

Government/Industry Aeronautical Charting Meeting (ACM)
Meeting 21-01
Charting Group
April 27-29, 2021

CHARTING GROUP MINUTES

I. Opening Remarks

FAA, Aeronautical Information Services (AIS) hosted the Charting Group portion of the Aeronautical Charting Meeting (ACM) on April 27-29, 2021. Due to the impacts of the COVID-19 pandemic, this meeting was held virtually. Samer Massarueh, FAA/AJV-A223, opened the meeting on Tuesday, April 27. Samer recognized and introduced Valerie Watson, FAA/AJV-A250, Chair of the Charting Group. He then acknowledged Jeff Rawdon, FAA/AFS-420, Chair of the Instrument Procedures Group (IPG) portion of the meeting held the previous day. Samer provided an overview of the purpose of the ACM, his role as facilitator, and explained how he planned to manage participation for the meeting attendees.

II. Review Minutes of Last Meeting, ACM 20-02

The minutes from ACM 20-02 meeting were distributed electronically last fall via the AIS ACM website: https://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 21-01 meeting was accepted as presented.

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

Chart Supplement Back Matter Changes Resulting from NOTAM Task Force

Jeff Lamphier, FAA/AJV-A240, provided a [briefing](#) on the Chart Supplement Modernization effort. He explained that as a result of the feedback received from the notifications sent to the ACM audience over the past several months, the Chart Supplement modernization plan has been adjusted and the effort has slowed to allow for more stakeholder engagement. A major change to the plan involves separating the feedback and requirements for the contiguous United States (CONUS) from that of the Alaska and Pacific publications. Formal Charting Notices will continue to be issued, but at a slower pace. Jeff briefed that in seeking greater stakeholder input, the formation of additional workgroups will be necessary. He said that though his team no longer reports to the NOTAM Task Force, they will continue to report to the ACM community.

Jeff then discussed accomplishments achieved. NOTAM content that conflicted with or was contained in published NOTAMs has been removed. The Preferred Routes section was cleaned up and automated. Chart Bulletins were removed as a result of the 56-day VFR charting publication change. Q routes were removed as they are graphically published on the IFR Enroute charts. Some minor XML changes were made to allow more publication consistency across the Supplements.

Jeff reported that the Chart Supplement team is currently working on an internal software migration that will be completed this summer. Once complete, work will begin on other enhancements to the Supplements, such as the addition of XML tags. (Note: ACM Issue 21-01-358 was closed later in the proceedings of this meeting based on the promised update of the XML tag endeavor in Jeff's subsequent briefings to this group.) The team is also working to relocate noise abatement remarks to a separate standardized location within each airport entry. Miscellaneous Activity Areas (MAAs) will be consolidated in a single location in the back of the Supplement. Jeff said his team is continuing to work on consolidating other categories of information so that they are easier to find and sort.

Jeff explained that there are different publication requirements for the Alaska, Pacific, and CONUS books based on the needs of the operators in those different areas. He said changes to the Alaska publication are part of the FAA Alaska Safety Initiative (FAASI). Separate Alaska and Pacific Chart Supplement stakeholder advisory workgroups will be formed to drive this initiative going forward. Jeff asked interested parties in the ACM audience to sign up to participate in the Alaska and/or Pacific stakeholder workgroups.

Jeff said that his team is currently working to document the current state of the Chart Supplements in the Interagency Air Committee (IAC) specifications. Once this is accomplished, future changes gathered from stakeholder input will be formally vetted using the standard IAC specification change process. Jeff said the original 2022 modernization deadline has become unrealistic and they now plan to keep working to continue to make progress, gather feedback, and brief at the ACM.

Michael Stromberg, UPS, asked whether Chart Supplement data could be downloaded in a format other than a PDF. He said if the data were in a text format it would be easier to download and search. Jeff said they are still in the process of transitioning from a paper product. The Airport/Facility Directory portion is pulled from the National Airspace System Resource (NASR) database and the Airport Diagrams are digital. Much of the information provided in the back of the publications, however, is submitted as print ready graphics, without

other data. The long term goal is to have all data digital. In the meantime, his team is working to improve the metadata and add more XML tags, so that information can be searchable.

| Chart Supplement Workgroup | | |
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NOTAM Briefing

Katie Ludwig, FAA/AJV-A360, from U.S. NOTAM Governance Office [briefed](#) the ACM on the ongoing transition of the FAA NOTAM system to the Federal NOTAM System (FNS), an ICAO compliant NOTAM system. Katie discussed the details of the new ICAO format that will replace the domestic NOTAM format. Katie provided a line-by-line breakdown of the revised ICAO NOTAM format ([slides 3-15](#)). She explained that the new format provides several ways that NOTAMs will be coded to allow systems to filter, sort, and prioritize them for the pilot.

Rich Boll, NBAA, asked what the pilot will see when NOTAMs are in the new format. Katie said they are still working with system development to determine what the pilot will see. Rich stressed that this is a huge change for pilots and a lot of training, guidance, and documentation changes are going to be necessary. He also said that they will need to look at the human factors impact of these changes. Rich asked whether pilots could expect to see different NOTAM formats from different NOTAM providers in the future. Katie said that the NOTAM modernization coalition is investigating those issues.

Vince Massimini, Tetra Tech, agreed that this change is going to require a lot of pilot training. He also expressed concerns regarding the current use of the teletype mode, which results in long, all CAPS blocks of text that are difficult for pilots to decipher. Katie said the topic of lengthy NOTAMs comes up frequently and they are looking at ways to improve that.

Lev Prichard, APA, asked when the changes will be fully implemented. Katie said the goal is full implementation by the end of 2024. Lev then asked if the intent is that third party software will decode the NOTAMs or will the pilot need to decipher them. Katie said the systems will be filtering the NOTAMs. Bill Tuccio, Garmin, stated that it would be helpful if there was a standard final transformation of the data so what pilots see would be consistent.

John Collins, ForeFlight, pointed out that there are multiple FIR boundaries, e.g., high, low, surface. He asked what boundary will be used in the NOTAM system for location assignment. John Warner said he is aware of those distinctions and that those details have yet to be resolved.

Michael Stromberg, UPS, asked how the changes will be rolled out, i.e. in phases or all at once, and whether or not there would be overlap with the old system. John Warner said the coalition has been discussing these issues. He stated that the plan is to make the switch all at once and not have any overlap.

George Bland, USAF, asked if they are working with the DoD NOTAM office on these changes. Katie said that the DoD is part of the NOTAM Modernization Coalition. Cameron Korrekt, NGA, stated that NGA is already using ICAO NOTAMS, listed as “W” series NOTAMS. He asked if NGA will have to adjust their series with this change. John Warner responded that they would not be making any changes to the DoD series NOTAMS. Kevin Keszler, AFFSA, verified DoD has been using ICAO NOTAMS for some time and explained that there is a forward facing interface that provides the pilot with only the information that they need. The other data is available for the system to use for filtering and sorting. Katie said that is what the FAA is working to accomplish and said there are more meetings planned with FAA and DoD in the near future.

Several ACM audience members raised concerns regarding the need for more coordination with industry stakeholders. Heidi Williams, NBAA, said that she co-chairs the AIS Industry Coalition, which is a joint industry and FAA coalition discussing topics related to the larger NOTAM system modernization effort. She stated that industry stakeholders interested in participating can contact her to be added to the coalition.

Valerie Watson, FAA/AJV-A250, suggested that when this item is briefed at the October ACM, it would be helpful if an example could be shown of what a new ICAO NOTAM will look like to the pilot. She also emphasized the concerns raised by the audience regarding the need to plan for training and outreach, updated pilot guidance, and changes to FAA Orders that will all need to be coordinated before this change can be implemented. Valerie urged the audience members to reach out to Heidi Williams and the coalition and/or the NOTAM Governance Group with their concerns.

Northeast Corridor Atlantic Routes

Joey Tinsley, FAA/AJT-E, [briefed](#) the audience on the implementation of the Northeast Corridor Atlantic Coast Routes Project. This is a large-scale change to the National Airspace System (NAS). It is part of a transition to a Performance Based Navigation (PBN)-centric NAS by adding/amending 39 Q and Y Routes to replace the current north-south high altitude route system along the east coast.

These changes are being implemented incrementally on thirteen chart cycle effective dates that began 11/10/2020 and are planned to continue through 11/03/2022. Due to the impacts of COVID-19, the implementation dates have been extended because of an inability to conduct controller training. Since most facilities are still under strict COVID restrictions, the group has pulled back on some planned changes and are concentrating on items that do not require extensive training. See [slides 6 and 7](#) for a list of changes being worked for 2021 and 2022. One of the larger revisions being worked for 2021 is the ZDC High Altitude Sector change, tentatively scheduled to be implemented on 9/9/2021.

Vince Massimini, Tetra Tech, asked whether DME-DME capability will be retained for these new RNAV routes, particularly off the coast. Joey said he is unsure of the answer to that, but did say that if a Y-route is unusable because of an outage, there is an underlying AR Route that can be used.

Discontinuation of VOR Services (VOR MON)

Ernesto Etienne, FAA/AJM-323, provided a [briefing](#) on the Very High Frequency Omnidirectional Range (VOR) Minimum Operational Network (MON) program. Ernesto reported that Phase 2 has begun and includes the discontinuance of 225 VORs by FY30. The total number of VOR candidates for discontinuance continues to be 307. Ernesto reported that even though COVID-19 caused problems, the team was able to meet their goal for 2020 and are on track to meet their goal for 2021. Since the last ACM, 15 VORs have been discontinued. Six additional VORs are planned to be discontinued by 6/17/21, another six by 8/12/21, and another five VORs by 10/7/21 ([slides 7 & 8](#)).

Ernesto briefly touched on the changes related to VOR Standard Service Volume (SSV) classes. Dale Courtney, FAA/AJW-263, provided a more detailed briefing on this topic. [See Briefing: [NAVAID Service Volumes \(DME, VOR and TACAN\)](#)]

Ernesto stated that current work is focused on flight inspection for the new SSVs and mitigation of Instrument Flight Procedures affected by VOR decommissioning.

Dave Smith, Air Crew Academy, asked if other countries differentiate between Terminal, Low, and High SSVs. Dale said that the U.S. is unique in how SSV is used. Different terminology is used internationally.

Rich Boll, NBAA, asked about MON airport selection criteria. He asked whether or not runway length is considered. He also asked if they are making sure they are retaining circling approaches. Rich asked if they are coordinating with the flight procedures team to ensure they are retaining enough VORs so there will be a usable MON airport for a variety of aircraft type. Ernesto said that MITRE has conducted the analysis using specific criteria to identify MON airports. Vince Massimini, Tetra Tech, verified coordination between the VOR MON Office and the flight procedures team. When MON airports were selected, the goal was to choose those airports that could best accommodate the most aircraft. They tried to choose secondary airports that had the right kind of approach, e.g. ILS, LOC or VOR, that did not require DME, NDB, or radar. From those, they tried to choose the longest runways available. There are only a few airports with runways less than 5000 feet that had to be chosen.

Mark Whitney, FAA/TWLC1-ZLC, asked whether military GPS jamming was taken into consideration when choosing to decommission a VOR. Ernesto said intentional outages were part of the consideration and that the MON program office does coordinate with the DoD. Dale agreed that military operations were taken into consideration.

