merrill municipal airport

AIRPORT MASTER PLAN

Draft – Phase 1

AIRPORT MASTER PLAN

For

Merrill Municipal Airport
Merrill, Wisconsin

Prepared for

City of Merrill

By

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Airport Consultants

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INTRODUCTION

INTRODUCTION

WHAT IS A MASTER PLAN?

The Federal Aviation Administration (FAA) recommends that airports update their long-term planning documents every seven to 10 years or as necessary to address local changes at the airport. The planning study for Merrill Municipal Airport (RRL) was completed in 2009, with the Airport Layout Plan (ALP) approved in 2016. The City of Merrill, the sponsor of the airport, received a grant from the Wisconsin Department of Transportation (WisDOT) Bureau of Aeronautics (BOA)[1] to update this airport master plan.

The city is responsible for funding capital improvements at the airport and obtaining FAA Airport Improvement Program (AIP) and WisDOT-BOA development grants. In addition, the city oversees facility enhancements and infrastructure development conducted by private entities at the airport. The master plan provides guidance for future development and justification for projects for which the airport may receive funding through an updated capital improvement program (CIP) by demonstrating the future investment required by the city, the FAA, and the BOA.

The airport master plan follows a systematic approach outlined by the FAA to identify airport needs in advance of the actual need for improvements. This is done to ensure the city can coordinate environmental reviews, project approvals, design, financing, and construction to minimize the negative effects of maintaining and operating inadequate or insufficient facilities. An important outcome of the master plan process is a recommended development plan, which reserves sufficient areas for future facility needs. Such planning will protect development areas and ensure they will be readily available when required to meet future needs. The intended outcome of this study is a detailed on-airport land use concept that outlines specific uses for all areas of airport property, including strategies for revenue enhancement.

The preparation of this study is evidence that the city recognizes the importance of the airport to the surrounding region and the associated challenges inherent in providing for its unique operating and improvement needs. The cost of maintaining an airport is an investment that yields impressive benefits to

[1] WisDOT participates in the State Block Grant Program, which administers federal grants from the Airport Improvement Program (AIP) for the FAA.

the local community. With a sound and realistic master plan, the airport can maintain its role as an important link to the regional, state, and national air transportation systems. Moreover, the plan will aid in supporting decisions for directing limited and valuable city resources for future airport development. Ultimately, the continued investments in the airport will allow the city to reap the economic benefits generated by historical investments.

AN AIRPORT MASTER PLAN IS…

- A comprehensive, long-range study of the airport and all air and landside components that describes plans to meet FAA safety standards and future aviation demand.
- Required by the FAA to be conducted every 7-10 years to ensure plans are up to date and reflect current conditions and FAA regulations.
- Funded 90% by a BOA apportionment grant, derived from FAA discretionary funds allocated to the BOA. The remaining 10% is split between the State of Wisconsin and the City of Merrill.
- A local document that will ultimately be presented for approval from the City of Merrill. The FAA approves only two elements of the master plan: the aviation demand forecasts and the airport layout plan (ALP) drawing set.
- An opportunity for airport stakeholders and the public to engage with airport staff on issues related to the airport, its current and future operations, and environmental and socioeconomic impacts. Two public information workshops will be conducted during the master plan process to facilitate this public outreach effort.

AN AIRPORT MASTER PLAN IS *NOT*…

- A guarantee that the airport will proceed with any planned projects. Master plans are guides that help airport staff plan for future development; however, the need/demand for certain projects might never materialize.
- A guarantee that the City of Merrill, the BOA, or the FAA will fund any planned projects. Project funding is considered on a case-by-case basis and requires appropriate need and demand. Certain projects may require the completion of a benefit-cost analysis.
- A binding or static plan. Elements of the master plan may be updated to reflect changes in aviation activity at the airport, economic conditions of the region, or the goals of the City of Merrill.
- Environmental clearance for specific projects. The master plan includes an environmental overview which identifies potential environmental sensitivities per the *National Environmental Policy Act of 1969* (NEPA) guidelines. Most planned projects will require a separate environmental study prior to construction.

