

# WILLOW RUN AIRPORT AIRPORT LAYOUT PLAN



Detroit Airports District Office  
Metro Airport Center  
11677 S. Wayne Road, Ste. 107  
Romulus, MI 48174

Mr. Chad Newton, President  
Wayne County Airport Authority  
Michael Berry Administration Building  
11050 Rogell Drive, Bldg. #602  
Detroit, MI 48242

Dear Mr. Newton:

Willow Run Airport (YIP)  
Ypsilanti, MI  
Airport Layout Plan Approval  
Airspace Case Number 2018-AGL-4927-NRA

The Master Plan (MP) documents for the YIP Airport are acceptable from a contractual standpoint with respect to FAA planning policies, applicable Advisory Circulars, and Standard Operating Procedures. The contents of the MP reflect the views of the YIP Airport, who is responsible for the accuracy of the document. The MP does not necessarily reflect the views or policies of the Federal Aviation Administration (FAA), and the determination of acceptability does not imply the FAA agrees with the MP conclusions and recommendations.

Enclosed is one conditionally approved copy of the subject Airport Layout Plan (ALP), dated December 2018. This letter cancels or supersedes all prior ALP approvals. The ALP approval is based upon recognition of and adherence to the following:

The approval is **not** considered a commitment of Federal funding for the proposed development. The FAA has concurred with the proposed development for planning purposes only based on current safety, utility, and efficiency standards. The FAA approved forecast dated August 29, 2016 recognizes the following:

1. The Critical Aircraft are the DC-9-30 for current to mid-term timeframes.
2. The airfield designation based on Airplane Design Group (ADG) of Category D-III. Actual development should comply with approved standards applicable at the time of construction. It is important to note that future projects listed below exceed FAA design standards based on the current and mid-term aircraft forecast. AIP eligibility is based on current justification and design standards at the time AIP funding is sought.
  - Construction of the future full parallel taxiway to runway 5R-23L to a width of 75 feet versus 50 feet.
  - Reconstruction of crosswind runway 9-27 to a width of 100 feet versus 75 feet.

All development depicted on this ALP must comply with the National Environmental Policy Act (NEPA) of 1969. FAA environmental approval is required for all airport development actions depicted on this ALP. This would apply to development projects, even if there was no FAA funding involved in the project. Additional requirements concerning FAA NEPA approval can be found in FAA Order 5050.4B "National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions".

To avoid conflicts with future development, we recommend you utilize the ALP when preparing leases. We further recommend you provide copies to the local and state planning zoning boards and county and city officials and encourage them to adopt compatible land use criteria in and around the airport. Copies should be distributed to Fixed Base Operators (FBOs) and airport users.

The Airport and Airway Improvement Act (49 USC 47107(a)(16)(D)) requires the sponsor to eliminate any adverse effects on Federal facilities, or bear all costs to relocate those facilities, that are a result of an airport change. However, if AIP eligible construction development items adversely affect FAA facilities, the cost of relocating the facilities may be eligible under AIP.

This approval does **not** include a detailed evaluation of actual construction. Prior to constructing any development on the airport, notice (FAA Form 7460-1) consistent with 14 CFR Part 77 must be filed with this office. This approval does **not** include approval for temporary construction equipment, which may be used during actual construction, e.g., cranes, equipment staging areas, site access roads, etc. A separate construction safety phasing plan for any project should be reviewed by the FAA no less than 60 days prior to beginning any project.

The planned runway developments will require new FAA flight procedures. If the FAA concurs with these developments there will need to be close coordination with different FAA offices. Development on new approaches will not begin until environmental approvals have been given and the sponsor requests the FAA Flight Procedures Office to initiate design of new approaches. Publication of revised Instrument Approach Procedures (IAPs) could take from 18 months to two years, after runway data is submitted. Review of this ALP does not constitute an automatic request for amended procedures.

If development is planned without aviation trust fund investments that will change the status or geometrics of runways, taxiways, aprons, or other operating airport surfaces, notice (FAA Form 7480-1) must be filed with this office consistent with 14 CFR Part 157.

We trust this letter provides a clear explanation of the conditions and terms of our approval. If you desire further clarification, please contact this office at (734) 229-2900.

Sincerely,

John L. Mayfield, Jr.

Manager  
Detroit Airports District Office

Cc: Mead & Hunt  
AGL-620  
MDOT:00A

A design standard modification or MOS is granted to allow the penetration of Ecorse Road of Runway 5R-23L Runway Object Free Area, FAA standard for this condition is under AC 150/5300-13A, "Table 3-5 and Table A7-10 Runway design standards matrix" for D-III runways. The standard runway Object Free Area (ROFA) is no less than 800-ft wide and 1000-ft beyond the end of the runway." The life cycle of the granted MOS is 5 years from the approved date of December 2018.

It is FAA policy that the Runway Protection Zone (RPZ) should be acquired in fee simple. It appears that the Airport Sponsor does not currently own part of every RPZ at YIP. The Airport Sponsor should have a complete aviation easement for those portions of the RPZ where fee simple ownership is not currently identified. The Airport Sponsor should review the land use in the area and ensure that it has adequate controls in place. The Airport Sponsor should ensure there is no congregation of people within the RPZ. Submission of an RPZ alternatives analysis to the ADO with coordination of the Regional and APP-600 Offices is required in accordance with the memo dated September 27, 2012 "Interim Guidance on Land Uses Within a Runway Protection Zone" when the following is proposed:

1. An airfield project (e.g., runway extension, runway shift)
2. A change in the critical design aircraft that increases the RPZ dimensions
3. A new or revised instrument approach procedure that increases the RPZ dimensions
4. A local development proposal in the RPZ (either new or reconfigured)

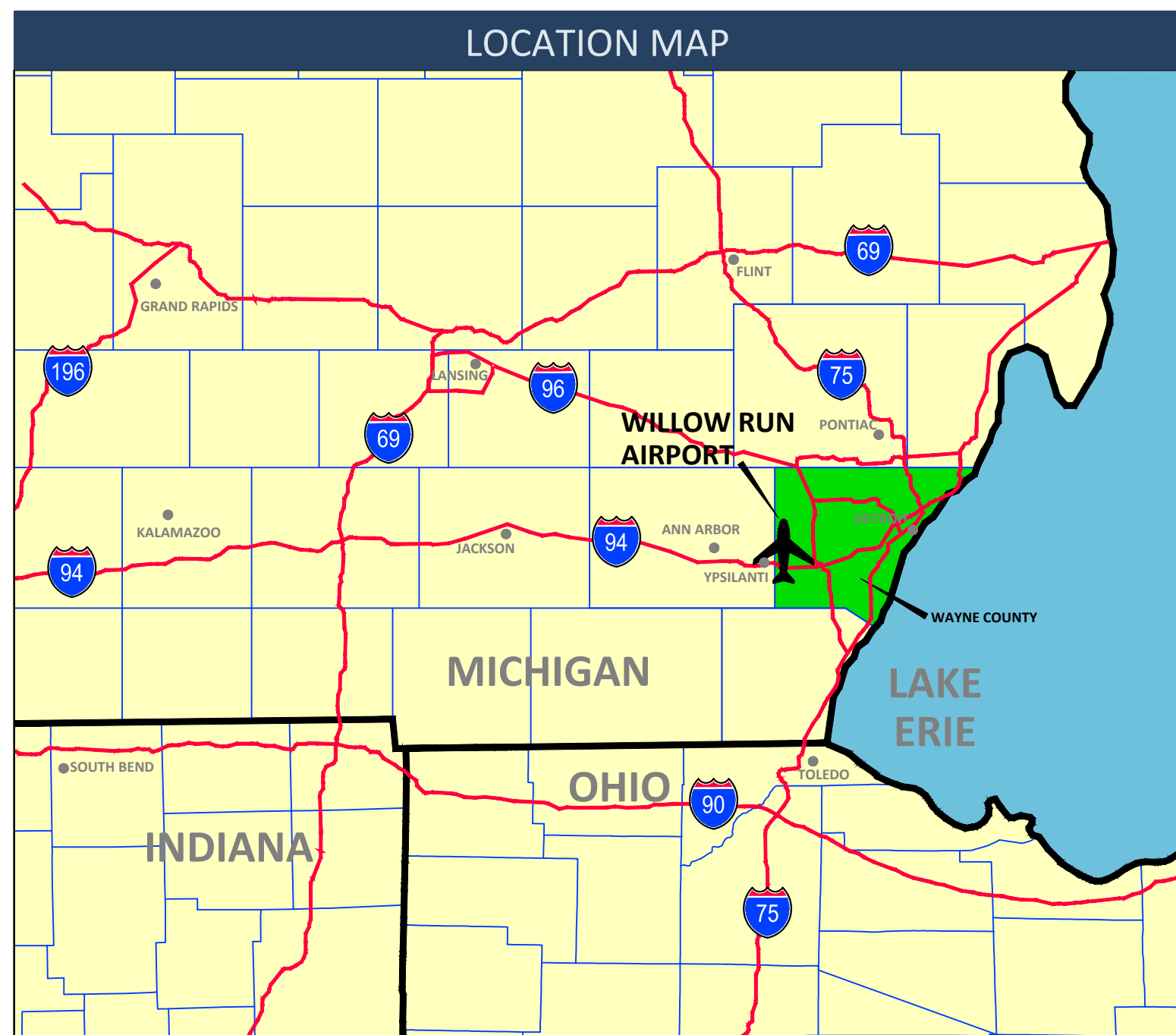
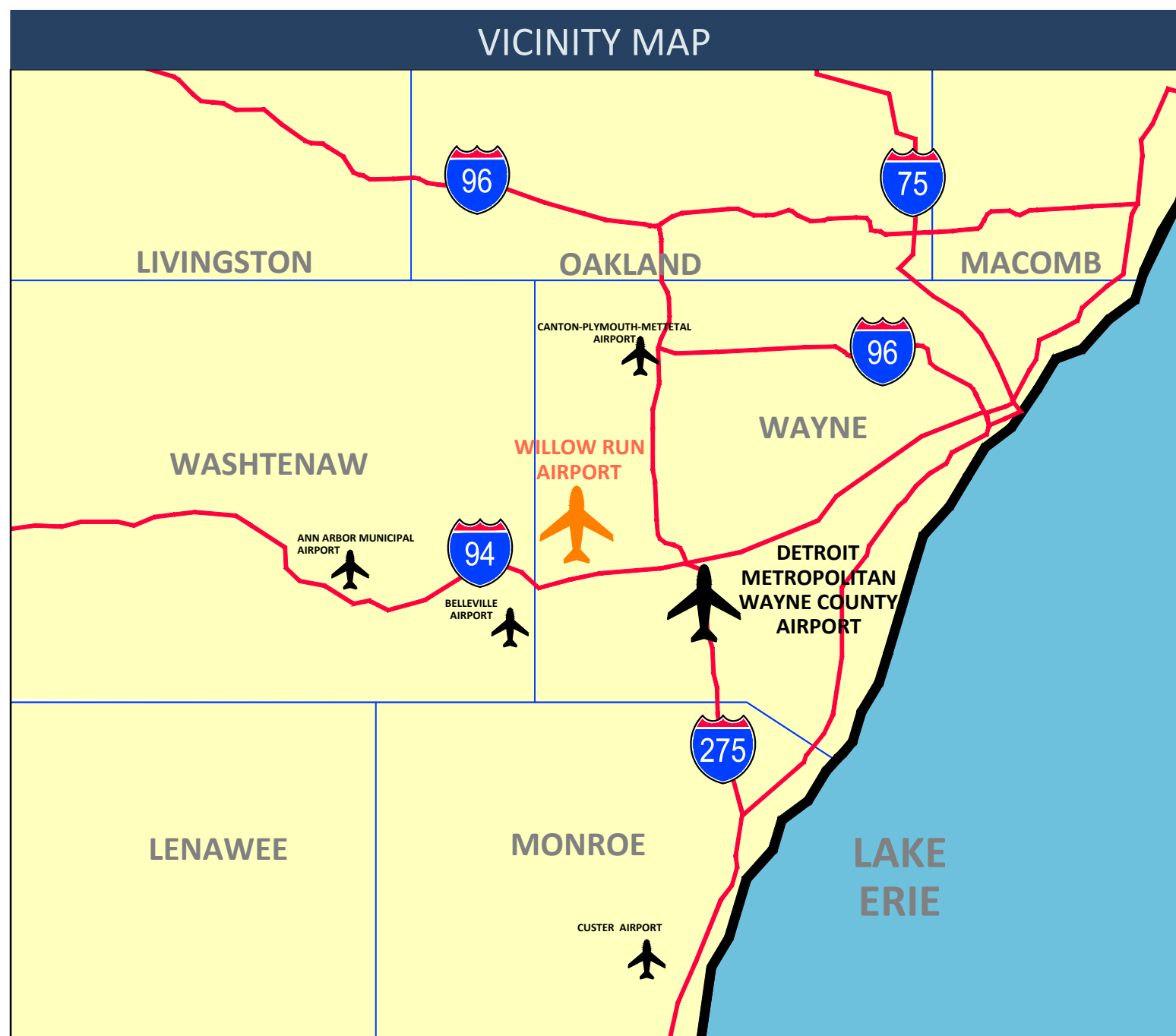
Sheets 19 entitled Exhibit "A" Airport Property Maps has been included and will require a separate review and concurrence.

If any of the design critical aircraft or aircraft groups change, this ALP must be reevaluated.

Our approval does not infer or imply that the land in the airport vicinity is considered compatible with airport operations. Federal requirements stipulate:

1. All development programs should be reasonably consistent with the plans of local and state planning agencies for the development in the airport vicinity.
2. That fair consideration has been given to the interest of communities in or near the airport.
3. That development programs provide for the protection and enhancement of the environment.

The FAA offers no objection to the proposed ultimate airspace utilization as depicted on the ALP based on considerations of safe and efficient use of airspace. The ALP has the status of "Plan on File" for the purpose of 14 CFR Part 77, Obstruction Evaluation, and 14 CFR Part 152, Airport Aid Program. A review of the airside landing area development was conducted according to the following 14 CFR's Part, 77, -152, and -157, Notice of Construction, Alteration, Activation, and Deactivation of Airports (reference Aeronautical Study Number 2018-AGL-4927-NRA). It should be noted that FAA cannot prevent erection of any structure near an airport. Airport environs can only be protected through state and local zoning ordinances, building regulations, and like requirements.



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19	EXHIBIT A PROPERTY MAP

**AIRPORT APPROVAL**

WILLOW RUN AIRPORT  
On behalf of Wayne County Airport Authority, I hereby certify that the Willow Run Airport, Airport Layout Plans Package was prepared according to the FAA Central Region Checklist as provided by the FAA Airport District Office.

*Chad Newton* 2-22-19

Chad Newton, A.A.E., Wayne County Airport Authority Interim CEO Date

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**FAA DISCLAIMER**

THE PREPARATION OF THIS DOCUMENT MAY HAVE BEEN SUPPORTED, IN PART, THROUGH THE AIRPORT IMPROVEMENT PROGRAM FROM THE FEDERAL AVIATION ADMINISTRATION (PROJECT NUMBER 3-31-0062-57) AS PROVIDED UNDER TITLE 49 U.S.C., SECTION 47104. THE CONTENTS DO NOT NECESSARILY REFLECT THE OFFICIAL VIEWS OR POLICY OF THE FAA OR THE (STATE) DOT. ACCEPTANCE OF THIS REPORT BY THE FAA AND (STATE) DOT DOES NOT IN ANYWAY CONSTITUTE A COMMITMENT ON THE PART OF THE UNITED STATES OR THE STATE OF MICHIGAN TO PARTICIPATE IN ANY DEVELOPMENT DEPICTED THEREIN NOR DOES IT INDICATE THAT THE PROPOSED DEVELOPMENT IS ENVIRONMENTALLY ACCEPTABLE OR WOULD HAVE JUSTIFICATION IN ACCORDANCE WITH APPROPRIATE PUBLIC LAWS.

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**MICHIGAN AERONAUTICS COMMISSION**

*Mark W. Noel* 2-12-2019

MDOT Office of Aeronautics, Planning and Development Section Manager Date  
Mark W. Noel, P.E.

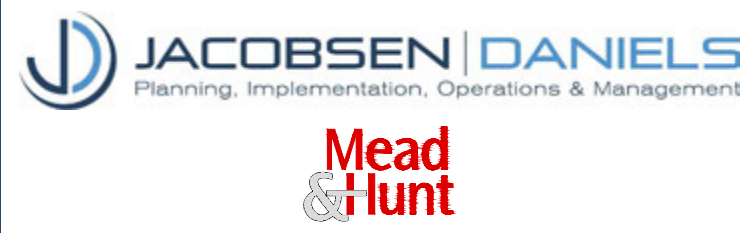
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**CONSTRUCTION NOTICE**

THESE ALP DRAWINGS ARE FOR PLANNING PURPOSES ONLY. THE DRAWING INFORMATION, INCLUDING LOCATION DETAILS AND ELEVATIONS SHOULD NOT BE USED FOR CONSTRUCTION. TO PROTECT THE AIRPORT'S OPERATIONAL SAFETY AND FUTURE DEVELOPMENT, ALL PROPOSED CONSTRUCTION ON THE AIRPORT MUST BE COORDINATED BY THE AIRPORT OWNER WITH FAA/STATE AERONAUTICS PRIOR TO CONSTRUCTION.

AN FAA FORM 7460 SHALL BE SUBMITTED TO EVALUATE THE EFFECT OF PROPOSED CONSTRUCTION ON THE AIRPORT OR ALTERATION ON AIR NAVIGATION EXCEEDING 14 CFR, PART 77. FILING THE FAA FORM 7460 DOES NOT RELIEVE THE SPONSOR FROM COMPLYING WITH OTHER FEDERAL, STATE OR LOCAL RULES AND REGULATIONS.

Color: J:\ACAD\ch.LT\Scale: 1:0000, Loc: Detail, 0:010, Last Saved: 4/11/2019 3:42 PM, Plotted On: 4/11/2019 3:45 PM, File: E:\00\_PROJECTS\2019\2019-03-15\19-ALP\2019-03-15-19-ALP-AGL-SHEET15-TITLE SHEET Layout1.SHEET1



FAA'S APPROVAL OF THIS AIRPORT LAYOUT PLAN (ALP) REPRESENTS ACCEPTANCE OF THE GENERAL LOCATION OF FUTURE FACILITIES DEPICTED (SHEET 17144C04). DURING THE PRELIMINARY DESIGN PHASE, THE AIRPORT OWNER IS REQUIRED TO RESUBMIT FOR APPROVAL THE FINAL LOCATIONS, HEIGHTS, AND EXTERIOR FINISH OF STRUCTURES. FAA'S CONCERN IS OBSTRUCTIONS, IMPACT ON ELECTRONIC AIDS, OR ADVERSE EFFECTS ON CONTROLLER VIEW OF AIRCRAFT APPROACHES AND GROUND MOVEMENT AREAS WHICH COULD ADVERSELY AFFECT THE SAFETY, EFFICIENCY, OR UTILITY OF THE AIRPORT.

DATA SOURCES:

NOTES:



By	Date	Revisions

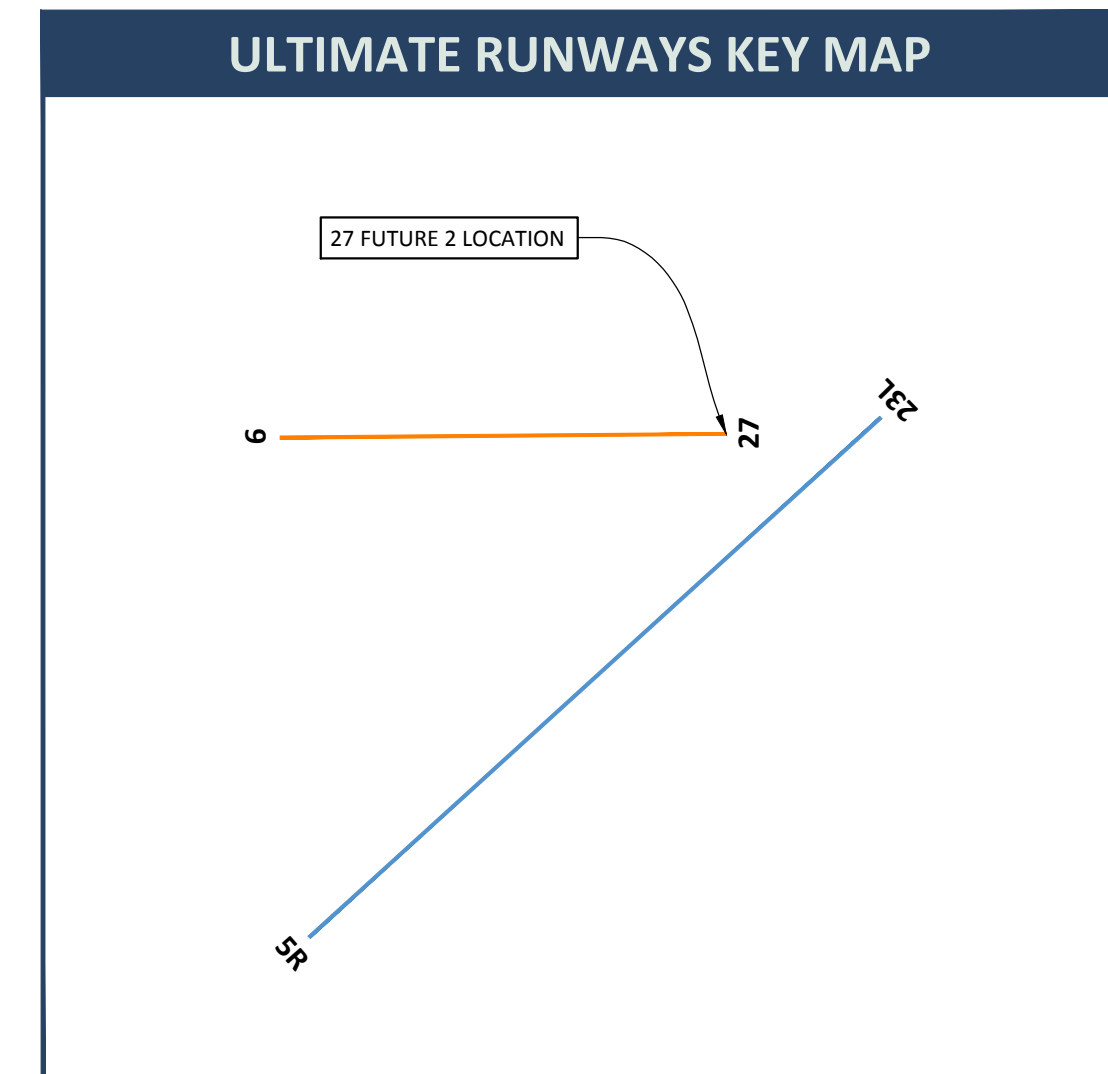
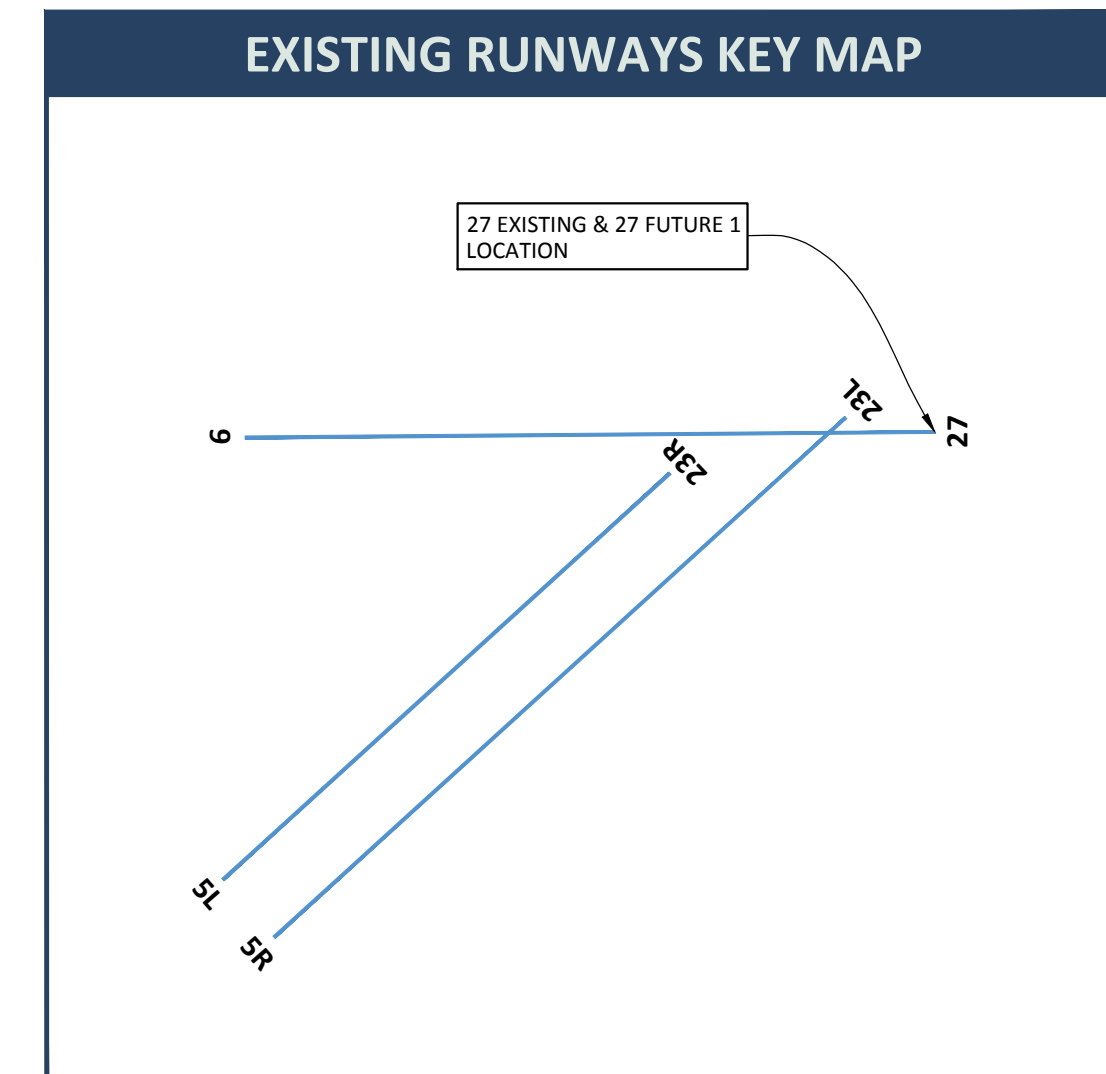
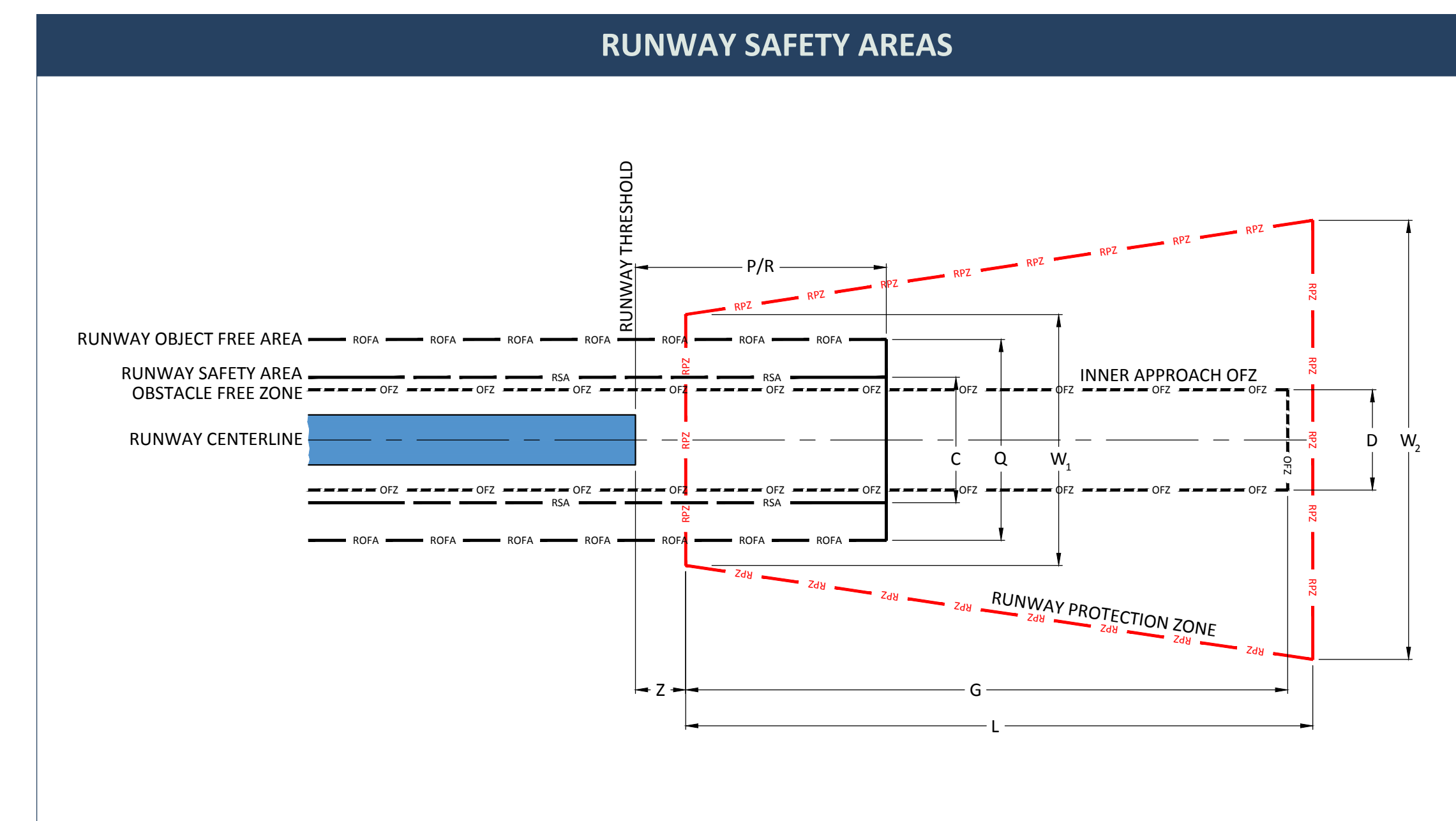
**WILLOW RUN AIRPORT**

**TITLE SHEET**

Drawn By: ST Date: 01-18-2019  
Approved By: MCI Job No: 037-15-03



RUNWAY DATA TABLE													
RUNWAY	5R		23L		5L		23R		9		27		
	EXISTING	FUTURE	EXISTING	FUTURE	EXISTING	FUTURE	EXISTING	FUTURE	EXISTING	FUTURE	EXISTING	FUTURE 1	FUTURE 2
RUNWAY DESIGN CODE (RDC)	D-IV-4000	D-IV-1200	D-IV-2400	D-IV-1200	D-IV-5000	CLOSED	D-IV-5000	CLOSED	D-IV-5000	C-II-5000	D-IV-VIS	C-II-5000	C-II-5000
RUNWAY REFERENCE CODE (RRC)	D-IV	D-IV	D-IV	D-IV	D-IV	CLOSED	D-IV	CLOSED	D-IV	C-II	D-IV	C-II	C-II
AIRCRAFT APPROACH CATEGORY	D	D	D	D	D	CLOSED	D	CLOSED	D	C	D	C	C
RUNWAY PAVEMENT STRENGTH (X 1,000 LBS)	100(S) 200(D) 89(2S) 350(2D) 800(2D2)	100(S) 200(D) 89(2S) 350(2D) 800(2D2)	100(S) 200(D) 89(2S) 350(2D) 800(2D2)	100(S) 200(D) 89(2S) 350(2D) 800(2D2)	35(S) 45(D) 90(2D)	CLOSED	35(S) 45(D) 90(2D)	CLOSED	55(S) 70(D) 89(2S) 120(2D)	55(S) 70(D) 89(2S) 120(2D)	55(S) 70(D) 89(2S) 120(2D)	55(S) 70(D) 89(2S) 120(2D)	55(S) 70(D) 89(2S) 120(2D)
RUNWAY PAVEMENT STRENGTH (PCN)	82/R/B/X/T	82/R/B/X/T	82/R/B/X/T	82/R/B/X/T	51/R/C/X/T	CLOSED	51/R/C/X/T	CLOSED	35/R/C/X/T	35/R/C/X/T	35/R/C/X/T	35/R/C/X/T	35/R/C/X/T
SURFACE TREATMENT	CONC-GRVD	CONC-GRVD	CONC-GRVD	CONC-GRVD	ASPH (GRVD)	CLOSED	ASPH (GRVD)	CLOSED	ASPH-GRVD	ASPH-GRVD	ASPH-GRVD	ASPH-GRVD	ASPH-GRVD
MAXIMUM EFFECTIVE GRADIENT (%)	0.2%	0.2%	0.2%	0.2%	0.1%	CLOSED	0.1%	CLOSED	0.2%	0.2%	0.2%	0.2%	0.2%
RUNWAY LENGTH	7,543	7,543	7,543	7,543	5,996	CLOSED	5,996	CLOSED	7,292	5,000	7,292	7,292	5,000
RUNWAY WIDTH	150	150	150	150	150	CLOSED	150	CLOSED	160	100	160	160	100
RUNWAY END ELEVATION (MSL)	714.4	714.4	701.5	701.5	715.1	CLOSED	707.3	CLOSED	715.5	715.5	699.4	699.4	707.0
RUNWAY BEARING (TRUE)	53.8	53.8	233.8	233.8	53.8	CLOSED	233.8	CLOSED	95.6	95.6	275.7	275.7	269°
DISPLACED THRESHOLD DISTANCE	N/A	N/A	N/A	N/A	N/A	CLOSED	N/A	CLOSED	575.5	N/A	N/A	N/A	N/A
DISPLACED THRESHOLD ELEVATION (MSL)	N/A	N/A	N/A	N/A	N/A	CLOSED	N/A	CLOSED	714.9	N/A	N/A	N/A	N/A
RUNWAY SAFETY AREA (RSA) LENGTH	1,000	1,000	1,000	1,000	1,000	CLOSED	1,000	CLOSED	1,000	1,000	1,000	1,000	1,000
RUNWAY SAFETY AREA (RSA) WIDTH	500	500	500	500	500	CLOSED	500	CLOSED	500	500	500	500	500
RUNWAY END COORDINATES	LATITUDE NORTH (NAD83)	42°13'50.25"	42°13'50.25"	42°14'41.34"	42°14'41.34"	CLOSED	42°14'36.46"	CLOSED	42°14'38.22"	42°14'38.22"	42°14'40.03"	42°14'39.47"	42°14'39.47"
	LONGITUDE WEST (NAVD88)	83°32'23.46"	83°32'23.46"	83°31'10.47"	83°31'10.47"	CLOSED	83°32'30.06"	CLOSED	83°32'35.98"	83°32'35.98"	83°30'59.06"	83°31'29.52"	83°31'29.52"
DISPLACED THRESHOLD COORDINATES	LATITUDE NORTH (NAD83)	N/A	N/A	N/A	N/A	CLOSED	N/A	CLOSED	42°14'38.36"	N/A	N/A	N/A	N/A
	LONGITUDE WEST (NAVD88)	N/A	N/A	N/A	N/A	CLOSED	N/A	CLOSED	83°32'28.33"	N/A	N/A	N/A	N/A
RUNWAY LIGHTING	HIRL,CL,MASLR,TDZ	HIRL,CL,MASLR,TDZ	HIRL, CL, MALSR	HIRL, CL, MALSR	MIRL	CLOSED	MIRL	CLOSED	MIRL	MIRL	MIRL	MIRL	MIRL
APPROACH RUNWAY PROTECTION ZONE (RPZ)	LENGTH	2,500	2,500	1,700	2,500	1,700	CLOSED	1,700	CLOSED	1,700	1,700	1,700	1,700
	INNER WIDTH	1,000	1,000	1,000	1,000	500	CLOSED	500	CLOSED	500	500	500	500
	OUTER WIDTH	1,750	1,750	1,510	1,750	1,010	CLOSED	1,010	CLOSED	1,010	1,010	1,010	1,010
DEPARTURE RUNWAY PROTECTION ZONE	LENGTH	1,700	1,700	1,700	1,700	1,700	CLOSED	1,700	CLOSED	1,700	1,700	1,700	1,700
	INNER WIDTH	500	500	500	500	500	CLOSED	500	CLOSED	500	500	500	500
	OUTER WIDTH	1,010	1,010	1,010	1,010	1,010	CLOSED	1,010	CLOSED	1,010	1,010	1,010	1,010
RUNWAY MARKING	PRECISION (PI)	PRECISION (PI)	PRECISION (PI)	PRECISION (PI)	NON-PRECISION	CLOSED	NON-PRECISION	CLOSED	NON-PRECISION	NON-PRECISION	NON-PRECISION	NON-PRECISION	NON-PRECISION
FAR PART 77 APPROACH CATEGORY	50:1   40:1	50:1   40:1	50:1   40:1	50:1   40:1	34:1	CLOSED	34:1	CLOSED	34:1	34:1	20:1	34:1	34:1
FAR PART 77 APPROACH TYPE	PIR	PIR	PIR	PIR	NPI-C	CLOSED	NPI-C	CLOSED	NPI-C	NPI-C	VIS-B	NPI-C	NPI-C
FAR PART 77 APPROACH SURFACE	WIDTH OF PRIMARY SURFACE	1,000	1,000	1,000	1,000	500	CLOSED	500	CLOSED	500	500	500	500
	AT OUTER END	16,000	16,000	16,000	16,000	3,500	CLOSED	3,500	CLOSED	3,500	1,500	3,500	3,500
	LENGTH	50,000	50,000	50,000	50,000	10,000	CLOSED	10,000	CLOSED	10,000	10,000	5,000	10,000
VISIBILITY MINIMUMS	1/2 MILE	<1/2 MILE	3/4 MILE	<1/2 MILE	1 MILE	CLOSED	1 MILE	CLOSED	1 MILE	1 MILE	VISUAL	1 MILE	1 MILE
AERONAUTICAL SURVEY REQUIRED	VGS	VGS	VGS	VGS	N/A	CLOSED	N/A	CLOSED	NVGS	NVGS	NVGS	NVGS	NVGS
TERPS DEPARTURE SURFACE/OCS	40:1	40:1	40:1	40:1	40:1	CLOSED	40:1	CLOSED	N/A	N/A	40:1	40:1	40:1
RUNWAY OBJECT FREE AREA (ROFA) LENGTH	1,000	1,000	1,000	1,000	1,000	CLOSED	1,000	CLOSED	1,000	1,000	1,000	1,000	1,000
RUNWAY OBJECT FREE AREA (ROFA) WIDTH	800	800	800	800	800	CLOSED	800	CLOSED	800	800	800	800	800
RUNWAY OBSTACLE FREE ZONE (ROFZ) LENGTH	200	200	200	200	200	CLOSED	200	CLOSED	200	200	200	200	200
RUNWAY OBSTACLE FREE ZONE (ROFZ) WIDTH	400	400	400	400	400	CLOSED	400	CLOSED	400	400	400	400	400
PRECISION OBSTACLE FREE ZONE (POFZ) LENGTH	200	200	200	200	N/A	CLOSED	N/A	CLOSED	N/A	N/A	N/A	N/A	N/A
PRECISION OBSTACLE FREE ZONE (POFZ) WIDTH	800	800	800	800	N/A	CLOSED	N/A	CLOSED	N/A	N/A	N/A	N/A	N/A
THRESHOLD SITING SURFACE (TSS)	34:1	34:1	20:1	34:1	20:1	CLOSED	20:1	CLOSED	20:1	20:1	20:1	20:1	20:1
TSS OBJECT PENETRATION(S)	YES	YES	NO	NO	YES	CLOSED	NO	CLOSED	NO**	YES	NO	NO	NO
VISUAL APPROACH AIDS	N/A	PAPI-4	PAPI-4	PAPI-4	PAPI-4	CLOSED	PAPI-4	CLOSED	PAPI-4	PAPI-4	N/A	PAPI-4	PAPI-4
INSTRUMENT APPROACH AIDS	LOC   GS	LOC   GS	LOC   GS	LOC   GS	N/A	CLOSED	N/A	CLOSED	N/A	N/A	N/A	N/A	N/A
TOUCHDOWN ZONE ELEVATION (MSL)	715.8	TBD	710.1	710.1	715.7	CLOSED	712.2	CLOSED	715.6	715.6	708.3	TBD	TBD
ARC AND CRITICAL AIRCRAFT	D-III * (DC9-30)	D-III * (B737-900)	D-III * (DC9-30)	D-III * (B737-900)	D-III (DC9-30)	CLOSED	D-III (DC9-30)	CLOSED	D-III (DC9-30)	C-II (HAWKER-800)	D-III (DC9-30)	C-II (HAWKER-800)	C-II (HAWKER-800)



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DATA SOURCES:

NOTES:

- \*RUNWAY 5R-23L IS CURRENTLY DESIGNED TO AND CAPABLE OF ACCOMMODATING UNRESTRICTED D-IV OPERATIONS; HOWEVER THE CURRENT AND FUTURE CRITICAL AIRCRAFT CONDUCTING 500 OR MORE ANNUAL OPERATIONS IS ARC D-III.
- \*\*MALSR TOWER ONLY OBSTRUCTION; HOWEVER, OBJECT FIXED BY FUNCTION.



By	Date	Revisions

WILLOW RUN AIRPORT

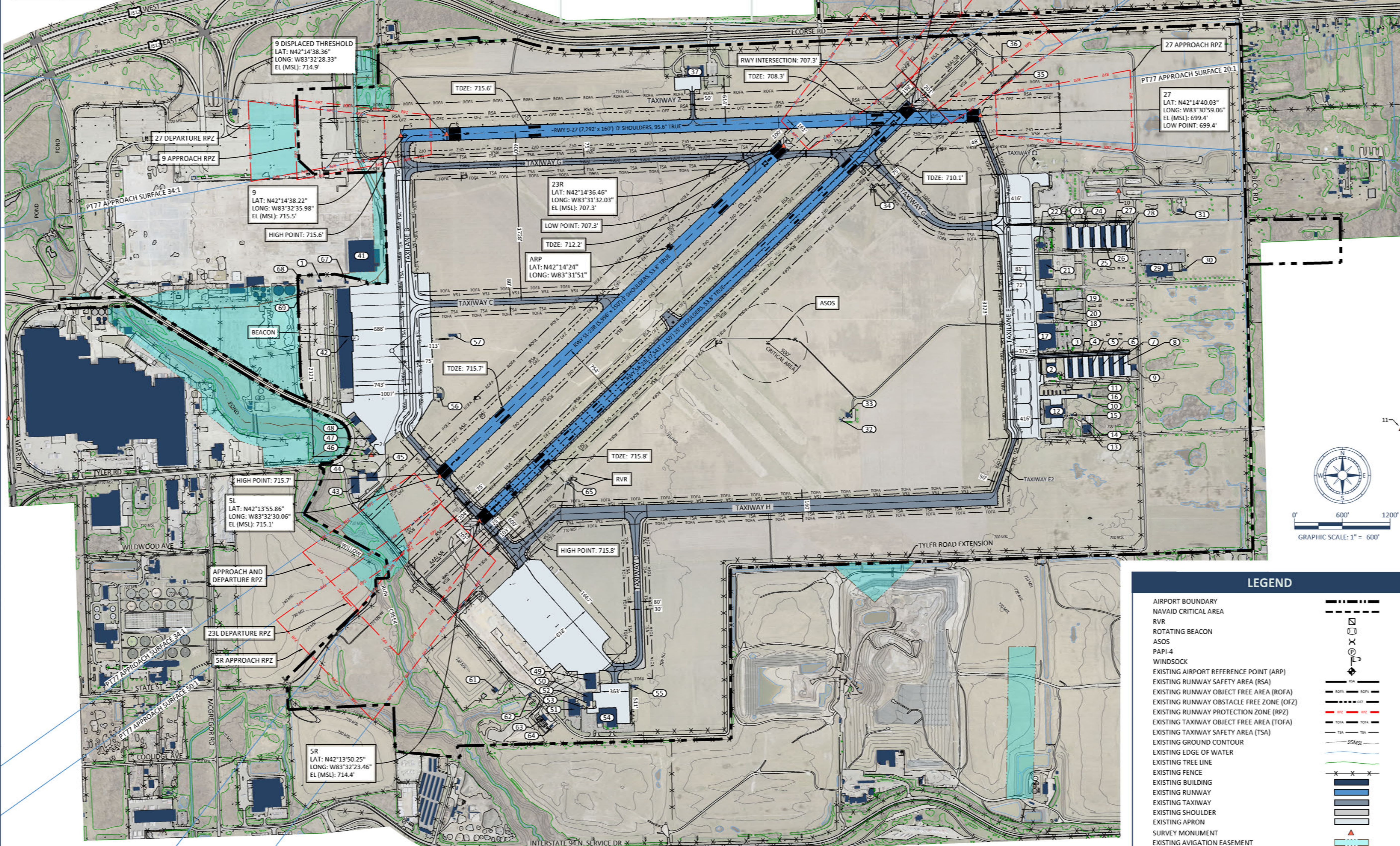
DATA SHEET

Drawn By: ST Date: 01-18-2019  
 Approved By: MCJ Job No: 037-15-03

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

RESERVED FOR  
FAA APPROVAL  
STAMP



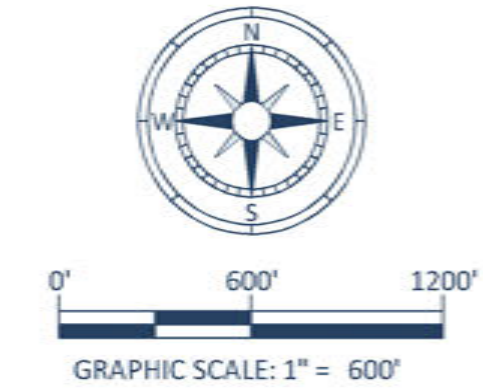
SURVEY CONTROL POINTS

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	STORAGE
33	797.58	ATC (EYE ELEVATION 785')
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	740.65	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	---
EXISTING FENCE	---
EXISTING BUILDING	---
EXISTING RUNWAY	---
EXISTING TAXIWAY	---
EXISTING SHOULDER	---
EXISTING APRON	---
SURVEY MONUMENT	---
EXISTING AVIGATION EASEMENT	---

Colorwork: J.D. ACHARD, L.T. SOARES, 1.0000, LeDentific: 1/22/2019 11:17 AM, Project: 12202019 11:17 AM, Pinned On: 1/22/2019 11:26 AM, File: E:\02\_PROJECT\5007\_Alt\150115-50\_Taxiway Plan Update\15\_1\_Taxiway Plan Update\15\_1\_Taxiway Plan Update.dwg, Plot: 1/22/2019 11:26 AM



FAA'S APPROVAL OF THIS AIRPORT LAYOUT PLAN (ALP) REPRESENTS ACCEPTANCE OF THE GENERAL LOCATION OF FUTURE FACILITIES DEPICTED (SHEET 07144004). DURING THE PRELIMINARY DESIGN PHASE, THE AIRPORT OWNER IS REQUIRED TO RESUBMIT FOR APPROVAL THE FINAL LOCATIONS, HEIGHTS, AND EXTERIOR FINISH OF STRUCTURES. FAA'S CONCERN IS OBSTRUCTIONS, IMPACT ON ELECTRONIC AIDS, OR ADVERSE EFFECTS ON CONTROLLER VIEW OF AIRCRAFT APPROACHES AND GROUND MOVEMENT AREAS WHICH COULD ADVERSELY AFFECT THE SAFETY, EFFICIENCY, OR UTILITY OF THE AIRPORT.

