



# Lake County Executive Airport Master Plan Executive Summary



Aerial of the  
airport from  
July 2018

Lake County Executive Airport (LNN), formerly known as Lost Nation Airport, is co-sponsored by Lake County and Lake County Ohio Port and Economic Development Authority (LCOPEDA), operated by LCOPEDA, and is a public-use, general aviation facility. The airport sits on about 400 acres in the cities of Willoughby and Mentor in Lake County. It has two active runways and also supports non-aviation facilities such as the Lost Nation Sports Park and the Players Club banquet facility. Airport services include fuel sales, aircraft parking, hangar rentals, aircraft maintenance and repair, aircraft line services, charter flights, aircraft rental, flight instruction, courtesy car, and pilot's lounge.

In 2018, the LCOPEDA began a process to rename the Airport to highlight its role as a Lake County facility. In 2019, the LCOPEDA considered a number of different names, sought feedback from the community and users, coordinated with the FAA, and officially changed the name of the airport to Lake County Executive Airport.

This master plan document was completed prior to the name change becoming official; therefore, throughout most of the document, the Airport is referred to as Lost Nation Airport or by its identifier, which will remain the same, LNN. The airport name has been changed in this executive summary and on all drawings of the ALP drawing set.

## Lake County Executive Airport History

1929	An 88-acre dairy farm owned by the Osborn family is first used as a flying field
1931–1932	The airport is established on land owned by Oscar Sutton. A group of airplane owners relocates from Old Lake County Airport. Original facilities include a 10,000-square-foot hangar and three turf runways
1942–1946	Operated by Civil Air Patrol. The airport grows; land acquisition totals 250 acres.
1946	Operated by General Aviation, Inc., founded by William McNeely
1952–1953	Runway 9-27 is paved and extended to 2,500 feet. Three hangars are constructed.
1956	Runway 5-23 is constructed.
1961	A control tower is constructed and runways 9-27 and 5-23 are extended to 5,000 feet by 100 feet.
Late 1970s	Kent Smith bequeaths the airport to Case-Western Reserve University. The university decides to sell the airport.
1982	The airport is designated a reliever for Cleveland Hopkins as part of the Airport Improvement Program.
1986	The City of Willoughby purchases the airport.
2006	City of Willoughby asks Lake County to take over airport assets.
2014	Transfer of real estate from the City of Willoughby to LCOPEDA. FAA designates Lake County and LCOPEDA to become co-sponsors of the airport.
2015	Airport receives FAA grants for improvements including repairs to Runway 5-23 and a master plan. The airport receives an ODOT grant for 2016 repairs to Runway 10-28
2019	The airport is officially renamed Lake County Executive Airport

## What is the history of the Airport?

In 1929, today's airport site was an 88-acre farm used as a flying field. In 1931, a group of airplane owners relocated their airplanes to the site. Initial construction included three turf runways and a 10,000-square-foot hangar. During the 1930s, the airport was operated by Dewey Eldred's Flying Service. In 1940, the airport was purchased by local industrialist Kent Smith. During WWII, while Dewey Eldred was assisting with the war effort, the airport was operated by the Civil Air Patrol. Mr. Smith began to acquire property surrounding the airport and by the conclusion of the war, it had grown to around 250 acres.

William McNeely was the airport manager at the start of the war, and the founder of General Aviation, Inc., which began to operate the airport in 1946. During Mr. McNeely's 40-year tenure, the airport saw consistent growth. The airport remained under the ownership of Kent Smith and management of William McNeely through the late 1970s when Mr. Smith bequeathed the airport to Case Western Reserve University, which decided to liquidate the asset. At that time, the cities of Mentor and Willoughby considered a joint purchase of the airport and it was designated a reliever for Cleveland Hopkins as part of the Federal Aviation Administration (FAA) Airport Improvement Program (AIP). The City of Mentor had an agreement with the City of Willoughby to pursue the airport in a joint venture, but opposition in Mentor forced the City of Mentor to back out. With unanimous City Council approval, the City of Willoughby purchased the 395-acre airport with FAA funding, and it was renamed Willoughby Lost Nation Municipal Airport.

From 1985 through 1995, the City of Willoughby received over \$14 million dollars in grants requiring over \$1.2 million dollars in local match funding. Projects included land acquisition, Runway 5-23 extension, new lighting systems, runway reconstructions, a master plan update, and other airside and landside improvements.

The 1990s was a period of growth for Willoughby. The airport, however, was perceived as a burden, requiring an investment by the City to cover operating expenses. After 1995, there was a lack of investment in infrastructure and maintenance was deferred. The privately built air traffic control tower was demolished. In 2006, the City of Willoughby asked Lake County to take over the airport, and

it was tentatively scheduled to be shut down in March 2016. In 2007, the Lake County Ohio Port and Economic Development Authority (LCOPEDA) was established and a study of the airport was conducted. On October 8, 2014, ownership of Lost Nation Airport was officially transferred from the City of Willoughby to the LCOPEDA and they along with Lake County were named co-sponsors.

## How does LNN benefit the community?

The airport is a valuable asset that brings numerous social and economic benefits to the community. It serves as a gateway to Willoughby, Mentor, and the rest of Lake County, providing a base for private pilots, local businesses, educational institutions, flight instruction, and other services. A few community benefits include:

- Valuable space for a local law enforcement base and firefighting and police training
- Local youth organization meetings
- Air shows
- Wings & Wheels and pancake breakfast fly-in/drive-in events
- Tours, airplane rides, and up-close looks at aircraft are used as auction items for local groups, charities, and fundraisers

Local spending by airport employees on housing, food, and other services contributes to the local economy. Other direct economic benefits include purchases by the airport (e.g., fuel and maintenance parts) and construction/maintenance projects. Indirect benefits include the value of the airport to local and regional businesses and the airport's support of career training and scholarship programs, community events, and the preservation of green space.

