

AERONAUTICAL CHARTING FORUM
Instrument Procedures Group
October 27, 2009
HISTORY RECORD

FAA Control # 09-02-291

Subject: Straight-in Minimums NA at Night

Background/Discussion:

The user community has raised questions concerning certain instrument approach procedure (IAP) charts containing the statement “**Straight-in minimums NA at night**” when circling minimums for the approach are authorized, and where a circle-land-maneuver to that runway is authorized using another IAP that serves the airport. NBAA offers two examples, Hayden, CO (HDN) and Brewton, AL (12J), where straight in minimums are not authorized at night (see attached HDN RNAV (GPS) Rwy 28 and 12J VOR/DME Rwy 30). However, in both cases, circling minimums published on these IAPs remain authorized at night, and an IAP for a different runway authorizes circle to landing on the same runway where the use of the straight-in minimums is not authorized.

TERPS para. 251 defines the visual portion of the final approach segment and establishes criteria for obstacle clearance in this visual portion based on the assessment of two slopes set at 34:1 and at 20:1. Chapter 3, paragraph 3.3.3d provides procedures for determining the visibility based on the evaluation of the visual segment of the final approach segment. ***(NOTE: instructions and criteria provided in these two sections for assessment of the visual segment are not in agreement with each other).***

The visual segment assessment areas differ in dimension depending on whether a straight-in approach (STRAIGHT-IN AREA), circling approach (STANDARD AREA), or straight-in approach not aligned with the runway centerline (OFFSET) is being evaluated. The purpose of these evaluations is to determine if night operations must be prohibited due to close-in unlighted obstacles or whether visibility minimums must be restricted.

Penetrations of the 20:1 surface affect the usability of the approach at night. If a **straight-in runway’s** 20:1 surface is penetrated, **ONE** of the following actions is taken:

3.3.2 d. (2)(b) 1. Adjust the obstacle height below the surface or remove the penetrating obstacles.

3.3.2 d. (2)(b) 2. Do not publish a VDP, limit minimum visibility to 1 mile/5000 RVR, and take action to have the penetrating obstacles marked and lighted.

3.3.2 d. (2)(b) 3. Do not publish a VDP, limit minimum visibility to 1 mile/5000 RVR, and publish a note denying the approach (both straight-in and circling) to the affected runway at night [*also see paragraph 3.3.2d(2)(d)*].

Penetrations of the 20:1 surface on a **circling approach** results in the following action:

3.3.2 d. (2)(c) 20:1 Surface Penetrations (circling runways). Mark and light the penetrating obstacles or publish a note denying night circling to the affected runway (except as noted below).

An exception is provided in TERPS for certain 20:1 penetrations:

3.3.2 d. (2)(d) 20:1 Surface Penetrations are sometimes impossible to mark and light. In these cases **ONLY**, nighttime operations may continue where an operating VGSI set at an angle ≥ 3 degrees serves the runway and its associated OCS is verified to be clear. The approach chart must be annotated to indicate the straight-in approach procedure or circling operation (as appropriate) is not authorized at night when the VGSI is inoperative

Since neither of these procedures contain notes referencing the operation of the VGSI, it can be assumed that this exception does not apply to the HDN and 12J examples.

TERPS 3.3.3 d contains the following NOTE:

*Note 1: The type of visual area assessment conducted and the subsequent results depend on how the runway is used in relation to the procedure being developed. For example, **a runway is served by an approach procedure not aligned with the runway centerline, and is authorized for landing from a circling maneuver on another approach procedure to a different runway receives both standard and offset evaluations.** However, it is not necessary to publish the results of a STANDARD area assessment to the runway to which the approach is being developed.*

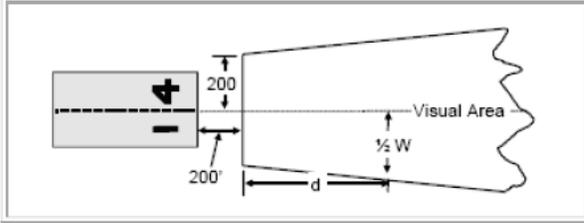
On the two examples provided, HDN and 12J, the use of the straight-in landing minimums are prohibited at night, which would indicate that the OFFSET assessment area's 20:1 slope has been penetrated (OFFSET is used because in both cases, the final approach course is not aligned with the runway centerline). However, as two different approaches to this airport illustrate, circling to the same runway is not prohibited even though the straight-in approach is prohibited. The only logical explanation is the differing dimensions of the assessment areas for straight-in minimums (OFFSET area) in the case of HDN and 12J) and circling minimums (STANDARD area) to the applicable runway as allowed for by the NOTE shown above.

As can be seen in these excerpts from TERPS, the STRAIGHT-IN and OFFSET assessment areas are larger in width than the STANDARD (circling) assessment area:

STANDARD:

Formula 3-3a. Standard Visual Area 1/2 width.
$\frac{1}{2}W = (0.15 \cdot d) + 200'$
Where 1/2W = perpendicular distance from RCL (extended) to edge of area
"d" = distance (ft) measure along RCL from area origin
$0.15 \cdot d + 200$

Figure 3-2a. Standard Visual Area.



STRAIGHT-IN:

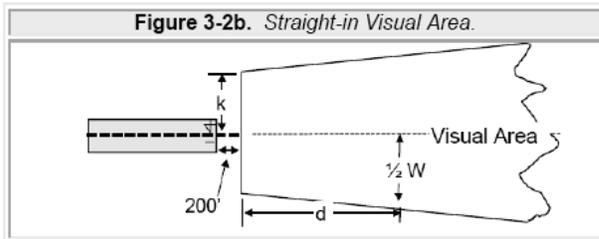
Formula 3-3b. Straight-in Visual Area 1/2 width.

$$\frac{1}{2}W = (0.138 \cdot d) + k$$

Where $1/2W$ = perpendicular distance from RCL (extended) to edge of area
 "d" = distance (ft) measure along RCL from area origin
 "k" = 200 for Cat A/B, 400 for Cat C/D/E

