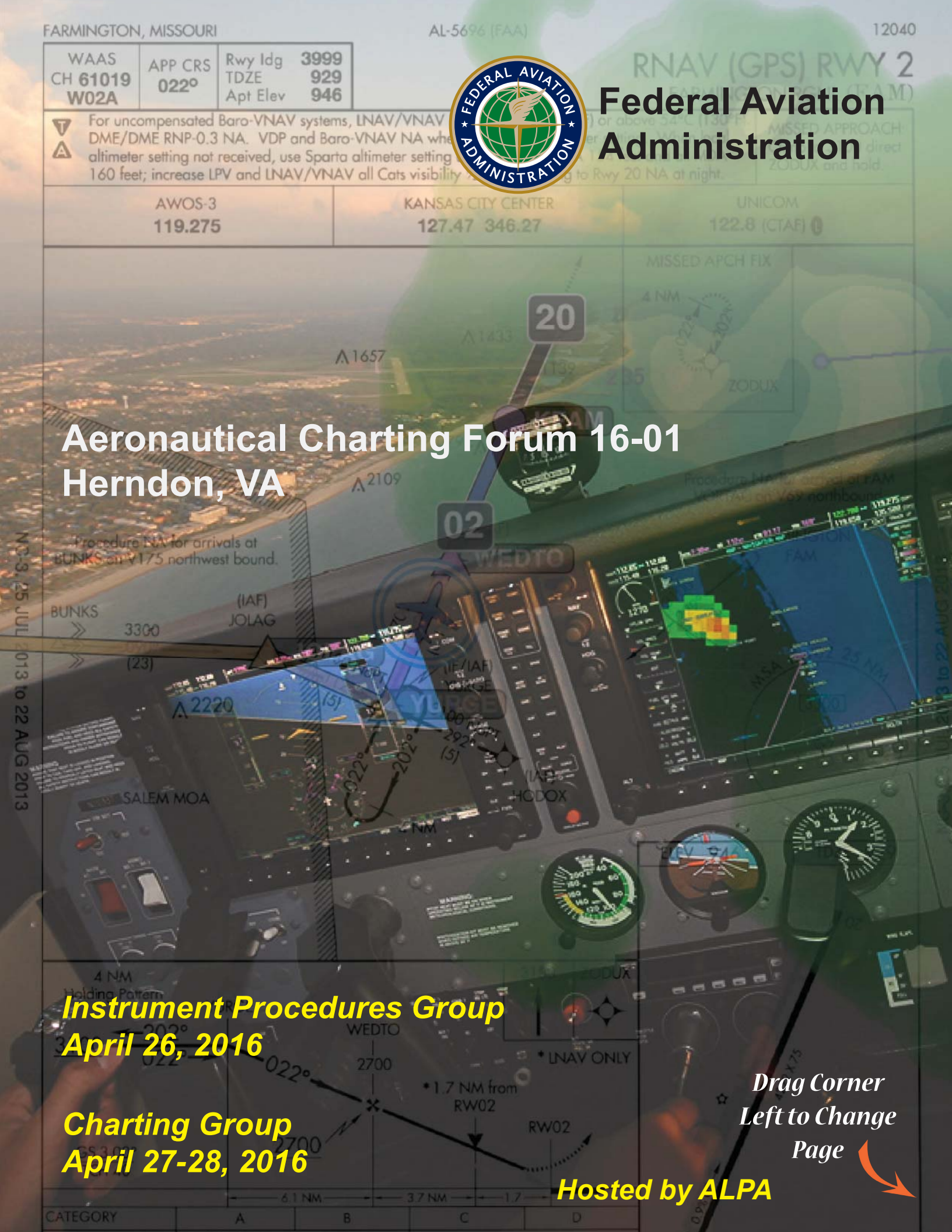

Federal Aviation Administration

Aeronautical Charting Forum 16-01
Herndon, VA

Instrument Procedures Group
April 26, 2016

Charting Group
April 27-28, 2016

Hosted by ALPA

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Instrument Procedures Group

AERONAUTICAL CHARTING FORUM (ACF)

MEETING 16-01 April 26, 2016
HOST: Air Line Pilots Association (ALPA)
535 Herndon Parkway
Herndon, VA 20192

INSTRUMENT PROCEDURES GROUP (IPG) AGENDA

I.	**OPENING REMARKS**	Tom Schneider
II.	**ALPA WELCOMING COMMENTS**	Darrell Pennington Marc Henegar
III.	**INTRODUCTIONS**	Attendees
IV.	**REVIEW MINUTES OF LAST MEETING, ACF 15-02**	Steve VanCamp
V.	**BRIEFINGS**	
	New revised FAA Forms 8260-3/4/5/7A	Tom Schneider
	Revision to FAA Order 8260.43B, Flight Procedures Management Program	Tom Schneider

VI.	**OLD BUSINESS (Open Issues)**	**OPR**
07-02-278	Advanced RNAV (FMS/GPS) Holding Patterns Defined by Leg Length	NBAA
10-01-294	RNP SAAAR Intermediate Segment Length and ATC Intervention	AFS-420
12-01-299	Loss of CAT D Line of Minima in Support of Circle-to-land Operations.	AFS-420
12-01-301	Publishing a Vertical Descent Angle (VDA) with 34:1 Surface Penetrations in the Visual Segment	AFS-420 & all ACF
13-02-312	Equipment Requirement Notes on Instrument Approach Procedures	AFS-420
14-01-315	90 Degree Airway-to-RNAV-IAP Course Change Limitation: Arrival Holds	AFS-420 (US-IFPP)
14-01-316	RNAV Fixes on Victor Airways Used for RNAV SIAPs	AFS-420

14-02-317	Use of GPS on Conventional (Ground-Based NAVAID) Instrument Approach Procedures (IAPs)	AFS-470
15-01-320	Common Sounding Fix Names	AJV-8
15-01-321	Coding of Missed Approach for ILS31L and ILS31R at KJFK	AFS-420 (US-IFPP)
15-02-323	Depiction of Low, Close-in Obstacles on SIDs & ODPs	AFS-420/AJV-54

VII. NEW BUSINESS (New Agenda Items)

		SPONSOR
16-01-324	SID/STAR Naming Policy	Love's Travel Stops
16-01-325	Priority of Terminal Procedure Amendments	NBAA
16-01-326	FAA Order 8260.46F, "Top Altitude" Charting Constraints	NATCA

VIII. NEXT MEETINGS

ACF 16-02 is scheduled for October 25-27, 2016, hosted by Pragmatics, Inc. Reston, VA.

ACF 17-01 is scheduled for April 25-27, 2017, host TBD.

December 11, 2015

Dear Forum Participant

Attached are the minutes of the Aeronautical Charting Forum, Instrument Procedures Group (ACF-IPG) meeting held on October 27, 2015. The meeting was hosted by the United States Geological Survey, 12201 Sunrise Valley Drive, Reston, VA. An office of primary responsibility (OPR) action listing (Atch 1) and an attendance listing (Atch 2) are appended to the minutes.

Please note there are briefing slides inserted in the minutes as PDF files shown as stickpins. All are asked to review the minutes and attachments for accuracy and forward any comments to the following:

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The AFS-420 web site contains information relating to ongoing activities including the ACF-IPG. The home page is located at:
https://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afs/afs400/afs420/acfipg/
This site contains copies of minutes of the past several meeting as well as a chronological history of open and closed issues to include the original submission, a brief synopsis of the discussion at each meeting, the current status of open issues, required follow-up action(s), and the OPR for those actions. There is also a link to the ACF Charting Group web site. We encourage participants to use these sites for reference in preparation for future meetings.

ACF meeting **16-01** is scheduled for **April 26-28, 2016** with ALPA as host at their Herndon, Va facility. ACF meeting **16-02** is scheduled for **October 25-27, 2016** with Pragmatics, Inc. as host at their Reston, VA headquarters..

Please note that **meetings begin promptly at 8:30 AM**. Dress is business casual. Forward new agenda items for the 16-01 ACF-IPG meeting to the above addressees not later than April 7, 2016. A reminder notice will be sent.

We look forward to your continued participation.

Thomas E. Schneider, FAA/AFS-420
Co-Chairman, Aeronautical Charting Forum,
Chairman, Instrument Procedures Group

GOVERNMENT / INDUSTRY AERONAUTICAL CHARTING FORUM
INSTRUMENT PROCEDURES GROUP
Meeting 15-02
U.S. Geological Survey (USGS)
12201 Sunrise Valley Drive
Reston, VA 20192
October 27, 2015

1. Opening Remarks:

Tom Schneider, AFS-420, Flight Standards co-chair of the Aeronautical Charting Forum (ACF), and Chair of the Instrument Procedures Group (IPG), opened the meeting at 8:30 am on October 27, 2015. The USGS hosted the meeting at their Reston, VA facility. Lance Christian made welcoming and administrative comments on behalf of the USGS. A listing of attendees is included as attachment 2.

2. Review of Minutes of Last Meeting:

Steve Vancamp, AFS-420, (ISI/Pragmatics Contract Support), briefed that the minutes of ACF-IPG 15-01 were electronically submitted on June 15, 2015. There were two corrections made, and the corrected copy is on the ACF-IPG web page.

3. Briefings:

a. Tom Schneider, AFS-420, briefed on revisions to FAA Order 7910.5, *Aeronautical Charting Forum*. Some office symbols changed and the timeframe for minutes' publication extended to 45 days. The order is in coordination.

b. Catherine M. Graham, AFS-470, briefed on work to utilize reduced visibility minima (1800 RVR) on GPS approaches. In a similar effort in 2008, 1800 RVR was briefed for use on ILS approaches, and work is now proceeding toward applying the same concept for satellite based approaches. A PowerPoint presentation was ( ) discussed, outlining: Requested action, background, runway requirements, lighting and ancillary equipment, operational safety review, and the way forward. This authorization does not affect the approach, but increases procedure availability by permitting use during lower visibility conditions, and could affect 347 LPV and eight GLS approaches (with requirements as noted). In the absence of TDZ/CL, the intent is to use the same note as the ILS chart does, and issue a P-NOTAM to allow the use of 1800 RVR until the chart note can be added. There is no specific timeline but the FAA is moving forward with this and will it eventually result in an update to FAA Order 8400.13, *Procedures for the Evaluation and Approval of Facilities for Special Authorization Category I Operations and All Category II and III Operations*.

4. Old Business (Open Issues):

a. 92-02-110: Cold Station Altimeter Settings (*Includes Issue 04-01-251*).

Kel Christianson, AFS-470, briefed the original issue regarding cold weather affect on altimeters and the procedures needed to compensate. The FAA worked with MITRE and identified approach procedures affected by cold weather. Those procedures are now listed in the Notice to Airman Publication (NTAP) and procedure plates have been updated to reflect a numerical temperature at which adjustment needs to be made. Cold weather procedures are mandatory

this winter at identified locations. Every year the list of affected procedures will be updated using temperature records from the previous five years. The NTAP entry will be revised and an InFO listing the changes will be published. Airports may be added, deleted or the specific numerical threshold temperatures may be revised in this annual reassessment and will precipitate revised National Flight Data Digest (NFDD) airport remarks and resultant chart changes. Rich Boll, NBAA, inquired about Midway Airport in Chicago, where all approaches have a snowflake icon, yet a cold temp adjustment does not apply to all the approaches. Kel stated why this happens and Rich understood, but noted when a snowflake is charted on "all" the approaches at the airport, the pilot would apply the temp correction to all approaches. Kel said the wording at the front of the TPP will be changed to reflect more clearly what is meant (i.e., Cold Temperature adjustment "on this approach" will be revised to "at this airport."). The disparities at Midway occurred because of O'Hare traffic separation issues, and Gary Fiske, AJV-82, added that. Midway is unique and he does not see this happening anywhere else. Kel said if any pilot decides to correct at a different temperature, rather than the NTAP value (or if no correction value is published), they will likely encounter delays by ATC. Kel said the intent is to release a new NTAP in the late summer or early fall every year with the annual changes. Gary said some FAA Order JO 7110.65 (and AIM changes) did not make the cut-off for publication, so a notice may be issued to bridge the gap. Ted Thompson, Jeppesen, advised that he is receiving a lot of feedback on the number of removed and added airports in the program and those with only a one-degree change. He also voiced that users are confused by the cold temperature values and those in the Baro-VNAV notes. Kel said he is willing to handle any questions and that user concerns could be referred to him. A general discussion followed touching on issues/concerns such as: should AFS-470 put FAQs on their web site? (Kel will consider); the opportunity for miscalculation of numbers in the cockpit (i.e., should the numbers be in the NAV data base?); speculation that some concerns may arise or be alleviated once procedures have actually been utilized; application of cold temp correction to procedure segments vs. the entire procedure; and lack of time to preplan in case of diverted destination. Kel proposed the issue be closed, saying that it is his position that the original ACF issue has been addressed and any new items related to cold temperature should be submitted as new ACF agenda items or via other means. He said that even though the issue is closed in the ACF, his office will provide support for any Cold Temperature related issues. Tom Schneider, AFS-420, suggested that all participants give the program two years, determine whether changes are needed and if so, bring them forth as new agenda items.

Status: Item Closed.

b. 02-01-241: Non Radar Level and Climb-in-Hold (CIH) Patterns.

Gary Fiske, AJV-82, briefed that several years ago the ATO submitted DCPs to their orders addressing how terminal facilities do their CIH assessments. This spring they finally came to an agreement on how to handle these on the terminal side, but he received several non-concurs from En Route, specifically Anchorage ARTCC. In trying to resolve the non-concur, Gary received feedback from Aeronautical Information Services (AIS) and AFS-420 during a telecon, wondering if this is an issue in 2015 with today's improved Radar surveillance, with the exception being that Anchorage does have non-radar airspace. Some of the expectations are different in 2015 and Gary sees no value and recommends dropping and closing the issue. Rich Boll, NBAA, asked if CIH is charted, and Tom Schneider, AFS-420, said if CIH is required it is stated on the applicable procedure chart. Gary said they are mostly on missed approaches. Tom said the problem is not on procedures where CIH is stated, but rather on the ad-hoc ones; i.e., is it clear to the ATC facility if ad-hoc CIH is issued, an assessment has not been done to support the higher airspeed permitted when climbing in a holding pattern that will ensure the

aircraft remains within protected airspace? Gary said it is altitude dependent since there is no issue when the aircraft is above the MVA/MIA, and the reality is surveillance has gotten better. FAA Order 7130.3, which is driving all of this, was written in the 1960's. John Moore, Jeppesen, inquired about placing information in a bulletin? Tom said the guidance is in the terminal section of FAA Order JO 7210.3, just not in the en route. Rich said he will take the aircraft speed issue in ad-hoc en route holding back to his ACF holding group and look at some additional AIM guidance to address this. ALPA representatives agreed that with both the completed work and this IOU from Rich, the issue should be closed.

Status: Item Closed.

c. 07-01-270: Course Change Limitation Notes on SIAPs

Tom Schneider, AFS-420, advised that a change will be made to FAA Order 8260.19H, removing the sentence in para 8-2-5.e regarding enroute obstacle clearance criteria applied to feeder routes. John Collins, GA pilot, agreed to close issue.

Status: Item Closed.

d. 07-02-278: Advanced RNAV (FMS/GPS) Performance of Holding Patterns Defined by Leg Length

Rich Boll, NBAA, formed a Working Group (WG) after ACF 15-01 to look at issues with holding. The group has representatives from the FAA, manufacturers/industry. There have been eight telecons and members now have a good understanding on how RNAV systems work with holding. Rich provided ( ) a presentation covering topics including: list of WG participants; proposed guidance materials; OEM provided information; principal recommendations for the AIM (e.g., speeds, entry procedures, substitution, etc.); recommendations for ATC and Pilot/Controller Glossary; and future actions. The WG determined that entry speed into the pattern (including slowing to pattern speed before the holding fix) is needed for containment, and some of the more advanced RNAV equipment will calculate the deceleration point for the pilot. Rich reminded all that the FMS will calculate the holding pattern size based on the speed you cross the holding fix at and to not use a turn bank limiting mode (i.e., criteria is based on 25 dg bank at all altitudes). FB vs. FO turns at the holding fix were discussed. Changes to FAA Order JO 7110.65 (ATC) & holding criteria were not the focus of the WG, but ATC agreed to process changes into their orders. Mike Stromberg, Air Wisconsin, inquired if FMS manufacturers will change their equipment going forward to fly these correctly. Rich said that he thinks more equipment manufacturers will incorporate RTCA DO-283, but it is not a requirement. Kevin Bridges, AIR-131, added that DO-283B (new MOPs) will be out soon with a two class system, and will contain the "Advanced RNP" function (which includes holding). Proposed AIM language ( ) is included and was sent separately to all ACF roster email addresses. Rich requested that all interested parties review the proposal and submit comments NLT 11-15-2015 for consideration. This will allow for final consolidation, review by AFS-420, and publication in the summer 2016 AIM revision.

