

Willow Run Airport

Master Plan

Public Information Meeting



DETROIT METRO • WILLOW RUN
WAYNE COUNTY AIRPORT AUTHORITY

Welcome!

Please sign in and pick up handouts

Station

1

What is a Master Plan?

- **20 year infrastructure development plan**
- **Assess and determine facility needs**
- **Provides development options to address needs**
- **Provides a timeline and financial schedule for implementation**
- **Conducted in combination with Airport Layout Plan (ALP) update**
 - *Graphical depiction of existing and future airport development*
 - *Facilities must be shown on the ALP to be eligible for FAA funding*



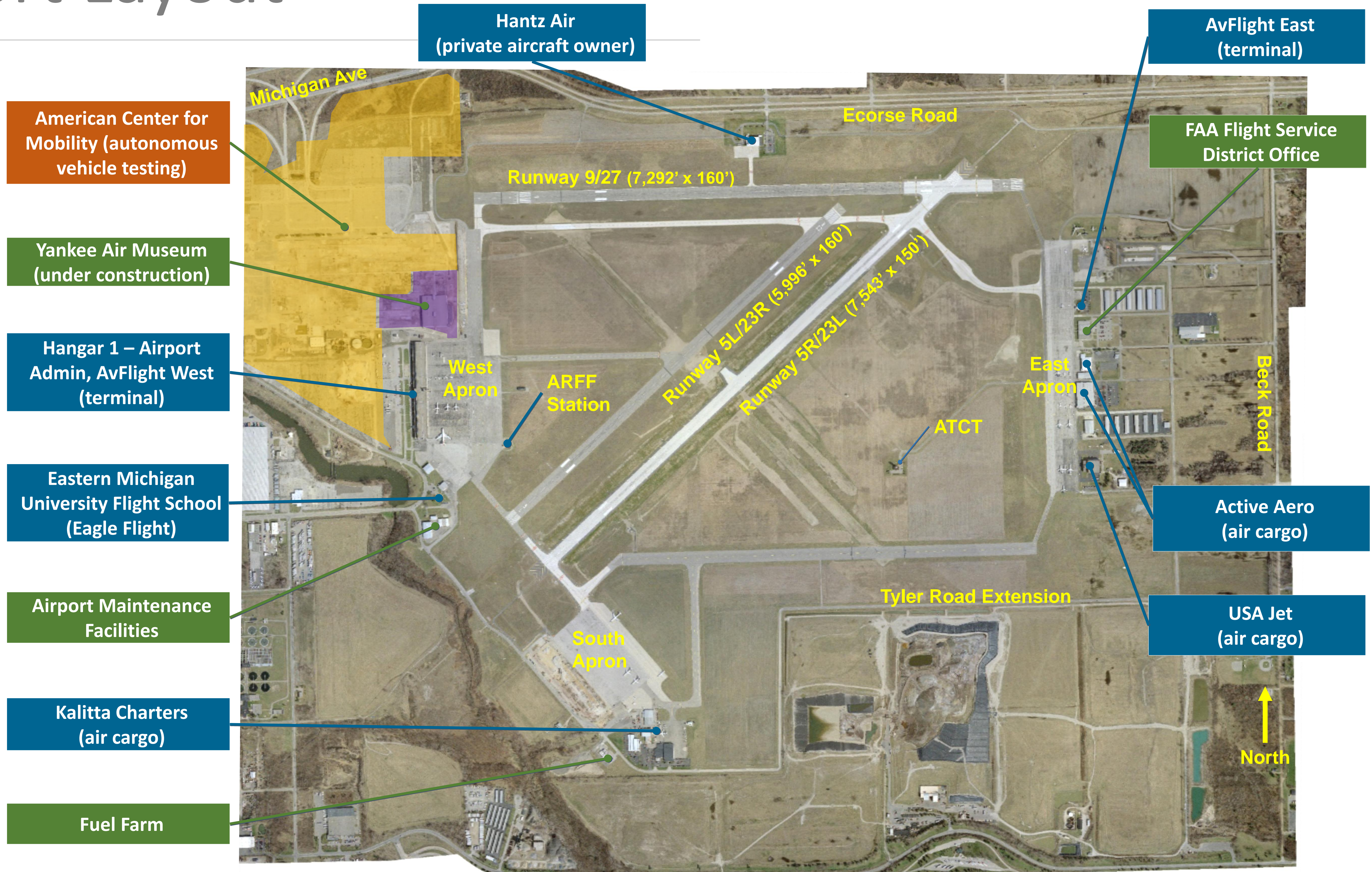
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Airport Layout

Key

- Airfield
- Landside
- Other



Evolving Roles of the Willow Run Airport

→ Willow Run Airport continues to evolve to serve the needs of Southeast Michigan

■ *Bomber Production for World War II (1940s)*

- Almost 8,700 B-24 Liberators built
- Bomber plant employed 42,000 people



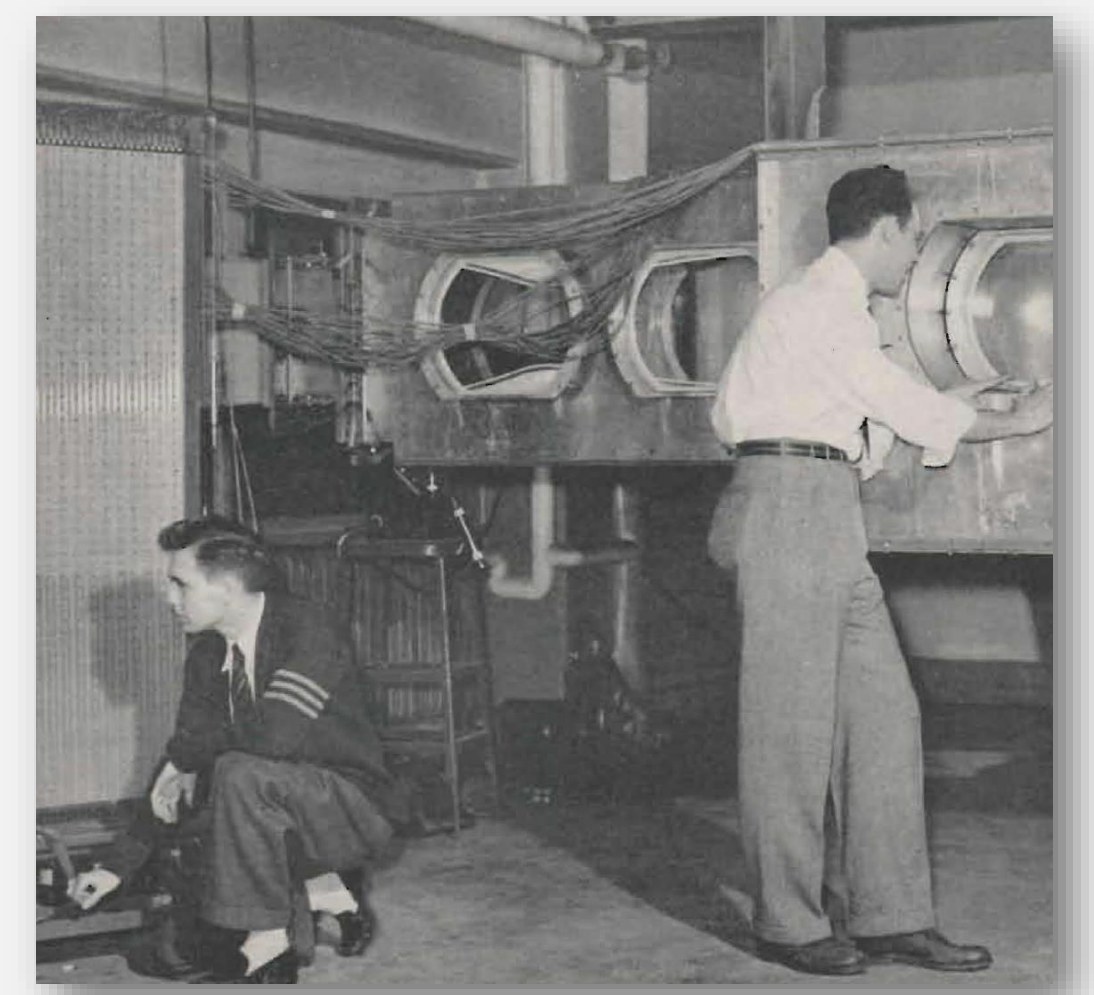
■ *Commercial Airline Service Airport (1947-1958)*