WHO IS PREPARING THE MASTER PLAN?

The city has contracted with Coffman Associates, Inc. to undertake the airport master plan. Coffman Associates is an airport planning and consulting firm that specializes in master planning and environmental studies. Coffman Associates will lead the planning team, with support from the following firms:

- Becher-Hoppe – Engineering support
- Martinez Geospatial – Aerial photography, ground survey, and geographic information system (GIS) products to meet FAA 5300-18B requirements for Airports GIS data submittal

The airport master plan is being prepared in accordance with FAA requirements, including Advisory Circular (AC) 150/5300-13B, *Airport Design*, and AC 150/5070-6B, *Airport Master Plans* (as amended). The plan will be closely coordinated with other planning studies relevant to the area and with aviation plans developed by the FAA and BOA. The plan will also be coordinated with the City of Merrill, as well as other local and regional agencies, as appropriate.

GOALS AND OBJECTIVES

The primary goal of this master plan is to develop and maintain a financially feasible, long-term development program that will satisfy aviation demand of the region; be compatible with community development, other transportation modes, and the environment; and enhance employment and revenue for the local area. Accomplishing this goal requires an evaluation of the existing airport to decide what actions should be taken to maintain a safe, adequate, and reliable facility.

Specific objectives of the study include the following:

- Conduct a thorough inventory of facilities, including the runway safety areas (RSA) for both runways (Runway 7-25 and Runway 16-34) to populate the data required for Appendix 1 of FAA Order 5200.8, *Runway Safety Area Program*.
- Conduct an environmental study, to include an inventory, nearby sensitivities, and an overview with consideration of future impacts based on the recommended plan.
- Outline existing and projected future aviation demand of Merrill Municipal Airport's based aircraft and annualized aircraft operations by type.
- Analyze current aircraft operations to determine the appropriate critical aircraft and associated planning design standards for the current and ultimate planning horizons.
- Consider future terminal building and hangar capacity (expansion/modification/replacement/etc.).
- Evaluate appropriate safety areas and setbacks in consideration of the airport's limited property and constraints.

- Complete a facility requirement analysis for the airfield system to include runway length and width for both runways, as well as taxiway locations/dimensions, and a justification analysis for crosswind Runway 16-34 in FAA funding mechanisms.
- Conduct an airfield geometry analysis, including a direct access taxiway to Runway 16-34 (among others).
- Consider construction of additional corporate hangars.
- Consider larger apron area(s).
- Develop future layout as determined via the planning process.
- Establish a development strategy, to include expanded hangar and apron development to support existing and anticipated based aircraft and itinerant operations.
- Develop a 20-year capital improvement plan (CIP), including a recommended phasing plan.
- Analyze eligibility of CIP projects for AIP funding.
- Provide strategies to protect the airport from encroachment and incompatible land uses.
- Conduct initial environmental planning analyses, including coordination with key agencies.
- Include public outreach and involvement throughout the planning process.
- Review and recommend updates of the airport's rates and charges.
- Complete the planning process as a collaborative measure that is inclusive of key stakeholders and the public.

BASELINE ASSUMPTIONS

A long-range planning study requires several baseline assumptions which will be used throughout this analysis. The baseline assumptions for this study are as follows:

- Merrill Municipal Airport will continue to operate as a local general aviation airport through the 20-year planning period;
- The airport will continue to accommodate general aviation tenants, as well as itinerant and/or local aircraft operations by air taxi, general aviation, and military operators;
- The aviation industry will develop through the planning period as projected by the FAA (specifics of projected changes in national aviation industries are described in Chapter Two – Forecasts);
- The socioeconomic characteristics of the region will generally change as forecast (see Chapter Two); and
- A federal and state airport improvement program will be in place through the planning period to assist in funding future capital development needs.

MASTER PLAN ELEMENTS AND PROCESS

The master plan includes eight elements that are intended to assist in the evaluation of future facility needs and provide the supporting rationale for their implementation. **Exhibit i** provides a graphical depiction of the process involved with the study.

