

# Commercial Aviation Coordinating Commission

## Meeting Summary

Location: SeaTac Airport, Central Auditorium

Date: January 9, 2020

Time: 10:00a.m. – 2:00p.m.

Attendees: David Fleckenstein, Tony Bean (phone), Joseph Braham, Jeffrey Brown, Josh Brown, Rep. Tom Dent, Steve Edmiston, Arif Ghouse, Andrea Goodpasture, Spencer Hansen, Warren Hendrickson, Robert Hodgman, Sen. Jim Honeyford, Shane Jones, Sen. Karen Keiser, Ryan Sheehan for Larry Krauter, Stroud Kunkle, Jim Kuntz (phone), Sabrina Minshall, Rep. Tina Orwall, Rudy Rudolph, Robin Toth, Bryce Yadon, Rita Brogan, Kerri Woehler, Christina Crea, Max Platts, Terri Palumbo, and guests

A safety briefing was conducted by the Port of Seattle, Amy McDonough.

### Welcome

David Fleckenstein welcomed everyone; Commission members and the members of the audience, to the second meeting of the Commercial Aviation Coordinating Commission (CACC). David thanked the WSDOT staff that put the meeting together, Rita Brogan, Warren Hendrickson Vice-Chair, Josh Brown and the PSRC team, and Eric Fitch for the Port's support and hosting the meeting.

Agenda was reviewed with no additions.

### Charter

There were two items captured in the updated charter. There was a request for a direct pull of language from the legislation, also a request to put in the FAA definition of what is a primary airport. Both were included in the charter.

Additional comments:

Jeff Brown mentioned the words "airports" and "sites" (used in legislation) were being used interchangeably within the Commission's Goal chapter. David stated this was not intentional and "airports" can be changed to "sites" to be more appropriate. WSDOT will make the change.

Rep. Orwall spoke about the language in the charter regarding picking a site. David agreed that the language also says that the commission can, in addition to considering a single preferred site, look at other airports and make recommendations to expand their capacity as well.

Shane Jones asked about the language in paragraph 4, "Does it limit us to a single preferred recommendation and preclude a potential for a recommendation for two sites, or a potential expansion of an existing site and a selection of a new site?" David Fleckenstein suggested looking at the third paragraph and discussed the sentences providing the response. He reiterated that while the legislation calls for a single preferred location, it also calls for recommendations on future WA State long-term commercial facility needs.

Steve Edmiston asked if it is assumed that our charter is intended to be a tool that is easier for people to access than looking up the legislative language. He does not see anything in the charter that is superseding legislation.

Bryce Yadon made a motion to approve the charter with the exception of changing “airports” to “sites”. Jeff Brown seconded. The Charter was adopted with none opposed.

### **Joint Base Lewis McChord**

David Fleckenstein stated that the commission members requested that WSDOT reach out to JBLM leadership for their thoughts on a commercial facility. The direct feedback from the JBLM leadership team is that they have looked at this issue a couple times and in the near term they are not interested. The Air Force does not think it is a good idea to pursue changing McChord Field into a facility with joint civilian and military operations. This was reiterated in an editorial by Representative Denny Heck who also said this is not a good idea. WSDOT also checked with Congressman Smith’s office and they said, yes, they were provided the same information. The recommendation was that the commission remove JBLM as a possible siting option for commercial service.

#### **Discussion:**

Shane Jones said he does not feel we should remove it now, as there is a long history where joint use has worked such as Portland, Charleston, South Carolina, and Oklahoma City. What if this Commission determines this is the best recommendation and there are opportunities to address? Taking it off the table at this juncture is premature.

David Fleckenstein agreed that there are examples of success across the U.S. and depending on what the Commission decides, we can keep it on the list to further look at it and the challenges associated with JBLM.

Rep. Orwall stated that moving forward will require a partnership with our congressional staff and since we are getting the message from them that it is not workable, it is going to be difficult to move this concept forward, just something for us to keep in mind.

Tony Bean added that you will have to have a sponsor to support the solution. If the Air Force is not going to be a sponsor, and they are telling you they are not, he does not know that you move this forward in the study other than to take their comments. You must have a supportive partner to take this forward.

David Fleckenstein suggested tabling this topic. All signals from the JBLM leadership is they are not in favor of this.

### **Public Involvement Program (PIP)**

Rita Brogan presents the goals of the public involvement program. The work of this commission is of interest to many different kinds of stakeholders. They have different areas of interest, different levels of technical understanding, they come from all kinds of communities, languages, and cultures. We are tasked to develop a public involvement program that help us engage all kinds of audiences in a way that will be meaningful to them. The PIP we will be developing will be the roadmap to creating meaningful engagement with the public. To get us started, our plan is to present a plan before our next meeting. Rita will chat with Steve Edmiston to get his insight also as he has a lot of experience in this. Rita discussed the draft being proposed which will be reviewed at the next meeting.

Steve Edmiston stated that he believes some sort of public comment to the commission is irreplaceable. The public will want to address the group, if we provide the window to do it, the public will have a greater trust which can't be achieved without this face-to-face process.

Bryce Yadon stated that as we look at more and more sites figuring out how we need to engage with the potentially impacted community, there will be people who will want to provide input.

David Fleckenstein stated that the draft will provide lots of detail as to how we get down into those communities as we go from one phase to the next as well as the level of public involvement effort that will be required.

## **Air Space**

Josh Brown, Executive Director, Puget Sound Regional Council (PSRC) presented data on the airspace findings of the Regional Aviation Baseline Study, currently being conducted by PSRC.

In 1988, PSRC forecasted that we would have 4.1 million people in the region in 2020. Here we are in 2020 at about 4.2 million people. Our data has been close to the mark. Other data was developed for forecasting in the early 1990s in terms of the aviation demands of the region. A lot of those demands have become realized today.

The FAA has charged PSRC to look out to 2050, when the region is expected to have 6 million residents. One important issue is capacity planning for aviation. The regional aviation baseline study pulls together the most complete, freshest set of data to inform the public and policy makers so we can better understand roles of airports within the region, provide a perspective of how these aviation activities and airports work together, and then set the stage for future planning.

Our study area is the four-county region with 29 airports. Our task is to look at all these airports and understand what is going on, what are the demands, what are the needs, and how do they all fit together. There are three big buckets in regard to the forecasting; commercial passenger service, air cargo, and general aviation, which plays an important role with flight schools and local businesses.

