THE OHIO STATE UNIVERSITY

AIRPORT

TECHNICAL ADVISORY COMMITTEE MEETING 3 – SEPTEMBER 10, 2018

Airport Master Plan

WELCOME & INTRODUCTIONS

Kimberly Moss, Doug Hammon (The Ohio State University)

Member Introduction

- Name
- Organization

MEETING PURPOSE, FORMAT AND DISCUSSION GUIDELINES

Marie Keister (Engage Public Affairs)

Meeting Purpose/Agenda

- Public/stakeholder input update
- Progress/schedule update
- Facility requirements & alternatives
- Runway alternatives
- Taxiway alternatives
- Terminal area alternatives
- Next steps

PUBLIC AND STAKEHOLDER INPUT UPDATE

Marie Keister (Engage Public Affairs)

E-News Update

- Alerted stakeholders that the public meeting will be rescheduled to fall
- Invited recipients to review available Master Plan chapters and ask questions or provide comments

Worthington Meeting

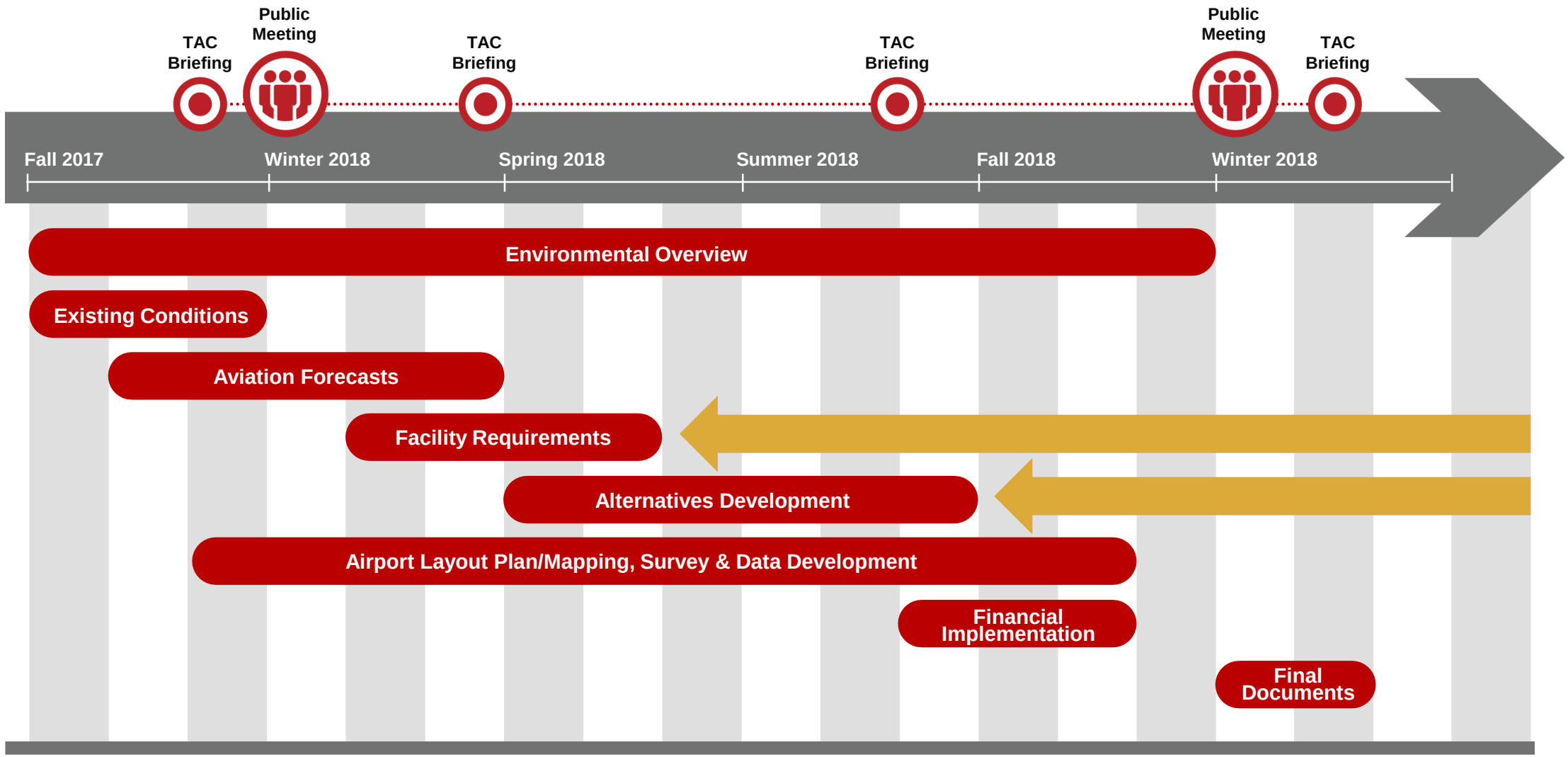
- Project team met with City of Worthington council leadership in July to explain the master plan and answer questions

Worthington Comments

- Airport a wonderful educational asset to the community
- Worthington residents tend to be more supportive of investments related to the academic mission of the airport
- Forecasts seem to favor economic development
- Optimistic growth forecasts could encourage airport to overbuild facilities, which could increase demand
- Keep resident concerns in mind:
  - Increased demand and extended runways may increase noise
  - Increased airport demand could increase traffic on surrounding roadways
  - Extending current airport runway(s)

PROGRESS/SCHEDULE UPDATE

Maria Muia (Woolpert)



TAC = Technical Advisory Committee

FACILITY REQUIREMENTS & ALTERNATIVES

Maria Muia, Woolpert

Facility Requirements and Alternatives

1. Facility Requirements – are the facilities in place to meet the needs of the users?

2. If not, what are the alternatives to meeting those needs

Facility Requirements and Alternatives

- **Ensure safety and security is the first priority, followed by meeting customer needs with quality service.**
- Focus on the needs of all general aviation with an emphasis on students.
- Promote compatible land use on the airport.
- Co-locate like users/services where possible.
- Plan landside development in an efficient, flexible and cost-effective manner.
- Preserve investment in existing facilities, property contiguous with taxiways and aprons for aviation purposes with airside needs.
- Maintain Class IV, Part 139 Standards and all FAA regulations and design standards.
- Be mindful of airport impact on neighborhoods.

Winds

Wind Data Table				
RUNWAY	10.5-KNOTS	13-KNOTS	16-KNOTS	20-KNOTS
All-Weather Wind Data Observations				
Runway 9-27	90.45 %	94.74 %	98.68 %	99.74 %
Runway 5-23	88.56 %	94.00 %	98.26 %	99.59 %
Combined	99.78 %	97.60 %	99.49 %	99.93 %
Instrument (IFR) Wind Data Observations				
Runway 9-27	91.45 %	95.50 %	99.00 %	99.84 %
Runway 5-23	90.95 %	95.44 %	98.86 %	99.78 %
Combined	95.88 %	98.45 %	99.74 %	99.98 %
Note: Crosswind component computed using runway true bearing (87.4 & 49.1)				
Source: FAA Airport GIS – "Station 724288 Ohio State University Arpt Annual Period Record 2008 – 2017"				

FACILITY REQUIREMENTS

Critical Design Aircraft

Primary runway (existing Runway 9R-27L) C/D-II (e.g. Gulfstream 450)

Parallel runway (existing Runway 9L-27R) A-II (e.g. Pilatus PC-12)

Crosswind runway (Runway 5-23) B-I (small) (e.g. Cessna Citation CJ1)

