



Wilkes-Barre/Scranton International Airport

Master Plan Update *FINAL REPORT*

JUNE 2019



McFarland Johnson

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1. Inventory

1.1. INTRODUCTION

The inventory chapter provides an overview of the Wilkes-Barre/Scranton International Airport (the Airport or AVP), including its ownership, physical facilities, operational characteristics, level of service, facility development, land use, zoning, and regional socioeconomic data. This information was obtained through on-site visits to the Airport; interviews with airport personnel, tenants, and the local business community; user surveys; and a review of published information from the Federal Aviation Administration (FAA), Pennsylvania Department of Transportation (DOT), and other aviation sources. Information was also obtained from available planning documents and studies concerning the Airport and surrounding area. The information presented in this chapter serves as the basis for the development of aviation forecasts, as well as the baseline data to be used in the facility requirements and dynamic planning model.

This chapter is organized into the following sections:

- Airport Background
- Airport Service Areas
- Socioeconomic Data
- Airside Facilities
- Landside Facilities
- Passenger Terminal Facilities
- Terminal Parking and Access Facilities
- Support Facilities
- Security
- Airspace
- Air Traffic Control
- Land Use and Zoning
- User/Tenant Interviews and Surveys

1.2. AIRPORT BACKGROUND

1.2.1. Airport Sponsor

The Counties of Luzerne and Lackawanna, Pennsylvania are recognized by the FAA as the Sponsor of the Wilkes-Barre/Scranton International Airport. The primary function of the Sponsor is to assure that, in exchange for state or federal development assistance, the Airport complies with grant obligations, thus fostering the public's interest in civil aviation and the safe, efficient functioning of the national airport system overall.



The Airport is operated by the Bi-County Airport Board made up of six representatives, three members from each of the two counties. The Board meets once a month and oversees the Executive Director responsible for the day to day management of AVP.

1.2.2. Airport History

In the 1930s, the largest cities in northeast PA recognized the need for an airport. The site in Avoca was first surveyed in 1939 by the County Commissioners board of both counties. In 1941, John B. McDade, Congressman Joseph M. McDade's father and president of the Heidelberg Coal Company, donated 122 acres on which part of the Airport now sits.

Early in 1945, the two counties entered into a legal agreement to co-sponsor and operate the Airport. During the negotiations on site selection and the bi-county operation plan, it was agreed that Scranton, the larger city and alphabetical first and closest in mileage should have second billing in name, since Luzerne County had the largest population, thus the Wilkes-Barre/Scranton Airport was named.

Construction of the Airport took place from 1945 to June 1, 1947, when the Wilkes-Barre/Scranton Airport was dedicated. The debut commercial passenger service for the region was witnessed by hundreds in attendance.

Colonial Airlines and American Airlines were the first two airlines at the Airport. In April 1948, Transcontinental and Western Air (later TWA) started service, along with All American Airways (later Allegheny Airlines) in June 1949. Colonial provided Montreal/Syracuse-Philadelphia/Washington and intermediate stop service; American provided Chicago/Buffalo-New York Service; TWA provided Kansas City/Pittsburgh-Albany/Boston service; and All American provided a general interstate service and later a looping network to Newark, Atlantic City, Washington, and around again through Pennsylvania.

The first aircraft type, operated by all four carriers, was the DC-3, a 21-passenger airplane weighing about 25,000 pounds, which cruised anywhere between 155-165 mph.

Between 1947 and 1962, passenger traffic grew at an annual rate of 39 percent, which prompted the need for a new terminal, which was constructed in 1958. In 1967, Runway 4-22 was extended by 1,250 feet to 6,451 feet long. The Airport was granted "international" status in 1975 when cargo flights to Canada began.

Runway 4-22 was extended again between 1985 and 1986 to today's length of 7,501 feet. This extension increases safety and allows larger payloads and longer stage lengths.

In May 2006, the Airport completed approximately \$80 million in facility improvements, including a new terminal and parking garage. The terminal has six jet bridges, a 15,967 square foot boarding lounge, and a shopping and dining area.

A new airport traffic control tower (ATCT) and TRACON facility opened on August 29, 2012 and was paid for with \$13.3 million from the American Recovery and Reinvestment Act of 2009. The old tower's view of the second runway (Runway 10-28) had been blocked due to the construction of the new terminal.

Today (2016) the Airport property totals 910 acres, is categorized by the FAA as a Federal Aviation Regulations (FAR) Part 139 Class I airport with Aircraft Rescue and Fire Fighting (ARFF) Index B designation. ARFF Index C equipment is available upon request. The Airport currently has two runways (Runways 4-22 and 10-28). Runway 4-22 is supported by precision and non-precision

instrument approaches. In 2015, there were 47 based aircraft at the Airport and it had approximately 57,000 annual operations.

1.2.3. Airport Classification

The FAA classifies airports that are within the National Plan of Integrated Airport Systems (NPIAS). The NPIAS is the FAA's report to Congress defining the system of airports in the United States and quantifying the system's capital needs. The NPIAS classifies airports as one of the following types: commercial service, general aviation (GA), or reliever. Commercial service airports have air passenger service provided by legacy carriers, regional airlines, or scheduled charter services. Airports without commercial services are classified as GA airports. Reliever airports are a subset of GA airports and "relieve" congested commercial service airports by providing an alternative landing airport for corporate and GA activity. In 2013, the NPIAS added a further classification of GA airports based upon types of use and number of based aircraft. The four categories are generally described as follows:

- **National:** provide communities with access to national and global markets. These airports have approximately 200 total based aircraft, including 30 jets.
- **Regional:** connect communities to regional and national markets. These airports average approximately 90 total based aircraft, including three jets.
- **Local:** provide access to local and regional markets. These airports average approximately 33 based propeller-driven aircraft and no jets.
- **Basic:** supports GA activities, often serving aeronautical functions within the local community, such as emergency response and access to remote communities. These airports have an average of 10 based propeller-driven aircraft and no jets.

AVP is a non-hub, primary commercial service airport serving the northeast region of Pennsylvania (PA). Counties served by AVP include Lackawanna, Luzerne, Carbon, Monroe, Milford, Susquehanna, Wayne, and Wyoming. AVP is served by Delta Airlines, American Airlines, Allegiant Air, and United Airlines. Non-stop flights are available to Atlanta, Detroit, Charlotte, Chicago O'Hare, Newark, Orlando-Sanford, Philadelphia, and Tampa-St. Petersburg. The Airport has approximately 30 daily flights.

In addition to commercial airline service, AVP serves as the regional gateway for general and corporate aviation. The general and corporate aviation facilities are located on the west side of the Airport, south of the terminal, with access to Terminal Road. The Airport's fixed base operator (FBO), Aviation Technologies, provides fueling, de-icing, and aircraft maintenance to private and commercial operators.

1.2.4. Statewide Aviation System Plan (SASP)

In 2007 PennDOT organized a Statewide Aviation System Plan (SASP). In Chapter 3 Airport Roles, AVP was ranked as an Advanced Airport within the State system. The following five factors were taken into account to rank the airports: activity/demand, accessibility, support, facilities, and optimization potential. The airports were given a high, medium, or low ranking. AVP ranked high in the activity/demand category for factors, such as number of based aircraft and operations, services provided, and fuel usage. The accessibility of the Airport received a medium ranking. The

factors that were considered for accessibility were population size, drive time from airport to four-lane highway or interstate, and businesses with 100 or more employees within a 30-minute drive. The Airport received a high ranking for support; it has great local support and commitment. The Airport facilities received a high ranking for the runway length, types of approaches, and number of aircraft storage units. The only low ranking the Airport received was for optimization potential because expansion potential is restricted due to the Airport's close proximity to Interstate 81 and Interstate 476. Overall the SASP placed the Airport in the Advanced Airport Functional Level for having a high activity level for commercial service and general aviation.

1.2.5. Location, Access, and Regional Transportation

AVP is located in northeast PA on the border of Lackawanna and Luzerne Counties. Found in the borough of Avoca and Pittston Township, the Airport is approximately three miles southwest of the City of Scranton and eight miles northeast of the City of Wilkes-Barre. This location is conveniently situated near the Endless Mountains and Pocono Mountains regions of northeast PA, which are prime tourist destinations for the state. **Figure 1-1** depicts the Airport's setting within the region.

The Airport can be accessed by Interstate 81, which runs north to south and is located on the western perimeter of AVP. Route 315, which spans from the City of Wilkes-Barre to the Airport entrance, also provides access to AVP. Just north of the Airport is the Interstate 84 interchange, which runs east to west from Scranton to the Massachusetts Turnpike (Interstate 90). South of AVP is the Interstate 80 interchange, which runs east to west from New Jersey to California. Other major corridors that converge in the northeast PA area include the PA Turnpike, also known as Interstate 476, which runs north to south from Clarks Summit, PA to Chester, PA outside of Philadelphia and U.S. Route 11, which parallels I-81 from Scranton to Harrisburg. Daily bus service from the Wilkes-Barre/Scranton area to New York, New Jersey, and Philadelphia also provides access to and from the Airport and northeast PA region. **Figure 1-2** depicts the local transportation system providing access to the Airport.

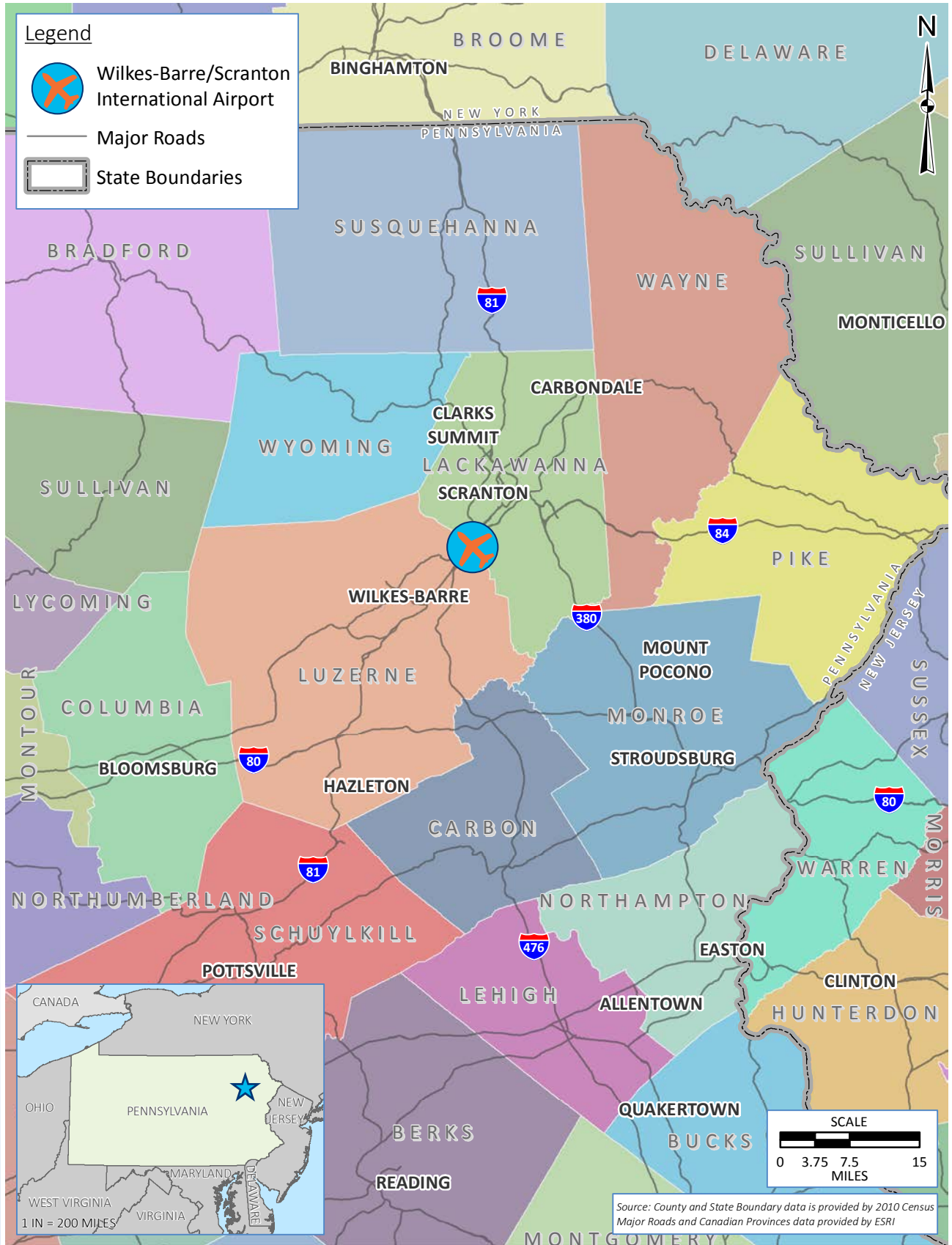
1.2.6. Meteorological Conditions/Climate

The Airport vicinity experiences all four seasons with warm summers and cold, snowy winters. According to the Climate Normals from 1981 to 2010 provided by the National Oceanic and Atmosphere Administration (NOAA), the warmest month is July with an average maximum temperature of 81.9°F and the coldest month is January with an average minimum temperature of 18.5°F. The average annual temperature for the area is 49.3°F. September has the highest amount of precipitation at 4.07 inches, while the annual monthly average is 3.19 inches. The average annual snowfall is 46.2 inches with the seasonal minimum of 4.5 inches in 2006 and the season maximum of 80.2 inches in 1994.