The 2014 Ohio Airports Focus Study documented that the combined direct and indirect employment resulting from the airport is 117 FTE (full-time equivalent) jobs, \$2.9 million in payroll, and \$9.4 million in output.



## Why did the airport need a master plan?

The last master plan was completed in 1999 and the current airport layout plan (ALP) was approved by the FAA on October 6, 2006. A new master plan was needed for several reasons:

1. With the transfer of ownership, LCOPEDA had a new vision for the airport and wanted to guide future development, improvements, and upgrades.
2. The master plan was a basis for ongoing commitments and participation in funding of eligible improvements by the FAA and the State of Ohio Office of Aviation. An FAA-approved ALP (the culmination of a master plan) was required to receive federal funding.
3. The FAA had issued new airport planning and design standards since the last master plan and ALP were completed.

The main objective of the master plan was to outline the vision for the airport and document the extent, type, and schedule of development required to accommodate existing and future needs.

## How were stakeholders and the public involved?

Through a thorough process of engaging airport users and community stakeholders, the master plan was developed to reflect its objectives. Several outreach efforts took place:

**Steering Committee**—A Steering Committee comprising representatives of the Board of County Commissioners, LCOPEDA, and the consultant team met four times to discuss the master plan. Their role was to represent the airport sponsors and provide data and input on technical issues, identify existing and future needs, advise on potential impacts, and review draft documents.

**Planning Advisory Committee (PAC)**—The PAC included representatives and residents of Mentor, Willoughby, Lake County, airport tenants and users, the FBO, and the FAA. The PAC met three times throughout the course of the master plan to provide an insight into the opinions of the general public and serve as a conduit for communication with key users within the community.

**Public Meetings & Outreach**—Through two public meetings, user and business surveys, the two project fact sheets, and numerous articles and email blasts, the public was encouraged to become involved in the master plan process.

The first of two public meetings was held on September 20, 2017. The purpose of this meeting was to present the details of the master plan process including the results of the inventory, forecasting effort, and the facility requirements analysis, as well as the alternatives analysis. The second public meeting occurred on August 29, 2018 and included a summary of the master plan process with a focus on describing the proposed development plan and obtaining public feedback.

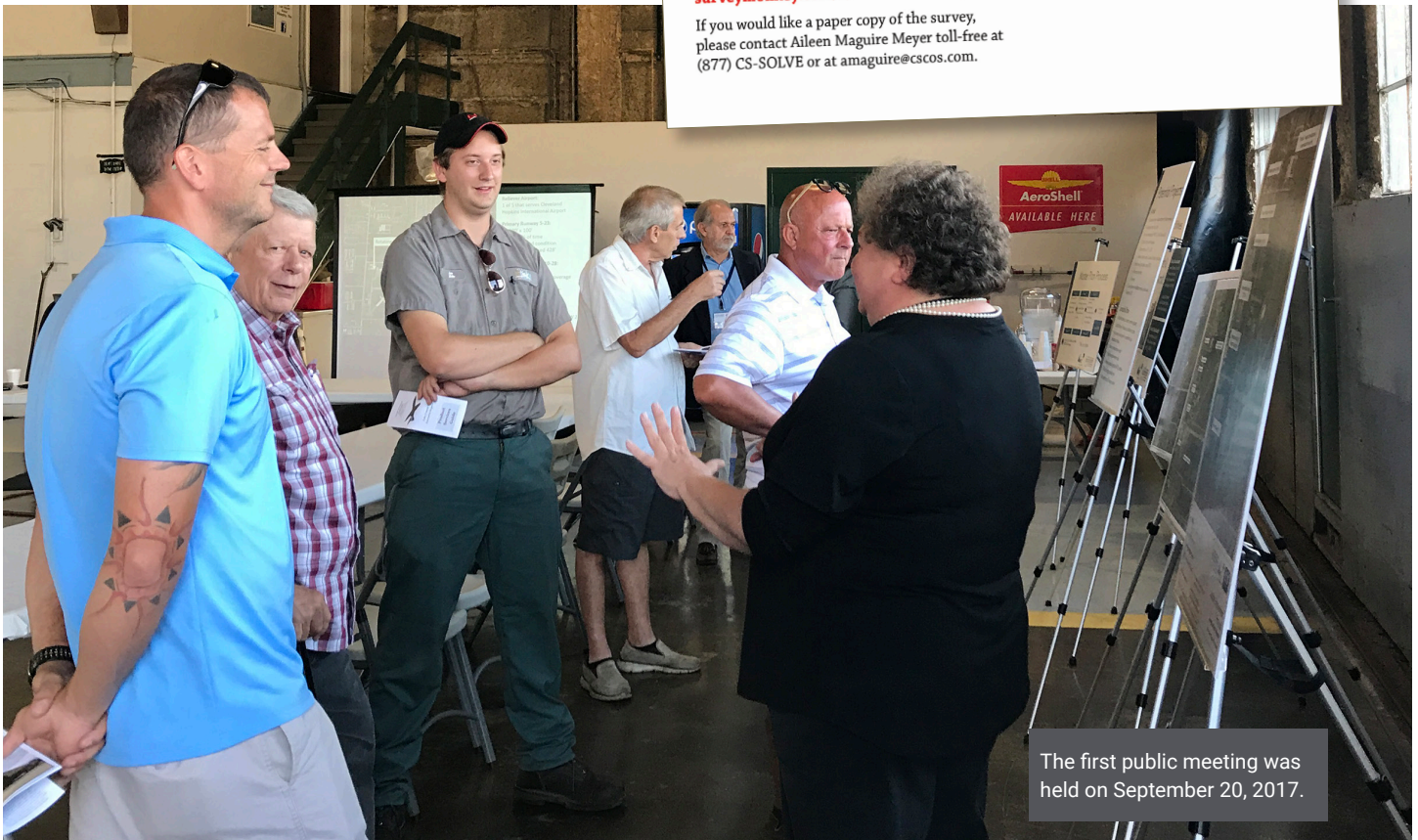
Help us shape the future of  
Lost Nation Airport

Take a quick survey to help with airport planning  
[surveymonkey.com/r/LNNPilotSurvey](https://surveymonkey.com/r/LNNPilotSurvey)

- Identify the airport's strengths, weaknesses and areas of need.
- Address future capital improvement needs.
- Develop a customized plan to benefit the airport's users and surrounding community.

