



Employee Parking

Airport employees park in E-Lot, just west of the terminal, as shown in **Figure 3.4.1**. The lot includes 76 spaces and is accessed through a controlled gate. Prior to the multimodal center construction, there was a staff parking lot just east of the terminal with 24 spaces with additional overflow employee parking areas north of the rental car areas (440 spaces). The employee overflow parking area is expected to remain in that area after construction.

3.5 General Aviation Facilities

General Aviation (GA) refers to all civil aviation operations at an airport other than scheduled commercial air transportation (including cargo). **Figure 3.5.1** illustrates all GA facilities located at the Airport.

Table 3.5.1 indicates aircraft operations by type in 2015. In 2015, 82% of the Airport’s 88,084 aircraft operations were GA operations. Of the GA operations, 63% were local and 37% were itinerant.

Table 3.5.1: Aircraft Operations (2015)

Type of Operations	Operations	% of Total
Air Carrier	4,431	5.03%
Air Taxi	11,356	12.89%
GA Local	44,930	51.01%
GA Itinerant	26,926	30.57%
Military	441	0.50%
Total Operations.	88,084	100.00%

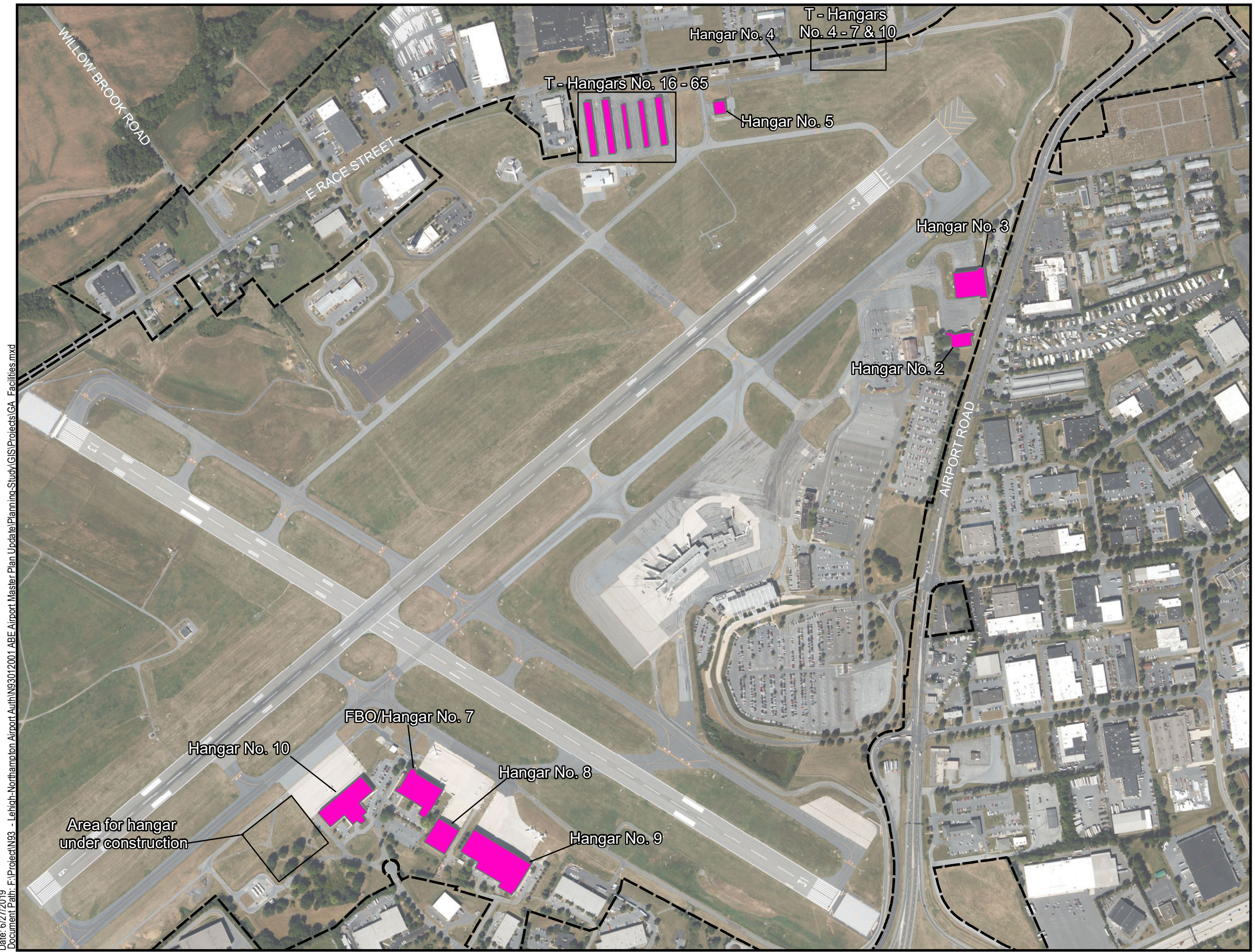
Note: Operations for 12 Months ending on 12/31/2015
Source: C&S Engineers, Inc.; Airport IQ 5010. Accessed 2/8/17. Accessible at: <http://www.gcr1.com/5010Web/airport.cfm?Site=ABE&AptSecNum=2>