We have 4.2M residents today in the region and 6M residents in 2050. During that same period of time the commercial service in an unconstrained environment is forecasted to more than double, air cargo will double, and general aviation demand will grow less than population growth, around 38 percent.

The numbers in our analyses are measured in enplanements. In 2018 numbers, SeaTac was the 8<sup>th</sup> busiest airport in the U.S. with 24M enplanements. Atlanta's Hartsfield-Jackson Atlanta International Airport is the busiest in the world today. The regional unconstrained forecast is more than double: low 49.3M – high 55.6M enplanements. To put the data in context: if the region hits the high mark it becomes busier than Atlanta is today; on the low end we're busier than LAX is today. Air cargo will more than double, from 552 thousand metric tons to 1.3M metric tons.

Regarding the capacity for the region's air system, the most complicated area is in the confluence of SeaTac, Renton, and Boeing Field. When we are going through the analysis of evaluating airports, looking at the length of the runways, and looking at the acreage for cargo we need to be mindful of the capacity challenges in the air. As we look at all of the other issues, we also have to look at the air capacity to include mountains, noise, weather, and the military.

How does unconstrained demand fit within the capacity of what's being planned for the future? Part of our capacity analysis builds off of master plans that are in place today as the starting point for the commercial service gap. As soon as 2027, we will go into the negative zone for capacity of commercial service. The scale of the capacity deficit at that time will be approximately 2.5M enplanements.

Another important point for purposes of this commission is drive time analysis. As we are planning airports, we need to be mindful of how we are connecting those airports with the region's land use strategy and our overall transportation system. SeaTac International Airport is the biggest trip generator in Washington State. It is similar to having two Seahawks football games in the same location, every day of the year. Airports generate a lot of traffic and we just have to come up with strategies to mitigate it.

Looking at drive time analysis today, SeaTac does a pretty good job of covering the region. Sixty eight percent of the region is within an hour of the airport today. By 2050, that number grows to 42%. All of Snohomish and Kitsap counties today are beyond an hour drive time. In coming years, Pierce County will be beyond an hour drive time. Getting to an hour is an average using the PSRC transportation models. There will be times which will take longer than one hour such as during rush hour.

Our gap analysis indicates that air cargo is in the red today. There are major issues in air cargo service. We need to be mindful of the different layers. International flights have air cargo; freighter businesses have cargo and in working with them we might have more flexibility with those facilities.

Regional general aviation is seeing growth and some airports will begin to hit capacity challenges in 2050: Arlington, Harvey Field, and Renton Municipal.

**Discussion:**

Tony Bean asked, "Does your model take into account aircraft gauge changes? Similar to 20 years ago, we had a lot of aircraft that did 19 seats on the small side and now we're bumping in 76 seats – did we look at what can happen with updating aircraft and going to larger planes?"

Josh Brown responded the data is based on enplanements; number of passengers are number of passengers. Where you'll be able to manage this is on the operations side.

Rep. Orwall asked, "You spoke of airspace capacity can you talk about the capacity around SeaTac?"

Josh Brown responded, "I will get you that information and work with you on it."

Jeffrey Brown asked, "In the baseline study, did you look at aerospace manufacturing with the population?"

Josh Brown responds that we talked about the diversity of the region's airspace and while our analysis is focused on air passenger service, air cargo, and general aviation, we have to be mindful of two other major economic drivers for the state; manufacturing and a supply chain network to serve the largest aerospace cluster in the world, and our military. We can't forecast how many planes will be where or what may happen in the future. We are mindful of what those airspace issues are as part of our planning. That will be reflected in our work because we can't move down a road where the decisions we are making will have impacts on those facilities. What we will see in our analysis in manufacturing

sector is there is significant demand and challenges on apron space. We will help policy makers and the public understand how much space is being used today for manufacturing, and how we will be supportive of manufacturing in the long run.

Steve Edmiston said he has some general thoughts. May we have presentations in advance so we can be prepared to ask better questions? As a citizen, I'm trying to translate enplanements to operations. I can assure you the communities won't get caught up on how many are getting on the plane, they will want to know how many planes are flying or how many we are proposing to add and what we are thinking about that. Please translate enplanements to the number of aircraft before presenting. This will be more useful to some of our stakeholders to have that data point. My question: If we're going over 900,000 flights on an unconstrained basis, what assessments should we be making about the actual constraints? Isn't this our job to forecast using the best policy? What is the risk analysis of things that may constrain those flights? Will we see significant constraints between now and 2050 around climate change, airplane emissions, and noise that greatly impact our forecast? I would like to know what PSRC is doing along those lines.

Josh Brown responded that PSRC has been doing a lot of work in these areas as it develops the region's transportation plan. The reason why I'm focusing this group on enplanement issues is because we have to get people to these airports. The number of people using Link Light Rail today is 6,000 daily. It is really important for this Commission to think about whether there is an opportunity for improvements for communities where the future aviation needs will be brought online for the region and the state of Washington. We should have the right transit connections come on-line at the same time as the airport does. We shouldn't have to wait another 20-30 years for that. Unconstrained demand is just that, unconstrained. They will have impacts in terms of ability for regions' businesses to access customer markets and individual's quality of life such as ability to visit family. What would it mean if these capacity constraints are not being dealt with in coming years, it means flight control for the regions' airports. There is flight control in place at some airports today. Is this the solution, is the solution to have Pierce County, the second largest county in Washington, be beyond an hour drive time. Is that acceptable to the residents? This is a really complicated issue. We are just trying to get facts out and others will decide what should be done about it. Solutions will be challenging.

Senator Keiser asked "PSRC covers which counties?"

Josh Brown responded, "King, Pierce, Snohomish, and Kitsap counties. Our study is limited to these four. We want to work collaboratively with our partners in other counties as we are mindful about how things are connected."

Sabrina Minshall reminded the group that when talking about forecasts, we shouldn't get too wrapped around the forecasts being exactly right, because we're talking about constrained and unconstrained assumptions like market, technology, demographics, other transportation systems can change a forecast. Forecasts are based on a set of assumptions any planning organization has at that time. When we get into something with so many different issues and market factors maybe we should consider where within that range we are.

Josh Brown added that when we went back and evaluated the forecasting we did in the early 90s, for the number of people to go through SeaTac in 2020, our numbers are pretty darn close and there are a lot of changes in the Puget Sound Region. We have forecast 49.3M – 55.6M enplanements, and this

information, for the purpose of our working out 30 years in the future, will serve the commission and the people in Washington State very well.