Take our confidential online survey by April 30:  
[surveymonkey.com/r/LNNPilotSurvey](https://surveymonkey.com/r/LNNPilotSurvey)

If you would like a paper copy of the survey, please contact Aileen Maguire Meyer toll-free at (877) CS-SOLVE or at [amaguire@cscos.com](mailto:amaguire@cscos.com).



The first public meeting was held on September 20, 2017.

## What are the existing features at the Airport?

The airport has two runways—5-23 and 10-28. Runway 5-23, the primary runway, is 5,028 feet long and 100 feet wide, with a northeast-southwest orientation. Approximately 70% of operations are on Runway 5-23. Runway 10-28 is oriented east-west and is 4,272 feet long and 100 feet wide. Both runway ends 5 and 28 have displaced thresholds that shorten the landing distances. There are four taxiways and two taxilanes that provide access to fixed base operator (FBO) and aircraft storage facilities. The runway pavements are in good condition and a grant was recently received to rehabilitate most taxiway and apron pavements. Some areas of the airfield have poor drainage.

Aircraft operations are supported by airfield lighting, signage, markings, and navigational aids that help pilots navigate. The airport also has a number of landside facilities:

- › Administration building (720 square feet) used as an office, police substation, and lounge with kitchenette and restroom.
- › A 75,000-square-foot hangar leased by Lost Nation Sports Park. The building houses a sports bar and banquet facility and includes a 13-acre outdoor soccer field complex.
- › A 16,000-square-foot conventional hangar housing the FBO, Classic Jet Center. Built in 1955, the hangar is in good condition and includes aircraft storage space, aircraft maintenance and repairs space, FBO administration offices, and

a pilot's lounge with a snooze room, restrooms/showers, television, and free wi-fi. Vector Aviation also leases space in this building for their flight school.

- › A 20,000-square-foot unheated conventional hangar used for storage of ground support equipment, mowing equipment, and snow removal equipment. This building is in fair condition.
- › Four hangars, ranging from 12,000 to 14,500 square feet, owned by private tenants on leased land. They are in good condition.
- › Three fuel storage areas (10,000-gallon avgas, 12,000-gallon Jet A, and three gas tanks for support vehicles). All fuel tanks are above ground and in very good condition.
- › Wayfinding to the airport is minimal, but access and parking is adequate and in good condition.
- › There is a wildlife deterrent fence around the airfield recently upgraded to be consistent height of 10 feet.



## What is the critical aircraft?

The FAA requires airports to base their design standards on a “critical aircraft,” which is the one that is both the most demanding to serve and has at least 500 annual operations at the airport (an operation is a takeoff or landing). If a single aircraft does not meet those criteria, a family of aircraft can be used. For Lake County Executive, the critical family of aircraft are different for each runway. The critical family of aircraft for Runway 5/23 include the Cessna 525 Citation Jet, Cessna 550 Citation II/Bravo, and the Dassault Falcon/Mystere 50 while the Cessna 414 and 414A Chancellor serve as the critical aircraft family for Runway 10/28. Airport features, such as runway width and length, are dictated by the needs of these aircraft.

## Existing aviation activity

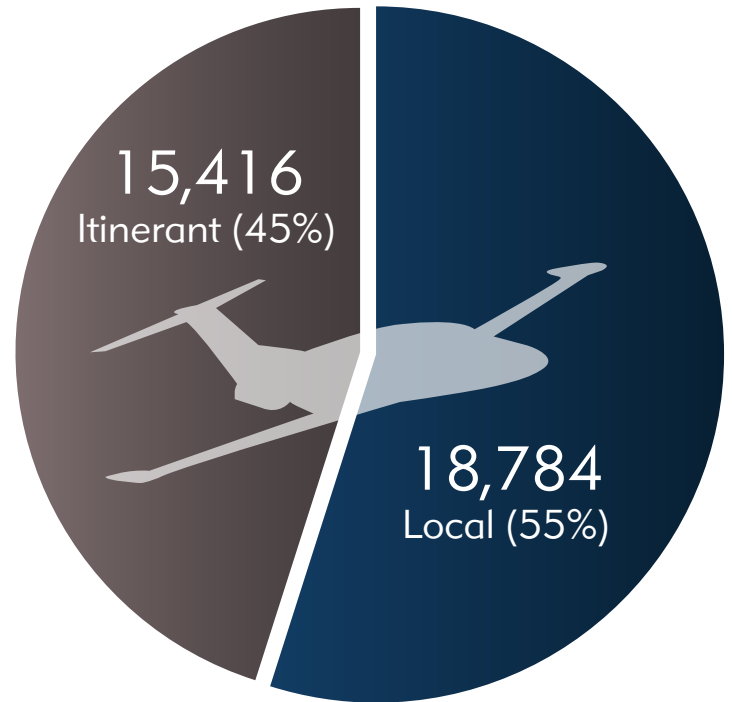
In 2015, there were 34,200 operations at Lake County Executive. “Local” operations stay within the local traffic pattern or within sight of the airport; “itinerant” operations extend beyond the local traffic pattern. As shown on the chart on this page, 55% of activity is local and 45% is itinerant.

