APPENDIX E: FACILITY AND SERVICE OBJECTIVES

In addition to system-wide performance measures, facility and service objectives are established for Arizona's system airports. These objectives are tailored to the six airport classifications as defined in the Arizona State Aviation System Plan (SASP) Update:

1. Commercial Service-International
2. Commercial Service-National
3. Reliever
4. General Aviation (GA)-Community
5. GA-Rural
6. GA-Basic

This appendix expands upon facility and service objectives summarized in **Chapter 6**, and details performance at each Arizona system airport. The first part of this appendix details performance associated with airside facility objectives. The second section details performance associated with landside facilities and services.

These facility and service objectives should not be viewed as a requirement, but rather guidelines for how each airport can best serve its functional role within the system. Airports that meets all facility and service objectives are best equipped to fulfill the market needs of their system classification.

As mentioned in **Chapter 6,** an airport that is deficient in a particular objective does not necessarily indicate a project should be pursued. Instead, an airport should consider if its existing facilities and services accommodate current and anticipated needs during the master planning process. From federal (i.e., Federal Aviation Administration [FAA]) and state (i.e., Arizona Department of Transportation [ADOT]) perspectives, specific projects must be justified in an airport-specific study (e.g., master plan) and included on the Airport Layout Plan (ALP) before funding can be awarded. While the SASP Update provides the framework of statewide needs, airport-specific analyses are critical to determine the facilities and objectives appropriate for a specific airport.

Some Arizona system airports may have already identified similar or additional facility and service needs in their individual master plans and capital improvement programs. In some cases, these master plans may already be moving towards addressing the facility and service needs identified in the SASP Update. In these cases, the projects identified in the analysis of facility and service objectives have been removed to avoid duplication in the final analysis of aviation system needs and costs in **Chapter 8**.

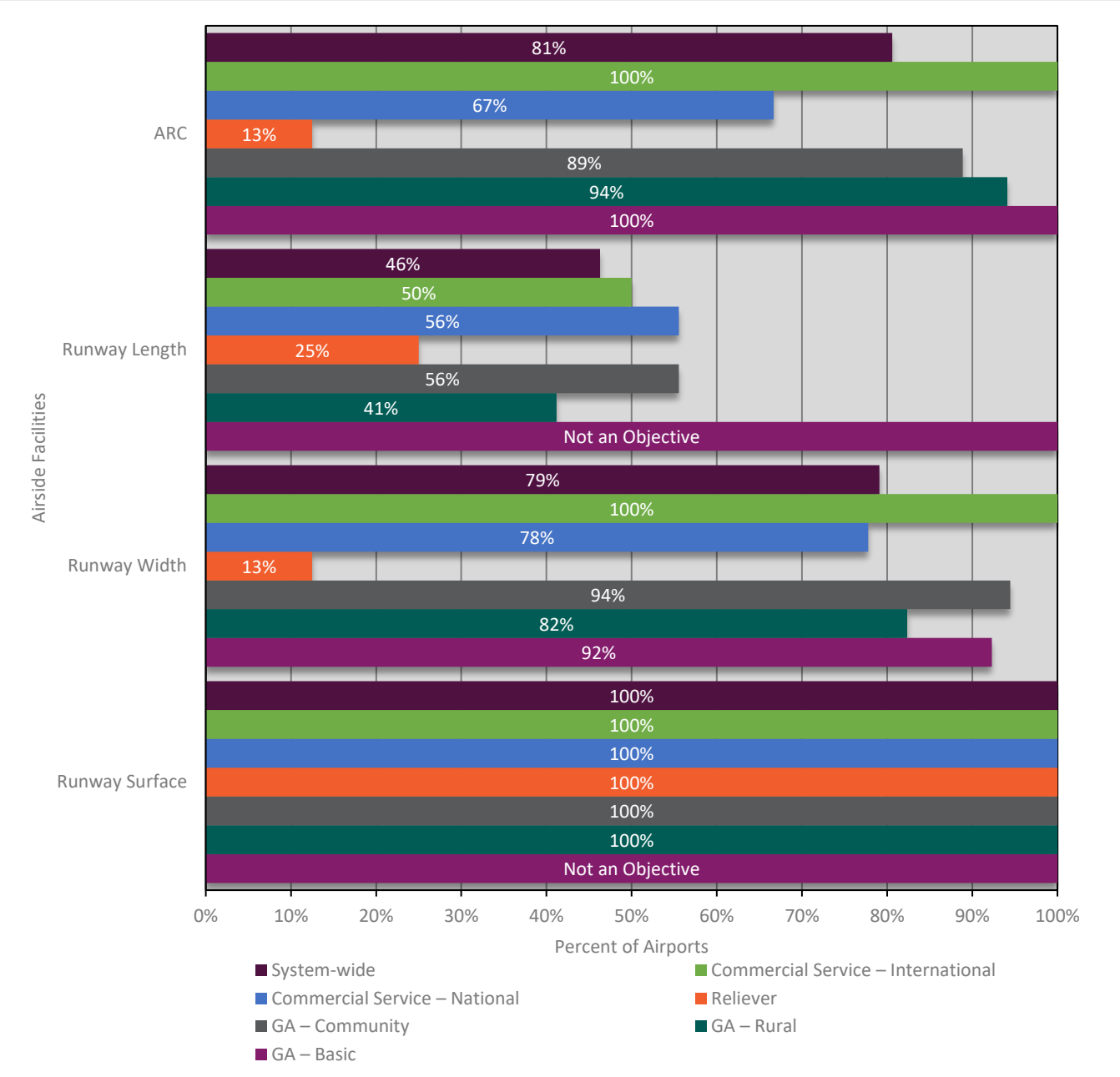
AIRSIDE FACILITIES

Airside facilities include airfield pavements and aviation equipment used in flight operations. Airside facilities are therefore the most significant factor in an airport's ability to support aviation operations and statewide aviation needs. The following airside facilities are assessed at Arizona airports, with specific objectives assigned for each airport's classification:

1. Airport reference code (ARC)
2. Primary runway length, width, and surface
3. Taxiway type and width
4. Instrument approach procedures (IAPs)

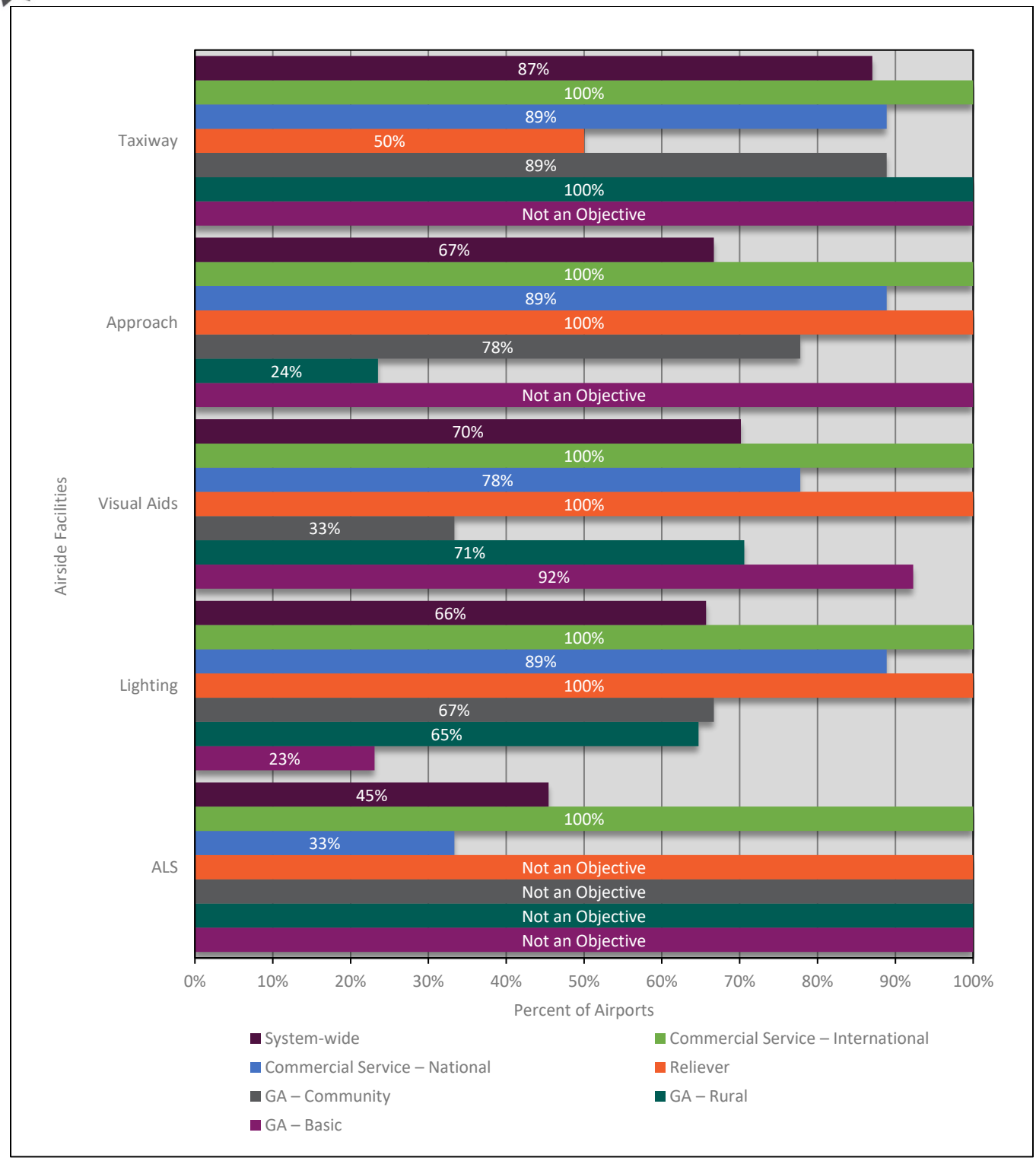
5. Visual aids, including rotating beacons, wind indicators, segmented circles, runway end indicator lights (REILs), and visual glideslope indicators (VGSIs)
6. Runway and taxiway lighting
7. Approach lighting systems (ALSs)

Figure 1 and **Figure 2** summarize system performance for airside facility objectives, each of which is described in the following pages.



Sources: Airport Inventory and Data Survey 2017, AirNav, FAA 5010 Master Record

Figure 1. Summary of Airside Facility and Service Objectives (1 of 2)



Sources: Airport Inventory and Data Survey 2017, AirNav, FAA 5010 Master Record

Figure 2. Summary of Airside Facility and Service Objectives (2 of 2)

Airport Reference Code

Airports included in the FAA's National Plan of Integrated Airport Systems (NPIAS) are encouraged by the FAA to meet all applicable design and development standards. Design standards are related to the approach speed and wingspan of each airport's design (or critical) aircraft, which is the most demanding aircraft, or group of same category aircraft, that operates at the airport on a regular basis with at least 500 annual takeoffs and landings. Each design aircraft is assigned a letter (A through E) based on its approach speed, and a roman numeral (I through VI) for its wingspan. These same characteristics are used to determine each runway's highest runway design code (RDC), the largest of which at an airport is considered the ARC. The ARC is used primarily for planning and design and the FAA notes that it is not a limiting factor in the aircraft that can safely operate at an airport.

Many of the FAA's safety and operational standards are based on the RDC (the highest of which is an airport's ARC), including but not limited to runway width, runway safety area (RSA), runway protection zones (RPZs), runway to taxiway separation, and object free area (OFA). A more detailed discussion of ARCs is provided in **Chapter 3** of this plan.

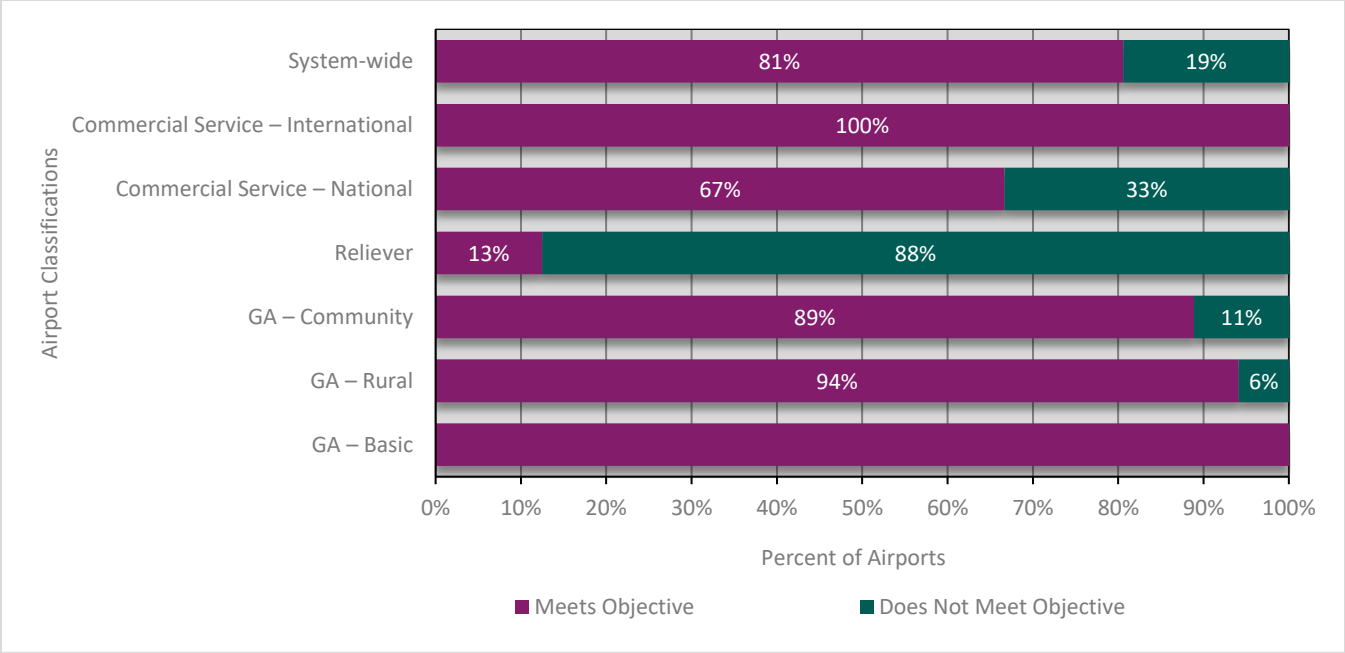
Objective ARCs for commercial service airports are based on the ultimate ARC on their primary runway shown in their most recent airport master plan. For GA airports, objective ARCs are based on each airport's system classification, with more demanding airports having a more advanced objective ARC. **Table 1** explains how aircraft characteristics relate to airfield design components.

Table 1. Aircraft Characteristics and Design Components

Aircraft Characteristics	Design Components
Approach Speed	RSA, Runway Obstacle Free Area (ROFA), RPZ, runway width, runway-to-taxiway separation, runway-to-fixed object
Landing and Takeoff Distance	Runway length
Cockpit to Main Gear Distance (CMG)	Fillet design, apron area, parking layout
Main Gear Width (MGW)	Taxiway width, fillet design
Wingspan/Tail Height	Taxiway and apron OFA, parking configuration, hangar locations, taxiway-to-taxiway separation, runway-to-taxiway separation

Source: FAA Advisory Circular (AC) 150/5300-13A, Change 1

Figure 3 summarizes ARC objective performance at Arizona system airports. In total, 81 percent of the Arizona system meets its ARC objective relative to its classification. This includes 100 percent of Commercial Service-International airports and nearly all airports in the three Non-Reliever GA classification. However, only one Reliever airport (Phoenix Goodyear Airport) meets its objective for its ARC.



Source: Airport Inventory and Data Survey 2017

Figure 3. Percentage of Airports by Classification Meeting ARC Objectives

Table 2 details ARC objective performance by individual airport.

Table 2. ARC Objective Performance by Airport

Associated City	Airport Name	Existing ARC	Objective ARC	Meets Objective
Commercial Service-International: Consistent with Master Plan				
Phoenix	Phoenix Sky Harbor International	D-V	D-V	Yes
Tucson	Tucson International	D-IV	D-IV	Yes
Commercial Service-National: Consistent with Master Plan				
Bullhead City	Laughlin/Bullhead City International	C-III	D-IV	No
Flagstaff	Flagstaff Pulliam	C-III	C-III	Yes
Grand Canyon	Grand Canyon National Park	C-III	C-III	Yes
Page	Page Municipal	B-II	B-II	Yes
Peach Springs	Grand Canyon West	B-II	C-II	No
Phoenix	Phoenix-Mesa Gateway	D-V	D-V	Yes
Prescott	Ernest A. Love Field	C-III	C-III	Yes
Show Low	Show Low Regional	C-II	C-III	No
Yuma	Yuma International	E-VI	E-VI	Yes
Reliever: C-III				
Chandler	Chandler Municipal	B-II	C-III	No
Glendale	Glendale Municipal	B-II	C-III	No
Goodyear	Phoenix Goodyear	D-IV	C-III	Yes
Marana	Marana Regional	C-II	C-III	No
Mesa	Falcon Field	B-II	C-III	No
Phoenix	Phoenix Deer Valley	C-II	C-III	No
Scottsdale	Scottsdale	B-II	C-III	No
Tucson	Ryan Field	B-II	C-III	No

Associated City	Airport Name	Existing ARC	Objective ARC	Meets Objective
	GA-Community: B-II			
Benson	Benson Municipal	B-II	B-II	Yes
Buckeye	Buckeye Municipal	B-II	B-II	Yes
Casa Grande	Casa Grande Municipal	B-II	B-II	Yes
Coolidge	Coolidge Municipal	C-IV	B-II	Yes
Cottonwood	Cottonwood Municipal	B-I	B-II	No
Kingman	Kingman	C-III	B-II	Yes
Lake Havasu City	Lake Havasu City	C-III	B-II	Yes
Marana	Pinal Airpark	D-V	B-II	Yes
Nogales	Nogales	C-II	B-II	Yes
Parker	Avi Suquilla	C-II	B-II	Yes
Payson	Payson	B-I	B-II	No
Safford	Safford Regional	B-II	B-II	Yes
Sedona	Sedona	B-II	B-II	Yes
Sierra Vista	Sierra Vista Municipal-Libby Army Airfield	E-V	B-II	Yes
Springerville	Springerville Municipal	B-II	B-II	Yes
St. Johns	St. Johns Industrial Air Park	B-II	B-II	Yes
Wickenburg	Wickenburg Municipal	B-II	B-II	Yes
Willcox	Cochise County	B-II	B-II	Yes
	GA-Rural: B-I			
Bisbee	Bisbee Municipal	B-II	B-I	Yes
Chinle	Chinle Municipal	B-I	B-I	Yes
Colorado City	Colorado City Municipal	B-II	B-I	Yes
Douglas	Bisbee-Douglas International	C-I	B-I	Yes
Douglas	Cochise College	B-I	B-I	Yes
Douglas	Douglas Municipal	B-II	B-I	Yes
Eloy	Eloy Municipal	A-II	B-I	No
Gila Bend	Gila Bend Municipal	B-II	B-I	Yes
Holbrook	Holbrook Municipal	B-I	B-I	Yes
Maricopa	Ak-Chin Regional	B-I	B-I	Yes
San Luis	Rolle Airfield	B-I	B-I	Yes
San Manuel	San Manuel	B-I	B-I	Yes
Taylor	Taylor	B-II	B-I	Yes
Whiteriver	Whiteriver	B-II	B-I	Yes
Williams	H.A. Clark Memorial Field	B-II	B-I	Yes
Window Rock	Window Rock	B-II	B-I	Yes
Winslow	Winslow-Lindbergh Regional	C-II	B-I	Yes
	GA-Basic: A-I			
Ajo	Eric Marcus Municipal	B-I	A-I	Yes
Bagdad	Bagdad	B-I	A-I	Yes
Cibecue	Cibecue	A-I	A-I	Yes
Clifton	Greenlee County	B-II	A-I	Yes
Globe	San Carlos Apache	C-II	A-I	Yes
Kayenta	Kayenta	B-II	A-I	Yes
Kearny	Kearny	A-I	A-I	Yes
Polacca	Polacca	A-I	A-I	Yes
Seligman	Seligman	B-I	A-I	Yes
Sells	Sells	A-I	A-I	Yes
Superior	Superior	B-II	A-I	Yes
Tombstone	Tombstone Municipal	A-I	A-I	Yes
Tuba City	Tuba City	B-II	A-I	Yes

