Flight Procedure Tracking Form	Action: FLIGHT CHECK	Task Type: IAP	Date Open: 03/13/2012	Task #: 2011063029983301004	Request #: 20110630299833
Procedure: RNAV (RNP) Z RWY 13 ORIG		Airport ID: KHRL	Airport: VALLEY INTL		Reimbursable #:
City: HARLINGEN	ST: TX	GPS #:		Estimated Chart Date: 09/20/2012	FICO #:
Fac ID:	Fac. Type: RNP	Specialist: SCOTT CORY			

Procedure Review

P1

	Rec'd	Rel'd	Full Name	Comments
Lead:	03/13/2012	06/05/2012	JILL OLSON	
QA:	06/05/2012	06/05/2012	SCOTT BEARD	
Liaison:	06/05/2012		Alfonso	APPROVAL REQUEST

Procedure Comments: **Remark Type:** INFORMATION

pkg 5 of 8

HARLINGEN, TX VALLEY INTL (KHRL) RNAV (RNP) Z RWY 13, ORIG (RNP) ENROUTE-NO FC: 8.7.12 PUB: 9.20.12

ATTACHED FORMS: 8260-3; 8260-10; 8260-9; 8260-2(S): AMAPE, REV 2; CAKOB, REV 2; CERLI, ORIG; CFPQS, ORIG; HUTES, ORIG; ORFEN, ORIG; TARGE, ORIG.

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

APP CRS	Rwy ldg	7257
131°	THRE	34
	Apt Elev	36

RNAV (RNP) Z RWY 13

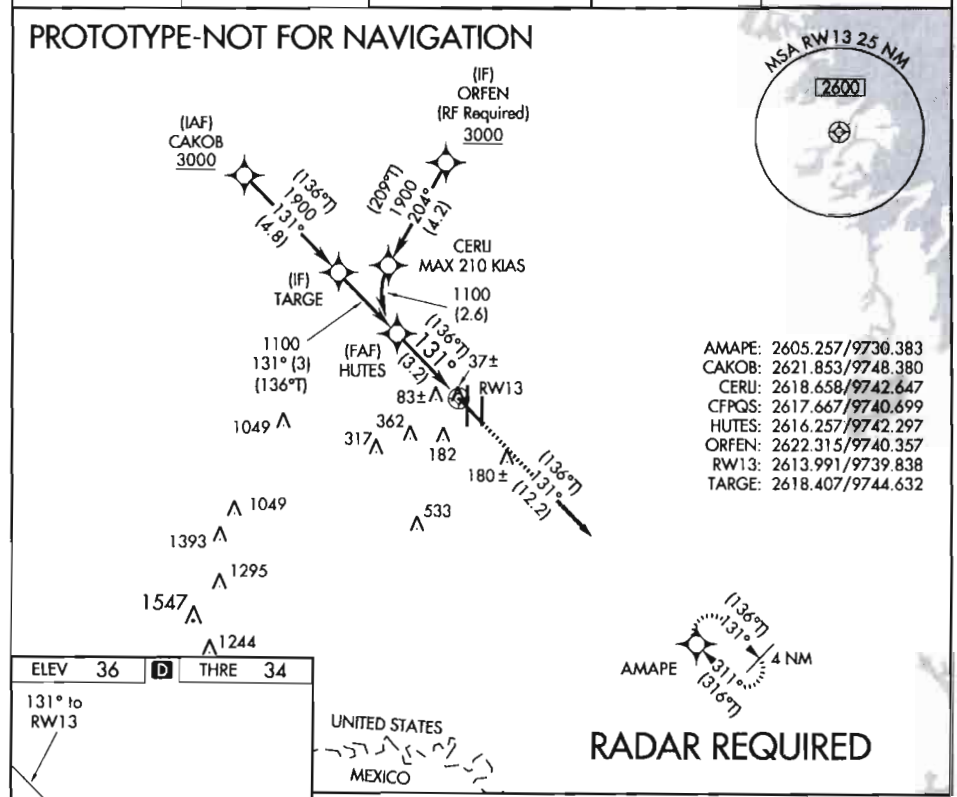
HARLINGEN/VALLEY INTL (HRL)

For uncompensated Baro-VNAV systems, procedure NA below 2°C (36°F) or above 14°C (136°F). GPS required.

MISSED APPROACH: Climb to 2000 on track 131° to AMAPE and hold.

ATIS	VALLEY APP CON	HARLINGEN TOWER ★	GND CON	UNICOM
124.85	120.7 239.0	119.3 (CTAF) 317.6	121.7	122.95

PROTOTYPE-NOT FOR NAVIGATION

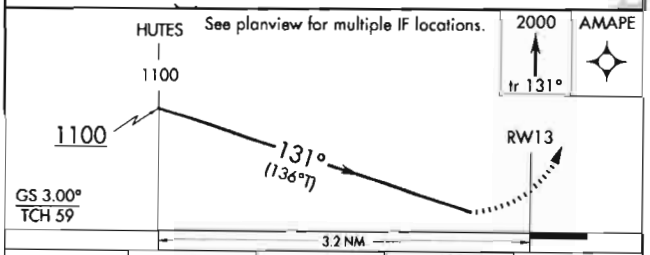


RADAR REQUIRED

ELEV 36	D	THRE 34

131° to RW13

See planview for multiple IF locations.