Status: Provide update on work being done by sub-group. **Item Open:** NBAA (Rich Boll), Ad-Hoc sub group/AFS-420.

e. 10-01-292: Removal of the Visual Climb Over Airport Option on Mountain Airport Obstacle Departure Procedures

Gary Fiske, AJV-82, advised all DCPs are approved and other changes are completed in FAA Orders JO 7110.10, 7110.65, and the P/CG have been completed and will be published December 10th, 2015. Gary recommends closing the issue. Rich Boll said NBAA is having problems with certain facilities (opting out of VCOAs); one example is a facility where they are trying to get a VCOA due to an ODP 500 ft/NM to 3000 above field (elevation 5000 ft). Bob Lamond, NBAA, stated this one is being worked through the service area, since the local facility was thinking the VCOA wouldn't be requested by every pilot, every time. Tom Schneider, AFS-420, acknowledged there may still be an airport with the issue; however, we believe that it is being resolved with the additional guidance now established in FAA Order 8260.46. As other facilities become aware of these changes, this reluctance will disappear. Gary said VCOAs are not going away; the pilot will be required to coordinate before flying the procedure. John Collins, GA pilot, inquired about FSS clearance relays (non-tower facility) for use of a VCOA and Gary responded that guidance will also be in FAA Order JO 7110.10 for Flight Service to follow. Given that the policy has been published in FAA Order 8260.46 for a short time and many locations are in the process of implementing, there was no objection to closing this agenda item.

Status: Item Closed.

f. 10-01-294: RNP SAAAR Intermediate Segment Length and ATC Intervention

Tom Schneider, AFS-420, said guidance is in the draft FAA Order 8260.58A. The order is still being worked; there is nothing more to report at this time, and the issue will remain open to ensure no objections are received to the language changes during the coordination process.

Status: Track status of guidance getting published in FAA Order 8260.58A. **Item Open: AFS-420**.

g. 11-02-298: Converging ILS Coding and Chart Naming Convention

Tom Schneider, AFS-420, briefed the Instrument Procedure Handbook (IPH) change ( ) guidance, which has been published. Kevin Allen, American Airlines, asked Brad Rush, AJV-54, about progress of implementing these changes. Brad said of the four airports with converging procedures (Philadelphia and Minneapolis) have been changed; Washington Dulles is scheduled for this year; and Dallas is delayed due to the Metroplex project. Aeronautical Information Services will continue to watch these. Tom advised guidance has been published in FAA Order 8260.19G. Kevin said as long as Dallas is not dropped, the issue can be closed. There were no objections.

Status: Item Closed.

h. 12-01-299: Loss of CAT D Line of Minima in Support of Circle-to-Land Operations

Tom Schneider, AFS-420, briefed we are awaiting publication of FAA Order 8260.3C. In addition, FAA Order 8260.43 (RAPT order) is being reworked by AFS-460. John Bordy, AFS-420, added that an AFS-400 policy memo is out directing to provide CAT C & D minimums as much as possible, but need to consider the impact on airport owners/sponsors (i.e., Would adding CATC and/or D minima incur any costs for them?). Lev Prichard, APA, inquired what was changing. John said the memo was done in conjunction with FAA Airports (ARP), to tell everyone the FAA wants CAT C & D minimums published as much as possible, adding that the RAPT needs to bring all parties together in the process when procedures are being approved. There are process guidelines currently in FAA Order 8260.43 and since the order is under

revision, changes must be anticipated. Bob Lamond, NBAA says he monitors all new procedures in the RAPT to ensure that if CAT C & D lines of minima are feasible, they are included, or challenge why they are not. The issue is when the airport *does not* want them and it is usually a perceived cost for infrastructure changes needed to support larger aircraft. He encourages all operators and organizations to participate in these RAPT discussions. Lev added it is operationally advantageous to have the higher minimums, and Bob agreed. Lev inquired if any consideration to adding one category higher if there is a circling approach. Tom said this had been talked about from operational, TERPS and airport standpoints, and all options are being considered. It appears that work on FAA Order 8260.43 is the best avenue, with the expanded guidance for when procedures are requested thru the IFP gateway and specified in the request. Lev inquired if an airport supports CAT C straight in, is there any reason CAT D circling would be restricted, and John thought not (infrastructure wise), just an extra evaluation for the circling. Tom added when CAT D is added, it would be interpreted that now CAT D aircraft can operate/land there. Bob said that is something the FAA needs to educate on and wishes the FAA airports division would emphasize to airport operators that these are two completely different issues. Rich and Bob will review any future changes to the Airport design Advisory Circular (for airport design and approach categories), to ensure when referencing approach categories a reference is made that a higher category may be required to support turbulence.

Status: **Item Open:** AFS-420 (status of FAA Orders 8260.3C and 8260.43C).

i. 12-01-301: Publishing a Vertical Descent Angle (VDA) with 34:1 Surface Penetrations in the Visual Segment (*includes Issue 13-01-309 LP Procedure Canceled Because of VDA Not Being Charted)*

Tom Schneider, AFS-420, and John Bordy, AFS-420, briefed () that draft FAA Order 8260.3C language is in place, but there are ongoing discussions that could result in changes to what is in the current draft. FAA Order 8260.3C has not gone out for coordination. Rick Dunham, AFS-420, added that the FAA wants criteria/language that encourages vertical guidance to the maximum extent possible; adding that if the procedure cannot be developed with vertical guidance, it may not be developed. The objective is to make VDA mandatory and possibly moving towards removing LP approaches. Rich Boll, NBAA, asked about Flight Standards review of procedures. Tom said there is a Procedures Review Board that looks at the procedure to see if it should go forward. Kevin Bridges, AIR-131, inquired about when considering LNAV and LP approaches, if there is an obstacle in the visual segment but nowhere else, the procedure will not be published. Rick said that is not correct. Maybe the airport is willing to remove the object or consider other options in order to get an instrument procedure. The FAA wants to provide vertical guidance wherever it can. This concept will not happen overnight. Lev Prichard, APA, likes the policy statement. Rune Duke, AOPA, agreed and said vertical guidance is very important, but there is value in LNAV and LP to provide access to many general aviation airports. Rick added this is a long term goal. Kevin added that the issue is whether you will have vertical guidance or not, and this discussion is for approved vertical guidance (LNAV/VNAV criteria) with stabilized approaches (everything clear/no obstacles). John added FAA will still calculate a VDA and try to design at three degrees. Tom said there is an effort between FAA Airports and Flight Standards to harmonize airport and TERPS surfaces. Tom outlined changes to FAA Order 8260.19, mentioning that IPH guidance is already out, and the AIM change will be published in Dec 2015. Brad Rush, AJV-54, said what you will see on the approach chart in the profile is a note and there will be no angle or TCH charted in the profile view, but data will be in the database. Ted Thompson, Jeppesen, briefed how Jeppesen will handle the data. A discussion followed commenting on how the pilot can generate the angle;

stabilized approaches; advisory angles - MDA vs. DA; obstacles below the MDA; OpsSpec authority for certain users; obstacles that may not be on centerline but VDA was eliminated; the ongoing effort to "marry" VDA with TERPS criteria; pilots using an advisory angle as if it was an approved angle.

Status: Provide update from sub-group. **Item Open:** AFS-420.

j. 13-02-312: Equipment Requirement Notes on Instrument Approach Procedures

Mike Webb, AFS-420, briefed ( ) proposed changes to get consensus on the equipment requirements box usage from the forum so that work can commence on the IACC specifications. A decision must also be made regarding PBN procedures (PBN requirements box) utilizing the same space as conventional procedures equipment requirements box. The effort is to consolidate the notes for equipment requirements that are scattered on the plan view and in the briefing strip into one place in the briefing strip for the pilot. The goal from the ACF discussion today was to gather opinion on whether to also specify what portion of the approach requires the specified equipment. Group discussions followed on several related topics including: What would notes look like; examples of PBN/conventional/missed approach shown; PBN to conventional (i.e., RNAV transition to an ILS); procedure naming differences (i.e., title of the procedure) between the U.S. and overseas (i.e., changing from RNAV to RNP outside U.S. and not here). Rick Dunham, AFS-420, said FAA current position is no change to procedure naming. Questions were raised about ICAO standards and pilots understanding the differences. There was discussion on NavSpecs (i.e., AC-90-100A/101A/105A/107) with concerns raised on the process of having to learn all the capabilities defined under current and future NavSpecs. There were questions on apparent redundancy for GPS in notes. It was brought up whether there would be too much text information in one box (Ted Thompson, Jeppesen, says yes) resulting in volumes of text like on SIDs & STARs. Radar Required – what does that mean and why necessary came up again and Tom Schneider, AFS-420, advised that is spelled out in current policy and it is explained in the AIM.

In summary, there was support for the equipment requirements box idea. Rick said we need input/feedback, since the goal is to simplify the planview and create a briefing strip for the pilot to focus in on when determining requirements for executing the approach. Brad Rush, AJV-54, questioned the required level of detail needed in the requirements box to fly the approach. Valerie Watson, AJV-553, said the question is do we put only those notes pertaining to the entire procedure (FAC, Missed or all transitions) in the briefing strip and those uniquely pertaining to transitions in the planview, *or* do we place ALL equipment requirement notes in briefing strip. Mike Webb said that all participants need to mark up the slides presented today and send back to us as specific feedback. Tom requested that all participants also review FAA Order 8260.19 draft data ( ) and comment on that as well.

Status: All participants to please review the presentations and forward input to Mike Webb and Tom Schneider. **Item Open:** AFS-420.

k. 14-01-315: 90 Degree Airway-to-RNAV-IAP Course Change Limitation; Arrival Holds

Rick Dunham, AFS-420, said there has been no resolution and the issue is tabled UFN. Tom Schneider, AFS-420, added it is an open agenda item in the US-IFPP and if there are any developments, AFS-420 will brief the ACF at that time.

Status: Follow action being taken at US-IFPP. **Item Open:** AFS-420.

l. 14-01-316: RNAV Fixes on Victor Airways Used for RNAV SIAPs

Tom Schneider, AFS-420, briefed he and Brad Rush, AJV-54, agreed on changes coming out in FAA Order 8260.19H ( ), showing existing, changes and updated verbiage. The group discussed fix/waypoint placement on an airway and legal fix make-up requirements. Rich Boll, NBAA, said this issue resulted from an RNAV (GPS) approach with an RNAV fix that appeared to be on airway route (feeder) but was not (i.e., not in the data base for the airway), so there is no way to link the airway with the approach. He added that this problem is also occurring with decommissioning of VORs; for example, OTT (Nottingham) where some SIDs do not attach to the airways. Tom said this policy change will help, and Paul Gallant, AJV-11, agreed with Tom, adding this is a legal definition problem. Tom feels this is the best solution, and when out for coordination, comments can be made.

Status: Track status of FAA Order 8260.19H change as it works its way through the coordination process. **Item Open:** AFS-420.

m. 14-02-317: Use of GPS on Conventional (Ground-Based NAVAID) Instrument Approach Procedures (IAPs)

Kel Christianson, AFS-470, said currently we have substitute and alternate navigation with RNAV systems on conventional procedures up to the FAF, but it is not authorized inside the FAF, and these two do not require the pilot to monitor a NAVAID. Draft explanatory AIM language including a note ( ) was shown. Lev Prichard, APA, said airlines under OpsSpec approval can directly substitute with suitable RNAV inside the FAF, but no one else can. Kel said C300 allows this currently (part 121 and some other operators can get this), but in general, aircraft cannot proceed inside FAF without monitoring the ground based navigation system. Rich Boll, NBAA, asked if once this is in the AIM, does it cancel the OpsSpec? Kel said no, adding without the provisions of OpsSpec C300, the underlying ground system must be operational and received in aircraft to ensure course alignment. Kel said this is a change, even though some pilots are incorrectly doing it now anyway. Larry Hills, FedEx, inquired if this language should be tightened up to refer to the NAS only, and Kel concurred. Jeff Kerr, AFS-470, explained the main point in OpsSpec C300 is that the airline is required to check flyability on the final approach segment. In the absence of C300 authorization, you must be able to monitor the underlying ground navigation system for course alignment. Lev commented about the confusion on this, and Kel added AC 90-108 explains the terms. Kel will make some minor word changes and keep the agenda item open until the AIM is published.

Status: Track status of AIM update. **Item Open:** AFS-470.

n. 14-02-318: Charting LNAV Engagement Altitudes

Tom Schneider, AFS-420, briefed that all references to “LNAV engagement altitude” in FAA Order 8260.46F have been deleted (was charted for VA-DF routing) and also they are being deleted during the transfer of FAA Order 8260.53 (Radar Vectors to RNAV) to FAA Order 8260.58A. Lev Prichard, APA, asked if those changes affect TERPs required altitudes (i.e., turning restriction vs. engagement altitude), which prompted a lengthy group discussion including: chart clutter; hybrid procedures; placing fixes to require navigation to those points; the AFS-420 IOU to look at San Antonio (SAT) procedure and associated language in FAA Order 8260.46F. Tom summarized that there are a variety of options in FAA Order 8260.46F for the procedure developer and the ATC facility to use when developing what is needed. This has

been coordinated, commented on, and is currently up for AFS-1 signature (Note: Expect release within the next 30-45 days). Ted Thompson, Jeppesen, suggested closing this ACF item and Jeppesen will take an IOU to bring up any future issues that may arise with the FAA, or in another forum, if appropriate. There were no objections.

Status: Item Closed.

o. 15-01-319: Removal of the Epoch Year documentation on 8260-series FAA Forms

Tom Schneider, AFS-420, briefed that at ACF15-01 the group decided to keep Epoch Year documentation. This information was brought back to the submitter and with their concurrence the agenda item is dropped.

Status: Item Closed.

p. 15-01-320: Common Sounding Fix Names

Gary Fiske, AJV-82, discussed changes in the works concerning a number of previously identified similar sounding fix names in close geographic proximity, giving dates when changes will occur. NFDC already has proposed changes to guidance language in FAA Order 7400.2, (a copy is in the minutes of ACF 15-01). Item will remain open for one more cycle.

Status: Report status at next meeting. **Item Open:** AJV-82 (Gary Fiske).

q. 15-01-321: Coding of Missed Approach for ILS31L and ILS31R at KJFK

John Bordy, AFS-420, briefed ( ) that this situation is related to a hold down altitude on the missed approach. The issue was referred to the US-IFPP and a working group was formed to look at procedure design and coding. There have been two meetings so far, looking at missed approach design options, guidance in FAA Order 8260.19, and ensuring language is consistent with departures. There is an effort to ensure missed approach instructions are clear to pilots and controllers. The intent is to make it easy for the database coder to know what is desired by the procedure developer and to try and avoid complicated procedures as much as possible. The group is looking at “at or above,” “at,” and “at or below” altitudes on forms. The intent is to avoid early level-off segments. The next amendment of FAA Order 8260.3 will explicitly prohibit hold down altitudes in the missed approach segment. The hold down of 1000 ft at JFK is being worked now with an expected publication date of February 2016. One option being explored is a missed approach that is similar to the RNAV MA to the same runway, which does not require a hold down altitude. Tony Lawson, AJV-54, said there is no criteria to evaluate a missed approach with a hold down altitude. General discussion followed on fixing the missed approach at JFK and pilot workload during a missed approach. Rick Dunham, AFS-420, assured the forum this is being worked and discussed within several groups. Rich Boll, NBAA, said this issue has come up before with the RNAV 4L/4R MA’s coding not matching. Ted Thompson, Jeppesen, said Jeppesen has changed coding multiple times on missed approaches for users, and continues to this day. Tom Schneider, AFS-420, recommended discussing the issue with the ARINC 424 group. John thinks the WG will have a recommendation by February 2016.

