



Lake Elmo Airport
ADVISORY COMMISSION
LEAAC

Regular Meeting

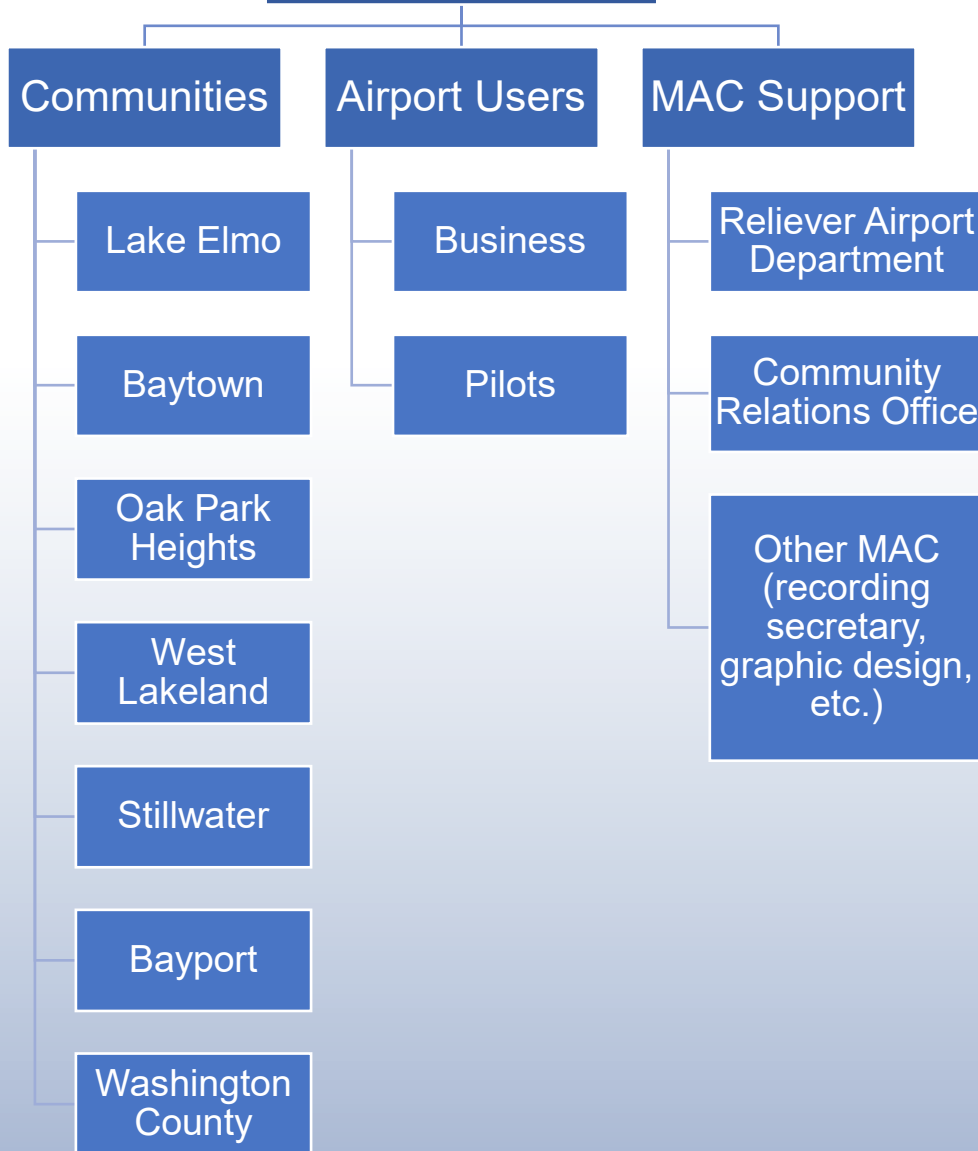
February 26, 2024



Welcome & Introductions



LEAAC



Lake Elmo Airport Advisory Commission

GOAL:

Further the general welfare of the community and the Lake Elmo Airport through minimizing or resolving problems created by the aircraft operations at the airport.

PURPOSE:

1. **ADVISE** the community and MAC on all matters affecting the Lake Elmo Airport, the classification, rules and regulations supplied to the operation of the Airport and the development of lands adjacent to the Airport
2. **COOPERATE** with the MAC staff in reviewing matters affecting Lake Elmo Airport use and control
3. **RECOMMEND** to the MAC regarding any proposal affecting the use or operations of Lake Elmo Airport



Agenda



Welcome & Introductions

- Approval of Meeting Minutes: 11-27-2023
 - Leadership Remarks and Airport Operations Authority
 - Noise Abatement Plan Discussion
 - Public Comment
 - Member Comment
 - Action for Noise Abatement Plan
 - Noise Abatement Plan Implementation and Distribution
 - Review LEAAC meeting schedule
- Adjourn



