Flight Procedure Tracking Form	Action: FLIGHT CHECK	Task Type: IAP	Date Open: 12/13/2010	Task #: 2002101012384901006	Request #: 20021010123849
Procedure: RNAV (GPS) RWY 33 AMDT 1		**Airport ID:** KIWS	**Airport:** WEST HOUSTON		**Reimbursable #:**
City: HOUSTON	**ST:** TX	**GPS #:**		**Estimated Chart Date:** 09/20/2012	**FICO #:**
Fac ID:	**Fac. Type:** LNAV	**Specialist:** ROSS BARTO			

Procedure Review

22

	Rec'd	Rel'd	Full Name	Comments
Lead:	02/14/2012	05/03/2012	JEREL PAWLEY	
QA:	05/03/2012	05/14/2012	STEVEN SZUKALA	
Liaison:	05/14/2012		Alfonso	

Procedure Comments: NON-ENROUTE **Remark Type:** INFORMATION

pkg 3 of 4

HOUSTON, TX WEST HOUSTON (KIWS) RNAV (GPS) RWY 33, AMDT 1 (LNAV) ENROUTE-NO FC: 8.7.12 PUB: 9.20.12

ATTACHED FORMS: 8260-3; 8260-10; 8260-9; 8260-2(S): EMULE, REV 2; SHYNR-INT, REV 1; WUXIM, ORIG.
FLCK NOTE: REQUEST 4D AC FROM FLIGHT CHECK FOR 590 TOWER, 295751.00N/0960145.00W (MISSED APPROACH HOLDING OBSTACLE).

CONTACT: JILL OLSON, AJV-353 LEAD, 405.954.9568:

HOUSTON, TEXAS | AL-6079 (FAA) | FIG

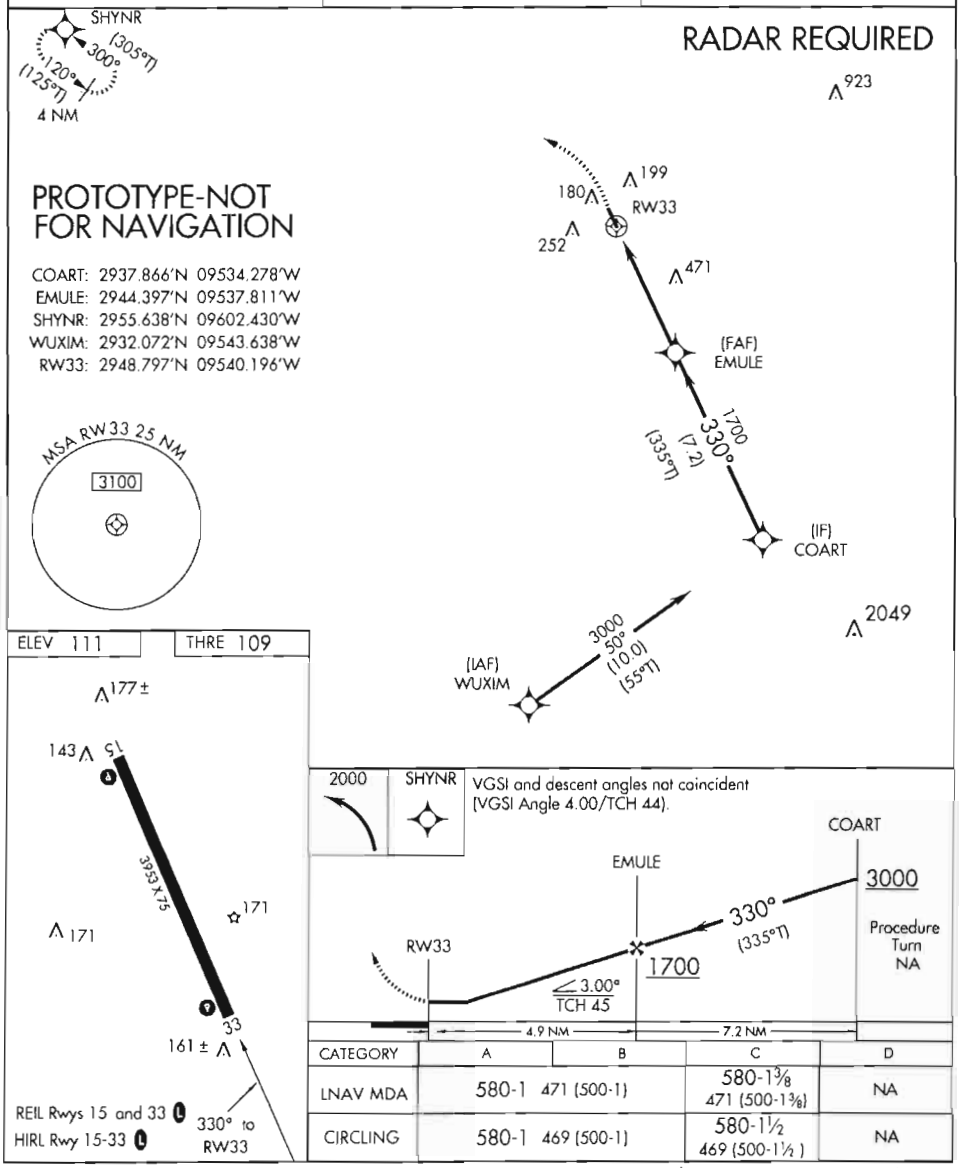
RNAV (GPS) RWY 33
HOUSTON/WEST HOUSTON (IWS)

APP CRS	Rwy ldg	3953
330°	THRE	109
	Apt Elev	111

DME/DME RNP -0.3 NA. Visibilit reduction by helicopters NA.Obtain local altimeter settting an CTAF; when not received, use George Bush Intercontinental /Houston altimeter setting and increase all MDA 60 feet and increase LNAV Cat C visibility ⅛ mile.
When VGSI inop. circling to RWY 15 NA at night.
When VGSI inop. straight-in/circling RWY 33 procedure NA at night.

