US DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

GLS - STANDARD INSTRUMENT APPROACH PROCEDURE TITLE 14 CFR PART 97.29

Bearings, headings, courses, 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 in feet RVR.

TERMINAL ROUTES

FROM	TO	COURSE AND DISTANCE	ALTITUDE
MAAKO (IAF)	KABBY (FB)	084.69 / 4.99	3000
KABBY	KICKM (FB)	084.74 / 4.24	3000
KICKM (IF)	FLIBZ (FB)	084.78 / 7.84	3000
FLIBZ	JACEN (FB)	084.85 / 3.27	2000
JACEN (FAF)	RW08L (MAP) (FO)	084.88 / 5.81	
RW08L (MAP)	580 MSL	084.88	580
580 MSL	CLEEP (FO)		4000

MISSED APPROACH

MAP: DA

CLIMB TO 580 THEN CLIMBING LEFT TURN TO 4000 DIRECT CLEEP AND HOLD.

ADDITIONAL FLIGHT DATA:

HOLD N, RT, 201.52 INBOUND.
DISTANCE TO THLD FROM 200 HATH: 0.44 NM.
LAAS CHANNEL # 21073
REFERENCE PATH ID: GBZU
CHART LOC RWY 8R AND RWY 9.
LTP HAE: .5 M

1. PT ____ SIDE OF COURSE ____ OUTBOUND ____ FT WITHIN ____ MILES OF ____ (IAF)
2. PROFILE STARTS AT MAAKO
3. FAC: 084.88 FAF: DIST FAF TO MAP: 5.81 THLD:
4. MIN. ALT: MAAKO 3000, KABBY 3000, KICKM 3000, FLIBZ 3000, JACEN 2000
5. DIST TO THLD FROM OM: 5.81 MM: IM: 150 HAT: 100 HAT: GS ANT:
6. MIN GS INCPT: 2000 GS ALT AT: JACEN 2000 OM: MM: IM:
7. GS ANGLE: 3.00 TCH: 59.0 34:1 IS CLEAR
8. MSA FROM: RW08L 3100

MAG VAR: 5E EPOCH YEAR: 2000

MINIMUMS

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

ALTERNATE: N A X

CATEGORY =====>	A			B			C			D			E		
	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA
GLS DA	292	2400	200	292	2400	200	292	2400	200	292	2400	200	292	2400	200

NOTES:
CHART NOTE: FOR INOPERATIVE ALSF, INCREASE GLS ALL CATS VISIBILITY TO RVR 4000.
CHART NOTE: DME/DME RNP-0.3 NA.
CHART NOTE: GPS REQUIRED.
CHART PLANVIEW NOTE: RADAR REQUIRED.
(SEE FORM 8260-10)

QUALITY CHECKED

CITY AND STATE	ELEVATION: 97 THRE: 92 AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO./AMDT NO./EFFECTIVE DATE:	SUP:
HOUSTON, TX	GEORGE BUSH INTERCONTINENTAL/HOUSTON	GIAH	GLS RWY 8L, ORIG	AMDT: NONE
				DATED

ALL AFFECTED PROCEDURES REVIEWED?	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE
[ ] YES [X] NO		ROUTINE

COORDINATED WITH:

ATA	AAT	ALPA	APA	AOPA	NBAA	OTHER (specify)
X		X	X	X	X	X ZHU, IAH APP CON, IAH TOWER, AMGR

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME: SCOTT M. CORY	FIFO AJV-353	DATE: 12/06/2011
APPROVED BY		
NAME: LARRY H STROUT MANAGER	FIFO AJV-353	DATE:

CHANGES:

1. ORIGINAL PROCEDURE.

REASONS:

1. FPT REQUEST.

03/12/2012: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 12/06/2011.
1. ADDED PROFILE NOTE: GLS UNUSABLE INSIDE DA.

04/02/2012: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 12/06/2011.
1. ADDED ARINC 8260-10 FORMS AND UPDATED PAGE NUMBERS.

QUALITY CHECKED

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NOTES, (CONT.):
CHART NOTE: SIMULTANEOUS APPROACH AUTHORIZED WITH RWY 8R AND RWY 9.
CHART NOTE: USE OF FD OR AP PROVIDING RNAV TRACK GUIDANCE REQUIRED DURING SIMULTANEOUS OPERATIONS.
CHART PROFILE NOTE: GLS UNUSABLE INSIDE DA.