## What will aviation activity look like in the future?

With the transfer of ownership to LCOPEDA and a renewed focus on investment and improvements at the airport, it is reasonable to assume that the development of hangars will increase the Airport’s market share of based aircraft. The number of based aircraft and operations are expected to increase quickly within the next five years before slowing through the end of the planning period in 2036. Following this trend, by 2036 the number of based aircraft is expected to grow from 76 to 98 and the number of annual operations is expected to grow from 34,200 to 44,100.

## What improvements are necessary to accommodate existing and future demand?

Based on existing and projected demand, the condition of existing facilities, and FAA design standards, the Airport needs a number of improvements/upgrades. Some projects may enhance safety or operational efficiency but are not required.



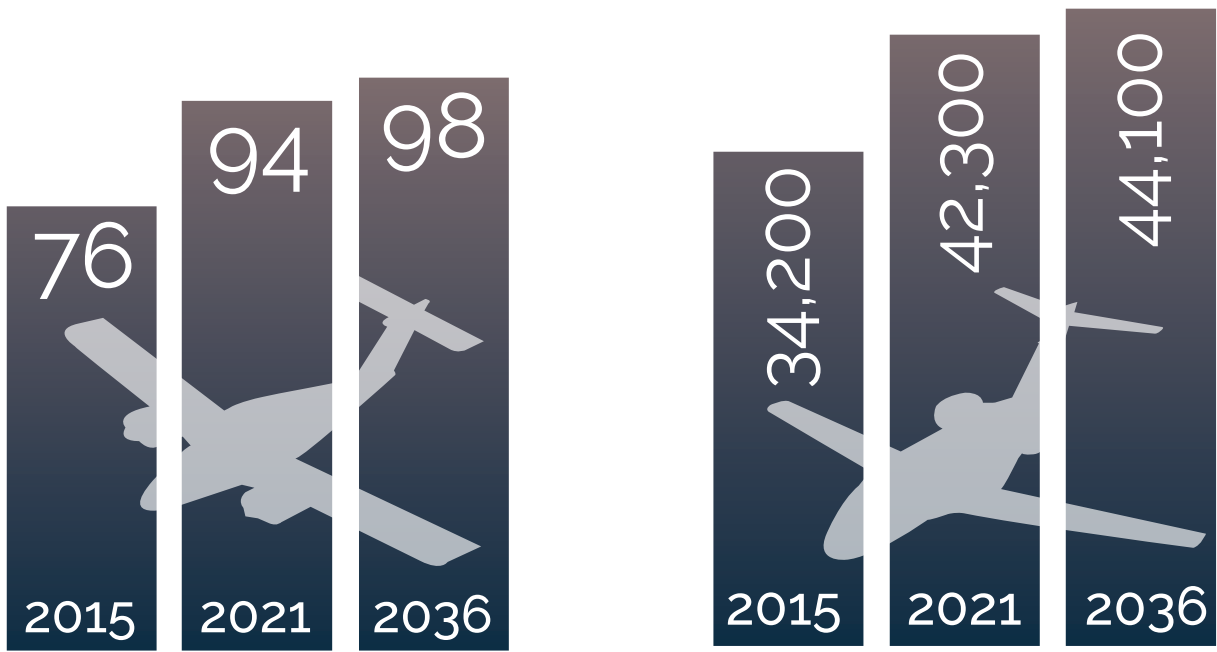
2015 Operations

### Airside needs

- › Address any items that do not meet FAA standards
- › Decrease or eliminate existing displacements on both runways to increase usable runway length and improve safety
- › Minimize/eliminate drainage issues on the airfield
- › Reconfigure the intersection of runways 5 and 10 with Taxiway D
- › Construct full parallel taxiways
- › Acquire (or gain control via easements) the land that is currently outside the airport boundary within runway protection zones

### Landside/other needs

- › Establish a gateway to the airport
- › Add additional corporate hangar storage space
- › Install service/perimeter road
- › Provide updated/upgraded FBO facilities
- › Add single aircraft/T-hangar storage space



Based Aircraft Forecast

Aircraft Operations Forecast

The critical aircraft family is designated with an Airport Reference Code (ARC) B-II for Runway 5/23. Wingspan ranges from 49'10" to 61'-11" and tail height ranges from 14' to 22'11".

Photo: Cessna Citation Jet (photo credit: Textron Aviation)



## What alternatives were considered?

Three alternatives for future development at the Airport were developed and are described below.