MISSED APPROACH: Climbing left turn to 2000 direct SHYNR and hold.

HOUSTON APP CON	CLNC DEL	UNICOM
123.8 257.7	121.15	123.05 (CTAF) L



CATEGORY	A	B	C	D
LNAV MDA	580-1 471 (500-1)		580-1⅜ 471 (500-1⅜)	NA
CIRCLING	580-1 469 (500-1)		580-1½ 469 (500-1½)	NA

HOUSTON, TEXAS
Amdt 1 FIG

29°49'N-95°40'W

HOUSTON/WEST HOUSTON (IWS)
RNAV (GPS) RWY 33

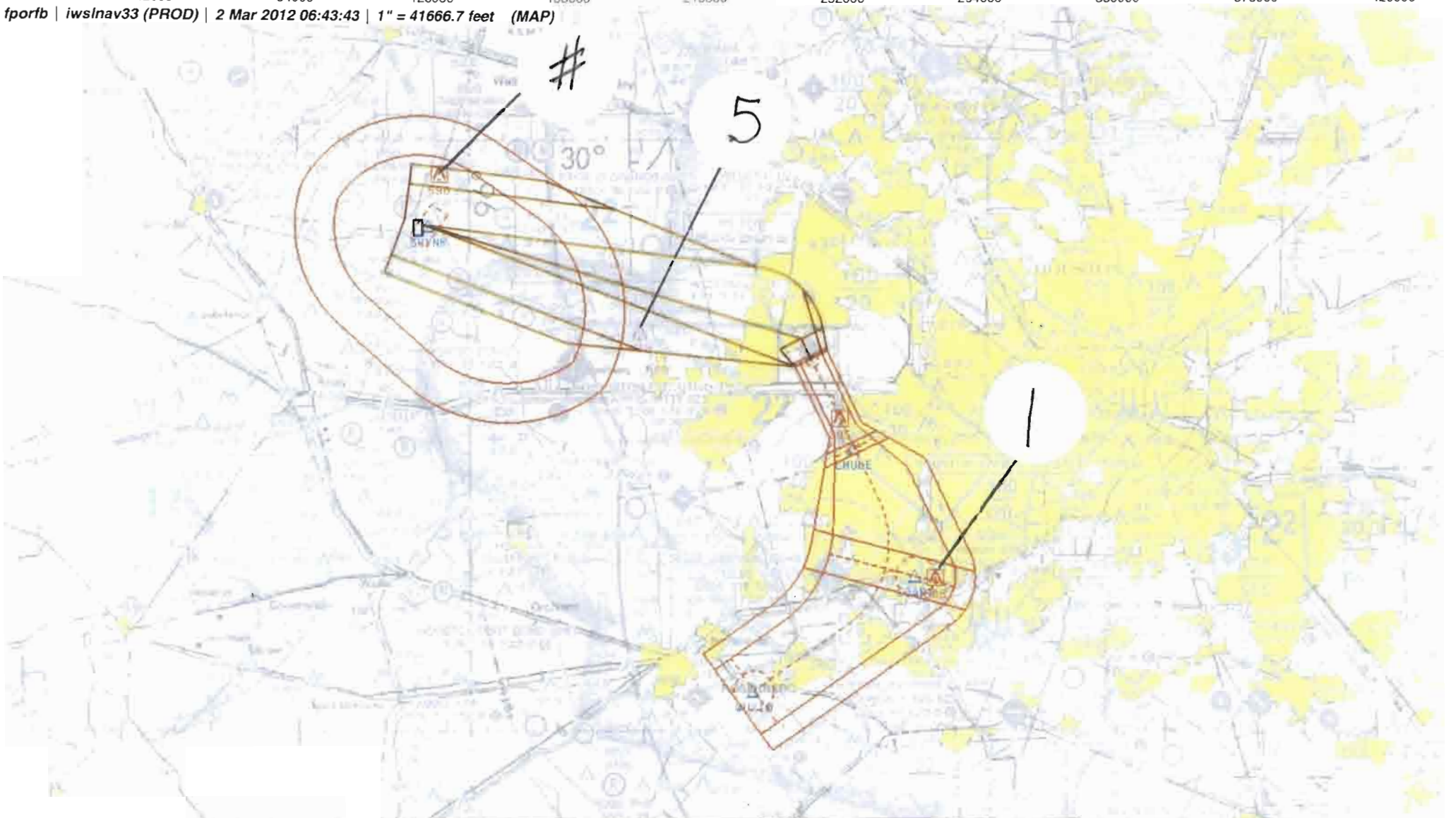
AUTOMATED AL-6079 RNAV (GPS) RWY 33

SC-5
08 MAR 2012
COMPILER: GB
REVIEWER:
DBL CHKR:
EFF DATE: FIG

NM 7 14 21 28 35 42 49 56 63 70

FT 42000 84000 126000 168000 210000 252000 294000 336000 378000 420000

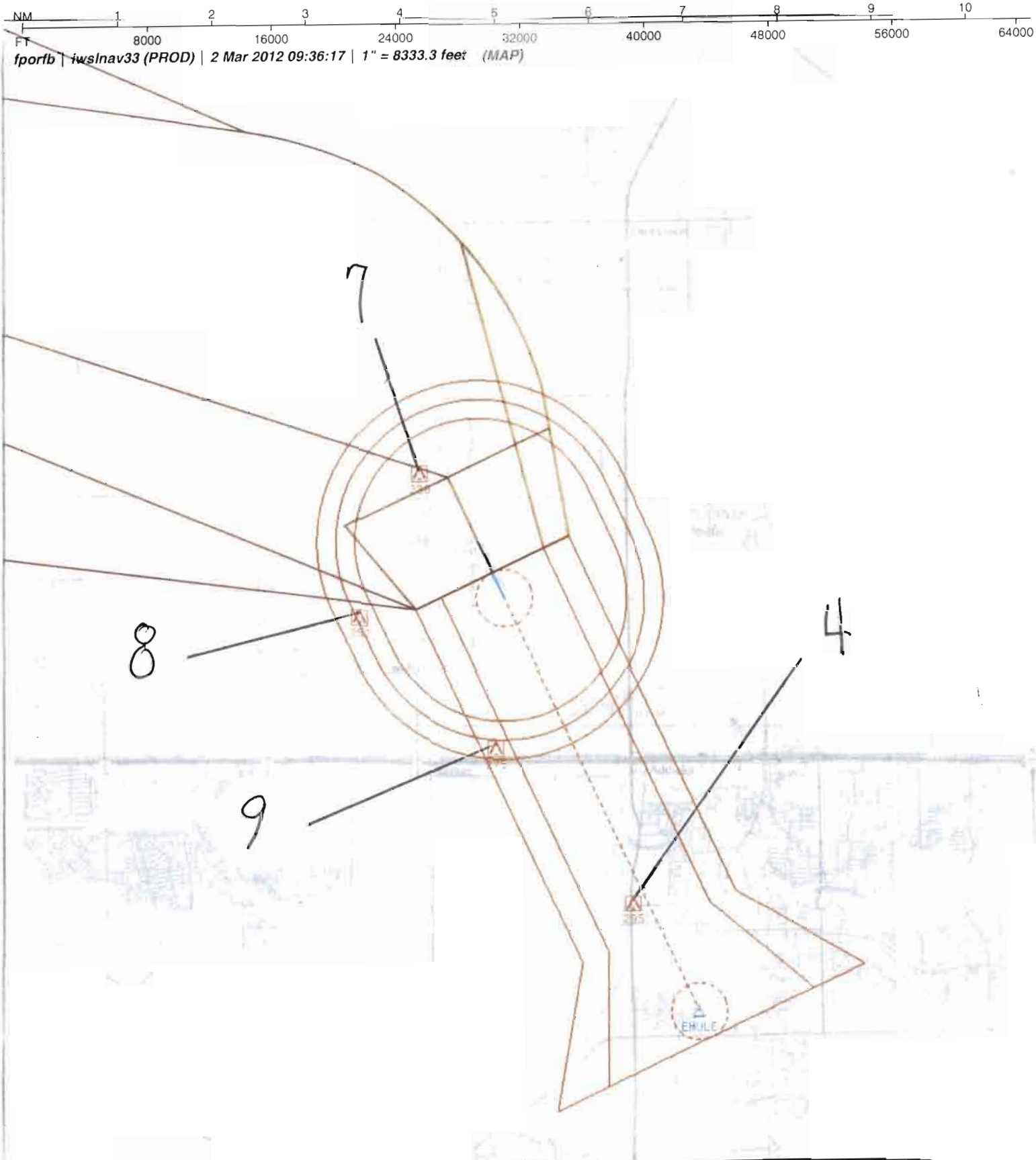
fporfb | iwsInav33 (PROD) | 2 Mar 2012 06:43:43 | 1" = 41666.7 feet (MAP)



Airport ID:	KIWS
Apt Name:	WEST HOUSTON
City:	HOUSTON
State:	TX
SCALE	1:500,000
Proc ID:	RNAV (GPS) RWY 33
AMDT#	1

FM 9

No	SEGMENT	OBSTRUCTION	ELEV
1	INITIAL/INTERMEDIATE	TOWER	608
5	MISS APP LVL SURFACE	TOWER	770
#	HOLDING	TOWER	590



Airport ID	KIWS
Apt Name:	WEST HOUSTON
City:	HOUSTON
State:	TX
Scale:	1:100,000
Proc ID:	RNAV (GPS) RWY 33
Amdt #:	1

FM 9

No	SEGMENT	OBSTRUCTION	ELEV
4	LNAV FINAL	AAO	295
7	CIRCLING CAT A	TREE	230
8	CIRCLING CAT B	~~ANTENNA~~ TOWER	252
