

DC METROPLEX BWI COMMUNITY ROUNDTABLE WORKING GROUP PUBLIC MEETING

Twenty-fourth meeting of the DC Metroplex BWI Community Roundtable Working Group

Tuesday, November 19, 2019, 7:10 PM - 9:47 PM

MDOT-MAA Offices, Assembly Rooms A/B

991 Corporate Boulevard

Linthicum, MD 21090

MEETING MINUTES

REGULAR PARTICIPANTS

Roundtable Member	District / Organization	Attended	Roundtable Member	District /Organization	Attended
Drew Roth, Chair*	District 12	✓	Dan Klosterman*	District 32	✓
Sarah Lacey, Vice Chair*	Anne Arundel County Council, District 1	✓	Marcus Parker, Sr	Alternate for Dan Klosterman, District 32	
Ellen Moss	Alternate for Sarah Lacey, District 1		Austin Holley*	District 33	✓
Debra Jung*	Howard County Council, District 4	✓	Nancy Higgs*	District 33	✓
Debbie Macdonald*	District 9	✓	Brent Girard	Office of Senator Chris Van Hollen	✓
Jesse Chancellor*	District 9	✓	Reece Peake (for Ramond Robinson*)	Office of Anne Arundel County Executive Stuart Pittman	✓
Howard Johnson*	District 12	✓	Kimberly Pruum*	Office of Howard County Executive Calvin Ball	
Barbara Deckert	Alternate for Drew Roth and Howard Johnson, District 12	✓	Samuel Snead (for Nancy Surosky*)	Office of Baltimore County Executive Johnny Olszewski	✓
Paul Verchinski	Alternate for Susan Defibaugh District 13	✓	Paul Shank, Chief Engineer	MDOT-MAA	✓
George Lowe*	District 13		Robin Bowie, Director, Office of Environmental Services	MDOT-MAA	✓
Susan Defibaugh*	District 13		Darline Terrell-Tyson, Deputy Director, Office of Environmental Services	MDOT-MAA	✓
Mary Reese*	District 30	✓	Paige Kroner	Mid Atlantic Regional Representative, NBAA	
Evan Reese*	District 30	✓	Kyle Evans	General Aviation Representative, CP Management LLC	
Paul Harrell*	District 32	✓	Phillip Moore (for David Richardson)	Southwest Airlines	✓
Richard Campbell	Alternate for Paul Harrell, District 32				
Daniel Woomeer*	District 32	✓			

*Voting members

ADDITIONAL PARTICIPANTS

Maryland Department of Transportation (MDOT) Maryland Aviation Administration (MAA)

Trey Hanna, Assistant for Legislative and Special Projects

Bruce Rineer, Manager, Noise Section

Karen Harrell, Noise Program

Roberta Walker, Administrative Assistant

Contractor Support

Adam Scholten, HMMH

Kurt Hellauer, HMMH

Sarah Yenson, HMMH

Royce Bassarab, HNTB

A.J. Durham, Straughan Environmental

Eileen Sien, ADCI

MEETING MATERIALS

Participants received the following materials in advance:

- Meeting Agenda for November 19, 2019

Handouts at the meeting:

- Meeting Agenda for November 19, 2019
- Draft Meeting Minutes V2 from October 15, 2019
- MDOT-MAA/Roundtable Technical Committee Presentation Titled: "Technical Analysis: Proposed BWI Marshall Flight Procedure Changes Developed by Roundtable Technical Committee" dated November 19, 2019

Presentations at the meeting:

- Meeting Agenda for November 19, 2019
- Draft Meeting Minutes V2 from October 15, 2019
- MDOT-MAA/Roundtable Technical Committee Presentation Titled: "Technical Analysis: Proposed BWI Marshall Flight Procedure Changes Developed by Roundtable Technical Committee" dated November 19, 2019

1. WELCOME AND INTRODUCTIONS

Introduction & Member Roll Call

Mr. Drew Roth (Chair) opened the meeting at 7:10 pm and welcomed attendees. Mr. Roth performed the member roll call. Roundtable members introduced themselves and stated the district or office they represent.

Review and Approve Meeting Agenda

Mr. Roth asked if there were any changes to the meeting agenda. No changes were proposed. Mr. Roth asked if there was a motion to approve the agenda. Mr. Evan Reese moved to approve the agenda. Mr. Daniel Woomer seconded. All were in favor. Meeting agenda approved.

Review and Approve Meeting Minutes from October 15, 2019 Meeting

Mr. Roth asked Roundtable members if they had any changes or issues concerning minutes from the October 15, 2019 meeting. Mr. Woomer moved to approve the October 15, 2019 meeting minutes. Ms. Nancy Higgs seconded. All were in favor. The October 15, 2019 meeting minutes were approved.

2. ROUNDTABLE CHAIR COMMENTS

Mr. Roth stated that the main event of the night's meeting would be the review of the noise and flight track analysis of the Roundtable Proposal that was presented at last month's meeting. He reminded those in attendance that the proposal was the work of the Roundtable Technical Committee, in conjunction with the Maryland Department of Transportation (MDOT) Maryland Aviation Administration (MAA) with industry participation from Southwest Airlines (SWA).

Mr. Roth explained that the Communications and Legislative Committees would give a quick briefing on what they have been doing before the Technical Committee's presentation on the noise and flight track analysis. He explained following the Technical Committee's presentation, there would be a public comment period, then two motions would be brought to the Roundtable: (1) a request from the Roundtable Legislative Committee; and, (2) approval of the Technical Committee proposals to send to the FAA for inclusion for consideration in its next meeting of the Performance Based Navigational (PBN) Working Group.