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

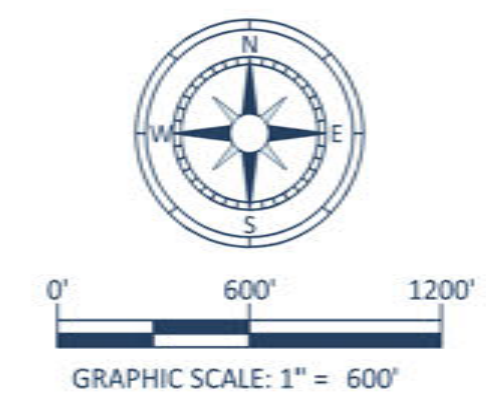
WILLOW RUN AIRPORT

EXISTING AIRPORT LAYOUT PLAN DRAWING

Drawn By: JGH Date: 01-18-2019  
Approved By: MCJ Job No: 037-15-03

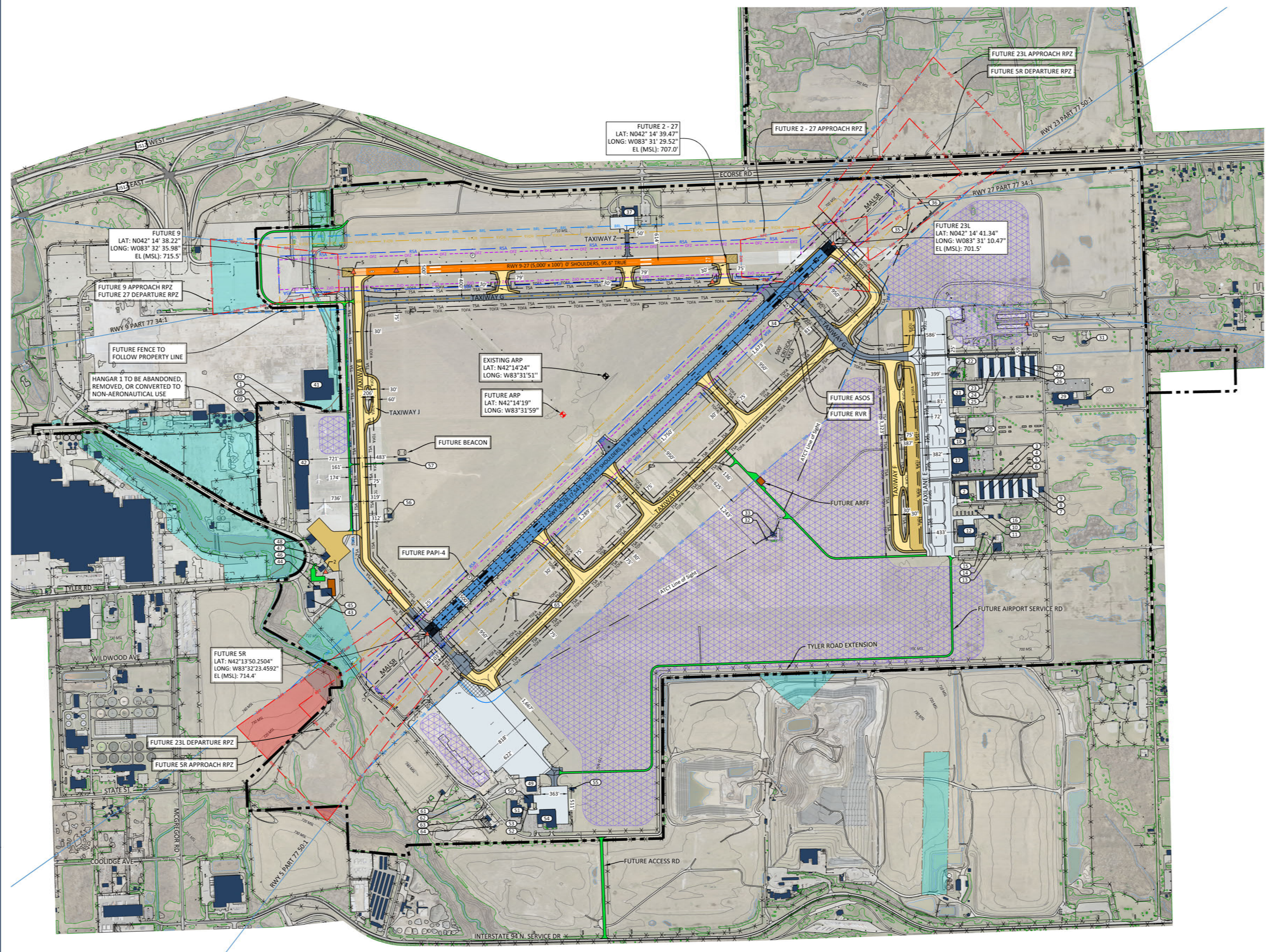


RESERVED FOR  
FAA APPROVAL  
STAMP



**LEGEND**

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



Coordinate: 48 ACAD018.LT Scale: 1:5000.0 Date: 01/18/2019 12:01 PM Printed On: 12/28/2019 12:02 PM  
 File: E:\100\_PROJECTS\777\777\_ULTIMATE\_FUTURE\_LAYOUT\777\_ULTIMATE\_FUTURE\_LAYOUT\_SHEET6.rvt



FAA'S APPROVAL OF THIS AIRPORT LAYOUT PLAN (ALP) REPRESENTS ACCEPTANCE OF THE GENERAL LOCATION OF FUTURE FACILITIES DEPICTED (SHEET 777-44004). DURING THE PRELIMINARY DESIGN PHASE, THE AIRPORT OWNER IS REQUIRED TO RESUBMIT FOR APPROVAL THE FINAL LOCATIONS, HEIGHTS, AND EXTERIOR FINISH OF STRUCTURES. FAA'S CONCERN IS OBSTRUCTIONS, IMPACT ON ELECTRONIC AIDS, OR ADVERSE EFFECTS ON CONTROLLER VIEW OF AIRCRAFT APPROACHES AND GROUND MOVEMENT AREAS WHICH COULD ADVERSELY AFFECT THE SAFETY, EFFICIENCY, OR UTILITY OF THE AIRPORT.

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

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



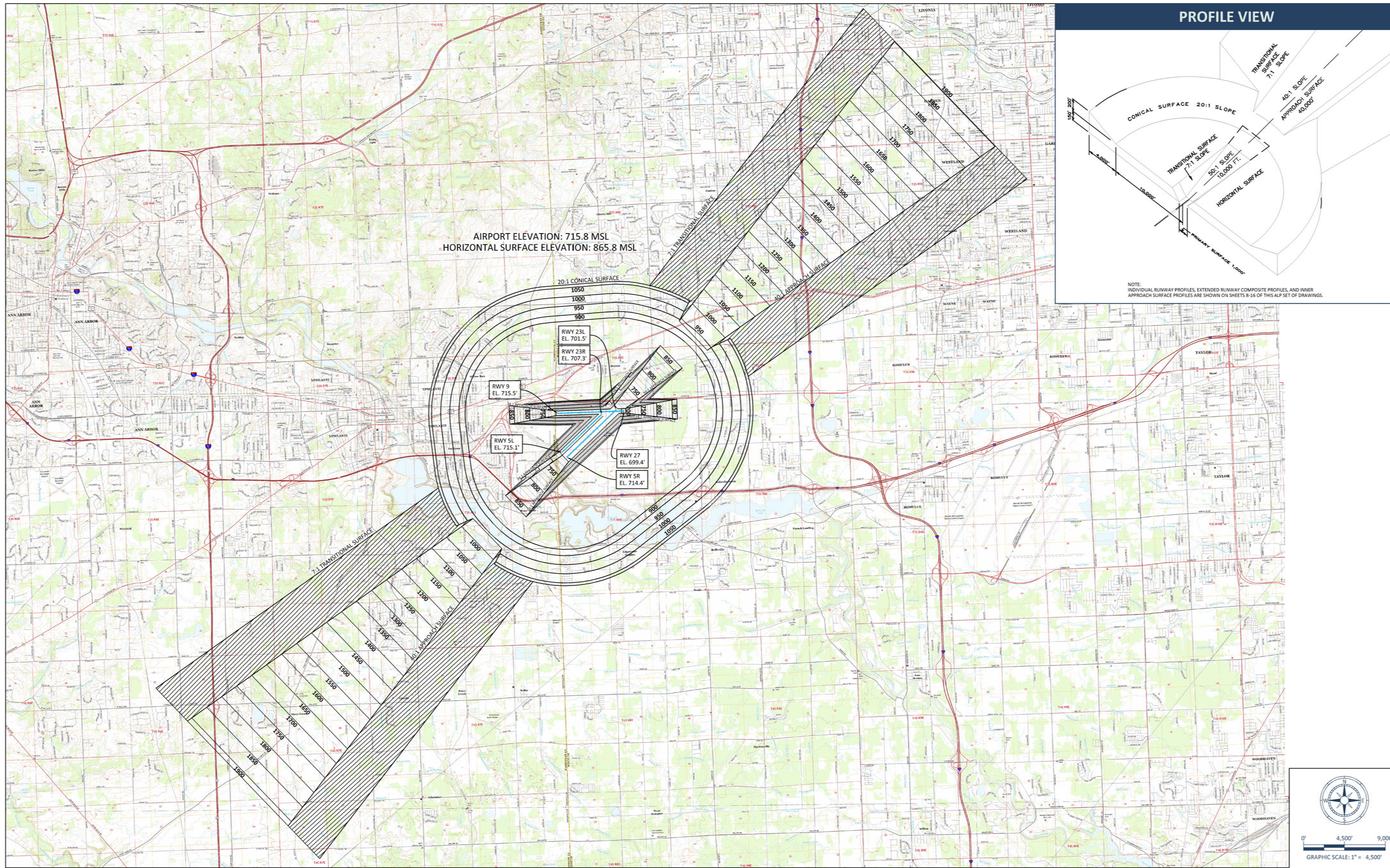
By	Date	Revisions

**WILLOW RUN AIRPORT**

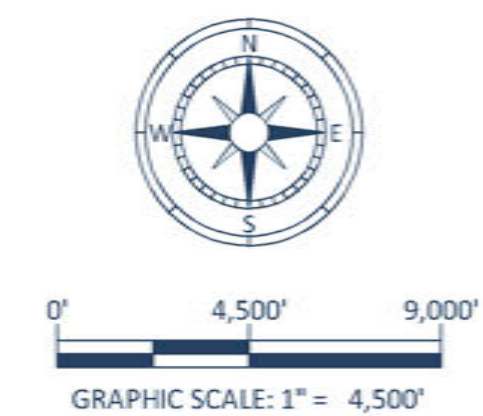
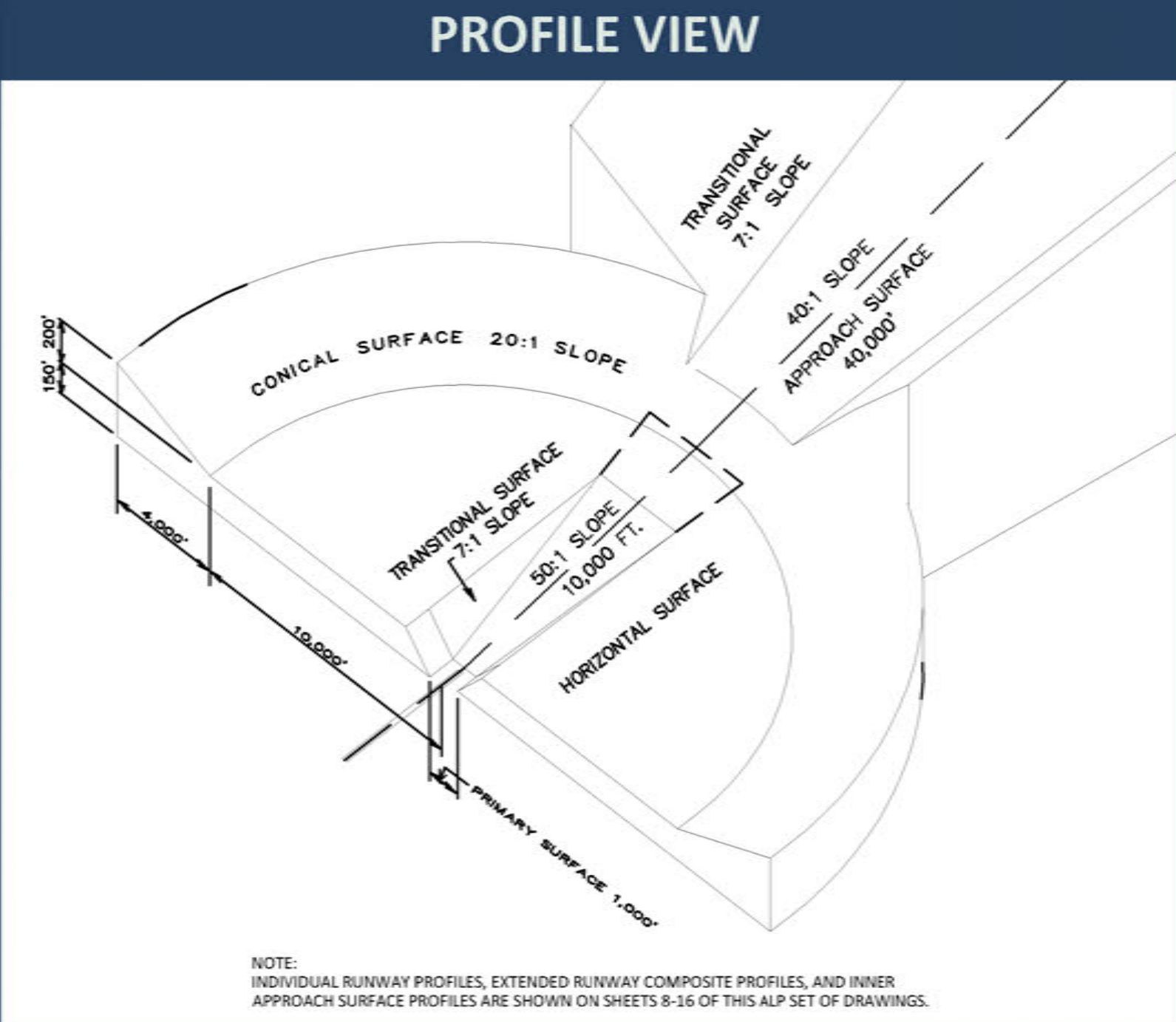
**ULTIMATE FUTURE AIRPORT LAYOUT DRAWING**

Drawn By: SRG Date: 01-18-2019  
 Approved By: MCJ Job No: 037-15-03

6 of 19



AIRPORT ELEVATION: 715.8 MSL  
 HORIZONTAL SURFACE ELEVATION: 865.8 MSL



Color: 02\_A320.ctb, L: 1/24/2019 11:17 AM, Project: 1242019\_017, Drawn On: 1/24/2019 11:19 AM, File: E:\09\_PROJECTS\0307\_Alt\150115-01\_Willow Run Airport Airspace Layout\_SHEET7.dwg



FAA'S APPROVAL OF THIS AIRPORT LAYOUT PLAN (ALP) REPRESENTS ACCEPTANCE OF THE GENERAL LOCATION OF FUTURE FACILITIES DEPICTED (SHEET 714AC04). DURING THE PRELIMINARY DESIGN PHASE, THE AIRPORT OWNER IS REQUIRED TO RESUBMIT FOR APPROVAL THE FINAL LOCATIONS, HEIGHTS, AND EXTERIOR FINISH OF STRUCTURES. FAA'S CONCERN IS OBSTRUCTIONS, IMPACT ON ELECTRONIC AIDS, OR ADVERSE EFFECTS ON CONTROLLER VIEW OF AIRCRAFT APPROACHES AND GROUND MOVEMENT AREAS WHICH COULD ADVERSELY AFFECT THE SAFETY, EFFICIENCY, OR UTILITY OF THE AIRPORT.

DATA SOURCES:  
 1. DRAWING BASE MAP PROVIDED BY UNITED STATES GEOLOGICAL SURVEY.

NOTES:  
 1. OBSTRUCTIONS TO PART 77 SURFACES ARE SHOWN ON SHEET 7A OF THIS ALP SET AT AN ENLARGED SCALE FOR CLARITY.

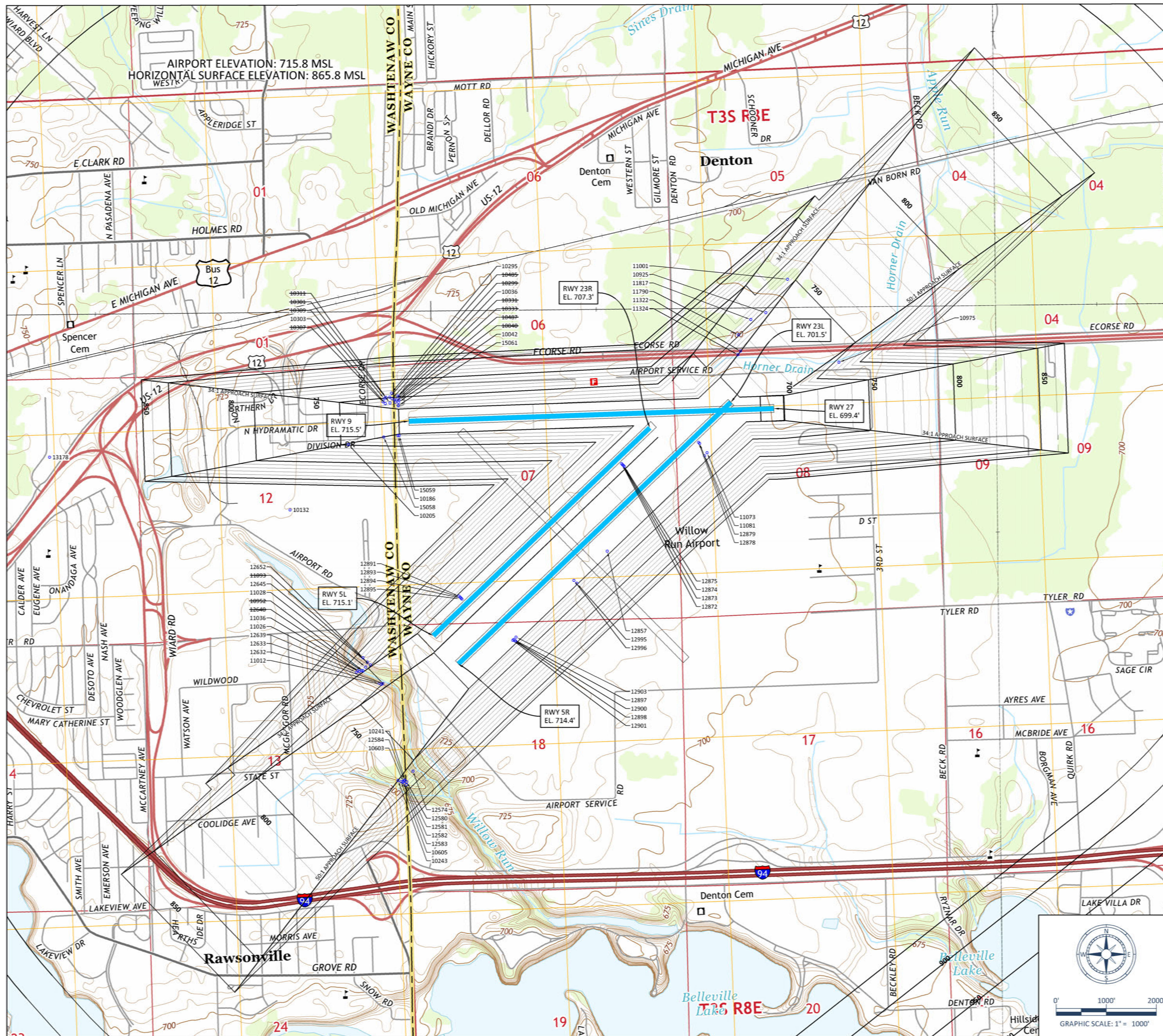


By	Date	Revisions

**WILLOW RUN AIRPORT**

**AIRPORT AIRSPACE DRAWING**

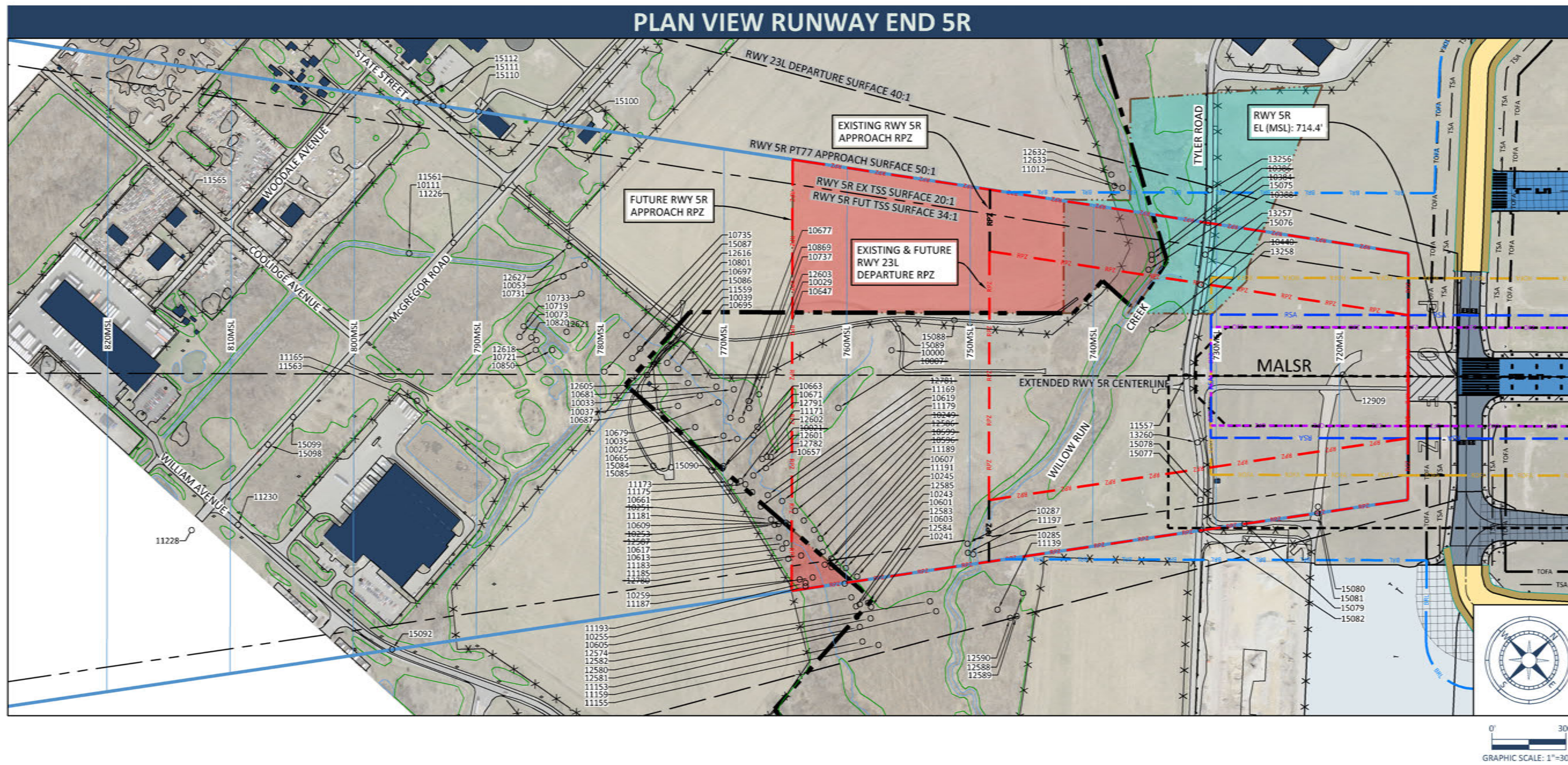
Drawn By: JGH Date: 01-18-2019  
 Approved By: MCI Job No: 037-15-03