9	CIRCLING CAT C	LIGHT PLOE	275

US DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

RNAV - STANDARD INSTRUMENT APPROACH PROCEDURE TITLE 14 CFR PART 97.33

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
WUXIM (IAF)	COART (FB)	049.65 / 10.00	3000
COART (IF)	EMULE (FB)	329.73 / 7.20	1700
EMULE (FAF)	RW33 (MAP) (FO)	329.70 / 4.86	
RW33 (MAP)	511 MSL		
511 MSL	SHYNR (FO)		2000

MISSED APPROACH

LNAV: RW33

CLIMBING LEFT TURN TO 2000 DIRECT SHYNR AND HOLD.

ADDITIONAL FLIGHT DATA:
HOLD SE, LT, 300.00 INBOUND.
FAS OBST: 295 AAO 294528N/0953836W
EMULE TO RW33: 3.00/45.

1. PT ____ SIDE OF COURSE ____ OUTBOUND ____ FT WITHIN ____ MILES OF ____ (IAF)
2. PROFILE STARTS AT COART
3. FAC: 329.70 FAF: EMULE DIST FAF TO MAP: 4.86 THLD: 4.86
4. MIN. ALT: COART 3000, EMULE 1700
5. DIST TO THLD FROM OM: ____ MM: ____ IM: ____ 150 HAT: ____ 100 HAT: ____ GS ANT: ____
6. MIN GS INCPT: ____ GS ALT AT: ____ OM: ____ MM: ____ IM: ____
7. GS ANGLE: ____ TCH: 34:1 IS NOT CLEAR
8. MSA FROM: RW33 3100

MAG VAR: 5E EPOCH YEAR: 1995

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
LNAV MDA	580	1	471	580	1	471	580	1 3/8	471		NA				
CIRCLING	580	1	469	580	1	469	580	1 1/2	469		NA				