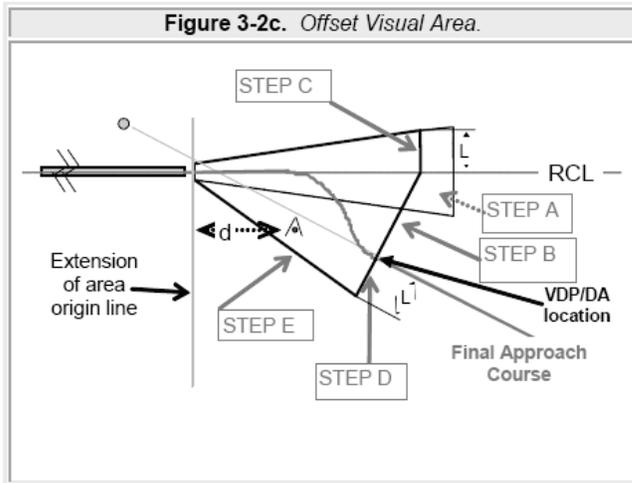
$$0.138 \cdot d + k$$

Figure 3-2b. Straight-in Visual Area.



OFFSET:

Figure 3-2c. Offset Visual Area.



It is likely that the application of the OFFSET assessment area has located offending obstacles that are otherwise missed with the application of the STANDARD assessment area. Perhaps the difference results from nothing more than the presence of lights, or lack thereof, on the affected obstacles.

In any event, the fact that an IAP states that use of the straight-in minimums to a runway is not authorized at night while at the same time an IAP serving a different runway allows for circling to the very same runway at night introduces confusion for the pilot. This practice encourages pilots to conduct the much riskier circle-to-land approach **at night** in lieu of conducting a stabilized, straight-in approach.

Further, it appears that this discrepancy might actually increase the risk of a low altitude encounter with unlighted low, close in obstacles since the circling maneuver by nature is more likely to encounter obstacles at the fringes of the visual obstacle assessment area. This is especially true for those obstacles that lie between the lateral limits of the STANDARD area and the STRAIGHT-IN or OFFSET areas.

NOTE: While the HDN RNAV (GPS) Runway 28 approach straight-in minimums have been NOTAM'd N/A, the 12J VOR/DME Runway 30 approach remains effective (see attached NOTAMS).

Recommendations:

NBAA recommends the following actions:

1. Take action to harmonize TERPS paragraph 251 and TERPS chapter 3, paragraph 3.3.3 (d) with respect to visual segment obstacle assessment.
2. Assess the need to deny landing from a circling approaches to a runway where the STRAIGHT IN or OFFSET assessment results in a denial of the use of the straight-in landing minimums at night for that runway.
3. Since circling approaches involve low-altitude flight maneuvers towards the landing runway, additional lateral protection must be provided beyond those stipulated in the STANDARD assessment area. Therefore, amend TERPS to expand the STANDARD assessment area to encompass the maneuvering necessary to align the aircraft with the final approach segment.

Comments:

This recommendation affects FAAO 8260.3, *United States Standard for Terminal Instrument Procedures (TERPS)*.

Submitted by: Richard J. Boll II

Organization: NBAA

Phone: 316-655-8856

FAX:

E-mail: richard.boll@sbcglobal.net

Date: October 18, 2009

HAYDEN, COLORADO

AL-5983 (FAA)

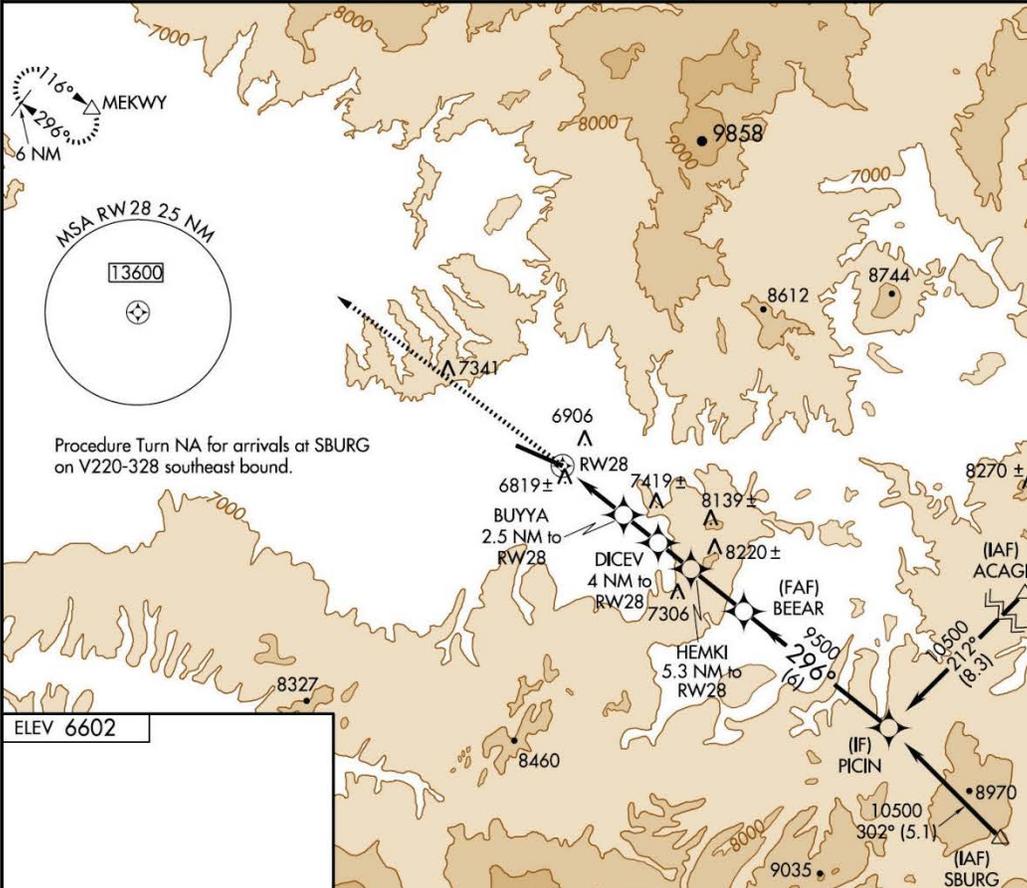
RNAV (GPS) RWY 28

HAYDEN/YAMPA VALLEY (HDN)