FACILITY REQUIREMENTS

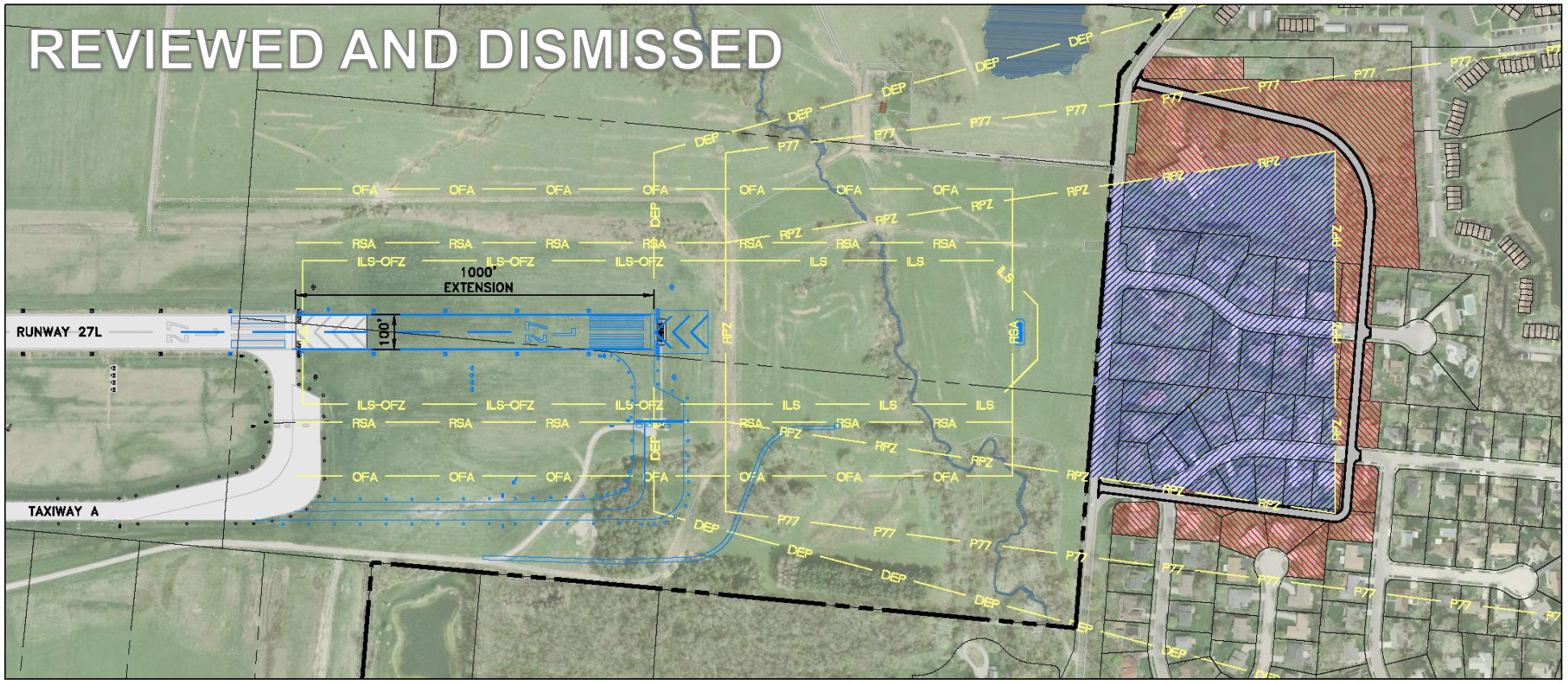
Runways

Runway Length Requirements		
Airport Elevation	906 ft. MSL	
Mean daily maximum temperature of the hottest month	84 F	
Maximum difference in runway centerline elevation (gradient)	12 ft.	
Small aircraft		
100% of small aircraft (12,500 lbs. or less & less than 10 passengers)	4,000 ft.	
100% of small aircraft (12,500 lbs. or less 10 or more passengers)	4,250 ft.	
Large aircraft of 60,000 pounds or less	Dry	Wet
75% of these large aircraft at 60% useful load	4,820 ft.	5,405 ft.
75% of these large aircraft at 90% useful load	6,570 ft.	7,000 ft.
100% of these large aircraft at 60% useful load	5,620 ft.	5,620 ft.
100% of these large aircraft at 90% useful load	8,320 ft.	8,320 ft.

Source: AC 150/5325-4B, Runway Length Requirements for Airport Design

Runways

Alt. 1 – Extend 27L 1000 feet



LEGEND: LINETYPE

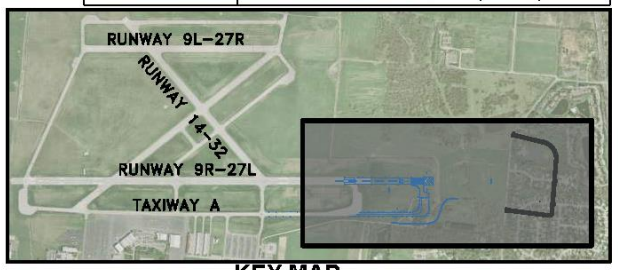
EXISTING	FACILITY
	AIRPORT PROPERTY LINE
	PARCEL LINE
	RUNWAY/TAXIWAY CENTERLINE
	EDGE OF PAVEMENT (AIRSIDE)
	EDGE OF PAVEMENT (PUBLIC)

LEGEND: LINETYPE

PROPOSED	FACILITY
RPZ	RUNWAY PROTECTION ZONE
P77	CFR PART 77 SURFACES
DEP	THRESHOLD SITING DEPARTURE SURFACES
RSA	RUNWAY SAFETY AREA
OFA	RUNWAY OBJECT FREE AREA
ILS	ILS CRITICAL AREA
ILS-OFZ	ILS CRITICAL AREA / OBSTACLE FREE ZONE
	EDGE OF PAVEMENT (AIRSIDE)

LEGEND: SYMBOLS

	FACILITY
	AIRFIELD PAVEMENT
	RELOCATED ROAD (PUBLIC)
	ROAD RELOCATION
	RPZ PROTECTION
	RUNWAY EDGE LIGHT (EX./PROP.)
	RUNWAY THRESHOLD LIGHT (EX./PROP.)
	REIL
	TAXIWAY EDGE LIGHT (EX./PROP.)
	PAPI/VASI
	GUIDANCE SIGN (EX./PROP.)
	WINDCONE



KEY MAP

N

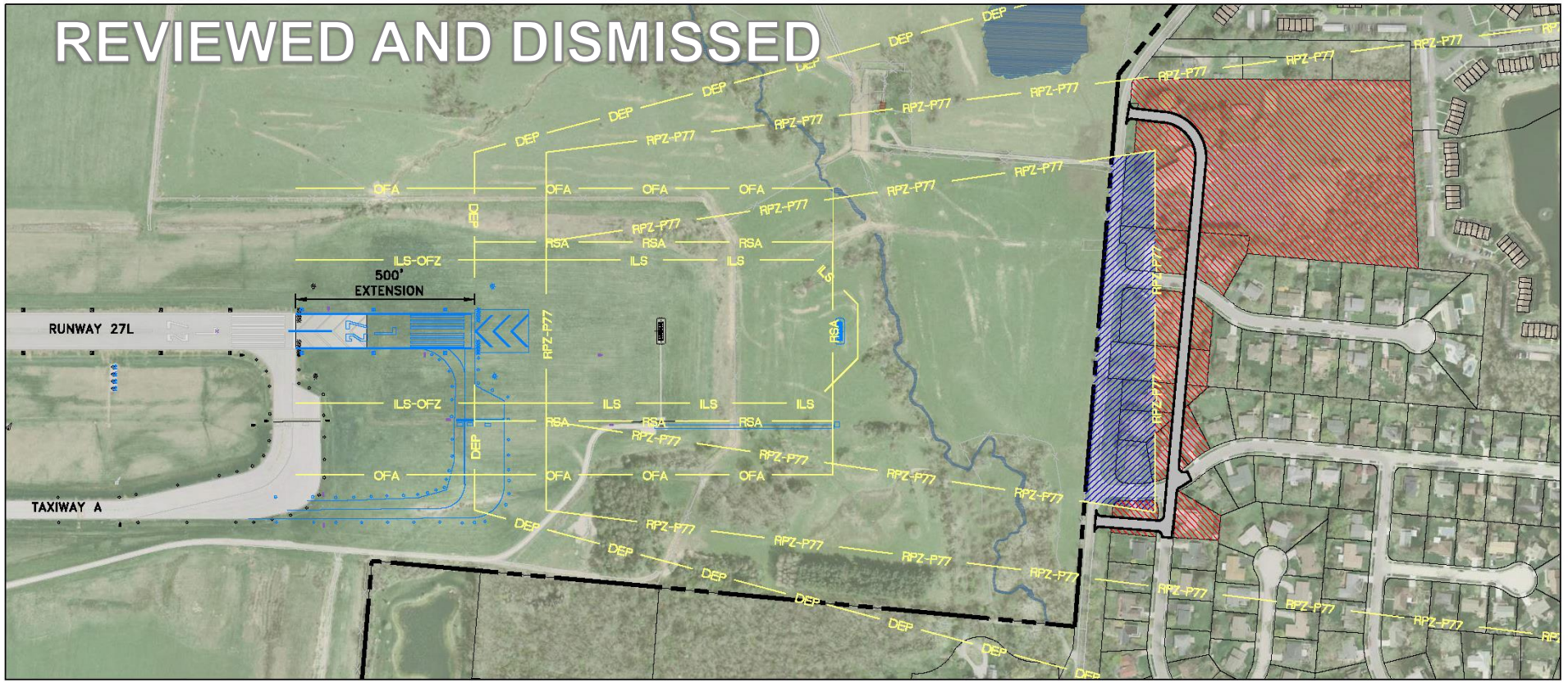
MAGNETIC DECLINATION 2018 = 7° 5' W CHANGING BY 0° 3' W PER YEAR

SOURCE DOCUMENT IS NATIONAL GEOPHYSICAL DATA CENTER – NOAA SATELLITE AND INFORMATION CENTER.

WOOLPERT
ARCHITECTURE | ENGINEERING | GEOSPATIAL
333 North Alabama St.
Suite 200
Indianapolis, IN 46204
317.299.7500
FAX: 317.291.5805

Runways

Alt. 2 – Extend 9R 500 ft. and 27L 500 ft.



