Table. 3.1.3: Occurrence of Weather Categories (2011 – 2015)

Category	Ceiling (in feet)	Visibility (in miles)	2014-2015 Occurrence %	2014-2015 Hours in Categories	Two-Year Average Annual Hours
VFR	>=1,000	>=3	93.02%	40,763	8,153
IFR					
CAT I	>=200 & <1,000	>=1/2 & <3	6.27%	2,749	550
CAT II	>=100 & <200	>=1/4 & <1/2	0.62%	272	54
CAT IIIa	<100	>=700 feet & <1/4	0.06%	28	6
CAT IIIb	<100	>=150 feet & <700 feet	0.03%	12	2
CAT IIIc	<100	<150 feet	0.00%	-	-
Total CAT II and CAT III Conditions			0.71%	312	62
Total IFR			6.98%	3,061	612
Total			100.00%	43,824	8,765

Source: C&S Engineers, Inc.; Northeast Regional Climate Center (NRCC); CLIMOD product: Hourly Observations; Start Date: January 1, 2014; End Date: December 31, 2015. Data report created by NRCC, Cornell University 09/02/2016 15:48 UTC; Data summarized by C&S Engineers, Inc. - September 8, 2016. Numbers may not add up as a result of rounding.

Note: Total hours available calculated by 365 days per year x 24 hours x 5 years = 43,800 hours

3.2 Airfield

Airfield facilities include those that directly support airport operations including runways, taxiways, navigational aids (NAVAIDs), and apron areas. The following section documents existing conditions for airfield facilities at LVIA. **Section 5 – Demand Capacity and Facility Requirements** addresses existing airfield design conditions in regards to FAA design standards.

LVIA's airfield is shown in **Figure 3.2.1. Table 3.2.1** provides a summary of the existing airside facilities that are described in the subsequent text.

CALLOUT LOCATION

Willowbrook Road

North GA Apron

RUNWAY 13/31 - 5,800' x 150'

RUNWAY 6/24 - 7,599' x 150'

Hangar 3 Apron

Hangar 2 Apron

Terminal Apron

Hangar 10 Apron

Hangar 7 Apron

Hangar 8 Apron

Hangar 9 Apron

Air Cargo Apron

Air Cargo Apron expansion

E Race Street

N IRVING STREET

AIRPORT ROAD

CALLOUT

Willowbrook Road

Legend

- Airport Property Line
- Apron
- EMAS

Visual NAVAIDs

- Windcone
- PAPI
- REIL
- Airfield Lights
- MALSR
- MALSR Shelter
- Rotating Beacon

Electronic NAVAIDs

- ILS-GS
- ILS-LOC
- ILS-LOC Shelter
- DME
- FAA Airport Surveillance Radar

NAVAID Support Equipment

- RVR
- ASOS
- FAA Radio Towers
- Airfield Electrical Vault

* Note: Runways and Taxiways labeled by nomenclature

N

0 200 400 800 1,200 Feet

1 inch = 800 feet
When printed at 11" x 17"

Date: 8/1/2017
Document Path: F:\Project\N93 - Lehigh-Northampton Airport Auth\N93012001 ABE Airport Master Plan Update\Planning-Study\GIS\Projects\Airfield.mxd

SOURCES: NAVAIDs from aerial imagery and 2004 ALP/2015 Updated ALP Base files from LNAA; Taxiway labels from AirNav. Aprons digitized by C&S Engineeres, Inc. Aerial Imagery from Quantum Spatial taken 09/12/16 CREATED BY: C&S Engineers, Inc.

Lehigh Valley International Airport
Master Plan Update

Airfield and NAVAIDs

Figure 3.2.1

Table 3.2.1: Runway System Characteristics

Characteristics	Runway 6-24	Runway 13-31
Use	Primary	Secondary
Length (feet)	7,599	5,800
Displaced Threshold (feet)	0 / 510	0 / 0
Width (feet)	150	150
Pavement Condition Index	43	56
Pavement Condition Rating	Poor	Fair
Pavement Strength (pounds)		
Single Wheel	75,000	75,000
Dual Wheel	209,000	161,000
Tandem	370,000	290,000
Composition	Asphalt/grooved	Asphalt/grooved
Wind Coverage (AW)		
10.5 knots	93.50%	95.44%
13 knots	96.44%	97.88%
16 knots	99.04%	99.58%
Markings	Precision / Precision	Precision / Non-Precision
Edge Lighting	HIRL/HIRL	HIRL/HIRL
Approach Lighting	MALSR / 0	MALSR / 0

Source: FAA Airport Master Record Form 5010 (09/15/2016), AirNav (01/01/2016) and C&S Engineers, Inc., Pavement Condition and Index provided from Appendix F - Pavement Management Plan.