**PART 77 OBSTRUCTION DATA**

POINT NO.	OBJECT	RUNWAY END	SURFACE	TOP ELEV (MSL)	PART77 PENETRATION	RESOLUTION
10036	TREE	9	P77TS	768.72	15.7912	TBR
10040	TREE	9-27	P77TS	745.2	3.9966	TBR
10042	TREE	9-27	P77TS	737.77	2.941	TBR
10132	BUILDING	-	P77HS	868.55	2.78	TBD
10186	FENCE	9	P77TS	720.73	0.4093	TBD
10205	LIGHT SUPPORT STRUCTURE	9	P77TS	759.12	10.667	TBD
10241	TREE	05R	P77TS	790.78	16.5272	TBR
10243	TREE	05R	P77TS	789.88	29.2951	TBR
10295	TREE	9	P77TS	767.56	4.8779	TBR
10299	TREE	9	P77TS	767.83	21.3823	TBR
10301	TREE	9	P77TS	744.65	9.7823	TBR
10303	TREE	9	P77TS	740.56	6.2031	TBR
10307	TREE	9	P77TS	770.91	30.8654	TBR
10309	TREE	9	P77TS	759.39	11.0160	TBR
10311	TREE	9	P77TS	761.13	8.9821	TBR
10331	TREE	9	P77TS	762.55	19.7443	TBR
10333	TREE	9	P77TS	763.62	21.4951	TBR
10405	TREE	9	P77TS	757.74	6.1172	TBR
10487	TREE	9	P77TS	754.99	18.9732	TBR
10603	TREE	05R	P77TS	789.47	16.8885	TBR
10605	TREE	05R	P77TS	788.72	20.1357	TBR
10925	TREE	23L	P77TS	752.17	9.2552	TBR
10952	TREE	05L	P77TS	780.32	24.4923	TBR
10975	TREE	23L	P77TS	759.41	0.2565	TBR
11001	TREE	23L	P77TS	769.17	1.8414	TBR
11012	TREE	05R	P77TS	754.98	3.5749	TBR
11026	TREE	05L	P77TS	773.5	6.3446	TBR
11028	TREE	05L	P77TS	758.91	1.1461	TBR
11036	TREE	05L	P77TS	769.35	7.1121	TBR
11073	NAVAID	23L	P77PS	741.39	37.3955	TBD
11081	NAVAID	23L	P77PS	709.53	5.3762	TBD
11093	TREE	05L	P77TS	766.18	2.0774	TBR
11322	PUBLIC ROAD PLUS 15FT	23L	P77TS	716.08	0.9523	TBD
11324	PUBLIC ROAD PLUS 15FT	23L	P77TS	716.28	3.3375	TBD
11790	TREE	23L	P77TS	752.08	0.0025	TBR
11817	TREE	23L	P77TS	760.09	1.3794	TBR
12574	TREE	05R	P77TS	774.87	3.6853	TBR
12580	TREE	05R	P77TS	784.07	3.2015	TBR
12581	TREE	05R	P77TS	789.91	4.0709	TBR
12582	TREE	05R	P77TS	786.11	6.172	TBR
12583	TREE	05R	P77TS	785.97	12.1689	TBR
12584	TREE	05R	P77TS	779.54	7.6518	TBR
12632	TREE	05R	P77TS	760.93	2.9133	TBR
12633	TREE	05R	P77TS	751.3	0.9009	TBR
12639	TREE	05L	P77TS	774.51	7.1521	TBR
12640	TREE	05L	P77TS	776.55	17.6740	TBR
12645	TREE	05L	P77TS	757.94	5.5241	TBR
12652	TREE	05L	P77TS	782.18	0.2392	TBR
12857	NAVAID	05R-23L	P77PS	725.6	14.0857	TBD
12872	NAVAID	23R	P77PS	710.03	1.6781	TBD
12873	NAVAID	23R	P77PS	710.03	1.6781	TBD
12874	NAVAID	23R	P77PS	710.03	1.6778	TBD
12875	NAVAID	23R	P77PS	710.03	1.6781	TBD
12878	NAVAID	05R-23L	P77PS	704.49	0.5361	TBD
12879	NAVAID	05R-23L	P77PS	704.24	0.2859	TBD
12891	NAVAID	23R	P77PS	715.9	1.1489	TBD
12893	NAVAID	23R	P77PS	715.86	1.1096	TBD
12894	NAVAID	23R	P77PS	715.79	1.0394	TBD
12895	NAVAID	23R	P77PS	715.68	0.9294	TBD
12897	BUILDING	05R-23L	P77PS	725.34	10.2078	TBD
12898	NAVAID	05R-23L	P77PS	722.64	7.5041	TBD
12900	NAVAID	05R-23L	P77PS	715.45	0.3242	TBD
12901	NAVAID	05R-23L	P77PS	759.32	44.1569	TBD
12903	NAVAID	05R-23L	P77PS	720.01	4.9585	TBD
12995	DIRT PILE	05R-23L	P77PS	715.29	2.3149	TBD
12996	DIRT PILE	05R-23L	P77PS	714.2	1.2209	TBD
13178	COMMUNICATION TOWER	-	P77CS	891.58	25.81	TBD
15058	PUBLIC ROAD PLUS 15FT	9	P77TS	731.71	6.9067	TBD
15059	PRIVATE ROAD PLUS 10FT	9	P77TS	724.72	5.3482	TBD
15061	PRIVATE ROAD PLUS 10FT	9	P77TS	725.52	0.0683	TBD

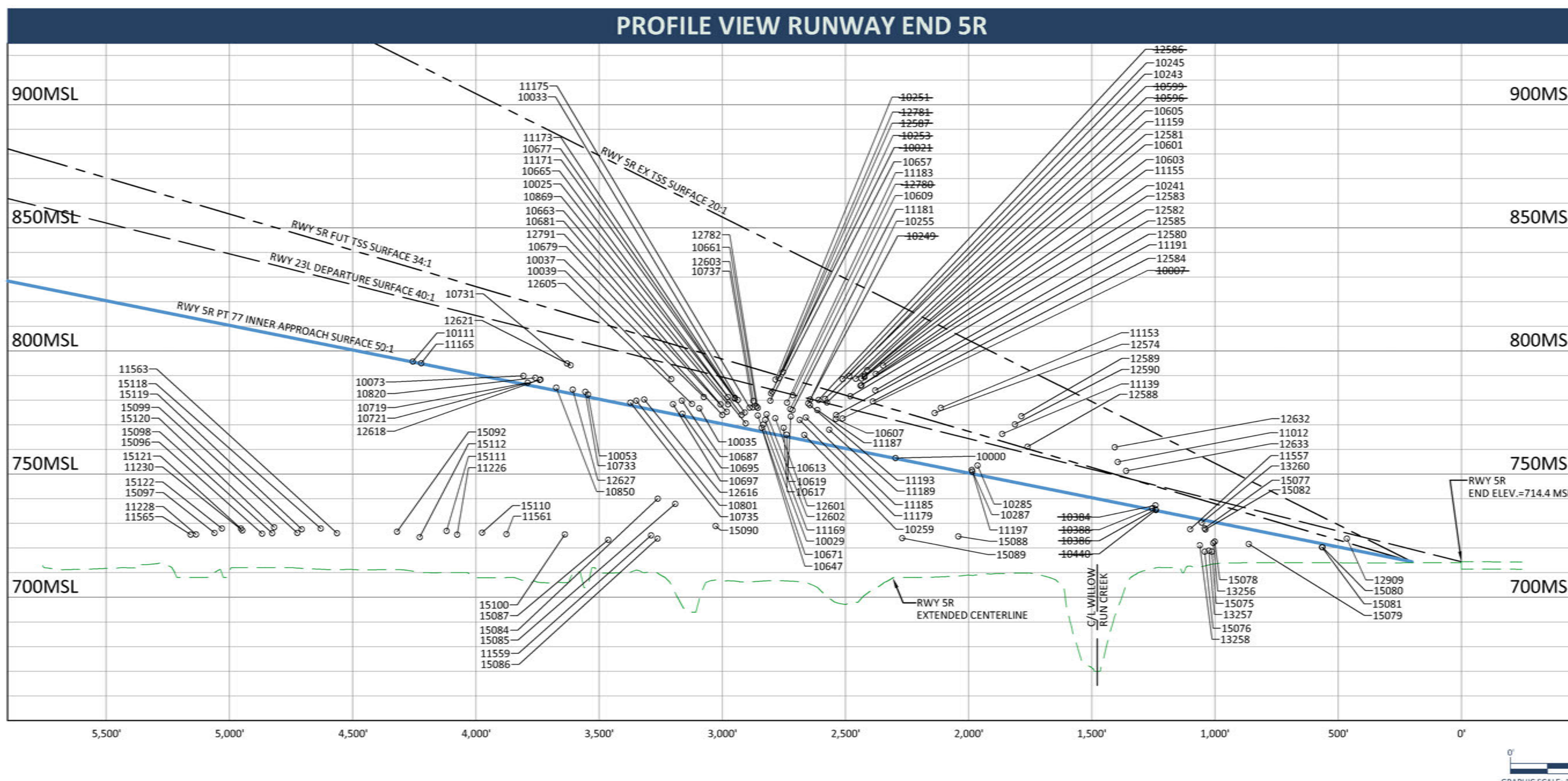
NOTES:  
 1. TBD = TO BE DETERMINED.  
 2. TBR = TO BE REMOVED.  
 3. OBSTRUCTION POINT LABELS WHICH HAVE A LINE DRAWN THROUGH THEM ARE TREES WHICH HAVE BEEN REMOVED AFTER THE DATE OF SURVEY.



### SURFACE OBSTRUCTION TABLES

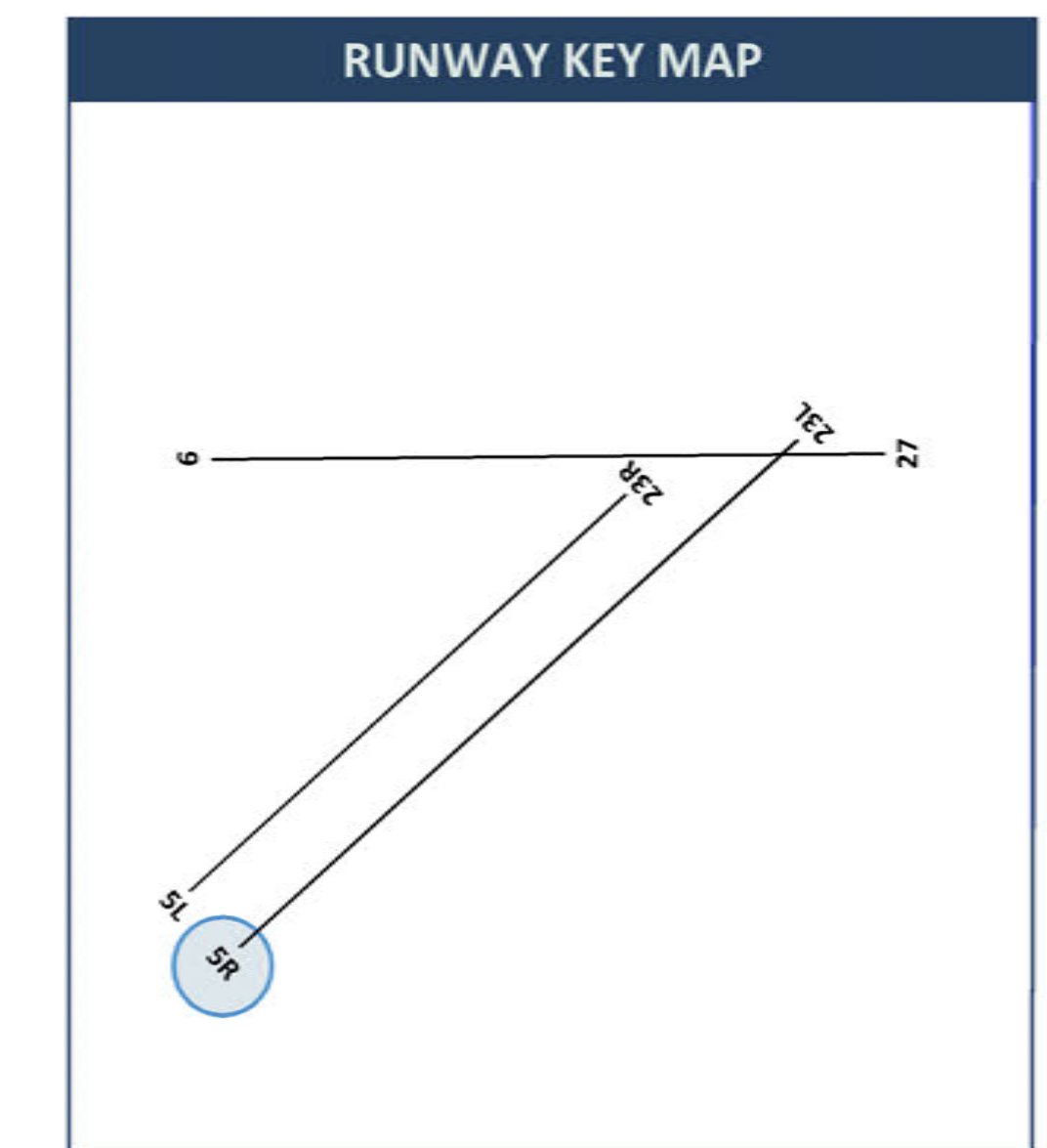
POINT No.	OBJECT	MSL	EX & FUT PT 77	EX TSS (20:1)	FUT TSS (34:1)	EX & FUT 23L DEPARTURE (40:1)	RESOLUTION	POINT No.	OBJECT	MSL	EX & FUT PT 77	EX TSS (20:1)	FUT TSS (34:1)	EX & FUT 23L DEPARTURE (40:1)	RESOLUTION
10000	TREE	756.56	0.20	-62.69	-19.53	-15.28	TBR	10735	TREE	779.05	1.16	-94.00	-28.69	-19.70	TBR
10001	TREE	752.63	11.95	-57.41	-9.91	-4.61	TBR	10737	TREE	777.10	9.15	-71.12	-16.04	-9.23	TBR
10002	TREE	782.82	16.36	-61.68	-8.13	-1.65	TBR	10801	TREE	779.86	2.45	-92.00	-27.18	-18.29	TBR
10025	TREE	781.32	11.34	-71.97	-14.80	-7.55	TBR	10820	TREE	789.17	3.57	-103.18	-29.92	-19.23	TBR
10029	TREE	770.11	2.99	-76.03	-21.80	-15.18	TBR	10850	TREE	785.09	1.19	-103.01	-31.50	-21.18	TBR
10033	TREE	780.13	10.97	-71.12	-14.79	-7.72	TBR	10869	TREE	770.61	2.07	-79.07	-23.38	-16.45	TBR
10035	TREE	776.70	4.40	-82.38	-22.82	-15.06	TBR	11012	TREE	754.98	3.57	-	-	5.68	TBR
10037	TREE	781.31	9.39	-76.84	-17.67	-9.99	TBR	11139	TREE	766.34	-10.09	-	-	5.32	TBR
10039	TREE	788.65	14.08	-76.12	-14.22	-5.96	TBR	11153	TREE	776.98	-0.01	-	-	9.72	TBR
10053	TREE	782.34	1.01	-99.33	-30.47	-20.71	TBR	11155	TREE	794.12	-2.15	-	-	21.01	TBR
10073	TREE	789.95	3.38	-104.82	-30.56	-19.65	TBR	11159	TREE	792.26	-2.00	-	-	17.52	TBR
10111	TREE	795.75	0.21	-121.44	-37.96	-25.07	TBR	11165	TREE	795.00	0.12	-120.54	-37.73	-24.99	TBR
10241	TREE	790.78	16.53	-	-	16.92	TBR	11169	TREE	772.00	5.04	-73.73	-19.67	-13.09	TBR
10243	TREE	789.88	29.30	-	-	13.34	TBR	11171	TREE	775.00	6.39	-74.86	-19.10	-12.15	TBR
10245	TREE	788.61	27.94	-	-	11.39	TBR	11173	TREE	781.00	11.58	-70.88	-14.29	-7.16	TBR
10249	TREE	778.75	15.30	-58.22	7.77	1.95	TBR	11175	TREE	777.00	8.79	-71.86	-16.51	-9.65	TBR
10251	TREE	788.46	22.34	-55.18	1.98	4.42	TBR	11179	TREE	772.00	7.85	-66.72	-15.55	-9.58	TBR
10253	TREE	793.39	25.87	-58.74	1.84	8.18	TBR	11253	TREE	776.00	11.27	-64.17	-12.40	-6.30	TBR
10255	TREE	780.30	17.00	-	-	-0.21	TBR	11183	TREE	779.00	13.82	-62.29	-10.06	-3.86	TBR
10259	TREE	765.90	2.13	-	-	-15.20	TBR	11185	TREE	773.00	9.35	-64.48	-13.81	-7.96	TBR
10285	TREE	753.53	3.82	-	-	-10.00	TBR	11187	TREE	776.00	13.28	-	-	-3.79	TBR
10287	TREE	751.78	1.62	-	-	-12.31	TBR	11189	TREE	768.00	6.25	-	-	-10.57	TBR
10304	TREE	737.35	2.69	-29.15	7.91	0.12	TBR	11191	TREE	774.00	12.82	-	-	-3.87	TBR
10306	TREE	735.70	0.52	-30.72	9.20	9.69	TBR	11193	TREE	778.00	14.70	-	-	-2.52	TBR
10390	TREE	736.18	0.65	-38.90	9.27	9.62	TBR	11197	TREE	751.00	0.87	-	-	-13.05	TBR
10440	TREE	735.49	0.26	-30.92	9.52	9.94	TBR	12574	TREE	774.87	3.69	-	-	6.99	TBR
10596	TREE	779.16	17.24	-53.98	5.11	0.37	TBR	12580	TREE	774.07	3.20	-	-	10.17	TBR
10599	TREE	780.56	18.46	-53.03	3.97	1.55	TBR	12581	TREE	789.91	4.07	-	-	14.90	TBR
10601	TREE	788.80	29.67	-	-	13.50	TBR	12582	TREE	786.11	6.17	-	-	10.80	TBR
10603	TREE	789.47	16.89	-	-	14.47	TBR	12583	TREE	785.97	12.17	-	-	10.58	TBR
10605	TREE	788.72	20.14	-	-	12.85	TBR	12584	TREE	779.54	7.65	-	-	5.38	TBR
10607	TREE	772.43	11.22	-58.94	-10.79	-5.48	TBR	12585	TREE	781.59	21.55	-	-	5.15	TBR
10609	TREE	776.46	11.55	-64.16	-12.21	-6.07	TBR	12586	TREE	780.13	17.52	-54.75	-5.15	0.47	TBR
10613	TREE	773.44	8.58	-67.06	-15.15	-9.03	TBR	12587	TREE	789.03	23.21	-53.07	0.97	5.36	TBR
10617	TREE	768.85	3.39	-73.14	-20.62	-14.37	TBR	12588	TREE	761.15	-5.83	-	-	2.70	TBR
10619	TREE	766.03	0.82	-75.33	-23.07	-16.87	TBR	12589	TREE	773.56	-6.59	-	-	14.48	TBR
10647	TREE	768.88	1.65	-77.54	-23.20	-16.55	TBR	12590	TREE	770.20	-11.03	-	-	10.46	TBR
10657	TREE	779.81	13.27	-64.88	-11.25	-4.75	TBR	12601	TREE	772.70	6.56	-70.98	-17.76	-11.36	TBR
10661	TREE	777.49	9.85	-69.96	-15.19	-8.46	TBR	12602	TREE	774.30	7.46	-71.14	-17.20	-10.64	TBR
10663	TREE	778.33	8.35	-74.95	-17.78	-10.53	TBR	12603	TREE	779.71	11.79	-68.43	-13.37	-6.58	TBR
10665	TREE	774.08	5.21	-76.43	-20.40	-13.39	TBR	12605	TREE	778.54	5.66	-82.00	-21.84	-13.95	TBR
10671	TREE	773.86	6.31	-73.34	-18.68	-11.96	TBR	12616	TREE	780.29	3.52	-89.98	-25.82	-17.07	TBR
10677	TREE	780.77	11.34	-71.13	-14.53	-7.40	TBR	12618	TREE	788.40	3.22	-102.90	-30.07	-19.47	TBR
10679	TREE	774.04	3.61	-80.38	-22.74	-15.39	TBR	12621	TREE	794.24	11.48	-91.00	-20.67	-10.60	TBR
10681	TREE	778.30	7.73	-76.46	-18.68	-11.30	TBR	12627	TREE	784.37	1.80	-100.39	-30.26	-20.23	TBR
10687	TREE	779.81	6.11	-82.79	-21.78	-13.71	TBR	12632	TREE	760.93	2.91	-	-	11.34	TBR
10695	TREE	774.49	0.81	-88.04	-27.06	-19.00	TBR	12633	TREE	751.30	0.90	-	-	2.84	TBR
10697	TREE	778.47	4.05	-85.92	-24.18	-15.95	TBR	12700	TREE	782.03	17.33	-58.07	6.33	0.24	TBR
10719	TREE	787.16	0.93	-106.77	-32.86	-22.02	TBR	12701	TREE	783.49	17.11	-60.80	7.33	0.87	TBR
10721	TREE	788.23	2.98	-103.23	-30.34	-19.72	TBR	12782	TREE	776.92	9.37	-70.30	-15.63	-8.91	TBR
10731	TREE	794.97	11.94	-90.94	-20.34	-10.21	TBR	12791	TREE	775.32	5.24	-78.21	-20.94	-13.67	TBR
10733	TREE	783.43	1.88	-98.80	-29.71	-19.90	TBR	12909	NAVAID	723.86	4.14	-3.79	1.65	-2.18	TBD

NOTES:  
 1. TBD = TO BE DETERMINED.  
 2. TBR = TO BE REMOVED.  
 3. OBSTRUCTION POINT LABELS WHICH HAVE A LINE DRAWN THROUGH THEM ARE TREES WHICH HAVE BEEN REMOVED AFTER THE DATE OF SURVEY.