1.3. AIRPORT SERVICE AREAS

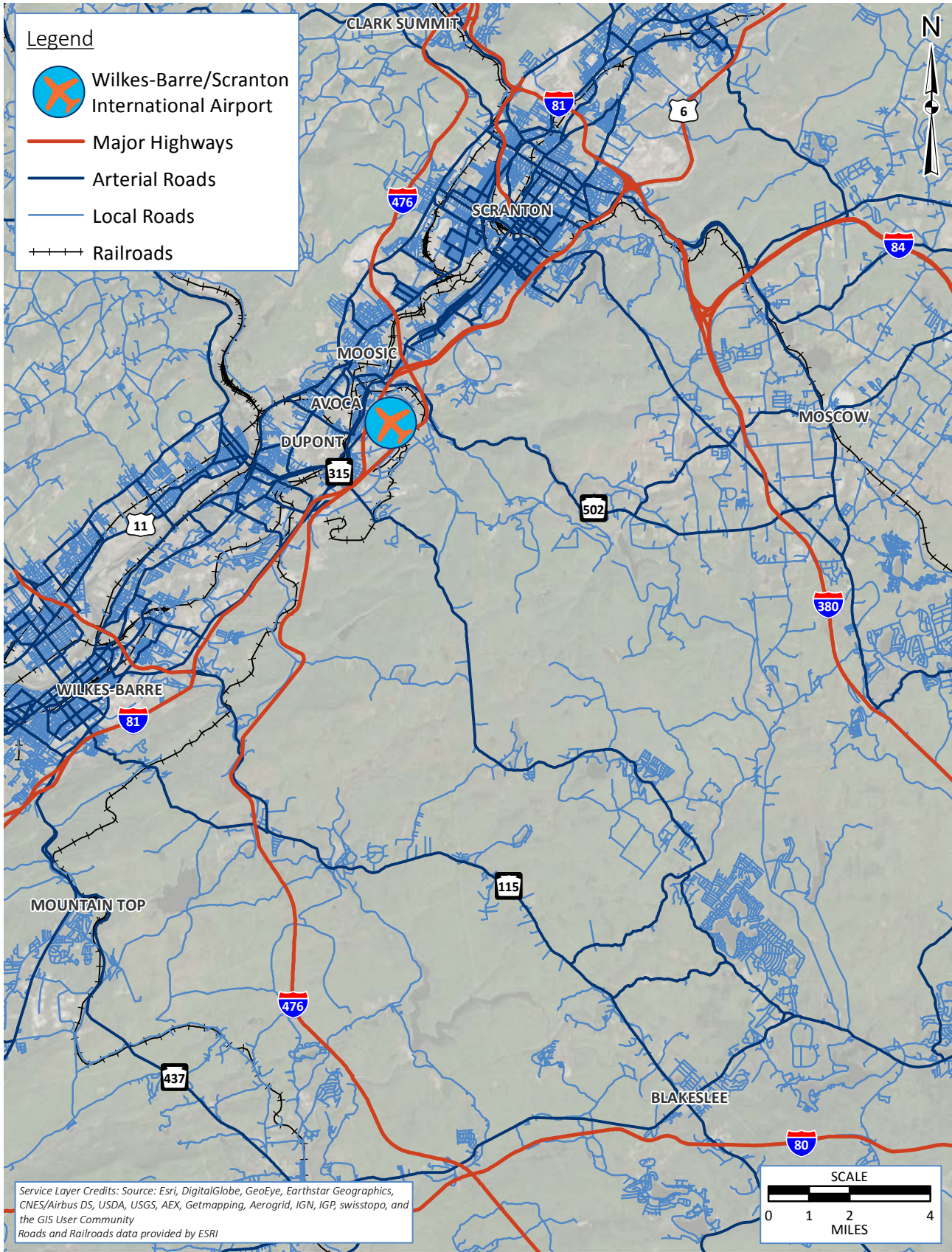
AVP is a commercial service airport that serves the central southern tier of New York State and portions of north central and north east Pennsylvania. A commercial service airport's service

Figure 1-1: AVP Location Map



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Figure 1-2: Local Transportation System



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area can be generally defined as the geographic region within which the majority of scheduled AVP Location Map air passengers reside/visit. These regions comprise the market areas, which serve as the basis for compiling socioeconomic and demographic data to be used in developing forecasts of aviation demand.

AVP serves the following airlines and destinations (see **Figure 1-3**):

- American – Charlotte; Philadelphia
- United – Chicago O’Hare; Newark
- Chartered flights to the Bahamas and Orlando International
- Delta – Atlanta; Detroit
- Allegiant – Orlando-Sanford; Tampa-St. Petersburg

The primary commercial service area is generally made up of those areas located within a 30-minute drive time of the Airport. For a variety of reasons, such as proximity to other airports, non-stop flights, and low airfares, passengers occasionally drive in excess of 60 or 90 minutes when flying. **Figure 1-4** displays the 30, 60, and 90-minute drive times from AVP. Notable cities and towns along with their respective drive times from AVP include:



- 30-Minute – Wilkes-Barre, Scranton, Clarks Summit, and Carbondale
- 60-Minute – Hazleton, Bloomsburg, Stroudsburg, and Mount Pocono
- 90-Minute – Binghamton (NY), Owego (NY), Whitney Point (NY), Port Jarvis (NY), Towanda, Clinton (NJ), Easton, Allentown, Quakertown, Pottsville, and Danville

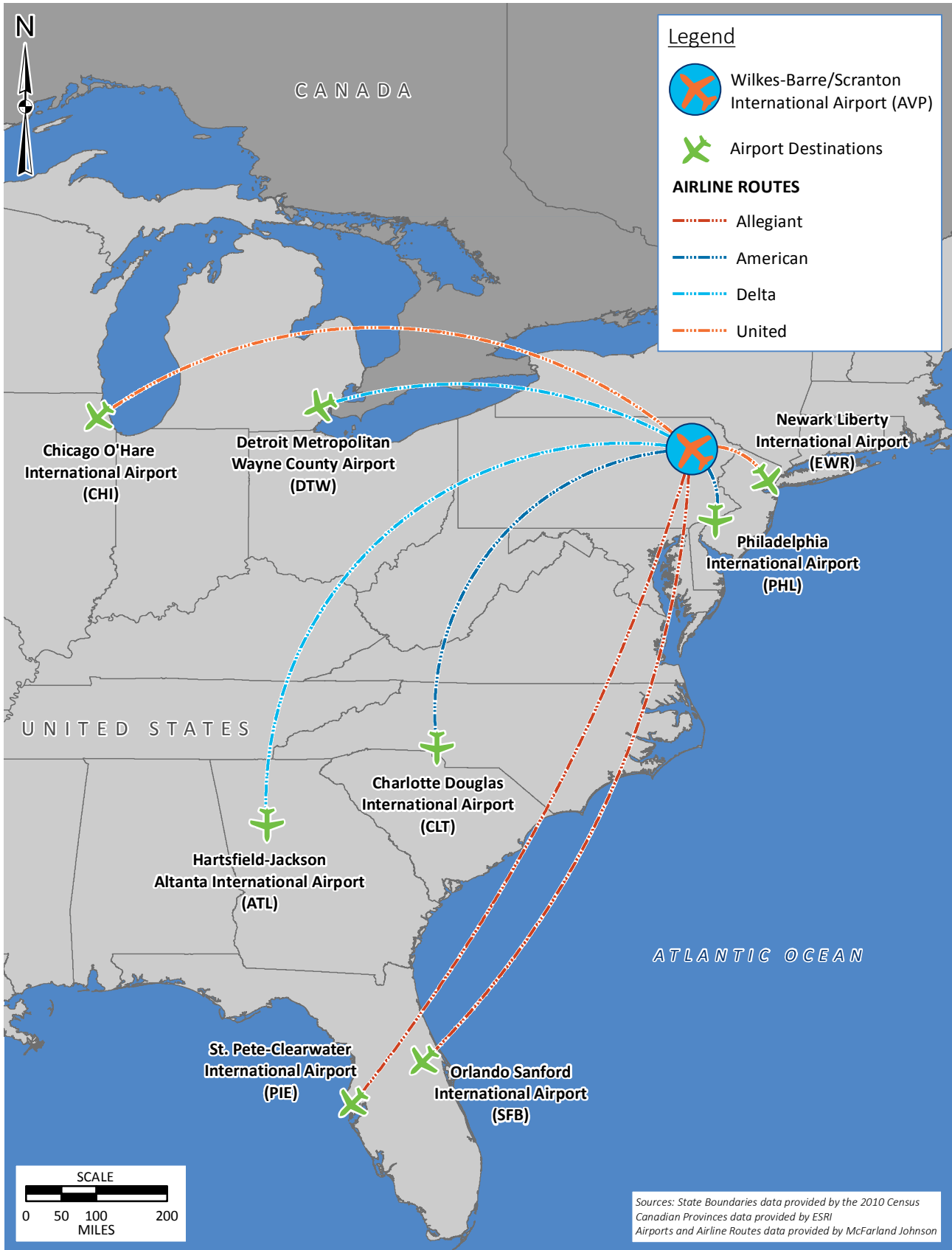
Competing airports located within an airport’s service area vie for passengers, especially leisure travelers with flexible schedules. Some factors, which determine what airport a passenger will choose to utilize, include:

- Travel time to the other commercial service airports
- Number of non-stop flights / destinations / frequency
- Average airfares
- Airport congestion / delays / reliability
- Airport marketing

1.3.1. Regional Commercial Airports

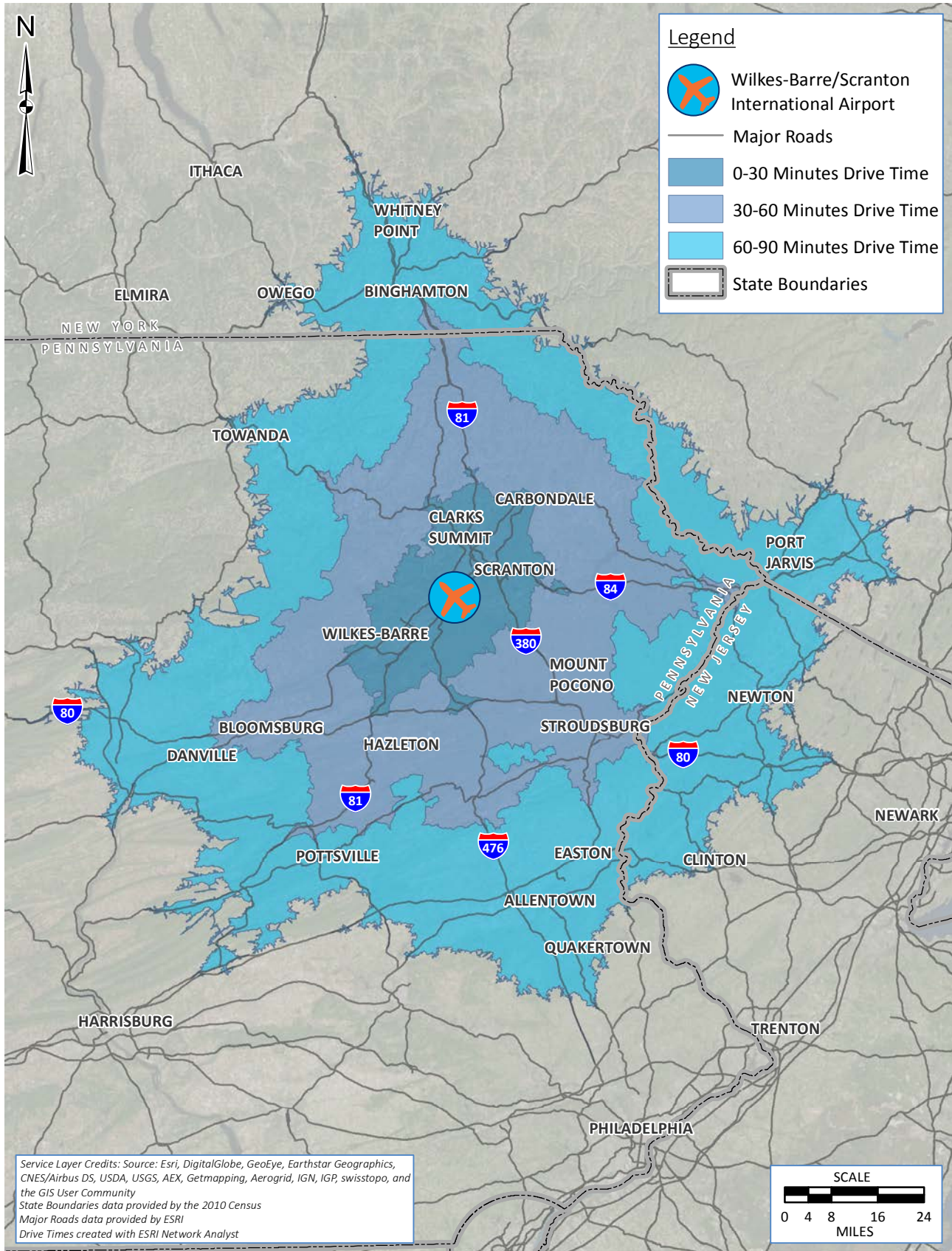
The closest alternative commercial airline service airports are the Greater Binghamton Airport, Lehigh Valley International Airport, and Williamsport Regional Airport. These three airports are all within 90 minutes drive time of AVP. For the most part, each of the four airports serves its respective city.

