APPENDIX C: MEETINGS & PUBLIC INVOLVEMENT

Introduction

The Mercer County Regional Airport (HZE) understands the importance of public involvement in the Master Plan Update process. During the scoping meeting, the Airport and KLJ designed a transparent process that allows opportunities for stakeholders to be actively engaged. The Airport also believes that members of the public should have an opportunity to comment on decisions about actions that could affect their lives. This involvement took place in the form of public open houses, website information sessions, and stakeholder outreach efforts. The Airport appreciates that public participation improves the decision-making process by recognizing and communicating the needs and interests of all participants. As a result of the public participation process, we feel that the airport master plan offers a valuable path for developing the Mercer County Regional Airport.

Stakeholders

As part of the planning process the following groups/people were contacted for their insight into the Mercer County Regional Airport:

1. Master Plan Advisory Committee
    a. Steve Frovarp – Airport Manager
    b. Marv Sutheimer – Airport Board
    c. Shawn Stromme – Airport Board
    d. Thomas Kaspari – Basin Electric
    e. Ron Muth - Pilot
2. Airport Board
    a. Wilbert Harsch – Pick City
    b. Kelly Muth - Hazen
3. FAA /State Planning
    a. Brian Schuck – FAA Planner
    b. Travis Schmit – FAA Program Manager

Key Issues/Public Involvement Goals

This planning effort completed typical aspects of airport master plans from reviewing existing conditions to forecasts to alternative development but also focused on key issues which we learned from our scoping meeting. These issues were as follows:

1. Evaluate the space for the possibility of a turf crosswind runway
2. Optimize instrument approach procedures
3. Generate various layouts of terminal area updates for more hangar space
4. Gather Aeronautical Survey to develop and update Airport Layout Plan (ALP), airfield, and safety surface to current FAA and AGIS standards

From the scope meeting it was determined that documentation of existing conditions, forecasting future aviation activity levels, identifying future facility requirements, formulating and evaluating alternatives,

preparing implementation plans and engaging the public and other government agencies were main goals for the future of HZE.

The following table specifies the type of public outreach achieved along with a location of specific meeting materials located in this appendix.

Table C-1 – Public Outreach Activities

Date of Outreach	Type of Public Process	Attendance	Information Conveyed	Page in Appendix
10/10/2023	Master Plan Kickoff	5	Roles, master plan, planning, existing conditions, public involvement	C-3
12/12/2023	Airfield Alternatives Meeting	6	Present alternative for the overall for input	C-15
02/05/2024	Crosswind Runway Alternatives Meeting	7	Review last meeting options and present revised runway alternatives for decision	C-26
05/14/2024	Terminal Area Alternatives Meeting	6	Terminal & apron alternatives and input	C-34
06/18/2024	Refined Terminal Area Alternatives Meeting	10	Review refined terminal area alternatives for decision	C-43
8/13/2024	Airport Board Crosswind Review Meeting	8	Crosswind runway alternatives were presented to the Board	C-51

Source: KLJ


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
MERCER COUNTY
REGIONAL AIRPORT
AL JOERSZ FIELD
TERMINAL 1/2 MILE
KLJ
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2

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

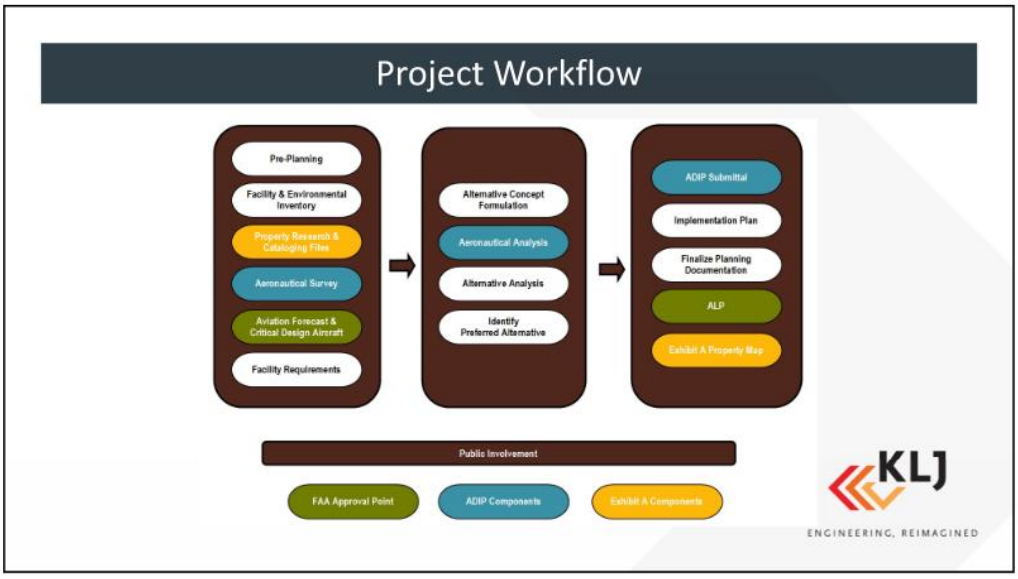
Mercer County Regional Airport Authority
- Provide Guiding Principles, Make Decision(s), Review and Approve Planning Documents & ALP

FAA / ND Aeronautics Commission
- Provide Technical Guidance, Approve Aviation Forecasts, Review Airport Plan, Approve ALP

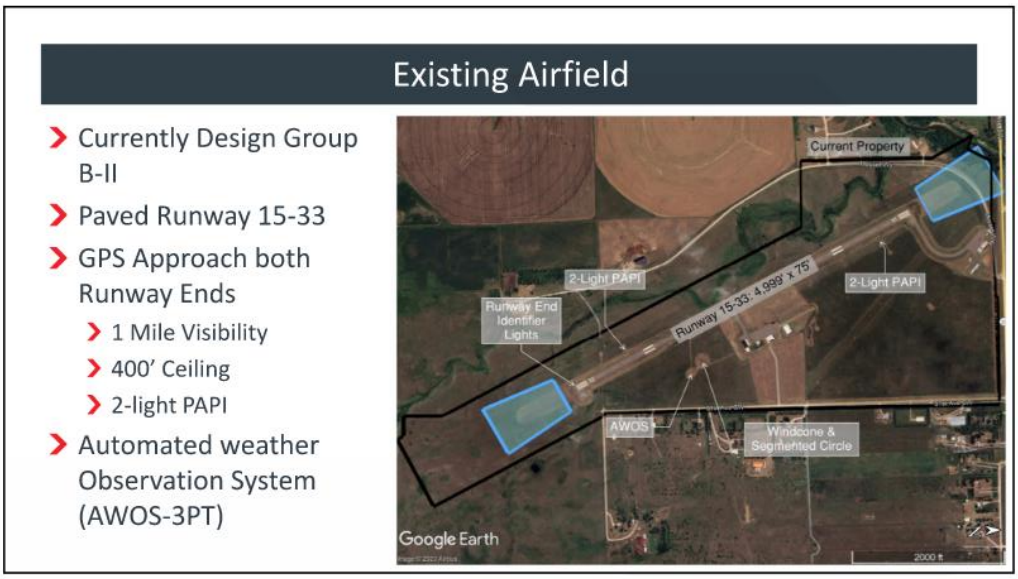


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Project Workflow
Pre-Planning
Facility & Environmental Inventory
Property Research & Cataloging Files
Aeronautical Survey
Aviation Forecast & Critical Design Aircraft
Facility Requirements
Alternative Concept Formulation
Aeronautical Analysis
Alternative Analysis
Identify Preferred Alternative
ADIP Submittal
Implementation Plan
Finalize Planning Documentation
ALP
Exhibit A Property Map
Public Involvement
FAA Approval Point
ADIP Components
Exhibit A Components
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7


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)
Current Property
2-Light PAPI
2-Light PAPI
Runway End Identifier Lights
Runway 15-33: 4,999' x 75'
AWOS
Windcone & Segmented Circle
Google Earth

8

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



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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



10

Pavement Condition & Project History

Map Type: PCI Timeline: 2021



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				

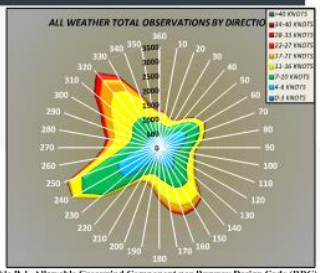


Table B-1. Allowable Crosswind Component per Runway Design Code (RDC)

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

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

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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

