12

Recommended System and Cost Estimates

The previous three chapters of the Kentucky Statewide Aviation System Plan (SASP) evaluated the Kentucky system of 59 airports using a number of factors. These factors included elements of airport stewardship, airport design standards based on runway design code (RDC), and SASP benchmarks based on each airport's role. In addition, the system as a whole was evaluated geographically, to illustrate how well Kentucky's population has access to airports with certain facilities and services.

Similarly to how system planning goals and objectives led to this multi-tiered system evaluation, the system evaluation directly results in a set of SASP recommendations, which are detailed in this chapter. These recommendations are designed to improve the efficiency, safety, and capacity of the Kentucky airport system, both at the individual airport level and throughout the Commonwealth as a whole. Not every item evaluated in the previous three chapters resulted in a recommendation. Stewardship factors, for example, do not often result in a SASP recommendation, but are provided for informational purposes. However, airports should strive to improve in all possible areas, particularly those identified in this plan as areas for improvement.

It is important to note that system planning recommendations are but one element of a multi-tiered airport planning approach taken by the Kentucky Department of Aviation. The Kentucky Airport Pavement Management System and Statewide Airport Obstruction Analysis Report will also result in recommendations and planned projects. In addition, individual airport capital improvement plans include planned projects. Projects resulting from these planning efforts may take priority over SASP recommendations.

Table 12-1 details how SASP goals and objectives have carried through the planning process. Objectives that led to SASP recommendations are shown in bold.

Table 12-1
Kentucky SASP Goals, Objectives, and Resulting Recommendations

	Objective Performance Measure		Action/Recommendations
Goal 1	: Help KYTC assess how the Kentuc	ky airport system provides n	nobility to people
1.01	Assess the adequacy of primary runway length at each system airport based on assigned airport role.	Length of runway; benchmarks by SASP role	Analysis presented in Chapter 10; 1 airport recommendation
1.02	Assess the adequacy of runway width at each system airport based on its runway design code.	Width of runway; compliance determined by RDC	Analysis presented in Chapter 10; No recommendations
1.03	Assess the adequacy of the primary runway lighting at each system airport based on assigned airport role.	Runway lighting; benchmarks by SASP role	Analysis presented in Chapter 10; No recommendations
Assess the adequacy of the approach lighting system (ALS) on the primary runway at each system airport based on 1.04 assigned airport role.		ALS; benchmarks by SASP role	Analysis presented in Chapter 10; 1 airport recommendation

Table 12-1 Kentucky SASP Goals, Objectives, and Resulting Recommendations

	Objective	Performance Measure	Action/Recommendations
1.05	Assess the adequacy of the best instrument approach procedure (IAP) at each system airport based on assigned airport role.	Best IAP; benchmarks by SASP role	Analysis presented in Chapter 10; 6 airport recommendations
1.06	Assess the adequacy of fuel provided at each system airport based on assigned airport role.	Fuel services; benchmarks by SASP role	Analysis presented in Chapter 10; No recommendations
1.07	Assess the adequacy of airport parking at each system airport based on airport manager's opinion.	Auto parking; benchmarks by SASP role	Analysis presented in Chapter 10; Informational only; No recommendations
1.08	Assess the adequacy of snow removal service provided at each system airport based on assigned airport role.	Snow removal services; benchmarks by SASP role	Analysis presented in Chapter 10; 16 airport recommendations
1.09	Assess the adequacy of terminal facilities provided at each system airport based on assigned airport role.	Terminal status; benchmarks by SASP role	Analysis presented in Chapter 10; 4 airport recommendations
1.10	Assess the adequacy of coverage by commercial service airports based on GIS drive-time analysis.	Percent of population and area within 60/90 minutes of a CS airport	Current coverage presented in Chapter 11;
1.11	Assess the adequacy of coverage by Economic Level 1 airports based on GIS drive-time analysis.	Percent of population and area within 30 minutes of an Economic Level 1 airport	Current coverage presented in Chapter 11;
1.12	Assess the adequacy of coverage by Economic Level 1 and 2 airports based on GIS drive-time analysis.	Percent of population and area within 30 minutes of an Economic Level 1 or 2 airport	Current coverage presented in Chapter 11;
1.13	Assess the adequacy of coverage by Economic Level 1, 2, and 3 airports based on GIS drive-time analysis.	Percent of population and area within 30 minutes of an Economic Level 1, 2, or 3 airport	Current coverage presented in Chapter 11;
1.14	Assess the adequacy of coverage by system airports (Commercial Service, Economic Level 1, 2, 3, and 4 airports) based on GIS drive-time analysis.	Percent of population and area within 30 minutes of a system airport	Current coverage presented in Chapter 11; Potential improved coverage from system planning recommendations presented in this chapter
1.15	Assess the adequacy of coverage by system airports with a runway length of at least 5,000 feet.	Percent of population and area within 30 minutes of a system airport with a 5,000 foot runway	Current coverage presented in Chapter 11; Potential improved coverage from system planning recommendations presented in this chapter

Table 12-1 Kentucky SASP Goals, Objectives, and Resulting Recommendations

	Objective	Performance Measure	Action/Recommendations
	Assess the adequacy of		Current coverage presented in
	coverage by system airports	Percent of population	Chapter 11;
	with instrument approach	and area within 30	Potential improved coverage from
	procedures (IAP) based on GIS	minutes of a system	system planning recommendations
1.16	drive-time analysis.	airport with an IAP	presented in this chapter
		Percent of population	Current coverage presented in
	Assess the adequacy of	and area within 30	Chapter 11;
	coverage by system airports	minutes of a system	Potential improved coverage from
	with fuel service based on GIS	airport with any fuel	system planning recommendations
1.17	drive-time analysis.	service	presented in this chapter
		Percent of population	Current coverage presented in
	Assess the adequacy of	and area within 30	Chapter 11;
	coverage by system airports	minutes of a system	Potential improved coverage from
	with jet fuel service based on	airport with jet fuel	system planning recommendations
1.18	GIS drive-time analysis.	service	presented in this chapter
Goal 2:	: Help KYTC assess the safety of the	Kentucky airport system	
	Assess whether each system		
	airport adheres to FAA runway	DCAli	Analysis agreement of in Chanter 10
2.01	safety area (RSA) standards on primary runways.	RSA compliance; determined by RDC	Analysis presented in Chapter 10;
2.01	· · · · · ·	determined by KDC	26 airport recommendations
	Assess whether each system		
	airport adheres to FAA runway safety area standards on other	RSA compliance;	Analysis presented in Chapter 10;
2.02	runways.	determined by RDC	5 airport recommendations
2.02	Assess whether each system	determined by NDC	3 airport recommendations
	airport controls its runway		Analysis presented in Chapter 10;
	protection zones (RPZ) on the	RPZ compliance;	Informational only;
2.03	primary runway.	determined by RDC	No recommendations
	Assess whether each system	,	
	airport controls its object free		Analysis presented in Chapter 10;
	area (OFA) on their primary	OFA compliance;	Informational only;
2.04	runway.	determined by RDC	No recommendations
			Analysis presented in Chapter 10;
	Assess whether each system		13 airport recommendations for
	airport meets FAA standards		hold line separation;
	for separation of the primary		6 airport recommendations for
	runway to the holding position,	Separation standard	taxiway separation;
	parallel taxiway, and aircraft	compliance; determined	8 airport recommendations for
2.05	parking area.	by RDC	aircraft parking separation
	Assess the adequacy of		
	taxiways for the primary	T	Analysis unservated to the state
2.06	runway at each system airport based on airport role.	Taxiway types; benchmarks by SASP role	Analysis presented in Chapter 10; 14 airport recommendations
2.00	Assess the adequacy of visual	benchinarks by SASP fole	14 an port recommendations
	glide slope indicators (VGSI) for		
	the primary runway at each		
	system airport based on airport	VGSI status; benchmarks	Analysis presented in Chapter 10;
2.07	role.	by SASP role	No recommendations
,	1	-, 5	

Table 12-1 Kentucky SASP Goals, Objectives, and Resulting Recommendations

	Objective Children	Performance Measure	Action/Recommendations
	•	Pariormanice Wieasure	Action/Recommendations
	Assess the adequacy of runway	DEU status la salas also	Analysis and sated in Charles 10
2.00	end identifier lights (REILs) at	REIL status; benchmarks	Analysis presented in Chapter 10;
2.08	each system airport.	by SASP role	No recommendations
	Assess the adequacy of		
	automated weather reporting	1407	Analysis and discharge 40
2.09	at each system airport based	WX reporting status;	Analysis presented in Chapter 10;
2.09	on airport role.	benchmarks by SASP role	6 airport recommendations
	Assess the adequacy of the	Dotatina hoosen status.	Analysis presented in Chapter 10.
2 10	rotating beacon at each system airport.	Rotating beacon status; benchmarks by SASP role	Analysis presented in Chapter 10;
2.10		benchmarks by SASP role	1 airport recommendation
	Assess the adequacy of wind	Military and a series of the Assess	Analysis and souts dis Charles 10
2 1 1	socks at each system airport	Wind sock status;	Analysis presented in Chapter 10;
2.11	based on airport role.	benchmarks by SASP role	No recommendations
	Assessable adam 6 11 PM		Analysis presented in Chapter 9;
2 4 2	Assess the adequacy of wildlife	Marchallista in Laure 1991	Informational only;
2.12	plans at each system airport.	Wildlife plan status	No recommendations
	Assess the adequacy of		Current coverage presented in
	coverage by airports with	Percent of area within 30	Chapter 11;
	automated weather reporting	nautical miles of a system	Potential improved coverage from
242	using a 30-nautical mile radius	airport with automated	system planning recommendations
2.13	of coverage.	weather reporting	presented in this chapter
Goal 3:	Help KYTC assess the security of the	he Kentucky airport system	
	Assess the adequacy of fencing	Facilities at 1	Analysis nosa i li ci i co
2.04	at system airports based on	Fencing status;	Analysis presented in Chapter 10;
3.01	assigned airport role.	benchmarks by SASP role	14 airport recommendations
	Assess the security of system		
	airports through an evaluation of airports with access control	Accord control assistant	
	systems based on assigned	Access control system status; benchmarks by	Analysis presented in Chapter 10.
3.02	airport role.	SASP role	Analysis presented in Chapter 10; 5 airport recommendations
3.02	Assess the security of system	JAJE TUIC	5 an port recommendations
	airports through an evaluation		Data presented in Chapter 3;
	of airports with general aviation		Informational only;
3.03	security plans.	GA security plan status	No recommendations
	Help KYTC assess how the Kentuc		
	rity of Kentucky	ky an port system contribute	s to and maintains the economic
p. 55pc	Assess the demand for hangar		
	space based on the number of		
	· ·		
	_	Hangar waiting list	Data collected as part of inventory
4.01		numbers	effort
+			
	through an evaluation of local		
	funding provided for:	Maintenance funding,	
	maintenance, operations, and	operations funding, and	Data collected as part of inventory
4.02	local matching funds for airport	local matching funds	effort
4.01	aircraft on waiting lists for hangar space as indicated in the airport survey. Assess the level of local commitment from sponsors	Hangar waiting list numbers	Data collected as part of inventory effort

Table 12-1 Kentucky SASP Goals, Objectives, and Resulting Recommendations

	Objective	Performance Measure	Action/Recommendations
	capital projects at system		
	airports.		
4.03	Assess airports' contributions to the economy of Kentucky through an evaluation of the direct economic impacts (jobs, payroll, and output) stemming from system airports.	Direct economic impacts	Analysis presented in Chapter 7; Informational only; No recommendations
4.04	Assess the coverage provided by system airports that typically provide service for business aircraft by evaluating system airports with 5,000-foot runways, automated weather reporting, jet fuel, and an instrument approach with vertical guidance.	Percent of population and area within 30 minutes of an airport with a 5,000-foot runway	Current coverage presented in Chapter 11; Recommended system coverage presented in this chapter
4.05	Assess the coverage provided by system airports that offer based flight training,	Percent of population and land area within 30 minutes of an airport offering based flight training	Current coverage presented in Chapter 11;
4.06	Assess the coverage of Kentucky's registered pilot population by system airports.	Percent of Kentucky's registered pilots living within 30 minutes of a system airport	Current coverage presented in Chapter 11;
Goal 5:	Help KYTC assess how the Kentuc	ky airport system contribute	es to preserving the quality of the
enviro	nment		
5.01	Evaluate what percentage of system airports have EPA spill prevention control and countermeasure (SPCC) plans.	SPCC status	Analysis presented in Chapter 9; Informational only; No recommendations
5.02	Evaluate what percentage of system airports have EPA stormwater pollution prevention plans (SWPPP).	SWPPP status	Analysis presented in Chapter 9; Informational only; No recommendations
5.03	Evaluate what percentage of system airports have maintained training as per Division of Water General Permit requirements.	Training status	Analysis presented in Chapter 9; Informational only; No recommendations
5.04	Evaluate what percentage of system airports have updated their Best Management Plan (BMP) as per Division of Water General Permit requirements.	BMP update status	Analysis presented in Chapter 9; Informational only; No recommendations

Table 12-1
Kentucky SASP Goals, Objectives, and Resulting Recommendations

	Objective	Performance Measure	Action/Recommendations
	Evaluate what percentage of		
	system airports have kept their		Analysis presented in Chapter 9;
	Tier II inventory and reporting		Informational only;
5.05	up to date.	Tier II status	No recommendations
Goal 6:	Help KYTC assess maintenance ne	eds at system airports	
		5-year history of	
		maintenance projects	
	Assess airfield maintenance	and planned CIP	Data collected as part of inventory
6.01	trends at each system airport.	maintenance	effort
	Assess how well each system		
	airport is maintaining its runway		
	infrastructure by tracking the		
	upkeep status of the primary		
	runway as reported by		
	Kentucky's most recent		Analysis presented in Chapter 9;
	pavement condition index (PCI)		Informational only;
6.02	report.	Primary runway PCI	No recommendations
Goal 7:	Help KYTC assess in a qualitative f	ashion how the Kentucky ai	rport system contributes to
preserv	ving the quality of Kentucky comm	unities	
	Develop a set of talking points		
	suitable for illustrating how		
	airports contribute to		
	preserving the quality of		
7.01	Kentucky communities.	Not applicable	Talking points provided to KDA

Objectives with associated recommendations are presented in bold text. Source: CDM Smith.