3. COMMUNICATIONS COMMITTEE UPDATE

Ms. Barbara Deckert stated that the Communications Committee sent out a press release to the Baltimore Sun. She stated that there may be a follow-up soon to correct errors in the article. There were three articles published based on this press release:

- "BWI panel nears deadline to send FAA flight changes it hopes will cut noise.", The Baltimore Sun, November 11, 2019, <https://www.baltimoresun.com/maryland/anne-arundel/ac-cn-bwi-roundtable-20191119-vcrknrp4lvamdpijshg636juzm-story.html>
- "BWI roundtable group approves proposal to reduce noise pollution, heads to federal agency's desk.", The Baltimore Sun, November 20, 2019, <https://www.baltimoresun.com/maryland/anne-arundel/ac-cn-bwi-vote-20191120-h26v3jcbovbbfj3w5myqb3b2wi-story.html>
- "Officials Hope To Reduce Noise Pollution At BWI.", December 3, 2019, Patch, <https://patch.com/maryland/odenton/officials-hope-reduce-noise-pollution-bwi>

4. LEGISLATIVE COMMITTEE UPDATE

Ms. Debra Jung stated that Senator Lam plans to introduce legislation in the upcoming session to do a health study funded through the state government. She noted the health study will focus on the

environmental and physical health impacts that may be caused by the superhighway caused by NextGen going over our heads. Ms. Jung stated that she is hoping additional funding for noise monitoring will be added to the legislation.

Mr. Roth announced that Ms. Jung had just come from a hearing with Howard County Delegates. Ms. Jung confirmed her interaction with the full Howard County delegation, and mentioned they meet before they go into session in the Banneker Room at the George Howard building to introduce upcoming legislation. Ms. Jung continued that, as part of the meeting, the Delegates requested two people deliver reports to them. Ms. Jung was one of the two people to provide a full briefing; she spoke on the BWI Roundtable and how efforts are going regarding mitigating the noise and environmental impacts. Ms. Jung stated she was very clear at what the BWI Roundtable was trying to accomplish, and how important it is to the people of Howard County that real action occur on the local, county, state, and federal levels. She explained that we need to work at all levels simultaneously to do whatever we can to get back to some level of quiet in our lives again, including the ability to sleep and enjoy the outdoors.

Ms. Jung exclaimed that noise at BWI Marshall is something she feels strongly about, and she believes she did a good job explaining the situation to the Delegates. She thought they were engaged in her message. Ms. Jung is encouraged that a number of the Delegates are helping the Roundtable and the community. She mentioned Senator Lam's attendance at the Roundtable Meetings and invited the Delegates to attend future Roundtable meetings.

Ms. Jung closed by posing a question from Delegate Ebersole: Did Baltimore County have any representation on the Roundtable? Mr. Sam Snead confirmed that he represents Baltimore County, and was there on behalf of County Executive Johnny Olszewski. Ms. Jung relayed that Delegate Ebersole's office had been inundated with calls from Catonsville complaining about flight noise, apparently during the closure of a runway. Ms. Jung confirmed that Baltimore County had representation from the Executive, but not from Catonsville specifically. Ms. Mary Reese mentioned two open seats available for the portion of District 12 in Baltimore County. Ms. Jung stated that she thinks Delegate Ebersole might have some people in mind; she would let him know about the open seats. Mr. Roth noted that he and Mr. Johnson are in Delegate Ebersole's district but do not cover all of Catonsville.

5. PRESENTATION OF TECHNICAL COMMITTEE PROPOSAL (FULL ANALYSIS AND MODELING)

Following the update from the Legislative Committee, Mr. Roth turned the meeting over to Mr. Evan Reese, chair of the Technical Committee. Mr. Reese introduced himself and began by recapping the history of the Technical Committee's work on their proposed changes. He stated that the original resolution from the Roundtable to FAA was to revert all flight paths back to pre-NextGen. After some struggles with FAA, the Roundtable was told that reversion was not possible. He stated that last April, the Technical Committee with MDOT-MAA's Paul Shank and HMMH began working on potential flight path changes to mitigate the noise and frequency of flights caused by NextGen as much as possible. Mr. Reese explained the only way to achieve that goal was to put aircraft at higher altitudes for longer amounts of time, facilitate Continuous Descent Approaches (CDA), which achieve a steady state descent, and try to achieve dispersion through procedural changes.

Mr. Reese praised the work HMMH did to model the Technical Committee's proposed flight track changes. He stated that the modeling outputs to be presented were a conservative, worst-case approach, and that more refined noise modeling could be achieved in two to three months. For now, this was the data they could provide. Mr. Reese asked those in the audience to not be alarmed by the information on the slides, and stated that all of the changes still achieve, where possible, the three goals of higher aircraft, CDA, and dispersion via procedures.

He turned the presentation over to Mr. Adam Scholten of HMMH. Mr. Scholten briefly went over the agenda for the presentation (Slide 2). He stated that the purpose of the night's presentation (Slide 4) was to present a technical and noise analysis of the proposed procedure changes that were developed and supported by the Roundtable Technical Committee, MDOT-MAA, and industry. Before beginning, he stated that the proposed procedural changes had not yet been seen or reviewed by FAA, and that the FAA may choose to adjust or not implement the procedure changes proposed by the Roundtable. He continued that for any procedures that are ultimately implemented, the FAA is going to go through their own separate analysis from an environmental perspective, which may include associated public outreach. Mr. Scholten also highlighted that any implementation of what is presented at tonight's meeting is going to be a multi-year process. Mr. Scholten reiterated that the presentation would go through many of the same things the FAA would examine if it chooses to, and that it would be a lengthy process, but FAA is required by law to conduct its own outreach and environmental studies.

Mr. Shank stated that the MDOT MAA, HMMH, and industry would likely be invited to attend meetings held by the FAA for a PBN Working Group in 2020 if the FAA decides to review and analyze the Technical Committee's proposed procedural changes. Mr. Reese stated that the Technical Committee does not believe that the proposed procedural changes would fix the problems of NextGen. He called the proposed procedural changes a very small step. Mr. Reese hopes that submitting the Technical Committee's procedural changes helps to change the process between FAA and the Roundtable, and that it can be replicated in the future to continue to make changes the Roundtable wants.