Element 1 – Study Initiation and Organization includes the development of the scope of services and schedule, as well as the establishment of a planning advisory committee (PAC). Study materials will be assembled in a workbook format. General background information will be established that includes outlining the goals and objectives to be accomplished during the master plan. A project-specific website will also be developed to house draft materials and allow for the receipt of comments.

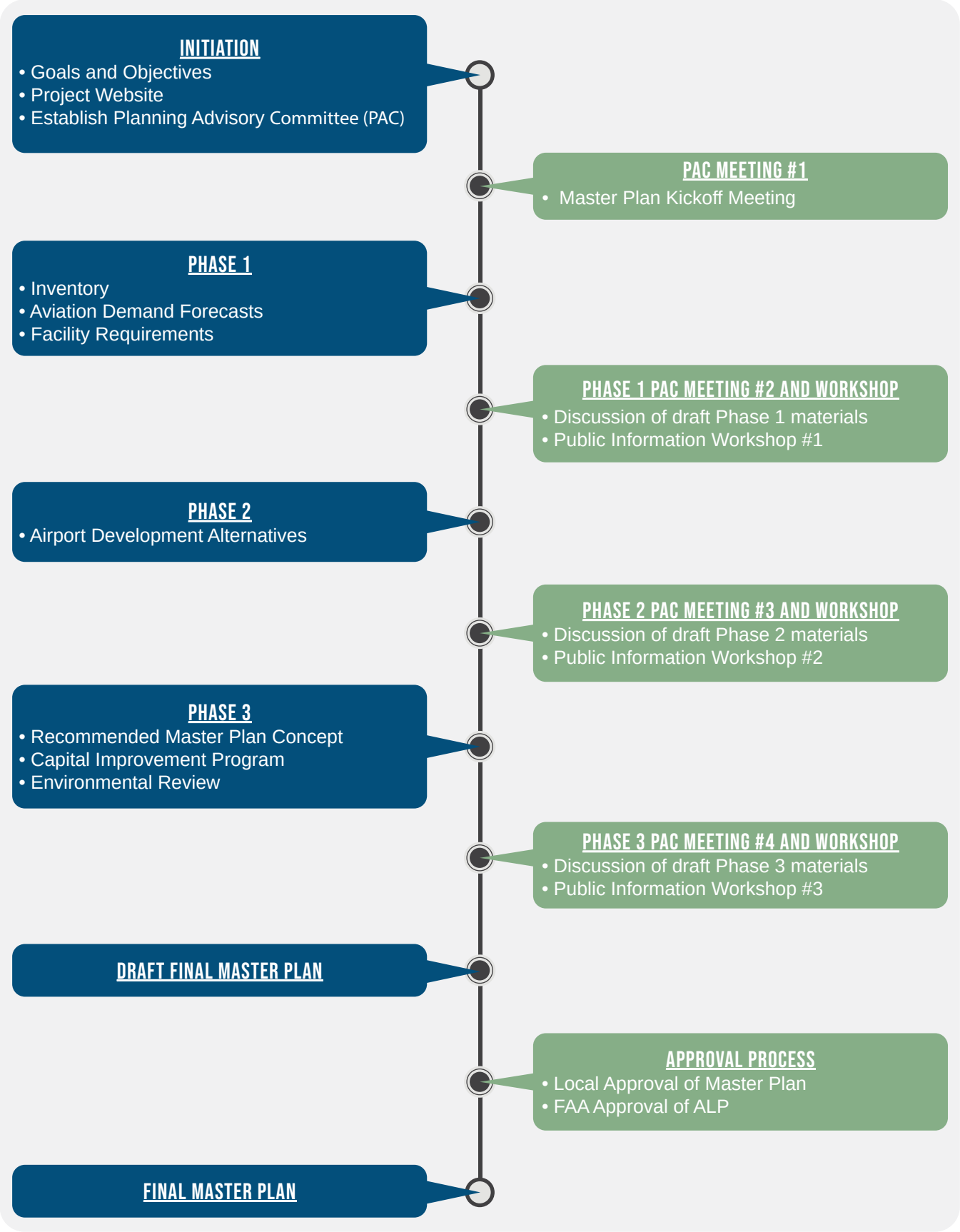
Element 2 – Inventory of Existing Conditions focuses on collecting and assembling relevant data pertaining to the airport and the area it serves. Information on existing facilities and operations is collected. Local economic and demographic data are collected to define the local growth trends, and environmental information is gathered to identify potential environmental sensitivities that might affect future improvements. Planning studies that may have relevance to the master plan are also collected.