CATEGORY	A	B	C	D
RNP 0.15 DA	301-⅞ 267 (300-⅞)			
RNP 0.30 DA	392-1⅛ 358 (400-1⅛)			

AUTHORIZATION REQUIRED

HIRL Rwy 17R-35L
REIL Rwys 13 and 17L
MIRL Rwys 13-31 and 17L-35R

NM 7 14 21 28 35 42 49

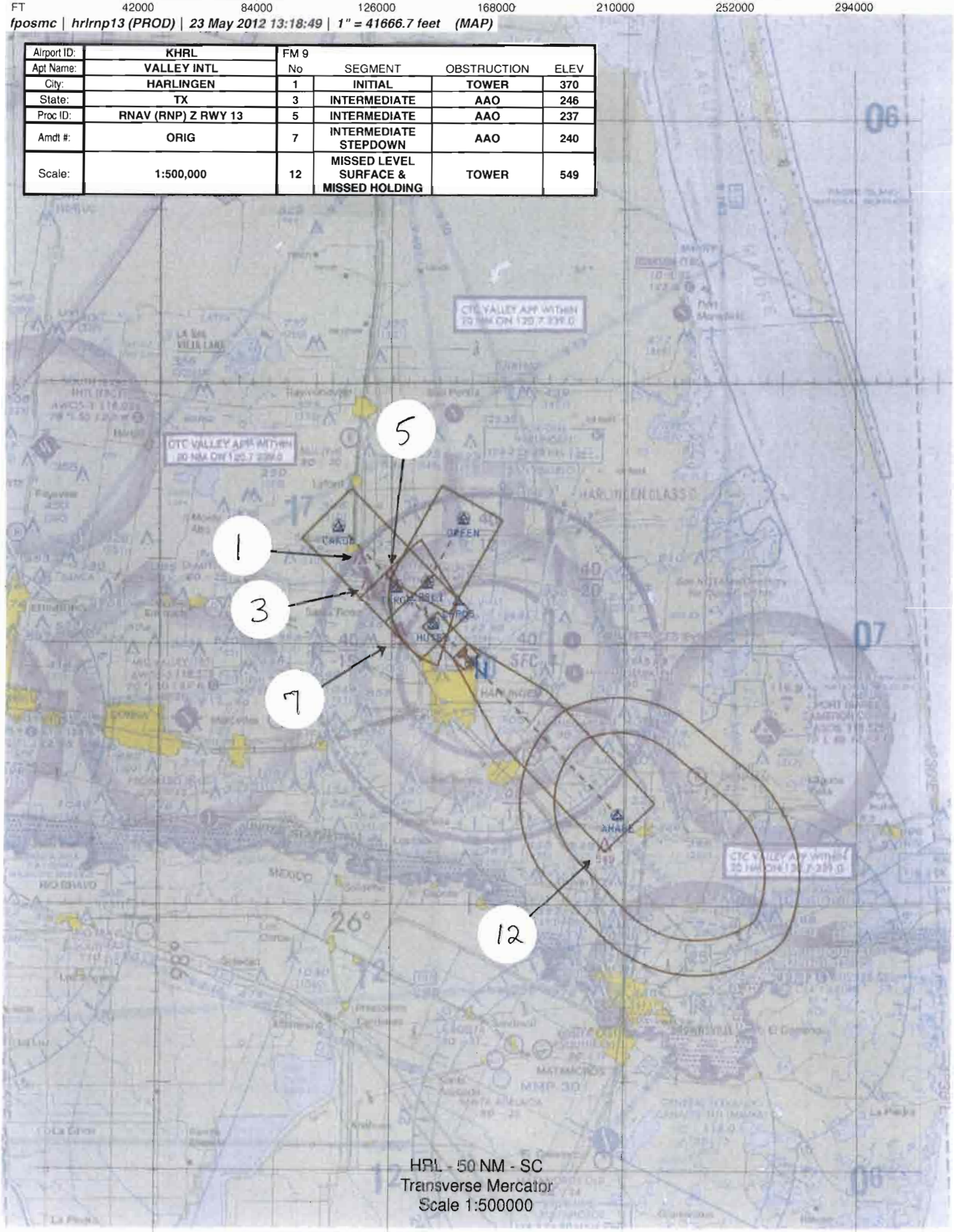
FT 42000 84000 126000 168000 210000 252000 294000

fposmc | hrlrnp13 (PROD) | 23 May 2012 13:18:49 | 1" = 41666.7 feet (MAP)

Airport ID:	KHRL
Apt Name:	VALLEY INTL
City:	HARLINGEN
State:	TX
Proc ID:	RNAV (RNP) Z RWY 13
Amdt #:	ORIG
Scale:	1:500,000

FM 9

No	SEGMENT	OBSTRUCTION	ELEV
1	INITIAL	TOWER	370
3	INTERMEDIATE	AAO	246
5	INTERMEDIATE	AAO	237
7	INTERMEDIATE STEPDOWN	AAO	240
12	MISSED LEVEL SURFACE & MISSED HOLDING	TOWER	549



HRL - 50 NM - SC
Transverse Mercator
Scale 1:500000

NM 1 2 3 4 5 6 7 8 9 10

FT 8000 16000 24000 32000 40000 48000 56000 64000

fposmc | hrlrnp13 (PROD) | 23 May 2012 13:23:09 | 1" = 8333.3 feet (MAP)

Airport ID:	KHRL	FM 9			
Apt Name:	VALLEY INTL	No	SEGMENT	OBSTRUCTION	ELEV
City:	HARLINGEN	10	RNP 0.15 MISSED 40:1 OCS	TANK	191
State:	TX				
Proc ID:	RNAV (RNP) Z RWY 13				
Amdt #:	ORIG				
Scale:	1:100,000				

