# Mercer County Regional Airport

Airport Master Plan Kickoff Meeting – October 10, 2023

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# Agenda

- Introductions
- Airport Master Plan
- Roles & Responsibilities
- Existing Conditions
- Questions/Comments




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# Introductions

- Project Team
  - Aviation Planner – Kent Penney & Amber Channel
  - Airport Engineer – Shane Steiner & Quinn Dalziel
- Mercer County Regional Airport Authority
- Agencies Involved
  - FAA – Brian Schuck
  - ND Aeronautics Commission – Grant Erwin
- Planning Committee
  - Ron Muth – Pilot
  - Marvin Sutheimer – Airport Board
  - Shawn Stromme – Airport Board
  - Thomas Kaspari – Medical/Basin Electric
  - Steve Frovarp – Airport Board

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# Airport Planning



"Road Map" for meeting aviation needs



Preserves flexibility to respond to future demands



Allows airport to cost-effectively keep pace with aviation growth



Considers environmental and socioeconomic impact of development

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# Why is Airport Planning Needed Now?

## Airport Planning Study Objectives

- Crosswind Runway
- Split Terminal/Hangar Area
- Additional Hangars
- Optimize Instrument Approach Procedures
- Approach Lighting for Runway

Last Airport Master Plan was completed in 1992

Last Airport Layout Plan (ALP) was approved in 2008

Need to bring the ALP up to current FAA Design Standards

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# Roles & Responsibilities

## KLJ Planning Team

- Manage Study, Complete Technical Work, Provide Analysis and Recommendations

## Planning Advisory Committee

- Identify Wants & Needs
- Ask Questions & Review Analysis
- Provide Feedback & Recommendations

## Mercer County Regional Airport Authority

- Provide Guiding Principles, Make Decision(s), Review and Approve Planning Documents & ALP

## FAA / ND Aeronautics Commission

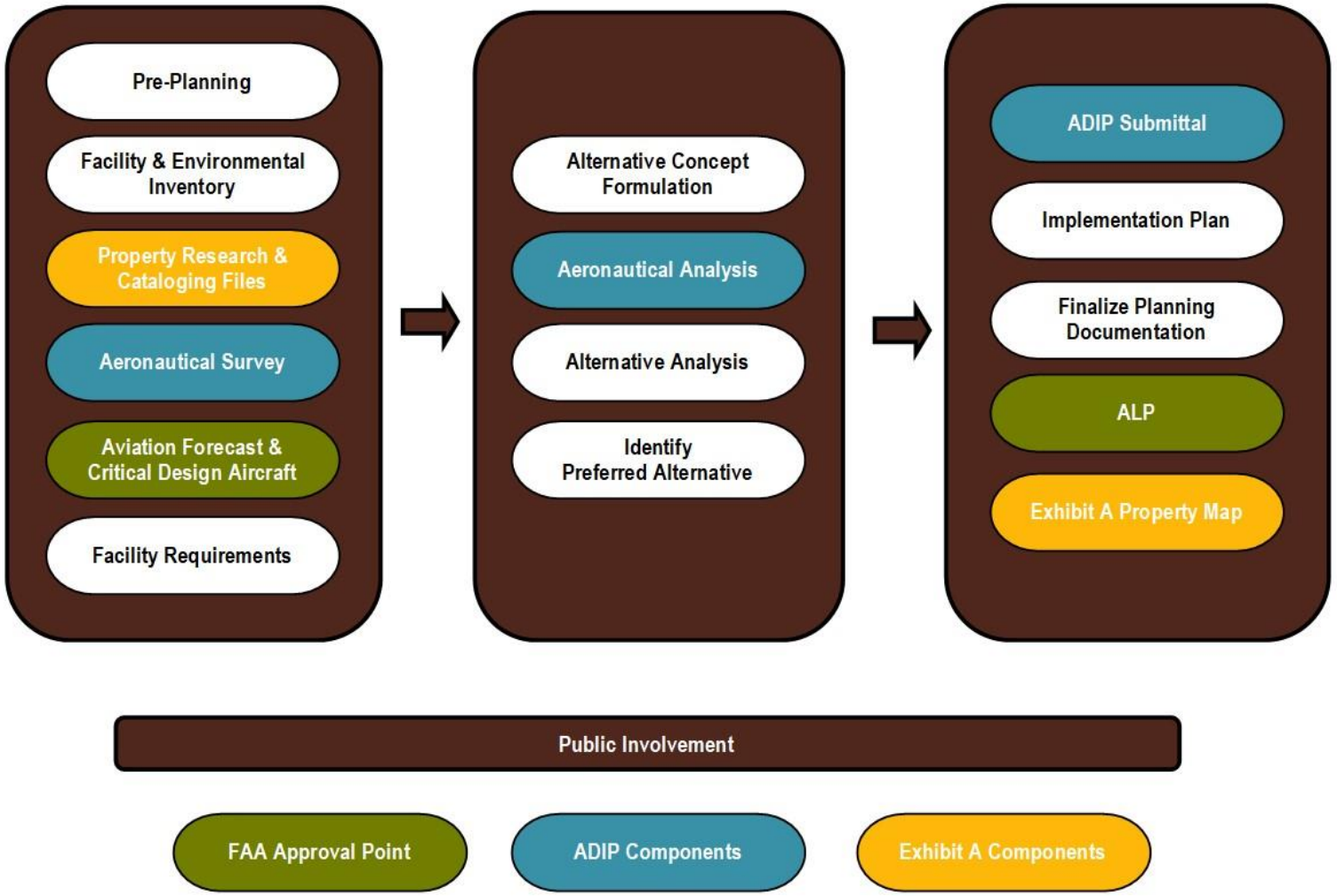
- Provide Technical Guidance, Approve Aviation Forecasts, Review Airport Plan, Approve ALP