Figure 1-3: AVP Airlines and Destinations



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Figure 1-4: AVP Service Area Drive Times



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Of all four airports, AVP shares the highest number of business destinations with Lehigh Valley Airport as shown in **Table 1-1**.

Table 1-1: Average Daily Service for AVP Area Airports

Destination	Wilkes-Barre/Scranton	Lehigh Valley*	Binghamton	Williamsport
Orlando	0.29	2	0	0
Tampa	0.29	1.1	0	0
Fort Myers	0	0.6	0	0
Charlotte	4	3	0	0
Philadelphia	12	3	2	1
Atlanta	2	3	0	0
Chicago	2	3	0	0
Newark	4	4	2	0
Detroit	4	4	4	0

* Not all destinations are shown.

Sources: <http://www.flyipt.com>, www.binghamtonairport.com, www.flylv.com, and <http://flyavp.com>.

AVP and Lehigh Valley provide both business and leisure destinations, whereas Binghamton and Williamsport provide either only leisure or only business destinations. This could lend the Airport to being the primary “go-to” for local travelers. AVP has the highest number of daily flights to Philadelphia. AVP, Lehigh Valley, and Binghamton have similar numbers of daily flights to Newark and Detroit. On the leisure travel side, Lehigh Valley has more daily flights to Orlando and Tampa and provides an additional destination (Fort Myers, Myrtle Beach, and Punta Gorda) above AVP’s destinations.

For a variety of reasons, some airline passengers will drive in excess for their air travel needs. For leisure passengers, the reasons typically involve lower fares and non-stop flights to leisure destinations. For business travelers, the reasons typically involve direct flights, airline loyalty, and improved schedule options. Refer to **Table 1-2** and **Figure 1-5** for all the commercial service airports in the surrounding vicinity within a three-hour drive of AVP.

Typically, travelers will travel between 2 and 2.5 hours for a flight. There are ten regional airports that are between 2 and 2.5 hours drive from AVP. Similar to AVP, the majority of the airports have American, Delta, and United Airlines service. However, some of the airports only have one airline, for instance the Trenton-Mercer Airport has Frontier service and the Lancaster Airport has Sun Air Express service. Some of the other airports provide a low cost airline option, such as Frontier, Allegiant, Southwest, JetBlue and/or Spirit. Allegiant provides low cost flight options for AVP and conveniently offers non-stop flights to two



destinations in Florida. The Ithaca Tompkins and the University Park Airports are not served by low cost airlines.

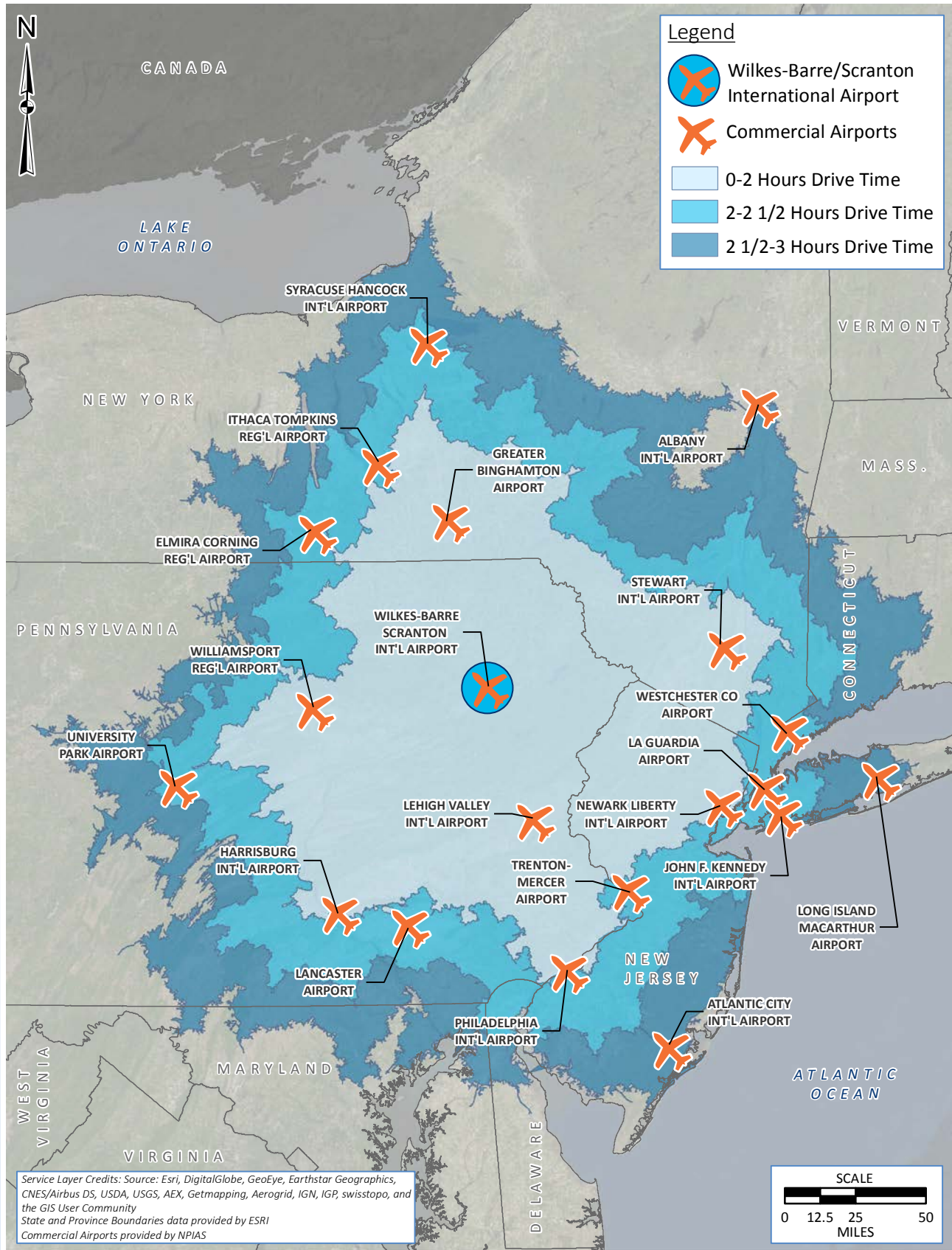
Furthermore, within the 2 to 2.5-hour drive time there are four large hub airports: John F. Kennedy, LaGuardia, Newark, and Philadelphia. These large hub airports have a variety of national and international airlines to multiple destinations. AVP ranks in the middle for airline destinations. AVP stays competitive by carrying major national airlines that provide a variety of connections, which allows travelers to access the world. Furthermore, the non-stop flights provided by Allegiant are a great asset to AVP and its leisure travelers. Allegiant allows travelers to fly directly to their destination without having to worry about making another connection.

Table 1-2: Commercial Service Airports in Vicinity

Airports	Distance (nm)	Enplanements	Airlines	Destinations	Drive Time (hrs)
Wilkes-Barre/Scranton	0	218,573	4	8	0
Lehigh Valley	43	305,535	4	8	0-2
Binghamton	53	88,974	3	3	0-2
Williamsport	54	24,787	1	1	0-2
Elmira Corning	72	150,637	4	5	2-2½
Stewart	74	166,211	4	5	0-2
Trenton-Mercer	76	322,473	1	10	2-2½
Lancaster	77	2,390	1	2	2-2½
Ithaca Tompkins	77	94,488	3	3	2-2½
Newark Liberty	80	17,850,108	25	153	0-2
Harrisburg	83	685,908	5	11	0-2
La Guardia	90	13,702,184	14	65	2-2½
Philadelphia	91	14,740,076	12	112	2-2½
Westchester County	92	731,057	6	14	2-2½
John F. Kennedy	98	26,780,087	82	169	2-2½
University Park	101	141,094	3	4	2-2½
Syracuse Hancock	108	978,125	6	13	2-2½
Albany	120	1,129,652	6	16	2½-3
Long Island MacArthur	123	566,449	2	6	2½-3
Atlantic City	124	623,119	2	6	2½-3

Sources: www.airnav.com, FAA TAF (2015), www.iflyavp.com, www.panynj.gov, www.phl.org, www.syrairport.org, www.iflyvia.com, flyipt.com, www.binghamtonairport.com, www.chemungcounty.com, www.nj.gov, www.lancasterairport.com, www.flyithaca.com, www.flyhia.com, www.airport.westchestergov.com, www.universityparkairport.com, www.albanyairport.com, and www.macarthurairport.com.

Figure 1-5: AVP and Surrounding Commercial Airports



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1.3.2. Regional General Aviation Airports

In addition to AVP providing commercial airline services, the Airport also accommodates GA. In 2015, AVP had a total of 57,415 airport operations and 41,850 of those operations were generated by GA, therefore the majority of airport operations are GA. Within 30 nautical miles there are nine other GA airports. Amongst the GA airports, AVP ranks second in annual operations, only 138 operations behind Seamans Field. The 4,300 ft x 150 ft runway at AVP is mainly used for GA and ranks third longest after Pocono Mountains and Hazleton. The GA airports in the region range from two to 66 based aircraft. AVP is in the middle range with 47 based aircraft. AVP is one of four airports that provide 100LL and Jet A fuel. Lastly, AVP is the only airport that has a precision approach. For more information refer to **Table 1-3** and **Figure 1-6**.

Table 1-3: Nearby General Aviation Airports

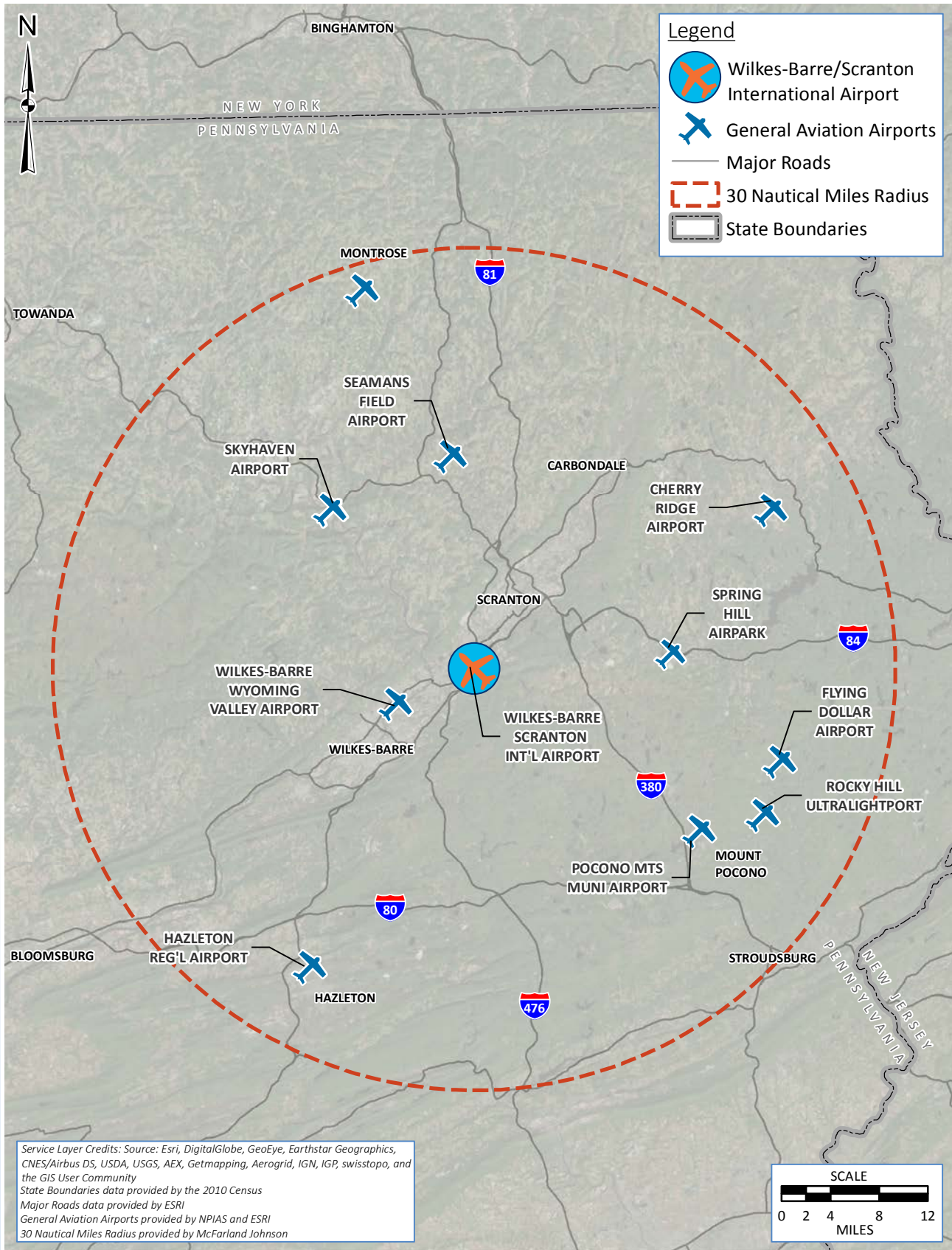
Airport	Distance	Runway (ft)	Approach	Fuel	Based Aircraft	Total Annual Operations
Wilkes-Barre/Scranton	0	7,501 x 150 4,300 x 150	Precision	100LL/ Jet A	47	57,415
Wilkes-Barre Wyoming Valley	6.3 nm SW	3,375 x 75 2,191 x 100	Non-Precision	100LL/ Jet A	50	28,125
Spring Hill Airpark	13.9 nm E	2,478 x 42	Non-Precision	100LL	4	2,010
Seamans Field	15.1 nm N	2,500 x 50	Non-Precision	100LL	54	27,882
Skyhaven	15.2 nm NW	2,007 x 50	None	100LL	66	22,090
Pocono Mountains	19.6 nm SE	5,001 x 75 3,999 x 100	Non-Precision	100LL/ Jet A	48	21,800
Flying Dollar	22.7 nm E	2,405 x 100	None	None	2	250
Rocky Hill Ultralightport	23.2 nm SE	1,000 x 100	None	None	2	150
Cherry Ridge	23.7 nm NE	2,986 x 50	Non-Precision	100LL	58	23,010
Hazleton	24.4 nm SW	4,898 x 100	Non-Precision	100LL/ Jet A	40	23,100

