

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.	
US DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION			
TERMINAL ROUTES		MISSED APPROACH	
FROM	TO	COURSE AND DISTANCE	ALTITUDE
TVF VOR/DME	FISTS (FO)	037.72 / 10.15	3300
FALPA (IAF)	FISTS (NOPT) (FB)	177.32 / 27.37	3300
FISTS (IF/IAF)	DARLL (FB)	217.33 / 5.00	2700
DARLL (FAF)	KEEFS/2.40 NM TO RW22 (FB)	217.27 / 2.44	
KEEFS/2.40 NM TO RW22	RW22 (MAP) (FO)	217.27 / 2.40	
RW22 (MAP)	1369 MSL	217.27	
1369 MSL	BOOMS (FO)		3300
		LPV: DA LNAV/VNAV: DA LNAV: RW22 CLIMB 3300 DIRECT BOOMS AND HOLD. ADDITIONAL FLIGHT DATA: HOLD SW, RT, 037.09 INBOUND. CHART FAS OBST: 1234 TREE 480422N/0960944W DISTANCE TO THLD FROM 250 HAT: 0.66 NM. CHART VDP AT 1.09 MILES TO RW22* *LNAV ONLY. WAAS CHANNEL # 77836 REFERENCE PATH ID: W22A CHART CIRCLING ICON LTP HAE: 313.7 M	
1. PT <u> </u> SIDE OF COURSE <u> </u> OUTBOUND <u> </u> FT WITHIN <u> </u> MILES OF <u> </u> (IAF) 2. HOLD NE FISTS, RT, 217.33 INBOUND, 3300 FT. IN LIEU OF PT (IAF) 3. FAC: <u>217.27</u> FAF: <u>DARLL</u> DIST FAF TO MAP: <u>4.84</u> THLD: <u>4.84</u> 4. MIN. ALT: FISTS 3300, DARLL 2700, KEEFS/2.40 NM TO RW22 1920* 5. DIST TO THLD FROM OM: <u> </u> MM: <u> </u> IM: <u> </u> 150 HAT: <u> </u> 100 HAT: <u> </u> GS ANT: <u> </u> 6. MIN GS INCPT: <u>2700</u> GS ALT AT: <u>DARLL 2700</u> OM: <u> </u> MM: <u> </u> IM: <u> </u> 7. GS ANGLE: <u>3.00</u> TCH: <u>40.0</u> 34:1 IS CLEAR 8. MSA FROM: <u>RW22 2700</u>			
		MAG VAR: 2E EPOCH YEAR: 2015	
MINIMUMS			
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT		ALTERNATE: N A STANDARD @	
CATEGORY =====>	A	B	C
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	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	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	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
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	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	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	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
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	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	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	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
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	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	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	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
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	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	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	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
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	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	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	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
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	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	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	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
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	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	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	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
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	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	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	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
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	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	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	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
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	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	DH/MDA	VIS
HAT/HAA	DH/MDA	VIS	HAT/HAA
DH/MDA	VIS		

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.

NOTES, (CONT.):

CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT FALPA ON V71 NORTHEAST BOUND.

CHART PROFILE NOTE: VGS1 AND RNAV GLIDEPATH NOT COINCIDENT.

CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE CROOKSON ALTIMETER SETTING AND INCREASE

ALL DA 82 FEET AND ALL MDA 100 FEET. INCREASE LPV ALL CATS VISIBILITY TO 1 1/8 MILE AND LNAV/VNAV

ALL CATS VISIBILITY TO 1 1/4 MILE.

QUALITY
6
CHECK

CITY AND STATE

THIEF RIVER FALLS, MN

ELEVATION: 1119

TDZE: 1119

AIRPORT NAME:

THIEF RIVER FALLS RGNL

FACILITY
IDENTIFIER:
RNAV

PROCEDURE NO./AMDT NO./EFFECTIVE DATE:

RNAV (GPS) RWY 22, ORIG

13 NOVEMBER 2014

SUP:

AMDT: NONE

DATED:

RNAV STANDARD INSTRUMENT APPROACH PROCEDURE
FLIGHT STANDARDS SERVICE - 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.

FAS DATA BLOCK INFORMATIONDATA FIELDDATA

OPERATION TYPE 0
SBAS SERVICE PROVIDER IDENTIFIER 0
AIRPORT IDENTIFIER KTVF
RUNWAY RW22
APPROACH PERFORMANCE DESIGNATOR 0
ROUTE INDICATOR 0
REFERENCE PATH DATA SELECTOR W22A
REFERENCE PATH IDENTIFIER (APPROACH ID) 480420.2380N
LTP/FTP LATITUDE 0961047.7400W
LTP/FTP LONGITUDE +03137
LTP/FTP ELLIPSOIDAL HEIGHT 480311.2355N
FPAP LATITUDE 0961211.6950W
FPAP LONGITUDE 00040.0
THRESHOLD CROSSING HEIGHT (TCH) F
TCH UNITS SELECTOR (METERS OR FEET USED) 03.00
GLIDEPATH ANGLE (GPA) 106.75
COURSE WIDTH AT THRESHOLD 1224
LENGTH OFFSET 40.0
HORIZONTAL ALERT LIMIT (HAL) 50.0
VERTICAL ALERT LIMIT (VAL)

CRC REMAINDER

800DE56E

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE K3
LTP ORTHOMETRIC HEIGHT +03409
FPAP ORTHOMETRIC HEIGHT +03409

QUALITY
6
CHECKED

CITY AND STATE
THIEF RIVER FALLS, MN

ELEVATION: 1119 TDZE: 1119
AIRPORT NAME:
THIEF RIVER FALLS RGNL

FACILITY
IDENTIFIER:
RNAV

PROCEDURE NO./AMDT NO./EFFECTIVE DATE:
RNAV (GPS) RWY 22, ORIG
13 NOVEMBER 2014

SUP:
AMDT: NONE
DATED:

RNAV (GPS) STANDARD INSTRUMENT APPROACH PROCEDURE

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)

[illegible][illegible][illegible]

SEGMENT	1	2	3	4	5	6	7	8	9	0	1	2	3	
SUSAP	KTVFK3FR22	AFALPA	010FALPAK3EA0E	A	IF				18000			A	JS	
SUSAP	KTVFK3FR22	AFALPA	020FISTSK3EA0EE	B	010TF		17730274	+	03300			A	JS	
SUSAP	KTVFK3FR22	ATVF	010TVF	K3D	0V	IF			18000			A	JS	
SUSAP	KTVFK3FR22	ATVF	020FISTSK3EA0EY		020TF		03770102	+	03300			A	JS	
SUSAP	KTVFK3FR22	ATVF	030FISTSK3EA0EE	AR	HF		21730040	+	03300			A	JS	
SUSAP	KTVFK3FR22	R	010FISTSK3EA0E	I	IF			+	03300	18000		A	JS	
SUSAP	KTVFK3FR22	R	020DARLLK3EA1E	F	051TF		21730050	+	02700		RW22	K3PGA	JS	
SUSAP	KTVFK3FR22	R	020DARLLK3EA2WALPV			ALNAV/VNAV	ALNAV						JS	
SUSAP	KTVFK3FR22	R	021KEEFSK3EA0E	S	031TF		21730024	V	0192001923		-300		A	JS
SUSAP	KTVFK3FR22	R	030RW22	K3PGOGY	M	031TF	21730024		01158		-300		A	JS
SUSAP	KTVFK3FR22	R	040		0	M	CA	2173	+	01369			A	JS
SUSAP	KTVFK3FR22	R	050BOOMSK3EA0EY		DF			+	03300				A	JS
SUSAP	KTVFK3FR22	R	060BOOMSK3EA0EE	R	HM		03710040	+	03300				A	JS

[illegible][illegible]

CITY AND STATE THIEF RIVER FALLS, MN	ELEVATION: 1119 TDZE: 1119 AIRPORT NAME: THIEF RIVER FALLS RGNL	FACILITY IDENTIFIER: RNAV	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE: RNAV (GPS) RWY 22, ORIG 13 NOVEMBER 2014	SUP:
				AMDT: NONE
				DATED:

RNAV (GPS) STANDARD INSTRUMENT APPROACH PROCEDURE

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.

SUSAP	KTVFK3PR22	RW22	001	0000W22A0N4804202380W09610477400+031370300N4803112355W09612116950106751224000400F400500800DE56E
SUSAP	KTVFK3PR22	RW22	002E	+03409+03409LPV 77836

[illegible]

CITY AND STATE
THIEF RIVER FALLS, MN

ELEVATION: 1119	TDZE: 1119
AIRPORT NAME:	
THIEF RIVER FALLS RGNL	

FACILITY
IDENTIFIER:

RNAV

PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:
RNAV (GPS) RWY 22, ORIG
13 NOVEMBER 2014

SUP:	
AMDT:	NONE
DATED:	

QUALITY
6
CHECK

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 SUMMARY - 424-18 - RNAV (GPS)

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG (TRUE)	DISTANCE	ALTITUDE	SPEED
	FALPA	FALPA	010	IAF	IF		FB					
	FALPA	FISTS	020		TF		FB	1.0	177.3 (179.3T)	027.4	AA 03300	
	TVF	TVF	010		IF		FB					
	TVF	FISTS	020		TF		FO	2.0	037.7 (039.7T)	010.2	AA 03300	
	TVF	FISTS	030	IAF	HF	R	FO		217.3 (219.3T)	004.0	AA 03300	
		FISTS	010	FACF	IF		FB				AA 03300	
		DARLL	020	FAF	TF		FB	0.5	217.3 (219.3T)	005.0	AA 02700	
		KEEFS	021	SDF	TF		FB	0.3	217.3 (219.3T)	002.4	AA 01920	GS 01923
		RW22	030	MAP	TF		FO	0.3	217.3 (219.3T)	002.4	AT 01158	

MISSED APPROACH	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG (TRUE)	DISTANCE	ALTITUDE	SPEED
		040		CA		FB		217.3 (219.3T)		AA 01369	
	BOOMS	050		DF		FO				AA 03300	
	BOOMS	060		HM	R	FO		037.1 (039.1T)	004.0	AA 03300	

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	TVF	N480409.53	W0961111.31	N4804.159	W09611.189
	BOOMS	N475603.49	W0962050.30	N4756.058	W09620.838
	DARLL	N480805.07	W0960613.61	N4808.085	W09606.227
	FALPA	N483918.16	W0960159.16	N4839.303	W09601.986
	FISTS	N481157.03	W0960129.84	N4811.951	W09601.497
	KEEFS	N480611.72	W0960831.92	N4806.195	W09608.532
	RW22	N480420.24	W0961047.74	N4804.337	W09610.796

RUNWAY DATA	RWY	THRESHOLD ELEVATION	TCH
	RW22	01118	40

QUALITY
6
CHECKED

CITY AND STATE THIEF RIVER FALLS, MN	ELEVATION: 1119	TDZE: 1119	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
	AIRPORT NAME:			RNAV (GPS) RWY 22, ORIG	AMDT: NONE
	THIEF RIVER FALLS RGNL	RNAV	13 NOVEMBER 2014	DATED:	