AIRPORT DESIGN AIRPLANE AND AIRPORT DATA

Aircraft Approach Category B
Airplane Design Group II
Airplane wingspan . . . . . 78.99 feet
Primary runway end approach visibility minimums are not lower than 1 mile
Other runway end approach visibility minimums are not lower than 1 mile
Airplane undercarriage width (1.15 x main gear track) . . . 14.95 feet
Airport elevation . . . . . 1150 feet

RUNWAY AND TAXIWAY WIDTH AND CLEARANCE STANDARD DIMENSIONS

	Airplane	Group/ARC
Runway centerline to parallel runway centerline simultaneous operations when wake turbulence is not treated as a factor:		
VFR operations with no intervening taxiway		700 feet
VFR operations with one intervening taxiway		700 feet
VFR operations with two intervening taxiways		700 feet
IFR approach and departure with approach to near threshold		2500 feet less 100 ft for each 500 ft of threshold stagger to a minimum of 1000 feet.
Runway centerline to parallel runway centerline simultaneous operations when wake turbulence is treated as a factor:		
VFR operations		2500 feet
IFR departures		2500 feet
IFR approach and departure with approach to near threshold		2500 feet
IFR approach and departure with approach to far threshold		2500 feet plus 100 feet for each 500 feet of threshold stagger.
IFR approaches		3400 feet
Runway centerline to parallel taxiway/taxilane centerline	239.5	240 feet
Runway centerline to edge of aircraft parking	250.0	250 feet
Runway width		75 feet
Runway shoulder width		10 feet
Runway blast pad width		95 feet
Runway blast pad length		150 feet
Runway safety area width		150 feet
Runway safety area length beyond each runway end or stopway end, whichever is greater		300 feet
Runway object free area width		500 feet
Runway object free area length beyond each runway end or stopway end, whichever is greater		300 feet
Clearway width		500 feet
Stopway width		75 feet
Obstacle free zone (OFZ):		
Runway OFZ width		400 feet
Runway OFZ length beyond each runway end		200 feet
Inner-approach OFZ width		400 feet
Inner-approach OFZ length beyond approach light system		200 feet
Inner-approach OFZ slope from 200 feet beyond threshold		50:1
Inner-transitional OFZ slope		0:1
Runway protection zone at the primary runway end:		
Width 200 feet from runway end		500 feet
Width 1200 feet from runway end		700 feet

Length		1000 feet

Runway protection zone at other runway end:

Width 200 feet from runway end		500 feet
Width 1200 feet from runway end		700 feet
Length		1000 feet

Departure runway protection zone:

Width 200 feet from the far end of TORA		500 feet
Width 1200 feet from the far end of TORA		700 feet
Length		1000 feet

Threshold surface at primary runway end:

Distance out from threshold to start of surface		0 feet
Width of surface at start of trapezoidal section		400 feet
Width of surface at end of trapezoidal section		1000 feet
Length of trapezoidal section		1500 feet
Length of rectangular section		8500 feet
Slope of surface		20:1

Threshold surface at other runway end:

Distance out from threshold to start of surface		0 feet
Width of surface at start of trapezoidal section		400 feet
Width of surface at end of trapezoidal section		1000 feet
Length of trapezoidal section		1500 feet
Length of rectangular section		8500 feet
Slope of surface		20:1

Taxiway centerline to parallel taxiway/taxilane centerline	104.8	105 feet
Taxiway centerline to fixed or movable object	65.3	65.5 feet
Taxilane centerline to parallel taxilane centerline	96.9	97 feet
Taxilane centerline to fixed or movable object	57.4	57.5 feet
Taxiway width	30.0	35 feet
Taxiway shoulder width		10 feet
Taxiway safety area width	79.0	79 feet
Taxiway object free area width	130.6	131 feet
Taxilane object free area width	114.8	115 feet
Taxiway edge safety margin		7.5 feet
Taxiway wingtip clearance	25.8	26 feet
Taxilane wingtip clearance	17.9	18 feet

REFERENCE: AC 150/5300-13, Airport Design, including Changes 1 through 4.

AIRPORT DESIGN AIRPLANE AND AIRPORT DATA

Aircraft Approach Category B
Airplane Design Group II
Airplane wingspan . . . . . 78.99 feet
Primary runway end approach visibility minimums are not lower than 3/4 mile
Other runway end approach visibility minimums are not lower than 3/4 mile
Airplane undercarriage width (1.15 x main gear track) . . . 14.95 feet
Airport elevation . . . . . 1150 feet

RUNWAY AND TAXIWAY WIDTH AND CLEARANCE STANDARD DIMENSIONS

	Airplane	Group/ARC
Runway centerline to parallel runway centerline simultaneous operations when wake turbulence is not treated as a factor:		
VFR operations with no intervening taxiway		700 feet
VFR operations with one intervening taxiway		700 feet
VFR operations with two intervening taxiways		700 feet
IFR approach and departure with approach to near threshold		2500 feet less 100 ft for each 500 ft of threshold stagger to a minimum of 1000 feet.
Runway centerline to parallel runway centerline simultaneous operations when wake turbulence is treated as a factor:		
VFR operations		2500 feet
IFR departures		2500 feet
IFR approach and departure with approach to near threshold		2500 feet
IFR approach and departure with approach to far threshold		2500 feet plus 100 feet for each 500 feet of threshold stagger.
IFR approaches		3400 feet
Runway centerline to parallel taxiway/taxilane centerline	239.5	240 feet
Runway centerline to edge of aircraft parking	250.0	250 feet
Runway width		75 feet
Runway shoulder width		10 feet
Runway blast pad width		95 feet
Runway blast pad length		150 feet
Runway safety area width		150 feet
Runway safety area length beyond each runway end or stopway end, whichever is greater		300 feet
Runway object free area width		500 feet
Runway object free area length beyond each runway end or stopway end, whichever is greater		300 feet
Clearway width		500 feet
Stopway width		75 feet
Obstacle free zone (OFZ):		
Runway OFZ width		400 feet
Runway OFZ length beyond each runway end		200 feet
Inner-approach OFZ width		400 feet
Inner-approach OFZ length beyond approach light system		200 feet
Inner-approach OFZ slope from 200 feet beyond threshold		50:1
Inner-transitional OFZ slope		0:1
Runway protection zone at the primary runway end:		
Width 200 feet from runway end		1000 feet
Width 1900 feet from runway end		1510 feet

Length		1700 feet
Runway protection zone at other runway end:		
Width 200 feet from runway end		1000 feet
Width 1900 feet from runway end		1510 feet
Length		1700 feet
Departure runway protection zone:		
Width 200 feet from the far end of TORA		500 feet
Width 1200 feet from the far end of TORA		700 feet
Length		1000 feet
Threshold surface at primary runway end:		
Distance out from threshold to start of surface		200 feet
Width of surface at start of trapezoidal section		1000 feet
Width of surface at end of trapezoidal section		4000 feet
Length of trapezoidal section		10000 feet
Length of rectangular section		0 feet
Slope of surface		20:1
Threshold surface at other runway end:		
Distance out from threshold to start of surface		200 feet
Width of surface at start of trapezoidal section		1000 feet
Width of surface at end of trapezoidal section		4000 feet
Length of trapezoidal section		10000 feet
Length of rectangular section		0 feet
Slope of surface		20:1
Taxiway centerline to parallel taxiway/taxilane centerline	104.8	105 feet
Taxiway centerline to fixed or movable object	65.3	65.5 feet
Taxilane centerline to parallel taxilane centerline	96.9	97 feet
Taxilane centerline to fixed or movable object	57.4	57.5 feet
Taxiway width	30.0	35 feet
Taxiway shoulder width		10 feet
Taxiway safety area width	79.0	79 feet
Taxiway object free area width	130.6	131 feet
Taxilane object free area width	114.8	115 feet
Taxiway edge safety margin		7.5 feet
Taxiway wingtip clearance	25.8	26 feet
Taxilane wingtip clearance	17.9	18 feet

REFERENCE: AC 150/5300-13, Airport Design, including Changes 1 through 4.