Action

**Approval of
Meeting Minutes
for
11/27/2023**





Lake Elmo Airport
ADVISORY COMMISSION
LEAAC

Leadership Remarks and Airport Operations Authority





Aviation Agencies and Roles



Federal Regulations on Aircraft Noise

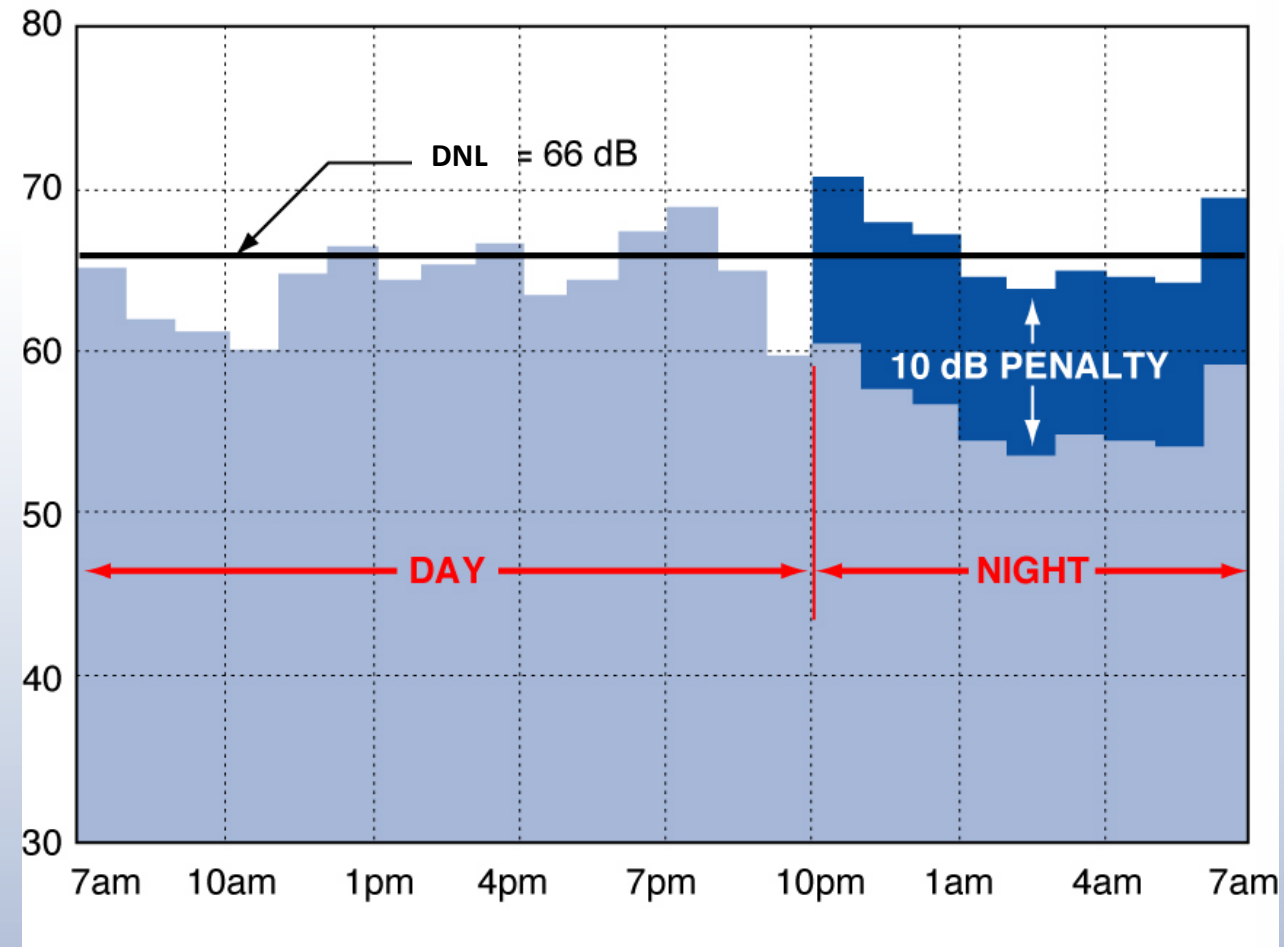


Applies to all public-use airports in the United States.



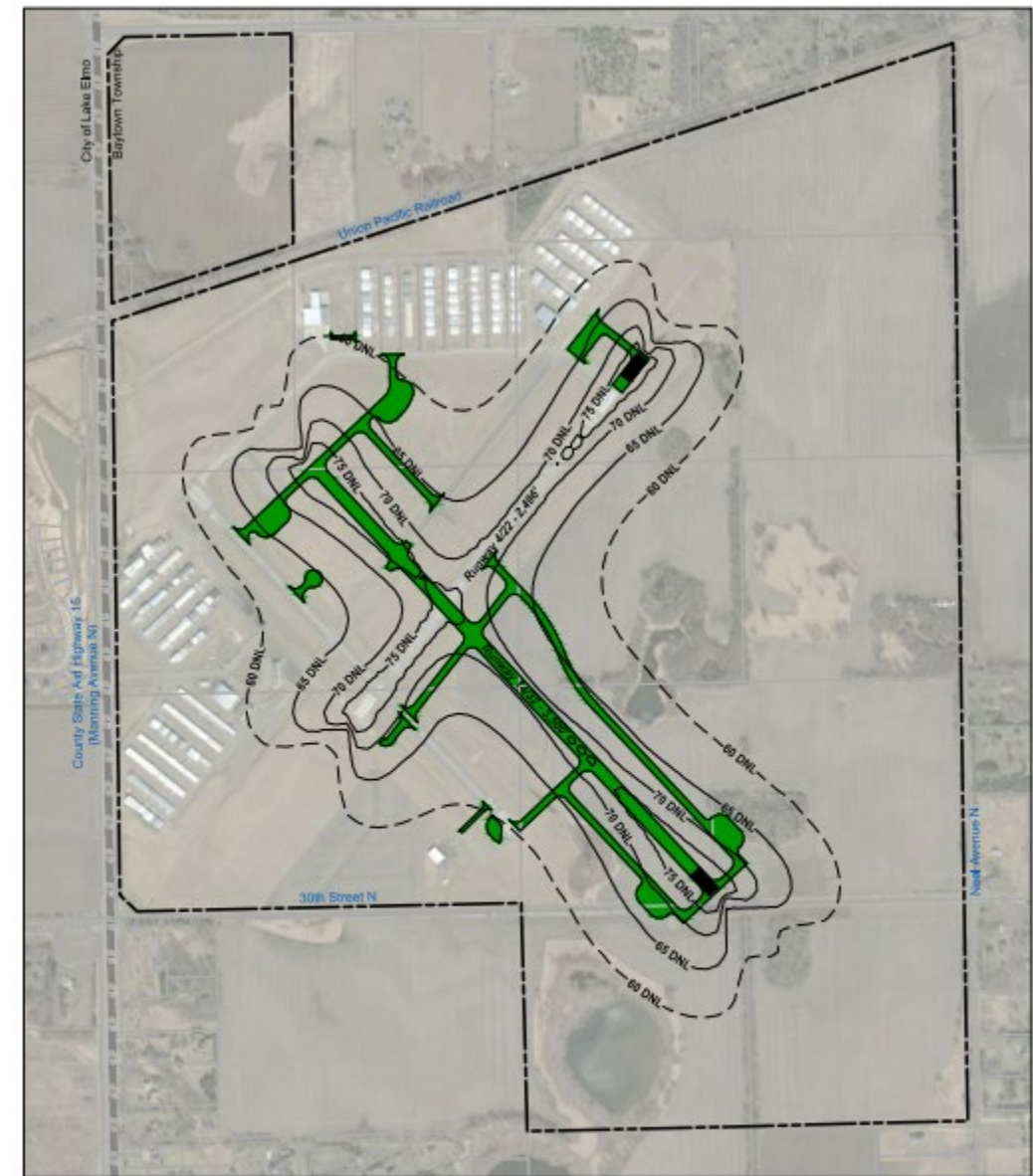
Day-Night Average Sound Level (DNL)

- Used in aircraft noise exposure maps
- A way to describe the noise dose for a 24-hour period
- Provides an additional weighting factor for nighttime operations (between 10 PM and 7 AM)
- Accounts for noise event “noisiness” and number of noise events



Lake Elmo Airport DNL Contours

- FAA considers residential areas within the 65 DNL contours to be incompatible
- FAA considers all land uses compatible outside 65 dB DNL
- The 65 DNL contour is contained entirely on Lake Elmo Airport property



Note: Aircraft noise contour 60 DNL is shown for informational purposes only.



Federal Regulations on Aircraft Noise



Applies to all public-use airports in the United States.