Status: Report results of sub-group meetings and US-IFPP decisions. **Item Open:** AFS-420.

r. 15-01-322: Charts for SID, STAR, and ODP do not provide accurate information for filing a flight plan in many cases

Tom Schneider, AFS-420, briefed guidance has been placed in FAA Order 8260.19G (STARs) and FAA Order 8260.46F (SIDs). The statements will allow the ATC facility to request a chart note be placed on the procedure saying "Do not file - to be assigned by ATC". John Collins, GA pilot, said this is good going forward, but inquired about existing procedures. Tom said this would be addressed during periodic reviews and procedures will be up numbered. A discussion followed on HOST computer filing, codes utilized, and how some filed procedures are being "kicked-out". Gary Fiske, AJV-82, added some procedures are coded using a three letter identifier that does not exist. Tom said the policy for those computer codes has been in existence for years and policy may not have been followed. This cannot be fixed here at the ACF and specific instances may need to go back to the applicable facility. Gary took an IOU to work with John to fix identified locations (about 20-30). Brad Rush, AJV-54, said AIS is also working an initiative now to clean up computer codes on SIDs and STARs and requested John supply him with the same list. The ACF issue will be closed.

Status: Item Closed.

5. New Business:

a. 15-02-323: Depiction of Low, Close-In Obstacles on SIDs & ODPs

Rich Boll, NBAA, presented this issue with several industry partners supporting this position. FAA policy since around 2000 is to publish low, close-in obstacles (LCIO) on SIDs & ODPs. An example was provided for Chicago's Midway Airport (MDW) Runway 31R. It was noted that not all obstacles in the Initial Climb Area (ICA) are listed since they can be grouped per criteria (i.e., highest/closest per grouping policy specified in FAA Order 8260.46). One problem is that many locations have very long lists of obstacles and this can result in procedures being split into two pages (i.e., first page being the procedure graphic and the second page just for the list of obstacles). Not all obstacles are in the LCIO notes, with some penetrating the 40:1 surface to a height above 200 ft, requiring a higher climb gradient/visibility restriction to see and avoid. The actual obstacle that you may need to avoid can be difficult to pick out of the list. Another issue is that new survey data being submitted is resulting in many more obstacles being identified, adding to an already extensive list of obstacles. The proposal is to change the LCIO obstacle notes section, when LCIOs are present, to identify the highest and closest obstacles to DER in the ICA for the pilot to be aware of. This change would have to be explained in the AIM and IPH. Obstacles that the pilot must be aware of that must be considered and avoided will still be listed and would be easier for the pilot to identify. There should be no charting or TERPs criteria changes required, just the method used in stating these obstacles. Discussions followed on: turns in low visibility to avoid a LCIO; listing of the highest obstacle vs. obstacle requiring the highest climb gradient; see and avoid issues; planning departure to avoid obstacles (i.e., take off sooner); due to the long lists of obstacles, some pilots are not reading them at all; some pilots do not plan correctly; Rich said LCIO obstacles are useless for performance engineering; situational awareness function of listing these obstacles; AIS software tool in development to help group obstacles by using highest/closest to DER in each group; and displaying data on a tabular list vs. a run on list. FAA personal, Jeppesen, AOPA, Airline representatives and most attendees cited the benefits and endorsed the NBAA proposal to attempt to find a better way of disseminating this information. Consensus was that the existing lengthy lists of obstacles are cumbersome and are of questionable value to most pilots and that listing only crucial ones would be preferable. Rick supports the proposal to work on finding a better way to provide this information to the pilot and AFS-420 will take on the issue, working in conjunction with AIS on examples for ACF 16-01 (utilizing their new software for obstacle grouping) and charting specs.

Status: AFS-420 to report back with a status and proposals. **Item Open:** AFS-420.

6. Next Meeting:

ACF 16-01 is scheduled to be held on April 26-28, 2016, hosted by ALPA at their Herndon, VA location.

ACF 16-02 is scheduled to be held on October 25-27, 2016, hosted by Pragmatics, Inc. at their Reston, VA headquarters.

Please note the attached Office of Primary Responsibility (OPR) listing (attachment 1) for action items. It is requested that all OPRs provide the Chair, Tom Schneider, AFS-420, a written status update on open issues not later than April 7th, 2016 - a reminder notice will be provided.

7. Attachments (2): 1. OPR/Action Listing
2. Attendance Listing

AERONAUTICAL CHARTING FORUM
INSTRUMENT PROCEDURES GROUP
OPEN AGENDA ITEMS FROM MEETING 15-02

OPR	AGENDA ITEM (ISSUE)	REQUIRED ACTION
NBAA	**07-02-278:** (Advanced RNAV (FMS/GPS) Holding Patterns Defined by Leg Length)	NBAA to consolidate comments from sub-group participants and forward to AFS-405 to submit proposed changes to the ATO for the next available AIM publication.
AFS-420	**10-01-294:** (RNP SAAAR Intermediate Segment Length and ATC Intervention)	Track publication status of FAA Order 8260.58A and provide update at next ACF meeting.
AFS-420	**12-01-299:** (Loss of CAT D Line of Minima in Support of Circle-to-Land Operations)	Track publication status of Order 8260.3C and Order 8260.43C and provide update at next ACF meeting.
AFS-420 (US-IFPP)	**12-01-301:** (Publishing a Vertical Descent Angle (VDA) with 34:1 Surface Penetrations in the Visual Segment, *also includes issue 13-01-309*)	Track status of proposed changes to Order 8260.3C and AIM and provide an update at the next ACF meeting.
AFS-420	**13-02-312:** (Equipment Requirement Notes on Instrument Approach Procedures)	Work feedback received from ACF participants on material presented at ACF 15-02 and provide status update at next ACF meeting.
AFS-420 (US-IFPP)	**14-01-315:** 90 Degree Airway-to-RNAV-IAP Course Change Limitation; Arrival Holds	Monitor US-IFPP action and report status at next ACF meeting.
AFS-420	**14-01-316:** RNAV Fixes on Victor Airways Used for RNAV SIAPs	Proposed text in draft Order 8260.19H; monitor comments from coordination phase and report to next ACF meeting.
AFS-470	**14-02-317:** Use of GPS on Conventional (Ground-Based NAVAID) Instrument Approach Procedures (IAPs)	Track status on AIM update and report status at next ACF meeting.
AJV-8	**15-01-320:** Common Sounding Fix Names	Continue to work resolving common fix name changes at affected facilities and brief progress at next ACF meeting.
AFS-420 (US-IFPP)	**15-01-321:** Coding of Missed Approach for ILS31L and ILS31R at KJFK	Monitor US-IFPP action and brief progress of working group meetings at next ACF meeting.
AFS-420/AJV-54	**15-02-323:** Depiction of Low, Close-In Obstacles on SIDs & ODPs	Bring to US-IFPP for discussion, work issue with AIS and brief next ACF meeting.

Attachment 1

ACF 15-02
INSTRUMENT PROCEDURES GROUP
ATTENDANCE LIST

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Attachment 2

ACF 15-02
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Attachment 2

ACF 15-02
INSTRUMENT PROCEDURES GROUP
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Attachment 2

AERONAUTICAL CHARTING FORUM
Instrument Procedures Group
April 26, 2016

RECOMMENDATION DOCUMENT

FAA Control # 16-01-324

Subject:
SID/STAR Naming Policy

Background/Discussion:

It is easy to confuse SIDs and STARs that begin with the same letter. For example KOKC has the Ghost.1 and Gulli.1 STARs and the TEBRD.1, THRPE.1, and TRUPR.1 SIDS. It would make it easier on flight crews if the beginning letters were only repeated when necessary (i.e., more than 24 SID's or STAR's). See attached 6 NASA ASRS reports.

Recommendations:
Name SIDs and STARs so that they don't start with the same letter. If unable to name SIDs and STARs in that manner, as an alternative, change the revision number on one procedure to make them different; i.e., TEBRD.1 and THRPE.2.

Comments:

Submitted by: Derek Benda
Organization: Love's Travel Stops
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FAX:
E-mail: d.benda@hotmail.com
Date: 03/18/2016

AERONAUTICAL CHARTING FORUM
Charting Group
Meeting 16-01 – April 26, 2016

RECOMMENDATION DOCUMENT

FAA Control # 16-01-325

Subject: Priority of Terminal Procedure Amendments

Background/Discussion:

FAA is deploying new RNAV SIDs and RNAV STARs at the major airports in the United States. The Metroplex project leverages the capabilities of RNAV systems to gain greater efficiencies in the traffic management at these locations. These SIDs and STARs often have complex lateral and vertical routing, including multiple altitude and speed constraints. While every effort is made during the design stage to mitigate potential airspace conflicts or user issues, inevitably usability issues often arise arise shortly after the publication of the procedure.

A recent example is the DYAMD Two RNAV STAR at San Francisco (SFO) (see FIG 1). The final altitude constraint on the procedure at ARCHI was amended by NOTAM from an "at" 7000' MSL constraint to an "at" 8000' MSL constraint:

KSFO SAN FRANCISCO INTL

FDC 5/0051 (A1963/15) - STAR SAN FRANCISCO INTL,SAN FRANCISCO, CA. DYAMD TWO ARRIVAL (RNAV) CHANGE ALTITUDE RESTRICTION AT ARCHI TO READ: 8000. ALL OTHER DATA REMAINS AS PUBLISHED. 02 OCT 13:30 2015 UNTIL 01 OCT 23:59 2016 ESTIMATED. CREATED: 02 OCT 13:13 2015

A check of the FAA's IFP Information Gateway reveals that there no plans to amend or update the procedure to reflect the NOTAM, was released as a temporary NOTAM as identified by the "ESTIMATED" annotation in the NOTAM text.

While it remains the responsibility of the pilot-in-command to familiarize themselves with all available information prior to a flight, implementing these critical procedural changes by NOTAM with a long effective date and without high priority level for the publication of a revised procedure increases the likelihood that these critical changes will be missed in actual line operations.

It must be noted that a temporary NOTAM such as the example above will not result in revisions to the navigation database. It remains the responsibility of the pilot to change the fix restriction once the procedure is loaded into the RNAV system's active flight plan

Recommendations:

NBAA recommends that flight procedure development associated with the core US airports prioritize changes to terminal arrival and departure procedures (i.e. RNAV SIDs

and RNAV STARs) through the Regional Airspace & Procedures Teams (RAPT) to address amendments to any altitude constraint, speed constraint, or "Top Altitude" that is published on the procedure. These changes are critical to the vertical navigation of the aircraft when controlled by the RNAV system, and require coding changes in the navigation database.

NBAA recommends that FAA Order 8260.43B be amended to permit the facility issuing a NOTAM requiring a change in the aforementioned items be able to request from the RAPT priority amendment and publication of these changes on RNAV SIDs and RNAV STARs at the earliest opportunity by the assignment of a "Priority 1" designation.

Comments: This recommendation affects:

FAA Order 8260.43B Flight Procedures Management Program

Submitted by: Richard J. Boll II
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Phone: 316-655-8856
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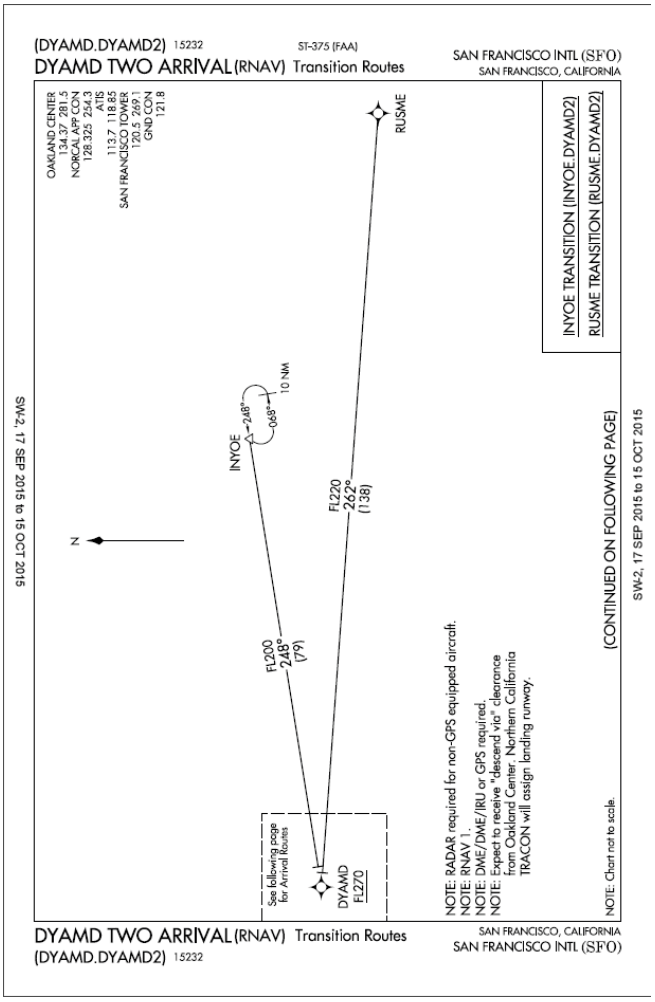
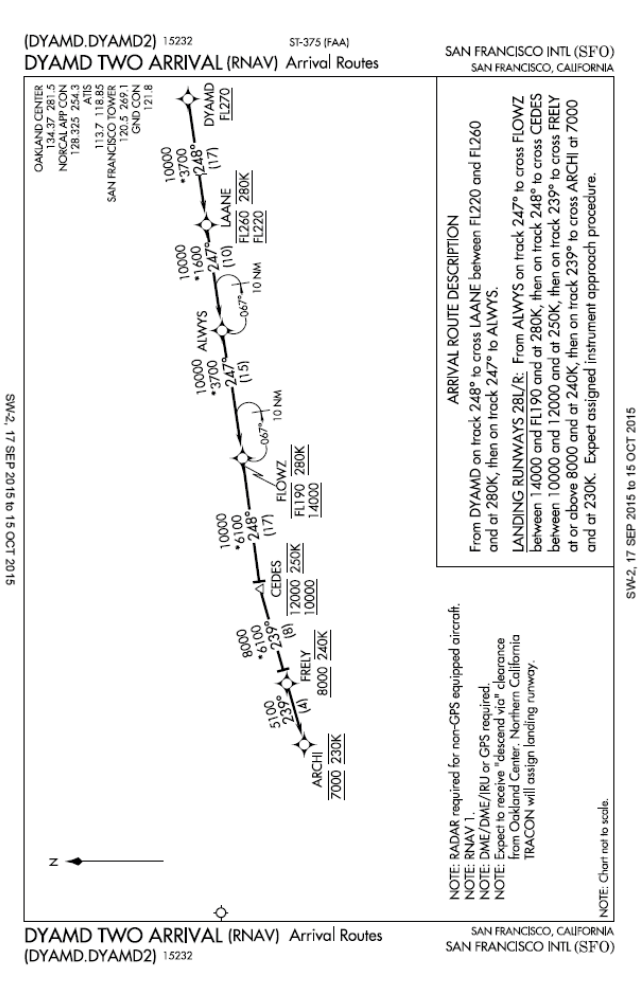
E-mail: richard.boll@sbcglobal.net
Date:

Fig 1


(DYAMD.DYAMD2) 15232
ST-375 (FAA)
DYAMD TWO ARRIVAL (RNAV) Transition Routes
SAN FRANCISCO INTL (SFO)
SAN FRANCISCO, CALIFORNIA
OAKLAND CENTER 134.37 281.5
NORCAL APP CON 128.325 254.3
A11S 113.7 118.85
SAN FRANCISCO TOWER 120.5 269.1
GND CON 121.8
INYOE
RUSME
FL200 248° (79)
FL220 262° (138)
248°
068°
10 NM
DYAMD FL270
See following page for Arrival Routes
INYOE TRANSITION (INYOE.DYAMD2)
RUSME TRANSITION (RUSME.DYAMD2)
(CONTINUED ON FOLLOWING PAGE)
NOTE: RADAR required for non-GPS equipped aircraft.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: Expect to receive "descend via" clearance from Oakland Center, Northern California TRACON will assign landing runway.
NOTE: Chart not to scale.
SW-2, 17 SEP 2015 to 15 OCT 2015
DYAMD TWO ARRIVAL (RNAV) Transition Routes
(DYAMD.DYAMD2) 15232
SAN FRANCISCO, CALIFORNIA
SAN FRANCISCO INTL (SFO)


(DYAMD.DYAMD2) 15232
ST-375 (FAA)
DYAMD TWO ARRIVAL (RNAV) Arrival Routes
SAN FRANCISCO INTL (SFO)
SAN FRANCISCO, CALIFORNIA
OAKLAND CENTER 134.37 281.5
NORCAL APP CON 128.325 254.3
A11S 113.7 118.85
SAN FRANCISCO TOWER 120.5 269.1
GND CON 121.8
DYAMD FL270
LAANE FL260 280K FL220
ALWYS
FLOWZ FL190 280K 14000
CEDES 12000 250K 10000
FRELY 8000 240K
ARCHI 7000 230K
10000 •3700 248° (17)
10000 •1600 247° (10)
10000 •3700 247° (15)
10000 •6100 248° (17)
8000 •6100 239° (8)
5100 239° (A)
067°
10 NM
ARRIVAL ROUTE DESCRIPTION
From DYAMD on track 248° to cross LAANE between FL220 and FL260 and at 280K, then on track 247° to ALWYS.
LANDING RUNWAYS 28L/R: From ALWYS on track 247° to cross FLOWZ between 14000 and FL190 and at 280K, then on track 248° to cross CEDES between 10000 and 12000 and at 250K, then on track 239° to cross FRELY at or above 8000 and at 240K, then on track 239° to cross ARCHI at 7000 and at 230K. Expect assigned instrument approach procedure.
NOTE: RADAR required for non-GPS equipped aircraft.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: Expect to receive "descend via" clearance from Oakland Center, Northern California TRACON will assign landing runway.
NOTE: Chart not to scale.
SW-2, 17 SEP 2015 to 15 OCT 2015
DYAMD TWO ARRIVAL (RNAV) Arrival Routes
(DYAMD.DYAMD2) 15232
SAN FRANCISCO, CALIFORNIA
SAN FRANCISCO INTL (SFO)

AERONAUTICAL CHARTING FORUM
Instrument Procedures Group
Meeting 16-01 – April 28, 2016

RECOMMENDATION DOCUMENT

FAA Control # 16-01-326

Subject: FAA Order 8260.46F, "Top Altitude" Charting Constraints

Background/Discussion: It appears there is confusion how "Top Altitudes" should be charted when a procedure serves multiple airports based on the language contained within the FAA Order 8260.46F, Departure Procedure Program. Under paragraph 2-1-3-e (1) (f), it states; "Enter the "Top Altitude(s)' on Form 8260-15B for SIDS when provided by ATC. No more than two "Top Altitudes" are allowed per procedure. The variations permitted are specified in appendix d, section2, and E, section 1. "Top Altitudes" 18,000 feet MSL and above must be specified as a "Flight Level". The "Top Altitude" must be at or above all altitude restrictions specified along the departure route and transitions."

