

Charlotte Airport Community Roundtable (ACR)

Unapproved Summary Minutes: April 7, 2022 – Special Meeting of the ACR

Attendees

Kurt Wiesenberger, Chair, Charlotte
Phillip Gussman, City 1
Darren Crosby, City 2
Bobbi Almond, City 5
Doug Pray, County 1
Mark Loflin, County 6
Sayle Brown, Cornelius
Sam Stowe, Gaston
Walter Ballard, Lincoln
Kim Hardee, Matthews
Thelma Wright, Mecklenburg
Jacob Pollack, York

Gene Reindel, HMMH (Technical Consultant)
Sarah Yenson, HMMH
Stuart Hair, CLT (ex-officio)
Dan Gardon, CLT
Kevin Hennessey, CLT
Ted Kaplan, CLT
Amber Leathers, CLT
Michael Pilarski, CLT
Chris Poore, CLT
Ed Gagnon, CSS, Inc. (Facilitator)

Summary Minutes

❖ Open the Meeting

- Wiesenberger: Thank you and welcome to all. I appreciate everyone taking time out of your lives to talk about this important amendment to one of our Recommendations. At this time, I would ask if there are people on the call that are not a part of the ACR, CLT, HMMH, etc. who are not normally on our calls?
None.
- Hair: I do not see anyone on the call that is an elected official or someone who is not a normal participant. I do want to acknowledge that we have a good representation of staff from CLT. Ted Kaplan, our chief business innovation officer, is with us. Ted has been the executive sponsor of this group. We also have Amber and Mike from our planning team. Amber is the director, and Mike is one of the planners. We also have Chris Poore - strategic coms team.
- Gagnon: That is it for people not typically on the call, Kurt.
- Wiesenberger: We are here to discuss Agenda Item #2 which is – Update on Moving Forward – the information we were expecting to receive from CLT on the FAA’s alternative proposal to Recommendation #3. That includes some information from HMMH.
- Hair: Just to clarify that this is a Special Meeting, not a normal meeting. That is why we are not doing a lot of the things that we would do in a normal business meeting, such as receiving public input, or adopting minutes or any of the normal activities. This is a Special Meeting, and according to North Carolina Open Meeting Laws and Robert’s Rules of Order, which are our dictating guidelines, we have also consulted with outside specialists on this topic - we can receive briefing during a Special Meeting, and then you all can vote – take an action – after the Special Meeting adjourns. That is our purpose here tonight. After the briefing from HMMH as Kurt said on the alternative from the FAA on Recommendation #3, Ed will talk about how you will vote. Unless there are questions about Special Meetings, I would ask Gene and Sarah from HMMH to provide the briefing.

❖ Update on Moving Forward – Monitor, Engage, and Improve (25 Mins.)

- Reindel: Sarah and I will tag team. I will set the stage. This is to bring you the analysis for all that we have done for all the measures that you, as a body, reviewed, suggested and ultimately submitted to the FAA for their consideration. This analysis that we are bringing tonight is specific to ACR Recommendation #3 and specific to what the FAA came back with because they could not implement your Recommendation #3 as suggested by you. We will go through what Recommendation #3 was to bring everyone back up to speed. I

know that it has been awhile, and we also have new members since the submittal of the ACR's Recommendation to the FAA.