Source: Airport Inventory and Data Survey 2017

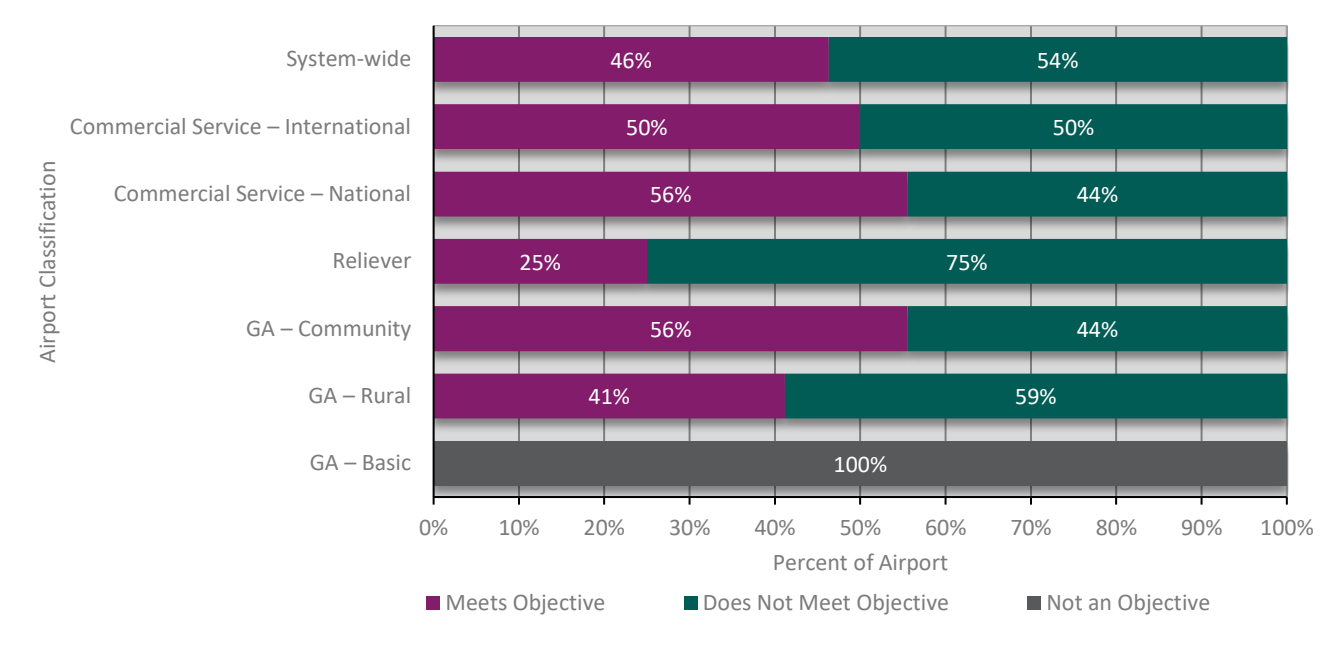
Primary Runway Length

The length of a runway is one of the most important factors determining what types of aircraft can land at an airport. While there are other factors, in general, longer runways can support larger aircraft. Primary runway length objectives for airports in the Commercial Service-International and Commercial Service-National classifications were determined using ultimate runway lengths specified in each airport's master plan. There is no objective for GA-Basic airports, which are recommended to maintain existing lengths.

For the other classifications, the SASP Update employed a runway length analysis that considers factors such as mean maximum daily temperature during the hottest month and airport elevation. Outputs were based on the type of aircraft and useful load the airport will accommodate. Objective primary runway lengths for airports in the Reliever, GA-Community, and GA-Rural classifications were determined based on the following parameters:

1. Reliever: Accommodate 75% of large aircraft at 90% useful load
2. GA-Community: Accommodate 75% of large aircraft at 60% useful load
3. GA-Rural: Accommodate 75% of small planes

The SASP Update sets runway length objectives as a basis for evaluation. Airports exceeding their objectives are not recommended to reduce their runway length unless determined by other factors or plans. **Figure 4** summarizes runway length objective performance by airport classification. In total, 46 percent of the system meets objectives for runway length. This includes 25 percent of Reliever, 56 percent of GA-Community, and 41 percent of GA-Rural airports. As previously mentioned, commercial service airports were evaluated based on the ultimate runway length cited in their master plans. Based on these criteria, one of two Commercial Service-International and 56 percent of Commercial Service-National airports meet runway length objectives.



Sources: Airport Inventory and Data Survey 2017,
FAA AC 150/5325-4B – Runway Length Requirements for Airport Design

Figure 4. Percentage of Airports by Classification Meeting Primary Runway Length Objectives

Table 3 details primary runway length objective performance by individual airport.

Table 3. Primary Runway Length Objective Performance by Airport

Associated City	Airport Name	Primary Runway	Primary Runway Length	Objective Runway Length	Meets Objective
Commercial Service-International: Consistent with Master Plan					
Phoenix	Phoenix Sky Harbor International	08/26	11,489	12,000	No
Tucson	Tucson International	11L/29R	10,966	10,966	Yes
Commercial Service-National: Consistent with Master Plan					
Bullhead City	Laughlin/Bullhead City International	16/34	8,500	8,500	Yes
Flagstaff	Flagstaff Pulliam	03/21	8,800	8,800	Yes
Grand Canyon	Grand Canyon National Park	03/21	8,999	10,000	No
Page	Page Municipal	15/33	5,950	6,550	No
Peach Springs	Grand Canyon West	17/35	5,000	6,500	No
Phoenix	Phoenix-Mesa Gateway	12C/30C	10,201	10,201	Yes
Prescott	Ernest A. Love Field	03R/21L	7,619	10,570	No
Show Low	Show Low Regional	06/24	7,200	7,200	Yes
Yuma	Yuma International	03L/21R	13,000	13,000	Yes
Reliever: Accommodate 75% of Large Aircraft at 90% Useful Load					
Chandler	Chandler Municipal	04L/22R	4,401	7,850	No
Glendale	Glendale Municipal	01/19	7,150	7,850	No
Goodyear	Phoenix Goodyear	03/21	8,501	8,500	Yes
Marana	Marana Regional	03/21	3,892	7,900	No
Mesa	Falcon Field	4R/22L	5,101	7,850	No
Phoenix	Phoenix Deer Valley	7L/25R	4,500	7,850	No
Scottsdale	Scottsdale	03/21	8,249	8,130	Yes
Tucson	Ryan Field	6R/24L	5,500	8,000	No
GA-Community: Accommodate 75% of Large Aircraft at 60% Useful Load					
Benson	Benson Municipal	10/28	4,002	6,400	No
Buckeye	Buckeye Municipal	17/35	5,500	5,550	No
Casa Grande	Casa Grande Municipal	05/23	5,200	5,200	Yes
Coolidge	Coolidge Municipal	05/23	5,564	5,420	Yes
Cottonwood	Cottonwood Municipal	14/32	4,252	6,300	No
Kingman	Kingman	03/21	6,825	6,300	Yes
Lake Havasu City	Lake Havasu City	14/32	8,001	5,480	Yes
Marana	Pinal Airpark	12/30	6,849	5,300	Yes
Nogales	Nogales	03/21	7,199	7,430	No
Parker	Avi Suquilla	01/19	6,250	5,090	Yes
Payson	Payson	06/24	5,504	6,780	No
Safford	Safford Regional	12/30	6,006	5,970	Yes
Sedona	Sedona	03/21	5,132	7,100	No
Sierra Vista	Sierra Vista Municipal-Libby Army Airfield	08/26	12,001	7,840	Yes
Springerville	Springerville Municipal	03/21	8,422	7,700	Yes
St. Johns	St. Johns Industrial Air Park	14/32	5,322	7,050	No
Wickenburg	Wickenburg Municipal	05/23	6,101	5,600	Yes
Willcox	Cochise County	03/21	6,095	6,430	No
GA-Rural: Accommodate 75% of Small Planes					
Bisbee	Bisbee Municipal	17/35	5,929	4,480	Yes
Chinle	Chinle Municipal	18/36	6,902	7,400	No
Colorado City	Colorado City Municipal	11/29	6,300	6,800	No
Douglas	Bisbee-Douglas International	08/26	4,966	6,000	No
Douglas	Cochise College	05/23	5,551	4,110	Yes

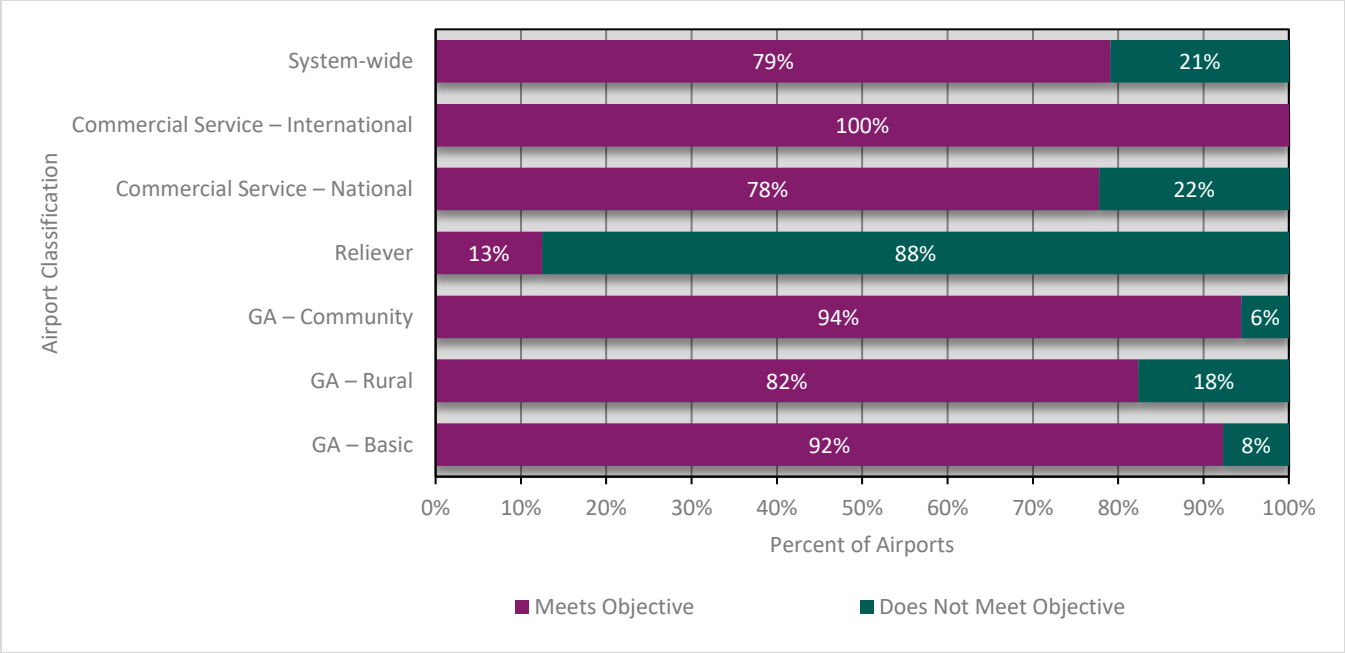
Associated City	Airport Name	Primary Runway	Primary Runway Length	Objective Runway Length	Meets Objective
Douglas	Douglas Municipal	03/21	5,760	6,390	No
Eloy	Eloy Municipal	02/20	3,901	4,500	No
Gila Bend	Gila Bend Municipal	04/22	5,200	4,200	Yes
Holbrook	Holbrook Municipal	03/21	6,698	7,100	No
Maricopa	Ak-Chin Regional	04/22	4,751	4,400	Yes
San Luis	Rolle Airfield	17/35	2,800	2,730	Yes
San Manuel	San Manuel	11/29	4,207	5,400	No
Taylor	Taylor	03/21	7,001	7,700	No
Whiteriver	Whiteriver	01/19	6,350	4,520	Yes
Williams	H.A. Clark Memorial Field	18/36	6,000	7,340	No
Window Rock	Window Rock	02/20	7,000	5,770	Yes
Winslow	Winslow-Lindbergh Regional	11/29	7,100	7,390	No
GA-Basic: Maintain Existing					
Ajo	Eric Marcus Municipal	12/30	3,800	NA	NA
Bagdad	Bagdad	05/23	4,552	NA	NA
Cibecue	Cibecue	07/25	4,200	NA	NA
Clifton	Greenlee County	07/25	4,978	NA	NA
Globe	San Carlos Apache	09/27	6,500	NA	NA
Kayenta	Kayenta	05/23	7,101	NA	NA
Kearny	Kearny	08/26	3,400	NA	NA
Polacca	Polacca	04/22	4,200	NA	NA
Seligman	Seligman	04/22	4,800	NA	NA
Sells	Sells	04/22	5,830	NA	NA
Superior	Superior	04/22	3,250	NA	NA
Tombstone	Tombstone Municipal	06/24	4,430	NA	NA
Tuba City	Tuba City	05/33	6,230	NA	NA

Sources: Airport Inventory and Data Survey 2017, FAA Advisory Circular 150/5325-4B – Runway Length Requirements for Airport Design

Primary Runway Width

Runway width is also strongly associated with the type of activity that an airport can accommodate. Like primary runway length objectives, not every airport in a classification has the same objective for its primary runway width. Rather, primary runway width objectives are determined by the existing or objective ARC of each airport, whichever is more advanced. For example, if an airport has an existing B-II ARC but an objective ARC of C-III, the runway width standard for a C-III airport is used as the primary runway width objective. However, if an airport has an existing ARC of C-III but an objective ARC of B-II, C-III primary runway width standards would still apply. This higher ARC is hereafter referred to as the ultimate ARC.

Figure 5 summarizes primary runway width objective performance by airport classification. In total, 79 percent of the system meets primary runway width objectives, including 100 percent of Commercial Service-International airports and nearly all Non-Reliever GA airports. Only one Reliever airport (Phoenix Goodyear Airport) meets this objective.



Sources: Airport Inventory and Data Survey 2017

Figure 5. Percentage of Airports by Classification Meeting Primary Runway Width Objectives

Table 4 details primary runway width objective performance at each airport in the Arizona system.

Table 4. Primary Runway Width Objective Performance by Airport

Associated City	Airport Name	Primary Runway	Primary Runway Width	Ultimate ARC	Objective Runway Width	Meets Objective
Commercial Service-International: To Meet ARC Standards						
Phoenix	Phoenix Sky Harbor International	08/26	150	D-V	150	Yes
Tucson	Tucson International	11L/29R	150	D-IV	150	Yes
Commercial Service-National: To Meet ARC Standards						
Bullhead City	Laughlin/Bullhead City International	16/34	150	D-IV	150	Yes
Flagstaff	Flagstaff Pulliam	03/21	150	C-III	150	Yes
Grand Canyon	Grand Canyon National Park	03/21	150	C-III	150	Yes
Page	Page Municipal	15/33	150	B-II	75	Yes
Peach Springs	Grand Canyon West	17/35	75	C-II	100	No
Phoenix	Phoenix-Mesa Gateway	12C/30C	150	D-V	150	Yes
Prescott	Ernest A. Love Field	03R/21L	150	C-III	150	Yes
Show Low	Show Low Regional	06/24	100	C-III	150	No
Yuma	Yuma International	03L/21R	200	E-VI	200	Yes
Reliever: To Meet ARC Standards						
Chandler	Chandler Municipal	04L/22R	75	C-III	150	No
Glendale	Glendale Municipal	01/19	100	C-III	150	No
Goodyear	Phoenix Goodyear	03/21	150	C-III	150	Yes
Marana	Marana Regional	03/21	75	C-III	150	No
Mesa	Falcon Field	4R/22L	100	C-III	150	No
Phoenix	Phoenix Deer Valley	7L/25R	75	C-III	150	No

Associated City	Airport Name	Primary Runway	Primary Runway Width	Ultimate ARC	Objective Runway Width	Meets Objective
Scottsdale	Scottsdale	03/21	100	C-III	150	No
Tucson	Ryan Field	6R/24L	75	C-III	150	No
GA-Community: To Meet ARC Standards						
Benson	Benson Municipal	10/28	75	B-II	75	Yes
Buckeye	Buckeye Municipal	17/35	75	B-II	75	Yes
Casa Grande	Casa Grande Municipal	05/23	100	B-II	75	Yes
Coolidge	Coolidge Municipal	05/23	150	B-II	150	Yes
Cottonwood	Cottonwood Municipal	14/32	75	B-II	75	Yes
Kingman	Kingman	03/21	150	B-II	150	Yes
Lake Havasu City	Lake Havasu City	14/32	100	B-II	150	No
Marana	Pinal Airpark	12/30	150	B-II	150	Yes
Nogales	Nogales	03/21	100	B-II	100	Yes
Parker	Avi Suquilla	01/19	100	B-II	100	Yes
Payson	Payson	06/24	75	B-II	75	Yes
Safford	Safford Regional	12/30	100	B-II	75	Yes
Sedona	Sedona	03/21	100	B-II	75	Yes
Sierra Vista	Sierra Vista Municipal-Libby Army Airfield	08/26	150	B-II	150	Yes
Springerville	Springerville Municipal	03/21	75	B-II	75	Yes
St. Johns	St. Johns Industrial Air Park	14/32	75	B-II	75	Yes
Wickenburg	Wickenburg Municipal	05/23	75	B-II	75	Yes
Willcox	Cochise County	03/21	75	B-II	75	Yes
GA-Rural: To Meet ARC Standards						
Bisbee	Bisbee Municipal	17/35	60	B-I	75	No
Chinle	Chinle Municipal	18/36	60	B-I	60	Yes
Colorado City	Colorado City Municipal	11/29	75	B-I	75	Yes
Douglas	Bisbee-Douglas International	08/26	60	B-I	100	No
Douglas	Cochise College	05/23	60	B-I	60	Yes
Douglas	Douglas Municipal	03/21	75	B-I	75	Yes
Eloy	Eloy Municipal	02/20	75	B-I	60	Yes
Gila Bend	Gila Bend Municipal	04/22	75	B-I	75	Yes
Holbrook	Holbrook Municipal	03/21	75	B-I	60	Yes
Maricopa	Ak-Chin Regional	04/22	50	B-I	60	No
San Luis	Rolle Airfield	17/35	60	B-I	60	Yes
San Manuel	San Manuel	11/29	75	B-I	60	Yes
Taylor	Taylor	03/21	75	B-I	75	Yes
Whiteriver	Whiteriver	01/19	75	B-I	75	Yes
Williams	H.A. Clark Memorial Field	18/36	100	B-I	75	Yes
Window Rock	Window Rock	02/20	75	B-I	75	Yes
Winslow	Winslow-Lindbergh Regional	11/29	150	B-I	100	Yes
GA-Basic: To Meet ARC Standards						
Ajo	Eric Marcus Municipal	12/30	60	A-I	60	Yes
Bagdad	Bagdad	05/23	60	A-I	60	Yes
Cibecue	Cibecue	07/25	100	A-I	60	Yes
Clifton	Greenlee County	07/25	75	A-I	75	Yes
Globe	San Carlos Apache	09/27	100	A-I	100	Yes
Kayenta	Kayenta	05/23	75	A-I	75	Yes
Kearny	Kearny	08/26	60	A-I	60	Yes
Polacca	Polacca	04/22	50	A-I	60	No
Seligman	Seligman	04/22	75	A-I	60	Yes
Sells	Sells	04/22	60	A-I	60	Yes