AIRPORT DESIGN AIRPLANE AND AIRPORT DATA

Aircraft Approach Category B	
Airplane Design Group II	
Airplane wingspan	78.99 feet
Primary runway end approach visibility minimums are not lower than CAT I	
Other runway end approach visibility minimums are not lower than CAT I	
Airplane undercarriage width (1.15 x main gear track)	14.95 feet
Airport elevation	1150 feet
Airplane tail height	15.40 feet

RUNWAY AND TAXIWAY WIDTH AND CLEARANCE STANDARD DIMENSIONS

	Airplane Group/ARC	
Runway centerline to parallel runway centerline simultaneous operations when wake turbulence is not treated as a factor:		
VFR operations with no intervening taxiway		700 feet
VFR operations with one intervening taxiway		700 feet
VFR operations with two intervening taxiways		705 feet
IFR approach and departure with approach to near threshold		2500 feet less 100 ft for each 500 ft of threshold stagger to a minimum of 1000 feet.
Runway centerline to parallel runway centerline simultaneous operations when wake turbulence is treated as a factor:		
VFR operations		2500 feet
IFR departures		2500 feet
IFR approach and departure with approach to near threshold		2500 feet
IFR approach and departure with approach to far threshold		2500 feet plus 100 feet for each 500 feet of threshold stagger.
IFR approaches		3400 feet
Runway centerline to parallel taxiway/taxilane centerline	239.5	300 feet
Runway centerline to edge of aircraft parking	400.0	400 feet
Runway width		100 feet
Runway shoulder width		10 feet
Runway blast pad width		120 feet
Runway blast pad length		150 feet
Runway safety area width		300 feet
Runway safety area length beyond each runway end or stopway end, whichever is greater		600 feet
Runway object free area width		800 feet
Runway object free area length beyond each runway end or stopway end, whichever is greater		600 feet
Clearway width		500 feet
Stopway width		100 feet
Obstacle free zone (OFZ):		
Runway OFZ width		400 feet
Runway OFZ length beyond each runway end		200 feet
Inner-approach OFZ width		400 feet
Inner-approach OFZ length beyond approach light system		200 feet
Inner-approach OFZ slope from 200 feet beyond threshold		50:1
Inner-transitional OFZ height H	50.1	50.1 feet
Inner-transitional OFZ slope		6:1
Runway protection zone at the primary runway end:		

Width 200 feet from runway end		1000 feet
Width 2700 feet from runway end		1750 feet
Length		2500 feet

Runway protection zone at other runway end:

Width 200 feet from runway end		1000 feet
Width 2700 feet from runway end		1750 feet
Length		2500 feet

Departure runway protection zone:

Width 200 feet from the far end of TORA		500 feet
Width 1200 feet from the far end of TORA		700 feet
Length		1000 feet

Threshold surface at primary runway end:

Distance out from threshold to start of surface		200 feet
Width of surface at start of trapezoidal section		1000 feet
Width of surface at end of trapezoidal section		4000 feet
Length of trapezoidal section		10000 feet
Length of rectangular section		0 feet
Slope of surface		34:1

Threshold surface at other runway end:

Distance out from threshold to start of surface		200 feet
Width of surface at start of trapezoidal section		1000 feet
Width of surface at end of trapezoidal section		4000 feet
Length of trapezoidal section		10000 feet
Length of rectangular section		0 feet
Slope of surface		34:1

Taxiway centerline to parallel taxiway/taxilane centerline	104.8	105 feet
Taxiway centerline to fixed or movable object	65.3	65.5 feet
Taxilane centerline to parallel taxilane centerline	96.9	97 feet
Taxilane centerline to fixed or movable object	57.4	57.5 feet
Taxiway width	30.0	35 feet
Taxiway shoulder width		10 feet
Taxiway safety area width	79.0	79 feet
Taxiway object free area width	130.6	131 feet
Taxilane object free area width	114.8	115 feet
Taxiway edge safety margin		7.5 feet
Taxiway wingtip clearance	25.8	26 feet
Taxilane wingtip clearance	17.9	18 feet

REFERENCE: AC 150/5300-13, Airport Design, including Changes 1 through 4.

AIRPORT AND RUNWAY DATA

Airport elevation	1150 feet
Mean daily maximum temperature of the hottest month	86.00 F.
Maximum difference in runway centerline elevation	17 feet
Length of haul for airplanes of more than 60,000 pounds	2000 miles
Dry runways	

RUNWAY LENGTHS RECOMMENDED FOR AIRPORT DESIGN

Small airplanes with approach speeds of less than 30 knots	330 feet
Small airplanes with approach speeds of less than 50 knots	890 feet
Small airplanes with less than 10 passenger seats	
75 percent of these small airplanes	2860 feet
95 percent of these small airplanes	3390 feet
100 percent of these small airplanes	4020 feet
Small airplanes with 10 or more passenger seats	4420 feet
Large airplanes of 60,000 pounds or less	
75 percent of these large airplanes at 60 percent useful load	4980 feet
75 percent of these large airplanes at 90 percent useful load	6690 feet
100 percent of these large airplanes at 60 percent useful load	5760 feet
100 percent of these large airplanes at 90 percent useful load	8600 feet
Airplanes of more than 60,000 pounds	Approximately 8210 feet

REFERENCE: Chapter 2 of AC 150/5325-4A, Runway Length Requirements for Airport Design, no Changes included.

