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
MFE VOR/DME	AMAPE (FO)	092.25 / 39.99	2600
RELAX	AMAPE (FO)	207.32 / 12.08	2000
AMAPE (IF/IAF)	BEBSE (FB)	310.70 / 6.00	1700
BEBSE (FAF)	RW31 (MAP) (FO)	310.67 / 4.98	
RW31 (MAP)	411 MSL	310.67	
411 MSL	CAKOB (FO)		2000

MISSED APPROACH

LNAV/VNAV: DA
LNAV: RW31

CLIMB TO 2000 DIRECT CAKOB AND HOLD.

ADDITIONAL FLIGHT DATA:
HOLD NW, RT, 130.57 INBOUND.
CHART FAS OBST: 77 TREE 261221N/0973848W
CHART FAS OBST: 180 TOWER 261144N/0973755W
DISTANCE TO THLD FROM 375 HAT: 1.01 NM.
CHART VDP AT 1.22 MILES TO RW31*
*LNAV ONLY.

1. PT ____ SIDE OF COURSE ____ OUTBOUND ____ FT WITHIN ____ MILES OF ____ (IAF)
2. HOLD SE AMAPE, RT, 310.70 INBOUND, 2000 FT. IN LIEU OF PT (IAF)
3. FAC: 310.67 FAF: BEBSE DIST FAF TO MAP: 4.98 THLD: 4.98
4. MIN. ALT: AMAPE 2000, BEBSE 1700
5. DIST TO THLD FROM OM: ____ MM: ____ IM: ____ 150 HAT: ____ 100 HAT: ____ GS ANT: ____
6. MIN GS INCPT: 1700 GS ALT AT: BEBSE 1700 OM: ____ MM: ____ IM: ____
7. GS ANGLE: 3.00 TCH: 55.0 34:1 IS NOT CLEAR
8. MSA FROM: RW31 2600

MAG VAR: 5E EPOCH YEAR: 2005

MINIMUMS

TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT ALTERNATE: N A STANDARD @

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/VNAV DA	411	1 1/4	375	411	1 1/4	375	411	1 1/4	375	411	1 1/4	375			
LNAV MDA	480	1	444	480	1	444	480	1 1/4	444	480	1 1/2	444			
CIRCLING	500	1	464	500	1	464	500	1 1/2	464	680	2	644			

NOTES:
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -15C (5F) OR ABOVE 54C (130F). @ NA WHEN LOCAL WEATHER NOT AVAILABLE.
CHART NOTE: DME/DME RNP-0.3 NA.
CHART NOTE: VISIBILITY REDUCTION BY HELICOPTERS NA.
CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE PORT ISABEL ALTIMETER SETTING AND (SEE FORM 8260-10)

CITY AND STATE	ELEVATION: 36 TDZE: 36 AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO./AMDT NO./EFFECTIVE DATE:	SUP: RNAV (GPS) RWY 31
HARLINGEN, TX	VALLEY INTL	RNAV	RNAV (GPS) Y RWY 31, AMDT 1A	AMDT: 1
				DATED 10/30/2003

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] **ZHU, VALLEY APP CON, HRL TOWER, AMGR**

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME: **JILL OLSON (STEPHEN PETERSON)**	FIFO **AJV-353**	DATE: **04/05/2012**
APPROVED BY		
NAME: **LARRY H STROUT** **MANAGER**	FIFO **AJV-353**	DATE:

CHANGES:

1. CHANGED PROCEDURE NAME FROM "RNAV (GPS) RWY 31" TO "RNAV (GPS) Y RWY 31."
2. ADDED UPPER LIMIT TO BARO-VNAV NOTE.
3. ADDED BACKUP ALTIMETER BY NOTE.
4. REMOVED GPS OR RNP-0.3 REQUIRED NOTE.
5. ADDED BARO-VNAV AND VDP NA NOTES FOR USE OF PORT ISABEL ALTIMETER SETTING.
6. ADDED NA FOR ARRIVALS NOTE TO MFE VOR/DME.
7. ADDED HELICOPTER VISIBILITY REDUCTION NOTE.
8. AUTHORIZED ALTERNATE MINIMUMS.
9. RAISED LNAV/VNAV DA FROM 320 TO 411 AND ALL CATS VISIBILITY FROM 1 TO 1 1/4.