1990 Airport Noise and Capacity Act (ANCA) and Grant Assurances

Prevents public-use airports from creating unreasonable, arbitrary and discriminatory restrictions on flights

The FAA's regulation includes a broad view of what constitutes a restriction

- **Curfews and other limits on the hours of operations**
- **Direct or indirect limits on the number of operations (i.e. touch-and-gos, flight training operations)**
- **Limits on a single event or cumulative noise exposure**
- **Differential fees or rates directly or indirectly controlling airport noise**



Lake Elmo Airport Considerations

- **As a public-use airport, Lake Elmo Airport is subject to federal regulations**
- **Restricting airport operations is extremely difficult to implement at a public-use airport**
- **No airport has been successful in implementing a mandatory restriction by the FAA because the FAA has determined all proposals to be discriminatory and therefore inconsistent with federal law and airport grant assurances**
- **As a result, airport operators cannot restrict aircraft operations at an airport (such as closing the airport to flight training or closing it at night) to control noise**
- **Today, any U.S. airport that employs access or use restrictions designed for noise control had them in place prior to the 1990 Airport Noise and Capacity Act and were grandfathered in by Congress**
- **Public-use airports without mandatory restrictions prior to 1990 utilize voluntary noise abatement plans**



The MAC's Role

- **Adhere to Federal Requirements**
- **Fulfill Legislated Purpose**
 - Promote efficient, safe, economical air commerce
 - Develop the full potentialities of the metropolitan area as an aviation center
 - Minimize the environmental impact from air transportation and the public's exposure to noise and safety hazards around airports
- **Balance needs and desires from stakeholders**
- **Collaboration**
 - Airport Advisory Commission
 - Federal Aviation Administration
 - Local city/township officials
 - Airport users, hangar owners and pilots



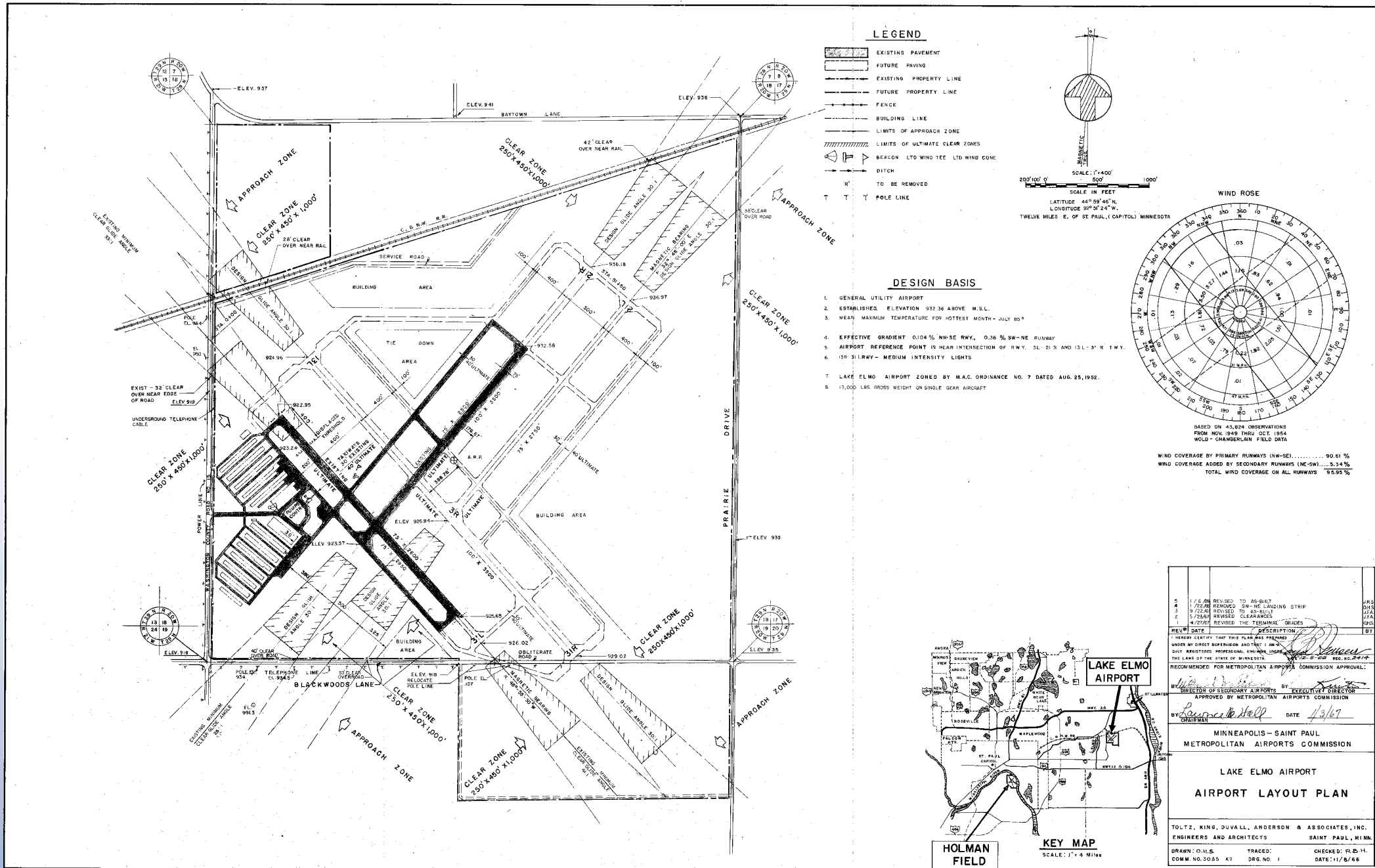
Noise Abatement at Airports Takes Partnership.



1966 Airport Layout Plan

Total
runways at
plan build-
out: 4

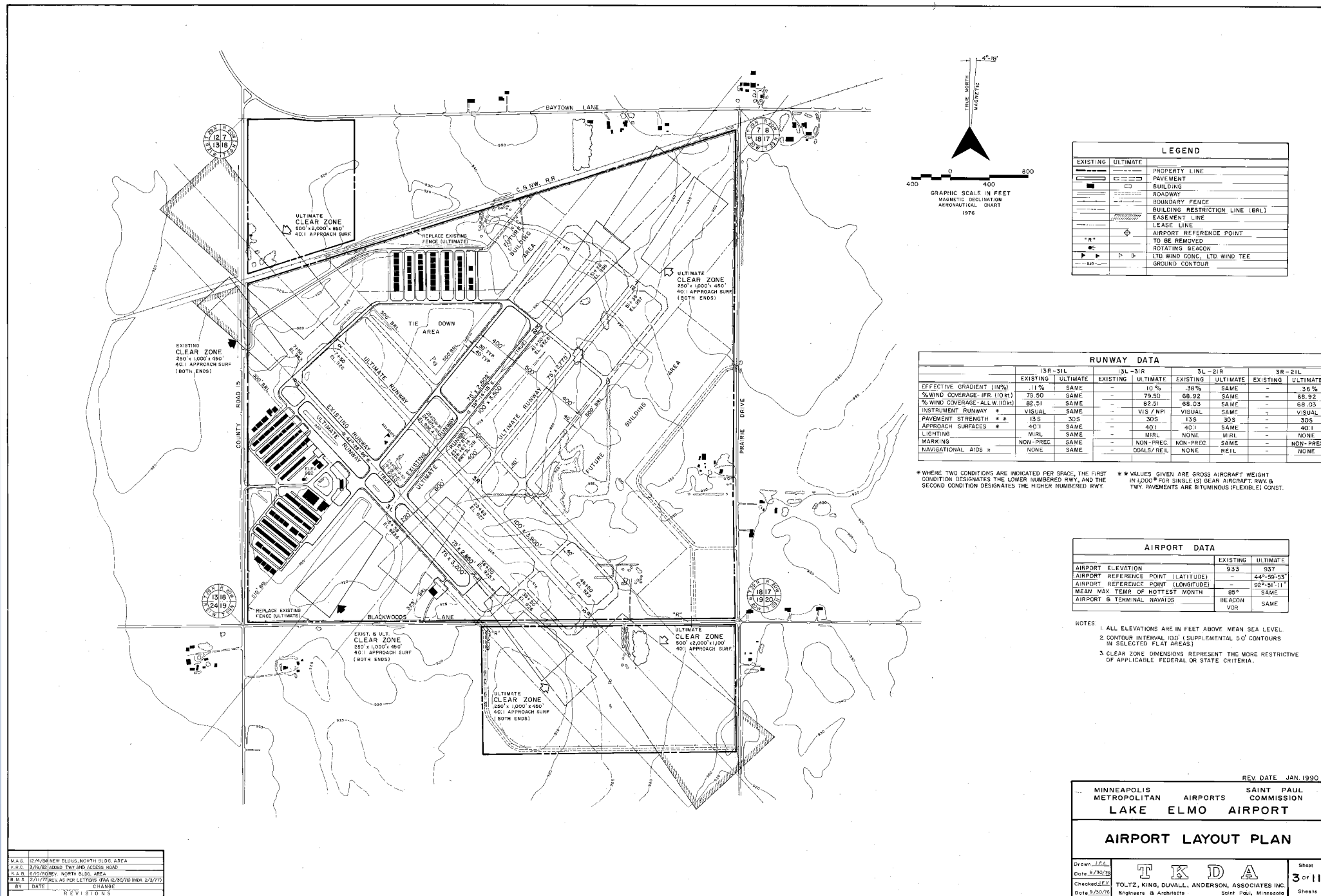
Planned
primary
runway
length: 3,900
feet