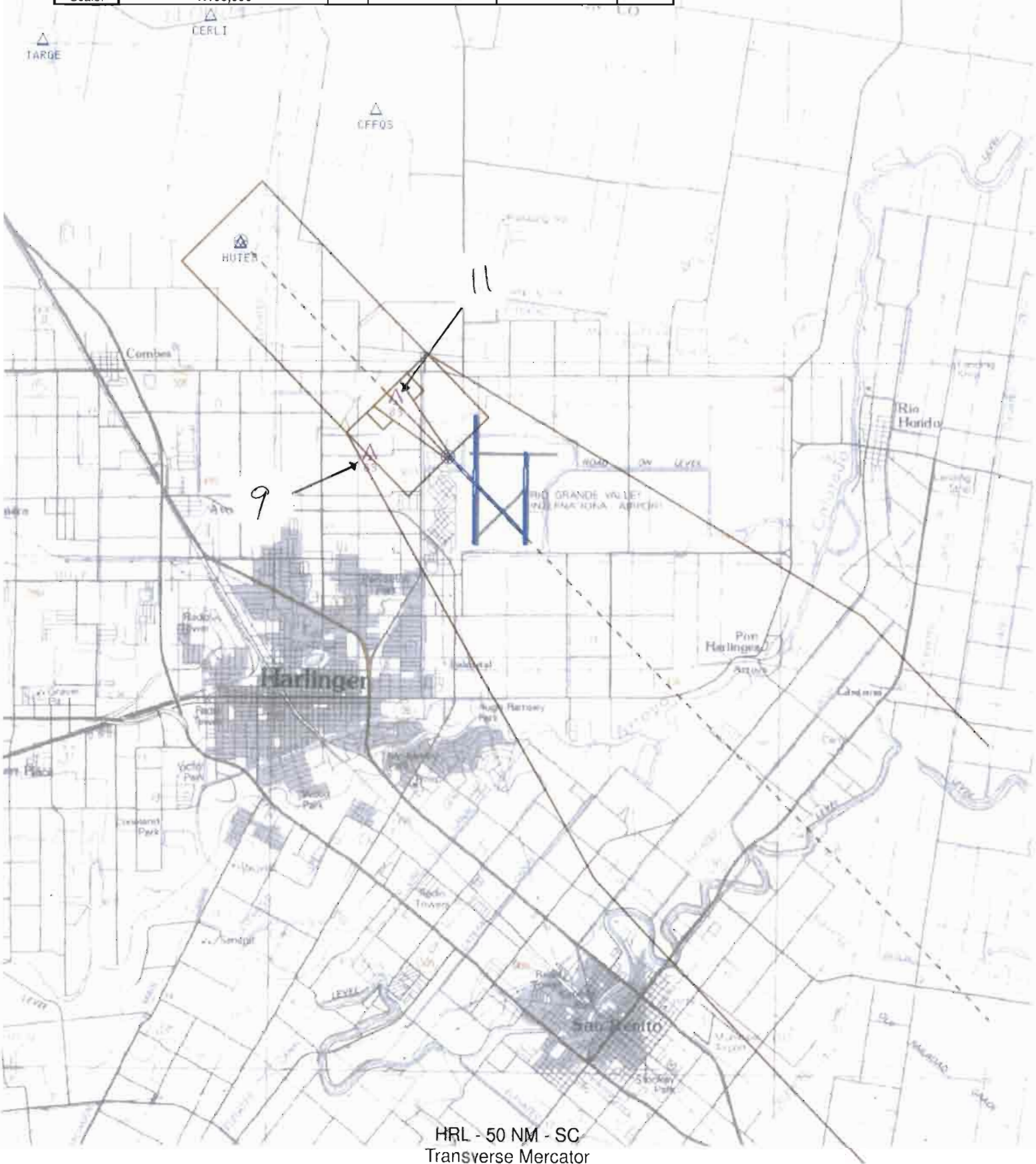
HRL - 50 NM - SC
Transverse Mercator

NM 1 2 3 4 5 6 7 8 9 10

FT 8000 16000 24000 32000 40000 48000 56000 64000

fposmc | hrlrnp13 (PROD) | 23 May 2012 13:23:50 | 1" = 8333.3 feet (MAP)

Airport ID:	KHRL	FM 9			
Apt Name:	VALLEY INTL	No	SEGMENT	OBSTRUCTION	ELEV
City:	HARLINGEN	9	RNP 0.30 FINAL	TREE	83
State:	TX	11	RNP 0.30 MISSED 40:1 OCS	TREE	83
Proc ID:	RNAV (RNP) Z RWY 13				
Amdt #:	ORIG				
Scale:	1:100,000				



HRL - 50 NM - SC
Transverse Mercator

US DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

RNAV (RNP) - 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
CAKOB (IAF)	TARGE (TF) (FB) (RNP 1.00)	130.57 / 4.81	1900
TARGE (IF)	HUTES (TF) (FB) (RNP 1.00)	130.59 / 3.00	1100
ORFEN (IF)	CERLI (TF) (FB) (RNP 1.00)	204.44 / 4.19	1900
CERLI	HUTES (RF) (FB) (RNP 1.00)	(2.01 NM RADIUS CCW CFPQS)/2.59	1100
HUTES (FAF)	RW13 (MAP) (TF) (FO)	130.61 / 3.16	
RW13 (MAP)	AMAPE (TF) (FO) (RNP 1.00)	130.63 / 12.17	2000

MISSED APPROACH

RNP: DA

CLIMB TO 2000 ON TRACK 130.63 TO AMAPE AND HOLD.