QUALITY CHECKED

CITY AND STATE	ELEVATION: 97 THRE: 92	FACILITY IDENTIFIER:	PROCEDURE NO./ AMDT NO./EFFECTIVE DATE:	SUP:
HOUSTON, TX	AIRPORT NAME: GEORGE BUSH INTERCONTINENTAL/HOUSTON	GIAH	GLS RWY 8L, ORIG	AMDT: NONE
				DATED:

ALL AFFECTED PROCEDURES REVIEWED?	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE
☐ YES ☐ NO		

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ OTHER (specify) ☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	FIFO	DATE:
APPROVED BY		
NAME:	FIFO	DATE:

CHANGES:

REASONS:

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

GLS - STANDARD

INSTRUMENT APPROACH PROCEDURE - TITLE 14 CFR PART 97.29

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FAS DATA BLOCK INFORMATION

DATA FIELD	DATA
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	14
AIRPORT IDENTIFIER	KIAH
RUNWAY	RW08L
APPROACH PERFORMANCE DESIGNATOR	1
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	2
REFERENCE PATH IDENTIFIER (APPROACH ID)	GBZU
LTP/FTP LATITUDE	300025.7780N
LTP/FTP LONGITUDE	0952131.6470W
LTP/FTP ELLIPSOIDAL HEIGHT	+00005
FPAP LATITUDE	300025.8600N
FPAP LONGITUDE	0951949.0300W
THRESHOLD CROSSING HEIGHT (TCH)	00059.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	0008

CRC REMAINDER	0AB8904E

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K4
LTP ORTHOMETRIC HEIGHT	+00279
FPAP ORTHOMETRIC HEIGHT	+00279

QUALITY CHECKED

CITY AND STATE	ELEVATION: 97 THRE: 92	FACILITY IDENTIFIER:	PROCEDURE NO./ AMDT NO./EFFECTIVE DATE:	SUP:
HOUSTON, TX	AIRPORT NAME: GEORGE BUSH INTERCONTINENTAL/HOUSTON	GIAH	GLS RWY 8L, ORIG	AMDT: NONE
				DATED:

ALL AFFECTED PROCEDURES REVIEWED?	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE
☐ YES ☐ NO		

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ OTHER (specify) ☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	FIFO	DATE:
APPROVED BY		
NAME:	FIFO	DATE:

CHANGES:

REASONS:

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

GLS **INSTRUMENT APPROACH PROCEDURE**

FLIGHT STANDARDS SERVICES TITLE 14 CFR PART 97.29

Bearings, headings, courses, 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 in feet RVR.

```
HEADER                                                                                             1         1         1         1
         1         2         3         4         5         6         7         8         9         0         1         2         3
123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
HDR      USA      HOUSTON                  TX   IAP       KIAH      GLS RWY 8L          ORIG
WAYPOINT                                                                                           1         1         1         1
         1         2         3         4         5         6         7         8         9         0         1         2         3
123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
SUSAEAENRT   CLEEP K40    C   L N30173895W095101761                       E0030     NAR           CLEEP
SUSAEAENRT   FLIBZ K40    C     N30002477W095315872                       E0032     NAR           FLIBZ
SUSAEAENRT   JACEN K40    C     N30002524W095281298                       E0032     NAR           JACEN
SUSAEAENRT   KABBY K40    C     N30002219W095455321                       E0033     NAR           KABBY
SUSAEAENRT   KICKM K40    C     N30002327W095410025                       E0033     NAR           KICKM
SUSAEAENRT   MAAKO K40    C     N30002069W095513803                       E0034     NAR           MAAKO
AIRPORT                                                                                            1         1         1         1
         1         2         3         4         5         6         7         8         9         0         1         2         3
123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
SUSAP KIAHK4AIAH     0     120YHN29590396W095202919E005000097         1800018000C    MNAR    GEORGE BUSH INTERCONTINENTAL/H
SEGMENT                                                                                            1         1         1         1
         1         2         3         4         5         6         7         8         9         0         1         2         3
123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
SUSAP KIAHK4FJ08L  AMAAKO 010MAAKOK4EA0E  A    IF                                 + 03000     18000                 A LS
SUSAP KIAHK4FJ08L  AMAAKO 020KABBYK4EA0E       TF                                 + 03000                           A LS
SUSAP KIAHK4FJ08L  AMAAKO 030KICKMK4EA0E  B    TF                                 + 03000                           A LS
SUSAP KIAHK4FJ08L  AMAAKO 040FLIBZK4EA0EE      TF                                 + 03000                           A LS
SUSAP KIAHK4FJ08L  J      010FLIBZK4EA0E  I    IF                                 + 03000     18000                 A LS
SUSAP KIAHK4FJ08L  J      020JACENK4EA0E  F    TF                                 + 02000                 RW08L K4PGA LS
SUSAP KIAHK4FJ08L  J      030RW08LK4PG0GY M    TF                                   00151             -300          A LS
SUSAP KIAHK4FJ08L  J      040         0  M     CA                     0849        + 00580                           A LS
SUSAP KIAHK4FJ08L  J      050CLEEPK4EA0EY  L   DF                                 + 04000                           A LS
SUSAP KIAHK4FJ08L  J      060CLEEPK4EA0EE  R   HM                     20150040    + 04000                           A LS
```