- Detroit's commercial airline service airport until 1958



■ *Aeronautical Research Center (1947-1970s)*

- Michigan Aeronautical Research Center (MARC), run by University of Michigan
- Rocket motor and propellant research for antiballistic missile defense systems



■ *Air Cargo Facility (1980s-1990s)*

- Became successful air cargo airport



■ *Today (2000s)*

- On-Demand Air Cargo
- Eastern Michigan University flight training
- Reliever to Detroit Metropolitan Wayne County Airport



Airport Roles

	Willow Run (YIP)	Detroit Metro (DTW)
Role	Reliever Airport	Commercial Airport
Users	 On-demand air cargo  General aviation flight training  Corporate and recreational general aviation  Aircraft maintenance	 Large hub passenger operations  Integrated logistics carriers  High-end corporate general aviation  Aircraft maintenance
Actions	Preserve land areas for: (1) Maintenance, Repair, and Overhaul (MRO) operators (2) Commercial development (3) Alternative aviation-related markets not yet realized	Seek opportunities to maximize revenue generation and allow DTW to serve as a catalyst for local and regional economic growth & development

Economic Impact of Willow Run Airport

- Generates both aeronautical and non-aeronautical related jobs
- Economic impact throughout Michigan
- Businesses are attracted to air cargo capabilities of Airport
- Continued capital improvements at Airport is vital to area economy
- Supports the \$10.2 billion economic impact of Detroit-Wayne County Metropolitan Airport

Activity	Direct Spending	Economic Impact	Income Impact	Jobs Impact
Cargo Transportation	\$22.3 million	\$44.4 million	\$14.4 million	306
Visitors	\$1.1 million	\$2.1 million	\$0.6 million	21
General Aviation	\$9.4 million	\$18.7 million	\$6.1 million	129
Education	\$1.4 million	\$3.1 million	\$1.1 million	37
Airport Enhancement (2014)*	\$25.0 million	\$54.9 million	\$18.2 million	457
TOTAL ANNUAL IMPACTS	\$59.4 million	\$123.1 million	\$40.5 million	950

Notes:

Due to rounding, stated numbers may not add to stated totals

* Airport Enhancement dollar amounts represent infrastructure investment made in 2014 and will vary by year

Source: *The Economic Impact of Willow Run Airport 2014*, The University of Michigan – Dearborn College of Business (2014)