APP CRS	Rwy Idg	9998
296°	TDZE	6602
	Apt Elev	6602

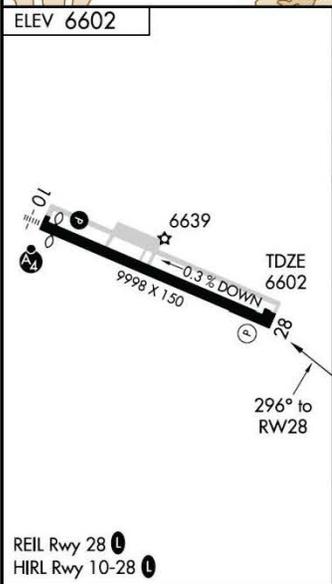
NA GPS or RNP-0.3 required. DME/DME RNP-0.3 NA. Straight in minimums NA at night. MISSED APPROACH: Climb to 10000 direct MEKWY WP and hold.

AWOS-3 119.275	DENVER CENTER 120.475 235.975	UNICOM 123.0 (CTAF)
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SW-1, 24 SEP 2009 to 22 OCT 2009

SW-1 24 SEP 2009 to 22 OCT 2009



	MEKWY	BUYYA	DICEV	HEMKI	BEEAR	PICIN
Altitude	10000	7640	8200	8700	9500	10500
Distance to RWY 28		2.5 NM	4 NM	5.3 NM		
Category		A	B	C	D	
LNVA MDA		7140-1	538 (600-1)	7140-1½	538 (600-1½)	NA
CIRCLING		7220-1	618 (700-1)	7220-1¾	618 (700-1¾)	7320-2¼
						718 (800-2¼)

HAYDEN, COLORADO
Orig-B 09183

40°29'N-107°13'W

RNAV (GPS) RWY 28

HAYDEN, COLORADO

AL-5983 (FAA)

RNAV (GPS) Y RWY 10

HAYDEN/ YAMPA VALLEY (HDN)

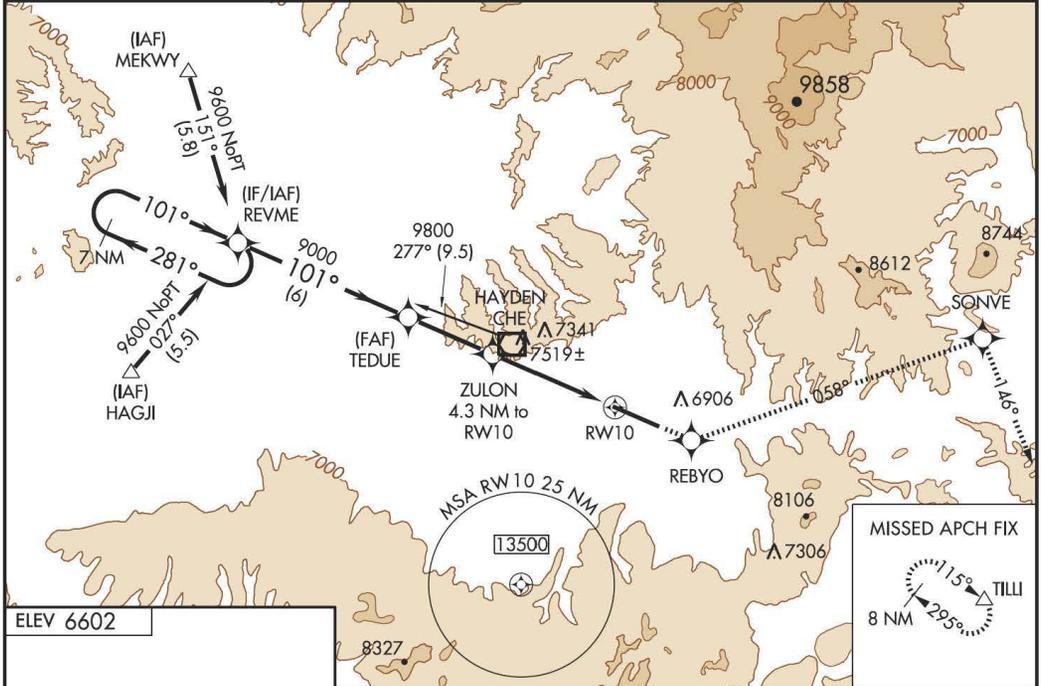
WAAS CH 53410 W10A	APP CRS 101°	Rwy Idg TDZE Apt Elev	9490 6587 6602
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⚠ Inoperative table does not apply. DME/DME RNP-0.3 NA.
⚠ Baro-VNAV NA when using Craig-Moffat altimeter setting.
 For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -28°C (-18°F) or above 36°C (96°F).
 Visibility reduction by helicopters NA.
 When local altimeter setting not received, use Craig-Moffat altimeter setting and increase all DA/MDA 100 feet, and LPV all Cats visibility ½ mile.
 VDP NA when using Craig-Moffat altimeter setting.

MALSF

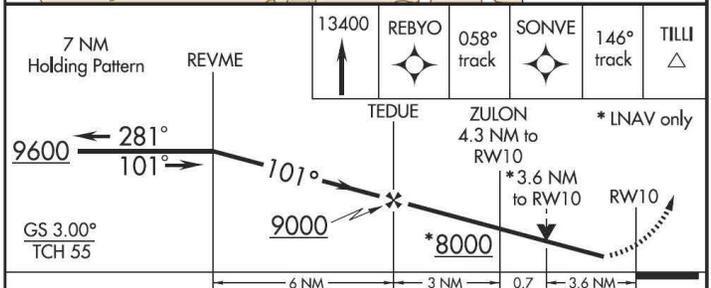
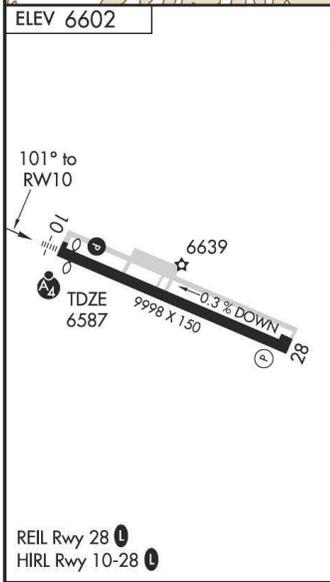
MISSED APPROACH: Climb to 13400 direct REBYO and via 058° track to SONVE and via 146° track to TILLI and hold, continue climb-in-hold to 13400.