TAKEOFF RUNWAY LENGTH ADJUSTMENT
(given takeoff length at sea level, Mean Max Temperature, Elevation & difference in Hi / Lo pts)

Altitude Correction	E = Elevation
(7% per 1,000' above sea level)	L = Takeoff length @ sea level
	L1 = Length corrected for altitude
	L1 = (.07 * E / 1000) * L + L
Temperature Correction	
(0.5% per degree above stnd temp in hottest month)	
(Stnd Temp adjusted to Sea Level)	T1 = Adjusted Stnd Temp
	T = Mean Max High Temperature
	L2 = Length corrected for altitude & temperature
	T1 = 59 - (3.566 * E / 1000)
	L2 = (.005*(T - T1)) * L1 + L1
Effective Gradient Correction (takeoff only)	
(10' for each 1' difference between Hi / Lo	G = Difference between Hi / Lo point in feet
	L3 = RW length corrected for alititude, temperature & gradient
	L3 = G * 10 + L2

KING AIR 90

Takeoff Runway Length at Sea Level and 59 Degrees Fahrenheit		
1. Enter the takeoff runway length at sea level in feet	L =	2577
Altitude		
2. Enter Airport Altitude in feet above sea level	E =	1152
	L1 =	2785
Temperature		
3. Enter Mean Max Daily Temp in degrees F	T =	86
	T1=	54.89
	L2 =	3218
Gradient Adjustment		
4. Enter Maximum Difference in RW Elevation in feet		17.3
Takeoff Runway Length Adjusted for Temp, Elevation & Gradient	L3 =	3391

TAKEOFF RUNWAY LENGTH ADJUSTMENT
(given takeoff length at sea level, Mean Max Temperature, Elevation & difference in Hi / Lo pts)

Altitude Correction
(7% per 1,000' above sea level)

E = Elevation
L = Takeoff length @ sea level
L1 = Length corrected for altitude
L1 = (.07 * E / 1000) * L + L

Temperature Correction
(0.5% per degree above stnd temp in hottest month)
(Stnd Temp adjusted to Sea Level)

T1 = Adjusted Stnd Temp
T = Mean Max High Temperature
L2 = Length corrected for altitude & temperature
T1 = 59 - (3.566 * E / 1000)
L2 = (.005*(T - T1)) * L1 + L1

Effective Gradient Correction (takeoff only)
(10' for each 1' difference between Hi /G = Difference between Hi / Lo point in feet
L3 = RW length corrected for alititude, temperature & gradient
L3 = G * 10 + L2

KING AIR 200

Takeoff Runway Length at Sea Level and 59 Degrees Fahrenheit		
1. Enter the takeoff runway length at sea level in feet	L =	2579
Altitude		
2. Enter Airport Altitude in feet above sea level	E =	1152
	L1 =	2787
Temperature		
3. Enter Mean Max Daily Temp in degrees F	T =	86
	T1=	54.89
	L2 =	3220
Gradient Adjustment		
4. Enter Maximum Difference in RW Elevation in feet		17.3
Takeoff Runway Length Adjusted for Temp, Elevation & Gradient	L3 =	3393

TAKEOFF RUNWAY LENGTH ADJUSTMENT
(given takeoff length at sea level, Mean Max Temperature, Elevation & difference in Hi / Lo pts)

Altitude Correction
(7% per 1,000' above sea level)

E = Elevation
L = Takeoff length @ sea level
L1 = Length corrected for altitude
L1 = (.07 * E / 1000) * L + L

Temperature Correction
(0.5% per degree above stnd temp in hottest month)
(Stnd Temp adjusted to Sea Level)

T1 = Adjusted Stnd Temp
T = Mean Max High Temperature
L2 = Length corrected for altitude & temperature
T1 = 59 - (3.566 * E / 1000)
L2 = (.005*(T - T1)) * L1 + L1

Effective Gradient Correction (takeoff only)
(10' for each 1' difference between Hi / G = Difference between Hi / Lo point in feet
L3 = RW length corrected for alititude, temperature & gradient
L3 = G * 10 + L2

KING AIR 350

Takeoff Runway Length at Sea Level and 59 Degrees Fahrenheit

1. Enter the takeoff runway length at sea level in feet — L = 3680

Altitude

2. Enter Airport Altitude in feet above sea level — E = 1152

L1 = 3977

Temperature

3. Enter Mean Max Daily Temp in degrees F — T = 86

T1= 54.89

L2 = 4595

Gradient Adjustment

4. Enter Maximum Difference in RW Elevation in feet — 17.3

Takeoff Runway Length Adjusted for Temp, Elevation & Gradient — L3 = 4768

TAKEOFF RUNWAY LENGTH ADJUSTMENT
(given takeoff length at sea level, Mean Max Temperature, Elevation & difference in Hi / Lo pts)

Altitude Correction	E = Elevation
(7% per 1,000' above sea level)	L = Takeoff length @ sea level
	L1 = Length corrected for altitude
	L1 = (.07 * E / 1000) * L + L
Temperature Correction	
(0.5% per degree above stnd temp in hottest month)	
(Stnd Temp adjusted to Sea Level)	T1 = Adjusted Stnd Temp
	T = Mean Max High Temperature
	L2 = Length corrected for altitude & temperature
	T1 = 59 - (3.566 * E / 1000)
	L2 = (.005*(T - T1)) * L1 + L1
Effective Gradient Correction (takeoff only)	
(10' for each 1' difference between Hi / Lo	G = Difference between Hi / Lo point in feet
	L3 = RW length corrected for alititude, temperature & gradient
	L3 = G * 10 + L2

CESSNA 441

Takeoff Runway Length at Sea Level and 59 Degrees Fahrenheit		
1. Enter the takeoff runway length at sea level in feet	L =	2465
Altitude		
2. Enter Airport Altitude in feet above sea level	E =	1152
	L1 =	2684
Temperature		
3. Enter Mean Max Daily Temp in degrees F	T =	86
	T1=	54.89
	L2 =	3078
Gradient Adjustment		
4. Enter Maximum Difference in RW Elevation in feet		17.3
Takeoff Runway Length Adjusted for Temp, Elevation & Gradient	L3 =	3251

TAKEOFF RUNWAY LENGTH ADJUSTMENT
(given takeoff length at sea level, Mean Max Temperature, Elevation & difference in Hi / Lo pts)

Altitude Correction
(7% per 1,000' above sea level)

E = Elevation
L = Takeoff length @ sea level
L1 = Length corrected for altitude
L1 = (.07 * E / 1000) * L + L

Temperature Correction
(0.5% per degree above stnd temp in hottest month)
(Stnd Temp adjusted to Sea Level)

T1 = Adjusted Stnd Temp
T = Mean Max High Temperature
L2 = Length corrected for altitude & temperature
T1 = 59 - (3.566 * E / 1000)
L2 = (.005*(T - T1)) * L1 + L1

Effective Gradient Correction (takeoff only)
(10' for each 1' difference between Hi /G = Difference between Hi / Lo point in feet
L3 = RW length corrected for alititude, temperature & gradient
L3 = G * 10 + L2

CITATION II

Takeoff Runway Length at Sea Level and 59 Degrees Fahrenheit

1. Enter the takeoff runway length at sea level in feet — L = 3450

Altitude

2. Enter Airport Altitude in feet above sea level — E = 1152

L1 = 3728

Temperature

3. Enter Mean Max Daily Temp in degrees F — T = 86

T1= 54.89

L2 = 4308

Gradient Adjustment

4. Enter Maximum Difference in RW Elevation in feet — 17.3

Takeoff Runway Length Adjusted for Temp, Elevation & Gradient — L3 = 4481

TAKEOFF RUNWAY LENGTH ADJUSTMENT
(given takeoff length at sea level, Mean Max Temperature, Elevation & difference in Hi / Lo pts)