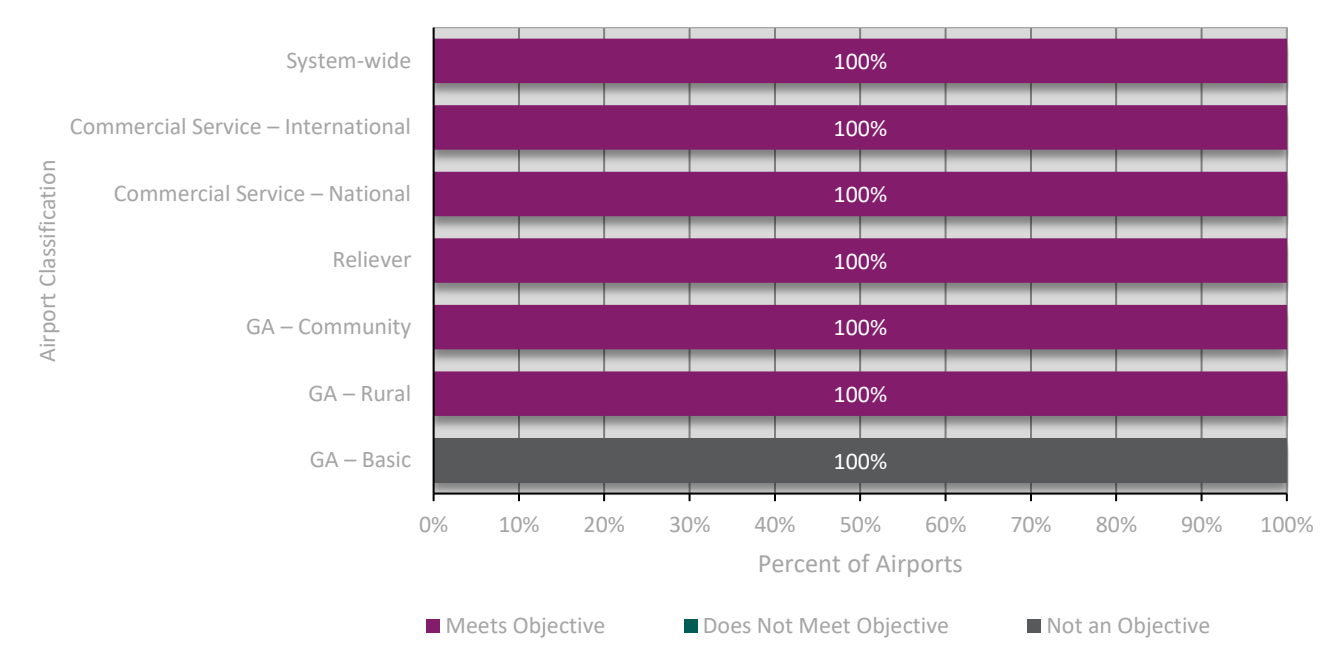
Associated City	Airport Name	Primary Runway	Primary Runway Width	Ultimate ARC	Objective Runway Width	Meets Objective
Superior	Superior	04/22	75	A-I	75	Yes
Tombstone	Tombstone Municipal	06/24	60	A-I	60	Yes
Tuba City	Tuba City	05/33	75	A-I	75	Yes

Source: Airport Inventory and Data Survey 2017

Primary Runway Surface

The surface material of a runway is another major determinant in the type of aircraft that can operate at an airport. A runway's surface is directly tied to its weight capacity and resistance to weather and time. Runway surfaces range from gravel and turf (grass or dirt) to paved materials such as asphalt and concrete. All airports in the Arizona system other than those in the GA-Basic classification are held to the objective of having a paved runway.

Figure 6 summarizes runway surface objectives in the Arizona system. Every airport in the system meets its runway surface objective. As stated, GA-Basic airports do not have a runway pavement objective. Despite this, 11 of the 13 GA-Basic airports also have a paved primary runway.



Source: Airport Inventory and Data Survey 2017

Figure 6. Percentage of Airports by Classification Meeting Primary Runway Surface Objectives

Table 5 details primary runway surface objective performance at Arizona system airports.

Table 5. Primary Runway Surface Objective Performance by Airport

Associated City	Airport Name	Primary Surface	Meets Objective
Commercial Service-International: Asphalt/Paved			
Phoenix	Phoenix Sky Harbor International	Paved	Yes
Tucson	Tucson International	Paved	Yes
Commercial Service-National: Asphalt/Paved			
Bullhead City	Laughlin/Bullhead City International	Paved	Yes
Flagstaff	Flagstaff Pulliam	Paved	Yes
Grand Canyon	Grand Canyon National Park	Paved	Yes
Page	Page Municipal	Paved	Yes
Peach Springs	Grand Canyon West	Paved	Yes
Phoenix	Phoenix-Mesa Gateway	Paved	Yes
Prescott	Ernest A. Love Field	Paved	Yes
Show Low	Show Low Regional	Paved	Yes
Yuma	Yuma International	Paved	Yes
Reliever: Asphalt/Paved			
Chandler	Chandler Municipal	Paved	Yes
Glendale	Glendale Municipal	Paved	Yes
Goodyear	Phoenix Goodyear	Paved	Yes
Marana	Marana Regional	Paved	Yes
Mesa	Falcon Field	Paved	Yes
Phoenix	Phoenix Deer Valley	Paved	Yes
Scottsdale	Scottsdale	Paved	Yes
Tucson	Ryan Field	Paved	Yes
GA-Community: Asphalt/Paved			
Benson	Benson Municipal	Paved	Yes
Buckeye	Buckeye Municipal	Paved	Yes
Casa Grande	Casa Grande Municipal	Paved	Yes
Coolidge	Coolidge Municipal	Paved	Yes
Cottonwood	Cottonwood Municipal	Paved	Yes
Kingman	Kingman	Paved	Yes
Lake Havasu City	Lake Havasu City	Paved	Yes
Marana	Pinal Airpark	Paved	Yes
Nogales	Nogales	Paved	Yes
Parker	Avi Suquilla	Paved	Yes
Payson	Payson	Paved	Yes
Safford	Safford Regional	Paved	Yes
Sedona	Sedona	Paved	Yes
Sierra Vista	Sierra Vista Municipal-Libby Army Airfield	Paved	Yes
Springerville	Springerville Municipal	Paved	Yes
St. Johns	St. Johns Industrial Air Park	Paved	Yes
Wickenburg	Wickenburg Municipal	Paved	Yes
Willcox	Cochise County	Paved	Yes
GA-Rural: Asphalt/Paved (Desired)			
Bisbee	Bisbee Municipal	Paved	Yes
Chinle	Chinle Municipal	Paved	Yes
Colorado City	Colorado City Municipal	Paved	Yes
Douglas	Bisbee-Douglas International	Paved	Yes
Douglas	Cochise College	Paved	Yes

Associated City	Airport Name	Primary Surface	Meets Objective
Douglas	Douglas Municipal	Paved	Yes
Eloy	Eloy Municipal	Paved	Yes
Gila Bend	Gila Bend Municipal	Paved	Yes
Holbrook	Holbrook Municipal	Paved	Yes
Maricopa	Ak-Chin Regional	Paved	Yes
San Luis	Rolle Airfield	Paved	Yes
San Manuel	San Manuel	Paved	Yes
Taylor	Taylor	Paved	Yes
Whiteriver	Whiteriver	Paved	Yes
Williams	H.A. Clark Memorial Field	Paved	Yes
Window Rock	Window Rock	Paved	Yes
Winslow	Winslow-Lindbergh Regional	Paved	Yes
GA-Basic: Gravel/Dirt (Minimum)			
Ajo	Eric Marcus Municipal	Paved	NA
Bagdad	Bagdad	Paved	NA
Cibecue	Cibecue	Dirt	NA
Clifton	Greenlee County	Paved	NA
Globe	San Carlos Apache	Paved	NA
Kayenta	Kayenta	Paved	NA
Kearny	Kearny	Paved	NA
Polacca	Polacca	Paved	NA
Seligman	Seligman	Paved	NA
Sells	Sells	Paved	NA
Superior	Superior	Dirt	NA
Tombstone	Tombstone Municipal	Paved	NA
Tuba City	Tuba City	Paved	NA

Source: FAA 5010 Master Record (accessed 2017)

Primary Taxiway Type and Width

At the most basic level, taxiways are constructed to facilitate aircraft movements between the runways and aircraft parking areas. However, as airports take on more substantial activity volumes, taxiways also become necessary to improve operational efficiency and safety. Strategically placed taxiway exits permit aircraft to clear the runway quickly after landing, improving the capacity and safety of the runway. Taxiways come in several forms, including parallel taxiways that run the full length of the connected runway, partial parallel taxiways, turnarounds located at the ends of the runway, and stub taxiways. Taxiways are designed for “cockpit over centerline” taxiing with pavement being sufficiently wide to allow for a certain amount of wander. Previous guidance on taxiway design was based only on Airplane Design Group (ADG). ADGs are based on wingspan and tail height, but not the dimensions of the aircraft undercarriage. Updated guidance establishes Taxiway Design Groups (TDGs), which is based on Main Gear Width (MGW) and the Cockpit to Main Gear Distance (CMG). Taxiway-type objectives are determined by airport classification, with airports in more demanding classifications having an objective of a more complex taxiway system. Taxiway width objectives are determined by each airport’s ultimate ARC.

Figure 7 summarizes the percentage of airports by classification that meet primary taxiway objectives. In total, 85 percent of applicable Arizona system airports meet taxiway objectives, including 100 percent of Commercial Service-International, 78 percent of Commercial Service-National, 89 percent of GA-Community, and 100 percent of GA-Rural. While all Reliever airports meet their objectives for taxiway type, only half of the airports in the classification meet objectives for taxiway width. Several airports exceed their classification objectives for taxiway type and meet the "desired" objectives, including 78 percent of GA-Community airports that have a full parallel taxiway instead of the minimum partial parallel. Also exceeding the objectives for taxiway type are most of the airports in the GA-Rural classification: nine airports in this classification have a full parallel taxiway, four have a partial parallel, and one airport has a stub—all exceeding the minimum of turnarounds. There is no objective for GA-Basic airports.

Source: Google Earth 2017

Figure 7. Percentage of Airports by Classification Meeting Primary Taxiway Objectives

Table 6 details primary taxiway type and width objective performance at Arizona system airports.

Table 6. Primary Taxiway Objective Performance by Airport

Associated City	Airport Name	Existing Taxiway Type	Existing Taxiway Width	Ultimate ARC	Objective Taxiway Width	Meets Objective
Commercial Service-International: Consistent with Master Plan						
Phoenix	Phoenix Sky Harbor International	Full Parallel	75	D-V	75	Yes
Tucson	Tucson International	Full Parallel	75	D-IV	75	Yes
Commercial Service-National: Consistent with Master Plan						
Bullhead City	Laughlin/Bullhead City International	Full Parallel	75	D-IV	75	Yes
Flagstaff	Flagstaff Pulliam	Full Parallel	50	C-III	50	Yes
Grand Canyon	Grand Canyon National Park	Full Parallel	75	C-III	50	Yes
Page	Page Municipal	Full Parallel	40	B-II	35	Yes
Peach Springs	Grand Canyon West	Full Parallel	35	C-II	35	Yes
Phoenix	Phoenix-Mesa Gateway	Full Parallel	75	D-V	75	Yes
Prescott	Ernest A. Love Field	Full Parallel	50	C-III	50	Yes
Show Low	Show Low Regional	Partial Parallel	50	C-III	50	No
Yuma	Yuma International	Full Parallel	75	E-VI	100	No
Reliever: Full Parallel; Width per ARC						
Chandler	Chandler Municipal	Full Parallel	40	C-III	50	No
Glendale	Glendale Municipal	Full Parallel	35	C-III	50	No
Goodyear	Phoenix Goodyear	Full Parallel	75	D-IV	75	Yes
Marana	Marana Regional	Full Parallel	50	C-III	50	Yes
Mesa	Falcon Field	Full Parallel	50	C-III	50	Yes
Phoenix	Phoenix Deer Valley	Full Parallel	40	C-III	50	No
Scottsdale	Scottsdale	Full Parallel	40	C-III	50	No
Tucson	Ryan Field	Full Parallel	50	C-III	50	Yes
GA-Community: Full or Partial Parallel; Width per ARC						
Benson	Benson Municipal	Full Parallel	35	B-II	35	Yes
Buckeye	Buckeye Municipal	Full Parallel	40	B-II	35	Yes
Casa Grande	Casa Grande Municipal	Full Parallel	40	B-II	35	Yes
Coolidge	Coolidge Municipal	Partial Parallel	35	C-IV	75	No
Cottonwood	Cottonwood Municipal	Partial Parallel	40	B-II	35	Yes
Kingman	Kingman	Full Parallel	75	C-III	50	Yes
Lake Havasu City	Lake Havasu City	Full Parallel	50	C-III	50	Yes
Marana	Pinal Airpark	Full Parallel	75	D-V	75	Yes
Nogales	Nogales	Full Parallel	50	C-II	35	Yes
Parker	Avi Suquilla	Full Parallel	50	C-II	35	Yes
Payson	Payson	Full Parallel	35	B-II	35	Yes
Safford	Safford Regional	Full Parallel	35	B-II	35	Yes
Sedona	Sedona	Partial Parallel	35	B-II	35	Yes
Sierra Vista	Sierra Vista Municipal-Libby Army Airfield	Full Parallel	75	E-V	75	Yes
Springerville	Springerville Municipal	Full Parallel	30	B-II	35	No
St. Johns	St. Johns Industrial Air Park	Full Parallel	40	B-II	35	Yes
Wickenburg	Wickenburg Municipal	Full Parallel	35	B-II	35	Yes
Willcox	Cochise County	Partial Parallel	35	B-II	35	Yes
GA-Rural: Full or Partial Parallel, Connectors, or Turnarounds; Width per ARC						
Bisbee	Bisbee Municipal	Full Parallel	35	B-II	35	Yes

Associated City	Airport Name	Existing Taxiway Type	Existing Taxiway Width	Ultimate ARC	Objective Taxiway Width	Meets Objective
Chinle	Chinle Municipal	Turnaround	0	B-I	25	Yes
Colorado City	Colorado City Municipal	Partial Parallel	35	B-II	35	Yes
Douglas	Bisbee-Douglas International	Stub	35	C-I	25	Yes
Douglas	Cochise College	Full Parallel	25	B-I	25	Yes
Douglas	Douglas Municipal	Partial Parallel	30	B-II	35	Yes
Eloy	Eloy Municipal	Full Parallel	40	B-I	25	Yes
Gila Bend	Gila Bend Municipal	Full Parallel	40	B-II	35	Yes
Holbrook	Holbrook Municipal	Partial Parallel	35	B-I	25	Yes
Maricopa	Ak-Chin Regional	Full Parallel	30	B-I	25	Yes
San Luis	Rolle Airfield	Turnaround	0	B-I	25	Yes
San Manuel	San Manuel	Partial Parallel	35	B-I	25	Yes
Taylor	Taylor	Full Parallel	35	B-II	35	Yes
Whiteriver	Whiteriver	Full Parallel	30	B-II	35	Yes
Williams	H.A. Clark Memorial Field	Full Parallel	50	B-II	35	Yes
Window Rock	Window Rock	Turnaround	0	B-II	35	Yes
Winslow	Winslow-Lindbergh Regional	Full Parallel	50	C-II	35	Yes
GA-Basic: None						
Ajo	Eric Marcus Municipal	None	0	B-I	25	NA
Bagdad	Bagdad	None	0	B-I	25	NA
Cibecue	Cibecue	None	0	A-I	25	NA
Clifton	Greenlee County	Full Parallel	35	B-II	35	NA
Globe	San Carlos Apache	Full Parallel	35	C-II	35	NA
Kayenta	Kayenta	Turnaround	0	B-II	35	NA
Kearny	Kearny	Turnaround	0	A-I	25	NA
Polacca	Polacca	Turnaround	0	A-I	25	NA
Seligman	Seligman	Full Parallel	35	B-I	25	NA
Sells	Sells	Turnaround	0	A-I	25	NA
Superior	Superior	None	0	B-II	35	NA
Tombstone	Tombstone Municipal	None	0	A-I	25	NA
Tuba City	Tuba City	Turnaround	0	B-II	35	NA

Sources: Airport Inventory and Data Survey 2017, Kimley-Horn

Instrument Approach Procedures

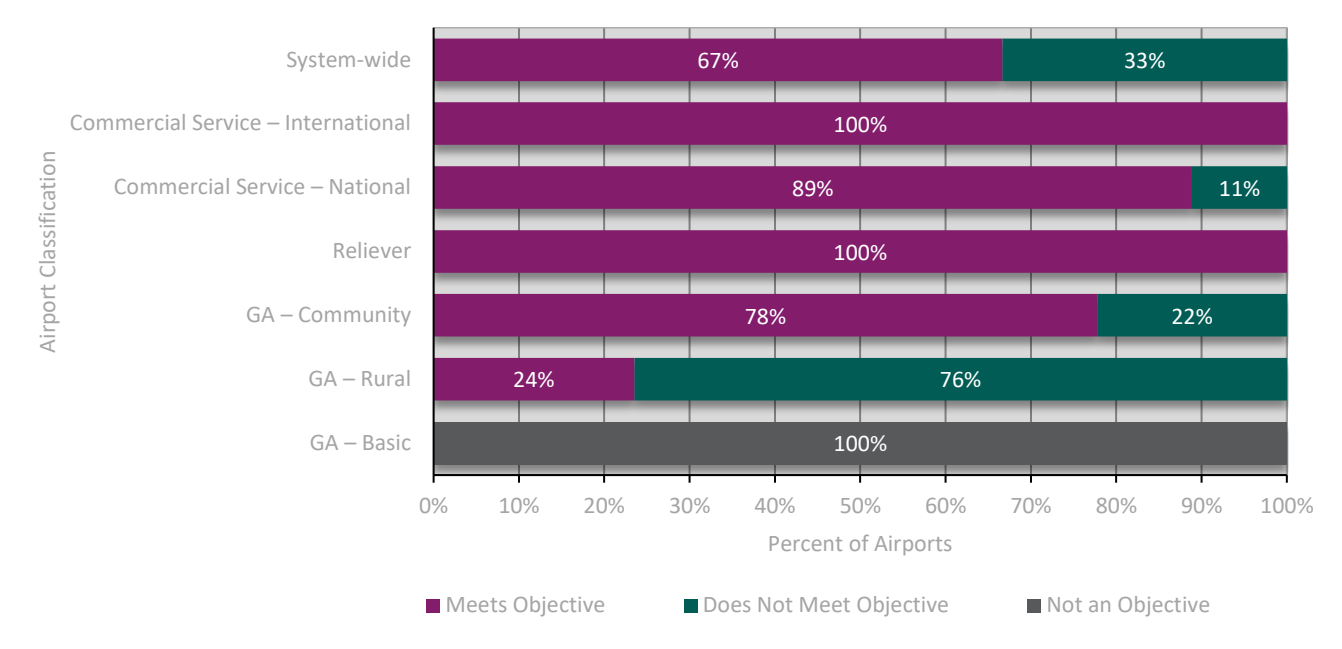
IAPs provide navigational guidance to aircraft beyond simple visual operations. An IAP can significantly improve an airport's operational efficiency and safety by allowing a pilot to navigate without visual reference to a point close enough to the runway that visual contact can be made. This is particularly important during times of low visibility or inclement weather. IAP minima are expressed in terms of cloud ceiling (feet) and visibility distance to the runway (miles). The more advanced the IAP, the lower these minima, and the closer the aircraft can come to the runway without having to make visual contact. While IAPs come in many forms, from instrument landing systems to global positioning system-based technology, they are categorized into the following three tiers for the purposes of the SASP Update:

1. **Precision approach:** The most advanced approaches that provide both horizontal and vertical guidance, with minima not higher than ¾ mile for cloud ceiling and 200 feet for visibility.
2. **Approach with vertical guidance (APV):** An approach that provides both horizontal and vertical guidance but with higher cloud ceiling and visibility minima than a precision approach.
3. **Non-precision approach:** An approach that provides only horizontal guidance.