### LEGEND

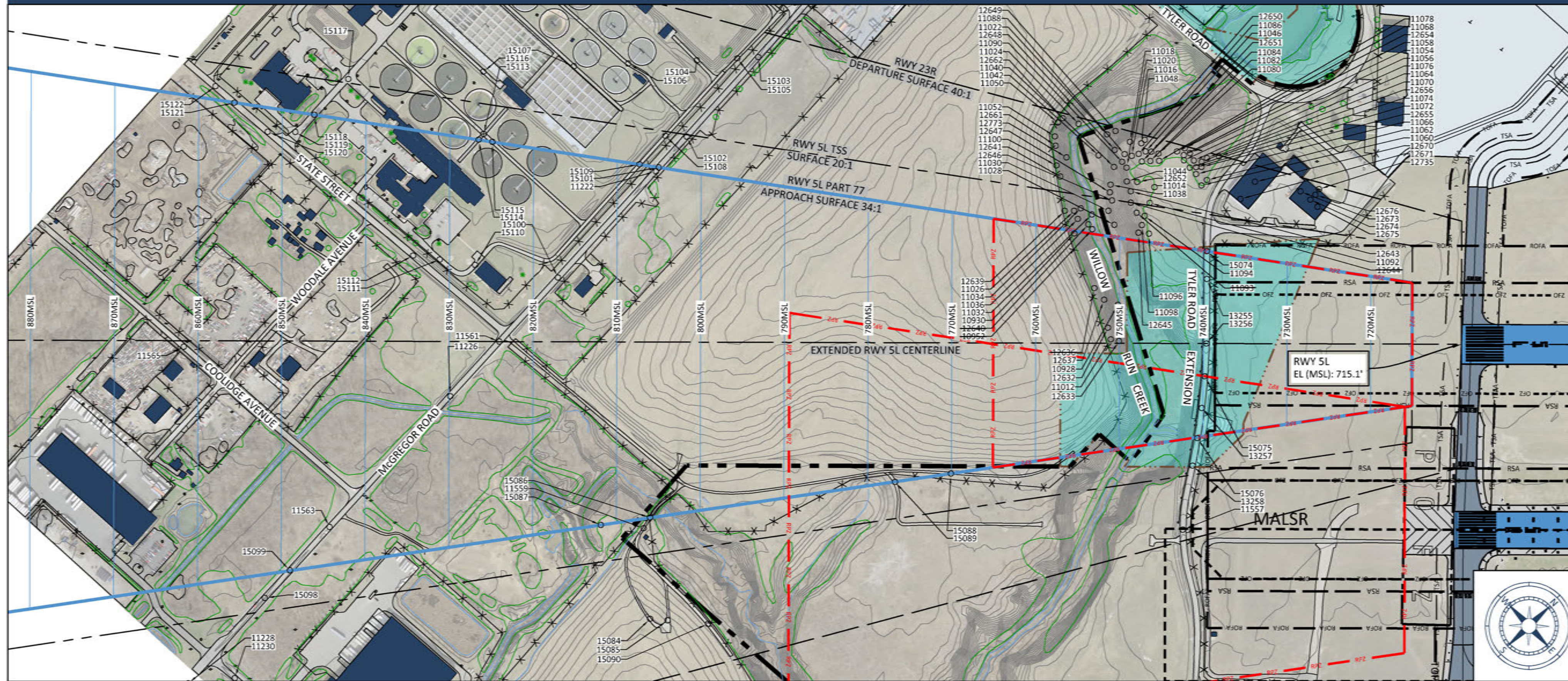
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EXISTING GROUND CONTOUR	~
EXISTING EDGE OF WATER	~
EXISTING TREE LINE	~
EXISTING FENCE	---
EXISTING BUILDING	■
EXISTING RUNWAY	▬
EXISTING TAXIWAY	▬
EXISTING SHOULDER	▬
FUTURE TAXIWAY SAFETY AREA (TSA)	--- TSA --- TSA
NAVAID CRITICAL AREA	---
FUTURE RUNWAY SAFETY AREA (RSA)	▬ RSA ▬ RSA
FUTURE RUNWAY OBSTACLE FREE ZONE (OFZ)	▬ OFZ ▬ OFZ
FUTURE RUNWAY PROTECTION ZONE (RPZ)	▬ RPZ ▬ RPZ
FUTURE RUNWAY OBJECT FREE AREA (ROFA)	▬ ROFA ▬ ROFA
FUTURE TAXIWAY OBJECT FREE AREA (TOFA)	▬ TOFA ▬ TOFA
FUTURE PRECISION OBSTACLE FREE ZONE (POFZ)	▬ POFZ ▬ POFZ
FUTURE TAXIWAY PAVEMENT	▬
FUTURE SHOULDER PAVEMENT	▬
FUTURE DEMOLITION	▬
EXISTING AVIGATION EASEMENT	▬
FUTURE AVIGATION EASEMENT	▬



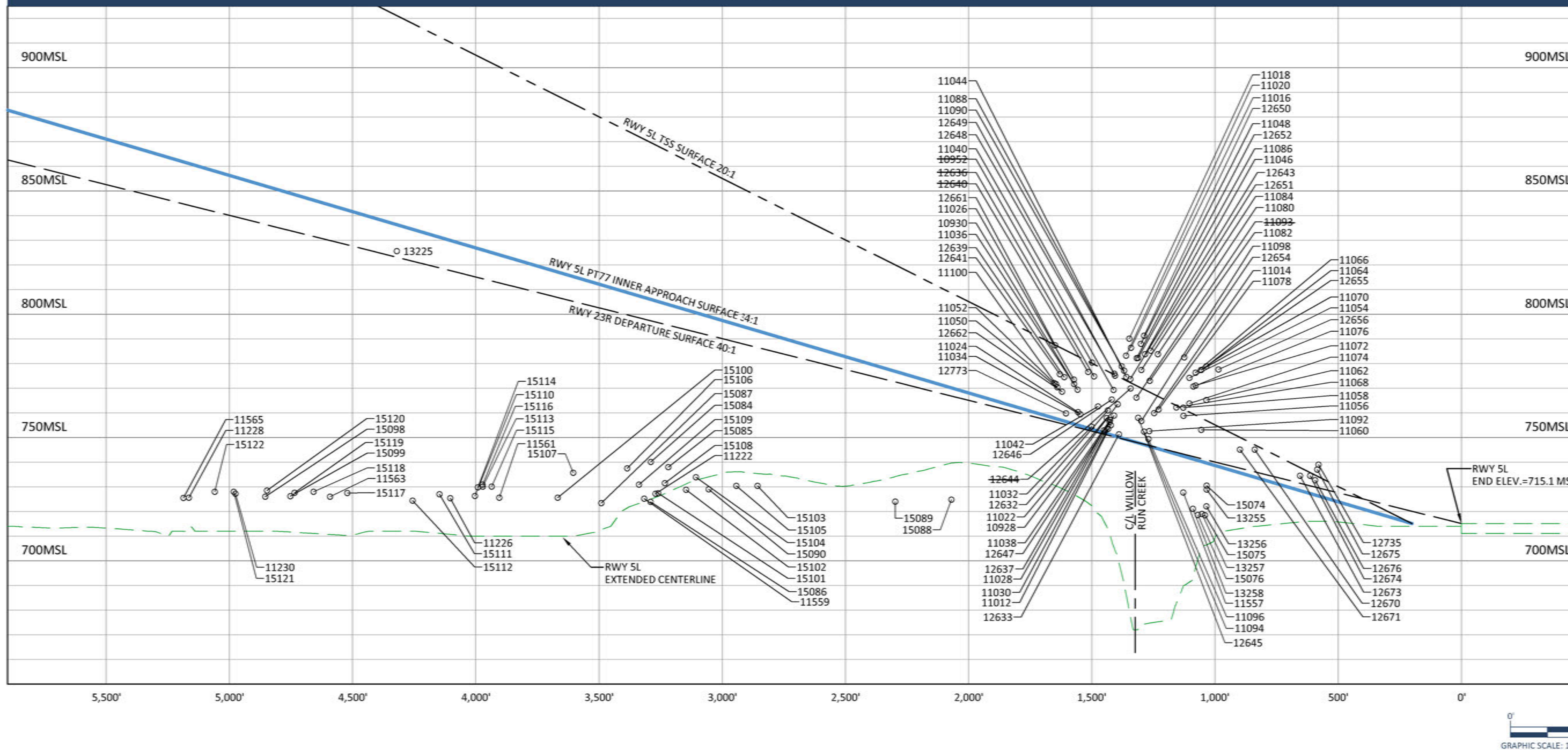
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 ALP PREPARED BY:



PLAN VIEW RUNWAY END 5L



PROFILE VIEW RUNWAY END 5L



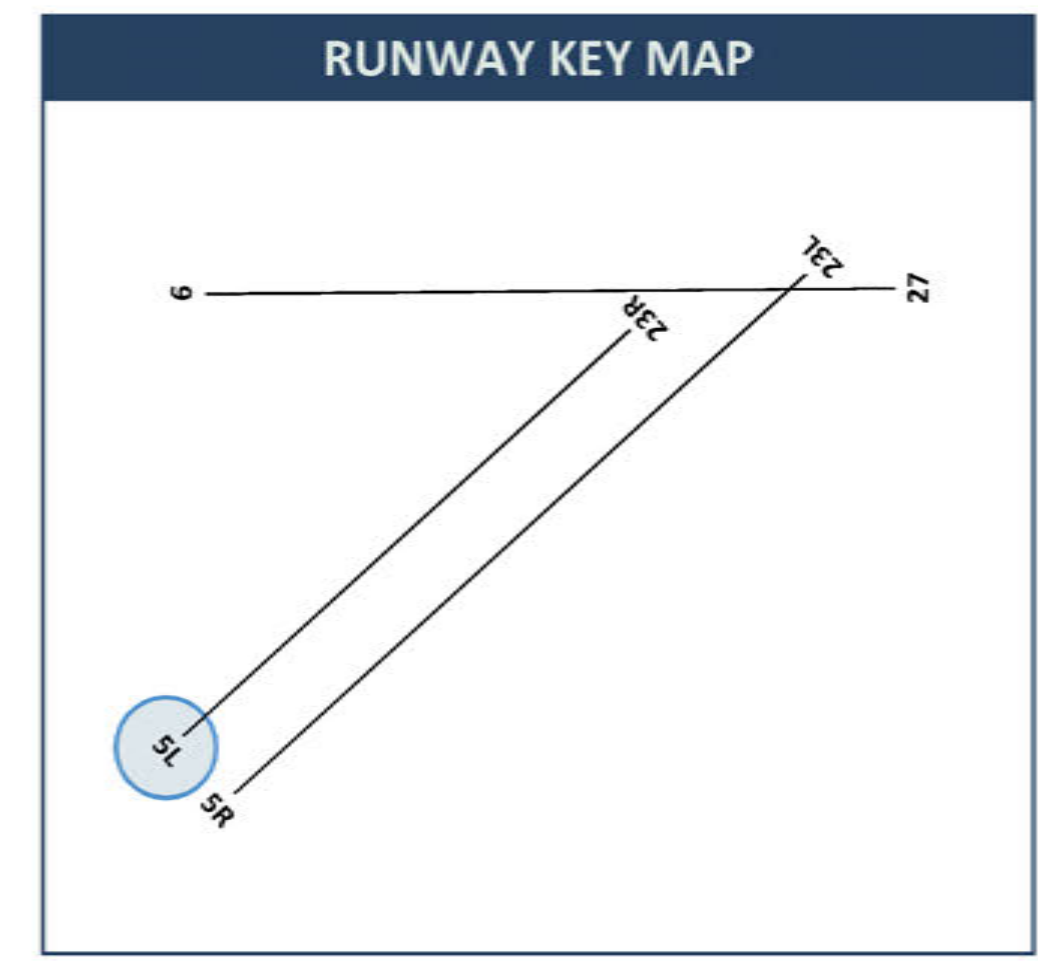
SURFACE OBSTRUCTION TABLES

POINT No.	OBJECT	TOP ELEV. (MSL)	EX PT 77	EX TSS (20-1)	EX DEPARTURE (40-1)	RESOLUTION
10928	TREE	763.44	13.25	-11.34	13.52	TBR
10930	TREE	771.57	16.27	-11.97	17.32	TBR
10958	TREE	766.33	14.49	-12.22	14.35	TBR
11012	TREE	754.98	3.95	-	4.35	TBR
11014	TREE	759.91	-18.47	-	13.67	TBR
11016	TREE	786.39	-10.78	-	37.82	TBR
11018	TREE	790.04	-15.34	-	41.29	TBR
11020	TREE	783.19	-7.31	-	34.12	TBR
11022	TREE	757.90	-52.45	-	6.84	TBR
11024	TREE	760.29	-57.15	-	6.33	TBR
11026	TREE	773.50	6.34	-10.20	19.12	TBR
11028	TREE	758.91	1.15	-16.63	8.61	TBR
11030	TREE	753.49	-12.64	-23.28	2.58	TBR
11032	TREE	754.40	-10.06	-25.72	1.81	TBR
11034	TREE	759.38	-9.04	-23.00	5.66	TBR
11036	TREE	769.35	7.11	-13.61	15.34	TBR
11038	TREE	757.10	-24.07	-	6.40	TBR
11040	TREE	769.28	-22.11	-	18.93	TBR
11042	TREE	762.61	-35.94	-	10.68	TBR
11044	TREE	774.57	-7.95	-	25.51	TBR
11046	TREE	783.80	-15.59	-	36.64	TBR
11048	TREE	788.00	-16.14	-	40.42	TBR
11050	TREE	770.40	-48.41	-	14.33	TBR
11052	TREE	772.09	-38.83	-	15.72	TBR
11054	TREE	774.17	-22.87	-	31.52	TBR
11056	TREE	758.73	-34.32	-	15.46	TBR
11058	TREE	762.08	-33.95	-	18.79	TBR
11060	TREE	753.06	-24.93	-	11.59	TBR
11062	TREE	765.17	-15.69	-	24.23	TBR
11064	TREE	778.86	-14.77	-	37.93	TBR
11066	TREE	776.23	-8.46	-	34.20	TBR
11068	TREE	762.15	-36.18	-	18.18	TBR
11070	TREE	777.32	-14.31	-	35.86	TBR
11072	TREE	771.09	-17.56	-	29.05	TBR
11074	TREE	763.78	-24.87	-	21.11	TBR
11076	TREE	770.68	-21.95	-	28.43	TBR
11078	TREE	761.40	-32.06	-	15.61	TBR
11080	TREE	783.79	-13.92	-	37.94	TBR
11082	TREE	772.97	-20.62	-	26.29	TBR
11084	TREE	777.38	-16.27	-	29.84	TBR
11086	TREE	782.26	-15.85	-	34.39	TBR
11088	TREE	777.02	-21.41	-	27.73	TBR
11090	TREE	778.82	-15.24	-	29.29	TBR
11092	TREE	752.53	-16.84	-	5.81	TBR
11093	TREE	766.38	2.89	-4.82	18.15	TBR
11094	TREE	752.38	-9.60	-17.06	5.13	TBR
11096	TREE	749.37	-2.18	-19.16	2.57	TBR
11098	TREE	756.62	-0.18	-13.37	9.10	TBR
11100	TREE	771.70	-22.20	-	15.50	TBR
12632	TREE	760.93	9.56	-15.87	10.00	TBR
12633	TREE	751.30	1.26	-23.23	1.50	TBR
12636	TREE	744.48	21.79	-4.79	26.49	TBR
12637	TREE	752.83	0.98	-24.77	1.50	TBR
12639	TREE	774.51	7.35	-11.13	19.16	TBR
12640	TREE	796.55	27.67	-4.26	29.64	TBR
12641	TREE	775.68	-11.71	-	19.87	TBR
12643	TREE	773.63	-3.10	-	24.98	TBR
12644	TREE	768.91	6.16	-2.30	24.28	TBR
12645	TREE	757.94	5.52	-12.73	10.08	TBR
12646	TREE	765.39	-6.61	-10.62	14.85	TBR
12647	TREE	756.26	-20.52	-	5.49	TBR
12648	TREE	775.90	-25.34	-	25.62	TBR
12649	TREE	775.09	-37.10	-	24.88	TBR
12650	TREE	791.23	-14.84	-	43.98	TBR
12651	TREE	785.17	-13.92	-	38.60	TBR
12652	TREE	782.18	0.24	-	34.18	TBR
12654	TREE	782.47	-17.58	-	39.28	TBR
12655	TREE	777.36	-11.30	-	35.89	TBR
12656	TREE	777.58	-16.63	-	37.88	TBR
12661	TREE	787.36	-18.12	-	31.08	TBR
12662	TREE	768.52	-52.71	-	12.95	TBR
12670	BUILDING	745.02	-33.36	-	8.98	TBD
12671	BUILDING	745.02	-23.80	-	7.49	TBD
12673	BUILDING	734.51	-36.90	-	3.08	TBD
12674	BUILDING	734.51	-31.74	-	4.09	TBD
12675	BUILDING	736.99	-24.96	-	7.30	TBD
12676	BUILDING	732.68	-36.32	-	2.77	TBD
12735	POLE	738.97	-33.16	-	9.41	TBD
12773	TREE	759.72	-38.66	-	4.55	TBR
13225	CHIMNEY/SMOKESTACK	825.59	-	-	2.53	TBD

NOTES:  
 1. TBD = TO BE DETERMINED.  
 2. TBR = TO BE REMOVED.  
 3. OBSTRUCTION POINT LABELS WHICH HAVE A LINE DRAWN THROUGH THEM ARE TREES WHICH HAVE BEEN REMOVED AFTER THE DATE OF SURVEY.

**LEGEND**

- AIRPORT BOUNDARY
- EXISTING GROUND CONTOUR
- EXISTING EDGE OF WATER
- EXISTING TREE LINE
- EXISTING FENCE
- EXISTING BUILDING
- EXISTING RUNWAY
- EXISTING TAXIWAY
- EXISTING SHOULDER
- EXISTING RUNWAY SAFETY AREA (RSA)
- EXISTING RUNWAY OBJECT FREE AREA (ROFA)
- EXISTING RUNWAY OBSTACLE FREE ZONE (OFZ)
- EXISTING TAXIWAY OBJECT FREE AREA (TOFA)
- EXISTING TAXIWAY SAFETY AREA (TSA)
- NAVAID CRITICAL AREA
- FUTURE RUNWAY PROTECTION ZONE (RPZ)
- FUTURE PRECISION OBSTACLE FREE ZONE (POFZ)
- EXISTING AVIGATION EASEMENT



Coordinate: 42 ACAD.ctb, L:\Scale: 1:1000, L:\Draw: 3/12/2018 1:35 PM, Project: Willow Run Airport Master Plan Update 13 - RWY 5L TSS SURFACE 20-1, Layer: SHEET 10  
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FAA'S APPROVAL OF THIS AIRPORT LAYOUT PLAN (ALP) REPRESENTS ACCEPTANCE OF THE GENERAL LOCATION OF FUTURE FACILITIES DEPICTED (SHEET 1714404). DURING THE PRELIMINARY DESIGN PHASE, THE AIRPORT OWNER IS REQUIRED TO RESUBMIT FOR APPROVAL THE FINAL LOCATIONS, HEIGHTS, AND EXTERIOR FINISH OF STRUCTURES. FAA'S CONCERN IS OBSTRUCTIONS, IMPACT ON ELECTRONIC AIDS, OR ADVERSE EFFECTS ON CONTROLLER VIEW OF AIRCRAFT APPROACHES AND GROUND MOVEMENT AREAS WHICH COULD ADVERSELY AFFECT THE SAFETY, EFFICIENCY, OR UTILITY OF THE AIRPORT.

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 2012), AND NAD 83 (2011).  
 3. OBSTRUCTION POINT LABELS IN PLAN VIEW WHICH HAVE A LINE DRAWN THROUGH THEM ARE TREES WHICH HAVE BEEN REMOVED AFTER THE DATE OF SURVEY.