NOTES:
CHART NOTE: WHEN VGSI INOP, CIRCLING RWY 15 NA AT NIGHT.
CHART NOTE: WHEN VGSI INOP, STRAIGHT-IN/CIRCLING RWY 33 PROCEDURE NA AT NIGHT.
CHART NOTE: DME/DME RNP-0.3 NA.
CHART NOTE: VISIBILITY REDUCTION BY HELICOPTERS NA.
(SEE FORM 8260-10)

QUALITY A CHECKED

CITY AND STATE	ELEVATION: 111 THRE: 109 AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO./AMDT NO./EFFECTIVE DATE:	SUP: RNAV (GPS) Y RWY 33
HOUSTON, TX	WEST HOUSTON	RNAV	RNAV (GPS) RWY 33, AMDT 1	AMDT: ORIG-A
				DATED 12/05/2002

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] **ST. AV. DIR, ARPT MGR, IWS ATCT**

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:

DEVELOPED BY		
NAME:	FIFO	DATE:
JILL OLSON (ROSS F. BARTO)	**AJV-353**	**03/05/2012**

APPROVED BY		
NAME:	FIFO	DATE:
LARRY H STROUT MANAGER	**AJV-353**	

CHANGES:

1. MINIMUMS BASED ON HEIGHT ABOVE THLD VS TOUCHDOWN.
2. REMOVED GEORGE BUSH INTERCONTINENTAL AIRPORT ALTIMETER SETTING MINIMUMS.
3. REMOVED FEEDER FROM IAH VORTAC AND INITIALS FROM EWEFE AND HUB VOR/DME.
4. ADDED INITIAL FROM WUXIM.
5. REMOVED LNAV STEPDOWN.
6. CHANGED MISSED APPROACH CLEARANCE LIMIT FROM SEALY TO SHYNR.
7. CHANGED FINAL CONTROLLING OBSTACLE FROM 270 POLE TO 295 AAO.
8. CHANGED 34:1 IS CLEAR TO 34:1 IS NOT CLEAR.
9. LOWERED FAF ALTITUDE FROM 1800 TO 1700.
10. ADDED FAF TO MAP DISTANCE (4.86) AND CHANGED FAF TO THLD DISTANCE FROM 5.06 TO 4.86.
11. REVISED VDA FROM 3.31/44 TO 3.00/45.
12. NAME CHANGED FROM RNAV (GPS) Y RWY 33 TO RNAV (GPS) RWY 33.
13. ADDED NOTE: VISIBILITY REDUCTION BY HELICOPTERS NA.
14. ADDED PLANVIEW NOTE: RADAR REQUIRED.
SEE 8260-10

REASONS:

1. PER 8260.3, CH 20.
2. BACK-UP ALTIMETER MINIMUMS IN A NOTE.
3, 4, 6, 9. ATC REQUEST.
5. NOT NEEDED.
7. AAO APPLIED.
8. SURFACE IS NOT CLEAR.
10. FAF MOVED TO PFAF LOCATION.
11. VDA FROM FAF VS STEPDOWN FIX.
12. RNAV (GPS) Z RWY 33 CANCELED.
13. VISUAL SURFACE PENETRATIONS.
14. ATC REQUEST.
15. REQUIRED, 20:1 PENETRARIONS.
16. REQUIRED.
17. NEW OBSTACLE ACCURACY CODE.

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NOTES, (CONT.):
CHART PLANVIEW NOTE: RADAR REQUIRED.
CHART PROFILE NOTE: VGSI AND DESCENT ANGLES NOT COINCIDENT.
CHART NOTE: OBTAIN LOCAL ALTIMETER SETTING ON CTAF; WHEN NOT RECEIVED, USE GEORGE BUSH INTERCONTINENTAL/HOUSTON ALTIMETER SETTING AND INCREASE ALL MDA 60 FT AND INCREASE LNAV CAT C VISIBILITY 1/8 MILE.

QUALITY 2 CHECKED

CITY AND STATE	ELEVATION: 111 THRE: 109 AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO./ AMDT NO./EFFECTIVE DATE:	SUP: RNAV (GPS) Y RWY 33
HOUSTON, TX	WEST HOUSTON	RNAV	RNAV (GPS) RWY 33, AMDT 1	AMDT: ORIG-A
				DATED: 12/05/2002

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:	FIFO	DATE:
APPROVED BY		
NAME:	FIFO	DATE:

CHANGES:

CHANGES CONT.
15. ADDED VGSI INOP NOTES. 16. ADDED MDA AND VISIBILITY ADJUSTMENTS WHEN USING BACK-UP ALTIMETER SETTING. 17. LOWERED CAT C CIRCLING FROM 620 TO 580.

REASONS:

QUALITY 2 CHECKED

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION
RNAV (GPS) STANDARD INSTRUMENT APPROACH PROCEDURE
FLIGHT STANDARDS SERVICES - FAR PART 97.33

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.