Airports with only a visual approach have no published IAPs.

Figure 8 summarizes IAP objective performance for the Arizona system. In total, 67 percent of applicable airports meet their IAP objective, including 100 percent of Commercial Service-International and Reliever airports. With only four of 17 airports meeting the objective, GA-Rural was the lowest performing classification category. There is no IAP objective for GA-Basic airports.

Several airports exceeded their classification objectives for IAP, meeting the "desired" objectives. This includes both Commercial Service-International and five Commercial Service-National airports having precision IAPs. In addition, four of eight Reliever airports exceeded the non-precision objective, with three having an APV approach and one airport (Ryan Airfield in Tucson) having a precision approach. All four of the GA-Rural airports that met the IAP objective did so with the desired non-precision approach over the minimum circling approach.



Source: Airport Inventory and Data Survey 2017

Figure 8. Percentage of Airports by Classification Meeting Instrument Approach Objectives

Table 7 details IAP objectives by airport.

Table 7. Instrument Approach Objective Performance by Airport

Associated City	Airport Name	Existing Approach Capability	Meets Objective
Commercial Service-International: Precision (Desired); Near-Precision (Minimum)			
Phoenix	Phoenix Sky Harbor International	Precision	Yes
Tucson	Tucson International	Precision	Yes
Commercial Service-National: Precision (Desired); Near-Precision (Minimum)			
Bullhead City	Laughlin/Bullhead City International	APV	Yes
Flagstaff	Flagstaff Pulliam	Precision	Yes
Grand Canyon	Grand Canyon National Park	Precision	Yes
Page	Page Municipal	APV	Yes
Peach Springs	Grand Canyon West	Visual	No
Phoenix	Phoenix-Mesa Gateway	Precision	Yes
Prescott	Ernest A. Love Field	Precision	Yes
Show Low	Show Low Regional	APV	Yes
Yuma	Yuma International	Precision	Yes
Reliever: Asphalt/Paved: Near-Precision (Desired); Non-Precision (Minimum)			
Chandler	Chandler Municipal	Non-Precision	Yes
Glendale	Glendale Municipal	APV	Yes
Goodyear	Phoenix Goodyear	Non-Precision	Yes
Marana	Marana Regional	Non-Precision	Yes
Mesa	Falcon Field	Non-Precision	Yes
Phoenix	Phoenix Deer Valley	APV	Yes
Scottsdale	Scottsdale	APV	Yes
Tucson	Ryan Field	Precision	Yes
GA-Community: Non-Precision			
Benson	Benson Municipal	Visual	No
Buckeye	Buckeye Municipal	Visual	No
Casa Grande	Casa Grande Municipal	Precision	Yes
Coolidge	Coolidge Municipal	Non-Precision	Yes
Cottonwood	Cottonwood Municipal	Non-Precision	Yes
Kingman	Kingman	APV	Yes
Lake Havasu City	Lake Havasu City	APV	Yes
Marana	Pinal Airpark	Visual	No
Nogales	Nogales	Non-Precision	Yes
Parker	Avi Suquilla	APV	Yes
Payson	Payson	Non-Precision	Yes
Safford	Safford Regional	APV	Yes
Sedona	Sedona	Non-Precision	Yes
Sierra Vista	Sierra Vista Municipal-Libby Army Airfield	Precision	Yes
Springerville	Springerville Municipal	Non-Precision	Yes
St. Johns	St. Johns Industrial Air Park	APV	Yes
Wickenburg	Wickenburg Municipal	Visual	No
Willcox	Cochise County	APV	Yes
GA-Rural: Non-Precision or Circling			
Bisbee	Bisbee Municipal	Visual	No
Chinle	Chinle Municipal	Visual	No
Colorado City	Colorado City Municipal	Visual	No
Douglas	Bisbee-Douglas International	Non-Precision	Yes
Douglas	Cochise College	Visual	No

Associated City	Airport Name	Existing Approach Capability	Meets Objective
Douglas	Douglas Municipal	Visual	No
Eloy	Eloy Municipal	Visual	No
Gila Bend	Gila Bend Municipal	Visual	No
Holbrook	Holbrook Municipal	Visual	No
Maricopa	Ak-Chin Regional	Visual	No
San Luis	Rolle Airfield	Visual	No
San Manuel	San Manuel	Visual	No
Taylor	Taylor	Non-Precision	Yes
Whiteriver	Whiteriver	Visual	No
Williams	H.A. Clark Memorial Field	Visual	No
Window Rock	Window Rock	Non-Precision	Yes
Winslow	Winslow-Lindbergh Regional	Non-Precision	Yes
GA-Basic: None			
Ajo	Eric Marcus Municipal	Visual	N/A
Bagdad	Bagdad	Visual	N/A
Cibecue	Cibecue	Visual	N/A
Clifton	Greenlee County	Visual	N/A
Globe	San Carlos Apache	Non-Precision	N/A
Kayenta	Kayenta	Visual	N/A
Kearny	Kearny	Visual	N/A
Polacca	Polacca	Visual	N/A
Seligman	Seligman	Visual	N/A
Sells	Sells	Visual	N/A
Superior	Superior	Visual	N/A
Tombstone	Tombstone Municipal	Visual	N/A
Tuba City	Tuba City	Visual	N/A

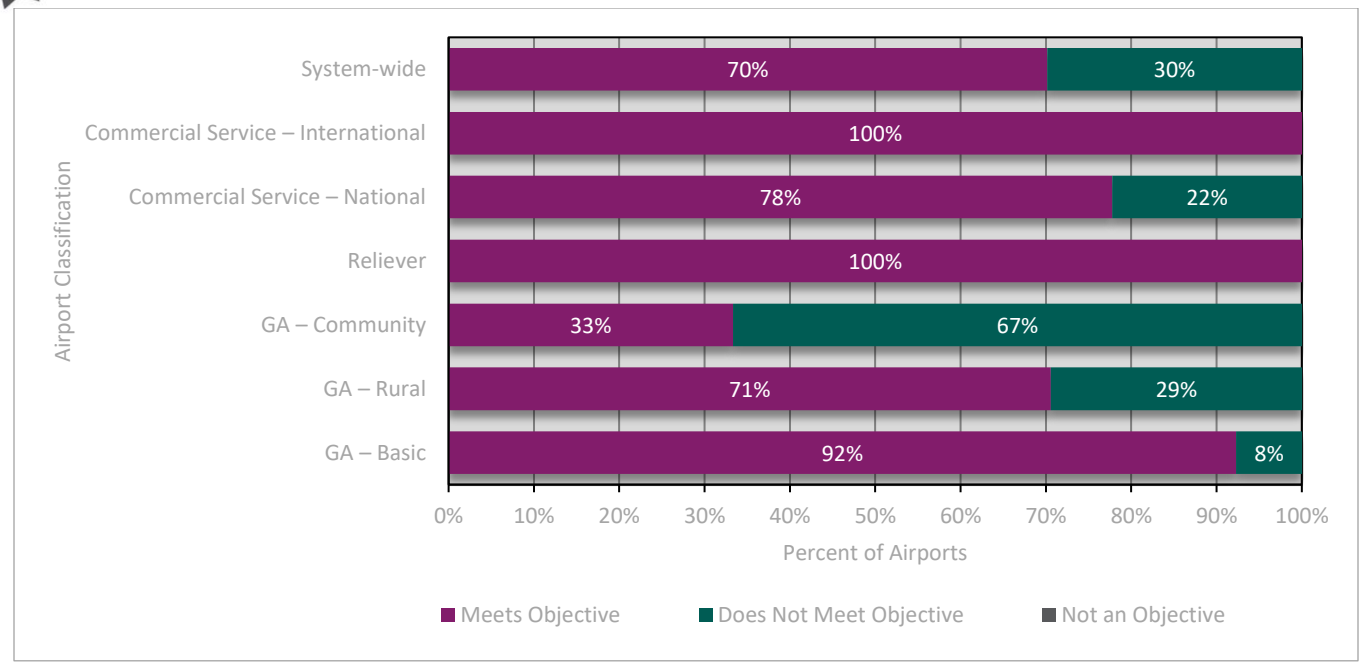
Sources: Airport Inventory and Data Survey 2017, Kimley-Horn

Visual Aids

Visual aids, also called navigational aids (NAVAIDs), are aviation equipment that assist pilots during the enroute phase of a flight and while on final approach. Visual aids often work in concert with IAPs and, like IAPs, are particularly important during times of inclement weather and decreased visibility. Visual aids allow for visual identification of runways, help pilots align with runway centerlines and to ensure proper approach paths. Visual aids included as part of the airside facility objectives analysis include the following:

1. Rotating beacon
2. Wind indicators (including lighted wind cones and wind socks)
3. Segmented circle
4. REILs
5. VGSI, including the precision approach path indicator (PAPI) and visual approach slope indicator (VASI)

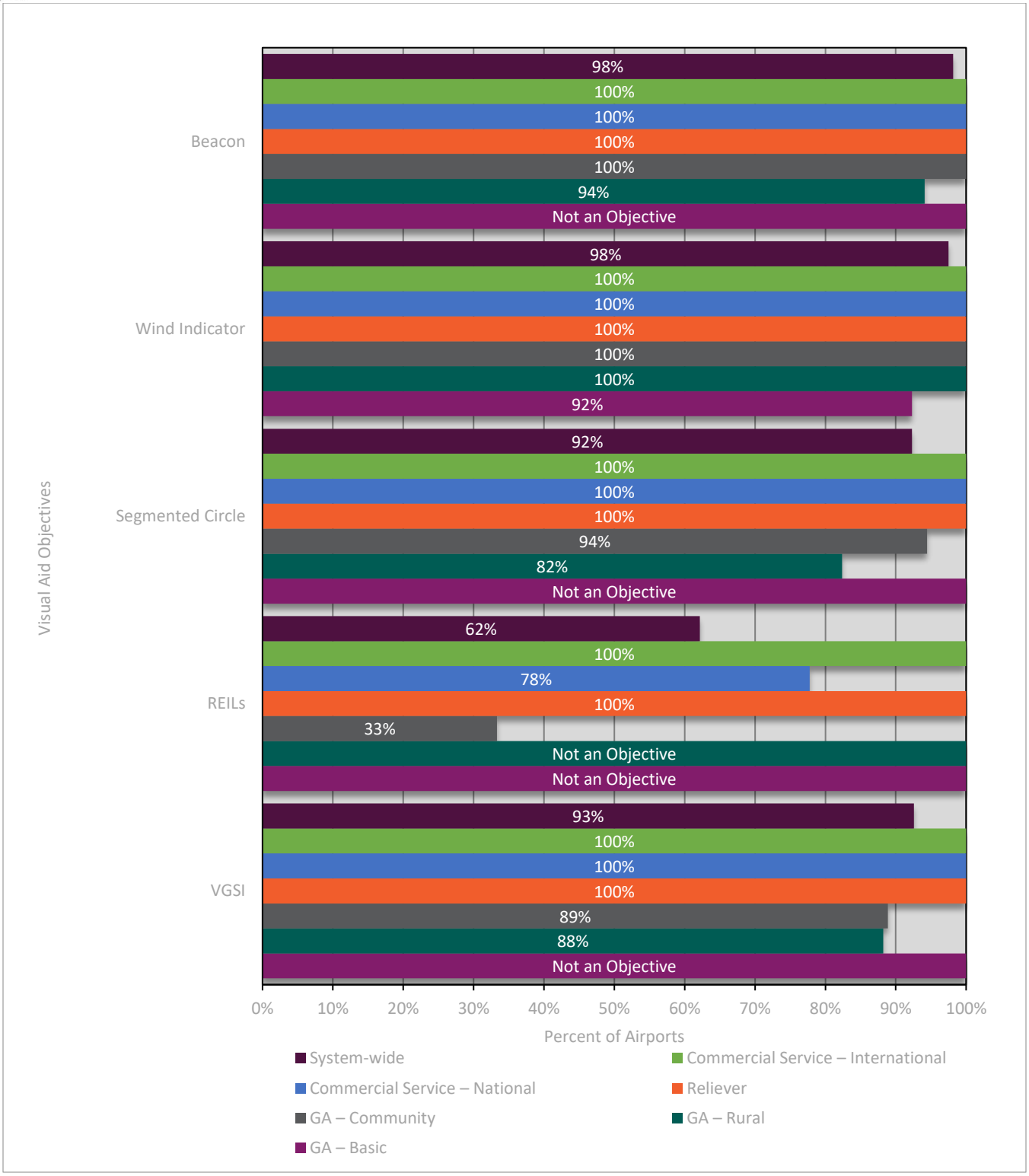
Figure 9 summarizes the percentage of airports by classification that meet all visual aid objectives, while **Figure 10** shows visual aids performance by individual facility. In total, 70 percent of Arizona system airports meet all visual aid objectives for their respective classification. This includes 100 percent of Commercial Service-International and Reliever airports, 92 percent of GA-Basic airports, 78 percent of Commercial Service-National airports, and 71 percent of GA-Rural airports. Only 33 percent of GA-Community airports meet all visual aid objectives, making it the lowest performing airport classification.



Source: Airport Inventory and Data Survey 2017

Figure 9. Percentage of Airports by Classification Meeting All Visual Aid Objectives

Individually, objectives related to rotating beacons and wind indicators performed the highest, each being met by 98 percent of the system. In addition, 93 percent of applicable airports have a VGSI, and 92 percent of applicable airports have a segmented circle. Rotating beacons, segmented circles, REILs, and VGSI are not objectives for GA-Basic airports.



Source: Airport Inventory and Data Survey 2017

Figure 10. Percentage of Airports by Classification Meeting Individual Visual Aid Objectives

Table 8 presents visual aid objectives by airport.

Table 8. Visual Aids Objective Performance by Airport

Associated City	Airport Name	Existing Visual Aids	Missing Objective Visual Aids	Meets Objective
Commercial Service-International: Rotating Beacon, Lighted Wind Cone, Segmented Circle, REILs, VGSIs				
Phoenix	Phoenix Sky Harbor	Rotating Beacon, Lighted Wind Cone, REILs, VGSI	N/A	Yes
Tucson	Tucson International	Rotating Beacon, Lighted Wind Cone, Segmented Circle, REILs, VGSI	N/A	Yes
Commercial Service-National: Rotating Beacon, Lighted Wind Cone, Segmented Circle, REILs, VGSIs				
Bullhead City	Laughlin/Bullhead City Int'l	Rotating Beacon, Lighted Wind Cone, Segmented Circle, REILs, VGSI	N/A	Yes
Flagstaff	Flagstaff Pulliam	Rotating Beacon, Lighted Wind Cone, VGSI	REILs	No
Grand Canyon	Grand Canyon National Park	Rotating Beacon, Lighted Wind Cone, Segmented Circle, REILs, VGSI	N/A	Yes
Page	Page Municipal	Rotating Beacon, Lighted Wind Cone, Segmented Circle, REILs, VGSI	N/A	Yes
Peach Springs	Grand Canyon West	Rotating Beacon, Wind Sock, Segmented Circle, REILs, VGSI	N/A	Yes
Phoenix	Phoenix-Mesa Gateway	Rotating Beacon, Wind Sock, Segmented Circle, REILs, VGSI	N/A	Yes
Prescott	Ernest A. Love Field	Rotating Beacon, Lighted Wind Cone, Segmented Circle, REILs, VGSI	N/A	Yes
Show Low	Show Low Regional	Rotating Beacon, Lighted Wind Cone, Segmented Circle, REILs, VGSI	N/A	Yes
Yuma	Yuma International	Rotating Beacon, Lighted Wind Cone, VGSI	REILs	No
Reliever: Rotating Beacon, Lighted Wind Cone, Segmented Circle, REILs, VGSIs				
Chandler	Chandler Municipal	Rotating Beacon, Lighted Wind Cone, Segmented Circle, REILs, VGSI	N/A	Yes
Glendale	Glendale Municipal	Rotating Beacon, Lighted Wind Cone, Segmented Circle, REILs, VGSI	N/A	Yes
Goodyear	Phoenix Goodyear	Rotating Beacon, Lighted Wind Cone, Segmented Circle, REILs, VGSI	N/A	Yes
Marana	Marana Regional	Rotating Beacon, Lighted Wind Cone, Segmented Circle, REILs, VGSI	N/A	Yes
Mesa	Falcon Field	Rotating Beacon, Lighted Wind Cone, Segmented Circle, REILs, VGSI	N/A	Yes
Phoenix	Phoenix Deer Valley	Rotating Beacon, Lighted Wind Cone, Segmented Circle, REILs, VGSI	N/A	Yes
Scottsdale	Scottsdale	Rotating Beacon, Lighted Wind Cone, Segmented Circle, REILs, VGSI	N/A	Yes
Tucson	Ryan Field	Rotating Beacon, Lighted Wind Cone, Segmented Circle, REILs, VGSI	N/A	Yes
GA-Community: Rotating Beacon, Wind Cone, Segmented Circle, REILs, VGSIs				
Benson	Benson Municipal	Rotating Beacon, Lighted Wind Cone, Segmented Circle, REILs, VGSI	N/A	Yes
Buckeye	Buckeye Municipal	Rotating Beacon, Lighted Wind Cone, Segmented Circle, VGSI	REILs	No
Casa Grande	Casa Grande Municipal	Rotating Beacon, Lighted Wind Cone, Segmented Circle, VGSI	REILs	No