Mr. Scholten continued that the main goal of tonight's meeting was to come to an agreement as a Roundtable to support the proposed changes developed by the Technical Committee and move them forward as a submittal package to FAA for consideration at the next PBN Working Group set to begin in early 2020. He echoed Mr. Reese's comment that these are the Technical Committee's first proposed procedural changes, and although they are a step toward trying to have some improvements, it was not the last step that would need to be taken. Mr. Scholten briefly went over what was presented at the last Roundtable Meeting in October and the timeline from the beginning of the process until now (Slide 6). The timeline included the following:

- **March 2015:** FAA completed implementation of DC Metroplex at BWI Marshall, communities voice concerns regarding flight path changes
- **February 2016:** FAA further modifies departure procedure (TERPZ) for Runways 28 and 15R
- **March 2017:** DC Metroplex BWI Community Roundtable formed to address community concerns regarding flight path changes

- **August 2017 – April 2018:** FAA convenes PBN Working Group to evaluate modifying BWI Marshall procedures, FAA presents proposed flight procedures (mainly departures) from PBN Working Group to Roundtable
- **December 2018 – January 2019:** MDOT-MAA presents noise analysis of FAA proposed procedure changes from April 2018, Roundtable sends FAA letter assessing proposed procedure changes
- **February 2019 – September 2019:** Roundtable Technical Committee meets with MDOT-MAA and industry to explore and finalize additional flight procedure changes (arrivals)
- **October 2019:** Roundtable Technical Committee presents “first look” at proposed flight procedure changes to full Roundtable

Mr. Scholten then described the historical flight tracks that would be presented for reference. He noted the flight tracks represented historical operations at BWI Marshall for two distinct time periods:

- **Pre-Metroplex:** January, June, July, and December 2012 (123 days)
- **Post-Metroplex:** November 2018, and February, May, and August 2019 (120 days)

Mr. Scholten explained the time periods were selected for seasonal variability in aircraft operations and performance as well as avoid prolonged runway closures. He explained on each slide that arrivals are depicted in Purple and departures are depicted in Green and noted darker shades of color represent areas with greater concentrations of flight tracks, while lighter shades represent areas of lesser concentrations. Slides 8-9 depicted arrival and departure Jet flight tracks from pre-Metroplex on the left and post-Metroplex on the right at different scales. Mr. Scholten stated that the biggest takeaway from these graphics was that since the DC Metroplex was implemented, the flight tracks became much more concentrated. He continued that pre-Metroplex, air traffic controllers vectored aircraft much more frequently and that post-Metroplex flights are more often on proceduralized routes that require less intervention from air traffic controllers.

Mr. Scholten continued that in April of 2018, the FAA presented proposed procedure changes at BWI Marshall. He noted these procedures specifically modified Runway 15R and Runway 28 westbound departures to try to revert some flight paths closer to historical patterns (Slide 10-11). In addition, FAA included an adjustment to Runway 28 southbound departures, made small changes to the downwind leg for Runway 28 to the northeast and base leg to arrivals from the south and southeast, and added climb-via capability to all departures. Mr. Scholten reminded those in attendance that the FAA presentation from April 2018 was available on the MDOT MAA community relations website.

**Note: The FAA’s presentation of proposed procedure changes from April 24, 2018 can be found at: https://maacommunityrelations.com/media/client/anznoiseupdate/2018/BWI_Overview_CapitalProject_FINAL_20180419.pdf*

Mr. Scholten then explained that MDOT-MAA did a noise technical analysis in December 2018 on the FAA proposed changes from April 2018 (Slides 12-17). Mr. Scholten stated that the Technical Committee procedural changes included all the FAA’s proposed changes from April 2018. Mr. Scholten described the flight paths depicted on Slides 12-17 and noted that with the implementation of the DC Metroplex

departure flight tracks became more concentrated, especially west and south of the airport. He pointed out that in the FAA's April 2018 proposed changes, the concentrated 25 percent of departures heading to the west on the TERPZ departure procedure would be rerouted to a new departure procedure called the LINSE. Mr. Scholten pointed out other changes in the FAA April 2018 proposal, such as the shift south in some of the westbound departures and departures off Runway 15, and an eastern shift in some departures over the Annapolis Peninsula. He noted that the shift in departures over the Annapolis Peninsula was a change that the Roundtable did not support and asked the FAA to reconsider. For arrivals, some flights landing on Runway 28 would shift further north or further east.

**Note: The MDOT MAA's December 2018 presentation and analysis of FAA proposed procedure changes from April 24, 2018 can be found at:*

https://maacommunityrelations.com/media/client/anznoiseupdate/2018/MDOT_MAA_BWI_Marshall_April_24_FAA_Proposed_Procedure_Analysis_20181204.pdf

Mr. Scholten reviewed the goals of the Roundtable Technical Committee's proposed procedural changes (Slide 18). Mr. Scholten stated that the procedural changes were supported by the MDOT-MAA and Industry, and that tonight the Technical Committee was seeking the support of the full Roundtable to provide these proposed changes to the FAA. Mr. Scholten then moved on to an overview of the Technical Committee's procedural changes presented at the October Roundtable Meeting (Slides 19-22) starting with proposed changes to Runway 33L arrivals. These changes included:

Runway 33L arrivals:

- Relocating the RAVNN navigational point (part of the RAVNN arrival) north and west over a less densely populated area
- Creating a Continuous Descent Approach (CDA) procedure for arrivals from the navigational point RAVNN to SPLAT
- Creating a new procedure to send aircraft near the navigational point HAXAK, between the airport and the GRAFE navigational point from the RAVNN navigational point

Ms. Higgs asked what the benefits were of having aircraft fly to the SPLAT navigational point. Mr. Scholten replied that no published procedures exist for this area today and that under visual conditions, pilots descend and go to SPLAT at low altitudes since there is no procedural vertical guidance. He explained the Technical Committee's proposed changes would create a corridor with published vertical guidance between the RAVNN and SPLAT navigational points and facilitate continuous aircraft descents. Mr. Scholten emphasized that the creation of this procedure was not to increase the number of arrival aircraft that overfly the SPLAT navigational point.

