

**AERONAUTICAL CHARTING MEETING**  
**Instrument Procedures Group**  
**Meeting 22-01 – April 25-26, 2022**

**RECOMMENDATION DOCUMENT**

**FAA Control # 22-01-369**

**Subject:** Improve IAP Alternate Minimums

**Background/Discussion:**

Alternate Minimums are established on procedure source (8260-series) forms. Alternate Mins can either be NA, Non-Standard (NSTD), or Standard (STD). In the latter two cases (NSTD and STD), numerical minimums can be accompanied by textual restrictions such as “NA when local altimeter not received” or “NA when control tower closed”.

FAA Order 8260.19I, sec. 8-6-11, includes the following:

(4) When alternate minimums are standard, enter the word “Standard”; when not authorized, place an “X” in the “NA” box. When part-time, or higher than standard for some categories, enter “Standard” and annotate the appropriate condition by separate standard note: “NA WHEN CONTROL TOWER CLOSED; CAT D 1000-3; NA WHEN LOCAL WEATHER NOT AVAILABLE”

(5) When alternate minimums are non-standard; e.g., higher than standard for each category available for certain users, etc., do *not* place an X in the NA box. Enter the appropriate condition by separate standard note: “NA EXCEPT STANDARD FOR OPERATORS WITH APPROVED WEATHER REPORTING SERVICE; CAT A, B 900-2, CAT C 900-2 1/2, CAT D 1000-3.”

In some cases, this has led to alternate minimums that are more permissive than the approach itself. See TIST, ILS or LOC RWY 10 and VOR-A, wherein the alternate minimums appear unconstrained by tower closure status, while the “standard” approach plates both show “Procedure NA when control tower closed” note.

## CHARLOTTE AMALIE, VI

CYRIL E KING (STT) (TIST)....ILS or LOC Rwy 10<sup>1</sup>

RNAV (GPS) Rwy 10<sup>23</sup>

VOR-A<sup>4</sup>

<sup>1</sup>LOC, Category C, 900-2½; Category D, 1500-3.

<sup>2</sup>NA when control tower closed.

<sup>3</sup>Categories A, B, 1000-2¼, Category C, 1000-2¾,  
Category D, 1000-3.

<sup>4</sup>Categories A, B, C, 1200-3; Category D, 1500-3.

Figure 1: TIST Alternate Mins Publication


CHARLOTTE AMALIE, VIRGIN ISLANDS			AL-5005 (FAA)	21280
LOC/DME I-TMN <b>110.1</b> Chan <b>38</b>	APP CRS <b>100°</b>	Rwy Idg <b>6892</b> TDZE <b>24</b> Apt Elev <b>24</b>	<b>ILS or LOC RWY 10</b> CYRIL E KING (STT)(TIST)	
 Circling NA at night. Procedure NA when control tower closed. Circling NA north of Rwy 10-28.			MISSED APPROACH: Climb to 620 then climbing right turn to 2800 on heading 180° then right turn direct St Thomas VOR/DME and hold.	

Figure 2: TIST IL10


CHARLOTTE AMALIE, VIRGIN ISLANDS			AL-5005 (FAA)	21196
VOR/DME STT <b>108.6</b> Chan <b>23</b>	APP CRS <b>181°</b>	Rwy Idg <b>N/A</b> TDZE <b>N/A</b> Apt Elev <b>24</b>	<b>VOR-A</b> CYRIL E KING (STT)(TIST)	
 CAUTION: High terrain north of Rwy 10-28 extended. Circling NA north of Rwy 10-28. Procedure NA when control tower not in operation. Procedure NA at night.			MISSED APPROACH: If unable to proceed visually to airport upon descent to 1160, climb to 2800 via heading 180°, then right turn direct STT VOR/DME and hold.	

Figure 3: TIST VOR-A

In other cases, minor (P-NOTAM) amendments alter the numerical alternate minimums without either restating or canceling the previous textual restrictions, as illustrated below:

### KMUT RNAV (GPS) RWY 24 (photos on next page)

The ORIG 8260 states that the alternate mins are NA when local weather is not available. ORIG-A altered the numerical values (making Circling NSTD) but did not carry across the textual restriction. As a result, the Alt Mins book does not attribute footnote #2 to the R24 procedure.