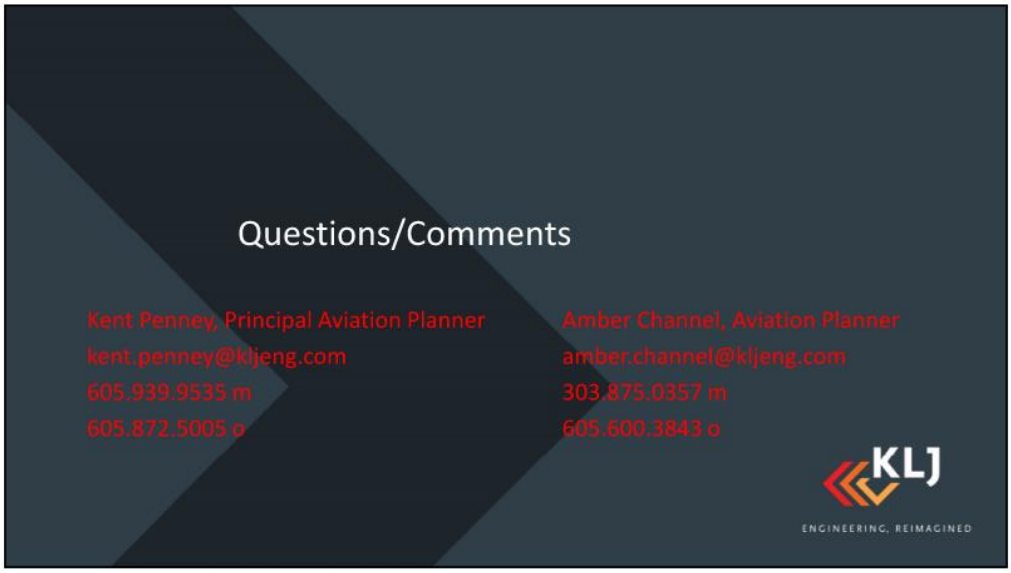
- Complete Airport Inventory
- Outreach to Stakeholders (Mary Lynch)
- Draft Aviation Forecasting
- Draft Facility Requirements

- Next Meeting: Facility Requirements & Airfield Alternatives

- Website: inputcentral.com/hze-airportplan

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Questions/Comments
Kent Penney, Principal Aviation Planner
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605.872.5005 o
Amber Channel, Aviation Planner
amber.channel@kljeng.com
303.875.0357 m
605.600.3843 o
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9

DATE 10-10-2023

PURPOSE Mercer County Airport

CUE COLUMN

NOTES

Name	Organization
Steve Froucup	Clerk - MCRAA
Shane Steiner	KLJ
Quinn Dalziel	KLJ
Tom KASPARI	
Kent Penney	KLJ

SUMMARY

Meeting Minutes

Date: 10/10/2023 **Facilitator:** Kent Penney
Time: 2:00 PM **Minutes:** Master Plan Kickoff Meeting
Attendees: Steve Frovarp - Airport Manager, Tom Kaspari - Basin & Pilot, Quinn Dalziel - KLJ, Shane Steiner - KLJ, Kent Penney - KLJ

Agenda Topics

Turf Runway

1. Needed for tail draggers & those who want to save their tiers
2. Coulee to the west will impeded a crosswind or parallel turf runway option

Action Items: Create turf runway alternative options to present at next meeting.

Airport Needs/Wants from Operators

1. The airport is needed for life flight but needs more aircraft (there are more at Beulah)
2. Need hangar space and mechanic (mechanic at Stanley & Beulah)
3. A grooved runway is needed for planned Basin Electric Embraer Phenom
    a. aircraft slid off runway & Embraer stipulated a need for grooving on runways
    b. A minimum of 5" of asphalt is needed to add grooving
4. Sanford Health Medical from Fargo and items they need are;
    a. Terminal
    b. Crew car
    c. Hangar storage (tug/tow bars) for B-200 (14'10" tail height)
    d. Deicing
    e. Runway cleared
    f. AWOS-III full functional (HZE ceilometer was out of service)
    g. Instrument capability

Action Items: Review overall airfield and create alternatives to meet needs/wants if able.

NATIONAL PERSPECTIVE
REGIONAL EXPERTISE
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Other Notes or Information

Terminal area alternatives for hangars will be presented at a later date.

Next Meeting Information

Date: 12/12/2023
Time: 5:00 PM

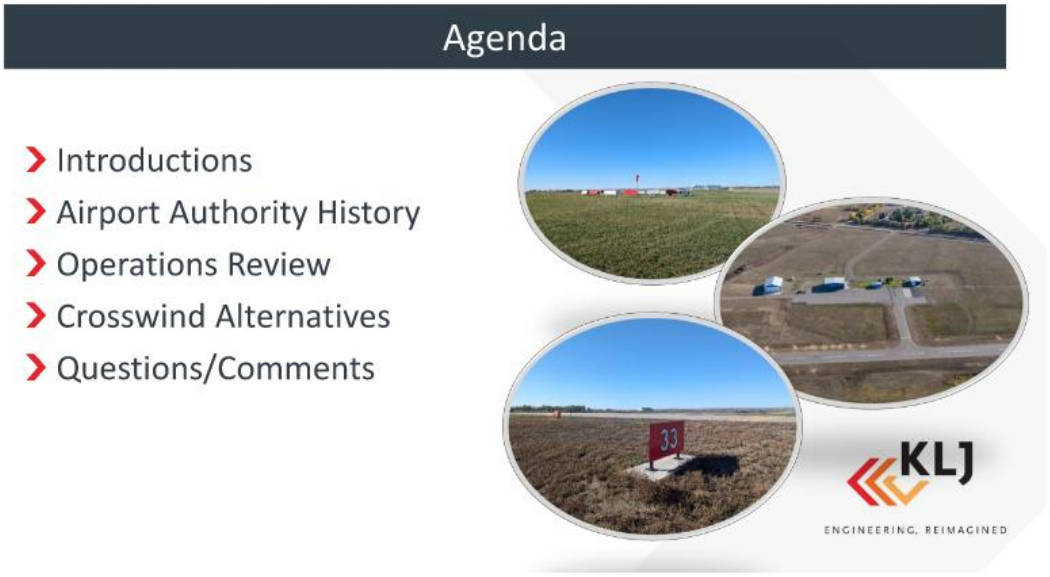
Facilitator: Kent Penney
Minutes: Airfield Alternative Meeting

NATIONAL PERSPECTIVE
REGIONAL EXPERTISE
TRUSTED ADVISOR

10/10/2023


Mercer County Regional Airport
Airfield Alternatives Meeting
December 12, 2023
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Agenda
Introductions
Airport Authority History
Operations Review
Crosswind Alternatives
Questions/Comments
33
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2

10/10/2023

Why Hazen was Chosen

- Beulah and Hazen had their own airport and in 1989 the cities agreed to accept a single airport site.
- There were other aviation needs to serve the community other than Beulah and Hazen as far as agriculture, recreation, energy, medical, and business and bring in light business jet traffic.
- Three sites were evaluated last master plan; Beulah Municipal Airport, Hazen Municipal Airport, and an undeveloped site.
- A main determination was based on a site able to accommodate a 4,400-foot runway with anticipation to expand to a 5,500-foot-long runway and instrument approach capability.
- The Hazen site was recognized most practical for development.

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3

Operations Review

- According to the TAF in 2022…

Based Aircraft	Air Taxi/Commuter Ops.	GA Itinerant Ops.	Military Itinerant Ops.	Total Itinerant Ops.	Total Local Ops.
16	200	500	30	730	800

- According to the TFMS in 2022, 222 IFR operations were reported.
- Fuel from the previous six years

Year	100LL (Gallons Sold)	Jet A (Gallons Sold)	Total Gallons (Annual)
2016	11,712	13,535	25,247
2017	7,241	12,874	20,115
2018	8,667	10,291	18,958
2019	6,776	10,775	17,551
2020	11,476	1,967	13,443
2021	8,875	3,203	12,078
2022	9,660	8,008	17,668

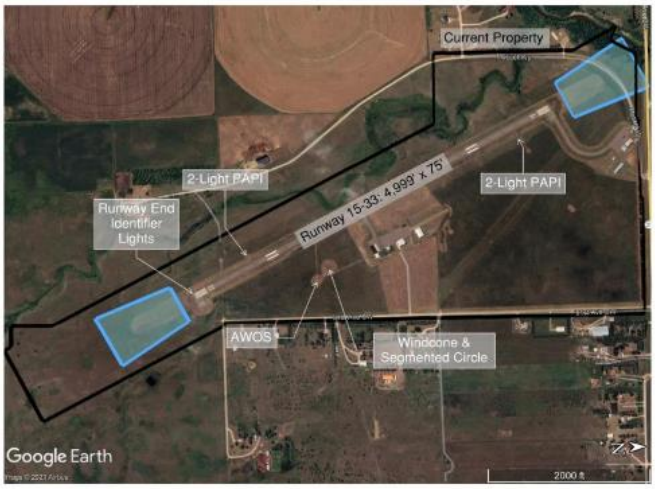
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4