Altitude Correction	E = Elevation
(7% per 1,000' above sea level)	L = Takeoff length @ sea level
	L1 = Length corrected for altitude
	L1 = (.07 * E / 1000) * L + L
Temperature Correction	
(0.5% per degree above stnd temp in hottest month)	
(Stnd Temp adjusted to Sea Level)	T1 = Adjusted Stnd Temp
	T = Mean Max High Temperature
	L2 = Length corrected for altitude & temperature
	T1 = 59 - (3.566 * E / 1000)
	L2 = (.005*(T - T1)) * L1 + L1
Effective Gradient Correction (takeoff only)	
(10' for each 1' difference between Hi / Lo	G = Difference between Hi / Lo point in feet
	L3 = RW length corrected for alititude, temperature & gradient
	L3 = G * 10 + L2

CITATION III

Takeoff Runway Length at Sea Level and 59 Degrees Fahrenheit		
1. Enter the takeoff runway length at sea level in feet	L =	5150
Altitude		
2. Enter Airport Altitude in feet above sea level	E =	1152
	L1 =	5565
Temperature		
3. Enter Mean Max Daily Temp in degrees F	T =	86
	T1=	54.89
	L2 =	6431
Gradient Adjustment		
4. Enter Maximum Difference in RW Elevation in feet		17.3
Takeoff Runway Length Adjusted for Temp, Elevation & Gradient	L3 =	6604

TAKEOFF RUNWAY LENGTH ADJUSTMENT
(given takeoff length at sea level, Mean Max Temperature, Elevation & difference in Hi / Lo pts)

Altitude Correction	E = Elevation
(7% per 1,000' above sea level)	L = Takeoff length @ sea level
	L1 = Length corrected for altitude
	L1 = (.07 * E / 1000) * L + L
Temperature Correction	
(0.5% per degree above stnd temp in hottest month)	
(Stnd Temp adjusted to Sea Level)	T1 = Adjusted Stnd Temp
	T = Mean Max High Temperature
	L2 = Length corrected for altitude & temperature
	T1 = 59 - (3.566 * E / 1000)
	L2 = (.005*(T - T1)) * L1 + L1
Effective Gradient Correction (takeoff only)	
(10' for each 1' difference between Hi / Lo	G = Difference between Hi / Lo point in feet
	L3 = RW length corrected for alititude, temperature & gradient
	L3 = G * 10 + L2

SABRELINER 65

Takeoff Runway Length at Sea Level and 59 Degrees Fahrenheit		
1. Enter the takeoff runway length at sea level in feet	L =	5150
Altitude		
2. Enter Airport Altitude in feet above sea level	E =	1152
	L1 =	5565
Temperature		
3. Enter Mean Max Daily Temp in degrees F	T =	86
	T1=	54.89
	L2 =	6431
Gradient Adjustment		
4. Enter Maximum Difference in RW Elevation in feet		17.3
Takeoff Runway Length Adjusted for Temp, Elevation & Gradient	L3 =	6604

TAKEOFF RUNWAY LENGTH ADJUSTMENT
(given takeoff length at sea level, Mean Max Temperature, Elevation & difference in Hi / Lo pts)

Altitude Correction	E = Elevation
(7% per 1,000' above sea level)	L = Takeoff length @ sea level
	L1 = Length corrected for altitude
	L1 = (.07 * E / 1000) * L + L
Temperature Correction	
(0.5% per degree above stnd temp in hottest month)	
(Stnd Temp adjusted to Sea Level)	T1 = Adjusted Stnd Temp
	T = Mean Max High Temperature
	L2 = Length corrected for altitude & temperature
	T1 = 59 - (3.566 * E / 1000)
	L2 = (.005*(T - T1)) * L1 + L1
Effective Gradient Correction (takeoff only)	
(10' for each 1' difference between Hi / Lo	G = Difference between Hi / Lo point in feet
	L3 = RW length corrected for alititude, temperature & gradient
	L3 = G * 10 + L2

FALCON 50

Takeoff Runway Length at Sea Level and 59 Degrees Fahrenheit		
1. Enter the takeoff runway length at sea level in feet	L =	4700
Altitude		
2. Enter Airport Altitude in feet above sea level	E =	1152
	L1 =	5079
Temperature		
3. Enter Mean Max Daily Temp in degrees F	T =	86
	T1=	54.89
	L2 =	5869
Gradient Adjustment		
4. Enter Maximum Difference in RW Elevation in feet		17.3
Takeoff Runway Length Adjusted for Temp, Elevation & Gradient	L3 =	6042

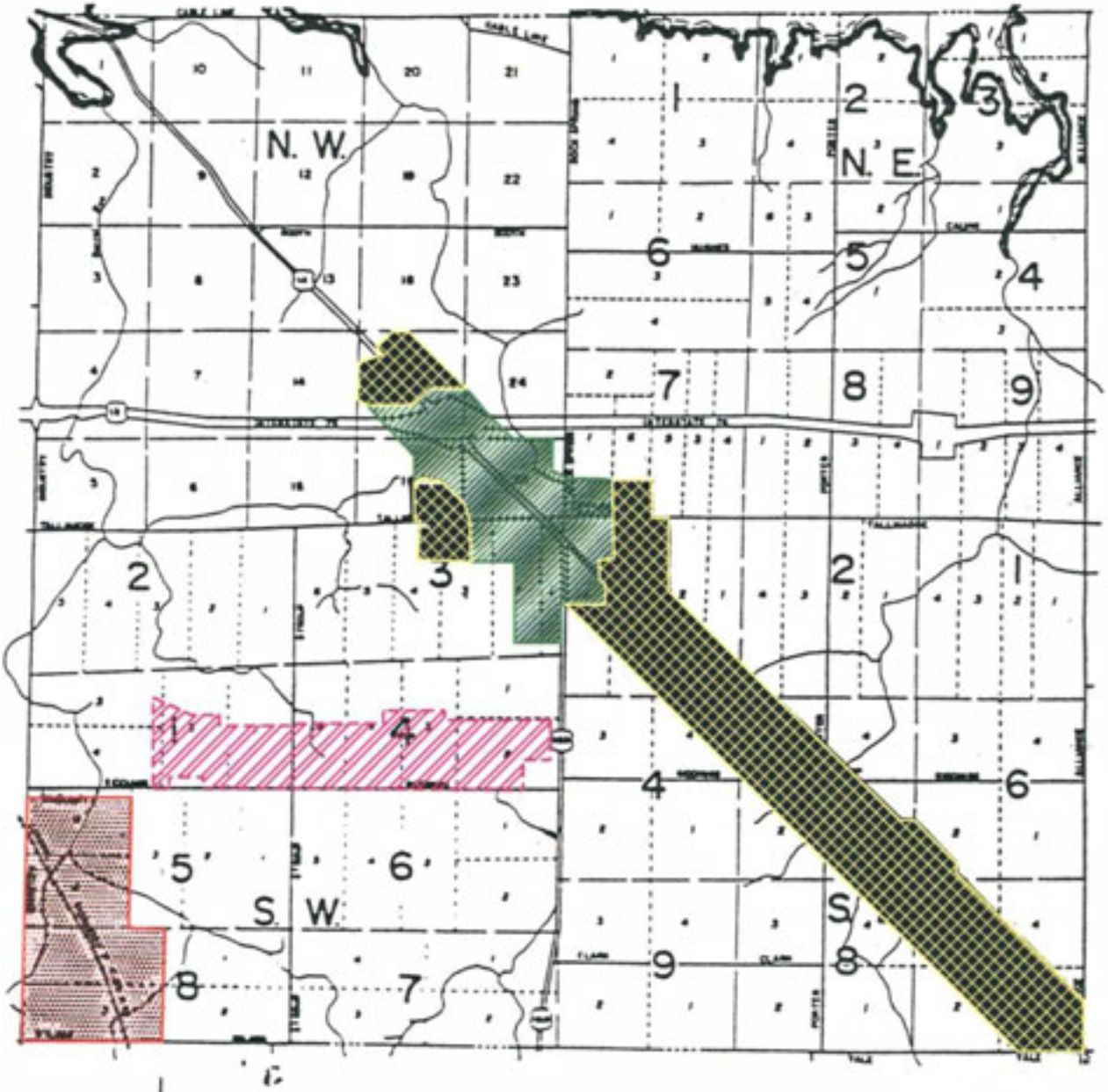
Update Costs for Landside Relocation (Alternatives 6 & 7)
Complete Closure of KSU Airfield and Transfer All Services

