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MEETING MINUTES

RE: Taxiway and Apron Network
Technical Advisory Committee Meeting #1

Date of Meeting: December 3, 2019

Project Manager: Kaci Nowicki

Time of Meeting: 8:00 a.m.

SEH No.: 150733 16.00

Location of Meeting: Duluth International Airport,
Amatuzio Room

Attendance:

Tom Werner – DAA
Kaci Nowicki – SEH
Shawn McMahan – SEH
Matt Stewart – SEH
Benita Crow – SEH (phone)
Jacob Martin – FAA ADO (phone)
Gina Mitchell – FAA ADO (phone)
Scott Rautio – FAA Air Traffic Control Tower
Mike Magnus – Monaco Air

Don Monaco – Monaco Air & DIATA
Bill King – Cirrus Aircraft
Mark Wasserbauer – 148th Fighter Wing
Israel Malachi – GA
Eric Monson – Lake Superior Helicopters
Sherry Sanches Tibbetts – Lake Superior
College
Matt Lebens – MnDOT (Phone)
Kevin Carlson – MnDOT (Phone)
Don Berre – MnDOT (Phone)

The following is a summary of items discussed at the above referenced meeting. A full transcript of the meeting is also kept in the project records. A copy of the meeting presentation slides as well as all handouts are attached to these minutes. A letter dated February 14, 2020 was from the Duluth International Airport Tenants Association (DIATA) expressed the members of the associations preferred alternatives of taxiway network and Runway 3/21 improvements. The letter is included as part of this summary.

- I. Introduction to taxiway and apron system – Users were asked to describe their use of the taxiway and apron system.
 - A. 148th - Mark
 1. Mark described TW E as the 148th's main entrance to Runway 9/27
 2. TW F – cargo and contract air. Not used by fighter aircraft.
 3. TW H and TW E only fighter aircraft access points between 148th and airfield.
 4. Steepness of the grade on TW H, still a concern for 148th.
 5. TW B connection to C would allow for another egress for transient aircraft.
 - B. Monaco – Mike and Don
 1. Ramps
 - a. Monaco ramp – small and large GA, many utilize customs facility located at Monaco
 - b. Tower ramp – rotary wing ramp, med flights, military rotatory, 2 yellow circles for helicopters
 - c. Terminal ramp – service most of the commercial fights, fueling, deicing , ground handling
 - d. Midfield ramp – typically used for 100,000 lbs. aircraft or larger, 747 type, military side includes C5, C130 etc.
 - e. NBDE ramp – developed ramp, no tenants yet
 - f. Terminal ramp parking can pose a challenge when charters, or diversions, arrive in the overnights since all gates are currently full at the terminal with RON aircraft.

