

**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>		<u>AIRPORT ID</u>	<u>PROCEDURE NAME</u>	<u>ORIGINAL/AMENDMENT</u>	<u>CITY</u>	<u>STATE</u>
GRAND MARAIS/COOK COUNTY		KCKC	RNAV (GPS) RWY 28	3	GRAND MARAIS	MN
<u>AIRPORT ELEVATION</u>	<u>TDZE</u>	<u>SUPERSEDED</u>	<u>ORIGINAL/AMENDMENT</u>	<u>DATED</u>	<u>MAG VAR</u>	<u>EPOCH YEAR</u>
1803	1797	RNAV (GPS) RWY 28	2	06/22/2017	1W	1995
<u>FACILITY</u>	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u>	<u>CANCEL/SUSPEND</u>		
RNAV		25 APRIL 2019	ROUTINE			

**TAA**

<b><u>FROM</u></b>	<b><u>FIX TYPE</u></b>	<b><u>TO</u></b>	<b><u>FIX TYPE</u></b>	<b><u>ALTITUDE</u></b>
1. 186/30 CW 006/30	NOPT	WIHFY	IF/IAF	5000
2. 006/30 CW 186/30		WIHFY	IF/IAF	5000

**TERMINAL ROUTES**

<b><u>FROM</u></b>	<b><u>FIX TYPE</u></b>	<b><u>TO</u></b>	<b><u>FIX TYPE</u></b>	<b><u>LEG TYPE</u></b>	<b><u>FO/FB</u></b>	<b><u>RNP</u></b>	<b><u>COURSE</u></b>	<b><u>DISTANCE</u></b>	<b><u>ALTITUDE</u></b>
WIHFY	IF/IAF	TUMDE		TF	FB	1.00	275.90	6.08	3400
TUMDE	FAF	ZUPLU/2.22 NM TO RW28		TF	FB	0.30	275.79	2.70	
ZUPLU/2.22 NM TO RW28		RW28	MAP	TF	FO	0.30	275.79	2.22	
RW28	MAP	2047 MSL		CA			275.79		
2047 MSL		CUMAM		DF	FO	1.00			7000

**MISSED APPROACH**

**MAP:**

LPV: DA  
LNAV/VNAV: DA  
LNAV: RW28

**MISSED APPROACH INSTRUCTIONS:**

CLIMB TO 7000 DIRECT CUMAM, CROSS CUMAM AT OR ABOVE 4000 AND HOLD, CONTINUE CLIMB-IN-HOLD TO 7000.

**ALTERNATE MISSED APPROACH INSTRUCTIONS:**



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. HOLD E WIFHY, RT, 275.90 INBOUND, 5000 FT. IN LIEU OF PT (IAF), MAX 10000.

3. FAC: 275.79FAF: TUMDEDIST FAF TO MAP: 4.92DIST FAF TO THLD: 4.92

4. MIN ALT: WIFHY 5000, TUMDE 3400, ZUPLU/2.22 NM TO RW28 2540\*

5. DIST TO THLD FROM OM:MM:IM:150 HAT:250 HAT: 0.67GS ANT:

6. MIN GP INCPT: 3400GP ALT AT FAF : TUMDE 3400OM:MM:IM:

7. GP ANGLE: 3.0034:1: IS NOT CLEAR20:1: IS NOT CLEARTCH: 39.9

8. MSA FROM:

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: PROCEDURE NA AT NIGHT.  
CHART NOTE: RWY 28 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED.  
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -18°C OR ABOVE 54°C.  
\*LNAV ONLY

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.  
CHART P-204, R-4305  
WAAS CHANNEL #69520  
REFERENCE PATH ID: W28A  
CHART FAS OBST: 1944 TREE 475032N/0902056W.  
HOLD W, RT, 095.48 INBOUND  
LTP HAE: 516.5 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD - CAT D 900-2 3/4, NA WHEN LOCAL WEATHER NOT AVAILABLE.

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	2047	1	250	2047	1	250	2047	1	250	2047	1	250			
LNAV/VNAV DA	2219	1 1/4	422	2219	1 1/4	422	2219	1 1/4	422	2219	1 1/4	422			
LNAV MDA	2200	1	403	2200	1	403	2200	1 1/8	403	2200	1 1/8	403			
CIRCLING	2300	1	497	2300	1	497	2380	1 1/2	577	2640	2 3/4	837			