Relocation Assistance 2 FBO Trailers	$17,000
5 Aircraft (Increased Rental Fees at Other Site(s)	$6,000
Maintenance Facilities (3,000 s.f.)	$30,000
Kent State University Flight School (3,500 s.f.; 4 Trailers)	$32,000
Terminal Facilities (1,200 s.f.)	$12,000
Tenants (9 aircraft @ $2,000)	$18,000
Tie Down Tenants (5 aircraft @ $1,000)	$5,000
Hangars (KSU) Removal/Utilities Disconnect	$95,000
Hazard Evaluation Survey/Report	$5,000
Runway Decommission/Closed Marking	$4,000
Appraisals	$80,000
Engineering/Closure Management	$25,000
Administrative/Legal	$26,000
TOTAL AIRFIELD CLOSURE COST	$355,000

EDINBURG TOWNSHIP

ZONING MAP

1995



KEY

- R-1 RESIDENTIAL DISTRICT
- I-1 INDUSTRIAL DISTRICT
- C-1 COMMERCIAL DISTRICT
- C-2 COMMERCIAL DISTRICT

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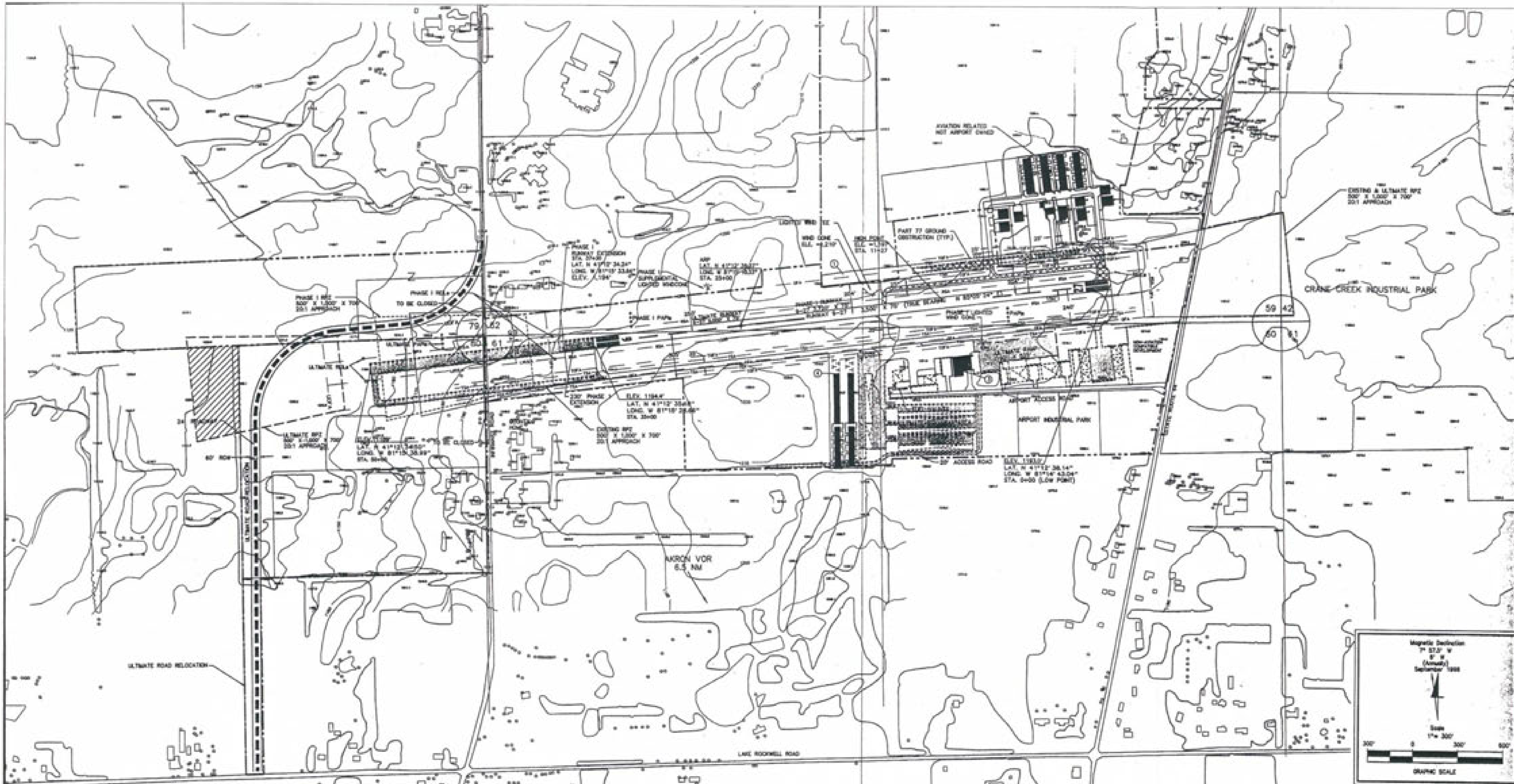


RUNWAY AND APPROACH DATA

	9	27	9 PHASE I	27 PHASE I	9 FUTURE	27 FUTURE
Instrument Aids	VOR-A/GPS-A	PAPI/VOR/DME, RNAV(GPS)	VOR-A/GPS-A	PAPI/VOR/DME, RNAV(GPS)	VOR-A/GPS-A, PAPI	PAPI/VOR/DME, RNAV(GPS)
Critical Aircraft	KING AIR 200	KING AIR 200	KING AIR 200	KING AIR 200	KING AIR 200	KING AIR 200
Approach Slope	20:1	20:1	20:1	20:1	20:1	20:1
Approach Visibility Min.	1 MILE	1 MILE	1 MILE	1 MILE	1 MILE	1 MILE
RPZ	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