Runways

Runway 6-24, the primary runway, is 7,599 feet long by 150 feet wide. There is a 510-foot displacement on the Runway 24 end. **Table 3.2.2** lists the declared distances (runway lengths available for takeoff and landing).

Table 3.2.2: Runway 6-24 Declared Distances (feet)

Runway End	Takeoff Run Available (TORA)	Takeoff Distance Available (TODA)	Accelerate Stop Distance Available (ASDA)	Landing Distance Available (LDA)
6	7,599	7,599	7,599	7,599
24	7,599	7,599	7,599	7,089

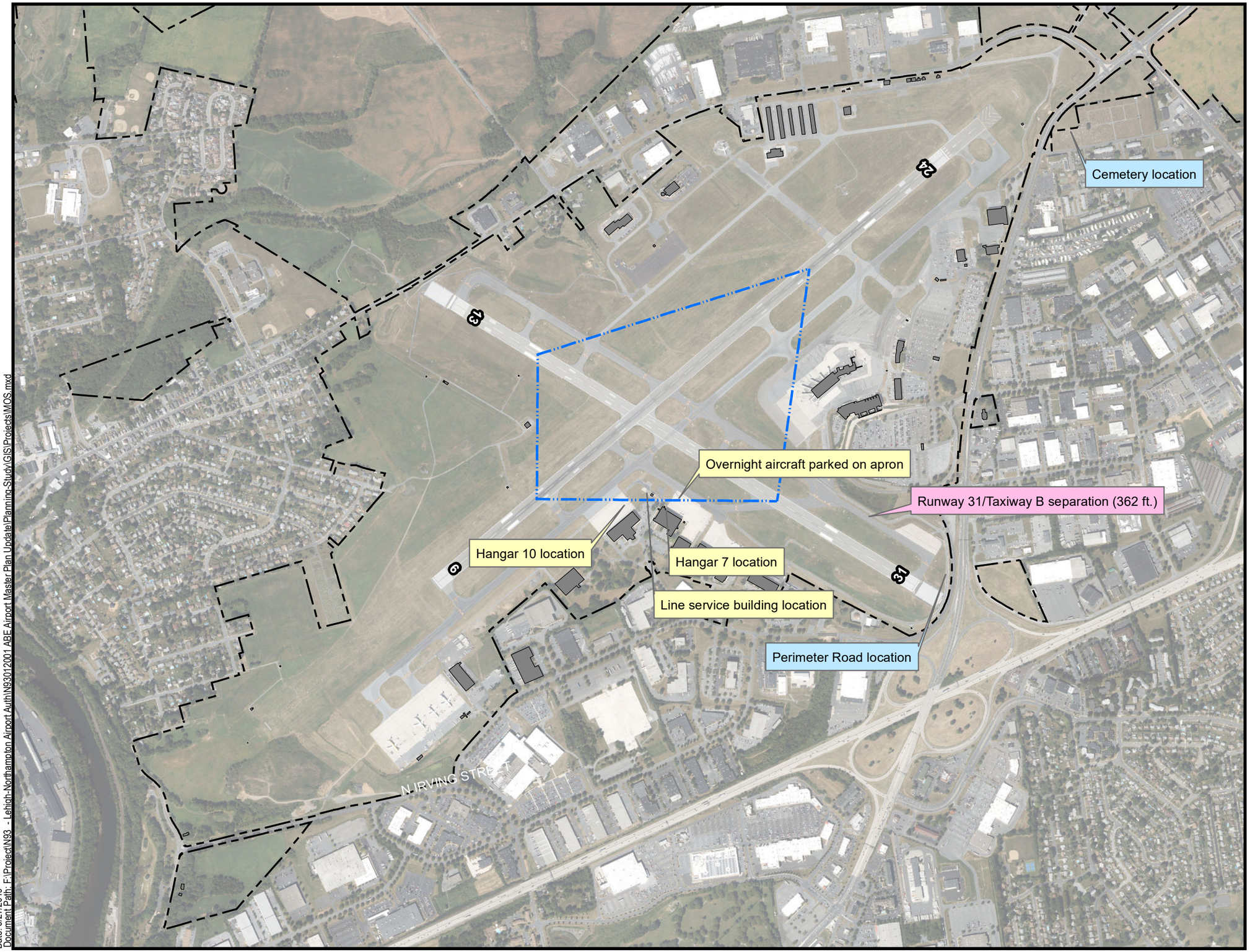
Source: FAA Airport Master Record Form 5010 (09/15/2016)