Sources: Airport management, www.airnav.com, FAA TAF (2015), and Airport IQ 5010.

1.4. SOCIOECONOMIC DATA

In order to understand the socioeconomic atmosphere surrounding the Airport, data was collected and placed in multiple tables. The tables provide a comparison between the United

Figure 1-6: AVP and Nearby General Aviation Airports



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States, the State of Pennsylvania, the two Counties AVP resides in, and surrounding Cities, Boroughs, and Townships that makes up the Wilkes-Barre/Scranton Area.

The total percent change in population from 2000 to 2014, shows that the Wilkes-Barre/Scranton Area has not experienced a great change in population. The only municipality surrounding AVP that has increased in population is the Borough of Moosic. However, the Counties of Lackawanna and Luzerne have experienced a slight increase in population and the State as a whole has increased in population, but not at the rate of the national population as shown in **Table 1-4**.

The Wilkes-Barre/Scranton Area is racially and ethnically diverse. The City of Wilkes-Barre has a larger percentage of African Americans than the State and the Nation. However, nationally there is a higher percentage of Hispanic/Latino population than in the State or the Wilkes-Barre/Scranton Area. The City of Scranton has a larger percent of Asians than the State and the County of Luzerne has a higher percentage of Native Americans than the State, but the Nation has a higher percentage overall, as shown in **Table 1-5**.

The majority of municipalities that surround the Airport are below the State and national unemployment and median household income rate, as shown in **Table 1-6**. Only the City of

Table 1-4: Population Change 2000-2014

Area	2000 Population	2010 Population	Population Estimate 2014	Total % Population Change (2000-2014)
United States	281,421,906	308,745,538	314,107,084	11.6%
State of Pennsylvania	12,281,054	12,702,379	12,758,729	3.9%
County of Lackawanna	213,295	214,437	214,023	0.3%
County of Luzerne	319,250	320,918	320,392	0.4%
City of Wilkes-Barre	43,123	41,498	41,202	-4.5%
City of Scranton	76,415	76,089	75,842	-0.7%
Borough of Moosic	5,575	5,719	5,712	2.5%
Pittston Township	3,450	3,368	3,382	-2.0%
Borough of Dupont	2,719	2,711	2,708	-0.4%
Borough of Avoca	2,851	2,661	2,663	-6.6%

Source: United States Census Bureau, American Fact Finder, 2014.

Table 1-5: Racial and Ethnic Characteristics

Area	White	African American	Asian	Native American	Hispanic/Latino
United States	73.80%	12.60%	5.00%	0.80%	16.90%
State of Pennsylvania	81.90%	10.90%	3.00%	0.20%	6.10%
County of Lackawanna	93.00%	2.90%	2.00%	0.10%	5.60%
County of Luzerne	91.00%	3.80%	1.00%	0.30%	8.00%
City of Wilkes-Barre	77.80%	13.60%	1.40%	0.20%	13.30%
City of Scranton	85.80%	7.00%	3.60%	0.20%	10.90%
Borough of Moosic	100.00%	0.00%	0.00%	0.00%	0.30%



Area	White	African American	Asian	Native American	Hispanic/Latino
Pittston Township	97.90%	1.40%	0.00%	0.00%	0.70%
Borough of Dupont	94.20%	0.00%	0.00%	0.00%	0.00%
Borough of Avoca	98.00%	0.00%	1.80%	0.00%	0.50%

Source: United States Census Bureau, American Fact Finder, 2014.

Table 1-6: Age, Employment, and Income

	Unemployment Rate	Percent In Labor Force	Median Household Income
United States	5.8%	63.9%	53,482
State of Pennsylvania	5.4%	62.9%	53,115
County of Lackawanna	4.6%	60.0%	46,056
County of Luzerne	5.1%	60.2%	45,118
City of Wilkes-Barre	5.6%	56.7%	31,361
City of Scranton	5.2%	57.5%	37,551
Borough of Moosic	3.0%	61.7%	51,802
Pittston Township	7.5%	62.00%	56,100
Borough of Dupont	4.9%	63.5%	47,849
Borough of Avoca	3.2%	64.6%	48,864

Source: United States Census Bureau, American Fact Finder, 2014.

Wilkes-Barre and Pittston Township have a higher unemployment rate than the State. Pittston also surpasses the national unemployment rate. Although Pittston has a higher unemployment rate, the Township is the only municipality in the Area that has a median household income above the State and Nation. The next municipality that is closest to the State and national median household income rate is the Borough of Moosic. The remaining municipalities have a lower than average household income, the lowest are the Cities of Wilkes-Barre and Scranton.

According to the 2014 American Community Survey provided by the U.S. Census American Fact Finder, the Counties of Lackawanna and Luzerne major industries are education, human services, and health care (28.3%, 24.9%); retail (12.5%, 13.9%); and manufacturing (11.3%, 13.0%). The top ten employers in the two counties are government, local school districts, colleges/universities, staffing agencies, medical service providers, and hospitals, along with retailers such as Wal-mart and Amazon. In addition, Bank of America is a top ten employer for Lackawanna County and the Mohegan Sun Pocono casino is a top ten employer for Luzerne County.

1.5. AIRSIDE FACILITIES

Discussion of airport facilities in this report will be divided into airside and landside sections. Airside facilities are associated with the taxiing, takeoff, and landing of aircraft (i.e., the airfield and its components). The airfield facilities discussed below are the following:

- Runways
- Taxiways
- Lighting and Instrumentation
- Visual and Navigational Aids

The airside facilities at AVP are illustrated in **Figure 1-7**. There is an on-going pavement management study. Results of this study will be included as part of this Master Plan in **Appendix A**.



1.5.1. Runways

AVP has two bi-directional runways: Runway 4-22 is the primary runway and Runway 10-28 is the crosswind runway.

Runway 4-22

Runway 4-22 is 7,501 feet long and 150 feet wide and is aligned in a north-northeast to south-southwest direction. It has grooved asphalt pavement, which is in good condition, and supports weights of 133,000 pounds single-wheel, 173,000 pounds dual-wheel, and 300,000 pounds dual-wheel in tandem. The pavement classification number (PCN) is published as 45/F/A/X/T. This PCN will be updated in the ongoing pavement management plan. As the primary runway, it supports all airport users and aircraft types.

Runway 4-22 is equipped with high intensity runway edge lights (HIRL). In addition, Runway 4 is equipped with a 1,400-foot medium intensity approach lighting system with runway alignment indicator lights (MALSR). Both runway ends have a visual glide slope indicator (VGSI). Runway 4 has a four-light precision approach path indicator (PAPI) with a standard three-degree glide slope. Runway 22 has a four-box visual approach slope indicator (VASI) with a standard three-degree glide path and runway end identifier lights (REILs). Runway 22 has a right-handed traffic pattern.

Both ends of Runway 4-22 have precision instrument landing system (ILS) approaches. The glide slope antennas are located opposite Taxiway B2 for the Runway 4 end opposite and north of Taxiway B5 for the Runway 22. The localizer serving the Runway 4 approach is sited opposite Taxiway B5 and the localizer serving the Runway 22 approach is sited immediately south of Taxiway B2. Approach visibility minimums are 2,400 horizontal and 300 feet above ground level (AGL) vertical for Runway 4 and 5,500 feet horizontal and 387 feet AGL vertical for Runway 22.

Runways 4 and 22 are equipped with an engineered materials arresting system (EMAS) to slow down aircraft over-running the runway and minimize the potential for over-run distance, structural damage to aircraft, and injuries to passengers and crew. Due to the EMAS beds, full runway safety area requirements are met and the declared distances takeoff runway available (TORA), takeoff distance available (TODA), accelerate stop distance available (ASDA), and landing distance available (LDA) are all the full runway length of 7,501 feet for both runway ends.

Runway 10-28

Runway 10-28 is 4,300 feet long, 150 feet wide, and is aligned in an east to west direction. It has grooved asphalt pavement, which is in good condition, and supports weights of 58,000 pounds single-wheel, 80,000 pounds dual-wheel, and 125,000 pounds dual-wheel in tandem.

Runway 10-28 is equipped with medium intensity runway edge lights (MIRL). Runway 10 is equipped with a two-light PAPI with a standard three-degree glide slope.

Runway 28 is a visual runway with no visual glide slope indicator available. Both Runways 10 and 28 have REILs and right-handed traffic patterns.

Declared distances of the full runway length for each side are provided to result in the following: TOFA, TODA, ASDA, and LDA are 4,300 feet.

1.5.2. Taxiways

AVP has nine taxiways designated A through E (including B2, B3, B4, and B5). Each of the taxiways are constructed with standard yellow taxiway markings. All taxiways are lit with blue omnidirectional medium intensity taxiway lights (MITL).

Taxiway A is approximately 90 feet wide and connects the general aviation apron with Taxiway B. It provides direct access to Runway 4-22 via Taxiway B2, which is a non-standard condition based on FAA's geometry criteria.

Taxiway B is a partial parallel taxiway to Runway 4-22. It is 75 feet wide and 400 feet from the Runway 4-22 centerline.

Taxiway B2 is approximately 113 feet wide and is an extension of Taxiway A. It connects Taxiway B with Runway 4-22 approximately 1,200 feet from the Runway 4 threshold.

Taxiway B3 is approximately 87 feet wide and provides access to Runway 4-22 from the fire station and passenger terminal ramps. Taxiway B3 provides direct access from the ramp to Runway 4-22, which is a non-standard condition.

Taxiway B4 is approximately 135 feet wide and is a taxiway stub connecting the passenger terminal ramp with Taxiway B.

Taxiway B5 is approximately 100 feet wide and connects Taxiway B with Runway 4-22 approximately 1,200 feet from the Runway 22 threshold.

Figure 1-7: Existing Airport Layout



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Taxiway C is approximately 100 feet wide and provides access to Runway 4-22 from the passenger terminal ramp. It provides direct access from the ramp to the runway, which is a non-standard condition.

Taxiway D ranges in width between 50 and 75 feet and serves as a full-length parallel taxiway to Runway 10-28. Taxiway D has a 300-foot separation from Runway 10-28.

Taxiway E is approximately 50 feet wide and serves as an entrance/exit taxiway to Runway 10. It is located approximately 190 feet from the Runway 10 threshold and provides direct access from the passenger terminal ramp to Runway 10, which is a non-standard condition.

1.5.3. Pavement Management Plan

Appendix A of this master plan presents the airfield pavement management study (APMS) for AVP. The AMPS provides a detailed account of existing pavement conditions while documenting pavement distresses, to include severity and quantities, and identifying a pavement condition index (PCI) value for each pavement section and branch using FAA approved software. This allows for a comprehensive understanding of pavement conditions across the airfield and enables the thoughtful development of a pavement maintenance and improvement program. The pavement condition index map prepared is the APMS is presented as **Figure 1-8**.



