

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										MISSED APPROACH						
FROM		TO		COURSE AND DISTANCE				ALTITUDE		LPV: DA LNAV/VNAV: DA LNAV: RW13						
ZENOL (IAF)		WIMUS (NOPT) (FB)		042.56 / 5.00				2700		CLIMB TO 2700 DIRECT ZUDOL AND HOLD.						
WIBIX (IAF)		WIMUS (NOPT) (FB)		222.70 / 5.00				2700								
WIMUS (IF/IAF)		ZIRMO (FB)		132.63 / 6.21				2700								
ZIRMO (FAF)		CHERR/2.00 NM TO RW13 (FB)		132.71 / 2.79												
CHERR/2.00 NM TO RW13		RW13 (MAP) (FO)		132.71 / 2.00												
RW13 (MAP)		1365 MSL		132.71						ADDITIONAL FLIGHT DATA: HOLD SE, RT, 312.92 INBOUND. CHART FAS OBST: 1219 TREE 480449N/0961112W DISTANCE TO THLD FROM 250 HAT: 0.66 NM. CHART VDP AT 1.02 MILES TO RW13* *LNAV ONLY. WAAS CHANNEL # 72711 REFERENCE PATH ID: W13A LTP HAE: 312.6 M						
1365 MSL		ZUDOL (FO)						2700								
1. PT _____ SIDE OF COURSE _____ OUTBOUND _____ FT WITHIN _____ MILES OF _____ (IAF)										MAG VAR: 2E EPOCH YEAR: 2015						
2. HOLD NW WIMUS, RT, 132.63 INBOUND, 2700 FT. IN LIEU OF PT (IAF)																
3. FAC: 132.71 FAF: ZIRMO DIST FAF TO MAP: 4.79 THLD: 4.79																
4. MIN. ALT: WIMUS 2700, ZIRMO 2700, CHERR/2.00 NM TO RW13 1780*																
5. DIST TO THLD FROM OM: _____ MM: _____ IM: _____ 150 HAT: _____ 100 HAT: _____ GS ANT: _____																
6. MIN GS INCPT: 2700 GS ALT AT: ZIRMO 2700 OM: _____ MM: _____ IM: _____																
7. GS ANGLE: 3.00 TCH: 40.0 34:1 IS CLEAR																
8. MSA FROM: _____																
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
LPV DA		1365	1	250	1365	1	250	1365	1	250	1365	1	250			
LNAV/VNAV DA		1436	1 1/4	321	1436	1 1/4	321	1436	1 1/4	321	1436	1 1/4	321			
LNAV MDA		1480	1	365	1480	1	365	1480	1	365	1480	1 1/4	365			
CIRCLING		1540	1	421	1580	1	461	1580	1 1/2	461	1680	2	561			
NOTES: CHART NOTE: BARO-VNAV AND VDP NA WHEN USING CROOKSON ALTIMETER SETTING. CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -17C (2F) OR ABOVE 54C (130F). CHART NOTE: DME/DME RNP-0.3 NA. *LNAV ONLY (SEE FORM 8260-10)																
CITY AND STATE THIEF RIVER FALLS, MN		ELEVATION: 1119 TDZE: 1115 AIRPORT NAME: THIEF RIVER FALLS RGNL			FACILITY IDENTIFIER: RNAV		PROCEDURE NO./AMDT NO./EFFECTIVE DATE: RNAV (GPS) RWY 13, ORIG-A 13 NOVEMBER 2014						SUP: AMDT: ORIG DATED 03/12/2009			

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

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NOTES, (CONT.):

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 1/8 MILE, LNAV/VNAV ALL CATS VISIBILITY 1/4 MILE, AND INCREASE LNAV CATS C/D VISIBILITY TO 1 3/8 MILE.

TAA

	FROM	TO	ALT
1.	043/30 CW 223/30 (NOPT)	043/10 CW 223/10	2800
2.	043/10 CW 223/10	WIMUS (IF/IAF) (FB)	2700
3.	223/30 CW 313/30	WIBIX (IAF) (FB)	2700
4.	313/30 CW 043/30	ZENOL (IAF) (FB)	2700



CITY AND STATE
THIEF RIVER FALLS, MN

ELEVATION: 1119 TDZE: 1115
AIRPORT NAME:
THIEF RIVER FALLS RGNL

FACILITY
IDENTIFIER:
RNAV

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

SUP:
AMDT: ORIG
DATED: 03/12/2009

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION
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	KTVF
RUNWAY	RW13
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W13A
LTP/FTP LATITUDE	480415.4285N
LTP/FTP LONGITUDE	0961136.1255W
LTP/FTP ELLIPSOIDAL HEIGHT	+03126
FPAP LATITUDE	480312.7100N
FPAP LONGITUDE	0961001.8400W
THRESHOLD CROSSING HEIGHT (TCH)	00040.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	0768
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0