Lev Prichard, APA, asked how much coordination and training is happening between the facilities and air traffic. He also asked if practicing a MON approach is included in the pilot training. Vince said he does not know what sort of training is happening at the facilities. He pointed out that the Aeronautical Information Manual (AIM) has been updated with an entire section on VOR MON. It is up to individual pilots to ensure they stay current on all the requirements.

Brent Luna, NATCA, pointed out that the intent of the VOR MON program is a recovery operation. He said they are working with individual facilities directly about necessary mitigation specific to their location. He said that there can't be a standardized national plan because every facility is unique.

NAVAID Service Volumes (DME, VOR and TACAN)

Dale Courtney, FAA/AJW-263, presented a [briefing](#) on upcoming changes to NAVAID standard service volumes (SSVs). He explained the VOR MON Program is in the process of implementing two new VOR SSVs in order to achieve VOR service within 70 nautical miles above 5,000 feet AGL. The new VOR NAVAID codes are VOR Low (VL) and VOR High (VH). Along with that effort, the NextGen DME Program is going to implement two new DME SSVs primarily to support DME-DME RNAV service. This change will require the establishment of two new DME NAVAID codes. The new DME NAVAID codes are Expanded DME Low (DL) and Expanded DME High (DH). The new NAVAID SSVs will be in addition to the legacy SSVs of Terminal (T), Low (L) and High (H) that will continue to be maintained.

Dale reported that the National Airspace System Resources (NASR) database change to support the population of VOR and DME service volumes is scheduled to be released on 7/21/2021. He said that the initial deployment will copy existing SSV values. The new service volumes are planned to be populated as early as the next 56-day chart cycle. Dale showed images of how the information is currently shown and how it will be shown on the new interface on eNASR ([slides 6-9](#)), as well as existing and new DME service volumes ([slides 10-12](#)).

Valerie Watson, FAA/AJV-A250, explained how the changes will be published in the Chart Supplement and on the IFR Enroute Charts. She presented a [slide](#) of the SSV table from the legend of the Chart Supplement that will be expanded to include the new SSVs. She also showed a sample Airport/Facility Directory entry and Enroute chart NAVAID facility box. She explained that VORTACs and VOR/DMEs will include two SSVs with the VOR SSV listed first. She also said that explanatory information will be added to the Chart Users' Guide.

Post-Meeting update: The population of the new SSVs in NASR is now projected to be December 2, 2021.

Noise Abatement

Kent Duffy, FAA/APP-410, [briefed](#) on the presentation of noise abatement information in the Chart Supplements. He explained that currently there is no standard terminology or structure to describe noise abatement information within the Supplements. Because it is difficult for pilots to locate and understand the noise abatement plan for a specific location, they may often not fly the intended noise abatement route or procedure. Kent explained that a project to standardize how noise abatement information is communicated is being led by the FAA Office of Airports and input from stakeholders is being solicited.

Kent described the new separate "Noise" section that will be implemented in the Chart Supplement Airport/Facility Directory airport entries ([slide 4](#)) that will contain all noise related remarks. He explained that this project intends to implement a "Best Practices" guidance document to be used to develop and to revise existing noise abatement remarks to ensure they use consistent terminology and structure. Kent said the group has evaluated the existing 489 noise abatement entries in the Chart Supplement. They focused on consistency, clarity, and the location of the information. The group identified a number of issues to be addressed, including incomplete entries, inconsistent use of terminology or use of outdated nomenclature, incorrect/inconsistent use

of abbreviations, lack of reference to published IFPs or graphics in the back of the Chart Supplement, etc. The group developed a set of best practices for moving forward ([slides 8-11](#)).

The team is also defining criteria for when a noise abatement graphic should be published in the back of the Chart Supplement based on the complexity and/or the pilot benefit for visual references. They are also working to determine what information should be included on the graphic. Kent provided examples of existing noise abatement entries and showed how they would change when following the proposed best practices ([slides 14-22](#)).

Bill Tuccio, Garmin, asked whether any human factors testing on these changes has been planned. Kent said that they haven't planned to do that, but they may when further progress has been made. Bill asked if noise abatement procedures are mandatory or recommended. Kent said the vast majority of procedures are voluntary.

John Moore, Jeppesen, suggested that a formalized feedback mechanism be put into place for stakeholders to provide comments on the revised entries. Kent said he will take that suggestion back to the team.

Lev Prichard, APA, noted noise abatement procedures often do not coordinate with a cleared instrument procedure and for this reason pilots ignore them. He said noise abatement is not a priority for the pilot. Kent agreed that this is a known problem that will have to be considered.

Rich Boll, NBAA, said that some published noise abatement procedures are regulatory and that regulation remains in the Code of Federal Regulations (CFR). Rich asked how the group will ensure they are not counter to the CFR. He asked how they plan to identify those that are regulatory. Kent said they will have to look into the CFR, but that they plan to identify if procedures are voluntary or regulatory.

Scott Jerdan, FAA/AJV-A310, asked how the information will flow from the originator to those who produce the Chart Supplement and other chart producers. He also asked what office will enforce compliance with the wording constraints. Scott said that there needs to be a controlled process for the flow of the data in order to achieve these goals. Jeffrey Lamphier, FAA/AJV-A240, confirmed that the data for the Chart Supplement entry is pulled directly from the National Airspace System Resource (NASR). All submissions must meet the requirements before they are submitted to NASR.

Valerie Watson, FAA/AJV-A250, agreed that current noise abatement remarks are submitted through the Portal inconsistently and that these entries will need to be scrubbed before they are submitted. She suggested that there should be a conduit from the airport manager to another office that will ensure compliance before they are submitted to the Portal for publication. Kent said he understands the problem and they will work on a process for that.

Valerie also suggested that noise abatement procedures need to be sorted based on if they are regulatory, mandatory, or recommended, particularly since the majority of them are recommended. She asked if those that are regulatory or mandatory would be referenced to a published Takeoff or Departure Procedure. Kent responded that he does foresee that as a possibility.

Rich Boll clarified that the noise abatement procedures regulations should not be confused with the Obstacle Departure Procedures (ODPs) and that ODPs are strictly created for obstacle clearance and not for noise.

Data Driven Charting Requirements for Electronic Maps

John Barry, FAA/AIR-622, presented a [briefing](#) on data driven charting requirements for electronic charts. He said that the Electronic Maps Minimum Operational Performance Standards (MOPS) are currently being updated with requirements for data driven charting (update DO-257). He said it will provide standards to allow data elements in a database to build an electronic chart on the primary display. Pilots will no longer have to rely on raster scans of paper products. The scheduled completion date is June 2023. John recommended that interested parties should participate through the RTCA. See the presentation for participation and contact information ([slides 3-4](#)).

V. New Charting Topics

[21-01-349 Shading on IAPS](#)

Bruce Williams, FAASTeam, is the proponent of this item but was not in attendance. Samer Massarueh, FAA/AJV-A223, reviewed the recommendation. The recommendation is to make Instrument Approach Procedure (IAP) charts easier to read by screening and shading lines of minima and notes in the briefing strip and profile. Other ideas involve highlighting information that is relevant to notes or icons on other parts of the chart, such as in the missed approach. Bruce included a method to parse out departure route depictions on departure procedures so it is easier to delineate the runway text. He also included suggestions about using color to do the same thing.

Krystle Kime, FAA/AJV-A222, said that the FAA does not currently have the capability to support highlighting. She also said that the use of color cannot be supported due to safety considerations related to cockpit lighting. She said the shading of alternating lines of minima is possible but still poses some challenges. She said they cannot pursue the recommendation regarding the shading of notes. That change would require a change to the procedure source documentation. Valerie Watson, FAA/AJV-A250, stated that the FAA charting offices do not currently have the time or resources to pursue these changes because the priority right now is chart automation.

Michael Stromberg, UPS, said he liked the recommendations for shading every other line of minima and the shading of alternating text on DPs and STARs. He asked if the FAA could consider that change in the future. Valerie agreed that this could be looked at in the future. Krystle said she can add the suggestion to Terminal Charting Team's list of changes to investigate when time and resources allow.

John Moore, Jeppesen, agreed that keeping shading for every other line in the minima box for future consideration is fine, but disagrees with making any other of the proposed changes.

Bill Tuccio, Garmin, said he likes the idea but voiced that shading changes need to be tested in the cockpit. Jeff Rawdon, FAA/AFS-420, agreed that a thorough human factors review would be necessary.

Bruce McGray, FAA/AFS-420, said that Jeppesen performed a study and found that low levels of shading on low visibility taxi charts could not be differentiated at night in low light cockpit situations.

Valerie summarized and said that this issue will be closed since Terminal Charting cannot pursue any of the recommendations at this time. She said the recommendations for shading every other line of minima and the shading of alternating text on DPs and STARs will be put on Terminal Charting's to-do list for future investigation and before any shading is pursued, a human factors review will be requested.

STATUS: CLOSED

[21-01-350 Holding Pattern Leg Lengths on Terminal Charts](#)

Steven Madigan, Garmin, [presented](#) the new recommendation. Steve explained a discontinuity involving holding pattern leg lengths, especially on conventional Standard Terminal Arrivals (STARs) and Departure Procedures (DPs). Steve walked through the example included in the RD where two holding patterns are shown on a conventional STAR without leg lengths. One would assume those leg lengths are standard, however on the 8260-2 holding source form the leg lengths are non-standard. He pointed out that ARINC codes the holding patterns based on the 8260-2 which creates a discrepancy with the chart. Garmin recommends the charting of holding pattern leg lengths on all procedure types and the inclusion of holding pattern leg lengths on the procedure source forms.

Jeff Rawdon, FAA/AFS-420, asked the Terminal Charting Team if they only chart the holding leg length when published on the 8260-17 for a STAR or the 8260-15B for a DP. Krystle Kime, FAA/AJV-A222, said the current standard for conventional DPs and STARs is to chart it from the procedure source form. Her team also looks at the 8260-2 but the *procedure forms* are considered source, per specifications. Krystle pointed out that this problem has grown as more RNAV components have been added to conventional procedures. She said if the 8260-2 or another source should be used rather than the procedure form, that clarification would need to be added to terminal charting guidance. Jeff said the Flight Procedures and Airspace Group (FPAG) would like to investigate this issue further to understand what needs to change before taking any action.

Pat Mulqueen, FAA/AJV-A440, acknowledged the disconnect and agreed that this information should be on the procedure source forms. Pat agreed that further discussion with the FPAG is needed.

Rich Boll, NBAA, also agreed that there is disconnect between the 8260-2 and the chart and that the leg lengths need to be charted. He also asked if there is a charting specification for the depiction of holding pattern leg lengths on Enroute charts. Valerie Watson, FAA/AJV-A250, said holding pattern leg lengths are not depicted on Enroute charts. She agreed with others that holding pattern information should be documented on terminal procedure source forms if they are to be correctly charted on terminal charts.

Aaron Jacobson, Jeppesen, also agreed that it would be preferable to have the information on the procedure source forms to ensure that charts agree with coding as intended.

Scott Jerdan, FAA/AJV-310, stated his team is currently reviewing holding pattern information in the National Airspace System Resource (NASR) database and is coordinating with the Instrument Flight Procedures (IFP) group on discrepancies.

Steve Madigan again asserted that to completely clarify the holding pattern leg lengths to be used on a specific procedure, the data should always be on the procedure source forms. He said commonly a new 8260-2 may be published before an old procedure form is updated and this can result in a discrepancy. Valerie pointed out that there can be multiple holding patterns predicated on the same fix and NASR doesn't assign them to a specific procedure, so charting is forced to go back to the 8260-2. Steve asked if NASR could include 'Fix Use' similar to that on the 8260-2, so that holding specifics tied to procedure name would be easily accessible via that database. Scott said they will do whatever is necessary to support the stakeholders, but before any changes are made, the Flight Procedures and Airspace Group needs to investigate the issue first.