→ Example of Economic Impact Spending

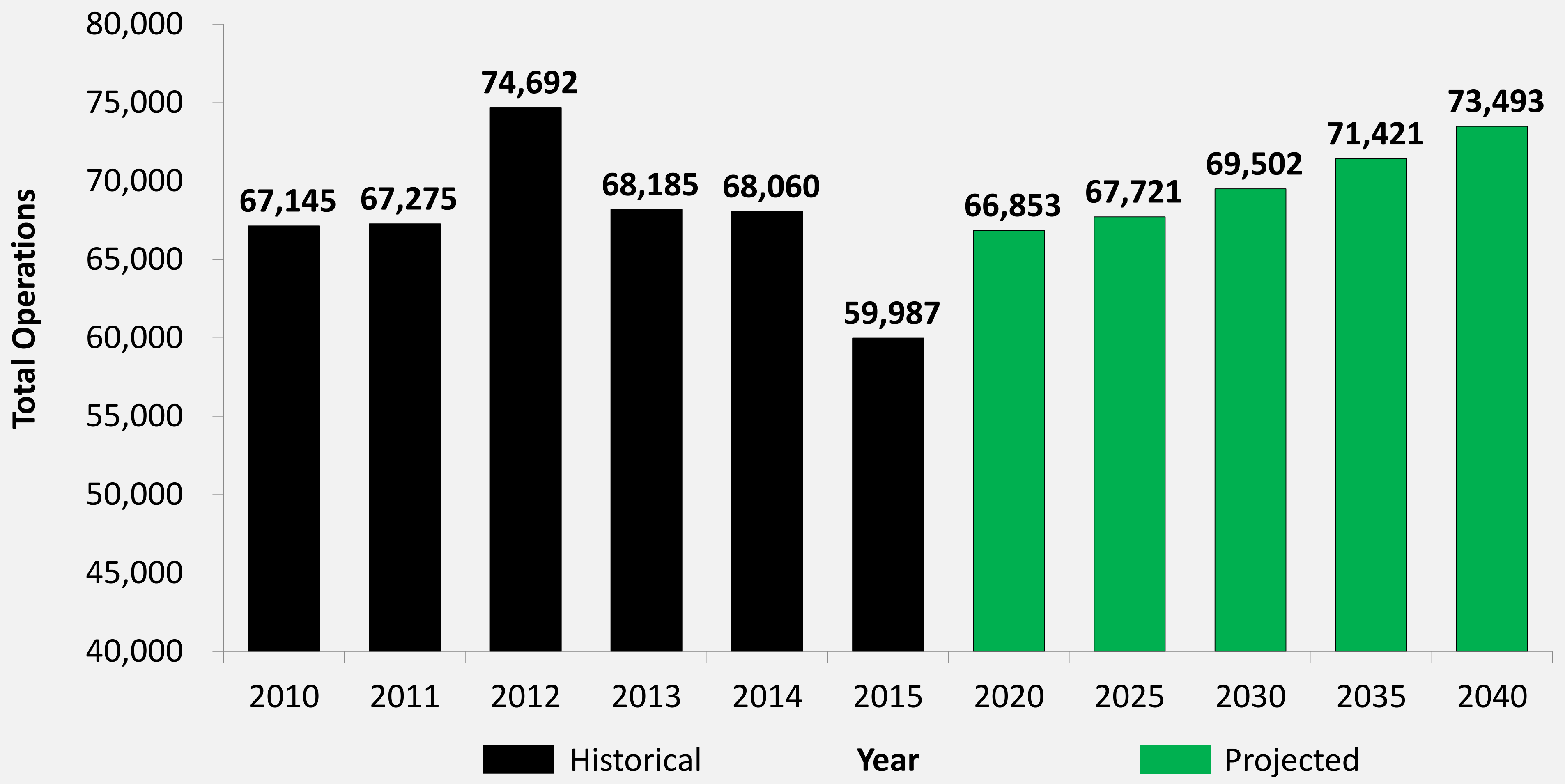


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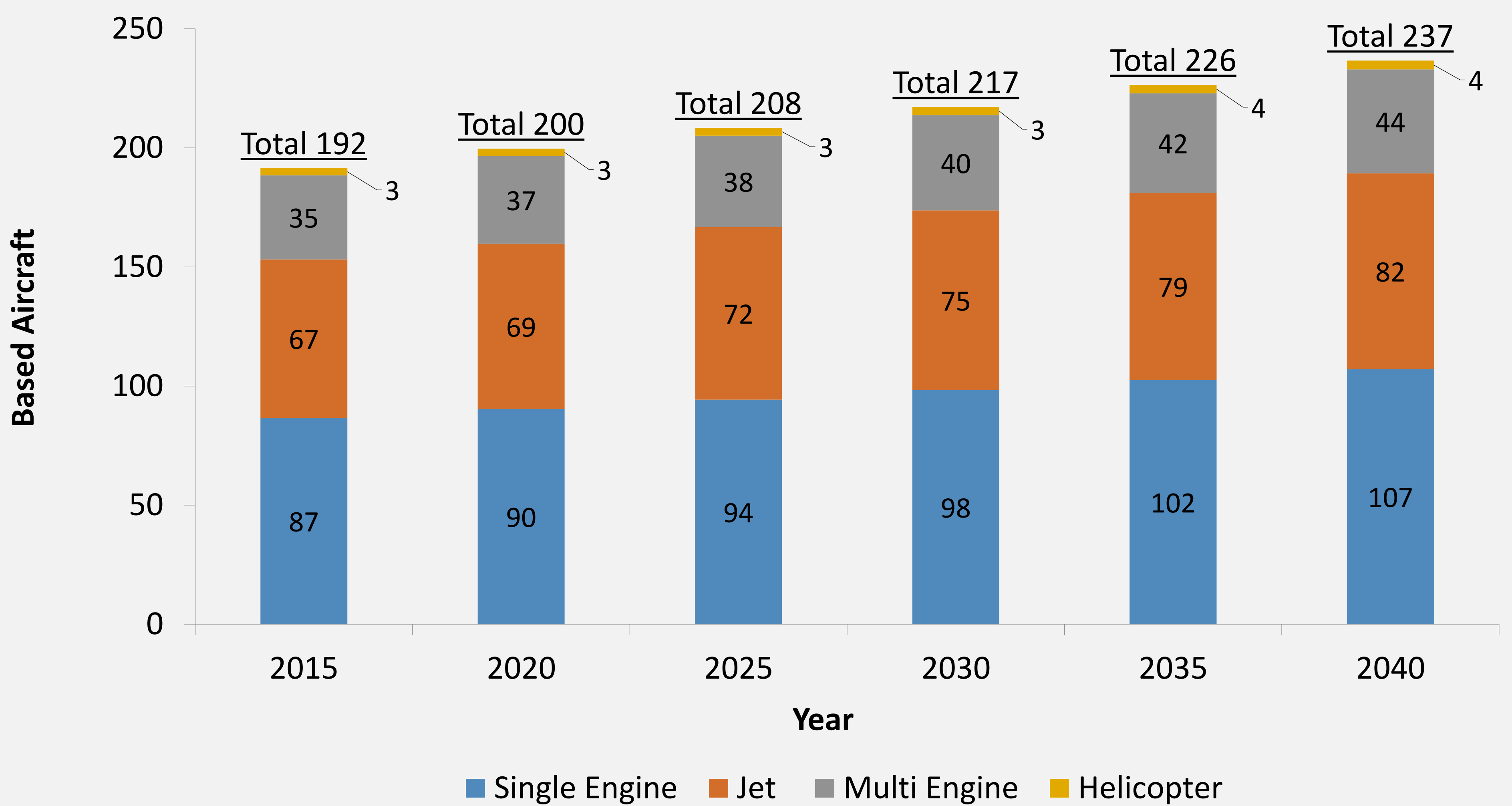
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Forecasts of Aviation Demand

✈ Aircraft Operations (total takeoffs and landings)



✈ Based Aircraft



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Goals of the Airport

→ **Maintain safety**

- *Eliminate design standard hot spots and resolve modification of standards*

→ **Improve the financial sustainability of the Willow Run Airport**

- *Reduce operating costs through right-sized facilities and prioritized capital investment*

→ **Optimize the airfield to accommodate the needs of existing and future users**

- *Maximize airfield efficiencies and capacity*
- *Rehabilitate and improve failing infrastructure*
- *Accommodate needs of existing and future users with appropriate runway length*

→ **Support the Airport's role and economic impact within the region**

- *Accommodate and support the local and regional demand for air freight; manufacturing, maintenance, repair, and overhaul (MMRO); corporate aviation; and general aviation*
- *Support opportunities for job creation and local development*

→ **Minimize impacts to quality of life on surrounding community**

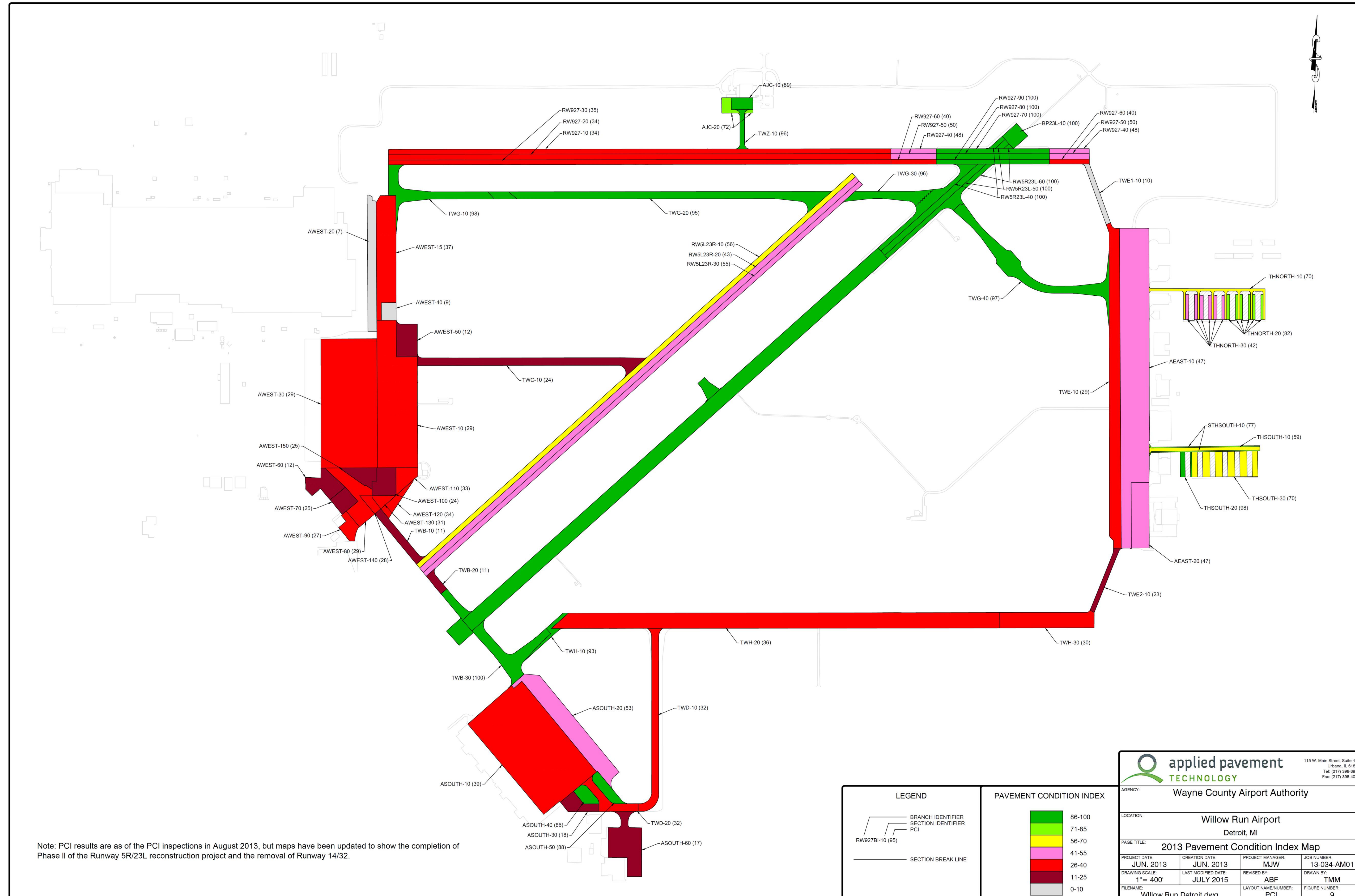
→ **Assure compliance with master planning requirements and regulations**

→ **Engage and collaborate with users and regional stakeholders**

Infrastructure Needs

Existing infrastructure in poor condition

- Airfield pavements
- Landside pavements
- Utilities



Summary of Facility Needs

Key

- Airfield
- Landside
- Other

Existing infrastructure in poor condition

- Runway
- Taxiways
- Aprons
- Buildings
- Roads
- Utilities

Crosswind runway recommended for light general aviation traffic

Possible plan for add'l runway length on either 5R/23L or 9/27

Improve or replace fire station

Improve maintenance facility

Parallel runway not needed for capacity, could be maintained for traffic separation