Following the presentation of SASP recommendations for the existing system, this chapter will detail plans to build two new general aviation (GA) airports in Kentucky. These airports are to be located in Gallatin County in northern Kentucky, and Letcher County in the southeastern region of the Commonwealth. This chapter will detail planned facilities and services, and examine the coverage of these airports' expected market areas. Because these airports will fill gaps in current system coverage, they are part of the recommended system. In addition, this chapter provides an overview of early plans to turn the Bluegrass Station center outside of Lexington into an additional GA airport.

Finally, this chapter will present a portrait of Kentucky's full recommended airport system, including the improved geographic coverage that will occur if all recommendations are met, and the additional coverage offered by the planned new airports.

Recommendations Based on Airport Design Standards

Chapter 10 of this study, System Evaluation – Facilities and Services, evaluated several aspects of FAA airport design standards. These included runway width, runway safety areas (RSA), runway protection zones (RPZ), object free areas (OFA), and separation between runway centerlines and taxiway centerlines, aircraft parking areas, and hold lines. Unlike SASP benchmarks, this evaluation was not based on system planning roles, but on the FAA runway design code (RDC).

The SASP makes specific recommendations for the following airport design standards:

- Runway width
- Runway Safety Area
- Runway Centerline to Aircraft Holding Position Separation
- Runway Centerline to Taxiway Centerline Separation
- Runway Centerline to Aircraft Parking Area Separation

All 59 Kentucky system airports meet RDC design standards for runway width, meaning there are no runway width recommendations. The SASP does not make specific recommendations for either RPZ or OFA. However, airports should always be working towards full compliance with FAA design standards where feasible, particularly in terms of land ownership and control.

The following sections detail recommendations and cost estimates for RSA and runway separation standards.

Runway Safety Area Recommendations

The RSA is a surface surrounding a runway designed to reduce damage to aircraft in the event of an undershoot, overshoot, or excursion from the runway. Chapter 10 of this study detailed RSA dimensions per RDC and RSA compliance at Kentucky system airports. Compliance was determined using several data sources, including the Airport Inventory and Data Survey, airport layout plans, and aerial imagery. Issues such as roadways, improper grading, vegetation, and built structures resulted in 26 primary runway RSAs and four secondary runway RSAs to not be in full compliance with FAA standards.

RSA recommendations are made with the goal of airports achieving full use of their marked airport pavements. Recommendations are not made in an attempt to reclaim pavement lost to displaced or relocated thresholds, but rather to eliminate the need for declared distances as a means for achieving RSA compliance. The SASP found that 17 Kentucky system airports use declared distances – a procedural means of shortening the available runway for take offs and landings – to improve operational safety. Four of these airports – Fulton Airport, Lake Barkley State Resort Park Airport, Gene Snyder Airport, and Bowman Field – have specifically instituted declared distances to meet RSA standards within the physical constraints around each airport. In the SASP, RSA recommendations are designed to eliminate the need for declared distances to meet RSA standards, maximizing the usable runway pavement within designated thresholds.

Table 12-2 details RSA recommendations for primary runways in the Kentucky airport system. Estimated costs for RSA corrective actions vary greatly between airports due to a number of factors including area of noncompliance, cost of land, severity of issue, and the nature of the noncompliance. Projects such as relocating roadways and fixing severe grading issues are estimated to be particularly costly.

In total, bringing primary runway RSAs into compliance is estimated to cost over \$68 million, with an average cost per project of over \$2.5 million. However, 72 percent of the total cost is attributed to recommended projects at two airports:

- **Pikeville-Pike County Regional Airport**: Major projects include moving two public roads that cross the RSA near both runway ends. Both roads are built on hillsides, greatly increasing the costs of these projects. Other projects include clearing trees within the RSA and as part of road relocations, and acquiring uncontrolled land. The total estimated cost of these projects is \$31.4 million.
- **Bowman Field in Louisville**: Major projects include relocating multiple roadways in both ends of the RSA. Other projects include clearing trees and shrubs and acquiring uncontrolled land. The total estimated cost of these projects is \$18.4 million.

When removing these three airports, the average cost of RSA recommendations comes to approximately \$750,000. While these projects are part of the system plan recommendations, it should be recognized that their high cost may hinder their implementation.

Table 12-3 details secondary runway RSA recommendations. In total, these projects are estimated to cost nearly \$3 million, with much of this attributable to moving a road at Barkley Regional Airport in Paducah and improving a slope issue at Wendell H. Ford Regional Airport in Hazard.

Table 12-2
Primary Runway RSA Recommendations and Cost Estimates

FAA ID	Associated City	Airport Name	Primary Runway RSA Recommendations	Estimated Project Costs
			Commercial Service	
BWG	Bowling Green	Bowling Green-Warren County Regional	Acquire uncontrolled land: 0.52 acres	\$26,000
Comm	nercial Service Tot	al		\$26,000
			Economic Level 1	
DVK	Danville	Stuart Powell Field	RW 30: Clear shrubs - 0.27 acres RW 30: Grading, fill - 0.27 acres	\$41,600
FGX	Flemingsburg	Fleming-Mason	RW 07: Clear 20 trees RW 07: Grading/Fill - 7.70 acres RW 25: Clear 10 trees RW 25: Grading/fill - 8.09 acres Acquire uncontrolled land: 6.4 acres	\$3,564,000
27K	Georgetown	Georgetown Scott County - Marshall Field	RW 21: 2-track road requires grading - 0.27 acres	\$4,000
EHR	Henderson	Henderson City-County Hopkinsville-Christian	RW 09: Move public road - 0.21 acres RW 27: Move public road - 0.33 acres Acquire uncontrolled land: 1.67 acres RW 26: Move dirt road, grade area - 0.33 acres	\$2,866,400
HVC LOZ	Hopkinsville London	County London-Corbin-Magee Field	Acquire uncontrolled land: 0.19 acres RW 06: Clear 20 trees/shrubs RW 06: Fill and grade 0.45 acres RW 24: Remove trees - 7,100 sq yds RW 24: Relocate structures - 1.47 acres Acquire uncontrolled land: 3.98 acres	\$8,900
LOU	Louisville	Bowman Field	RW 06: Move walking path - 0.04 acres RW 06: Clear 15 trees/shrubs RW 06: Relocate Roadway Acquire uncontrolled land: 0.4 acres	\$18,430,000

Table 12-2
Primary Runway RSA Recommendations and Cost Estimates

FAA ID	Associated City	Airport Name	Primary Runway RSA Recommendations	Estimated Project Costs
			RW 09: Clear trees - 7.23 acres	
			RW 09: Non-secure service Road - 0.72 acres	
			RW 27: Clear 30 trees	
		Pikeville – Pike County	RW 27: Move public road - 0.31 acres	
PBX	Pikeville	Regional	Acquire uncontrolled land: 5.07 acres	\$31,409,200
			RW 03: Clear 20 trees	
			RW 03: Move public road - 0.17 acres	
			RW 21: Remove trees/Shrubs - 0.04 acres	
SJS	Prestonsburg	Big Sandy Regional	Acquire uncontrolled land: 0.33 acres	\$743,700
			RW 06: Fill at end of RSA	
4M7	Russellville	Russellville-Logan County	(project in progress as part of runway extension)	\$0
			RW 11: Grading, deep fill - 0.45 acres	
612	Springfield	Lebanon-Springfield	RW 29: Grading, deep fill - 0.82 acres	\$1,952,800
Economic Level 1 Total				
			Economic Level 3	
			RW 03: Evidence of slope collapse - 5.79 acres	
K62	Falmouth	Gene Snyder	RW 21: Grading, fill at north end - 0.17 acres	\$4,613,900
			RW 09: Grading - 1.01 acres	
			RW 27: Move public road - 0.07 acres	
1M7	Fulton	Fulton	Acquire uncontrolled land: 0.54 acres	\$874,600
			RW 02: Clear trees - 0.45 acres	
M20	Leitchfield	Grayson County	Acquire uncontrolled land: 0.45 acres	\$22,500
			RW 10: Clear trees - 0.07 acres	
			RW 10: Move public road - 0.10 acres	
			RW 28: Move public road - 0.07 acres	
1A6	Middlesboro	Middlesboro-Bell County	RW10/28: Acquire uncontrolled land: 0.75 acres	\$1,322,900
Economic Level 3 Total				
Econo	mic Level 3 Total		Economic Level 4	\$6,833,90

Table 12-2 Primary Runway RSA Recommendations and Cost Estimates

FAA ID	Associated City	Airport Name	Primary Runway RSA Recommendations	Estimated Project Costs
		Lake Barkley State Resort	RW 02: Clear trees - 0.43 acres	
1M9	Cadiz	Park	RW 20: Clear trees - 0.33 acres	\$12,200
196	Columbia	Columbia-Adair County	RW 08: Grading, fill - 0.19 acres	\$5,500
8M7	Dawson Springs	Tradewater	RW 18: Clear trees - 0.31 acres	\$5,000
213	Falls of Rough	Rough River State Resort Park	RW 02: Grading, fill at end of RSA - 0.27 acres RW 20: Grading, fill at end of RSA - 0.04 acres	\$97,100
M34	Gilbertsville	Kentucky Dam Village State Resort Park	RW 09: Clear 10 trees RW 27: Clear shrubs - 0.39 acres Acquire uncontrolled land: 0.35 acres	\$33,400
JKL	Jackson	Julian Carroll	RW 01: Clear trees - 0.06 acres RW 19: Grading, fill at north end - 0.08 acres	\$6,200
153	Liberty	Liberty-Casey County	RW 01: Minor grading in RSA center, 2-track road - 0.08 acres	\$2,000
181	Pine Knot	McCreary County	RW 04: Grading fill, south corner - 0.14 acres	\$3,900
8M9	Providence	Providence-Webster County	RW 16: Regrade unpaved road - 0.10 acres RW 34: Clear shrubs - 0.04 acres Acquire uncontrolled land: 0.2 acres	\$12,200
150	Stanton	Stanton-Powell County	RW 06: Move public road - 0.21 acres RW 24: Move public road - 0.08 acres Acquire uncontrolled land: 0.14 acres	\$1,009,800
Econo	mic Level 4 Total	•	·	\$1,187,300
Kentu	cky System Total			\$67,285,700

Source: CDM Smith, Connico.

Table 12-3
Secondary Runway RSA Recommendations and Cost Estimates

		Secondary Runway Rom Recomm	i e e e e e e e e e e e e e e e e e e e		
FAA	Associated		Secondary Runway RSA	Estimated	
ID	City	Airport Name	Recommendations	Project Costs	
		Commercial	Service		
BWG	Bowling Green	Bowling Green-Warren County Regional	Acquire uncontrolled land: 0.17 acres	\$1,500	
			RW 14: Move public road: 0.45 acres		
PAH	Paducah	Barkley Regional	Acquire uncontrolled land: 0.45 acres	\$1,638,500	
Comm	Commercial Service Total				
		Economic L	evel 1		
CPF	Hazard	Wendell H. Ford Regional	RW 06: Slope failure - 0.14 acres	\$1,297,900	
DVK	Danville	Stuart Powell Field	Acquire uncontrolled land: 0.12 acres	\$5,400	
LOU	Louisville	Bowman Field	Acquire uncontrolled land: 0.10 acres	\$24,000	
Economic Level 1 Total				\$1,327,300	
Kentu	Kentucky System Total				

Source: CDM Smith, Connico.

Separation Standards Recommendations

Like standards for airport RSAs, runway separation standards are determined by a runway's RDC. The following sections detail recommended corrective actions for noncompliance with runway centerline to hold position separation, runway centerline to parallel taxiway separation, and runway centerline to aircraft parking area separation.