Warren Hendrickson asked, “There was a slide that shows a potential expansion of SeaTac’s air cargo capacity at 8,000 square feet, how does that translate to tons?”

Josh Brown responded that he will follow up with Mr. Hendrickson on this issue.

David Fleckenstein said that one key question is, should we plan to meet demand? Just because there is this big demand, should we plan to meet it given some of the potential consequences? How do we balance this demand with the environment, technology, etc. and this also gets into the forecast. Thinking about the future, there are a lot of things that can happen between now and 2040-2050 which would throw some of the things out of the water that we’re talking about now. I just ask that you keep that in consideration.

### **Defining the Challenge**

Rob Hodgman, Sr. Aviation Planner, WSDOT , stated that this is a complex topic and we have only just begun. As we continue to walk through this, you will become more and more aware of the layers of complexity. We talked about the charter, making sure it is in line with legislation. In the bill, we are charged with three main points: first, we are charged with identifying a recommendation for a primary commercial aviation facility, which may include expansion of an existing airport facility; second, we’re charged with determining long-range commercial aviation facility needs; and third, we’re asked to look at commercial air service, air cargo, and general aviation.

Initial steps to reach those goals:

- We will talk about airport site selection factors, these are PRELIMINARY, high-level and not comprehensive.
- We will discuss initial concepts for strategies; number of airports, airport sizes, roles, green field sites, high-level strategies and perhaps phases, and what options are there.
- Talk about lists; the near-term list is six airports and what does it look like, should we add/remove.
- We will talk about the resilient/sustainable path forward with technology, market, and environment uncertainty.

Rob Hodgman presented proposed site selection factors: Available land, existing facilities, environmental constraints, proximity to population centers, and airport sponsor.

Airspace is a complex issue and the effort to analyze the airspace beyond what is being done in the Regional Baseline Capacity Study is prohibitively expensive at this point. Consequently, the data we’re looking at is somewhat limited. If a site is determined to have potential, we can take a deeper look and analyze it. Another issue is land and the shape of available land to include space for expansion both land-side components (aircraft storage, etc.) and air-side (runway length, etc.). We anticipate a lot of additional work to study environmental constraints, so for this initial pass we want to capture any noteworthy environmental constraints that we know now and we can take a deeper look at sites moving forward. Proximity to population centers is another issue. Josh talked about drive times or travel times. Whatever number we decide (60 minutes/90 minutes), it should reflect whether people and freight will go to that airport, if it is too far it is less likely to be used. We believe any of the sites will need partnerships with other governments to build and administer the site.

Senator Keiser said, “I would like to add to existing facilities, the evaluation of land transportation, both by road and rail and any other type as a part of the interconnectedness we need to figure out.

Rep. Orwall added “regarding proximity to population centers, we need to be sensitive to the concentration of the residential areas. I hope it’s about people and the impact on people. It would be nice to have it listed as a factor.”

David Fleckenstein responded that we will discuss these issues in a minute about when we should have this very discussion. Some of the population base surrounding a site may cause an airport to be thrown out of contention.

Shane Jones said, “In a perfect world, with all of the other constraints and factors met, and the airport sponsor is supportive it would be fantastic. It is a possibility that the best one or two airports may not currently have a sponsor that is supportive? We need to consider what’s best for the region, and local opposition is considered, and government and public interests, but keep a state and region mindset and transcend that.”

Representative Dent said, “Regarding existing facilities and adequate space to add a runway. We can’t have a facility with only one runway, we need two runways for incidents. We need more than one runway. Regarding proximity to population centers, the time that people are willing to spend today to travel to an airport may be different in 20 – 30 years. It may not be an hour, we may have to look at two or three hours to encompass the population and concerns around air traffic, air travel, and also the number of flights. We may not be able to do it in an hour.

David suggested that regarding existing facilities, we may want to consider “bridging strategies”; looking at the how the projected demand is out to 2040-2050, there may be some things we can do in the interim that don’t involve airports with two runways. That is why I reluctantly say we don’t want to box ourselves into requiring expansion to two runways. The bridging strategies solution may be an airport with one runway. Rob will show examples of highly successful airports across the U.S. with one runway moving millions of passengers.

Sabrina Minshall said, “I would like to draw attention to some things in our charter, where we have the guiding principles and make sure that even though we’re looking at site selection, we’re covering all of the guiding principles. Rep. Orwall mentioned the people side of it, and I think this is a worthy component and I want to make sure we are documenting it up front and how it may affect certain populations or inadvertently affect aircraft patterns. It may fall under existing facilities or it may be worth making sure that we’re completely covered up front so we don’t have to backtrack.”

David Fleckenstein responded, I would encourage us to consider that these additional site selection factors are to get us to six. From the six, we will develop screening criteria to get us to two and then one. Some of the things you’re talking about may be better suited for down the road. We want to see what are possible for the six just for consideration.”

Robert Rodriguez said the classic textbook procedures are to look at the air first and then you can fix the ground to the air solution. We might have restricted airspace with in-bound routes which can’t be changed, there may also be existing air navigation aids; or long-range radar that can’t see the ground. He would recommend we get a cursory review of these.

Rob Hodgman responded that those are good ideas. We have done that and have looked at multi-modal a bit. We looked at any planned transit to a variety of sites, but there is not any planned transit to most of these sites. As Josh was speaking earlier, there is a partnership between the airports and the rest of the modes to work together so the transit comes online the same time the airport does.

Ryan Sheehan stated that regarding Government structures when we talk about 2050, current government structures that are allowed by state law while they may not accommodate what is needed, those are not a fixed function of state legislature. Certain combinations of municipalities or port districts can operate our ports today. There are other models in the country where airport authorities can be created to sponsor airports and could support an operation like this. In terms of JBLM, we wouldn't be looking at the military to act as a sponsor we would look at a regional airport authority that could operate in there in a joint-use manner at that facility.

Rob Hodgman responded that we will get back to Ryan on those thoughts. Right now, we need to hear whether we are on the right track. We're not looking for a formal vote, just a sense that you're comfortable with this. Understanding that downstream we will roll in more layers. This is just the first blush to get us some kind of a list.

Commissioners indicated they are comfortable with the current direction.