STATUS: OPEN

ACTION: Jeff Rawdon, FAA/AFS-420, and the Flight Procedures and Airspace Group will investigate the documentation of holding pattern leg lengths and report back at the next ACM.

[21-01-351 Non Air Carrier Runways in the Chart Supplement](#)

Alberto Rodriguez, FAA/AAS-300, briefed the new recommendation. He explained that in 2014 an air carrier departed from Chicago Midway International Airport on a non-Part 139 runway because the Part 139 runways were closed for construction. The flight made an uneventful takeoff; however, stakeholders agreed that a hazard exists where it is possible for air carriers to unknowingly depart from or land on non-Part 139 runways. It was also agreed that this hazard exists at Part 139 airports across the National Airspace System (NAS) that have runways that are *not* part of their Part 139 certificate programs and could be used in error. Based on the results of a Safety Risk Management (SRM) panel, the Office of Airports is recommending that non-air carrier runways be identified in the National Airspace System Resource (NASR) subscriber files and in the Chart Supplement to alert pilots to non-air carrier runways. Chris Criswell, FAA/AAS-120, said the Office of Airports is establishing the workflows and processes to collect this data. Now they are looking for the best way to provide that information to the pilots.

Valerie Watson, FAA/AJV-A250, showed an [example](#) of how this information is currently handled as a remark in NASR and in the Chart Supplement airport entries. Alberto agreed such remarks have historically been used, but the SRM panel ultimately decided it would be better for the information to be standardized, perhaps adding a new data field for airports to identify non-air carrier runways on the 5010 form and subsequently in NASR. The goal is to be able to tie the specific non Part 139 designation to a specific runway by use of a runway attribute rather than a lengthy text remark that a pilot may miss.

Rich Boll, NBAA, noted that the NASR remarks in Valerie's example appear on Jeppesen approach charts. He voiced he has seen many such notes that don't make sense and could benefit from review and standardization. He is concerned that most pilots won't know what "Part 139 runway" means and suggested perhaps better drafted and standardized remarks might be preferable.

Gary McMullin, Southwest Airlines, said that Southwest would like to see the data that makes these non-air carrier runways unsafe. He also agreed that pilots would not understand "Part 139 runway" terminology. He said that Southwest would like to participate in further discussion before this moves forward.

Bill de Groh, APA, asked if there is a rule that prohibits operation on a Part 139 runway, and if not, air carriers should be allowed to do their own risk analysis. Chris reiterated that they are simply trying to collect and disseminate a data attribute to identify runways that do not meet Part 139 requirements and that they not trying to change airport operations.

Many industry audience members voiced their concerns about Part 139 requirements and also concerns that adding this remark may cause pilot confusion. There was also discussion about the need for greater granularity in the data that will be provided. Several in the audience expressed the need for further discussion before this effort moves forward.

Valerie summarized the discussion and pointed out that there are existing requirements for what defines Part 139 airports and the Office of Airports is not proposing to change that. Their goal is to simply identify those runways that don't meet the requirements. If pilots have issues with those requirements, that is a different discussion. Valerie asked if the remarks that are currently published will be removed once the new data attribute is published. Alberto said yes, their intent is to remove the remarks.

Valerie asked the proponents if they are open to forming a workgroup for further discussion. Chris and Alberto agreed and said the Office of Airports would chair the workgroup.

| Non-Air Carrier Runways Workgroup | | |
|--|--------------------|------------------------------|
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STATUS: OPEN

ACTION: Alberto Rodriguez, FAA/AAS-300, and Chris Criswell, FAA/AAS-120, will report on the progress of the Non-Air Carrier Runways Workgroup.

21-01-352 Transition Narratives on DPs/STARs

This recommendation was withdrawn.

21-01-353 Airport and Runway Lighting in the Chart Supplement

Rich Boll, NBAA, presented a [new recommendation](#) regarding the publication of airport and runway lighting information in the Chart Supplement. He described how the presentation of airport lighting information is inconsistent and is scattered throughout the different subsections of the Airport/Facility Directory (A/FD) entries. He also said airport lighting is not adequately described in the Chart Supplement Legend. He questioned whether the Services section is the appropriate place for pilot controlled lighting information. He also noted that despite light information being published in the Services section, the legend for that section does not publish any lighting information. Rich recommended creation of a discreet lighting section in the A/FD entries and that all lighting information be consolidated in that location. He provided two examples of his proposed changes ([slides 9-10](#)), pointing out that this change will also provide a location for the planned future addition of LED lighting information.

Jeff Lamphier, FAA/AJV-A240, voiced that further research into the issue would be required by his team before a decision could be made to revise the structure of the A/FD entries as Rich suggested.

Paul Hannah, Lean Engineering, said he fully supports the proposal to consolidate lighting information and standardization.

Valerie queried the audience to gauge support for this proposal. Gary McMullin, Southwest Airlines, Jim McClay, AOPA, Michael Stromberg, UPS, and Bill Tuccio, Garmin, all voiced their support.

Jeff Rawdon, FAA/AFS-420, asked about the level of effort that would be required to accomplish this proposed change. Valerie explained that all the data is in the NASR database and that the change is solely a matter of its arrangement in the Chart Supplement. Bob Carlson, FAA/AJV-A241, said his team would need to discuss this with their automation team to understand what would be required.

Valerie summarized there is pilot support for the proposal to arrange lighting information into a single section. Jeff Lamphier, FAA/AJV-A240, will investigate this proposal further and will report back at the next ACM.

STATUS: OPEN

ACTION: Jeff Lamphier, FAA/AJV-A240, will investigate the consolidation of lighting information under a single Lighting section in the Chart Supplement and report back at the next ACM.

21-01-354 Concurrent Operations with RF/TF Legs on IAPs

Rich Boll, NBAA, [presented](#) the new recommendation. He explained that in 2016, the Performance Based Operations Aviation Rulemaking Committee (PARC) Navigation Work Group (NAV WG) was tasked to conduct an analysis addressing concurrent operations using procedures constructed with Radius-to-Fix (RF)

leg types and procedures using Track-to-Fix (TF) leg types. The proposal was accepted by the PARC and submitted to the FAA. The proposal recommends the publication of (roughly parallel) RF and TF legs on the same Instrument Approach Procedure (IAP) chart. The start and end points (IF and PFAF) waypoints would be identical and thus the ground track would be nearly identical. Rich reported that the FAA has accepted the recommendation and is proceeding with the development of criteria to support RF/TF concurrent operations. The step being brought before the ACM is the development of charting standards for the depiction of these RF/TF legs on a single IAP.

The PARC NAV WG provided 3 possible charting solutions for consideration:

1. Use a chart inset depicting the alternative version while the main chart shows the primary ([slide 7](#)).
2. Depict the RF option as primary with the TF option ghosted ([slide 8](#)).
3. Depict the TF option as primary with the RF option ghosted ([slide 9](#)).

Jeff Rawdon, FAA/AFS-420, reported that the Flight Procedures and Airspace Group (FPAG) supports this proposal and will work to develop criteria. Jeff said the intent is to include documentation of both RF/TF legs on a single procedure with all the appropriate terminal route information included for both leg types.

Krystle Kime, FAA/AJV-A222, agreed that Terminal Charting would need full documentation on the 8260 procedure source forms for all legs intended for charting. Krystle stated that because insets are currently used for other purposes, because information in an inset is not in its true location relative to the rest of the graphic procedure, and because insets take up considerable planview space, possibly compromising the integrity of the chart, her team does not support the inset option. Her team could support either of the remaining options.

Pat Mulqueen, FAA/AJV-A440, voiced that though he supports the proposal, there are issues that require additional investigation. The 8260 procedure source form documentation guidance will need to be established. Assessment of the different types of obstacle evaluations that are required for TF and RF leg types will need to be investigated. Updates to documentation and automation tools to accommodate this change will need to be accomplished.

Michael Stromberg, UPS, said he prefers the TF in solid black with the RF ghosted, and suggested that the fix symbols should not be ghosted on either track so they are easier to read. A discussion took place regarding the notation on the 8260 source form to delegate solid versus ghosted attributes. Valerie Watson, FAA/AJV-A250, suggested that it might be better to simply describe both the RF and TF legs on the procedure source document and then write the charting rules into the specifications. This would allow third party chart providers to make their own decisions about how to depict this information. Rich agreed and said the PARCs intent is that the charting decisions be left up to the individual charting providers. Rich said he will be forming a workgroup to discuss the details of charting.

Doug Willey, ALPA, asked how this information will be presented in the database so that aircraft only receive aspects of the procedure they are capable of flying. Rich said that has been discussed and is part of how these procedures will be loaded and coded in the database. He said pilots will only receive what they are capable of flying.

John Moore, Jeppesen, asked how this change will impact what notes go into the PBN requirements box. Valerie agreed that the notes will have to be part of the discussion. John also suggested that the human factors aspects need to be taken into consideration.

John Collins, ForeFlight, said that since both options will be loaded into the Flight Management System (FMS), the FMS will need the ability to allow for both provisions at the same time and be able to switch between the two. John also stated that he favors ghosting the RF leg because there is less information to be communicated on the ghosted RF leg option.

Rich will chair a workgroup to discuss this further, but he emphasized that the workgroup will only be focusing on changes to the Interagency Air Committee (IAC) specifications for the charting of RF/TF legs.

| RF/TF Procedure Workgroup | | |
|----------------------------------|----------------------------|---|
| Krystle Kime | FAA | krystle.kime@faa.gov |
| Eric Morse | Delta Air Lines | eric.morse@delta.com |
| Jeff Rawdon | FAA | jeffrey.rawdon@faa.gov |
| Charles Wade | Delta Air Lines | charles.w.wade@delta.com |
| Adam See | Delta Air Lines | adam.see@delta.com |
| Mike Webb | FAA | mike.webb@faa.gov |
| Ron Brumback | NGA | ronald.e.brumback@nga.mil |
| Valerie Watson | FAA | valerie.s.watson@faa.gov |
| Joshua Fenwick | Garmin | joshua.fenwick@garmin.com |
| Jennifer Hendi | FAA | jennifer.l.hendi@faa.gov |
| Darrell Pennington | ALPA | darrell.pennington@alpa.org |
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| Craig Boxrucker | ALPA | craig.boxrucker@alpa.org |
| John Collins | ForeFlight | john@foreflight.com |
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| Steven Madigan | Garmin | steven.madigan@garmin.com |
| Jay Leitner | American Airlines | jay.leitner@aa.com |
| Diane Adams-Maturo | FAA | diane.r.adams-maturo@faa.gov |
| Paul Hannah | Lean Engineering | phannah@leancorp.com; paul.hannah.lc@flsfo.com |
| Andrew Riedel | Boeing/Jeppesen | andrew.v.riedel@boeing.com |
| Trey Turner | Southwest Airlines | lawrence.turner@wnco.com |

STATUS: OPEN

ACTION: Rich Boll, NBAA, will report on the progress of the RF/TF procedure workgroup.