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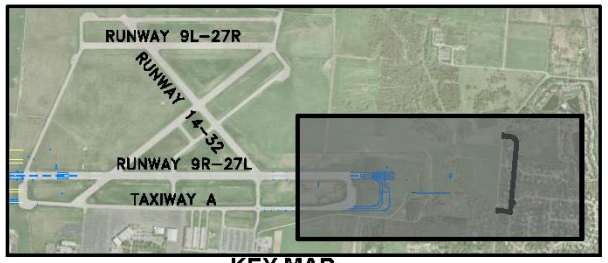

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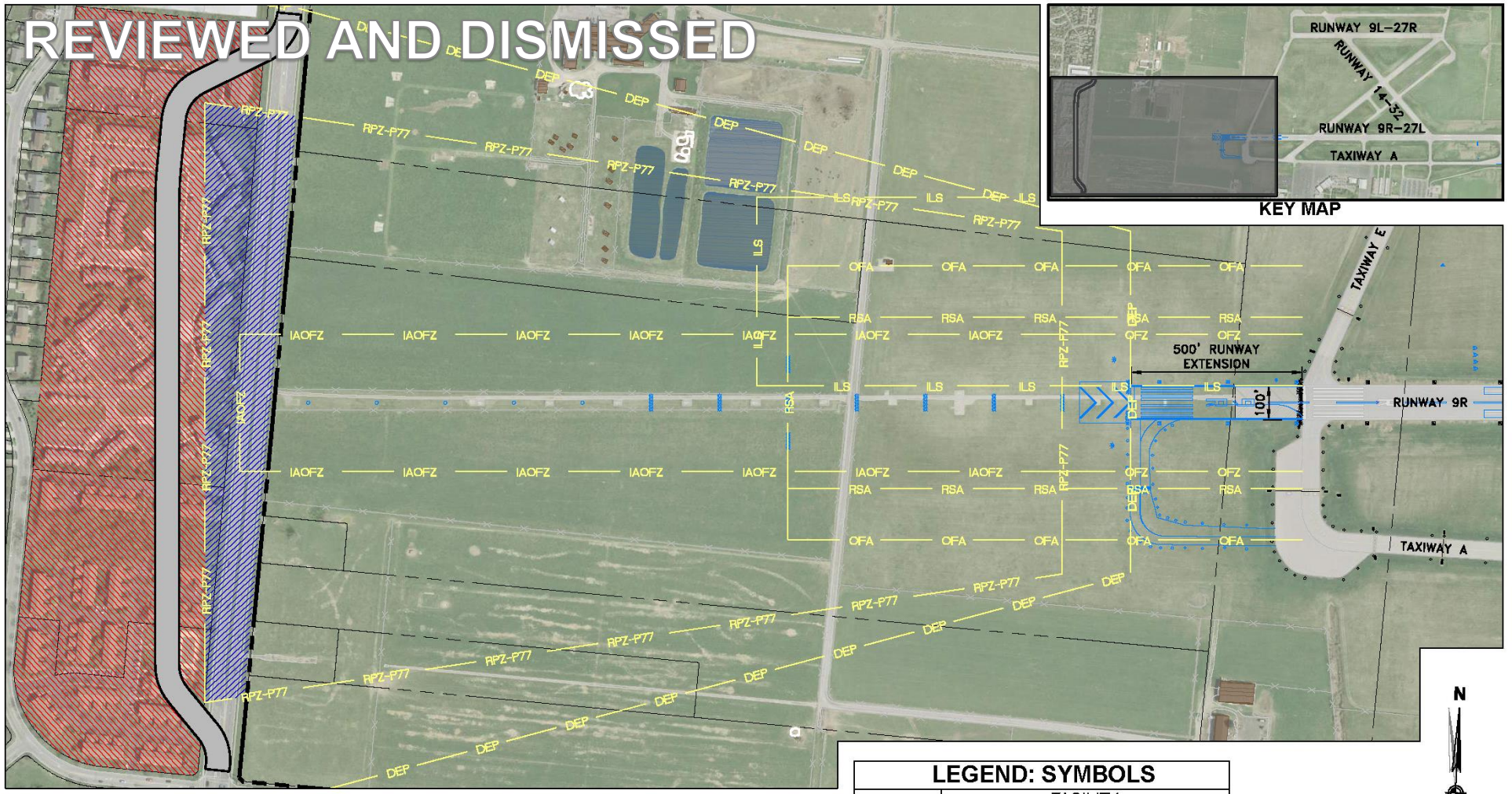

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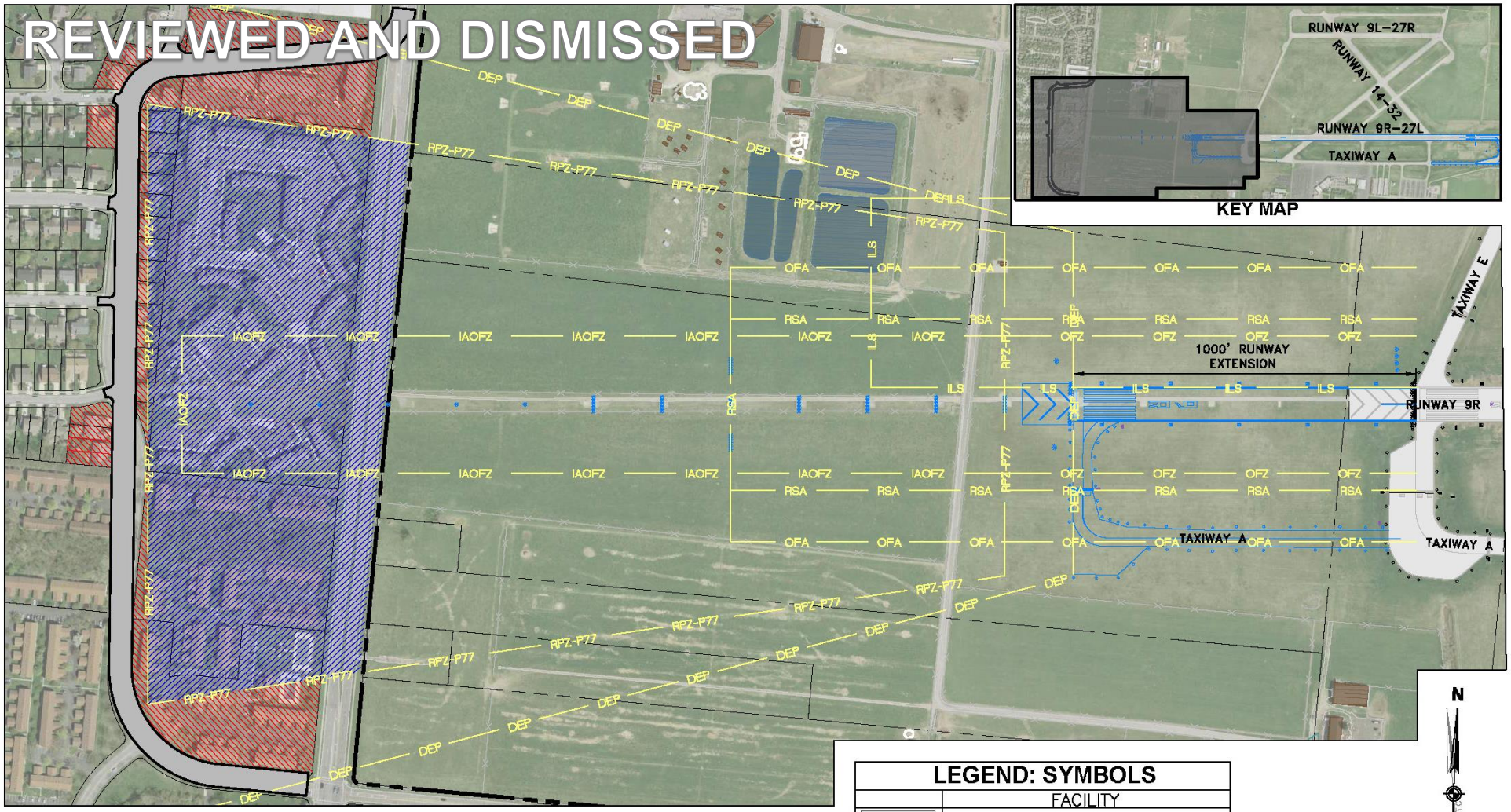
Runways

Alt.3 – Extend 9R 1000 feet



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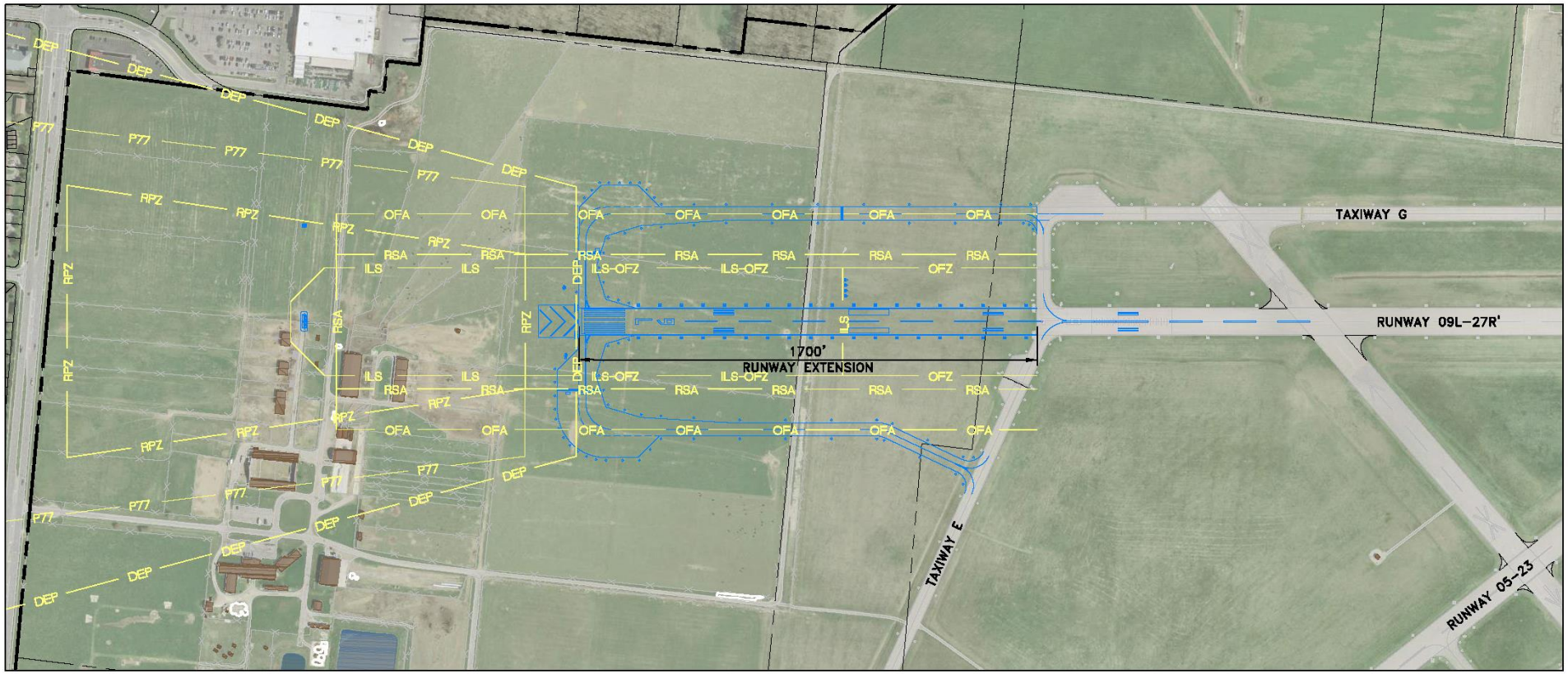
Runways

Alt.4 – Extend 9L 1700 ft. and 27R 1306 ft.