- Yenson: First a review of original Recommendation #3 as proposed by this group, and then we will talk about the FAA's proposed changes to Recommendation #3 and the results that are similar to the results of the original Recommendation #3. Let me set some background: Recommendation #3 addresses the CHSLY STAR, and currently the CHSLY STAR has the aircraft leveling off on the north flow east downwind at different altitudes depending on which runway they will be using. As you can see, 18L they level off at 4000 feet, at 18R at 5000 feet, and at 18C at 6000 feet. The separation in altitudes is related to maintaining the vertical separation between parallel landing traffic during this turn from the downwind legs to the final approach legs.
- Reindel: I want to explain what is a downwind. If you see that bluish shaded area there – Slide 2 – that is the area of the CHSLY STAR. You can see the airport in the upper middle of the graphic, and you see the red lines – what happens is the aircraft comes into the airspace from the top right, and that blue area is known as the downwind leg. They are flying with the wind at that point, and then they come down, make a turn that is called a base leg, and then they turn on the final approach - which is where they are lined up to the runway in order to land the runway. Aircraft typically arrive and depart into the wind. So now they are flying into the wind as they approach the runway. The shaded area is what the ACR recommended to be raised 1000 feet the way that they were prior to Metroplex – Slide 4. This slide shows the red being pre-Metroplex and the green post-Metroplex. You can see that there is about 1000 foot change in altitude on those procedures.
- Yenson: You can see roughly those 3 altitude bands in the red where the traffic is stratified. The intent of Recommendation #3 was to bring the altitudes on CHSLY closer to Pre-Metroplex altitudes. The upside of having that Recommendation would be to reduce the noise impact to approximately 80,000 residents in the Charlotte area. This proposal said that we could raise the altitudes at CAATT and EPAYE, which are two waypoints along the downwind. So those would be raised by 1000' each. Currently they are at 9000 for CAATT and 6000 for EPAYE, so the proposal would be to raise CAATT to 10000 and EPAYE to 7000. We did an analysis of this Recommendation prior to submitting this to the FAA, and this shows the results of that particular analysis compared to the 2018 baseline.
- Reindel: So what we are showing here - and we are not showing the scale so I cannot tell you exactly by the different colors the number of events over 70 - but everywhere that you see color that is not white, those are showing grid points where they have at least one noise event above 70dB in annual average day of operations. The area that you see circled in red is the area of the east downwind on the CHSLY procedure. You can see on the left side on the baseline, you are getting some noise events above 70 on that downwind leg. You also see that on the west side on the downwind leg as well – there are noise events above 70. Now there is a little bit of a blip up north. That is probably similar to the same thing. We don't know why it doesn't exist to the north, but it is worth talking about that we did not analyze any noise events above 70 when they are flying and landing from the north to the south - which would be the downwind legs. Not to say that they are not experiencing similar noise levels, because they are, but our analysis did not show that they were experiencing noise events above 70. What is being shown is that if you raise the altitude back up 1000 feet to the way it was before Metroplex was implemented, you would basically remove that set of population that would experience any noise events above 70 decibels.
- Yenson: Slide 6 reshows that information but in the inverse – you can see the areas that would benefit. There is a large blob in the area that would experience fewer events above 70dB. The table on the left shows you the same information but in a numerical, quantitative aspect. At the bottom is the takeaway – no people would experience more events above 70 dB, but there would be an increase of people (709 grid points or 80,000 people) experiencing fewer events above 70dB.
 - Next, we will move to the FAA's proposed alternative. Their alternative was not only to raise the altitudes on the CHSLY arrival but also to raise altitudes along the same downwinds along the other arrival procedures in order to achieve symmetry in the area. This would affect both north and south flow on the downwinds to the east and the west of the airport. This figure (Slide 8) just gives you an idea of which waypoints would be affected and where they fall in a geographical sense. The original ACR Recommendation as we just discussed was to increase the altitudes at CAATT and EPAYE to 10000 feet and 7000 feet, which is 1000 feet higher than what is currently charted. That included no increase

in miles flown or any change to flight tracks. The FAA proposal changes the other STARs to 1000 feet higher than the current restrictions. As the figure shows, this impacts AAIRE, JRDEN, CEDOX, VALLL and LEEKS. AAIRE, CEDOX and LEEKS raised to 10000 feet, JRDEN and VALLL raised to 7000 feet, and HANDO in the northeast corner stays at 8000 feet. The next couple of slides – 9 and 10 - show the estimated flight tracks that we modeled for this analysis. Slide 9 shows the runways 23 and 36. The blue lines show the downwinds for these arrivals, and the black lines show the final approaches. It gives you a sense of the density of these proposed tracks that presumably would result if implemented. As we mentioned, the aircraft level off at different altitudes depending on which runway they will use. Most aircraft use 36L, which level off at 5000 feet. During this analysis we noted that about 60% of aircraft using these particular arrival procedures result in events of 70dB on these downwind legs. Slide 10 shows a similar graphic, similar tracks for north flow on runway 05 and 18. Again they level out at different altitudes this time - 5000 feet seems to be common with 20% of traffic using that one. However, on this one, we found that about 40% or fewer of the operations on these legs did not result in events above 70dB. This is what Gene was pointing out earlier. We did not necessarily see those contours of increased events, but that does not mean they do not exist. The modeling did not bring it to our attention in this case. This slide – 11 – shows a comparison of 2018 Baseline and the FAA’s proposed Recommendation #3. As you can see the 2 blobs to the south show areas of benefit. Those are now removed in the modeling for the FAA’s proposal. The people to the south under the 2 downwinds would see fewer events. And the small stub that was pointed out earlier in the northwest corner – that has gone away. People up slightly to the northwest would see some benefit, as well.