AWOS-3 119.275	DENVER CENTER 120.475 235.975	UNICOM 123.0 (CTAF)
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SW-1, 24 SEP 2009 to 22 OCT 2009

SW-1, 24 SEP 2009 to 22 OCT 2009



CATEGORY	A	B	C	D
LPV DA	7042-1½ 455 (500-1½)			
LNAV/VNAV DA	8356-7 1769 (1800-7)			
LNAV MDA	7780-1¼ 1193 (1200-1¼)	7780-1½ 1193 (1200-1½)	7780-3 1193 (1200-3)	1193 (1200-3)
CIRCLING	7780-1¼ 1178 (1200-1¼)	7780-1½ 1178 (1200-1½)	7780-3 1178 (1200-3)	1178 (1200-3)

HAYDEN, COLORADO
 Amdt 1 09183

40°29'N-107°13'W

RNAV (GPS) Y RWY 10

BREWTON, ALABAMA

AL-5920 (FAA)

APP CRS	Rwy Idg	5136
064°	TDZE	81
	Apt Elev	96

GPS RWY 6

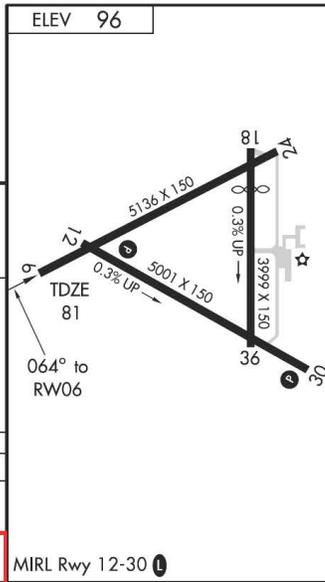
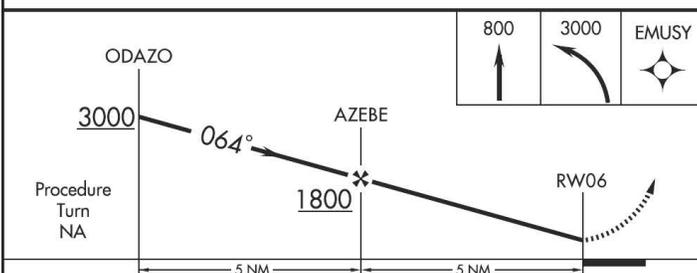
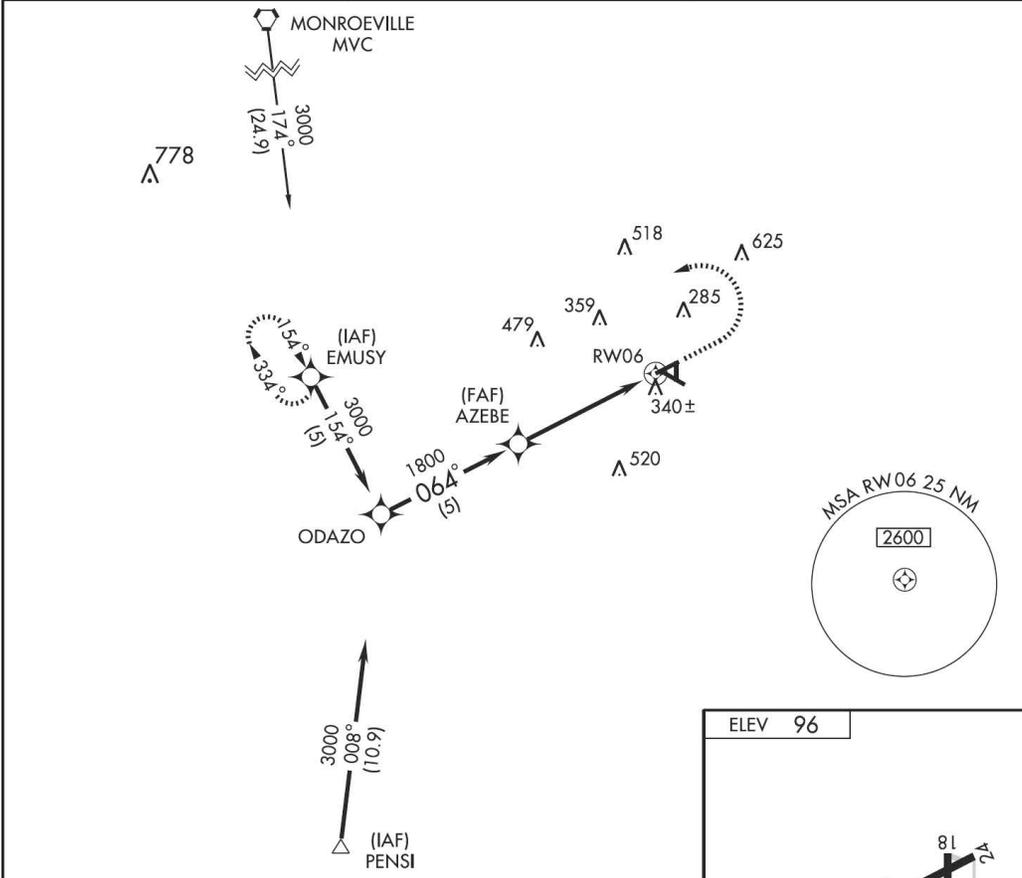
BREWTON MUNI (12J)

Use Pensacola altimeter setting.