Under Appendix D (Conventional SIDS), section 2, paragraph 10 (c) (1) it states; "For a single airport, specify the "Top Altitude(s)" specific to a given runway(s) or transition(s), as applicable.
Examples: CHART: TOP ALTITUDE: 16000, or CHART: TOP ALTITUDE RWY 8/25/34L/34R/35L/35R: 16000; RWY 16L/16R/17L/17R: 12000, or CHART: TOP ALTITUDE: STEVE AND DANNO TRANSITIONS: FL230; CHNHO AND KONOH TRANSITIONS: FL180, or CHART: TOP ALTITUDE: ASSIGNED BY ATC."
Section 2, paragraph 10 (c) (2) states: "For multiple airports, in addition to paragraph 10.c(1), include the airport names and/or specific runways when "Top Altitudes" differ between airports and/or specific runways.
Examples: Starship Muni - CHART: TOP ALTITUDE: 16000, Anywhere Intl - CHART: TOP ALTITUDE RWY 8/25/34L/34R/35L/35R: 16000; RWY 16L/16R/17L/17R: 12000, and Mayfair Metro - CHART: TOP ALTITUDE 12000. If all airports share a common "Top Altitude," then state as such: All Airports - CHART: TOP ALTITUDE: 12000.

Under Appendix E (RNAV SIDS), section 1, paragraph 10 (b) (1) states; "For a single airport, specify the "Top Altitude(s)" specific to a given runway(s) or transition(s), as applicable.
Examples: CHART: TOP ALTITUDE: 16000, or CHART: TOP ALTITUDE RWY 8/25/34L/34R/35L/35R: 16000; RWY 16L/16R/17L/17R: 12000, or CHART: TOP ALTITUDE: STEVE AND DANNO TRANSITIONS: FL230; CHNHO AND KONOH TRANSITIONS: FL180, or CHART: TOP ALTITUDE: ASSIGNED BY ATC.
Under section 2, paragraph 10 (b) (1) states: "For multiple airports, in addition to paragraph 10.b(1), include the airport names and/or specific runways when "Top Altitudes" differ between airports and/or specific runways.
Examples: Starship Muni - CHART: TOP ALTITUDE: 16000, Anywhere Intl - CHART: TOP ALTITUDE RWY 8/25/34L/34R/35L/35R: 16000; RWY 16L/16R/17L/17R: 12000, and Mayfair Metro - CHART: TOP ALTITUDE 12000. If all airports share a common "Top Altitude," then state as such: All Airports - CHART: TOP ALTITUDE: 12000."

I have been advised that "appendix D and E" is a little misleading as they just provide examples of different variations allowed, however, they've made it clear in paragraph 2-1-3 e (1) (f), page 2-15 that we are still limited to two per procedure.
I understand that only two "Top Altitudes" can be published per procedure, but if you have a SID that applies to multiple airports, then I believe the language within appendix D and E clearly shows that you can have more than two "Top Altitudes" per procedure, but not more than two per airport. Under paragraph 2-1-3-e (1) (f), it advises you that appendix D and E shows the variations allowed, which includes multiple airports attached to a procedure. Each airport has their own procedure built and charted based on the information contained on FAA Form 8260-15B and therefore stating it doesn't matter how many airports are tied to procedure, you can only have two "Top Altitudes" in my opinion is inefficient. If this interpretation is allowed to continue, it will add confusion and complexity to the NAS. The goal of adding the "Top Altitudes" to a procedure at a particular airport was to inform the pilot of the highest altitude they could climb to if they received a "Climb Via" clearance, but current policy restricts the number of "Top Altitudes" based on a procedure and not based on the possibility that various airports the procedure serves each may uniquely require a different set of "Top Altitudes" to support operational constraints. Additionally, we believe that current "Top Altitude" policy limitations increase workload and complexities for both ATC and pilots. If we are going to move forward with NEXTGEN in a positive manner that ensures safety, we need to ensure the directives containing the criteria/policy are written to allow this to occur.

Recommendations:

Allow two "Top Altitudes" published based on the procedure serving the airport of intended departure and not based solely on the procedure itself. By allowing this to occur, the "Top Altitudes" for each individual airport the procedure serves will be charted independently and will reduce complexity and communications for ATC and pilots. This retains the two "Top Altitude" maximum that will appear on any one chart, yet give ATC operational flexibility at complex locations where a single SID can serve multiple airports.

Comments:

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Charting Group

Government/Industry Aeronautical Charting Forum (ACF)
Meeting 16-01

April 27 – 28, 2016

Air Line Pilots Association (ALPA)

535 Herndon Parkway
Herndon, VA 20170

CHARTING GROUP AGENDA

I. OPENING REMARKS

II. REVIEW MINUTES OF LAST MEETING, ACF 15-02

III. AGENDA APPROVAL

IV. PRESENTATIONS, ACF WORKING GROUP REPORTS, ACF PROJECT REPORTS

ICAO / IFPP Committee Report	Mike Webb, FAA/AFS-420
PARC PBN Procedure Naming & Charting	Mike Webb, FAA/AFS-420
Airport GIS	FAA/AAS-100
Discontinuation of VOR Services	Leonixa Salcedo, FAA /AJM-324
FAA Order 7100.41A PBN Implementation Process Update	Newton Gentry, Contract Support, FAA/AJV-142
Available on Demand (AOD) Charting	Lauren Priem, FAA/AJV-553
VFR Chart Print Schedule Realignment and Synchronization	Rick Fecht, FAA/AJV-522
Caribbean Aeronautical Charts and Alaskan VFR Wall Planning Charts Briefing	Barry Lewis, FAA/AJV- Katie Murphy, FAA/AJV-5222
NOTAM Briefing	FAA/AJR-B11
Atlantic Coast Route Project (ACRP)	Ray Spickler, FAA/AJV-142
PBN Strategy – 2016	William “Bill” Fernandez, FAA/AJV-142

V. OUTSTANDING CHARTING TOPICS

Forum Number	Description Summary	Submitter
07-01-195	Charting & A/FD Information Re: Class E Surface Areas **Status:** Paul Gallant, FAA/AJV-113	NBAA
13-01-262	Airport Facility Directory (A/FD) Depiction of Traffic Pattern Altitudes **Status:** Rick Mayhew, FAA/AJV-533	Randy Coller Michigan DOT
13-01-270	Stepdown Fix Chart Notes **Status:** Tom Schneider, FAA/AFS-420, Bruce McGray, FAA/AFS-410, and Rich Boll, NBAA	Kevin Bridges FAA/AIR-131
14-01-274	Solar Power Plant Ocular Hazard Symbol on Aeronautical Charts **Status:** Rick Mayhew, FAA/AJV-533	FAA Western Services Center Operations Support Group
14-01-279	Naming of FAA Certified, National Disseminated AWOS-3 Systems on Private Use Airports **Status:** Rick Mayhew, FAA/AJV-533	Regina H. Sabatini FAA
14-02-282	VASI PAPI Differences **Status:** Brad Rush, FAA/AJV-54	John Collins GA Pilot
14-02-284	DME Facilities – Charting and MAGVAR Issues **Status:** Valerie Watson, AJV-553, Dale Courtney and Stand Alone DME Work Group Chair, FAA/AJW-292	Leo Eldredge Tetra Tech
15-01-289	Adding “CPDLC” Information to Airport Diagram and Terminal Procedures and Updating the AFD **Status:** Valerie Watson, FAA/AJV-553	David Cherry DataComm
15-01-293	STAR Terminus Point Standardization **Status:** Valerie Watson, AJV-553	Lev Prichard Allied Pilots Association
15-01-295	Charting Airports for the Minimum Operating Network (MON) **Status:** Vince Massimini, MON Workgroup Chair, MITRE	VOR MON Program FAA

Forum Number	Description Summary	Submitter
15-02-296	Charting of Unmanned Free Balloon Activities and Amateur Rocket Activity Areas **Status:** Paul Eure, FAA/AJV-113, Valerie Watson, FAA/AJV-553 and Rick Mayhew, FAA/AJV-533	Paul Eure FAA/AJV-113
15-02-297	Charting of HILPT Maximum Holding Altitude **Status:** Valerie Watson, FAA/AJV-553	Rich Boll NBAA
15-02-298	Charting GLS DMax (Service Volume) **Status:** Valerie Watson, FAA/AJV-553, Tom Schneider, FAA/AFS-420 and Catherine Graham, AFS-470	Ron Renk United Airlines

VI. NEW CHARTING TOPICS

Forum Number	Description	Submitter
16-01-301	RVR Locations in FAA Documentation **Briefer:** Kemal Ahmed, Navtech	Kamal Ahmed Navtech
16-01-302	Cold Temperature Restricted Airport SIAP Segment Depiction **Briefer:** Rune Duke, AOPA	Rune Duke AOPA
16-01-303	Terminal Area Charts (TAC) and Charting IFR Arrival/Departure Routes **Briefer:** Rune Duke, AOPA	Rune Duke AOPA
16-01-304	Depicting Non-Standard Maximum Holding Speeds **Briefer:** Air Wisconsin	Michael Stromberg Air Wisconsin
16-01-305	Cold Weather Temperature Compensation at Military Authority Locations **Briefer:** TBD	HQ AFFSA/XAP (Terps) USAF
16-01-306	Availability of Airport Ground Parking/Ramp Diagrams **Briefer:** Kemal Ahmed, Navtech	Kemal Ahmed Navtech

V. NEXT MEETINGS

ACF 16-02 is scheduled for October 25-27, 2016, hosted by Pragmatics, Inc, Reston, VA.

ACF 17-01 is scheduled for April 25-27, 2017, host TBD.

Government/Industry Aeronautical Charting Forum (ACF)
Meeting 15-02
Charting Group
October 28-29, 2015
USGS - HQ
Reston, VA 20190

CHARTING GROUP MINUTES

I. Opening Remarks

The Aeronautical Charting Forum (ACF) was hosted by the United States Geological Service (USGS) at their headquarters located in Reston, VA. Valerie Watson, AJV-553, opened the Charting Group portion of the forum on Wednesday, October 28. Valerie acknowledged ACF Co-chair Tom Schneider, AFS-420, who presided over the Instrument Procedures Group (IPG) portion of the Forum the previous day. Valerie also expressed appreciation to Lance Christianson, NGA, for coordinating with USGS to host the 15-02 ACF.

II. Review Minutes of Last Meeting, ACF 15-01

The minutes from ACF 15-01 meeting were distributed electronically last spring via the Aeronautical Information Services (AIS) ACF website: http://www.faa.gov/air_traffic/flight_info/aeronav/acf/. The minutes were accepted as submitted with no changes or corrections.

III. Agenda Approval

The agenda for the 15-02 meeting was accepted as presented.

IV. Presentations, ACF Working Group Reports and ACF Project Reports

ICAO/IFPP Committee Report

Mike Webb, AFS-420 and advisor to the U.S. Delegation to the ICAO Instrument Flight Procedures Panel (IFPP), provided an update on the ICAO/IFPP Committee activities and an overview of the key topics of the ICAO/IFPP Integration Working Group (IWG), see Slide #2.

Mike provided a brief on the meeting held in Montreal this past September. Mike discussed the ongoing debate regarding the titling of procedures based on GBAS. The U.S. delegation is looking into how the U.S. can align GBAS terminology with the GLS definition, including the possibility of renaming of GLS procedures GBAS.

Next Mike discussed several subjects that are currently under discussion within the ICAO/IFPP Committee. He touched on updates being done to Helicopter Point-in-Space criteria, work being done internationally on specifications for Hybrid Procedures, topics related to the Relocation and Renaming of Significant Points, and work being done on the Classification of ATS Routes. More information on these topics is included in Mike's presentation slides.

Ron Renk, United Airlines, stated that procedure name of GLS approaches is of huge concern to industry. He stated that the naming needs to be consistent or it can cause confusion in the cockpit. Lev Prichard, APA, agreed that the chart naming is a huge issue, especially with regards to training. Mike stated that the equipment manufacturers are asking for a reevaluation of the chart naming of RNAV and GLS due to these recognized issues.

ACTION: Mike Webb, AFS-420, will provide an update at the next ACF.

PARC PBN Procedure Naming and Charting

Mike Webb, AFS-420, provided an update on the Performance Based Operations Aviation Rulemaking Committee (PARC) Performance Based Navigation (PBN) Procedure Naming Action Team activities since the last ACF. Mike referred to his discussion during the IPG portion of the meeting where he reported on the charting of PBN Navigation Specifications in a PBN Requirements Box (ACF -IPG Item 13-02-312).

Regarding the changes to the PBN procedure naming, Mike stated that the U.S. delegation is working through different committees regarding the implementation of new ICAO procedure names. ICAO will be adopting "RNP" for the procedure title, while the US is still planning to retain "RNAV". Concerns are being raised regarding how to deal with the titling mismatch. The delegation is going back to the AirNav Commission to readdress these issues. The meeting is to take place in January 2016.

ACTION: Mike Webb, AFS-420, will provide an update at the next ACF.

Airport GIS

Dr. Mike McNerney, AAS-100, provided an update on the progress made on the FAA Airports GIS program. He began by reviewing the FY 2015 deliverables. The Surface Analysis & Visualization (SAV) Tool is now fully automated and has been made accessible to all three service areas. The Modification of Standards (MOS) tool is now fully electronic and is currently being tested by the SW region. The Electronic Airport Layout Plan (eALP) tool is still being worked and is now moving forward with electronic signatures and is rapidly approaching a fully digital eALP process.

Dr. McNerney then discussed progress of the NAV Lean 5010 Airport Data Update Tool. He stated that AC 150/5300-19, Airport Data and Information Program was signed on 30 September 2015, but has yet to be implemented. Data is provided and maintained by the airports through the use of the 5010 Web tool. The data is transmitted to NFDC using XML, minimizing the chance of error because the data does not require manual input.

Next, Dr. McNerney gave an update on the implementation process associated with the Cloud Server. The cloud server now has aerial photography for over 900 airports, 2266 airports have their legacy ALPS in PDF format stored on the server and 576 airports have their airport signage and marking plans on the server.

Dr. McNerney stated the next safety issue that will be looked at is runway incursion data. The Office of Airports have geolocated runway incursion data from 2007-2014. Airport managers/personnel will be able to graphically view and analyze the data. This tool will also allow for a system-wide analysis to look at the frequency of runway incursions.