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# Project Workflow

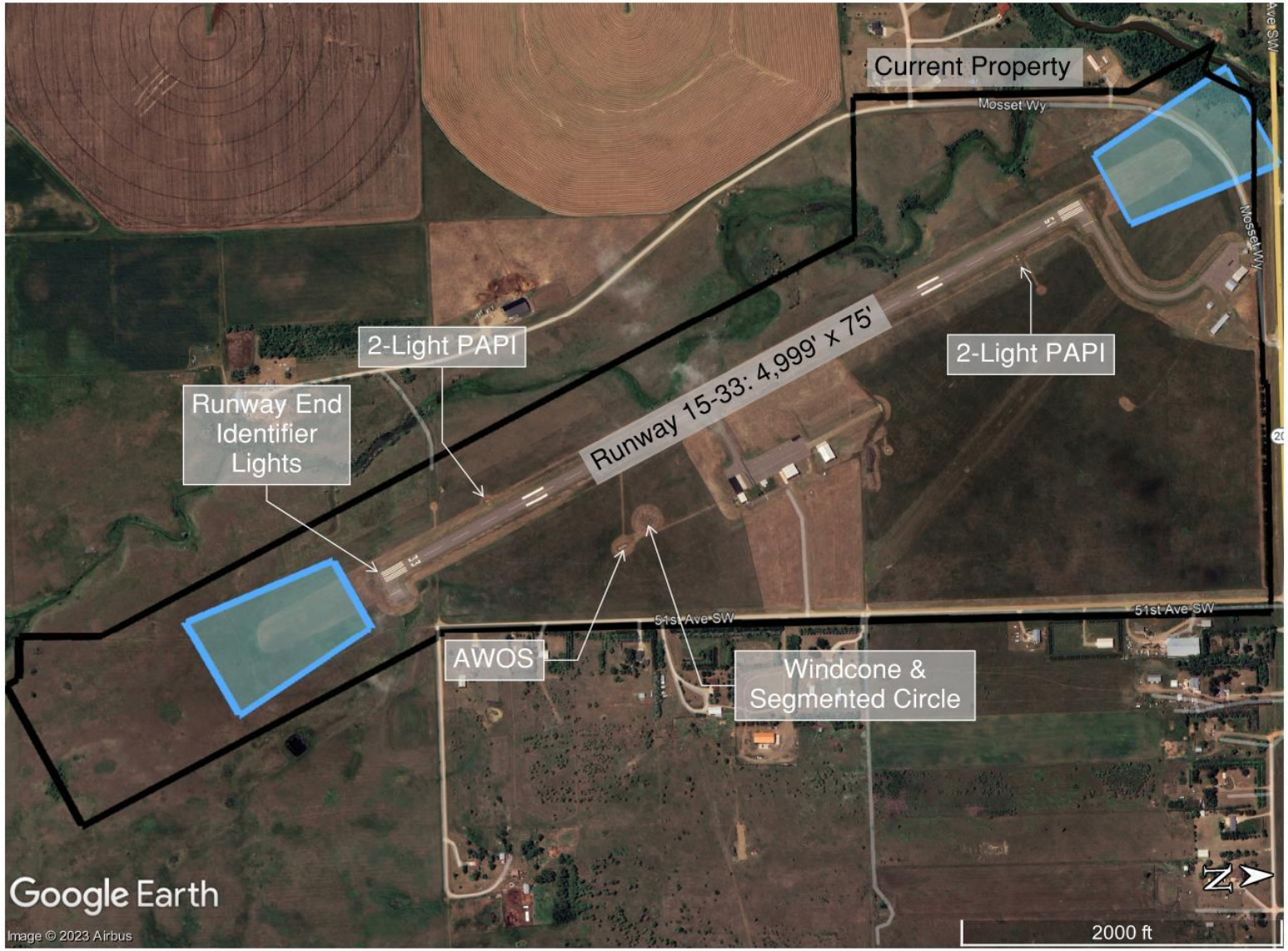



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# Existing Airfield

- Currently Design Group B-II
- Paved Runway 15-33
- GPS Approach both Runway Ends
  - 1 Mile Visibility
  - 400’ Ceiling
  - 2-light PAPI
- Automated weather Observation System (AWOS-3PT)



# South Apron

- Apron
  - 9,300 SY
  - 8 asphalt tiedowns
  - 2 concrete tiedowns (20k)
  - 35’ taxilanes
- 4 hangars / units
  - Terminal & SRE buildings
- Fuel, underground tanks
  - Single point Jet-A
  - 24-hour self serve 100LL



# North Apron

- Apron
  - Roughly 5,000 SY
  - Three asphalt tiedown spots
  - 1,000’ x 35’ Taxiway
- 6 hangars / units
  - 4 T-hangars & garage, 4 box hangars, 1 storage



# Pavement Condition & Project History

**Map Type:** PCI **Timeline:** 2021




PAVEMENT CONDITION INDEX (PCI):

| 100-86 | 85-71 | 70-56 | 55-41 | 40-0 |
|---|---|---|---|---|

applied pavement TECHNOLOGY

| Year | Project | Entitlement | Discretionary | COVID | Total |
|---|---|---|---|---|---|
| 2006 | Rehabilitate Runway | 10,000 | | | 10,000 |
| 2006 | Update Airport Master Plan Study | 76,642 | | | 76,642 |
| 2007 | Construct Building | 309,788 | 8,492 | | 318,280 |