Element 3 – Forecasts examines the potential aviation demand at the airport. The analysis utilizes local socioeconomic information and national air transportation trends to quantify the levels of aviation activity that can reasonably be expected to occur at Merrill Municipal Airport over a 20-year period. An existing and ultimate critical aircraft are also established to determine future planning design standards based on AC 150/5000-17, *Critical Aircraft and Regular Use Determination*. The results of this effort are used to determine the types and sizes of facilities that will be required to meet the projected aviation demand at the airport through the planning period. This element is one of two elements that are submitted to the BOA for approval.

Element 4 – Airport Facility Requirements Analysis determines the available capacities of various facilities at the airport; whether they conform with FAA/BOA standards; and what facility updates or new facilities will be needed to comply with FAA/BOA requirements and/or the projected 20-year demand.

Element 5 – Airport Development Alternatives considers a variety of solutions to accommodate projected airside and landside facility needs through the long-term planning period. An analysis is completed to identify the strengths and weaknesses of each proposed development alternative, with the intention of determining a single direction for development.

Element 6 – Recommended Plan and Land Use Compatibility provides both a graphic and narrative description of the recommended plan for the use, development, and operation of the airport. This plan forms the basis of the ALP drawing set. Existing zoning ordinances and other land use management documentation will be reviewed and summarized, and land use management techniques in the airport vicinity will be outlined. This element also includes the formulation of an environmental overview and recycling plan.


INITIATION
• Goals and Objectives
• Project Website
• Establish Planning Advisory Committee (PAC)
PAC MEETING #1
• Master Plan Kickoff Meeting
PHASE 1
• Inventory
• Aviation Demand Forecasts
• Facility Requirements
PHASE 1 PAC MEETING #2 AND WORKSHOP
• Discussion of draft Phase 1 materials
• Public Information Workshop #1
PHASE 2
• Airport Development Alternatives
PHASE 2 PAC MEETING #3 AND WORKSHOP
• Discussion of draft Phase 2 materials
• Public Information Workshop #2
PHASE 3
• Recommended Master Plan Concept
• Capital Improvement Program
• Environmental Review
PHASE 3 PAC MEETING #4 AND WORKSHOP
• Discussion of draft Phase 3 materials
• Public Information Workshop #3
DRAFT FINAL MASTER PLAN
APPROVAL PROCESS
• Local Approval of Master Plan
• FAA Approval of ALP
FINAL MASTER PLAN

Element 7 – Financial Management and Development Program includes a 20-year capital improvement program (CIP). The CIP is established to define the schedules, costs, and funding sources for the recommended development projects.

Element 8 – Final Reports and Approvals provides documents which depict the findings of the study effort and present the study and its recommendations to appropriate local organizations. The final document incorporates the revisions to previous working papers prepared under earlier elements into a usable master plan document.

COORDINATION AND OUTREACH

The Merrill Municipal Airport master plan is of interest to many within the local community and region, including local citizens; local businesses; community organizations; city officials; airport users/tenants; and aviation organizations. As a component of the regional, state, and national aviation systems, the airport is of importance to both state and federal agencies responsible for overseeing the air transportation system.

To assist in the development of the master plan, a PAC was established to act in an advisory role during preparation of the study. Committee members are scheduled to meet four times at designated points during the study to review study materials and provide comments to help ensure the development of a realistic, viable plan.

Draft working paper materials will be prepared at various milestones in the planning process. The working paper process allows for timely input and review during each step in the master plan to ensure all issues are fully addressed as the recommended program develops.