Improve approach minimums

Parallel taxiway to increase capacity and safety

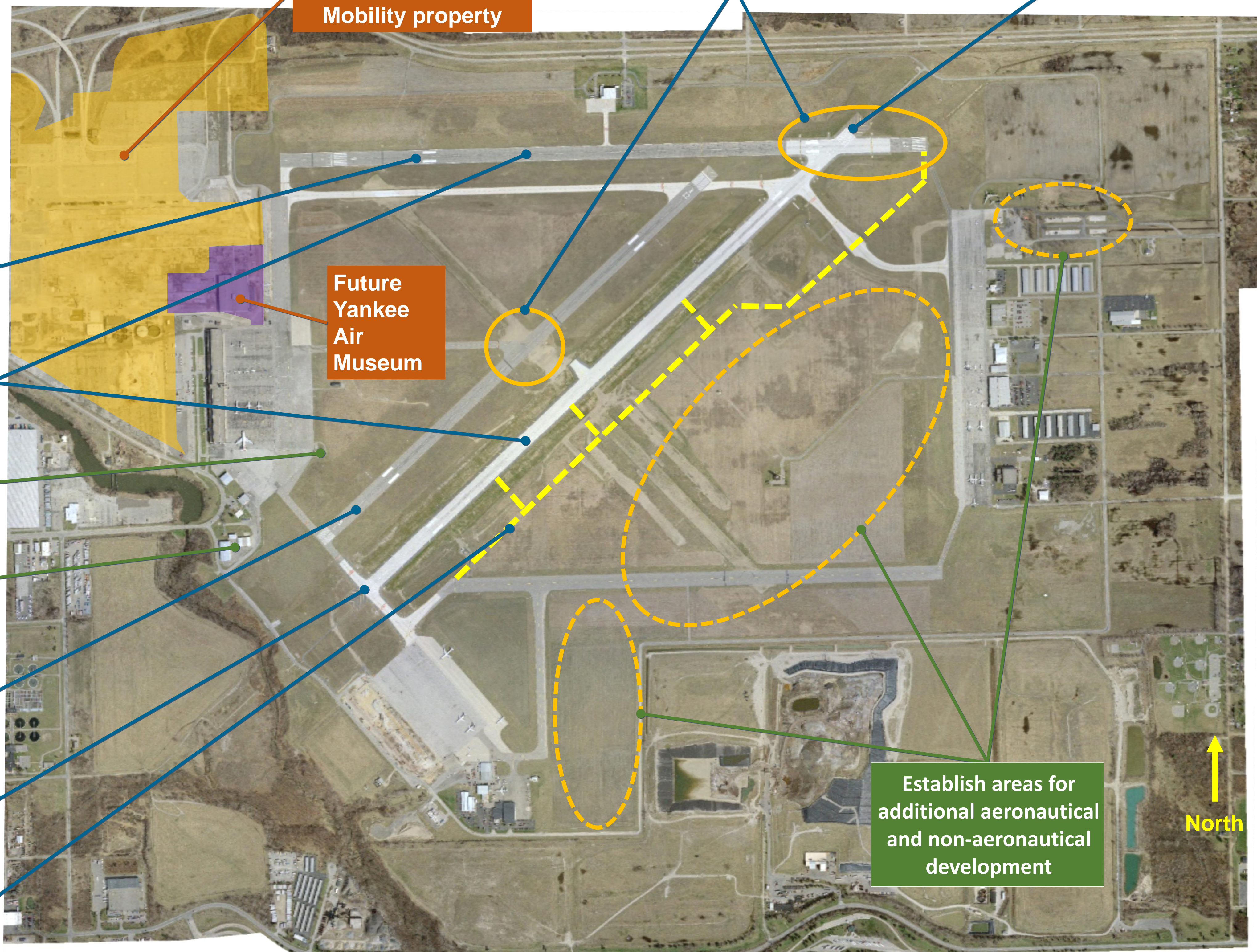
Development of the American Center for Mobility property

Future Yankee Air Museum

Correct airfield hot spots

Improve approach minimums

Establish areas for additional aeronautical and non-aeronautical development

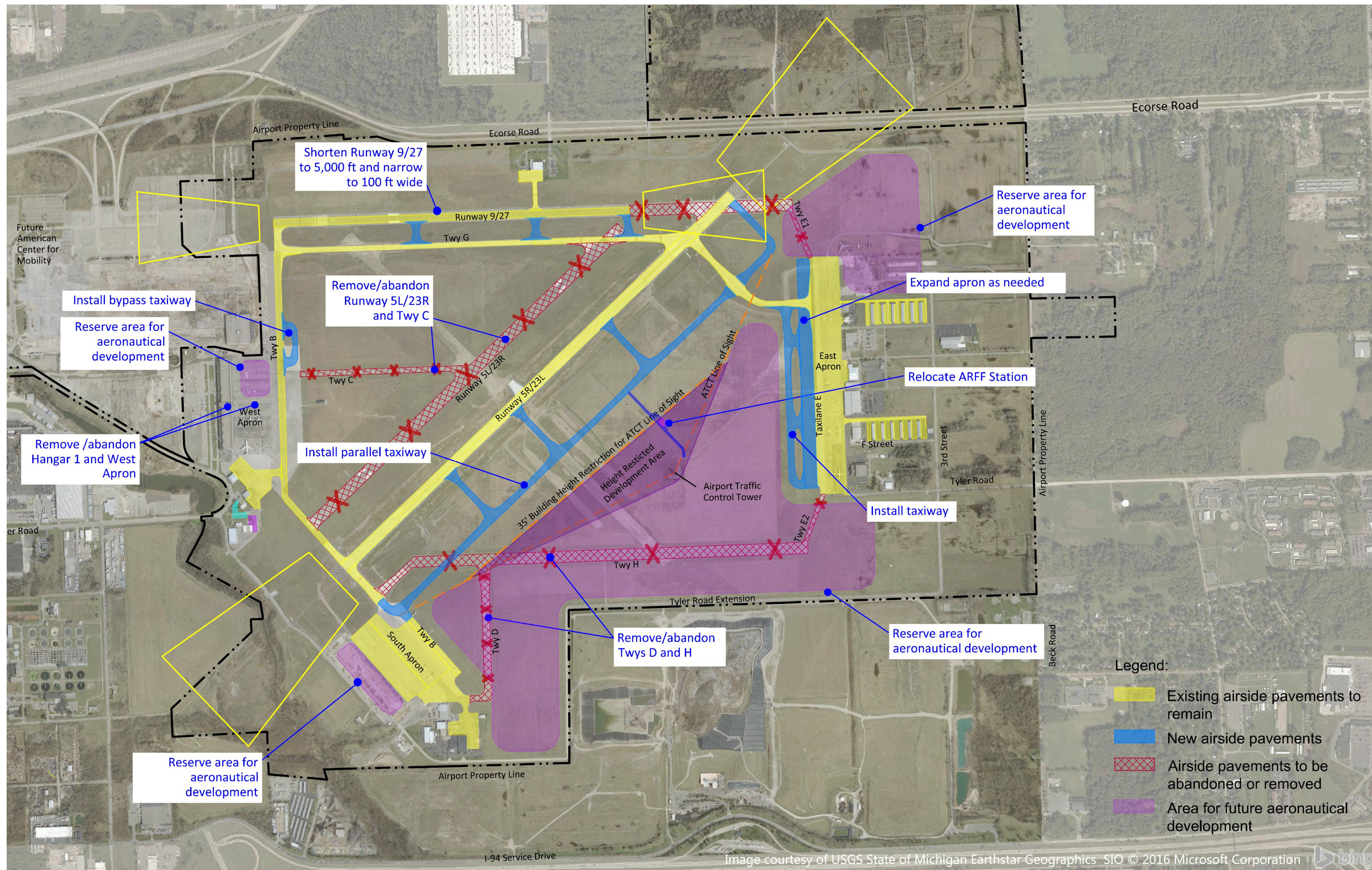


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Recommended Future Facilities