- g. Diversions – Monaco works with DGS and Envoy, primarily parked on Tower and Midfield (Airbus and larger), 767, 747 from air France, etc. when needed.
- 2. Taxiways
 - a. TW B used by AAR, MN Power uses Monaco ramp to access TW Network from Hangar
 - b. Tech stops – ½ civilian, ½ military international traffic clearing customs. More and more training opportunities for military at DLH
 - c. Don mentioned connecting B and C would be nice to have...
 - d. Taxiway width must be maintained, as needed, to continue to serve all existing aircraft using DLH.
- C. ATCT - Scott
 - 1. A3 is the most used egress from Runway 9/27
 - 2. When landing Runway 9, an additional connector between A2 and A3 would be helpful.
 - 3. Large aircraft roll out full-length of Runway 9/27 and use end connectors.
 - 4. RW 27/A5 – Still a hotspot, all types of aircraft taxi past A5
 - a. Bill King asked about the viability of an ATIS note related to A5 and military area beyond.
 - 5. Green paint (painted island on terminal ramp) is unknown to pilots (ATCT gets questions about it)
 - 6. Lots of changes, it will take a while for users and controllers to get used to them.
 - 7. Helicopter circles by the tower cause noise and exhaust issues in ATCT.
 - 8. Scott recommended having a TW connector added to Runway 9/27 between A2 and A3, and consideration of straightening TW A to improve site lines, and make more room for ramps.
- D. Cirrus – Bill King
 - 1. TW A and C the most used by Cirrus.
 - 2. Quality of pavement is important,
 - 3. Cirrus would like to see pads on Midfield Ramp grinded down.
 - 4. Future manufacturing in Building 311 will pose taxiway challenges.
 - 5. Compass calibration pad – Important to maintain. Not sure where the best site is due to metal challenges, and electrical lines, etc. to get accurate readings
 - 6. Tom discussed AAR needs for compass calibration pad as well.
- E. GA Traffic – Israel Malachi
 - 1. TW C is troublesome due to long taxi length
 - 2. Helicopters sometimes block other GA hangar traffic on taxilanes
- F. LSH – Eric
 - 1. Discussed operations on tower ramp and GA Area
 - 2. 10,000 helicopter operations at DLH
 - 3. Eric mentioned that there are no issues with operating on B and vehicle traffic on perimeter road.
 - 4. Preference for a dedicated helicopter area of the airport.
- G. DAA – Tom
 - 1. Fed ex will be operating a larger ATR in the coming year, the operation is growing, and may attempt to acquire a “sweep” aircraft. Similar to what they had before...767, Airbus 300 series, 737s, etc.
 - 2. Tom asked if the tower and Hangar 2 were gone, would that help congestion? Mike mentioned that elevation changes would still pose a challenge.
 - 3. Strong possibility there would be 5 RONS by summer 2020 which would pose a challenge to the terminal ramp and gate usage.
 - 4. Mike discussed instances of 180 passenger aircraft using the terminal customs overnight, resulting in the possibility of 6 aircraft at the terminal.
 - 5. Far western part of the ramp is designated for customs, and should be protected. The two facilities complement each other.
 - 6. Reclaiming deicing fluid, and any need for deicing aprons should be considered in the Master Plan.
 - 7. American’s ERJ will get larger in summer, and may need more space

