



## Summary of Aviation Forecast Development Middleton Municipal Airport (C29) – Master Plan

Date: September 14<sup>th</sup>, 2020

To: Mark Opitz, City Planner and Zoning Administrator, City of Middleton

This document is intended to summarize the Federal Aviation Administration's (FAA's) review of the Chapter 2 Aviation Demand Forecasts developed for the Middleton Municipal Airport (C29) Master Plan. It provides a high-level summary of the comments received, and chronicles revisions made to the initial draft that subsequently led to the FAA's approval of the forecast chapter in July of 2020.

### Initial Draft – October 2018

The original draft of the forecast chapter was submitted to the Wisconsin Bureau of Aeronautics (BOA) in October of 2018. The BOA reviewed the draft document and then forwarded it to the FAA (Chicago Airports District Office) for their review. Initial FAA comments were received in August of 2019.

Most of the FAA's comments were concerned with how the existing baseline activity was presented. As C29 is a non-towered airport, there are no precise counts on the overall number of annual operations. The original forecast chapter utilized data from the Terminal Area Forecasts (TAF) to show the existing number of operations at C29 and utilized information from the 5010 Airport Master Records to document the existing number of based aircraft. Through their review comments, the FAA communicated that both the TAF and the 5010 sources are no longer considered acceptable data bases to be used to represent the existing conditions. Instead, the FAA suggested that the existing traffic operations be confirmed through the review of fuel sales, logbooks, user survey data and flight plans filed to and from C29. The FAA also indicated that the existing number of based aircraft should be sourced from aircraft validated through the basedaircraft.com website, which is administered by a third-party vendor, GCR, Inc.

Other FAA comments provided in their August 2019 correspondence included the following:

- Remove the *Operations per Based Aircraft* methodology for projecting future operations as it is no longer considered applicable.
- Military and Commercial operations need to be supported with more local data.
- Include letters or surveyed data from users to support the demand for future jet operations.
- Use charts to summarize all the forecasting methods evaluated at the conclusion of each section.
- Provide additional data regarding the existing and future design critical aircraft.
- Present a stronger story with backup data and a clearer line of logic, or high and low forecasts.

## Revised Draft – May 2020

To address the FAA's August 2019 comments, revision efforts were undertaken to provide greater documentation of the existing activity at C29, and to better explain the assumptions and reasoning for the preferred forecast selected. These updates were incorporated into a revised draft of the forecast chapter that was submitted to the BOA and FAA in May of 2020. The resulting changes are summarized within the bulleted list below:

- An inventory of the existing (2019) operations was conducted through outreach to the based users, through interviews with the Fixed-Base-Operators (Morey Airplane Company and Capital Flight), through a review of the FAA's Traffic Flow Management System Counts (TFMSC) database, and through a review of visitor logs and fuel sales. The results of the 2019 inventory efforts are summarized within Appendix A.
- The existing fleet mix of aircraft based at C29 was obtained from information validated in the National Based Aircraft Inventory Program ([basedaircraft.com](http://basedaircraft.com)).
- The *Operations per Based Aircraft* forecasting methodology was removed as suggested.
- Greater explanation of the military helicopter operations from the nearby Truax Air National Guard base was provided. These operations occur infrequently.
- One of the biggest commercial activities occurring at C29 right now is the daily deliveries from Freight Runners Express and Pro Aire Cargo Consultants. Both companies are contracted to provide air freight deliveries for UPS, which has a delivery center located only 1.5 miles south of the Airport. The local freight operations were combined with the local charter operations to account for the overall commercial activities at C29.
- More information was provided regarding the local trends and desire for airport improvements. Since 2018, the Airport has received 36 inquiries from people interested in basing an aircraft at the Airport and this listing was provided within Appendix B. Anecdotal information provided from the original, anonymous user survey responses is referenced with a link to the on-line results provided in Appendix C. Additionally, correspondence from existing and prospective business users of C29 concerning their needs or interest in additional airport facilities is provided in Appendix D.
- A summary chart of all the forecasting methodologies developed was provided at the conclusion of each section. A summary table listing the assumptions used in developing each forecast was also included as well as an explanation for the preferred forecast selected.
- A more robust discussion on the design critical aircraft at C29 was provided. The most demanding aircraft at C29 are the turbine powered aircraft (small jets and turboprops). The size of these aircraft ranges from the high end of the B-I standards to the low end of the B-II standards. Appendix E provides a historical summary of the instrument flight rule (IFR) operations conducted at C29 by all aircraft types since 2010.
- The revised chapter was structured to present low, medium, and high forecasts to account for a broader range of future conditions and in light of the uncertainty stemming from COVID-19.

## **Final Approved Chapter – July 2020**

Following the May 2020 resubmittal, a conference call was held in June 2020 with representatives from the FAA and the BOA to address the following additional revisions which were incorporated into the final July 2020 version of the chapter:

- For the socioeconomic forecasts, the FAA asked that the coefficients of correlation (r-squared values) be presented. The FAA generally requires an r-squared value of 0.90 or greater for a forecast of this methodology to be selected as the preferred. As C29 is a non-towered airport, the past activity has been an estimate, and has been reported the same (40,510 annual operations) since 2010. When the flat reported activity at C29 was compared to the expansive growth occurring in Dane County, no strong correlation could be shown, and the resulting r-squared values were much lower than 0.90. As such, the FAA suggested selecting the national market share methodology as the preferred forecast of future operations at C29 – both for general aviation operations and for the projected number of jet and turboprop operations. At the FAA's direction, the socioeconomic methodologies have been left in the final chapter for comparison and for use in defining the low, medium, and high ranges of projected growth.
- The final revision was regarding the preferred forecast for based aircraft. The FAA felt that the near-term growth was likely too aggressive, but generally concurred with the overall number of projected aircraft (+25) by the end of the 2039 planning horizon. The near-term growth in hangars was lowered to show a more gradual increase in the 5-year and 10-year periods.

With the above revisions incorporated, the FAA provided their approval of the forecast chapter in a letter dated July 30<sup>th</sup>, 2020. The approved forecasts will serve as a guide and framework for quantifying the facility requirements to be addressed in the following chapter of the master plan.

Respectfully submitted,

MEAD & HUNT, Inc.

Greg Stern, P.E.

cc: Josh Holbrook, Wisconsin Bureau of Aeronautics