In 2015, the Airport had a based fleet of 107 aircraft. Based aircraft at LVIA are categorized in **Table 3.5.2**.

Table 3.5.2: Based Aircraft (2015)

Aircraft Type	Number Based
Single Engine	60
Multi Engine	7
Jet	37
Helicopter	3

Note: There are no gliders, military, or ultra-light based aircraft at the Airport
Source: C&S Engineers, Inc.; Airport IQ 5010. Accessed 2/8/17. Accessible at: <http://www.gcr1.com/5010Web/airport.cfm?Site=ABE&AptSecNum=2>



Legend

- Airport Property Line
- General Aviation Facility
- Demolished General Aviation Facility

N

300 150 0 300 600 Feet

1 inch = 600 feet
When printed at 11" x 17"



Lehigh Valley International Airport
Master Plan Update

General Aviation & Fixed-Base Operator Locations

Figure 3.5.1

Date: 6/27/2019
Document Path: F:\Project\N93 - Lehigh-Northampton Airport Auth\N93\2001 ABE Airport Master Plan Update\Planning-Study\GIS\Projects\GA - Facilities.mxd

SOURCES: Building Polygons from LVIA ALP Base 2015 Update CAD files from LNA; Aerial Imagery from Quantum Spatial taken 09/12/16 CREATED BY: C&S Engineers, Inc.



Fixed Base Operators

The Airport's FBO, Lehigh Valley Aviation Services, is located in Hangar 7, adjacent to Taxiway J. Currently the FBO is comprised of an approximate 23,550 square-foot hangar that houses single-engine aircraft, multi-engine aircraft, corporate jets, and helicopters, in addition to 25,770 square-feet of office space.¹³

Amenities provided by the FBO include: conference room space, concierge services for catering, car and hotel reservations, courtesy transportation, crew cars, a flight planning center, U.S. Customs, and a pilot lounge. Aircraft services include: de-icing (Type I and IV), full service fueling of Jet A and Avgas, ground handling, quick-turn services, on-site maintenance, potable water service, and a reservation center. This facility also houses the Ace Pilot Training Inc. flight school and the LCCC Aviation flight school.¹⁴ On-site maintenance operations at this hangar include Scott Richards Aviation Maintenance and LV Avionics in conjunction with New World Aviation, operating out of Hangar 9 and adjacent to the FBO.¹⁵

Prior to its use as an FBO, this facility was owned and operated by Bethlehem Steel. Many amenities of the facility remain from its original construction. Recent improvements to the facility include an updated air conditioning system and lobby area. Interviews with the FBO have identified tenant improvement requests including: a new central heating/cooling system, restroom rehabilitations, the installation of an outside canopy, and potable water improvements.

Hangars

The Airport provides multiple conventional/bulk and T-hangars to house corporate and GA tenants.

Conventional / Bulk Hangars





Conventional/Bulk hangars, along with accessibility, tenants, and hangar/office capacities are outlined in **Table 3.5.3**. A total of 197,172 square feet of hangar and 42,292 square-feet of office space are provided by these facilities. Hangar 4 was demolished in 2018. In addition, a 57,000 square foot GA hangar facility is under construction adjacent to the LNAA Fuel Farm.

¹³ *Lehigh Valley International Airport Master Plan Update*, 2004, LNAA, DMJM Aviation, AECOM, GRA, Inc., DMJM Harris, McTish Kunkel & Associates




¹⁴ "Amenities," Lehigh Valley Aviation Website. Accessed 11/14/16. Accessible at: <http://www.flylv.com/stay-connected/general-aviation-lnaa/lehigh-valley-aviation-services/amenities/>

¹⁵ "Services," Lehigh Valley Aviation Website. Accessed 11/14/16. Accessible at: <http://www.flylv.com/stay-connected/general-aviation-lnaa/lehigh-valley-aviation-services/services/>