1976 Airport Layout Plan

Total runways at plan build- out: 4

Planned primary runway length: 3,900 feet



N.A.S.	12/7/66	NEW BLDGS. NORTH BLDG. AREA
F.R.C.	3/29/72	ADDED TRY AND ACCESS ROAD
F.S.B.	8/20/76	NORTH BLDG. AREA
B.M.S.	2/11/77	REV. AS PER LETTERS (D&A 12/20/76) (D&A 2/3/77)
BY	DATE	CHANGE

REV. DATE JAN. 1990

MINNEAPOLIS METROPOLITAN AIRPORTS SAINT PAUL AIRPORTS COMMISSION
LAKE ELMO AIRPORT

AIRPORT LAYOUT PLAN

Drawn: J.E.A.
Date: 9/26/76

Checked: J.E.A.
Date: 9/26/76

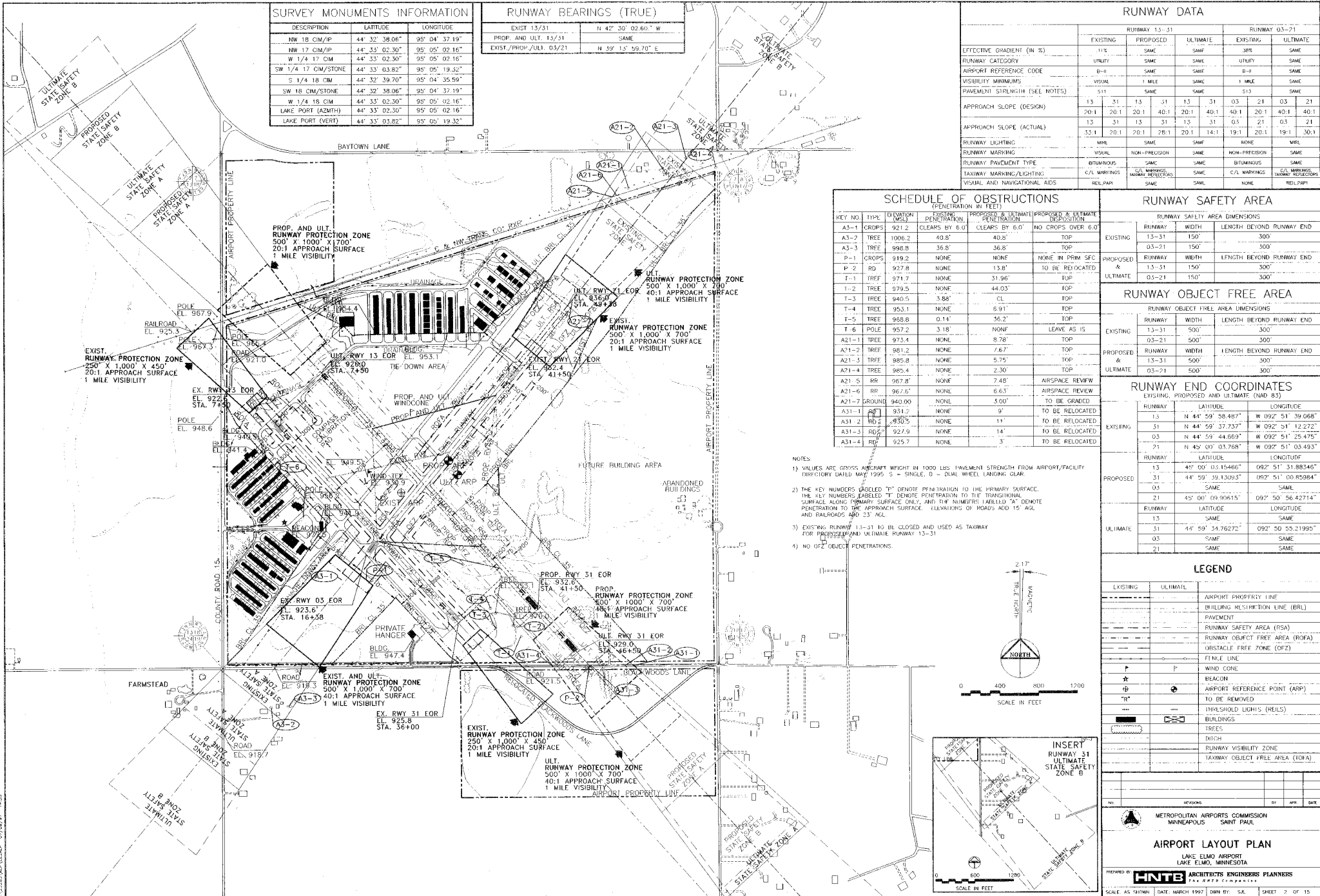
T K D A
TOLTZ, KING, DUNNALL, ANDERSON, ASSOCIATES INC.
Engineers & Architects
Saint Paul, Minnesota

Sheet
3 of 11
Sheets

1992 Plan Update 1997 Airport Layout Plan

Total runways
at plan build-
out: 2

Planned
primary
runway
length: 3,300
feet (initial)
3,900 feet
(ultimate)



2008

Long-Term Comprehensive Plan

Total runways at plan build-out: 2

Planned runway lengths:

Extend crosswind runway to 3,200 feet

Relocate and extend primary runway to 3,900 feet beyond 2025 planning period



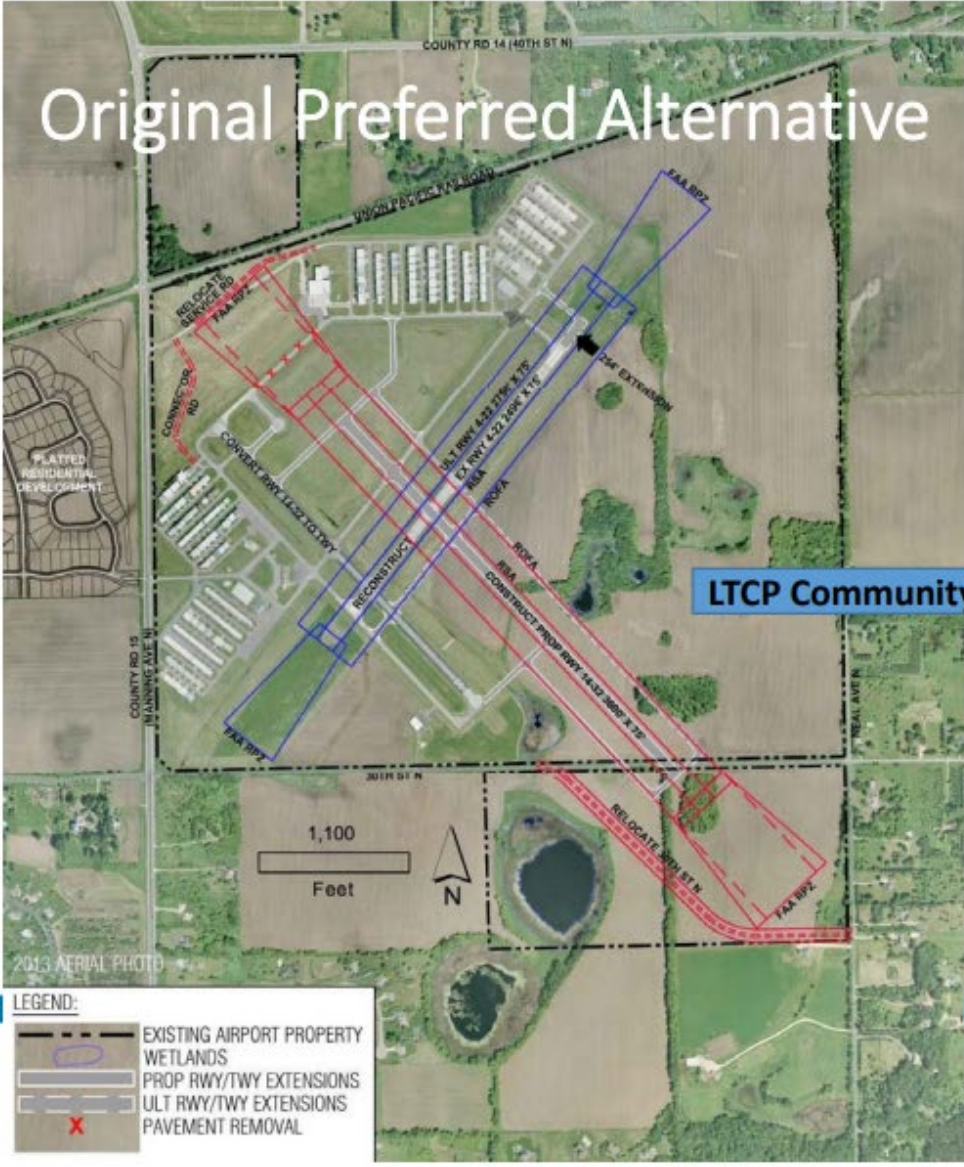
Figure ES-1

2015

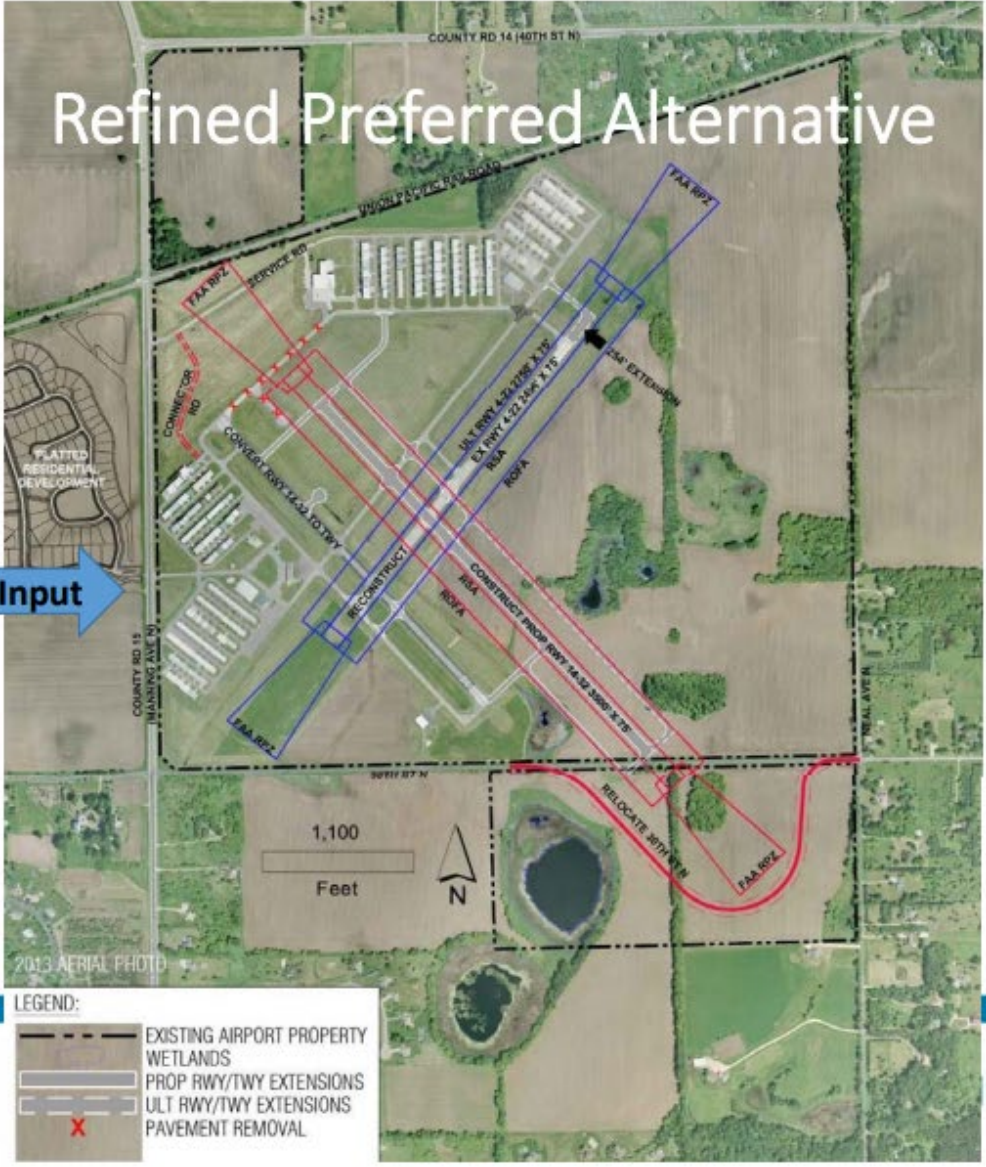
Long-Term Comprehensive Plan

Total runways at plan build-out: 2

Planned primary runway length:
3,600 feet original
3,500 feet refined based on community input