Ms. Higgs stated it was her understanding the proposed change would not change the percentage of flights over the SPLAT navigational. Mr. Reese responded that there is no way to know at this time whether flights over SPLAT would change or stay the same. Mr. Roth interjected and requested that questions be held until after the presentation. Mr. Scholten concluded a review of the Technical Committee's proposals for Runway 33L by stating that the main benefit of the new procedures was to facilitate aircraft flying higher along the existing corridors used for visual approaches, relocate arrival

flight paths over less densely populated areas, and allow arrival aircraft to fly along Interstate 97 close to the airport.

Mr. Scholten then moved on to present proposed changes to Runway 10 and 15R arrivals. These proposed changes included:

Runway 10 arrivals:

- Shifting some arrival flight paths currently over the western portions of Columbia further to the east

Runway 15R arrivals:

- Adjusting aircraft approach altitudes to facilitate continuous aircraft descents

Mr. Scholten summarized the anticipated benefits of the Technical Committee's proposed procedural changes, including increased aircraft altitudes in all weather, leveraging CDAs for approaches, and new published procedures along existing visual approach corridors to facilitate higher altitudes and better distribution of approach operations.

Mr. Scholten then moved on to the flight track analysis of the Technical Committee's proposed procedure changes (Slides 25-27). He explained for the analysis, three distinct time periods were analyzed:

- **Pre-Metroplex:** January, June, July, and December 2012 (123 days)
- **Post-Metroplex:** November 2018, and February, May, and August 2019 (120 days)
- **Post-Metroplex with FAA proposed/simulated changes:** November 2018, and February, May, and August 2019 (120 days), modified to reflect the FAA's proposed April 24, 2018 procedure changes and Roundtable Technical Committee's proposed procedure changes

Mr. Scholten reiterated that the proposed procedure changes were modeled conservatively by HMMH and that if the FAA implements the proposed procedure changes, there is some variability in how aircraft may fly the procedures once implemented as well as how air traffic controllers may work the procedures. He also noted that only aircraft equipped with Required Navigation Performance (RNP) or Area Navigation (RNAV) would be able to fly the Technical Committee's proposed procedures. Mr. Scholten explained that only Jet aircraft operations are presented in the flight track graphics, but that all operations including Turboprop, Piston Prop, and Helicopters were included in the noise analysis. Mr. Scholten revisited the proposed changes for Runway 33L (Slides 28-42) as described at the beginning of the presentation including moving the RAVNN navigational point to the northwest, the establishment of approach procedures from the RAVNN to the SPLAT navigational point and along Interstate 97 inside of the HAXAK navigational point, continuous aircraft descents with higher altitudes, and better distribution of approach operations.

Mr. Roth took a moment to further summarize the proposed procedural changes for Runway 33L and revisited Ms. Higgs' earlier question. He stated that the addition of the new procedures, which facilitate

CDAs, will result in fewer planes flying at low altitudes. He explained in addition, the published minimum altitudes would be higher than they are today. Mr. Austin Holley added that with the published procedures, aircraft arrival altitudes will still vary, but would likely be closer to the published altitudes and less variable than they are today.

Mr. Scholten explained that the Technical Committee's procedural changes would also better distribute flights. He explained that for Runway 33L, approximately 50 percent of arrivals come from the southwest. Those flights currently approach BWI Marshall primarily using one of three navigational points: JANNS, SPLAT, and GRAFE. Mr. Scholten noted that with the Technical Committee's proposed procedural changes an additional navigational point would be added between the airport and the navigational point GRAFE, and that approximately 7% of Runway 33L arrival operations would join the final approach course at that new point.

Ms. Higgs commented that this would not result in fewer flights over the SPLAT navigational point. Mr. Scholten stated that in the modeling, the number of flights over SPLAT remained constant. However, if the Roundtable's proposed procedures were implemented, air traffic controllers may send aircraft to different waypoints, thus avoiding SPLAT and lowering the amount of flights over SPLAT. Mr. Reese added that the Technical Committee modeled the new procedure that uses the additional waypoint with a low flight density. He continued that Southwest Airlines, which accounts for 70 percent of the traffic to BWI Marshall, helped design this new procedure and waypoint. Mr. Reese noted the assumption is that Southwest Airlines would utilize the new procedure and reduce flights over SPLAT. Mr. Reese cautioned that results will not be known until the procedure gets reviewed by the FAA and the PBN Working Group; and, if implemented, the procedure will not be in practice for another two years. Mr. Reese concluded by stating that even after implementation, it will still take six to eight months of data review to get an idea of how the new routes will be flown.

Mr. Roth summarized that the modeling being presented was done with the Technical Committee's proposed procedural changes using historical data; in reality, because Southwest Airlines wants to fly the new proposed procedural changes, the future distribution of flights may be different from the historical data. Ms. Higgs asked how we know Southwest Airlines would want to use the new proposed procedure. Mr. Roth replied that Southwest Airlines proposed this new procedure, and it would ultimately save them money on fuel costs.

Mr. Scholten concluded the review of changes to Runway 33L arrivals by noting that the proposed procedure changes would move the RAVNN navigational point over less densely populated areas and would facilitate aircraft flying along Interstate 97 to the airport. Mr. Scholten briefly recapped the Technical Committee's proposed procedure changes to arrivals for Runway 33 left and highlighted that, due to the design of NextGen there would still be some concentrated flight paths.

Mr. Scholten moved on to discuss the Technical Committee's proposed procedural changes for Runway 10 (Slides 43-51). He stated that the main objective with Runway 10 arrivals was to shift aircraft east, closer to the airport, to provide relief for western portions of Columbia. He explained this objective

would be achieved by shifting the existing published arrivals and RNP approach procedure for Runway 10 closer to the airport and increasing aircraft altitudes.