<p><b>Alternative 1</b> No Build</p>	<p>The no-build alternative keeps the airport in its present condition without improving existing facilities to meet design standards and facility requirements. This alternative assumes only routine maintenance of existing facilities and services and implementation of safety measures, including obstruction removal or lighting. The primary result of this alternative is that, as the facilities reach and extend beyond their intended useful life, anticipated maintenance and operations costs would become prohibitive to sustain, or the facilities will no longer meet the needs of airport users. The Airport would not provide additional aircraft storage for new tenants and increased revenues. It is important to note that this scenario does not address potentially unsafe runway and taxiway configurations and “hot spots,” such as the intersection of Runways 5 and 10 with Taxiway D.</p>
<p><b>Alternative 2</b> Develop within existing runway and t-hangar footprint, remove displaced thresholds</p>	<p>Alternative 2 focuses on improvements that can be made within the existing runway footprint and incorporating the T-hangar development that is currently in design. Future aircraft storage needs are met by expanding the planned T-hangar and corporate hangar development. Removing or mitigating existing obstructions allows the runway threshold displacements to be removed so the two runways can maximize the existing runway infrastructure. Pavement removal associated with narrowing the runways to meet design standards is not included. It is anticipated that this will be done when the next significant pavement rehabilitation projects are due and the project will include a decision by the sponsor about whether or not the entire width will be maintained without FAA AIP funding for the additional width.</p>
<p><b>Alternative 3</b> Shift runway location, new t-hangar development location</p>	<p>Alternative 3 provides other opportunities to achieve the required runway length (per Section 4.2.3) by shifting the full Runway 5-23 length to begin at the displaced threshold on Runway 5 and extending the Runway 23 end by 428 feet. Future aircraft storage capacity is met through an alternate location of additional T-hangars adjacent to the proposed parallel taxiway to 5-23. The runway shift requires additional runway pavement, taxiway pavement, and perimeter road construction to meet the location of the new runway end, as well as demolition of runway pavement on the Runway 5 end to meet overrun requirements. Pavement removal associated with narrowing the runways to meet design standards is not included and the runway extensions assume maintaining the existing width of the runways. It is anticipated that the projects will include a decision by the sponsor about whether or not the entire width will be maintained without FAA AIP funding for the additional width. For the purposes of this analysis, it is assumed the existing runway widths are maintained. Additional T-hangar apron pavement and auto parking pavement is required to accommodate access to the alternate hangar development location. Not included are the specific additional obstructions to the relocated surfaces that would occur with the shift in the Runway 23 end location.</p>



## Criteria and processes used to evaluate the alternatives

Evaluation criteria highlight the differences between alternatives as well as the challenges and benefits of each. The alternative plans underwent a comparative analysis process consisting of quantitative and qualitative factors. The factors considered for alternative development are grouped in five basic categories:

- › Facility Requirements and Design Standards
- › Environmental Impacts
- › Economic Vitality
- › Sustainability
- › Implementation Feasibility

The alternative evaluation process looks at each alternative using the above categories providing a “best solution” for development based on the current and future needs of the airport. A detailed description of the evaluation criteria and how each alternative was assessed is provided in the Detailed Alternatives Evaluation Matrix found in Appendix H – Alternatives Evaluation Matrix. Based on the qualitative and quantitative assessment provided, each evaluation criteria was assigned a comparative rating. Similar to the Consumer Report system, the rating system uses a modified circle to visually communicate the qualitative assessment. The ratings correlate to a simplified non-weighted score. Based on the analysis, alternative 2 received the highest summary score and therefore has been made the preferred alternative.

Evaluation Criteria	Alternative 1 No Build	Alternative 2	Alternative 3
<b>Facility Requirements And Design Standards</b>			
Airfield	○	●	●
Runways	○	●	◐
Taxiways	○	●	●
Land Requirements	○	◐	◐
GA Based Aircraft Storage Capacity	○	●	◐
Transient Aircraft Storage Capacity	○	●	●
GA Terminal Building Capacity	◐	◐	◐
<b>Environmental Impacts</b>			
Land Use Compatibility	○	◐	◐
Noise	●	◐	◐
Air Quality and GHG Emissions	◐	○	○
Water Quality	●	◐	○
Wetlands	●	◐	◐
Fish, Wildlife & Plants	●	◐	◐
Social Impacts	●	◐	◐
Department of Transportation Act, Section 4(f)	●	●	●
Historical, Architectural, Archeological, and Cultural Resources	●	●	●
Hazardous Material and Solid Waste Impacts	●	●	●
Construction Impacts	●	◐	◐
Environmental Justice	●	●	●
<b>Economic Vitality</b>			
Development Cost	●	◐	◐
Operation and Maintenance Cost	◐	◐	◐
Revenue Generation	○	●	●
<b>Sustainability</b>			
Ability to Re-Use Existing Buildings and Facilities	●	◐	◐
Surface Transportation Management	○	◐	◐
Sustainable Materials Use	○	◐	○
<b>Implementation Feasibility</b>			
Conforms To Best Practices for Safety and Security	○	●	●
Provides for the Highest and Best Use of Property	○	●	◐
Allows for Forecasted Growths	◐	●	●
Provides Flexibility for Unforeseen Changes	○	●	●
Technically/Engineering Feasible	●	●	●
Socially/Politically Feasible	◐	◐	◐
<b>Score</b>	<b>47</b>	<b>70</b>	<b>58</b>
<b>Ranking</b>	<b>3</b>	<b>1</b>	<b>2</b>

## Implementation and Phasing

The proposed development plan has been divided into three phases:

- › Phase 1 (2018 to 2023)—short-range airport growth and immediate needs
- › Phase 2 (2024 to 2028)—mid-range airport growth
- › Phase 3 (2029 to 2040)—long-range airport growth and future rehabilitation

The first phase of development includes a number of projects currently listed on the Airport's Capital Improvement Plan (ACIP) along with additional development identified through the master plan process. Phase 2 of development includes the remainder of the projects on the current ACIP along with additional development identified in the master plan process, with a focus on major airside development projects. The projects identified in Phase 3 include aircraft storage additions, apron expansions, and taxiway relocations, and pavement work at the end of Runways 5 and 10.