REASONS:

1. REQUIRED FOR PUBLICATION OF RNAV (RNP) TO THIS RUNWAY.
2. REQUIRED FOR UNCOMPENSATED BARO-VNAV SYSTEMS.
3. APPLIED 8260.19D PARAGRAPH 855F.
4. PROCEDURE IS GPS ONLY.
5. BOTH ARE NA WITH A REMOTE ALTIMETER SOURCE.
6. AIRWAY RADIALS USE EXCESSIVE TURN ANGLES.
7. 34:1 VISUAL SURFACE IS NOT CLEAR.
8. PROCEDURE MEETS 8260.19D PARAGRAPH 853B PARAMETERS.
9. NEW SURVEY/NEW CONTROLLING OBSTACLE ON FINAL AND MISSED APPROACH ADJUSTMENT.

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NOTES, (CONT.):
INCREASE ALL DA 42 FEET AND ALL MDA 60 FEET; INCREASE LNAV/VNAV ALL CATS AND LNAV CAT C AND CIRLING CAT D VISIBILITY 1/4 MILE.
CHART NOTE: BARO-VNAV NA WITH PORT ISABEL ALTIMETER SETTING.
CHART NOTE: VDP NA WITH PORT ISABEL ALTIMETER SETTING.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT RELAX ON V163 NORTHBOUND.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS ON MFE VOR/DME AIRWAY RADIALS 029 CW 075.

QUALITY CHECKED

CITY AND STATE	ELEVATION: 36 TDZE: 36	FACILITY IDENTIFIER:	PROCEDURE NO./ AMDT NO./EFFECTIVE DATE:	SUP: RNAV (GPS) RWY 31
HARLINGEN, TX	AIRPORT NAME: VALLEY INTL	RNAV	RNAV (GPS) Y RWY 31, AMDT 1A	AMDT: 1
				DATED: 10/30/2003

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

RNAV (GPS) STANDARD INSTRUMENT APPROACH PROCEDURE

FLIGHT STANDARDS SERVICES - **FAR PART 97.33**

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ARINC PACKET - 424-18 - RNAV (GPS)

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                 1         2         3         4         5         6         7         8         9         0         1         2         3
NAVAID  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAD        MFE   K4011720VDHW N26102595W098142683    N26102595W098142683E0090001002     NARMC ALLEN

                 1         2         3         4         5         6         7         8         9         0         1         2         3
WP      123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAEAENRT   AMAPE K40    W     N26051540W097302296                        E0043     NAR           AMAPE
        SUSAEAENRT   BEBSE K40    W     N26093376W097350238                        E0044     NAR           BEBSE
        SUSAEAENRT   CAKOB K40    W     N26215116W097482279                        E0045     NAR           CAKOB
        SUSAEAENRT   RELAX K40    C   L N26152969W097231266                        E0043     NAR           RELAX

                 1         2         3         4         5         6         7         8         9         0         1         2         3
AIRPORT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KHRLK4AHRL     0     083YHN26133760W097391850E005000036         1800018000C    MNAR    VALLEY INTL

                 1         2         3         4         5         6         7         8         9         0         1         2         3
SEGMENT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KHRLK4FR31-Y AMFE   010MFE  K4D 0V       IF                                                18000                A JS
        SUSAP KHRLK4FR31-Y AMFE   020AMAPEK4EA0EY   020TF                     09230400    + 02600                            A JS
        SUSAP KHRLK4FR31-Y AMFE   030AMAPEK4EA0EE AR   HF                     31070040    + 02000                            A JS
        SUSAP KHRLK4FR31-Y ARELAX 010RELAXK4EA0E       IF                                                18000                A JS
        SUSAP KHRLK4FR31-Y ARELAX 020AMAPEK4EA0EY   020TF                     20730121    + 02000                            A JS
        SUSAP KHRLK4FR31-Y ARELAX 030AMAPEK4EA0EE AR   HF                     31070040    + 02000                            A JS
        SUSAP KHRLK4FR31-Y R      010AMAPEK4EA0E  I    IF                                  + 02000     18000                  A JS
        SUSAP KHRLK4FR31-Y R      020BEBSEK4EA1E  F 051TF                     31070060    + 01700                  RW31  K4PGA JS
        SUSAP KHRLK4FR31-Y R      020BEBSEK4EA2WN          ALNAV/VNAV ALNAV                                                      JS
        SUSAP KHRLK4FR31-Y R      030RW31 K4PG0GY M 031TF                     31070050      00091            -300            A JS
        SUSAP KHRLK4FR31-Y R      040         0  M     CA                     3107        + 00411                            A JS
        SUSAP KHRLK4FR31-Y R      050CAKOBK4EA0EY      DF                                  + 02000                            A JS
        SUSAP KHRLK4FR31-Y R      060CAKOBK4EA0EE  R   HM                     13060040    + 02000                            A JS