Hold Position Recommendations

Table 12-4 details recommendations for runway centerline to hold position separation. Variations in the estimated costs of these recommendations are the results of taxiway width and the number of hold lines that are missing or not in compliance. In total, recommended projects for bringing hold line position into compliance is estimated to cost \$30,000.

Table 12-4
Runway Centerline to Hold Position Separation Recommendations and Cost Estimates

FAA ID	Associated City	Airport Name	Hold Position Recommendation	Estimated Project Costs		
	Economic Level 1					
M25	Mayfield	Mayfield Graves County	Move hold line	\$2,000		
	Economic Level 1 Total					
		Economic Level 2		\$2,000		
DWU	Ashland	Ashland Regional	Move hold lines	\$5,000		
Econo	mic Level 2 Total			\$5,000		
		Economic Level 3				
018	Cynthiana	Cynthiana-Harrison County	Move hold lines	\$3,000		
M20	Leitchfield	Grayson County	Move hold line	\$1,000		
1A6	Middlesboro	Middlesboro-Bell County	Move hold lines	\$3,000		
2M0	Princeton	Princeton-Caldwell County	Move hold lines	\$2,000		
Econo	Economic Level 3 Total					
		Economic Level 4				
196	Columbia	Columbia-Adair County	Move hold lines	\$5,000		
8M7	Dawson Springs	Tradewater	Paint hold line	\$1,000		
M34	Gilbertsville	Kentucky Dam Village State Resort Park	Move hold lines	\$3,000		
JKL	Jackson	Julian Carroll	Paint hold line	\$1,000		
153	Liberty	Liberty-Casey County	Move hold line	\$1,000		
181	Pine Knot	McCreary County	Paint hold line	\$2,000		
8M9	Providence	Providence-Webster County	Move hold line	\$1,000		
Economic Level 4 Total			\$14,000			
Kentu	cky System Total			\$30,000		

Source: CDM Smith, Stantec.

Taxiway Separation Recommendations

Table 12-5 details recommendations for correcting runway centerline to taxiway centerline separation noncompliance. In total, costs for these recommended projects are estimated at over \$19 million. However, \$14.3 million of this can be attributed to relocating the taxiway at Pikeville – Pike County Regional Airport. This project requires the filling in and grading of a significant area on the airport's western environs.

Table 12-5
Runway Centerline to Taxiway Centerline Separation Recommendations and Cost Estimates

FAA ID	Associated City	Airport Name	Runway-Taxiway Separation Recommendation	Estimated Project Costs	
	Economic Level 1				
			Move section of TW 40 feet.		
AAS	Campbellsville	Taylor County	Acquire land as necessary	\$1,078,800	
PBX	Pikeville	Pikeville – Pike County Regional	Move TW 30 feet	\$14,380,900	
Econo	mic Level 1 Total			\$15,459,700	
		Economic	Level 2	<u>'</u>	
			Move TW 40 feet		
DWU	Ashland	Ashland Regional	(relocation in progress, no SASP cost)	\$0	
Econo	Economic Level 2 Total				
		Economic	Level 3		
1A6	Middlesboro	Middlesboro-Bell County	Move TW 15 feet	\$2,557,000	
Econo	mic Level 3 Total			\$2,557,000	
		Economic	Level 4		
196	Columbia	Columbia-Adair County	Move TW 82 feet	\$1,077,000	
Econo	Economic Level 4 Total				
Kentu	cky System Total			\$19,093,700	

Source: CDM Smith, Connico.

Aircraft Parking Area Separation Recommendations

Table 12-6 details recommendations for bringing runway centerline to aircraft parking area separation into compliance with FAA standards. Variances in cost between airports depend on a number of factors, including the size of the aircraft parking area, the existence of structures in the parking area, and the ownership of land. In some cases, moving the aircraft parking area may only be a matter of changing or adding pavement markings. In total, these projects are estimated to cost just over \$700,000. The most significant project is at Columbia-Adair County Airport, where complete demolition and reconstruction of the old apron's failed pavement is necessary. This project has an estimated cost over \$580,000.

Table 12-6
Runway Centerline to Aircraft Parking Area Recommendations and Cost Estimates

	_		Runway-Aircraft Parking	
FAA	Associated		Separation	Estimated
ID	City	Airport Name	Recommendation	Project Costs
	3.01	Commercial Service		
BWG	Douding Croop		Mayo AC parking 40 fact	¢10.000
	Bowling Green	Bowling Green-Warren County Regional	Move AC parking 40 feet	\$10,000
Comm	ercial Service Tot	al 		\$10,000
		Economic Level 1		
FGX	Flemingsburg	Fleming-Mason	Move AC parking 20 feet	\$15,100
EHR	Henderson	Henderson City-County	Move AC parking 82 feet	\$6,200
HVC	Hopkinsville	Hopkinsville-Christian County	Move AC parking 40 feet	\$40,800
M25	Mayfield	Mayfield Graves County	Move AC parking 65 feet	\$9,600
CEY	Murray	Kyle-Oakley Field	Move AC parking 10 feet	\$15,400
Econoi	mic Level 1 Total			\$72,000
		Economic Level 2		
DWU	Ashland	Ashland Regional	Move AC parking 30 feet	\$4,300
Econoi	mic Level 2 Total			\$13,700
		Economic Level 3		
018	Cynthiana	Cynthiana-Harrison County	Move AC parking 37 feet	\$33,100
Econoi	mic Level 3 Total			\$33,100
		Economic Level 4		
196	Columbia	Columbia-Adair County	Move AC parking 50 feet	\$580,800
Econoi	mic Level 4 Total			\$580,800
Kentud	cky System Total			\$709,600

Source: CDM Smith, Connico.

Recommendations Based on Role Benchmarks

Previous chapters of the SASP stratified the Kentucky airport system into system roles, assigned facility and service benchmarks to each role, and evaluated individual airports based on the benchmarks of their role. Role benchmarks are designed so that each airport is best equipped to serve the market typical of its role. Airports that have facilities and services in excess of benchmarks are not recommended to remove or reduce facilities and services. Additionally, due to external factors such as terrain issues or surrounding development, it is possible that some airports are not recommended to upgrade a facility or service to meet a benchmark.

Note that there are no SASP recommendations for the following facilities or services:

- Runway lighting¹
- Aircraft fuel
- Visual glideslope indicators (PAPI or VASI)
- Runway end indicator lights (REILs)
- Wind indicators

Runway Length Recommendations

There is perhaps no performance measure that illustrates the well-developed Kentucky airport system than runway length. Nearly the entire system (57 of 59 airports) meet recommended role benchmarks for runway length. However, because the runway at Bowling Green-Warren County Regional Airport falls short of its Commercial Service benchmark of 6,500 feet by only one foot, there is no recommendation to extend the runway to meet its benchmark.

The only runway length recommendation in Kentucky is at Bowman Field in Louisville. The airport's primary runway, Runway 06/24, is only 4,326 feet in length, 674 feet short of the Economic Level 1 benchmark of 5,000 feet. Bowman Field is located in a completely developed area of Louisville, so any runway extension would require extensive land acquisition, environmental studies, utility work, road relocation, and construction. The total cost of extending Runway 06/24 at Bowman Field is estimated to be \$16.1 million.

Approach Lighting System Recommendations

Having an approach lighting system (ALS) such as a medium intensity approach lighting system (MALSR) is only a benchmark for Commercial Service airports. The only Commercial Service airport currently not equipped with an ALS is Bowling Green-Warren County Regional Airport. The cost of installing the recommended MALSR at Bowling Green is estimated at \$1.2 million, based on recent construction of similar projects at other Kentucky airports.

Instrument Approach Recommendations

In total, two airports in the Economic Level 2 role and four in the Economic Level 3 role do not currently meet role benchmarks for published instrument approaches (**Table 12-7**).² Economic

¹ Middlesboro-Bell County Airport (1A6) does not meet its role objective to have medium intensity runway lighting (MIRL). However, runway lighting may encourage night operations, and the airport has significant terrain obstructions that should be addressed before night operations should be considered. Runway lighting is therefore not recommended for the airport until such time as all obstructions can be cleared.

² Middlesboro-Bell County Airport (1A6) does not meet its role objective to have a non-precision instrument approach. Similar to runway lighting, however, an instrument approach may encourage low visibility operations, and the airport has significant terrain obstructions that would render such operations extremely dangerous. An instrument approach is therefore not recommended for the airport until such time as all obstructions can be cleared.

Level 2 airports are recommended to publish to an approach with vertical guidance (APV), while Economic Level 3 airports are recommended to publish a non-precision approach.

All new published instrument approaches should be enabled by the global positioning system (GPS), and therefore require no on-the-ground airport equipment. In addition, the FAA will perform flight inspections and publish approaches for no cost. However, if the flight inspection identifies obstructions to the approach, obstructions will have to be cleared before the approach can be published. The clearing of obstructions for new approaches would require additional engineering and possibly environmental analysis, which could result in potentially significant costs. For the purposes of the SASP: however, there is no cost associated with publishing new instrument approaches at these seven airports.

Table 12-7
Instrument Approach Recommendations and Estimated Costs

FAA	FAA Associated		Instrument Approach	Estimated					
ID	City	Airport Name	Recommendation	Project Costs					
Economic Level 2									
DWU	Ashland	Ashland Regional	Publish APV Approach	FAA covers cost					
M21	M21 Greenville Muhlenberg County Publish APV Approach								
Econo	mic Level 2 Total	l		\$0					
Economic Level 3									
1M7	Fulton	Fulton	Publish Non-precision Approach	FAA covers cost					
193	Hardinsburg	Breckinridge County	Publish Non-precision Approach	FAA covers cost					
135	Harlan	Tucker-Guthrie Memorial	Publish Non-precision Approach	FAA covers cost					
M20	Leitchfield	Grayson County	Publish Non-precision Approach	FAA covers cost					
Econo	mic Level 3 Total			\$0					
Kentu	cky System Total			\$0					

Source: CDM Smith, FAA, Stantec.

Snow Removal Recommendations

In total, 16 Kentucky system airports are recommended to add or upgrade their snow removal operations (**Table 12-8**). However, only Economic Level 1 airports are recommended to purchase snow removal equipment to keep on site. Airports in the Economic Level 2 and Economic Level 3 roles are recommended to enter into an arrangement with a local snow plow company or government agency to ensure that the airport is of a high priority when heavy winter snowfall occurs. The 10 Economic Level 1 airports that do not currently have snow removal operations are recommended to each purchase a truck and snow plow at an estimated cost of \$150,000 each, for a total SASP cost of \$1.5 million.

Table 12-8
Snow Removal Recommendations and Cost Estimates

FAA ID	Associated City	Airport Name	Snow Removal	Estimated Project Costs
		Econo	mic Level 1	
AAS	Campbellsville	Taylor County	Purchase Snow Removal Equipment	\$150,000
DVK	Danville	Stuart Powell Field	Purchase Snow Removal Equipment	\$150,000
EKX	Elizabethtown	Addington Field	Purchase Snow Removal Equipment	\$150,000
FGX	Flemingsburg	Fleming-Mason	Purchase Snow Removal Equipment	\$150,000
JQD	Hartford	Ohio County	Purchase Snow Removal Equipment	\$150,000
HVC	Hopkinsville	Hopkinsville-Christian County	Purchase Snow Removal Equipment	\$150,000

Table 12-8
Snow Removal Recommendations and Cost Estimates

FAA	Associated			Estimated			
ID	City	Airport Name	Snow Removal	Project Costs			
K24	Jamestown	Russell County	Purchase Snow Removal Equipment	\$150,000			
M25	Mayfield	Mayfield Graves County	Purchase Snow Removal Equipment	\$150,000			
RGA	Richmond	Central Kentucky Regional	Purchase Snow Removal Equipment	\$150,000			
612	Springfield	Lebanon-Springfield	Purchase Snow Removal Equipment	\$150,000			
Econo	mic Level 1 Total			\$1,500,000			
		Econo	mic Level 2				
4M7	4M7 Russellville Russellville-Logan County Add Off-Site Snow Removal Agreement						
Econo	Economic Level 2 Total						
		Econo	mic Level 3				
1M7	Fulton	Fulton	Add Off-Site Snow Removal Agreement	No Project Cost			
193	Hardinsburg	Breckinridge County	Add Off-Site Snow Removal Agreement	No Project Cost			
M20	Leitchfield	Grayson County	Add Off-Site Snow Removal Agreement	No Project Cost			
1A6	Middlesboro	Middlesboro-Bell County	Add Off-Site Snow Removal Agreement	No Project Cost			
2M0	Princeton	Princeton-Caldwell County	Add Off-Site Snow Removal Agreement	No Project Cost			
Econo	mic Level 3 Total			\$0			
Kentu	cky System Total			\$1,500,000			

Sources: CDM Smith, Stantec.

Terminal Recommendations

All airports in the Kentucky system are held to the benchmark of having an airport terminal, with 55 of 59 airports meeting this benchmark. The four airports without terminals, as shown in **Table 12-9**, are recommended to build a 2,500-square foot facility. All work for these facilities, including environmental, design, and construction, is estimated at \$1 million per terminal building, for a total SASP cost of \$4 million.