Rob Hodgman continued that we want to align with the FAA and we expect they will be a partner with us. We're hoping the outcome of this Commission will nest nicely with some of the FAA needs and requirements. The FAA methodology is dependent on whether it is an existing airport or a new greenfield site. An existing airport will need an updated airport master plan and a new site will require a feasibility study. The FAA site evaluation criteria, for the feasibility study, covers operational capability, capacity potential, ground access, development costs, and environmental consequences. This information is for your awareness.

Defining the challenge is about drilling down to more detail. We will talk about aviation growth, using the PSRC baseline study extensively. Defining capacity measures; aircraft operations, passenger enplanements, air cargo sorting facility square footage, and air cargo and general aviation aircraft parking. There are many others we can use from different aspects though we expect these will get us close.

In defining the population growth challenge the top five fastest growing counties are King, Snohomish, Pierce, Clark, Thurston (these four are in the Seattle region), and Kitsap, which is number 12 which is still very high for growth. This reinforces what Josh stated about population growth and not only demand of travel but demand of goods and services, and freight.

The FAA definition of primary airports is "Commercial Service Airports that have more than 10,000 passenger boardings each year." We need to talk about what our goal really is. We are breaking out the passenger enplanements challenge to be able to solve both the demand in 2050 and the incrementally increasing demand until then. There may be a way to incrementally institute improvements to meet the gap, just in time, as well as a strategy to meet the end goal. We recognized that 22-27 million enplanements is the same amount that SeaTac is handling now. If we recommend another "SeaTac" airport, in 2050, we're out of capacity again. Have we solved the long-term aviation capacity needs? So the question is, for discussion, do we meet forecasted demand or do we meet the minimum of 10,000 enplanements, or is it somewhere in between? Legislation said that we meet the demand; but this is the Commission's decision, which will drive everything else as we move forward.

Any comments about that? Are we striving to meet forecasted demand or are we striving to meet the letter of the law, the definition of a commercial aviation facility, which is a minimum of 10,000 enplanements?

### **Discussion**

Jeffrey Brown responded that regarding the 10,000 enplanements, within the definition the FAA uses there are a large number of public airports, which is what percent of the nation's travelers? I think a better frame of reference would be a large public airport instead of 10,000 enplanements. We need better tactics looking toward 2050.

David Fleckenstein responded that the importance of that definition is that is the baseline requirement for the FAA in terms of another primary facility in the state. So that is why we started with that definition, it is just the base.

Jeffrey Brown followed with another question, "The intent of the Commission is to site the facility in the state of Washington, right? However, what we have here is the capacity for the Puget Sound region only. So are we solving the problems for the Puget Sound region only or for the entire state?"

Rob Hodgman responded that we did take a look at that. We really don't have any commercial service or air cargo constraints elsewhere in the state, it really is in the Seattle region. He is happy to supply those slides from October 30 if anyone needs a refresher.

David Fleckenstein stated the recommendation made, again getting back to the previous meeting, is whatever recommendation the commission makes should look at the system as a whole and not just solving the one issue of capacity for the Puget Sound region.

Tony Bean stated that the bigger thing about the definition of the commercial airport, the 10,000 enplanements, is not the fact that it is a commercial airport, it is what comes with it. Any capacity analysis solution that we have to do to try to meet the larger need has to be done at a facility that meets the requirements the FAA and TSA have, all requirements which GA airports do not currently have to do or may not want to tackle just looking at some of the challenges moving through TSA and FAA requirements. You really have to have the baseline in order to move into trying to tackle it in 2050. If you don't meet the baseline requirements for the airport to have the commercial service then you really can't get to the rest of it.

Rob Hodgman said, "I would like to see a show of hands, the question is, are we continuing to build toward demand? Show of hands – it looks like only half voted. This was not an official commission vote. Hence, there was only a comment that it appears the commission is in favor of a path that will meet the anticipated demand.

David Fleckenstein said, "I would like to add something, my vote is yes, but with caveats. I think it is irresponsible to have a plan to meet demand without considering things like population base, impacts on the environment, etc. So my personal belief is whatever recommendations are made, if we're planning to meet demand, there has to be caveats attached to that which takes into consideration what will we actually be doing to the population base and the environment. And, are there things which can be put into place to make sure that we don't further damage our environment etc. Given the

possibilities for technology in the future, it is tough to do that although I do not think it should be discarded.”

Rob Hodgman said the reason we are asking the question is that it’s going to determine what follows. I am sensing that in general, there is support for and planning for the full level of demand. How that is accomplished remains to be seen. We will take that direction from you and continue to provide recommendations to you based on that assumption.

### **Air cargo**

Factors impacting air cargo capacity: aircraft apron parking (airside), truck access (landside), and cargo sorting-building square feet (landside). Still defining the challenge.

### **General Aviation**

The aviation system plan and the PSRC baseline study have looked at general aviation. Aircraft storage currently has a problem and is forecasted to get much worse. The forecast for the 2034 timeline leaves most airports over capacity for general aviation. We have insufficient airplane storage. We begin to have a sense this is a widespread challenge. We plan to do a very short survey with all of those airports to get accurate data we can bring back to you with more detail.

### **Exploring other regions**

Rob Hodgman shared the information gathered about these metropolitan statistical areas: Atlanta Metro (ATL), Los Angeles/Long Beach/Anaheim(LAX, SNA, BUR, LGB, CNT), Chicago Naperville Elgin (ORD, MDW), Dallas/Fort Worth/Arlington (DFW, DAL), Houston/The Woodlands/ Sugar Land (IAH, HOU), Washington DC/Arlington/Alexandria (DCA, IAD), Miami/Fort Lauderdale/West Palm Beach (MIA, FLL, PBI), Boston/Cambridge/Newton (BOS, PVD), Seattle (SEA). A couple of takeaways; of these airports surveyed, 70% of enplanements for that region is from the flagship airport and 30% from the satellite airport or airports. The second takeaway; as the demand for air service, whether passenger or freight grows, the number of airports is likely to grow, the exception is Atlanta.

### **What is possible in Washington State?**

Rob Hodgman presented a list of strategies: one very large SeaTac-size airport, one or more existing airports expanded and improved to provide commercial and freight service, expand air service and air cargo capabilities to more locations across the state, incorporate aviation innovation into long-term strategies, provide recommendations for general aviation aircraft storage, and a combination of these.

It would also be possible to phase options in. An incremental approach could give us the potential to give us the best outcome of the long run because we could adjust as we go forward. Rob shared some existing airport possibilities. John Wayne Airport, Orange County Airport information was shared. The runway length at 5,701 feet is similar to some Washington airports and has many enplanements.