Ted Thompson, Jeppesen, inquired about public access to the Airports GIS tools and data. This generated vigorous discussion regarding the desire for public access. Rune Duke, AOPA, Chris Hill, Delta Air Lines, Mike Stromberg, Air Wisconsin, John Collins, GA Pilot, Lev Prichard, APA, and others expressed their desire for access to the data and the tools associated. All agreed that an FAA-populated and maintained central repository for airport information in the NAS is desirable, but is of limited use if not made available.

Dr. McNerney stated that currently, though Airports GIS will be the designated source for Airport data, the Office of Airports is not the authorized dissemination point for the data. He explained that Aeronautical Information Services (AIS) remains the office of dissemination for aeronautical data in the NAS. He also said that there is not currently a plan for public access to the tools, only the data. How AIS will eventually make the data available, in addition to currently available NFDD, eNASR and subscriber files has yet to be determined.

Dr. McNerney acknowledged ACF consensus for public access to Airports GIS in its entirety (data and tools). Jill Olson, AJV-553, stated that she would explore the issue of public access with AIS Director Abby Smith.

ACTION: AAS-100, will provide an update at the next ACF.

ACTION: Jill Olson, AJV-553, will provide an update on outcome of discussion with FAA Management regarding public access to Airports GIS.

Discontinuation of VOR Services

Leonixa Salcedo, AJM-324, briefed the issue. Leonixa gave an overview of the VOR MON (Minimum Operating Network) program and provided a status report of activity since the last ACF. She reviewed the progress made to date on identifying the specific VORs to be decommissioned and briefed that the number of VORs expected to be decommissioned has been reduced to just over 30% (approximately 308). Leonixa emphasized that the process for decommissioning would follow the process as outlined in Joint Order 7400.2.

Approval for Phase I was received in September 2015. Phase I will run from October 2015 through to September 2020 and will result in 74 VOR decommissionings. Phase II will involve the remaining VOR decommissionings, resulting in a total of 308 by the end of 2025. The final list of all VORs to be decommissioned is still yet to be made public. It is anticipated that over the life of the program (Phase I and II), 15 VORs will be decommissioned in the Western Region, 162 in the Central Region and 131 in the Eastern Region.

Leonixa commented that work continues on evaluating the airway, procedure and airspace impact of those VORs selected for decommissioning. Leonixa emphasized that where a decommissioned VOR impacts a segment of an airway, that segment may not necessarily be replaced. A significant number of Victor and Jet routes/segments are expected to be eliminated. The total project is expected to generate changes to approximately 7700 instrument flight procedures.

John Collins, GA Pilot, expressed his concern over the current problems within the NAS regarding the disconnect between RNAV routes and Victor Airways. Leonixa stated that work is ongoing to insure those issues are addressed.

Lev Prichard, APA, expressed his concern over the potential impact of a GPS outage and the ability of the MON to handle all the aircraft airborne within the NAS during an outage. Lev asked if facilities have a contingency plan for the loss of GPS. Dale Courtney, AJW-292, responded that there is a concept of operations in place. However, there is still work ongoing to address training, awareness, new AIM guidance, and detailed plans for how the MON would operate should there be a GPS outage, either nationally or within a specific geographic area. Dale stated that the VOR MON is just one part of the FAA's contingency/back up plans.

ACTION: Leonixa Salcedo, AJM-324, will provide an update the next ACF.

National Route Strategy / PBN Implementation Process FAA Order 7100.41

No update provided. Bruce Kinsler, AJV-142, reported to Valerie Watson, AJV-553, that his team would provide a briefing at the April 2016 ACF.

VFR Chart Print Schedule Realignment and Synchronization

Rick Fecht, AJV-5223, briefed the issue. Rick stated that a White Paper submitted to management detailing the changes to the VFR chart print schedule has been accepted and is now part of the operations plan, with a target implementation start date of early 2017. There remains a lot of work to be done within Visual Charting to meet this target and management is actively working through those issues.

Rune Duke, AOPA, asked if the FAA is planning to provide a public comment period on this change of business practice. Rick stated that at the present time, a public comment period has not been addressed. Rune asked that the FAA have a comment period so that all stakeholders have an opportunity to review the details of the change and provide comments back to the FAA. John Moore, Jeppesen, suggested that a Notice of Proposed Policy (NPP) could be published in the Federal Register to inform the public of the change and to solicit public comment. Valerie agreed to take this recommendation back to FAA management.

Lev Prichard, APA, inquired if the digital editions of the VFR charts are updated and published more frequently than the paper editions? Rick responded that for now, the digital publishing cycle mirrors the paper publishing cycle. Intermediate changes are published only via textual notice in the Chart Bulletin section in the Airport Facility Directories. The long term goal is to publish all the charts on a 56 day cycle.

Rich Boll, NBAA, asked if those long term plans included a single, master digital raster VFR chart. Rick stated that at present, the FAA does not have plans for generating a master digital chart.

ACTION: Rick Fecht, AJV-5223, to provide an update at the next ACF.

NOTAM Briefing

Ernie Bilotto, AJR-B11, briefed the issue. Ernie discussed the ongoing transition of the FAA NOTAM system to the ICAO compliant Federal NOTAM System (FNS). Ernie highlighted two changes to the system that are to take affect by the end of CY2015. The first is a change to how international NOTAMs pertaining to hazardous areas are issued. The NOTAM identifier will be changed from KZZZ to KIZC on 1 November 2015. This change will make these NOTAMs easier to sort and identify. There are approximately 20 subject NOTAMs in the system currently and all will be migrated to the new identifier.

The second change to the NOTAM system, captured in FAA NOTAM Order JO Order 7930.2, version Q, effective 15 December 2015, requires that Estimated Time of Cancelation (EST) NOTAMS be subject to auto cancellation to better align with ICAO practices. At this same time, the few remaining Until Further Notice (UFN) NOTAMs will be cancelled and either republished with effective dates or permanently removed.

Ernie stated that the next version of the NOTAM order, version R, has an expected publication date of September 2016 and subsequent updates to the order are anticipated every 7 months.

Lev Prichard, APA, expressed concern over the volume of NOTAMs that pilots must deal with and how problematic that has become. Lev emphasized that the huge volume of NOTAMs in the system can result in

a pilot missing important information. Ernie responded that they understand the problem, but the volume pilots are seeing is due in part by the airlines requesting to have as much information available as possible. A balance between supplying all pertinent information and over populating the NOTAM system is a known dilemma.

Rich Boll, NBAA, commented that part of the issue is the lack of an ability to properly sort NOTAMs. Rich suggested that NOTAM search engines, such as NOTAM Search are available and helpful.

Ernie suggested the formation of a workgroup comprised of industry stakeholders and the FAA. A workgroup signup sheet was circulated and supplied to Ernie so that a workgroup, independent and not sanctioned by the ACF, could be established by the NOTAM Office.

ACTION: Office of NOTAMs will provide future updates to the ACF as warranted.

Publish Electronic Form of MVA Charts

Jeff Lamphier, AJV-564, provided an update on the release of MVA charts in an electronic format. Jeff stated that MVA charts are available to the public via URL: https://www.faa.gov/air_traffic/flight_info/aeronav/digital_products/mva_mia/ in two formats, PDF and AIXM 5. The AIXM 5 files are to be published in conjunction with the PDF files for all future MVA/MIA projects.

John Collins, GA Pilot, inquired as to whether the AIXM files were georeferenced. Jeff responded that yes, the AIXM files are georeferenced and showed an example of how such files are coded.

Gary Fisk, AJV-82, asked if the release of these files is coordinated prior to public release. Jeff replied that all MVA/MIA files are fully coordinated with ATC and are not released until the effective date on which the new maps are implemented by the subject facility.

Transport Airplane Performance Planning Update

Bruce McGray, AFS-410, provided a briefing on the Transport Airplane Performance Planning (TAPP) program. Bruce discussed the results of the TAPP working groups work to address the issue of industry confusion regarding departure climb gradient compliance. Details can be found in the presentation.

V. Outstanding Charting Topics

07-01-195 Charting & AFD Information Re: Class E Surface Areas

Paul Gallant, AJV-113, reviewed the issue. Paul stated that the new AIM guidance was submitted regarding the specifics of Class airspace and associated extensions when an airport's air traffic control tower closes. Paul anticipates publication of the new AIM guidance for the 26 May 2016 edition of the AIM.

Paul stated that AIS identified a number of mismatches in the airspace legal descriptions and has provided a list to AJV-113 to aid in correcting the issue. To date, only 20% of the legal descriptions have been corrected. Those that remain have gone out to the services centers to be worked and will be published when received by his office.

STATUS: OPEN

ACTION: Paul Gallant, AJV-113, to report on publication of revised AIM guidance and progress in the update of the airspace legal descriptions.

13-01-261 Alaska Ground Based Transceivers (GBT) Locations

Valerie Watson, AJV-553, briefed the issue. Valerie stated that she has been in further contact with FAA General Counsel assigned to the ADS-B program data release. The FAA General Counsel has been working both the ACF request and a Freedom of Information Act (FOIA) request for release of ADS-B locations. Valerie received word from legal that the FOIA office does not concur with the objection to release the data. There is no information yet as to how or when the information will be released.

Valerie stated that she would provide the ADS-B and FOIA office contact information to John Collins, GA Pilot, the original proponent of the issue and asked if this item could be closed. John thanked Valerie and agreed to closing the item.

STATUS: CLOSED

13-01-262 Airport Facility Directory (AFD) Depiction of Traffic Pattern Altitudes

Valerie Watson, AJV-553, reviewed the issue. Rick Mayhew, AJV-533, stated that the past policy was to populate the NASR Traffic Pattern Altitude (TPA) data field only when the traffic pattern is other than standard. Rick reported that NFDC is ready to populate all TPAs, however they first need to secure a source for the data.

Valerie asked if the data is populated on the 5010 form and whether NFDC can use that as the source. Rick stated that they are only populated on this form if they are "other than standard". He suggested that since the standard is subject to confusion and misinterpretation, NFDC could ask the airport inspectors who fill out the 5010 forms to begin to populate this field for all altitudes.

Rick accepted the commitment to engage with the Office of Airports for a source for this data.

STATUS: OPEN

ACTION: Rick Mayhew, AJV-533, to report on dialog with the Office of Airports and Airport Inspectors regarding securing a source for all Traffic Pattern Altitudes in NASR.

13-01-266 Standardized Depiction of Altitude Restrictions on Bottom, Top and Maintain Altitudes on Standard Terminal Arrival (STAR) and Standard Instrument Departures (SIDs)

Valerie Watson, AJV-553, reviewed the history of the issue. Valerie stated that 2/3 of published Standard Instrument Departure (SID) Procedures now depict a Top Altitude. The process to add a Top Altitude to the remaining charts is ongoing.

Valerie also reported that basic guidance for Bottom Altitudes on Arrivals has been captured in the Draft of FAA Order 8260.19G and there is a charting specification in place though implementation has not begun nor been finalized. The topic of Bottom Altitudes is still under discussion in the PARC PCPSI and may require further revision. It was decided that this issue may be closed in this forum and if changes to prior decisions are made in the future, the subject will be revisited.

STATUS: CLOSED

13-01-270 Stepdown Fix Chart Notes

Kevin Bridges, AIR-131, provided an update. Kevin stated that the USIFPP suggested the topic be closed due to there being no means to classify the misleading information and there is no way to identify aircraft that have VNAV systems. Kevin added that there is a very high probability that airplanes with FMSs with baro-VNAV systems authorized for use on LNAV/VNAV line of minima also have GPWS or TAWS per 91.223. GPWS/TAWS can be considered as mitigation for a 10^{-3} baro-VNAV system used in this case for a 10^{-5} operation.

Rich Boll, NBAA, stated that there is one part of the recommendation that still remains unresolved regarding the addition of circling to the **LNAV only* note. Discussion focused on whether circling should be addressed in the **LNAV only* note. It was noted that details on what minima apply to non-precision approaches, including circling, are covered in the Aeronautical Information Manual (AIM), however, there seems to be pilot confusion regard the applicability of the note.

Rich stated that there are two options: take the **LNAV only* note off the chart entirely or change the note to read **LNAV and Circling only*. There was a lengthy discussion on the best course of action. The sentiment in the room shifted to the issue being not about charting and inclusion of a note to the real need for pilots to be properly trained to fly the procedure. It was reemphasized that for non-precision (meaning non-vertically guided) approaches, step down fixes apply and that needs to be instilled in pilots through training. In the end, the consensus was that all **LNAV only* stepdown notes and the similarly used **LOC only* stepdown notes should be removed from the FAA Order 8260.19 guidance and from the charts.

Rich agreed to look at the AIM language to determine whether additional guidance is required.

Tom Schneider agreed to initiate necessary changes to the FAA Order 8260.19 guidance. Brad Rush stated that once the guidance has been published, the note will be removed from the charts as the 8260 series procedure source forms are amended for other reasons, meaning that it will likely be a long time before all the notes will be removed.

STATUS: OPEN

ACTION: Tom Schneider, AFS-420, to report on progress made on modifying FAA Order 8260.19 revised to remove *LNAV only and *LOC only stepdown notes.

ACTION: Bruce McGray, AFS-410, and Rich Boll, NBAA, to review AIM guidance and report on possible revision.

14-01-274 Solar Power Plant Ocular Hazard Symbol on Aeronautical Charts

Valerie Watson, AJV-553, reviewed the topic. Valerie commented that at present, there are two solar power plants that have been depicted on the FAA VFR Sectional charts with the existing "ocular hazard" symbology. The issue that remains is the sourcing and databasing of solar fields deemed to be Ocular Hazards for pilots.

Mike Wallin, AJV-5331, stated that NFDC is currently looking in to how to database the areas in NASR. (The two current areas were published via NFDD "add-on" pages.) Mike said that for the data to be published, Solar Power plants would have to be submitted to NFDC by the Service Areas via the portal. Also, any future modifications would have to come in through the same means from the service centers.

Valerie asked about the source of the currently charted ocular hazard areas. Rick Fecht, AJV-5223, stated that the requests to date have come in via special request from the Western Service Center. The areas are not currently databased in NASR. Rick Mayhew, AJV-533, commented that it may be possible to expand FAA Order 7900.3 for special activity areas to include the housing of these areas. Rick also stated that NFDC can reach out to the service centers to see if they have additional areas where ocular hazard should be charted.

Discussion shifted to what altitudes solar plants that operate utilizing focused mirrors impact pilots. JoIda Reed, AJV-W21, stated that pilots can suffer glare at any altitude. She said that at Ivanpah Solar Power Facility, pilots have reported ocular hazard up to 380FL and 180 miles away from the facility.

Rune Duke, AOPA, suggested that the FAA look into using the ocular glare tool; Significant Glare Analysis Tool (https://share.sandia.gov/phlux), currently used for Solar Panel instillations at and around airports.

Discussion then shifted as to what the FAA's reporting requirements are for companies looking to construct solar sites. It was stated that the only real requirement is when there is an obstacle constructed at or above 200 feet AGL. There was a question regarding what information is included on the construction notice when an obstacle is submitted. Rick Mayhew will look into whether the information submitted on construction notices provides an indication that a solar farm is being constructed. The final consensus was that the Service Areas will need to submit to NFDC the areas that they deem to be ocular hazards to pilots and are thus "chart-worthy". NFDC cannot take the responsibility for making this decision, nor can the charting teams. Rick will pursue with the three Service Areas to set up a source submission process.

STATUS: OPEN

ACTION: Rick Mayhew, AJV-533, will reach out to the Service Areas regarding submission of solar farms required for charting.

ACTION: Rick Mayhew, AJV-533, will review FAA Order 7900.3 to see if it can be expanded to include ocular hazards for databasing in NASR under the newly developed Special Activity Area resource.

ACTION: Rick Mayhew, AJV-533, to research what information is submitted on a construction notice with regard to solar plant construction.

14-01-276 Removal of Non-Alaska Facility Information from Alaska Supplement

Valerie Watson, AJV-553, reviewed the issue. Bob Carlson, AJV-5641, reported that with the automation of the Alaska Supplement, the supplemental Non-Alaskan information (specifically requested by the military and AOPA) will remain in the book, but will separated into a non-Alaska section. Bob said he had spoken with Rune Duke, AOPA, and Marshall Severson, AJR-BAL, and they were agreeable to that solution.

Lynette Jamison, AJR-B1, commented that there is still a lot of inaccurate data in the AFDs. Bob replied that the airport information in the AFD is updated based what is in databased in NASR. If there is incorrect information, corrections need to be submitted to NASR from the airport – when incorporated into NASR, those revisions will be reflected in the supplements.