Associated City	Airport Name	Existing Visual Aids	Missing Objective Visual Aids	Meets Objective
Coolidge	Coolidge Municipal	Rotating Beacon, Wind Sock, Segmented Circle, VGSI	REILs	No
Cottonwood	Cottonwood Municipal	Rotating Beacon, Lighted Wind Cone, Segmented Circle, REILs, VGSI	N/A	Yes
Kingman	Kingman	Rotating Beacon, Lighted Wind Cone, Segmented Circle, REILs, VGSI	N/A	Yes
Lake Havasu City	Lake Havasu City	Rotating Beacon, Lighted Wind Cone, Segmented Circle, REILs, VGSI	N/A	Yes
Marana	Pinal Airpark	Rotating Beacon, Lighted Wind Cone, Segmented Circle	REILs, VGSI	No
Nogales	Nogales	Rotating Beacon, Lighted Wind Cone, Segmented Circle, VGSI	REILs	No
Parker	Avi Suquilla	Rotating Beacon, Lighted Wind Cone, Segmented Circle, VGSI	REILs	No
Payson	Payson	Rotating Beacon, Lighted Wind Cone, Segmented Circle, VGSI	REILs	No
Safford	Safford Regional	Rotating Beacon, Lighted Wind Cone, Segmented Circle, VGSI	REILs	No
Sedona	Sedona	Rotating Beacon, Lighted Wind Cone, Segmented Circle, REILs, VGSI	N/A	Yes
Sierra Vista	Sierra Vista Municipal-Libby Army Airfield	Rotating Beacon, Lighted Wind Cone, VGSI	Segmented Circle, REILs	No
Springerville	Springerville Municipal	Rotating Beacon, Lighted Wind Cone, Segmented Circle, VGSI	REILs	No
St. Johns	St. Johns Industrial Air Park	Rotating Beacon, Lighted Wind Cone, Segmented Circle, VGSI	REILs	No
Wickenburg	Wickenburg Municipal	Rotating Beacon, Lighted Wind Cone, Segmented Circle, REILs, VGSI	N/A	Yes
Willcox	Cochise County	Rotating Beacon, Lighted Wind Cone, Segmented Circle	REILs, VGSI	No
GA-Rural: Rotating Beacon, Wind Cone, Segmented Circle, VGSIs				
Bisbee	Bisbee Municipal	Rotating Beacon, Lighted Wind Cone, Segmented Circle, VGSI	N/A	Yes
Chinle	Chinle Municipal	Rotating Beacon, Lighted Wind Cone, Segmented Circle, VGSI	N/A	Yes
Colorado City	Colorado City Municipal	Rotating Beacon, Lighted Wind Cone, Segmented Circle, REILs, VGSI	N/A	Yes
Douglas	Bisbee-Douglas International	Rotating Beacon, Lighted Wind Cone, Segmented Circle, VGSI	N/A	Yes
Douglas	Cochise College	Rotating Beacon, Lighted Wind Cone, Segmented Circle, VGSI	N/A	Yes
Douglas	Douglas Municipal	Rotating Beacon, Lighted Wind Cone, Segmented Circle, VGSI	N/A	Yes
Eloy	Eloy Municipal	Rotating Beacon, Lighted Wind Cone, Segmented Circle, REILs, VGSI	N/A	Yes
Gila Bend	Gila Bend Municipal	Rotating Beacon, Lighted Wind Cone, Segmented Circle, VGSI	N/A	Yes
Holbrook	Holbrook Municipal	Rotating Beacon, Lighted Wind Cone, REILs, VGSI	Segmented Circle	No
Maricopa	Ak-Chin Regional	Rotating Beacon, Wind Sock, Segmented Circle	VGSI	No
San Luis	Rolle Airfield	Wind Sock, Segmented Circle	Rotating Beacon, VGSI	No

Associated City	Airport Name	Existing Visual Aids	Missing Objective Visual Aids	Meets Objective
San Manuel	San Manuel	Rotating Beacon, Lighted Wind Cone, Segmented Circle, VGSI	N/A	Yes
Taylor	Taylor	Rotating Beacon, Lighted Wind Cone, Segmented Circle, REILs, VGSI	N/A	Yes
Whiteriver	Whiteriver	Rotating Beacon, Wind Sock, REILs, VGSI	Segmented Circle	No
Williams	H.A. Clark Memorial Field	Rotating Beacon, Lighted Wind Cone, Segmented Circle, REILs, VGSI	N/A	Yes
Window Rock	Window Rock	Rotating Beacon, Lighted Wind Cone, REILs, VGSI	Segmented Circle	No
Winslow	Winslow-Lindbergh Regional	Rotating Beacon, Lighted Wind Cone, Segmented Circle, REILs, VGSI	N/A	Yes
GA-Basic: Wind Sock				
Ajo	Eric Marcus Municipal	Rotating Beacon, Lighted Wind Cone, Segmented Circle, VGSI	N/A	Yes
Bagdad	Bagdad	Rotating Beacon, Wind Sock	N/A	Yes
Cibecue	Cibecue	Wind Sock	N/A	Yes
Clifton	Greenlee County	Rotating Beacon, Lighted Wind Cone, Segmented Circle, VGSI	N/A	Yes
Globe	San Carlos Apache	Rotating Beacon, Lighted Wind Cone, Segmented Circle, REILs, VGSI	N/A	Yes
Kayenta	Kayenta	Rotating Beacon, Wind Sock, Segmented Circle, VGSI	N/A	Yes
Kearny	Kearny	Wind Sock	N/A	Yes
Polacca	Polacca	Lighted Wind Cone	N/A	Yes
Seligman	Seligman	Rotating Beacon, Lighted Wind Cone, Segmented Circle, REILs, VGSI	N/A	Yes
Sells	Sells	None	Wind Indicator	No
Superior	Superior	Wind Sock	N/A	Yes
Tombstone	Tombstone Municipal	Wind Sock	N/A	Yes
Tuba City	Tuba City	Rotating Beacon, Lighted Wind Cone, Segmented Circle, VGSI	N/A	Yes

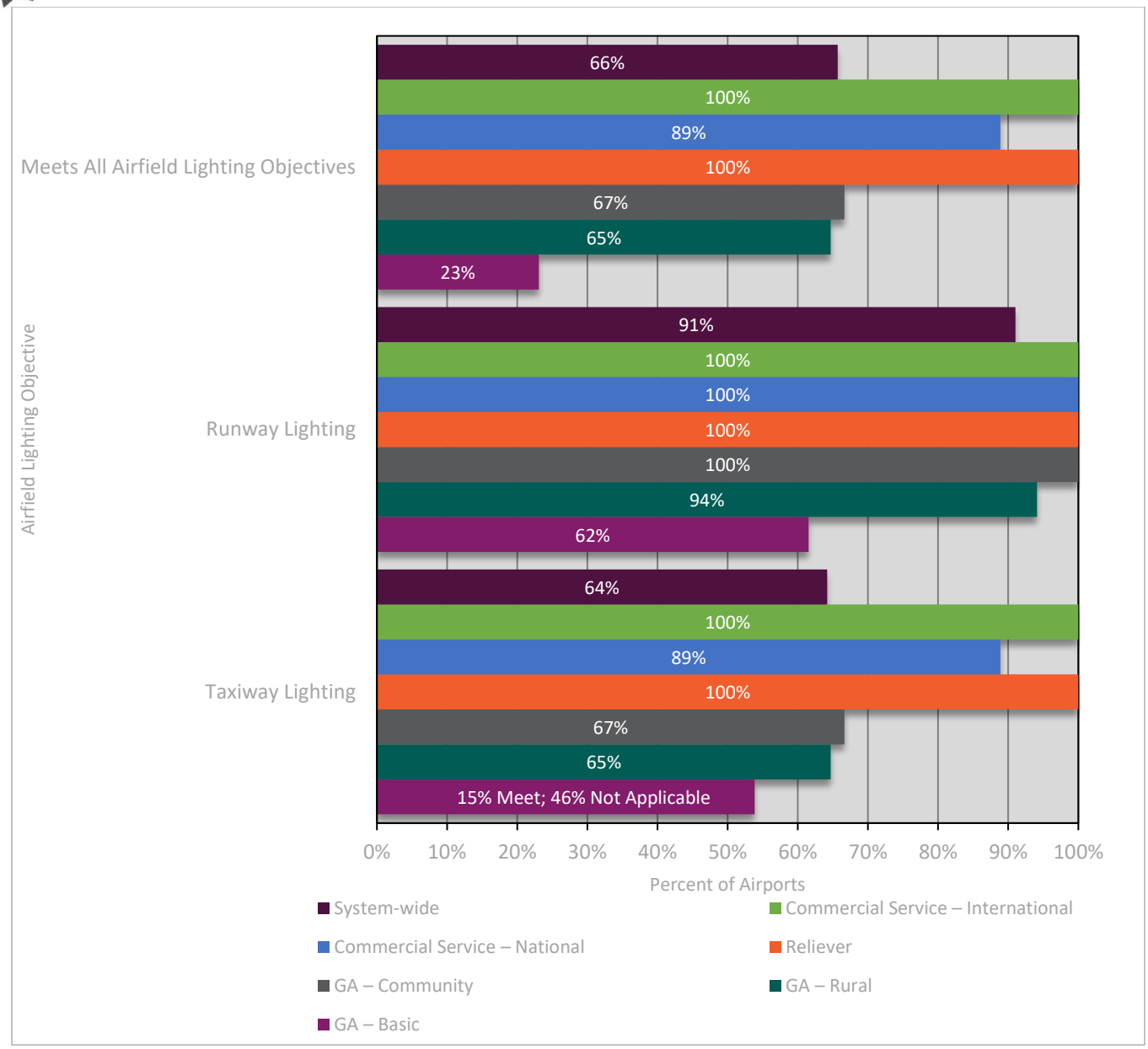
Source: Airport Inventory and Data Survey 2017

Airfield Lighting

Airfield lighting identifies runways and taxiways at night or other times of reduced visibility. Airfield lighting is classified based on the brightness/intensity each system of lighting can produce. Runway lights are grouped as high, medium, and low intensity runway lighting (HIRL, MIRL, and LIRL, respectively), while taxiway lights are grouped similarly (HITL, MITL, and LITL). To meet the benchmark for airfield lighting, each system airport must meet its objectives for both runway and taxiway lighting. Note that GA-Basic airports are only held to the objective of having taxiway reflectors if the airport has an existing taxiway.

Figure 11 summarizes airfield lighting objectives by SASP classification, including performance for both runway and taxiway lighting in addition to full airfield lighting performance. In total, 66 percent of Arizona's system airports meet airfield lighting objectives, including 100 percent of Commercial Service-International and Reliever airports. Individually, 91 percent of the system meets objectives for runway lighting, and 64 percent of the system meets objectives for taxiway lighting.

While only held to the objective of MIRL and MITL, it is considered desirable for airports in the Commercial Service-International and Commercial Service-National classifications to have HIRL and HITL. Both Commercial Service-International and two Commercial Service-National airports have HIRL, but no airports in these classifications have HITL.



Source: Airport Inventory and Data Survey 2017

Figure 11. Percentage of Airports by Classification Meeting Airfield Lighting Objectives

Table 9 details airfield lighting at each system airport.

Table 9. Airfield Lighting Objective Performance by Airport

Associated City	Airport Name	Existing Runway Lighting	Existing Taxiway Lighting	Meets Objective
Commercial Service-International: HIRL/HITL (Desired); MIRL/MITL (Minimum)				
Phoenix	Phoenix Sky Harbor International	HIRL	MITL	Yes
Tucson	Tucson International	HIRL	MITL	Yes
Commercial Service-National: HIRL/HITL (Desired); MIRL/MITL (Minimum)				
Bullhead City	Laughlin/Bullhead City International	MIRL	MITL	Yes
Flagstaff	Flagstaff Pulliam	HIRL	MITL	Yes
Grand Canyon	Grand Canyon National Park	MIRL	MITL	Yes
Page	Page Municipal	MIRL	MITL	Yes
Peach Springs	Grand Canyon West	MIRL	None	No
Phoenix	Phoenix-Mesa Gateway	MIRL	MITL	Yes
Prescott	Ernest A. Love Field	MIRL	MITL	Yes
Show Low	Show Low Regional	MIRL	MITL	Yes
Yuma	Yuma International	HIRL	MITL	Yes
Reliever: MIRL/MITL				
Chandler	Chandler Municipal	MIRL	MITL	Yes
Glendale	Glendale Municipal	MIRL	MITL	Yes
Goodyear	Phoenix Goodyear	MIRL	MITL	Yes
Marana	Marana Regional	MIRL	MITL	Yes
Mesa	Falcon Field	MIRL	MITL	Yes
Phoenix	Phoenix Deer Valley	MIRL	MITL	Yes
Scottsdale	Scottsdale	MIRL	MITL	Yes
Tucson	Ryan Field	MIRL	MITL	Yes
GA-Community: MIRL/MITL				
Benson	Benson Municipal	MIRL	MITL	Yes
Buckeye	Buckeye Municipal	MIRL	MITL	Yes
Casa Grande	Casa Grande Municipal	MIRL	MITL	Yes
Coolidge	Coolidge Municipal	MIRL	MITL	Yes
Cottonwood	Cottonwood Municipal	MIRL	None	No
Kingman	Kingman	MIRL	MITL	Yes
Lake Havasu City	Lake Havasu City	MIRL	MITL	Yes
Marana	Pinal Airpark	MIRL	Reflectors	No
Nogales	Nogales	MIRL	MITL	Yes
Parker	Avi Suquilla	MIRL	MITL	Yes
Payson	Payson	MIRL	Reflectors	No
Safford	Safford Regional	MIRL	MITL	Yes
Sedona	Sedona	MIRL	MITL	Yes
Sierra Vista	Sierra Vista Municipal-Libby Army Airfield	HIRL	MITL	Yes
Springerville	Springerville Municipal	MIRL	Reflectors	No
St. Johns	St. Johns Industrial Air Park	MIRL	Reflectors	No
Wickenburg	Wickenburg Municipal	MIRL	MITL	Yes
Willcox	Cochise County	MIRL	Reflectors	No
GA-Rural: MIRL/MITL				
Bisbee	Bisbee Municipal	MIRL	MITL	Yes
Chinle	Chinle Municipal	MIRL	MITL	Yes
Colorado City	Colorado City Municipal	MIRL	MITL[1]	Yes

[1] Colorado City Airport's MITL is located on a taxiway connected to the secondary runway.

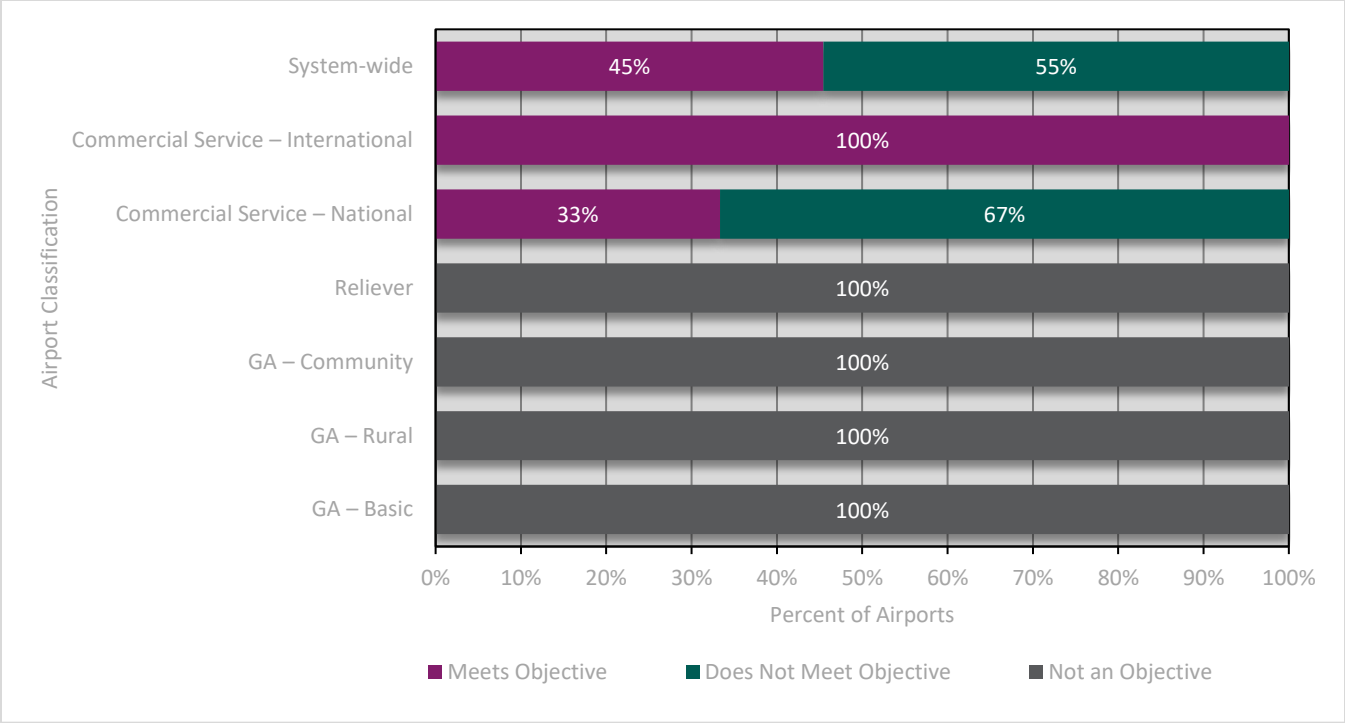
Associated City	Airport Name	Existing Runway Lighting	Existing Taxiway Lighting	Meets Objective
Douglas	Bisbee-Douglas International	MIRL	MITL	Yes
Douglas	Cochise College	MIRL	MITL	Yes
Douglas	Douglas Municipal	MIRL	MITL	Yes
Eloy	Eloy Municipal	MIRL	MITL	Yes
Gila Bend	Gila Bend Municipal	MIRL	MITL	Yes
Holbrook	Holbrook Municipal	MIRL	MITL	Yes
Maricopa	Ak-Chin Regional	MIRL	None	No
San Luis	Rolle Airfield	None	None	No
San Manuel	San Manuel	MIRL	MITL	Yes
Taylor	Taylor	MIRL	Reflectors	No
Whiteriver	Whiteriver	MIRL	None	No
Williams	H.A. Clark Memorial Field	MIRL	None	No
Window Rock	Window Rock	MIRL	None	No
Winslow	Winslow-Lindbergh Regional	MIRL	MITL	Yes
GA-Basic: Reflectors (if Airport has Taxiway)				
Ajo	Eric Marcus Municipal	MIRL	N/A	Yes
Bagdad	Bagdad	None	N/A	No
Cibecue	Cibecue	None	N/A	No
Clifton	Greenlee County	MIRL	Reflectors	Yes
Globe	San Carlos Apache	MIRL	None	No
Kayenta	Kayenta	MIRL	None	No
Kearny	Kearny	None	None	No
Polacca	Polacca	NSTD	None	No
Seligman	Seligman	MIRL	MITL	Yes
Sells	Sells	NSTD	None	No
Superior	Superior	None	N/A	No
Tombstone	Tombstone Municipal	None	N/A	No
Tuba City	Tuba City	MIRL	None	No

Source: Airport Inventory and Data Survey 2017

Approach Lighting System

An ALS extends outward from a runway end and allows pilots to visually align with a runway while on approach to land. Types of ALS installed at Arizona airports include the medium intensity approach lighting system with runway alignment indicator lights (MALSRs) and medium intensity approach lighting system with sequenced flashing lights (MALSFs).

Only Arizona's Commercial Service-International and Commercial Service-National airports are held to the objective of having an ALS. As shown in **Figure 12**, 45 percent of Arizona's commercial service airports have an ALS. This includes both Commercial Service-International airports and three of eight Commercial Service-National Airports. While an ALS is considered desirable for Reliever airports, no Arizona Reliever airports currently have an ALS.