Ms. Jung observed that many people in Columbia would still be living under flight paths of the proposed procedural changes and asked how the changes would help. Mr. Reese replied that planes would fly at a higher altitude. Mr. Scholten echoed that the flights would be higher, as well as shifted east. Ms. Jung replied that it looked like flight paths would be more concentrated under the proposed procedural changes. Mr. Scholten replied that a good amount of the arrival flight paths would be shifting east, adding that a lot of the benefit to those living in this area are from the FAA's proposed April 2018 departure changes. He reiterated that the results provided as much relief as possible given the limitations of existing technology and NextGen requirements.

Mr. Scholten moved on to the Technical Committee's procedural changes for Runway 15R arrivals (Slides 52-59) which included an increase in aircraft altitudes through the use of CDAs. He stated that Runway 15R is not used much, but that the Technical Committee saw the opportunity to increase aircraft altitudes through modifying Runway 15R approach procedures. Mr. Scholten concluded review of proposed changes to Runway 15R approaches by noting that the modeling for this analysis showed approaches with higher concentrations of flight paths that were likely to occur once actually implemented.

Mr. Scholten concluded his review of the Roundtable Technical Committee's proposed arrival changes and the FAA's April 2018 proposed changes to arrivals (Slides 60 – 64) by highlighting the following:

Proposed Roundtable Technical Committee arrival and approach procedure changes may:

- Shift some arrivals to Runway 33L over less densely populated areas along corridors currently used for visual approaches, better distribute operations, and facilitate continuous aircraft descents at higher altitudes with reduced power settings
- Facilitate continuous aircraft descents for some aircraft within the existing Runway 33L arrival corridor west of Annapolis between the South and Severn Rivers that allow for descents at higher altitudes and reduced power settings
- Shift some arrivals to Runway 10 to the east closer to the airport away from western portions of Columbia and increase aircraft altitudes on arrival and on approach that facilitate continuous aircraft descents
- Increase the altitudes of some arrivals to Runway 15R and facilitate continuous aircraft descents

Proposed FAA April 2018 arrival procedure changes may:

- Shift the flight paths of Runway 28 arrivals to the north as aircraft turn to the downwind leg near Wildwood Beach

Mr. Scholten moved on to the FAA's April 2018 proposed procedural changes to departures (Slides 65-69). Again, Mr. Scholten reminded everyone that the Technical Committee's proposed procedural changes assumed the implementation of the proposed FAA April 2018 procedural changes, and that the

figures and noise analysis included the FAA April 2018 procedural changes. Mr. Scholten summarized the FAA April 2018 procedural changes by highlighting the FAA's proposed procedures may:

- Shift Runway 15R initial jet departure turns southeast of 2012 and 2018-2019 turn locations
- Increase dispersion of Runway 15R initial jet departure turns relative to 2018-2019, but will not return dispersion to 2012 levels
- Shift flight paths for Runways 15R and 28 closer to 2012 historical locations to the west and south of Elkridge and Columbia
- Shift Runway 28 southbound departures over the Annapolis peninsula at altitudes of 8,000 – 9,000 feet; however, the Roundtable requested the FAA reconsider this proposed change
- Cause minor changes to aircraft altitude profiles
- Marginally increase the concentration of Runway 33L and 33R jet departures

Mr. Scholten next discussed the noise modeling analysis. He stated that the flight track data from aircraft operations from 2012 (pre-Metroplex), 2018-2019 (post-Metroplex/current), and 2018/2019 proposed (simulated) were analyzed using noise modeling software. He stated that all operations, both arrivals and departures, are included in the modeling and highlighted that although the figures previously presented showed only Jet flight tracks, noise from all aircraft types was included in the noise modeling. He also explained that some adjustments to the operations were made to match operations levels captured by the FAA to account for small numbers of operations that were either missing from radar data or were of poor data quality.

Mr. Scholten stated that the FAA's Aviation Environmental Design Tool (AEDT) was used to complete the noise modeling and that the noise results are reported in terms of the Day-Night Average Sound Level (DNL) metric as mandated by FAA for airport noise analyses. He explained noise results are shown as noise contours in 5-decibel increments from 55 to 75 decibels (dB) DNL on the forthcoming Figures. Mr. Scholten noted population counts were obtained from both the 2010 US Census and American Community Survey (ACS) 2016 5-year estimates to show how the population exposed to various noise levels may change between with and without the FAA and Roundtable Technical Committee's proposals (Slides 71-72).

Mr. Scholten reviewed Slides 73-75, which displayed noise contours from the modeled operations from 2012 (pre-Metroplex), 2018 (post-Metroplex/current), and 2018/2019 proposed (simulated), respectively. He stated that the big change in noise contours between 2018 (post-Metroplex/current) and 2018/2019 proposed (simulated) is the shifting of contours to the southwest of the airport, closer to pre-Metroplex conditions. In addition, Mr. Scholten highlighted the proposed FAA and Roundtable Technical Committee proposed procedures may:

- Slightly change the 65 dB DNL and greater contours
- Shift the 65 dB DNL and greater contours west of the airport to the south, due to changes in Runway 28 departures
- Shift the 65 dB DNL and greater contours southeast of the airport to the northeast, due to changes in Runway 15R departures and 33L arrivals

- Shift the 55 and 60 dB DNL contours west of the airport, associated with Runway 28 departures and Runway 10 arrivals, further to the south (away from Columbia and Elkridge) towards the historical location of 55 and 60 dB DNL contours from 2012
- Shift the 55 and 60 dB DNL contours southeast of the airport, associated with Runway 15R departures and Runway 33L arrivals, further to the south and west (away from Elmhurst, towards Severn)

Mr. Scholten explained that between 2018 (post-Metroplex/current) and 2018/2019 proposed (simulated), the population exposed to levels of 55 dB DNL and higher decreased cumulatively, with a net decrease in population exposed to 55 dB DNL of approximately 20,000. However, Mr. Scholten stated the population exposed to levels of 60 dB DNL and higher would increase with the Roundtable Technical Committee and Roundtable's proposed procedure changes.