Project Number	Project Description	Cost Estimate (2018)	Potential Funding Source
1-1	Land Acquisition for RPZ Control RW 5	\$413,000	FAA AIP
1-2	Land Acquisition for RPZ Control RW 10/28	\$3,710,000	FAA AIP
1-3	Widen Taxiways A/B to 35 feet	\$253,000	FAA AIP
1-4	Relocated Building 4/SRE Building	\$4,311,000	Private/ODOT
1-5	Fence Improvements	\$953,000	FAA AIP
1-6	New T-hangars & Kennedy Parkway Extension	\$4,630,000	Private/AIP/ODOT
1-7	Runway 10 Obstruction Removal	\$114,000	ODOT
1-8	Runways 5, 23, and 28 Obstruction Removal	\$3,931,000	ODOT
<b>Phase 1 Total</b>		<b>\$18,315,000</b>	
2-1	Remove Non-Directional Beacon Obstructions	\$7,000	AIP/ODOT
2-2	Relocate RW 5 Displaced Threshold and Resurface RW 5/23	\$2,346,000	FAA AIP*
2-3	Relocate RW 28 Displaced Threshold and Resurface RW 10/28	\$2,133,000	FAA AIP*
2-4	Parallel Taxiway for RW 5/23 (include partial demo of TW C)	\$3,856,000	FAA AIP
2-5	Parallel Taxiway for RW 10/28 (include relocation of TW D)	\$5,762,000	FAA AIP
2-6	Install Perimeter Road	\$1,200,000	ODOT
2-7	New T-hangars	\$4,385,000	Private
2-8	Airfield Drainage Improvements	\$1,054,000	FAA AIP
<b>Phase 2 Total</b>		<b>\$20,743,000</b>	
3-1	Taxiway A to Runway 5 End Relocation and Runway 10 End Pavement Removal	\$637,000	AIP/ODOT
3-2	New Conventional Hangars	\$6,600,000	Private
3-3	Relocate AWOS Access Road	\$123,000	FAA AIP
3-4	Relocate Hodgson Road	\$1,476,110	FAA AIP
<b>Phase 3 Total</b>		<b>\$8,836,110</b>	
<b>Program Total</b>		<b>\$47,894,110</b>	

\*Denotes that the total cost would not be FAA AIP eligible

## Planning Projects

Several planning projects have been identified for implementation throughout the planning period.

- › Given the Airport's long-range development plan, opportunities exist to release or lease lands for non-aeronautical development. A careful review of the airport property shows potential for economic development, improved fire response times, and increased community engagement purposes while not jeopardizing future aircraft operations and development needs.
- › The Wildlife Hazard Site Visit Report conducted in 2016 recommended a full wildlife hazard assessment because of a number of events that trigger the need, including documented wildlife strikes, aircraft engine ingestion of wildlife, and the observation of sufficiently sized/quantity of wildlife on-site.
- › It is recommended that the Airport implement recording keeping processes to document operations and fuel sales by aircraft type. This information is often necessary in justifying the purpose and need for projects that are dependent on an activity and/or aircraft size threshold.
- › To help the Airport live its vision, conducting a study to understand how successful airports operate and maintain their facilities, engage with users, and become more of an integral part of their communities will provide the guidance and tools LNN needs to implement the programs and initiatives noted below and achieve its goals.
- › While not likely standalone projects, correspondence with various environmental protection agencies identified the following analyses to be completed as development occurs at the airport:
  - A floodway analysis is recommended by the EPA as part of a future environmental analysis
  - A wetland delineation is recommended by the USACE



## Programs

- › Implement a composting program for restaurant food waste and transition to recyclable restaurant take-out containers
- › Construct water fountains/bottle refill stations at Lost Nation Sports Park
- › Implement an education awareness campaign encouraging single-stream recycling
- › Market and re-brand the Airport

## Other Initiatives

- › Transition from paper products to air dryers in restrooms
- › Use recycled materials where possible for constructing taxiways, roadways, infrastructure improvements, etc.
- › Provide recycling containers throughout facilities, particularly in office and vending areas
- › Design for all aspects of proposed projects should minimize emissions to the maximum extent possible
- › Use construction equipment that can operate on alternative fuels when possible
- › Use hybrid or electric vehicles during construction, where practical



## Financial Plan

The overall development plan consists of \$47.9 million in capital improvements. Of this total, approximately \$22 million is eligible for FAA Airport Improvement Program (AIP) funds, with the remaining funds coming from local and other non-AIP funding sources.

Based on current legislation, AIP-approved projects are eligible for 90–95 percent funding. The funds for the AIP are distributed in accordance with provisions contained in the Airport and Airway Improvement Act (the Act). There are also a number of potential

non-AIP funding sources for capital improvement projects and programs/plans such as state grant programs, local funding including LCOPEDA and Lake County, private funding, sustainability funding opportunities including the ZEV Pilot Program, DERA, and PACE Program.

## Lake County/LCOPEDA/FAA Approval

On June 9, 2020, the FAA Detroit Airports District Office issued an ALP approval for Lake County Executive Airport (LNN). The Ohio Department of Transportation (ODOT) Office of Aviation signed the ALP on August 18, 2020.

With the signatures of the FAA and ODOT, the Board of County Commissioners adopted the ALP on September 17, 2020 and the LCOPEDA adopted the ALP on September 23, 2020. The approved/adopted ALP is included on the following page.