LTCP Community Input





Lake Elmo Airport
ADVISORY COMMISSION
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21D Noise Abatement Plan Discussion



21D Noise Abatement Plan (NAP)

The 21D Noise Abatement Plan outlines voluntary measures for pilots to consider during their flight planning and operation of aircraft to and from the airport, with the understanding that:

1. safe operation of the aircraft and compliance with regulations are the priority,
2. aircraft equipment and performance, and pilot ability vary, and
3. weather conditions and flight factors require dynamic and situational decision-making.

The 21D NAP is an existing MAC document, and the MAC makes the final determination about content.



Purpose and Intent for 21D NAP Update

The purpose of the 21D NAP is to provide voluntary guidance to users of the airport to operate neighborly when they fly.

A voluntary 21D NAP has been in effect at Lake Elmo Airport since 2008.

The MAC determined an update to the 21D NAP was needed based on airfield changes at the Lake Elmo Airport, airport/community concerns, and environmental and technological considerations.

The 21D NAP will remain voluntary, in accordance with federal Grant Assurances prohibiting interference with use of the airport.

Input Themes Received for 21D NAP 2024 Update

Voluntary vs.
Mandatory

Consistent
Standards

Use of Airport
Requirements

Altitude
Parameters

Concise and
Practical

Voluntary vs. Mandatory

- **The Noise Abatement Plan is voluntary.**
- **Federal Grant Assurances specifically require the MAC to allow access to the airport for any aircraft that seeks to use it.**
- **Federal Aviation Regulations do not give the MAC authority over aircraft in flight.**
- **Tracking measures are offered through the MAC FlightTracker: macnoms.com**
- **The MAC will share quarterly reporting: <https://customers.macnoms.com/reports/relievers.html>**



Consistent Standards

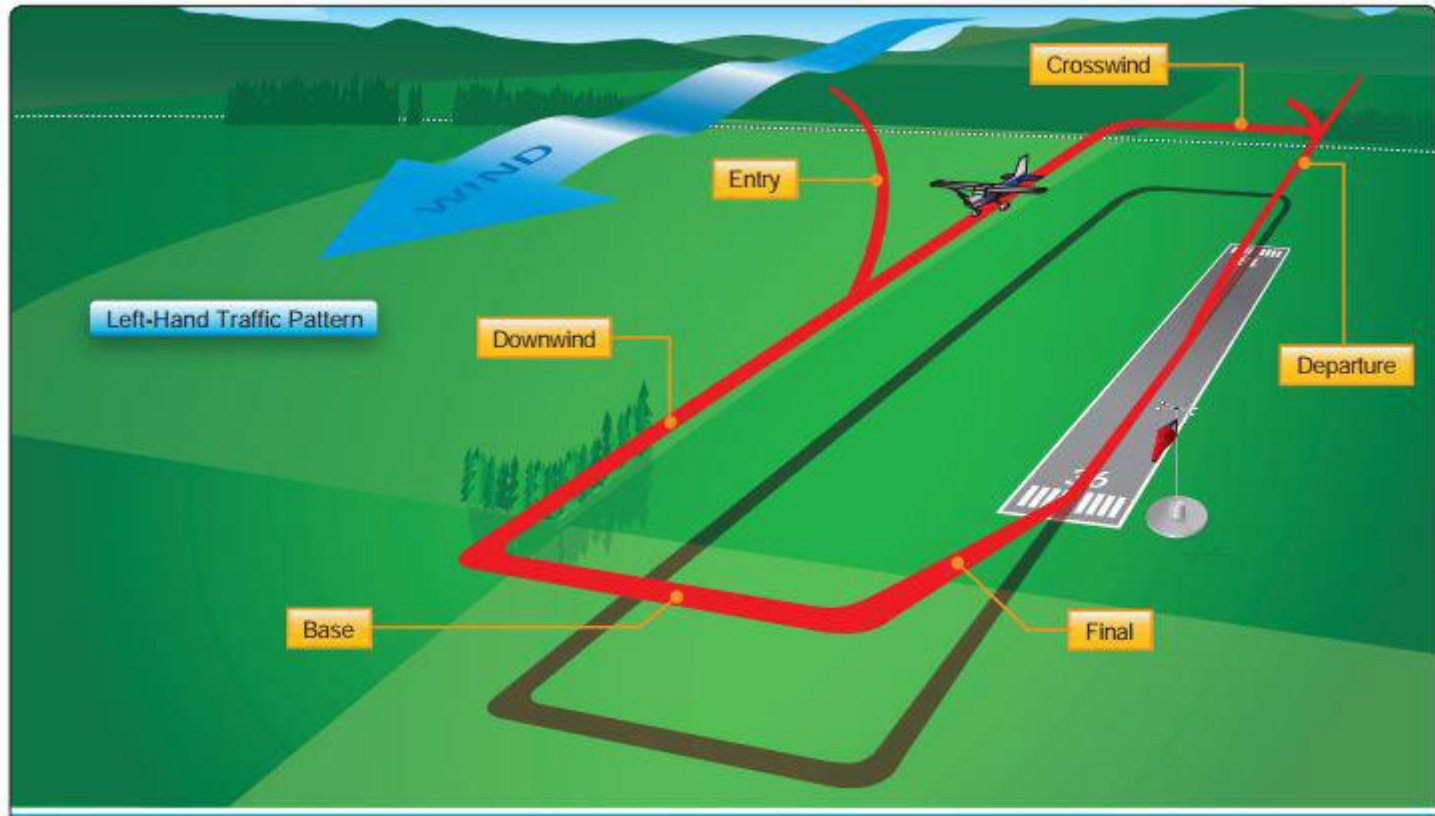
- **Guidance in the Noise Abatement Plan is consistent with federal standards.**
- **Guidance also is consistent with standard operating procedures to reduce risk and confusion.**