Runway 6-24 consists of grooved asphalt with precision instrument pavement markings. Runway 6-24 is equipped with high intensity runway edge lights (HIRLs) and centerline lights. Both runway ends have precision performance capability through an instrument landing system (ILS) and an Area Navigation (RNAV) global positioning system (GPS) localizer (LOC) performance with vertical guidance (LPV). Both runway ends have 4-light precision approach path indicators (PAPIs). Runway 24 has runway end identifier lights (REILs). Runway 6 has a medium intensity approach lighting system (MALSR) and Runway 24 is also served by distance measuring equipment (DME).

Runway 13-31 is 5,800 feet long by 150 feet wide. The grooved asphalt runway is equipped with HIRLs. Runway 13 has precision performance capability through an ILS and a RNAV GPS LPV. Runway 13 has precision instrument pavement markings and a MALSR. Runway 31 has a non-precision approach with visibility minimums greater than ¾ mile. Runway 31 has non-precision instrument pavement markings, REILs and 4-light PAPIs.

The runway visibility zone (RVZ) is defined as an area formed by imaginary lines connecting the two runways' line of sight points. Line of sight points are imaginary points located on the runway centerline at locations determined by runway geometric dimensions. In the RVZ, any point five feet above the runway centerline must be mutually visible with any other point five feet above the centerline of the crossing runway and inside the RVZ. As indicated in **Figure 3.2.2**, there are currently three FAA approved modifications to the RVZ design standard:

- Hangar 7/10 (approved 12/1993)
- Overnight aircraft parked on apron (approved 12/1993)
- Hangar 10 and line service building (approved 9/2002)



Legend

- Airport Property Line
- Runway Visibility Zone (RVR)

Modification of Standards (MOS) to the:

- Runway Visibility Zone (RVZ)
- Runway/Taxiway Separation
- Runway Object Free Area (ROFA)

N

0 300 600 1,200 Feet

1 inch = 1,000 feet
When printed at 11" x 17"

Lehigh Valley International Airport
Master Plan Update

Modification of Standards (MOS) Locations

Figure 3.2.2

Date: 6/27/2019
Document Path: F:\Project\N93 - Lehigh-Northampton Airport Auth\N93012001 ABE Airport Master Plan Update\Planning-Study\GIS\Projects\MOS.mxd

SOURCES: Aerial Imagery from Quantum Spatial taken 09/12/16 CREATED BY: C&S Engineers, Inc.

Taxiways

Each runway is served by a full length parallel taxiway. The airfield is also developed with a network of connector and cross-field taxiways. The taxiways are equipped with medium intensity taxiway edge lights (MITL) and centerline/edge pavement markings. The required separation from the parallel taxiways' centerlines to their associated runways' centerlines is 400 feet. There is currently an FAA approved Modification of Standards (MOS) to the Runway/Taxiway Separation design standard for a section of Taxiway B (approaching Runway 31) that provides only 362 feet of separation from the runway centerline (approved 12/1993). The taxiway locations can be viewed in **Figure 3.2.1** and **Table 3.2.3** lists and summarizes the characteristics of each taxiway.