QUALITY CHECKED

CITY AND STATE:	ELEVATION: 97 TDZE: 92 AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
HOUSTON, TX	**GEORGE BUSH INTERCONTINENTAL/HOUSTON**	**GIAH**	**GLS RWY 8L, ORIG**	AMDT: **NONE**
				DATED:

ALL AFFECTED PROCEDURES REVIEWED? ☐ YES ☐ NO	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE

COORDINATED WITH:

ATA	AAT	ALPA	APA	AOPA	NBAA	OTHER (specify)
☐	☐	☐	☐	☐	☐	☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	NFPG	DATE:
APPROVED BY		
NAME:	NFPG	DATE:

CHANGES:

REASONS:

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

GLS

INSTRUMENT APPROACH PROCEDURE

FLIGHT STANDARDS SERVICES TITLE 14 CFR PART 97.29

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```
RUNWAY
                                                                                                    1           1           1           1
          1         2         3         4         5         6         7         8         9         0           1           2           3
12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123
SUSAP KIAHK4GRW08L    0090020849 N30002578W095213165+0000     +0000500092000059150IIBZU3
PATH POINT
          1         2         3         4         5         6         7         8         9         0           1           2           3
12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123
SUSAP KIAHK4QJ08L  RW08L001    02GBZU1N3000257780W09521316470+000050300N3000258600W0951949030010675000800059OF       0AB8904E
SUSAP KIAHK4QJ08L  RW08L002E       +00279+00279          21073
MSA
          1         2         3         4         5         6         7         8         9         0           1           2           3
12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123
SUSAP KIAHK4SRW08LK4PG                   0    18018003125                                                            M
GLS
          1         2         3         4         5         6         7         8         9         0           1           2           3
12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123
SUSAP KIAHK4TGBZU1    021073RW08L                    0849N30000409W095202020KIAH      23   300E0050   00094NARL     00014
```

QUALITY CHECKED

CITY AND STATE:	ELEVATION: 97 TDZE: 92 AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
HOUSTON, TX	GEORGE BUSH INTERCONTINENTAL/HOUSTON	GIAH	GLS RWY 8L, ORIG	AMDT: NONE
				DATED:

ALL AFFECTED PROCEDURES REVIEWED? ☐ YES ☐ NO	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE

COORDINATED WITH:

ATA	AAT	ALPA	APA	AOPA	NBAA	OTHER (specify)
☐	☐	☐	☐	☐	☐	☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	NFPG	DATE:
APPROVED BY		
NAME:	NFPG	DATE:

CHANGES:

REASONS:

STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD

PART - A OBSTRUCTION DATA

1. APP SEGMENT	FROM	TO	OBSTRUCTION	COORDINATES	ELEV. MSL	ROC	ALT. ADJUSTMENTS	MIN. ALT.
INITIAL	MAAKO	KABBY	1. TOWER (48-009581)	295942.00N/0954758.00W	466 (5D)	1000	AT1534	3000
			2. TERRAIN	300130.00N/0955136.00W	230 (200)		AS1500	1700
INITIAL: STEPDOWN	KABBY	KICKM	3. TOWER (48-011504)	300127.37N/0954139.62W	412 (2C)	1000	AT1588	3000