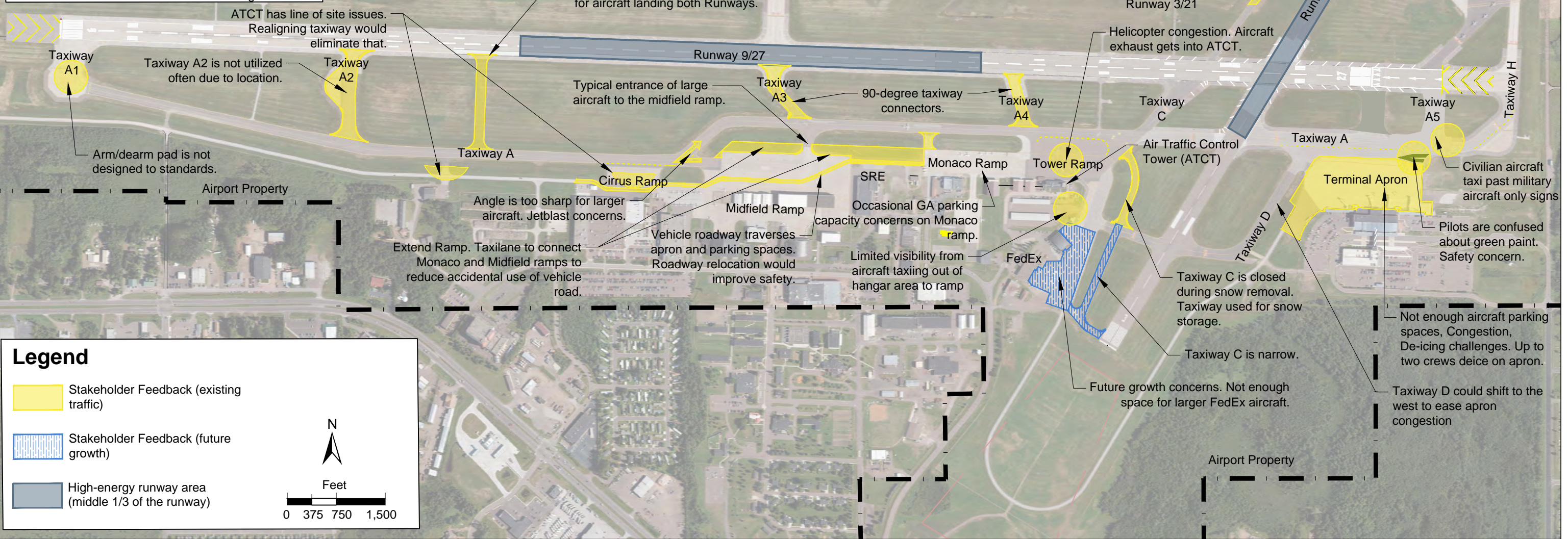
- H. Kaci –
 - 1. Snow storage concerns exist throughout the airfield. TW C is closed for parts of the winter due to snow storage needs.
- I. AAR –
 - 1. It is not uncommon to see three A320s on the Bravo (AAR) ramp
 - 2. Extension of the Bravo ramp is tied to the expansion of the building
- II. Taxiway PCI (pavement condition index)
 - A. Shawn gave an overview of the pavement condition throughout the airfield including the taxiways and aprons.
 - B. Don mentioned that we don't want to lose the capability to serve the existing aircraft as reconstruction projects occur.
- III. Stakeholder Feedback - Open conversation – The attached figure depicts the feedback given by stakeholders regarding the taxiway and apron system. See **Figure A**.
- IV. Taxiway and apron design overview
 - A. Design standards – Aircraft Design Group (ADG) and Taxiway Design Group (TDG) – Kaci gave an overview of each and what they influence. See **Slides 30 – 52** from the presentation in the meeting materials packet.
 - B. FAA non-standard design – Kaci gave an overview of areas of the taxiway and apron network that have non-standard design according to FAA design standards including the one designated Hot Spot (Hot Spot 1 at the Taxiway A and C intersection) (see **Figure 11** in the meeting materials packet).
- V. Next Steps
 - A. Project team will document the feedback and problems to be solved. Alternatives will be developed for the next TAC meeting.

SEH believes that this document accurately reflects the business transacted during the meeting. If any attendee believes that there are any inconsistencies, omissions or errors in the minutes, they should notify the writer at once. Unless objections are raised within seven (7) days, we will consider this account accurate and acceptable to all.

c: file

- ADDITIONAL FEEDBACK**
- Requests for a compass rose calibration pad
 - Pavement conditions were a concern by multiple stakeholders
 - ATCT indicated connectors to Runway 3/21 are well placed.
 - Western entrance to Monaco ramp should be able to accommodate existing users (75' wide taxiway)
 - Taxiway and apron network should continue to serve all existing users (geometry, pavement strength, etc.)
 - ARFF should have more direct access routes from Fire Station to runways.
 - Arm/dearm pads are preferred on both ends of Runway 9/27.
 - Concrete pads on the midfield ramp should be removed to allow for more aircraft storage

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Legend

- Stakeholder Feedback (existing traffic)
- Stakeholder Feedback (future growth)
- High-energy runway area (middle 1/3 of the runway)

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Future growth concerns. Taxiway B should connect to Taxiway C. Reduce runway crossings
ATCT stated they would not utilize this route for aircraft accessing Runway 21 unless from AAR or NBDA.

Large aircraft accessing Guard Ramp have difficulties making turn. Pavement is not suitable for heavier aircraft.

Taxiway F grade does not allow fighter jets to use.

Additional taxiway between A3 and A2 would increase usability for aircraft landing both Runways.

Aircraft hold location due to proximity of Taxiway C to Runway 3/21

Helicopter congestion. Aircraft exhaust gets into ATCT.

ATCT has line of site issues. Realigning taxiway would eliminate that.

Taxiway A2 is not utilized often due to location.

Typical entrance of large aircraft to the midfield ramp.

90-degree taxiway connectors.

Arm/dearm pad is not designed to standards.

Airport Property

Angle is too sharp for larger aircraft. Jetblast concerns.

