

<b>RNAV - STANDARD INSTRUMENT APPROACH PROCEDURE TITLE 14 CFR PART 97.33</b>				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.								
<b>US DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION</b>												
<b>TERMINAL ROUTES</b>				<b>MISSED APPROACH</b>								
FROM	TO	COURSE AND DISTANCE	ALTITUDE	LPV: DA LNAV/VNAV: DA LNAV: RW16R  CLIMB TO 700 THEN CLIMBING RIGHT TURN TO 3000 DIRECT CSN VORTAC AND HOLD.  ADDITIONAL FLIGHT DATA: HOLD SW, LT, 027.00 INBOUND. CHART FAS OBST: 393 TREE 384545N/0773209W 609 AAO 384822N/0773528W CHART R6608A, B, C. CHART VDP AT 1.32 MILES TO RW16R* *LNAV ONLY. WAAS CHANNEL # 78035 REFERENCE PATH ID: W16B CHART CIRCLING ICON LTP HAE: 24.5 M								
CSN VORTAC	SAVVV (FB)	021.29 / 14.07	3000									
SAVVV (IAF)	ANECU (FB)	090.10 / 7.85	3000									
SHYLO (IAF)	ANECU (FB)	231.54 / 8.09	3000									
MANNE (IAF)	ANECU (FB)	172.16 / 6.94	3000									
ANECU (IF)	TIKTE (FB)	160.51 / 2.67	2600									
TIKTE	WTRUS (FB)	160.53 / 2.67	2200									
WTRUS (FAF)	WUMAD/3.30 NM TO RW16R (FB)	160.57 / 2.87										
(SEE FORM 8260-10)												
1. PT <u>      </u> SIDE OF COURSE <u>      </u> OUTBOUND <u>      </u> FT WITHIN <u>      </u> MILES OF <u>      </u> (IAF)				MAG VAR: 10W      EPOCH YEAR: 2000								
2. PROFILE STARTS AT ANECU												
3. FAC: <u>160.57</u> FAF: WTRUS      DIST FAF TO MAP: <u>6.17</u> THLD: <u>6.17</u>												
4. MIN. ALT: ANECU 3000, TIKTE 2600, WTRUS 2200, WUMAD/3.30 NM TO RW16R 1280*												
5. DIST TO THLD FROM OM: <u>      </u> MM: <u>      </u> IM: <u>150</u> HAT: <u>      </u> 100 HAT: <u>      </u> GS ANT: <u>      </u>												
6. MIN GS INCPT: <u>2200</u> GS ALT AT: WTRUS 2200      OM: <u>      </u> MM: <u>      </u> IM: <u>      </u>												
7. GS ANGLE: <u>3.00</u> TCH: 53.0      34:1 IS NOT CLEAR												
8. MSA FROM: RW16R 3400												
<b>MINIMUMS</b>												
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
LPV DA	493	1	308	493	1	308	493	1	308	493	1	308
LNAV/VNAV DA	674	1 5/8	489	674	1 5/8	489	674	1 5/8	489	674	1 5/8	489
LNAV MDA	660	1	475	660	1	475	660	1 3/8	475	660	1 3/8	475
CIRCLING	720	1	528	740	1	548	840	1 3/4	648	880	2 1/4	688
NOTES: CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -15C (5F) OR ABOVE 54C (130F). CHART NOTE: DME/DME RNP-0.3 NA. CHART PLANVIEW NOTE: RADAR REQUIRED. CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVAL AT MANNE ON V4-92 NORTHWEST BOUND. (SEE FORM 8260-10)								@ CAT D 800-2 1/4 @ NA WHEN LOCAL WEATHER NOT AVAILABLE.				
CITY AND STATE		ELEVATION: 192      THRE: 185		FACILITY IDENTIFIER: RNAV		PROCEDURE NO./AMDT NO./EFFECTIVE DATE:		SUP:				
WASHINGTON, DC		AIRPORT NAME:				RNAV (GPS) RWY 16R, AMDT 1		AMDT: ORIG-D				
		MANASSAS RGNL/HARRY P. DAVIS FIELD				6 FEBRUARY 2014		DATED 05/02/2013				

US DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION  
**RNAV - STANDARD**  
**INSTRUMENT APPROACH PROCEDURE - TITLE 14 CFR PART 97.33**

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**TERMINAL ROUTES, (CONT.):**

FROM	TO	COURSE AND DISTANCE	ALTITUDE
WUMAD/3.30 NM TO RW16R	RW16R (MAP) (FO)	160.57 / 3.30	
RW16R (MAP)	700 MSL	160.57	700
700 MSL	CSN VORTAC (FO)		3000

**NOTES, (CONT.):**

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

CHART NOTE: WHEN LOCAL ALTIMETER SETTING IS NOT RECEIVED USE WASHINGTON DULLES INTL ALTIMETER SETTING AND INCREASE ALL DA 49 FEET AND ALL MDA 60 FT, INCREASE LPV ALL CATS VISIBILITY 1/8 MILE, VNAV ALL CATS AND CIRCLING CAT C 1/4 MILE.

CHART NOTE: VDP AND BARO-VNAV NA WHEN USING WASHINGTON DULLES INTL ALTIMETER SETTING.

CITY AND STATE  
 WASHINGTON, DC

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QUALITY  
 CHECKED

RNAV STANDARD INSTRUMENT APPROACH PROCEDURE  
FLIGHT STANDARDS SERVICE - FAR PART 97.33

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FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KHEF
RUNWAY	RW16R
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W16B
LTP/FTP LATITUDE	384336.1465N
LTP/FTP LONGITUDE	0773115.8710W
LTP/FTP ELLIPSOIDAL HEIGHT	+00245
FPAP LATITUDE	384218.4340N
FPAP LONGITUDE	0773020.0125W
THRESHOLD CROSSING HEIGHT (TCH)	00053.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1616
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0

<u>CRC REMAINDER</u>	76C25382
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ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K6
LTP ORTHOMETRIC HEIGHT	+00565
FPAP ORTHOMETRIC HEIGHT	+00565

CITY AND STATE

WASHINGTON, DC

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IDENTIFIER:

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RNAV (GPS) RWY 16R, AMDT 1  
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## RNAV (GPS) STANDARD INSTRUMENT APPROACH PROCEDURE

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ARINC PACKET - 424-18 - RNAV (GPS)

[illegible][illegible][illegible]

SEGMENT	1	2	3	4	5	6	7	8	9	0	1	2	3
SUSAP	KHEFK6FR16R	ACSN	010CSN	K6D	0V	IF				18000		A	JS
SUSAP	KHEFK6FR16R	ACSN	020SAVVVK6EA0E	A	020TF		02130141	+	03000			A	JS
SUSAP	KHEFK6FR16R	ACSN	030ANECUK6EA0EE	B	010TF		09010079	+	03000			A	JS
SUSAP	KHEFK6FR16R	AMANNE	010MANNEK6EA0E	A	IF					18000		A	JS
SUSAP	KHEFK6FR16R	AMANNE	020ANECUK6EA0EE	B	010TF		17220069	+	03000			A	JS
SUSAP	KHEFK6FR16R	ASAVVV	010SAVVVK6EA0E	A	IF					18000		A	JS
SUSAP	KHEFK6FR16R	ASAVVV	020ANECUK6EA0EE	B	010TF		09010079	+	03000			A	JS
SUSAP	KHEFK6FR16R	ASHYLO	010SHYLOK6EA0E	A	IF					18000		A	JS
SUSAP	KHEFK6FR16R	ASHYLO	020ANECUK6EA0EE	B	010TF		23150081	+	03000			A	JS
SUSAP	KHEFK6FR16R	R	010ANECUK6EA0E	I	IF			+	03000			A	JS
SUSAP	KHEFK6FR16R	R	011TIKTEK6EA0E	S	051TF		16050027	+	02600			A	JS
SUSAP	KHEFK6FR16R	R	020WTRUSK6EA1E	F	051TF		16050027	+	02200			RW16R	K6PGA JS
SUSAP	KHEFK6FR16R	R	020WTRUSK6EA2WALPV			ALNAV/VNAV	ALNAV						JS
SUSAP	KHEFK6FR16R	R	021WUMADK6EA0E	S	031TF		16060029	V	0128001288		-300		A JS
SUSAP	KHEFK6FR16R	R	030RW16RK6PGOGY	M	031TF		16060033		00238		-300		A JS
SUSAP	KHEFK6FR16R	R	040		0 M	CA	1606	+	00700				A JS
SUSAP	KHEFK6FR16R	R	050CSN	K6D	0VY	R	DF	+	03000				A JS
SUSAP	KHEFK6FR16R	R	060CSN	K6D	0VE	L	HM	+	03000				A JS