| 2007 | Rehabilitate Runway | 10,000 | | | 10,000 |
| 2008 | Construct Fuel Farm/Rehabilitate Runway | 45,149 | | | 45,149 |
| 2009/10 | Acquire Snow Removal Equipment | 172,921 | | | 172,921 |
| 2011 | Install Airport Beacons | 83,050 | | | 83,050 |
| 2011 | Rehabilitate Runway | 26,387 | | | 26,387 |
| 2013 | Rehabilitate Runway | 46,278 | | | 46,278 |
| 2015 | Construct Apron | 80,000 | | | 80,000 |
| 2015 | Improve Building | 169,400 | | | 169,400 |
| 2015 | Rehabilitate Apron, Runway and Taxiway | 143,036 | | | 143,036 |
| 2017 | Reconstruct Taxiway & NAVAIDS | 42,030 | 2,255 | | 44,285 |
| 2018 | Reconstruct Taxiway & NAVAIDS | 311,415 | | | 311,415 |
| 2019 | Rehabilitate Apron, Runway and Taxiway | 138,000 | | | 138,000 |
| 2020/21 | CARES & CRRSA Act Funds | | | $43,000 | 43,000 |
| 2021 | Rehabilitate Runway/Reconstruct Runway Lighting | 574,043 | 1,860,457 | $270,500 | 2,705,000 |
| 2022 | General ARPA | | | $32,000 | 32,000 |
| | Totals | $2,238,597 | $1,871,204 | $335,500 | $4,445,301 |

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# Aircraft Data

- Operations
  - 730 total itinerant
  - 800 total local
  - 1,530 Total operations
- Based Aircraft
- 16 single engine aircraft