STATUS: CLOSED

14-01-277 Discontinuation of World Aeronautical Charts

Guy Copeland, AJV-522, reviewed the topic. Guy reviewed the history of the World Aeronautical Charts (WACs), illustrating how demand for the WACs over the past few years has been declining to levels that no longer make it economically viable to continue production of the chart series. Guy added that contributing factors to the decline of the WACs was the migration to digital charts, use of electronic flight bags (EFBs), moving map displays and other related technologies.

Based on feedback, Guy stated that there was a notice of the policy change published in the Federal Register announcing the elimination of the entire WAC series and soliciting questions and comments from users. He stated that the Visual Charting Team will be able to redirect resources previously dedicated to WAC production to other Visual charting initiatives.

Guy stated that the proposal to mitigate the loss of the WACs is to develop an Alaskan VFR Wall Planning chart and produce two Caribbean VFR charts to provide coverage in those areas. Regarding concerns for Mexican and Canadian areas that were previously covered by the WACs, Guy stated that pilots will be

encouraged to use foreign, state-sponsored aeronautical charts when navigating in those regions. Canadian and Mexican charts exist and are commercially available.

Projected dates for WACs discontinuance were provided, subject to change.

Rune Duke, AOPA, stated that they disagreed with the FAA's publication of an announcement to discontinue a chart series without the opportunity for formal public comment. Subsequent to publication of the announcement, AOPA conducted a survey of their members and 745 responded that they valued and utilized the WAC charts. AOPA has been working with the FAA to establish a collaborative process on addressing the charting concerns and needs of pilots. AOPA looks forward to continuing that collaborative process as the FAA works through the process of discontinuing the WACs.

Rich Boll, NBAA, inquired if all of the U.S., including Alaska, is covered by a VFR sectional chart. Guy responded that yes, the U.S. and Alaska are covered by the VFR sectional charts.

Rich then emphasized that the regulations require that transport aircraft have both IFR and VFR charts in order to operate in accordance with the regulations, specifically 14 CFR 91.503 (a)(4). The regulation requires operators of these aircraft to carry pertinent aeronautical charts, a purpose for which the WAC product is uniquely suited. While Sectional charts meet this need, the number that must be carried on the airplane becomes problematic. As result, NBAA is concerned about the loss of the WAC series of charts to their members.

Rich went on to state that one key issue that pilots face with the use of current digital VFR and IFR charts is that they are stitched together by 3rd party charting application providers. Along the boundaries where charts are jointed, charted information sometimes gets missed, dropped or deleted entirely. He emphasized that these data losses are a huge issue. Rich suggested that the FAA look into generating one continuous digital VFR aeronautical chart for viewing on EFBs. NBAA would like to see the funds freed up by the discontinuance of the WACs be put towards generating a seamless electronic VFR chart.

Guy, in response, stated that VFR charts are currently still a paper product. The digital products are a snapshot of the paper product. Guy also stated that the FAA is working toward data driven charts which may solve many of these issues. Rich responded that digital charts are a long term goal and stated that something is needed in the interim. Guy stated that he would take the recommendation back for further discussion, but in the meantime, the FAA is working on the stitching issues. He explained that work has begun to clean up areas on the paper charts where they are jointed to help ensure that information is not lost.

Valerie Watson, AJV-553, asked if FAA Enroute Charting is aware these types of overlap and data loss issues with adjoining charts, and if so, if they are they looking into it. Bob Gifford, AJV-5211, stated that he was not aware of the problem, but would enquire.

Steve Woodbury, Flight Safety International, asked if there were plans to update guidance regarding the discontinuation of the WACs. Guy responded that all current references to the WAC series will be removed from the December 2015 version of the Aeronautical Information Manual (AIM). A future AIM update will include information regarding the new VFR products under development.

Rune inquired if the FAA has plans to provide information to pilots regarding which VFR Sectionals would cover the discontinued WACs. Guy replied that he there was currently not a plan to provide such a graphic, but that VFR Charting will look into producing a textual crosswalk charting notice that will correlate WAC coverage to Sectional chart coverage. Subsequent to the meeting, the following Notice was posted on the AIS website: http://www.faa.gov/air_traffic/flight_info/aeronav/safety_alerts/media/VIS_15-04_CN_WAC_to_Sectional_Crosswalk.pdf

Bob Lamond, NBAA, stated that the process for the discontinuation of the WACs did not occur as expected and as it was publicly announced. Bob emphasized that while the WACs may not be heavily used, they still have value. He encouraged the FAA to continue to discuss and work with industry to find solutions to these issues, especially regarding areas that directly impact how operators are to comply with elements of the regulations that require charts in the cockpit. NBAA understands the cost involved in producing the WACs. Pending the development of a robust, data-driven VFR chart option that is an acceptable alternative to the Sectional chart, NBAA believes that the loss of the WAC is best addressed by furnishing EFB software providers with a mosaic product that is suitable to their use. Bob added that NBAA believes this holds true not only for VFR charts, but for IFR charts as well. This would serve as good alternative pending the full, data-driven chart option.

Bob expressed that NBAA and AOPA's comments represent frustration from pilots about removal of products and tools without a suitable alternative or acceptable electronic replacement. Al Ball, Netjets, echoed this sentiment. Both Rune and Bob stated that their organizations hope to continue working with the FAA to improve the services and products to meet the needs of pilots. Guy replied that the FAA is engaged and also wants to work collaboratively.

STATUS: CLOSED

14-01-279 Naming of FAA Certified, National Disseminated AWOS-3 Systems on Private Use Airports

Valerie Watson, AJV-553, reviewed the issue. Rick Mayhew, AJV-533, briefed on actions taken by NFDC to address the issue. Rick stated that he and Valerie are going to work together to put together a list of all ASOS/AWOS systems that do not share the same location identifier as a public-use airport. They will submit that list to the non-federal weather office for verification. If they are certified for public use, they can be shown on the charts.

Gary Fiske, AJV-82, asked if these non-Federal AWOS systems are broadcasting over VHF frequencies, and if they can be picked up by pilots. Rick commented that yes, such stations could be picked up by pilots and that these stations utilize a frequency licensed by the FCC. What needs to be determined is whether these systems are inspected and maintained to FAA standards. If so, all agreed they should be charted.

Rune Duke, AOPA, commented that pilots see tremendous value in having access to any additional sources of weather information.

STATUS: OPEN

ACTION: Rick Mayhew, AJV-533, and Valerie Watson, AJV-553 to report back on their findings regarding the ASOS/AWOS list.

14-02-280 MEA Usage on SIDs

Valerie Watson, AJV-553, reviewed the item. Tom Schneider, AFS-420, provided an update. Tom stated that he has written guidance for Draft FAA Order 8260.46F that supports publication of crossing altitudes at specific fixes and a prohibition against establishing MEAs (segment altitudes) that have been artificially raised to support ATC separation needs. The Order has been circulated for approval and will be published within the next 90 days.

Tom stated that he will also insure that FAA Order 8260.19 for Arrivals and FAA Order 8260.46 for Departures are in agreement.

STATUS: CLOSED

14-02-282 VASI PAPI Differences

Brad Rush, AJV-54, briefed the issue. Brad stated in his discussions with the FAA Lighting Systems Office, he was told that there will not be an update to the Order to change the VASI Obstacle Clearance Surface (OCS). The office stated that changing the VASI distance would require that all VASIs be resurveyed for compliance, and that would be too costly. Brad stated that he would continue to work with AFS-410 on revising the language on in the AIM to clarify the different surface areas.

Michael Stromberg, Air Wisconsin, asked if all new VASI systems could be installed using the PAPI OCS. Brad stated that the FAA no longer installs new VASI systems.

STATUS: OPEN

ACTION: Brad Rush, AJV-54, to report on work on revising the AIM language regarding PAPI and VASI Obstacle Clearance Surface definitions.

14-02-283 Charting of Transmission Lines on VFR Charts

Valerie Watson, AJV-553, reviewed the issue. Valerie stated that the United States Coast Guard (USCG) was to provide findings linking FAA transmission line chart symbology to accident incidence. There were no findings submitted by the USCG and they were not in attendance at the meeting. Valerie proposed to close the issue. There were no objections.

STATUS: CLOSED

14-02-284 DME Facilities – Charting and MAGVAR Issues

Valerie Watson, AJV-553, reviewed the topic. Dale Courtney, AJW-292, informed the forum that since the last ACF, there had not been any meetings of the DME Workgroup. Dale stated that the scope of the VOR MON has changed due to the decrease in numbers of VORs to be decommissioned.

One of the recommendation is to chart the approximately 52 DMEs that will remain as a result of VOR decommissionings in MON Phase 1. Dale voiced the WG recommends that DMEs be charted using the square box symbology, shall retain the name and ident of the parent VOR/DME, will (when necessary) have a facility box with name, ident, morse code, channel and paired frequency. DMEs used as waypoints will be shown utilizing the standard hierarchy concept with the DME symbol and associated text. It was agreed that as DMEs have no azimuth, a magnetic variation of zero will be assigned.

Rich Boll, NBAA, inquired if these DMEs could be utilized by ATC. Dale stated that yes, ATC could use to them as a waypoint. Valerie voiced that as with any NAVAID, these will be entered into the NAVAID resource in NASR as NAVIAD type DME so the 3-character idents will be in the FMS and can be used as waypoints.

Gary Fiske, AJV-82, stated that ATC is against charting the DMEs if the sole purpose is for them to be used for DME backup. Dale commented that not charting them would result in the charts being inconsistent with the FMS. Ted Thompson, Jeppesen, agreed that if they are not all charted, it will cause confusion, both in creating a mismatch between charts and the FMS and for NOTAM clarity. Valerie stated that as with any NAVAID, if a DME is used on a procedure, airway or as part of a makeup, in the structure (say Enroute Low or High) of the chart product, it will be depicted.

There was consensus that for Phase 1, since there are only 52 DMEs and they are already charted VOR/DMEs, they should be charted as DMEs after the VOR is decomissioned. This policy may be revisited as the VOR MON decomissionings continue and the possible proliferation of newly commissioned DMEs commences.

Rick Mayhew, AJV-533, stated that NFDC can capture what is necessary for DMEs to be charted in NASR.

The DME Workgroup is made up of the following individuals:

DME Workgroup		
Name	**E-mail**	**Phone**
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Kevin Bridges	Kevin.bridges@faa.gov	202-385-4627

STATUS: OPEN

ACTION: Valerie Watson, AJV-553 to work with Dale Courtney, AJW-292, to develop a charting specification for DMEs.

15-01-289 Adding "CPDLC" Information to Airport Diagram and Terminal Procedures and Updating the AFD

Valerie Watson, AJV-553, reviewed the topic. Valerie stated that the charting specification is in place. She showed the group chart and AFD entry examples of how CPDLC would be depicted on FAA products.

Rick Mayhew, AJV-533, stated that the CPDLC information will be published in NASR (and the NFDD) as a Tower Services entry.

Lynette Jamison, AJR-B1, stated that there are complexities with CPDLC that were not initially apparent. Tech Ops has commented that CPDLC utilizes two different services and systems. This adds a layer of complexity in issuing a NOTAM because CPDCL services may be available through one system, but through another. The NOTAM office is considering how this should be handled.

On the subject of digital communications, Rich Boll, NBAA, presented a briefing on Terminal Weather Information for Pilots (TWIP). This is a digital weather reporting service that is installed at a number of major airports. TWIP provides pilots text information and a simple graphic of weather activity that may impact airport operations. Rich recommends that TWIP availability be depicted on IAPs, DPs and STARS in the same way CPDLC will be shown. Rich also recommends that the outdated AIM guidance regarding TWIP be updated.

Ted Thompson, Jeppesen, commented that Jeppesen has in the past attempted to include digital communication services on the charts and expressed that is has been problematic. He expressed that reliable source for the information and ensuring that it is maintained has been difficult.

Valerie stated that as technology advances and more communications are transmitted digitally verses vocally, we need a long term plan for sourcing, databasing and publishing digital communications. Valerie asked the audience if the charted communications listings should be expanded to include TWIP. It was agreed that digital services would be of value on the charts. Valerie stated that she would attempt to track down the appropriate office within the FAA that oversees digital communication services and research the issue. She will also attempt to determine the FAA office responsible for update of the AIM TWIP guidance and task them with its revision.

STATUS: OPEN

ACTION: Valerie Watson, AJV-553, will research digital communications availability, usage, source.

ACTION: Valerie Watson, AJV-553, work to see that the TWIP AIM guidance is updated.

15-01-290 VFR Charting of Airport Symbol – Services Availability

Rich Fecht, AJV-5223, reviewed the topic. Rich stated that the IACC Requirement Document has been signed and is ready to implement. Visual Charting is parsing through the data to get a list of airports that meet the fuel availability requirements and will soon start updating the VFR charts. Rich anticipates that the updated airport fueling information to be reflected on all charts within about two years. This change will affect public airports only.

STATUS: CLOSED

15-01-292 Removal of Grid Variation from U.S. IAP Charts

Kevin Bridges, AIR-131, stated that he received no objections from Alaskan users to the removal of Grid Variation. Valerie Watson, AJV-553, said that she would move forward with a charting specification change to remove grid variation from the charts. She reiterated that if the Air Force needs to retain grid depiction on their charts for use in the Antarctic, they can do so, but it will not affect FAA charting standards.

STATUS: CLOSED

15-01-293 STAR Terminus Point Standardization

Valerie Watson, AJV-553, reviewed the issue. Valerie showed the audience two sets of prototypes. The first showed STAR terminus points with runway and airport identifiers and the suggested procedure source document revisions that would reliably support the charting. The second set of prototypes also included an example bottom altitude along with the terminus identifiers. There were positive reactions to the addition of the runway identifiers, however strongly negative reactions to the addition of the bottom altitudes at the terminus.

Lev Prichard, APA, stated that he likes the runway information associated with each terminus. However, having such runway information on all STARS may be problematic. Lev added that there should be no effort made to chart the bottom altitudes in this manner.

Brad Rush, AJV-54, stated that the depiction of the bottom altitudes will cause pilot confusion and it is also a problem because there is not a way for them to be properly coded.

Rich Boll, NBAA, commented that the end result of this idea should be a reduction in congestion and the number of notes depicted on the chart.

Ted Thompson, Jeppesen, commented that the idea has merit; however, he feels more work is required. He suggested that AIS develop more concept charts on a variety of different arrivals.

Rick Dunham, AFS-420, stated that the criteria for STARs is in the process of transitioning to Flight Standards. PARC recommendations are being reviewed. It is anticipated that bottom altitudes will not go on STARs because of the potential for pilot confusion and coding issues.

Aside from altitudes, consensus of the group was strongly in favor of STAR terminus identification text shown at the terminus points on the planview of an Arrival chart rather than "buried" in the arrival text. Kevin Allen, American Airlines, and Lev Pritchard, APA, offered to make chart recommendations to Valerie for prototype charts for the next ACF.

STATUS: OPEN

ACTION: Valerie Watson, AJV-553, to create additional prototype STAR charts depicting terminus identifiers.

15-01-295 Charting of Airports for the MON

Vince Massimini, MITRE, reviewed the issue and stated that since the last ACF, the Workgroup was formed, but did not convene because he was awaiting the release of the list of proposed MON airports. Now that the list of airports has been released, Vince anticipates holding the first meeting of the Workgroup in the coming weeks.

Kevin Bridges, AIR-131, inquired about the impact MON Airports would have on pilots filing for alternate airports. Vince replied that there is not going to be a change to alternate filing requirements. Pilots will not have to file for a MON airport as an alternate for any flight operations. Kevin expressed his opinion that, for safety, alternate filing *should* be based on the MON. He voiced that the FAA will need to ensure that there is very clear guidance in the AIM and the IPH on MON operations.

Vince reassured the audience that those involved in the MON process are thoroughly discussing these and a number of related concerns. He stated that there are a variety of MON issues to be finalized before any language can be inserted in the AIM. Once these issues are finalized, language will be added to the AIM and other publications accordingly.

MON Workgroup		
Name	**E-mail**	**Phone**
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STATUS: OPEN

ACTION: The MON Workgroup will meet to discuss the issues and Vince Massimini, MITRE, will report back.

VI. New Charting Topics

15-02-296 Charting of Unmanned Free Balloon Activities and Amateur Rocket Activity Areas

Part I: Charting of Amateur Rocket Activity Areas

Paul Eure, AJV-113, introduced a recommendation for the charting of amateur rocket activity areas. Paul recommends that use of the newly introduced rocket symbol that was approved by the IACC to indicate space launch activity areas be expanded to include amateur rocket activity areas. Paul said that there are specific sites where amateur rocket launches are conducted by such government organizations as NASA and DoD and by commercial rocket manufacturers. Paul estimates that there are over 50 large, high-powered rocket launches per year. In addition to these organizational rocket launches, there are amateur rocket events at specific launch sites that conduct activities with rockets that may climb from 3,000 feet up to 484,000 feet. These amateur rockets are high power, and, in some cases, multistage rockets.