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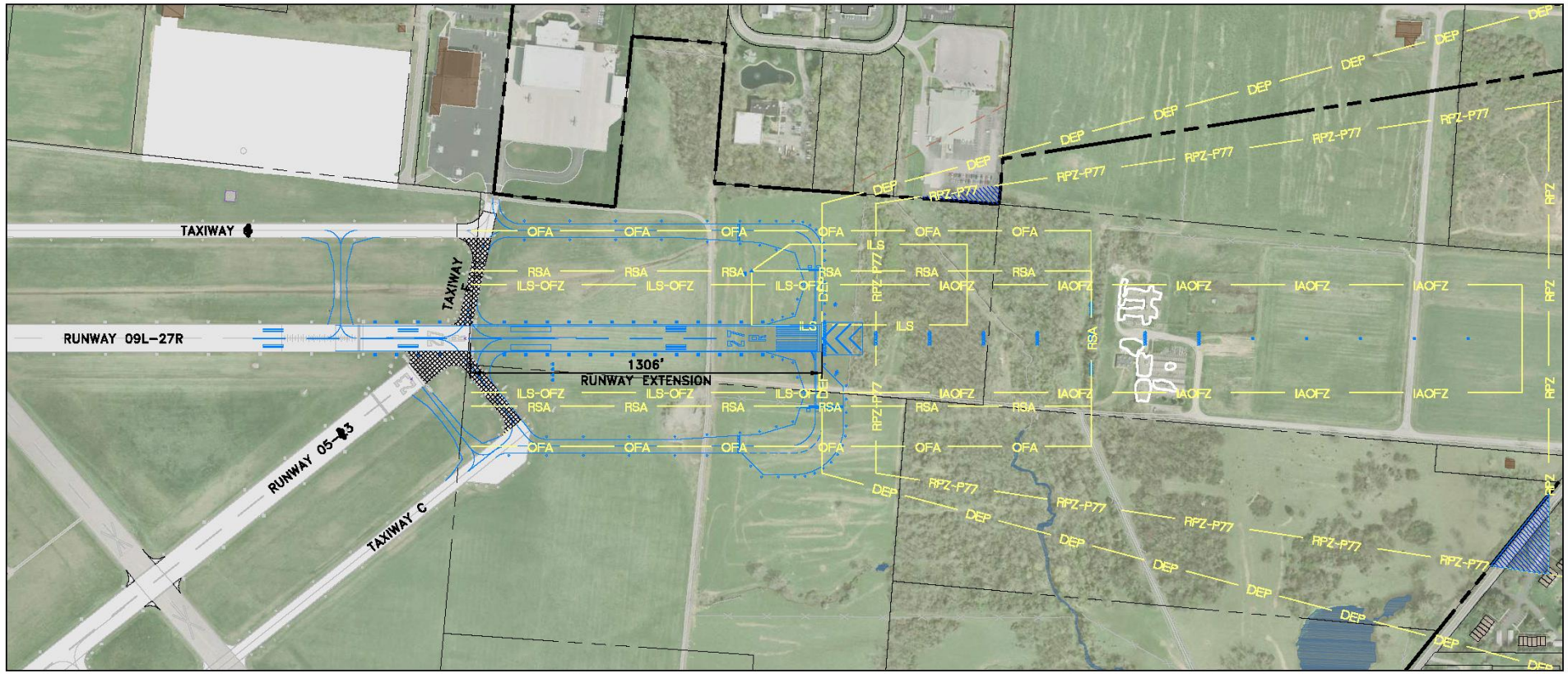

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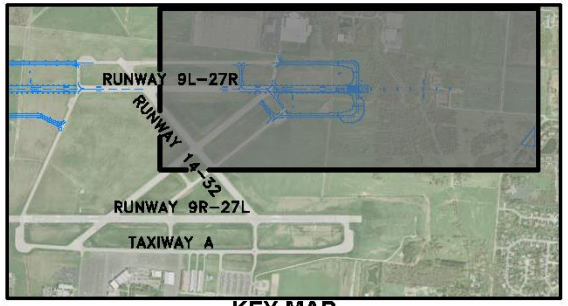

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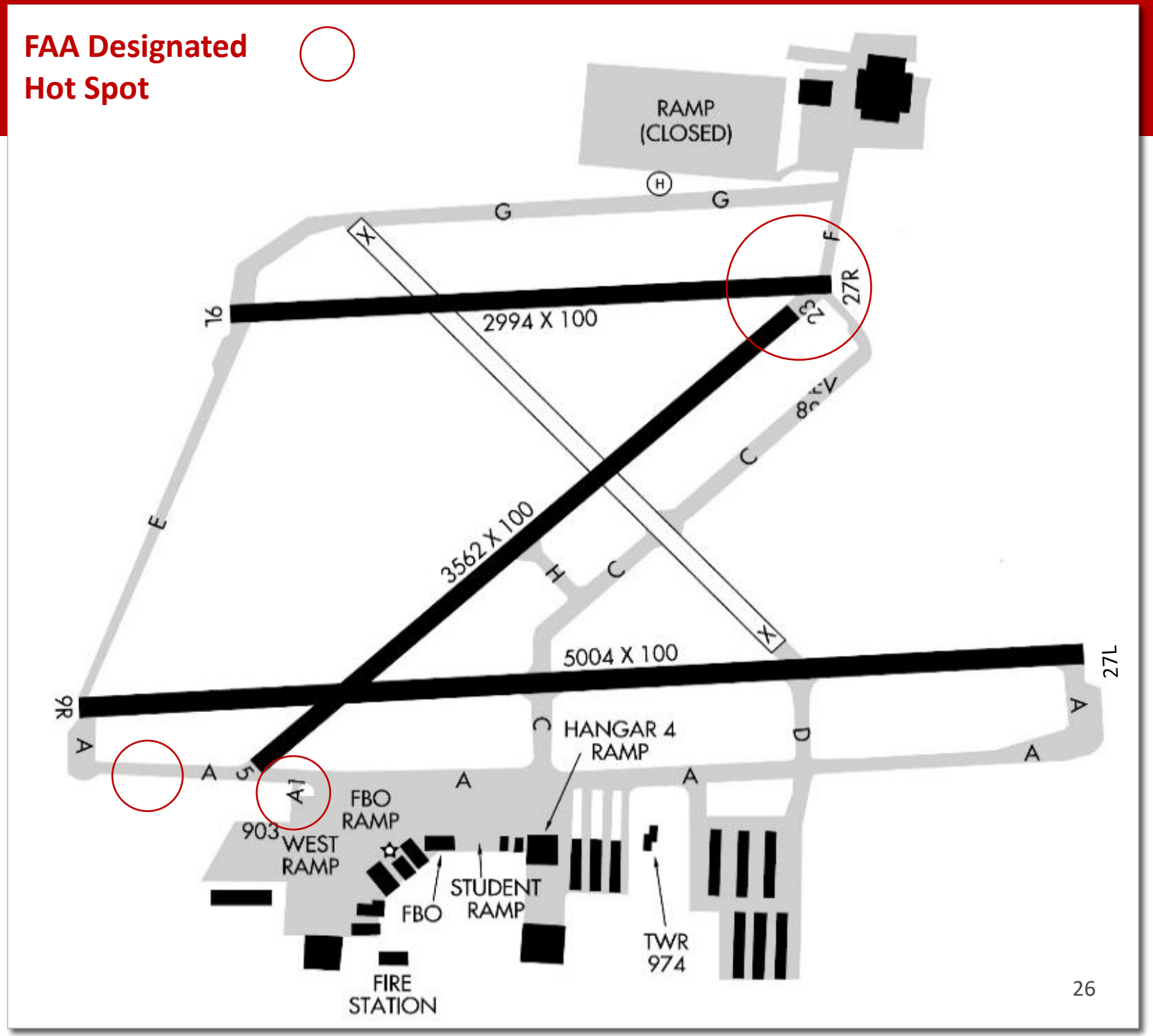
FACILITY REQUIREMENTS

Comments?