ARINC PACKET - 424-18 - RNAV (GPS)

```
                 1         2         3         4         5         6         7         8         9         0         1         2         3
WP      123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAEAENRT   COART K40    W     N29375198W095341669                      E0032     NAR           COART
        SUSAEAENRT   EMULE K40    W     N29442381W095374867                      E0032     NAR           EMULE
        SUSAEAENRT   SHYNR K40    C   L N29553829W096022578                      E0035     NAR           SHYNR
        SUSAEAENRT   WUXIM K40    W     N29320433W095433825                      E0033     NAR           WUXIM

                 1         2         3         4         5         6         7         8         9         0         1         2         3
AIRPORT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KIWSK4AIWS     0     039YHN29490550W095402140E005000111         1800018000C    MNAR    WEST HOUSTON

                 1         2         3         4         5         6         7         8         9         0         1         2         3
SEGMENT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KIWSK4FR33   AWUXIM 010WUXIMK4EA0E  A    IF                                                18000                 B JS
        SUSAP KIWSK4FR33   AWUXIM 020COARTK4EA0EE B 010TF                     04970100    + 03000                            B JS
        SUSAP KIWSK4FR33   R      010COARTK4EA0E  I    IF                                + 03000     18000                 B JS
        SUSAP KIWSK4FR33   R      020EMULEK4EA1E  F 051TF                     32970072    + 01700                 RW33  K4PGB JS
        SUSAP KIWSK4FR33   R      020EMULEK4EA2WN          N          ALNAV                                                   JS
        SUSAP KIWSK4FR33   R      030RW33 K4PG0GY M 031TF                     32970049      00154             -300          B JS
        SUSAP KIWSK4FR33   R      040         0  M     CA                     3297        + 00511                            B JS
        SUSAP KIWSK4FR33   R      050SHYNRK4EA0EY  L   DF                                + 02000                            B JS
        SUSAP KIWSK4FR33   R      060SHYNRK4EA0EE  L   HM                     30000040    + 02000                            B JS

                 1         2         3         4         5         6         7         8         9         0         1         2         3
RUNWAY  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KIWSK4GRW33    0039533297 N29484780W095401178+0000    +0005500109000045075R

                 1         2         3         4         5         6         7         8         9         0         1         2         3
MSA     123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KIWSK4SRW33 K4PG               0   18018003125                                                                        M
```

QUALITY 2 CHECKED

CITY AND STATE	ELEVATION: 111 THRE: 109	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP: RNAV (GPS) Y RWY 33
HOUSTON, TX	AIRPORT NAME: WEST HOUSTON	RNAV	RNAV (GPS) RWY 33, AMDT 1	AMDT: ORIG-A
				DATED: 12/05/2002

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

RNAV (GPS) STANDARD INSTRUMENT APPROACH PROCEDURE

FLIGHT STANDARDS SERVICES - **FAR PART 97.33**

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ARINC SUMMARY - 424-18 - RNAV (GPS)

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	WUXIM	WUXIM	010	IAF	IF		FB					
	WUXIM	COART	020		TF		FB	1.0	049.7(054.7T)	010.0	AA 03000	
		COART	010	FACF	IF		FB				AA 03000	
		EMULE	020	FAF	TF		FB	0.5	329.7(334.7T)	007.2	AA 01700	
		RW33	030	MAP	TF		FO	0.3	329.7(334.7T)	004.9	AT 00154	

MISSED APPROACH	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
		040		CA		FB		329.7(334.7T)		AA 00511	
	SHYNR	050		DF	L	FO				AA 02000	
	SHYNR	060		HM	L	FO		300.0(305.0T)	004.0	AA 02000	

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	COART	N293751.98	W0953416.69	N2937.866	W09534.278
	EMULE	N294423.81	W0953748.67	N2944.397	W09537.811
	SHYNR	N295538.29	W0960225.78	N2955.638	W09602.430
	WUXIM	N293204.33	W0954338.25	N2932.072	W09543.638
	RW33	N294847.80	W0954011.78	N2948.797	W09540.196

RUNWAY DATA	RWY	THRESHOLD ELEVATION	TCH
	RW33	00109	45

QUALITY 2 CHECKED

CITY AND STATE	ELEVATION: 111 THRE: 109 / AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP: RNAV (GPS) Y RWY 33
HOUSTON, TX	**WEST HOUSTON**	**RNAV**	**RNAV (GPS) RWY 33, AMDT 1**	AMDT: **ORIG-A**
				DATED: **12/05/2002**

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	WUXIM	COART	1. TWR (48-001285)	293723.76N/0953307.98W	608 (2C)	1000	AT1392	3000
			2. TERRAIN	293900.00N/0953903.00W	89 (100)		AS1500	1600
INTERMEDIATE	COART	EMULE	1. TWR (48-001285)	293723.76N/0953307.98W	608 (2C)	500	DG592	1700
			3. TERRAIN	294121.00N/0953857.00W	92 (100)		AS1500	1600
FINAL: LNAV	EMULE	RW33	4. AAO	294527.92N/0953836.29W	295 (2C)	250	XP20	580
2. PROCEDURE TURN	NA							
3. MISSED APPROACH MAP:	RW33	SHYNR				ASC		2000
			5. TWR (48-008098)	294949.86N/0955007.80W	770 (2C)	1000		1800
ELEV:	480		6. TERRAIN	295721.00N/0960000.00W	210 (200)		AS1500	1700

4. CIRCLING AREA	DISTANCE		HT. ABV. ARPT.		
CATEGORY A	1.3 NM	REQUIRED	350	ACTUAL	469
CATEGORY B	1.5 NM		450		469
CATEGORY C	1.7 NM		450		469
CATEGORY D	2.3 NM		550		
CATEGORY E	4.5 NM		550		

7. TREE (KIWST0204)	295002.13N/0954113.06W	230 (1A)	300	SI	580
8. TOWER (48-012550)	294831.20N/0954157.10W	252 (2C)	300	SI	580
9. LT POLE (KIWST0592)	294707.24N/0954017.14W	275 (1B)	300		580

5. MINIMUM SAFE ALTITUDES — PRIMARY NAVAID: **RW33**

SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A	SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A
360-360	TWR (48-004048)	142/ 17.0	2049 (5D)	3100					

QUALITY 2 CHECKED

CITY AND STATE		FACILITY	PROCEDURE AND AMENDMENT NO:	REGION
HOUSTON, TX	ELEVATION: 111 AIRPORT NAME: WEST HOUSTON	RNAV	RNAV (GPS) RWY 33, AMDT 1	ASW