21-01-355 Procedure Turn Limit on IAPs

Krystle Kime, FAA/AJV-A222, presented the new recommendation. She explained that the Interagency Air Committee (IAC) charting specification for Instrument Approach Procedures states that the procedure turn barb depiction in the planview should be placed at the procedure turn limit. The charting specifications also say that when there is a fix along the track that is *not* associated with the procedure turn, the barb is adjusted prior to that fix. This can become a problem when the procedure turn limit is 15NM and there is a fix charted that is not part of the procedure turn. It becomes a question of whether it is more important to chart the procedure turn at the 15NM limit, or to adjust it so that it is shown prior to the fix that is not associated with the procedure turn. Krystle presented two options for the audience to consider. [Option 1](#) shows the procedure turn to scale. [Option 2](#) shows the procedure turn charted prior to the fix not associated with the turn.

Jeff Rawdon, FAA/AFS-420, asked if there are any issues with documentation on the procedure source forms. Krystle confirmed there are no problems with the source and this is strictly a charting issue.

Valerie Watson, FAA/AJV-A250, pointed out that the procedure turn is typically shown to scale. She said that it is sometimes pulled in and depicted before the fix, but in her opinion, she believes that can lead to more confusion. She pointed out that the profile clearly shows that the fix is not part of the procedure turn. She would prefer to keep the procedure turn barb placement to scale in all cases. Krystle agreed and said that she also prefers option 1.

Several audience member expressed their preference for option 1. An informal poll was conducted to determine if the audience prefers option 1 or 2. The overwhelming majority of the respondents preferred option 1.

Rich Boll, NBAA, asked if the procedure turn barb depiction is documented in the Chart Users' Guide. Valerie wasn't certain but said Aeronautical Information Services will look into that and ensure it is documented appropriately.

Valerie summarized ACM concurrence for option 1. She said she will take an action to update the IAC specification to remove the conflicting stipulation and Jennifer Hendi, FAA/AJV-A250, will investigate the need for revised guidance in the Chart Users' Guide.

STATUS: OPEN

ACTION: Valerie Watson, FAA/AJV-A250, to process an Interagency Air Committee (IAC) specification change to document that the procedure turn barb will always be shown to scale.

ACTION: Jennifer Hendi, FAA/AJV-A250, will make any necessary updates to procedure turn limit guidance published in the Chart Users' Guide.

21-01-356 Charting of ARTCC Frequencies on IAPs

Marnie Escandon, FAA/TWLC1-ZLC, [presented](#) the new recommendation. She explained that the Instrument Approach Procedures (IAPs) for airport identifiers 32S and 6S5 previously charted both GEG Approach Control (APP CON) and ZLC Center frequencies. For the February 25, 2021 publication date, the Center frequencies were removed from the charts without any coordination with the facilities. She explained that these frequencies were needed by the facilities, but when they noticed the change, it was too late to get them back on the charts. She recommends that the FAA adopt a policy to pre-coordinate all charting changes with impacted facilities to ensure accuracy and awareness. She also recommends that the frequencies that were removed from the charts be reinstated, and more generally that the FAA chart both APP CON and CENTER frequencies when an operational advantage may be realized.

Krystle Kime, FAA/AJV-A222, explained that the charts were changed in order to align them with the Interagency Air Committee (IAC) charting [specification](#), which states that only primary APP CON frequencies are charted. She noted that when the chart was changed, as with any changes to the charts, the revised chart was published on Aeronautical Information Services' website three weeks prior to the effective date. There is also a chart compare feature that can be used to highlight changes. She explained that this is the mechanism that exists today for notifying the public of changes and to expand that and reach out to the facilities with every change is not feasible.

Krystle then explained that secondary frequencies are not charted on IAPs. She said in this case, if there are two *primary* frequencies, because they are being used for arrivals coming in from different directions, there is a mechanism in place to chart them both. The first step is to make sure they are both indicated as primary in the National Airspace System Resource (NASR) database.

Marnie explained that reviewing the published procedures three weeks before the effective date is too late to have a correction made and not having the chance to review changes in advance has resulted in this undesirable situation. She said if these changes were put into the Gateway, facilities could have a chance to comment before charts are published. Valerie Watson, FAA/AJV-A250, explained that the Gateway is not the proper mechanism for announcing frequency revisions since it is only for procedural changes.

Gary Fiske, FAA/AJV-P310, explained that a change request can be submitted through the Aeronautical Information Portal in order to make a correction in the NASR database. Marnie said she was unaware of that process and Gary offered to assist her with that offline. Krystle confirmed that if the change is made in the NASR database to indicate both frequencies are primary, the charts would reflect those frequencies. Scott Jerdan, FAA/AJV-A310, said that typically, the trigger for changes to the communications information comes from the facilities. Scott offered to connect Marnie with the appropriate people in Aeronautical Information Services (AIS) to get this specific issue fixed.

Brian Durham, FAA/AJV-W21, said he was discouraged by this discussion and would like more consideration of this proposal. He said that the specifications and policies do not work everywhere and since there was no pre-coordination of this change, it blindsided them. Valerie explained that this was a unique situation and most chart changes are handled through the National Flight Data Digest (NFDD). This is a rare case where the frequencies were apparently not databased appropriately and when the chart was updated to reflect

the source as per specification, there were unintended consequences. If both frequencies had been databased as primary, they would not have been removed.

Valerie stated that this item will be closed. Marnie will coordinate with Scott Jerdan to get this specific issue resolved. If there are others, they can be addressed using the same process of submitting changes to the Aeronautical Information Portal.

STATUS: CLOSED

[21-01-357 Single Direction Airways](#)

Rich Boll, NBAA, presented a [briefing](#) on a new recommendation regarding single direction airways. He explained that some J-Routes and Q-Routes are designated as High Altitude, Single Direction (HSD) IFR Preferred Routes. The HSD designation results in the depiction of a directional arrow on the IFR Enroute chart. Rich pointed out that directional restrictions are not part of the airway's legal description and ATC considers the airways usable in both directions, however pilots are expected to file an IFR route that is not in conflict with the charted direction. Rich said that some, but not all, Flight Management Systems (FMS) contain the airway restriction records. When the restriction is in the FMS, it can prevent the pilot from loading a route that doesn't conform to the restriction. This leads to a lot of questions regarding the intent behind indicating a route's directionality with regard to flight planning, operational use, and air traffic control (ATC) use. NBAA recommends that the FAA determine the purpose of HSD Q-Routes and J-Routes in the National Airspace System, and re-assess how those restrictions should be documented and charted ([slide 7](#)).

Colleen Kubont, FAA/AJV-A350, pointed out that about half of HSD routes are only single directional during specific time periods.

Don McGough, FAA/AJF-170, pointed out that flight inspection may not check a HSD route for DME coverage in both directions. He said it is possible that the coverage could be different depending on direction of flight.

John Moore, Jeppesen, said that what is being recommended will require a massive effort that has a lot of variables that won't be easily defined. ATC has the flexibility to change direction for an aircraft and that is not the problem. The problem is with the FMS. Rich agreed and said these restrictions were added to some FMS databases because this feature becomes important when flying internationally. Rich said if the FAA intends for these routes to be single directional, they should be documented on the 8260-16 airway form and be charted as such, but if it is merely a preference, they should not be charted as single direction. The issue could be resolved if the FAA states that the Preferred Route database for single directional routes is for flight planning purposes only. Valerie Watson, FAA/AJV-A250, agreed that if these directional instructions are only a preference and not a restriction, then perhaps the arrows should not be on the charts.

Curtis Davis, FAA/AJV-A311, asked whether this was a problem before the proliferation of Q-Routes. He said J-Routes have been single direction for a long time without an issue. Rich said that the J-Routes are time-based, so no restrictions are set. Rich said that the addition of many new HSD Q-Routes along the east coast has exacerbated this issue. Curtis suggested that perhaps the routes should not be coded in the FMS database as single directional and should be handled as preferred routes. Rich cautioned that the enroute

airway restrictions record is the data used to put the arrow on electronic applications. The data has to come from somewhere, so if it is not in the database, charting will not be consistent.

Pat Mulqueen, FAA/AJV-A440, responded to the prior concern that these routes were not evaluated by the FAA in both directions by stating that they ARE evaluated in both directions. He views this as more of a flight planning issue.

Aaron Jacobson, Jeppeson, said his organization would like to better understand the intended use. If ATC intends it to be single direction, it should be charted as such. If it is single direction less than 24 hours, it should not be charted with the arrow, and the coding should match. Gary Fiske, FAA/AJV-P310, emphasized that directionality is not part of the routes' legal description. He said he thinks that the whole idea of restricting these routes as directional is for situational awareness, and if ATC allows bidirectional use, they should not be restricted or flagged as single direction.

Michael Stromberg, UPS, asked where pilot guidance is published for HSD Routes. Rich said it is defined in the Pilot Controller Glossary and Preferred Routes are in the Chart Supplement. Michael asked if guidance should also be published in the Aeronautical Information Manual (AIM).

John Barry, FAA/AIR-622, recommended participation in RTCA Special Committee 227 regarding the update of aeronautical standards in the FMS. He said a change proposal could be brought to this group so airway restrictions are handled consistently.

Valerie encouraged interested parties to sign up for the Single Direction Airway Workgroup, to be chaired by Rich Boll. The workgroup will work to determine whether HSD Routes are considered to be directionally restricted or preferred and, based on that determination, investigate how to best handle possible changes in documentation (8260-16, airway docket, preferred route publication), databasing, and charting of the directional aspect. They will also look at adding/revising pilot guidance in the Chart Users' Guide and the AIM.

| Single Direction Airways Workgroup | | |
|---|--------------------|-----------------------------|
| Joshua Fenwick | Garmin | joshua.fenwick@garmin.com |
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STATUS: OPEN

ACTION: Rich Boll, NBAA, will report on the progress of the Single Direction Airway Workgroup.

21-01-358 Improvement to Digital Chart Supplement XML

Andrew Lewis, Garmin, presented the new recommendation. He explained there is a large amount of information in the Chart Supplement Special Notices section that is not easily accessible in a digital format. The metadata for the digital Chart Supplement contains the airport facility directory (A/FD) data, but does not include metadata for the miscellaneous information back portion of the publication. The recommendation is to expand the digital Chart Supplement XML file to include (1) metadata for every page and (2) a name and type identifier for the content of the page.

Joshua Fenwick, Garmin, mentioned that the inability to discern what airport/facility information is included on a given page means they are not able to provide this information to their customers.

Valerie Watson, FAA/AJV-A250, confirmed that the addition of XML metadata tags is part of the Chart Supplement improvements that are already underway. She said Jeff Lamphier, FAA/AJV-A240, will address this specific topic as part of his regular Chart Supplement Modernization briefing. It was agreed to close this item.

STATUS: CLOSED

21-01-359 Chart Supplement Visual Departures and Noise Abatement Procedures

Joshua Fenwick, Garmin, briefed the new recommendation. He explained that the Chart Supplement contains graphic visual departure and noise abatement procedures that he believes would be better placed in the Terminal Procedures Publication (TPP). In order to do this, he said consideration could be given to converting these procedures to a Standard Instrument Departure (SID) or Obstacle Departure Procedure (ODP) or to placing them with the textual Takeoff Minimums. This would allow for publication in the TPP. He also recommends improving the quality of graphics for better display in electronic flight bags (EFBs).

Jeff Rawdon, FAA/AFS-420, explained that these procedures cannot be converted to ODPs because those are strictly for obstacle clearance. Jeff said there is no support for adding charted visual departure procedures to the TPP. He said if ATC wanted to create a SID that served noise abatement purposes, they could decide to do that and it would be published in the TPP. Joshua said he is open to other suggestions and asked if they could be published as Specials. Jeff said that they do not meet the purpose of a Special and added that as Specials are not for public use, they are not published in the TPP.