OBSTRUCTION SUMMARY TABLE

ITEM NUMBER	DESCRIPTION	OBJECT ELEVATION	PRIMARY SURFACE	20:1	7:1	DISPOSITION
1	Ground	Varies	Varies	Varies	Varies	Lower
3	[illegible]	[illegible]	—	—	[illegible]	[illegible]
4	[illegible]	[illegible]	—	—	[illegible]	[illegible]

LEGEND

DESCRIPTION	EXISTING	ULTIMATE
Facilities		
Property Line		
Elevation Contours	800	
Trees		
Airport Buildings		
Non-Airport Buildings		
Facilities to be Removed		
Airport Beacon		
Wind Cone		
Lighted Wind Cone		
VASI's		
REIL's		
Airport Reference Point		
Avigation Easements		
Object Free Area	OFA	OFA
Runway Safety Area	RSA	RSA
Power Poles		

DIMENSIONS

RUNWAY	9-27
TAXIWAY WIDTH	[illegible]
TAXIWAY EDGE SAFETY MARGIN	[illegible]
TAXIWAY SHOULDER WIDTH	[illegible]
TAXIWAY SAFETY AREA WIDTH	[illegible]
TAXIWAY OBJECT FREE AREA WIDTH	[illegible]
TAXILANE OBJECT FREE AREA WIDTH	[illegible]
OBSTACLE FREE ZONE WIDTH	[illegible]
OBSTACLE FREE ZONE LENGTH	[illegible]
RUNWAY SAFETY AREA WIDTH	[illegible]
RUNWAY SAFETY AREA LENGTH	[illegible]
OBJECT FREE AREA WIDTH	[illegible]
OBJECT FREE AREA LENGTH	[illegible]

MODIFICATIONS TO FAA DESIGN STANDARDS

Date of FAA Letter	DESCRIPTION

NO.	DATE	REVISIONS	BY	APPR.
3				
2	3-02	AIP-10,11,12 & 13 AS-BUILT REVISIONS, TERMINAL AREA		DRY
1	3-01	RWY LENGTH, APPENDIX 2 CRITERIA, RWY 27 THRESH, FAA COMMENTS		DRY

PORTAGE COUNTY AIRPORT RAVENNA, OHIO

AIRPORT LAYOUT PLAN

DESIGNED
DRAWN
APPROVED DRY

YAGER CONSULTANTS, INC.
TOLEDO, OHIO

DATE
SHEET 2 OF 7

Form approved OMB No. 2120-0036

105112

U.S. Department of Transportation
Federal Aviation Administration

NOTICE OF LANDING AREA PROPOSAL

Name of Proponent, Individual, or Organization	Address of Proponent, Individual, or Organization (No., Street, City, State, Zip Code)
Kent State University ☐ Check if the property owner's name and address are different than above, and list property owner's name and address on the reverse.	4020 Kent Road Stow, Ohio 44224

☐ Establishment or Activation ☒ Deactivation or abandonment } OF ☐ Airport ☐ Ultralight Flightpark ☐ Vertiport
☐ Alteration ☐ Change of Status ☐ Heliport ☐ Seaplane Base ☒ Other (Specify) Sod Runway (2)

A. Location of Landing Area

1. Associated City/State	2. County/State (Physical Location of Airport)		3. Distance and Direction From Associated City or Town	
Stow, Ohio	Summit County, Ohio		Miles	Direction
4. Name of Landing Area	5. Latitude	6. Longitude	7. Elevation	
Kent State University Airport	41° 09' 06.1"	81° 24' 54.2"	1150	0

B. Purpose

Type Use	If Change of Status or Alteration, Describe Change	☐ Establishment or change to traffic pattern (Describe on reverse)	Construction Dates	
			To Begin/Began	Est. Completion
☒ Public ☐ Private ☐ Private Use of Public Land/Waters	Decommission Turf Runway 05-23 Turf Runway 09-27		N/A	N/A

C. Other Landing Areas

Ref. A5 above

	Direction From Landing Area	Distance From Landing Area
Akron Fulton Airport	195°	7.2 NM
Portage County Airport	65°	8.3 NM
Mills Field	55°	9 NM
Mayfield Airport	184°	9.6 NM
Freedom Airfield	66°	12.2 NM
Akron-Canton International	192°	13.6 NM
Medina Municipal	274°	15.4 NM
Wadsworth Municipal	250°	17.6 NM

D. Landing Area Data

1. Airport, Seaplane Base, or Flightpark	Existing (if any) Rwy #1	Rwy #2	Rwy #3	Proposed Rwy	Rwy	Rwy
Magnetic Bearing of Runway (s) or Sealane (s)	1-19	05-23	09-27		05-23	09-27
Length of Runway (s) or Sealane (s) in Feet	4000	2400	1170		0	0
Width of Runway (s) or Sealane (s) in Feet	60	165	55		0	0
Type of Runway Surface (Concrete, Asphalt, Turf, Etc.)	Asphalt	Turf	Turf		N/A	N/A

2. Heliport N/A

Dimensions of Final Approach and Take off Area (FATO) in Feet		
Dimensions of Touchdown and Lift-Off Area (TLOF) in Feet		
Magnetic Direction of Ingress/Egress Routes		
Type of Surface (Turf, concrete, rooftop, etc.)		

E. Obstructions

Type	Height Above Landing Area	Direction From Landing Area	Distance From Landing Area
Trees	80 ft.	230°	200 ft.
Trees	80 ft.	270°	200 ft.
Commercial Bldg.	30 ft.	50°	200 ft.
Commercial Bldg.	30 ft.	90°	200 ft.

3. All Landing Areas — Description of Lighting (If any): Medium Intensity, REIL, VASI

Direction of Prevailing Wind: Southwest

F. Operational Data

1. Estimated or Actual Number Based Aircraft

Airport, Flightpark, Seaplane base	Present (If est indicate by letter "E")	Anticipated 5 Years Hence	Heliport N.A.	Present (If est indicate by letter "E")	Anticipated 5 Years Hence
Multi-engine	0	3	Under 3500 lbs. mgw		
Single-engine	50	53	Over 3500 lbs. MGW		
Glider					

2. Average Number Monthly Landings

	Present (If est indicate by letter "E")	Anticipated 5 Years Hence		Present (If est indicate by letter "E")	Anticipated 5 Years Hence
Jet	180	196	Helicopter		
Turboprop	180	196	Ultralight		
Prop	5,600	6,070	Glider		

3. Are IFR Procedures For the Airport Anticipated ☐ No ☒ Yes Within 0 Years — Type Navaid: NDB/VOR-A

G. Other Considerations

Identification	Direction From Landing Area	Distance From Landing Area
Kimpton Junior High School	W	0.5 NM
Pambi Farms	S	0.1 NM
Riverview Elementary School	W	0.8 NM
Twin Falls United Methodist	W	1 NM
Indian Trails Elementary	NW	1 NM
Woodlawn Elementary	NNE	0.5 NM
Stow-Munroe Falls High Sch.	NNE	1.2 NM
Misc. High Density Resident		0.5-2NM
Church	NNE	0.1 NM