			4. TERRAIN	300221.00N/0954551.00W	201 (200)		AS1500	1700
INTERMEDIATE	KICKM	FLIBZ	5. TOWER (48-002815)	295941.00N/0953729.00W	517 (4D)	500	AT1983	3000
			6. TERRAIN	300224.00N/0953812.00W	171 (200)		AS1500	1700
INTERMEDIATE: STEPDOWN	FLIBZ	JACEN	7. TOWER (48-001307)	295934.00N/0952824.00W	636 (4D)	500	AT864	2000
			8. TERRAIN	300224.00N/0953157.00W	138 (100)		AS1500	1600
FINAL	JACEN	RW08L				ASC		292/200
2. PROCEDURE TURN	NA							
3. MISSED APPROACH MAP:	DA	CLEEP				ASC		4000
			9. TOWER (48-005943)	301545.40N/0951447.94W	1347 (1A)	1000		2400
ELEV:	122		10. TERRAIN	301906.00N/0951130.00W	174 (200)		AS1500	1700

4. CIRCLING AREA	DISTANCE	REQUIRED HT. ABV. ARPT.	ACTUAL HT. ABV. ARPT.
CATEGORY A	1.3 NM	350	
CATEGORY B	1.5 NM	450	
CATEGORY C	1.7 NM	450	
CATEGORY D	2.3 NM	550	
CATEGORY E	4.5 NM	550	

5. MINIMUM SAFE ALTITUDES — PRIMARY NAVAID: RW08L

SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A	SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A
360-360	TWR (48-004048)	190/ 26.8	2049 (5D)	3100					

CITY AND STATE	ELEVATION: 97 AIRPORT NAME:	FACILITY	PROCEDURE AND AMENDMENT NO:	REGION
HOUSTON, TX	GEORGE BUSH INTERCONTINENTAL/HOUSTON	GIAH	GLS RWY 8L, ORIG	ASW

PART B - SUPPLEMENTAL DATA

1. COMMUNICATIONS WITH:	2. WEATHER SERVICE		3. ALTIMETER SETTING
ZHU ARTCC IAH APP CON IAH TOWER	N W S F A A A / C	OTHER: ASOS	SOURCE: KIAH DISTANCE: HOURS REMOTE OPERATION:
SATISFACTORY ON:			
X V H F X U H F H F	LOCATION: KIAH		ADJUSTMENT: 0

4. MONITOR STATUS	PRIMARY NAVAID:	
	MONITOR POINT:	
	HRS OPTN: CAT 1	
	HRS OPTN: CAT 3	
5. APPROACH & RUNWAY LIGHTING	X	ALSF-2 27, 08L, 26R, 26L
		(S) SALS
	X	MALSR 15R, 08R, 09, 33R
	X	HIRL 15R, 33L, 27, 08L, 08R, 26R, 09, 26L, 15L, 33R
		MIRL
		REIL
	X	TDZ 15R, 33L, 27, 08L, 08R, 26R, 26L
	X	C/L 15R, 33L, 27, 08L, 08R, 26R, 09, 26L, 15L, 33R
	X	OTHER (SPECIFY) PAPI-4R 33L, 09 PAPI-4L 15R, 27, 08R, 26L, 15L, 33R

6. RUNWAY MARKINGS	BASIC	
	ALL WEATHER	PIR-G 15R, 27, 08L, 08R, 26R, 09, 26L, 33R
	INSTRUMENT	NPI-G 33L, 15L
7. RUNWAY VISUAL RANGE	APPROACH	15R, 33L, 27, 08L, 08R, 26R, 09, 26L, 15L, 33R
	MIDFIELD	15R, 33L, 27, 08L, 08R, 26R, 09, 26L, 15L, 33R
	ROLL OUT	15R, 33L, 27, 08L, 08R, 26R, 09, 26L, 15L, 33R

8. GLIDE PATH	GP ANGLE: 3.00	ELEV RWY THRESHOLD: 91.6
	DISTANCE FROM RWY:	ELEV GP ANTENNA:
		THRESHOLD CROSSING HEIGHT: 59.0

9. FINAL APPROACH COURSE AIMING	X	RUNWAY THRESHOLD	FT. FROM THRESHOLD
	X	ON CENTERLINE	FT. FROM CENTERLINE

10. WAIVERS: 1

ORDER 8260.19E APPENDIX L PARA 4I; REFERENCE PATH IDENTIFIER (RPI) FORMAT.

PART D - PREPARED BY: SCOTT M. CORY	DATE: 12/06/2011
TITLE: AERONAUTICAL INFORMATION SPECIALIST	OFFICE: AJV-353

PART C - REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

2. KIAH ASOS ON SERVICE A; HRS OPTN: 24.

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

SEE ATTACHED AIRSPACE LETTER.

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

GLS:
FINAL OCS SLOPE - 34:1

AVERAGE HIGH TEMPERATURE BASED ON 5-YEAR HISTORY (2006-2010) NOT APPLIED TO FLIBZ PER FPT/AIR TRAFFIC REQUEST TO KEEP AT EXISTING LOCATION TO DECONFLICT WITH ARRIVALS TO KDWH RWY 35L.