PART B - SUPPLEMENTAL DATA

1. COMMUNICATIONS WITH:	2. WEATHER SERVICE	3. ALTIMETER SETTING
HOU APP CON	[ ] NWS OTHER: CTAF	SOURCE: KIWS / KIAH
	[ ] FAA	DISTANCE: 0 / 19.93
	[ ] A/C	HOURS REMOTE OPERATION: 0 / 24
SATISFACTORY ON:		
[X] VHF [X] UHF [ ] HF	LOCATION: KIWS	ADJUSTMENT: 0 / 48

4. MONITOR STATUS	PRIMARY NAVAID:	
	MONITOR POINT:	
	HRS OPTN: CAT 1	
	HRS OPTN: CAT 3	

5. APPROACH & RUNWAY LIGHTING		
		ALS
		(S) SALS
		MALS
	X	HIRL 33 (PCL), 15 (PCL)
		MIRL
	X	REIL 33 (PCL), 15 (PCL)
		TDZ
		C/LINE
	X	OTHER (SPECIFY) PAPI-2L 33 PAPI-2R 15

6. RUNWAY MARKINGS	BASIC	15 NSTD-G, 33 NSTD-F
	ALL WEATHER	
	INSTRUMENT	
7. RUNWAY VISUAL RANGE	APPROACH	
	MIDFIELD	
	ROLL OUT	

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

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

10. WAIVERS: NONE

PART D - PREPARED BY:	DATE:
JILL OLSON (ROSS F. BARTO)	03/05/2012
TITLE: AERONAUTICAL INFORMATION SPECIALIST	OFFICE: AJV-353

PART C - REMARKS:

VDP NOT ESTABLISHED - OBSTACLES PENETRATE VDP SURFACE.

PARA 251, 20:1 PENETRATION.

PARA 251, 34:1 PENETRATION.

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

VGSI DATA: 4.00/TCH 44

TREE HEIGHT 75 FT PER FPT.

LPV AND LNAV/VNAV NA PER FPT (GQS PENETRATIONS)

LP NA DUE TO NO MDA CHANGE.

REQUEST (4D) AC FROM FLIGHT CHECK FOR 590 TOWER, 295751.00N/0960145.00W (MISSED APP HOLDING OBST)

TERPS, VOLUME 1, VISUAL PORTION OF FINAL PENETRATIONS:
RWY 33:
20:1 PENETRATIONS:
122 RD (KIWST0214) 294845.77N/0954009.93W (10.35)
123 RD (KIWST0218) 294843.86N/0954012.26W (7.02)
122 RD (KIWST0221) 294843.76N/0954012.20W (5.45)
122 RD (KIWST0223) 294843.66N/0954012.16W (4.92)
122 RD (KIWST0224) 294843.66N/0954011.88W (4.39)
122 RD (KIWST0225) 294843.76N/0954011.63W (4.38)
123 RD (KIWST0226) 294844.18N/0954010.31W (4.81)
122 RD (KIWST0229) 294843.87N/0954010.95W (3.60)
123 RD (KIWST0230) 294844.24N/0954009.93W (4.37)
123 RD (KIWST0231) 294843.76N/0954010.27W (2.82)
128 TREE (KIWST0236) 294844.43N/0954007.16W (5.02)
136 TREE (KIWST0238) 294842.30N/0954011.56W (11.58)
139 TREE (KIWST0250) 294842.15N/0954006.13W (3.67)
164 TREE (KIWST0262) 294841.06N/0954004.44W (20.52)
162 TREE (KIWST0269) 294840.38N/0954004.58W (15.68)
34:1 PENETRATIONS:
160 TREE (KIWST0338) 294831.68N/0953959.73W (0.36)
160 TREE (KIWST0336) 294831.53N/0954000.53W (0.84)
162 TREE (KIWST0333) 294833.32N/0953957.88W (4.71)
164 TREE (KIWST0322) 294834.79N/0953958.87W (11,75)
158 TREE (KIWST0320) 294832.39N/0954005.25W (6.38)
157 TREE (KIWST0317) 294832.60N/0954005.96W (6.73)
153 TREE (KIWST0316) 294832.40N/0954006.46W (2.74)
158 TREE (KIWST0315) 294832.71N/0954006.05W (8.12)
160 TREE (KIWST0314) 294833.00N/0954005.62W (10.42)
164 TREE (KIWST0312) 294836.11N/0953958.83W (15.25)
150 TREE (KIWST0308) 294831.95N/0954009.97W (2.42)
148 TREE (KIWST0307) 294833.33N/0954006.73W (0.54)
158 TREE (KIWST0306) 294834.69N/0954004.15W (11.33)
153 TREE (KIWST0300) 294836.04N/0954002.20W (7.80)
159 TREE (KIWST0299) 294836.46N/0954001.72W (14.39)
150 TREE (KIWST0298) 294834.78N/0954006.19W (5.84)
153 TREE (KIWST0294) 294836.26N/0954004.23W (10.64)
154 TREE (KIWST0290) 294837.57N/0954002.57W (13.32)
157 TREE (KIWST0289) 294838.05N/0954001.46W (16.38)
155 TREE (KIWST0284) 294838.43N/0954002.96W (17.06)
149 TREE (KIWST0277) 294836.26N/0954010.47W (13.55)
141 TREE (KIWST0274) 294839.37N/0954003.90W (6.62)
165 TREE (KIWST0271) 294840.93N/0954002.43W (33.18)
162 TREE (KIWST0269) 294840.38N/0954004.58W (31.09)
145 LT POLE (KIWST0268) 294837.45N/0954011.86W (14.28)
132 TREE (KIWST0264) 294838.71N/0954009.74W (2.32)
138 TREE (KIWST0257) 294841.44N/0954005.76W (11.24)

RWY 15:
CONT.