Two open-house public information workshops will also be conducted as part of the study coordination and outreach efforts. Workshops are designed to allow all interested persons to become informed and provide input concerning the master plan process. Notices of meeting times and locations will be advertised through local media outlets and all draft reports, meeting notices, and materials will be made available to the public on the project website at https://merrill.airportstudy.net.

SWOT ANALYSIS

A SWOT analysis is a strategic business planning technique used to identify **S**trengths, **W**eaknesses, **O**pportunities, and **T**hreats associated with an action or plan. The SWOT analysis involves identifying an action, objective, or element, and then identifying the internal and external forces that positively and negatively impact that action, objective, or element in a given environment. A SWOT analysis was conducted with the PAC in October 2023. A summary of this exercise and discussion is included below.

SWOT DEFINITIONS

This SWOT analysis groups information into two categories:

- **Internal –** attributes of the airport and market area that may be considered strengths or weaknesses for the action, objective, or element
- **External –** attributes of the aviation industry that may pose as opportunities or threats for the action, objective, or element

The SWOT further categorizes information into one of the following:

- **Strengths –** internal attributes of the airport that are helpful to achieving the action, objective, or element
- **Weaknesses –** internal attributes of the airport that are harmful to achieving the action, objective, or element
- **Opportunities –** external attributes of the industry that are helpful to achieving the action, objective, or element
- **Threats –** external attributes of the industry that are harmful to achieving the action, objective, or element

It is important to note that some attributes may fit into multiple categories. An attribute might be considered both a strength and a weakness, depending on the perspective of the person or entity describing it. **Exhibit ii** summarizes the SWOT exercise that was conducted with the PAC.

S STRENGTHS

- RRL is business-oriented, with a focus on revenue production and self-sustainability.
- Primary Runway 7-25 is 5,100' long and is capable of accommodating a wide range of GA aircraft, including small to mid-sized jets.
- There is a crosswind runway (16-34) which increases the airport's utility.
- The airport has close proximity to town and its location in central Wisconsin makes it convenient for medical transport.
- RRL is well-situated for future growth, with shovel-ready hangar sites.
- The primary runway has uncomplicated LPV GPS approaches that are easy to fly.
- There is a full-time FBO with aircraft maintenance service, which is not common in the area.
- A late model courtesy car is available for airport users.
- The terminal is modern, attractive, and well-equipped for pilots and airport visitors.
- The airport property is fully enclosed with perimeter fencing; enhancing safety, security, and preventing wildlife entry.
- There are publicly owned hangars available, which is an excellent revenue source for the city.
- Avigation easements are currently in place, serving to protect airspace by limiting incompatible land use development around the airport.
- Flight training is offered at RRL.
- A turf landing area is available adjacent the primary runway.

W WEAKNESSES

- Crosswind Runway 16-34 is 2,997' long, which is too short to accommodate many airport users, and does not have a full-length parallel taxiway. The runway is also in need of rehabilitation/reconstruction, but its eligibility for federal funding assistance is in question.
- The airport's proximity to town adds an element of risk in the form of noise complaints and the potential for nearby incompatible land use development.
- There are wetlands on the airport, which is an environmental risk factor.
- The current maintenance facility is too small.
- There are not enough hangars to accommodate demand for aircraft storage.
- The turf landing area adds maintenance costs and can be considered a risk.
- There is no approach lighting system at RRL.

O OPPORTUNITIES

- There is opportunity to educate the public and increase awareness about the value RRL brings to the community.
- RRL could accommodate Advanced Air Mobility (AAM) activity in the future.
- The hangar waiting list indicates clear demand for aircraft storage facilities.
- RRL provides an important connection to larger communities in the region.
- Funding sources in addition to annual entitlement funding, including BIL money, is available.

T THREATS

- The airport is perceived by some as only accessible to wealthy people, with limited utility for the larger public.
- AAM has many unknowns regarding its integration into existing operational practices.
- Congress has not increased the amount of funding available through the FAA Reauthorization Act in more than 20 years, while inflation has significantly increased.