Source: Airport Inventory and Data Survey 2017

Figure 12. Percentage of Airports by Classification Meeting ALS Objectives

Table 10 details ALS objective performance by airport.

Table 10. ALS Objective Performance by Airport

Associated City	Airport Name	Existing ALS	Meets Objective
Commercial Service-International: ALS			
Phoenix	Phoenix Sky Harbor International	MALSF	Yes
Tucson	Tucson International	MALSR	Yes
Commercial Service-National: ALS			
Bullhead City	Laughlin/Bullhead City International	None	No
Flagstaff	Flagstaff Pulliam	MALSR	Yes
Grand Canyon	Grand Canyon National Park	None	No
Page	Page Municipal	None	No
Peach Springs	Grand Canyon West	None	No
Phoenix	Phoenix-Mesa Gateway	None	No
Prescott	Ernest A. Love Field	MALSR	Yes
Show Low	Show Low Regional	None	No
Yuma	Yuma International	MALSR	Yes

Source: Airport Inventory and Data Survey 2017

LANDSIDE FACILITIES AND SERVICES

Landside facilities and services are important elements of an airport's attractiveness to customers. Hangar storage, apron parking, and ground handling services such as aircraft fuel and oxygen help to draw both visiting customers and based businesses. Terminal facilities such as phones, internet, and a pilot's lounge are important to passengers as well as pilots.

Landside facilities included in SASP Update objectives include the following:

1. Airport fencing
2. Aprons and tie-downs
3. Hangars
4. Terminal buildings
5. Automobile parking

Landside services included in SASP Update objectives include the following:

1. Automated weather reporting
2. Fixed base operator (FBO)
3. Air taxi/charter
4. Aircraft rental
5. Aircraft maintenance
6. Avionics sales and service
7. Aircraft fuel: AvGas and Jet A
8. Deicing
9. Oxygen
10. Snow Removal
11. Ground transportation
12. On-site rental car
13. Internet access
14. Phone access
15. Restroom
16. U.S. Customs

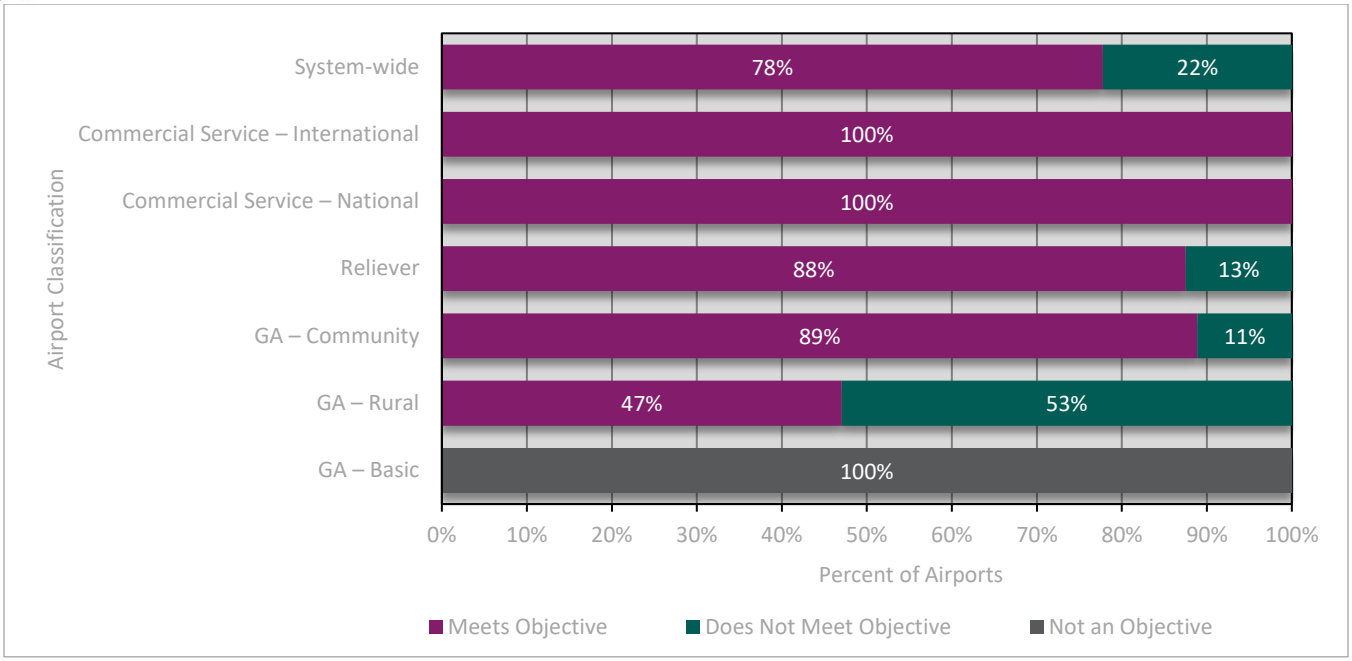
Landside Facilities

Airfield fencing is a crucial component of airport safety and security. For the purposes of the SASP Update, the fencing objective is for airports to have full perimeter fencing around the entire airport property. While it is not an objective for GA-Basic airports to have perimeter fencing, it is desired. Full perimeter fencing may come in any of four forms:

1. Four-foot barb wire fencing
2. Six-foot chain link fencing
3. Eight-foot security fencing
4. 10-foot wildlife fencing

In addition to fencing, airports in the Commercial Service-International, Commercial Service-National, and Reliever classifications are held to the objective of having secured access. This secured or limited access most commonly comes in the form of security gates that require access cards for entry.

Figure 13 summarizes fencing objective performance at Arizona system airports. System-wide, 78 percent of all airports meet objectives for fencing, including 100 percent of both Commercial Service-International and Commercial Service-National classifications, and most airports in the Reliever and GA-Community classifications. While airports in the GA-Basic classification are not held to a specific objective, it is still considered desirable for these airports to have perimeter fencing. Of the 13 GA-Basic airports, six currently have full perimeter fencing, while three have partial perimeter fencing.



Source: Airport Inventory and Data Survey 2017

Figure 13. Percentage of Airports by Classification Meeting Airport Fencing Objectives

Table 11 details perimeter fencing objective performance by airport.

Table 11. Airport Fencing Objective Performance by Airport

Associated City	Airport Name	Existing Airport Fencing	Meets Objective
Commercial Service-International: Full Perimeter Fencing with Controlled Access			
Phoenix	Phoenix Sky Harbor International	Full Perimeter with Controlled Access	Yes
Tucson	Tucson International	Full Perimeter with Controlled Access	Yes
Commercial Service-National: Full Perimeter Fencing with Controlled Access			
Bullhead City	Laughlin/Bullhead City International	Full Perimeter with Controlled Access	Yes
Flagstaff	Flagstaff Pulliam	Full Perimeter with Controlled Access	Yes
Grand Canyon	Grand Canyon National Park	Full Perimeter with Controlled Access	Yes
Page	Page Municipal	Full Perimeter with Controlled Access	Yes
Peach Springs	Grand Canyon West	Full Perimeter with Controlled Access	Yes
Phoenix	Phoenix-Mesa Gateway	Full Perimeter with Controlled Access	Yes
Prescott	Ernest A. Love Field	Full Perimeter with Controlled Access	Yes
Show Low	Show Low Regional	Full Perimeter with Controlled Access	Yes
Yuma	Yuma International	Full Perimeter with Controlled Access	Yes
Reliever: Full Perimeter Fencing with Controlled Access			
Chandler	Chandler Municipal	Full Perimeter with Controlled Access	Yes
Glendale	Glendale Municipal	Full Perimeter with Controlled Access	Yes
Goodyear	Phoenix Goodyear	Full Perimeter with Controlled Access	Yes
Marana	Marana Regional	Partial Perimeter with Controlled Access	No
Mesa	Falcon Field	Full Perimeter with Controlled Access	Yes

Associated City	Airport Name	Existing Airport Fencing	Meets Objective
Phoenix	Phoenix Deer Valley	Full Perimeter with Controlled Access	Yes
Scottsdale	Scottsdale	Full Perimeter with Controlled Access	Yes
Tucson	Ryan Field	Full Perimeter with Controlled Access	Yes
GA-Community: Full Perimeter Fencing			
Benson	Benson Municipal	Full Perimeter with Controlled Access	Yes
Buckeye	Buckeye Municipal	Full Perimeter with Controlled Access	Yes
Casa Grande	Casa Grande Municipal	Full Perimeter with Controlled Access	Yes
Coolidge	Coolidge Municipal	Full Perimeter	Yes
Cottonwood	Cottonwood Municipal	Full Perimeter with Controlled Access	Yes
Kingman	Kingman	Full Perimeter with Controlled Access	Yes
Lake Havasu City	Lake Havasu City	Full Perimeter with Controlled Access	Yes
Marana	Pinal Airpark	Partial Perimeter with Controlled Access	No
Nogales	Nogales	Full Perimeter with Controlled Access	Yes
Parker	Avi Suquilla	Full Perimeter	Yes
Payson	Payson	Full Perimeter	Yes
Safford	Safford Regional	Full Perimeter with Controlled Access	Yes
Sedona	Sedona	Full Perimeter with Controlled Access	Yes
Sierra Vista	Sierra Vista Municipal-Libby Army Airfield	Full Perimeter with Controlled Access	Yes
Springerville	Springerville Municipal	Partial Perimeter	No
St. Johns	St. Johns Industrial Air Park	Full Perimeter	Yes
Wickenburg	Wickenburg Municipal	Full Perimeter with Controlled Access	Yes
Willcox	Cochise County	Full Perimeter	Yes
GA-Rural: Full Perimeter Fencing			
Bisbee	Bisbee Municipal	Full Perimeter	Yes
Chinle	Chinle Municipal	Full Perimeter	Yes
Colorado City	Colorado City Municipal	None	No
Douglas	Bisbee-Douglas International	Full Perimeter	Yes
Douglas	Cochise College	Partial Perimeter with Controlled Access	No
Douglas	Douglas Municipal	Partial Perimeter	No
Eloy	Eloy Municipal	Partial Perimeter with Controlled Access	No
Gila Bend	Gila Bend Municipal	Full Perimeter	Yes
Holbrook	Holbrook Municipal	Full Perimeter	Yes
Maricopa	Ak-Chin Regional	Full Perimeter with Controlled Access	Yes
San Luis	Rolle Airfield	Full Perimeter with Controlled Access	Yes
San Manuel	San Manuel	Partial Perimeter	No
Taylor	Taylor	Partial Perimeter with Controlled Access	No
Whiteriver	Whiteriver	Partial Perimeter with Controlled Access	No
Williams	H.A. Clark Memorial Field	Full Perimeter with Controlled Access	Yes
Window Rock	Window Rock	Partial Perimeter	No
Winslow	Winslow-Lindbergh Regional	Partial Perimeter with Controlled Access	No
GA-Basic: Perimeter Fencing (Desired)			
Ajo	Eric Marcus Municipal	None	NA
Bagdad	Bagdad	Full Perimeter	NA
Cibecue	Cibecue	Partial Perimeter	NA
Clifton	Greenlee County	Full Perimeter with Controlled Access	NA
Globe	San Carlos Apache	Full Perimeter	NA
Kayenta	Kayenta	Full Perimeter	NA

Associated City	Airport Name	Existing Airport Fencing	Meets Objective
Kearny	Kearny	Partial Perimeter	NA
Polacca	Polacca	Full Perimeter	NA
Seligman	Seligman	Partial Perimeter with Controlled Access	NA
Sells	Sells	None	NA
Superior	Superior	Full Perimeter	NA
Tombstone	Tombstone Municipal	None	NA
Tuba City	Tuba City	None	NA

Source: Airport Inventory and Data Survey 2017

Landside facilities are important elements of an airport's infrastructure in terms of both airport operations and economic activity. Like airside facilities and landside services, landside facilities are often catalysts for airport activity, both based and transient. Facilities for parking and storing aircraft are among the most essential landside facilities. These range from surface parking on apron tie-downs to T-hangar and box hangar storage. The type of storage or parking needed at each airport can depend on several factors, including airport activities, the volume of operations, climate, and an operator's desire for security. Tie-down parking is common for transient aircraft that are visiting for a shorter period of time, while covered hangar storage is often preferred for based aircraft. Objectives for apron and hangar capacity are based on the volume of transient operations at an airport and the number of based aircraft:

Apron objectives:

1. Reliever: 25 percent of based fleet and 75 percent for transient
2. GA-Community: 40 percent of based fleet and 50 percent for transient
3. GA -Rural: 50 percent of based fleet and 25 percent for transient

Hangar objectives:

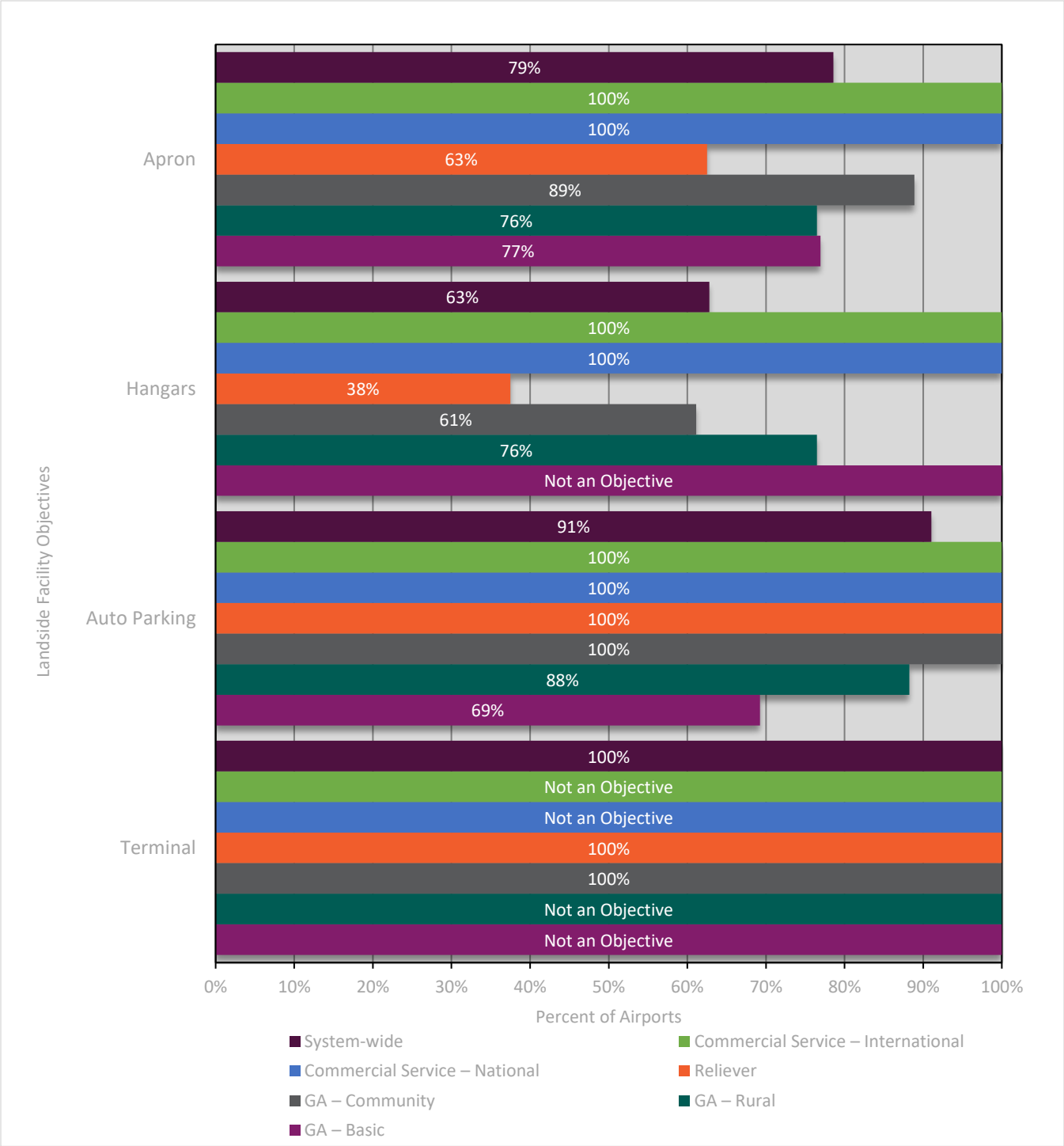
1. Reliever: 75 percent of based fleet and 25 percent overnight
2. GA-Community: 60 percent of based fleet and 25 percent overnight
3. GA-Rural: 50 percent of based fleet and 25 percent overnight

An airport terminal is another common and important landside facility. A terminal is typically seen as a gateway or welcome center for both the airport and its community. GA terminals may serve a variety of roles depending on the types and volume of aviation activity. A terminal is often the location of an airport's FBO, and may house facilities such as pilots lounge, weather information area, flight planning area, conference rooms, and flight observation area.

Surface automobile parking is another necessary landside facility. Airport users need a place to park their cars upon arrival at an airport, while automobile parking lots also provide a necessary facility to rental car facilities. For security reasons, automobile parking located away from hangars and other sensitive areas is preferable.

Figure 14 summarizes the percentage of airports by classification meeting apron, hangar, auto parking, and terminal facility objectives. In total, 79 percent of applicable airports meet apron capacity objectives, 63 percent meet hangar capacity objectives, 91 meet objectives for automobile parking areas, and 100 percent of applicable airports meet terminal objectives.

Table 12 provides details on these four landside facility objectives performance.