Table 12-9
Terminal Building Recommendations and Cost Estimates

FAA				Estimated
ID	Associated City	Airport Name	Terminal Recommendation	Project Costs
		Economic Leve	el 3	
193	Hardinsburg	Breckinridge County	Construct Airport Terminal	\$1,000,000
Econo	mic Level 3 Total			\$1,000,000
		Economic Leve	el 4	
8M7	Dawson Springs	Tradewater	Construct Airport Terminal	\$1,000,000
153	Liberty	Liberty-Casey County	Construct Airport Terminal	\$1,000,000
913	West Liberty	West Liberty	Construct Airport Terminal	\$1,000,000
Econo	mic Level 3 Total			\$3,000,000
Kentu	cky System Total			\$4,000,000

Sources: CDM Smith, Stantec.

Taxiway Recommendations

Benchmarks for taxiway types ranged from full parallel taxiways for Commercial Service and Economic Level 1 airports, partial parallel taxiways for airports in the Economic Level 2 and Economic Level 3 roles, and turnarounds for Economic Level 4. **Table 12-10** summarizes runway recommendations by airport, and includes cost estimates for each recommended project. Ranges in the estimated costs of taxiway projects result from several factors, including primary runway length, taxiway width (determined by RDC), terrain and grading issues, environmental factors, and engineering. At Economic Level 1 airports that have an existing partial parallel taxiway, the recommendation is to extend this taxiway to full parallel. The differences in existing partial parallel taxiway length also result in varying estimated costs.

In total, it is estimated that recommended taxiway projects would cost over \$71 million. However, more than half of this can be attributed to the taxiway extension recommendation at Wendell H. Ford Regional Airport in Hazard. Extending the existing partial parallel taxiway would require extensive tree clearing, fill, and road relocation.

Table 12-10
Taxiway Recommendations and Cost Estimates

FAA	Associated	-		Estimated
ID	City	Airport Name	Taxiway Recommendation	Project Costs
	_	Econo	omic Level 1	
AAS	Campbellsville	Taylor County	Extend to Full Parallel Taxiway	\$750,000
DVK	Danville	Stuart Powell Field	Extend to Full Parallel Taxiway	\$3,200,000
JQD	Hartford	Ohio County	Construct Full Parallel Taxiway	\$8,800,000
CPF	Hazard	Wendell H. Ford Regional	Extend to Full Parallel Taxiway	\$39,500,000
K24	Z24 Jamestown Russell County Extend to Full Parallel Taxiway		\$2,300,000	
M25	Mayfield	Mayfield Graves County	Extend to Full Parallel Taxiway	\$800,000
612	612 Springfield Lebanon-Springfield Extend to Full Parallel Taxiway		\$2,400,000	
Econo	mic Level 1 Total			\$57,750,000
5M9	Marion	Marion-Crittenden County	Construct Partial Parallel Taxiway	\$1,800,000
Econo	mic Level 2 Total			\$1,800,000
		Econo	omic Level 3	
K62	Falmouth	Gene Snyder	Construct Partial Parallel Taxiway	\$1,500,000
1M7	Fulton	Fulton	Construct Partial Parallel Taxiway	\$1,700,000
193	Hardinsburg	Breckinridge County	Construct Partial Parallel Taxiway	\$1,200,000
135	Harlan	Tucker-Guthrie Memorial	Construct Partial Parallel Taxiway	\$2,700,000
M20	Leitchfield	Grayson County	Construct Partial Parallel Taxiway	\$3,400,000
2M0	Princeton	Princeton-Caldwell County	Construct Partial Parallel Taxiway	\$1,000,000
Econo	\$11,500,000			
Kentu	cky System Total			\$71,050,000

Sources: CDM Smith, Stantec.

Automated Weather Reporting Recommendations

All airports other than those in the Economic Level 4 role are held to the benchmark of having onsite, automated weather reporting via a system such as an AWOS or ASOS. Nearly all airports in applicable roles have weather reporting capabilities, with only six of Kentucky's 59 system airports recommended to install an ASOS or AWOS (**Figure 12-11**). For two of these airports – Russellville-Logan County Airport and Breckinridge County Airport – the estimated cost comes directly from the FAA Airport Capital Improvement Program (ACIP). For the other airports, an average cost was applied. The total cost of installing recommended weather reporting facilities is estimated at \$1.19 million.

Table 12-11
Weather Reporting Recommendations and Cost Estimates

FAA	Associated		Automated Weather Reporting	Estimated		
ID	City	Airport Name	Recommendation	Project Costs		
		Econo	mic Level 2			
4M7	Russellville	Russellville-Logan County	Install Automated Weather Reporting	\$220,000		
Econo	mic Level 2 Tota	I		\$220,000		
		Econo	mic Level 3			
018	18 Cynthiana Cynthiana-Harrison County Install Automated Weather Reporting					
1M7	Fulton	Fulton	Install Automated Weather Reporting	\$200,000		
193	Hardinsburg	Breckinridge County	Install Automated Weather Reporting	\$170,000		
M20	Leitchfield	Grayson County	Install Automated Weather Reporting	\$200,000		
2M0	Princeton	Princeton-Caldwell County	Install Automated Weather Reporting	\$200,000		
Econo	mic Level 3 Tota	l .		\$970,000		
Kentu	cky System Tota	l		\$1,190,000		

 $Sources: CDM\ Smith, FAA\ ACIP, Stantec.$

Airport Beacon Recommendations

Having a rotating airport beacon is a minimum benchmark for all airports in the Commercial Service, Economic Level 1, Economic Level 2, and Economic Level 3 roles. The only one of these airports to not currently have a beacon is Middlesboro-Bell County Airport. The construction of this beacon is estimated to cost \$100,000.

Airport Fencing Recommendations

Airports in the Commercial Service, Economic Level 1, and Economic Level 2 roles have a benchmark for fencing around the complete airport property perimeter, while Economic Level 3 and Economic Level 4 airports are recommended to have partial perimeter fencing around key airport areas. As shown in **Table 12-12**, a total of 14 Kentucky airports are recommended to construct or expand their perimeter fencing. Due to the varying sizes of airport property throughout the Commonwealth, the estimated costs of airport fencing differs greatly. All of these airports are recommended to construct 6-foot chain link fencing.

Table 12-12
Airport Fencing Recommendations and Cost Estimates

FAA ID	Associated City	Airport Name	Airfield Fencing Recommendation	Estimated Project Costs		
		Economic Le	evel 1			
EKX	Elizabethtown	Addington Field	Construct Complete Perimeter Fencing	\$685,000		
EHR	Henderson	Henderson City-County	Construct Complete Perimeter Fencing	\$792,000		
LOZ	London	London-Corbin-Magee Field	Construct Complete Perimeter Fencing	\$624,000		
IOB	Mount Sterling	Mount Sterling-Montgomery County	Construct Complete Perimeter Fencing	\$816,000		
CEY	Murray	Kyle-Oakley Field	Construct Complete Perimeter Fencing	\$1,032,000		
RGA	Richmond	Central Kentucky Regional	Construct Complete Perimeter Fencing	\$643,200		
612	Springfield	Lebanon-Springfield	Construct Complete Perimeter Fencing	\$510,000		
Econoi	mic Level 1 Total			\$5,102,200		
		Economic Le	evel 2			
DWU	Ashland	Ashland Regional	Construct Complete Perimeter Fencing	\$456,000		
M21	Greenville	Muhlenberg County	Construct Complete Perimeter Fencing	\$657,600		
TWT	Sturgis	Sturgis Municipal	Construct Complete Perimeter Fencing	\$768,000		
Econoi	mic Level 2 Total			\$1,881,600		
		Economic Le	evel 3			
M20	Leitchfield	Grayson County	Construct Partial Perimeter Fencing	\$86,400		
Econoi	mic Level 3 Total			\$86,400		
		Economic Le	evel 4			
1M9	Cadiz	Lake Barkley State Resort Park	Construct Partial Perimeter Fencing	\$58,800		
213	Falls of Rough	Rough River State Resort Park	Construct Partial Perimeter Fencing	\$444,000		
8M9	8M9 Providence Providence-Webster County		Construct Partial Perimeter Fencing	\$120,000		
Econoi	Economic Level 3 Total					
Kentud	cky System Total			\$7,693,000		

Sources: CDM Smith, Stantec.

Security Access Control Recommendations

Recommendations for security access control include facilities for both vehicle and pedestrian access control. Each recommendation includes a 25-foot sliding vehicle gate and a 6-foot pedestrian gate, both with keypads for access. The total cost per unit is estimated to be \$30,000 (**Table 12-13**). A total of five airports are recommended to construct security access gates. However, because construction of security access gates is currently underway at Fulton Airport, the SASP only estimates the cost of four facilities, bringing the total to \$120,000.

Table 12-13
Security Access Control Recommendations and Cost Estimates

FAA ID	Associated City	Airport Name	Security Access Control System Recommendation	Estimated Project Costs
		Econo	mic Level 1	
LOU	Louisville	Bowman Field	Install Security Access Control System	\$30,000
Econo	mic Level 1 Total			\$30,000
		Econo	mic Level 3	
K62	Falmouth	Gene Snyder	Install Security Access Control System	\$30,000
1M7	Fulton	Fulton	Install Security Access Control System	In progress
135	Harlan	Tucker-Guthrie Memorial	Install Security Access Control System	\$30,000
M20	Leitchfield	Grayson County	Install Security Access Control System	\$30,000
Econo	mic Level 3 Total			\$90,000
Kentu	cky System Total			\$120,000

Sources: CDM Smith, Stantec.

SASP Recommendations by Airport

In total, the Kentucky SASP makes 124 recommendations for the Commonwealth's 59 public airports. This average of just over two projects per airport is yet more evidence of the outstanding condition of the current Kentucky airport system. Twelve system airports have no SASP recommendations, while an additional 38 have one to three recommendations each. Note that a lack of SASP recommendations does not imply that improvements are not needed at these airports, only that these airports meet the planning level recommendations established by the SASP. Other studies and individual airport planning efforts may find the need for other improvements at system airports.

Table 12-14 summarizes the categories in which each airport has a SASP recommendation. An orange cell indicates a recommended improvement. **Table 12-15** provides full recommended project details per airport, including a total estimated cost of SASP recommendations for each.

Table 12-14
Summary of SASP Recommendations by Airport (Recommendations Shown in Orange)

		Summary of SASP Recommendation	is by	, , , , , ,	JUIL	(ILCC	OIIII	псп	uatic	د دار	HUW	11 111	OI a	nge			
FAA ID	Associated City	Airport Name	Runway Length	ALS	Instrument Approach	Snow Removal	Terminal	Taxiway	Weather Reporting	Beacon	Fencing	Security Access Control	Primary RW RSA	Secondary RW RSA	Runway Centerline to Hold Position Separation	Runway Centerline to Parallel Taxiway Centerline Separation	Runway Centerline to Aircraft Parking Area Separation
			Com	mercia	l Servi	се											
BWG	Bowling Green	Bowling Green-Warren County Regional															
CVG	Covington	Cincinnati/Northern Kentucky International															
LEX	Lexington	Blue Grass															
SDF	Louisville	Louisville International-Standiford Field															
OWB	Owensboro	Owensboro-Daviess County Regional															
PAH	Paducah	Barkley Regional															
			Eco	nomic	Level	1											
AAS	Campbellsville	Taylor County															
DVK	Danville	Stuart Powell Field															
EKX	Elizabethtown	Addington Field															
FGX	Flemingsburg	Fleming-Mason															
FFT	Frankfort	Capital City															
27K	Georgetown	Georgetown Scott County - Marshall Field															
JQD	Hartford	Ohio County															
CPF	Hazard	Wendell H. Ford Regional															
EHR	Henderson	Henderson City-County															
HVC	Hopkinsville	Hopkinsville-Christian County															
K24	Jamestown	Russell County															
LOZ	London	London-Corbin-Magee Field															
LOU	Louisville	Bowman Field															
210	Madisonville	Madisonville Regional															
M25	Mayfield	Mayfield Graves County															
SYM	Morehead	Morehead-Rowan County Clyde A. Thomas Regional															
IOB	Mount Sterling	Mount Sterling-Montgomery County															

Table 12-14
Summary of SASP Recommendations by Airport (Recommendations Shown in Orange)