H. Application for Airport Licensing

☐ Has Been Made ☒ Not Required ☐ County
☐ Will Be Made ☐ State ☐ Municipal Authority

I. CERTIFICATION: *I hereby certify that all of the above statements made by me are true and complete to the best of my knowledge*

Name, title (and address if different than above) of person filing this notice – type or print	Signature (in ink)	Telephone No. (Precede with area code)
Hermann Schwaner, P.E., Project Engineer	Hermann Schwaner Date of Signature 7/12/06	419-524-0074

FAA Form 7480-1 (1-93) Supersedes Previous Edition

KENT STATE UNIVERSITY AIRPORT
ZONING AND LAND USE MAP

Source: Cities of Kent, Stow and Monroe Falls Zoning & Land Use Maps

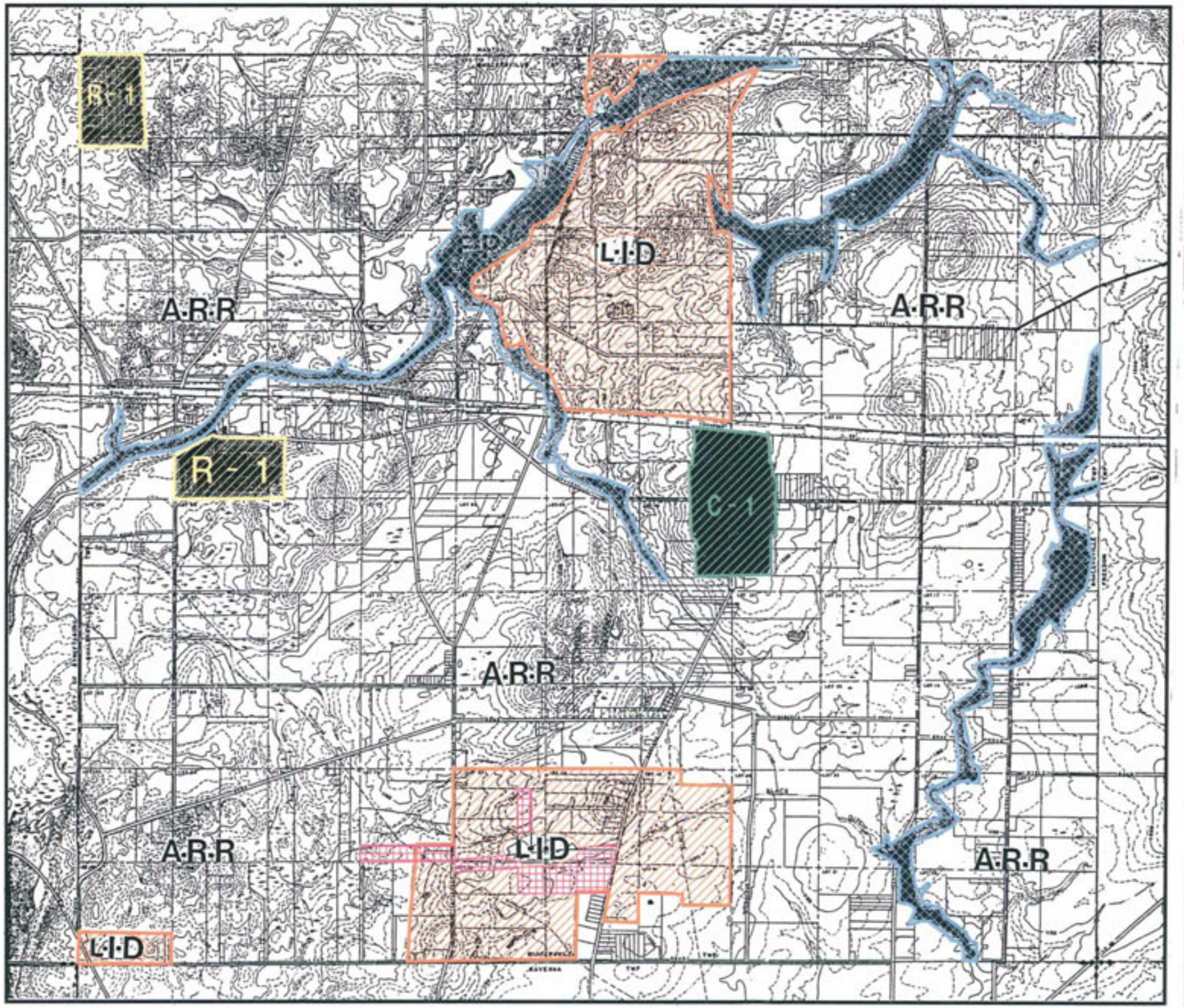
- C3 Community Retail
- C4 General Business
- C6 Office
- I1 Limited Industrial
- P1 Park District
- R1 Residential
- R2 Residential
- R3 Residential
- R8 Residential / Business

- A-B Minimal Exposure / Moderate Exposure
- A-C Minimal Exposure / Significant Exposure
- B-C Moderate Exposure / Significant Exposure

1" = 1000' HORIZONTAL SCALE IN FEET

DESIGNED
CHECKED

Job No. 10217A1/EXHIBITS/PIRES_EXHIBITS/KSU_DUZ Date 07/03/06 Drawn By SCB



SHALERSVILLE TOWNSHIP
PORTAGE COUNTY, OHIO
ZONING DISTRICT MAP

- F-P Flood Plain
- R-1 Low Density Residential
- C-1 Neighborhood Commercial
- L-I-D Light Industrial
- A-R-R Agricultural Rural Residential
- Portage County Airport

AMENDMENTS

Rev.	1999

F:\102174\EXHIBITS\SHALERVILLE.DWZ

RICHLAND ENGINEERING LIMITED

29 North Park Street, Mansfield, Ohio 44902-1769 • 419/524-0074 FAX 419/524-1812

105112

September 6, 2006

Dr. Mary Knapp
Ecological Services
US Fish and Wildlife Service
6950 Americana Parkway, Suite H
Reynoldsburg, Ohio 43068-4127

Re: Summit County
Kent State University Airport
Master Plan Study
Environmental Coordination

Dear Ms Knapp:

The above project is located in the USGS Hudson Quadrangle with an approximate Latitude of 41°09'18"N and Longitude of 81°24'53"W. We have enclosed one copy of the following for the above project for your use in conducting an environmental review.

- Exhibit 1,Location Map
- Exhibit 2, USGS Map
- Exhibit 3, Aerial Photograph

The Federally Endangered, Threatened, Proposed, and Candidate Species in Ohio October 25, 2005 lists the following species for Summit County.

- Indiana Bat (E) Myotis sodalist
- Bald Eagle (T) Haliaeetus leucocephalus
- Northern Monkshood (T) Aconitum noveboracense

If you have any questions or need additional information, please contact us.

Sincerely,
RICHLAND ENGINEERING LIMITED

Edward E Litt

Edward E. Litt, P.E.

Enc.