CIRCLING NA PER CENTRAL FPO AND ATC REQUEST.

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.

PROCEDURE NOT CONNECTED TO ENROUTE STRUCTURE PER FPO/AIR TRAFFIC REQUEST; RADAR REQUIRED FOR PROCEDURE ENTRY.

OBSTACLE #7 - LOCATED 69 FEET INTO SECONDARY AREA, PRIMARY EQUIVALENT: 618'.

QUALITY CHECKED 1

RADIO FIX AND HOLDING DATA RECORD

NAME: CLEEP **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 301738.95N/0951017.61W **TYPE:** WP, INT, DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** NO CHANGE

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	DAISETTA	DAS	VORTAC	H	278.00	283.00	28.07	28.07		3000	17500
2	HUMBLE	IAH	VORTAC	H	019.13	024.13	22.13	22.13		3000	17500
3	HOBBY	HUB	VOR/DME	H	003.13	008.13	38.61	38.61		3000	17500

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME	LEG LENGTH DME	HOLDING ALTITUDES MIN	HOLDING ALTITUDES MAX	TEMPLATES MIN	TEMPLATES MAX
1	N	IAH	VORTAC	019.13	199.13	R	1		4000	6000	5	6
2	N		WP	021.52	201.52	R		4	4000	6000	5	6
3	N	HUB	VOR/DME	003.13	183.13	R	1		3100	6000	6	7
4	N		WP	019.13	199.13	R		4	3000	6000	5	6
5	E		WP	098.00	278.00	R		4	3100	6000	5	6

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
UPN	200	TOWER (48-009465)	301351.00N/0950726.00W	2049	5D
1	200	TOWER (48-009465)	301351.00N/0950726.00W	2049	5D
2	200	TOWER (48-009465)	301351.00N/0950726.00W	2049	5D
3	200	TOWER (48-009465)	301351.00N/0950726.00W	2049	5D
4	200	TOWER (48-009465)	301351.00N/0950726.00W	2049	5D
5	200	TOWER (48-009465)	301351.00N/0950726.00W	2049	5D

HOLDING RESTRICTIONS:
UNPLANNED HOLDING AUTHORIZED AT OR ABOVE 3100.

REMARKS:
DAISETTA (FAC 1) AND HUMBLE (FAC 2) USED TO ESTABLISH FIX COORDINATES
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	V13	1, 2, 3				(US)
EN ROUTE	V306	1, 2, 3				(US)
IAP	RNAV (GPS) RWY 14		4	KCXO	HOUSTON	TX (US)
IAP	RNAV (GPS) RWY 19		5	KCXO	HOUSTON	TX (US)
IAP	GLS RWY 8L		2	KIAH	HOUSTON	TX (US)
IAP	ILS OR LOC RWY 8L	1, 2, 3	1, 3	KIAH	HOUSTON	TX (US)
IAP	ILS RWY 8L (CAT II/III)	1, 2, 3	1, 3	KIAH	HOUSTON	TX (US)
IAP	ILS RWY 8L (SA CAT I)	1, 2, 3	1, 3	KIAH	HOUSTON	TX (US)
IAP	RNAV (GPS) RWY 8L		2	KIAH	HOUSTON	TX (US)

REQUIRED CHARTING: SECTIONAL, VFR TERMINAL AREA, IAP, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 14 **DATE OF REVISION:** 07/26/2012

REASON FOR REVISION:
ADDED REMARK FOR FIX COORDINATE ESTABLISHMENT.
REMOVED FIX RESTRICTION.
UPDATED FIX USE.

DEVELOPED BY: **DATE:** 11/29/2011 **OFFICE:** AJV-353 **NAME:** SCOTT CORY

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: CEN
ARTCC: ZHU
ATC FACILITY: IAH APP CON
OTHER:

QUALITY CHECKED 4

RADIO FIX AND HOLDING DATA RECORD

NAME: FLIBZ **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 300024.77N/0953158.72W **TYPE:** WP, RADAR, DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	HOUSTON	I-BZU	LOC/DME		266.94	269.94	10.73	10.73		3000	4500

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

REMARKS:
I-BZU DME LAT/LONG: 300030.07N/0951937.07W

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	GLS RWY 8L			KIAH	HOUSTON	TX (US)