Runways

Runway ID	Highest PCI	Lowest PCI	Action Plan
9R-27L (Primary)	99	77	Preventative maintenance is appropriate for most of the runway.
9L-27R (Secondary)	99	3	Most of this runway was rehabilitated in 2017; so routine preventative maintenance is appropriate for most of it. The section that was not rehabilitated (approximately 500 feet on the 9L end) should be reconstructed as soon as funds can be programmed.
5-23 (Crosswind)	77	74	Preventative maintenance needed

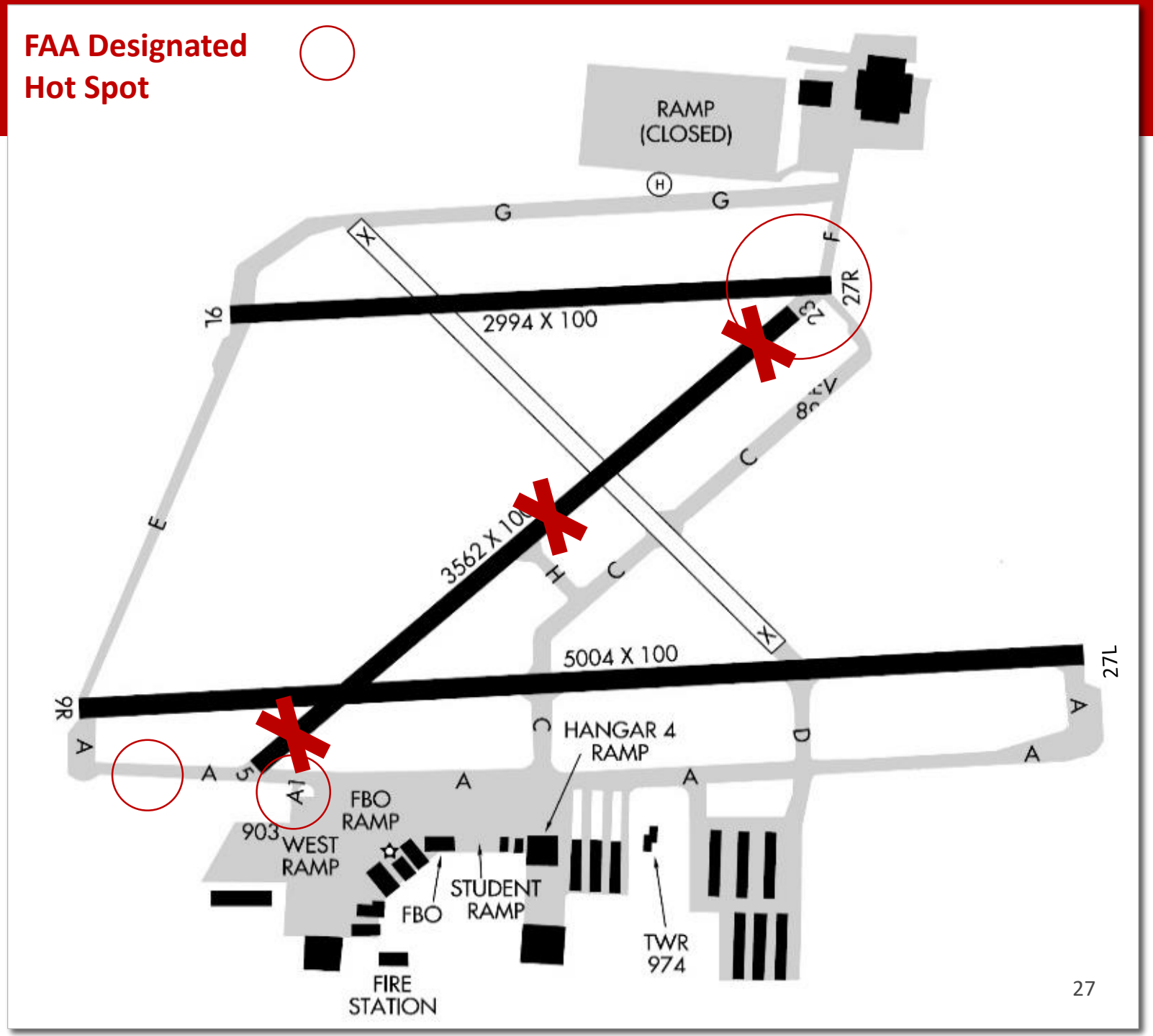
Taxiways


FAA Designated
Hot Spot
RAMP
(CLOSED)
G
G
X
F
27R
16
2994 X 100
23
C
E
3562 X 100
H
C
X
5004 X 100
27L
9R
A
A
5
A1
C
HANGAR 4
RAMP
D
A
A
A
FBO
RAMP
903
WEST
RAMP
FBO
STUDENT
RAMP
TWR
974
FIRE
STATION