- Reindel: In 2018 we had about 60% of the aircraft arriving in what we call north flow - arriving from the south and departing to the north - and that could have played a role in the modeling coming up with the number of events above 70 and why we did not see as many up to the north. What I want to convey is just because we did not reach 70 dBs in the model, it could have been 68 or 69; I would contend that the noise in those 4 areas that are circled in red are going to experience similar noise levels, and just because they did not reach the level of N70 in our 2018 data, does not mean that they don’t experience similar noise levels. I think while the benefit we are going to show to the N70 is really mostly concentrated to the areas south of the airport, I would contend that the proposal that the FAA is putting before you would also get similar reduction in noise to those downwind legs to the north, as well. So, I think the benefit is to all 4 of those red ovals. I just wanted to share my thoughts on this even though the model is not showing the same number of events above 70 to the north on these downwind legs.
- Yenson: This shows you what we modeled primarily to the south of the downwind, although as Gene says there is potential for people to the north of the airport to benefit as well; it is just not depicted in these results. You can see a faint green blob in the north that does show a benefit.
- Reindel: I would say that the reason that we are focused on the N70 is that was one criteria that the ACR came up with to evaluate whether there would be benefits to proposals that they were recommending. The ACR had HMMH do a lot of evaluating of analysis like this to see if we are going to get benefit, and one of the ways to get benefit is in the reduction of noise events above 70dB. That is why we are giving you this information in terms of N70.
- Yenson: This is the selected metric for this case. Slide 12 – No one is going to see increases in events above 70 dB, but there are people who will benefit. This analysis shows that 812 grid points/92,000 people would see a reduction in the number of N70 events. Still about 2% of grid points, but instead of 80K people now it shows 92K people experiencing less events. That is 4.2% of people compared to 3.5% approximately. In summary, the FAA alternative Recommendation raises altitudes on all downwind arrivals by 1000 feet. It largely eliminates events above 70 dB along downwind legs of both north flow arrivals, and we conjecture that people under the same areas in south flow will benefit - it is just not captured in the data here. That translates to about 100,000 people experiencing fewer events above 70 dB from these aircraft arrivals. Again, that could be higher, but it is not captured in the data because of the N70 criteria. One caveat is that because of the increased altitudes, it may be necessary for arriving aircraft to extend their downwinds a little farther in order to reach their appropriate altitude before turning base to final. They need to reach a certain altitude before turning in order to meet the distance profiles. We do not expect the people in those areas to be newly overflowed to experience N70 events until the aircraft reach the final approaches. So, there may be additional noise events, but the modeling has not depicted that yet.