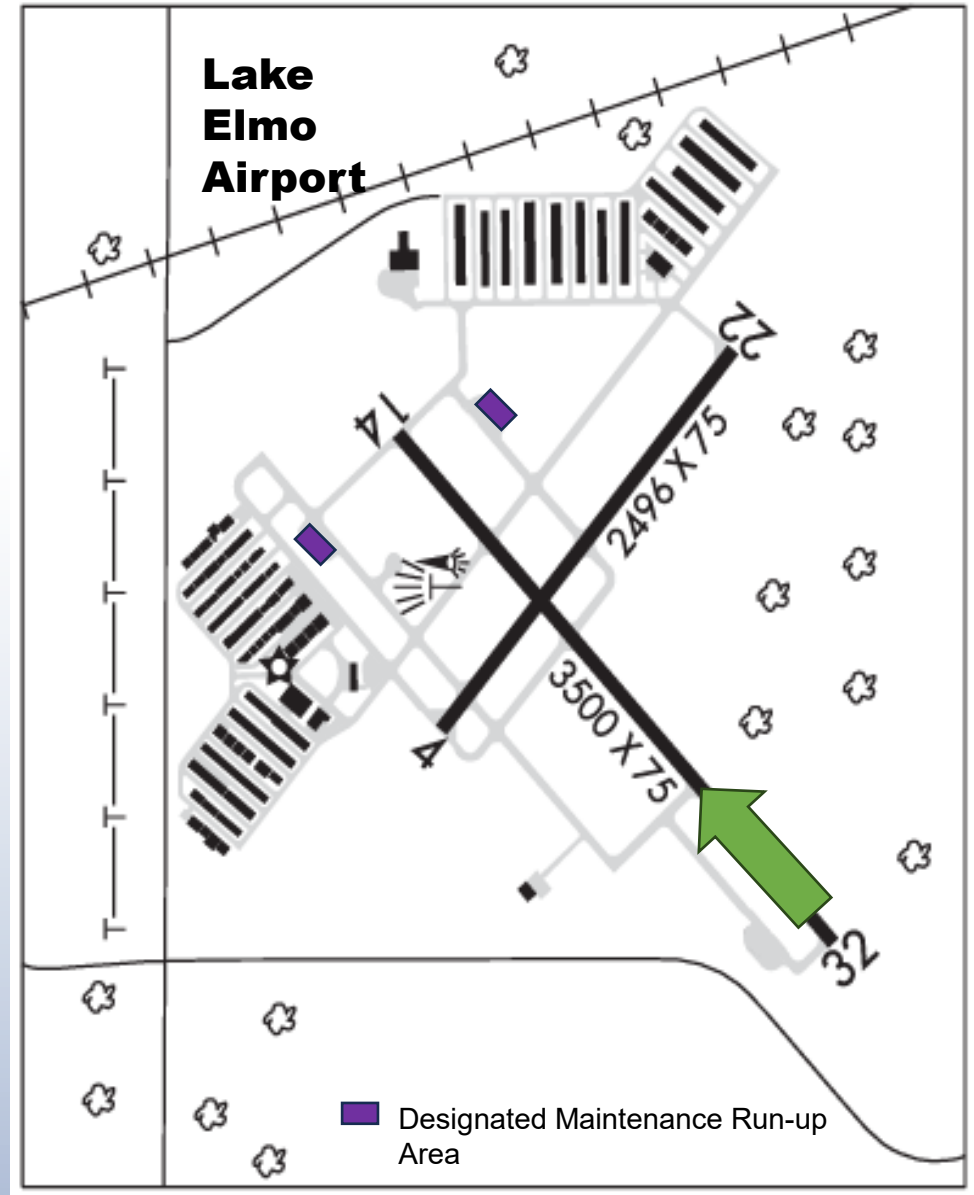
Use of Airport Requirements

- **Lake Elmo Airport is a public-use airport and the MAC does not have authority to impose limits on the number of aircraft using the airport, at any time.**
- **Preferred runway guidance is established when wind and safety requirements allow options.**
- **Flight paths will vary based on aircraft performance, airspace considerations, and winds aloft.**
- **The types of operations being conducted are determined by the pilot in command.**
- **Pilots are asked to avoid intersection takeoffs, stop and gos, repetitive activity, and flight activity during nighttime.**





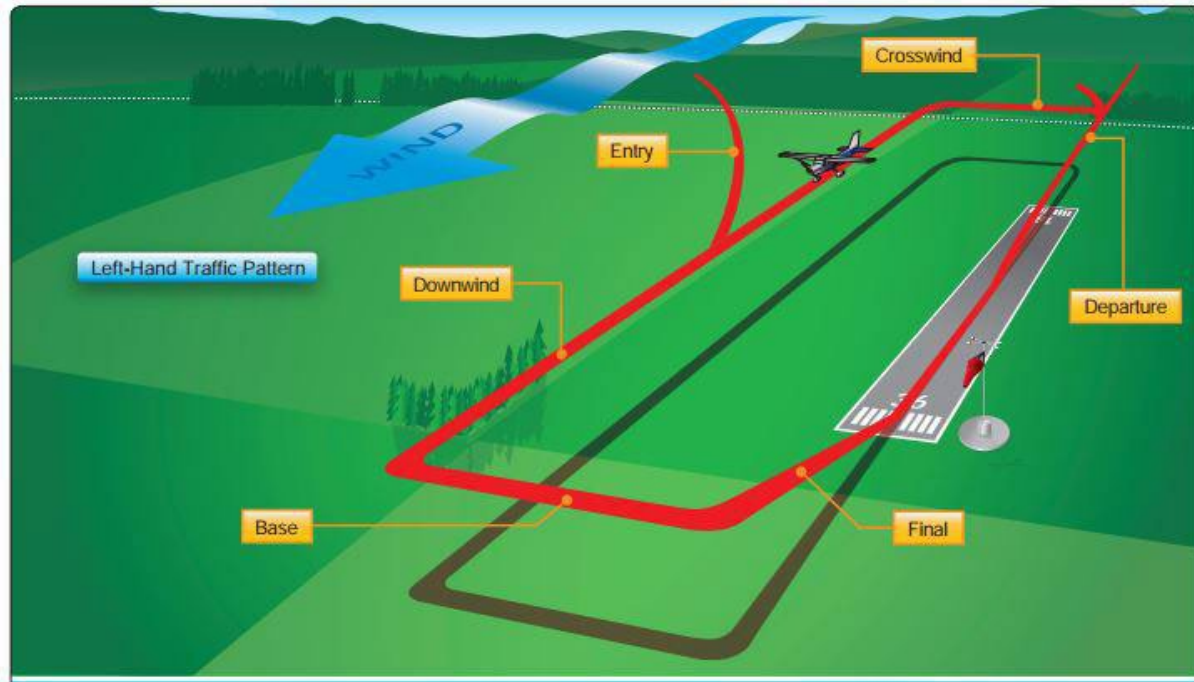
www.faa.gov/regulations_policies/handbooks_manuals/aviation/airplane_handbook



Altitude Parameters

- **Traffic Pattern Altitude is 1,000 feet for propellor aircraft and 1,500 for turbine aircraft.**
- **Approach and departure paths align with centerline of runway.**
- **It is suggested that pilots follow the indicator lights that guide the aircraft on approach at a specific angle, which are called Precision Approach Path Indicator (PAPI).**
- **Approach and descent angles are pilot discretion based on situational considerations, consistent with federal regulations.**
- **Altitude is affected by aircraft performance, weather, and pilot decision-making.**





www.faa.gov/regulations_policies/handbooks_manuals/aviation/airplane_handbook



Looking north (Runway 32)



Looking south (Runway 14)



Concise and Practical

Suggestions were received to make the measures clearer and more concise.

References were added to the document that link resources for pilots to use if more detail is needed.