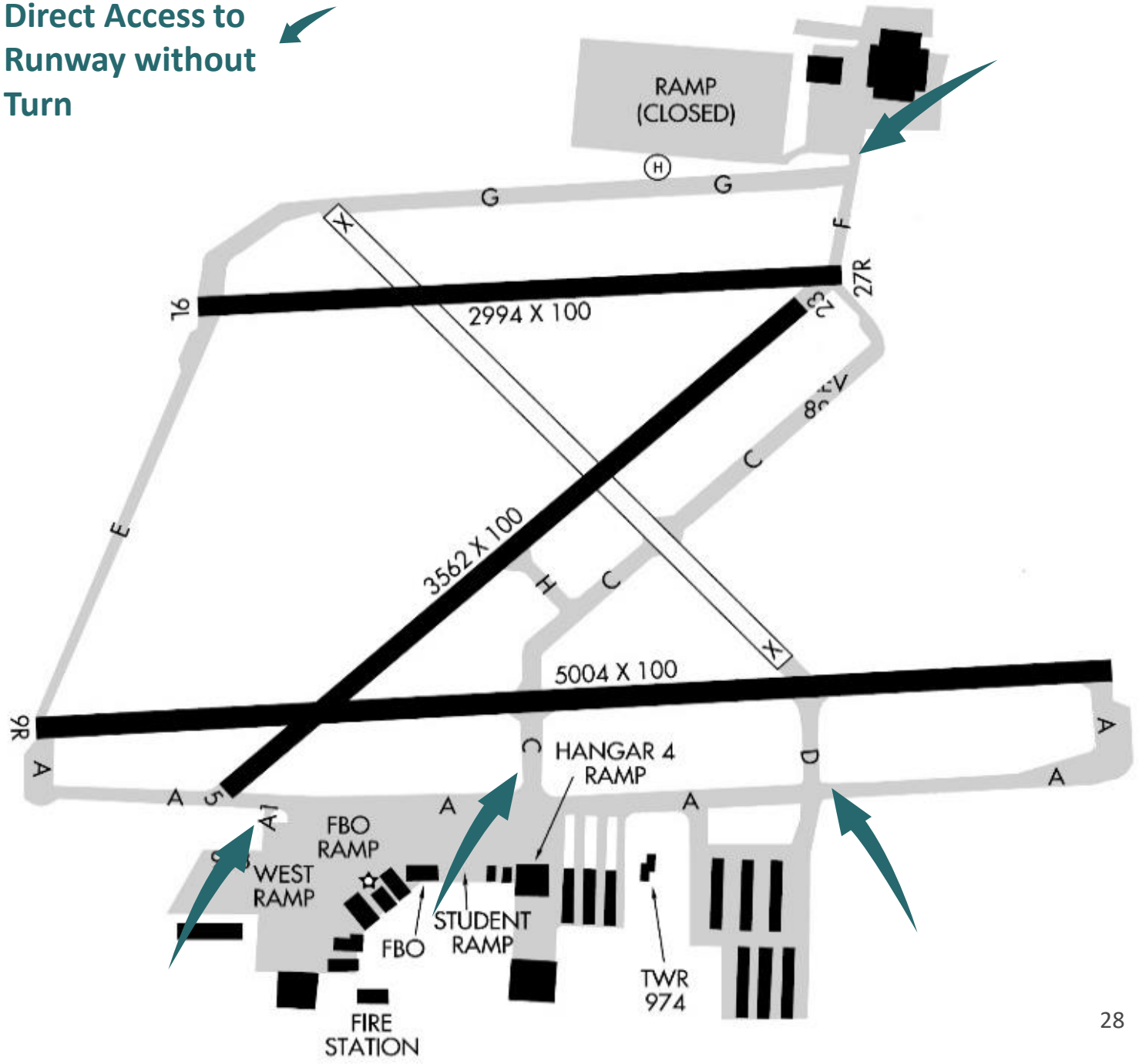
Taxiways

Runway	Use
5	1%
09R	24%
27R	14%
09L	7%
27L	50%
23	3%

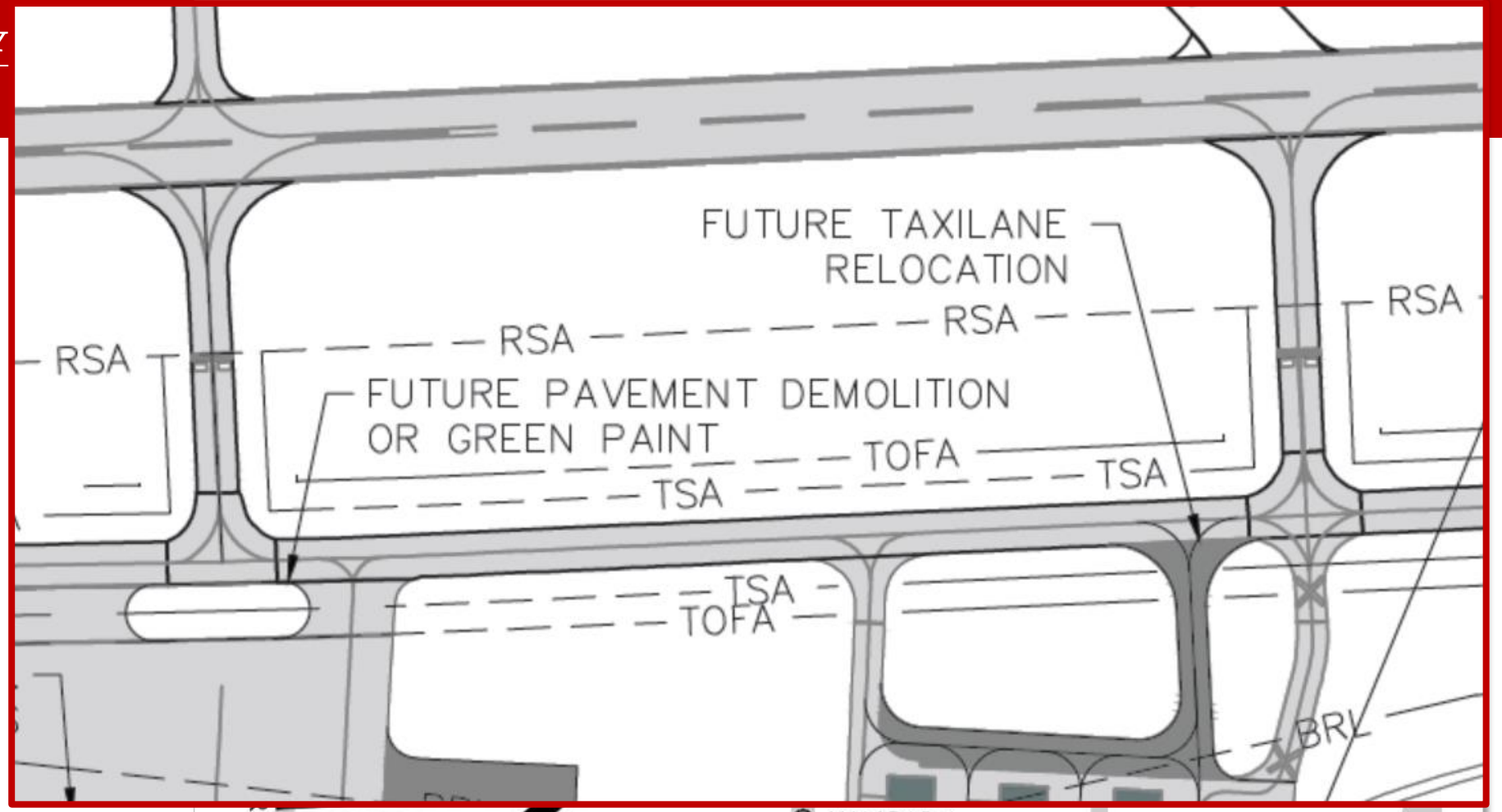
Source: CHM radar sample of 40% of operations



Taxiways

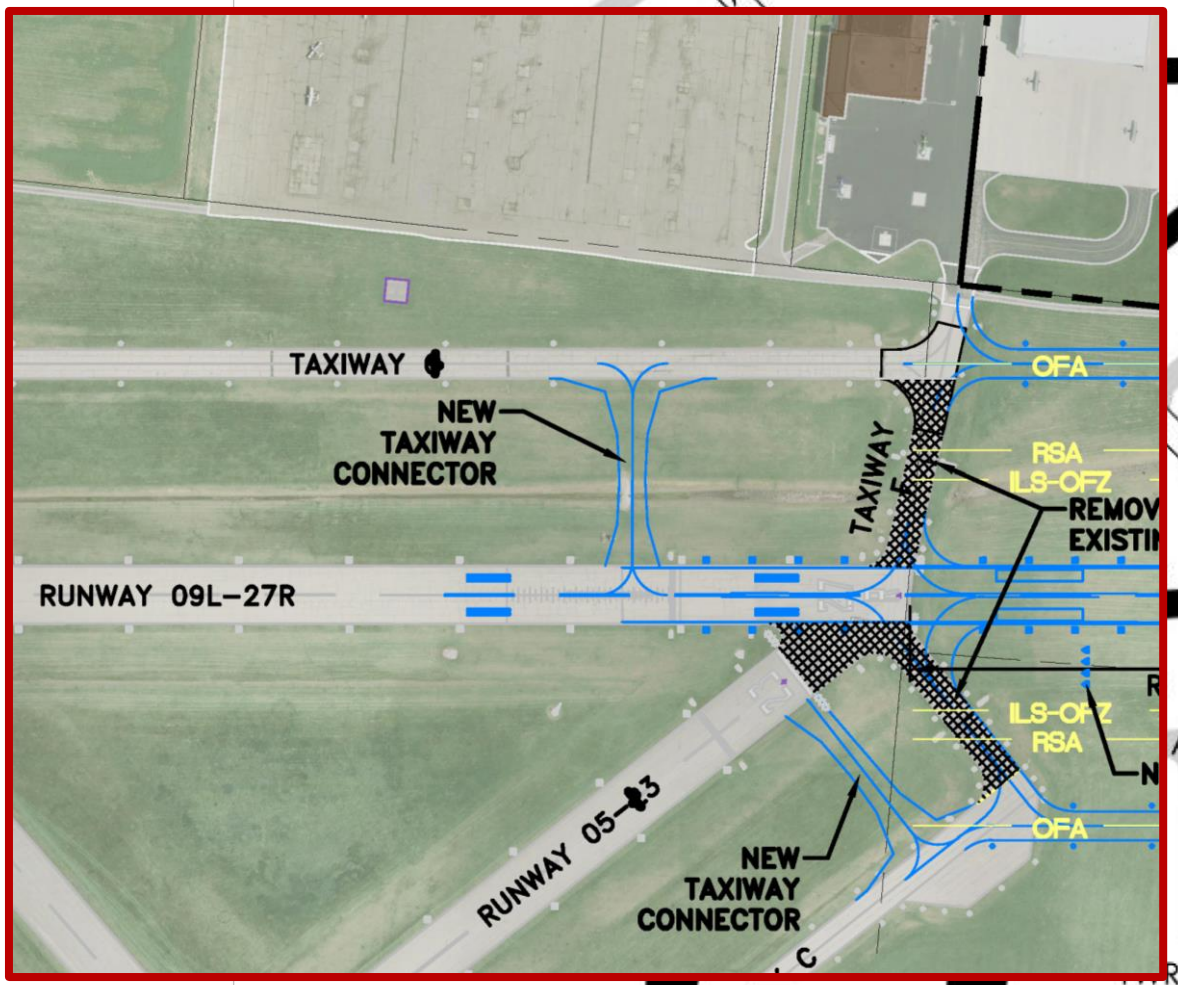

Direct Access to Runway without Turn
RAMP (CLOSED)
G
G
F
X
16
2994 X 100
27R
23
C
E
3562 X 100
H
C
X
5004 X 100
9R
A
A
A
A
A
C
HANGAR 4 RAMP
D
A1
FBO RAMP
WEST RAMP
FBO
STUDENT RAMP
TWR 974
FIRE STATION

Taxiways


FUTURE TAXILANE
RELOCATION
RSA
RSA
RSA
RSA
FUTURE PAVEMENT DEMOLITION
OR GREEN PAINT
TOFA
TSA
TSA
TSA
TOFA
BRL
HANGAR 4
RAMP
FBO
RAMP
WEST
RAMP
FBO
STUDENT
RAMP
TWR
974
FIRE
STATION

Taxiways

Direct Access to Runway without Turn



Taxiways

Taxiway ID	Highest PCI	Lowest PCI	Action Plan
A	90	68	Preventative maintenance
C	91	42	Reconstruct section with 42 PCI; preventative maintenance for the remainder
D	89	76	Preventative maintenance
E	31	0	Reconstruct
F	32	15	Reconstruct
G	0	0	Reconstruct
H	55	43	Overlay/Reconstruct

Airfield Marking and Lighting

Airfield Marking and Lighting
Upgrade to LED lighting where possible when useful life is surpassed.
Relocate airport beacon.
Relocate electrical vault to midfield.

Aircraft Hangars, Apron, and Auto Parking

Aircraft Hangars and Apron
4-9 additional T-hangars (55 spaces).
61,000 SF. of additional conventional hangar. (14 Jets/10 Rotor spaces)
30,000 SF. Flight Education hangar and associated apron. (25-30 spaces)
Academic Maintenance Hangar.
150 total tiedowns.

Access and Auto Parking		
Airport signage on I-270.		
Vehicle parking spaces for buildings without dedicated parking.	Terminal Area 323 spaces	Non-Terminal Area South Side 112 spaces

Security, Storage, Maintenance

Airport Fencing, Security and Lighting
10 to 12-foot chain link perimeter fence with 3 strands of barbed wire outriggers and 2-feet buried where does not exist.

Airport Storage, Maintenance and Electrical Vault Buildings
Heated storage for fuel trucks, maintenance equipment, and snow removal equipment.
New midfield electrical vault.