IAP	ILS OR LOC RWY 8L	1		KIAH	HOUSTON	TX (US)
IAP	ILS RWY 8L (CAT II/III)	1		KIAH	HOUSTON	TX (US)
IAP	ILS RWY 8L (SA CAT I)	1		KIAH	HOUSTON	TX (US)
IAP	RNAV (GPS) RWY 8L			KIAH	HOUSTON	TX (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 3 **DATE OF REVISION:** 07/26/2012

REASON FOR REVISION:
ADDED DIST FROM FAC FOR FAC 1.
DELETED FAC 2 DATA.
UPDATED FIX USE.

DEVELOPED BY: **DATE:** 11/29/2011 **OFFICE:** AJV-353 **NAME:** JON DENTON

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZHU
ATC FACILITY: IAH APP CON
OTHER:

QUALITY 4 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: JACEN **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 300025.24N/0952812.98W **TYPE:** WP, RADAR, DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	HOUSTON	I-BZU	LOC		266.94	269.94	7.47	7.47	45367	2000	4500

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

REMARKS:
I-BZU DME LAT/LONG: 300030.07N/0951937.07W
PFAF DETERMINED IAW FAAO 8260.54A FORMULA 2-16B.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	GLS RWY 8L			KIAH	HOUSTON	TX (US)
IAP	ILS OR LOC RWY 8L	1		KIAH	HOUSTON	TX (US)
IAP	ILS RWY 8L (CAT II/III)	1		KIAH	HOUSTON	TX (US)
IAP	ILS RWY 8L (SA CAT I)	1		KIAH	HOUSTON	TX (US)
IAP	RNAV (GPS) RWY 8L			KIAH	HOUSTON	TX (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 3 **DATE OF REVISION:** 07/26/2012

REASON FOR REVISION:
FIX MOVED 553.06 FT WEST.
UPDATED FIX COORDINATES.
CHANGED FAC 1 DME FROM 7.37 TO 7.47.
ADDED DIST FROM FAC FOR FAC 1.
DELETED FAC 2 DATA.
UPDATED FIX USE.

DEVELOPED BY: **DATE:** 11/29/2011 **OFFICE:** AJV-353 **NAME:** JON DENTON

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZHU
ATC FACILITY: IAH APP CON
OTHER:

QUALITY CHECKED 4

RADIO FIX AND HOLDING DATA RECORD

NAME: KABBY **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 300022.19N/0954553.21W **TYPE:** WP, INT, DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	HOUSTON	I-BZU	LOC/DME		266.94	269.94	22.81	22.81		3000	7400
2	NAVASOTA	TNV	VORTAC	H	129.84	137.84		22.77		3000	17500

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
I-BZU	LOC/DME	R-267	23	3000	7400

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

REMARKS:
HOUSTON (FAC 1) USED TO ESTABLISH FIX COORDINATES
I-BZU DME LAT/LONG: 300030.07N/0951937.07W

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	GLS RWY 8L			KIAH	HOUSTON	TX (US)
IAP	ILS OR LOC RWY 8L	1, 2		KIAH	HOUSTON	TX (US)
IAP	ILS RWY 8L (CAT II/III)	1, 2		KIAH	HOUSTON	TX (US)
IAP	ILS RWY 8L (SA CAT I)	1, 2		KIAH	HOUSTON	TX (US)
IAP	RNAV (GPS) RWY 8L			KIAH	HOUSTON	TX (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 3 **DATE OF REVISION:** 07/26/2012

REASON FOR REVISION:
ADDED DIST FROM FAC FOR FAC 1 AND 2.
CHANGED FAC 1 MAA FROM 4500 TO 7400 FOR 318 FT/NM PLANNING.
CHANGED FAC 2 MAA FROM 4500 TO 17500.
DELETED FAC 3 DATA.
UPDATED ESV.
UPDATED FIX USE.

DEVELOPED BY: **DATE:** 11/29/2011 **OFFICE:** AJV-353 **NAME:** JON DENTON

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: CEN
ARTCC: ZHU
ATC FACILITY: IAH APP CON