By	Date	Revisions

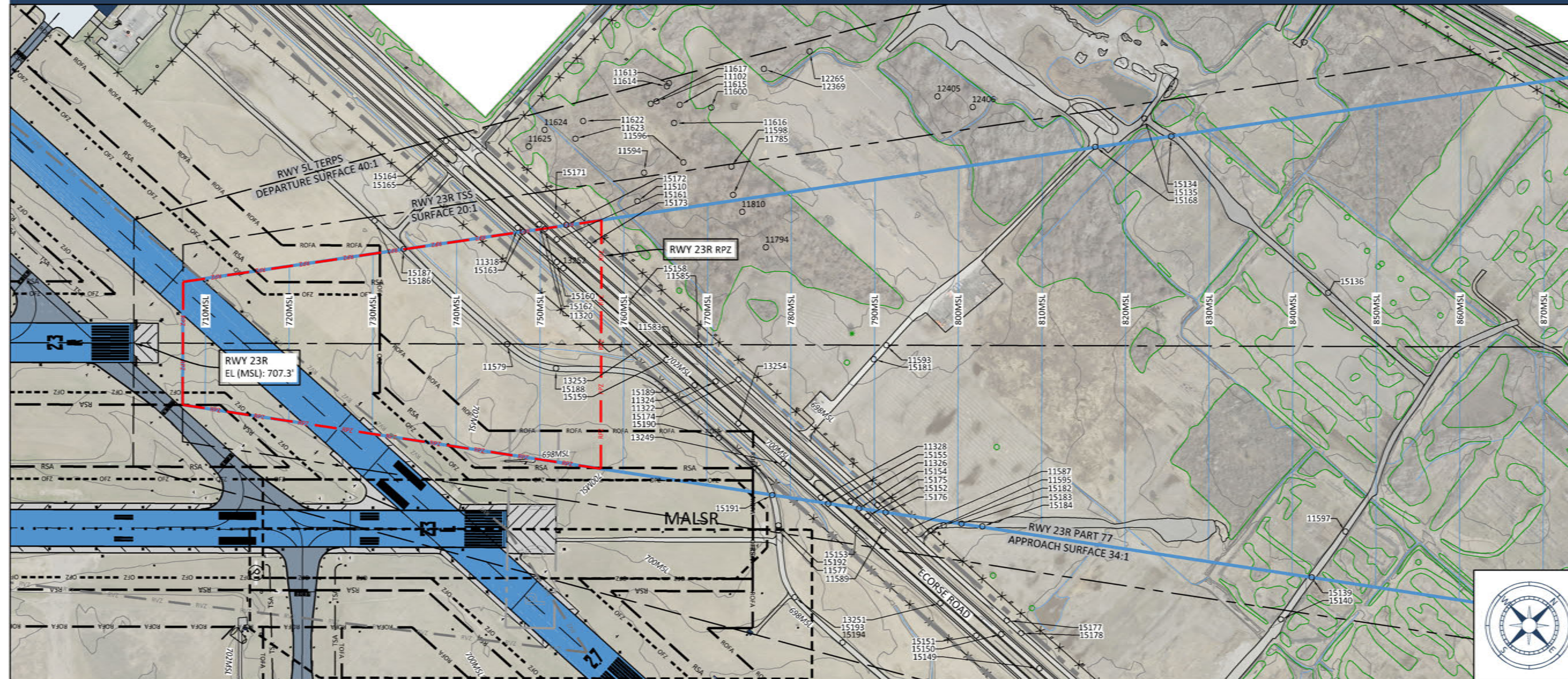


**WILLOW RUN AIRPORT**

**5L APPROACH & 23R DEPARTURE PLAN & PROFILE**

Drawn By: JGH Date: 01-18-2019  
 Approved By: MCJ Job No: 037-15-03

### PLAN VIEW RUNWAY END 23R

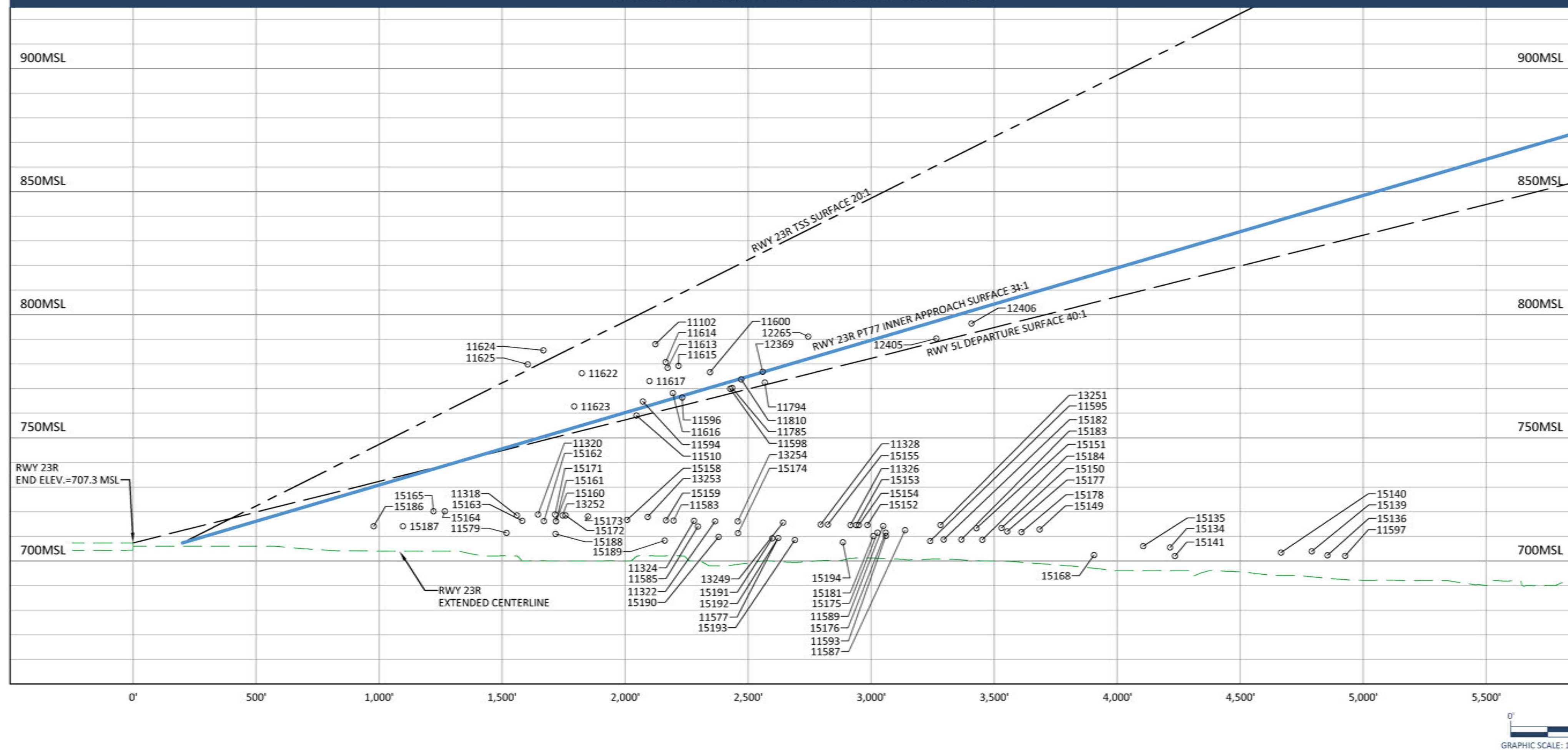


### SURFACE OBSTRUCTION TABLES

POINT NO.	OBJECT	TOP ELEV (MSL)	EX & FUT PT 77	EX TSS (20:1)	EX SL DEPARTURE (40:1)	RESOLUTION
11102	TREE	788.01	-40.03	-	27.62	TBR
11510	TREE	759.1	-10.31	-40.53	0.64	TBR
11594	TREE	764.75	-21.50	-	5.64	TBR
11596	TREE	766.33	-27.31	-	3.22	TBR
11598	TREE	769.94	-22.89	-48.74	1.95	TBR
11600	TREE	776.63	-49.71	-	10.71	TBR
11613	TREE	778.48	-60.58	-	16.85	TBR
11614	TREE	780.77	-56.42	-	19.34	TBR
11615	TREE	779.27	-47.57	-	16.53	TBR
11616	TREE	768.18	-47.88	-	6.02	TBR
11617	TREE	773.02	-53.46	-	13.25	TBR
11622	TREE	776.28	-37.86	-	23.36	TBR
11623	TREE	762.73	-40.94	-	10.60	TBR
11624	TREE	785.52	-22.14	-	36.52	TBR
11625	TREE	779.89	-17.68	-	32.50	TBR
11785	TREE	770.29	-6.10	-48.77	2.11	TBR
11794	TREE	772.49	-4.47	-53.24	0.98	TBR
11810	TREE	773.73	-0.41	-47.20	4.62	TBR
12265	TREE	791.11	-71.18	-	15.19	TBR
12369	TREE	776.85	-73.77	-	5.58	TBR
12405	TREE	790.33	-50.25	-	1.40	TBR
12406	TREE	796.46	-39.11	-	3.96	TBR

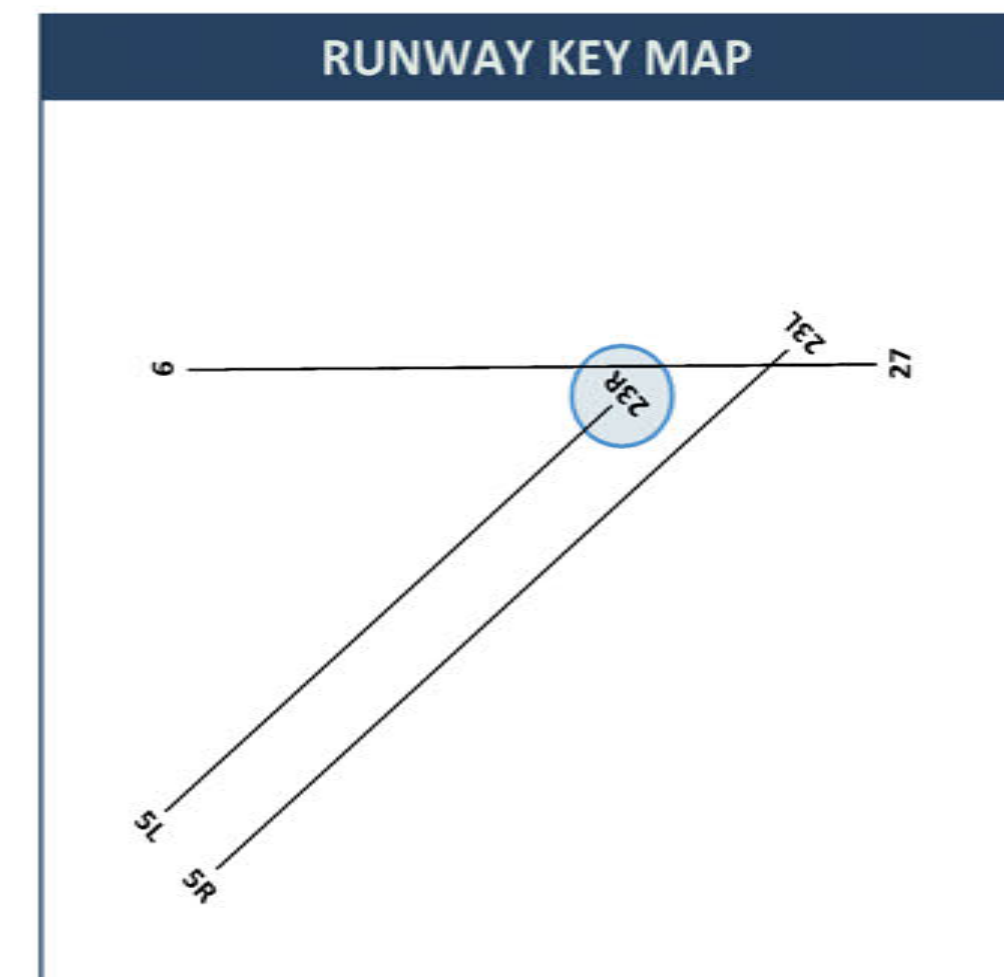
NOTES:  
 1. TBD = TO BE DETERMINED.  
 2. TBR = TO BE REMOVED.

### PROFILE VIEW RUNWAY END 23R



#### LEGEND

- AIRPORT BOUNDARY
- EXISTING GROUND CONTOUR
- EXISTING EDGE OF WATER
- EXISTING TREE LINE
- EXISTING FENCE
- EXISTING RUNWAY
- EXISTING TAXIWAY
- EXISTING SHOULDER
- EXISTING RUNWAY SAFETY AREA (RSA)
- EXISTING RUNWAY OBJECT FREE AREA (ROFA)
- EXISTING RUNWAY OBSTACLE FREE ZONE (OFZ)
- EXISTING TAXIWAY OBJECT FREE AREA (TOFA)
- EXISTING TAXIWAY SAFETY AREA (TSA)
- PAPI-4
- WINDSOCK
- NAVAID CRITICAL AREA
- FUTURE RUNWAY PROTECTION ZONE (RPZ)
- FUTURE PRECISION OBSTACLE FREE ZONE (POFZ)



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FAA'S APPROVAL OF THIS AIRPORT LAYOUT PLAN (ALP) REPRESENTS ACCEPTANCE OF THE GENERAL LOCATION OF FUTURE FACILITIES DEPICTED (SHEET 07144C04). DURING THE PRELIMINARY DESIGN PHASE, THE AIRPORT OWNER IS REQUIRED TO RESUBMIT FOR APPROVAL THE FINAL LOCATIONS, HEIGHTS, AND EXTERIOR FINISH OF STRUCTURES. FAA'S CONCERN IS OBSTRUCTIONS, IMPACT ON ELECTRONIC AIDS, OR ADVERSE EFFECTS ON CONTROLLER VIEW OF AIRCRAFT APPROACHES AND GROUND MOVEMENT AREAS WHICH COULD ADVERSELY AFFECT THE SAFETY, EFFICIENCY, OR UTILITY OF THE AIRPORT.

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).



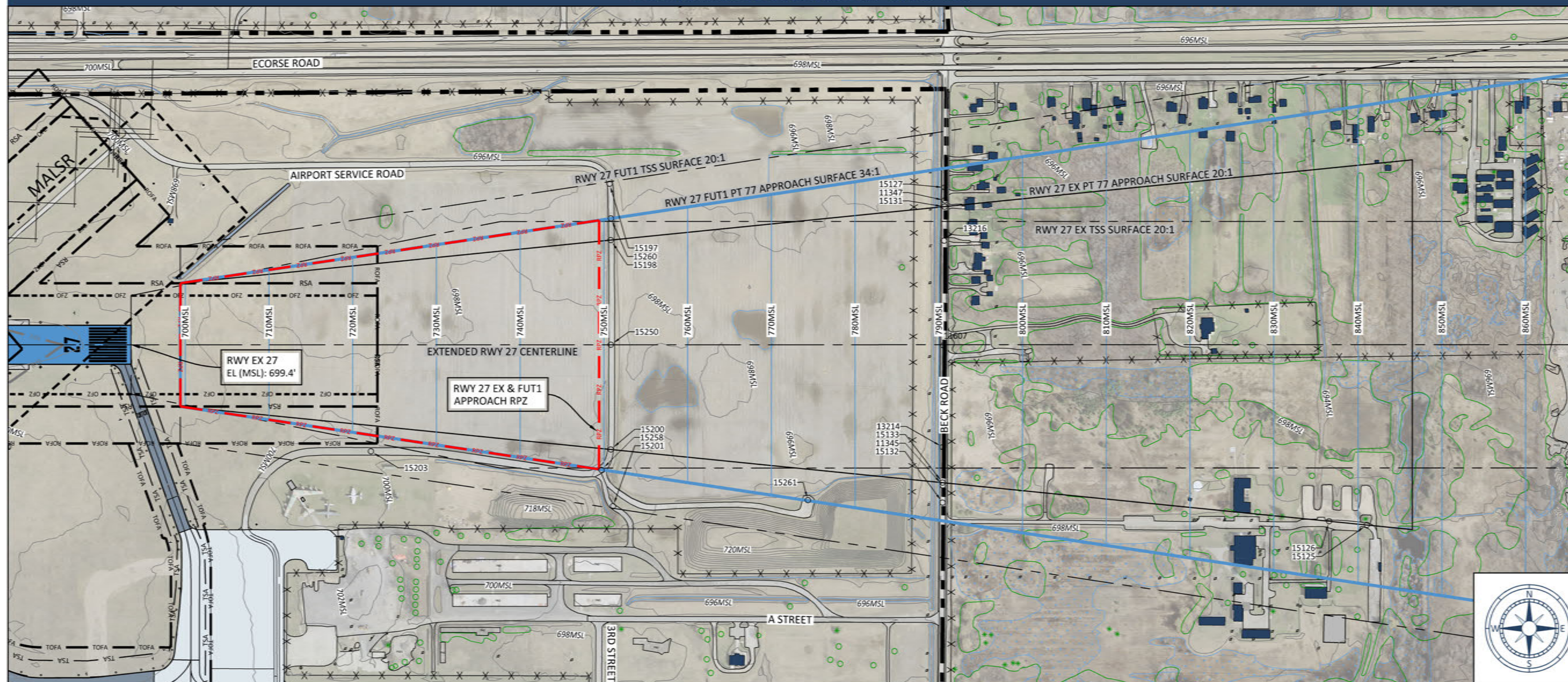
By	Date	Revisions

WILLOW RUN AIRPORT

**23R APPROACH & 5L DEPARTURE PLAN & PROFILE**  
 Drawn By: SRG Date: 01-18-2019  
 Approved By: MCJ Job No: 037-15-03



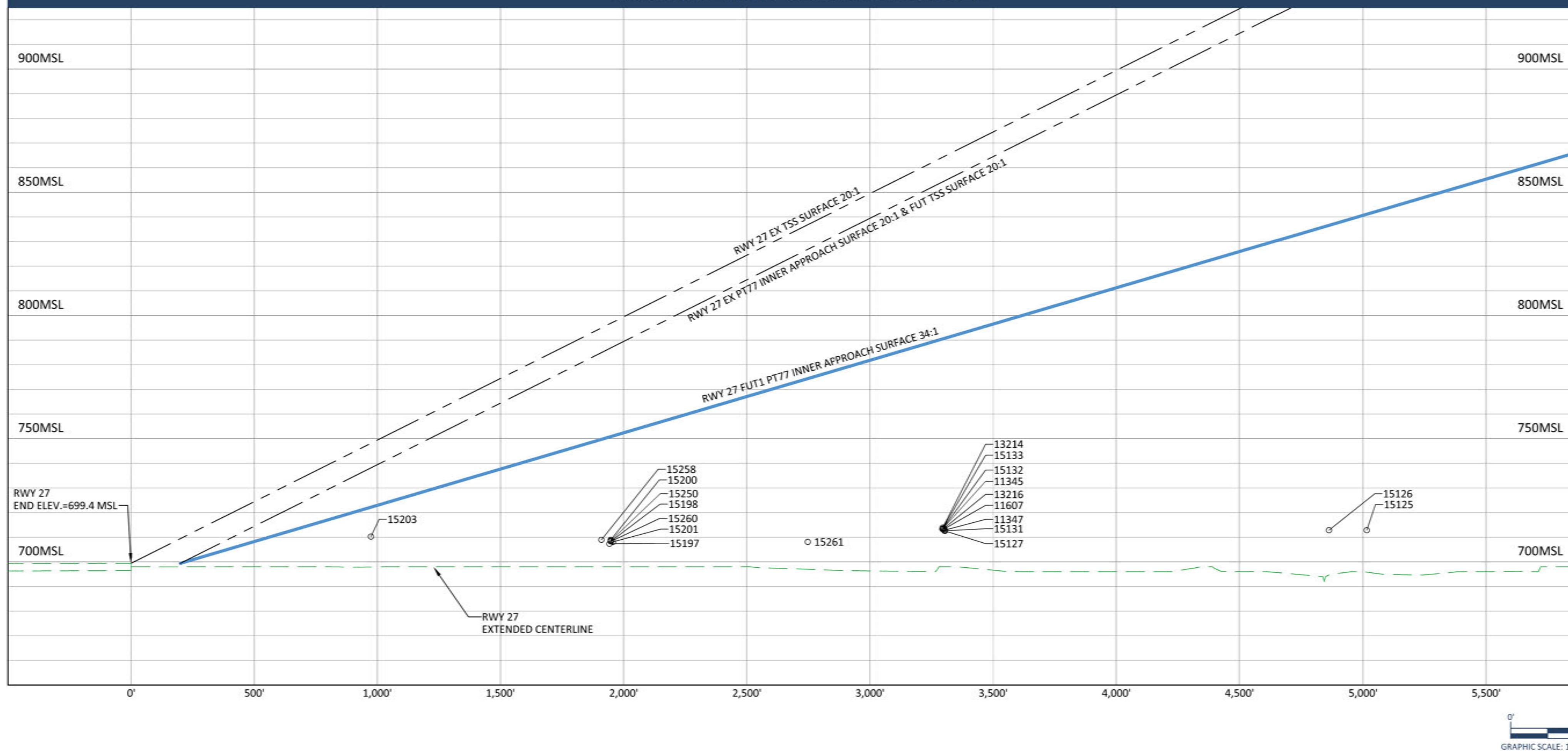
**PLAN VIEW RUNWAY END 27**



**SURFACE OBSTRUCTION TABLES**

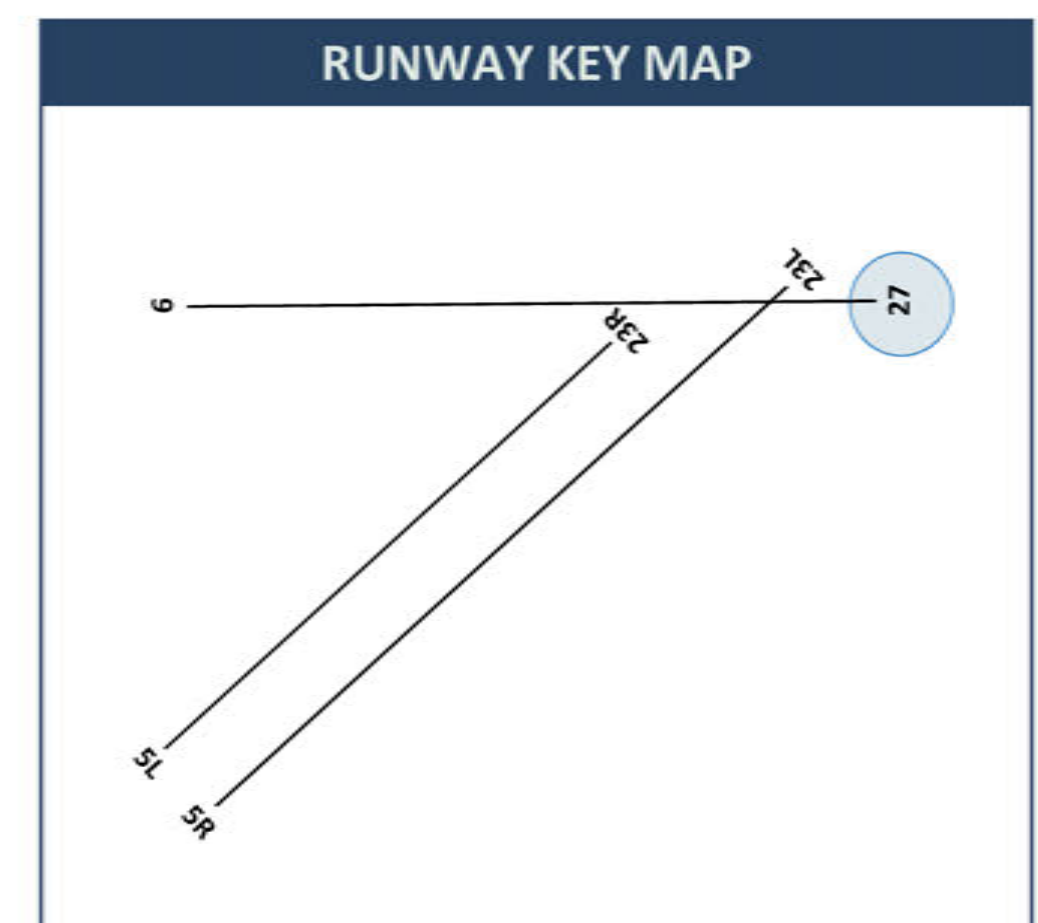
THERE ARE NO PENETRATIONS TO ANY SURFACE SHOWN ON THIS SHEET, THEREFORE, THERE IS NO TABLE.

**PROFILE VIEW RUNWAY END 27**



**LEGEND**

- AIRPORT BOUNDARY
- EXISTING GROUND CONTOUR
- EXISTING EDGE OF WATER
- EXISTING TREE LINE
- EXISTING FENCE
- EXISTING BUILDING
- EXISTING RUNWAY
- EXISTING TAXIWAY
- EXISTING SHOULDER
- EXISTING RUNWAY SAFETY AREA (RSA)
- EXISTING RUNWAY OBJECT FREE AREA (ROFA)
- EXISTING RUNWAY OBSTACLE FREE ZONE (OFZ)
- EXISTING TAXIWAY OBJECT FREE AREA (TOFA)
- EXISTING TAXIWAY SAFETY AREA (TSA)
- NAVAID CRITICAL AREA
- FUTURE RUNWAY PROTECTION ZONE (RPZ)



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FAA'S APPROVAL OF THIS AIRPORT LAYOUT PLAN (ALP) REPRESENTS ACCEPTANCE OF THE GENERAL LOCATION OF FUTURE FACILITIES DEPICTED (SHEET 7144C04). DURING THE PRELIMINARY DESIGN PHASE, THE AIRPORT OWNER IS REQUIRED TO RESUBMIT FOR APPROVAL THE FINAL LOCATIONS, HEIGHTS, AND EXTERIOR FINISH OF STRUCTURES. FAA'S CONCERN IS OBSTRUCTIONS, IMPACT ON ELECTRONIC AIDS, OR ADVERSE EFFECTS ON CONTROLLER VIEW OF AIRCRAFT APPROACHES AND GROUND MOVEMENT AREAS WHICH COULD ADVERSELY AFFECT THE SAFETY, EFFICIENCY, OR UTILITY OF THE AIRPORT.