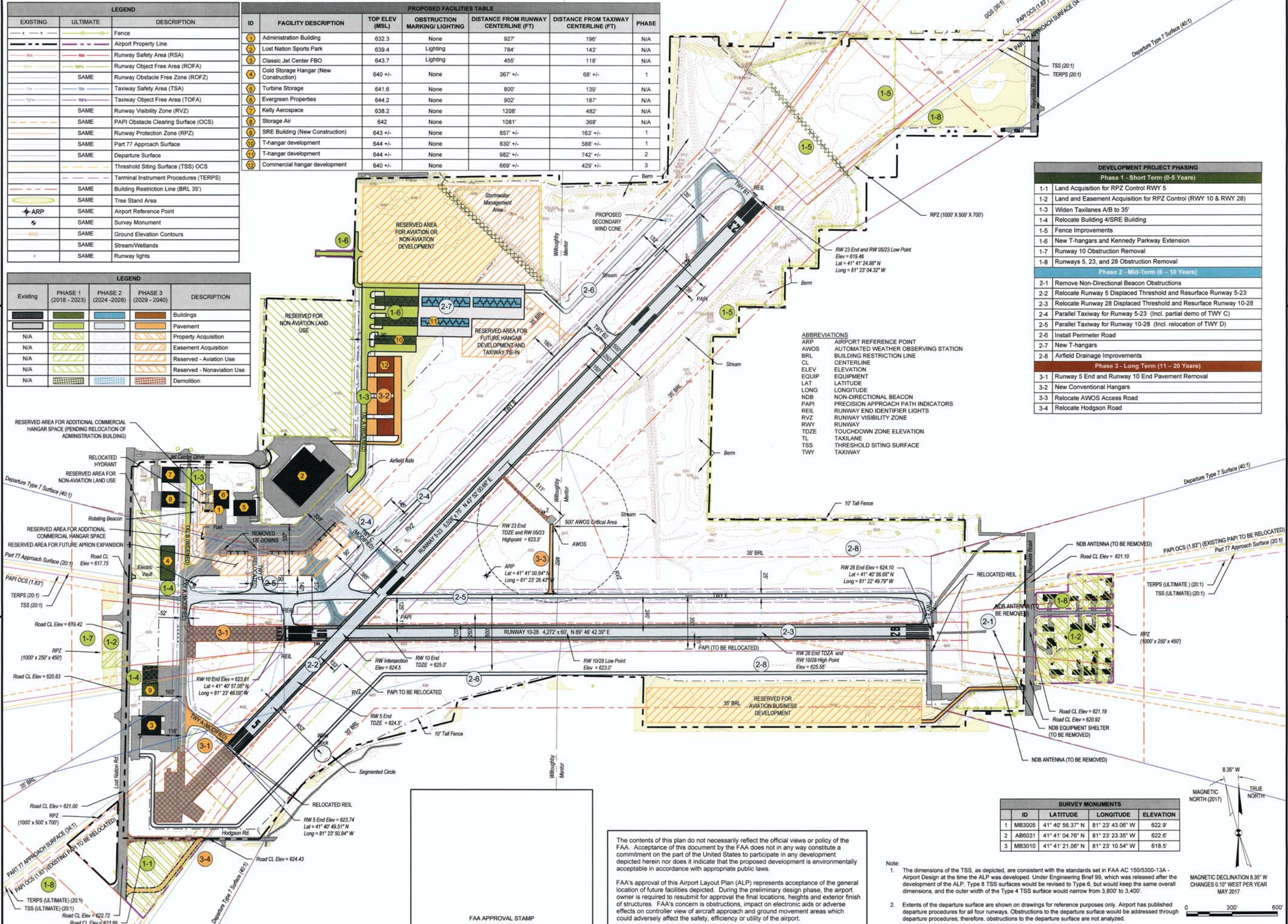
- › Promote the use of public transportation or carpooling for both construction and operation of the facility
- › Apply sustainable rating systems to construction and site development, where applicable
- › Use Airport as a tool to facilitate training students for pilot and aviation mechanic roles. Explore potential partnerships with day camps and schools such as Lake Erie College and Willoughby-Eastlake School of Innovation
- › Use future air shows as an opportunity for community engagement
- › Work with the City of Mentor to establish zoning codes with specific references to the Airport or preservation of airspace (part of the ODOT grant requirements)
- › Improve airport signage regarding FBO location
- › Update FBO facilities to bring airport in line with corporate expectations
- › Provide restaurant or access to the restaurant at Lost Nation Sports Park from the ramp
- › Enhance emergency response initiatives and implement safety improvements
- › Continue permitting measures to prevent wildlife hazards in the form of Canada goose nests and deer
- › Update Airport website to include directions to the airport

LEGEND		
EXISTING	ULTIMATE	DESCRIPTION
---	---	Fence
---	---	Airport Property Line
---	---	Runway Safety Area (RSA)
---	---	Runway Object Free Area (ROFA)
---	---	SAME Runway Obstacle Free Zone (ROFZ)
---	---	Taxiway Safety Area (TSA)
---	---	Taxiway Object Free Area (TOFA)
---	---	SAME Runway Visibility Zone (RVZ)
---	---	SAME PAPI Obstacle Clearing Surface (OCS)
---	---	SAME Runway Protection Zone (RPZ)
---	---	SAME Part 77 Approach Surface
---	---	SAME Departure Surface
---	---	Threshold Siting Surface (TSS) OCS
---	---	Terminal Instrument Procedures (TERPS)
---	---	SAME Building Restriction Line (BRL 35')
---	---	SAME Tree Stand Area
---	---	SAME Airport Reference Point
---	---	SAME Survey Monument
---	---	SAME Ground Elevation Contours
---	---	SAME Stream/Wetlands
---	---	SAME Runway lights

PROPOSED FACILITIES TABLE						
ID	FACILITY DESCRIPTION	TOP ELEV (MSL)	OBSTRUCTION MARKING/ LIGHTING	DISTANCE FROM RUNWAY CENTERLINE (FT)	DISTANCE FROM TAXIWAY CENTERLINE (FT)	PHASE
1	Administration Building	632.3	None	927'	196'	N/A
2	Lost Nation Sports Park	639.4	Lighting	784'	143'	N/A
3	Classic Jet Center FBO	643.7	Lighting	455'	118'	N/A
4	Cold Storage Hangar (New Construction)	640 +/-	None	367 +/-	68 +/-	1
5	Turbine Storage	641.6	None	800'	139'	N/A
6	Evergreen Properties	644.2	None	902'	187'	N/A
7	Kelly Aerospace	638.2	None	1208'	482'	N/A
8	Storage Air	642	None	1081'	368'	N/A
9	SRE Building (New Construction)	643 +/-	None	857 +/-	163 +/-	1
10	T-hangar development	644 +/-	None	830 +/-	588 +/-	1
11	T-hangar development	644 +/-	None	982 +/-	742 +/-	2
12	Commercial hangar development	640 +/-	None	669 +/-	429 +/-	3