Senator Keiser mentioned that John Wayne Airport is one of the few airports with a curfew that stops flights (after 11:00pm). Rob Hodgman will look into this.

Rob Hodgman added that we talked about airports and the possibility with existing airports covering the demand. With the first option of building a large airport, this is a second option. John Wayne is an example of how an existing airport might help meet the demand.

### **Electric Aircraft**

Max Platts, Aviation Planner, WSDOT Aviation and Project Lead for the Electric Aircraft Working Group (EAWG) made a presentation of the status of electric aircraft. The EAWG has been working together for just under two years. We have found the industry is paying very close attention to this technology and its ability to reshape how we travel. It has potential to bring back commercial service or expand commercial service in many different ways. Stakeholders and industry experts believe this technology has the potential to come to fruition around the 2040 – 2050 timeframe. Currently small aircraft have seating of nine to 12. Small aircraft can use smaller airports with 3000 feet of runway. Seventy out of the 135 total Washington State airports have the ability to support this size aircraft. Currently, 60 of those airports do not have commercial service. There is a potential for Electric Vertical Take Off and Landing (EVTOL) aircraft, as they require even less infrastructure to operate. Electric aircraft have potential for lower emission, noise, and operating space.

Rob Hodgman asked the commission to imagine if you had a local general aviation airport in your community with a 3,000-foot runway, you may not need to travel to the large commercial airport. This is a third option to consider. Maybe this is an option for the future.

### **The List**

Rob Hodgman stated that we are responsible to report to the legislature with a list of six airports. We talked about possible solutions and these airports have been identified as possibilities through previous studies: Central Pierce County, Olympia, Arlington, Bremerton National, Paine Field, and McChord Field. We have highlighted McChord field as a concern because JBLM has shared their concerns. Going back to the Flight Plan study, there are fourteen airports identified as candidates. Only a few of these airports meet the basic requirements. So it goes back to, do we have a list? I do not know that we have one at this point. Our assessment based on our understanding, the factors and what we are trying to accomplish is that Bremerton National, Olympia Regional, Paine Field, and SeaTac may be options. SeaTac may be getting close to capacity but will continue to add capacity during the interim.

### **Discussion:**

Steve Edmiston stated that when you say, environmental limitations, we had an environmental assessment that cost us \$3.2M and took two years. If there is an impact it is significantly more and drags on for who knows how long. When you are talking environmental limitations, have you looked at an ability to mitigate, just on a high level?

David Fleckenstein responded that we have had some preliminary discussions with the FAA based on both Olympia and Paine Field, regarding what we knew were some constraints. Olympia has an endangered species issue and Paine Field has constraints with the ability to add another runway along with a current limit on commercial operations without an environmental assessment.

Steve Edmiston responded, "I am a little confused looking at the legislation and seeing SeaTac pop up several times as a possible site. Because in the legislation I think it is very clear under section 3(a) that SeaTac is essentially to be an excluded airport from our work. It is listed when we are talking about an expansion."

Rob Hodgman responded that this is beyond those things already on their master plan list. Yes, we agree, SeaTac is not a possible site consideration.

Steve Edmiston asked, "When you say that, are you talking about the SAMP Near-Term Projects, which is a very limited expansion, or the long-range plans?"

Rob Hodgman deferred to Jeffrey Brown, who said that the near term for us is the long-term business.

Steve Edmiston said that if he reads the legislation correctly, one of the things this commission is not supposed to do is endorse, or support, or oppose anyone's current plan so that everyone is protected. The one thing we are excluded from doing is coming back to the legislature with a recommendation to expand SeaTac.

David Fleckenstein said that is not what this is about. This is only showing the possibility for airports as they exist right now, can they add capacity. This was just about capacity.

Shane Jones said he had just a quick comment on environmental. We should certainly be thinking about are there specific things related to airports whether endangered species or other events. Generally speaking, any airport on this list will go through the environmental process. Any of them are going to face that hurdle so that should not be a limiting factor.

David Fleckenstein clarified that we are only looking from a high-level at what some of the things are that we know today that would be a challenge.

Rob Hodgman added we are looking for solutions and ideas. Does anyone have any solutions or ideas?

Rep. Orwall said, "I feel a little at a disadvantage because a lot of us have not been told what the process is for siting another airport. It does seem like it's going to be complex and there is interest like in Olympia. I can't tell by the comments, are these insurmountable, or do we just have to get ready for a challenging process? I just hope we don't rule things out too quickly."

Rob clarified that this is just an initial, very rudimentary, assessment. The purpose here is to show what challenges we are already facing. Just looking at the factors we've talked about on the slide, not including the ones that we added in, we already have a tough challenge ahead of us. As we add in more factors, it's going to become more and more complicated.

Rep. Dent said that we are looking at expanding or being able to accommodate air travel for the next 100 years, so nothing we do is going to be easy here. Whatever it looks like, we have to decide what we can overcome and accomplish and not let a few challenges get in our way. This is a long-term big-vision goal.

Sen. Keiser said that the existing facilities in red, which are unlikely to accommodate site factors for a primary airport, they could be part of other satellite or other goals right? She added that red always connotes "stop." Sen Keiser did not want that to be the reaction because there are several airport facilities on this list that could have incredible opportunities.

David Fleckenstein agreed, adding for instance, many of those airports listed in red could help with the general aviation capacity issues.

### **Solution Sets**

Rob Hodgman said the state aviation system has 134 public use airports. We have talked about an integrated approach. Yes, there is a major component in Seattle, but we have an entire state with potential to help address capacity needs. We've talked about some possibilities, one was as demand

continues to grow, could that demand be met outside of the region? How far outside the region is up for discussion. We had some conversation about international, domestic and regional capability. We talked about we want this airport to be international capable but we also know there is a lot of domestic and regional service which can be supported maybe from smaller airports. This could be a blended solution, an incremental set of solutions. Same with freight, different mechanisms and operating procedures, different destinations for belly cargo vs freight vs integrator. What kind of solutions could we implement to meet things that are not belly cargo or freight or integrator which are not Seattle origin destined? General aviation solutions, we talked about, airfield capacity and annual service volume. These are closely tied with commercial service and cargo competing with time on the runway. We are looking at aircraft storage, which we think we have a good challenge on our hands. Sustainability, we talked about environmental and I think we will spend some time over the next several meetings looking deeper into that. We also talked about technologies and how we can leverage them. These are things we need to consider when we talk solutions.