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1.5.4. Lighting and Instrumentation

Lighting

Runway and taxiway edge lights are provided on Runways 4-22 and 10-28 and all taxiways. HIRL are provided on Runway 4-22 and MIRL are installed on Runway 10-28. Runway 4 is also equipped with a MALS. All taxiways are equipped with MITL. Airfield lighting is controlled by the on-site airport electric vault. The airport's electrical vault is located in the generator building and is in good condition. The Airport plans on replacing the control computers and software for the runway lighting controls and the airfield lighting generator within the planning period.

Instrument Approaches

Instrument approaches to AVP are made up of a series of predetermined maneuvers that position an aircraft to a point where the pilot can make a visual landing. Information related to the existing instrument approaches at AVP was obtained from the U.S. Terminal Procedures – Northeast (NE)-4, effective until April 28, 2016.

Instrument Landing System

An ILS provides horizontal and vertical guidance to a runway end, which allows pilots to land aircraft when visual navigation is limited. The ILS is used during poor weather conditions with low visibility conditions. Currently, ILS precision approaches are available on Runways 4 and 22. The ILS provides pilots with a set of cloud ceiling height and visibility requirements, referred to as minimums, to land under these conditions. The minimums for the CAT I ILS on Runway 4 consist of a decision height of 300 feet AGL (cloud ceiling) and 2,400 feet visibility. The minimums for the CAT I ILS on Runway 22 consist of a decision height of 268 feet AGL (cloud ceiling) and 4,500 feet visibility.



The electronic components that comprise the ILS are the localizer and glide slope. The localizer signal is used to establish and maintain the aircraft's horizontal position until visual contact confirms the runway alignment and location. The glide slope is an electronic transmitter that emits signals used to establish and maintain the aircraft's descent rate until a pilot can visually confirm the runway alignment and location.

GPS/RNAV Approaches

At AVP, pilots can use Global Positioning System (GPS) equipment. The GPS approaches are provided by satellite navigation systems. GPS utilizes range measurements from 30 satellites to determine an aircraft's position anywhere in the world. An aircraft must be properly equipped with antennas and receiver-processors in order to receive positioning, velocity, and timing from the satellites. Runway 4 minimums are a 200-foot AGL decision height (cloud ceiling) and 2,400-foot visibility. Runway 22 minimums are a 245-foot AGL decision height and 4,000-foot visibility.

Automated Surface Observing System (ASOS)

Weather reporting equipment at AVP consists of an ASOS located near the air traffic control tower. An ASOS provides continuous minute-by-minute observations and performs basic observing functions necessary to generate a meteorological terminal air report (METAR) and other aviation weather information. An ASOS has the capability to report altimeter, wind, temperature/dew point, density altitude, visibility, clouds/ceiling, precipitation, and remarks.



Runway Visual Range (RVR) / Transmissometer

Runways 4 and 22 are equipped with a touchdown RVR located between the Runway 22 and Runway 28 approach ends. RVR values are measured by transmissometers mounted on 14-foot towers positioned 250 feet apart along the runway. The transmissometer has a projector and a receiver. According to the Aeronautical Information Manual (AIM), a known intensity of light is emitted from the projector and is measured by the receiver. Any obscuring matter such as rain, snow, dust, fog, haze, or smoke reduces the light intensity arriving at the receiver. The resultant intensity measurement is then converted to an RVR value by the signal data converter. These values are displayed by readout equipment in the associated air traffic facility and updated approximately once every minute for controller issuance to pilots.

Very High Frequency Omnidirectional Range / Tactical Air Navigation (VORTAC)

A VORTAC is a collocated very high frequency omnidirectional range (VOR) and a tactical air navigation system (TACAN) beacon. A VORTAC facility includes a VOR azimuth, a TACAN azimuth, and a TACAN distance at one site. Both VOR and TACAN components operate simultaneously and provide all three services at all times.

The AVP VORTAC operates on the 111.6 frequency. The VOR portion is unusable between 290 and 305 degrees beyond 15 nautical miles (nm) and below 6,000 feet.

1.5.5. Visual and Navigational Aids

Visual approach aids at the airport include VASIs, PAPIs, wind cones, and a rotating beacon.

VASIs are lighting systems that provide pilots with visual descent guidance information during the approach to a runway. These lights are visible from three to five miles during the day and up to 20 miles or more at night. The visual glide path of the VASI provides safe obstruction clearance within plus or minus 10 degrees of the extended runway centerline and to four nautical miles from the



runway threshold. There is a four box VASI unit on the left side of Runway 22 with a standard three-degree glide path. The FAA owns the VASI.

PAPIs use light units similar to VASIs but are installed in a single row. PAPIs vertically guide a pilot to the runway with a narrower beam of light than the VASI; therefore, the PAPI is more precise. PAPIs have an effective visual range of approximately five miles during the day and up to 20 miles at night. There are two PAPI units at AVP. Runway 4 is equipped with a four-box PAPI on the right of the runway, which has a standard three-degree glide path. Runway 10 has a two-box PAPI located left of the runway with a standard three-degree glide path. Both PAPIs are owned by the Airport.

There are four wind cones located on the airfield; they are located between Taxiways B, B4, and D; at the Runway 22 hold line on Taxiway B5; north of the Runway 28 touchdown zone markings; and north of the Runway 4 PAPI and glide slope equipment.

In addition to these visual aids, the Airport also has a rotating beacon to assist pilots in locating the Airport during nighttime and inclement weather. At civil airports such as AVP, a rotating beacon emits alternating white and green flashes to indicate the location of the airport. The beacon at AVP is located atop the ATCT cab.

1.6. LANDSIDE FACILITIES

Landside facilities support the many activities and services involved in storing and maintaining aircraft before and after use of the airside facilities. Typical landside facilities include aircraft hangars and aprons, aviation fuel facilities, and access roads. Well-maintained and affordable landside facilities are important to an airport's efficient operation and success. Landside facilities and services have been divided into the following categories and will be discussed in detail on the pages to follow:

- General Aviation
- Air Cargo
- Vehicle Access and Parking (non-terminal)

Landside facilities are summarized in this section and displayed in **Figure 1-9**.



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Figure 1-9: Existing Landside Facilities



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1.6.1. General Aviation (GA)

GA landside facilities support both based and itinerant aircraft operations (except airline) at AVP. Components of GA landside facilities



include Fixed Base Operator (FBO) facilities, aircraft hangars, apron areas, and automobile parking areas. GA is comprised of all flying with the exception of military and commercial service. GA users at AVP include individuals flying for business or personal reasons, maintenance, and charter.

Aviation Technologies, Inc.

Aviation Technologies provides FBO services at AVP. Services provided include aviation fuel (100LL and Jet A) to commercial, military, and GA aircraft; maintenance; oxygen; de-icing; GPU/Power cart; aircraft cleaning; and storage (hangars).

Aviation Technologies provides 24-hour maintenance services and is the only certified FAR Part 145 repair station at AVP. Its technicians have a wide range of experience servicing, repairing, and maintaining corporate and FAR Part 135 aircraft including King Air, Citation, Hawker, and Gulfstream airframe models. It also performs repairs and down line maintenance for Part 121 commercial operations including United, Delta, and Allegiant.

Aviation Technologies services all levels of GA aircraft from single engines to turbo props providing routine maintenance and repairs, annual or phase inspections, and engine repair and replacement.

It also provides domestic and international charter services under 14 Code of Federal Regulations (CFR) Part 380.

Passenger and crew amenities include:

- Pilots lounge
- Communications (telephones and wireless internet)
- Lobby area
- Conference room
- Courtesy vehicle
- Catering
- Flight planning

Additionally, Aviation Technologies offers above-wing (ticket counter and gate agent services) and below-wing (baggage handling and ramp agent services) for charter and scheduled service.

Hangars

Including the GA terminal building, there are five conventional hangars at AVP. Four of these hangars are used for aircraft storage and one is being used for maintenance, as shown in Figure 1-9. The aircraft maintenance hangar and associated administrative offices were built in 1989 and are starting to age. Mechanical systems are reaching the end of their useful life and general updates may be needed within the planning period.

Apron Areas

There are two general aviation apron areas at AVP. Apron and run-up areas are shown on Figure 1-9.

South General Aviation Apron

The South General Aviation Apron is the newest apron at AVP and is located southwest of the GA terminal and hangar areas. The apron is 440 feet wide and 293 feet deep. It is lit by overhead lights and a helicopter parking/operating area is located on the southernmost corner of the apron (closest to the Runway 4 threshold). This apron is used for aircraft tie-downs and helicopter operations and is in good condition.

General Aviation Apron

The General Aviation Apron is south and west of the commercial terminal apron. It is 968 feet wide and 370 feet deep. There are five conventional hangars along the north side of this apron. This apron is used for aircraft tie-down storage and maintenance activities and is in good condition.

1.6.2. Air Cargo

The Cargo Apron is located north of the commercial terminal apron. It is 13,500 square yards in size and was constructed in 1996 followed by a 4,000-square foot air cargo facility in 2004.

United Parcel Service (UPS), Federal Express (FedEx), and DHL have cargo operations at AVP. UPS (operated by contract carrier Martinaire Cargo) utilizes a Cessna 208 Caravan aircraft. It operates Monday through Friday. The airplane holds approximately 3,000 pounds of cargo.

FedEx (operated by Wiggins Air) also operates a Cessna Caravan (C208) aircraft Monday through Friday. The Caravan aircraft is capable of carrying 3,000 pounds.

DHL (operated by Ameriflight) flies a Merlin 120, which has a payload capacity of approximately 3,950 pounds. It operates Tuesday through Friday, but does not base its aircraft at AVP.

1.6.3. Vehicle Access and Parking (Non-Terminal)

All general aviation facilities are accessed via Hangar Road, which connects to Terminal Road on the north side of the Airport. There are approximately 55 automobile parking spaces along Hangar Road which require parallel parking. Additionally, there are parking spaces available between some of the hangars.

1.7. COMMERCIAL PASSENGER TERMINAL FACILITIES

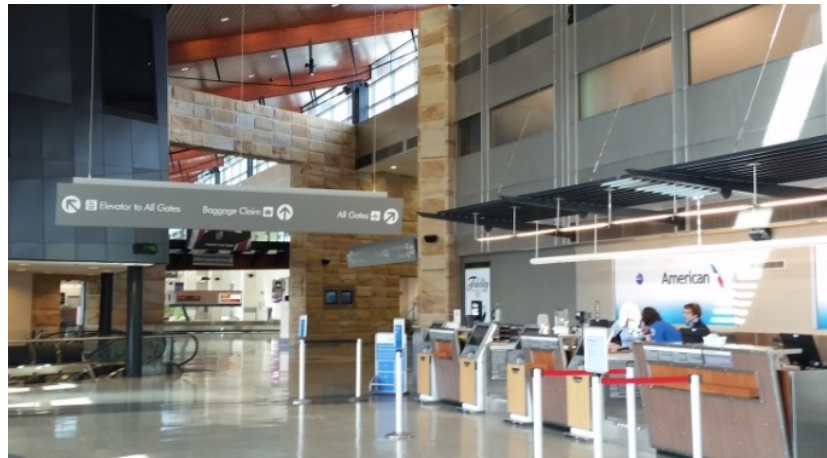
Joseph McDade Terminal Building was constructed in 2006 and spans 127,000 square feet. The terminal has two levels as shown in **Figure 1-10** and **Figure 1-11**.

1.7.1. First Level Terminal

The first level of the terminal includes rental car counters, baggage claim, restrooms, an information desk, limo and taxi stands, airline ticketing counters, and the turboprop boarding area.

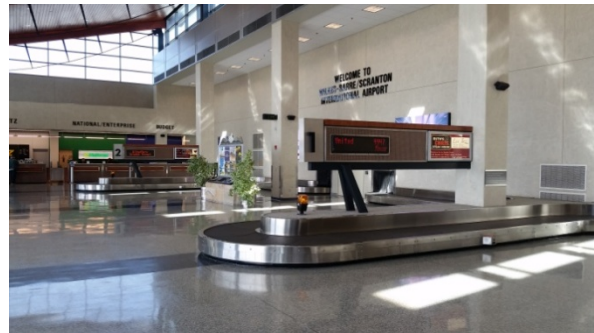
Airline Ticket Counters

The airline ticket counters consist of in-person and electronic check-in counters for approximately 120 linear feet of the terminal. This circulation and queuing area spans approximately 4,200 square feet.



Baggage Claim

Two baggage claim carousels serve AVP's passengers totaling approximately 200 linear feet. The baggage claim area spans approximately 5,000 square feet.