- Reindel: Again, it is based on the N70 criteria. Some areas may experience slight increase in number of operations, but those operations would not result in noise events above 70, so we really focused this analysis on N70 and to show the benefits of raising those altitudes without increasing N70 somewhere else. I have explained this before – if you push a balloon and you eliminate it somewhere, it shows up somewhere else. Our analysis did not show that it actually would, in this case, show up somewhere else.
- Wright: With the altitudes higher, will they have to drop down quicker to reach the altitude they need to arrive on, and will this increase the noise for those persons who are closer to the airport?
- Yenson: Our thinking is that they will have to extend the downwind farther away from the airport in order to maintain that reasonable descent angle. Unless the FAA goes ahead and requires that in terms of an approach, and I don't know if they would because there are criteria on how the descent gradient can be used for procedures. I don't believe that would be the case, and that is not what we were modeling for these procedures.
- Wright: I have a follow-up question. Knowing there is no positive effect for myself because of my location, but for those persons living in the southern area, Fort Mill, Rock Hill because the downwind will now be extended, are they going to have more noise? Is their noise level going to increase?
- Reindel: As we said, the raising of the altitudes could push some flights further north on a south flow day and further south on a north flow day. They would not reach the ACR criteria of noise above 70 dB. What is really creating this is while they are on the downwind, remember they are also at level flight - meaning they are at quite high power settings. Once they are given their clearance to turn onto base and final and cleared to go to the airport, they are more on a typical glide path at that point and they are no longer using higher power settings. That is why you are getting these reductions in N70 events.
- Pollack: I wanted to ask about the topic of extending the distance of the base leg, as it was put. I raised this in my email. This relates to the continuous descent question that came up in the prior meeting. Why is it not possible when raising the altitude 1000 feet on the downwind to not turn base at that higher altitude at the normal distance and come in 1000 feet higher and pick up the continuous descent line, and then just descend in. That is based on an understanding that they are coming in at an angle that is shallower until they hit that continuous descent line – why not just pick it up 1000 feet higher? Then you don't have to extend down further north or south and give relief to people under the rails because you would be cutting your throttle - then come in at 150 knots instead of 160 and that will cut noise. This would avoid the loss of time. It sounds like it will take more time to get to the airport.
- Reindel: That is the analysis that we did with our flight tracks. We saw – here is the altitude they would be at by raising them 1000 feet so how is that going to result in every one of those specific tracks that flew in 2018. These are not model tracks - they are specific tracks and how they flew in 2018. So what we did is we increased them all 1000 feet and quite frankly, they will not turn them onto final until they are at or close to at or below that glideslope that you talked about. So, they have to bring them further down than some are currently in order to make that turn to base and final. Now it did not result in a lot of aircraft going further south than they do today. It did eliminate some to the north being able to turn earlier than normal, and that is just because we were requiring everything to be 1000 feet higher. The FAA could also during slower times allow an aircraft to descend even below those altitudes and actually turn in, which would still not create N70 because it would be more of a reduced power setting. Just the fact that they are 1000 feet higher on average means they would have to fly further south or north before they are given that clearance to base leg and final.
- Pollack: I'm just trying to understand. So, on the final approach when they turn in, is that a 3 degree angle going back 12 miles? My understanding is that they are coming in at a lower altitude than the line projects out to until they pick it up at 6 to 7 miles out, and then they slow way down and start to glide in. So is there room, if you're picking the planes up on the downwind to come in at higher altitude on final approach and pick up that 3 degree, if it is 3 degree, continuous descent line further away from the airport and then glide in - rather than at the current altitudes?
- Reindel: It is all possible. It is a very congested, busy airspace that we have in Charlotte. The FAA works diligently to get these aircrafts lined up. You not only have the aircraft on the downwinds, but you have aircraft coming – say it is a north flow day - you have people going south on these downwinds and you already have people lined up on the runways in order to fly directly from the south and not be on the

downwind, and you have to mix all that traffic together. You also have departures over the top of some of these, so you have to keep them down so that the departures can actually get over the top of them. There is so much going on here, and I can talk for hours on this. The whole airspace has to work in harmony together, and that is FAA's jobs. Quite frankly, I am delighted that the FAA says they can raise these 1000 feet because that probably is going to have an effect on all these procedures, not just the downwind procedures. I understand what you are saying and certainly the FAA, the airlines, all want the aircraft on the ground as soon as they can because it saves fuel, it saves effort and time, it helps the controllers and the traffic. Everyone is trying to do that - it is just working in this airspace, sometimes you have to take them further south before turning them in.