WILLOW RUN AIRPORT MASTER PLAN UPDATE



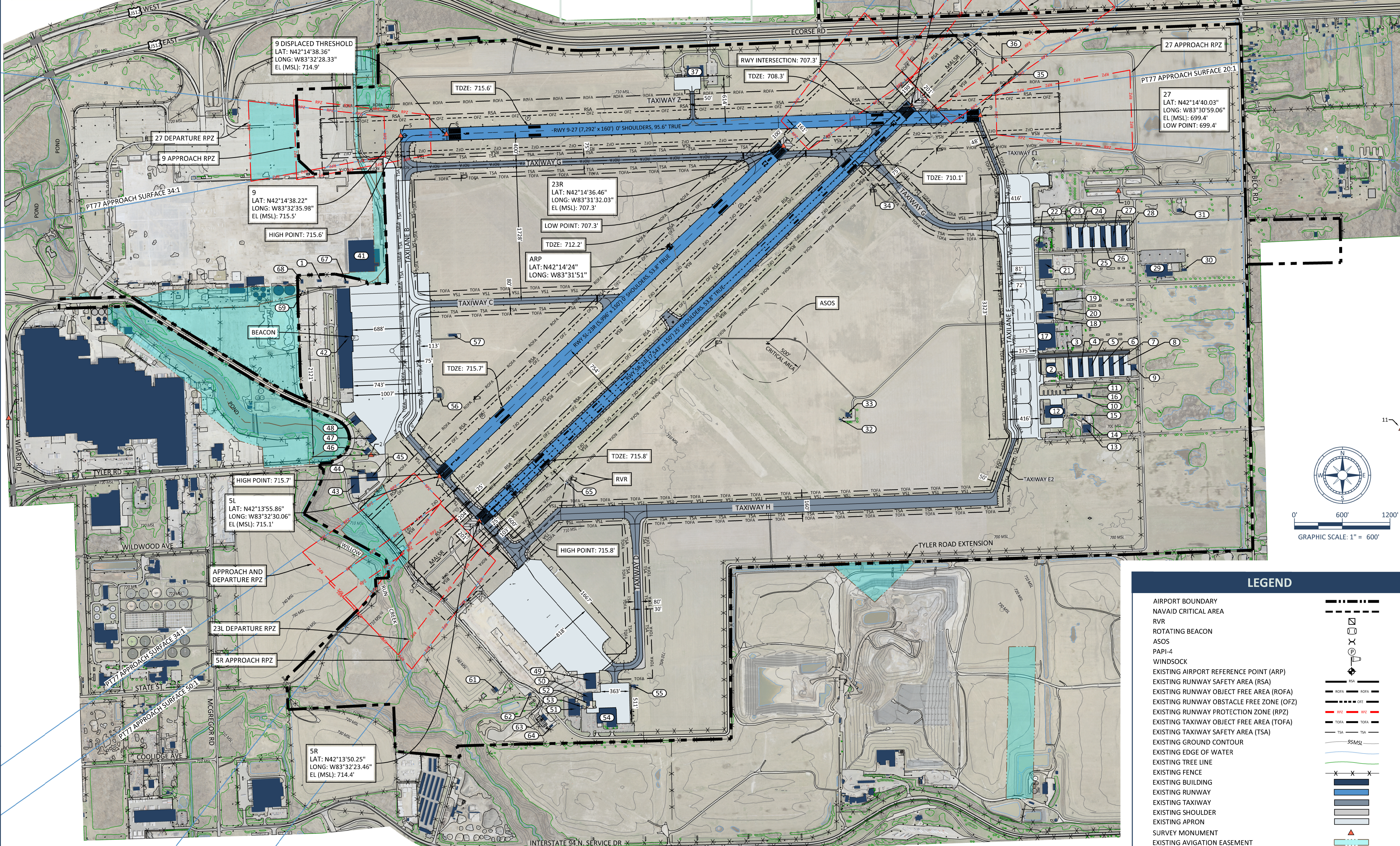
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TAXIWAY/TAXILANE DATA TABLE

NAME	DIMENSIONS					SEPARATION FROM TAXIWAY CL TO FIXED/MOVABLE OBJECT	LIGHTING
	WIDTH	SHOULDER	TSA	OFA	TDG		
B (TAXILANE)	75'	NONE	171'	225'	5	113'	MITL
C	80'	NONE	214'	320'	5	N/A	MITL
D	80'	NONE	214'	320'	5	211'	MITL
E1	48'	NONE	118'	186'	2	240'	MITL
E2	46'	NONE	118'	186'	2	N/A	MITL
E (TAXILANE)	72'	NONE	118'	162'	3	81'	MITL
G	75'	NONE	214'	320'	5	200'	MITL
H	160'	NONE	214'	320'	5	400'	MITL
Z	50'	NONE	118'	186'	3	120'	MITL

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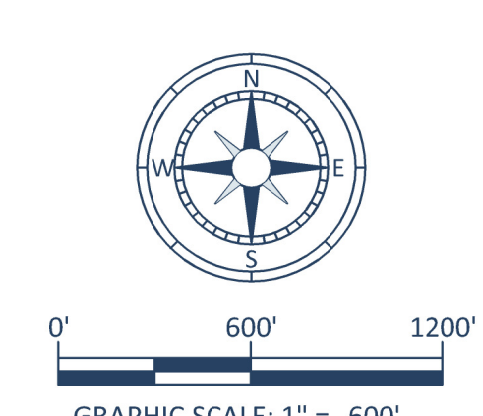
SURVEY CONTROL POINTS

BUILDING NUMBER	NORTHING	EASTING	MSL
1	268656.39	13341363.97	731.51
2	268193.11	13345920.35	715.61
3	267925.17	13346779.86	715.06
4	267361.79	13347281.72	714.44
5	272208.10	13346292.37	715.47
6	272228.46	13346867.75	714.93
7	272077.73	13351104.10	707.30
8	272587.65	13352720.07	701.51
9	272464.17	13353579.84	699.42
10	271513.09	13355316.45	700.26
11	268523.90	13358875.64	696.25
12	279758.45	13358191.02	691.01