Vehicle roadway traverses apron and parking spaces. Roadway relocation would improve safety.

Occasional GA parking capacity concerns on Monaco ramp.

Limited visibility from aircraft taxiing out of hangar area to ramp

Extend Ramp. Taxilane to connect Monaco and Midfield ramps to reduce accidental use of vehicle road.

Air Traffic Control Tower (ATCT)

Terminal Apron

Civilian aircraft taxi past military aircraft only signs

Pilots are confused about green paint. Safety concern.

Not enough aircraft parking spaces, Congestion, De-icing challenges. Up to two crews deice on apron.

Taxiway D could shift to the west to ease apron congestion

Taxiway C is closed during snow removal. Taxiway used for snow storage.

Taxiway C is narrow.

Future growth concerns. Not enough space for larger FedEx aircraft.

Airport Property

Duluth International Airport Tenants Association

February 14, 2020

Tom Werner, Executive Director
Duluth Airport Authority
4701 Grinden Drive
Duluth, MN 55811

Dear Tom:

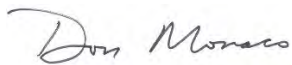
I am writing this letter on behalf of the Duluth International Airport Tenants Association to provide input to the Master Plan project regarding Runway 3/21, taxiways, and ramps. The positions stated below represent the collective interests and have the full support of AAR, Allete/Minnesota Power, Cirrus Aircraft, Monaco Air, and the 148th Fighter Wing.

1. Name Runway 3/21 Alternative 2A (8,000 foot length, extended to the north from its current position, with 1-mile visibility approach minimums and improved lighting at both ends) as the preferred alternative.
2. Do not straighten the west end of Taxiway Alpha other than perhaps a short straightening in front of the west end of the Midfield Ramp to provide improved sight lines from the Control Tower. Taxiway Alpha does not have to be straightened to allow for more ramp space in front of Cirrus. The 148th will use the 8,000 foot Runway 3/21 when Runway 9/27 is unavailable in the long term. If it is determined that the west end of Taxiway Alpha must be reconstructed and can be straightened with minimal impact on airfield operations and without adversely affecting the funding and timing of the Runway 3/21 extension project, then we support this approach which creates a short-term emergency landing surface for the 148th.
3. Taxiway Alpha should remain its current 75 foot width or wider, with required shoulders, to support the current aircraft weight limits for its entire length. The airport must officially support all General Aviation, Commercial Aviation, and Military aircraft we have been serving (up to and including the Boeing 747 and C5 Galaxy), at a minimum, and those specifications should be stated in the appropriate civilian and military publications.
4. The taxiway entrances at the ends of Runway 9/27 to Taxiway Alpha and one taxiway between Runway 9/27 and the Midfield Ramp should also meet these requirements.

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5. The Master Plan should call for repairing Taxiway Alpha wherever the subbase is intact to minimize cost and construction downtime.
 6. Widen the west entrance to the Monaco Air Ramp from Taxiway Alpha to a full 75 foot width and heavy aircraft capacity as shown on the attachment to allow larger aircraft to safely enter and exit the Monaco Air Ramp and to better utilize the Ramp Connector.
 7. Add a Ramp Connector between the Monaco Air Ramp and the Midfield Ramp as shown on the attachment to allow aircraft to taxi or be tugged between the ramps without having to use Taxiway Alpha. The Ramp Connector will also create a bypass around Taxiway Alpha connecting the Midfield, Monaco Air, and Tower Ramps while Taxiway Alpha is under construction and during other closures.
 8. Create ramp area north of the Ramp Connector and expand the Midfield Ramp up to the hold short demarcation as shown on the attachment.
 9. Remove the foundations on the west end of the Midfield Ramp to provide additional ramp area for aircraft parking as shown on the attachment.
 10. Determine which project elements are eligible for DoD funding and schedule those projects to allow enough lead time to obtain DoD funding.

Please let me know if you have any questions or concerns about these positions.

Best regards,



Don Monaco
President

Attachment

ATTACHMENT