CHANGES - REASONS

TCH CHANGED FROM 53 TO 39.9 - FINAL BUILT TO VGSI DATA.  
WIHFY TO TUMDE DISTANCE CHANGED FROM 6.12 TO 6.08 - CURRENT PFAF FORMULA USED.  
STEPDOWN FIX ZUPLU/2.20 NM CHANGED TO ZUPLU/2.22 NM - CURRENT PFAF FORMULA USED.  
TUMDE TO ZUPLU DISTANCE CHANGED FROM 2.68 TO 2.70 - CURRENT PFAF FORMULA USED.  
ZUPLU TO RW28 DISTANCE CHANGED FROM 2.20 TO 2.22 - CURRENT PFAF FORMULA USED.  
DIST FAF TO MAP/THLD CHANGED FROM 4.88 TO 4.92 - CURRENT PFAF FORMULA USED AND TCH UPDATED TO MATCH THE VGSI.  
MISSED APPROACH INSTRUCTIONS: ADDED CROSS CUMAM AT OR ABOVE 4000 RESTRICTION - PER IFP CHECKLIST, AVOIDANCE OF PROHIBITED AREA 204.  
DISTANCE TO THLD FROM 250 HAT CHANGED FROM 0.63 NM TO 0.67 NM - TCH CHANGED FROM 53 TO 39.9.  
ADDED CHART FAS OBST: 1944 TREE 475032N/0902056W - CRITERIA FOR THE NONPRECISION CONTROLLING OBSTACLE IN THE PRIMARY AND/OR SECONDARY AREA OF THE FAS MUST BE SHOWN AS THE FAS OBSTACLE.  
BARO-VNAV SYSTEMS NOTE, REMOVED FAHRENHEIT TEMPS - NO LONGER REQUIRED.  
UPDATED HELICOPTER NOTE FROM RWY 10/28 TO RWY 28 - CURRENT CRITERIA WORDING.  
DELETED NOTE: DME/DME RNP-0.3 NA - REPLACED WITH REQUIREMENT NOTE: RNP APCH.  
DELETE GLIDEPATH NOTE COINCIDENT NOTE - FINAL BUILT TO VGSI DATA.  
ALTERNATE MINIMUMS: ADDED NA WHEN LOCAL WEATHER NOT AVAILABLE - CRITERIA.  
ADDED 20:1 IS NOT CLEAR - REQUIRED FOR 20:1 PENETRATION.  
LNAV/VNAV DA/HAT CHANGED FROM 2232/435 TO 2219/422 ALL CATS - NEW OBSTACLE DATA.  
LNAV/VNAV VISIBILITY CHANGED FROM 1 1/2 TO 1 1/4 ALL CATS - LOWER DA/HAT.  
CIRCLING CAT C MDA/HAA CHANGED FROM 2360/557 TO 2380/577 - NEW OBSTACLE DATA.

FAS DATA BLOCK INFORMATION CHANGES AND REASONS:  
LTP/FTP LATITUDE/ LONGITUDE CHANGED FROM 475016.3340N/0902227.9540W TO 475016.3335N/0902227.9480W - CURRENT AIRNAV DATA.  
FPAP LATITUDE/LONGITUDE CHANGED FROM 475023.6095N/0902439.7735W TO 475023.6070N/ 0902439.7675W - CURRENT PFAF FORMULA USED.  
THRESHOLD CROSSING HEIGHT (TCH) CHANGED FROM 53 TO 39.9 - FINAL BUILT TO VGSI DATA.  
LENGTH OFFSET CHANGED FROM 1232 TO 1224 - CURRENT AIRNAV DATA.  
CRC REMAINDER CHANGED FROM 7F642CEF TO D1C9F609 - RESULT OF FAS DATA BLOCK INFORMATION CHANGES.

COORDINATED WITH:

A4A ☐ ALPA ☒ AOPA ☒ APA ☐ HAI ☐ NBAA ☒ OTHER: ZMP, AMGR

FLIGHT CHECKED BY	<i>Digitally signed by</i>	OFFICE	DATE	
ROSS LARSON	DAVID DANNER	FICO	2/19/19	
	Feb 21, 2019			
DEVELOPED BY	<i>Digitally signed by</i>	OFFICE	DATE	
DEANNA M. FIELDS	DEANNA M FIELDS	AJV-5421	11/02/2018	
APPROVED BY		OFFICE	DATE	TITLE
JULIE MORGAN	<i>Digitally signed by</i>	AJV-5420		MANAGER
	DAVID DANNER			
	Feb 21, 2019			



**FAS DATA BLOCK INFORMATION**

<b><u>DATA FIELD</u></b>	<b><u>DATA</u></b>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KCKC
RUNWAY	RW28
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W28A
LTP/FTP LATITUDE	475016.3335N
LTP/FTP LONGITUDE	0902227.9480W
LTP/FTP ELLIPSOIDAL HEIGHT	+05165
FPAP LATITUDE	475023.6070N
FPAP LONGITUDE	0902439.7675W
THRESHOLD CROSSING HEIGHT (TCH)	00039.9
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1224
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	D1C9F609

**ADDITIONAL PATH POINT RECORD INFORMATION**

ICAO CODE	K3
LTP ORTHOMETRIC HEIGHT	+05468
FPAP ORTHOMETRIC HEIGHT	+05468