		Summary of SASP Recommendation	is by	AII	port	(кес	:01111	nend	uauc)118 3	now	'II III	Ura	nge	<u></u>		
FAA ID	Associated City	Airport Name	Runway Length	ALS	Instrument Approach	Snow Removal	Terminal	Taxiway	Weather Reporting	Beacon	Fencing	Security Access Control	Primary RW RSA	Secondary RW RSA	Runway Centerline to Hold Position Separation	Runway Centerline to Parallel Taxiway Centerline Separation	Runway Centerline to Aircraft Parking Area Separation
CEY	Murray	Kyle-Oakley Field															
PBX	Pikeville	Pikeville – Pike County Regional															
SJS	Prestonsburg	Big Sandy Regional															
RGA	Richmond	Central Kentucky Regional															
SME	Somerset	Lake Cumberland Regional															
612	Springfield	Lebanon-Springfield															
BYL	Williamsburg	Williamsburg-Whitley County															
			Eco	nomic	Level	2									,		
DWU	Ashland	Ashland Regional															
BRY	Bardstown	Samuels Field															
GLW	Glasgow	Glasgow Municipal															
M21	Greenville	Muhlenberg County															
5M9	Marion	Marion-Crittenden County															
EKQ	Monticello	Wayne County															
4M7	Russellville	Russellville-Logan County															
TWT	Sturgis	Sturgis Municipal															
			Eco	nomic	Level	3											
018	Cynthiana	Cynthiana-Harrison County															
K62	Falmouth	Gene Snyder															
1M7	Fulton	Fulton															
193	Hardinsburg	Breckinridge County															
135	Harlan	Tucker-Guthrie Memorial															
M20	Leitchfield	Grayson County															
KY8	Lewisport	Hancock Co-Ron Lewis Field															
1A6	Middlesboro	Middlesboro-Bell County															

Table 12-14
Summary of SASP Recommendations by Airport (Recommendations Shown in Orange)

FAA ID	Associated City	Airport Name	Runway Length	ALS	Instrument Approach	Snow Removal	Terminal	Taxiway	Weather Reporting	Beacon	Fencing	Security Access Control	Primary RW RSA	Secondary RW RSA	Runway Centerline to Hold Position Separation	Runway Centerline to Parallel Taxiway Centerline Separation	Runway Centerline to Aircraft Parking Area Separation
2M0	Princeton	Princeton-Caldwell County															
TZV	Tompkinsville	Tompkinsville-Monroe County															
			Eco	nomic	Level	4											
1M9	Cadiz	Lake Barkley State Resort Park															
196	Columbia	Columbia-Adair County															
8M7	Dawson Springs	Tradewater															
213	Falls of Rough	Rough River State Resort Park															
M34	Gilbertsville	Kentucky Dam Village State Resort Park															
JKL	Jackson	Julian Carroll															
153	Liberty	Liberty-Casey County															
181	Pine Knot	McCreary County															
8M9	Providence	Providence-Webster County															_
150	Stanton	Stanton-Powell County															
913	West Liberty	West Liberty															
Kentu	ky System Total:	124 Total SASP Recommendations			•				•		•						

Kentucky System Total: 124 Total SASP Recommendations

Source: CDM Smith.

Table 12-15
Details of SASP Recommendations and Cost Estimates Per Airport

FAA ID	Associated City	Airport Name	Recommendations	Total Estimated Cost
		Comm	nercial Service	
BWG	Bowling Green	Bowling Green-Warren County Regional	Install an ALS	\$1,200,000
			Improve Primary Runway RSA	\$26,000
			Improve Secondary Runway RSA	\$8,500
			Move AC parking 40 feet	\$10,000
			Airport Total:	\$1,244,500
CVG	Covington	Cincinnati/Northern Kentucky International	No SASP Recommendations	\$0
LEX	Lexington	Blue Grass	No SASP Recommendations	\$0
SDF	Louisville	Louisville International-Standiford Field	No SASP Recommendations	\$0
OWB	Owensboro	Owensboro-Daviess County Regional	No SASP Recommendations	\$0
PAH	Paducah	Barkley Regional	Improve Secondary Runway RSA	\$1,638,500
Comm	ercial Service Total	:		\$2,883,000
		Econ	omic Level 1	
AAS	Campbellsville	Taylor County	Purchase Snow Removal Equipment	\$150,000
			Extend to Full Parallel Taxiway	\$750,000
			Correct Runway to Taxiway Separation	\$1,078,800
			Airport Total:	\$1,978,800
DVK	Danville	Stuart Powell Field	Purchase Snow Removal Equipment	\$150,000
			Extend to Full Parallel Taxiway	\$3,200,000
			Improve Primary Runway RSA	\$41,600
			Improve Secondary Runway RSA	\$5,400
			Airport Total:	\$3,397,000
EKX	Elizabethtown	Addington Field	Purchase Snow Removal Equipment	\$150,000
			Construct Complete Perimeter Fencing	\$685,000
			Airport total:	\$835,000
FGX	Flemingsburg	Fleming-Mason	Purchase Snow Removal Equipment	\$150,000
			Improve Primary Runway RSA	\$3,564,000
			Airport Total:	\$3,714,000
FFT	Frankfort	Capital City	No SASP Recommendations	\$0

Table 12-15
Details of SASP Recommendations and Cost Estimates Per Airport

FAA ID	Associated City	Airport Name	Recommendations	Total Estimated Cost
27K	Georgetown	Georgetown Scott County - Marshall Field	Improve Primary Runway RSA	\$4,000
JQD	Hartford	Hartford Ohio County Purchase Snow Removal Equipment		\$150,000
			Construct Full Parallel Taxiway	\$8,800,000
			Airport Total:	\$8,950,000
CPF	Hazard	Wendell H. Ford Regional	Extend to Full Parallel Taxiway	\$39,500,000
			Improve Primary Runway RSA	\$1,297,900
			Airport Total:	\$40,797,900
EHR	Henderson	Henderson City-County	Construct Complete Perimeter Fencing	\$792,000
			Improve Primary Runway RSA	\$2,866,400
			Correct Runway to Aircraft Parking Separation	\$6,200
			Airport Total:	\$3,664,600
HVC	Hopkinsville	Hopkinsville-Christian County	Purchase Snow Removal Equipment	\$150,000
			Improve Primary Runway RSA	\$8,900
			Correct Runway to Aircraft Parking Separation	\$40,800
			Airport Total:	\$199,700
K24	Jamestown	Russell County	Purchase Snow Removal Equipment	\$150,000
			Extend to Full Parallel Taxiway	\$2,300,000
			Airport Total:	\$2,450,000
LOZ	London	London-Corbin-Magee Field	Construct Complete Perimeter Fencing	\$624,000
			Improve Primary Runway RSA	\$217,900
			Airport Total:	\$841,900
LOU	Louisville	Bowman Field	Extend Runway 06/24 by 674 Feet	\$16,100,000
			Install Security Access Control System	\$30,000
			Improve Primary Runway RSA	\$18,430,000
			Improve Secondary Runway RSA	\$24,000
			Airport Total:	\$34,584,000
210	Madisonville	Madisonville Regional	No SASP Recommendations	\$0

Table 12-15
Details of SASP Recommendations and Cost Estimates Per Airport

FAA ID	Associated City	Airport Name	Recommendations	Total Estimated Cost
M25	Mayfield	Mayfield Graves County	Purchase Snow Removal Equipment	\$150,000
			Extend to Full Parallel Taxiway	\$800,000
			Correct Runway to Hold Line Separation	\$2,000
			Correct Runway to Aircraft Parking Separation	\$9,600
			Airport Total:	\$961,600
SYM	Morehead	Morehead-Rowan County Clyde A. Thomas Regional	No SASP Recommendations	\$0
IOB	Mount Sterling	Mount Sterling-Montgomery County	Construct Complete Perimeter Fencing	\$816,000
CEY	Murray	Kyle-Oakley Field	Construct Complete Perimeter Fencing	\$1,032,000
			Correct Runway to Aircraft Parking Separation	\$15,400
			Airport Total:	\$1,047,400
PBX	Pikeville	Pikeville – Pike County Regional	Improve Primary Runway RSA	\$31,409,200
			Correct Runway to Taxiway Separation	\$14,380,900
			Airport Total:	\$45,790,100
SJS	Prestonsburg	Big Sandy Regional	Improve Primary Runway RSA	\$743,700
RGA	Richmond	Central Kentucky Regional	Purchase Snow Removal Equipment	\$150,000
			Construct Complete Perimeter Fencing	\$643,200
			Airport Total:	\$793,200
SME	Somerset	Lake Cumberland Regional	No SASP Recommendations	\$0
612	Springfield	Lebanon-Springfield	Purchase Snow Removal Equipment	\$150,000
			Extend to Full Parallel Taxiway	\$2,400,000
			Construct Complete Perimeter Fencing	\$510,000
			Improve Primary Runway RSA	\$1,952,800
			Airport Total:	\$5,012,800
BYL	Williamsburg	Williamsburg-Whitley County	No SASP Recommendations	\$0
Econo	mic Level 1 Total:			\$156,581,700

Table 12-15
Details of SASP Recommendations and Cost Estimates Per Airport

FAA ID	Associated City	Airport Name	Recommendations	Total Estimated Cost
		Economic	Level 2	
DWU	Ashland	Ashland Regional	Publish APV Approach	Free from FAA
			Construct Complete Perimeter Fencing	\$456,000
			Correct Runway to Hold Line Separation	\$5,000
			Correct Runway to Taxiway Separation (in progress)	\$0
			Correct Runway to Aircraft Parking Separation	\$4,300
			Airport Total:	\$465,300
BRY	Bardstown	Samuels Field	No SASP Recommendations	\$0
GLW	Glasgow	Glasgow Municipal	No SASP Recommendations	\$0
M21	Greenville	Muhlenberg County	Publish APV Approach	Free from FAA
			Construct Complete Perimeter Fencing	\$657,600
			Airport Total:	\$657,600
5M9	Marion	Marion-Crittenden County	Construct Partial Parallel Taxiway	\$1,800,000
EKQ	Monticello	Wayne County	No SASP Recommendations	\$0
4M7	Russellville	Russellville-Logan County	Add Off-Site Snow Removal Agreement	No Associated Cost
			Install Automated Weather Reporting	\$220,000
			Improve Primary Runway RSA (in progress)	\$0
			Airport Total:	\$220,000
TWT	Sturgis	Sturgis Municipal	Construct Complete Perimeter Fencing	\$768,000
Econo	mic Level 2 Total:			\$3,910,900
		Economic	Level 3	
018	Cynthiana	Cynthiana-Harrison County	Install Automated Weather Reporting	\$200,000
			Correct Runway to Hold Line Separation	\$3,000
			Correct Runway to Aircraft Parking Separation	\$33,100
			Airport Total:	\$236,100
K62	Falmouth	Gene Snyder	Construct Partial Parallel Taxiway	\$1,500,000
			Install Security Access Control System	\$30,000
			Improve Primary Runway RSA	\$4,613,900
			Airport Total:	\$6,143,900

Table 12-15
Details of SASP Recommendations and Cost Estimates Per Airport

FAA ID	Associated City	Airport Name	Recommendations	Total Estimated Cost
1M7	Fulton	Fulton	Publish Non-precision Approach	Free from FAA
			Add Off-Site Snow Removal Agreement	No Associated Cost
			Construct Partial Parallel Taxiway	\$1,700,000
			Install Automated Weather Reporting	\$200,000
			Install Security Access Control System	In progress
			Improve Primary Runway RSA	\$874,600
			Airport Total:	\$2,774,600
193	Hardinsburg	Breckinridge County	Publish Non-precision Approach	Free from FAA
			Add Off-Site Snow Removal Agreement	No Associated Cost
			Construct Airport Terminal	\$1,000,000
			Construct Partial Parallel Taxiway	\$1,200,000
			Install Automated Weather Reporting	\$170,000
			Airport Total:	\$2,370,000
135	Harlan	Tucker-Guthrie Memorial	Publish Non-precision Approach	Free from FAA
			Construct Partial Parallel Taxiway	\$2,700,000
			Install Security Access Control System	\$30,000
			Airport Total:	\$2,730,000
M20	Leitchfield	Grayson County	Publish Non-precision Approach	Free from FAA
			Add Off-Site Snow Removal Agreement	No Associated Cost
			Construct Partial Parallel Taxiway	\$3,400,000
			Install Automated Weather Reporting	\$200,000
			Construct Partial Perimeter Fencing	\$86,400
			Install Security Access Control System	\$30,000
			Improve Primary Runway RSA	\$22,500
			Correct Runway to Hold Line Separation	\$1,000
			Airport Total:	\$3,739,900
KY8	Lewisport	Hancock Co-Ron Lewis Field	No SASP Recommendations	\$0