 MISSED APPROACH: Climb to 800 then climbing left turn to 3000 direct EMUSY WP and hold

AWOS-3 119.325	JACKSONVILLE CENTER 120.2 346.4	UNICOM 122.725 (CTAF) 0
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SE-4, 24 SEP 2009 to 22 OCT 2009



CATEGORY	A	B	C	D
S-6	680-1	599 (600-1)	680-1½ 599 (600-1½)	680-1¾ 599 (600-1¾)
CIRCLING	740-1	644 (700-1)	760-1¾ 664 (700-1¾)	780-2¼ 684 (700-2¼)

BREWTON, ALABAMA
Orig 09183

31°03'N-87°04'W

BREWTON MUNI (12J)
GPS RWY 6

Data Current as of: Sun, 18 Oct 2009 16:27:00 GMT

KHDN YAMPA VALLEY

10/001 - COM EFAS OUTLET 122.0 OTS. WIE UNTIL UFN. CREATED: 01 OCT 01:10 2009

FDC 9/4500 - FI/T YAMPA VALLEY, HAYDEN, CO. RNAV (GPS) Y RWY 10, AMDT 1...

LPV DA MINIMUMS NA.

LNAV/VNAV DA MINIMUMS NA.

LNAV MDA MINIMUMS NA. WIE UNTIL UFN. CREATED: 09 OCT 18:22 2009

FDC 9/4499 - FI/T YAMPA VALLEY, HAYDEN, CO.

RNAV (GPS) RWY 28, ORIG-B...

LNAV MDA MINIMUMS NA. WIE UNTIL UFN. CREATED: 09 OCT 18:22 2009

FDC 9/5427 - FI/T YAMPA VALLEY, HAYDEN, CO.

RNAV (RNP) Z RWY 10, ORIG...

PROCEDURE NA. WIE UNTIL UFN. CREATED: 23 APR 13:26 2009

K12J BREWTON MUNI

10/306 - OBST TOWER 775 (501 AGL) 11.07 NNW LGTS OTS (ASR 1035440). WIE UNTIL 01 NOV 03:25 2009. CREATED: 17 OCT 03:26 2009

10/272 - OBST TOWER 459 (253 AGL) 9.28 W LGTS OTS (ASR 1224653). WIE UNTIL 30 OCT 22:42 2009. CREATED: 15 OCT 22:42 2009

10/188 - OBST TOWER 625 (400 AGL) 4.34 NNE LGTS OTS (ASR 1036525). WIE UNTIL 25 OCT 05:02 2009. CREATED: 10 OCT 05:02 2009

FDC 9/1802 - FI/T BREWTON MUNI, BREWTON, AL.

GPS RWY 6, ORIG...

PROCEDURE NA AT NIGHT. WIE UNTIL UFN. CREATED: 03 JUN 18:23 2009

FDC 9/7088 - FI/T BREWTON MUNI, BREWTON, AL.

TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES...

NOTE: RWY 12, TREE 199 FEET FROM END OF RUNWAY, 495 FEET RIGHT OF CENTERLINE, 57 FEET AGL/156 FEET MSL. ROAD 1906 FEET FROM END OF RUNWAY, 456 FEET RIGHT OF CENTERLINE, 15 FEET AGL/156 FEET MSL. RWY 30, TREE 92 FEET FROM END OF RUNWAY, 391 FEET RIGHT OF CENTERLINE, 46 FEET AGL/126 FEET MSL. TREE 2654 FEET FROM END OF RUNWAY, 1129 FEET LEFT OF CENTERLINE, 83 FEET AGL/161 FEET MSL.

ALL OTHER DATA REMAINS AS PUBLISHED. WIE UNTIL UFN. CREATED: 05

MAY 12:45

2009

FDC 8/4820 - FI/T BREWTON MUNI, BREWTON, AL.

VOR/DME OR GPS RWY 30, AMDT 7...

DISTANCE HIHIT (FAF) TO MAP: 4.40 NM.

MAP: CEW R-301/23.40 DME.

TERMINAL ROUTE: (ITUYU) CEW R-358/14 DME (IAF) ARC TO ROICE

(CEW R-301/14 DME) MIN ALT 2300. WIE UNTIL UFN. CREATED: 25 AUG

19:44 2008

Number of NOTAMs selected: 10 End of Report

Initial Discussion - Meeting 09-02: New issue presented by Rich Boll, NBAA. Rich stated that NBAA members have raised questions concerning certain instrument approach procedure (IAP) charts that contain the statement "**Straight-in minimums NA at night**"; however, circling minimums for the same approach are authorized. Additionally, in some

cases a circle-land maneuver to that runway is authorized if using another IAP that serves the airport - Several charted examples were provided in the Recommendation Document - see above. NBAA believes this scenario introduces confusion for the pilot and also encourages pilots to conduct the much riskier circle-to-land approach at night in lieu of conducting a stabilized, straight-in approach. This perceived contradiction might actually increase the risk of a low altitude encounter with unlighted low, close-in obstacles since the circling maneuver by nature is more likely to encounter obstacles at the fringes of the visual obstacle assessment area. This is especially true for those obstacles that lie between the lateral limits of the Standard area and the Straight-in or Offset areas. TERPS paragraph 251 specifies 3 different visual obstacle assessment areas: Standard, Straight-in, and Offset; however, there seems to be a contradiction between TERPS paragraph 251 and the required actions of TERPS Chapter 3, paragraph 3.3.2d. Brad Rush, AJW-372, stated that in some cases, minimums are restricted due to survey accuracy. He questioned whether we should ever allow circling to a runway where an IFR straight-in approach is not authorized at night. Tom Schneider, AFS-420, concluded that this is a TERPS criteria issue and must be worked through the US-IFPP. **ACTION: ACF-IPG Chair and US-IFPP.**