Data gathered from FAA 2021 TAF & Based Aircraft Inventory

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# Wind Analysis

| ALL-WEATHER WIND COVERAGE | | | | |
|---|---|---|---|---|
| CONFIGURATION | CROSSWIND COMPONENT | | | |
| | 10.5 KNOTS | 13 KNOTS | 16 KNOTS | 20 KNOTS |
| RUNWAY 15-33 | 93.50% | 97.60% | 99.17% | - |
| | - | - | - | - |
| | - | - | - | - |
| COMBINED | 93.50% | 97.60% | 99.17% | - |
| *SOURCE: KHZE AWOS (2012-2021, HOURLY) FROM NATIONAL CLIMATIC DATA CENTER* | | | | |
| *83,657 TOTAL OBSERVATIONS* | | | | |

| INSTRUMENT FLIGHT RULES (IFR) WIND COVERAGE | | | | |
|---|---|---|---|---|
| CONFIGURATION | CROSSWIND COMPONENT | | | |
| | 10.5 KNOTS | 13 KNOTS | 16 KNOTS | 20 KNOTS |
| RUNWAY 15-33 | 91.19% | 96.67% | 98.97% | - |
| | - | - | - | - |
| | - | - | - | - |
| COMBINED | 91.19% | 96.67% | 98.97% | - |
| *SOURCE: KHZE AWOS (2012-2021, HOURLY) FROM NATIONAL CLIMATIC DATA CENTER* | | | | |
| *5,233 TOTAL OBSERVATIONS* | | | | |
| *IFR = VISIBILITY LOWER THAN 3 MILES OR CEILING LOWER THAN 1,000 FEET* | | | | |