                 1         2         3         4         5         6         7         8         9         0         1         2         3
RUNWAY  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KHRLK4GRW31    0072573106 N26130809W097385455+0000    -0011800036000055150R

                 1         2         3         4         5         6         7         8         9         0         1         2         3
MSA     123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KHRLK4SRW31 K4PG                0   18018002625                                                                    M
```

QUALITY CHECKED

CITY AND STATE	ELEVATION: 36 TDZE: 36	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP: RNAV (GPS) RWY 31
HARLINGEN, TX	AIRPORT NAME: **VALLEY INTL**	**RNAV**	**RNAV (GPS) Y RWY 31, AMDT 1A**	AMDT: **1**
				DATED: **10/30/2003**

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:	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
	MFE	MFE	010		IF		FB					
	MFE	AMAPE	020		TF		FO	2.0	092.3(097.3T)	040.0	AA 02600	
	MFE	AMAPE	030	IAF	HF	R	FO		310.7(315.7T)	004.0	AA 02000	
	RELAX	RELAX	010		IF		FB					
	RELAX	AMAPE	020		TF		FO	2.0	207.3(212.3T)	012.1	AA 02000	
	RELAX	AMAPE	030	IAF	HF	R	FO		310.7(315.7T)	004.0	AA 02000	
		AMAPE	010	FACF	IF		FB				AA 02000	
		BEBSE	020	FAF	TF		FB	0.5	310.7(315.7T)	006.0	AA 01700	
		RW31	030	MAP	TF		FO	0.3	310.7(315.7T)	005.0	AT 00091	

MISSED APPROACH	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
		040		CA		FB		310.7(315.7T)		AA 00411	
	CAKOB	050		DF		FO				AA 02000	
	CAKOB	060		HM	R	FO		130.6(135.6T)	004.0	AA 02000	

POINT DATA

WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
MFE	N261025.95	W0981426.83	N2610.433	W09814.447
AMAPE	N260515.40	W0973022.96	N2605.257	W09730.383
BEBSE	N260933.76	W0973502.38	N2609.563	W09735.040
CAKOB	N262151.16	W0974822.79	N2621.853	W09748.380
RELAX	N261529.69	W0972312.66	N2615.495	W09723.211
RW31	N261308.09	W0973854.55	N2613.135	W09738.909

RUNWAY DATA

RWY	THRESHOLD ELEVATION	TCH
RW31	00036	55

QUALITY CHECKED

CITY AND STATE	ELEVATION: 36	TDZE: 36	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP: RNAV (GPS) RWY 31
HARLINGEN, TX	AIRPORT NAME: VALLEY INTL		RNAV	RNAV (GPS) Y RWY 31, AMDT 1A	AMDT: 1
					DATED: 10/30/2003

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:	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.
FEEDER	MFE VOR/DME	AMAPE	1. TOWER (48-004005)	260602.00N/0975021.00W	1547 (1A)	1000		2600
			2. TERRAIN	261415.00N/0981603.00W	132 (100)		AS1500	1600
FEEDER	RELAX	AMAPE	3. TOWER (48-011678)	260755.00N/0972819.00W	514 (2D)	1000	AT486	2000
			4. TERRAIN	260633.00N/0973042.00W	33 (0)		AS1500	1500
INTERMEDIATE	AMAPE (IF/IAF)	BEBSE	3. TOWER (48-011678)	260755.00N/0972819.00W	514 (2D)	500	AT686	1700
			5. TERRAIN	260230.00N/0973312.00W	50 (100)		AS1500	1600
FINAL: LNAV/VNAV	BEBSE	RW31	6. TREE (KHRLT0176)	261221.17N/0973847.57W	77 (1A)	23.4:1	MA74	411/375