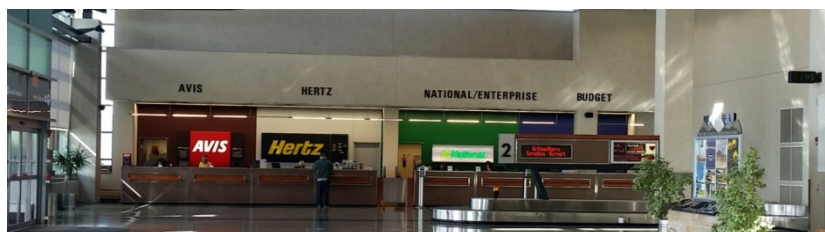
Turboprop Boarding Area

This area is also known as the commuter boarding area. It has two commuter gates and spans approximately 4,000 square feet.

Rental Car Counters

There are rental car counters for the following rental car agencies:

- Avis,
- Budget,
- Enterprise,
- Hertz, and
- National.

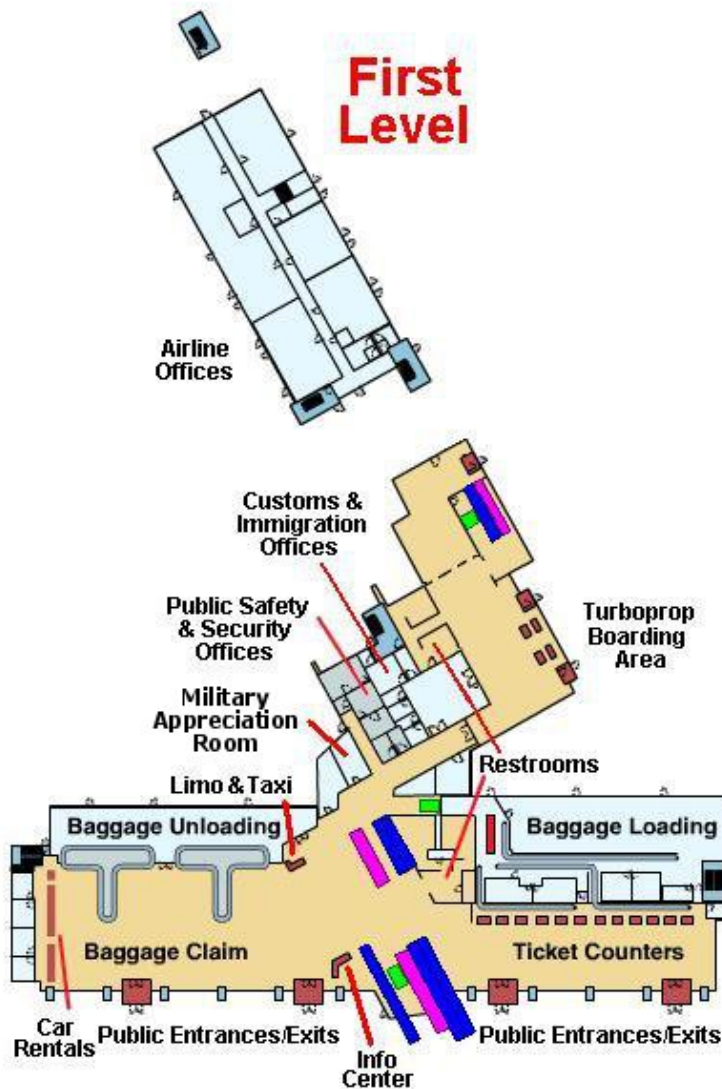


Additionally, a limo and taxi service stand is located on the opposite side of the rental car counters. Best Value Limousine provides ground transportation from this location.

Non-Public Areas

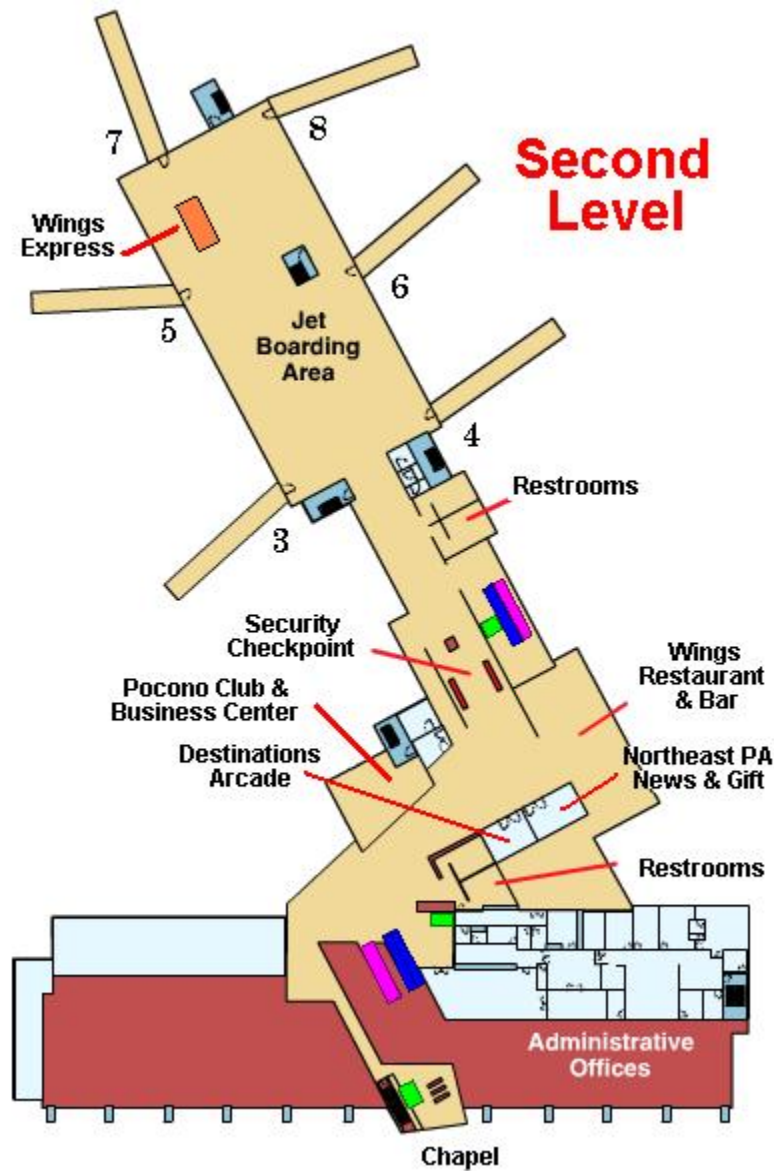
The first terminal level includes approximately 2,450 square feet of airline ticket offices immediately behind the ticket counters and 5,210 square feet of airline offices. Baggage loading/outbound baggage screening facility are located on the first level of the terminal. During peak traffic levels, the baggage screening for outbound flights can be taxed and has resulted in flight delays. Customs and immigration offices and public safety and security offices are also located on the first level of the terminal.

Figure 1-10: AVP Terminal Level 1



Source: Airport

Figure 1-11: AVP Terminal Level 2



Source: Airport

1.7.2. Terminal Access

Terminal access is provided by two-lane Terminal Drive to the first level of the terminal. In front of the terminal building the road expands to four lanes to provide space for drop-off and pick-up and lanes for through traffic to by-pass and exit.

1.7.3. Second Level Terminal

The second level of the terminal currently includes two restrooms, terminal concessions, a chapel, airline gates, security screening, and administrative offices. The two levels of the terminal are connected through escalators.

Airline Gates

The jet boarding area covers an area of approximately 15,000 square feet for the six airline gates, including queuing and circulation. As of March 2016, the following airlines use these gates: Delta, American, United, and Allegiant.

Concessions

Current concessions at the Airport include (March 2016):

- Wings Express
- Pocono Club and Business Center
- Destinations Arcade
- Wings Restaurant and Bar
- Northeast PA News and Gift



Non-Public Areas

The only non-public areas on the second level include the administrative and TSA offices, which cover approximately 8,200 square feet.

1.8. TERMINAL PARKING AND ACCESS FACILITIES

AVP has a parking garage that was constructed in 2003 and provides 640 parking spaces. Surface lots, also constructed in 2003, add up to 480 spaces (including 30 handicapped spaces). Covered parking in the garage is \$12 per day with a maximum of \$72 per week (the 7th day is free). Surface parking is \$9 per day.

AVP has a Frequent Parking Program for those passengers who fly 50,000 miles or more with an airline serving AVP. To participate, the passenger has to fill out an application and receive an Airport-issued parking permit to park in one of the Frequent Parking Member Spaces on the second floor of the Airport parking garage (subject to availability).



An employee parking lot (154 spaces), a rental car parking lot (117 spaces), and a local FBO parking lot (50 spaces) are also provided. Parking facilities are accessible via the Terminal Drive.

1.9. SUPPORT FACILITIES

1.9.1. Fuel Farm

The FBO is the sole provider of fuel on the Airport. The Airport owns and the FBO operates the four fuel tanks located south between the South General Aviation and General Aviation ramps. The fuel farm has four aviation fuel tanks and two tanks for automobile gasoline:



- One 20,000-gallon above-ground Jet A tank
- Two 15,000-gallon above-ground Jet A tanks
- One 12,000-gallon above-ground avgas tank
- One 1,000-gallon above-ground automobile fuel tank
- One 1,000-gallon above-ground diesel tank

Three fuel trucks provide fuel to all tenants on the Airport. Two 5,000-gallon fuel trucks are used for Jet A and one 750-gallon fuel truck is used for avgas (100 low lead).

1.9.2. Aircraft Rescue and Fire Fighting (ARFF)

The ARFF facility was built in 1999 and is located south of the terminal building. The ARFF facility houses equipment for Index B, but can provide Index C upon request. It is available 24 hours a day, 7 days a week. The facility has three bays, which house the following equipment:

- 1997 Oshkosh T-1500 Crash Truck
 - 1,500 gallons of water, 210 gallons of Aqueous Film-Forming Foam (AFFF)
 - 450 pounds of Purple K dry chemical
 - Roof turret rated at 750 GPM on high flow, 375 GPM on low flow
 - Bumper turret rated at 300 GPM
 - Dual agent booster reel
 - Two 100-foot long, 1 ¾-inch pre-connected hand lines
- 2000 E-One Titan Fire Truck
 - 1,500 gallons of water
 - 210 gallon AFFF
 - Roof turret rated at 750 GPM on high flow, 375 GPM on low flow
 - Bumper turret rated at 300 GPM
- 2012 Ford Super Duty Rosenbauer Airwolf Class 2
 - 300 gallon water
 - 40 gallon AFFF
 - 450 pounds Purple K.
 - Bumper turret rated at 300 GPM





The three bay fire station provides Index B service. Airports certificated under FAR Part 139 are required to provide ARFF facilities and equipment. The index is based upon the largest aircraft types using the airport and their frequency of operation.

Index B Requirements consist of:

One vehicle carrying at least 500 pounds of sodium-based dry chemical, halon 1211, or clean agent and 1,500 gallons of water and the commensurate quantity of AFFF for foam production.

OR Two vehicles:

One vehicle carrying the extinguishing agents as specified above and

One vehicle carrying an amount of water and the commensurate quantity of AFFF so the total quantity of water for foam production carried by both vehicles is at least 1,500 gallons.

AVP meets these requirements.

1.9.3. Airfield Maintenance

AVP’s airfield maintenance facility was constructed in 2001 and is located on the north side of Runway 10-28. It is in good condition and provides storage for the following maintenance vehicles and equipment:

- 16-foot Henke Ramp Bucket (RB42-16)
- 1970 John Deere TR 47
- 1978 Oshkosh Plow PL-22
- 1980 Case Loader L-51
- 1988 Case TR49
- 1990 Sweepster Broom BR-13
- 1990 Walters Truck Blow PL-27
- 1992 Ford Mower TR46
- 1996 Oshkosh Snow Blower BL-37
- 1997 Oshkosh Truck with 22-foot Plow PL-25
- 1998 4x4 Timberwolf Quad
- 2000 Case Backhoe/Loader L-52
- 2000 John Deere TR48
- 2003 Ingersoll Rand 185 CFM Air Compressor
- 2003 Ford Explorer XLT C-4
- 2004 Tennant Broom BR-15
- 2006 JLG 26-foot Lift
- 2006 KEB115T 115 Gallon Tar Kettle
- 2008 Ford F550 Dump C-5
- 2008 Ford Pickup C-7
- 2008 Oshkosh Snow Blower 4,000 ton/hour
- 2008 Oshkosh Truck with 10-foot rollover plow
- 2008 Oshkosh Truck with 10-foot rollover plow (A)
- 2008 Oshkosh Truck with 22-foot plow (B)
- 2008 Sweepster 24-foot sweeper BR-11
- 2008 Volvo Skid Steer L-53
- 2009 Columbia SUV-LN Golf Cart C18
- 2009 Ford Explorer – Airport 3 Vehicle
- 2009 Ford Explorer – Airport 4 Vehicle
- 2009 Oshkosh Multi Unit Truck 14
- 2010 Crafcoc SS125 with diesel compressor
- 2010 Chevy Silverado Friction Test Truck C-9

- 2011 Chevy Silverado Crew Cab C-6
- 2013 Chevrolet Silverado Reg Cab C-8
- 2013 Western Snow Plow (Mounted C-8)
- 2014 Case Front End Loader (Loader 50)
- 2014 Chevy Silverado K2500 Pickup C-8
- 2014 Freightliner Dump Truck C-10
- Bobcat Mower
- Winco Portable Generator
- Light Tower
- 2010 Light Car #1 Magnum Pro
- Light Car #2
- Line Lazer 3400
- Line Lazer II Push Paint Machine
- ACS side dump loader bucket
- EZ-Liner Paint Machine
- 2016 John Deere Tractor TR-45

1.9.4. Airport Utilities

The Airport's utilities infrastructure including electric, natural gas, water, telephone/cable, internet, and sewer were reviewed as part of this Master Plan and the following information found to be relevant for the Airport. There are no utilities north of the ATCT, between the ATCT and the runways.