NOTE: SURVEY POINT NUMBER 12 IS OUTSIDE OF DRAWING VIEW

EXISTING BUILDING TABLE

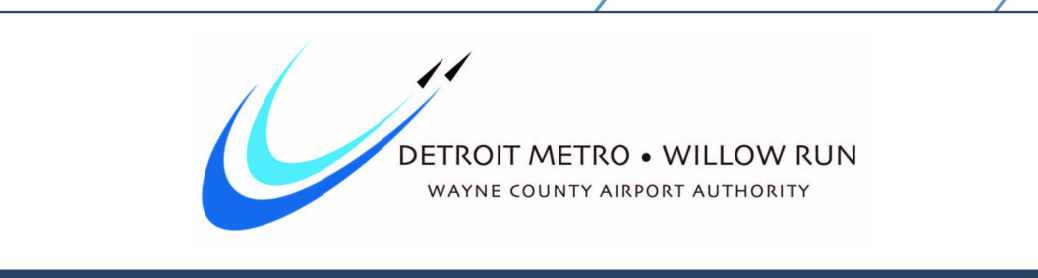
BUILDING NUMBER	TOP ELEVATION	OCCUPANT
1	731.71	YIP DEFUNCT FUEL FARM ISLAND
2	726.99	AVIATION DEPOT GROUP
3	716.70	BIRD CAGE HANGARS
4	716.23	BIRD CAGE HANGARS
5	716.29	BIRD CAGE HANGARS
6	716.24	BIRD CAGE HANGARS
7	716.24	BIRD CAGE HANGARS
8	716.24	BIRD CAGE HANGARS
9	723.45	ACTIVE AERO STORAGE
10	721.41	ACTIVE AERO BUZZARD AVIATION
11	710.25	ACTIVE AERO BUZZARD AVIATION
12	755.49	PACKARD HANGAR
13	719.45	ACTIVE AERO STORAGE
14	713.19	ACTIVE AERO STORAGE
15	711.43	PUMP HOUSE
16	723.20	ACTIVE AERO BUZZARD AVIATION
17	728.20	ACTIVE AERO USA JET AIRLINES
18	721.30	ACTIVE AERO USA JET AIRLINES
19	730.26	ACTIVE AERO USA JET AIRLINES
20	713.23	PAVILION
21	715.32	FAA OFFICE BUILDING
22	722.10	AV FLIGHT TERMINAL
23	716.86	BLACK EAGLE AVIATION
24	714.58	BLACK EAGLE AVIATION
25	714.53	BLACK EAGLE AVIATION
26	716.76	BLACK EAGLE AVIATION
27	716.82	BLACK EAGLE AVIATION
28	716.82	BLACK EAGLE AVIATION
29	726.89	YANKEE AIR MUSEUM
30	714.43	YANKEE AIR MUSEUM
31	722.38	YANKEE AIR MUSEUM
32	716.87	ATC
33	797.58	STORAGE
34	711.68	GLIDE SLOPE SHACK
35	708.87	LOCALIZER SHACK
36	706.43	DME SHACK
37	746.08	JOHNSON CONTROL HANGAR
41	781.05	YANKEE AIR MUSEUM
42	798.19	WILLOW RUN ADMIN
43	743.34	WCAA MAINTENANCE
44	740.68	WCAA SALT AND SAND
45	733.81	WCAA MAINTENANCE
46	725.63	EAGLE FLIGHT CENTER
47	740.66	ROUSH HANGAR
48	743.29	EAGLE FLIGHT HANGAR
49	735.88	KALITTA CHARTERS
50	738.35	KALITTA CHARTERS MAINTENANCE
51	752.36	KALITTA SIMULATOR
52	726.69	KALITTA CHARTERS
53	721.73	KALITTA SIM BLDG GENERATOR
54	751.34	KALITTA AIR
55	732.27	KALITTA ENGINE TEST CELL
56	733.19	FIRE HOUSE
57	734.65	AIRFIELD ELECTRICAL VAULT
61	727.94	LAND FILL
62	723.50	WCAA STORAGE
63	726.89	WCAA FUEL FARM FUELING ISLAND
64	720.66	WCAA FUEL FARM
65	720.56	GLIDE SLOPE SHACK
67	733.84	AVFLIGHT FLEET MAINT STORAGE
68	731.72	UNKNOWN
69	727.88	WCAA DEFUNCT FUEL FARM OFFICE



LEGEND

- AIRPORT BOUNDARY
- NAVAID CRITICAL AREA
- RVR
- ROTATING BEACON
- ASOS
- PAPI-4
- WINDSOCK
- EXISTING AIRPORT REFERENCE POINT (ARP)
- EXISTING RUNWAY SAFETY AREA (RSA)
- EXISTING RUNWAY OBJECT FREE AREA (ROFA)
- EXISTING RUNWAY OBSTACLE FREE ZONE (OFZ)
- EXISTING RUNWAY PROTECTION ZONE (RPZ)
- EXISTING TAXIWAY OBJECT FREE AREA (TOFA)
- EXISTING TAXIWAY SAFETY AREA (TSA)
- EXISTING GROUND CONTOUR
- EXISTING EDGE OF WATER
- EXISTING TREE LINE
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- EXISTING BUILDING
- EXISTING RUNWAY
- EXISTING TAXIWAY
- EXISTING SHOULDER
- EXISTING APRON
- SURVEY MONUMENT
- EXISTING AVIGATION EASEMENT

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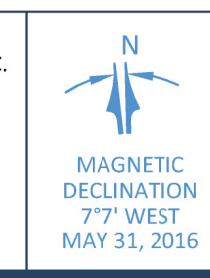


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DATA SOURCES:
1. AIRPORT PROPERTY BOUNDARY AND EASEMENTS OBTAINED FROM WILLOW RUN AIRPORT DRAFT EXHIBIT A, DATED 11-30-2016.

NOTES:
1. SURVEY CONDUCTED ON 10/23/2014 BY GEOPRO CONSULTANTS, LLC.
2. SURVEY PERFORMED USING MICHIGAN STATE PLANE, SOUTH ZONE, INTERNATIONAL FEET, NAVD 88 (GEOID 2012A), AND NAD 83 (2011).

By	Date	Revisions



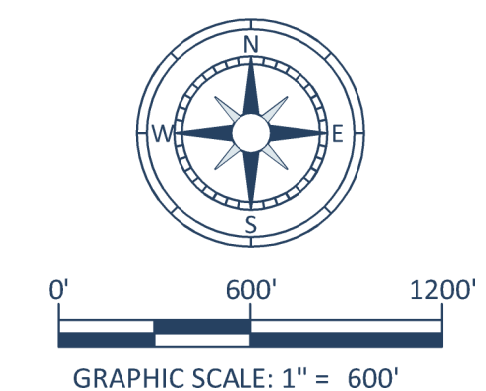
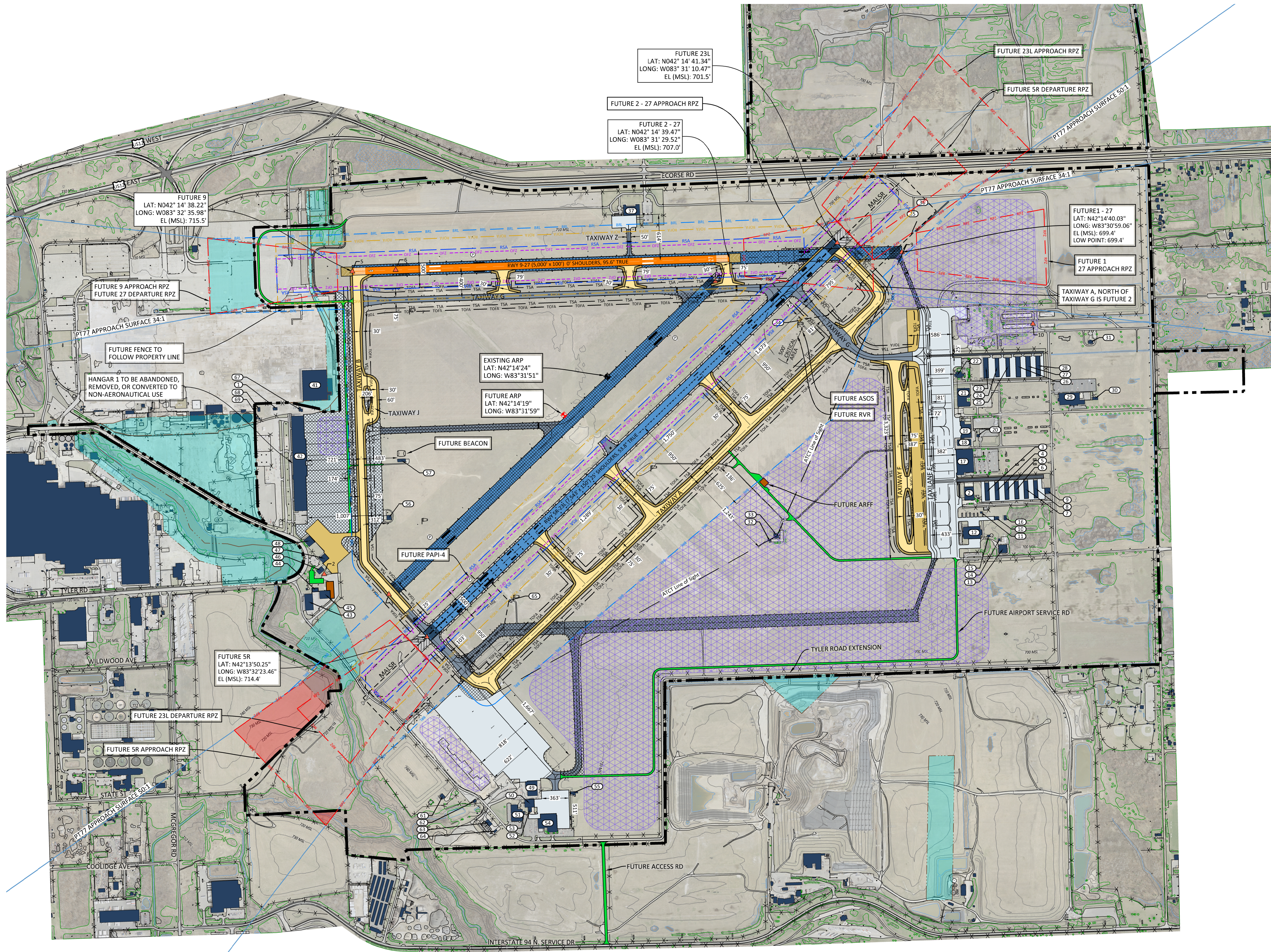
WILLOW RUN AIRPORT