Table 12-15
Details of SASP Recommendations and Cost Estimates Per Airport

	Details of SASP Recommendations and Cost Estimates Per Airport					
FAA ID	Associated City	Airport Name	Recommendations	Total Estimated Cost		
1A6	Middlesboro	Middlesboro-Bell County	Add Off-Site Snow Removal Agreement	No Associated Cost		
			Construct Airport Beacon	\$100,000		
			Improve Primary Runway RSA	\$1,322,900		
			Correct Runway to Hold Line Separation	\$3,000		
			Correct Runway to Taxiway Separation	\$2,557,000		
			Airport Total:	\$3,982,900		
2M0	Princeton	Princeton-Caldwell County	Add Off-Site Snow Removal Agreement	No Associated Cost		
			Construct Partial Parallel Taxiway	\$1,000,000		
			Install Automated Weather Reporting	\$200,000		
			Correct Runway to Hold Line Separation	\$2,000		
			Airport Total:	\$1,202,000		
TZV	Tompkinsville	Tompkinsville-Monroe County	No SASP Recommendations	\$0		
Econo	Economic Level 3 Total:					
		Economic l	Level 4			
1M9	Cadiz	Lake Barkley State Resort Park	Construct Partial Perimeter Fencing	\$58,800		
			Improve Primary Runway RSA	\$12,200		
			Airport Total:	\$71,000		
196	Columbia	Columbia-Adair County	Improve Primary Runway RSA	\$5,500		
			Correct Runway to Hold Line Separation	\$5,000		
			Correct Runway to Taxiway Separation	\$1,077,000		
			Correct Runway to Aircraft Parking Separation	\$580,800		
			Airport Total:	\$1,668,300		
8M7	Dawson Springs	Tradewater	Construct Airport Terminal	\$1,000,000		
			Improve Primary Runway RSA	\$5,000		
			Correct Runway to Hold Line Separation	\$1,000		
			Airport Total:	\$1,006,000		
213	Falls of Rough	Rough River State Resort Park	Construct Partial Perimeter Fencing	\$444,000		
			Improve Primary Runway RSA	\$97,100		
			Airport Total:	\$541,100		
	•	•	•			

Table 12-15
Details of SASP Recommendations and Cost Estimates Per Airport

FAA ID	Associated City	Airport Name	Recommendations	Total Estimated Cost
M34	Gilbertsville	Kentucky Dam Village State Resort Park	Improve Primary Runway RSA	\$33,400
			Correct Runway to Hold Line Separation	\$3,000
			Airport Total:	\$36,400
JKL	Jackson	Julian Carroll	Improve Primary Runway RSA	\$6,200
			Correct Runway to Hold Line Separation	\$1,000
			Airport Total:	\$7,200
153	Liberty	Liberty-Casey County	Construct Airport Terminal	\$1,000,000
			Improve Primary Runway RSA	\$2,000
			Correct Runway to Hold Line Separation	\$1,000
			Airport Total:	\$1,003,000
181	Pine Knot	McCreary County	Improve Primary Runway RSA	\$3,900
			Correct Runway to Hold Line Separation	\$2,000
			Airport Total:	\$5,900
8M9	Providence	Providence-Webster County	Construct Partial Perimeter Fencing	\$120,000
			Improve Primary Runway RSA	\$12,200
			Correct Runway to Hold Line Separation	\$1,000
			Airport Total:	\$133,200
150	Stanton	Stanton-Powell County	Improve Primary Runway RSA	\$1,009,800
913	West Liberty	West Liberty	Construct Airport Terminal	\$1,000,000
Econo	Economic Level 4 Total:			
Kentu	Kentucky System Total			

Source: CDM Smith, Connico, Stantec.

Future Kentucky Airports

In addition to the current Kentucky airport system of 59 public-use facilities, there are two new public airports currently being considered in the Commonwealth to help fill existing gaps in service. As shown on **Figure 12-1**, these two airports – located in Gallatin County and Letcher County – would be built in areas where existing Kentucky system airports or relevant out-of-state airports do not currently provide access for businesses and residents. In addition, both of these airports are planning the types of high-end aviation services typically demanded by business users, improving Kentucky's already well-developed airport system. The airport in Gallatin County is planned to have services and facilities similar to an Economic Level 1 airport, while the planned facility in Letcher County is anticipated to more closely match Economic Level 2 airport facilities.

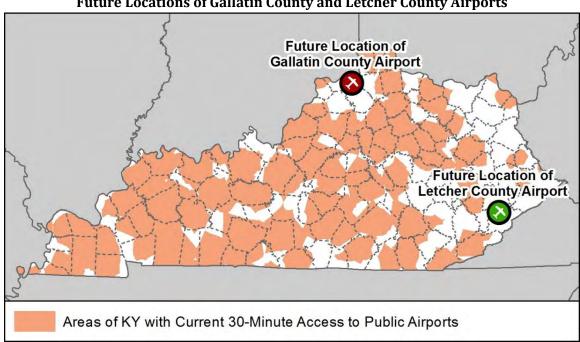


Figure 12-1
Future Locations of Gallatin County and Letcher County Airports

Sources: Kentucky Transportation Cabinet.

The following sections provide further details on the justifications for building these airports, as well as details on the coverage that these airports are expected to add to the Kentucky airport system. Finally, a brief note is added on very early plans for a potential third new airport in the Lexington region being considered for an existing heliport site.

Gallatin County Airport

A new general aviation airport in Northern Kentucky has been a goal of the Kentucky Department of Aviation (KDA) and the FAA for many years. Beginning in the 1990s, this region – most specifically the tri-county region of Gallatin, Carroll, and Owen Counties between the Cincinnati and Louisville metropolitan areas – has transitioned from a largely local, agricultural economy to an economy that has continuously added industry and tourism elements. Industrial companies located along the Ohio River in this region include Dow Chemical, Nucor Steel, North American Stainless, DRC Packaging, Steel Technologies, Arkema Chemical, Certain Teed Gypsum, Gallatin Steel, and Kentucky Utilities. Tourism in the region is anchored by Kentucky Speedway and Belterra Casino in Indiana, but also includes two Kentucky state parks. From 2010 to 2014 alone, per capita personal income in the tri-county area grew 58 percent.

From 1998 to the present, KDA and the FAA have worked closely with the local governments and stakeholders to assess the possibility of building a major general aviation airport within the region. These efforts have included five feasibility studies, three site selection studies, and two environmental assessments. Survey efforts revealed over 240 aircraft owned by residents of the tricounty area, with over 70 indicating that they would relocate their aircraft to a new airport.³

The site selected for the Gallatin County Airport is shown on **Figure 12-2**.

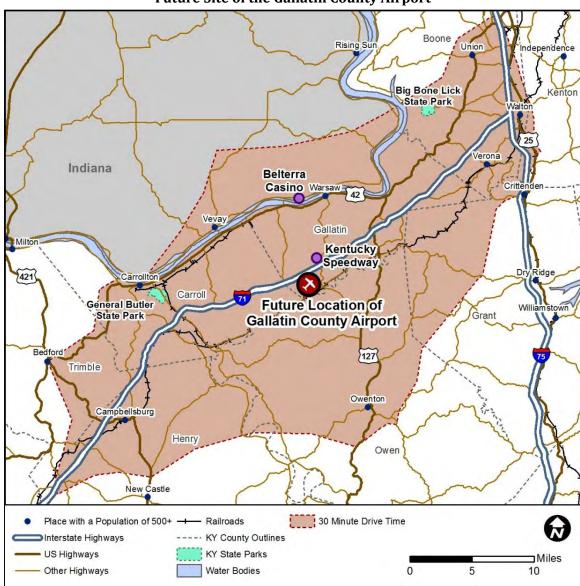


Figure 12-2
Future Site of the Gallatin County Airport

Source: CDM Smith, KYTC, PDC Consultants.

The Gallatin County Airport will be located just south of Interstate 71, near Gallatin County's borders with Carroll and Owen Counties The airport will also have prime railroad access with the CSX Railroad line directly to the south. The airport's location near a major highway interchange

³ PDC Consultants (2016).

results in a potentially very large 30-minute drive time market area. The airport's potential 30-minute market area has an estimated area of 669 square miles, stretching along I-71 from the outskirts of the Cincinnati metropolitan region to Henry and Trimble counties.

The potential 30-minute drive time area of Gallatin County Airport includes an estimated population of 89,960 Kentucky residents (**Table 12-16**). Union, Kentucky, with a population over 5,300, is the largest of these urban areas, followed by Carrollton and Walton.

Table 12-16
Cities and Towns with a Population of 500+
Located Within 30 Minutes of the Planned
Gallatin County Airport

City	2010 Population Estimate		
Cities and Towns			
Union	5,379		
Carrollton	3,938		
Walton	3,635		
Warsaw	1,615		
Verona	1,455		
Owenton	1,327		
Campbellsburg	813		
Bedford	599		
Vevay, IN	1,683		

Source: CDM Smith, US Census Bureau.

As of January 2017, all landowners on the proposed airport site have reportedly come to terms to sell their land for the development of the Gallatin County Airport. An airport layout plan (ALP) has received conditional approval by the FAA. The conditional ALP calls for an initial runway length of 5,000 feet. The airport is planned to have an ultimate runway length of 5,500 feet, and cost an estimated \$30 million.

Letcher County Airport

Another area of Kentucky that is currently underserved by public airports is the less densely-populated eastern region. A proposed new airport in Letcher County, in the southeastern part of the Commonwealth, is planned that will provide additional coverage in this underserved area. Planning for the Letcher County Airport is not as complete as the Gallatin County facility, but justification for the airport exists. In addition to the existing gap in service, the airport would be an economic incubator for the region, and would reportedly attract aviation business users from both Kentucky and nearby Virginia. Because the region is difficult to access via highways, the airport would be a primary access point for businesses, residents, and visitors alike.

Figure 12-3 displays the site selected for the Letcher County Airport.

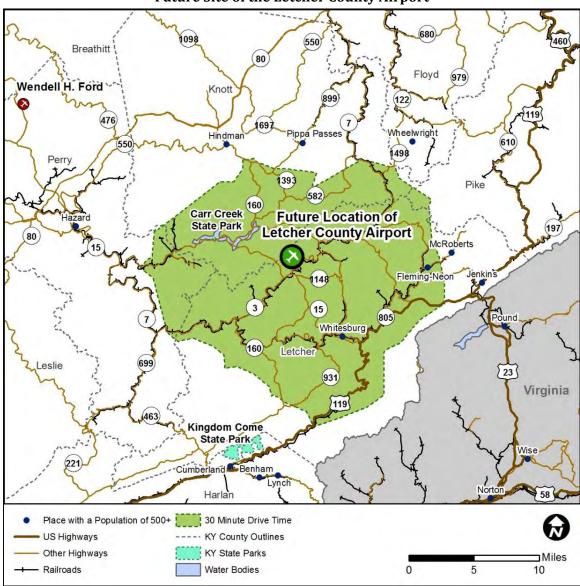


Figure 12-3
Future Site of the Letcher County Airport

The Letcher County Airport will be located just north of Kentucky Highway 3, near the border of Letcher and Knott counties. The airport will be accessible via several state highways, and is within a 30-minute drive of US-119.

This potential 30-minute drive time area – estimated at 317 square miles – includes 29,785 Kentucky residents, nearly all of whom live in unincorporated, rural areas. The 30-minute market area includes two towns with a population over 500: Whitesburg (2,139 residents per 2010 Census estimates), and Fleming-Neon (770 residents).⁴

The Letcher County Airport is initially planned to have a 4,000-foot runway, with a 5,000-foot ultimate length, and has an estimated engineering and construction cost of \$18 million.

⁴ US Census Bureau (2010).

Bluegrass Station

In addition to the above two planned airports, a new general aviation airport in the Lexington area is being considered for an existing helicopter landing area. Bluegrass Station, owned and operated by the Kentucky Department of Military Affairs, provides logistical and operational support to companies and government agencies engaged in retrofitting helicopters. Bluegrass Station is located approximately 10 miles east of downtown Lexington, near the borders of Fayette, Clark, and Bourbon Counties (**Figure 12-4**). Bluegrass Station is near the intersection of Interstates 64 and 75, has highway access via KY-57, and is also accessible via railroad.

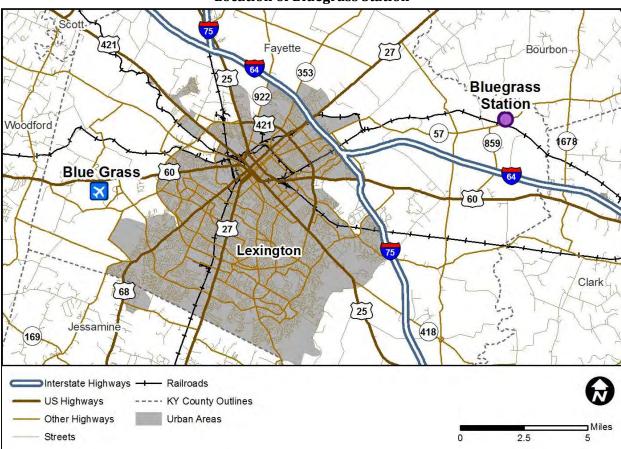


Figure 12-4 Location of Bluegrass Station

Source: CDM Smith, KYTC.

At the present time, the aviation activities at Bluegrass Station are limited to helicopters. However, investors are interested in expanding their work to fixed-wing aircraft and have proposed building an 8,100-foot runway on the site, which would make Bluegrass Station one of the largest general aviation airports in Kentucky. Because these developments are in the earliest stages of consideration, the planning and potential construction of a new airport at Bluegrass Station will require significant additional analysis.

Recommended System

The recommended Kentucky airport system includes the existing 59 public-use airports and two planned future airports (**Figure 12-5**). Individual airport recommendations of the SASP are intended to not only improve facilities and services at the local level, but also throughout the Commonwealth.