QUALITY 2 CHECKED

STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD

PART - A OBSTRUCTION DATA

1. APP SEGMENT		FROM	TO	OBSTRUCTION	COORDINATES	ELEV. MSL	ROC	ALT. ADJUSTMENTS	MIN. ALT.
3. MISSED APPROACH	MAP:								
	ELEV:								

4. CIRCLING AREA	DISTANCE	HT. ABV. ARPT. REQUIRED	ACTUAL
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:

SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A	SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A

QUALITY CHECKED

CITY AND STATE	ELEVATION: 111	FACILITY	PROCEDURE AND AMENDMENT NO:	REGION
HOUSTON, TX	AIRPORT NAME: WEST HOUSTON	RNAV	RNAV (GPS) RWY 33, AMDT 1	ASW

PART B - SUPPLEMENTAL DATA

1. COMMUNICATIONS WITH:	2. WEATHER SERVICE	3. ALTIMETER SETTING
SATISFACTORY ON:	[ ] N W S OTHER: [ ] F A A [ ] A / C	SOURCE: DISTANCE: HOURS REMOTE OPERATION:
[ ] V H F [ ] U H F [ ] H F	LOCATION:	ADJUSTMENT:

4. MONITOR STATUS	PRIMARY NAVAID:	
	MONITOR POINT:	
	HRS OPTN: CAT 1	
	HRS OPTN: CAT 3	

5. APPROACH & RUNWAY LIGHTING		
	[ ]	ALS
	[ ]	(S) SALS
	[ ]	MALS
	[ ]	HIRL
	[ ]	MIRL
	[ ]	REIL
	[ ]	TDZ
	[ ]	C/LINE
	[ ]	OTHER (SPECIFY)

6. RUNWAY MARKINGS	BASIC	
	ALL WEATHER	
	INSTRUMENT	
7. RUNWAY VISUAL RANGE	APPROACH	
	MIDFIELD	
	ROLL OUT	
8. GLIDE PATH	GP ANGLE:	ELEV RWY THRESHOLD:
	DISTANCE FROM RWY:	ELEV GP ANTENNA:
		THRESHOLD CROSSING HEIGHT:

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

10. WAIVERS:

PART D - PREPARED BY:	DATE:
TITLE:	OFFICE:

PART C - REMARKS:

CONTINUED.
20:1 PENETRATIONS:
117 TREE (KIWST0052) 294924.65N/0954033.47W (5.04)
146 TREE (KIWST0056) 294926.81N/0954030.31W (30.13)
143 TREE (KIWST0057) 294926.88N/0954030.77W (25.94)
143 TREE (KIWST0061) 294928.21N/0954031.23W (19.01)
144 TREE (KIWST0063) 294926.66N/0954035.62W (18.82)
148 TREE (KIWST0067) 294927.40N/0954035.06W (20.49)
149 TREE (KIWST0072) 294928.68N/0954033.35W (18.87)
151 TREE (KIWST0073) 294928.85N/0954033.52W (19.78)
145 TREE (KIWST0074) 294929.77N/0954031.58W (13.23)
152 TREE (KIWST0075) 294929.91N/0954031.31W (20.10)
155 TREE (KIWST0076) 294929.68N/0954032.00W (22.85)
142 TREE (KIWST0084) 294928.79N/0954036.99W (4.51)
152 TREE (KIWST0088) 294931.41N/0954032.49W (11.03)
147 TREE (KIWST0096) 294930.76N/0954035.92W (2.54)
156 TREE (KIWST0099) 294931.76N/0954034.42W (9.80)
169 TREE (KIWST0101) 294930.57N/0954038.32W (20.89)
159 TREE (KIWST0102) 294931.31N/0954037.31W (9.41)
167 TREE (KIWST0107) 294931.10N/0954039.37W (14.49)
163 TREE (KIWST0110) 294931.66N/0954038.84W (8.93)
159 TREE (KIWST0111) 294932.23N/0954037.54W (4.78)
165 TREE (KIWST0119) 294933.75N/0954036.67W (5.48)
161 TREE (KIWST0120) 294934.67N/0954034.73W (0.93)
165 TREE (KIWST0123) 294934.86N/0954034.86W (3.82)
176 TREE (KIWST0145) 294934.92N/0954041.03W (2.93)

RASS PRESSURE PATTERNS SAME
KIWS 111, KIAH 97
RA = 47.79.
SEE ATTACHED AIRSPACE LETTER.

XP - TO MAINTAIN CURRENT MDA

QUALITY 2 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: EMULE **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 294423.81N/0953748.67W **TYPE:** WP

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

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (GPS) RWY 33			KIWS	HOUSTON	TX (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 2 **DATE OF REVISION:** 09/20/2012

REASON FOR REVISION:
1. FIX MOVED 1254 FT NW TO NEW PFAF LOCATION.
2. REVISED FIX COORDINATES.
3. REMOVED FAC 1 AND FAC 2.
4. REVISED FIX USE.

DEVELOPED BY: **DATE:** 02/29/2012 **OFFICE:** AJV-353 **NAME:** JILL OLSON (ROSS BARTO)

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

SIGNATURE:

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

QUALITY 2 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: SHYNR **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 295538.29N/0960225.78W **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	HUMBLE	IAH	VORTAC	H	262.37	267.37	36.26	36.26		4000	45000
2	INDUSTRY	IDU	VORTAC	L	085.49	093.49	27.25	27.25		4000	17500
3	NAVASOTA	TNV	VORTAC	H	169.55	177.55		21.64		4000	45000

HOLDING: **HOLDING TYPE OF ACTION:** ESTABLISH

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	SE		WP	120.00	300.00	L		4	2000	6000	4	6

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (48-010010)	295751.00N/0960145.00W	590	4D

REASON FOR NONSTANDARD HOLDING:
PAT 1 ATC REQUEST

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERN.