10/10/2023

Current Facilities

- 10.5 knot all-weather wind coverage is at 93.50%
- 13 knot all-weather wind coverage is at 97.60%
- Not currently meeting 95% wind coverage for 10.5 knots



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Options Eliminated



- North-South Crosswind East Side
  - Would not meet the 95% wind coverage
- East of the 33 End Crosswind
  - Safety areas will restrict terminal area development
  - Would not increase wind coverage

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10/10/2023

Parallel to Runway 15-33 Options

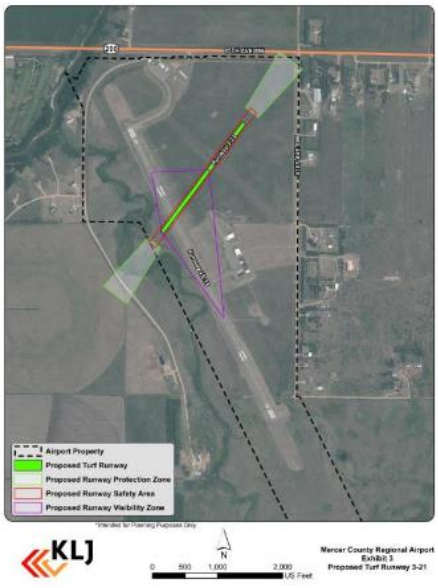
- Within the Runway Safety Area (RSA)
  - 2,800' long
  - Runway 15-33 paved and turf are considered the same runway
- 300' Centerline Separation
  - 1,800' long
  - No additional property needed



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Runway 3-21 Alignment

- 2,000' long
- Exceeds 95% wind coverage (97.22%)
- Intersects with Runway 15-33
- Runway Visibility Zone (RVZ) requirements would restrict future terminal area development
- Roads within both RPZs



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10/10/2023

Runway 9-27 Alignment

- 2,000’ long
- Exceeds 95% wind coverage (98.85%)
- Intersects with Runway 15-33
- RVZ does not interfere with future terminal area development
- Roads in both RPZs



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Runway 13-31 Alignment

- 2,300’ long
- Exceeds 95% crosswind coverage (96.79%)
- Does not interfere with future terminal area development
- Roads in both RPZs and access road
- Crosses north taxiway



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	Parallel within RSA	Parallel outside RSA	3-21	9-27	13-31
Length	2,800'	1,800'	2,000'	2,000'	2,300'
Wind Coverage	94.13%	94.13%	97.22%	98.85%	96.79%
Terminal Area Impact	None	None	Yes	None	None
Things Affected	Use of Runway 15-33	None	Crosses Runway 15-33	Crosses Runway 15-33	Access road & crosses north taxiway
RPZ Items	None	Airport Fence	Mosset Wy, 45th Ave & 51st Ave	Mosset Wy, Archers Ln & 51st Ave	Mosset Wy, 45th Ave & 51st Ave
Land Requirements	None	Less than 0.1 acres needed for RPZs	9.4 acres needed for RPZs	11.7 acres needed for RPZs	6.4 acres needed for RPZs
Fencing	Roughly 333' of fence needs to be moved 43' west	Roughly 4,055' of fence needs to be moved at least 135' west	Roughly 287' of fence needs to be moved 265' west	Roughly 297' of fence needs to be moved 315' west	No change

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Open Discussion

- Issues
- Forecast
- Alternatives
- Terminal/Hangar Needs



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10/10/2023

Typical Hangar Attributes

Typical Aircraft Hangar Attributes

	T-Hangars	Small Storage Less than 6,000 sf	Large Storage More than 6,000 sf	FBO/SASO
Photo Examples				
Dedicated Apron	None	None	Equal to depth of hangar	Equal to depth of hangar (plus apron for services)
Airport Apron Access	No	No	No	Yes
Setbacks from Taxilanes	Yes - for Design Group (I or II)	Yes - for Design Group (I or II)	Yes plus Apron - for Design Group (II+)	Yes plus Apron - for Design Group (II+)
Airside Taxi Route	Yes - for Design Group (I or II)	Yes - for Design Group (I or II)	Yes - for Design Group (II+)	Yes - for Design Group (II+)
Public Road Access/Parking	No	Yes or No *	Yes*	Yes*

* Any business/corporate hangar located on an airport should have public road access and parking for customers/passengers. Particularly those customers/passengers who are not trained in driving on an airport.

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Next Steps

- Complete Airport Inventory
- Complete Aviation Forecasting
- Draft Facility Requirements
- Terminal/Hangar Area Alternatives

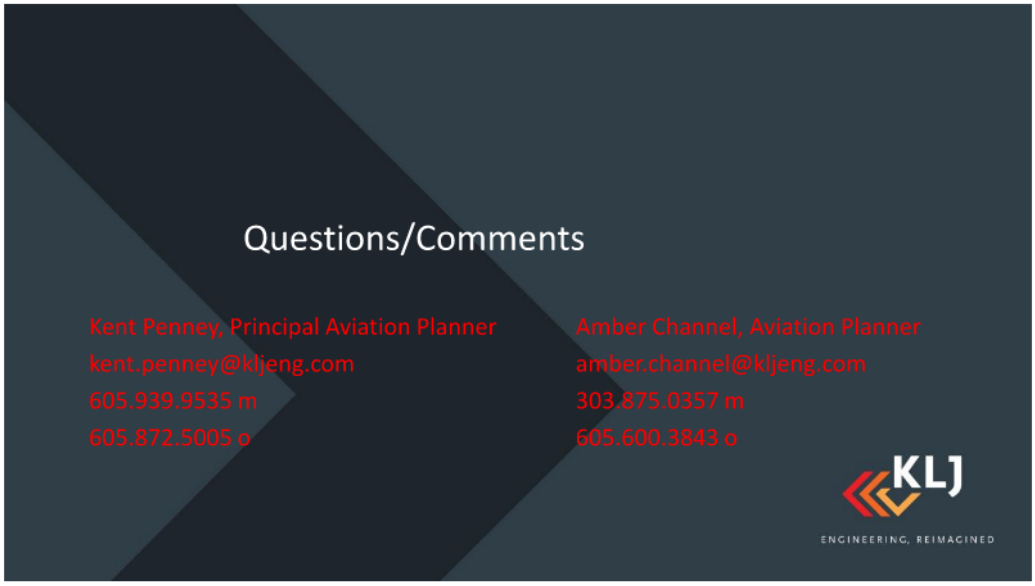
- Next Meeting: Terminal/Hangar Area Alternatives

- Website: inputcentral.com/hze-airportplan

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10/10/2023



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9

Mercer County Regional Airport – Airfield Alternatives – December 12,2023

ATTENDANCE LIST

Engineering Reimagined

YEAR 2022 | KLJENG.COM

KLJ

Name (please print)	Organization/Business	Phone	Email (optional)
Steve Erovarp	MCRAA Clerk	701-880-9989	Steve_nd@hotmail.com
Shawn Stromme	See / Tres	701-891-1156	shawn.stromme65@Gmail.com
Tom KASPARI		701 880 1088	tdkaspari123@gmail.com
Kent Penney	KLJ		
Amber Channel	KLJ		
Quinn Dalziel	KLJ		

Meeting Minutes

Date: 12/12/2023 **Facilitator:** Kent Penney
Time: 5:00 PM **Minutes:** Airfield Alternatives
Attendees: Steve Frovarp - Airport Manager, Shawn Strommee - Airport Board, Tom Kaspari - Basin & Pilot, Quinn Dalziel - KLJ, Kent Penney - KLJ, Amber Channel - KLJ

Agenda Topics

Operations

1. Spraying operations are intermittent.
2. There is currently no flight training at the airport. A few years ago, people were getting trained through the North Dakota Program.
3. The military operations are from Bismarck, helicopters for night and low level training.
4. The airport averages about three aircraft per day getting fuel during Oshkosh.
5. It is believed that 2023 fuel sales will reflect 2022's. It is also believed that fuel prices affect the operation numbers.

Action Items: Finish forecasting and send a copy of the Traffic Flow Management System (TFMS).

Airfield Improvements

1. 51st Ave SW was supposed to be paved but new board members decided against it. It has been expressed to the airport by the medical flight teams that paving the road is needed.
2. The north area could be used as an area for flight training.
3. Thinking the taxilane to the north could be a connector taxiway for the turf runway.

Action Items: Include all above items in alternatives.

Turf Runway Alternatives

1. Would like a turf runway for the crosswind component.
2. Like Runways 9-27 and 3-21 option.

Action Items: Move 3-21 runway outside of the coolie area, shorten Runway 9-27 options, include turf taxiways on all future alternatives.