ALTERNATE: N A			STANDARD @					
C			D			E		
DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA
812	1/2	267	812	1/2	267			
874	3/4	329	874	3/4	329			
960	3/4	415	960	1	415			
1200	1 3/4	653	1200	2	653			

STANDARD, LNAV/VNAV NA BELOW -16C @ NA WHEN LOCAL WEATHER NOT AVAILABLE  
CITY MUNI ALTIMETER SETTING AND  
MUNI ALTIMETER SETTING.  
VISIBILITY TO 1 1/4.

Figure 4: KMUT R24 AMDT ORIG

<b>AIRAC Date: 13 SEPTEMBER 2018</b>	
<p>FDC 8/3780 MUT IAP MUSCATINE MUNI, Muscatine, IA. RNAV (GPS) RWY 24, ORIG... DELETE NOTE: DME/DME RNP-0.3 NA. PBN REQUIREMENTS NOTE: RNP APCH. LNAV/VNAV DA 950/HAT 405 ALL CATS. CIRCLING MDA 1080/HAA 533 CAT A, MDA 1200/HAA 653 CAT B, MDA 1500/HAA 953 CAT D. VISIBILITY 3 SM. CHART CIRCLING ICON. DELETE NOTE: FOR INOPERATIVE MALSR, INCREASE LPV ALL CATS VISIBILITY TO 1, LNAV CAT D VISIBILITY TO 1 1/4 SM. DELETE NOTE: IF LOCAL ALTIMETER SETTING NOT RECEIVED, USE IOWA CITY ALTIMETER SETTING AND INCREASE ALL DAS/MDAS 80 FEET. DELETE NOTE: BARO-VNAV AND VDP NA WHEN USING IOWA CITY MUNI ALTIMETER SETTING. CHART NOTE: FOR INOPERATIVE ALS, INCREASE LPV ALL VISIBILITIES TO 1 SM, INCREASE LNAV/VNAV ALL CATS AND LNAV CATS C VISIBILITY TO 1 1/8 SM, AND INCREASE LNAV CAT D VISIBILITY TO 1 1/4 SM. CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE IOWA CITY ALTIMETER SETTING AND INCREASE LPV DA TO 992 AND ALL VISIBILITIES 1/8 SM; INCREASE LNAV/VNAV DA TO 1030 FEET AND ALL VISIBILITIES 1/4 SM; INCREASE ALL MDA 80 FEET AND LNAV CATS C AND D VISIBILITY 1/4 SM AND CIRCLING CAT C VISIBILITY 1/4 SM. CHART NOTE: FOR INOPERATIVE ALS WHEN USING IOWA CITY ALTIMETER SETTING, INCREASE LPV ALL VISIBILITIES TO 1 SM, LNAV/VNAV ALL VISIBILITIES TO 1 3/8 SM, LNAV</p>	
<p>CATS A AND B VISIBILITY TO 1 SM, AND LNAV CATS C AND D VISIBILITY TO 1 3/8 SM. CHART NOTE: BARO-VNAV AND VDP NA WHEN USING IOWA CITY ALTIMETER SETTING. <b>ALTERNATE MINIMUMS: CIRCLING CAT D, 1000-3.</b> THIS IS RNAV (GPS) RWY 24, ORIG-A. 1806281003-PERM</p>	

Figure 5: KMUT AMDT 0A, showing numerical changes to alternates

<b>MUSCATINE, IA</b>	
MUSCATINE	
MUNI (MUT).....	RNAV (GPS) Rwy 6 <sup>12</sup>
	RNAV (GPS) Rwy 12 <sup>2</sup>
	RNAV (GPS) Rwy 24 <sup>3</sup>
	RNAV (GPS) Rwy 30 <sup>2</sup>
<sup>1</sup> Categories A, B, C, D, 800-2½.	
<sup>2</sup> NA when local weather not available.	
<sup>3</sup> Category D, 1000-3.	

Figure 6: KMUT Alt Mins, showing restriction removed for R24

### KTTN RNAV (GPS) Z RWY 6

A similar situation is present on this procedure. AMDT ORIG 8260 states that alternates are NA when local weather is not available. Alternates were not modified until AMDT ORIG-D, at which point CAT D became NSTD. Because ORIG-D did not restate the restriction, the Alt Mins book does not attribute footnote #3 to the R06-Z procedure.