RICHLAND ENGINEERING LIMITED

29 North Park Street, Mansfield, Ohio 44902-1769 • 419/524-0074 FAX 419/524-1812

105112

September 6, 2006

Randall E. Sanders
Environmental Administrator
Ohio Department of Natural Resources
2045 Morse Road, C4
Columbus, Ohio 43229

Re: Summit County
Kent State University Airport
Master Plan Study
Environmental Coordination

Dear Mr. Sanders:

The above project is located in the USGS Hudson Quadrangle with an approximate Latitude of 41°09'18"N and Longitude of 81°24'53"W. We have enclosed one copy of the following for the above project for your use in conducting an environmental review.

- Exhibit 1, Location Map
- Exhibit 2, USGS Map
- Exhibit 3, Aerial Photograph

The Federally Endangered, Threatened, Proposed, and Candidate Species in Ohio October 25, 2005 lists the following species for Summit County. I could not find a listing of State species by County to know what state species may be of concern.

- Indiana Bat (E) Myotis sodalist
- Bald Eagle (T) Haliaeetus leucocephalus
- Northern Monkshood (T) Aconitum noveboracense

If you have any questions or need additional information, please contact us.

Sincerely,
RICHLAND ENGINEERING LIMITED

Edward E Litt

Edward E. Litt, P.E.

Enc.

RICHLAND ENGINEERING LIMITED

29 North Park Street, Mansfield, Ohio 44902-1769 • 419/524-0074 FAX 419/524-1812

105112

September 6, 2006

Julie Quinlan
Ohio Historic Preservation Office
567 East Hudson Street
Columbus, Ohio 43211-1030

Re: Summit County
Kent State University Airport
Master Plan Study
Environmental Coordination

Dear Ms. Quinlan:

We have enclosed one copy of the following for the above project:

- Exhibit 1, Location Map
- Exhibit 2, USGS Map
- Exhibit 3, Aerial Photograph
- Exhibit 4, Picture log locations
- Picture log of building on and adjacent to the airport

These are provided for your use in conducting an environmental review of the airport property to determine whether there are any architecturally significant buildings, NRHP eligible buildings, or archeological sites of concern.

If you have any questions or need additional information, please contact us.

Sincerely,
RICHLAND ENGINEERING LIMITED

Edward E Litt

Edward E. Litt, P.E.

Enc.

KENT STATE UNIVERSITY AIRPORT
MASTER PLAN STUDY
ALTERNATIVE RATING/SELECTION CRITERIA

	PRIMARY ALTERNATIVE CONSIDERATION	EXISTING AIRPORT ALTERNATIVES													#6 *Construct Airport On New Site	#7 Transfer to Other Airport	#8 Transfer and Maintain Exist.
		Alt. 1	Alt. 1A	Alt.1B	Alt. 2A	Alt. 2B	Alt. 2C	Alt. 3A	Alt. 3B	Alt. 4A	Alt. 4B	Alt. 4C	Alt. 4E	Alt. 5			
1.	Distance to primary users.	1	1	1	1	1	1	1	1	1	1	1	1	1	3	2	1
2.	Runway orientation/wind coverage.	3	3	3	3	3	3	3	3	3	3	3	3	3	1	1	2
3.	Public Acceptance.	3	4	4	5	5	5	4	5	4	5	5	4	5	3	2	2
4.	Land use issues.	2	3	3	4	5	5	3	4	4	5	5	4	4	3	2	2
5.	Land availability.	3	4	4	5	5	5	4	5	4	5	5	4	4	2	2	2
6.	No parcels/acres affected.	1	1	1	2	3	2	3	4	2	3	4	2	3	2	2	2
7.	No. of families/business relocation.	1	1	1	2	5	2	2	5	2	5	3	2	2	2	1	1
8.	Suitability for ultimate development.	4	4	4	4	5	4	4	5	4	5	4	3	4	2	2	3
9.	Anticipated ultimate development cost.	1	1	1	1	3	5	3	4	2	5	3	3	4	3	1	2
10.	Suitability for crosswind runway.	5	5	5	5	5	5	5	5	5	5	5	5	5	1	3	5
11.	Adaptability for ultimate land use.	4	5	5	5	5	5	5	5	5	5	5	5	5	2	2	3
12.	Existing adverse easements.	3	3	3	3	3	3	3	3	3	3	3	3	3	1	1	2
13.	Existing user/non-user agreements.	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
14.	Tax base effect.	3	3	3	4	5	4	3	5	3	5	4	3	5	1	1	3
15.	Adverse topography effect.	2	3	3	3	5	4	3	4	3	5	3	3	5	2	2	2
16.	Wind data utilization.	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	2
17.	Access to major business routes.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
18.	Adverse environmental issues.	2	2	3	4	5	4	4	5	3	5	4	4	4	3	2	2
19.	Positive environmental issues.	3	3	3	4	5	4	4	5	3	5	4	4	4	3	2	2
20.	Airspace compatibility.	3	3	3	3	3	3	3	3	3	3	3	3	3	1	2	2
21.	Obstruction effects.	2	3	3	3	5	4	3	4	3	5	3	3	3	2	2	2
22.	Available utilities.	1	1	1	1	1	1	1	1	1	1	1	1	1	4	2	2
23.	Soil conditions.	2	2	2	2	2	2	2	2	2	2	2	3	3	2	2	2
24.	Potential for community growth stimulus.	4	3	3	3	3	3	3	3	3	3	3	2	4	3	1	3
25.	Compatibility with regional plan.	3	3	3	4	4	4	4	4	4	4	4	4	4	2	2	3
26.	Compatibility with existing businesses.	4	3	3	3	3	3	3	3	3	3	3	2	3	3	2	3
27.	Affect on energy uses/energy reserves.	2	2	2	2	2	2	2	2	2	2	2	2	3	2	2	2
28.	Cost benefit ratio.	1	1	1	3	4	3	3	4	2	5	3	2	5	3	1	2
29.	Return on investment.	1	1	1	3	5	3	3	4	3	5	4	3	4	4	1	3
30.	Noise factor/maximum exposure rate/noise contours.	3	4	4	4	4	4	4	4	4	4	4	4	4	1	2	2
31.	Compatible with local philosophy.	3	3	3	3	4	4	3	5	4	5	5	3	5	3	2	2
32.	Other factors as become apparent from public and standing committee.	2	3	3	3	5	3	3	4	3	5	4	3	5	3	1	2
	TOTAL RATING	**77**	**83**	**84**	**97**	**118**	**105**	**96**	**116**	**93**	**122**	**107**	**93**	**113**	**71**	**54**	**71**

* The alternatives study investigated one potential site within Portage County. This site would adequately support the operational demands. Estimated costs for developing the alternative site is $19.6 million dollars.

Point Ranking

1 = Desirable - Closest to ideal conditions
2 = Good - Meeting the required qualities
3 = Adequate - Meeting only minimum qualitites
4 = Poor - Not meeting minimum qualities (or requires extensive modifications.)
5 = Inadequate - Minimum qualities cannot be achieved without servere adverse affects.
Most Accepetable Alternative (Lowest Points)

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