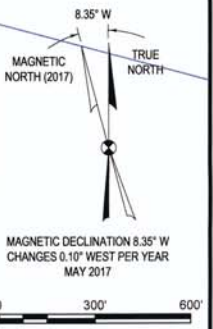
LEGEND				
Existing	PHASE 1 (2018 - 2023)	PHASE 2 (2024 - 2026)	PHASE 3 (2029 - 2040)	DESCRIPTION
---	---	---	---	Buildings
---	---	---	---	Pavement
---	---	---	---	Property Acquisition
---	---	---	---	Easement Acquisition
---	---	---	---	Reserved - Aviation Use
---	---	---	---	Reserved - Nonaviation Use
---	---	---	---	Demolition

DEVELOPMENT PROJECT PHASING	
Phase 1 - Short Term (0-5 Years)	
1-1	Land Acquisition for RPZ Control RWY 5
1-2	Land and Easement Acquisition for RPZ Control (RWY 10 & RWY 28)
1-3	Widen Taxiways A/B to 35'
1-4	Relocate Building 4/SRE Building
1-5	Fence Improvements
1-6	New T-hangars and Kennedy Parkway Extension
1-7	Runway 10 Obstruction Removal
1-8	Runways 5, 23, and 28 Obstruction Removal
Phase 2 - Mid-Term (6 - 10 Years)	
2-1	Remove Non-Directional Beacon Obstructions
2-2	Relocate Runway 5 Displaced Threshold and Resurface Runway 5-23
2-3	Relocate Runway 28 Displaced Threshold and Resurface Runway 10-28
2-4	Parallel Taxiway for Runway 5-23 (Incl. partial demo of TWY C)
2-5	Parallel Taxiway for Runway 10-28 (Incl. relocation of TWY D)
2-6	Install Perimeter Road
2-7	New T-hangars
2-8	Airfield Drainage Improvements
Phase 3 - Long Term (11 - 20 Years)	
3-1	Runway 5 End and Runway 10 End Pavement Removal
3-2	New Conventional Hangars
3-3	Relocate AWOS Access Road
3-4	Relocate Hodgson Road



ABBREVIATIONS	
ARP	AIRPORT REFERENCE POINT
AWOS	AUTOMATED WEATHER OBSERVING STATION
BRL	BUILDING RESTRICTION LINE
CL	CENTERLINE
ELEV	ELEVATION
EQUIP	EQUIPMENT
LAT	LATITUDE
LONG	LONGITUDE
NDB	NON-DIRECTIONAL BEACON
PAPI	PRECISION APPROACH PATH INDICATORS
REIL	RUNWAY END IDENTIFIER LIGHTS
RVZ	RUNWAY VISIBILITY ZONE
RWY	RUNWAY
TDZE	TOUCHDOWN ZONE ELEVATION
TL	TAXILANE
TSS	THRESHOLD SITING SURFACE
TWY	TAXIWAY

SURVEY MONUMENTS			
ID	LATITUDE	LONGITUDE	ELEVATION
1	MB3005 41° 40' 56.37" N	81° 23' 43.06" W	622.9'
2	AB6031 41° 41' 04.76" N	81° 23' 23.35" W	622.6'
3	MB3010 41° 41' 21.06" N	81° 23' 10.54" W	618.5'



The contents of this plan do not necessarily reflect the official views or policy of the FAA. Acceptance of this document by the FAA does not in any way constitute a commitment on the part of the United States to participate in any development depicted herein nor does it indicate that the proposed development is environmentally acceptable in accordance with appropriate public laws.

FAA's approval of this Airport Layout Plan (ALP) represents acceptance of the general location of future facilities depicted. During the preliminary design phase, the airport owner is required to submit for approval the final locations, heights and exterior finish of structures. FAA's concern is obstructions, impact on electronic aids or adverse effects on controller view of aircraft approach and ground movement areas which could adversely affect the safety, efficiency or utility of the airport.

Note:

- The dimensions of the TSS, as depicted, are consistent with the standards set in FAA AC 150/5300-13A - Airport Design at the time the ALP was developed. Under Engineering Brief 99, which was released after the development of the ALP, Type 8 TSS surfaces would be revised to Type 6, but would keep the same overall dimensions, and the outer width of the Type 4 TSS surface would narrow from 3,800' to 3,400'.
- Extents of the departure surface are shown on drawings for reference purposes only. Airport has published departure procedures for all four runways. Obstructions to the departure surface would be addressed through departure procedures; therefore, obstructions to the departure surface are not analyzed.

FAA APPROVAL STAMP

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**Lake County Ohio PORT AND ECONOMIC DEVELOPMENT AUTHORITY**  
 AN OHIO PORT AUTHORITY

**AIRPORT LAYOUT PLAN UPDATE  
 LAKE COUNTY EXECUTIVE AIRPORT  
 CITY OF WILLOUGHBY AND CITY OF MENTOR  
 LAKE COUNTY, OHIO**

REVISIONS		
MARK	DATE	DESCRIPTION

PROJECT NO: Q06.001.001  
 DATE: NOVEMBER 2019  
 DRAWN BY: K. R. YOUNG  
 DESIGNED BY: K. R. YOUNG  
 CHECKED BY: J. J. SHURER

**AIRPORT LAYOUT PLAN**

**SHEET 4 OF 15**

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