MEETING 10-01: Tom Schneider, AFS-420, briefed the following update as received from Jack Corman, AFS-420, and Executive Director of the US-IFPP: "If an approach meets straight-in requirements, even though offset, it will receive a straight-in visual segment evaluation using the criteria that accounts for an off-set final segment. If the evaluation results in mitigation actions that cannot be met at night, night operations FROM THIS APPROACH to that runway will be disallowed. In these cases, because the aircraft is approaching the runway from a straight-in alignment, the straight-in approach visual segment serves as the circling evaluation to this runway. Other runways receive a standard evaluation. Aircraft circling to the example runway from approaches to other runways are not prescribed a path to fly in the circling maneuver. The standard area assessment evaluates the area where circling aircraft are expected to gain alignment and descend to the runway for landing. If no mitigation is required for the standard evaluation, night operations to the runway from approaches to other runways will be allowed. ACTION accepted: TERPS will be revised to assure circling to the straight-in approach runway from the straight-in approach (as in the stated example) is not allowed when offending obstacles cannot be mitigated. The existing visual area dimensions are deemed satisfactory and will not be revised." Rich Boll, NBAA, stated that he still has concerns with the proposed policy as it continues to allow a circling approach and landing from a published approach to a different runway to the runway where straight-in minimums are NA at night. He added that the visual assessment area must be larger to account for joining the straight-in assessment area. Rich recommended, and was supported by others, that consideration should be given to not allowing a circling approach to runways where straight-in minimums are NA at night. Tom agreed to take the concerns back to the US-IFPP and ask for additional analysis.

ACTION: ACF-IPG Chair and US-IFPP.

MEETING 10-02: Tom Schneider, AFS-420, briefed the following input from T.J. Nichols, the AFS-420 conventional TERPS criteria specialist: "The issue was resolved by the AFS-1 memorandum to AJW-3 dated October 1, 2010. In summary, only those airports notified of 20:1 penetrations within the three years preceding this memorandum (i.e. Oct 1, 2007 through Sep 30, 2010) continue to be exempted from compliance with Order 8260.3 paragraph 251 and only for the period specified in AJW's letter to the airport operator. Tom went on to say that while this response addresses straight-in minimums at night when there are visual surface penetrations, it does not address the original NBAA concern; i.e., if

straight in minimums are not authorized at night on a specific approach to a runway, how can an aircraft be allowed to circle to land on that runway from another approach to a different runway? NBAA believes that circling to a runway where straight-in minimums are not authorized at night should also not be allowed at night. Tom will take the issue back to AFS-420 and have an answer at the next meeting. **ACTION: AFS-420 (US-IFPP)**.

MEETING 11-01: Tom Schneider, AFS-420, briefed the following draft change proposal to FAA Order 8260.3 from T.J. Nichols, the AFS-420 lead conventional TERPS criteria specialist. The change will be presented to the US-IFPP at the next meeting:

"For each approach designed;

1. Require evaluation of the applicable visual area assessment (straight-in or offset) to the approach runway. If there are published approach procedures to other runways, the applicable visual area is assessed separately for that approach, and the procedure will be annotated accordingly. Therefore, no 'extra' standard visual area assessment is required.

2. Require an additional standard visual area assessment only to those runways without a published approach procedure and to which circling is authorized.

3. Annotate the approach procedure to indicate that each runway with a documented unlit, unmitigated 20:1 visual area penetration is not available at night; e.g.,

Option 1. "RWY 36 NA at night" or "RWY 36 and 27 NA at night".

Option 2. "RWY 36 straight-in and circling NA at night" or "RWY 36 straight-in and circling and RWY 09/18/27 circling NA at night."

Lev Prichard, APA, stated that Option 1 was confusing and he believed Option 2 is preferred; the group agreed. The Executive Director of the US-IFPP will keep the ACF apprised of the issue status. **ACTION: AFS-420 (US-IFPP)**.

MEETING 11-02: Tom Schneider, AFS-420, briefed the following update as received from T.J. Nichols, the AFS-420 lead specialist for conventional TERPS criteria. "This issue was briefed at the June 2011 US-IFPP meeting where consensus was to reject the previous proposal. Participants acknowledged that there is an intentional difference in the alignment and dimensions of the different visual areas. Assuming that the standard visual area to the circling runway is suitable for its purpose, the US-IFPP participants agreed that it is illogical to impose a restriction on the circling approach based on the straight-in or offset analysis which, in many cases is based on a completely different final approach path. The recommendation was for Flight Standards to determine whether the current standard visual area provides adequate protection for the visual portion of a circling approach from the point the aircraft leaves CMDA. A request for AFS-450 analysis has been made to evaluate the adequacy of the standard visual area defined in Order 8260.3B, Volume 1, paragraph 3.3.2d. This request has been forwarded and is pending AFS-450 acceptance." Rick Dunham, AFS-420, briefed that the study is to determine whether the straight-in and circling

surfaces can be harmonized. It will include checking historical aspects behind the current criteria. Hard data is necessary to support a criteria change. Rich Boll, NBAA, restated that it is difficult to understand how a straight-in RNAV (GPS) approach is not authorized at night, yet circling to that same runway is allowed. Steve Serur, ALPA, stated that years ago, some VASI system were locally installed but may not have had a commissioning flight inspection. He recommended checking the NASR database and if the VASI system has not been formally commissioned, then it shouldn't be used as a mitigation for night operations as it cannot be assumed the obstacle surface is clear. Tom added that there is a wider area analyzed for a straight-in approach to transition to runway centerline because of the wider final approach trapezoid and the fact that the final approach course may not be aligned with the runway centerline. The circling area is more narrow because the pilot is visual in the circling area and normally descends when aligned with the runway. Rick added that even though the pilot may be confused, the analysis is safe. He added there are more and more RNAV (GPS) approaches being published with a "NA at night if VASI inop" note.
ACTION: AFS-420 and AFS-450 (US-IFPP).