Ms. Jung asked if the numbers in population account for another 8,000 [housing] units being built in the area. Mr. Chancellor replied that the Technical Committee had taken the new units into account, and they talked with the development company about this and about the downtown development. Mr. Roth directed Ms. Jung to changes in noise levels over areas of downtown Columbia. Ms. Jung replied that Columbia included other areas, including south along US-29 and included hundreds of new homes. Mr. Roth agreed with Ms. Jung but pointed out the Roundtable's position has been to revert to pre-Metroplex flight paths, and if paths revert back to those areas, they will experience increased noise. He stated that he wanted to be clear, that the noise contour mapping showed relief to the core of Columbia as well as areas of Long Reach and Oakland Mills.

Mr. Scholten presented Slide 77, which displays 2012 (pre-Metroplex) and 2018/2019 proposed (simulated) noise contours. He noted that the two time periods are not an apples-to-apples comparison due to the difference in aircraft fleet-mix and numbers of operations, but that the contours have the same general shape and the 2018/2019 proposed (simulated) contours show the Technical Committee's and FAA's proposed procedural changes shift the contours closer to where they were in 2012.

Mr. Chancellor, addressing Ms. Jung, stated that he was as angry and as frustrated as she is by all of this, but it should be noted that almost all of the change in noise levels are caused by what the Roundtable had already approved and sent to FAA for approval in January 2019. Mr. Chancellor stated that the Technical Committee's procedural changes made to Runway 10 would only come into play on days when the airport is in east flow operations, which is 30 percent of the time. He stated that most of the noise Howard County experiences is from Runway 28 departures, and changes to Runway 28 were already approved by the Roundtable. He explained that on east flow days, Howard County experiences continuous noise due to departures from Runways 28 and 15R, combined with the arrivals to Runway 10. Mr. Chancellor concluded by noting the decisions that were made to approve NextGen at BWI Marshall are a limitation to what can be modified by the Roundtable.

Mr. Chancellor stated that all the Technical Committee can presently do is try to mitigate the continuous noise problem. He stated that no one should leave the meeting thinking the proposed procedural changes are solving a problem, and that all the Roundtable can currently do is aim to help as many

people as possible within the technology limitations of NextGen. Ms. Jung affirmed her commitment to working to get relief for the people affected. Mr. Reese responded that making flight procedural changes is a long game, and that the Technical Committee's proposed procedural changes were the first step of many to come.

Ms. Higgs asked why the contours near the Severn River show 55 to 60 dB DNL, when she has a noise monitoring report for her home that shows 60 to 85 dB. Mr. Scholten replied that the DNL metric used for the Technical Committee's noise analysis modeled the sound level for specific period of time based on each data sample and explained that if a different sample period was used, there could be different results. Ms. Higgs stated that a study was done at a neighbor's home 18 months prior to the study at her residence, and their measured noise levels were 45 to 54 dB. Ms. Higgs commented on the difficulty of making decisions when the facts or correct noise levels are incorrect. Mr. Roth observed that the numbers are not necessarily absolute truth, but they provide a comparison of two situations with a comparable set of assumptions.

Mr. Scholten next described the DNL grid point analysis (Slides 79-83). He stated that the analysis extends further from the airport than the noise contours and is consistent with the type of analysis that the FAA would conduct to meet requirements of the National Environmental Policy Act (NEPA). Mr. Scholten stated that the grid point analysis shows how noise levels will shift with the proposed procedural changes, and that the grid points were based on a combination of a uniformly spaced grid and US Census population centroids.

Mr. Scholten pointed out the following locations with differences in noise between 2018 (post-Metroplex/current) and 2018/2019 proposed (simulated):

- Areas of downtown Columbia and south with 1 to 3 dB increases
- Areas of downtown Columbia and north with 1 to 3 dB and 3 to 5 dB decreases
- Areas of Severn with 1 to 3 dB decreases
- Areas South of Severn and along Interstate 97 with 1 to 3 dB and 3 to 5 dB increases
- Areas west of Annapolis with 1 to 3 dB decreases
- Areas over Annapolis with 1 to 3 dB increases

Mr. Klosterman asked if flights would be to the east or west of Interstate 97. Mr. Scholten replied that they would be right over Interstate 97 until they reach the Runway 33L extended centerline. Mr. Scholten stated that the increase shown in Annapolis was due to the FAA procedural change that the Roundtable had previously rejected. Mr. Chancellor reminded everyone that the FAA April 2018 proposal did not address arrivals and that many people in Anne Arundel County would benefit from the Roundtable Technical Committee's proposed changes and that most of the time spent by the Technical Committee addressed arrivals for this reason.

Mr. Holley described some of the Technical Committee's procedural changes in Anne Arundel County and some of the adjustments made to move flight paths. Mr. Chancellor reiterated that, for Runway 10 arrivals, the Technical Committee's procedural changes try to spread the noise to the extent possible. He stated that the FAA April 2018 proposed changes shift noise back to pre-Metroplex areas, but in a much

more concentrated way. Mr. Chancellor stated that there is no way to change flight paths intersecting over Columbia, but suggested people think about the flight paths in the context of an overlay with departures high and arrivals coming in below. The procedures push the flights higher and require CDA, so there is more separation between the two. Mr. Chancellor stated he believes the noise modeling does not fully tell the story, but the lived experience will be different and better.

Ms. Jung stated that it would be difficult for an elected official to sell the Technical Committee's procedural changes to Howard County. Mr. Chancellor restated that the Roundtable does not own NextGen or RNAV and did not cause these problems. Ms. Jung agreed.

Mr. Roth stated that the Technical Committee's proposed procedural changes reduce noise in Elkridge, Hanover, Long Reach, Oakland Mills, downtown Columbia, and Wilde Lake, and the proposal takes planes that rarely flew over the people in those locations and puts them back where they were pre-Metroplex. Ms. Jung agreed, but added that the planes would fly in concentrated flight paths, as opposed to the dispersion experienced pre-Metroplex. Mr. Holley added that the superhighways caused by RNAV are not going away.