1. PT ____ SIDE OF COURSE ____ OUTBOUND ____ FT WITHIN ____ MILES OF ____ (IAF)
2. PROFILE STARTS AT HUTES
3. FAC: 130.61 FAF: ____ DIST FAF TO MAP: ____ THLD: ____
4. MIN. ALT: HUTES 1100
5. DIST TO THLD FROM OM: 3.16 MM: ____ IM: ____ 150 HAT: ____ 100 HAT: ____ GS ANT: ____
6. MIN GS INCPT: 1100 GS ALT AT: HUTES 1100 OM: ____ MM: ____ IM: ____
7. GS ANGLE: 3.00 TCH: 59.0# 34:1 IS NOT CLEAR
8. MSA FROM: RW13 2600

ADDITIONAL FLIGHT DATA:
HOLD SE, RT, 310.70 INBOUND.
CHART FAS OBST: 83 TREE 261357N/0974045W
CHART 37 NAVAID 261358N/0973952W
CHART 35 NAVAID 261401N/0973949W
DISTANCE TO THLD FROM 267 HATH: 0.65 NM.
ROUTE TYPE: A, H
ROUTE TYPE QUALIFIER 1: F
ROUTE TYPE QUALIFIER 2: S
CHART MINIMUM 3000 AT CAKOB
CHART MINIMUM 3000 AT ORFEN
#TCH 93.4 MSL (DO NOT CHART)

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
AUTHORIZATION REQUIRED															
RNP 0.15 DA	301	7/8	267	301	7/8	267	301	7/8	267	301	7/8	267			
RNP 0.30 DA	392	1 1/8	358	392	1 1/8	358	392	1 1/8	358	392	1 1/8	358			

NOTES:
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW 2C (36F) OR ABOVE 54C (130F).
CHART NOTE: GPS REQUIRED.
CHART PLANVIEW NOTE AT CERLI : MAX 210 KIAS.
CHART PLANVIEW NOTE: RADAR REQUIRED.
(SEE FORM 8260-10)

CITY AND STATE	ELEVATION: 36 THRE: 34	FACILITY IDENTIFIER:	PROCEDURE NO./AMDT NO./EFFECTIVE DATE:	SUP:
HARLINGEN, TX	AIRPORT NAME: VALLEY INTL	RNAV	RNAV (RNP) Z RWY 13, 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] **ZHU, VALLEY APP CON, HRL ATCT, AMGR**

FLIGHT CHECKED BY

NAME:	FIFO	DATE:

DEVELOPED BY

NAME:	FIFO	DATE:
SCOTT M. CORY	**AJV-353**	**04/15/2012**

APPROVED BY

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

CHANGES:

1. ORIGINAL PROCEDURE.

REASONS:

1. FPT REQUEST.

QUALITY CHECKED

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NOTES, (CONT.):
CHART PLANVIEW NOTE ADJACENT TO ORFEN: RF REQUIRED.
CHART PROFILE NOTE: SEE PLANVIEW FOR MULTIPLE IF LOCATIONS.

QUALITY CHECKED

CITY AND STATE	ELEVATION: 36 THRE: 34	FACILITY IDENTIFIER:	PROCEDURE NO./ AMDT NO./EFFECTIVE DATE:	SUP:
HARLINGEN, TX	AIRPORT NAME: VALLEY INTL	RNAV	RNAV (RNP) Z RWY 13, 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

RNAV (RNP) 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 (RNP)

                 1         2         3         4         5         6         7         8         9         0         1         2         3
WP      123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAEAENRT   AMAPE K40    W     N26051540W097302296                        E0044     NAR           AMAPE
        SUSAEAENRT   CAKOB K40    W     N26215116W097482279                        E0045     NAR           CAKOB
        SUSAEAENRT   CERLI K40    W     N26183946W097423881                        E0045     NAR           CERLI
        SUSAEAENRT   CFPQS K40    W     N26174003W097404193                        E0045     NAR           CNF(CFPQS)
        SUSAEAENRT   HUTES K40    W     N26161542W097421783                        E0045     NAR           HUTES
        SUSAEAENRT   ORFEN K40    W     N26221890W097402140                        E0044     NAR           ORFEN
        SUSAEAENRT   TARGE K40    W     N26182441W097443794                        E0045     NAR           TARGE

                 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 KHRLK4FH13-Z ACAKOB 010CAKOBK4EA0E  A    IF                                + 03000     18000                 A FS
        SUSAP KHRLK4FH13-Z ACAKOB 020TARGEK4EA0E  B 010TF                                + 01900                           A FS
        SUSAP KHRLK4FH13-Z ACAKOB 030HUTESK4EA0EE   010TF                                + 01100                           A FS
        SUSAP KHRLK4FH13-Z AORFEN 010ORFENK4EA0E  B    IF                                + 03000     18000                 A FS
        SUSAP KHRLK4FH13-Z AORFEN 020CERLIK4EA0E    010TF                                + 01900          210              A-FS
        SUSAP KHRLK4FH13-Z AORFEN 030HUTESK4EA0EE  L010RF       0020102044    13060026   + 01100                 CFPQS K4EAA FS
        SUSAP KHRLK4FH13-Z H      020HUTESK4EA1E  F    IF                                + 01100     18000       RW13  K4PGA FS
        SUSAP KHRLK4FH13-Z H      020HUTESK4EA2W                                              A031A152                      FS
        SUSAP KHRLK4FH13-Z H      030RW13 K4PG0GY M 031TF                                  00093             -300          A FS
        SUSAP KHRLK4FH13-Z H      040AMAPEK4EA0EYM  010TF                                + 02000                           A FS
        SUSAP KHRLK4FH13-Z H      050AMAPEK4EA0EE  R   HM                     31070040   + 02000                           A FS