Next Meeting Information

Date: Friday in mid to late January **Time:** 1:00 or 2:00 PM

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10/10/2023


Mercer County Regional Airport
Crosswind Runway Alternatives Meeting
February 5, 2024
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Agenda
Introductions
Review last meeting
Runway 3-21 (Revised)
Runway 9-27 (Revised)
Questions/Comments
MERCER COUNTY
REGIONAL AIRPORT
KLJ
ENGINEERING, REIMAGINED

2

10/10/2023

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				

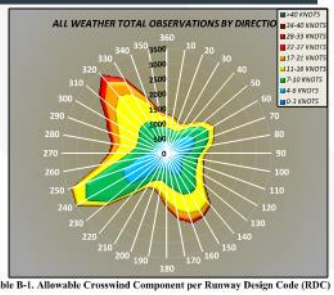


Table B-1. Allowable Crosswind Component per Runway Design Code (RDC)

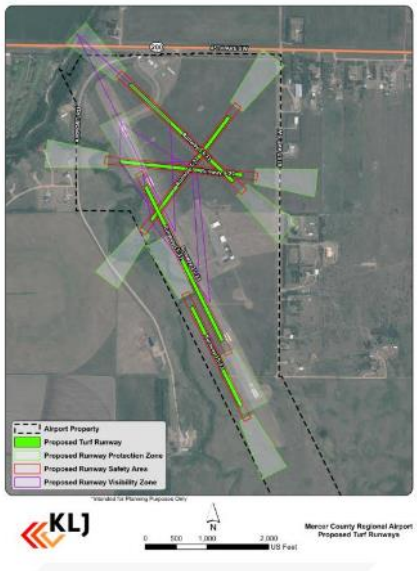
RDC	Allowable Crosswind Component
A-I and B-I *	10.5 knots
A-II and B-II	13 knots
A-III, B-III, C-I through D-III D-I through D-III	16 knots
A-IV and B-IV, C-IV through C-VI, D-IV through D-VI	20 knots
E-I through E-VI	20 knots

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

3

All Alignments Considered

	Parallel within RSA	Parallel outside RSA	3-21	9-27	13-31
Length	2,800'	1,800'	2,000'	2,000'	2,300'
Wind Coverage	94.13%	94.13%	97.22%	98.85%	96.79%
Things Affected	Use of Runway 15-33	None	Crosses Runway 15-33	Crosses Runway 15-33	Access road & crosses north taxiway
Land Requirements	None	Less than 0.1 acres needed for RPZs	9.4 acres needed for RPZs	11.7 acres needed for RPZs	6.4 acres needed for RPZs



4

10/10/2023

Items Considered for Updates

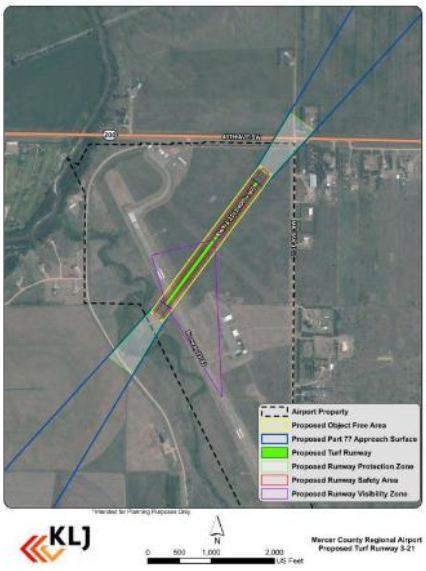
- Current runway lights and PAPI location
- Excavation needed on the west side of the current runway
- Runway Protection Zone (RPZ) placement and Part 77 surfaces
- Making sure aircraft will turnaround out of Runway 15-33 Runway Safety Area (RSA)
  - Threshold for Turf Runway 50' outside of RSA
- Possible runway length

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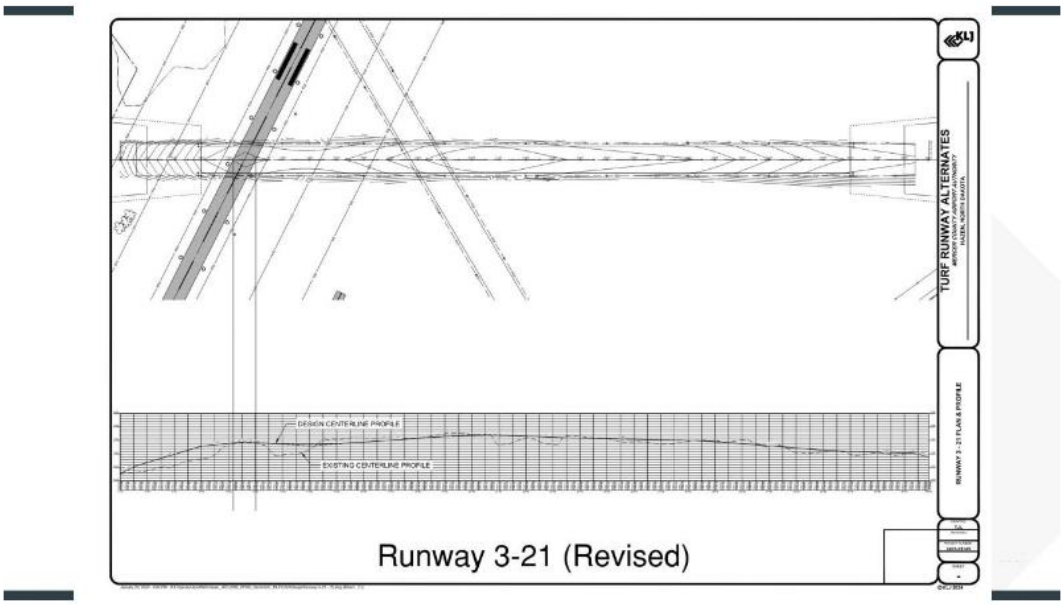
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Runway 3-21 (Revised)

- 2,400' x 60'
- Extended the runway to maximum capacity
- 3 End RPZ up to the front of the residence
- Runway Visibility Zone (RVZ) could affect development north



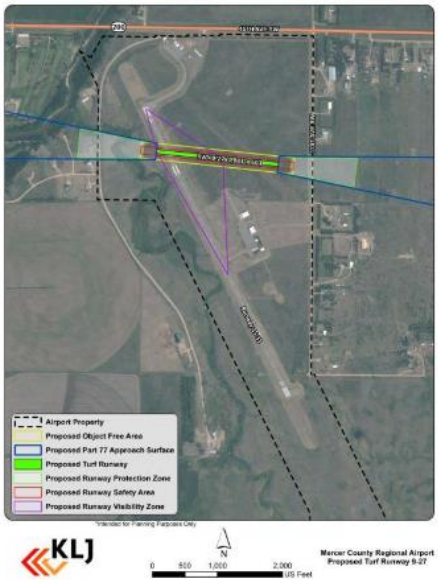
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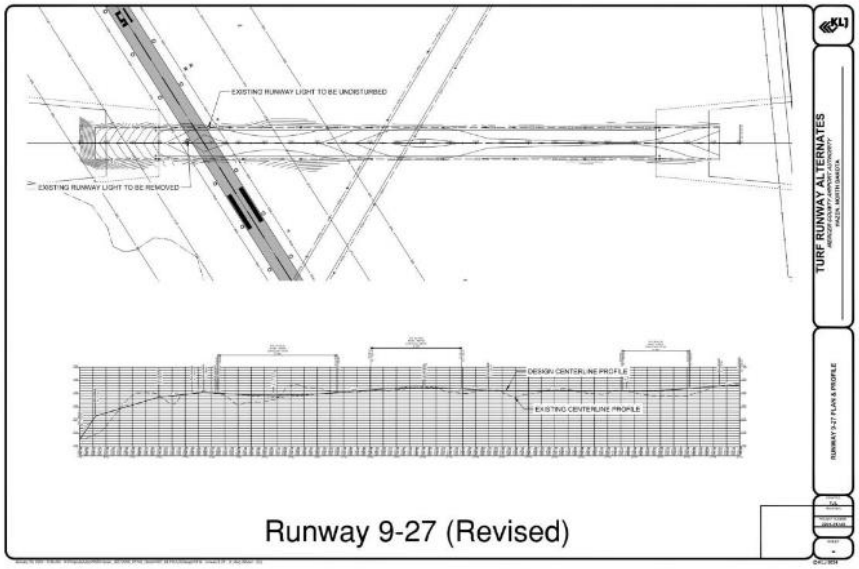
Runway 9-27 (Revised)

- 1,883' x 60'
- Had to shorten from previous option (2,000')
- Would need easements right away to ensure limited development in the RPZs



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9

Comparison

	3-21 (Revised)	9-27 (Revised)
Length	2,400	1,833
Combined Wind coverage	97.22%	98.85%
Possible Easement Area	11.0 acres	9.0 acres (portion currently developable)
Unclassified Excavation	20,600 cubic yards	12,200 cubic yards
Topsoiling (obtained on-site)	5,500 cubic yards	4,400 cubic yards
Estimated Cost	$940,000	$620,000
Items Affected	1 current runway light. Apron development could be limited.	1 current runway light. Must limit development within the RPZs.