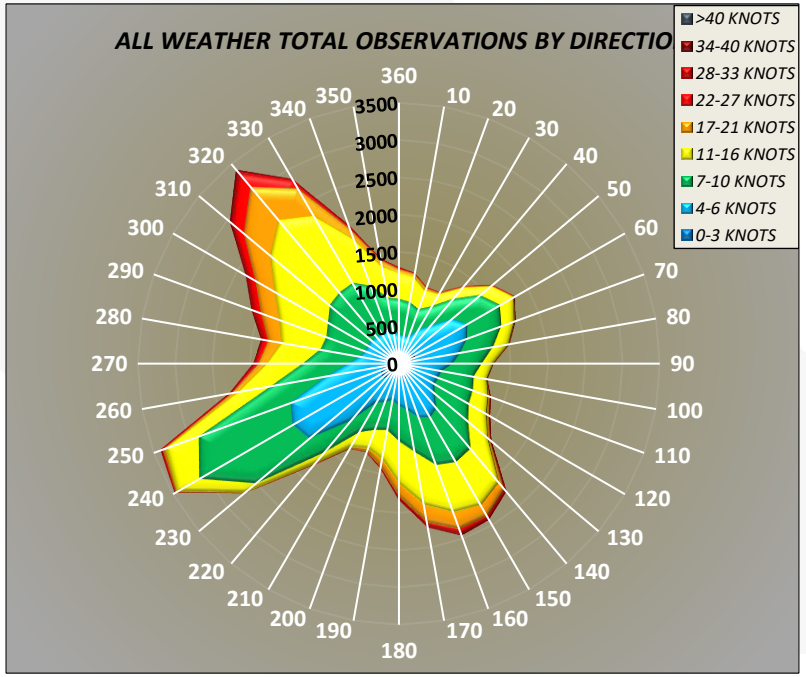
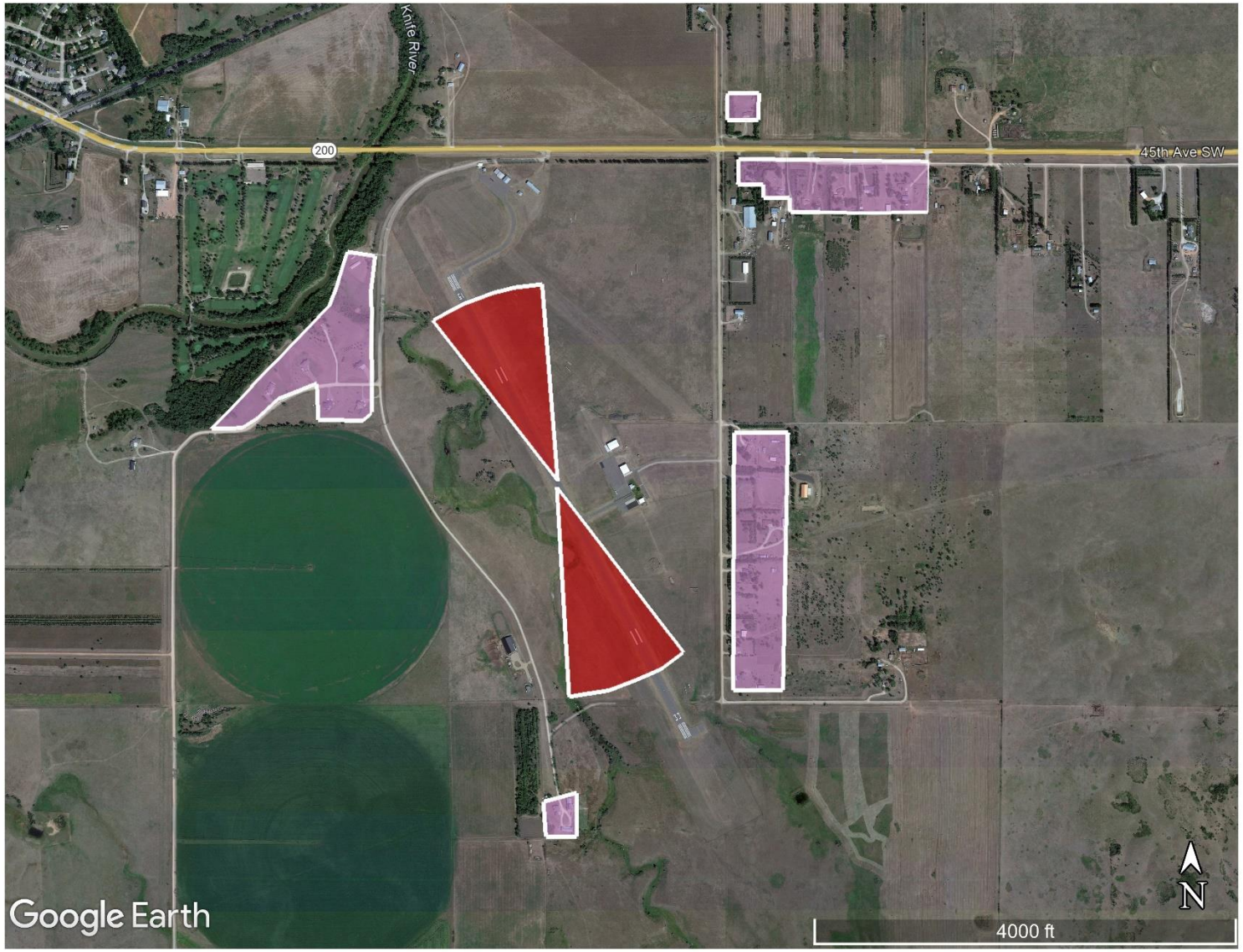



**Table B-1. Allowable Crosswind Component per Runway Design Code (RDC)**

| RDC | Allowable Crosswind Component |
|---|---|
| A-I and B-I * | 10.5 knots |
| A-II and B-II | 13 knots |
| A-III, B-III,<br>C-I through D-III<br>D-I through D-III | 16 knots |
| A-IV and B-IV,<br>C-IV through C-VI,<br>D-IV through D-VI | 20 knots |
| E-I through E-VI | 20 knots |

**Note:** * Includes A-I and B-I small aircraft.

# Crosswind Options




- 15-33 Existing
- 95% coverage with any alignment other than 140° to 180°
- Local Preferences
- Optimum 9-27 (98.8% Coverage)
- Runway (RSA/OFA/Approach/RPZ)

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# Open Discussion

- Issues
- Users
- Airfield Capabilities
- Terminal/Hangar Needs



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# Next Steps

- Complete Airport Inventory
- Outreach to Stakeholders (Mary Lynch)
- Draft Aviation Forecasting
- Draft Facility Requirements

- Next Meeting: Facility Requirements & Airfield Alternatives

- Website: inputcentral.com/hze-airportplan

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# Questions/Comments

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