CITY AND STATE <b>WASHINGTON, DC</b>	ELEVATION: <b>192</b> THRE: <b>185</b> AIRPORT NAME: <b>MANASSAS RGNL/HARRY P. DAVIS FIELD</b>	FACILITY IDENTIFIER:  <b>RNAV</b>	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE: <b>RNAV (GPS) RWY 16R, AMDT 1</b> 6 FEBRUARY 2014	SUP:
				AMDT: <b>ORIG-D</b>
				DATED: <b>05/02/2013</b>

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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RUNWAY 12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012

SUSAP KHEFK6GRW16R 0037151606 N38433615W077311587-0300 +0024500185000053100R

1 2 3 4 5 6 7 8 9 0 1 2 3  
PP 12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012

SUSAP KHEFK6PR16R RW16R001 0000W16B0N3843361465W07731158710+002450300N3842184340W07730200125106751616000530F40050076C25382  
SUSAP KHEFK6PR16R RW16R002E +00565+00565LPV 78035

1 2 3 4 5 6 7 8 9 0 1 2 3  
MSA 12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012

SUSAP KHEFK6SRW16RK6PG 0 18018003425

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CITY AND STATE  
WASHINGTON, DC

ELEVATION: 192 THRE: 185  
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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
CSN		CSN	010		IF		FB					
CSN		SAVVV	020	IAF	TF		FB	2.0	021.3(011.3T)	014.1	AA 03000	
CSN		ANECU	030		TF		FB	1.0	090.1(080.1T)	007.9	AA 03000	
MANNE		MANNE	010	IAF	IF		FB					
MANNE		ANECU	020		TF		FB	1.0	172.2(162.2T)	006.9	AA 03000	
SAVVV		SAVVV	010	IAF	IF		FB					
SAVVV		ANECU	020		TF		FB	1.0	090.1(080.1T)	007.9	AA 03000	
SHYLO		SHYLO	010	IAF	IF		FB					
SHYLO		ANECU	020		TF		FB	1.0	231.5(221.5T)	008.1	AA 03000	
		ANECU	010	FACF	IF		FB				AA 03000	
		TIKTE	011	SDF	TF		FB	0.5	160.5(150.5T)	002.7	AA 02600	
		WTRUS	020	FAF	TF		FB	0.5	160.5(150.5T)	002.7	AA 02200	
		WUMAD	021	SDF	TF		FB	0.3	160.6(150.6T)	002.9	AA 01280	GS 01288
		RW16R	030	MAP	TF		FO	0.3	160.6(150.6T)	003.3	AT 00238	

MISSED APPROACH	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
		040		CA		FB		160.6(150.6T)		AA 00700	
	CSN	050		DF	R	FO				AA 03000	
	CSN	060		HM	L	FO		027.0(017.0T)	004.0	AA 03000	

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	CSN	N383828.33	W0775155.80	N3838.472	W07751.930
	ANECU	N385337.79	W0773829.82	N3853.630	W07738.497
	MANNE	N390014.40	W0774113.17	N3900.240	W07741.220
	SAVVV	N385217.18	W0774824.14	N3852.286	W07748.402
	SHYLO	N385941.51	W0773137.71	N3859.692	W07731.629
	TIKTE	N385118.36	W0773649.00	N3851.306	W07736.817
	WTRUS	N384858.91	W0773508.29	N3848.982	W07735.138
	WUMAD	N384628.81	W0773320.12	N3846.480	W07733.335
	RW16R	N384336.15	W0773115.87	N3843.603	W07731.265

RUNWAY DATA	RWY	THRESHOLD ELEVATION	TCH
	RW16R	00185	53

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