**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).



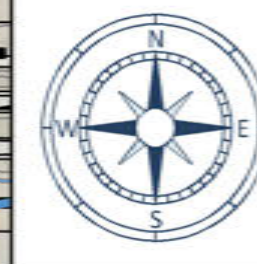
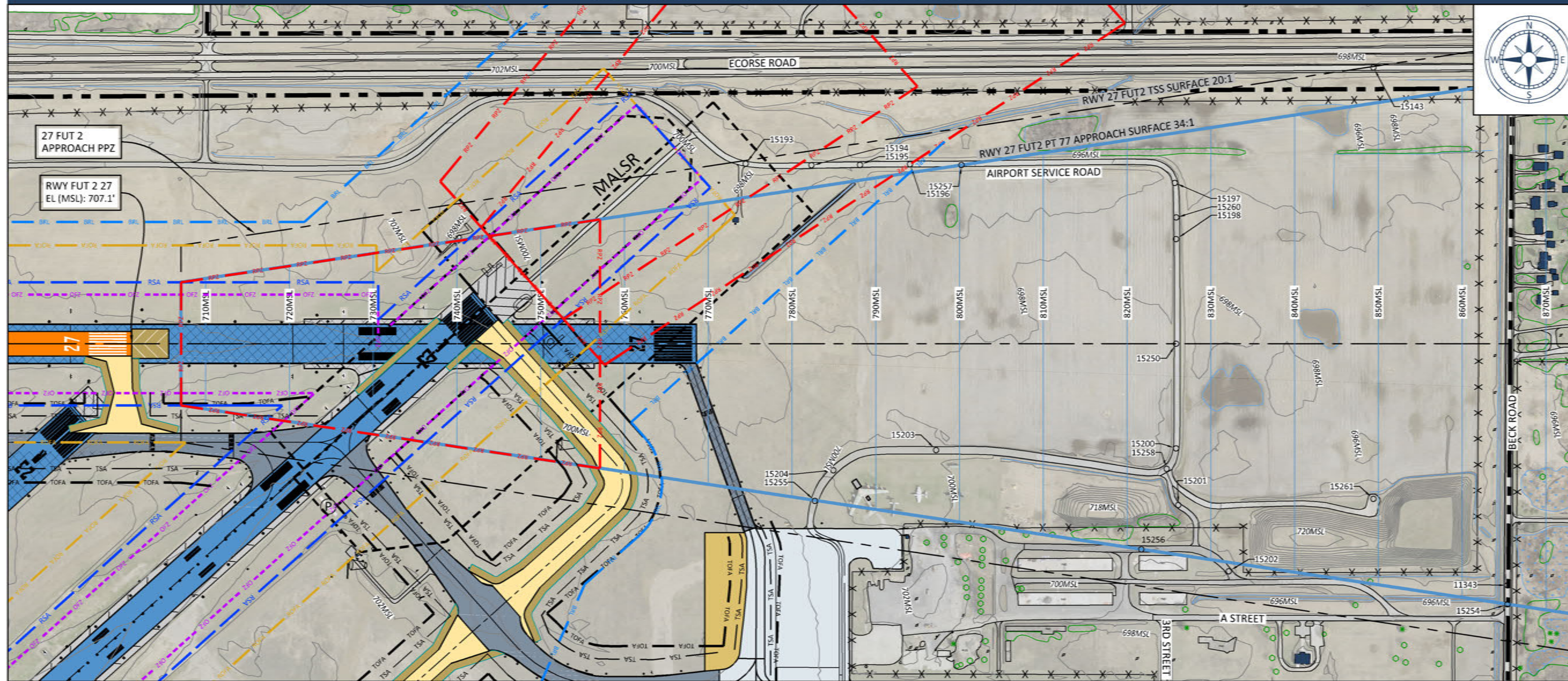
By	Date	Revisions

**WILLOW RUN AIRPORT**

**27 APPROACH PLAN & PROFILE**

Drawn By: JGH Date: 01-18-2019  
 Approved By: MCJ Job No: 037-15-03

### PLAN VIEW RUNWAY END 27 FUTURE 2

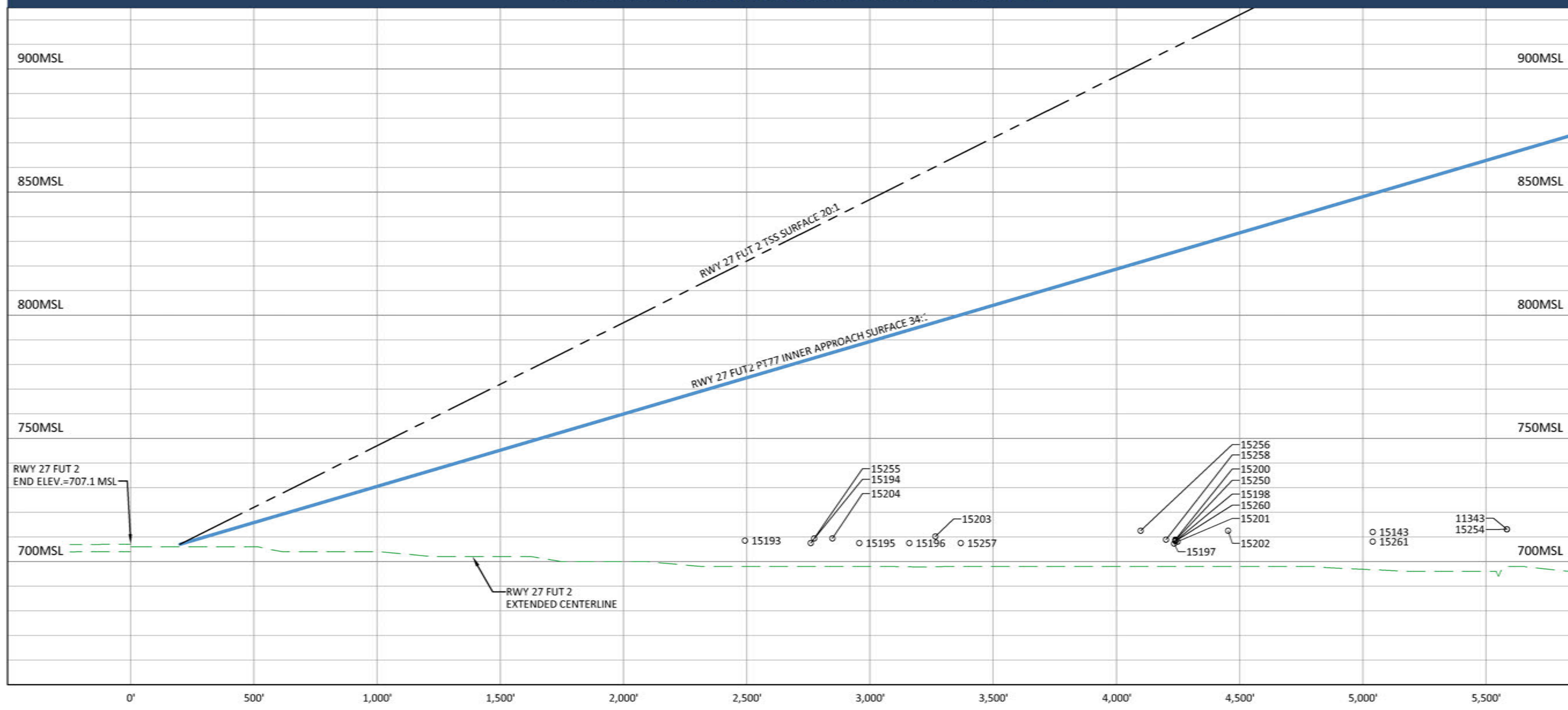


GRAPHIC SCALE: 1"=300'

### SURFACE OBSTRUCTION TABLES

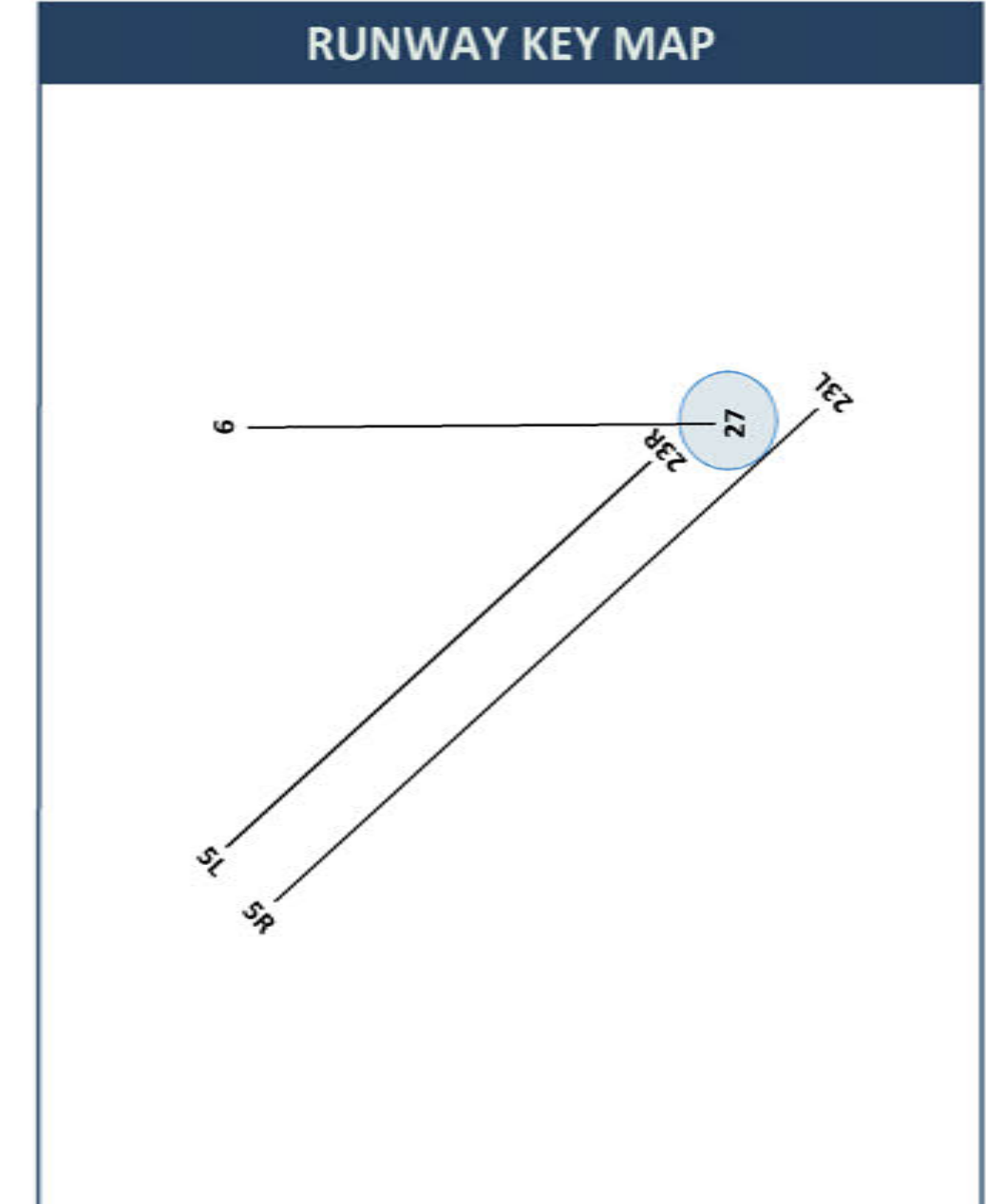
THERE ARE NO PENETRATIONS TO ANY SURFACE SHOWN ON THIS SHEET, THEREFORE, THERE IS NO TABLE.

### PROFILE VIEW RUNWAY END 27 FUTURE 2



GRAPHIC SCALE: 1"=300'

LEGEND	
AIRPORT BOUNDARY	---X---
EXISTING GROUND CONTOUR	~
EXISTING EDGE OF WATER	~
EXISTING TREE LINE	~
EXISTING FENCE	---X---
EXISTING BUILDING	■
EXISTING RUNWAY	■
EXISTING TAXIWAY	■
EXISTING SHOULDER	■
EXISTING TAXIWAY SAFETY AREA (TSA)	---TSA---
PAPI-4	⊙
WINDSOCK	⊙
NAVAID CRITICAL AREA	---X---
FUTURE RUNWAY SAFETY AREA (RSA)	---RSA---
FUTURE RUNWAY OBSTACLE FREE ZONE (OFZ)	---OFZ---
FUTURE RUNWAY PROTECTION ZONE (RPZ)	---RPZ---
FUTURE RUNWAY OBJECT FREE AREA (ROFA)	---ROFA---
FUTURE TAXIWAY OBJECT FREE AREA (TOFA)	---TOFA---
FUTURE PRECISION OBSTACLE FREE ZONE (POFZ)	---POFZ---
FUTURE RUNWAY PAVEMENT & MARKINGS	■
FUTURE TAXIWAY PAVEMENT	■
FUTURE APRON PAVEMENT	■
FUTURE SHOULDER PAVEMENT	■
FUTURE DEMOLITION	■



Coordinates: 42 ACAD.dwg, LT Scale: 1:1000, L:\DWG\15-03-2019\15-03-2019.dwg, Project: 15-03-2019, Date: 01-18-2019, 2:28 PM  
 File: L:\03\_PROJECT\15-03-2019\15-03-2019.dwg, Project: 15-03-2019, Date: 01-18-2019, 2:28 PM  
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FAA'S APPROVAL OF THIS AIRPORT LAYOUT PLAN (ALP) REPRESENTS ACCEPTANCE OF THE GENERAL LOCATION OF FUTURE FACILITIES DEPICTED (SHEET 7144C04). DURING THE PRELIMINARY DESIGN PHASE, THE AIRPORT OWNER IS REQUIRED TO RESUBMIT FOR APPROVAL THE FINAL LOCATIONS, HEIGHTS, AND EXTERIOR FINISH OF STRUCTURES. FAA'S CONCERN IS OBSTRUCTIONS, IMPACT ON ELECTRONIC AIDS, OR ADVERSE EFFECTS ON CONTROLLER VIEW OF AIRCRAFT APPROACHES AND GROUND MOVEMENT AREAS WHICH COULD ADVERSELY AFFECT THE SAFETY, EFFICIENCY, OR UTILITY OF THE AIRPORT.

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).



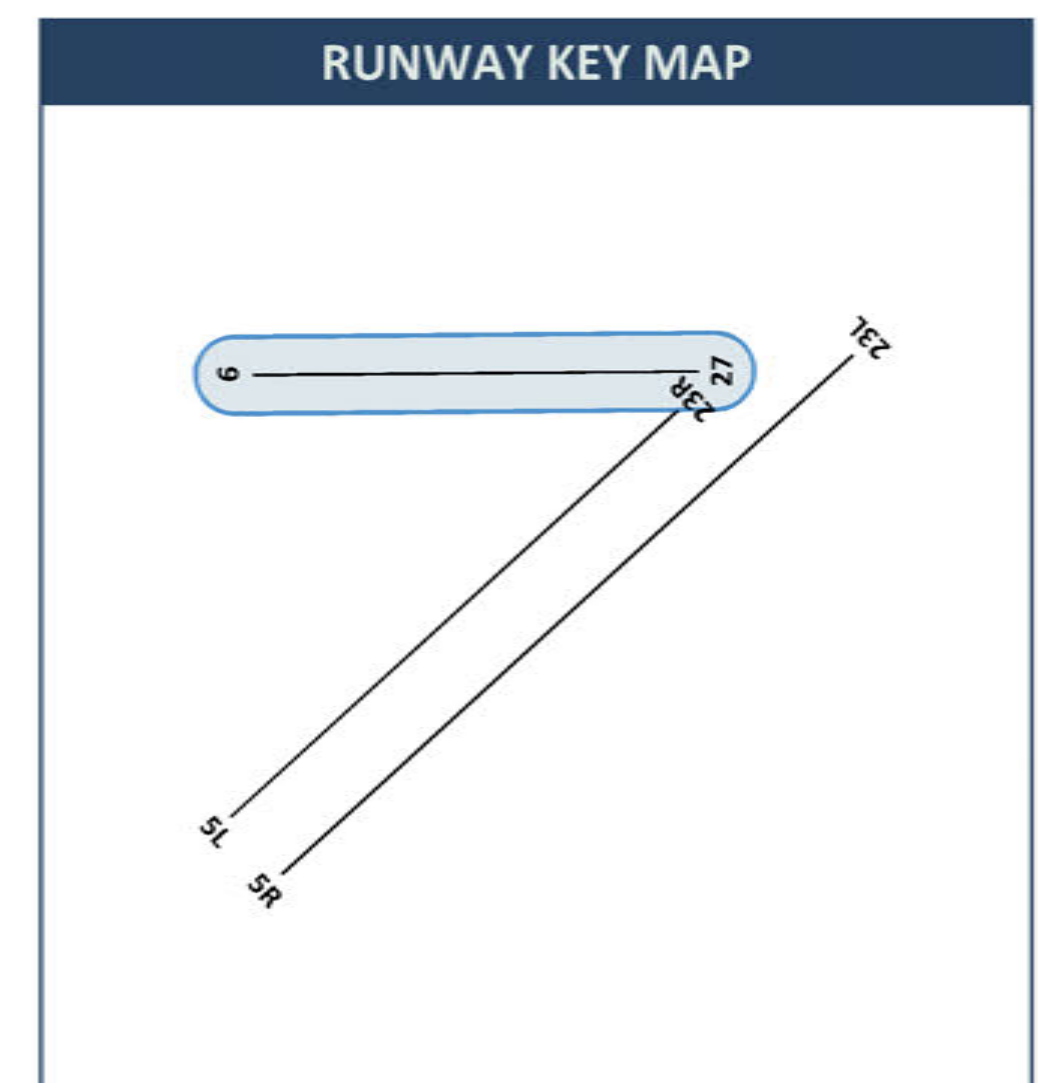
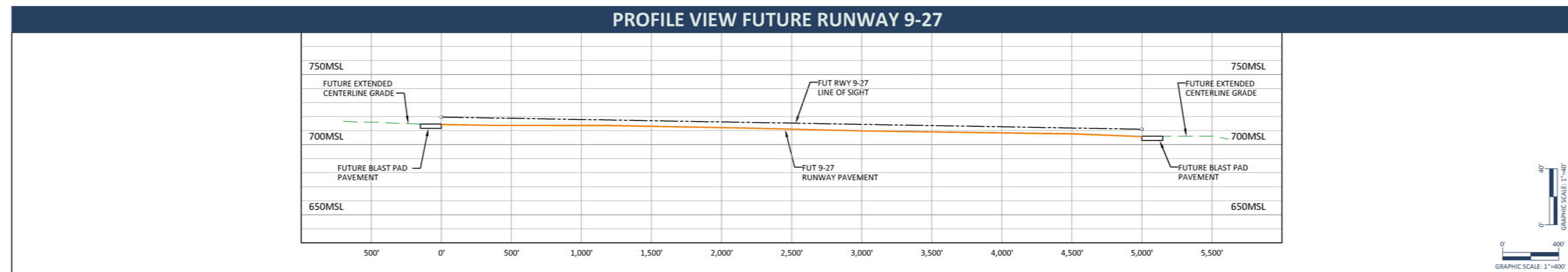
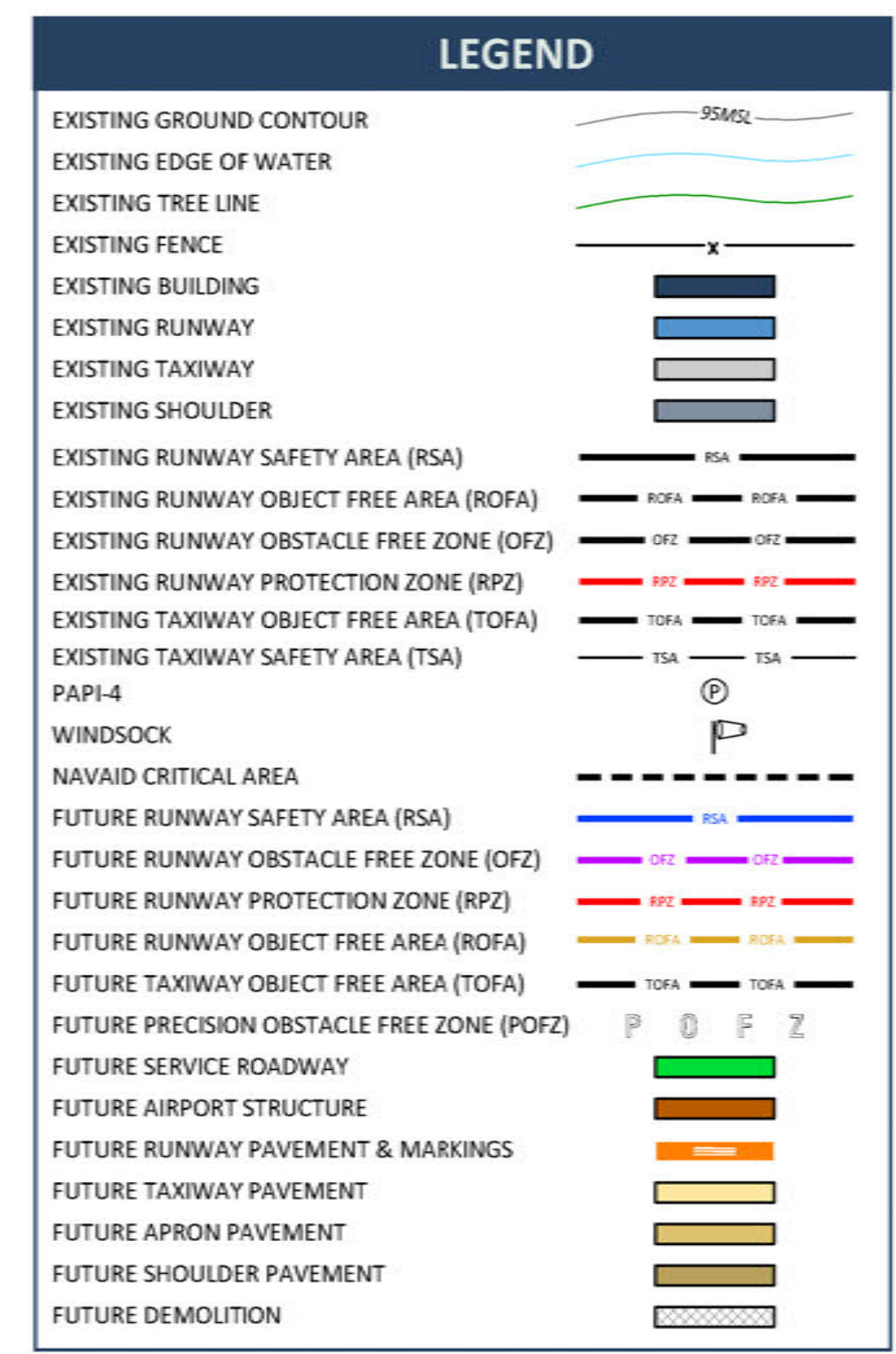
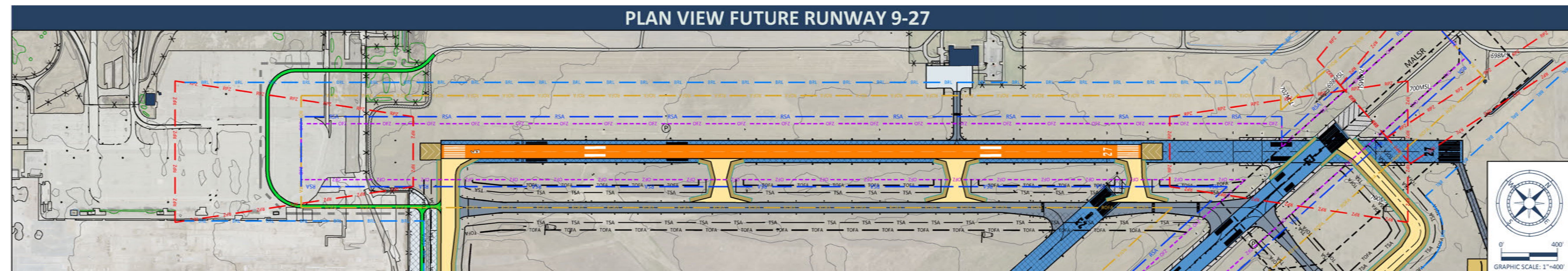
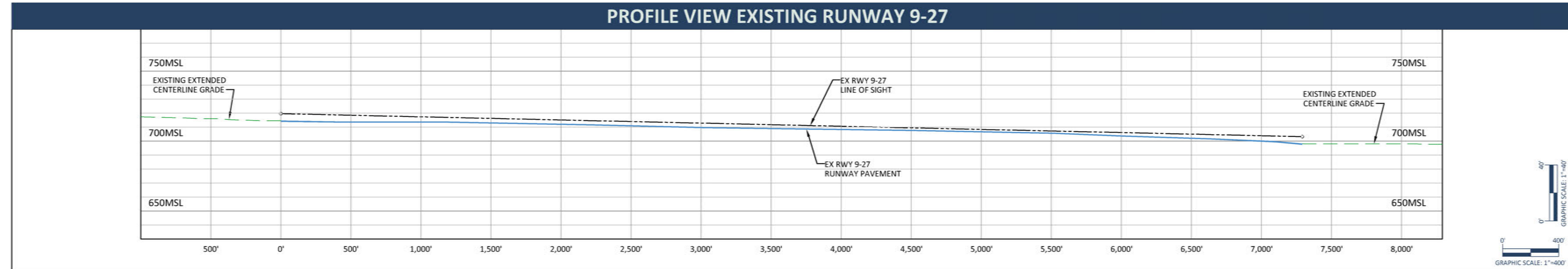
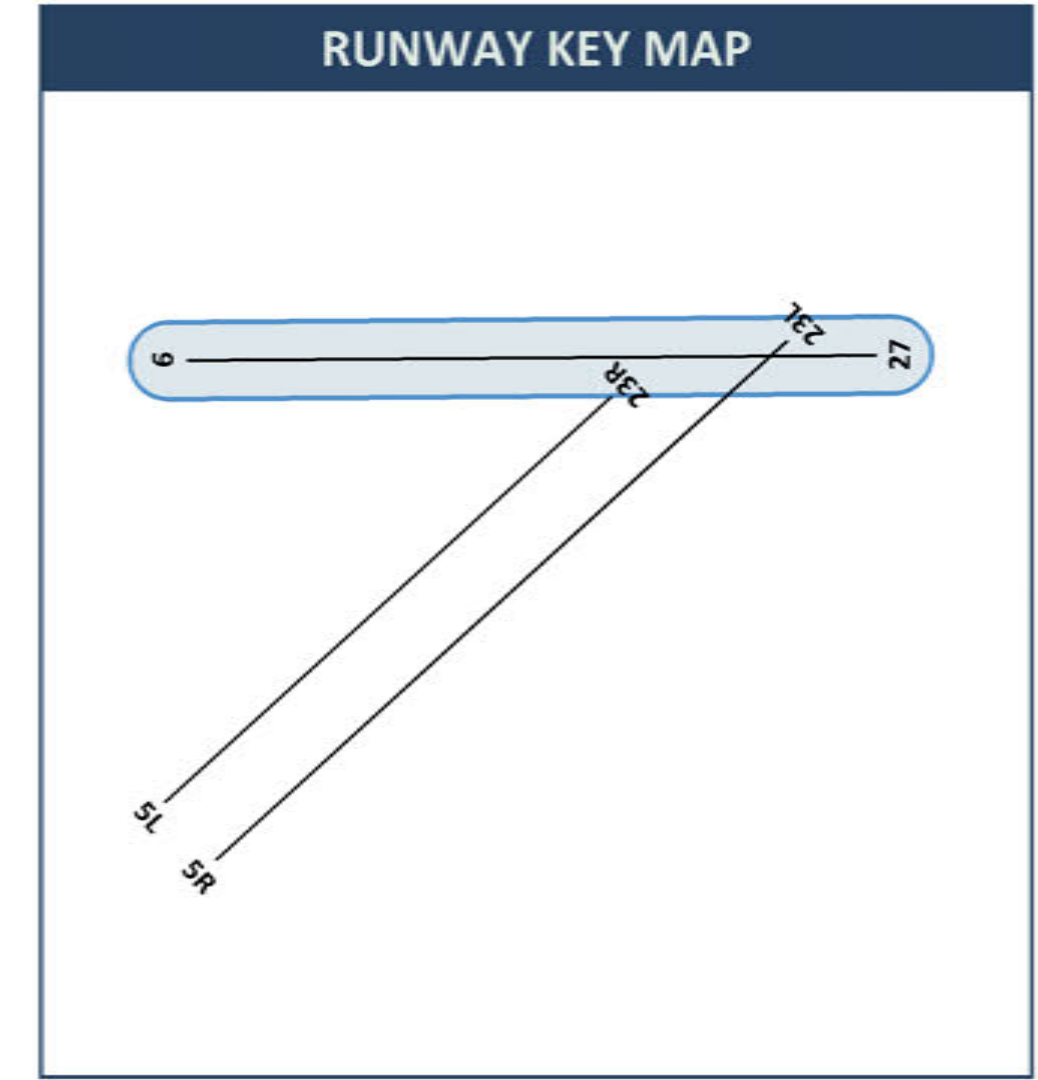
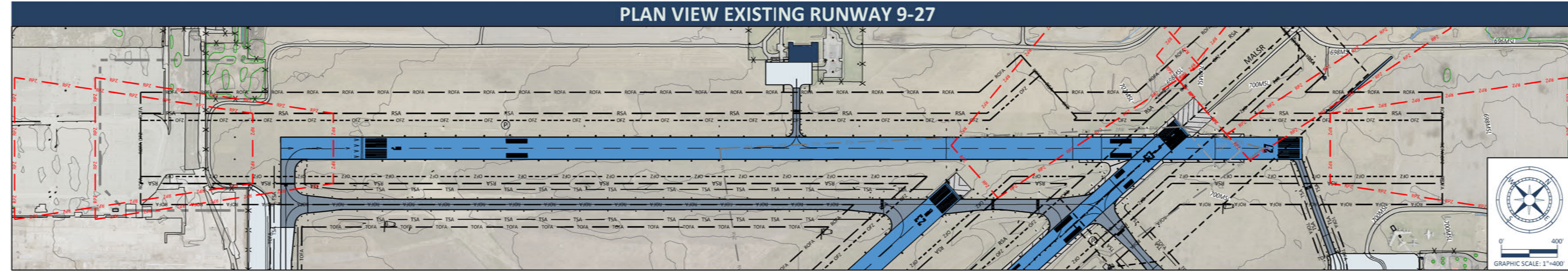
By	Date	Revisions