Rich Boll, NBAA, agreed with Jeff that VFR departures are not instrument procedures and cannot be placed in the TPP because they do not meet TERPs criteria. He does agree that it would be helpful to make them more readily accessible to the pilot. Joshua agreed that his biggest concern is that these procedures are “hidden” in the back of the Chart Supplement.

Valerie Watson, FAA/AJV-A250, said these procedures will have to remain in the Chart Supplement. She said the work being done by the Chart Supplement team to apply XML tags to Supplement content will help make these procedures more accessible. With regard to the image quality, she said this will be difficult to

accomplish because the graphics are submitted to Aeronautical Information Services camera-ready. Joshua agreed that XML tagging will be a big help.

Daniel Wacker, FAA/AFS-420, suggested adding "VFR" to the name of the visual departure procedure. Rich agreed since there has been pilot confusion and that would help them understand they are not operating under instrument flight rules.

Valerie summarized the issue. She said there was agreement that VFR Departure Procedures do not belong in the TPP and will remain in the back of the Chart Supplement. She said the ability to search by airport identifiers will be improved as the work to enhance the digital Chart Supplement XML file is completed. With regard to the poor quality of the graphics, she suggested that users send in specific requests for graphics that need to be improved through the Aeronautical Information Portal. Joshua asked how they will receive future status updates on the XML tagging improvements. Valerie said that Jeff Lamphier, FAA/AJV-A240 will add that topic to his Chart Supplement Modernization briefing that he provides at every ACM. There was agreement to close this issue.

STATUS: CLOSED

[21-01-360 Controlled Airspace Effective Hours on VFR Charts](#)

Steve Seibel presented the new recommendation. He proposed changing the notation on the VFR sectional charts regarding the effective hours of surface-level controlled airspace at eleven airports. He suggested that the note should read "See Chart Supplement for D eff hrs" rather than the current note of "See Chart Supplement for D/E(surf) eff hrs". He said this would more accurately reflect the fact that none of the surface-level Class E airspace at these airports converts to Class G airspace when the control tower is closed. He clarified that this recommendation only effects part time Class D airspace that have a surface level Class E extension. For more information regarding the background of this item, please see the Recommendation Document.

Katie Murphy, FAA/AJV-A214, said the Visual Charting Team has begun investigating these concerns and agrees that there are some charting inconsistencies. She said they plan to complete a full audit of these notes to make sure they are charting them correctly per specifications.

Paul Gallant, FAA/AJV-P210, said he always understood that the notes only refer to the core surface area and don't pertain to the extension areas. He said the Legend in the Chart Supplement has some explanation about the extension areas. He also said his office is in the process of working on rulemaking to clarify surface areas and extension areas and how they relate to each other. Paul provided some historical perspectives regarding this issue.

Rich said that he had introduced a related ACM recommendation in 2007 regarding the legal description discrepancies between airspace and extensions. Paul said he had thought the discrepancies had all been resolved, but issues continue to come up, particularly with regard to extension areas.

Katie says from the VFR charting perspective, we want pilots to look at the Chart Supplement and NOTAMs to figure out what they need to know about the airspace. Steve agreed, but emphasized that he would also like to make sure the notes are charted consistently.

Valerie Watson, FAA/AJV-A250, asked Paul if the rulemaking work he discussed will change airspace legal descriptions. Paul said they don't yet know what the final outcome will be. Valerie then summarized that this item will remain open for the Visual Charting Team to take a closer look at this issue and the examples Steve provided.

STATUS: OPEN

ACTION: Katie Murphy, FAA/AJV-A214, will investigate VFR charting of airspace effective hour notations and report back at the next ACM.

21-01-361 Alternate Minimums in the TPP

Bill Tuccio, Garmin, presented the new recommendation. Bill explained that the data in the IFR Alternate Minimums section of the Terminal Procedures Publication (TPP) is inconsistent with the explanatory guidance that is provided in the introduction of the section. He said that procedures with Alternate Minimums NA currently have the notation on the chart, but those procedures are not listed in the front of the TPP. He said this can lead to confusion because looking in the Alternate Minimums section, a pilot will not know if the unlisted procedures are standard or NA. Garmin suggested that any procedure that carry an "A" or an "A NA" should be listed in the Alternate Minimums section.

Krystle Kime, FAA/AJV-A222, said that if the ACM audience agrees, Terminal Charting could add those additional procedures to the Alternate Minimums. She clarified that if that step is taken, the "A NA" notation would be removed from individual charts and any chart with a listing in the front will carry an "A". She said the explanatory guidance would also have to be updated to explain that if there is not an A notation on the charts, there is no entry in the Alternate Minimums section, and the procedure has standard alternate minimums. Bill agreed with Krystle's suggestion.

Kevin Carter, NGA, says that the A notation on the chart is meaningless to military, but "A NA" is meaningful. He said the military would prefer to keep the "A NA" notation. Rich Boll, NBAA, Mike Stromberg, UPS, and John Moore, Jeppesen, all agreed with keeping the "A NA" on the approach chart.

Jeff Rawdon, FAA/AFS-420, asked Krystle how much effort and time would be required to make this change. Krystle said they would need to identify all the charts that contain "A NA" and then make the changes volume by volume. It would be a big effort, but she needs to investigate this further before determining a timeframe. She pointed out that this is not an automated process. Deb Copeland, FAA/AJV-A220, said this change will be a large level of effort and it might be something they need to wait to accomplish once they have an automated solution.

John Collins, ForeFlight, suggested that it would be helpful if the procedures with standard alternate minimums could also be listed so all the information can be found in a single location. Bill Tuccio agreed with that suggestion.

Jim Deuvall, CAVU Companies, said he thinks it would be better to leave things as they are. Rich said he is also concerned about moving forward and said this change will require changes in the training manuals and programs. Jim added that he thinks this could create confusion in where to look for non-standard alternate minimums and thinks this could be a problem all the way down to the flight instructor level.

There was further discussion regarding the best way to move forward. Jeff Rawdon pointed out that this effort is more complicated than it appears. He said first we need to understand the level of effort that would be required. He pointed out that this is not a safety concern and that the information is provided for pre-flight planning. He is unsure if the level of effort, potential confusion, additional training, etc., is justified. Valerie agreed and said she also has concerns about moving forward.

Valerie said the first step is for Terminal Charting to investigate this further to determine if they have the time and resources to work this issue. Once that has been determined, then the other aspects of this recommendation can be investigated further.

STATUS: OPEN

ACTION: Krystle Kime, FAA/AJV-A222, will investigate this recommendation further to determine the level of effort required to add “A NA” entries to the Alternate Minimums Section of the Terminal Procedures Publication.

VI. Outstanding Charting Topics

[15-02-298 Charting GLS DMax \(Service Volume\)](#)

Samer Massarueh, FAA/AJV-A223, reviewed the issue. Joel Dickinson, FAA/AFS-410, reported that a workgroup met to discuss [IPG Item 20-02-349](#) regarding the charting of required NAVAID changes. He said they were not able to reach a consensus and the issue was closed. Joel said the Flight Operations Branch does not support this recommendation. He proposed closure of this item in the Charting Group based on the guidance that has been published in the Aeronautical Information Manual (AIM).

Doug Willey, ALPA, voiced his opinion that lack of consensus on IPG Item 20-02-349 is not appropriate justification to close this item, and said Ron Renk, the original proponent of this recommendation, needs to be part of the decision to close. Joel said that Ron was part of the discussions within the IPG working group. Valerie Watson, FAA/AJV-A250, agreed that though Ron may have been part of the larger discussion regarding the depiction of required NAVAID changes on terminal procedures, she will reach out to him to notify him of the continued AFS lack of support for this specific aspect of the issue and will see if he is satisfied with closure of this item.

STATUS: ON HOLD PENDING PROPONENT INPUT

16-02-310 Inclusion of MSA Info for ODPs, SIDs & STARs

Samer Massarueh, FAA/AJV-A223, reviewed the issue. Jeff Rawdon, FAA/AFS-420, stated that guidance has been added to draft FAA Order 8260.46H for the addition of Minimum Safe Altitudes (MSAs) on Graphic Obstacle Departure Procedures (ODPs) and Standard Instrument Departures (SIDs). He said the Order is pending signature and should be released soon. Valerie Watson, FAA/AJV-A250, reported that the Interagency Air Committee (IAC) Specification change for the addition of MSAs to Departures has been signed and will be implemented when Order 8260.46H is implemented.

STATUS: OPEN

ACTION: Sue Walker, FAA/AFS-420, will report on the status of revised guidance in FAA Order 8260.46 for the addition of MSAs to Departure Procedures.

17-02-311 TFR Charting: Recommendations of the RTCA Tactical Operations Committee

Samer Massarueh, FAA/AJV-A223, reviewed the issue. Scott Jerdan, FAA/AJV-A310, reported that FAA Order 7930.2, which documents the System Operations Security Office's obligation to serve as the authoritative source for the charting of these areas, was published in early 2021. Valerie Watson, FAA/AJV-A250, reminded the audience that the charting guidance for depiction of National Defense Airspace TFR Areas on VFR charts is already in place. Scott stated that the Aeronautical Data Team is coordinating with the System Operations Security Office to obtain and database the current list of National Defense Airspace TFR Areas. He said his team is still working a few internal tool changes, but that users can expect publication on the charts for the 12 August 2021 effective date.

John Collins, ForeFlight, asked if this change will have an impact on the way the National Security Special Flight Rules Area (SFRA) is charted around Washington DC. John said there has been some pilot confusion regarding the requirements for this area and said he would like to see the charting of all of these areas standardized. Katie Murphy, FAA/AJV-A214, said this will not impact the charting of the SFRA. She pointed out the SFRA around DC is unique, and the charting of it was by special request.

Post meeting update: After further email communication on this issue, Valerie committed to reaching out to inquire of System Operation Security if any aspect of the DC SFRA can/should be handled like the "long-term TFRs" that qualify as National Defense Airspace TFR Areas. She will report at the next meeting.

STATUS: OPEN

ACTION: Katie Murphy, FAA/AJV-A214, to provide an update on the charting implementation of National Defense Airspace TFRs on VFR Charts.

ACTION: Valerie Watson, FAA/AJV-A250, will report on Aeronautical Information Services interaction with System Operations Security regarding possible boundary depiction surrounding DC SFRA similar to National Defense Airspace TFR Areas.

17-02-312 Standardized Communications on DPs and STARs

Samer Massarueh, FAA/AJV-A223, reviewed the issue. Jeff Rawdon, FAA/AFS-420, reported that FAA Order 8260.46H has been updated with the revised guidance for DPs (DEP CON) and that the Order is currently in signature process. Valerie Watson, FAA/AJV-A250, stated that the Interagency Air Committee (IAC) specification change for standardized communications on DPs is in process and will be implemented once the revised guidance is published in FAA Order 8260.46H. As with implementation of the related Arrival revision, charts will be updated as they are formally amended.

STATUS: OPEN

ACTION: Sue Walker, FAA/AFS-420, to report on the status of revised guidance for standardized communications on Departure Procedures in FAA Order 8260.46H.

ACTION: Valerie Watson, FAA/AJV-A250, will report on the status of the Interagency Air Committee (IAC) Specification change for standardized communications on Departure Procedures.