- Gussman: Gene, we are looking at our expanded area that we updated about a year and a half ago, correct?
- Reindel: Yes.
- Gussman: My comment to all ACR members is that – one key part of this is that this was one of the few things that we looked at that would decrease noise without adding noise somewhere else. We looked at a lot of ideas during this process where we were moving noise around to see how best to manage it. This was one where the noise was pushed farther up, and when they came back with more waypoints, the reason why we are rushing to get this approval is because we all said “oh yes.” But I will say it is a “yes, and” some of the other ideas we should continue pursuing. But this being one of the few things we know reduces noise without pushing it somewhere else, this is what we need to pursue as soon as possible.
- Pollack: Is that true though? They said it would push the noise south. If you do what I am suggesting, it would do that, but with this does it push the noise further south and north.
- Gussman: So, they are pushing noise further south potentially, but if you have been on the south leg where they are turning right now, as you probably are, it's loud because they have been running at level flight and they all of a sudden shift and turn the corner. If they do that 1000 feet higher, even if it is a little further out, we're probably going to see fewer people impacted, and certainly fewer people impacted by the N70.
- Reindel: And that is key, Phil. It is really about the N70. Some operations are just going to have to go further south or north because they are 1000 feet higher. Not all of them will. That is what our analysis showed. Not all of them will have to go further south or north. That is not the case. Some are in a position to turn sooner. But those operations will not reach the level N70, which was the criteria that the ACR developed and thought was a good criteria to use.
- Gussman: I would say that we thought that was a good starting point. Once we reached that, we will work on making it better for more people.
- Brown: Thank you for your analysis, Sarah and Gene. I have 2 points. EPAYE and CAATT, they are raising it 1000 feet. That is great. I am up in the northeast – Cornelius and Davidson. HANDO they are leaving it alone. The problem that we are having up here is on the downwind leg on a southern landing flow, even though they have a higher altitude, the controllers are cutting the corner and descending the planes down to MSA – minimum sector altitude – 3500 feet, coming right over Cornelius and Davidson. They are screaming right in at high power setting, at final approach fix at 3500 feet. Is there any way we can keep them from doing that? If you take it further up north and go over HANDO, you're over the main channel - that is community friendly up there. There is no one living over the main channel of the lake. But when the controllers are turning them in early, they are coming right over Cornelius and Davidson. I understand the FAA is going for safety and efficiency. That is all they care about. I think we need to have something to force them from making those turns early. In a northern flow scenario, the same thing is happening to people down south. I appreciate them saying they can raise the altitudes. What is going to keep them from cutting the corner early and descending to final approach at 3500 feet? That is my only concern. Gene and Sarah, you do a great job. But I think there should be some way to get the FAA to be a little more community friendly and not cut those corners. This is on the controllers.
- Reindel: There is a lot of merit to that. Unfortunately, it is not something that the ACR has recommended to them, as of yet. That is something that the ACR should put on their list. This is not a “one and done.”
- Brown: I think we did address that by asking for 6000 feet minimum altitude.
- Reindel: Yes, you are right, but there might be other ways to tackle that.

- Crosby: My take on this is that it is a good thing. Getting ATC – air traffic controller – getting them accustomed to these higher altitudes is the first step. Once they get comfortable with it, then they can start moving for making changes to fine tune it more. The other question I have, and I have done a little research on it, is the glideslope degree is set at 3 and that is pretty much across the nation. There are some airports where it is higher. Most aircraft are not approved to do a higher than 3 degree glideslope. Most of them are certified at 3.25. Has there been any consideration in increasing the glideslope? Any little bit helps. If you do the math, at 5 miles out you're not much higher - 30 feet difference per nautical mile. Don't know whether the safety outweighs it.
- Wiesenberger: I am continually impacted by approach glideslope where I live, but I think that tonight's meeting, we ought to limit our discussion because we planned only 30 minutes. There are a lot of issues. Darren, you bring up a good issue and as Gene recommended, we need to keep these things for future recommendations for the FAA. The purpose of tonight's meeting was to consider the FAA's change in our Recommendation to go from 2 waypoints altitude level increases to 7. I think we need to limit our discussion to that.
- Gagnon: Thank you for that, Kurt. Jacob, Darren, and Sayle all brought up good topics for a future meeting. To Kurt's point, are there any other questions specifically about the HMMH analysis? After that I will describe what the process will be for voting on this alternative proposal from the FAA.
- Loflin: Just a brief comment. I'm sure that CLT has signed off on this, or we wouldn't be here. I did not hear any negatives. Sometimes that is concerning. Are there any negatives?
- Reindel: Some aircraft are going to have to fly further south or north because they are up higher. I think we have discussed that.
- Hair: I needed to see this analysis a couple of times. It kept coming back better and better. While I don't think it solves everything, from a CLT perspective it is a reasonable thing for you all to recommend.
- Pollack: On the different levels for the different runways that they are coming in to – 4000', 5000', 6000' – I am just curious as to why one runway is one level and another a different level? What leads to this?
- Reindel: So, the aircraft, while they are on different downwinds, one's on the east side, one's on the west side, whether they are going north flow or south flow, they have to maintain 1000 foot elevation and separation in order to turn them in towards each other. Because eventually they have to turn towards one another to get on those downwind legs. To do that it is required, and it will never change, unless the FAA finds some way to keep flights safe without 1000 feet separation in altitude; that is why it is there. The least used runway is highest because they want them lower if they can have them lower. They put the highest altitude on the least used runway and make sure that all of these aircraft when they are turning into one another, they have to have 1000 feet separation in altitude.
- Gagnon: Thanks, Gene. Immediately after this meeting I am going to send an e-mail to all ACR members – I will copy Dan Gardon, Kevin Hennessey and Stuart because I know that Dan is out of the office. I will send the e-mail that will have this alternative proposal motion and ask you all to reply by 9a tomorrow morning. Replying All will just go to myself and CLT representatives. The focus of this motion is the alternative proposal that was just analyzed and presented by HMMH.
 - Motion is: *To submit to the FAA their Alternative Proposal to raise altitudes on four arrival procedures (7 waypoints) from the ACR's original proposal to raise altitudes on one of the four arrival procedures (2 waypoints).*
 - Basically adopting and submitting to the FAA what HMMH just presented. We will be looking for, since this is a formal submittal to the FAA, a 2/3rd majority of votes in favor of this for it to go to the FAA. We will let the ACR know how the vote goes. Dan and CLT have already put together a cover letter that accompanies this type of information, and we have all been coordinating with Kurt and Phil on the process and how this will work.
- Wright: This may already have been stated. This Recommendation will look like a win for the FAA as if they are responding to our desire for accommodation for excessive noise v. a win on the back side for the ACR's efforts in Recommendations that we have submitted after 4 years. I guess I am being a little bit of a pessimist or something. Is this going to be a win for the FAA for accommodating some concerns of a community, but it really doesn't address totally what our concerns have been, but at least it is a response?

