

## Chapter 3: State of the System Analysis

Chapter 3 presents a review of how the SASP airports conform to all of the performance criteria for airports within the “commercial service,” “advanced,” and “intermediate” classifications. This review was based on the data contained in the 1999 and 2005 airport inventory tables pertaining to these performance criteria.

### Approach

For the airports in the these three classifications, a comparison was made between the 2002 SASP inventory data (compiled in 1999) against the revised 2005 inventory data, the latest inventory on file. The comparison focused on the amenities and services “objectives” or performance criteria that were listed in the 2002 SASP and modified for the 2007 SASP update.

The amenities and services criteria used for the 2007 SASP update for the three airport classifications are listed in Appendix 1. They were derived from the 2002 SASP amenities and services “objectives” for system airports as listed in Table 10-1 in the 2002 SASP report (also included in Appendix 1).

The differences between the criteria used in the 2007 SASP update and those established for the 2002 SASP were:

- “Commercial service” airports – there were no criteria in the 2002 SASP
- “Advanced” airports:
  - Runway length revised from 5,000 to 4,500 feet as described previously
  - The approach minimums achieved from NAVAIDS criterion changed from a published approach with a decision altitude of 200 feet and visibility of ½ mile to a published approach with a decision altitude of 400 feet and visibility of ¾ mile
  - One of the approach aids criterion changed from a MALSR to just an ALS (without RAILS)
  - The runway edge lighting criterion added MIRLS as an option
- “Intermediate” airports:
  - The runway length criterion changed from 4,000 to 3,800 feet
  - The runway strength criterion revised from 30,000 lbs. single-wheel weight to 12,500 lbs.
  - The NAVAIDS criterion revised so the decision height was increased from 400 feet to 600 feet.

### Results – Commercial Service Airports

Table 3-1 summarizes how well the “commercial service” airports achieved the performance criteria based on the 1999 and 2005 airport inventory tables.

**Table 3-1 – Commercial Service Airport Assessment**

Amenity/Service	1999 Inventory	2005 Inventory
Runway Length	100% at 5,000-plus feet	same
Runway Width	100% at 100 feet wide	same
Runway Strength	67% at 60,000 lbs	73% at 60,000 lbs
Parallel Taxiway	73% with full length taxiway	80% with full length taxiway

Amenity/Service	1999 Inventory	2005 Inventory
NAVAIDS	Inventory data not available	73% met criteria
Approach Aids	53% met criteria	67% met criteria
Runway Edge Lighting	100% with HIRLs or MIRLs	same
Weather Reporting	100% with service	same
Services	100% met criteria	same
Facilities	100% met criteria	same

### **Results – Advanced Airports**

**Table 3-2** summarizes how well the “advanced” airports achieved the performance criteria based on the 1999 and 2005 airport inventory tables.

**Table 3-2 –Advanced Airport Assessment**

Amenity/Service	1999 Inventory	2005 Inventory
Runway Length	80% at 4,500-plus feet	100% at 4,500-plus feet
Runway Width	100% at 75 feet wide	same
Runway Strength	53% at 30,000 lbs	73% at 30,000 lbs
Parallel Taxiway	80% with full length taxiway	same
NAVAIDS	Inventory data not available	40% met criteria
Approach Aids <sup>6</sup>	7% met criteria	33% met criteria
Runway Edge Lighting	100% with MIRLs or HIRLs	same
Weather Reporting	100% with service	same
Services	100% met criteria	same
Facilities	100% met criteria	same

### **Results – Intermediate Airports**

**Table 3-3** summarizes how well the “intermediate” airports achieved the performance criteria based on the 1999 and 2005 airport inventory tables.

**Table 3-3 – Intermediate Airport Assessment**

Amenity/Service	1999 Inventory	2005 Inventory
Runway Length	33% at 3,800-plus feet	43% at 3,800-plus feet
Runway Width	62% at 75 feet wide	62% at 75 feet wide
Runway Strength	5% at 30,000 lbs	71% at 12,500 lbs
Parallel Taxiway	43% with full length taxiway	43% with full length taxiway
NAVAIDS	Inventory data not available	62% met criteria
Approach Aids	48% met criteria	52% met criteria
Runway Edge Lighting	67% with MIRLs	71% with MIRLs
Weather Reporting	57% with service	52% with service
Services	76% met criteria	76% met criteria
Facilities	57% met criteria	57% met criteria

<sup>6</sup> In 1999 this criterion included a MALSR. In 2005 that criterion was revised to eliminate RAILS.

## **Conclusions**

Airport amenities and services defined for the 2007 SASP Update were evaluated for the airports in the “commercial service”, “advanced,” and “intermediate” classifications. The assessment indicates that between 1999 and 2005, BOA- and FAA-funded projects made significant strides in improving compliance with these performance criteria. This “state of the system” assessment is summarized in **Table 3-4**.

While airport development priorities at “commercial service” airports are directly managed by the FAA, PENNDOT still commits over one-third of the state aviation development program funding (approximately \$3.5 million) annually to the Federal AIP projects. The BOA provides this funding to commercial service airports to assist them with the non-federal match for their AIP grants. However, the BOA has little impact on what projects are completed and when at these airports.

**Table 3-4 – State of the System Summary – Percent Meeting Performance Criteria**

<b>Amenity/Service</b>	<b>Commercial Service</b>	<b>Advanced</b>	<b>Intermediate</b>
Runway Length	100%	100%	43%
Runway Width	100%	100%	62%
Runway Strength	73%	73%	71%
Parallel Taxiway	73%	80%	43%
NAVAIDS <sup>7</sup>	73%	40%	62%
Approach Aids <sup>7</sup>	67%	33%	52%
Runway Edge Lights	100%	100%	71%
Weather Reporting	100%	100%	52%
Facilities	100%	100%	76%
Services	100%	100%	57%

<sup>7</sup> The ability for PENNDOT to fund improvements to obtain better approach minimums and provide enhanced visual approach guidance is limited and depends on terrain, obstacles, and the ability to demonstrate that state and FAA funding for these improvements are warranted.