Rudy Rudolph offered a couple of thoughts regarding general aviation and aircraft storage. While it is nice we have the data, I think we need to be mindful, both in this area and in passenger service area, of crossing over from infrastructure evaluation as in conclusions about business development. While aircraft storage may be infrastructure at GA airports, those are the local business development decisions. Along the same lines, an example using Bremerton, while we might evaluate what could happen at Bremerton to arrive or suppose a conclusion that a particular airline will go there it may not fit their business model. You can do an extension of a runway and nobody comes. We need to be careful as we do our evaluations of crossing that line into the business development area.

Rob Hodgman agreed, saying the Commission is asked to provide recommendations to include general aviation but how that is implemented is subject to discussion. Rep. Orwall asked about the process. We had a lot of help from Rita Brogan, and this is a little bit iterative for us as we explore this. The process we are following is first to build a list, then we cull that list using screening criteria (in or out). The factors we discussed this morning are the first pass at screening criteria. Then once we have the list of six airports and make the recommendation we start the evaluation criteria. The evaluation criteria are across a broad spectrum. That is where we hone into which choices are better. We may find we have a primary here that we deliver and there probably will be other recommendations. We put all of this information out so we can be thinking about it.

Joseph Braham stated that everything you have shown here is looking at existing facilities. If we look at the forecast and look ahead, obviously there has to be a bridge, but if you look at the forecast and what's ahead, we need another SeaTac. Do we have a list, from scratch, areas where we can build another SeaTac?

Rob Hodgman responded that we have done a bit of looking. A previous slide shows Olympia/Black Lake area was recommended by the Flight Plan. It appears that is somewhat of a greenfield site. We have looked at Pierce County and Lewis County. There is a lot of development and so King and Snohomish have a lot of development already, and trying to find for 4,600 acres, or anything close to that, that would be outside the airspace and close enough to population density, etc. is quite limited as far as a greenfield site. I appreciate you mentioning the SeaTac-sized airport. That is one of the possible solutions. We encourage you to consider there are other solutions. We haven't even talked about financials yet and the amount of money required. That is another topic for sure.

David Fleckenstein added that at our next meeting we will separate these greenfield sites out and introduce options for greenfield sites.

The Commission paused for twenty minutes to get lunch and return for a working lunch.

### **A Resilient and Sustainable Future**

Kerri Woehler, WSDOT Multimodal Planning Director, stated that she is happy to have a chance to talk with the Commission about how you approach something like a 20-year plan. During the last meeting, Commission members had questions about what the future is going to look like and how you set a path and make a plan for 2040 or 2050.

There are other questions about what if this happens or that happens? Those are the things that are going to face the Commission throughout your process to make a recommendation. We will talk this afternoon about how we manage that uncertainty and how we move forward. What does the future look like, what is in store for us? The PSRC's Central Puget Sound forecast suggests that by 2050 we are looking at a gap of 27 million passenger enplanements each year. There are also gaps on the air cargo side. What that means is that with all of the facilities that we have today won't be adequate to serve 27 million passenger enplanements. A number of assumptions drive that forecast. We are thinking about our existing system today and what kind of system would be needed to serve air transportation demands in 2050.

There are a lot of assumptions that go into determining how big that gap is and how we might deal with it. Assumptions related to capacity we have today; environmental factors, the infrastructure at airports, and how that might change, technology and aircraft and how that might change, and market demand, both in terms of how passengers prefer and desire to travel and what travel preferences are for air cargo.

One of the challenges for this Commission is going to be, as you think about a plan for 2040-2050 and think about addressing those passenger enplanements, is one of those "what if" questions based on these assumptions. So if the assumption is that we will be able to meet demand, then the 27 million passenger enplanements is the gap. One of the things assumed is that we continue to maintain our existing airport infrastructure and we don't lose existing capacity.

That is an assumption that we are making. This makes some assumptions about how people travel, how much they want to travel, how that might look different over time. That's a lot to deal with as we think about a long-range plan and a challenge with any long-range plan, and we're talking about 20 and 30 years out. Take a moment here and go back to the year 2000.

PSRC has done tremendous things with their population forecasts. Just think about what a different time just 20 years ago was. Where we were at, types of technology we were using, how we were using the internet, how we were interacting with one another, and learning new information. Things are very different today. It begs the question for us, when this Commission is thinking about how to recommend a path to get us from today to 2040-2050. What is it going to look like then? There are things that we think are going to happen, many will not. With a lot of speculation today about how technology is going to change and we just do not know which of those things will truly come to fruition and what may never happen.

While there are things that we expect may not occur, at the same time, there are things that we simply cannot predict and will surprise us over time. Some examples thinking back over the last 20 years: things like the increased need for security after 9/11, the emerging technologies and smart phones; how that has changed travel behavior and your choices about how and when you travel; Next Gen technology, even for ground transportation, thinking about services like Uber and Lyft; and how that is changing the airport environment.

This kind of thinking has consequences for how airports operate and get passengers to and from the airport. So there are things we believe will happen that may not, and there are things that may surprise us, and that is the challenge that faces any group that is doing real long-range planning. So the question is, what is a Commission like this going to do and how do you move towards a good recommendation while navigating that uncertainty?

The most important thing to do is to identify uncertainties and be resilient to changes in the future. This graphic, we appreciate the help from Sabrina Minshall, basically is illustrating to you the further you go forward in time, the harder it is to predict what is going to happen in the future. That makes sense, right? It doesn't mean it stops your work, it just means you try to understand what is possible and what might happen, stay flexible, and as you get closer in time you're able to get more precise and refine your ideas.

So what does that mean for this Commission when it comes to making a recommendation for how to address the anticipated shortfalls we have in capacity? To serve demand for air transportation in this region across the state. The idea is to think about recognizing those uncertainties while you develop a path that's going to be resilient and sustainable over time.

We could have picked out any number of themes you could drill in on to think about how things will change by 2040 or 2050, but we selected three themes that I think has come up a lot in this group already. Technology, market, and the environment.

The question then is how will these uncertainties affect the work of the Commission? An example on the topic of technology; there could be huge changes in aircraft that necessitates either longer runways to accommodate bigger aircraft or perhaps like we heard earlier, maybe there are different advances in technology that allow aircraft to use a smaller facility. How do you do a long-range plan for new capacity not knowing how that is going to go? Similarly for market, do we think there is going to be a generation of travelers 20 years from now who are going to make different choices, who are going to travel with different frequency, to different places, how might that affect the work of this Commission.