Electric

The electrical company is PPL Electric.

Natural Gas

Natural gas is provided by UGI Utilities.

Water

Water is provided by Pennsylvania American Water.

Telephone/Cable

Telephone services are provided by Verizon (tenants) and Frontier Communications (Airport). The Airport's internet telephone system is a Shoretel voice over internet protocol (VOIP) system owned by the Airport. Cable is provided by Comcast.

Sanitary Sewer

Sanitary sewer is provided by Lower Lackawanna Valley Sanitary Authority.

Internet

Internet services are provided by Comcast (public wi-fi connection) and American Computer Associates (redundant connections for administrative network).

1.10. SECURITY

Airport security for both passengers and the Airport itself is regulated by Transportation Security Regulations (TSR) 1542. Although many of a commercial service airport's security procedures are confidential, general information regarding airport security can be documented. The TSA is responsible for providing passenger and baggage screening services. Some of AVP's security measures include enforcement of the Security Identification Display Area (SIDA). Anyone entering the SIDA must have proper identification and be badged accordingly. In addition, there are numerous gates and fences on and around the Airport, as well as security signage displayed throughout airport property. Patrols by law enforcement also help to maintain a secure environment.

1.10.1. Passenger Screening

All departing passengers are required to pass through the security screening checkpoint located in the center of the second level of the passenger terminal. Passengers are screened with either a magnetometer or Advanced Imaging Technology machines. All carry-on baggage is screened through an enhanced imaging x-ray device. Restrictions on what may be transported by passengers through the checkpoint such as liquids, gels, and aerosols are subject to change; a list of the most current restrictions can be found on the TSA website.



1.10.2. Baggage Screening

Baggage screening is conducted on the first level of the terminal in the area behind the airline ticketing counters. All baggage is screened prior to being loaded on to aircraft. The existing outbound baggage system is limited and experiences delays during peak passenger traffic times or when system issues require a system reboot.

1.10.3. Airfield

To ensure security for the entire airport property, and comply with TSA requirements, the perimeter of the air operations area is secured by 8-foot to 10-foot tall chain link fence topped with barbed-wire. There are 20,978 linear feet of 8-foot tall fence with three-strand barbed wire and 5,387 linear feet of 10-foot tall fence with three-strand barbed wire.

The majority of the details related to airport security are shared on a need-to-know basis and inquiries should be directed to the airport director's office.

1.11. AIRSPACE / AIR TRAFFIC CONTROL

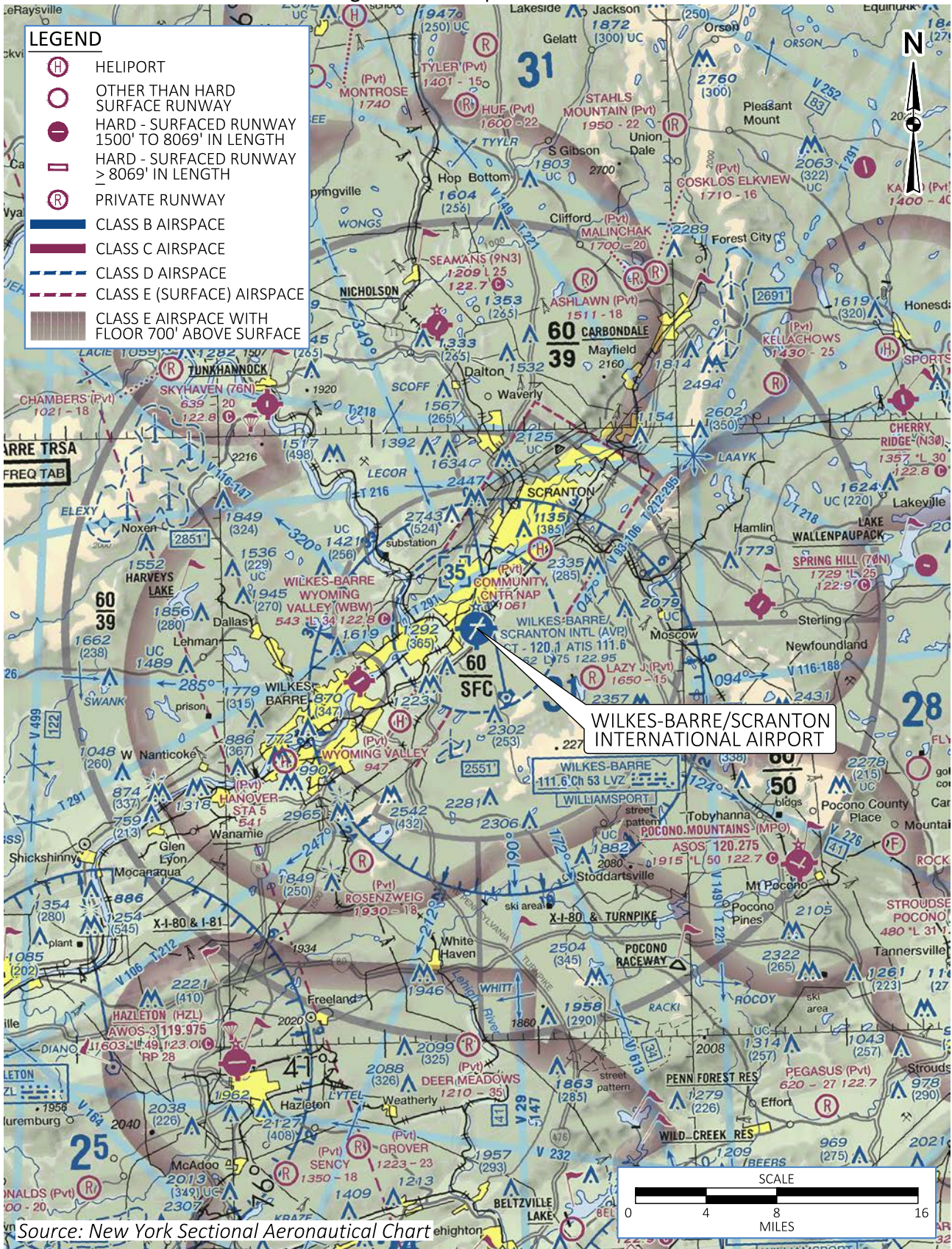
Airspace in the United States is classified as controlled, uncontrolled, or special use. Controlled airspace is a generic term that covers the different classification of airspace (Class A, Class B, Class C, Class D, and Class E) and defined dimensions within which air traffic control (ATC) service is provided to instrument flight regulations (IFR) flights and to visual flight regulations (VFR) flights in accordance with the airspace classification. Uncontrolled airspace includes areas where ATC has neither authority nor responsibility to control aircraft. According to the AIM, special use airspace consists of airspace where activities must be confined because of their nature, or where limitations are imposed upon aircraft operations that are not part of the confined activities. Special use or restricted airspace is depicted on aeronautical charts unless it is the result of a controlled firing area. Special use areas are typically due to military training facilities.

1.11.1. Airspace Structure

Airspace in the United States is designated with the letters A through G (not including F). A summary of each of these types of airspace follows. A visual representation can be found in **Figure 1-12**.

- **Class A:** All airspace above 18,000 feet mean sea level (MSL). Class A airspace contains all high altitude airways (jet routes).
- **Class B:** Airspace from the surface to 10,000 feet MSL surrounding the nation's busiest airports in terms of IFR operations or passenger enplanements. Newark Liberty International Airport (EWR) is the closest airport to AVP surrounded by Class B airspace.
- **Class C:** Airspace from the surface to 4,000 feet above the airport elevation surrounding airports that have an operational control tower, are serviced by a radar approach control, and that have a certain number of IFR operations or passenger enplanements. Lehigh Valley International Airport is the closest airport to AVP that is surrounded by Class C airspace.
- **Class D:** The terminal area airspace surrounding non-hub commercial airports, such as AVP, with a radius of five statute miles. The airspace extends from the surface to a height of 2,500 feet AGL. At AVP this equates to an elevation of 3,500 feet MSL. Within the Class D airspace, the AVP ATCT visually controls all air traffic arriving or departing the Airport or transitioning the area. Aircraft within this area must establish two-way radio communication with the ATCT.
- **Class E:** General and en route airspace that includes most of the remaining airspace not designated as A through D. In the Wilkes-Barre/Scranton region, the Class E airspace begins at 700 feet AGL and extends upward to the overlying Class A airspace. This airspace contains low altitude airways often called Victor Airways. Aircraft operating in this area must follow the general regulations for operating in controlled

Figure 1-12: Airspace Structure



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airspace. There is an area within the Runway 22 approach path where Class E airspace extends all the way to the surface (over the City of Scranton).

- **Class G:** Uncontrolled airspace that exists between the ground and 700 feet AGL, beyond the limits of the AVP Class D area, except for the area over the Runway 22 approach, where Class E airspace extends from the surface to Class A airspace.
- **Special Use Airspace:** There are no special use areas adjacent to AVP. The closest designated special use areas are restricted areas R-5802 A, B, C, and D approximately 65 nm from AVP. They are near Muir Army Airfield (Fort Indiantown Gap). Approximately 90 nm from AVP is McGuire Field (Joint Base) in New Jersey. It has restricted areas R-5001 A and B and A-220.
- **En Route Airspace:** Aircraft flying inbound to or outbound from AVP typically follow designated routes between ground based navigational aids (NAVAIDs). The primary en route NAVAID in this region is the Wilkes-Barre VORTAC, which is located four nautical miles southeast of the Airport. The Wilkes-Barre VORTAC's three letter identifier is LVZ. It is owned and maintained by the FAA.

These designated routes or airways have alphanumeric identifiers beginning with the letter V and are thus called Victor Airways. Several Victor Airways cross the Wilkes-Barre VORTAC, including V29, V93, V103, C106, V116, V147, V188, V212, V226, and V613.

1.11.2. Air Traffic Control Tower (ATCT)

The air traffic control tower (ATCT) cab at AVP was constructed in 2012 east of the airfield. It is 92 feet AGL and has an approximately 12,000 square foot base building. AVP's ATCT is continuously operational.

AVP has an FAA Terminal Radar Approach Control facility (TRACON) combined with the control tower; this is known as a TRACAB. The TRACAB handles inbound, outbound, and low altitude transitioning aircraft. The TRACAB also has an associated designated area called a Terminal Radar Service Area (TRSA) centered on the Airport where radar service and control is available to aircraft. A TRSA is a specified size and shape of airspace designed to provide traffic separation between participating VFR aircraft and all IFR aircraft. Participation by VFR aircraft is strictly voluntary. The TRSA is a designated area, not an airspace classification, and encompasses portions of the Class D and Class E airspace.

The AVP TRSA includes and surrounds the AVP Class D airspace and extends into the surrounding Class E airspace. The TRSA terminates at 6,000 feet MSL although the TRACON controllers handle traffic beyond this level. Three concentric circles, described below, define the TRSA dimensions.

- Inner Circle (5 nm radius and Runway 22 approach) surface up to 6,000 feet MSL





- Outer Circle (20 nm radius) 3,300 to 6,000 feet MSL for three-quarters of the circle and 5,000 to 6,000 feet MSL for the southeast quadrant of the circle

Aircraft departing AVP are initially controlled by the ATCT, which hands off the traffic to the TRACAB before departing Class D airspace. After departing the outer circle of the TRSA and typically within 30 miles of the Airport, the traffic is then handed off to the regional Air Route Traffic Control Centers (ARTCC) in Cleveland, New York, or Boston. In-bound traffic will also follow this procedure, but in the reverse order.

Two-way radio communication is required to enter Class D airspace. However, the radar control services provided by the TRACAB are only mandatory for aircraft operated under an instrument flight plan – flying under IFR. Although strongly encouraged, aircraft operating under VFR are not required to accept ATC radar service within TRSA.