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	INDUSTRY	1, 2, 3		KLBX	ANGLETON/LAKE JACKSON	TX (US)
DP	INDUSTRY	1, 2, 3		KGLS	GALVESTON	TX (US)
DP	INDUSTRY	1, 2, 3		KAXH	HOUSTON	TX (US)
DP	INDUSTRY	1, 2, 3		KCXO	HOUSTON	TX (US)
DP	INDUSTRY	1, 2, 3		KDWH	HOUSTON	TX (US)
DP	INDUSTRY	1, 2, 3		KEFD	HOUSTON	TX (US)
DP	INDUSTRY	1, 2, 3		KEYQ	HOUSTON	TX (US)
DP	INDUSTRY	1, 2, 3		KHOU	HOUSTON	TX (US)
DP	INDUSTRY	1, 2, 3		KIAH	HOUSTON	TX (US)
DP	INDUSTRY	1, 2, 3		KIWS	HOUSTON	TX (US)
DP	INDUSTRY	1, 2, 3		KSGR	HOUSTON	TX (US)
DP	INDUSTRY	1, 2, 3		KTME	HOUSTON	TX (US)
DP	INDUSTRY	1, 2, 3		KT41	LA PORTE	TX (US)
IAP	RNAV (GPS) RWY 15		1	KIWS	HOUSTON	TX (US)
IAP	RNAV (GPS) RWY 33		1	KIWS	HOUSTON	TX (US)
STAR	BITER	1, 2, 3		K3R9	AUSTIN	TX (US)
STAR	BITER	1, 2, 3		K6R4	AUSTIN	TX (US)
STAR	BITER	1, 2, 3		KAUS	AUSTIN	TX (US)
STAR	BITER	1, 2, 3		KGTU	GEORGETOWN	TX (US)
STAR	BITER	1, 2, 3		KRYW	LAGO VISTA	TX (US)
STAR	BITER	1, 2, 3		KHYI	SAN MARCOS	TX (US)

REQUIRED CHARTING: DP, STAR, IAP, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 1 **DATE OF REVISION:** 09/20/2012

REASON FOR REVISION:
1. ADDED HOLDING.
2. ADDED PRECIPITOUS TERRAIN EVALUATION.
3. ADDED HOLDING LIMITED TO ESTABLISHED PATTERN.
4. REVISED FIX USE.
5. ADDED IAP TO CHARTING.
6. ADDED WAYPOINT TO FIX TYPE.

DEVELOPED BY: **DATE:** 02/28/2012 **OFFICE:** AJV-353 **NAME:** JILL OLSON (ROSS BARTO)

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

SIGNATURE:

QUALITY 2 CHECKED

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

QUALITY 2 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: WUXIM **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 293204.33N/0954338.25W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (GPS) RWY 33			KIWS	HOUSTON	TX (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 09/20/2012

DEVELOPED BY: **DATE:** 02/29/2012 **OFFICE:** AJV-353 **NAME:** JILL OLSON (ROSS BARTO)

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

SIGNATURE:

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

QUALITY 2 CHECKED

TERMINAL AIRSPACE DATA REQUIREMENTS

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

AIRPORT NAME: **WEST HOUSTON** ID: **KIWS**

PROCEDURE: **RNAV (GPS) RWY 33** AMDT: **1**

DOCKET # :
(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 **2.86**
   (Enter THLD, FAF, ARP, FACILITY, as appropriate)
2. Width of **FINAL** segment at 1000' point **1.20**
   (Enter appropriate segment , final, intermediate, etc.)
3. True Course of **FINAL** segment containing 1000' point **334.70**
4. High Terrain in **FINAL** segment containing 1000' point **95**
5. Distance from **THLD** to 1500' point **4.66**
   (If 1500' point in PT maneuvering area or holding pattern note in remarks)
6. Width of **FINAL** segment at 1500' point **1.94**
7. True Course of **FINAL** segment containing 1500' point **334.70**
8. High Terrain in **FINAL** segment containing 1500' point **95**
9. Threshold Coordinates (if straight-in) ... **294847.80N** / **0954011.78W**
10. ARP Coordinates ..... **294905.50N** / **0954021.40W**
11. Runway Approach End and distance furthest from ARP.....RWY **33**
    Distance **0.33** NM
12. FAF Coordinates ..... **294423.81N** / **0953748.67W**
    (Click to Select)

REMARKS: Approach/Drawing attached. ADDITIONAL AIRSPACE REQUIRED

RADIO FIX AND HOLDING DATA RECORD

NAME: COART **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 293751.98N/0953416.69W **TYPE:** WP

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

HOLDING: **HOLDING TYPE OF ACTION:** CANCEL

REMARKS:
FIX MOVED 1.20NM, FIX NAME NOT CHANGED PER ATC REQUEST (OPERATIONAL ADVANTAGEOUS).

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (GPS) RWY 33			KIWS	HOUSTON	TX (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 2 **DATE OF REVISION:** 09/20/2012

REASON FOR REVISION:
1. FIX MOVED 1.20 NM TO NEW IF LOCATION.
2. REVISED FIX COORDINATES.
3. REMOVED FAC 1 AND FAC 2.
4. REMOVED HOLDING.
5. REVISED FIX USE.

DEVELOPED BY: **DATE:** 02/29/2012 **OFFICE:** AJV-353 **NAME:** JILL OLSON (ROSS BARTO)

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

SIGNATURE:

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

QUALITY 2 CHECKED

RADIO FIX AND HOLDING DATA RECORD

CANCELLED

NAME: EWEFE **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 294105.68N/0952940.43W **TYPE:** WP

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

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	COART					064.70	5.00				17500

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	WEST HOUSTON - RNAV (GPS) RWY 33			KIWS	HOUSTON	TX (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 1 **DATE OF REVISION:** 03/02/2001

REASON FOR REVISION:
PROCEDURE REQUIRES RELOCATION OF WP FOR PFAF

DEVELOPED BY: **DATE:** **OFFICE:** **NAME:**

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: FTW
ARTCC: ZHU
ATC FACILITY: IAH ATCT
OTHER:

QUALITY 2 CHECKED