Table 3.2.3: Taxiways

Taxiway		Serves	Width (feet)
A		Parallel to RW 6-24; extends beyond RW 6 to cargo apron	75
	A1	Access from TW A to RW 24	
	A2	Access from TW A to terminal apron	
	A3	Access from TW A to RW 6-24 and terminal apron	
	A4	Access from TW A to RW 6-24	
	A5	Access from TW A to RW 6	
B		Parallel to RW 13-31	75
	B1	Access from TW B to RW 31	
	B3	Access from TW B to RW 13-31 and Hangars 7-9	
	B4	Access from TW B to RW 13-31	
	B5	Access from TW B to RW 13-31	
	B6	Access from TW B to RW 13-31	
	B7	Access from TW B to RW 13	
C		Cross-field from RW 24 to TW B	35
E		Cross-field from terminal apron to ARFF facility	93
J		Connector from RW 6-24 to Hangars 7-9	60

Note: Pavement type and condition provided in Appendix F - Pavement Management Plan

Safety Areas and Object Free Areas

Runways and taxiways are surrounded by rectangular areas known as "safety areas". These areas have slopes ranging from 1% to 5% and should be graded and free of obstructions to enhance the safety of aircraft that undershoot, overrun, or veer off a runway or taxiway. The purpose of the safety areas is to minimize the probability of serious damage to aircraft accidentally entering the area, and to provide greater accessibility for firefighting and rescue equipment during such incidents.

Runway design standards applicable to each runway are specified by the Runway Design Code (RDC). The RDC consists of three components related to the operational demands of aircraft:

- Aircraft Approach Category (AAC) – approach speed
- Airplane Design Group (ADG) – wingspan and tail height
- Runway Visibility Range (RVR) - visibility minimums

The Airport Layout Plan (ALP), approved in December 2004, identified the existing RDC for Runway 6-24 as D-IV and the existing RDC for Runway 13-31 as C-III. Based on the RDC, the applicable Runway Safety Area (RSA) for both runways is 500 feet wide centered on the runway and extends for 600 feet prior to the arrival threshold and 1,000 feet beyond the departure end. The RDC and these surfaces will be further evaluated in the facility requirements based on the forecasts of aviation demand.

An Engineered Materials Arresting System (EMAS) provides a level of safety that is equivalent to an RSA and is considered to be a "standard RSA." An EMAS is designed to stop an overrunning aircraft by exerting predictable deceleration forces on its landing gear as the EMAS material deforms. An EMAS is installed on Runways 13 and 31.

Areas known as Object Free Areas (OFAs) also surround runways and taxiways. These areas require clearing of objects except for any object whose location is fixed by function. The purpose of the OFAs is to provide safe and efficient operations at the Airport. The applicable Runway Object Free Area (ROFA) for both runways is 800 feet wide and centered on the runway, and extends for 600 feet prior to the threshold and 1,000 feet beyond the departure end. There are currently two FAA approved modifications to the ROFA design standard:

- Perimeter road in ROFA of Runway 24 and Runway 31 (approved 10/1993)
- Corner of cemetery located 250 feet from extended Runway 6 centerline with 300-foot penetration (approved 12/1993)

The Taxiway Safety Area (TSA) is a defined surface alongside the taxiway that is suitable for reducing the risk of damage to an aircraft deviating from the taxiway. The applicable TSA for ADG III is 118 feet and for ADG IV is 171 feet. The Taxiway Object Free Area (TOFA) for ADG III is 186 feet and for ADG IV is 259 feet. The ADG and these surfaces will be further evaluated in the facility requirements based on the forecasts of aviation demand.

Runway Protection Zone

As defined by FAA AC 150/5300-13A, *Airport Design*, the function of the Runway Protection Zone (RPZ) is to enhance the protection of people and property on the ground. This is best achieved by Airport acquisition of property located within the RPZ and clearing it of incompatible land uses and obstructions. The RPZ is a trapezoidal shape centered on and extending out from the runway centerline, and contains a Central Portion and a Controlled Activity Area. The Central Portion of the RPZ is equal in width to the runway OFA. The Controlled Activity Area is the remaining area of the RPZ on either side of the Central Portion of the RPZ. The dimensions of an RPZ are determined by the type of aircraft that the facility serves as well as the approach visibility minimums for each runway end. RPZ dimensions for each runway end are outlined in **Table 3.2.4.**

Table 3.2.4: LVIA Approach Runway Protection Zones (RPZ)

RPZ	6	24	13	31
Length	2500 ft.	1700 ft.	2500 ft.	1700 ft.
Inner Width	1000 ft.	1000 ft.	1000 ft.	1000 ft.
Outer Width	1750 ft.	1510 ft.	1750 ft.	1510 ft.