Source: Airport Inventory and Data Survey 2017

Figure 14. Percentage of Airports by Classification Meeting Landside Facility Objectives

Table 12. Landside Facility Objective Performance by Airport

Associated City	Airport Name	Apron Capacity Objective	Current Apron Capacity	Hangar Capacity Objective	Current Hangar Capacity	Auto Parking	Terminal	Meets All Facility Objectives
Commercial Service-International: Consistent with Master Plan with the Following Minimums – Apron, Auto Parking, Operations/Maintenance Hangar								
Phoenix	Phoenix Sky Harbor International	N/A	42	N/A	81	Yes	With Pilot's Lounge	Yes
Tucson	Tucson International	N/A	85	N/A	32,019	Yes	With Pilot's Lounge	Yes
Commercial Service-National: Consistent with Master Plan with the Following Minimums – Apron, Auto Parking, Operations/Maintenance Hangar								
Bullhead City	Laughlin/Bullhead City International	N/A	55	N/A	31	Yes	With Pilot's Lounge	Yes
Flagstaff	Flagstaff Pulliam	N/A	60	N/A	49	Yes	Terminal	Yes
Grand Canyon	Grand Canyon National Park	N/A	96	N/A	0	Yes	Terminal	Yes
Page	Page Municipal	N/A	104	N/A	62	Yes	With Pilot's Lounge	Yes
Peach Springs	Grand Canyon West	N/A	42	N/A	0	Yes	With Pilot's Lounge	Yes
Phoenix	Phoenix-Mesa Gateway	N/A	115	N/A	152	Yes	With Pilot's Lounge	Yes
Prescott	Ernest A. Love Field	N/A	222	N/A	165	Yes	Terminal	Yes
Show Low	Show Low Regional	N/A	100	N/A	50	Yes	With Pilot's Lounge	Yes
Yuma	Yuma International	N/A	144	N/A	125	Yes	With Pilot's Lounge	Yes
Reliever: Apron (25% of Based Fleet and 75% for Transient), Auto Parking, Hangars (75% of Based Fleet and 25% Overnight), Terminal with Pilot's Lounge								
Chandler	Chandler Municipal	189	286	349	244	Yes	With Pilot's Lounge	No
Glendale	Glendale Municipal	97	0	221	244	Yes	With Pilot's Lounge	No
Goodyear	Phoenix Goodyear	97	93	178	127	Yes	With Pilot's Lounge	No
Marana	Marana Regional	93	131	194	245	Yes	With Pilot's Lounge	Yes
Mesa	Falcon Field	224	436	536	485	Yes	With Pilot's Lounge	No
Phoenix	Phoenix Deer Valley	363	366	737	783	Yes	With Pilot's Lounge	Yes
Scottsdale	Scottsdale	197	227	354	207	Yes	With Pilot's Lounge	No
Tucson	Ryan Field	105	93	203	123	Yes	With Pilot's Lounge	No
GA-Community: Apron (40% of Based Fleet and 50% for Transient), Auto Parking, Hangars (60% of Based Fleet and 25% Overnight), Terminal with Appropriate Facilities								
Benson	Benson Municipal	26	65	28	17	Yes	With Pilot's Lounge	No
Buckeye	Buckeye Municipal	54	59	49	42	Yes	With Pilot's Lounge	No

Associated City	Airport Name	Apron Capacity Objective	Current Apron Capacity	Hangar Capacity Objective	Current Hangar Capacity	Auto Parking	Terminal	Meets All Facility Objectives
Casa Grande	Casa Grande Municipal	111	18	77	52	Yes	With Pilot's Lounge	No
Coolidge	Coolidge Municipal	21	30	28	47	Yes	Terminal	Yes
Cottonwood	Cottonwood Municipal	14	82	12	34	Yes	With Pilot's Lounge	Yes
Kingman	Kingman	68	160	92	95	Yes	Terminal	Yes
Lake Havasu City	Lake Havasu City	69	185	84	71	Yes	With Pilot's Lounge	No
Marana	Pinal Airpark	3	0	3	57	Yes	With Pilot's Lounge	No
Nogales	Nogales	18	31	18	18	Yes	With Pilot's Lounge	Yes
Parker	Avi Suquilla	15	78	12	27	Yes	With Pilot's Lounge	Yes
Payson	Payson	36	53	36	8	Yes	Terminal	No
Safford	Safford Regional	28	32	35	39	Yes	With Pilot's Lounge	Yes
Sedona	Sedona	29	95	39	67	Yes	With Pilot's Lounge	Yes
Sierra Vista	Sierra Vista Municipal-Libby Army Airfield	28	28	33	65	Yes	With Pilot's Lounge	Yes
Springerville	Springerville Municipal	6	41	8	3	Yes	With Pilot's Lounge	No
St. Johns	St. Johns Industrial Air Park	15	20	11	7	Yes	With Pilot's Lounge	No
Wickenburg	Wickenburg Municipal	35	38	32	53	Yes	With Pilot's Lounge	Yes
Willcox	Cochise County	15	22	16	18	Yes	With Pilot's Lounge	Yes
GA-Rural: Apron (50% of Based Fleet and 25% for Transient), Auto Parking, Hangars (50% of Based Fleet and 25% for Transient)								
Bisbee	Bisbee Municipal	15	35	14	3	Yes	With Pilot's Lounge	No
Chinle	Chinle Municipal	3	3	2	0	Yes	None	No
Colorado City	Colorado City Municipal	8	17	7	14	Yes	With Pilot's Lounge	Yes
Douglas	Bisbee-Douglas International	8	4	4	48	Yes	With Pilot's Lounge	No
Douglas	Cochise College	9	35	8	12	Yes	With Pilot's Lounge	Yes
Douglas	Douglas Municipal	7	45	6	21	Yes	With Pilot's Lounge	Yes
Eloy	Eloy Municipal	15	27	12	36	Yes	None	Yes
Gila Bend	Gila Bend Municipal	4	56	3	6	Yes	With Pilot's Lounge	Yes
Holbrook	Holbrook Municipal	9	5	8	4	Yes	With Pilot's Lounge	No
Maricopa	Ak-Chin Regional	20	12	16	3	Yes	With Pilot's Lounge	No
San Luis	Rolle Airfield	0	4	0	2	No	None	No
San Manuel	San Manuel	13	20	12	28	Yes	With Pilot's Lounge	Yes

Associated City	Airport Name	Apron Capacity Objective	Current Apron Capacity	Hangar Capacity Objective	Current Hangar Capacity	Auto Parking	Terminal	Meets All Facility Objectives
Taylor	Taylor	8	24	8	16	Yes	With Pilot's Lounge	Yes
Whiteriver	Whiteriver	1	17	0	0	No	None	No
Williams	H.A. Clark Memorial Field	4	0	3	16	Yes	With Pilot's Lounge	No
Window Rock	Window Rock	5	12	4	12	Yes	With Pilot's Lounge	Yes
Winslow	Winslow-Lindbergh Regional	11	15	7	9	Yes	With Pilot's Lounge	Yes
GA-Basic: Apron, Auto Parking								
Ajo	Eric Marcus Municipal	1	9	N/A	2	Yes	None	Yes
Bagdad	Bagdad	1	12	N/A	1	Yes	None	Yes
Cibecue	Cibecue	1	0	N/A	0	No	None	No
Clifton	Greenlee County	1	20	N/A	2	Yes	With Pilot's Lounge	Yes
Globe	San Carlos Apache	1	40	N/A	5	Yes	Terminal	Yes
Kayenta	Kayenta	1	17	N/A	0	Yes	Terminal	Yes
Kearny	Kearny	1	7	N/A	4	Yes	None	Yes
Polacca	Polacca	1	2	N/A	0	No	None	No
Seligman	Seligman	1	14	N/A	0	Yes	None	Yes
Sells	Sells	1	0	N/A	0	Yes	None	No
Superior	Superior	1	0	N/A	0	No	None	No
Tombstone	Tombstone Municipal	1	4	N/A	0	No	None	No
Tuba City	Tuba City	1	8	N/A	0	Yes	None	Yes

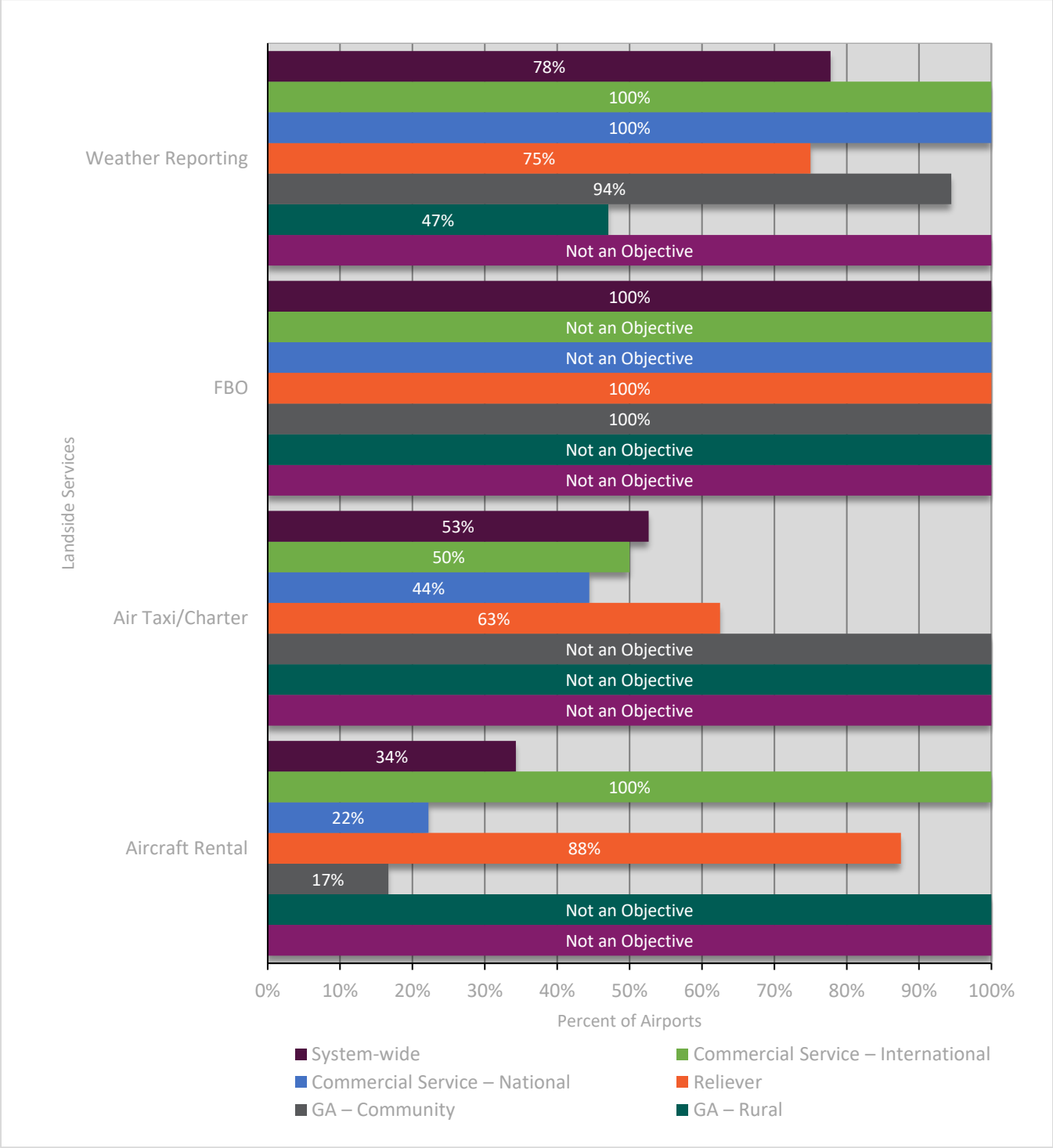
Source: Airport Inventory and Data Survey 2017

Landside Services

The types and level of pilot and passenger services available at an airport can greatly influence the types of activities and aviation operations that can be supported. Airports that have a greater number and range of aviation services are better prepared to attract activities ranging from recreational flying to high-end business aviation. An FBO is a common provider of services at airports, providing ground handling services such as fueling and oxygen, but these services may also be provided by the airport sponsor. Other common aviation services include ground transportation, deicing, aircraft maintenance and avionics service, and aircraft rental. Air taxi and charter services help to improve an airport's chances of attracting business activity, while pilot services such as automated weather reporting via an Automated Weather Observing System (AWOS) or Automated Surface Observing System (ASOS) can improve accessibility and operational safety. Various terminal services such as phones, restrooms, and internet access are also needed at many airports, while a U.S. Customs and Border Protection facility can be an important service at many commercial airports.

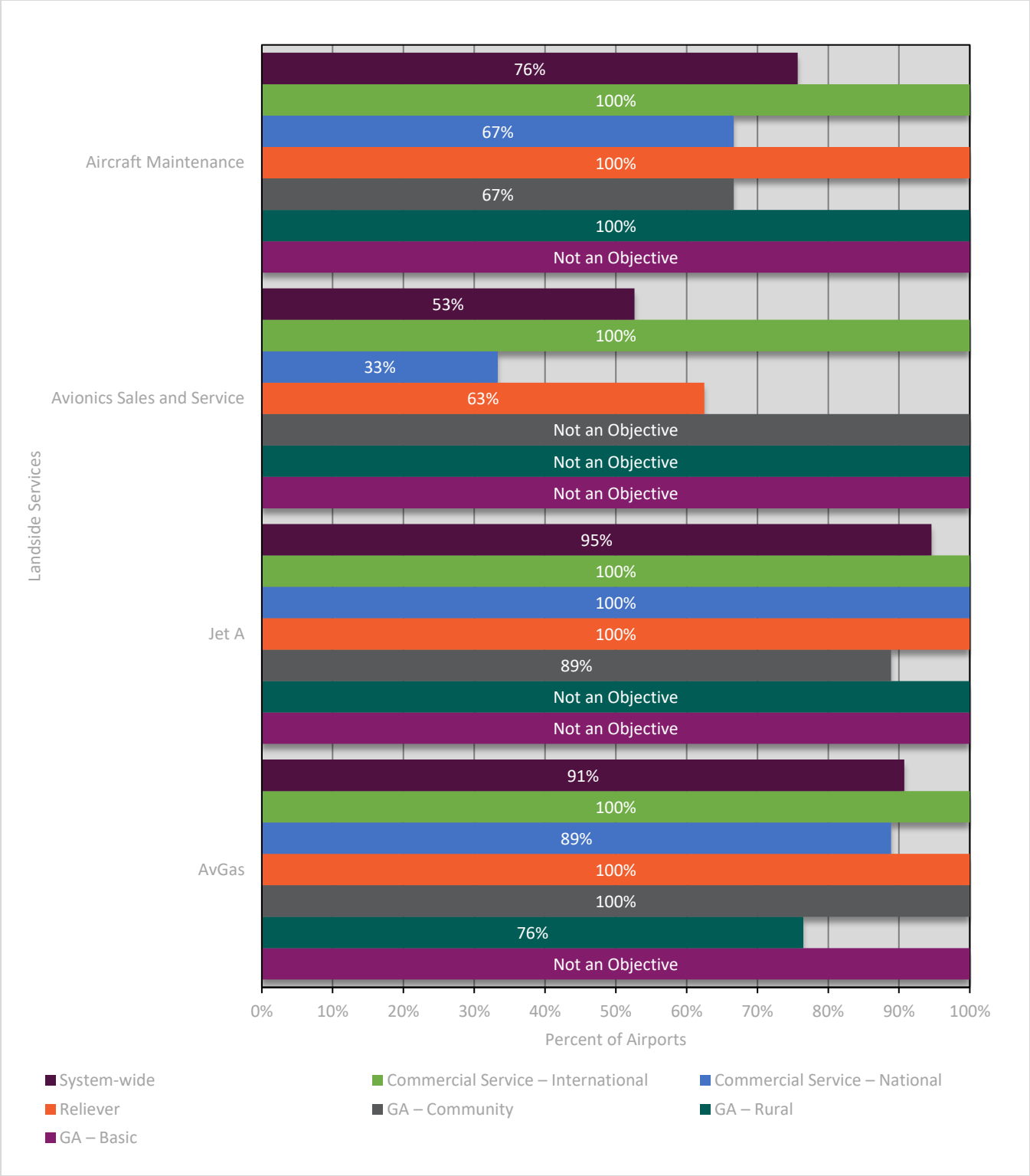
Figure 15 through **Figure 18** summarize landside service objective performance at Arizona system airports. While only one airport, Colorado City Municipal Airport, meets all service objectives, this is largely due to an expanded list of service objectives in comparison to the previous SASP. Many individual facility objectives performed very well, however. Airports in the Reliever and GA-Community classifications have an FBO objective, and all of these airports meet this objective. In addition, 95 percent of applicable airports meet objectives for jet fuel service, while 91 percent meet objectives for AvGas. Other high performing service objectives include restroom facilities (91 percent of applicable airports), internet access (84 percent), and on-site rental car

(82 percent). The lowest performing service objectives were U.S. Customs services (26 percent of applicable airports), deicing (27 percent), and phone access (33 percent). **Table 13** details service objective performance by individual airport.



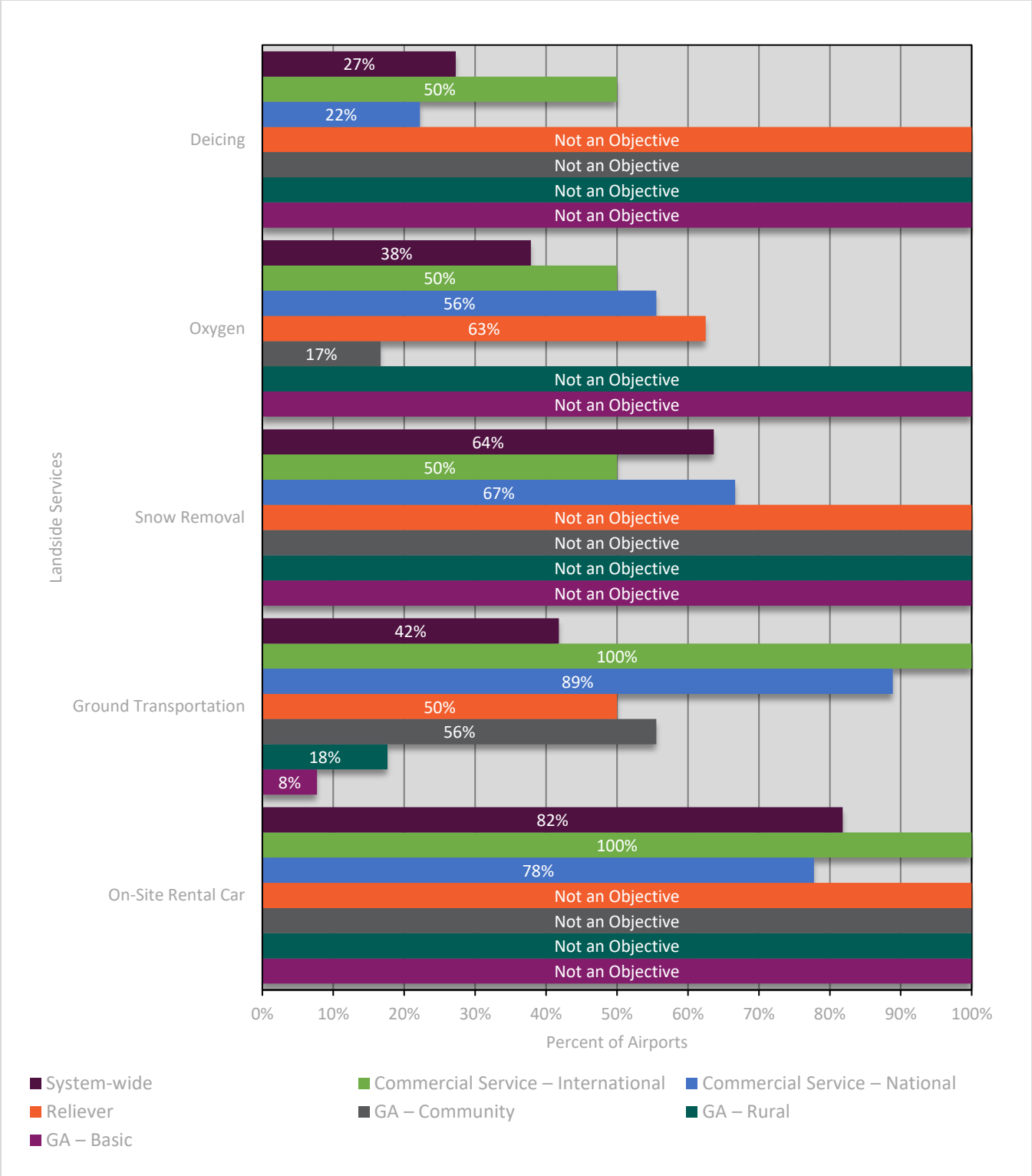
Source: Airport Inventory and Data Survey 2017

Figure 15. Percentage of Airports by Classification Meeting Landside Service Objectives (1 of 4)