ALTERNATE: N A			STANDARD @					
C			D			E		
DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA
360	1/2	200	360	1/2	200			
585	7/8	425	585	7/8	425			
700	1	540	700	1	540			
700	1 1/2	488	780	2	568			

ING.  
(8F) OR ABOVE 54C (130F).

@ NA WHEN LOCAL WEATHER NOT AVAILABLE.

QUALITY  
1  
CHECKED

Figure 7: KTTN R06Z AMDT ORIG showing textual restriction

### AIRAC Date: 23 APRIL 2020

FDC 0/1235 TTN IAP TRENTON MERCER, TRENTON, NJ. RNAV (GPS) Z RWY 6, ORIG-C... CHART CIRCLING ICON. DELETE APT ELEV 212. CHART APT ELEV 213. CIRCLING CAT A/B HAA 487, CAT C MDA 760/HAA 547, CAT D MDA 960/747. CIRCLING CAT D VIS 2 1/2. ALTERNATE MINIMUMS: STANDARD - CAT D 800-2 1/2. CHANGE NOTE TO READ: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED USE NORTHEAST PHILADELPHIA ALTIMETER SETTING: INCREASE LPV DA TO 435 FEET; LNAV/VNAV DA TO 658 FEET, AND ALL CATS VISIBILITY 1/8 SM; INCREASE ALL MDA 60 FEET AND LNAV CAT C/D VISIBILITY 1/4 SM AND CIRCLING CAT C VISIBILITY 1/4 SM. THIS IS RNAV (GPS) Z RWY 6, ORIG-D. 2002282039-PERM

Figure 8: KTTN R06-Z AMDT ORIG-D showing numerical changes to alternates

<b>TRENTON, NJ</b>	
TRENTON	
MERCER (TTN).....	ILS or LOC Rwy 6 <sup>1</sup>
	RNAV (GPS) Rwy 16 <sup>2</sup>
	RNAV (GPS) Rwy 34 <sup>2</sup>
	RNAV (GPS) Z Rwy 6 <sup>2</sup>
	RNAV (GPS) Z Rwy 24 <sup>23</sup>
	VOR or GPS-A <sup>2</sup>
<sup>1</sup> LOC, Category D, 800-2½.	
<sup>2</sup> Category D, 800-2½.	
<sup>3</sup> NA when local weather not available.	

Figure 9: KTTN Alternate Mins pub showing no textual restriction



Both IAPs use backup altimeter settings, and alternates are approved for both procedures, so based on the .19, both should appear in the ALT MINS book as “NA when local altimeter setting not available”. Due to NOTAM inconsistency, however, neither are notated as such in the Alternate Mins book.

**Recommendations:**

Garmin recommends 2 changes to alternate minimums:

- Review of alternate criteria to avoid a situation wherein alternates are more permissive than the standard approach, and
- An improvement to the abbreviated amendment/P-NOTAM process to consistently restate (or cancel) alternate minimums textual restrictions at each amendment. As an example, see PANC IL07R, AMDT 4A PNOTAM:

FDC 1/6735 ANC IAP TED STEVENS ANCHORAGE INTL, ANCHORAGE, AK. ILS OR LOC RWY 7R, AMDT 4, ILS RWY 7R (SA CAT I), AMDT 4, ILS RWY 7R (CAT II AND III), AMDT 4 ... DELETE AT OR BELOW 3000 AND AT OR ABOVE 1600 AT WEWWO. CHART MINIMUM ALTITUDE 1600 AT WEWWO/I-ANC 12.37 DME. DELETE NOTE: \*LOC ONLY. DELETE ASTERISK FROM VDP AT I-ANC 3.23 DME. DELETE ASTERISK FROM MINIMUM ALTITUDE AT WIDVA/I-ANC 4.83 DME 1000. **DELETE ALTERNATE MINIMUMS NOTE: NA WHEN LOCAL WEATHER NOT AVAILABLE.** THIS IS ILS OR LOC RWY 7R, AMDT 4A, ILS RWY 7R (SA CAT I), AMDT 4A, ILS RWY 7R (CAT II AND III), AMDT 4A 2110011313-PERM

**Comments:**

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