Source: FAA AC 150/5300 13A

Lighting and Navigational Aids (NAVAIDs)

Lighting/Visual NAVAIDs

Visual aids to navigation are extremely important, especially for those under VFR. The visual aids at the Airport include:

- **Wind Sock** – a wind sock is a conical textile tube that provides a visual indication of wind direction and velocity. The Airport has five lighted wind cones:
  - south of RW 6, between TW A4 and A5
  - south of RW 24, between TW A3 and A2 (primary windcone)
  - south of RW 24, between TW A2 and A1
  - east of RW 13, between TW B6 and B5
  - east of RW 31, between TW B1 and B3
- **Airport Beacon** – A rotating beacon is installed at an airport to indicate its location to aircraft pilots at night. The beacon rotates at a constant speed, which produces the visual effect of flashes at regular intervals of two alternating colors (180°, Green & White). The airport beacon is located adjacent to the rental car quick turnaround area.

Airport Beacon

Source: C&S Engineers, Inc.

The Airport has several different lighting systems to facilitate operations during periods of low visibility or at night. A summary of lighting is summarized in **Table 3.2.5** and includes the following:

- **Runway Edge Lighting** – both runways have HIRLs
- **Runway Centerline Lighting (RCL)** – in pavement RCLs are installed on Runway 6-24.
- **Approach Lighting System (ALS)** – the MALSR is a configuration of lights positioned uniformly along the extended runway centerline for the purpose of visual guidance. The MALSR is provided to augment the ILS and provides a ground reference aid for the pilot when making an approach to the runway. MALSR are installed on Runways 6 and 13.
- **Runway End Identifier Lights (REILs)** – REILs are installed at an airfield to provide rapid and positive identification of the approach end of a particular runway. The system consists of a pair of synchronized flashing lights located laterally on each side of the runway threshold. REILs are installed on Runways 24 and 31.
- **Precision Approach Path Indicator (PAPI)** – provides visual approach slope guidance during aircraft landing operations. A PAPI system consists of two-four light units, located left of the runway edge and perpendicular to the runway centerline. PAPIs are installed on Runways 6, 24 and 31.
- **Taxiway Lighting** – all taxiways have MITL

Table 3.2.5: Runway Lighting

Lighting	6	24	13	31
HIRL	✓	✓	✓	✓
RCL	✓	✓		
MALSR	✓		✓	
REIL		✓		✓
PAPI	✓	✓		✓

Source: FAA Airport Master Record Form 5010 (09/15/2016), AirNav (01/01/2016) and C&S Engineers, Inc.

Electronic Aids to Navigation

Electronic NAVAIDs help pilots navigate to and land at the airport and are generally classified by the approach procedures they support. Electronic NAVAIDs and the approaches they support at the Airport include:

Runway 13 Glide Slope

Source: C&S Engineers, Inc.

Precision Approach

- **ILS** – an electronic ground-based system that provides precision lateral and vertical guidance to an aircraft approaching and landing on a runway, using radio signals to enable a safe landing during periods of low ceilings or reduced visibility. The Glide Slope (GS), LOC, and DME are primary discrete radio antenna components of the ILS. There is an ILS approach to Runways 6, 24 and 13.

Approaches with Positive Vertical Guidance

A Wide Area Augmentation System (WAAS) is an air navigation aid to augment the GPS by improving its accuracy. GPS uses a network of satellites to create reference points that allows users with GPS receivers to determine their latitude, longitude and altitude. RNAV describes an aircraft's capability to navigate using performance standards and enables aircraft to navigate using a combination of GPS and ground based navigational aids as a network of navigation beacons. This provides the most efficient use of airspace because coverage is limited by the capabilities of the network rather than a single system.

- **Localizer Performance with Vertical Guidance (LPV)** – lateral and vertical guidance to provide approach capabilities similar to Category I ILS.
- **Lateral Navigation/Vertical Navigation (LNAV/VNAV)** – provide both horizontal and vertical approach guidance.