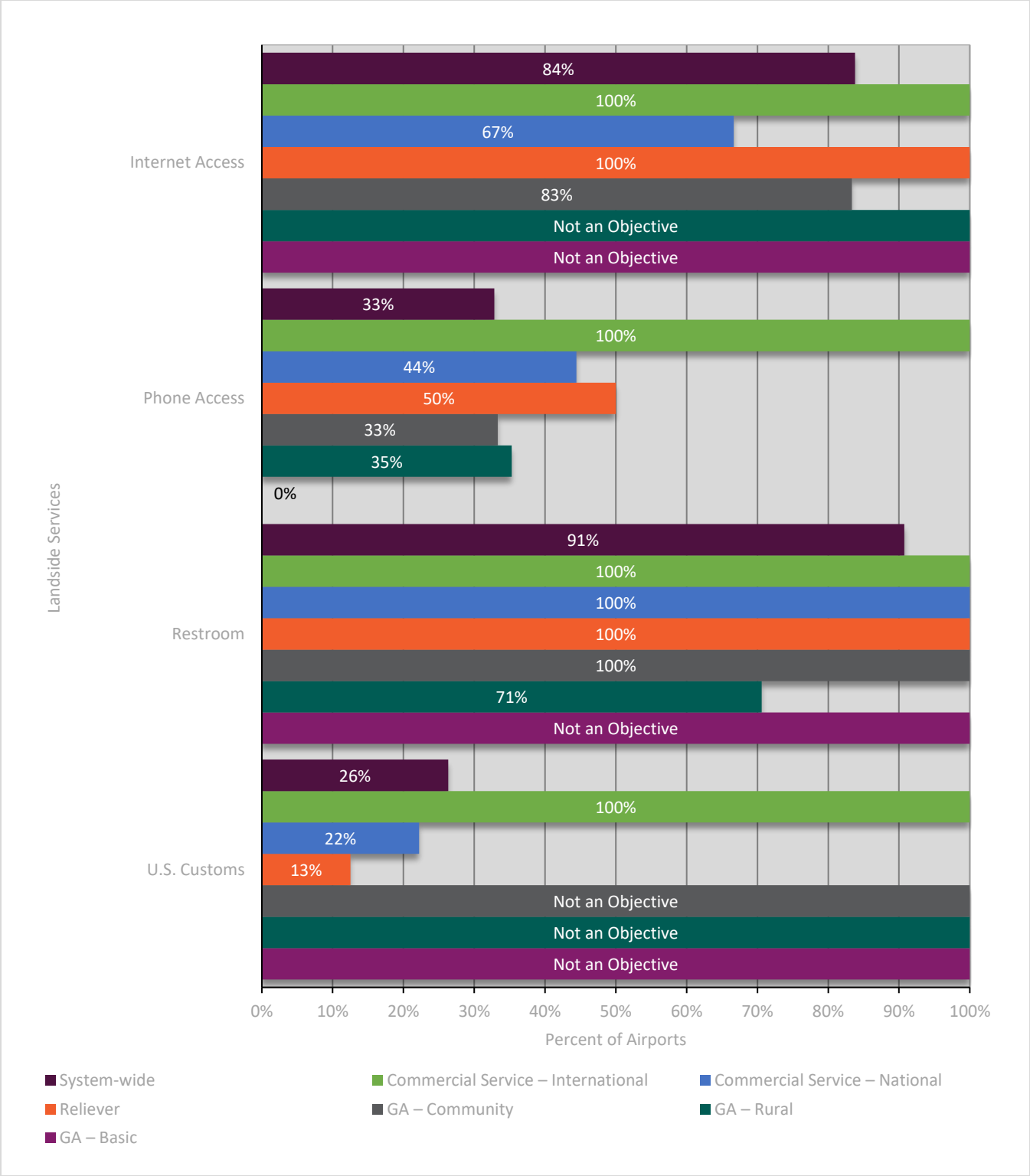
Source: Airport Inventory and Data Survey 2017

Figure 16. Percentage of Airports by Classification Meeting Landside Service Objectives (2 of 4)



Source: Airport Inventory and Data Survey 2017

Figure 17. Percentage of Airports by Classification Meeting Landside Service Objectives (3 of 4)



Source: Airport Inventory and Data Survey 2017

Figure 18. Percentage of Airports by Classification Meeting Landside Service Objectives (4 of 4)

Table 13. Landside Services Objective Performance by Airport

Associated City	Airport Name	Existing Services	Missing Objective Services	Meets Objective
Commercial Service-International: Air Taxi/Charter, Aircraft Maintenance, AvGas, Avionics, Deicing, Ground Transportation, Internet Access, Jet A, On-Site Rental Car, Oxygen, Phone Access, Restroom, Snow Removal (as Needed), U.S. Customs, Weather Reporting				
Phoenix	Phoenix Sky Harbor	AWOS, FBO, Air Taxi/Charter, Aircraft Maintenance, Avionics, Jet A, AvGas, Oxygen, Ground Transportation, On-Site Rental Car, Internet Access, Phone Access, Restroom, U.S. Customs	Deicing, Snow Removal	No
Tucson	Tucson International	ASOS, FBO, Aircraft Maintenance, Avionics, Jet A, AvGas, Deicing, Snow Removal, Ground Transportation, On-Site Rental Car, Internet Access, Phone Access, Restroom, U.S. Customs	Air Taxi/Charter, Oxygen	No
Commercial Service-National: Air Taxi/Charter, Aircraft Maintenance, Aircraft Rental, AvGas, Avionics, Deicing, Ground Transportation, Internet Access, Jet A, On-Site Rental Car, Oxygen, Phone Access, Restroom, Snow Removal (as Needed), U.S. Customs, Weather Reporting				
Bullhead City	Laughlin/Bullhead City Int'l	ASOS, FBO, Jet A, AvGas, Ground Transportation, On-Site Rental Car, Internet Access, Restroom	Air Taxi/Charter, Aircraft Rental, Aircraft Maintenance, Avionics, Deicing, Oxygen, Snow Removal, Phone Access, U.S. Customs	No
Flagstaff	Flagstaff Pulliam	ASOS, FBO, Aircraft Rental, Aircraft Maintenance, Jet A, AvGas, Deicing, Oxygen, Ground Transportation, On-Site Rental Car, Internet Access, Restroom	Air Taxi/Charter, Avionics, Snow Removal, Phone Access, U.S. Customs	No
Grand Canyon	Grand Canyon National Park	ASOS, FBO, Aircraft Maintenance, Jet A, AvGas, Snow Removal, Ground Transportation, Restroom	Air Taxi/Charter, Aircraft Rental, Avionics, Deicing, Oxygen, On-Site Rental Car, Internet Access, Phone Access, U.S. Customs	No
Page	Page Municipal	ASOS, FBO, Air Taxi/Charter, Aircraft Maintenance, Avionics, Jet A, AvGas, Oxygen, Snow Removal, Ground Transportation, On-Site Rental Car, Restroom	Aircraft Rental, Deicing, Internet Access, Phone Access, U.S. Customs	No
Peach Springs	Grand Canyon West	AWOS, Air Taxi/Charter, Jet A, Snow Removal, Phone Access, Restroom	Aircraft Rental, Aircraft Maintenance, Avionics, AvGas, Deicing, Oxygen, Ground Transportation, On-Site Rental Car, Internet Access, U.S. Customs	No
Phoenix	Phoenix-Mesa Gateway	ASOS, FBO, Air Taxi/Charter, Aircraft Maintenance, Avionics, Jet A, AvGas, Oxygen, Ground Transportation, On-Site Rental Car, Internet Access, Phone Access, Restroom, U.S. Customs	Aircraft Rental, Deicing, Snow Removal	No
Prescott	Ernest A. Love Field	AWOS, FBO, Air Taxi/Charter, Aircraft Rental, Aircraft Maintenance, Avionics, Jet A, AvGas, Deicing, Oxygen, Snow Removal, Ground Transportation, On-Site Rental Car, Internet Access, Phone Access, Restroom	U.S. Customs	No

Associated City	Airport Name	Existing Services	Missing Objective Services	Meets Objective
Show Low	Show Low Regional	AWOS, FBO, Aircraft Maintenance, Jet A, AvGas, Snow Removal, Ground Transportation, On-Site Rental Car, Internet Access, Phone Access, Restroom	Air Taxi/Charter, Aircraft Rental, Avionics, Deicing, Oxygen, U.S. Customs	No
Yuma	Yuma International	ASOS, FBO, Jet A, AvGas, Oxygen, Ground Transportation, On-Site Rental Car, Internet Access, Restroom, U.S. Customs	Air Taxi/Charter, Aircraft Rental, Aircraft Maintenance, Avionics, Deicing, Phone Access	No
Reliever: Air Taxi/Charter, Aircraft Maintenance, Aircraft Rental, AvGas, Avionics, FBO, Ground Transportation, Internet Access, Jet A, Oxygen, Phone Access, Restroom, U.S. Customs, Weather Reporting				
Chandler	Chandler Municipal	AWOS, FBO, Air Taxi/Charter, Aircraft Rental, Aircraft Maintenance, Avionics, Jet A, AvGas, Internet Access, Phone Access, Restroom	Oxygen, Ground Transportation, U.S. Customs	No
Glendale	Glendale Municipal	AWOS, FBO, Aircraft Rental, Aircraft Maintenance, Jet A, AvGas, Internet Access, Restroom	Air Taxi/Charter, Avionics, Oxygen, Ground Transportation, Phone Access, U.S. Customs	No
Goodyear	Phoenix Goodyear	FBO, Aircraft Rental, Aircraft Maintenance, Jet A, AvGas, Oxygen, Ground Transportation, On-Site Rental Car, Internet Access, Phone Access, Restroom	Weather Reporting, Air Taxi/Charter, Avionics, U.S. Customs	No
Marana	Marana Regional	AWOS, FBO, Air Taxi/Charter, Aircraft Maintenance, Avionics, Jet A, AvGas, Oxygen, Ground Transportation, On-Site Rental Car, Internet Access, Restroom	Aircraft Rental, Phone Access, U.S. Customs	No
Mesa	Falcon Field	FBO, Air Taxi/Charter, Aircraft Rental, Aircraft Maintenance, Avionics, Jet A, AvGas, Deicing, Oxygen, Ground Transportation, On-Site Rental Car, Internet Access, Restroom	Weather Reporting, Phone Access, U.S. Customs	No
Phoenix	Phoenix Deer Valley	ASOS, FBO, Air Taxi/Charter, Aircraft Rental, Aircraft Maintenance, Jet A, AvGas, Oxygen, On-Site Rental Car, Internet Access, Phone Access, Restroom	Avionics, Ground Transportation, U.S. Customs	No
Scottsdale	Scottsdale	ASOS, FBO, Air Taxi/Charter, Aircraft Rental, Aircraft Maintenance, Avionics, Jet A, AvGas, Oxygen, Ground Transportation, On-Site Rental Car, Internet Access, Restroom, U.S. Customs	Phone Access	No
Tucson	Ryan Field	AWOS, FBO, Aircraft Rental, Aircraft Maintenance, Avionics, Jet A, AvGas, Internet Access, Phone Access, Restroom	Air Taxi/Charter, Oxygen, Ground Transportation, U.S. Customs	No
GA-Community: Aircraft Maintenance, Aircraft Rental, AvGas, FBO, Ground Transportation, Internet Access, Jet A, Oxygen, Phone Access, Restroom, Weather Reporting				
Benson	Benson Municipal	AWOS, FBO, Aircraft Rental, Aircraft Maintenance, Jet A, AvGas, Ground Transportation, Internet Access, Phone Access, Restroom	Oxygen	No
Buckeye	Buckeye Municipal	AWOS, FBO, AvGas, Ground Transportation, Internet Access, Restroom	Aircraft Rental, Aircraft Maintenance, Jet A, Oxygen, Phone Access	No

Associated City	Airport Name	Existing Services	Missing Objective Services	Meets Objective
Casa Grande	Casa Grande Municipal	AWOS, FBO, Aircraft Maintenance, Jet A, AvGas, Internet Access, Restroom	Aircraft Rental, Oxygen, Ground Transportation, Phone Access	No
Coolidge	Coolidge Municipal	AWOS, FBO, Jet A, AvGas, Restroom	Aircraft Rental, Aircraft Maintenance, Oxygen, Ground Transportation, Internet Access, Phone Access	No
Cottonwood	Cottonwood Municipal	AWOS, AvGas, Ground Transportation, Internet Access, Phone Access, Restroom	Aircraft Rental, Aircraft Maintenance, Jet A, Oxygen	No
Kingman	Kingman	ASOS, FBO, Aircraft Maintenance, Jet A, AvGas, Phone Access, Restroom	Aircraft Rental, Oxygen, Ground Transportation, Internet Access	No
Lake Havasu City	Lake Havasu City	AWOS, Air Taxi/Charter, Aircraft Rental, Aircraft Maintenance, Jet A, AvGas, Oxygen, Ground Transportation, On-Site Rental Car, Phone Access, Restroom	Internet Access	No
Marana	Pinal Airpark	AWOS, FBO, Aircraft Maintenance, Jet A, AvGas, Oxygen, Internet Access, Restroom	Aircraft Rental, Ground Transportation, Phone Access	No
Nogales	Nogales	ASOS, FBO, Aircraft Rental, Aircraft Maintenance, Jet A, AvGas, Ground Transportation, Internet Access, Restroom, U.S. Customs	Oxygen, Phone Access	No
Parker	Avi Suquilla	AWOS, FBO, Aircraft Maintenance, Jet A, AvGas, Internet Access, Restroom	Aircraft Rental, Oxygen, Ground Transportation, Phone Access	No
Payson	Payson	AWOS, FBO, Air Taxi/Charter, Aircraft Maintenance, Avionics, Jet A, AvGas, Snow Removal, Ground Transportation, Internet Access, Restroom	Aircraft Rental, Oxygen, Phone Access	No
Safford	Safford Regional	ASOS, FBO, Air Taxi/Charter, Aircraft Maintenance, Avionics, Jet A, AvGas, Oxygen, Ground Transportation, Internet Access, Phone Access, Restroom	Aircraft Rental	No
Sedona	Sedona	AWOS, FBO, Jet A, AvGas, Internet Access, Restroom	Aircraft Rental, Aircraft Maintenance, Oxygen, Ground Transportation, Phone Access	No
Sierra Vista	Sierra Vista Municipal-Libby Army Airfield	ASOS, FBO, Aircraft Maintenance, Jet A, AvGas, Deicing, Internet Access, Restroom	Aircraft Rental, Oxygen, Ground Transportation, Phone Access	No
Springerville	Springerville Municipal	AWOS, FBO, Jet A, AvGas, Snow Removal, Ground Transportation, Internet Access, Restroom	Aircraft Rental, Aircraft Maintenance, Oxygen, Phone Access	No
St. Johns	St. Johns Industrial Air Park	ASOS, FBO, Jet A, AvGas, Ground Transportation, Internet Access, Phone Access, Restroom	Aircraft Rental, Aircraft Maintenance, Oxygen	No
Wickenburg	Wickenburg Municipal	AWOS, FBO, Aircraft Maintenance, Jet A, AvGas, Ground Transportation, Internet Access, Restroom, U.S. Customs	Aircraft Rental, Oxygen, Phone Access	No
Willcox	Cochise County	FBO, Aircraft Maintenance, Jet A, AvGas, Internet Access, Restroom	Weather Reporting, Aircraft Rental, Oxygen, Ground Transportation, Phone Access	No

Associated City	Airport Name	Existing Services	Missing Objective Services	Meets Objective
GA-Rural: AvGas, Ground Transportation, Phone Access, Restroom, Weather Reporting				
Bisbee	Bisbee Municipal	FBO, AvGas, Phone Access, Restroom	Weather Reporting, Ground Transportation	No
Chinle	Chinle Municipal	Jet A, Snow Removal	Weather Reporting, AvGas, Ground Transportation, Phone Access, Restroom	No
Colorado City	Colorado City Municipal	AWOS, FBO, Aircraft Maintenance, Jet A, AvGas, Snow Removal, Ground Transportation, Internet Access, Phone Access, Restroom	N/A	Yes
Douglas	Bisbee-Douglas International	ASOS, FBO, Aircraft Maintenance, Jet A, AvGas, Snow Removal, Restroom, U.S. Customs	Ground Transportation, Phone Access	No
Douglas	Cochise College	AvGas, Internet Access, Phone Access	Weather Reporting, Ground Transportation, Restroom	No
Douglas	Douglas Municipal	FBO, Jet A, AvGas	Weather Reporting, Ground Transportation, Phone Access, Restroom	No
Eloy	Eloy Municipal	FBO, Aircraft Maintenance, Jet A, AvGas, Restroom	Weather Reporting, Ground Transportation, Phone Access	No
Gila Bend	Gila Bend Municipal	FBO, AvGas, Internet Access, Phone Access, Restroom	Weather Reporting, Ground Transportation	No
Holbrook	Holbrook Municipal	AWOS, FBO, AvGas, Restroom	Ground Transportation, Phone Access	No
Maricopa	Ak-Chin Regional	FBO, Aircraft Rental, Aircraft Maintenance, AvGas, Internet Access, Restroom	Weather Reporting, Ground Transportation, Phone Access	No
San Luis	Rolle Airfield	N/A	Weather Reporting, AvGas, Ground Transportation, Phone Access, Restroom	No
San Manuel	San Manuel	AWOS, FBO, Aircraft Maintenance, AvGas, Internet Access, Restroom	Ground Transportation, Phone Access	No
Taylor	Taylor	AWOS, FBO, Aircraft Maintenance, AvGas, Snow Removal, Ground Transportation, Internet Access, Phone Access, Restroom	N/A	Yes
Whiteriver	Whiteriver	Snow Removal, U.S. Customs	Weather Reporting, AvGas, Ground Transportation, Phone Access, Restroom	No
Williams	H.A. Clark Memorial Field	AWOS, FBO, Aircraft Maintenance, AvGas, Snow Removal, On-Site Rental Car, Internet Access, Restroom	Ground Transportation, Phone Access	No
Window Rock	Window Rock	ASOS, FBO, Air Taxi/Charter, Jet A, Snow Removal, Internet Access, Phone Access, Restroom, U.S. Customs	AvGas, Ground Transportation	No
Winslow	Winslow-Lindbergh Regional	ASOS, FBO, Aircraft Maintenance, Jet A, AvGas, Snow Removal, Ground Transportation, On-Site Rental Car, Restroom, U.S. Customs	Phone Access	No
GA-Basic: Ground Transportation, Phone Access				
Ajo	Eric Marcus Municipal	Restroom	Ground Transportation, Phone Access	No
Bagdad	Bagdad	N/A	Ground Transportation, Phone Access	No

Associated City	Airport Name	Existing Services	Missing Objective Services	Meets Objective
Cibecue	Cibecue	N/A	Ground Transportation, Phone Access	No
Clifton	Greenlee County	AWOS, Restroom	Ground Transportation, Phone Access	No
Globe	San Carlos Apache	AWOS, AvGas	Ground Transportation, Phone Access	No
Kayenta	Kayenta	AWOS, Jet A, Snow Removal, Restroom	Ground Transportation, Phone Access	No
Kearny	Kearny	Aircraft Maintenance, AvGas, Ground Transportation, Restroom	Phone Access	No
Polacca	Polacca	N/A	Ground Transportation, Phone Access	No
Seligman	Seligman	Restroom	Ground Transportation, Phone Access	No
Sells	Sells	N/A	Ground Transportation, Phone Access	No
Superior	Superior	N/A	Ground Transportation, Phone Access	No
Tombstone	Tombstone Municipal	N/A	Ground Transportation, Phone Access	No
Tuba City	Tuba City	Snow Removal	Ground Transportation, Phone Access	No

Source: Airport Inventory and Data Survey 2017