**WILLOW RUN AIRPORT**

**27 FUTURE 2 APPROACH PLAN & PROFILE**

14 of 19

Drawn By: SRG Date: 01-18-2019  
 Approved By: MCJ Job No: 037-15-03



Coordinate: 42 ACAD.ctb, LT Scale: 1:1000, Location: 3122/2018 4:43 PM, Project: 01-18-2019 2:05 PM, File: L:\01\_PROJECT\3007\_Alt1\10115-01\_TWP\_Maine\_Plan\_Update\13-TWP\ALP\02\_SHEETS\0001\_P&P\_Layou1\_SHEET13.dwg



FAA'S APPROVAL OF THIS AIRPORT LAYOUT PLAN (ALP) REPRESENTS ACCEPTANCE OF THE GENERAL LOCATION OF FUTURE FACILITIES DEPICTED (SHEET 01-18-2019). DURING THE PRELIMINARY DESIGN PHASE, THE AIRPORT OWNER IS REQUIRED TO RESUBMIT FOR APPROVAL THE FINAL LOCATIONS, HEIGHTS, AND EXTERIOR FINISH OF STRUCTURES. FAA'S CONCERN IS OBSTRUCTIONS, IMPACT ON ELECTRONIC AIDS, OR ADVERSE EFFECTS ON CONTROLLER VIEW OF AIRCRAFT APPROACHES AND GROUND MOVEMENT AREAS WHICH COULD ADVERSELY AFFECT THE SAFETY, EFFICIENCY, OR UTILITY OF THE AIRPORT.

**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)



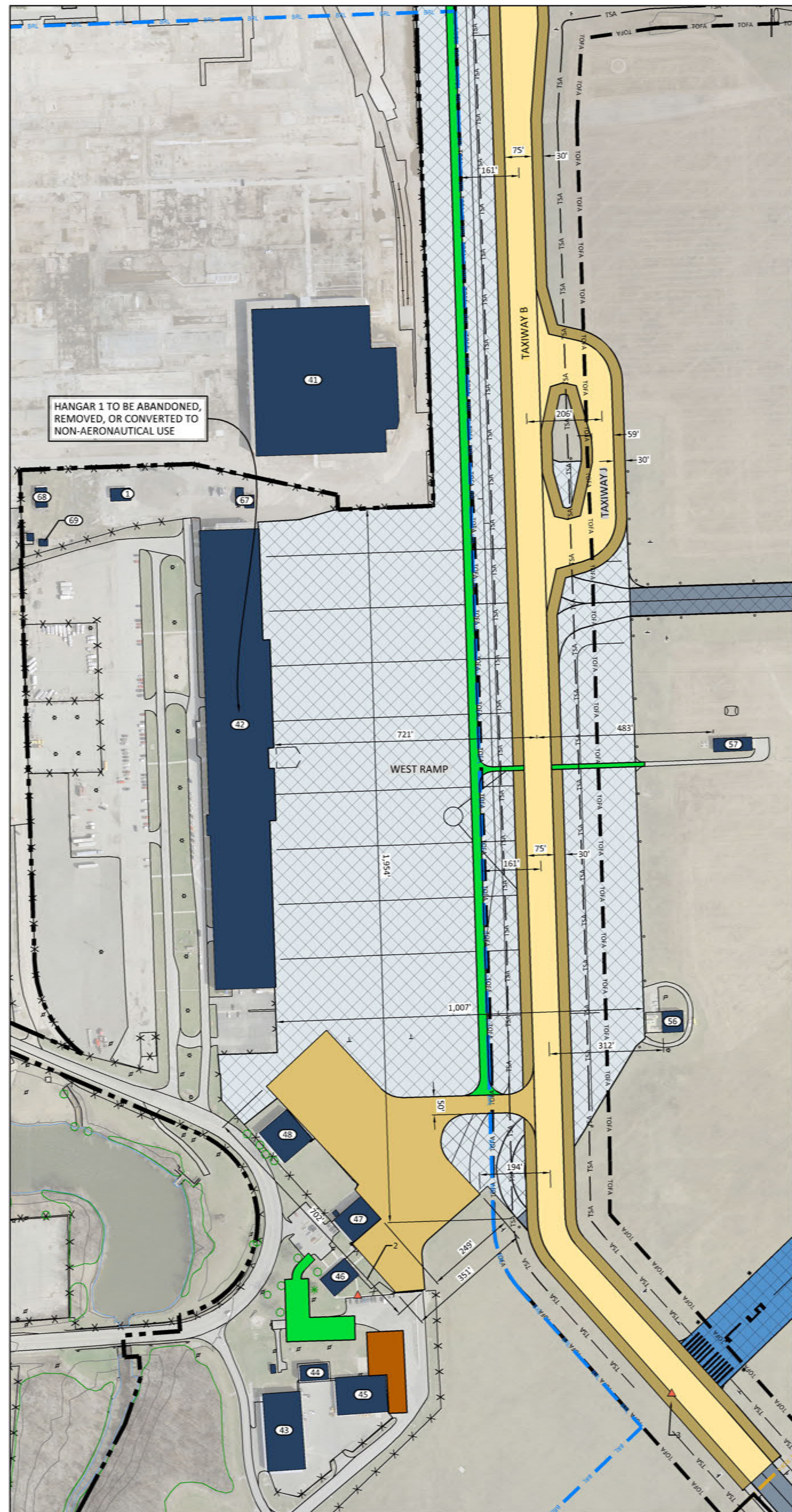
By	Date	Revisions

**WILLOW RUN AIRPORT**

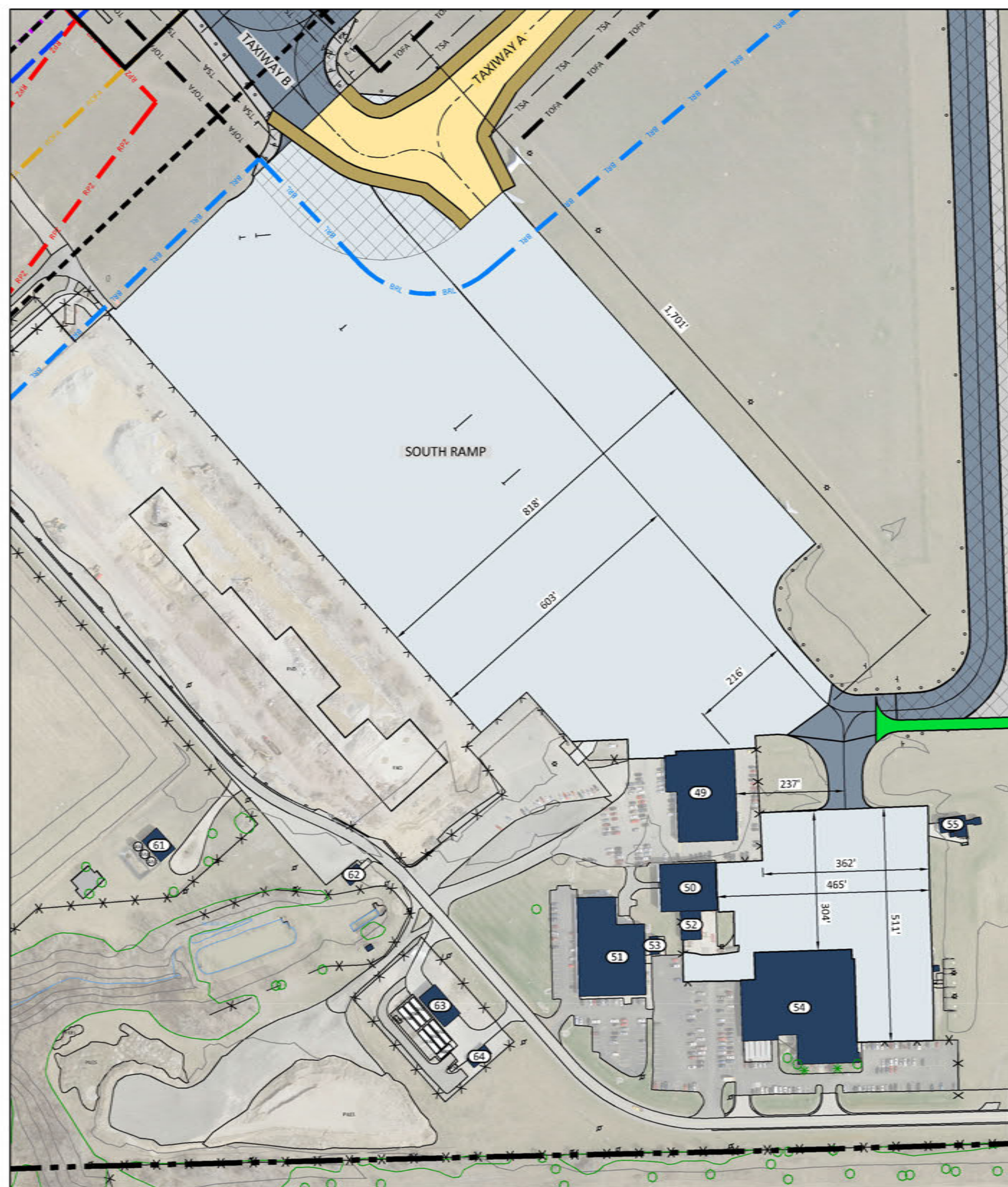
**9-27 RUNWAY PLAN & PROFILE**

Drawn By: SRG Date: 01-18-2019  
 Approved By: MCJ Job No: 037-15-03

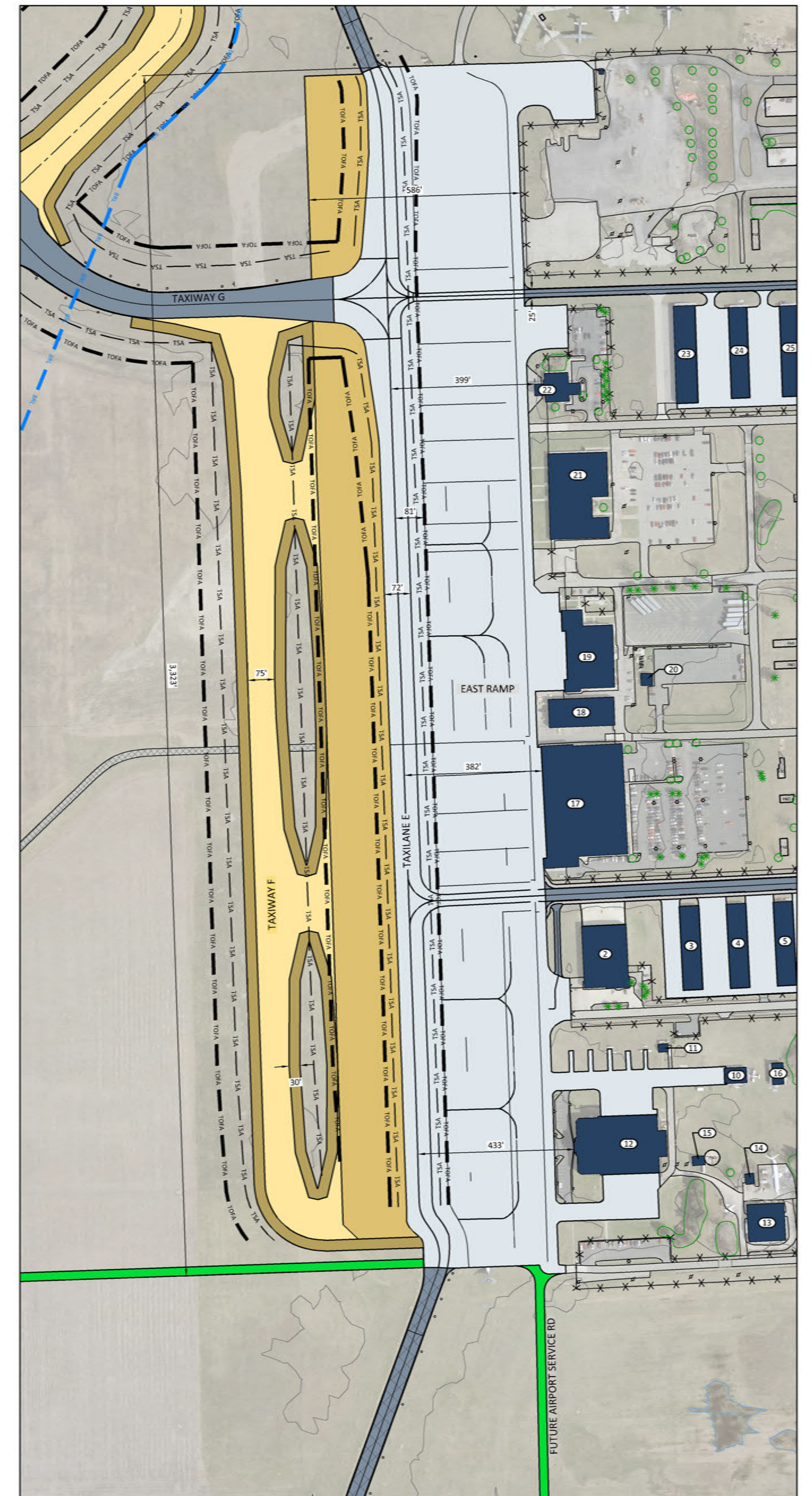




WEST RAMP



SOUTH RAMP



EAST RAMP

**LEGEND**

- AIRPORT BOUNDARY
- EXISTING GROUND CONTOUR
- EXISTING EDGE OF WATER
- EXISTING TREE LINE
- EXISTING FENCE
- EXISTING BUILDING
- EXISTING RUNWAY
- EXISTING TAXIWAY
- EXISTING SHOULDER
- PAPI-4
- WINDSOCK
- NAVAID CRITICAL AREA
- FUTURE RUNWAY SAFETY AREA (RSA)
- FUTURE RUNWAY OBSTACLE FREE ZONE (OFZ)
- FUTURE RUNWAY PROTECTION ZONE (RPZ)
- FUTURE RUNWAY OBJECT FREE AREA (ROFA)
- FUTURE TAXIWAY OBJECT FREE AREA (OFA)
- FUTURE TAXIWAY SAFETY AREA (TSA)
- FUTURE SERVICE ROADWAY/PARKING
- FUTURE AIRPORT STRUCTURE
- FUTURE TAXIWAY PAVEMENT
- FUTURE APRON PAVEMENT
- FUTURE SHOULDER PAVEMENT
- FUTURE DEMOLITION
- SURVEY MONUMENT



Color: 02\_ACAD.ctb, 0.010, 12/20/2018, 3:53 PM, Printed On: 12/20/2018, 1:30 PM  
 File: E:\09\_PROJECT\50071\_AIR\150115-50\_TIP\ALP\02\_SHEET\31\TERMINAL\_AREA\_PLAN\_Layou1.dwg, SHEET 17



FAA'S APPROVAL OF THIS AIRPORT LAYOUT PLAN (ALP) REPRESENTS ACCEPTANCE OF THE GENERAL LOCATION OF FUTURE FACILITIES DEPICTED (SHEET 1714AC04). DURING THE PRELIMINARY DESIGN PHASE, THE AIRPORT OWNER IS REQUIRED TO RESUBMIT FOR APPROVAL THE FINAL LOCATIONS, HEIGHTS, AND EXTERIOR FINISH OF STRUCTURES. FAA'S CONCERN IS OBSTRUCTIONS, IMPACT ON ELECTRONIC AIDS, OR ADVERSE EFFECTS ON CONTROLLER VIEW OF AIRCRAFT APPROACHES AND GROUND MOVEMENT AREAS WHICH COULD ADVERSELY AFFECT THE SAFETY, EFFICIENCY, OR UTILITY OF THE AIRPORT.

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

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

MAGNETIC DECLINATION  
 7.7° WEST  
 MAY 31, 2016

By	Date	Revisions

**WILLOW RUN AIRPORT**

**TERMINAL AREA PLAN**

Drawn By: SRG Date: 01-18-2019  
 Approved By: MCJ Job No: 037-15-03