Non-Precision Approach

- **Lateral Navigation (LNAV)** – WAAS RNAV (GPS) non-precision approach that provides lateral guidance.
- **Very High Frequency Omnidirectional Range (VOR) Circling** – short-range radio navigation system enabling aircraft to determine their position and stay on course by receiving radio signals transmitted by a network of fixed ground radio beacons. There is a VOR-A circling approach.

- **Tactical Air Navigation System (TACAN)** – provides bearing and distance information.

Table 3.2.6 summarizes the electronic NAVAIDS and **Table 3.2.7** summarizes the published Instrument Approach Procedures (IAP) for LVIA. LVIA also has published takeoff minimums, departure procedures and IFR Alternate Airport Minimums.

Table 3.2.6: Electronic NAVAIDS

NAVAID	6	24	13	31
GS	✓	✓	✓	
LOC	✓	✓	✓	
DME		✓		

Note: GS, LOC, and DME are components of the ILS

Source: FAA Airport Master Record Form 5010 (09/15/2016), AirNav (01/01/2016) and C&S Engineers, Inc.

Support Equipment

The airport is also served by the following support equipment:

- **Automated Surface Observing System (ASOS)** – an automated sensor suite, which is designed to serve aviation and meteorological observing needs for safe and efficient aviation operations, weather forecasting and climatology. An ASOS is located northwest of the intersection of Runway 6-24 with Taxiway A4.
- **Runway Visual Range (RVR)** – a system that measures visibility, background luminance, and runway light intensity to determine the distance a pilot should be able to see down the runway. The RVR interfaces with the ASOS to support precision landing and takeoff operations. There are RVRs serving runways 6 and 24.

Runway 24 Glide Slope and RVR

Source: C&S Engineers, Inc.

Table 3.2.7: LVIA IAPs and Minimums

Procedure	Category	Aircraft Approach Category Altitude/Visibility Minimums in 1,000's of Feet) A	B	C	D
ILS or LOC RWY 6	S-ILS 6	594/24	594/24	594/24	594/24
	S-LOC 6	920/24	920/24	920/55	920/55
	Cirding	920/1	920/1	920/1½	980/2
ILS or LOC/DME RWY 24	S-ILS 24	587/40	587/40	587/40	587/40
	S-LOC 24	800/55	800/55	800/60	800/60
	Cirding	900-1	900-1	900/1½	980/2
ILS or LOC RWY 13	S-ILS 13	633/1	633/1	633/1	633/1
	S-LOC 13	1260/1	1260/1	1260/2½	1260/2¾
	Cirding	900-1	900-1	900/1½	980/2
RNAV (GPS) RWY 6	LPV DA	594/24	594/24	594/24	594/24
	LNAV/VNAV DA	644/24	644/24	644/24	644/24
	LNAV MDA	840/24	840/24	840/45	840/45
	Cirding	900-1	900-1	900/1½	980/2
RNAV (GPS) RWY 24	LPV DA	587/40	587/40	587/40	587/40
	LNAV/VNAV DA	783/1¼	783/1¼	783/1¼	783/1¼
	LNAV MDA	860/55	860/55	860/1 3/8	860/1 3/8
	Cirding	900/1	900/1	900/1½	980/2
RNAV (GPS) RWY 13	LPV DA	636/½	636/½	636/½	636/½
	LNAV/VNAV DA	758/1¼	758/1¼	758/1¼	758/1¼
	LNAV MDA	940/1	940/1	940/1 5/8	940/1 5/8
	Cirding	940/1	940/1	940/1 5/8	980/2
RNAV (GPS) RWY 31	LPV DA	633/¾	633/¾	633/¾	633/¾
	LNAV/VNAV DA	758/1¼	758/1¼	758/1¼	758/1¼
	LNAV MDA	940/1	940/1	940/1 5/8	940/1 5/8
	Cirding	940/1	940/1	940/1 5/8	980/2
VOR-A	Cirding	980/1	980/1	980/1½	980/2
TACAN-C	Cirding	940/1	940/1	940/1½	980/2

Note: Approach plates are documented in Appendix C - Inventory Materials. Source: AirNav (01/01/2016) and C&S Engineers, Inc.

NAVAID and Support Equipment Condition

Table 3.2.8 indicates construction dates for the above NAVAIDs and support equipment.