                 1         2         3         4         5         6         7         8         9         0         1         2         3
RUNWAY  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KHRLK4GRW13    0072571306 N26135947W097395028+0000    -0012300034000059150R

                 1         2         3         4         5         6         7         8         9         0         1         2         3
MSA     123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KHRLK4SRW13 K4PG                0   18018002625                                                                    M
```

QUALITY 4 CHECKED

CITY AND STATE	ELEVATION: 36 THRE: 34	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
HARLINGEN, TX	AIRPORT NAME: **VALLEY INTL**	**RNAV**	**RNAV (RNP) Z RWY 13, 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:	NFPG	DATE:
APPROVED BY		
NAME:	NFPG	DATE:

CHANGES:

REASONS:

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ARINC SUMMARY - 424-18 - RNAV (RNP)

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	CAKOB	CAKOB	010	IAF	IF		FB				AA 03000	
	CAKOB	TARGE	020		TF		FB	1.0			AA 01900	
	CAKOB	HUTES	030		TF		FB	1.0			AA 01100	
	ORFEN	ORFEN	010		IF		FB				AA 03000	
	ORFEN	CERLI	020		TF		FB	1.0			AA 01900	AB 210
	ORFEN	HUTES	030		RF	L	FB	1.0		002.6	AA 01100	
		HUTES	020	FAF	IF		FB				AA 01100	
		RW13	030	MAP	TF		FO	0.3			AT 00093	

MISSED APPROACH	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	AMAPE	040		TF		FO	1.0			AA 02000	
	AMAPE	050		HM	R	FO		310.7(315.7T)	004.0	AA 02000	

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	AMAPE	N260515.40	W0973022.96	N2605.257	W09730.383
	CAKOB	N262151.16	W0974822.79	N2621.853	W09748.380
	CERLI	N261839.46	W0974238.81	N2618.658	W09742.647
	CFPQS	N261740.03	W0974041.93	N2617.667	W09740.699
	HUTES	N261615.42	W0974217.83	N2616.257	W09742.297
	ORFEN	N262218.90	W0974021.40	N2622.315	W09740.357
	TARGE	N261824.41	W0974437.94	N2618.407	W09744.632
	RW13	N261359.47	W0973950.28	N2613.991	W09739.838

RUNWAY DATA	RWY	THRESHOLD ELEVATION	TCH
	RW13	00034	59

QUALITY CHECKED 4

CITY AND STATE	ELEVATION: 36 THRE: 34	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
HARLINGEN, TX	AIRPORT NAME: VALLEY INTL	RNAV	RNAV (RNP) Z RWY 13, 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:	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	CAKOB	TARGE	1. TOWER (48-010189)	261939.42N/0974700.09W	370 (5D)	1000	AC50 AT480	1900
(RNP 1.00)			2. TERRAIN	261827.00N/0974624.00W	49 (0)		AS1500	1500
INTERMEDIATE	TARGE	HUTES	3. AAO	261812.00N/0974630.00W	246 (4C)	500	AC20 AT334	1100
(RNP 1.00)			4. TERRAIN	261803.00N/0974624.00W	46 (0)		AS1000	1000
INTERMEDIATE	ORFEN	CERLI	5. AAO	261842.00N/0974500.00W	237 (4C)	500	AC20 AT1143	1900
(RNP 1.00)			6. TERRAIN	261845.00N/0974503.00W	36 (0)		AS1500	1500
INTERMEDIATE: STEPDOWN	CERLI	HUTES	7. AAO	261527.00N/0974427.00W	240 (4C)	500	AC20 AT340	1100
(RNP 1.00)			8. TERRAIN	261503.00N/0974403.00W	39 (0)		AS1000	1000
FINAL: RNP 0.15	HUTES	RW13				ASC	MA17	301/267
FINAL: RNP 0.30	HUTES	RW13	9. TREE	261357.00N/0974045.00W	83 (4C)	20.09:1	AC20 MA50	392/358
MISSED APPROACH	DA	RW13	10. TANK (48-004834)	261325.00N/0973953.00W	191 (2B)	ASC	AC10	
(RNP 0.15-1.00)		(40:1)						
MISSED APPROACH	DA	RW13	11. TREE	261433.00N/0974027.00W	83 (4C)	ASC	AC20	
(RNP 0.30-1.00)		(40:1)						
3. MISSED APPROACH — MAP:								
ELEV:								

4. CIRCLING AREA	DISTANCE	HT. ABV. ARPT. REQUIRED	HT. ABV. ARPT. 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: **RW13**

SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A	SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A
360-360	TWR (48-004005)	225/ 21.0	1547 (1A)	2600					

CITY AND STATE		FACILITY	PROCEDURE AND AMENDMENT NO:	REGION
HARLINGEN, TX	ELEVATION: 36 AIRPORT NAME: VALLEY INTL	RNAV	RNAV (RNP) Z RWY 13, ORIG	ASW

PART B - SUPPLEMENTAL DATA

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

4. MONITOR STATUS	PRIMARY NAVAID:	
	MONITOR POINT:	
	HRS OPTN: CAT 1	
	HRS OPTN: 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: 34.4
	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: NONE

PART D - PREPARED BY: SCOTT M. CORY	DATE: 04/15/2012
TITLE: AERONAUTICAL INFORMATION SPECIALIST	OFFICE: AJV-353