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Crosswind Alternatives Open Discussion



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Next Steps

- Complete Airport Inventory
- Complete Aviation Forecasting
- Complete Facility Requirements
- Terminal/Hangar Area Alternatives

- Next Meeting: Terminal/Hangar Area Alternatives

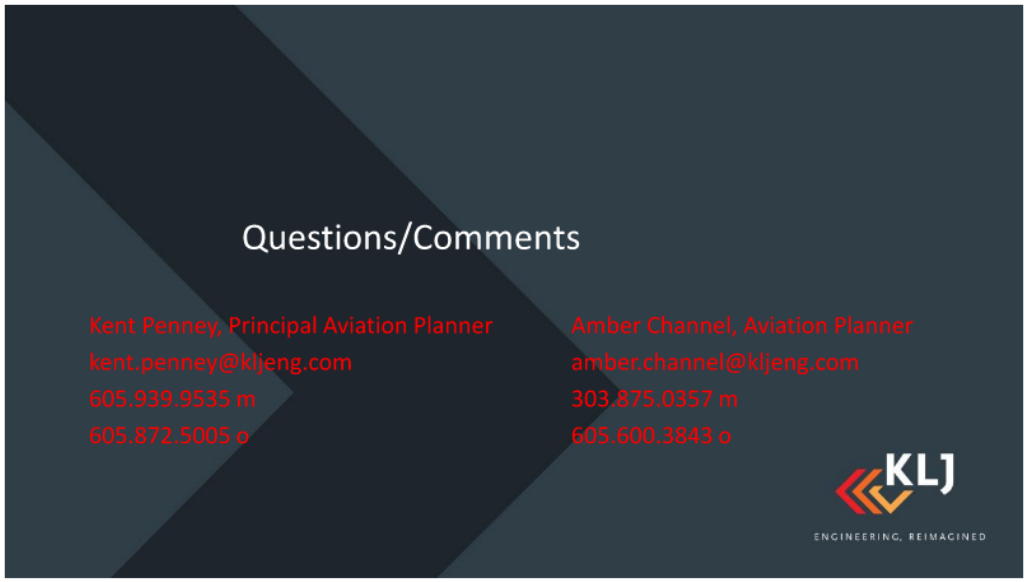
- Website: inputcentral.com/hze-airportplan

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Questions/Comments
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Amber Channel, Aviation Planner
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605.600.3843 o
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Meeting Minutes

Date: 2/5/2024 **Facilitator:** Kent Penney
Time: 1:00 PM **Minutes:** Crosswind Runway Alternatives
Attendees: Steve Frovarp - Airport Manager, Shawn Stromme - Airport Board, Michael Berg - Tenant, Quinn Dalziel - KLJ, Shane Steiner - KLJ, Kent Penney - KLJ, Amber Channel - KLJ

Agenda Topics

Turf Option 3-21

1. Roughly about halfway through the current north taxilane of the terminal area will be omitted due to the Runway Visibility Zone (RVZ)
2. Would like to see the current north taxilane extended to be a connector for the turf

Action Items: N/A

Turf Option 9-27

1. Like where the west end is located and asked about keeping that but shifting the northeast side of 3-21 further north
    a. The location of the coolie and the PAPIs interfere with that plan
2. The east RPZ is concerning for the group because they believe it would not be easy to get an easement for that area

Action Items: *N/A*

Decision

1. Majority ruled in favor of turf crosswind option 3-21 for the length

Action Items: *Will keep the length but remind group it can be shortened to get the RPZ out of the residential lot*

Next Meeting Information

Date: 5/14/2024 **Facilitator:** Kent Penney
Time: 5:00 PM **Minutes:** Terminal Area Alternatives

NATIONAL PERSPECTIVE
REGIONAL EXPERTISE
TRUSTED ADVISOR

5/20/2024


Mercer County Regional Airport
Terminal Area Alternatives Meeting
May 14, 2024
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1


Agenda
Introductions
Review Crosswind Runway 3-21
Terminal Area Alternative Options
Questions/Comments
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5/20/2024

Crosswind Runway 3-21

- 2,500' x 100'
- Runway 3 RPZ approx. 130' feet from the residence
- Runway 21 threshold is 50' outside of Primary RSA
- Runway Visibility Zone (RVZ) does impact hangar development



3

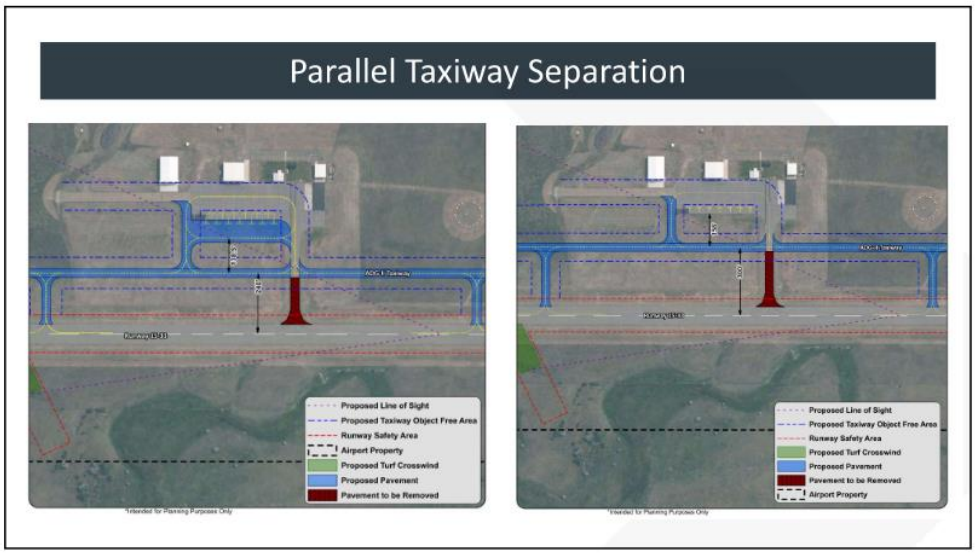
Items Considered for Terminal/Hangar Alternatives

- Apron layout
- Group I T-Hangars and individual box hangars
- Large hangars on Apron for Group II aircraft
- Accommodate relocation of all North Tenants to Central Area
- New fuel farm location
- Area for FBO/Maintenance Operator
- Avoiding the drainage swale/electrical cooridor
- Landside access

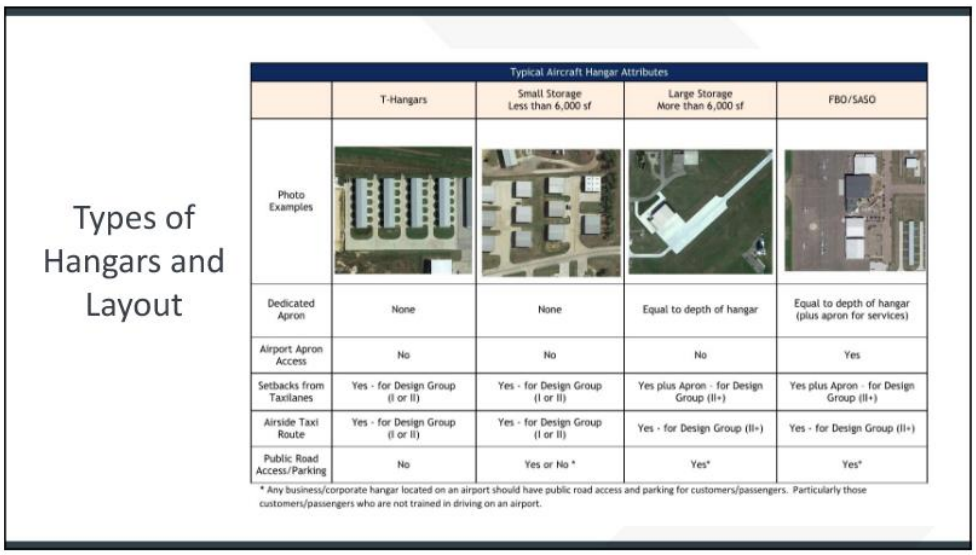
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Parallel Taxiway Separation
Proposed Line of Sight
Proposed Taxiway Object Free Area
Runway Safety Area
Airport Property
Proposed Turf Crosswind
Proposed Pavement
Pavement to be Removed
*Intended for Planning Purposes Only
Proposed Line of Sight
Proposed Taxiway Object Free Area
Runway Safety Area
Proposed Turf Crosswind
Proposed Pavement
Pavement to be Removed
Airport Property
*Intended for Planning Purposes Only