Ms. Reese pointed out that the changes being proposed are incremental and stated that reversion to pre-Metroplex flight paths were adopted as part of the Roundtable charter. Mr. Roth asked whether the changes would be better or worse than leaving current flight paths. Ms. Jung responded that there would supposedly be a change for 20,000 people in a county of 330,000. She wondered if, with all of the development in Howard County, what that number will be in three more years when the changes are finally made. She acknowledged that the Technical Committee was doing the best they could.

Ms. Reese, addressing Ms. Jung, stated that she would not sell the Technical Committee's proposed procedural changes as great. She believes it has been a terrible process but gives a lot of credit to her fellow Roundtable members for their efforts. Ms. Reese stated that they have to make something happen with the cards they were dealt. She also noted the need for an elected official at the federal level to take action.

Mr. Verchinski and Ms. Deckert both agreed that the changes were small, though a step in the right direction. Mr. Reese encouraged new members of the Roundtable to review prior meeting minutes and information to see some of the early interactions with FAA and described them as bloody fights that the Roundtable lost. Mr. Reese stated that they could sue FAA as a recourse, which is happening, and they could pursue their congressmen and women as well as senators to get the FAA Reauthorization Act changed. Ms. Jung replied that going to the state level could also be effective, since the state owns the airport. Mr. Reese agreed with Ms. Jung but believed that is an issue for a future Roundtable meeting.

Mr. Reese noted that the Technical Committee's procedural changes are what they can achieve now and reiterated that getting these procedural changes in the upcoming FAA PBN Working Group cycle would be significant. He explained if the FAA rejects the procedural changes that are supported by the MDOT MAA and Industry, it would look bad for the FAA. Mr. Reese commented that if the FAA does not accept the procedural changes into the upcoming PBN Working Group cycle, it would either be out of spite or laziness. Mr. Reese continued and noted if the FAA grants acceptance of the procedural changes, we

would be the first Roundtable in the country to have achieved design of procedural changes with the state airport authority and industry and stated that if the Roundtable can eliminate the FAA's reasons to say no, it will have to entertain and implement the requests. Mr. Reese highlighted that if this effort is successful then the Roundtable can iterate through this process multiple times along with other Roundtables around the country.

Mr. Reese stated that the Technical Committee's procedural changes are not what everyone wants but can potentially improve the lives of up to 20,000 people. Mr. Klosterman asked if the community gives up any options or any leverage if they vote yes to submit the Technical Committee procedural changes to the FAA. Mr. Roth stated that the Roundtable vote to send the Technical Committee's procedural changes package to the FAA PBN Working Group would allow the MDOT MAA to be a member of the PBN Working Group. He continued that voting to send the Technical Committee's procedural changes to FAA would not prevent additional changes during the PBN Working Group process.

Mr. Shank added that if the FAA PBN Working Group accepts the Technical Committee's procedural changes, it will go through an Environmental Assessment process under NEPA which would be open to public input and changes. Mr. Roth clarified that prior to the public input stage, changes could be made during the PBN evaluation period; and, if the Roundtable voted down the proposal to send the Technical Committee's procedural changes to the FAA, they would have to wait at least another year to get into a future PBN Working Group cycle. He stated that while the Technical Committee's procedural changes do not solve every problem, getting into the PBN cycle now is better than waiting another year. Mr. Klosterman asked if the FAA could demand something of the Roundtable in exchange for adding the Technical Committee's procedural changes to the PBN Working Group. Mr. Reese replied that having MDOT-MAA and Industry on board with the proposal should highly restrict the FAA's leverage.

Mr. Verchinski asked if the Runway 28 procedural changes proposed by FAA in April 2018 were already through the PBN Working Group. He recalled that the Roundtable sent a letter stating agreement with those changes in January 2019. Mr. Reese replied that the PBN process was delayed due to funding and staffing that required the FAA to wait until 2020. Mr. Reese noted this delay allowed a window for the Roundtable to propose additional procedural changes.

Mr. Verchinski asked if the PBN Working Group already started, if the Runway 28 procedural changes were further along in the process of being reviewed than the Technical Committee's procedural changes and requested an update on where the FAA was in the process. Mr. Reese explained that the Technical Committee, with the help of HMMH and Industry, essentially did the PBN's analysis of the procedural changes. HMMH used the same software the PBN Working Group uses, and Industry created models to prove the aircraft can fly the Technical Committee's procedural changes. Mr. Reese stated that the package the Roundtable delivers to the FAA will contain all of the software files and results, and that the Technical Committee's work has fast forwarded the process.

Mr. Roth stated that he has reestablished contact with the FAA and has a monthly call with them. Furthermore, he noted the FAA are well aware of the Roundtable's displeasure with the lack of consideration for arrivals in the procedural changes the FAA presented in April 2018. Mr. Roth explained

to the FAA that the Roundtable intends to deliver its own procedural changes with the backing of the MDOT MAA, Industry, and the surrounding communities and that the FAA are looking forward to receiving this information.

Mr. Roth stated that there is little downside to moving forward and delivering the Technical Committee's procedural changes to the FAA, and that changes can still be made during the PBN cycle. He warned that a negative vote by the Roundtable regarding the Technical Committee's procedural changes would mean they would get nothing from the FAA for at least a year and believed a negative vote may damage their current relationship. Mr. Roth concluded by stating that the Roundtable has the best people working on the procedural changes and the full support of the MDOT MAA and Industry to implement them.