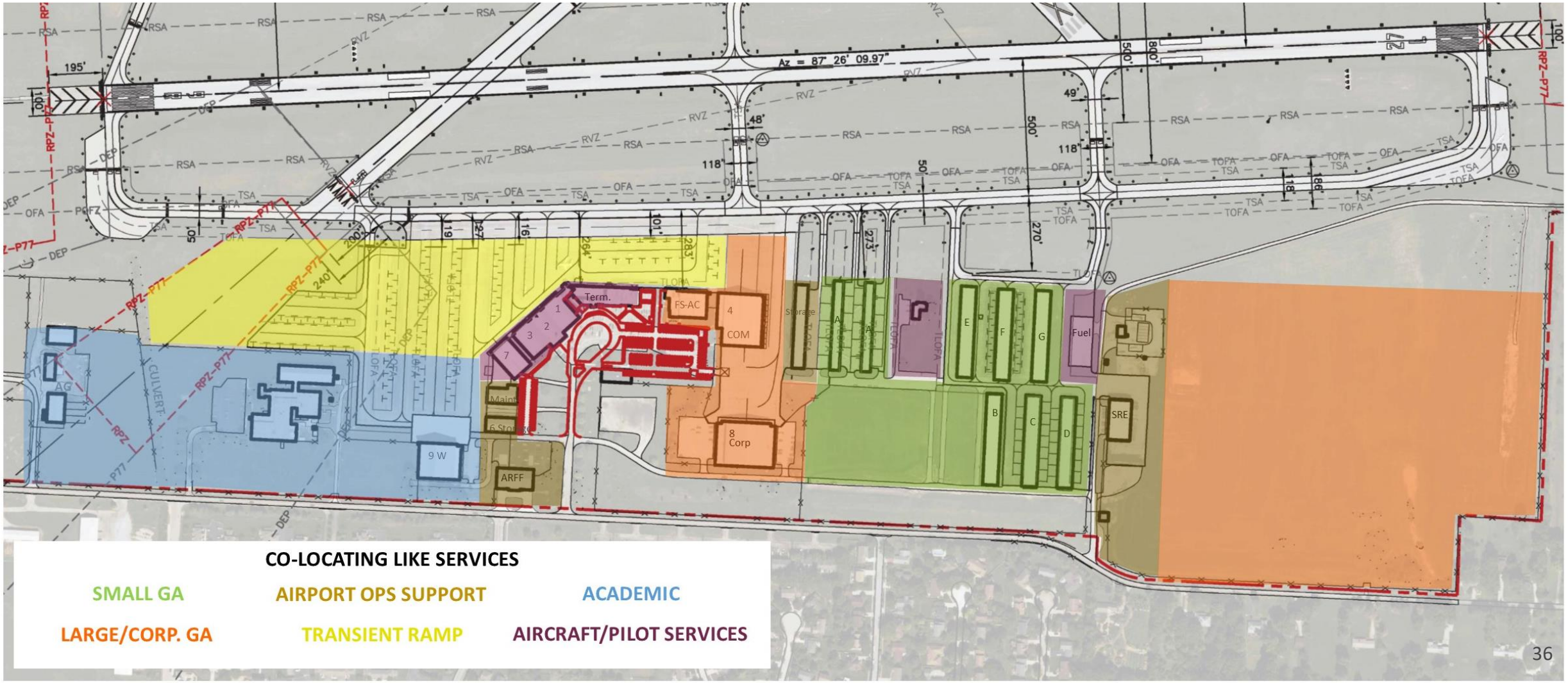
Equipment
Consider replacing equipment older than 10 years - KOSU has 30 pieces over 10 years old.

Services, etc.

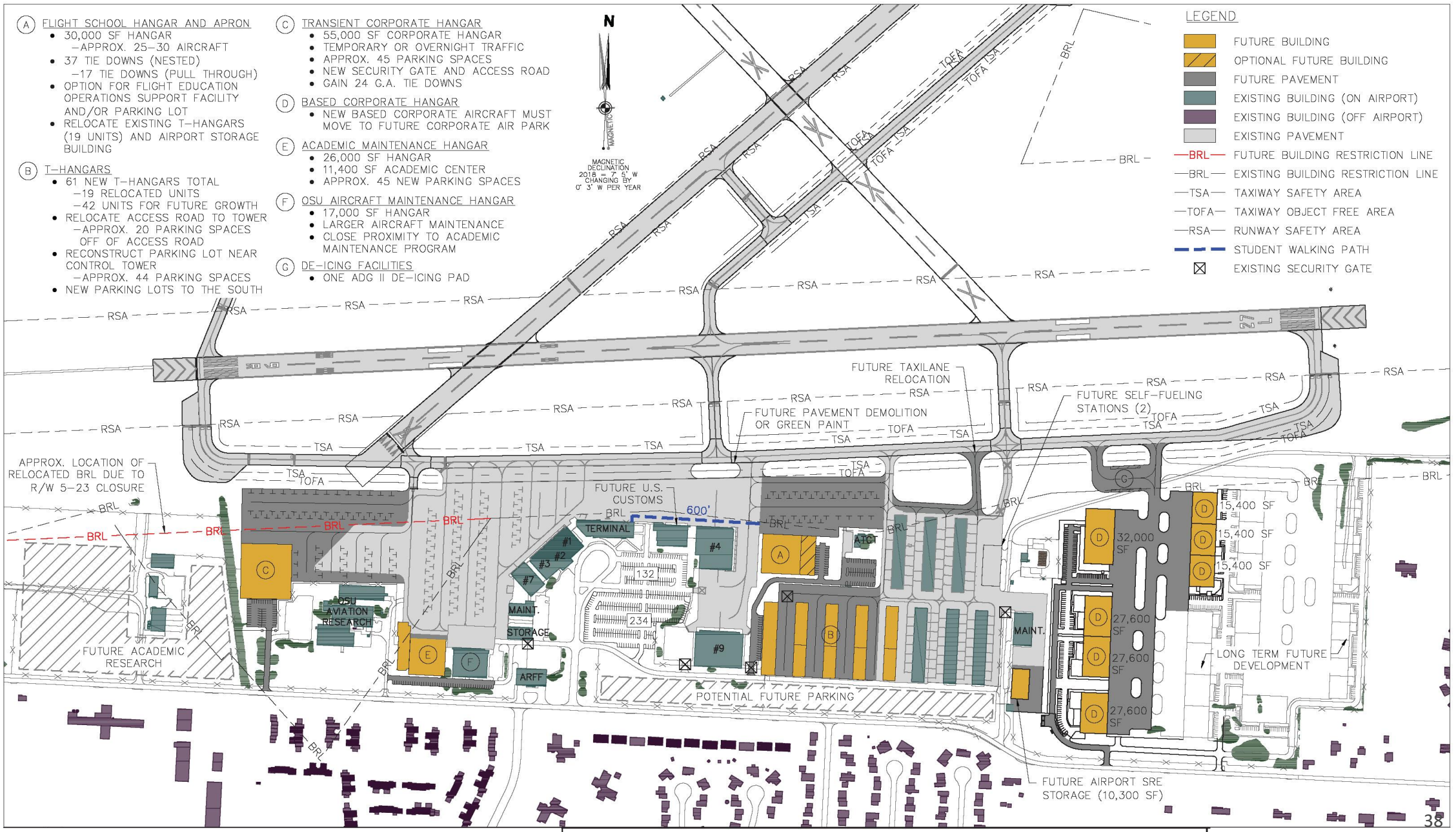
Services
Self-fueling with spill containment.
Dedicated deicing pad with runoff containment/mitigation.

Other
Compass calibration pad.
U.S. Customs Service.
Completed perimeter road within fence.
Aviation academic and research support center.