5


Types of Hangars and Layout
Typical Aircraft Hangar Attributes
T-Hangars
Small Storage Less than 6,000 sf
Large Storage More than 6,000 sf
FBO/SASO
Photo Examples
Dedicated Apron
None
None
Equal to depth of hangar
Equal to depth of hangar (plus apron for services)
Airport Apron Access
No
No
No
Yes
Setbacks from Taxilanes
Yes - for Design Group (I or II)
Yes - for Design Group (I or II)
Yes plus Apron - for Design Group (II+)
Yes plus Apron - for Design Group (II+)
Airside Taxi Route
Yes - for Design Group (I or II)
Yes - for Design Group (I or II)
Yes - for Design Group (II+)
Yes - for Design Group (II+)
Public Road Access/Parking
No
Yes or No *
Yes*
Yes*
* Any business/corporate hangar located on an airport should have public road access and parking for customers/passengers. Particularly those customers/passengers who are not trained in driving on an airport.

6

5/20/2024


Alternative 1
A
B
C
D
E
SF
Airside Pavement
Landside Pavement
Hangars/Buildings
Pavement Removal
500 ft
Google Earth

7

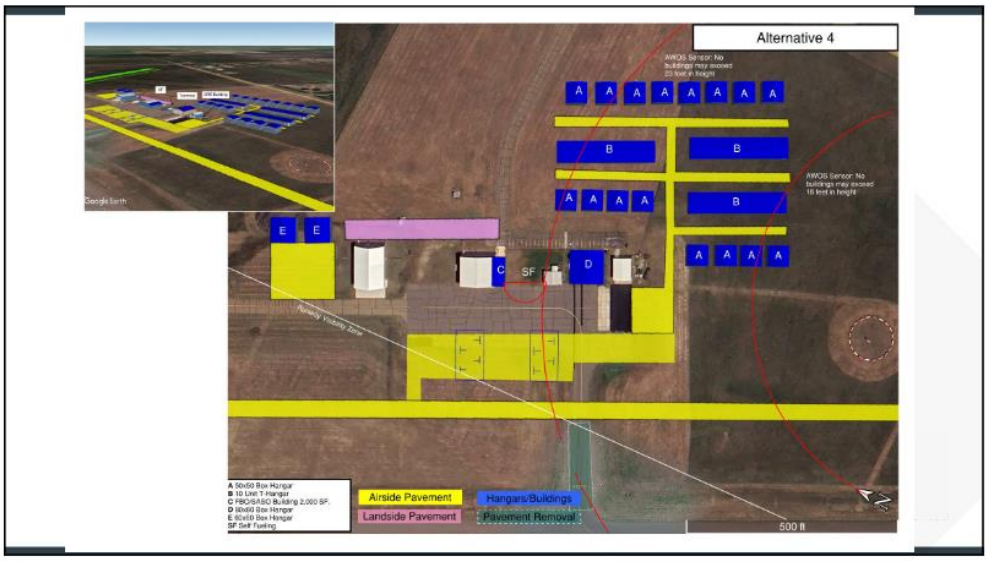

Alternative 2
A
B
C
SF
Airside Pavement
Landside Pavement
Hangars/Buildings
Pavement Removal
500 ft
Google Earth

8

5/20/2024



9



10

5

5/20/2024



11



12

Metric	Alternatives					
	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6
Runway to Parallel Taxiway Separation	240'	300'	240'	300'	240'	240'
Self-Fueling Location	South	North	Terminal building and storage hangar	Terminal building and storage hangar	South	Terminal building and storage hangar
FBO/Maintenance Operator		South Addition to Hangar	North Addition to Hangar	South Addition to Hangar		
Apron Hangars	Add 2 60x60 and 1 80x80 Hangars	Add 80x80 Hangar	Add 1 80x80 and 2 100x100 Hangars	Add 2 60x60 and 1 80x80 Hangar	Add 60x60 Hangar	Add 1 60x60 and 2 100x100 Hangars
Storage Hangars	N-S Opening 33 spaces	S-E-W Open 27 spaces	E-W Open 25 spaces	E-W Open 46 spaces	N-S Open 33 spaces	E-W Open 52 spaces
Additional Impacts	None	RVZ	None	AWOS Sensor	None	RVZ
Group I Tiedowns	12	8	20	8	10	12

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Terminal Area Alternatives Open Discussion

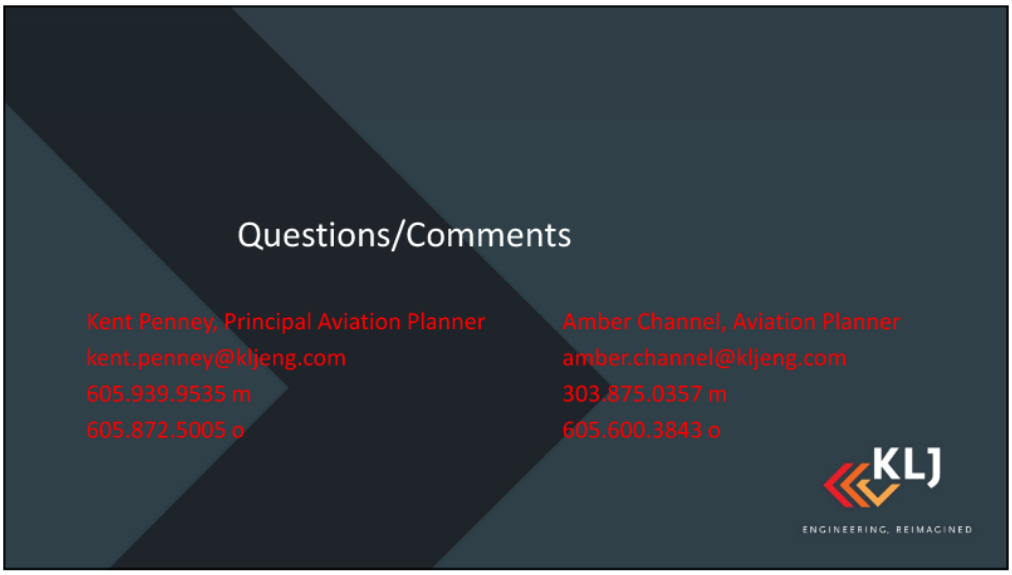


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Next Steps
Revise Terminal Area Alternatives
Select Preferred Alternative
Prepare Airport Layout Plan
Prepare Implementation Plan
Next Meeting: Revised Terminal Area Alternatives
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Questions/Comments
Kent Penney, Principal Aviation Planner
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605.600.3843 o
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Mercer County Regional Airport – Terminal Alternatives – May 14, 2024

ATTENDANCE LIST

Engineering Reimagined

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KLJ

Name (please print)	Organization/Business	Phone	Email (optional)
Kent Penney	KLJ		
Steve Frovarp	MCRAA		
Quinn Dalziel	KLJ		
Shane Steiner	KLJ		
Amber Channel	KLJ - online		
Jack Vogt	KLJ - online		

Meeting Minutes

Date: 5/14/2024 **Facilitator:** Kent Penney
Time: 5:00 PM **Minutes:** Terminal Area Alternatives
Attendees: Steve Frovarp - Airport Manager, Quinn Dalziel - KLJ, Kent Penney - KLJ, Amber Channel - KLJ, Jack Vogt - KLJ

Agenda Topics

Buildings on the Apron

1. Like adding north onto the current apron hangar for an FBO
2. Like the Hangar D on Alternative 3 for a maintenance shop or long term transient customers

Action Items: For Alternative 1 add a lean-to onto the current large hangar to the south of the building.