Table 3.5.3: Conventional/Bulk Hangars

Hangar	Total Hangar Area/Office Area (SF)	Airside/Gate Access	Tenants
<p data-bbox="553 304 668 330">Hangar 2</p> 	<p data-bbox="1221 304 1345 330">8,000/2,034</p>	<p data-bbox="1650 304 1852 330">Taxiway A/Gate 11</p>	<ul data-bbox="2001 304 2132 330" style="list-style-type: none"> ▪ DonJon
<p data-bbox="553 633 668 659">Hangar 3</p> 	<p data-bbox="1205 633 1361 659">25,428/15,314</p>	<p data-bbox="1650 633 1852 659">Taxiway A/Gate 14</p>	<ul data-bbox="2001 633 2362 721" style="list-style-type: none"> ▪ Air Products ▪ DB Integrations ▪ Inflight Training Solutions, Inc.
<p data-bbox="553 951 668 977">Hangar 4</p> 	<p data-bbox="1190 951 1376 977">Demolished 2018</p>	<p data-bbox="1650 951 1852 977">Taxiway C/Gate 16</p>	
<p data-bbox="553 1270 668 1296">Hangar 5</p> 	<p data-bbox="1221 1270 1345 1296">5,760/1,500</p>	<p data-bbox="1650 1270 1852 1296">Taxiway C/Gate 16</p>	<ul data-bbox="2001 1270 2309 1296" style="list-style-type: none"> ▪ Lehigh Valley Flying Club



Hangar	Total Hangar Area/Office Area (SF)	Airside/Gate Access	Tenants
<p>Hangar 8</p> 	26,250/N.A.	Taxiway J/Gate 43A	<ul style="list-style-type: none"> ▪ GA Tenants
<p>Hangar 9</p> 	71,938/16,880	Taxiway J/Gate 44B	<ul style="list-style-type: none"> ▪ New World Aviation Inc. ▪ Also used to house LNAA equipment storage
<p>Hangar 10</p> 	40,654/6,564 (Does not include maintenance closet or fire protection system square footage)	Taxiway A/Gate 42B	<ul style="list-style-type: none"> ▪ Dumont Aircraft Charter ▪ East Coast Jets ▪ JET-A ▪ LR Services ▪ Flight Management Services LLC

Note: Hangar 1 is now the Rental Car QTA and is therefore not included as a hangar

Source: Hangar/Office square-footages from LNAA in Lehigh Valley International Airport T-Hangar/Bulk Hangar Rentable Space document; All photos from C&S Engineers, Inc. taken on 12/13/16



T-Hangars No. 16-65

This T-hangar complex is located adjacent to the ARFF facility in the northern area of the airfield. T-hangars 4-7 and 10 were demolished in 2018. This complex, including Nos. 16-65, contains five facilities totaling 50 T-hangar units leased by the LNAA. These facilities can be accessed by tenants via Gate 16 off of Race Street. **Table 3.5.4** illustrates the total capacity of these facilities.

Table 3.5.4: T-Hangars 16-65 Capacity

T-Hangars	Unit Area (SF)	Number of Units	Total Area (SF)
16-19	928	4	3,712
20 & 21	1,067	2	2,134
22-25	928	4	3,712
26-35	830	10	8,300
36-45	650	10	6,500
46-65	1,420	20	28,400
Total	N.A.	50	52,758

Source: C&S Engineers, Inc.; Hangar/Office square-footages from LNAA, “Lehigh Valley International Airport T-Hangar/Bulk Hangar Rentable Space”

Flight Schools

Ace Pilot Training Inc.

Ace Pilot Training Inc. occupies approximately 800 square-feet of space in Hangar 7. They offer fixed-wing and helicopter instruction and placement services, aerial photography, financing, student housing services, FAA/FCC testing, and the M1 Foreign Student VISA program. Their fleet includes:

- Cessna 152 (7)
- Piper Cherokee (4)
- Diamond, Diamond Star (1)
- Cessna 172P (1)
- Beechcraft Dutchess 76 (1)
- Piper Seneca (1)
- Mooney – M20C (1)
- Schweizer (1)¹⁶

Lehigh Carbon Community College (LCCC) Flight School

The LCCC Flight School occupies approximately 1,640 square-feet of space on the second floor of Hangar 7. Their facilities include two classrooms, two offices, and one flight simulator room. The school is approved to offer FAR Part 141 Flight School training.

¹⁶ Ace Pilot Training, accessible at: <http://www.acepilot.com/>. Accessed 12/29/2016



Maintenance Services

Hangar 7

LV Avionics has approximately 651 square-feet of space designated in Hangar 7 for its sole use. LV Avionics provides services such as: avionics installations; iPad installations; equipment bench-testing, diagnostics, and repair; autopilot installation and diagnostics; 24 month IFR certifications and Reduced Vertical Separation Minimum (RVSM) checks; navigation calibrations; 406 Emergency Locator Transmitter (ELT) installations; aircraft weighing and balancing; custom instrument panels; silk screening (panel labelling); and sells new and used equipment.¹⁷

Hangar 7 Maintenance



Source: C&S Engineers, Inc. 12/13/16.