PART C - REMARKS:

MAX SPEED CERLI TO HUTES - 210 KIAS.

PARA 251, 34:1 PENETRATION.

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

3. KHRL ASOS ON SERVICE A.

SEE ATTACHED AIRSPACE LETTER.

AUTHORIZATION REQUIRED (AR). FAAO 8260.52 CRITERIA USED; IPDS USED FOR PROCEDURE EVALUATION.

BARO-VNAV NA BELOW 2C (36F) OR ABOVE 54C (130F).
BARO-VNAV HIGH TEMP COMPUTED USING AFS CALCULATOR

ISA DEVIATION USED: -12.93C (8.73F)
AVERAGE COLD TEMPERATURE BASED ON 5-YEAR HISTORY (2006-2010); ACT: 2C.

ORDER 8260.3, VOLUME 1, "VISUAL PORTION OF FINAL" PENETRATIONS:
34:1 72 TREE (KHRLT0049) (20/3) 261403.36N/0974002.45W (16.02)
34:1 69 TREE (KHRL0003) (20/3) 261403.22N/0974001.45W (15.19);
CAT C/D ONLY

37 MSL NAVAID (KHRLT0041) 261358.46N/0973952.25W PENETRATES RNP VISUAL OIS BY 4.14'; 35 MSL NAVAID (KHRLT0040) 261400.76N/0973949.43W PENETRATES VISUAL OIS BY 2.94'; OBSTACLES CHARTED IAW FAAO 8260.52 PARA 3.6.

POFZ PENETRATIONS:
37 NAVAID (KHRLT0041) (20/3) 261358.46N/0973952.25W (5.60)
35 NAVAID (KHRLT0040) (20/3) 261400.76N/0973949.43W (3.60)
DUE TO POFZ PENETRATIONS, PROCEDURE LIMITED TO 250' HATH AND 3/4 SM VIS.

PROCEDURE ENTRY TRANSITIONS NOT CONNECTED TO ENOUTE STRUCTURE PER AIR TRAFFIC/LEAD CARRIER REQUEST; RADAR REQUIRED FOR PROCEDURE ENTRY.

PROCEDURE ENTRY INITIAL SEGMENTS (AT CAKOB AND ORFEN) EVALUATED FOR MINIMUM SEGMENT LENGTH FOR WORST-CASE 90 DEGREE TURN (RADAR VECTORS); SEGMENT LENGTHS MEET CRITERIA IAW AFS MEMO DATED 2/6/2012 (PERFORMANCE BASED NAVIGATION (PBN) INSTRUMENT PROCEDURE MINIMUM SEGMENT LENGTH STANDARD); SEGMENT LENGTHS ALSO GREATER THAN DTA.

210 KIAS MAX USED IN INTERMEDIATE RF SEGMENT (CERLI-HUTES) PER FPT/LEAD CARRIER REQUEST TO REDUCE TURN RADIUS AND MAINTAIN LESS THAN 25 DEGREE BANK ANGLE IAW AFS MEMO DATED 10/3/2011.

50' VEGETATION USED PER FPT AND EXISTING PROCEDURES.

VEB DATA: SEE ATTACHED SPREADSHEETS.

MISSED APPROACH: FAAO 8260.52 PARA 4.2 (STANDARD RNP MA); IPDS USED FOR EVALUATION.

RF SEGMENT RADIUS/BANK ANGLE COMPUTATIONS:

SEGMENT	ALT	KIAS	KTAS	HAA	VKTW	TR	BA
CERLI-HUTES	1900	210	221.6	1863.7	30*	2.01	24.65

*VKTW OBTAINED IAW AFS MEMO DATED 10/3/2011.

CHECKED
QUALITY

STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD

PART - A OBSTRUCTION DATA

1. APP SEGMENT	FROM	TO	OBSTRUCTION	COORDINATES	ELEV. MSL	ROC	ALT. ADJUSTMENTS	MIN. ALT.
MISSED APPROACH	RW13	AMAPE				ASC		
(RNP 0.15-1.00)		(40:1)						
MISSED APPROACH	RW13	AMAPE				ASC		
(RNP 0.30-1.00)		(40:1)						
MISSED APPROACH	DA/DA	AMAPE				ASC		2000
(RNP 1.00)		LEVEL SURFACE	12. TOWER (48-007992)	260303.00N/0973111.00W	549 (5D)	1000	AC50	1600
ELEV:	69/103	AIRSPACE	13. TERRAIN	261012.00N/0973543.00W	39 (0)		AS1500	1500

3. MISSED APPROACH									
	MAP:								
	ELEV:								

4. CIRCLING AREA	DISTANCE	HT. ABV. ARPT.								
CATEGORY A	1.3 NM	REQUIRED	350	ACTUAL						
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

CITY AND STATE		FACILITY	PROCEDURE AND AMENDMENT NO:	REGION
HARLINGEN, TX	ELEVATION: 36 AIRPORT NAME: VALLEY INTL	RNAV	RNAV (RNP) Z RWY 13, ORIG	ASW

PART B - SUPPLEMENTAL DATA

1. COMMUNICATIONS WITH:	2. WEATHER SERVICE			3. ALTIMETER SETTING
SATISFACTORY ON:		N W S	OTHER:	SOURCE:
		F A A		DISTANCE:
		A / C		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:

RADIO FIX AND HOLDING DATA RECORD

NAME: AMAPE **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 260515.40N/0973022.96W **TYPE:** WP

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

HOLDING: **HOLDING TYPE OF ACTION:** MODIFY

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	130.70	310.70	R		4	2000	6000	4	6

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (48-007992)	260303.00N/0973111.00W	549	5D

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERN.

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (GPS) Y RWY 13		1	KHRL	HARLINGEN	TX (US)
IAP	RNAV (GPS) Y RWY 31		1	KHRL	HARLINGEN	TX (US)
IAP	RNAV (RNP) Z RWY 13		1	KHRL	HARLINGEN	TX (US)
IAP	RNAV (RNP) Z RWY 31			KHRL	HARLINGEN	TX (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

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

REASON FOR REVISION:
DELETED FAC 1.
UPDATED HOLDING PAT 1 MAX TEMPLATE FROM 7 TO 6.
UPDATED HOLDING PAT 1 CONTROLLING OBSTRUCTION ID.
MOVED HOLDING LIMITED NOTE FROM REMARKS TO HOLDING RESTRICTIONS.
CONDUCTED/DOCUMENTED PRECIPITOUS TERRAIN EVALUATION.
UPDATED FIX USE.

DEVELOPED BY: **DATE:** 04/04/2012 **OFFICE:** AJV-353 **NAME:** SCOTT CORY

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZHU
ATC FACILITY: HRL ATCT
OTHER: VALLEY APP CON

CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: CAKOB **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 262151.16N/0974822.79W **TYPE:** WP

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

HOLDING: **HOLDING TYPE OF ACTION:** MODIFY

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	NW		WP	310.57	130.57	R		4	2000	6000	4	6

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (48-004396)	262518.00N/0974641.00W	534	5D

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERN.

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (GPS) Y RWY 13		1	KHRL	HARLINGEN	TX (US)
IAP	RNAV (GPS) Y RWY 31		1	KHRL	HARLINGEN	TX (US)
IAP	RNAV (RNP) Z RWY 13			KHRL	HARLINGEN	TX (US)
IAP	RNAV (RNP) Z RWY 31		1	KHRL	HARLINGEN	TX (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

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

REASON FOR REVISION:
DELETED FAC 1.
UPDATED HOLDING PAT 1 MAX TEMPLATE FROM 7 TO 6.
UPDATED HOLDING PAT 1 CONTROLLING OBSTRUCTION ID.
MOVED HOLDING LIMITED NOTE FROM REMARKS TO HOLDING RESTRICTIONS.
CONDUCTED/DOCUMENTED PRECIPITOUS TERRAIN EVALUATION.
UPDATED FIX USE.

DEVELOPED BY: **DATE:** 04/04/2012 **OFFICE:** AJV-353 **NAME:** SCOTT CORY

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

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: CEN
ARTCC: ZHU
ATC FACILITY: HRL ATCT
OTHER: VALLEY APP CON

QUALITY 1 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: CERLI **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 261839.46N/0974238.81W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (RNP) Z RWY 13			KHRL	HARLINGEN	TX (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

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

DEVELOPED BY: **DATE:** 04/04/2012 **OFFICE:** AJV-353 **NAME:** SCOTT CORY

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZHU
ATC FACILITY: VALLEY APP CON, HRL ATCT
OTHER:

QUALITY 1 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: CFPQS **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 261740.03N/0974041.93W **TYPE:** CNF

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (RNP) Z RWY 13			KHRL	HARLINGEN	TX (US)

COMPULSORY REPORTING POINT: NO

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

DEVELOPED BY: **DATE:** 04/04/2012 **OFFICE:** AJV-353 **NAME:** SCOTT CORY

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZHU
ATC FACILITY: VALLEY APP CON, HRL ATCT
OTHER:

CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: HUTES **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 261615.42N/0974217.83W **TYPE:** WP

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

REMARKS:
PFAF LOCATION ESTABLISHED WITH 8260.54A FORMULA 2-16B.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (RNP) Z RWY 13			KHRL	HARLINGEN	TX (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

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

DEVELOPED BY: **DATE:** 04/04/2012 **OFFICE:** AJV-353 **NAME:** SCOTT CORY

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZHU
ATC FACILITY: VALLEY APP CON, HRL ATCT
OTHER:

RADIO FIX AND HOLDING DATA RECORD

NAME: ORFEN **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 262218.90N/0974021.40W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (RNP) Z RWY 13			KHRL	HARLINGEN	TX (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

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

DEVELOPED BY: **DATE:** 04/04/2012 **OFFICE:** AJV-353 **NAME:** SCOTT CORY

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZHU
ATC FACILITY: VALLEY APP CON, HRL ATCT
OTHER:

QUALITY CHECK

RADIO FIX AND HOLDING DATA RECORD

NAME: TARGE **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 261824.41N/0974437.94W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (RNP) Z RWY 13			KHRL	HARLINGEN	TX (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

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

DEVELOPED BY: **DATE:** 04/04/2012 **OFFICE:** AJV-353 **NAME:** SCOTT CORY

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZHU
ATC FACILITY: VALLEY APP CON, HRL ATCT
OTHER:

QUALITY CHECKED

TERMINAL AIRSPACE DATA REQUIREMENTS

CITY: **HARLINGEN** STATE: **TX**

AIRPORT NAME: **VALLEY INTL** ID: **KHRL**

PROCEDURE: **RNAV (RNP) Z RWY 13** 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 **2.85**
   (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 **135.61**
4. High Terrain in **FINAL** segment containing 1000' point **33**
5. Distance from **THLD** to 1500' point **4.42**
   (If 1500' point in PT maneuvering area or holding pattern note in remarks)
6. Width of **INTERMEDIATE** segment at 1500' point **4.00**
7. True Course of **INTERMEDIATE** segment containing 1500' point **135.59**
8. High Terrain in **INTERMEDIATE** segment containing 1500' point **46**
9. Threshold Coordinates (if straight-in) ... **261359.47N** / **0973950.28W**
10. ARP Coordinates ..... **261337.60N** / **0973918.50W**
11. Runway Approach End and distance furthest from ARP ..... RWY **17R**
    Distance **0.82** NM
12. FAF Coordinates ..... **261615.42N** / **0974217.83W**

REMARKS: Approach/Drawing attached.

***1500' POINT LOCATED/DOCUMENTED IN STRAIGHT INTERMEDIATE SEGMENT TARGE-HUTES); RF INTERMEDIATE SEGMENT (CERLI-HUTES) ALSO CONTAINS 1500' POINT BUT IS FULLY CONTAINED WITHIN STRAIGHT INTERMEDIATE SEGMENT AREA.**

Do not remove from package.

PFAF Calculations

Min Intermediate Segment Alt (a):	
LTP MSL Elevation (b):	
TCH:	
Glidepath Angle (Θ):	
Distance from LTP to PFAF (D):	0.00
	0.00 NM
LTP/FTP Latitude:	
LTP/FTP Longitude:	
True RWY Bearing/True Course:	
PFAF Latitude:	000° 00' 00.00"
PFAF Longitude:	000° 00' 00.00"

Latitude/Longitude valid for straight segment only

VEB OCS Origin & Slope

Intermediate Segment Altitude:	1100
LTP Elevation:	34.4
Glidepath Angle:	3
TCH:	59
RNP Value:	0.30
Δ ISA:	-12.93
Straight In Segment	
(*Wingspan =<262*) LTP to Origin:	3,371.20'
(*Wingspan =<136*) LTP to Origin:	3,170.27'
OCS Slope Ratio:	20.09 : 1
RF Turn Segment | Bank angle:	
(*Wingspan =<262*) LTP to Origin:	NA
(*Wingspan =<136*) LTP to Origin:	NA
OCS Slope Ratio:	NA

Version 2.0

VEB Temperature Limits

Glidepath Angle:	3.00°	
Max Glidepath Angle:	3.50°	
PFAF Elevation:	1100	
LTP Elevation:	34.4	
ACT:	2.00°C	
Min Glidepath Angle	2.96°	
NA Below	2.00°C	35.60°F
NA Above	47.72°C	117.90°F

Intermediate Segment VEB ROC

Glidepath Angle	3.00°
LTP MSL Elevation	34.40
TCH (ft)	59.00
OCS Slope	20.09
OCS Origin Distance (ft) *(measured along-track from LTP)*	3,371.20
Obstacle Distance (ft) *(measured along-track from LTP)*	43,691.99
VEB ROC *(at obstacle)*	**349**
Glidepath MSL altitude at Obstacle	2,428.94
OCS MSL altitude at Obstacle	2,080.36

TARGE

~~SECRET~~ - HUTES

PFAF Calculations

Min Intermediate Segment Alt (a):	
LTP MSL Elevation (b):	
TCH:	
Glidepath Angle (Θ):	
Distance from LTP to PFAF (D):	**0.00**
	0.00 NM
LTP/FTP Latitude:	
LTP/FTP Longitude:	
True RWY Bearing/True Course:	
PFAF Latitude:	**000° 00' 00.00"**
PFAF Longitude:	**000° 00' 00.00"**

Latitude/Longitude valid for straight segment only

VEB OCS Origin & Slope

Intermediate Segment Altitude:	1100
LTP Elevation:	34.4
Glidepath Angle:	3
TCH:	59
RNP Value:	0.15
Δ ISA:	-12.93
Straight In Segment	
(*Wingspan =<262*) LTP to Origin:	**2,311.04'**
(*Wingspan =<136*) LTP to Origin:	**2,109.88'**
OCS Slope Ratio:	**20.12 : 1**
RF Turn Segment | Bank angle:	
(*Wingspan =<262*) LTP to Origin:	**NA**
(*Wingspan =<136*) LTP to Origin:	**NA**
OCS Slope Ratio:	**NA**

Version 2.0

VEB Temperature Limits

Glidepath Angle:	3.00°	
Max Glidepath Angle:	3.50°	
PFAF Elevation:	1100	
LTP Elevation:	34.4	
ACT:	2.00°C	
Min Glidepath Angle	**2.96°**	
NA Below	**2.00°C**	**35.60°F**
NA Above	**47.72°C**	**117.90°F**

Intermediate Segment VEB ROC

Glidepath Angle	3.00°
LTP MSL Elevation	34.40
TCH (ft)	59.00
OCS Slope	20.12
OCS Origin Distance (ft) *(measured along-track from LTP)*	2,311.04
Obstacle Distance (ft) *(measured along-track from LTP)*	43,691.99
VEB ROC *(at obstacle)*	**297**
Glidepath MSL altitude at Obstacle	2,428.94
OCS MSL altitude at Obstacle	2,132.14