Tiedown Spots/Apron Space

1. Like the nested tiedowns that Alternative 1, could phase these into the west
2. The layout in Alternative 2 would require the buildout of the apron though could flip the tiedowns
3. The extra apron space on Alternative 3 could be for agricultural spray operations
4. Alternative 5 apron layout was eliminated for the group said it looked like a maze for pilots to maneuver and did not offer room for buildings to be placed on the apron

Action Items: *N/A*

Fuel Farm

1. Alternative 1 fuel location eliminates a hangar layout to the south like that of Alternative 4
2. Do not like the fuel location on Alternative 2 because this would have the trucks on the apron
3. Like the fuel location on the north side of the terminal for the ease of the truck entrance
4. The question was asked if a fuel farm could be placed between the current hangar and the new taxilane as that in Alternative 3; yes but could but it would be a high cost and a route would need to be laid out so fueling aircraft and taxiing aircraft could move around each other

Action Items: *Look at vertical tanks if space is restricted and in tandem*

NATIONAL PERSPECTIVE
REGIONAL EXPERTISE
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Other Items

1. Like the roadside access presented on Alternative 3

Action Items: N/A

Other Notes or Information

Will revise Alternative 1 and 3

Next Meeting Information

Date: 6/18/2024
Time: 6:20 PM
Facilitator: Kent Penney

Minutes: Refined Terminal Area Alternatives

NATIONAL PERSPECTIVE
REGIONAL EXPERTISE
TRUSTED ADVISOR

6/18/2024


Mercer County Regional Airport
Refined Terminal Area Alternatives Meeting
June 18, 2024
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1


Agenda
Introductions
Refined Terminal Area Alternatives
Comparison
Questions/Comments
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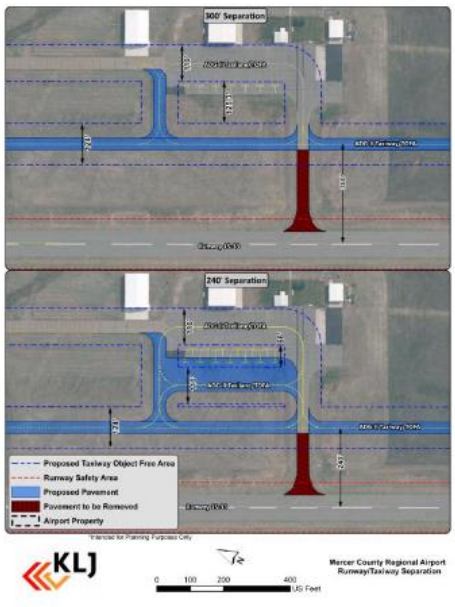
6/18/2024

Items Considered for Terminal/Hangar Alternatives

- Apron layout
- Group I T-Hangars and individual box hangars
- Large hangars on Apron for Group II aircraft
- Accommodate relocation of all North Tenants to Central Area
- New fuel farm location
- Area for FBO/Maintenance Operator
- Avoiding the drainage swale/electrical cooridor
- Landside access

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3



4

2

6/18/2024


Alternative 1 Revised
Airside Pavement
Landside Pavement
Hangars/Buildings
Pavement Removal
800 ft
Google Earth

5


Alternative 3 Revised
Airside Pavement
Landside Pavement
Hangars/Buildings
Pavement Removal
600 ft
Google Earth

6

6/18/2024

Alternatives Comparison

Metric	Alternatives	
	Refined Alternative 1	Refined Alternative 3
Runway to Parallel Taxiway Separation	240'	240'
Self-Fueling Location	South	Terminal building and storage hangar
FBO/Maintenance Operator	South Addition to Hangar	North Addition to Hangar
Apron Hangars	Add 2 60x60 and 1 80x80 Hangars	Add 1 80x80 and 2 100x100 Hangars
Storage Hangars	E-W-S Opening 33 spaces	E-W Open 25 spaces
Additional Impacts	None	None
Group I Tiedowns	12	20

7

Terminal Area Alternatives Open Discussion



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6/18/2024

Next Steps

- Prepare Airport Layout Plan
- Prepare Implementation Plan

Website: inputcentral.com/hze-airportplan

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Questions/Comments

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5

Mercer County Regional Airport – Refined Terminal Alternatives – June 18, 2024

ATTENDANCE LIST

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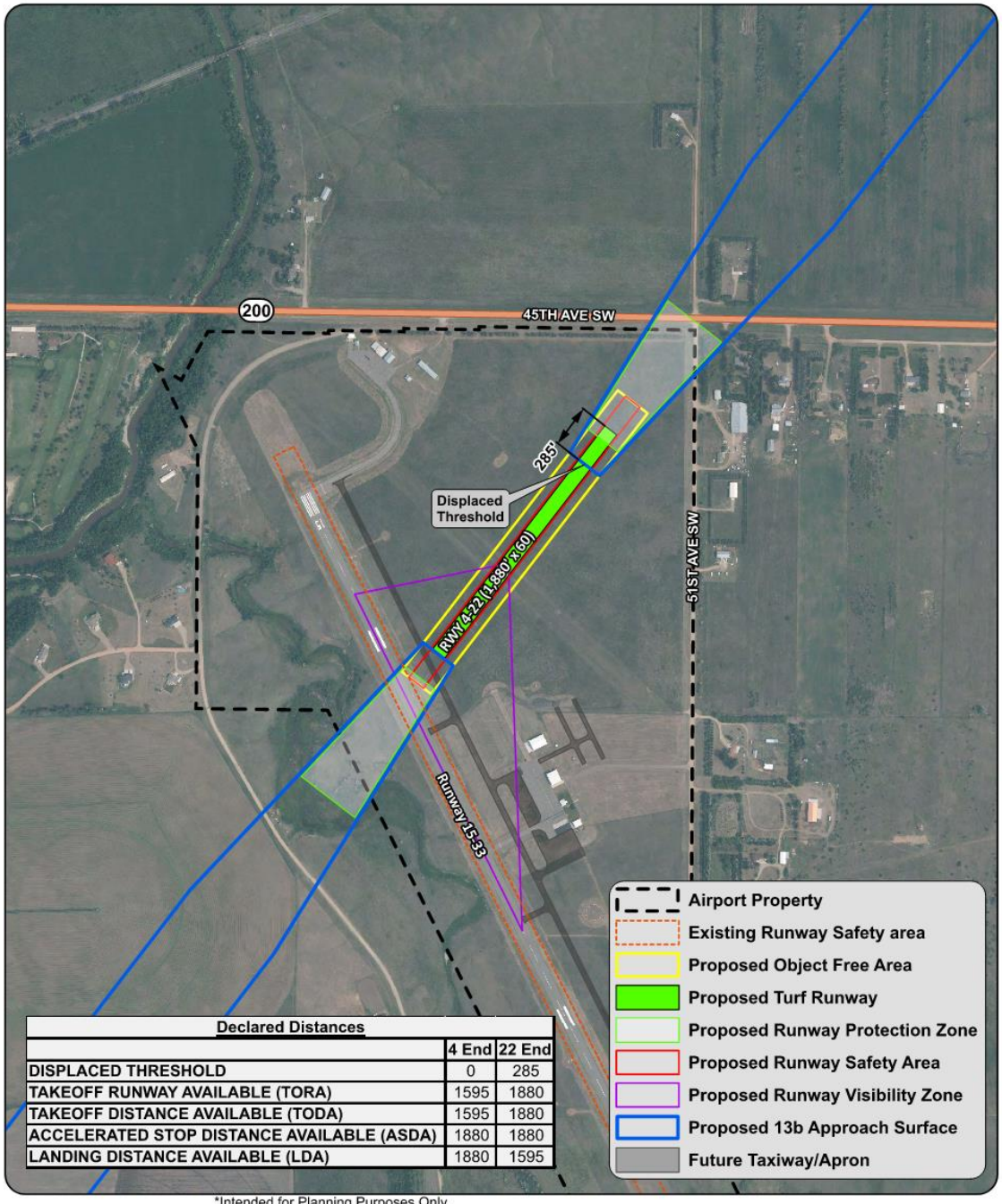
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Steve Froyarp	MCRAA	701-880-9989	
Wilbert Harsell	MCRAA	701-487-3503	
Shawna Stromme	MCRA	701-891-1156	shawnastromme65@gmail.com
Kelly Mott	MCRA	701-880-0400	
Marvin Sutheimer	MCRA	701-948-2805	
Tom Kazsas		701 880-1988	
Shane Steiner	KLJ	701-355-8400	
Kent Penney	KLJ		
Amber Channel	KLJ		

Airport Board Crosswind Review Meeting – August 2024

**After further review, the correct length of this alternative was found to be 1,990 feet long.



Declared Distances		
	4 End	22 End
DISPLACED THRESHOLD	0	285
TAKEOFF RUNWAY AVAILABLE (TORA)	1595	1880
TAKEOFF DISTANCE AVAILABLE (TODA)	1595	1880
ACCELERATED STOP DISTANCE AVAILABLE (ASDA)	1880	1880
LANDING DISTANCE AVAILABLE (LDA)	1880	1595