17-02-314 Charting of ILS Classification System for Category I ILS Approaches

Samer Massarueh, FAA/AJV-A223, reviewed the issue. Mike Melssen, FAA/AFS-410, provided an update. He said the Flight Operations Branch is still in the process of evaluating the publication of Category I Autoland guidance in AC 121-118. He said they are also still considering the publication of a Safety Alert for Operators (SAFO). Mike recommended closing this issue. Valerie Watson, FAA/AJV-A250, said that this item will remain open pending the publication of guidance in AC 121-118.

STATUS: OPEN

ACTION: Mike Melssen, FAA/AFS-410, will report on the effort to publish Category I Autoland guidance in AC 121-118. He will also report on the publication of a Safety Alert for Operators (SAFO).

17-02-316 Improving OROCA to Meet FAR 91.177 Requirements

Samer Massarueh, FAA/AJV-A223, reviewed the issue. Joel Dickinson, FAA/AFS-410, reported that the revised guidance in the Aeronautical Information Manual (AIM) and on the FAA Enroute Low Charts have been submitted for publication. Valerie Watson, FAA/AJV-A250, reported that the Interagency Air Committee (IAC) Specification change amending the OROCA text on IFR Enroute Low Altitude charts will be published on the 12 August 2021 effective date.

All actions have been completed and there was agreement to close this item.

STATUS: CLOSED

[17-02-318 Charting of Helicopter Routes per RNP NAVSPEC 0.3](#)

Samer Massarueh, FAA/AJV-A223, reviewed the issue. Valerie Watson, FAA/AJV-A250, reported there is no new update for this item. She reminded the audience that per Mike Webb, FAA/AFS-420, the first IFR Low Altitude RNAV Helicopter (TK) routes with a Required Navigation Performance (RNP) 0.3 value will be published as Specials (not for public use) so air traffic can limit traffic on the routes before conversion to public-use. Conversion to public-use is not expected before the end of 2021. Gary Fiske, FAA/AJV-P310, clarified that the TK routes that will be published as Specials will be designated as ZK routes while restricted to private-use.

Scott Jerdan, FAA/AJV-A310, reported that the enhancement to add an RNP attribute to the airway resource of the National Airspace System Resource (NASR) database occurred in April 2021. He said FAA Form 8260-16 includes an RNP field that will serve as the source for the RNP values in the database.

Valerie stated that this issue will remain open until the first public-use TK routes with RNP values are published.

STATUS: OPEN

ACTION: Mike Webb, FAA/AFS-420, will provide an update on the publication of the first public TK routes with RNP values.

[18-01-322 Recognize Specific PERM NOTAMs as Authoritative Source](#)

Samer Massarueh, FAA/AJV-A223, reviewed the issue. Scott Jerdan, FAA/AJV-A310, recommended this item be closed. He said Aeronautical Information Services will not be authorized to use the discussed PERM NOTAMs as source to update the National Airspace System Resources (NASR) database and thus the charts/publications. He said they have been working with the Office of Airports and Tech Ops and have made progress communicating with the Airport District Offices and airport managers regarding when and how to submit permanent aeronautical changes to the FAA. He said he will continue that effort. Scott asked if AOPA agreed with closing this item.

Jim McClay, AOPA, stated his organization is in agreement and voiced the work currently being done supports the original goal of reducing the number of PERM NOTAMs in the system.

Valerie Watson, FAA/AJV-A250, asked the audience if there were objections to closing this item. There were no objections to closing. She reiterated that Aeronautical Information Services will continue to work with the Office of Airports on reducing the number of PERM NOTAMs associated with airport information.

STATUS: CLOSED

[18-01-323 Standardizing the Labeling of Parking Areas on Airport Diagrams](#)

Samer Massarueh, FAA/AJV-A223, reviewed the issue. Jim McClay, AOPA, said there have been some changes since last ACM. He stated that consensus has been reached with Airports Council International (ACI) and American Association of Airport Executives (AAAE) on three standardized parking designations.

FBO Ramp - An apron where itinerant general aviation operators can park their aircraft and expect to have access to traditional FBO services subject to terms and conditions.

GA Transient Ramp - An apron where itinerant general aviation operators can park their aircraft without FBO services and subject to terms and conditions.

GA Tenant Ramp - An area designated for parking of based general aviation aircraft, i.e. tiedown area.

Jim said that at this point they are moving forward with a voluntary adoption process. He said AOPA is working with pilot and aviation organizations and, to date, they have had over 20 airports voluntarily adopt these new terms.

Lynette McSpadden, FAA/AJR-B3, suggested that Jim bring a sample airport that has adopted the new terms to the next ACM.

Valerie Watson, FAA/AJV-A250, explained that the Office of Airports has not yet been able to sanction these terms and update their relevant guidance and documentation. As a result, these terms are not yet published in the Pilot/Controller Glossary (PCG) of the Aeronautical Information Manual (AIM). Jim said the Office of Airports wants to first make sure there is industry consensus on how these terms should be used. A decision needs to be made on whether or not the FAA should impose them as a standard before the Office of Airports updates their guidance. Until then, use of the terms will remain voluntary.

Valerie said this issue will remain open while AOPA continues to work on getting full concurrence from industry.

STATUS: OPEN

ACTION: Jim McClay, AOPA, will continue to coordinate with industry and the Office of Airports to sanction use of the proposed terms and update their relevant guidance/documents.

[18-02-327 IAP Chart Modernization](#)

Samer Massarueh, FAA/AJV-A223, reviewed the issue. Rich Boll, NBAA, presented a [briefing](#) on the history and summarized the proposal as it stands today. He said that the primary proposed revisions involve incorporation of inoperative components into the minima tables and deletion of corresponding notes, expansion of the profile view, and replacement of the current airport sketch with a smaller, skeletonized sketch.

Rich explained that at ACM 19-02, it was determined that the military ceiling and visibility cannot be removed. The workgroup is now proposing to remove the repeated visibility value except when RVR is charted, the visibility will be shown as it is today ([slide 4](#)). There is concurrence from the FAA, industry, and

two of the three branches of the military. They are awaiting on concurrence from the Army, but expect it will not be a problem. With regard to the simplified airport sketch, there was significant workgroup discussion concerning the depiction of the final approach course information and whether or not it should be shown within the sketch in all cases. Rich said he plans to bring a separate RD to the next ACM to discuss this.

John Collins, ForeFlight, expressed some concern regarding the size of the font used in the Time/Distance Table. He suggested the font size be increased as much as possible to ensure readability.

There was a discussion about whether to put heliports on the simplified airport sketch. Rich said the working group recommends including them, but would like ACM consensus. A poll was taken and there was consensus for charting the heliports.

Rich then discussed airport lighting. He said all airport lighting information previously contained within the airport sketch box will be moved to the Airport Diagram. He explained that every airport in the Terminal Procedures Publication (TPP) will have an airport diagram. He said the workgroup is also proposing the addition of Visual Glide Slope Indicator (VGSI) lighting information to the briefing strip for the approach runway. See [slides 12 & 13](#) for the proposed briefing strip lighting depiction. Rich then presented several sample Instrument Approach Procedure (IAP) charts ([slides 15-18](#)). He also explained how this recommendation will move forward to implementation ([slide 19](#)).

George Bland, USAF, pointed out that this workgroup has been going back and forth on a number of issues. He said the workgroup was ready to present this to the ACM to get feedback, but there will likely still be adjustments to this proposal before it is finalized.

Bill Tuccio, Garmin, asked if the lighting graphic is necessary in the briefing strip. Rich explained that the lighting symbols are necessary so they can be shown in negative to indicate pilot control. He also pointed out that the TPP legend contains detailed lighting information.

Michael Stromberg, UPS, asked about the inoperative note on the CRQ example and how that should be depicted in the inoperative visibility minimums, i.e., NA or blank. Valerie Watson, FAA/AJV-A250, said the workgroup is looking at that. She also pointed out that all inoperative visibility values that will be charted, will be documented on the procedure source form so these decisions will have to be addressed in the criteria. Rich suggested that comments regarding that issue should be sent to the workgroup for consideration.

Bill de Groh, APA, said he likes the changes, but when he looked at the example he wondered if it would be helpful to better separate the airport sketch from the profile view with a heavier line. Mike Melszen, FAA/AFS-410, also likes the proposed changes and agreed that he would like to see heavier lines used to differentiate the sections of the chart. Valerie said the group will look at those line weights.

John Moore, Jeppesen, said there is always a tradeoff between the benefits of a change and the cost and time associated with implementing it. He asked how much this change will cost and what the implementation time will be. Deb Copeland, FAA/AJV-A220, said she doesn't expect this to be a heavy lift because Terminal Charting is in the process of automating the charts so these changes can be incorporated

into that automation. With regard to the timing, many of the changes may have to wait until the automation is ready.

Jeff Lamphier, FAA/AJV-A240, said that FAA Order 7910.4E for Airport Diagrams has been updated to allow the FAA to create an Airport Diagram for every airport with an IAP.

Steve Madigan, Garmin, asked if the inoperative visibility values will be documented on the procedure source form. Valerie said the inoperative minima tables will be published on the 8260 procedure source form in the same way that standard tables are currently published. Steve then asked if a procedural amendment will be required before they can be implemented. Valerie said yes, the charts would not be updated until there was a new procedure source form to pull those values from. Krystle Kime, FAA/AJV-A222, added that if this format was approved, some of the changes could begin to be implemented before the procedural amendments for the minima tables. For example, they could move forward with the simplified sketches for airports that have an Airport Diagram in place.

Jim Deuvall, CAVU Companies, asked why the declared distances symbol is on the simplified sketch instead of moving it to the briefing strip notes. Rich said the workgroup did discuss the declared distance symbol and elected to keep it for now, but may revisit that later. Jim then asked why the FAA does not want to always chart the final approach course in the sketch. Rich explained that there are concerns about how pilots will interpret it in cases where the missed approach point falls outside the parameters of the sketch. He said this issue requires more investigation.

Brent Walker, FAA/AJV-A242, asked if the Common Traffic Advisory Frequency (CTAF) and lighting symbol that is charted on the communications line of an IAP will be added to the Airport Diagram. Krystle said the workgroup will look at that, but she agrees that it should be included on the Airport Diagram.

Rich said that the presentation will be posted on the ACM website with an email address for input submission. Comment are requested by 6/1/2021. He said his goal is to present a formal recommendation to the ACM at the 21-02 meeting.

STATUS: OPEN

ACTION: Rich Boll, NBAA, will report on progress of the IAP Chart Modernization Workgroup at the next ACM.

[19-01-331 Hotspot Information on Departure/Arrival Charts](#)

Samer Massarueh, FAA/AJV-A223, reviewed the issue. Rich Boll, NBAA, reported that the FAA is still considering conducting a Safety Risk Management Panel (SRMP) to determine if there is a safety risk on the RUUDY DEPARTURE at Teterboro Airport (TEB). He said they are still awaiting results from the FAA's Aviation Risk Identification and Assessment (ARIA) tool. Rich said that they hope to complete the analysis by 6/30/2021, and, based on those findings, they will then determine if a SRMP should be conducted.

STATUS: OPEN

ACTION: Rich Boll, NBAA, will report on the results of the FAA Safety Management Group’s risk analysis of the RUUDY DEPARTURE at Teterboro Airport (TEB).

ACTION: Rich Boll, NBAA, will report on progress of the addition of criteria for the use of an Alert Notice or Departure AAUP for Teterboro Airport (TEB).

19-01-332 Charting Waypoints with Both Fly-Over and Fly-By Functions

Samer Massarueh, FAA/AJV-A223, reviewed the issue. Joel Dickinson, FAA/AFS-410, reported that he coordinated with Kevin Kessler, AFFSA, and has submitted a [Document Change Proposal \(DCP\) for the Aeronautical Information Manual \(AIM\)](#).