Table 3.2.8: NAVAID and support equipment construction dates

Runway 6 Glide Slope	1954
Runway 6 Localizer	1954
Runway 6 MALSR	1978
Runway 24 Glideslope	2006
Runway 24 Localizer	2006
Runway 13 Glideslope	1976 (relocated in 2015)
Runway 13 Localizer	1976
Runway 13 MALSR	1977
ABE RTR	1955

Source: LNAA and C&S Engineers, Inc.

Airfield Electrical Vault

The Airfield Electrical Vault is located in the western area of the airfield, north of Runway 6 and west of Runway 13. The vault was built in 2003 and is accessible via the Airport's perimeter road.

Aircraft Parking Aprons

The Airport has multiple aircraft parking aprons available for based and transient aircraft use. The North GA Apron is currently vacant and is being used for additional Ground Support Equipment (GSE) equipment storage. **Table 3.2.8** indicates details regarding all aircraft parking aprons.

Table 3.2.8 – Aircraft Parking Apron

Location	Based/ Transient	Area (sq. yd.)	Pavement Condition	Aircraft Spaces/Tie-downs
North GA Apron	Based	14,949	Poor	36
Terminal	Transient	96,500	Poor	14
Hangar 2	Based	6,015	Very Poor	Private
Hangar 3	Based	3,036	Very Poor	Private
Hangar 7	Transient & Based	7,129	Fair	8
Hangar 8	Based	7,056	Satisfactory	18
Hangar 9	Based	10,970	Fair	
Hangar 10	Based	10,830	Good	
Air Cargo Apron	Transient	45,016	Satisfactory	5

Source: C&S Engineers, Inc. Apron dimensions measured using ArcGIS and are approximate values.
Pavement Condition provided from Appendix F - Pavement Management Plan

Signage and Markings

Airfield signage is used for navigational and safety purposes. Types of signage located on the airfield include informational and directional signage.

Airfield pavement markings provide information that is useful during aircraft takeoff, landing, or taxiing. Examples of airfield markings used at the Airport include the following:

- Holding Position Marking for the Runway/Approach Surface
- Holding Position Marking for the ILS/POFZ (Precision Obstacle Free Zone)
- Holding Position Marking for the Intermediate
- Enhanced taxiway centerline marking
- Taxiway edge marking (continuous and dashed)
- Non-movement area boundary marking

- Vehicle roadway markings
- Surface painted Holding Position Signs[10]

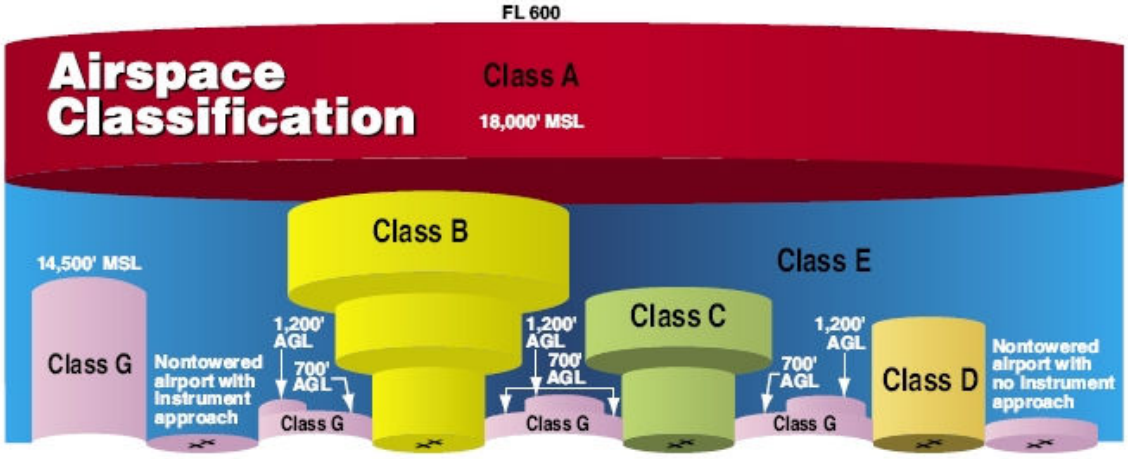
Airspace and Air Traffic Control

As indicated in **Figure 3.2.3**, LVIA operates under Class C airspace.