MEETING 12-01: Tom Schneider, AFS-420, briefed that, as noted at the last US-IFPP meeting on April 13, research of the history defining the current obstacle areas is on-going within AFS-420 and 450 and AFS-450 is still studying the adequacy of the circling visual segment. Steve Serur, ALPA, asked whether any check had been made regarding VGSI flight inspections. Tom responded, no. Brad Rush, AJV-3B, stated that procedure specialists check the Air-Nav data base when developing procedures. Tom stated that one would have to assume that the VGSI systems at all Part 139 airports have been flight inspected. Brad added that if there is no survey for the airport, they must assume 20:1 penetrations exist. **ACTION: AFS-420 and AFS-450 (US-IFPP).**

MEETING 12-02: Rick Dunham, AFS-420, briefed that no analysis of straight-in and circling surfaces has been accomplished due to other higher order analysis projects. This project is on hold pending funding and manpower. Rick added that the US-IFPP considers the cost-benefit of this study to be marginal in overall impact to NAS operations and could adversely impact the current minimums if the two surfaces are harmonized. John Collins, GA Pilot, asked about the impact on minima. Rick responded that the study is looking at harmonizing the surfaces without impacting minimums and that AFS-420 and 450 will continue to work the issue through the US-IFPP. **ACTION: AFS-420 and AFS-450 (US-IFPP).**

MEETING 13-01: Valerie Watson, AJV-3B, briefed the following update from Brad Rush, AJV-3B, who could not attend: "The issue was briefed at the US-IFPP in January and although short-term and long-term solutions are being addressed, nothing concrete has developed thus far. AFS-420, AFS-460 and AeroNav Products have determined a short term fix that can be implemented reasonably, is to change the terminology of the subject notes. Instead of using notes indicating "straight-in" or "circling", the recommendation is to indicate "Night Landing". An example of such notes would be: "**Night landing: RWY 9, 27, 32 NA and RWY 14, 26 requires use of VGSI**". NBAA has been coordinated with on the subject note and agrees with the concept. Work will continue on the issue and a recommendation will be provided to the US-IFPP in June." Bob Lamond asked whether the NBAA note recommendation regarding the VGSI use is still under consideration: "**Night landing: RWY 9, 27, 32 NA; RWY 14, 26 operational VGSI required, remain on or above visual glidepath until threshold**". Tom responded that nothing is final yet; however, there

is concern the NBAA-proposed language is overly wordy. An extract of the US-IFPP minutes and example notes are provided here (📌). AFS-420 will continue to track the issue through the US-IFPP and make changes to FAA Order 8260.19 as necessary.
ACTION: AFS-420 (US-IFPP).

MEETING 13-02: Rich Boll, NBAA, presented an addendum to the original recommendation Document (📌). NBAA is concerned over a recent proliferation of NOTAMS affecting straight-in and/or circling minima on instrument approach procedures. The NOTAMS specify that straight-in and circling minimums are NA at night. Without straight-in or circling minima, the affected approaches are not authorized at night since there is no way to complete the approach. Pilots should not request nor should ATC issue a clearance for an approach where both straight-in and circling minima are "NA". When this situation occurs, NBAA believes Order 8260.19 should clearly state that the procedure itself must NA at night.

Tom Schneider, AFS-420, stated that AFS-420 agrees with this proposal and has included the following change to current paragraph 8-54m(2)(a) in Order 8260.19F "If unable to authorize night minimums (e.g., when both straight-in and circling minimums are not authorized at night), use: **Chart note: Procedure NA at night.**" Tom also noted that additional changes have been made to the draft Order as briefed at the last ACF meeting.

Brad Rush, AJV-3B, commented on draft Order 8260.19F, paragraph 8-54m(2)(h) note that states "remain on or above the VGSI glide path until threshold" portion not being necessary and in fact redundant. The group initially concurred. Bill Hammett, AFS-420 (ISI/Pragmatics Contract Support), said the Order is still out for formal coordination so comments can still be made. Tom asked if NBAA agreed with removing the comment portion in subparagraph (h). Rich Boll, NBAA, had questions on this and subparagraph (g), and then presented a PowerPoint discussion on operations, surfaces, and minima from the NBAA perspective. A copy of Rich's presentation is provided here: (📌). He concluded prohibitions on operations at night must be consistent for the affected runway across all charts. NBAA believes surfaces should be aligned, and should protect aircraft on the visual portion of an approach, and until this is accomplished FAA needs to stop applying TERPS paragraph 3-3-2. Lev Prichard, APA, stated that circling approaches should be almost obsolete since current rules allow a straight-in RNAV approach to be developed nearly everywhere. Therefore, current policy is forcing pilots to fly a more risky circling maneuver. Kel Christianson, AFS-470 said the note in subparagraph (h) is there as mitigation for 20:1 visual surface obstacle penetrations. Tom asked Rich again, specifically about the note in subparagraph (h) regarding remaining on or above the VGSI. Rich stated the note should remain in support of Kel's comment. A group discussion followed. Bob Lamond, NBAA, emphasized that NBAA wants action on this issue ASAP as it is impacting operations. Tom Schneider, AFS-420, asked what harm does the note do. Val Watson, AJV-3B, responded that it takes up "white space" on the chart and that providing pilot guidance is not the purpose of an approach chart. John Moore, Jeppesen, supported Val's position adding that pilot guidance should be contained in the AIM, IPH, etc. John Frazier, Advanced Aircrew Academy, stated that if we start publishing notes to advise pilots to stay on or above the VGSI, will there be pilots that think if there is no note, they don't have to follow the VGSI. Kel stated that the VGSI is used to support a waiver and was concerned to hear comments that pilots may not be following the VGSI. John Collins, GA Pilot, stated that he supports the note as it is rulemaking under Part 97. If the VGSI is used to mitigate 20:1 surface penetrations, then it should be so noted. After the discussion, Tom said we will retain note as is, and reminded the group this was the direction decided upon at the last ACF. Bruce

DeCleene, AFS-400, opened a discussion regarding charting unlit obstacles. Tom said we have forced obstacles to be lit, but this does not work in every case. Brad stated charting all unlit obstacles would result in a black blob on chart. Rich again questioned suspending 3-3-2 (c) until issue brought up by NBAA addressed. Tom said this would need to be brought up in AFS-400, since there are possibly bigger ramifications.