Scott Richards Aircraft Maintenance, LLC provides services such as: piston and turbine repairs; annual inspections; 100 hour inspections; phase inspections; MSG document inspections; minor and major repairs; borescope inspections; aircraft recovery; and aircraft purchase consultation.¹⁸ Scott Richards Aviation Maintenance occupies over approximately 2,000 square-feet of Hangar 7.

Hangar 9

New World Aviation provides inspections and repair services to Gulfstream, Challenger, Falcon, Hawker, and Learjet aircraft out of Hangar 9. They perform scheduled and non-scheduled maintenance services, comprehensive airframe services and inspection, engine repairs, and FAA Part 135 conformity inspections. They also install a full range of Flight Management Systems, basic instruments, and entertainment equipment.¹⁹

Deicing Facilities

As of December 2016, current records indicate that approximately 30,000 gallons of propylene glycol is used each year for aircraft deicing.²⁰ Due to the low quantities of deicing fluid used at the Airport, no dedicated deicing facility exists or is currently planned. All deicing activity occurs on the ramp apron.

Both Type I and Type IV glycol are applied at the Airport. Type I glycol has a low viscosity and provides short term protection after application while Type IV glycol provides a longer holdover time after application. The following table, **Table 3.5.5**, indicates glycol deicing tank capacities at the Airport:

¹⁷ LV Avionics, accessible at: <http://www.lvavionics.com/>. Accessed 12/29/16

¹⁸ Scott Richard Aircraft Maintenance LLC, Welcome page. Accessible at: <http://scottrichardmx.com/index.html>. Accessed 12/29/16

¹⁹ New World Aviation, Maintenance. Accessible at: <http://www.newworldaviation.com/maintenance/>. Accessed 12/29/16

²⁰ *Preparedness, Prevention, and Contingency (PPC) & Spill Prevention Response (SPR) Plan*, Rettew Associates, Inc., February 2017.



Table 3.5.5: Glycol Deicing Tank Capacities

Name/Location	Substance	Tanks	Tank Capacity	Total Capacity
LVAS Deicing Air Carrier Apron	Type I Glycol	2	6,000 gal.	12,000 gal.
US Airways Deicing Tank Air Carrier Apron	Type I Glycol	1	6,000 gal.	6,000 gal.
US Airways Deicing Tank Air Carrier Apron	Type IV Glycol	1	1,000 gal.	1,000 gal.
Delta Deicing Tanks Air Carrier Apron	Type I Glycol	1	6,000 gal.	6,000 gal.
Delta Deicing Tanks Air Carrier Apron	Type IV Glycol	1	1,000 gal.	1,000 gal.
FedEx Deicing Tanks (Mobile) Cargo Apron	Type I Glycol	1	5,000 gal.	5,000 gal,
FedEx Deicing Tanks (Mobile) Cargo Apron	Type IV Glycol	1	5,000 gal.	5,000 gal,

Source: C&S Engineers, Inc.; *Appendix II- Airport Emergency Plan, Lehigh Valley International Airport (ABE)*, Lehigh-Northampton Airport Authority, submitted February 2013 and revised March 2016

3.6 Cargo

Air Cargo Data

In 2015, a Regional Freight Plan was developed by the Lehigh Valley MPO in cooperation with PennDOT and in conjunction with *Pennsylvania’s Comprehensive Freight Management Plan (CFMP)* to identify trends, needs, and issues in freight transportation for the Lehigh Valley throughout the year 2040.

According to this study, and as identified in **Table 3.6.1**, aviation is the third largest mode of transportation for cargo in the Lehigh Valley behind rail and truck, and is anticipated to increase from 10 thousand tons of annual cargo, as reported in the year 2011, to 20 thousand tons of annual cargo by the year 2040. This is a total cargo value for air freight growth from \$1,668 million in 2011 to an anticipated \$3,845 million by 2040. However, despite this increase in tonnage, the percent tonnage share of air cargo to total cargo for all modes is expected to decrease to less than 1 percent throughout the planning period while the total air cargo freight value percent share is expected to remain at a constant 3 percent. This means that although air cargo freight value is expected to remain constant, other modes of cargo transport, specifically trucking, are expected to grow at a faster rate. Factors contributing to this increase in trucking for cargo transport include the integration of Intelligent Transportation Systems (ITS), the need to streamline supply chain efficiency, and the current trend of existing railroad abandonment in the Lehigh Valley region.