Table 12-17 details how facility and service recommendations and the new airports will improve geographic coverage of the Kentucky airport system. Note that these percentages also include coverage by out-of-state public airports that are located within a 30-minute drive from Kentucky. Most recommended improvements increased population coverage by 1 to 2 percent throughout the Commonwealth for that type of facility or service. The fact that recommended improvements to the system would only affect geographic coverage in a relatively small way further illustrates the outstanding existing coverage of the Kentucky system and its aviation facilities.

Table 12-17
Potential Improvements to Kentucky Airport System Coverage
With Implementation of Recommended System

		KY Population Improvement	Potential KY Land Area Coverage Improvement		
Facility or Criteria	Current System	Recommended System	Current System	Recommended System	
Full Kentucky System	87%	89%	66%	69%	
Airports with a 5,000' Runway	79%	81%	49%	51%	
Instrument Approach Coverage:					
Airports with a Precision Approach	31%	No change	7%	No change	
Airports with a Precision Approach or APV	79%	86%	53%	57%	
Airports with any Instrument Approach	84%	86%	58%	63%	
Fuel Service Coverage:					
Airports with Jet Fuel	82%	87%	54%	56%	
Airports with any Aircraft Fuel	86%	87%	63%	65%	
Airports with Automated Weather Reporting	100%	100%	100%	100%	
Airports Meeting Business User Needs	77%	81%	47%	51%	

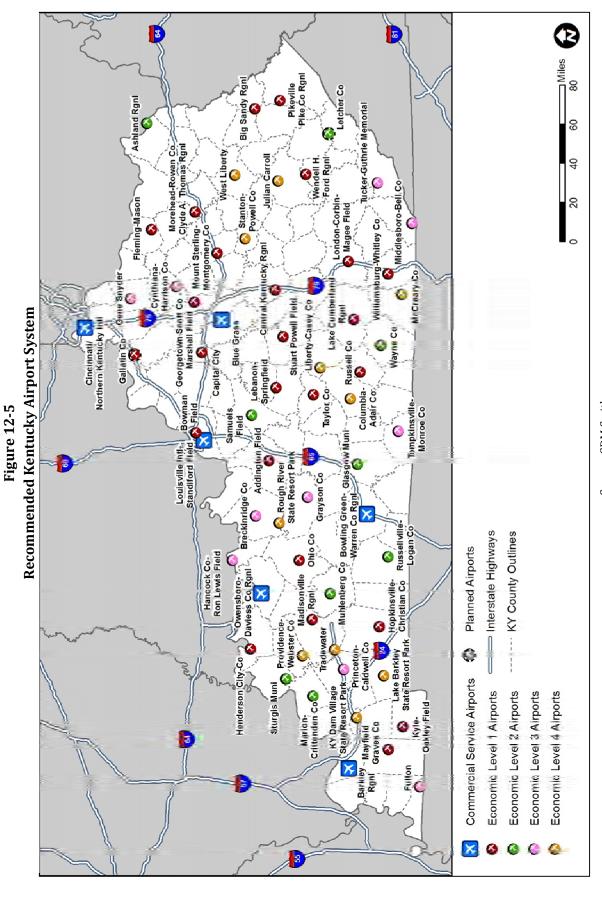
Note: All coverage includes relevant out-of-state airports. Recommended system coverage does not include Bluegrass Station because the facility's status as an airport is in the earliest planning stages.

Source: CDM Smith, US Census Bureau.

Most significantly, the implementation of recommendations for jet fuel, APV approaches, and automated weather reporting would lead to an additional three airports meeting "business user needs" as defined by the SASP. In combination with the two new airports, this results in a 4 percent increase in Kentucky population coverage.

Figures 12-5 through **12-12** display the potential additional coverage that would result from implementing all SASP facility and service recommendations.

⁵ Note that Liberty-Casey County Airport remains in the Kentucky airport system, but is changing to restricted use, public-owned status. However, the recommendations of this plan remain in effect for the airport despite this change in status.



Source: CDM Smith.

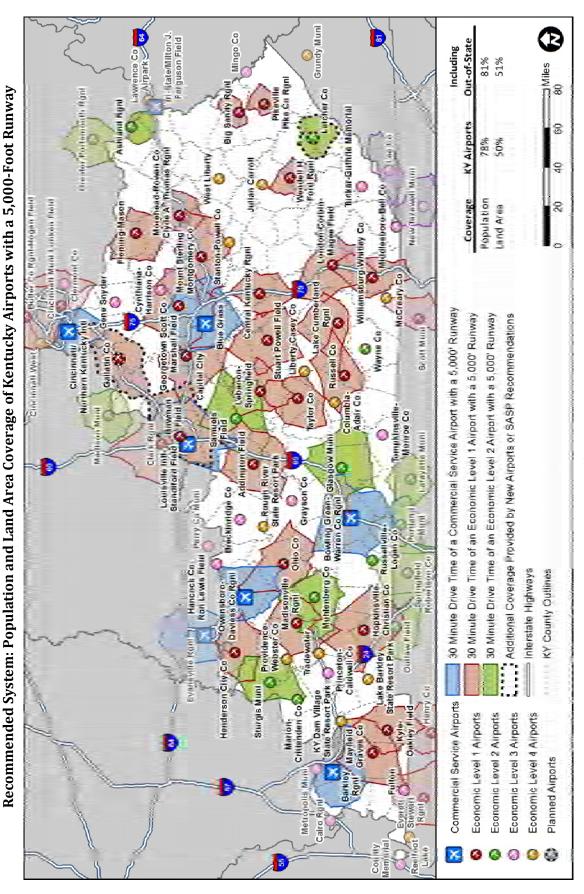
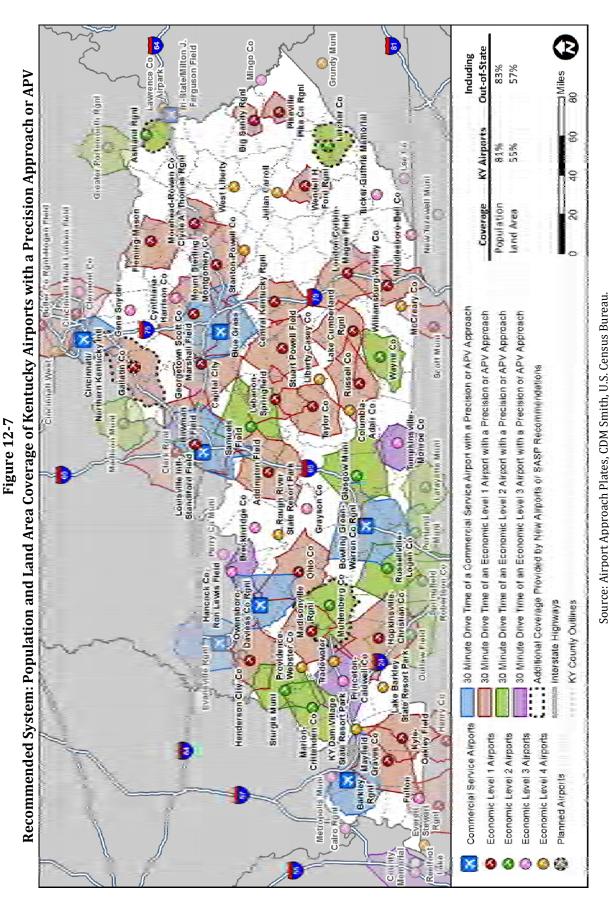
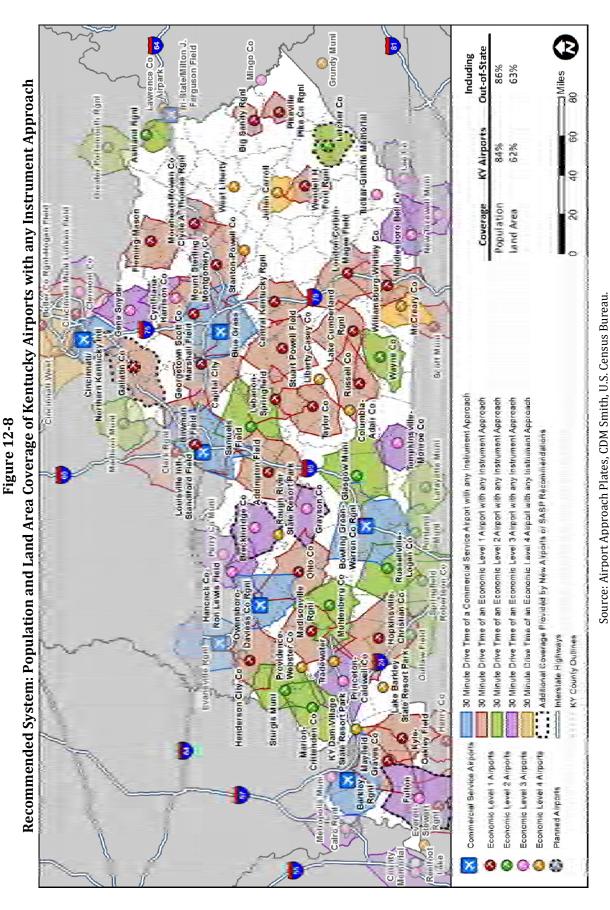
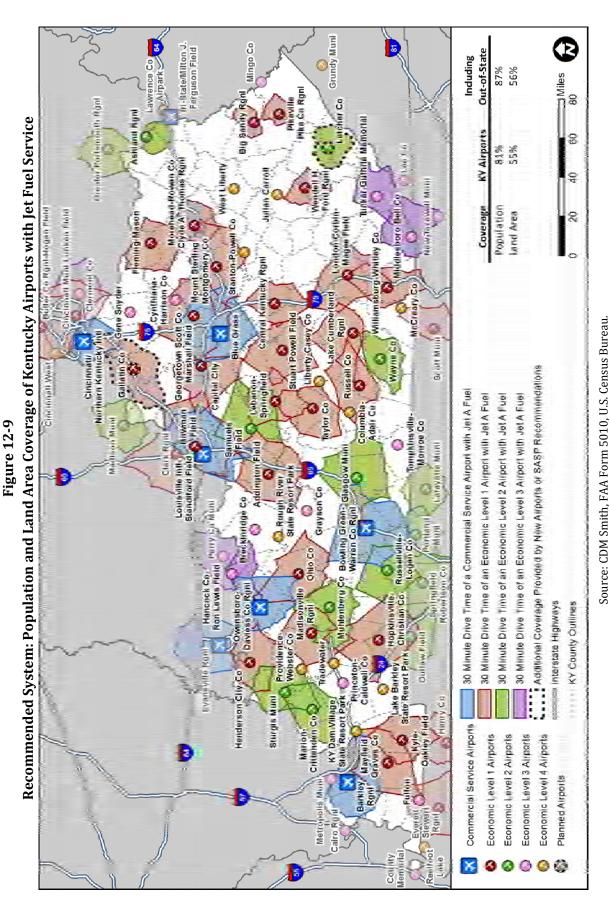


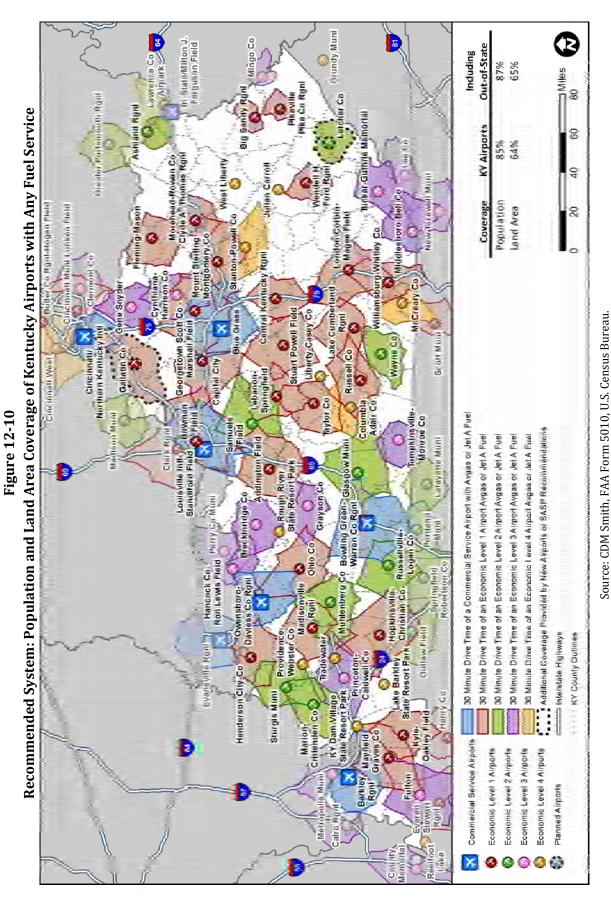
Figure 12-6

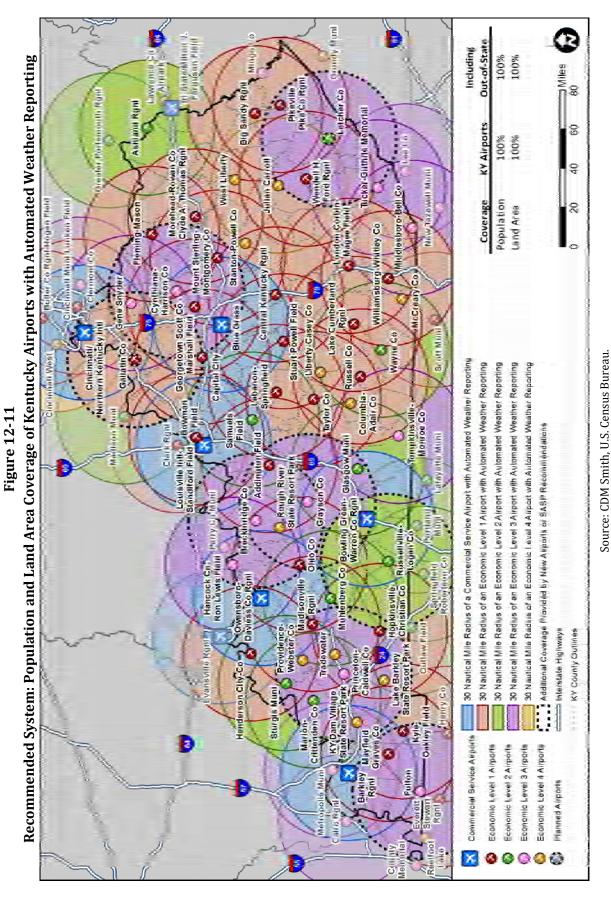
Source: CDM Smith, U.S. Census Bureau.