Then when it comes to environment the question that has already come up today, how does this Commission come up with a strategy that is resilient, sustainable, and really balances the need to serve the demand that we anticipate and also be responsible stewards of our environment? So, we want to put all of those questions to you and give some time for Commission members to be thinking about what is ahead of us over the next 20-30 years.

We want to be able to really task the expertise that is in this room. I'm going to start with giving you a little bit of homework. If you could get out a piece of paper and do a little individual brain storming and then come together as a group to share our thoughts. When it comes to these three themes, technology, market, and environment, can you think of where we are today, 2020, and imagine the planning horizon 2040-2050, in terms of , technology, market, and environment, what are the things

you know are going to happen? What do you think may happen? What are your questions about what could happen? Brain storm some thoughts then we'll come back together.

### **Discussion**

Kerri Woehler facilitated a discussion with the Commission, asking them to discuss what we know is going to happen, that is going to be a challenge for this group thinking about very long-range planning.

- Different types of air mobility
  - Drones will be more common
- Continued financial constraints with aging infrastructure
- Safety will be a growing issue
- People's preferences will change
- Rate of change happens even faster now given technology
  - Our problems may be different in the future
- Aviation will continue to be the most efficient means of travel
- Environment more of an issue
  - Climate change

She then asked the Commission to talk about what we think may happen. Folks in this room, this is your business, looking at trends and where the industry is going so it will be really helpful to hear from everyone here.

- Airports may look different
- Electrification more likely for general aviation and personal use
- On-demand air travel
- Technology presents more opportunities for capacity in different areas
  - On land
  - In the air
  - In space
- Biofuel may be a bridging strategy until other advanced propulsion systems become available
- Climate resiliency?
- Increasing consideration of the "human environment"
  - No free ride
  - Will spur more innovation
- Availability of fossil fuels makes it harder to shift to alternatives
- Fewer airports unless something changes with infrastructure funding
- New technology
- New environmental impacts
- New labor requirements will emerge
- More urbanization and resiliency issues
- More privatization is possible for airport infrastructure
- Autonomous flight will someday follow the path of cars
- Weather impacts to airports, lack of staffing availability, something needs to be built and we don't have enough people to hire to do this

Kerry posed a last question: What questions do you have about what could happen?

- Economy?
- Decentralization and re-centralization – what will the impact be on smaller communities?

- How will commutes change?
- Security implications?
- How can we support new technology to move it forward and embrace it?
- How can we make necessary changes to infrastructure?
- What will happen to accessibility of air travel?

Keri Woehler summarized that we have done some speculating here. It addresses some of those “what if” questions that have come up a lot. When you think about the charge of this group, which is to make that recommendation of how to proceed, how do we address these kinds of questions that we can’t answer. This is about embracing the fact that we don’t necessarily know the future. How does that impact you looking at shorter planning horizons out of a concern of locking into a path for a future that doesn’t materialize.

That idea is how to create a path that is the most resilient, will weather the storm, and going to be the most useful. Recognizing there are going to be changes and some of the things we predict will happen, and there are going to be some things we can’t anticipate. So how does all of this land on you in terms of how do these kinds of considerations influence your work as a commission.

David Fleckenstein said that for him, when we come to talk about recommendations, are there recommendations we can make that will stand the test of time. This is not only good for today but it’s going to be good for 20-30 years from now.

Shane Jones said these are all interesting considerations, to see which ones actually develop over the next 30 years because they are all very exciting. “I have two competing thoughts. One is, how much will it really make a dent in the 50M annual enplanements that are forecast? It could be material in the ten percent or 20%. That means we are still faced with 40M enplanements that we still have to solve for. With that being said, it does influence us to really consider whether the second SeaTac makes sense. We have all this change that could be around for the next 30 years and maybe it’s more incremental recommendations.”

Tony Bean added, “I think larger in a lot of the cases is better because you can always shrink things down. The biggest problem we have in aviation with airports is encroachment. If we’re talking about more things in the airspace, no matter what it is, whether its drone technology or larger aircraft that need longer runways, the industry continues to consolidate into larger platforms, or we go the other direction where we are talking smaller platforms, if we don’t protect the size, capability, and airspace of whatever the solution or solution sets are, we’re doing a disservice to somebody that has to actually execute this.”

Rep. Orwall stated that this is the second planning commission for another airport. The first one was 30 years ago. This shows us the consequences of not acting and how important it is. People are counting on us, our kids and grandkids, to do it and do it right.

Kerri Woehler stated that she also heard what may have come out of one of the resilient strategies is to make sure to maintain and preserve the infrastructure and the capacity that exists today. Sometimes in planning we jump to how do we build on it, and making sure to articulate that preserving the system we have and making sure that it continues to function in the future is going to be a really important part of whatever else this Commission is going to recommend.

Joseph Braham stated that when it comes to a strategy that we solve for that is resilient, it is a less resilient strategy if it relies on one solution. We are presented with an opportunity to locate a new airport, greenspace, etc. Is that the right solution or the only solution to capacity? So it goes back to the question, are we trying to solve for a capacity constraint or trying to solve for a new location of an airport? If it is a capacity constraint that we're trying to solve for, there are multiple solutions that need to be considered, not just an airport.

Rob Hodgman said that when you review legislation, it really talks about recommendations based on infrastructure. He suggested that we also think some other things worth considering are recommendations on policies. Policy to maintain infrastructure. Policies such as land use particularly encroachment and planning for new types of airports. Policy along investing and planning for where ever these or this airport is going to be. Policy on promoting aviation. Whatever these policies are, it is not just on infrastructure, this body can recommend policy to guide the future.

### **Technical Working Groups (TWG) Break Out Sessions**

Members of the Commission broke into their respective Technical Working Groups to discuss their Physical Assessment of the System, Land Use and Transportation, and Market Demand. They were asked to discuss the following questions

- What will be our role?
- What will be our key products?
- What do we need to advance our discussion?
- When and how will we meet?

### **Physical Assessment of the System**

Arif Ghouse reported on behalf of the TWG focused on the physical assessment of the system. He reported that the group talked about whether we look at an airport system site or conclude that we want a greenfield site, one north of SeaTac or one south? We know the next session will discuss greenfield sites, so we are going to concentrate on discussing airport system sites. We talked about the governing structure at airports. If we were going to expand commercial service in the region, do we continue the model of each government entity running their own airport or do we think about recommending a regional airport model, maybe international and regional airports working together.