EXISTING AIRPORT LAYOUT PLAN DRAWING

4 of 19

Drawn By: JGH Date: 06-15-16
Approved By: MCJ Job No: 037-15-03

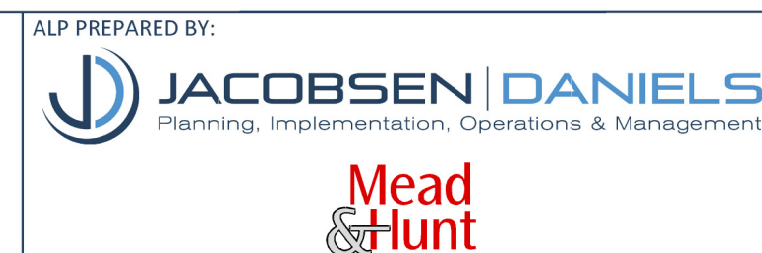
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LEGEND

AIRPORT BOUNDARY	
EXISTING GROUND CONTOUR	
EXISTING EDGE OF WATER	
EXISTING TREE LINE	
EXISTING FENCE	
EXISTING BUILDING	
EXISTING RUNWAY	
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FUTURE PRECISION OBSTACLE FREE ZONE (POFZ)	
FUTURE FENCE	
FUTURE SERVICE ROADWAY/PARKING	
FUTURE AIRPORT STRUCTURE	
FUTURE RUNWAY PAVEMENT & MARKINGS	
FUTURE TAXIWAY PAVEMENT	
FUTURE APRON PAVEMENT	
FUTURE SHOULDER PAVEMENT	
FUTURE DEMOLITION	
FUTURE AIRPORT DEVELOPMENT AREA	
FUTURE AIRPORT REFERENCE POINT (ARP)	
SURVEY MONUMENT	
EXISTING AVIGATION EASEMENT	
FUTURE AVIGATION EASEMENT	

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DATA SOURCES:
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NOTES:
1. SEE EXISTING AIRPORT LAYOUT DRAWING FOR THE EXISTING BUILDING TABLE AND THE SURVEY CONTROL POINTS TABLE.



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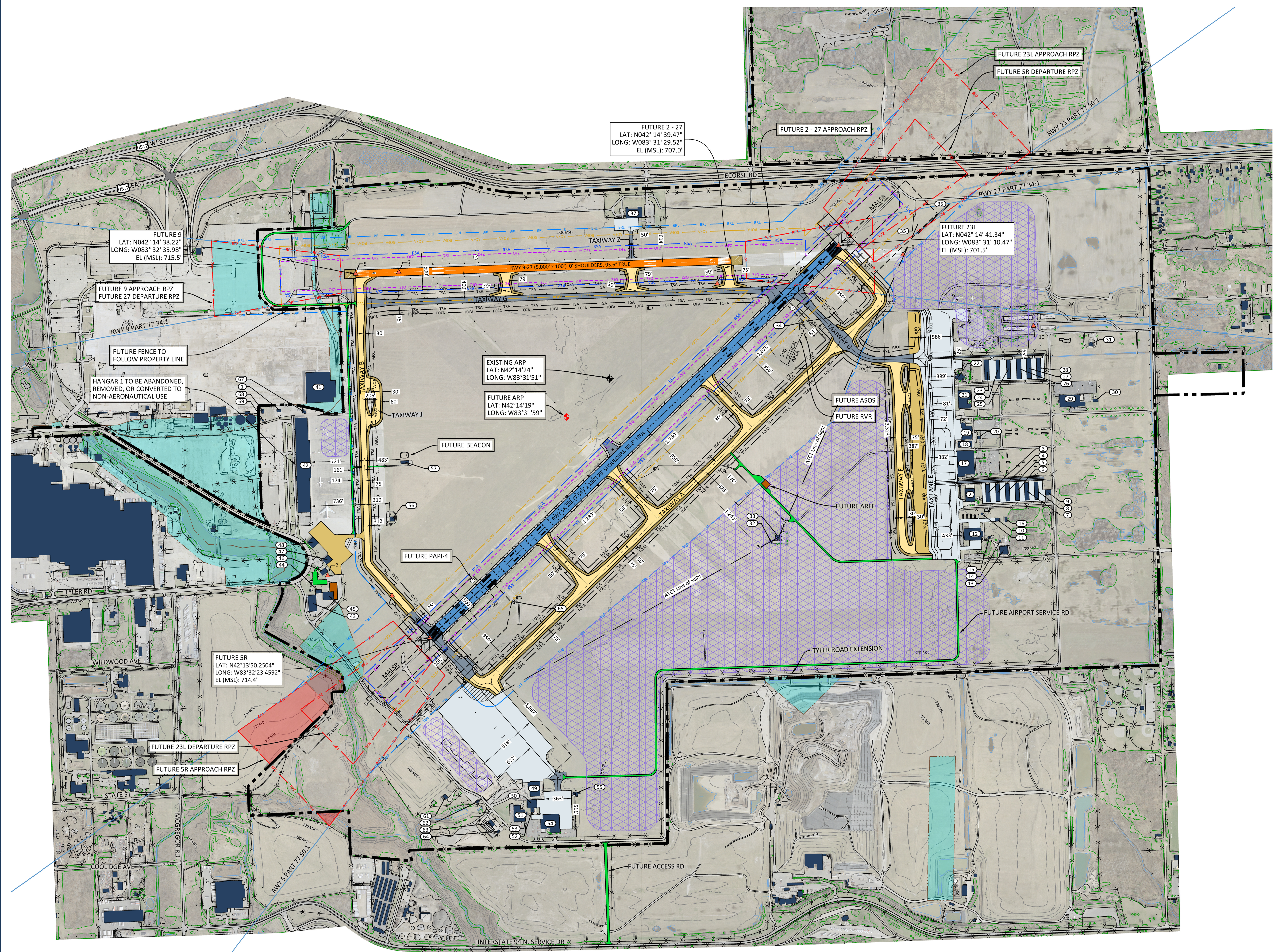
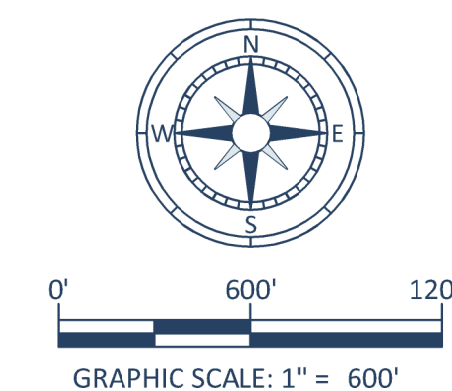
WILLOW RUN AIRPORT

FUTURE AIRPORT LAYOUT PLAN DRAWING

Drawn By: JGH Date: 06-15-16
 Approved By: MCJ Job No: 037-15-03

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NOTES:
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By	Date	Revisions