Paul stated there is currently one amateur rocket site in Nevada that he believes should be charted with the rocket symbol to enhance situational awareness for pilots. Black Rock, NV is a major amateur launch site, which when active with a TFR, has a protected airspace radius of 17NM. Paul emphasized that amateur rockets are not considered space operations, but that doesn't lessen the danger associated with such activities to pilots and aircraft.

Rich Fecht, AJV-5223, suggested that Visual Charting could use the current rocket symbol for Black Rock, but that there would need to be a specification change in order to expand the definition of the symbol to include amateur rockets.

Valerie Watson, AJV-553, asked why these areas need to be charted if a NOTAM and TFR is always released for major launches. Paul stated that a TFR is required for those launches that are planned to fly at or above 18,000 feet. However, launches that are projected to fly below that altitude can be launched without a NOTAM, using spotters.

Rune Duke, AOPA, asked how it would be determined what sites qualify for a symbol. Paul responded that sporadic activities would not qualify. Guy Copeland, AJV-522, stated that before Black Rock and other similar amateur sites can be charted, criteria needs to be devised to establish a threshold whereby such facilities could qualify to be charted.

It was suggested, and Paul agreed, that Flight Standards should be involved in the establishment of criteria for publication/charting of rocket activity areas. Number and frequency of activity, altitudes, contact information, etc., should possibly be considered. Paul will work with AFS to attempt to define criteria.

Rick Mayhew asked if such launch facilities are included in the AFD. Valerie stated that publication of a text entry in the Notices section of the AFD is something that could be accomplished quickly while a long term charting solution is investigated. Paul stated that that was something that he would like to investigate further.

Part II: Charting of Unmanned Free Balloon Activities

Paul Eure, AJV-113, introduced a recommendation for the depiction of unmanned free balloon activity areas on VFR charts. Paul stated that at present, there is nothing on the charts to indicate areas of high balloon launch activity. The balloons launched are designed to travel up to 100,000 feet often carrying cargo. The most common, regularly scheduled balloon launches are associated with weather balloons launched at 07h00 and 19h00 every day. There are 108 weather balloon launch sites and the weather services launches over 75,000 balloons per year.

Paul stated that, in addition to weather balloons, Google, NASA and others also launch balloons in a similar manner and to extremely high altitudes. Paul stated his believe that this is a safety of flight issue and pilots need to know where this activity is taking place. Balloons such as Google's do not have restrictions regarding terms of launch, have no transponder or lighting requirements and no payload restrictions. The only restrictions in place pertain to operating near Class B airspace and that launch companies have to provide a notice of launch.

Paul commented that Title 14, Part 101 – Moored Balloon, Kites, Amateur Rockets and Unmanned Free Balloons needs to be updated. The last time Subpart D, Unmanned Free Balloons was revised was 1964.

Ted Thompson, Jeppesen, commented that the charting of these launch sites at this time is premature. Regulation needs to come before charting so that criteria can be established. He also pointed out that this request is to add something to the charts that is dynamic in nature – this is difficult on a 224 day update cycle. He suggested that publication of Special Notice might be more appropriate.

John Moore, Jeppesen, commented that written criteria needs to be established before there is any discussion of charting. Once criteria is established, then you have to develop how such sites, rocket or balloon, are to be documented. Only after these steps are taken should charting be considered.

Guy Copeland, AJV-522, stated that if Flight Standards provides a threshold criteria for charting and the areas are published in NASR (or as NFDD add-on pages), Visual Charts could likely accommodate this request as long as the threshold for charting did not cause undo congestion to the VFR products.

Rune Duke, AOPA, asked if there was any data regarding an increase in aircraft-balloon incidents. Paul replied that yes, there have been 12 incidents in the last two years. Rune asked if those incidents were in the vicinity of the launch sites that Paul would like to see charted. Paul responded that he did not know the locations of the incidents.

STATUS: OPEN

ACTION: Paul Eure, AJV-113, will work with Flight Standards on developing criteria for charting amateur rocket and unmanned free balloon launch sites on Visual Charts. He will also consider submission of Notices for publication in the AFDs.

ACTION: Rick Mayhew, AJV-533, and Valerie Watson, AJV-553, will coordinate with Paul Eure regarding publication in the Special Notices section of the AFD.

15-02-297 Charting of HILPT Maximum Holding Altitude

Rich Boll, NBAA, briefed the new recommendation. Rich recommends that where a maximum holding altitude has been established for a hold-in-lieu of procedure turn (HILPT) holding pattern, it should be depicted on the approach chart so that both pilots and ATC are aware of the restriction. Rich emphasized that ATC does not readily have access to FAA 8260-2 forms (on which the maximum altitude would be documented) so they may not be aware that a maximum holding altitude applies. Rich stated that it is unknown how large the issue is, however he showed, as part of his presentation, several examples where maximum holding altitudes apply to a HILPT and they are not published on the chart. He stated that this is not likely a problem at larger fields, but may be an issue at smaller airports.

Rune Duke, AOPA, stated his support for charting these altitudes, agreeing that pilots need to know this information.

Michael Stromberg, Air Wisconsin, asked how a pilot would get the 8260-2 forms to look up this information. Rick Mayhew, AJV-533, stated that some but not all 8260-2 forms are available online. Valerie Watson, AJV-553, stating that if it is decided that the maximum holding altitude needs to be charted, it would have to be documented on the on the 8260 series procedure source form, not merely the 8260-2 holding pattern form.

Tom Schneider, AFS-420, stated that FAA Order 8260.19 would need to be revised to specify any maximum holding altitudes that require charting. If/when the decision is made to chart this information, Tom will take an action IOU to make necessary changes.

Rich commented that if there are any changes to the charts to include maximum holding altitudes, there would also have to be an education piece for the AIM.

Discussion shifted as to where such maximum holding pattern altitude should appear on the chart, the profile view or planview, or both, and how it should be depicted in the profile. There was consensus that it should be depicted in both the planview and profile. Valerie agreed to create concept charts for the next ACF with various depiction options.

STATUS: OPEN

ACTION: Valerie Watson, AJV-553, to draft prototype charts for next ACF.

15-02-298 Charting GLS DMax (Service Volume)

Ron Renk, United Airlines, briefed the issue. Ron first described to the audience the process of how a GLS approach is flown at Houston. Ron stated that United has flown over 3,000 GLS approaches and an unanticipated issue has surfaced. ATC can expect a pilot to join the final approach course (FAC) outside the service volume of the GLS ground station. Beyond the scope of the GLS signal, pilots must use LNAV/VNAV to fly the procedure. Once within the service volume of the GLS signal, they can use the Approach (APP) mode to complete the approach. Since pilots don't know the service volume limit, they have no way to know if they should use LNAV or APP mode to join the FAC. Ron recommends that the GLS service volume limit, or DMax, be charted on GLS procedures.

Catherine Graham, AFS-470, stated that the GLS service volume is sourced on the airport detail sheet that is used by the procedure designer. She stated that it is documented as a distance from the antenna. Ron said that it would need to be converted to a distance from threshold for charting.

Ron proposed a couple of ideas on how the service volume could be provided to pilots on the charts. His first idea was be to provide a feather-like representation (like a localizer) that would go out as far as the service volume for a given approach. His second idea was to add an arc at the point along the FAC at the service volume limit.

Discussion continued regarding different depiction ideas for showing the DMax limit. Suggestions included showing it as a note, or as a line or symbol across the FAC. The preference seemed to be indicate the DMax limit as a note.

Brad Rush, AJV-54, suggested the establishment of a waypoint on the FAC at or just inside the DMax limit. The point would include an indicator of (DMax) with the waypoint name. This point would be indicated for charting on the Form 8260-3 to support charting and database coding. There was consensus of support for this suggestion. The audience agreed both that the GLS service volume should be depicted on the charts and that establishment of a labeled waypoint on the planview would be a clear method to show it.

Valerie Watson, AJV-553, agreed to create prototype charts for the next ACF for the depiction of a waypoint located at the service volume limit (or just inside) accompanied by text indicating "(DMax)". Catherine said that she would work on determining the correct DMax fix placement and coordinate with Tom Schneider on changes that would be necessary in FAA Order 8260.19.

STATUS: OPEN

ACTION: Valerie Watson, AJV-553, to develop prototypes for the depiction of a DMax waypoint on GLS procedures for consideration at next ACF.

ACTION: Catherine Graham, AFS-470, and Tom Schneider, AFS-420, to work on FAA Order 8260.19 revisions to support establishment of a DMax waypoint on GLS procedures.

15-02-299 Add INOP Components Minimums Adjustments to IAPs

John Collins, ForeFlight, briefed the topic. John stated that current FAA charts show the Inoperative Components Table separate from the charts in the legend pages of the TPP. He stated that this becomes an issue when using an electronic flight bag (EFB) because the pilot may not readily have access to a digital copy of the table from the legend. He recommends that the FAA make the information more readily available to pilots by including a note on the approach charts for standard and nonstandard adjustments to visibility. He pointed out that Jeppesen provides such information on their approach charts.

Kevin Bridges, AIR-131, asked if this was purely an issue with EFBs. John replied that yes, this was an EFB issue, adding that the information the pilot need is not all in one place.

Michael Stromberg, Air Wisconsin, stated that this appears to be a vendor issue related to how the EFB is programmed to utilize FAA charts. He pointed out that a request could be made to the vendor to make that page more accessible.

Valerie Watson, AJV-553, stated that the FAA provides an electronic version of the Inop Components table, but it is not up to the FAA how EFB vendors link or provide the table.

Brad Rush, AJV-54, stated that this doesn't appear to be a charting issue, but an EFB vendor issue.

After a lengthy discussion, it was decided that as the FAA had no plans to modify their minima depiction with lights-out information as Jeppesen does, that the table is available and thus all necessary information is provided, this is essentially a vendor issue and no action will be taken.

STATUS: CLOSED

15-02-300 Standardize Depiction of Communications on DPs and STARs

Allison Miller, AJV-5612, briefed the issue. Allison asked the ACF to provide recommendations for standard communications that should be charted, when available, on all DPs and STARs. She stated that in the current process there is a disconnect between what is designated for charting in the specifications, what is provided by NASR and what is requested by the facility or procedure developer.

FAA charting policy is to depict basic frequencies as listed in the IACC specifications. Numerical frequencies should not be shown on procedure source documents because frequencies often change and a procedure amendment would need to be processed to revise the frequency. For this reason, the charting teams would like to see all frequencies databased in NASR. Frequencies can be annotated in NASR to clarify the procedures on which they are intended to be used. If the standard initial contact approach control frequency is NOT desired to be utilized on a given Arrival, for instance, the desired frequencies should be databased specifically and annotated with the name of the procedure on which they are to be used.

It was reported that often facilities contact the charting offices and request frequency changes on procedures when the frequencies are not databased in NASR. Allison agreed that Terminal Charting does get

requests for non-databased frequencies to be included on the chart and such requests often come in via email from the center. It was agreed that ATC needs to follow the process and provide the information to NFDC.

Rick Mayhew, AJV-533, stated that for metroplex projects, NFDC has recently begun to add frequencies in NASR that are tied to specific procedures. He stated that Tom Harris is the point of contact for communication in NASR and concerns should be brought to him.

Valerie voiced enthusiastic support for this process and the recommendation was made that when the standard frequencies in NASR are NOT what the facility desires, ATC be advised to send a request to NFDC to add the desired frequencies and tie them to the specific procedures. FAA Terminal charting will follow this procedure and direct ATC to NFDC for unique frequency publication as necessary. Ted Thompson, Jeppesen, concurred and will advise his AIS specialists to do the same.

STATUS: CLOSED

VII. Closing Remarks

Valerie Watson, AJV-553, thanked the attendees for their participation and voiced special appreciation to Lance Christian, NGA, for venue coordination and to the USGS for hosting the ACF.

Notices of the official minutes will be announced via email and provided via the Internet. The two website addresses (CG and IPG) are provided below:

- Charting Group – http://www.faa.gov/air_traffic/flight_info/aeronav/acf/
- Instrument Procedures Group – http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afs/afs400/afs420/acfipg/

Please note the attached Office of Primary Responsibility (OPR) listing for action items. It is requested that all OPRs be prepared to provide verbal input at the next Forum or provide the Chair, Valerie Watson (with an informational copy to Alex Rushton, Contract Support), a written status update. These status reports will be used to compile the minutes of the meeting and will serve as a documented statement of your presentation.

Appreciation to Jennifer Hendi, AJV-553, for presentation assistance for the CG portion of the forum, conference support pre- and post-conference, and to Alex Rushton, Contract Support to AJV-553, for taking the minutes and conference support pre- and post-conference.

VIII. Next Meeting

ACF 16-01 is scheduled to be held on April 26-28, 2016, hosted by ALPA at their Herndon, VA location.

ACF 16-02 is scheduled to be held on October 25-27, 2016, hosted by Pragmatics, Inc., at their Reston, VA location.

IX. Attachments

a. 15-02 Attendee Roster
b. Office of Primary Responsibility (OPR)

AERONAUTICAL CHARTING FORUM
Charting Group
Meeting 16-01 – April 27 - 28, 2016

RECOMMENDATION DOCUMENT

FAA Control # ACF-CG RD 16-01-301

Subject: RVR Locations in FAA Documentation

Background/Discussion:

RVR location information is required for calculating and publishing minima on instrument charts. In the FAA documentation KPHL – Philadelphia airport, it is unclear whether certain RVR information given in the DAFD section of the FAA.gov website (http://www.faa.gov/air_traffic/flight_info/aeronav/digital_products/dafd/search/), can be used in conjunction with other runways given in the airports remark section. Another section of the FAA website, (http://rvr.fly.faa.gov/cgi-bin/rvr-status.pl?fs=lg), gives live RVR reporting information, but in some cases, some airports do not appear in the DAFD that do in RVR.fly, or vice versa, or the information given in each is contradictory. It is therefore difficult to clearly determine how many RVR sensors, if any, are available for use on a runway, which affects the publication of safe minima values on charts.

Recommendations:

TERPS Order 8900.1, Volume 3, Chapter 18, Section 5, Part C (current change 417), states "OPSPEC C078/C079—IFR LOWER-THAN-STANDARD TAKEOFF MINIMA, 14 CFR PART 121 AIRPLANE OPERATIONS—ALL AIRPORTS E. Lower-Than-Standard Takeoff Minimums for TDZ RVR. C078 and C079 authorize lower-than-standard takeoff minimums for TDZ RVR 1600 (500 meters). If TDZ RVR is inoperative, mid-point RVR may substitute for TDZ RVR. Below RVR 1600, two operating RVR sensors are required and controlling. If more than two RVR sensors are installed, all operating RVR sensors are controlling, with the exception of a fourth, far-end RVR sensor that may be installed on extremely long runways. A far-end RVR sensor is advisory only." This suggests that unless there are two or more RVR sensors available for use on a RWY, take off cannot be commenced with a minima value less than 1600ft.

The issue at KPHL is that in the DAFD, it states that "Rwy 09 rollout RVR used for Rwy 09L midpoint RVR. Rwy 09L touchdown RVR avbl. Rwy 27R touchdown RVR avbl. Rwy 09R rollout RVR avbl. Rwy 27L touchdown, and rollout RVR avbl. Rwy 17 touchdown RVR avbl. Rwy 35 touchdown RVR avbl. Rwy 08 touchdown, rollout RVR avbl. Rwy 26 touchdown, rollout RVR avbl." This report suggests that for RWY 27R for example, that only the touchdown zone RVR is available for use, meaning that when taking off from this RWY, there is only one controlling RVR and therefore as per the TERPS order mentioned, the minima cannot be lower than 1600ft. On the reciprocal end though for RWY 09L it states there is also a TDZ RVR available, and also presumably when it says RWY 09, this means RWY 09R, and this rollout RVR can be used as a midpoint for RWY 09L. This means that RWY 09L has two RVR sensors available for use, meaning lower minima can be used.

With this combination of RVR sensors on just this RWY for example, this means there are 3 located along the length of the same RWY, why then does the text only mention one is available for RWY 27R? If a TDZ RVR is available for a RWY, can this also count as a Rollout RVR for the reciprocal RWY? An operator who uses KPHL airport regularly, has confirmed that RWY 09L has 3 available RVR sensors, this is also mirrored in the RVR.fly section of the FAA website suggesting 3 RVR sensors, so clarification

is required regarding the way the RVR information is presented in the FAA documentation. This issue does not just affect this RWY 09L/27R at KPHL, and affects the safe and accurate publication of minima on our charts.