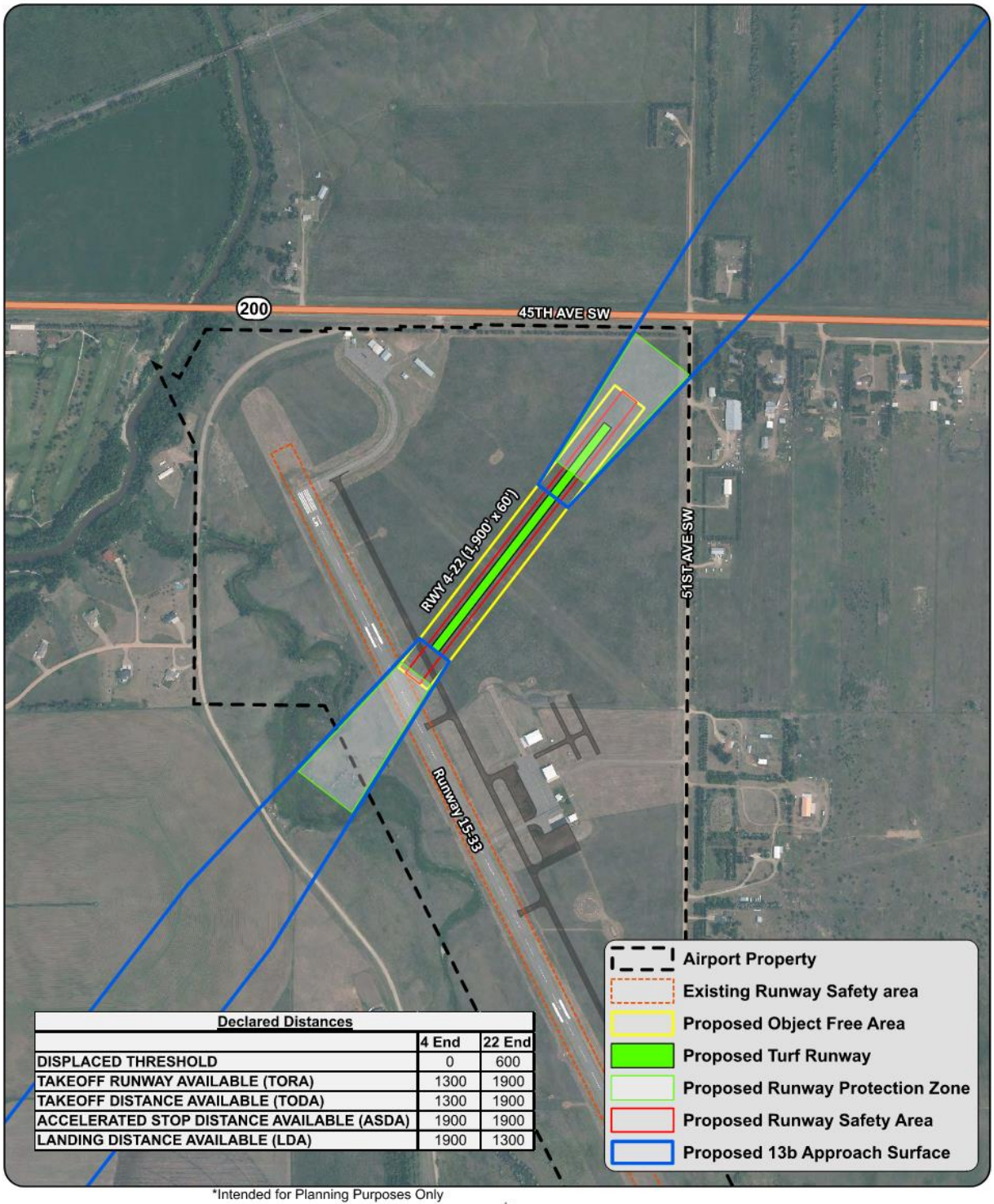
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N

0 500 1,000 2,000 US Feet

Mercer County Regional Airport
Proposed Turf Runway 4-22
Displaced Threshold



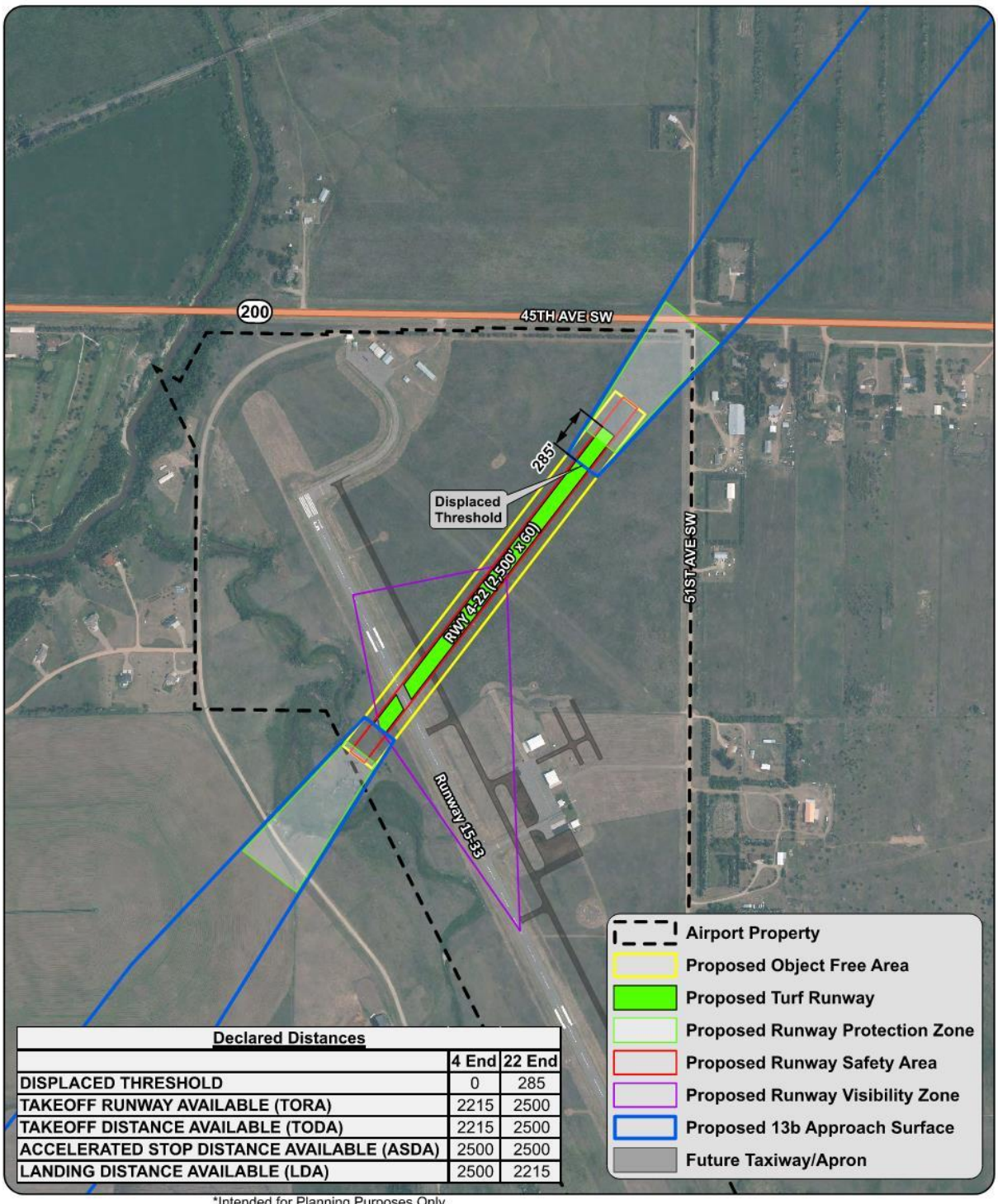
Declared Distances		
	4 End	22 End
DISPLACED THRESHOLD	0	600
TAKEOFF RUNWAY AVAILABLE (TORA)	1300	1900
TAKEOFF DISTANCE AVAILABLE (TODA)	1300	1900
ACCELERATED STOP DISTANCE AVAILABLE (ASDA)	1900	1900
LANDING DISTANCE AVAILABLE (LDA)	1900	1300

*Intended for Planning Purposes Only

N

0 500 1,000 2,000 US Feet

Mercer County Regional Airport
Proposed Turf Runway 4-22



Declared Distances		
	4 End	22 End
DISPLACED THRESHOLD	0	285
TAKEOFF RUNWAY AVAILABLE (TORA)	2215	2500
TAKEOFF DISTANCE AVAILABLE (TODA)	2215	2500
ACCELERATED STOP DISTANCE AVAILABLE (ASDA)	2500	2500
LANDING DISTANCE AVAILABLE (LDA)	2500	2215

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N

0 500 1,000 2,000 US Feet

Mercer County Regional Airport
Proposed Turf Runway 4-22
Displaced Threshold