The criteria for a site receiving a Class C airspace is that it must have an operational ATCT, be serviced by a radar approach control, and have either at least 75,000 annual instrument operations at the primary airport, at least 100,000 annual instrument operations at the primary and secondary airports in the terminal area hub, or at least 250,000 enplaned passengers at the primary airport.

Although variations do exist, the general configuration of Class C airspace is laterally represented as two circles centered on the airport reference point. The inner circle has a 5 NM radius and the outer circle has a 10 NM radius. Typical vertical limits of the ceiling of the Class C airspace is 4,000 feet above the primary airport's field elevation, with the 5 NM circle extending down to the surface and the airspace between the 5 and 10 NM circles extending no lower than 1,200 feet Above Ground Level (AGL).[11]

Figure 3.2.3: Airspace Classification



Source: Types of Controlled Airspace, ALC Content, FAA. Accessible at: https://www.faasafety.gov/gslac/ALC/course_content.aspx?cID=42&sID=505&preview=true

While operating in Class C airspace, pilots must establish and maintain two-way radio communications with the ATCT from the airport from which they are operating or from the ATCT of the facility having jurisdiction over the airspace. All aircraft within the Class C airspace must be equipped with the appropriate transponder equipment as identified in 14 Code of Regulations (CFR) Part 91, section 91.215. Additionally, beginning January 1, 2020, all aircraft operating in the Class C airspace described in 14 CFR Part 91, section

[10] "Airfield Signage and marking Plan – Exhibit 311 (1-3)" Lehigh Northampton Airport Authority
[11] FAA, Order NO 7400.2H. Section 2. Class C Airspace Standards. Accessible at: http://tfmlearning.fly.faa.gov/publications/atpubs/AIR/air1602.html

91.225 must have ADS-B Out equipment installed.[12]

When operating in Class C Airspace it is required for ATC to separate aircraft operating under VFR rules from aircraft operating under IFR rules. VFR weather minimums in Class C Airspace require visibility of 3 statute miles and distances from clouds of 1,000 feet above, 500 feet below, and 2,000 feet horizontally.

3.3 Terminal Area

The passenger terminal complex at LVIA is located in the southeast quadrant of the Airport adjacent to the Runway 24 and Runway 31 endpoints and the Airport Access Road. The terminal complex is classified as a satellite configuration, which is one of four basic terminal concepts outlined in FAA AC 150/5360-13, *Airport Terminal Planning and Design*. Airside access from the runway system to the terminal complex is via parallel Taxiway A or Taxiway B. The main terminal is accessible from the landside via City Line Road. In front of the terminal complex is the public parking lot, and adjacent to the terminal complex to the east was a maintenance facility that was demolished in December 2016 to build a Multi-modal Transportation Center. **Figure 3.3.1** depicts a site plan of the existing terminal area.

Terminal Building

Source: LVIA, Accessed from: http://www.flylvia.com/stay-connected/facts/

At LVIA, the terminal complex consists of two main facilities: the terminal Main Terminal and the Satellite Concourse. The Main Terminal is three floors, and an approximate total floor area of 97,300 square-feet, excluding the Floor 3 office space. Floors 1 and 2 are the primary public areas that contain the major functional areas, and are accessed by a stacked roadway and curbside passenger pick-up and drop-off locations. Floor 3 is non-public area consisting of the Airport Authority offices. The Main Terminal is connected to the Satellite Concourse via an underground tunnel at the central building vertical circulation core.

The Satellite Concourse is a combination of two building, the Satellite Wiley Concourse and the old Satellite Concourse. The concourse is two floors, and an approximate total floor area of 68,305 square feet (77,088 square-feet including the tunnel). Floor 2 of the western part of the concourse is the primary public area that contains major functional areas including holdrooms, concessions, and restrooms. Floor 1 of the eastern part of the concourse contains the same elements, although is only utilized for overflow. Level 1 of the western part of the concourse is occupied by airline and airport offices, and concessions support space.

Terminal Apron Area

The Satellite Concourse is approximately 600 feet long with a total of 15 gates. The eastern part of the

[12] *FAA Regulations and Policies, Handbook, Chapter 15 Airspace*, Accessed 2/14/17. Accessible at: https://www.faa.gov/regulations_policies/handbooks_manuals/aviation/phak/media/17_phak_ch15.pdf