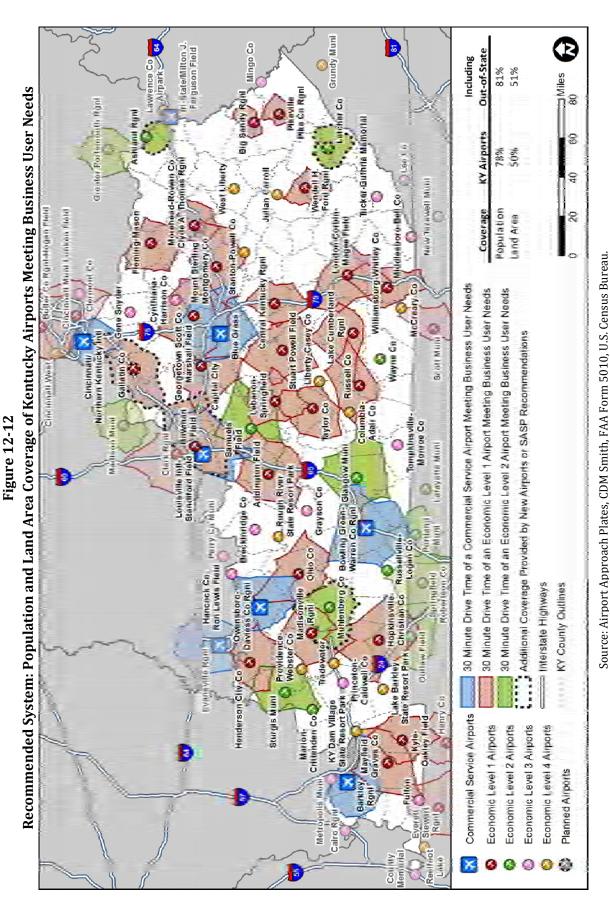












Addressing Gaps in Business User Airport Coverage

The Kentucky Transportation Cabinet's (KYTC) Department of Aviation have identified economic development as a major goal of the SASP, with Goal 4 stating that the SASP should "Help KYTC assess how the Kentucky airport system contributes to and maintains the economic prosperity of Kentucky." A key aspect of assessing this quality of the Kentucky airport system is to measure the coverage by airports that meet "business user needs," specifically those airports with a runway at least 5,000 feet in length, a precision or APV approach, jet fuel service, and automated weather reporting.

As detailed in the previous section, current coverage, when combined with new airports and potential coverage resulting from the implementation of SASP recommendations, results in 81 percent of Kentucky's population and 51 percent of its land area having 30-minute access to an airport meeting business user needs. This coverage is currently provided by the 32 airports that meet business user needs. There are three airports that would meet these qualifications based on system plan recommendations. Furthermore, the two planned airports in Gallatin and Letcher Counties, if built, would add to this already robust business ready system.

Table 12-18 details the potential additional population and land area coverage that could be provided by the remaining 24 Kentucky system airports, including the status of their qualifying facilities and services. While none of these airports currently have a runway of at least 5,000 feet in length, several meet other criteria such as jet fuel, weather reporting, and an advanced instrument approach. In addition, six airports in the Economic Level 2 and Economic Level 3 roles are recommended to install an automated weather reporting system (table cells shown in green).

While the SASP does not make direct recommendations for any of these airports to install and construct the remaining facilities and services necessary to achieve business user needs, this information is intended as a tool for KYTC to assess where improvements would be most impactful. For example, adding business user facilities and services would have the most impact by population coverage at Gene Snyder Airport in Falmouth (41,526 residents).

Table 12-18
Potential Additional Coverage Provided by Airports Not Currently Meeting All Business User Needs

	1 000110	lai Additional Coverage Frovided b	Potential	Potential							
			Added Area	Added KY	Primary						
FAA			Coverage	Population	Runway		Jet	Weather			
ID	Associated City	Airport Name	(Square Miles)	Coverage	Length	Best IAP	Fuel	Reporting			
Economic Level 2											
5M9	Marion	Marion-Crittenden County	371	8,461	4,400	APV	Yes	Yes			
EKQ	Monticello	Wayne County	425	26,595	4,000	APV	Yes	Yes			
4M7	Russellville	Russellville-Logan County	336	20,974	4,500	APV	Yes	No			
Economic Level 3											
018	Cynthiana	Cynthiana-Harrison County	206	9,585	3,850	Non-Precision	No	No			
K62	Falmouth	Gene Snyder	512	41,526	3,994	Non-Precision	No	Yes			
1M7	Fulton	Fulton	182	7,378	4,001	Visual	No	No			
193	Hardinsburg	Breckinridge County	525	22,369	4,000	Visual	No	No			
135	Harlan	Tucker-Guthrie Memorial	415	29,828	3,460	Circling	Yes	Yes			
M20	Leitchfield	Grayson County	414	27,077	4,000	Visual	No	No			
KY8	Lewisport	Hancock Co-Ron Lewis Field	167	8,869	4,000	APV	Yes	Yes			
1A6	Middlesboro	Middlesboro-Bell County	290	28,581	3,631	Circling	Yes	Yes			
2M0	Princeton	Princeton-Caldwell County	635	28,644	4,099	APV	No	No			
TZV	Tompkinsville	Tompkinsville-Monroe County	309	11,440	4,000	APV	No	Yes			
			Economic Level 4								
1M9	Cadiz	Lake Barkley State Resort Park	215	8,833	4,800	Visual	No	No			
196	Columbia	Columbia-Adair County	210	7,532	2,600	Visual	No	No			
8M7	Dawson Springs	Tradewater	436	23,980	2,875	Visual	No	No			
213	Falls of Rough	Rough River State Resort Park	417	19,264	3,200	Visual	No	No			
M34	Gilbertsville	Kentucky Dam Village State Resort Park	71	8,255	4,000	Visual	No	No			
JKL	Jackson	Julian Carroll	210	10,151	4,400	Non-Precision	No	Yes			
153	Liberty	Liberty-Casey County	169	9,624	3,000	Visual	No	No			
181	Pine Knot	McCreary County	184	13,214	2,999	Non-Precision	No	No			
8M9	Providence	Providence-Webster County	234	9,566	3,800	Visual	No	No			
150	Stanton	Stanton-Powell County	393	22,829	2,996	Visual	No	No			
913	West Liberty	West Liberty	528	25,598	2,400	Visual	No	No			

Recommended System and Cost Estimates

Source: Airport Approach CDM Smith, US Census Bureau.

Recommendations Summary

Making the recommended system a reality involves implementing the recommendations detailed earlier in this chapter. The following section summarizes the many facility and service recommendations made for the Kentucky airport system.

Figure 12-13 summarizes the number of airport recommendations by facility or service. With 20 percent of all SASP recommendations, RSA improvements are the most common, followed by recommendations for snow removal equipment or operations (13 percent), and taxiways, airport fencing, and runway to hold line separation (11 percent respectively). With only one recommendation each, runway length, approach lighting, and airport beacons are the least-recommended facility upgrades.

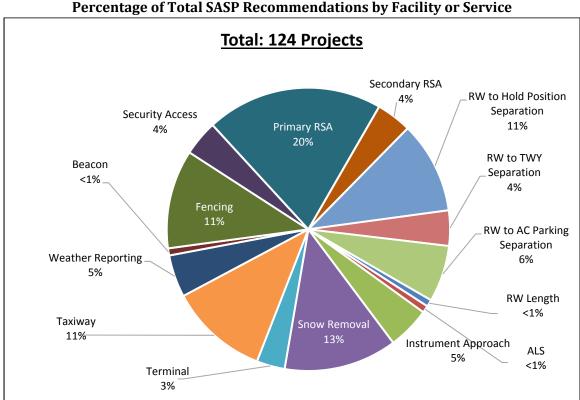


Figure 12-13
Percentage of Total SASP Recommendations by Facility or Service

Source: CDM Smith.

By role, Economic Level 1 airports have the most recommended projects (**Figure 12-14**). This is not unexpected since Economic Level 1 airports accounting for 24 of the Commonwealth's 59 system airports. Following is the Economic Level 3 role, with 29 percent of all recommendations.

Total: 124 Projects Economic Level 3 Economic Level 2 9% Economic Level 4 20% **Economic Level 1** 37% Commercial Service 4%

Figure 12-14 Percentage of Total SASP Recommendations by Airport Role

Source: CDM Smith.

Figure 12-15 summarizes the estimated costs of all SASP recommendations. Recommendations related to upgrading taxiways or bringing RSAs into compliance account for 72 percent of the total estimated costs, with taxiway recommendations alone accounting for 37 percent of the total \$193 million. The estimated costs of several recommendation categories account for under one percent each.

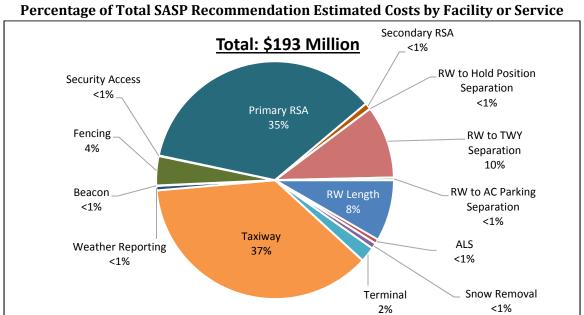
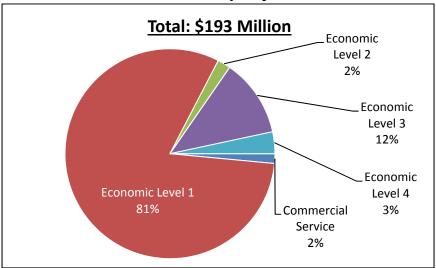


Figure 12-15

Source: CDM Smith, Connico, Stantec.

Similar to their share of all recommendation projects, Economic Level 1 airports also account for a large percentage of the total estimated costs (**Figure 12-16**). Economic Level 1 airports account for 81 percent of the total \$193 million in estimated project costs.

Figure 12-16
Percentage of Total SASP Recommendation
Estimated Costs by Airport Role



Source: CDM Smith, Connico, Stantec.

Finally, **Figure 12-17** presents estimated cost by project type, including the estimated cost of the planned airports in Gallatin and Letcher counties. While the construction of these new airports will include various airside and landside construction project categories, when presented as individual elements of the SASP, they illustrate the magnitude of constructing a new airport. The \$30 million cost of the Gallatin County Airport would account for 12 percent of the total SASP project cost, while the \$18 million cost Letcher County Airport represents an additional 7 percent.

Secondary RSA **RW** to Hold Position Total: \$241 Million <1% Separation <1% RW to TWY Separation RW to AC Parking **Security Access** 8% Separation <1% <1% **Primary RSA** 28% **Gallatin County** Fencing Airport 3% 12% Beacon **Letcher County** <1% Airport **Taxiway** 7% 29% **RW** Length Weather Reporting 7% <0% ALS Snow Removal Terminal <0% <1% 2%

Figure 12-15
Percentage of Total SASP Recommendation Estimated Costs by Facility or Service
Including Future Gallatin and Letcher County Airports

Source: CDM Smith, Connico, Stantec.

These two new airports, in addition to projects that result from the SASP, will represent a significant investment from the Kentucky Department of Aviation and the FAA, an investment necessary to maintain Kentucky's leading position in aviation.

Again, it is important to note that system planning recommendations are but one element of a multi-tiered airport planning approach taken by the Kentucky Department of Aviation. The Kentucky Airport Pavement Management System and Statewide Airport Obstruction Analysis Report also result in many recommendations and planned projects. In addition, individual airport capital improvement plans include planned projects. Projects resulting from these other planning efforts may take priority over SASP recommendations.