By having regional airports not competing against each other, not worrying about what traffic goes where, it will work collectively at that point. We decided we needed to meet at least twice between commission meetings, by phone. We talked about cargo, whether or not it needed to be addressed in a separate meeting. Talked about having a dedicated cargo carrier in the state, their efforts would be dedicated to cargo. That could involve one area of the state that way and it could be a specialized function.

Ryan Sheehan added that in terms of physical assessment, there is a lot more to consider than roadways and runways. There are fuel pipelines, utilities considerations - sewer, water, stormwater discharge; there is a lot more to physical assessments than just available space, roadways, and runways.

### **Land use and Transportation**

Warren Hendrickson presented on behalf of the Land Use and Transportation TWG. He asked, in terms of what our role is, is it our role to formulate questions for others to answer or is it our role to answer those questions? None of us really have the bandwidth or expertise to answer the questions but we can certainly ask them. We are going to be somewhat dependent on others to supply the data we need to

address the issues that come up to us as we evaluate land use and transportation. We have to take into account the growth management act and its impact on land use and transportation decisions going forward. We have to identify holes and silos within regards to various governmental planning space that takes place. Our TPOs, for example, get their data from the state and any local area but aviation historically has never been one of the considerations of our TPOs. That needs to change because that is a tremendous resource availability on the local levels. In terms of our products, we want to identify the multimodal options that have to be taken into account. We have to make sure we look at a larger view statewide. An out-of-the-box solution came up; why don't we move JBLM across the Cascades and create the open space necessary to build a new airport. The larger view statewide in terms of opportunities are certainly there.

Another thought was the bridge connections between airports. How do we get people from a new given airport facility site location to SeaTac for connections. What are the different ways to do that? There are more than literal bridges, there are other ways to do that whether it is multimodal, air transportation or otherwise. Identify environmental issues that are important and also identify the need for community aviation connections. This needs to involve them and that will be part of the public involvement plan. In terms of our products, what are the specific community aviation connections that need to be made? Because this is not just us in a vacuum as a commission, this is going to be a statewide solution that we all have to buy into. One of our needs: funding, we have to get that.

Looking at Josh, of those enplanements, how much of that is origin and destination traffic at SeaTac versus connecting traffic and will that forecast change over time? Is it the local population that is supporting those increased enplanements or is it the increase in connecting traffic as international connections grow? We don't have an answer but that is a need. Another need is that we need to leverage the RTPO expertise that is out there because they do know land use and ground use. They are planning for transportation and job impacts. But, are the jobs matching what the airports are doing. Airports are prescribing the increase in businesses, but are there GMA and RTPO plans for that number of jobs in that particular area? So we have different people marching in different directions but it is not necessarily coordinated. Also countywide land use planning. Other comments were to keep airspace in mind. We can find the perfect solution on the ground but if the airspace above it doesn't support it, it is a show stopper. We have to have the airspace to service the airport. We will meet quarterly via conference call and will determine dates for doing so.

### **Market Demand**

Spencer Hanson began the presentation of the Market Demand TWG stating that their group will focus on current and future demand of commercial, air cargo, and General Aviation. Part of that too is we then need to consider and recommend options to figure out how to encourage the air carrier's support of that. One of the things we identified as the key part of this is to identify what is the agreed upon source from a market demand perspective from what we use. PSRC is a good source but are there other sources, is it *THE* source. That is something we will have to land on, is whether we utilize that or utilize some other options to identify what that source is.

Robin Toth added that we have the three components; commercial, general aviation, and air cargo. Fortunately, we do have a very recent air cargo report we are going to be able to leverage. We need to do an analysis of what's currently going on and decide on our team as we add members to it. Is there a way to separate passenger and air cargo that streamlines the process. We feel like we have some information. We know we will need additional information as well.

In regards to general aviation, we'll have to find some studies or analyses that have already been done that we can take into consideration as well.

What we need going further is more support. We need the market analytics, and maybe Josh could be a team member. What we need to do is identify the need of the consumer, could be the consumer of cargo or the consumer of passenger. Once we identify the needs, we can forecast the demand. So what is the need of the future of commercial and passenger airlines? Analytics will help us solve for that and then in turn will help us solve for forecasting what it should be as well. We know there is a drastic difference between passenger and cargo. We had a discussion on how the only reason why passenger and cargo are linked together now is because of the limited resources we have now whether it is runways or airports. What is it going to look like when we separate cargo from passengers? Do you still have a capacity concern at SeaTac? Are there other options to fulfill the need of cargo versus the need of both. We see that as an opportunity, the analytics behind it will allow us to solve for it. I see that there is going to be a lot of overlap between the three groups. So what I've encountered in the past is that it really benefits us that we don't work in silos, knowing there is going to be an overlap. Rather, we have a liaison that goes between the three to bridge the gaps. Because there is going to be a lot of contingencies between the three. Lastly, we are going to decide before we leave how often we will get together. That is also going to be determined by the scope on how much we can accomplish between now and the next time we meet.

### **Next Steps**

David Fleckenstein asked if there are any comments anyone would like to make before we close today? Having heard none, I was remiss in that I didn't introduce some new members.

Robert Rodriguez said, "I am the Joint Base Lewis McChord (JBLM) Aviation Officer, I oversee fixed based aviation infrastructure and aircraft on JBLM and the Yakima Training Center."

David noted that Ryan Sheehan is here today representing Larry Krauter from the Spokane Airport.

Bryce Yadon stated that he is present on behalf of Futurewise, an environmental land use organization that does land use planning and transportation planning across the whole state; Seattle, Spokane, Tri-Cities and a couple other cities.

David Fleckenstein stated that there has been a suggestion that we meet at different locations around the state. We are looking at meeting next at Paine Field at the end of March, coordinating with Arif. We will then look during the summer, at a location on the other side of the mountains, probably at Grant County.

Things for the next meeting that we still need to address.

- Further explore the options of greenfield sites, looking a lot more about greenfield sites the next time
- Look at establishing screening criteria that would validate the list of six
- Talk about the Public Involvement Plan (PIP)
- Technical Working Group time to meet

Dave Fleckenstein also said that, by way of follow up, staff will:

- Have hard copies of presentations for commission members ahead of time and at the meeting.

- Define the number of aircraft when we talk about enplanements or capacity

Adjourned 2:04pm

Draft