Terminal Area Land Uses

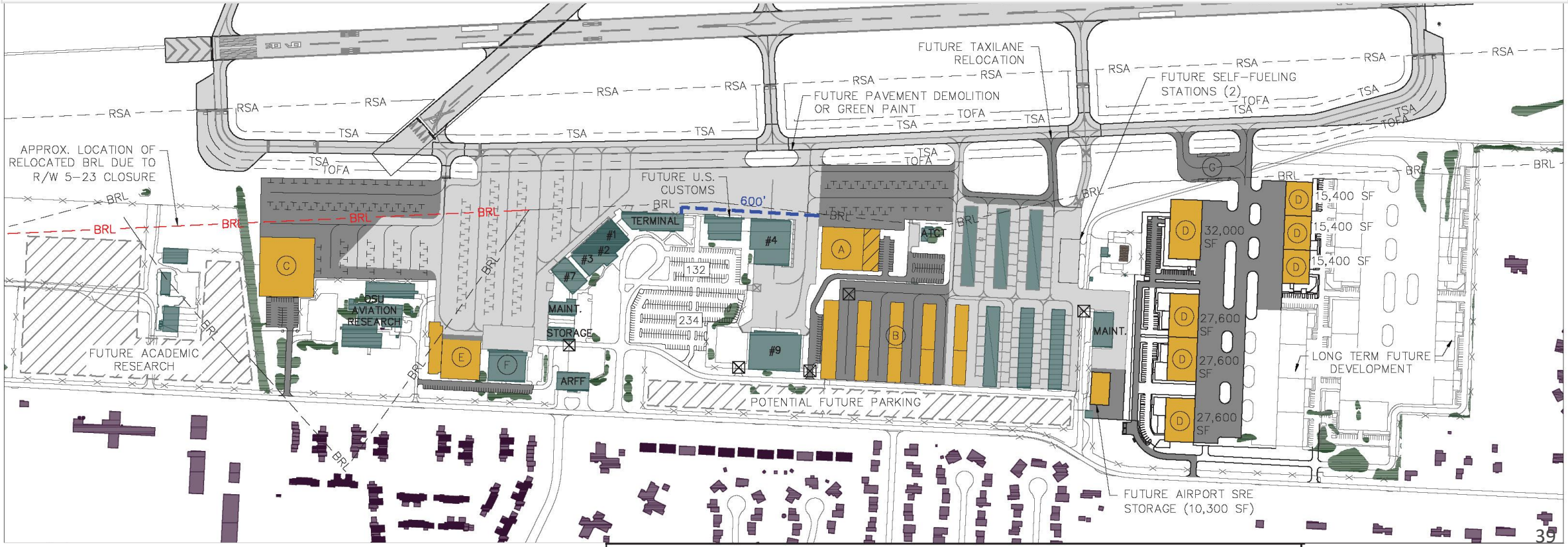


Terminal Area Alternatives



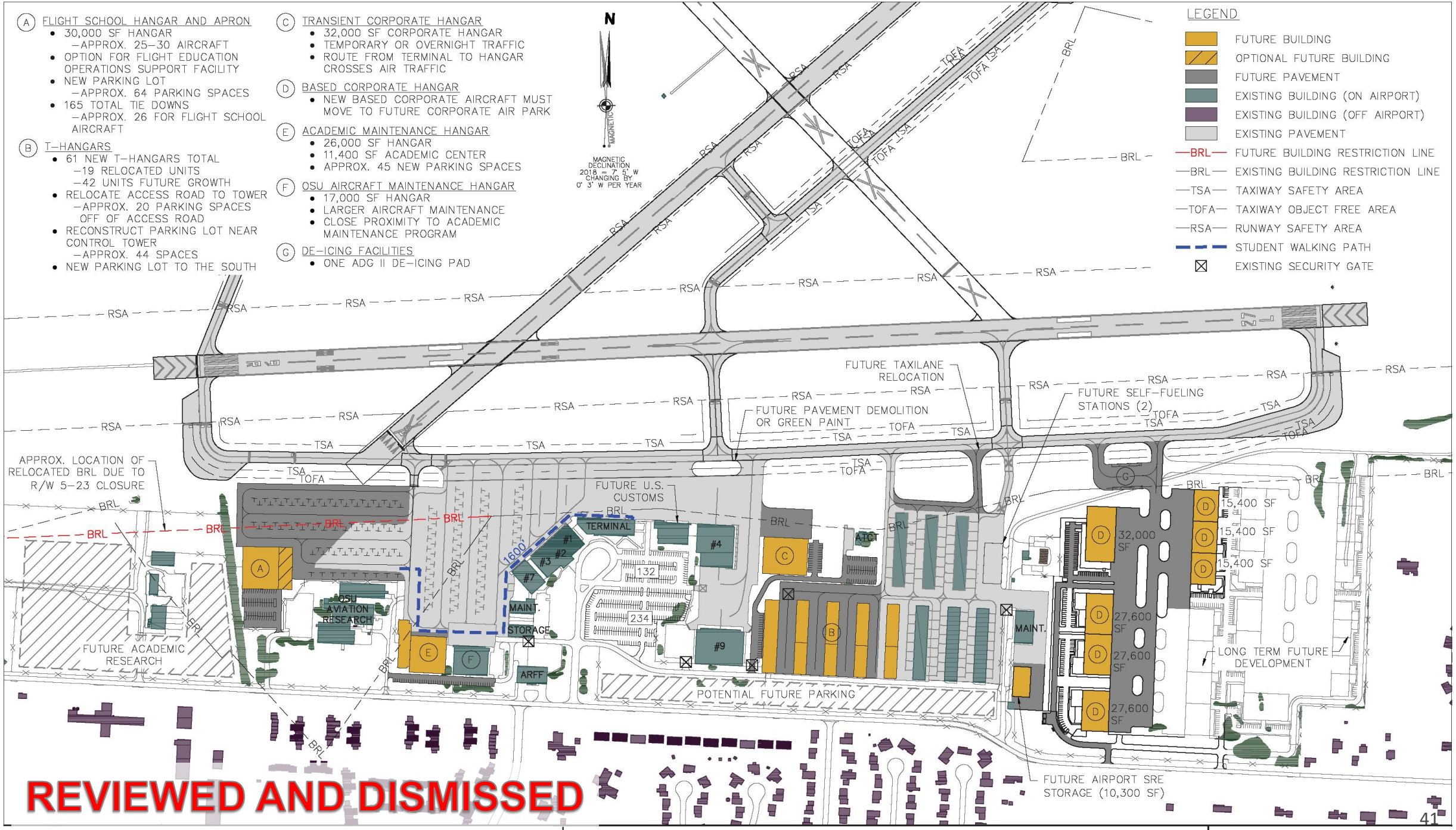
TERMINAL AREA - ALTERNATIVE 1

PROS	CONS
• Keeps student in visual contact when walking to flight school aircraft staging area	• Student walking across transient apron
• Establishes a corporate campus for all future corporate hangars	• Neither apron nor corporate hangar can be built before crosswind is closed or corporate campus initiated
• No impact of drainage swale	• Requires relocation of existing users in 2 T-hangar bldgs.
• Flight school hangar has expansion potential	• Short on T-hangars
• Co-location of T-hangars	• No corporate hangar space available until corporate campus is initiated



TERMINAL AREA - ALTERNATIVE 1

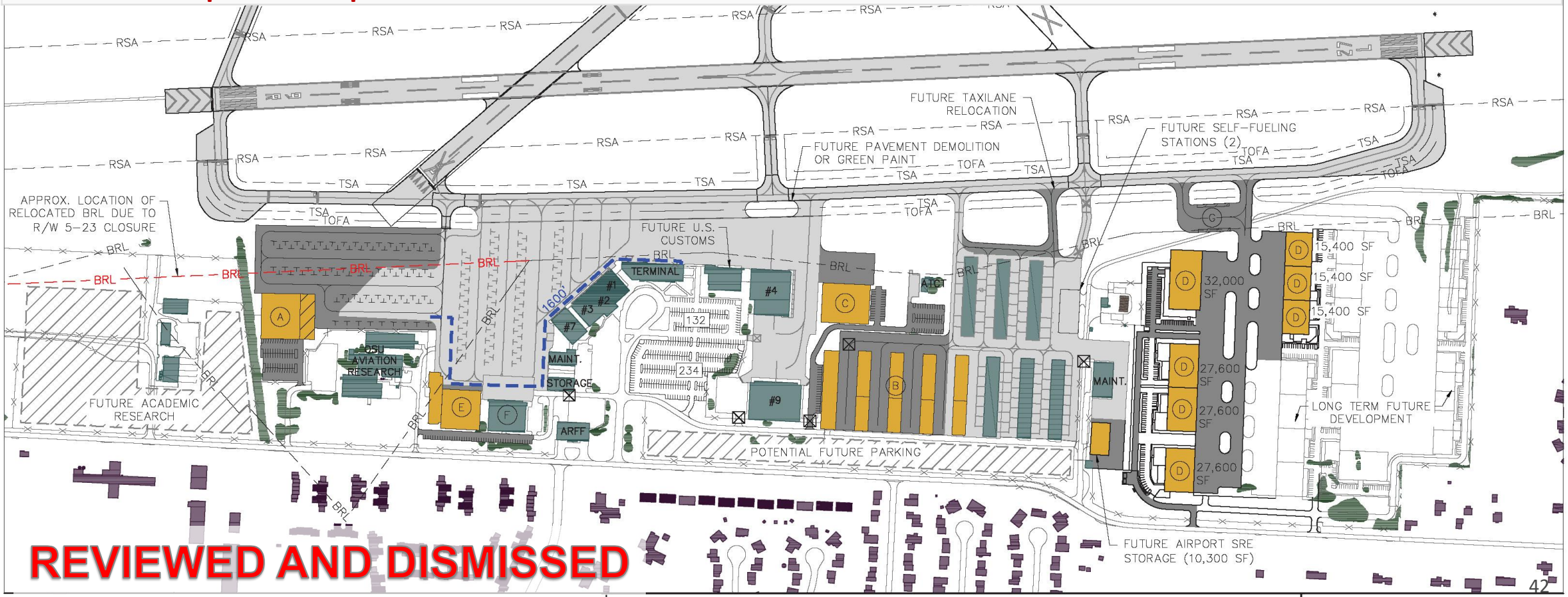

FS AC Hangar Location
N150SU



REVIEWED AND DISMISSED

TERMINAL AREA - ALTERNATIVE 2

PROS	CONS
• Co-location of T-hangars	• Neither apron nor transient corporate hangar can be built before crosswind is closed
• Co-location of maintenance hangars	• Requires relocation of existing users in 2 T-hangar bldgs.
• Co-location of academic uses	• Short on T-hangars
• No impact of drainage swale	
• Allows for 1 corporate hangar without infrastructure needs of corporate campus	



REVIEWED AND DISMISSED

TERMINAL AREA - ALTERNATIVE 2

FACILITY REQUIREMENTS

Comments?

Next Steps

- TAC provide comments back to OSU team on runway and terminal area alternatives by Sept. 24
- TAC meeting summary posted online
- Next TAC meeting: Winter 2019 (tentative)
- Brief Worthington City officials: Winter 2019 (tentative)
- Brief Dublin City Council: Winter 2019 (tentative)
- Brief Northwest Civic Association: Winter 2019 (tentative)
- Public meeting: Winter 2019 (tentative)

QUESTIONS & DISCUSSION

THE OHIO STATE UNIVERSITY

AIRPORT

THANK YOU

osuairport.org/airport-facilities/master-plan

ENGAGE PUBLIC AFFAIRS

WOOLPERT