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: KICKM **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 300023.27N/0954100.25W **TYPE:** WP, INT, DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	HOUSTON	I-BZU	LOC/DME		266.94	269.94	18.57	18.57		3000	6100
2	HOBBY	HUB	VOR/DME	H	309.79	314.79		29.86		3000	17500

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
I-BZU	LOC/DME	R-267	19	3000	6100

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

REMARKS:
HOUSTON (FAC 1) USED TO ESTABLISH FIX COORDINATES
I-BZU DME LAT/LONG: 300030.07N/0951937.07W

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	GLS RWY 8L			KIAH	HOUSTON	TX (US)
IAP	ILS OR LOC RWY 8L	1, 2		KIAH	HOUSTON	TX (US)
IAP	ILS RWY 8L (CAT II/III)	1, 2		KIAH	HOUSTON	TX (US)
IAP	ILS RWY 8L (SA CAT I)	1, 2		KIAH	HOUSTON	TX (US)
IAP	RNAV (GPS) RWY 8L			KIAH	HOUSTON	TX (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 3 **DATE OF REVISION:** 07/26/2012

REASON FOR REVISION:
FIX MOVED 1.40 NM WEST.
UPDATED FIX COORDINATES.
ADDED DIST FROM FAC FOR FAC 1 AND 2.
CHANGED FAC 1 DME FROM 17.17 TO 18.57.
CHANGED FAC 2 TRUE BRG FROM 316.75 TO 314.79.
CHANGED FAC 1 MAA FROM 4500 TO 6100 FOR 318 FT/NM PLANNING.
DELETED FAC 3 DATA.
ADDED ESV DATA.
UPDATED FIX USE.

DEVELOPED BY: **DATE:** 11/29/2011 **OFFICE:** AJV-353 **NAME:** JON DENTON

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: CEN
ARTCC: ZHU
ATC FACILITY: IAH APP CON
OTHER:

QUALITY CHECKED 4

RADIO FIX AND HOLDING DATA RECORD

NAME: MAAKO **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 300020.69N/0955138.03W **TYPE:** WP, INT, DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	HOUSTON	I-BZU	LOC/DME		266.94	269.94	27.80	27.80		3000	9000
2	NAVASOTA	TNV	VORTAC	H	140.67	148.67		19.80		3000	17500

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
I-BZU	LOC/DME	R-267	28	3000	9000

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

REMARKS:
HOUSTON (FAC 1) USED TO ESTABLISH FIX COORDINATES
I-BZU DME LAT/LONG: 300030.07N/0951937.07W

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	GLS RWY 8L			KIAH	HOUSTON	TX (US)
IAP	ILS OR LOC RWY 8L	1, 2		KIAH	HOUSTON	TX (US)
IAP	ILS RWY 8L (CAT II/III)	1, 2		KIAH	HOUSTON	TX (US)
IAP	ILS RWY 8L (SA CAT I)	1, 2		KIAH	HOUSTON	TX (US)
IAP	RNAV (GPS) RWY 8L			KIAH	HOUSTON	TX (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 1 **DATE OF REVISION:** 07/26/2012

REASON FOR REVISION:
ADDED DIST FROM FAC FOR FAC 1 AND 2.
CHANGED FAC 1 MAA FROM 4500 TO 9000 FOR 318 FT/NM PLANNING.
DELETED FAC 3 DATA.
UPDATED ESV.
UPDATED FIX USE.

DEVELOPED BY: **DATE:** 11/29/2011 **OFFICE:** AJV-353 **NAME:** JON DENTON

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZHU
ATC FACILITY: IAH APP CON
OTHER:

QUALITY CHECKED 4

TERMINAL AIRSPACE DATA REQUIREMENTS

CITY: **HOUSTON** STATE: **TX**

AIRPORT NAME: **GEORGE BUSH INTERCONTINENTAL/HOUSTON** ID: **KIAH**

PROCEDURE: **GLS RWY 8L** AMDT: **ORIG**

DOCKET#: **NOT REQUIRED**
(96-AXX-X/Required/Not Required)

ALL DIST TO 1/100 NM; ELEV TO NEAREST FT; COORD TO 1/100 SEC; DEG TO 1/100 DG.