FINAL: LNAV	BEBSE	RW31	7. TOWER (48-006025)	261144.00N/0973755.00W	180 (4D)	250	AC50	480
2. HOLD-IN-LIEU-OF-PT	AMAPE	P-4	8. TOWER (48-007992)	260303.00N/0973111.00W	549 (5D)	1000	AT451	2000
			9. TERRAIN	255854.00N/0972803.00W	50 (100)		AS1500	1600
3. MISSED APPROACH — MAP:	DA / RW31	CAKOB	10. ANT (KHRLT0203)	261154.43N/0973902.57W	138 (1A)	ASC		2000
			11. TOWER (48-010189)	261939.42N/0974700.09W	370 (5D)	1000		1400
ELEV:	138/230		12. TERRAIN	262003.00N/0974836.00W	50 (100)		AS1500	1600
			13. TANK (48-004834)	261325.00N/0973953.00W	191 (1B)	300		500
			13. TANK (48-004834)	261325.00N/0973953.00W	191 (1A)	300		500
			13. TANK (48-004834)	261325.00N/0973953.00W	191 (1B)	300		500
			14. TOWER (48-002527)	261234.00N/0974146.00W	362 (1A)	300		680

4. CIRCLING AREA	DISTANCE	HT. ABV. ARPT. REQUIRED	HT. ABV. ARPT. ACTUAL
CATEGORY A	1.3 NM	350	464
CATEGORY B	1.5 NM	450	464
CATEGORY C	1.7 NM	450	464
CATEGORY D	2.3 NM	550	644
CATEGORY E	4.5 NM	550	

5. MINIMUM SAFE ALTITUDES — PRIMARY NAVAID: RW31

SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A	SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A
360-360	TWR (48-004005)	231/ 12.5	1547 (1A)	2600					

CITY AND STATE	ELEVATION: 36 / AIRPORT NAME:	FACILITY	PROCEDURE AND AMENDMENT NO:	REGION
HARLINGEN, TX	VALLEY INTL	RNAV	RNAV (GPS) Y RWY 31, AMDT 1A	ASW

PART B - SUPPLEMENTAL DATA

1. COMMUNICATIONS WITH:	2. WEATHER SERVICE			3. ALTIMETER SETTING
HRL TOWER VALLEY APP CON		N W S	OTHER: ASOS	SOURCE: KHRL / KPIL
		F A A		DISTANCE: 0 / 17.08
		A / C		HOURS REMOTE OPERATION: 24 / 24
SATISFACTORY ON: X V H F X U H F H F	LOCATION: KHRL			ADJUSTMENT: 0 / 42

4. MONITOR STATUS	PRIMARY NAVAID:	
	MONITOR POINT:	
	HRS OPTN:	CAT 1
		CAT 3
5. APPROACH & RUNWAY LIGHTING		ALS
		(S) SALS
	X	MALSR 17R (PCL)
	X	HIRL 17R, 35L
	X	MIRL 31, 35R, 13, 17L
	X	REIL 13, 17L
		TDZ
		C/LINE
	X	OTHER (SPECIFY) VASI-4L 31, 13, 35L

6. RUNWAY MARKINGS	BASIC	
	ALL WEATHER	PIR-G 17R, 35L
	INSTRUMENT	NPI-G 31, 35R, 13, 17L
7. RUNWAY VISUAL RANGE	APPROACH	17R
	MIDFIELD	
	ROLL OUT	
8. GLIDE PATH	GP ANGLE: 3.00	ELEV RWY THRESHOLD: 35.7
	DISTANCE FROM RWY:	ELEV GP ANTENNA:
		THRESHOLD CROSSING HEIGHT: 55.0
9. FINAL APPROACH COURSE AIMING	X	RUNWAY THRESHOLD FT. FROM THRESHOLD
	X	ON CENTERLINE FT. FROM CENTERLINE

10. WAIVERS: NONE

PART D - PREPARED BY: JILL OLSON (STEPHEN PETERSON)	DATE: 04/05/2012
TITLE: AERONAUTICAL INFORMATION SPECIALIST	OFFICE: AJV-353

PART C - REMARKS:

PARA 251, 34:1 PENETRATION.

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

NO ADDITIONAL AIRSPACE REQUIRED.
RASS PRESSURE PATTERNS SAME
KHRL 36.3FT, KPIL 18.6FT
RA = 41.77.

LNAV/VNAV
INNER SLOPE: 23.4:1
OUTER SLOPE: 34:1

ISA DEVIATION: -30C

TAA NOT DEVLOPED BECAUSE OF CLOSE PROXIMITY OF INTERNATIONAL BORDER WITH MEXICO, RESTRICTED AREAS.

ASSUMBED VEGETATION HEIGHT: 50FT PER FPT.

TERPS, VOLUME 1, VISUAL PORTION OF FINAL PENETRATIONS:

34:1
68 POLE (48-004836) 261304.00N/0973843.00W (7.88)

QUALITY CHECKED