WILLOW RUN AIRPORT

ULTIMATE FUTURE AIRPORT LAYOUT DRAWING

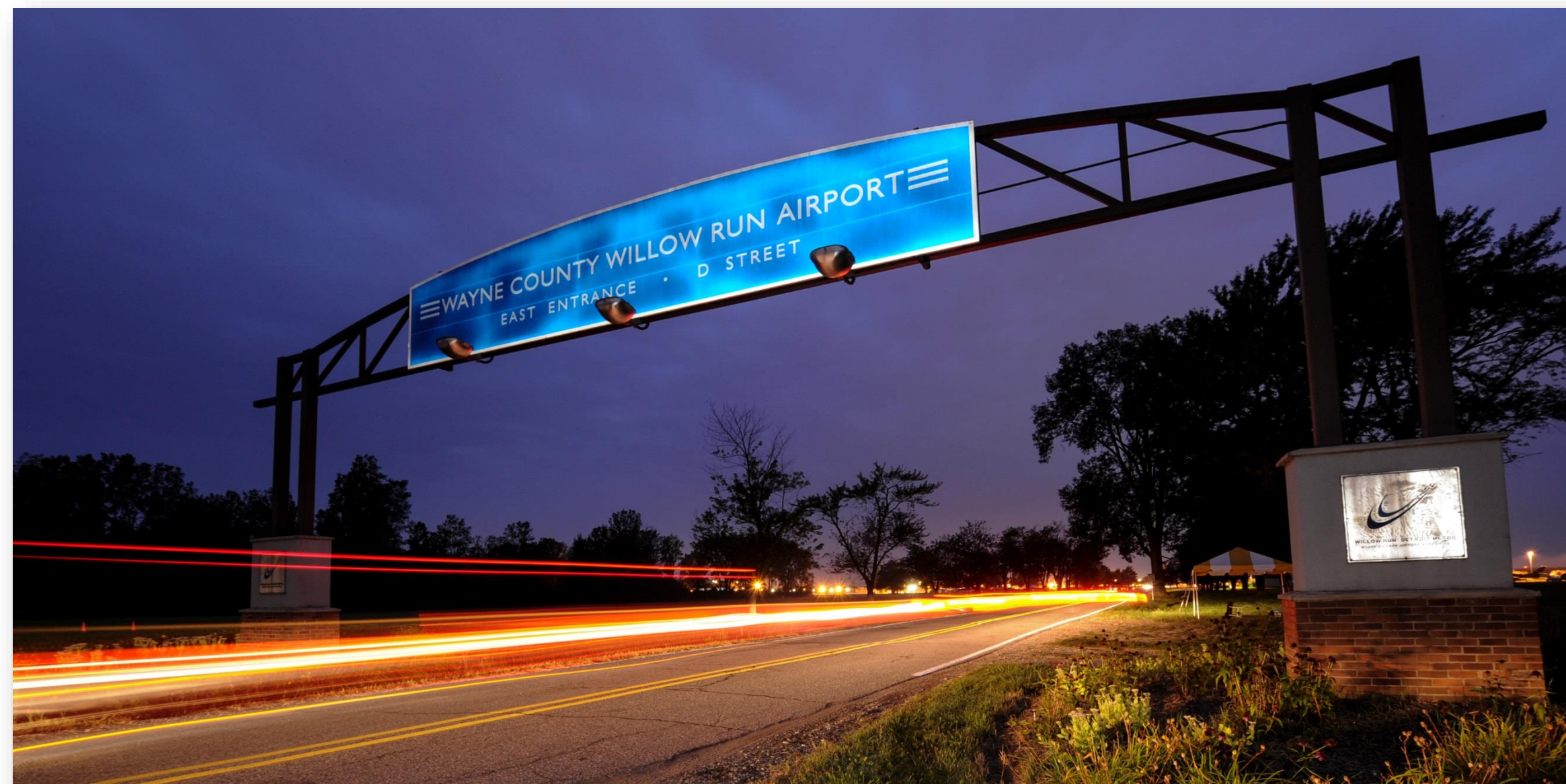
Drawn By: SRG Date: 3-31-17
 Approved By: MCJ Job No: 037-15-03

Station

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Next Project Steps

- **Complete Airport Layout Plan**
- **Complete Exhibit A Property Map**
- **WCAA Preparation of Annual Capital Improvement Plan**
- **Publish Airport Master Plan**



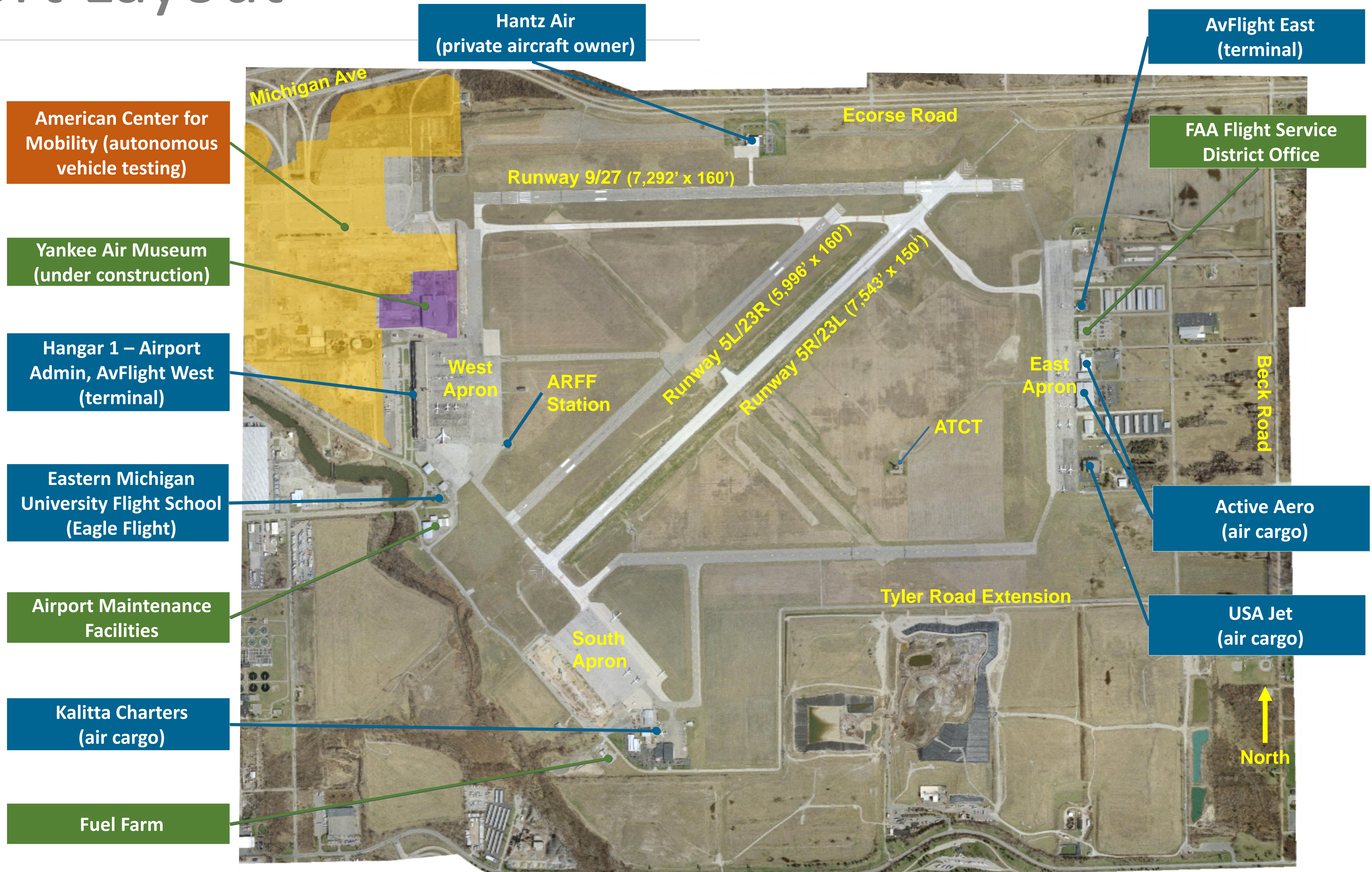
Comments?

Please share with us your thoughts,
comments, ideas, or other suggestions
about the Willow Run Airport

Airport Layout

Key

- Airfield
- Landside
- Other



American Center for Mobility (autonomous vehicle testing)

Yankee Air Museum (under construction)

Hangar 1 – Airport Admin, AvFlight West (terminal)

Eastern Michigan University Flight School (Eagle Flight)

Airport Maintenance Facilities

Kalitta Charters (air cargo)

Fuel Farm

Hantz Air (private aircraft owner)

AvFlight East (terminal)

FAA Flight Service District Office

Active Aero (air cargo)

USA Jet (air cargo)