- Wiesenberger: I completely disagree. They have gone beyond our one Recommendation #3 and increased it 3-fold to have a much bigger impact on the community than what we originally recommended. Sure, they may use some public relations methodology to say they had a win, but I say we have a bigger win – we recommended it in the first place. First of all, it has to get approved. There is likely years of study to get this implemented. So, I think we are getting a little bit ahead of ourselves in being too pessimistic, but if we can get this through, it is a big win for everyone. There is a 4% group of people who have a lower N70 experience. I don't see it that way.
- Wright: That is kind of what I wanted to hear. Thank you for confirming, Kurt.
- Brown: One more thing. As long as this is not a one-time shot with the FAA and we can refine it, like Gene said, I think it is a big win for everybody.
- Pollack: I'm assuming if this proposal does not get approved, it does not go away. It is an initial Recommendation and could get approved at an additional meeting. So, there is not a rush to approve it. I have some concerns about it. On the whole, it is a good proposal. I have concerns that it pushes noise to others who do not have it now. Especially when there is a potential solution that does not do that, which is to raise the approaches on the base leg. I don't know if that is a problem or if they have thought about that. So why not ask the question first and let them respond to it. I agree it is a good proposal and ultimately would be worth submitting, but there is no harm in taking time and asking some questions before submitting. In my experience in dealing with organizations, if they feel like they got a win and they gave you something, they don't feel like they need to give you something again for a little while. You may be best served by asking a couple of questions and seeing if there is something in the proposal that can be modified that makes it better before you approve it and send it on.
- Gagnon: Thank you for that. Any other comments before we adjourn?
- Wiesenberger: One more comment. One of the prevailing philosophies about the ACR and why we are together is because of what NextGen did which is concentrate noise in more specific areas than it had previously. Once it got concentrated over certain areas, that is when we rose up as citizens and got this group together. What this Recommendation is doing is going back to a broader dispersion of noise, even if it spreads some of those downwind legs a few miles further south or north, it is fewer N70 events of noise. It is more dispersed. I think it is an overall benefit to what we are trying to achieve. I will now ask for a motion to close the meeting.
- Gussman: I make a motion to adjourn.
- Wright: Second.
- Wiesenberger: All in favor? *Yes.* We should expect to get an e-mail tomorrow?
- Gagnon: In about one minute, you all will get an e-mail.
- Wiesenberger: Thank you all.
- Meeting adjourned at 6:55 pm