Valerie Watson, FAA/AJV-A250 expressed concern about the sentence “A holding waypoint will always be designated as a fly-over waypoint in the navigational database but may be charted as a fly-by event unless the holding waypoint is used for another purpose in the procedure and both events require the waypoint to be a fly-over event”. She said “**may** be charted” needs to be changed to “**will** be charted” because the holding waypoint will always be charted as a fly-by unless it is used as a fly-over waypoint on another portion of the procedure. Kevin Keszler said they felt “may” was correct since it is not hard and fast. It may be charted one way or another on military charts.

Bruce McGray, FAA/AFS-420 said he agrees with Valerie on the wording. Kevin Carter, NGA, said he also agrees with Valerie that it should be “will” and he also thinks the second portion of the change is also incorrect. The last sentence should refer to “fly-by” and not “fly-over” in that case. Krystle Kime, FAA/AJV-A222, and Valerie both voiced agreement that last sentence is incorrect. Joel said he will look into that.

Gary McMullin, Southwest Airlines, asked if on the 8260-2 form, a waypoint can be both a fly-over and fly-by waypoint depending on its use. Jeff Rawdon, FAA/AFS-420, said the 8260-2 form does not designate whether a waypoint is fly-over or fly-by. That is documented on the 8260-3 procedure form.

George Bland, USAF, said the issue arises when you try to rectify what is coded in the database with what is charted. If you are flying from the database, the procedure will tell you whether you are doing a “fly-over” or a “fly-by” because it can be coded correctly for each portion/use of that waypoint on the procedure. He said this issue only becomes a problem if a pilot is using a paper chart and not the database. Valerie agreed that the coding isn’t the problem. The problem is the paper chart where it is only possible show it one way. She said she thought it was agreed that holding would be shown as fly-by unless it was used in another function as fly-over. George said that on the DoD procedures, the fly-by/fly-over aspect of a waypoint in the missed approach icons section of the chart always matches the coding at that point, even if it is shown differently in the planview. Valerie suggested adding “in the planview” to the AIM language. Joel said he doesn’t want to make a change and is still satisfied with the original language. Kevin Keszler explained that is why they chose to put “may”. When one compares the database against the chart they will understand that there will always be exceptions because of dual use.

Valerie asked George and Kevin if the DoD follows the Interagency Air Committee (IAC) specifications for the charting of waypoints in the planview. Kevin and George both said yes. She said she is okay with leaving the word “may” in the AIM language as long as the DoD is following the specifications.

STATUS: OPEN

ACTION: Joel Dickinson, FAA/AFS-410, will report on the status of the revised language (fly-over to fly-by in the final sentence) for the Aeronautical Information Manual (AIM).

[19-01-333 LED Lighting at Airfields](#)

Samer Massarueh, FAA/AJV-A223, reviewed the issue. Matt Harmon, FAA/AFS-410, said there is nothing new to report. The Flight Operations Branch is continuing to work with the Office of Airports to have LED lighting systems added to FAA Form 5010, Airport Master Record, so the information can be collected and submitted for publication. Once a reliable source for LED lighting system locations is established, Aeronautical Information Services charting/publication offices will investigate how to communicate this information to users.

STATUS: OPEN

ACTION: Matt Harmon, FAA/AFS-410, will continue to work with the Office of Airports, FAA/AAS-100, to secure a source for the LED data.

[19-01-335 Charting of Unusable Airway Segments](#)

Samer Massarueh, FAA/AJV-A223, reviewed the issue. Pat Mulqueen, FAA/AJV-A440, reported that Aeronautical Information Services (AIS) established an internal workgroup and proposed revised criteria to the Flight Procedures and Airspace Group (FPAG). TJ Nichols, FAA/AFS-420, said there are other criteria considerations and FPAG will take over as point of contact for this issue.

Jeff Rawdon, FAA/AFS-420, reported the FPAG has discussed this at length and from their perspective, they do not understand why it is necessary to chart an unusable airway segment. He said if it is temporary, a T-NOTAM should be used. If it is permanent, the route should not be charted. Valerie Watson, FAA/AJV-A250, explained that there are many complicated situations. She said there are currently examples of unusable conventional airways with a note that says it can still be flown with GNSS. Pat agrees that some of the charted notes do not meet criteria and they need more guidance.

Curtis Davis, FAA/AJV-A311, showed [examples of unusable airway segments](#) on existing charts and in the database. He said there are five ways this has been handled in the past. Pat said these examples are very helpful to demonstrate the problem and to help determine the best way to move forward. He said this problem exists partially due to the need to update the airways to meet the 224 NOTAM requirement. Jeff thanked both Pat and Curtis. He said that we should address the 224 day requirement and said he would like to work together with Pat to address these issues.

Gary Fiske, FAA/AJV-P310, mentioned that when ATC clears an aircraft on a route with an unusable segment or ATC assigns an unusable segment because it is a preferred route, the local traffic is unaware that there is an unusable segment on the other end. This situation will continue to occur. That doesn't mean the pilot

can't still fly the same path. John Collins, ForeFlight, agreed that pilots constantly receive clearances across unusable airways. He said there is confusion about what pilots file and fly on these routes.

Rich Boll, NBAA, asked if unusable routes are still charted with a MEA and whether those altitudes are still being monitored for changes. Curtis said the MEAs should come off the chart when the unusable symbol is added to the route but that sometimes that removal is not reflected on the 8260-16 airway form that renders the "unusable" aspect. Rich said on data driven charts, the MEAs are still showing up. Scott Jerdan, FAA/AJV-A310, suggested that once the approach to dealing with these airway segments is standardized, they could work with the ERAM office to identify the attributes of an unusable segment. Scott said unusable airway segments cannot be removed from the airway data because it is Part 71 and would require rulemaking. Paul Gallant, FAA/AJV-P210, said a request could be sent to his office to begin the rulemaking process, but it is a lengthy process.

Valerie noted there is still a lot of confusion about how unusable routes and segments can and cannot be used and how they should be documented on 8260-16 airway forms, in databases, and in Part 95. Valerie showed the audience the guidance that FAA/AFS-410 submitted for the [Chart Users' Guide](#). Valerie said explanatory guidance also should be added to the Aeronautical Information Manual (AIM). Jeff said the FAA needs more time to investigate this issue. He said they will work to clarify the criteria and the guidance.

STATUS: OPEN

ACTION: Jeff Rawdon, FAA/AFS-420, will report on discussions between the Flight Procedures and Airspace Group (FPAG) and Aeronautical Information Services (FAA/AJV-A) to resolve existing issues related to unusable airway segments and investigate potential criteria and pilot guidance updates.

[19-02-336 Addition of PDC Note in Chart Supplement](#)

Samer Massarueh, FAA/AJV-A223, reviewed the issue. Valerie Watson, FAA/AJV-A250, reported that Pre-Departure Clearance (PDC) has now been published in the communications section of the Chart Supplement and on the Airport Diagrams of 70+ airports.

John Collins, ForeFlight, said he is still concerned about the number of PDCs that are being rejected. He presented [slides](#) detailing the reasons why approximately 1/3 of PDCs are not accepted at specific facilities. John then [briefed](#) that FAA Order JO 7110.113F provides guidance to the facilities regarding procedures for issuing PDC. It allows each facility to develop their own local directive. He said all the facilities sent John their directives, except for Dallas Love Field. John presented examples of some of the facilities' directives including their reasons for non-acceptance.

John recommends adding notes to the PDC entry in the Chart Supplement for non-standard requirements (see [slide 6](#) for examples). He also recommends improving the PDC guidance in the Aeronautical Information Manual (AIM). He said if pilots understand the restrictions, they will be more successful obtaining PDC service.

Rich Boll, NBAA, thanked John for all his research. He said he is not sure this information belongs in the Chart Supplement because he doesn't know how the information could be sourced. He suggested facilities could publish this information in a Letter to Airmen which could be posted to the FMS NOTAM site. Rich also pointed out that some of this information is already in the "flight planning" section of the AIM. John said he would prefer the restrictions to be listed in a fixed location in the Chart Supplement.

Gary Fiske, FAA/AJV-P310, said the facilities are using PDC the best they can within the system's limits. He said they are not going to change how they are implementing PDC. John said he is not looking to make a change, he only wants to communicate the information. Gary said the system still works because if a pilot does not get a digital PDC, they will still get a verbal clearance. He said he understands customers might complain if they are expecting this service and do not get it after providing all the information. John said he would like to see an improved rate of PDC success and he thinks providing the local requirements will improve that success rate.

Valerie Watson, FAA/AJV-A250, said that the only information the FAA receives from the FAA Data Communications Office is that the local facility provides PDC. Information regarding restrictions resides in the local facilities and is not submitted for publication. She said this information would have to be provided to Aeronautical Information Services by the Data Communication Office and they have said that they do not support restrictions.

Rich said this has been a problem for NBAA too. He reiterated that he would like to see Letters to Airmen detailing individual facility requirements and restrictions. He offered to work with ForeFlight to see if that can be accomplished. Scott Jerdan, FAA/AJV-A310, also agreed that a Letter to Airmen would be a good solution to provide non-standard information. Gary said it may be a challenge to get the facilities to agree since they are under no obligation to share that information.

Valerie summarized the discussion. She said Rich and John have agreed to pursue Letters to Airmen to detail PDC restrictions at local facilities. Jim McClay, AOPA, said he would also assist with this effort. John said he will also submit an AIM update to provide improved guidance regarding PDC procedures.

STATUS: OPEN

ACTION: John Collins, ForeFlight, Rich Boll, NBAA, and Jim McClay, AOPA, will work together to pursue Letters to Airmen to detail facilities PDC requirements. They will report back at the next ACM.

ACTION: John Collins, ForeFlight, will report on the status of revised Aeronautical Information Manual (AIM) guidance regarding PDC procedures.

[19-02-338 Publish DP \(SID/ODP\) and STAR Chart Notes in Machine Readable Form](#)

Samer Massarueh, FAA/AJV-A223, reviewed the issue. Pat Mulqueen, FAA/AJV-A440, reported that the FAA is working toward implementing digital procedure source forms for Departure Procedures (DPs), Standard Terminal Arrival Charts (STARs), and Obstacle Departure Procedures (ODPs). He said they expect to start with DPs in February 2022. The target date to have everything available digitally is June 2024. John Collins,

ForeFlight, asked if he could get a copy of the implementation plan. Pat said he will provide that. There was agreement to close this item.

STATUS: CLOSED

[19-02-341 Review of Mountain Passes on VFR Charts](#)

Samer Massarueh, FAA/AJV-A223, reviewed the issue. Tom George, AOPA, presented an [update](#) from the Mountain Pass Working Group. Tom reviewed that the workgroup is focused on (1) removing unsafe/unused mountain passes from the VFR charts (2) identifying mountain passes that should be charted and (3) establishing VFR waypoints that will improve identification of mountain passes. Tom emphasized that VFR waypoints are only for situational awareness and are not intended to represent a route to be flown. He listed several guidance documents that will need to be revised to make sure that is adequately explained. He said the group is still working to identify the correct Flight Standards office to sponsor a request to change FAA Order 7210.3 regarding the use of VFR waypoints and checkpoints for mountain pass situational awareness. Tom invited feedback from the ACM community on the [white paper](#) the workgroup has developed.