Tom also briefed the following update as received from John Bordy, the AFS-420 conventional TERPS criteria specialist: "In June 2013, the US-IFPP designated AFS-420 to lead a working group to develop a recommended position related to all aspects of visual segments, to include using VGSI to mitigate 20:1 visual surface penetrations. To date, no working group has been convened due to other commitments; however there has been other significant activity by AFS-400 relating to 20:1 penetrations. These include, but are not limited to:

- 1) The issuance of a waiver in September to allow the temporary use of VGSI in lieu of obstruction lighting prior to receiving explicit approval from AFS.
- 2) A waiver was issued in September to temporarily mitigate 20:1 penetrations that exceed the lateral boundaries of localizer/LP signals (ILS, LOC, LPV, LP IAPs only).
- 3) Additionally, in September, representatives from AFS-400 participated in a "tiger team" along with representatives of Mission Support Services, AeroNav Products (AJV-3) and the Airports Division (AAS-100) to develop risk-based requirements (assessment, response times, NOTAM actions, etc.) related to the discovery of 20:1 penetrations. The tiger team's recommendations are currently under management review.
- 4) AFS-400 is also considering issuing a waiver that will allow application of a beginning straight-in/offset visual surface width of +/- 200 ft for CAT A/B aircraft on all IAPs that have CAT A/B minimums published even when higher CAT minimums are established to the same runway.
- 5) Lastly, John stated that during the October 23 AFS-400 Division Manager's meeting, Bruce DeCleene, Manager, AFS-400, stated this ACF issue is being added to the Division's One Plan. He directed that AFS-450 work hand-in-hand with the Airport Obstructions Standards Committee (AOSC) to acquire data so an objective analysis can be made regarding what area needs to be considered when assessing visual surfaces. The AOSC, through MITRE, has already collected much data that could be used for analysis of straight-in procedures; but, it's likely AFS-450 will need to obtain additional data related to aircraft alignment with the landing runway following a circling maneuver. An AOSC working group telcon is scheduled prior to the ACF meeting where John Bordy, AFS-420, will bring this issue up to the members to ensure all are on board as well. John has also agreed to keep the ACF informed of future actions of the working group."

Bruce DeCleene, AFS-420, provided a brief recap on 20:1 visual surface penetrations. The VGSI angles are usually reasonably coincidental with the approach VDA. More and more 20:1 penetrations are being noted and there is increased pushback from users regarding minima/procedure loss on procedures that have been in place for many years. We need to look at risk. If the risk is low, then give the airport time to fix the problem. If the risk is high, then amend or cancel the procedure. If the risk is medium, then apply a combination of the above. This would be a near term solution. For long term, we need to determine why there is an increase in penetrations and we need to study the effectiveness of using VGSI as mitigation. We also need to assess what data we currently have on the surfaces in question, and collect new data using the best technology available. John Collins, GA Pilot, stated that "Procedure NA at night"

NOTAMs affect more GA airports and he believes FAA is attempting to apply an airline solution for all airports when GA can easily accept a 4 degree descent angle. Bruce responded that the goal is to provide a descent angle to get all aircraft into a position to land. The preference is to not always use 3 degrees, rather to use an angle that coincides with the VGSI. He stated that he is a strong proponent for vertically guided approaches and if there is vertical guidance available to a runway, then it should be used. John agreed; however, adding that vertical guidance is not as substantial for GA operations.

Status: AFS-420 will continue to work the issue through the US-IFPP.

Item Open AFS-420 (US-IFPP)].

MEETING 14-01: Tom Schneider, AFS-420, briefed on a slide provided by John Bordy, AFS-420. (📌) Bob Lamond, NBAA, then briefed on an NBAA slide (📌) example (Ft. Dodge, IA.) where a 3 foot furrow of dirt in the adjacent farmer's field penetrates the 20:1 surface and has rendered night operations NA. Jay Jackson, AJV-22, discussed 20:1 mitigations (about 2500 of them in system), and stated that for an obstacle, from a data base perspective, the solution seems simple for airports to advise the FAA when one of these minor obstacles is removed so that it can be mitigated. Bob re-emphasized that a plow furrow in a farm field should not constitute a 20:1 penetration, stressing that this is not logical and questioned if criteria could take situations like this into account. AFS-420 will continue to monitor progress on this issue.

Status: AFS-420 will continue to work the issue through the US-IFPP. **Item Open**

AFS-420 (US-IFPP)].

MEETING 14-02: Tom Schneider, AFS-420, provided an update (📌) from John Bordy, AFS-420, showing the current standard and what changes are in progress. Rick Dunham, AFS-420, advised this may change before FAA Order 8260.3C is finalized, and stated that the guidance will harmonize the visual straight-in and circling issue, along with a number of 20:1 issues. Tom said the last slide will be submitted at January 2015 US-IFPP. Rick has done some ad-hoc coordination with US-IFPP members via email and received verbal concurrence on proposed changes. Kevin Bridges, AIR-130, inquired about the splay to be used, stating his concern on flight check of obstacles. Rick said they will report any obstacles they see along edges. Rick discussed safety case and data risk management methods used to warrant this change. Vincent Massimini, MITRE, asked if the intent is to prohibit night landings on instrument approaches. Tom stated that policy in FAA Order 8260.19 has changed and addresses "instrument" flight procedures and this does not impact operations conducted under VFR. Rick advised that a memo is being finalized to change the current FAA Order 8260.3B criteria immediately (not wait for FAA Order 8260.3C publication). Rich Boll, NBAA, asked about procedure revisions and Brad Rush, AJV-344, said policy when reviewing a procedure is to review "all" runway visual areas at same time at the airport.

Status: AFS-420 will continue to work the issue through the US-IFPP. **Item Open:**

AFS-420 (US-IFPP)].

MEETING 15-01: Tom Schneider, AFS-420, briefed using a slide  provided by John Bordy, AFS-420, recapping the issue of segment width differences for circling vs. straight-in. The old policy was a 400' width and the new policy is a 200' width, providing consistency between straight-in and circling. The memo issued in November 2014 was also displayed to the group. The policy is now in use by Aeronautical Information Services (AIS). Procedures will be updated at the time of the next Periodic Review. Lev Prichard, Allied Pilots Association, asked if PAPI/VASI mitigation for 20:1 surface penetrations can be waived and Rick Dunham, AFS-420, said yes. Tom advised the issue is still open in US-IFPP, pending publication of Order 8260.3C and asked NBAA if they would be willing to close.

Status: Rich Boll, NBAA, agreed to close. Item Closed.