Measures in the Noise Abatement Plan were aligned with federal standard operating procedures, best practices, and practical standards.



Public Comment

Members of the public are welcome to share their remarks with the Commission.

Please state your name and address

Limit remarks to 3 minutes



Member Comments





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Action for Noise Abatement Plan



Suggestion for Action:

Recommend the MAC finalize and publish the Lake Elmo Airport Noise Abatement Plan, and actively promote use of the plan measures with pilots.





Lake Elmo Airport
ADVISORY COMMISSION
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Noise Abatement Plan Implementation and Distribution



**Create and Publish
Fly Neighborly
Guide**

**Newsletter Articles
to Pilots**

Pilot Meetings

**FAA Chart
Supplement**

Airfield Signage

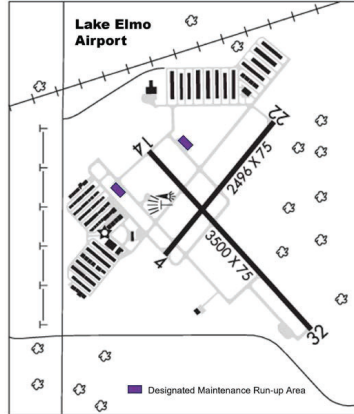




Lake Elmo Airport (21D) Fly Neighborly Guide

1. TAKEOFF AND APPROACH

- A. Runway 32 is the preferred runway.
- B. Runway Prioritization (particularly during nighttime hours): 32, 14, 22, 4
- C. Arrivals: follow Precision Approach Path Indicator (PAPI) glide slope until a lower altitude is necessary for a safe landing.
- D. Use guidance published by FAA, NBAA, AOPA when arriving to or departing from the airport.
 - [FAA AC 90-66C Non-Towered Airport Flight Operations](#)
 - [FAA AC 91-36D - Visual Flight Rules \(VFR\) Flight Near Noise-Sensitive Areas](#)
 - [NBAA Noise Abatement Program](#)
 - [AOPA Noise Awareness Steps](#)
- E. Turbine-powered aircraft and itinerant aircraft, depart Runways 32 or 14, fly runway heading and turn to a northerly heading after attaining 500 feet above ground.



2. TRAFFIC PATTERN (Left Turns)

- A. Fly aircraft at the airport traffic pattern altitude:
 - Turbine-powered aircraft: 1,500 feet agl (2433 msl)
 - Propeller-driven aircraft: 1,000 feet agl (1933 msl)
- B. Avoid multiple training events by turbine-powered aircraft in the airport traffic pattern.
- C. Keep traffic pattern legs as short as possible and close to the airport without risking safety.
- D. Use the full length of runway for arrivals and departures: avoid stop and go operations and avoid intersection takeoffs.
- E. Avoid repetitive activity over residences.
- F. When departing the traffic pattern, choose a path that avoids overflying residential areas if practical.

3. MAINTENANCE RUN-UPS

- A. Use designated areas (see map) to conduct all engine tests and maintenance run-ups in excess of 5-minutes. Pre-departure Run-ups may be conducted in other areas.
- B. Avoid engine tests and maintenance run-ups during nighttime hours.

4. HELICOPTER TRAINING

- A. Avoid helicopter training in the traffic pattern during nighttime hours.
- B. Avoid hovering for extended durations in the vicinity of residential areas.
- C. Avoid repetitive activity over the same neighborhoods.

5. NIGHTTIME OPERATIONS (2200-0700)

- A. Avoid operating aircraft during nighttime hours.
- B. Avoid nighttime currency operations and flight training in the traffic pattern after 2400 local time.
- C. Avoid intersection takeoffs and stop and go operations.
- D. Avoid low-level flyovers at the airport.

If you have questions, please contact the airport manager at **763-717-0001**

Metropolitan Airports Commission - Lake Elmo Airport Noise Abatement Plan - Revised February 2024

The screenshot shows the website for Lake Elmo Airport. The top navigation bar includes links for NEWS, EVENTS, DOCUMENTS & RESOURCES, FAQs, and CONTACT US. Below this, there are links for About Us, Our Airports, Doing Business, Community Connection, and 2022 Annual Report. A search bar is located on the right. The main content area features a large image of an aircraft on the tarmac with the text "Lake Elmo Airport" overlaid. On the left side, there is a vertical menu with links to various resources, including "Pilot Resources" which is highlighted. On the right side, there is a section titled "Pilot Resources" with a sub-header and a paragraph of text. Below the text are three buttons: "See 21D Air Navigation Information", "See 21D Pilot Guide", and "See Fixed-Base Operators At 21D".

metroairports.org/our-airports/lake-elmo-airport and QR code

Lake Elmo Airport



ADVISORY COMMISSION

LEAAC

ST PAUL

LAKE ELMO (21D) 9 E UTC-6(-5DT) N44°59.83' W92°51.22'
933 B NOTAM FILE 21D

RWY 14-32: H3500X75 (ASPH) S-11 MIRL

RWY 14: REIL. PAPI(P4L)—GA 3.5° TCH 25'.

RWY 32: REIL. PAPI(P4L)—GA 3.5° TCH 25'.

RWY 04-22: H2496X75 (ASPH) S-13 0.4% up NE

SERVICE: S4 **FUEL** 100LL, JET A **LGT** ACTVT or incr intst REIL Rwy 14 and 32; PAPI Rwy 32; MIRL Rwy 14-32—CTAF.
MIRL Rwy 14-32 preset low intst. Adnl lgtd Wind-T.

NOISE: Voluntary noise abatement procs avbl at www.macnoise.com/pilots.

AIRPORT REMARKS: Attended Apr-Oct 1300-0100Z‡, Nov-Mar 1300-2300Z‡. Deer, birds and wildlife on and invof arpt.
100LL avbl H24 self svc via credit card. Ultralight ops prohibited. Rwy 32 calm wnd rwy.

AIRPORT MANAGER: 763-717-0001

WEATHER DATA SOURCES: AWOS-3 120.075 (651) 779-5949.

COMMUNICATIONS: CTAF/UNICOM 122.8

Ⓜ MINNEAPOLIS APP/DEP CON 121.2

ST PAUL CLNC DEL 118.625

CLEARANCE DELIVERY PHONE: For CD ctc Minneapolis Apch at 612-726-9086.

RADIO AIDS TO NAVIGATION: NOTAM FILE PNM.

GOPHER (H) (H) VORTACW 117.3 GEP Chan 120 N45°08.74' W93°22.39' 106° 23.8 NM to fld. 877/6E.

GREEN BAY
L-12J, 14I, A
IAP, AD

ATTENTION PILOTS

**PLEASE FLY NEIGHBORLY
HELP REDUCE AIRCRAFT NOISE**





Lake Elmo Airport
ADVISORY COMMISSION
LEAAC

Review Meeting Schedule



2024 Future LEAAC Meeting Dates:

May						
S	M	T	W	T	F	S
		1	2	3	4	
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

June						
S	M	T	W	T	F	S
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9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

July						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

August						
S	M	T	W	T	F	S
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4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

September						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

October						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

November						
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

December						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				





Thank you for joining us!