1. Distance from **THLD** to 1000' point **2.98**
   (Enter THLD, FAF, ARP, FACILITY, as appropriate)
2. Width of **FINAL** segment at 1000' point **0.86**
   (Enter appropriate segment, final, intermediate, etc.)
3. True Course of **FINAL** segment containing 1000' point **089.88**
4. High Terrain in **FINAL** segment containing 1000' point **124**
5. Distance from **THLD** to 1500' point **4.55**
   (If 1500' point in PT maneuvering area or holding pattern note in remarks)
6. Width of **FINAL** segment at 1500' point **1.20**
7. True Course of **FINAL** segment containing 1500' point **089.88**
8. High Terrain in **FINAL** segment containing 1500' point **124**
9. Threshold Coordinates (if straight-in) ... **300025.78N** / **0952131.65W**
10. ARP Coordinates ..... **295903.96N** / **0952029.19W**
11. Runway Approach End and distance furthest from ARP ..... RWY **27**
    Distance **2.07** NM
12. FAF Coordinates ..... **300025.24N** / **0952812.98W**

REMARKS: Approach/Drawing attached.

US Department of Transportation
Federal Aviation Administration

FLIGHT PROCEDURES STANDARDS WAIVER

FLIGHT STANDARDS USE ONLY

CONTROL NO:

1. Flight Procedure Identification:
Houston, TX (IAH)
George Bush Intercontinental/Houston
GLS RWY 8L

2. Waiver Required and Applicable Standard:
8260.19E APPENDIX L PARA 4i; Reference Path Identifier (RPI). "For ground based augmentation systems (e.g., LAAS) the identifier is defined with a "G" followed by the runway number. The last character, beginning with the letter "A," excluding the letters "C," "L," and "R," will be used to define the first procedure, followed by a succeeding letter for each procedure to a particular runway."

3. Reason for Waiver *(Justification for nonstandard treatment)*:
The current RPI methodology allows multiple procedures at different airports located within the GBAS facility service volume to have the same RPI. For future application of GBAS RPI, Spectrum Engineering and GBAS program office have requested a new format which provides a unique RPI for all procedures at all airports within GBAS facility service volume. New RPI format is still defined with a "G", but is followed by the corresponding ILS system identifier for that runway. RPI for KIAH, GLS RWY 8L: GBZU.

4. Equivalent Level of Safety Provided:

1. The change of RPI methodology supports current systems and future GBAS authentication.

2. Only a small number of aircraft are currently equipped to fly GLS approach procedures.

3. Air carriers must obtain FAA authorization via Operations Specifications (C052) to fly GLS procedures.

5. How Relocation or Additional Facilities Will Affect Waiver Requirement:
N/A

6. Coordination With User Organizations *(Specify)*:

AJV-353: _____

7. SUBMITTED BY

DATE:	Office Identification:	Title:	Signature:
	AJV-35	**Manager, Terminal Products Group**	**Greg Yamamoto**

FAA FORM 8260 - 1 / July 2003 (computer generated)

8. CONTINUATION
Comments:

9. AFS ACTION		
		Approved
		Disapproved
		Not Required

Comments:		
Date:	Routing Symbol:	Signature: