

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
RNAV (GPS) STANDARD INSTRUMENT APPROACH PROCEDURE
TITLE 14 CFR PART 97.33

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

<u>AIRPORT</u> BROWNWOOD RGNL	<u>AIRPORT ID</u> KBWD	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 35	<u>ORIGINAL/AMENDMENT</u> 1A	<u>CITY</u> BROWNWOOD	<u>STATE</u> TX
<u>AIRPORT ELEVATION</u> 1387	<u>TDZE</u> 1386	<u>SUPERSEDED</u> RNAV (GPS) RWY 35	<u>ORIGINAL/AMENDMENT</u> 1	<u>DATED</u> 08/04/2005	<u>MAG VAR</u> 4E
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL SUSPEND</u>	<u>EPOCH YEAR</u> 2020

TAA

<u>FROM</u>	<u>FIX TYPE</u>	<u>TO</u>	<u>FIX TYPE</u>	<u>ALTITUDE</u>
1. 265/30 CW 085/30	NOPT	PEQIS	IF/IAF	4000
2. 085/30 CW 175/30		FICCU	IAF	4000
3. 175/30 CW 265/30		OKUTY	IAF	4000

TERMINAL ROUTES

<u>FROM</u>	<u>FIX TYPE</u>	<u>TO</u>	<u>FIX TYPE</u>	<u>LEG TYPE</u>	<u>FO/FB</u>	<u>RNP</u>	<u>COURSE</u>	<u>DISTANCE</u>	<u>ALTITUDE</u>
FICCU	IAF	PEQIS	NOPT	TF	FB	1.00	085.31	5.00	4000
OKUTY	IAF	PEQIS	NOPT	TF	FB	1.00	265.41	5.00	4000
PEQIS	IF/IAF	IWAHU		TF	FB	1.00	355.36	6.25	3000
IWAHU	FAF	HOVAS/2.40 NM TO RW35		TF	FB	0.30	355.36	2.51	
HOVAS/2.40 NM TO RW35		RW35	MAP	TF	FO	0.30	355.36	2.40	
RW35	MAP	1636 MSL		CA			355.36		
1636 MSL		MUSRE		DF	FO	1.00			4000

MISSED APPROACH

MAP:

LPV: DA
 LNAV: RW35

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 4000 DIRECT MUSRE AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)
2. HOLD S PEQIS, RT, 355.36 INBOUND, 4000 FT. IN LIEU OF PT (IAF), MAX 10000.
3. FAC: 355.36 FAF: IWAHU DIST FAF TO MAP: 4.91 DIST FAF TO THLD: 4.91
4. MIN ALT: PEQIS 4000, IWAHU 3000, HOVAS/2.40 NM TO RW35 2180*
5. DIST TO THLD FROM OM: MM: IM: 150 HAT: 250 HAT: 0.69
6. MIN GP INCPT: 3000 GP ALT AT FAF : IWAHU 3000 OM: MM: IM:
7. GP ANGLE: 3.00 34:1: IS NOT CLEAR 20:1: IS CLEAR TCH: 45.0
8. MSA FROM:

PBN EQUIPMENT REQUIREMENTS NOTES

RNP APCH.

NOTES:

CHART NOTE: RWY 35 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.

ADDITIONAL FLIGHT DATA:

CHART: 1560 TOWER 314446N/0985702W
CHART VDP AT 1.13 NM TO RW35*
*LNAV ONLY
WAAS CHANNEL #77525
REFERENCE PATH ID: W35A
CHART FAS OBST: 1492 TOWER 314625N/0985659W.
HOLD N, RT, 175.36 INBOUND
LTP HAE: 391.5 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD

CATEGORY:	A			B			C			D			E		
FINAL TYPE	DA/MDA	VIS	HAT/HAA	DA/MDA	VIS	HAT/HAA	DA/MDA	VIS	HAT/HAA	DA/MDA	VIS	HAT/HAA	DA/MDA	VIS	HAT/HAA
LPV DA	1636	1	250	1636	1	250	1636	1	250	1636	1	250			
LNAV MDA	1780	1	394	1780	1	394	1780	1 1/8	394	1780	1 1/4	394			
CIRCLING	1840	1	453	1840	1	453	1840	1 1/8	453	1940	2	553			



CHANGES - REASONS

- 1. ADDED CHART NOTE: RWY 35 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED - 34:1 VISUAL SURFACE PENETRATIONS EXIST.
- 2. ADDED 20:1 IS CLEAR TO LINE 7 - IAW 8260.19H PARA 8-6-7G(3).
- 3. CRC REMAINDER CHANGED FROM 744C0542 TO 36D7CF0C - LTP ELLIPSOIDAL HEIGHT CHANGED FROM +03914 TO +03915.
- 4. MOVED ALTIMETER SETTING NOTE AND ASSOCIATED NOTES TO THE BACK OF THE 8260-9; REMOVED STANDARD @ AND @ NA WHEN LOCAL WEATHER NOT AVAILABLE - KBWD ON WMSCR, BACKUP ALTIMETER SETTING NOTE CAN BE REMOVED AND MOVED TO THE 8260-9 FOR CONTINGENCY PURPOSES - ASOS/AWOS THAT TRANSMIT ON WMSCR DO NOT REQUIRE A PUBLISHED BACKUP ALTIMETER SOURCE.
- 5. DELETED NOTE: DME/DME RNP-0.3 NA; ADDED PBN REQUIREMENTS NOTE: RNP APPCH - IAW 9/12/17 MEMO SUBJECT: IMPLEMENTATION OF FAA ORDER 8260.19H FLIGHT PROCEDURE AND AIRSPACE.
- 7. LTP CHANGED FROM 314840.6700N/0985718. 7300W TO 314711.3900N/0985717.5570W - FROM AIRNAV.
- 8. UPDATED FAS OBST FROM 1593 TOWER, AND ADDED CHART OBST 1560 TOWER (7:1) - OBSTACLE DATABASE UPDATED.
- 9. RAISED LNAV CAT C VISIBILITY FROM 1 SM TO 1 1/8 SM - OBSTACLE DATABASE UPDATED.
- 10. INCREASED ALL COURSES/HEADINGS BY 4 DEGREES - KBWD MAG VAR CHANGED FROM 8E/1980 TO 4E/2020.

PDF EDIT:
ADDED XP38: MAINTAIN CURRENT MDA TO SEGMENT REMARKS - LNAV STEPDOWN.



<u>AIRPORT</u> BROWNWOOD RGNL	<u>AIRPORT ID</u> KBWD	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 35	<u>ORIGINAL/AMENDMENT</u> 1A	<u>CITY</u> BROWNWOOD	<u>STATE</u> TX
<u>COORDINATED WITH:</u>					
A4A <input type="checkbox"/> ALPA <input checked="" type="checkbox"/> AOPA <input checked="" type="checkbox"/> APA <input type="checkbox"/> HAI <input type="checkbox"/> NBAA <input checked="" type="checkbox"/> <u>OTHER:</u> ZFW, ST. AV. DIR., AMGR, ATA					
<u>FLIGHT CHECKED BY</u>			<u>OFFICE</u>	<u>DATE</u>	
<u>DEVELOPED BY</u>			<u>OFFICE</u>	<u>DATE</u>	
MIKE MELSSEN			AJV-5412	11/16/2017	
<u>APPROVED BY</u>			<u>OFFICE</u>	<u>DATE</u>	<u>TITLE</u>
GEORGE DAVIS			AJV-5410		MANAGER



FAS DATA BLOCK INFORMATION

DATA FIELD	DATA
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KBWD
RUNWAY	RW35
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W35A
LTP/FTP LATITUDE	314711.3900N
LTP/FTP LONGITUDE	0985717.5570W
LTP/FTP ELLIPSOIDAL HEIGHT	+03915
FPAP LATITUDE	314840.6700N
FPAP LONGITUDE	0985718.7300W
THRESHOLD CROSSING HEIGHT (TCH)	00045.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1040
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	03C1AFD3
ADDITIONAL PATH POINT RECORD INFORMATION	
ICAO CODE	K4
LTP ORTHOMETRIC HEIGHT	+04176
FPAP ORTHOMETRIC HEIGHT	+04176



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

<u>AIRPORT</u> BROWNWOOD RGNL	<u>AIRPORT ID</u> KBWD	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 35	<u>AMDT NO.</u> 1A	<u>CITY</u> BROWNWOOD	<u>STATE</u> TX	<u>AIRPORT ELEVATION</u> 1387	<u>FACILITY</u> RNAV
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PART A: OBSTRUCTION DATA SEGMENTS

STRAIGHT-IN AREA

FROM
265/30 CW 085/30

TO
PEQIS

RNP

DISTANCE

PAT

MAP

HAT

HMAS

<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
1.TOWER (44-5789)	311525.00N/0992336.00W	2423	500	50	5D	1000				AT577	4000
2.TERRAIN	311448.00N/0991815.00W	1989 (2000)								AS1500	3500

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT
REMARKS:

LEFT BASE AREA

FROM
085/30 CW 175/30

TO
FICCU

RNP

DISTANCE

PAT

MAP

HAT

HMAS

<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
3.TOWER (44-3209)	314455.00N/0991958.00W	2468	50	20	2C	1000				AT532	4000
4.TERRAIN	314515.00N/0992027.00W	1979 (2000)								AS1500	3500

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT
REMARKS:



CIRCLING

☐ ALL CATS

☒ CAT A

☒ CAT B

☒ CAT C

☒ CAT D

☐ CAT E

☐ NOT AUTHORIZED

<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>RADIUS</u>	<u>HAA</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
CATEGORY A											
16.50' TREE	314918.00N/0985715.00W	1.30	453	1539	50	20	2C	300			1840
CATEGORY B											
16.50' TREE	314918.00N/0985715.00W	1.50	453	1539	50	20	2C	300			1840
CATEGORY C											
16.50' TREE	314918.00N/0985715.00W	1.70	453	1539	50	20	2C	300			1840
CATEGORY D											
17.50' TREE	314836.00N/0990021.00W	2.30	553	1599	50	20	2C	300		HAA	1940

CIRCLING REMARKS:

CENTER

RADIUS

MSA REMARKS:

NOTES/EXPLANATIONS FROM PROCEDURE SEGMENTS:

FINAL: STEPDOWN OBSTACLE IS 1583.5 FT INTO SECONDARY

ALL TREES ASSUMED TO BE 50 FT AGL

PSEUDO OBSTACLE ADDED TO HIGHEST TERRAIN.

ALTIMETER ADJUSTMENT 45.515 ROUNDED TO 60.

LPV:
INNER SURFACE = 27.03:1
OUTER SURFACE = 34:1
LNAV/VNAV NOT DEVELOPED PER CEN FPT REQUEST

PART B: SUPPLEMENTAL DATA

COMMUNICATIONS WITH

ZFW ARTCC, ZFW FSS



<u>AIRPORT</u>	<u>AIRPORT ID</u>	<u>PROCEDURE NAME</u>	<u>AMDT NO.</u>	<u>CITY</u>	<u>STATE</u>	<u>AIRPORT ELEVATION</u>	<u>FACILITY</u>
BROWNWOOD RGNL	KBWD	RNAV (GPS) RWY 35	1A	BROWNWOOD	TX	1387	RNAV

PART C: GENERAL REMARKS:

CONTINGENCY ALTIMETER NOTES:
WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE COMANCHE ALTIMETER SETTING AND INCREASE DA TO 1683 FEET AND ALL MDA 60 FEET. INCREASE LNAV CAT C/D VISIBILITY TO 1 3/8 SM.
VDP NA WITH COMANCHE ALTIMETER SETTING.

ORDER 8260.3 CHAPTER 2 APPLIED TO 1560 TOWER 314446N/0985702W.

NO ADDITIONAL AIRSPACE REQUIRED.

RASS PRESSURE PATTERNS THE SAME
KBWD 1387, KMKN 1387
RA = 45.5.



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BROWNWOOD RGNL	KBWD	RNAV (GPS) RWY 35	1A	BROWNWOOD	TX	1387	RNAV

PART D: AIRSPACE
DOCKET #

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

DISTANCE FROM	THLD	TO 1000FT POINT	3.09
WIDTH OF	FINAL	SEGMENT AT 1000FT POINT	1.69
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1000FT POINT	359.36
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1000FT POINT	1444
DISTANCE FROM	FAF	TO 1500FT POINT	4.45
WIDTH OF	INTERMEDIATE	SEGMENT AT 1500FT POINT	7.09
TRUE COURSE OF	INTERMEDIATE	SEGMENT CONTAINING 1500FT POINT	359.36
HIGH TERRAIN IN	INTERMEDIATE	SEGMENT CONTAINING 1500FT POINT	1618

THRESHOLD
COORDINATES
(IF STR-IN)314711.39N/0985717.56W

ARP COORDINATES314737.00N/0985723.40W

RUNWAY APCH END
AND DIST FURTHEST
FROM ARP RUNWAY 17 DISTANCE 0.50 NM

FAF
COORDINATES314216.41N/0985713.71W

FIX NAME
COORDINATES

REMARKS



<u>AIRPORT</u>	<u>AIRPORT ID</u>	<u>PROCEDURE NAME</u>	<u>AMDT NO.</u>	<u>CITY</u>	<u>STATE</u>	<u>AIRPORT ELEVATION</u>	<u>FACILITY</u>
BROWNWOOD RGNL	KBWD	RNAV (GPS) RWY 35	1A	BROWNWOOD	TX	1387	RNAV

PART E: PREPARED BY

<u>NAME</u>	<u>OFFICE</u>	<u>DATE</u>	<u>TITLE</u>
MIKE MELSSEN	AJV-5412	11/16/2017	AERONAUTICAL INFORMATION SPECIALIST