Valerie Watson, FAA/AJV-A250, said the white paper will be posted on the ACM website with an email address for input submission.

STATUS: OPEN

ACTION: Tom George, AOPA, will report on progress of the Mountain Pass Workgroup.

[20-02-345 Wrong Surface Hot Spots](#)

Samer Massarueh, FAA/AJV-A223, reviewed the issue. At ACM 20-02, there was consensus of the audience that wrong surface landing risk is a known issue that needs to be addressed. However, there was not consensus of the audience in support of the proposal presented as an appropriate solution. Giovanni Dipierro, FAA/AJI-141, provided a [briefing](#) on what the Runway Safety Group has been working since the last meeting. He summarized that at the last ACM three initiatives were presented: hot spot symbolization specific to wrong surface hot spots (as distinct from hot spots of other causes) on Airport Diagrams, the addition of Arrival Alert Notices in the Chart Supplement, and the addition of a Misalignment Risk (MR) icon on associated Instrument Approach Charts (IAPs). He explained that his office listened to the feedback provided at the last ACM, went back and talked to the stakeholders, and eliminated the proposal to add the MR icon to IAP charts. The proposals to add a wrong surface hot spot symbol to Airport Diagrams and the publication of an Arrival Alert Page in the Chart Supplement remain. Giovanni stated that it is proposed that wrong surface hot spots be added initially to 11 airports ([slide 7](#)). Giovanni said the report from the Safety Risk Management Panel (SRMP) conducted in 2019 is still in the process of being updated and finalized because the items associated with the MR icon had to be removed.

Giovanni showed current and proposed examples ([slides 4-6](#)) with the proposed hot spot shapes and an example Alert Notice at Lincoln Airport (LNK). He said that they have developed "From the Flight Deck"

(FTFD) videos and are also working with Flight Standards to develop international and military training to mitigate the risk of wrong surface events. There are also plans for communication and outreach through other means ([slide 8](#)).

Valerie Watson, FAA/AJV-A250, emphasized that the Airport Diagram is a ground movement chart and asked if the publication of the wrong surface hot spot is intended to protect aircraft on the ground. She said that if the intent is to mitigate landing risks, the Airport Diagram is not a landing chart and this is still not the solution. Giovanni said yes, they are warning ground traffic. He said that the incursion happens on the ground so both the ground and approaching aircraft need to be aware of these locations. Valerie repeated that depiction of a wrong surface hot spot on an Airport Diagram does not protect landing aircraft. She said she supports the publication of an Arrival Alert Page in the Chart Supplement. She also said that she thinks the publication of the three hot spot shapes is too subtle and that the differences will not stand out to a pilot.

Scott Jerdan, FAA/AJV-A310, asked which FAA Order governs the identification and removal of hot spots, as well as the submission process. He also asked about the criteria that will be used to add new locations. Giovanni said they will work directly with Aeronautical Information Services (AIS) to coordinate charting changes for the 11 airports. He said they are also currently working with the Office of Airports to create a process document in their Runway Safety Order for the removal of hot spots that are no longer relevant. Valerie commented that a process for hot spot publication and removal does not constitute criteria and asked if solid criteria has or will be developed, both for Hot Spots, Wrong Surface Hot Spots, and Misalignment Risk. If these terms are to be used, she believes solid criteria should exist and be published so that pilots understand the terms. Giovanni said hot spots are typically created as part of the Runway Safety Action Teams (RSATs) and that the criteria is based on data, such as documented repeated incursions. He said they work with facilities to try to mitigate the problem locally, but if that doesn't work, they will try putting it on the Airport Diagram. Valerie asked that Giovanni share the data that is being used and the criteria the data must meet with the ACM audience. She also emphasized that she wants to make sure that "landing" risk, "approach" risk, and "arrival" risk are not used in the hot spot textual descriptions. The hot spot textual description must be written to address aircraft on the ground, not landing aircraft.

Brent Walker, FAA/AJV-A242, spoke to the current submission process for hot spots. He stated that AIS has a partnership with the Runway Safety Office and emphasized that the wording in the hot spot descriptions does get reviewed.

Rich Boll, NBAA, said he is glad to see the MR icon is not going to be included on the approach charts and thinks putting the Arrival Alert in the Chart Supplement is appropriate. He said he is still not convinced that the other proposed solutions are addressing the issue properly. He expressed concern with calling attention to 11 airports when there are hundreds of airports with similar "misalignment risks". Rich asked if the data regarding these locations will be monitored so that the list of published wrong surface hot spots published in the future can change. Giovanni said the intent is to look at the data to see if identifying charting wrong surface hot spots is effective or not. If charting them does alleviate the issue, they will work to eliminate the unnecessary hot spots. Rich asked whether they are trying to tighten up the hot spot criteria to eliminate the number of charted hot spots. Giovanni said they are going to look at every hot spot, including the verbiage, and make sure the intent is properly communicated to users. Valerie again asked if specific hot

spot criteria would be applied and what that criteria might be. Giovanni said written criteria does not yet exist, but is being worked.

Gary McMullin, Southwest Airlines, reported that all the pilots he shared this proposal with disagreed with adding wrong surface hot spots to the Airport Diagram. He emphasized that the Diagram is a taxi chart and has nothing to do with flying. He said that adding these additional locations is going to take away from what the publication of a hot spot is meant to accomplish. Hot spots have already proliferated to the point of no longer having a great deal of meaning for the pilot. He also said that the shapes of the hot spot locations aren't going to matter to pilots. Giovanni said he will take this feedback to back to his office and encouraged Southwest to participate in the RSATs. Gary emphasized he believes pilot education is what is most important to ensure pilots comply with their landing clearance, not adding additional hot spots to taxi charts.

John Moore, Jeppesen, applauded the effort, but thinks Giovanni's group is not using the Airport Diagram for its intended purpose. Additionally, he thinks they are using the wrong terminology. Hot spots are for ground movement, but the wrong surface hot spots clearly seem to be intended for airborne traffic. John thinks they should stop now and find a different solution.

Bruce McGray, FAA/AFS-420, said that Flight Standards has significant issues with this entire effort. He said this is the wrong solution using the wrong data. Bruce said perhaps a working group should be created to bring flight operations expertise into the process. He emphasized that "misalignment" means something different to a pilot from how it is being used in this proposal. Giovanni said terms can mean different things to different people. He said the original SRMP talked about adding an MR icon to the approach charts. He said they have started fresh since the discussion at the last ACM, so he's not sure what Bruce is objecting to. Valerie clarified that the main objective of this proposal is still to publish wrong surface hot spots on a ground movement chart as a mitigation for landing aircraft and repeated the ACM audience did not support that at the previous meeting.

Bill de Groh, APA, voiced agreement that the addition of a wrong surface hot spot to the Airport Diagram is inappropriate. He stated that when too many hot spots are charted, pilots become desensitized and they become meaningless. He said that looking at the data to understand the root causes for the incursions could help with coming up with other and better ways to mitigate the problem.

Doug Willey, ALPA, said that each pilot does things a little differently. He cautioned that the ACM audience should be careful about talking for all pilots and speaking for the whole community. He pointed out that some pilots may consult Airport Diagrams for information other than ground movements.

Lynette McSpadden, FAA/AJR-B3, stated that in the current chart example on slide 7, the entire runway is circled to indicate a landing risk. She pointed out that there is already a precedent for showing wrong surface risk on an Airport Diagram.

Anthony Schneider, FAA/AJI-1, said that they have clearly heard that pilots want to reduce the number of hot spots that are being published and he stated that is one of the goals of this initiative. He stated that the 11 airports identified for wrong surface hot spots were based on the number of incidents that were occurring. He agrees they need to identify the root causes and define their criteria, but in the meantime

they are trying a variety of solutions to try to mitigate the problem. He stated that Flight Standards as well as much of industry have concurred with the current proposal. He said that while he heard Bruce's comments, he doesn't necessarily think all of Flight Standards shares that opinion since they are part of the Surface Safety Group on the National Runway Safety Council. He said they would like to try this approach at the 11 airports and if the resulting data shows that charting the hot spot has no effect, they will remove them. He said he will take the feedback that this audience does not agree with adding wrong surface hot spots on the Airport Diagrams and talk about it internally and with the Runway Safety Council and Surface Safety Group. He added that they are still open to other ideas.

Valerie suggested removing the word "Arrival" on slide 7, and instead changing it to "Wrong Surface Hot Spots," since only ground traffic is being warned by their publication. She also pointed out that though there is ACM support for publishing the Arrival Alert page in the Chart Supplement, the remainder of the proposal was again not supported by the audience, particularly if the intent is to mitigate risk to landing aircraft and not aircraft on the ground.

STATUS: OPEN

ACTION: Giovanni Dipierro, FAA/AJI-141, will take the ACM feedback back to Runway Safety management for further discussion and will report at the next ACM.

ACTION: Giovanni Dipierro, FAA/AJI-141, will provide the final Safety Risk Management Panel (SRMP) report to Valerie Watson, FAA/AJV-A250, for distribution to the ACM mailing list.

[20-02-346 Special Use Airspace on VFR Charts](#)

Samer Massarueh, FAA/AJV-A223, reviewed the issue. Katie Murphy, AJV-A214, reported that clarifying language about Part 93 areas was added to the [Chart Users' Guide](#) in the 22 April 2021 edition. In addition, the visual charting team did an audit of all Part 93 areas on VFR charts. She said they found two areas that needed revision which have since been corrected. Katie said she believes they have addressed the concerns and thinks the issue can be closed. Jeremy Katz said he is satisfied and agreed with closing the issue.

STATUS: CLOSED

[20-02-347 Mode C Airspace Label](#)

Samer Massarueh, FAA/AJV-A223, reviewed the issue. At the last ACM, there was audience consensus to update the Mode C Airspace label to include a reference to ADS-B on the VFR Sectionals and Terminal Area Charts. Valerie Watson, FAA/AJV-A250, confirmed that the charting specification has been approved and that "Mode C & ADS-B OUT" will be published on all Mode C Veil boundaries for the 12 August 2021 effective date.

STATUS: CLOSED

20-02-348 NASR Improvements for ARTCC/RCAG Frequencies

Samer Massarueh, FAA/AJV-A223, reviewed the issue. Brian Murphy, FAA/AJV-A350, said changes to the National Airspace System Resource (NASR) database had been on hold until recently. He said Aeronautical Information Services (AIS) is currently investigating this issue. He pointed out that improvements to the databasing of ARTCC frequencies are wanted internally within AIS as well as by outside organizations and will receive a high priority. He said he will have a better idea of the timeline and nature of revisions by the October ACM.

STATUS: OPEN

ACTION: Brian Murphy, FAA/AJV-A350, will report on the status of the request to improve the databasing of Air Route Traffic Control Center (ARTCC) frequencies in the National Airspace System Resource (NASR) database.

VII. Closing Remarks

Samer Massarueh, FAA/AJV-A223, and Valerie Watson, FAA/AJV-A250, thanked the attendees for their participation and input to the issues discussed.

Notices of the official minutes will be announced via email and provided via the ACM website. 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/afx/afs/afs400/afs420/acfi/pg/

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 meeting or provide the Chair, Valerie Watson (with an informational copy to Jennifer Hendi), 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.

VIII. Next Meetings

ACM 21-02 is scheduled for October 25-28, 2021, location TBD, likely virtual only.

ACM 22-01 is scheduled for April 25-28, 2022, location TBD.

IX. Attachments

- a. 21-01 Attendee Roster
- b. Office of Primary Responsibility (OPR)