1.11.3. Airspace Conflicts

There are five public airports located within boundaries of AVP’s TRSA. These are:

- Wilkes-Barre Wyoming Valley (WBW), located 6 nm southwest of AVP
- Spring Hill (70N), located 14 nm east of AVP
- Pocono Mountains (MPO), located 20 nm southeast of AVP
- Seamans (9N3), located 15 nm north of AVP
- Skyhaven (76N), located 15 nm northwest of AVP

The FAA has established planning specifications for evaluating potential airspace conflicts and to ensure safe and efficient aircraft operations. These guidelines are presented in FAA Order 7480-1A, *Guidelines for Airport Spacing and Traffic Patterns*. In general, for VFR activity, the FAA considers that there is a potential for conflict between any airport within the Class D airspace of another. There are no public or private airports within AVP’s Class D airspace.

The FAA has also published guidelines for identifying potential conflicts between IFR aircraft operating at nearby airports. WBW, 70N, MPO, and 9N3 have instrument/GPS approaches. All IFR traffic is coordinated and managed through the AVP TRACAB to avoid any conflicts.

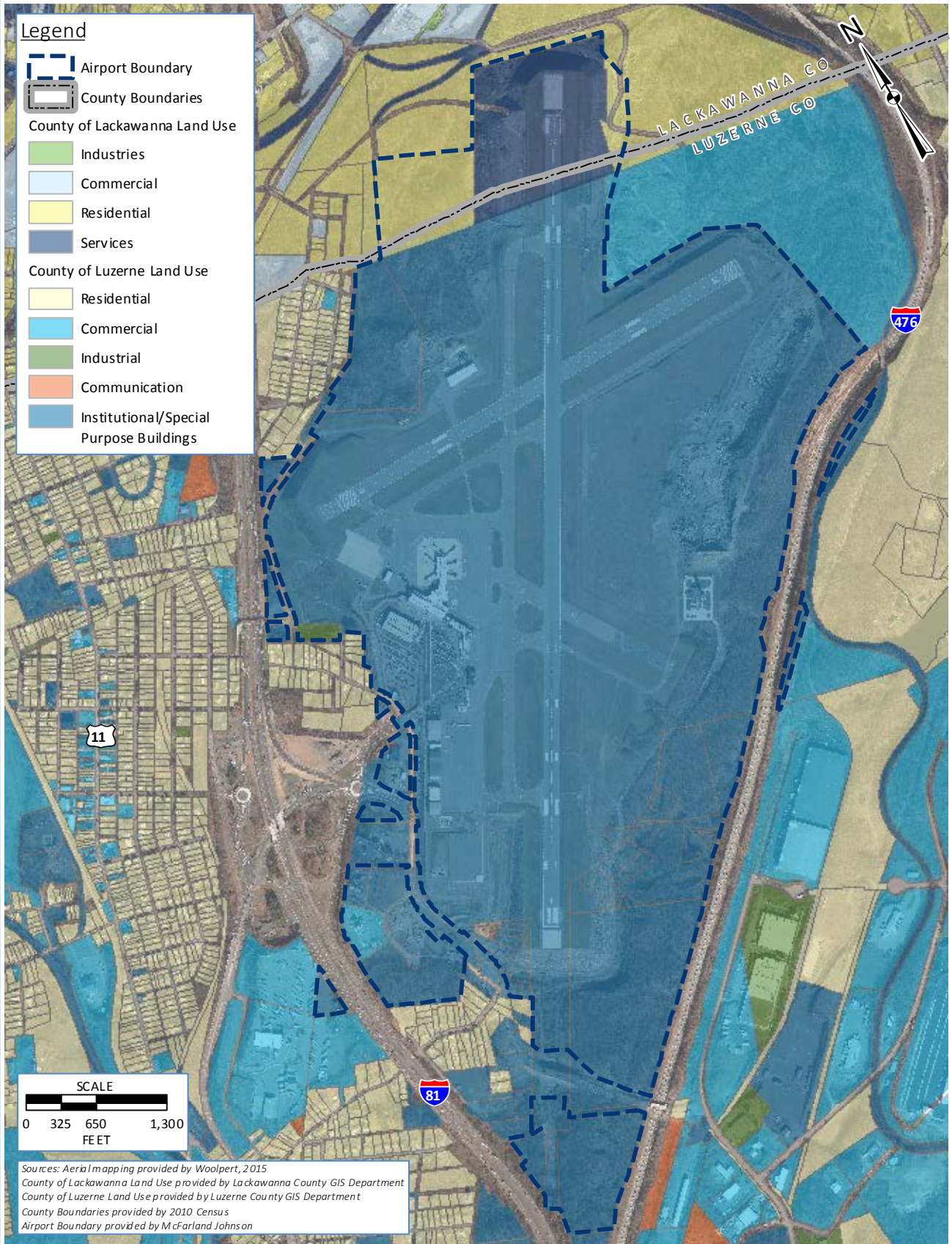
1.12. LAND USE AND ZONING

1.12.1. Land Use

The land use for the northern portion of the Airport is in the County of Lackawanna. The land use within the Airport boundary is Residential and Services. The land use adjacent to the Airport boundary is Residential. Below is a synopsis of each land use, also shown on **Figure 1-13**:

- **Residential Uses:** Vacant lots, single and multi-family dwellings, seasonal dwellings, miscellaneous (garages, etc.), and condos/townhouses.
- **Services Uses:** Municipality owned lands, churches, cemeteries, hospitals, and schools.

Figure 1-13: AVP Land Use Map



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The land use that covers the majority of the Airport is under the jurisdiction of Luzerne County. Within the Airport the land uses are Institutional/Special Purpose Buildings, Industrial, and Commercial. Adjacent to the Airport the land uses are Commercial, Institutional/Special Purpose Buildings, Residential, and Communication. Below is a synopsis of each land use:

- **Institutional/Special Purpose Buildings Uses:** post offices, cemeteries, municipal buildings, schools, hospitals, police/fire stations, and rail/bus/air terminals.
- **Industrial Uses:** Manufacturing, research and development, bakeries, chemical plants, food processing, metal working, mining, and print shop.
- **Commercial Uses:** Hotels/motels, nursing homes, mobile home parks, campgrounds, restaurants, bars, auto dealers and service garages, shopping malls, supermarkets, funeral homes, cinemas, florists, sports complexes, and warehouses.
- **Residential Uses:** Single and multi-family residential, condos, mobile homes, agriculture, apartments, and townhouses.
- **Communication Uses:** Utilities, utility companies, railroads, pipelines, equipment buildings, and, water system.

1.12.2. Zoning

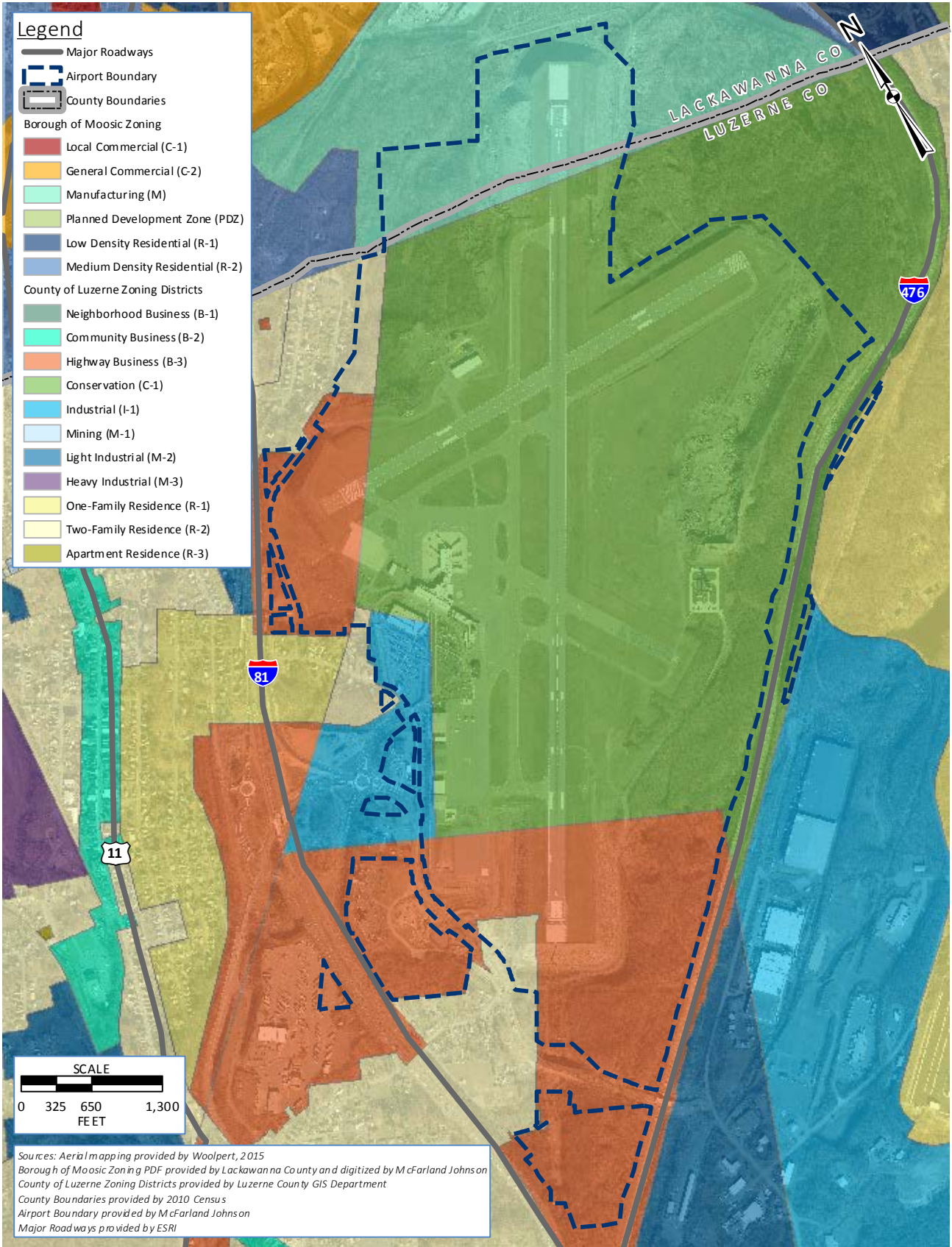
The northern portion of the Airport is located in the County of Lackawanna, the Borough of Moosic. This area is zoned as Manufacturing (M) as shown in **Figure 1-14**. Within the M Zone there are a variety of principal permitted uses, such as:

- **M Uses:** Adult/child daycare facilities, assisted living/group homes, single/multi-family dwellings, residential telecommunication facilities, wholesale bakeries, banking services, contracting businesses, farm/heavy equipment sales, hotels/motels, laboratories, machine shops, recycling establishments, food processing, warehouses, storage units, trade/business schools, repair shops, radio/TV stations, clothing manufacturing, and lumber yards. The Airport is a special exception to the M Zone.

The majority of the Airport resides in the County of Luzerne’s, Pittston Township Conservation Zoning District (C-1). Smaller portions of the Airport boundary are zoned as One-Family Residence (R-1), Two-Family Residence (R-2), Highway Business (B-3), and Industrial (I-1). There are a variety of principal permitted uses within these zoning districts, such as:

- **C-1 Uses:** Agriculture, greenhouses, parks/recreations, single family homes, State game lands, mobile homes, and utilities. Under Pittston Township Zoning, the Airport is considered conditional use. Therefore, the Airport is not an accepted use in the zoning district, but the municipality set a condition to allow for the use.
- **R-1 Uses:** Single family detached homes, public/semi-public uses, and utilities.

Figure 1-14: AVP Zoning Map



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- **R-2 Uses:** Two-family homes, single family detached homes, public/semi-public uses, and utilities.
- **B-3 Uses:** Amusement parks, animal hospitals/kennels, cemeteries, commercial horse race tracks and stables, service garages and/or vehicle sales, motels, banks, restaurants, and retail.
- **I-1 Uses:** Forestry, outdoor storage, gas stations, adult/child daycare facilities, wholesale bakeries, banking, bars/taverns, cultural facilities, data processing/record storage, office buildings, manufacturing, machine shops, lumber yards, recreational vehicle/boat sales, schools, visitor centers, and warehouses.

1.13. USER/TENANT INTERVIEWS AND SURVEYS

User and tenant interviews and surveys were distributed to Airport users and tenants. Some of the results of the surveys/interviews were as follows:

- Additional hangar space may be needed
- Additional automobile parking may be needed
- Snow removal was deemed excellent
- Hangar facilities, roadway signage to the Airport, and ability to access may need improvements
- Upgrades or products that were noted that would assist in promoting business and economic development efforts:
 - Community Awareness of Airport (2 responses – suggestions included community tradeshows, dinners, and speaking to community groups)
 - Community Collaboration Efforts
 - Improved Multi-Modal Capabilities/Access (2 responses)
- Suggestion for pre-check at check-in and shuttle service from parking lots was made
- Suggestions for additional non-stop flights, especially to hubs were made (3 responses)
- Suggestion for a cell phone lot to handle approximately 30 vehicles was made
- Current facilities and procedures for baggage handling could be improved
- TSA processing procedures and facilities could be improved
- Suggestion to have a sit-down eatery beyond security

The sample survey that was used for each group can be found in **Appendix B**.