6. MOTIONS (MOVED FROM 7 ON THE AGENDA)

Approval of Technical Committee Proposals

Mr. Klosterman made a motion for the Roundtable to accept the Technical Committee's procedural changes and send them to FAA for inclusion in the upcoming PBN Working Group. Mr. Reese and Mr. Woome seconded the motion. A majority of the Roundtable voted to approve the motion with the exception of two members. Mr. Snead did not vote as he was not yet a member of the Roundtable and Ms. Jung abstained. Mr. Roth thanked everyone for their hard work and Mr. Holley noted the Herculean effort by Mr. Scholten and HMMH to get the noise analysis complete and thanked them. Mr. Holley also thanked Mr. Shank, MDOT-MAA, and Southwest Airlines for their assistance and support.

State Legislature requests from Roundtable

Mr. Howard Johnson, on behalf of the Legislative Committee, brought forward a motion for the Roundtable to endorse the efforts by the MDOT MAA, local, state, and federal representatives to conduct environmental studies on health, considering both the physical and mental effects of airport noise on surrounding communities, and to properly fund noise monitoring equipment to validate modeling. Mr. Roth announced the motion, and Mr. Reese seconded the motion. A majority of the Roundtable voted in favor of the motion, with Ms. Lacey abstaining, Ms. Jung no longer in attendance, and Mr. Snead again not voting as he was not yet a member of the Roundtable.

7. PUBLIC COMMENT (MOVED FROM 6 ON THE AGENDA)

Mr. Roth moved on to public comment.

Mr. Jimmy Pleasant of Ellicott City stated that he lived under the superhighways of flight paths in Ellicott City. He had a noise study done in the summer and the highest reading recorded was 82 dB. Mr. Pleasant stated that 300 aircraft were in his area yesterday. He stated that moving the aircraft over other homes is not going to solve the problem. Mr. Pleasant concluded by suggested putting a cap on the amount of flights per flight path.

Mr. Mark Peterson of Elkridge noted that Executive Director of the MDOT MAA, Mr. Ricky Smith, MDOT Secretary Mr. Pete Rahn, and FAA Eastern Regional Administrator, Ms. Jennifer Solomon, were all absent from the meeting.

Mr. Michael Bahr of Harmans Woods stated that his property is still getting hammered by departures from Runways 15R, 28, and 33L, especially during runway construction. He observed aircraft taking a sharp left turn and flying low. Mr. Bahr asked why planes with stage three engines are allowed to fly out of BWI Marshall and noted that he has frequently observed loud aircraft such as the McDonnell Douglas MD88, a Russian Antonov cargo plane, and fighter jets among others.

Ms. Laura Donovan of Glen Burnie asked if the intention was to adjust flight paths to fly directly over Interstate 97 or just fly near it. Mr. Roth, Mr. Chancellor, and Mr. Reese replied that the intent was to stay over Interstate 97 as much as possible.

Ms. Mary Kanasar of Severna Park thanked the Roundtable for their hard work. She stated she lived near the navigational point SPLAT, and although there did not seem to be much change for her area as part of the Technical Committee's procedural changes, she was glad changes were being made. Ms. Kanasar specifically thanked Mr. and Ms. Reese for their technical expertise. She asked what percentage of planes use RNAV or RNP. Mr. Shank stated an approximate total of 68 percent. Mr. Reese added that almost all aircraft will be RNP compliant by 2022. Ms. Reese stated that although there is not a significant decrease in anticipated flights over SPLAT, the aircraft would fly at a higher altitude and on a CDA.

Mr. Mark Cisneros of Lake Elkhorn and Columbia thanked the Roundtable for their work and made the point that reverting to 2012 flight paths would not be the same because the flight volumes are a lot higher now. In addition to the noise, he also finds the smell of Jet fuel to be a problem. Mr. Cisneros also stated that he was unsure of what the constant flights were doing to air quality, and that his child requires headphones to sleep at night because he thinks the planes are thunder. He fears that the Technical Committee's procedural changes will make it worse where he lives. Mr. Reese replied that the altitudes would be higher, and Mr. Roth stated that the procedural changes would limit visual approaches that allow planes to drop to 2,000 feet between 15 and 20 miles out from the airport. Mr. Cisneros stated that his area is also affected by departures. Mr. Roth added that Senator Lam is introducing legislation to fund studies to document the environmental and health effects of aircraft flying overhead.

Mr. Brent Girard of Senator Chris Van Hollen's Office stated that he recognized the Roundtable's stance that the Technical Committee's procedural changes would help more people than they harm, but pointed out that there are areas that would be impacted under the procedural changes that were not impacted pre- or post-Metroplex. He asked if it was true that communities who do not know the horrors of NextGen would be exposed to the horrors of NextGen, and if so, whether the Roundtable has a plan to reach out to those communities to request participation in this process before the procedures are implemented.

Mr. Roth replied that new communities impacted by the procedural changes currently have representation on the Roundtable to allow their concerns to be heard. Mr. Reese replied that it was unknown whether communities who do not have impacts currently would get impacts after implementation of the Technical Committee's procedural changes. He stated that the projections are from a model, and the model has flaws. Ms. Reese replied that without any help from federal law makers, the FAA can continue to implement changes and cause negative impacts. Mr. Girard explained that he needed to understand the potential consequences of the vote to submit the Technical Committee's procedural changes when he reports back to Senator Van Hollen. Mr. Roth replied that it is not possible to make changes under the circumstances we have that do not have a negative impact on somebody else, but the Roundtable is doing the best it can.

Mr. Roth asked attendees to reach out to the Technical Committee if there were any observed gaps in the analysis, and the Technical Committee would bring those matters to the attention of MDOT-MAA and HMMH. Mr. Shank confirmed that MDOT MAA would review requests for changes.

8. PLANNING FOR NEXT MEETING

Mr. Roth tentatively scheduled the next meeting for Tuesday, January 21, 2020. He stated that he hoped the FAA would be able to confirm by that time that it would review the Roundtable Technical Committee's proposals. Mr. Roth noted he would like to invite Ms. Jennifer Solomon, Eastern Regional Administrator of the FAA to attend the January 2020 meeting. Mr. Woomer motioned to adjourn. Ms. Reese seconded. All were in favor.

9. ADJOURN

The meeting adjourned at 9:47 pm.