It would be beneficial to have these sensors shown on the AD chart in the DTP section of the website (http://www.faa.gov/air_traffic/flight_info/aeronav/digital_products/dtpp/search/) for example, in the same way that other countries use as a generic method for showing the sensors. It would also be acceptable to see this as textual data that clearly lists the RVR sensors available for each RWY, either on the individual procedure charts, or in the USTAL (https://nfdc.faa.gov/nfdcApps/airportLookup/index.jsp?category=nasr) section, as this clearly lists other RWY data for individual aerodromes. This would be an improvement to seeing this data as hidden in a sometimes large paragraph, that is easy to miss or interpret, and that is not even present in this section for a lot of aerodromes. The RVR.fly is also a good way of showing this data, however again, this does not give a definitive list of all aerodromes in the USA with RVR sensors, and as this is live data, would this be adequate for permanent use on aeronautical charts?

If the data cannot be presented in this way, a solution is required to define whether an RVR sensor listed as “RWY 27R TDZ avbl.”, is actually available for use as the RWY 09L rollout RVR also, as the location of them along the RWY length suggests.

Comments:

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AERONAUTICAL CHARTING FORUM
Charting Group
Meeting 16-01 – April 27 - 28, 2016

RECOMMENDATION DOCUMENT

FAA Control # ACF-CG RD 16-01-302

Subject: Cold Temperature Restricted Airport SIAP Segment Depiction

Background/Discussion:

ACF IPG RD 92-02-110, Cold Station Altimeter Settings, was closed at ACF 15-02 following the implementation of the Cold Temperature Restricted Airport (CTRA) procedure. Following the receipt of feedback from general aviation pilots, it is clear there are issues as to the accessibility of information and difficulties as to how the information is presented.

A. Each segment of an Instrument Approach Procedure (IAP) that requires temperature correction at a CTRA airport is identified in the Notices to Airmen Publication (NTAP). A snowflake icon is depicted in the notes box of the IAP together with the temperature at which correction is required; however, the applicable segment is not provided.

   Not providing the segment on the IAP plate along with the applicable temperature deprives the pilot of easy access to the information. The Cold Temperature Error Table is provided in the front matter of the Terminal Procedures Publication (TPP) so many pilots, once they learn the procedure, would prefer to not have to reference the NTAP for operational information as it could all be in the TPP. Consolidating the information would be beneficial for the pilots who use the procedure more often such as in Alaska.

B. The temperature is currently provided on the IAP plate in Fahrenheit and Celsius. Pilots using the Cold Temperature Error Table must only use Celsius for determining new altitudes to fly. Temperature is reported to pilots primarily in Celsius and those temperatures not provided in Celsius can easily be converted. To avoid mistakes and reduce chart clutter, it would be beneficial to remove the depiction of Fahrenheit on the IAP plate.

Recommendations:

Consolidate all applicable information to the IAP plate and group the segment requiring correction with the applicable temperature (Celsius only). The initial, final, and missed approach segment would be identified by the first letter, such as F for the final segment.

Below is an example for Quinhagak, AK (PAQH) which requires correction for all three segments but at different temperatures. The first box shows how it is currently depicted and the box below shows what AOPA is recommending.

Figure 1 - Current Depiction

QUINHAGAK, ALASKA

T
A NA
W
-16°C/3°F

Procedure NA at night.
Baro-VNAV NA. DME/DME RNP-0.3 NA.
Use Platinum altimeter setting.

Figure 2 - AOPA Proposal

T
A NA
W
-16°C(IF)/-32°C(M)

Procedure NA at night.
Baro-VNAV NA. DME/DME RNP-0.3 NA.
Use Platinum altimeter setting.

Comments:

The Cold Temperature Restricted Airports section in the front matter of the TPP and the NTAP/AIM entry would need to be updated to explain the new method of depicting segments.

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AERONAUTICAL CHARTING FORUM
Charting Group
Meeting 16-01 – April 27 - 28, 2016

RECOMMENDATION DOCUMENT

FAA Control # ACF-CG RD 16-01-303

Subject: Terminal Area Charts (TAC) and Charting IFR Arrival/Departure Routes

Background/Discussion:

The FAA tasked the RTCA Tactical Operations Committee in November 2014 to provide recommendations related to Class B airspace design and designation. The working group's recommendations, provided in a document titled "Class B Airspace: Designation, Design and Evaluation," included a recommendation related to the charting of IFR arrival and departure routes to and from the primary and satellite airports. Below is that recommendation and supporting statement:

> *"Recommendation 13.* Ensure all Class B Terminal Area Charts include information on IFR arrival/departure routes to/from the primary airport and explore possibility of extending to include secondary airports.
>
> During the course of the group's deliberations, there was discussion of the possibility that some VFR flights outside of Class B could improve their avoidance of IFR arrival/departure routes if the pilots knew where these are located. Currently the Terminal Area Chart (TAC) for most Class B airspace areas also have a VFR flyway chart that includes these IFR routes. There is benefit for all Class B's as well as secondary airports to include this information."

A review of existing TACs revealed:

- There are 30 TACs.
- Ten TACs do not have a flyway chart.
- Six charts do not depict IFR arrival/departure routes to the primary airport on the TAC or the flyway chart.
- Several flyways do chart IFR arrival/departure routes to the satellite airports, e.g., LAX or ANC, while others do not, e.g., STL.

AJV-113's response to the Class B working group's charting recommendation was that they concurred; however, they provided the following statement regarding their authority:

> "The FAA believes this recommendation has merit, but is technically outside the scope of the Class B rulemaking process. To address the issue, the OSGs and affected ATC facilities would need to work the content of Terminal Area Charts directly with Aeronautical Information Services (AIS)."

Recommendations:

AOPA presents the following recommendations to the ACF:

A. The primary airport's IFR arrival/departure routes should be added to the TAC and/or flyway chart for the six TACs that do not currently have this information depicted.

B. AIS should work with air traffic to ensure significant IFR arrival/departure routes to satellite airports in high-density airspace are charted on TACs.

C. The FAA should review the ten TACs that currently do not have flyway charts to determine the feasibility and value of adding the supplementary flyway chart.

Comments:

The depiction of IFR arrival/departure routes enhances a VFR pilot's situational awareness for high-speed jet traffic and reduces the possibility of a mid-air collision or of a wake turbulence event. It is important this information be provided in high-density airspace. A full listing of TACs and flyways are attached.

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Class B Airspace	TAC Chart ID	Flyway Chart	IFR Arr/Dep Route Charted
Anchorage-Fairbanks	TANC	✓	✓
Atlanta	TATL	✓	✓
Baltimore-Washington	TWAS	✓	✓
Boston	TBOS	✘	✓
Charlotte	TCHA	✓	✓
Chicago	TCHI	✓	✓
Cincinnati	TCIN	✓	✓
Cleveland	TCLE	✘	✓
Dallas-Ft Worth	TDFW	✓	✓
Denver-Colorado Springs	TDEN	✓	✘
Detroit	TDET	✓	✘
Houston	THOU	✓	✓
Kansas City	TKC	✘	✓
Las Vegas	TLV	✓	✓
Los Angeles	TLA	✓	✓
Memphis	TMEM	✘	✘
Miami	TMIA	✓	✓
Minneapolis-St Paul	TMSP	✘	✓
New Orleans	TNO	✘	✘
New York	TNY	✘	✓
Philadelphia	TPHI	✘	✓
Phoenix	TPHX	✓	✓
Pittsburgh	TPIT	✘	✓
Puerto Rico-VI	LPR	✘	✘
St Louis	TSTL	✓	✓
Salt Lake City	TSLC	✓	✓
San Diego	TSD	✓	✓
San Francisco	TSF	✓	✓
Seattle	TSEA	✓	✘
Tampa-Orlando	TTAM	✓	✓

AERONAUTICAL CHARTING FORUM
Charting Group
Meeting 16-01 – April 27 - 28, 2016

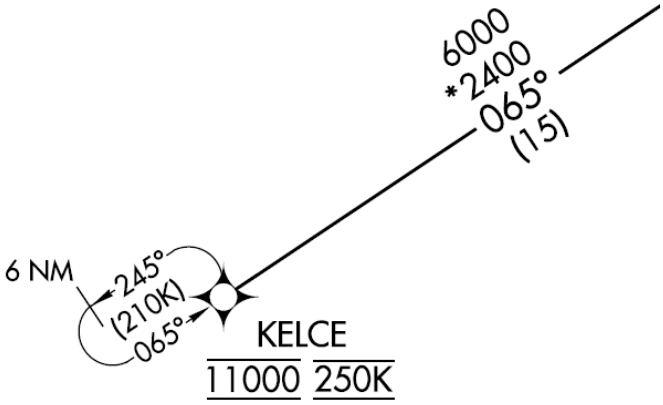
RECOMMENDATION DOCUMENT

FAA Control # ACF-CG RD 16-01-304

Subject: Depicting non-standard maximum holding speeds

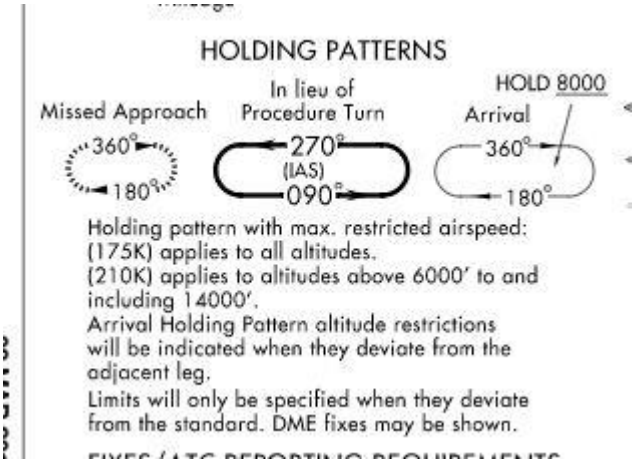
Background/Discussion:

Aeronav charts depict maximum holding speeds when nonstandard, but they do not include the affective altitudes. An example of this is on the DUCXS THREE Arrival in KRIC.



The speed of 210 only applies for altitudes of 6,001' to 14,000'. However if you were holding at 6,000' or less, the maximum hold speed of 200 KIAS would apply. Labeling this (210K) could induce people to fly the hold at 6,000' at 210 KIAS.

While this is covered in the glossary, it can lead to confusion on what altitudes the speed restriction applies to.



Recommendations:

Add affected altitudes to the non-standard holding speeds to reduce confusion.

Comments:

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AERONAUTICAL CHARTING FORUM
Charting Group
Meeting 16-01 – April 27 - 28, 2016

RECOMMENDATION DOCUMENT

FAA Control # ACF-CG RD 16-01-305

Subject: Cold Weather Temperature Compensation at Military Authority Locations

Background/Discussion:

A result of a *"Military Cold Temperature Restricted Airport"* study, the military presently has seven locations where cold weather temperature compensation should be implemented:

1. Eielson AFB, AK (PAEI)
2. Volk Field, WI (KVOK)
3. Allen AAF, AK (PABI)
4. Ladd AAF, AK (PAFB)
5. Bangor Int'l, ME (KBGR)
6. Ray S. Miller, MN AAF, (KRYM)
7. Roberts Field, OR (KRDM)

Recommendations:

Include military airports when publishing NTAP Cold Weather Altitude Corrections. The appropriate military airport authority (OPR) will add a snow flake-XX°C icon to the airport approach plates. The icon will indicate to civil aviators a cold temperature altitude correction is required on an approach when the reported temperature is "at or below" the specified temperature at the airport.

Comments:

This recommendation is for civil aviation and is not military founded. USAF aircrews apply AFI 11-202v3 para. 7.2. Cold Weather Altitude Corrections values derived from the FIH Temperature Correction Chart. On the contrary, the civil aviation community must be alerted by the airport authority to apply cold temperature compensation via NOTAMs. The temperature compensation NOTAM is too lengthy to maintain on the approach plate therefore, airport officials must continually process reoccurring NOTAMs every 90 days. All military and civil locations requiring temperature altitude compensations should be maintained in the Notice to Airmen Publication (NTAP).

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AERONAUTICAL CHARTING FORUM
Charting Group
Meeting 16-01 – April 27 - 28, 2016

RECOMMENDATION DOCUMENT

FAA Control # ACF-CG RD 16-01- 306

Subject: Availability of Airport Ground Parking/Ramp Diagrams

Background/Discussion:

Currently the FAA publishes one airport diagram per airport. This does not include any information with relation to Parking positions/coordinates, detailed ramp layout information or taxi lanes etc

ICAO Annex 4 stipulates that this information should be provided by the relevant state authorities (See excerpt below)

14.6 Aerodrome data

This chart shall show in a similar manner all the information on the Aerodrome/Heliport Chart — ICAO relevant to the area depicted, including:

a) apron elevation to the nearest metre or foot;

b) aprons with aircraft stands, bearing strengths or aircraft type restrictions, lighting, marking and other visual guidance and control aids, where applicable, including location and type of visual docking guidance systems;

c) geographical coordinates in degrees, minutes, seconds and hundredths of seconds for aircraft stands;

d) taxiways with designations, width to the nearest metre, bearing strength or aircraft type restrictions where applicable, lighting, markings (including runway-holding positions and, where established, intermediate holding positions), stop bars, and other visual guidance and control aids;

e) where established, hot spot locations with additional information properly annotated;

Note.— Additional information regarding hot spots may be shown in tabular form on the face or verso of the chart.

f) where established, standard routes for taxiing aircraft, with their designators;

g) geographical coordinates in degrees, minutes, seconds and hundredths of seconds for appropriate taxiway centre line points;

h) the boundaries of the air traffic control service;

i) relevant communication facilities listed with their channels and, if applicable, logon address;

j) obstacles to taxiing;

k) aircraft servicing areas and buildings of operational significance;

l) VOR checkpoint and radio frequency of the aid concerned;

m) any part of the depicted movement area permanently unsuitable for aircraft, clearly identified as such.

In chapter 14 this information relates to an Aerodrome Ground Movement chart. It is also reproduced in Chapter 15 for Parking/Docking Charts.

As a Charts provider we provide this information to our customers. It is imperative that we provide accurate information that is up to date with the current ground layouts. We regard this as a safety issue.

Currently we gain access to this information by contacting the airports directly. Whilst this can be fruitful there is no internationally/nationally governed update process in place to ensure this documentation is kept up to date and disseminated correctly.

There is also a difficulty in initial access as there is no single point of contact to obtain it.

Recommendations:

We would like to see the FAA collate this information and make it available from 1 source location, so that it can be accessed easily. We would also like the FAA to implore the relevant airport authorities to produce this information and update it when needed.

This is as per ICAO Annex 4 Chapter 1.3, which we would like the FAA to adhere to. (see below)

1.3 Availability

1.3.1 *Information.* A Contracting State shall on request by another Contracting State provide all information relating to its own territory that is necessary to enable the Standards of this Annex to be met.

1.3.2 *Charts.* Contracting States shall, when so specified, ensure the availability of charts in whichever of the following ways is appropriate for a particular chart or single sheet of a chart series.

Note.— The availability of charts includes specified electronic charts.

1.3.2.1 For any chart or single sheet of a chart series entirely contained within the territory of a Contracting State, the State having jurisdiction over the territory shall either:

a) produce the chart or sheet itself; or

b) arrange for its production by another Contracting State or by an agency; or

c) provide another Contracting State prepared to accept an obligation to produce the chart or sheet with the data necessary for its production.

1.3.2.2 For any chart or single sheet of a chart series which includes the territory of two or more Contracting States, the States having jurisdiction over the territory so included shall determine the manner in which the chart or sheet will be made available. This determination shall be made with due regard being given to regional air navigation agreements and to any programme of allocation established by the Council of ICAO.

Note.— The phrase "regional air navigation agreements" refers to the agreements approved by the Council of ICAO normally on the advice of regional air navigation meetings.

1.3.3 A Contracting State shall take all reasonable measures to ensure that the information it provides and the aeronautical charts made available are adequate and accurate and that they are maintained up to date by an adequate revision service.

1.3.4 **Recommendation.—** *To improve worldwide dissemination of information on new charting techniques and production methods, appropriate charts produced by Contracting States should be made available without charge to other Contracting States on request on a reciprocal basis.*

Note.— Guidance material on the preparation of aeronautical charts, including sample formats, is contained in the Aeronautical Chart Manual *(Doc 8697).*

Comments:

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