CRC REMAINDER 90BFB9EA

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K3
LTP ORTHOMETRIC HEIGHT	+03398
FPAP ORTHOMETRIC HEIGHT	+03398



CITY AND STATE THIEF RIVER FALLS, MN	ELEVATION: 1119	TDZE: 1115	FACILITY IDENTIFIER: RNAV	PROCEDURE NO./AMDT NO./EFFECTIVE DATE: RNAV (GPS) RWY 13, ORIG-A 13 NOVEMBER 2014	SUP:
	AIRPORT NAME: THIEF RIVER FALLS RGNL	AMDT: ORIG			
	DATED: 03/12/2009				

RNAV (GPS) STANDARD INSTRUMENT APPROACH PROCEDURE

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ARINC PACKET - 424-18 - RNAV (GPS)

[illegible][illegible]

SEGMENT	1	2	3	4	5	6	7	8	9	0	1	2	3
SUSAP KTVFK3FR13	AWIBIX	010WIBIXK3EA0E	A	IF						18000		A	JS
SUSAP KTVFK3FR13	AWIBIX	020WIMUSK3EA0EE	B	010TF		22270050		+ 02700				A	JS
SUSAP KTVFK3FR13	AWIMUS	010WIMUSK3EA0EE	AR	HF		13260040		+ 02700		18000		A	JS
SUSAP KTVFK3FR13	AZENOL	010ZENOLK3EA0E	A	IF						18000		A	JS
SUSAP KTVFK3FR13	AZENOL	020WIMUSK3EA0EE	B	010TF		04260050		+ 02700				A	JS
SUSAP KTVFK3FR13	R	010WIMUSK3EA0E	I	IF				+ 02700		18000		A	JS
SUSAP KTVFK3FR13	R	020ZIRMOK3EA1E	F	051TF		13260062		+ 02700				A	JS
SUSAP KTVFK3FR13	R	020ZIRMOK3EA2WALPV			ALNAV/VNAV	ALNAV							JS
SUSAP KTVFK3FR13	R	021CHERRK3EA0E	S	031TF		13270028		V 0178001795		-300		A	JS
SUSAP KTVFK3FR13	R	030RW13 K3PGOGY M	031TF			13270020		01155		-300		A	JS
SUSAP KTVFK3FR13	R	040	0	M	CA	1327		+ 01365				A	JS
SUSAP KTVFK3FR13	R	050ZUDOLK3EA0EY		DF				+ 02700				A	JS
SUSAP KTVFK3FR13	R	060ZUDOLK3EA0EE	R	HM		31290040		+ 02700				A	JS

[illegible][illegible]

CITY AND STATE
THIEF RIVER FALLS. MN

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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
	WIBIX	WIBIX	010	IAF	IF		FB					
	WIBIX	WIMUS	020		TF		FB	1.0	222.7 (224.7T)	005.0	AA 02700	
	WIMUS	WIMUS	010	IAF	HF	R	FO		132.6 (134.6T)	004.0	AA 02700	
	ZENOL	ZENOL	010	IAF	IF		FB					
	ZENOL	WIMUS	020		TF		FB	1.0	042.6 (044.6T)	005.0	AA 02700	
		WIMUS	010	FACF	IF		FB				AA 02700	
		ZIRMO	020	FAF	TF		FB	0.5	132.6 (134.6T)	006.2	AA 02700	
		CHERR	021	SDF	TF		FB	0.3	132.7 (134.7T)	002.8	AA 01780	GS 01795
		RW13	030	MAP	TF		FO	0.3	132.7 (134.7T)	002.0	AT 01155	

MISSED APPROACH	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
		040		CA		FB		132.7 (134.7T)		AA 01365	
	ZUDOL	050		DF		FO				AA 02700	
	ZUDOL	060		HM	R	FO		312.9 (314.9T)	004.0	AA 02700	

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	CHERR	N480539.87	W0961343.22	N4805.665	W09613.720
	WIBIX	N481532.58	W0961801.12	N4815.543	W09618.019
	WIMUS	N481159.35	W0962316.53	N4811.989	W09623.276
	ZENOL	N480825.87	W0962831.21	N4808.431	W09628.520
	ZIRMO	N480737.52	W0961640.58	N4807.625	W09616.676
	ZUDOL	N475545.04	W0955851.53	N4755.751	W09558.859
	RW13	N480415.43	W0961136.13	N4804.257	W09611.602

RUNWAY DATA	RWY	THRESHOLD ELEVATION	TCH
	RW13	01115	40



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