



Restrooms

Restrooms are located in the main path of travel for maximum passenger convenience and adjacent to offices areas for tenant and Airport personnel conveniences. In the Main Terminal building, restrooms are located adjacent to the central circulation corridor and adjacent to office spaces. In the Satellite Concourse, the restrooms are located between holdrooms and concession areas.

Airport Offices

Much of the Airport’s office space is located on the third floor. There is some office area on the enplaning level in the Main Terminal. These areas are used primarily for meeting rooms and storage and also leased to TSA, airport police, etc. There is no office area in the concourse.

Third Floor

The mezzanine level is the primary location for the LNAA offices. Other support areas include public circulation, which is egress for the Authority’s office space, and restrooms to support the offices. There is also a waiting area and check-in window. A square footage area summary is in **Table 3.3.4**.

Table 3.3.4: Mezzanine Level Area Summary

Main Terminal Building	
Functional Element	Area (SF)
Airport Office ¹	8,000
Public Circulation ²	470
Non-Public Circulation ³	1,930
Restrooms	620
Conference Rooms	1,300

¹ Includes interior hallways

² Includes foyer and vertical transitions only

³ Includes outside hallway and stairway

Source: LNAA Main Terminal Mezzanine Level Plans

3.4 Access, Circulation, and Parking

This section summarizes the Airport’s access, circulation, and parking facilities, and the current levels of activity occurring at those facilities. **Figure 3.4.1** depicts key access and parking facilities referenced throughout.

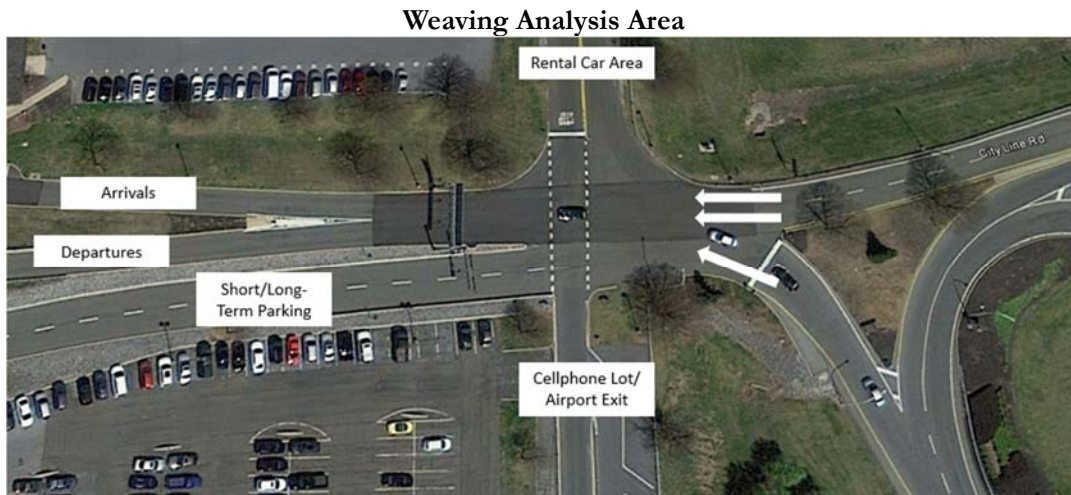
Data Sources

Previously prepared reports and available traffic data were reviewed, and surveys of Airport traffic were conducted to assess existing levels of activity on Airport roadways and within the Airport’s parking facilities. Surveys conducted as part of this master plan are listed below. Detailed data is provided in **Appendix C - Inventory Materials**.

- **Traffic Counts** – The specific traffic data collection locations and the type of data collected at each are shown in **Figure 3.4.2**. Automatic traffic recorders (ATR) were used to collect seven days of hourly counts along Airport Road (ATR 1) and the entrance to the Airport (ATR 16) in October 2016 in order

to determine the peak day and hour for Airport activity and for Airport Road. The peak day of the week was determined to be Friday and the peak hour for both the Airport and Airport Road was found to be 4:00 – 5:00 PM. Data specific to the peak hour was collected at the 16 ATR locations and turning movement counts were collected at the intersections of Airport Road with City Line Road and Ave A/Postal Road as noted on **Figure 3.4.2** on Friday, December 2, 2016.

- **Curbside Data** – A vehicle dwell time survey was conducted on Friday, December 2, 2016 from 4:00 – 6:00 PM. This included the recording of all vehicles by type that stopped along the arrival or departure curbside and for how long. Pedestrians crossing each of the curbside roadway areas were also documented. Video of each curbside area was also recorded for all of December 2, 2016 in order to observe activity.
- **Weaving Analysis** – Video was collected on Friday, December 2, 2016 and used to document traffic patterns along the main entrance to the Airport. The main entrance road includes two travel lanes from Airport Road. Within a short distance, vehicles must choose between the rental car area, arrival curbside roadway, departure curbside roadway, short-term parking, long-term parking, the cell phone parking area, and exiting the Airport (see photo).



Source: Google and C&S Engineers, Inc.

- **Other Data** –
 - Traffic data for other major roadways in the vicinity of the Airport was obtained through the Pennsylvania Department of Transportation’s (PennDOT) website:
<http://www.penndot.gov/ProjectAndPrograms/Planning/Maps/Pages/Traffic-Volume.aspx>
 - Flight schedules, enplanement/deplanement data, and parking data was provided by the LNAAL for December 2, 2016
 - Bus routing and schedules for the Lehigh and Northampton Transportation Authority (LANta) was obtained via <http://www.lantabus.com/>.

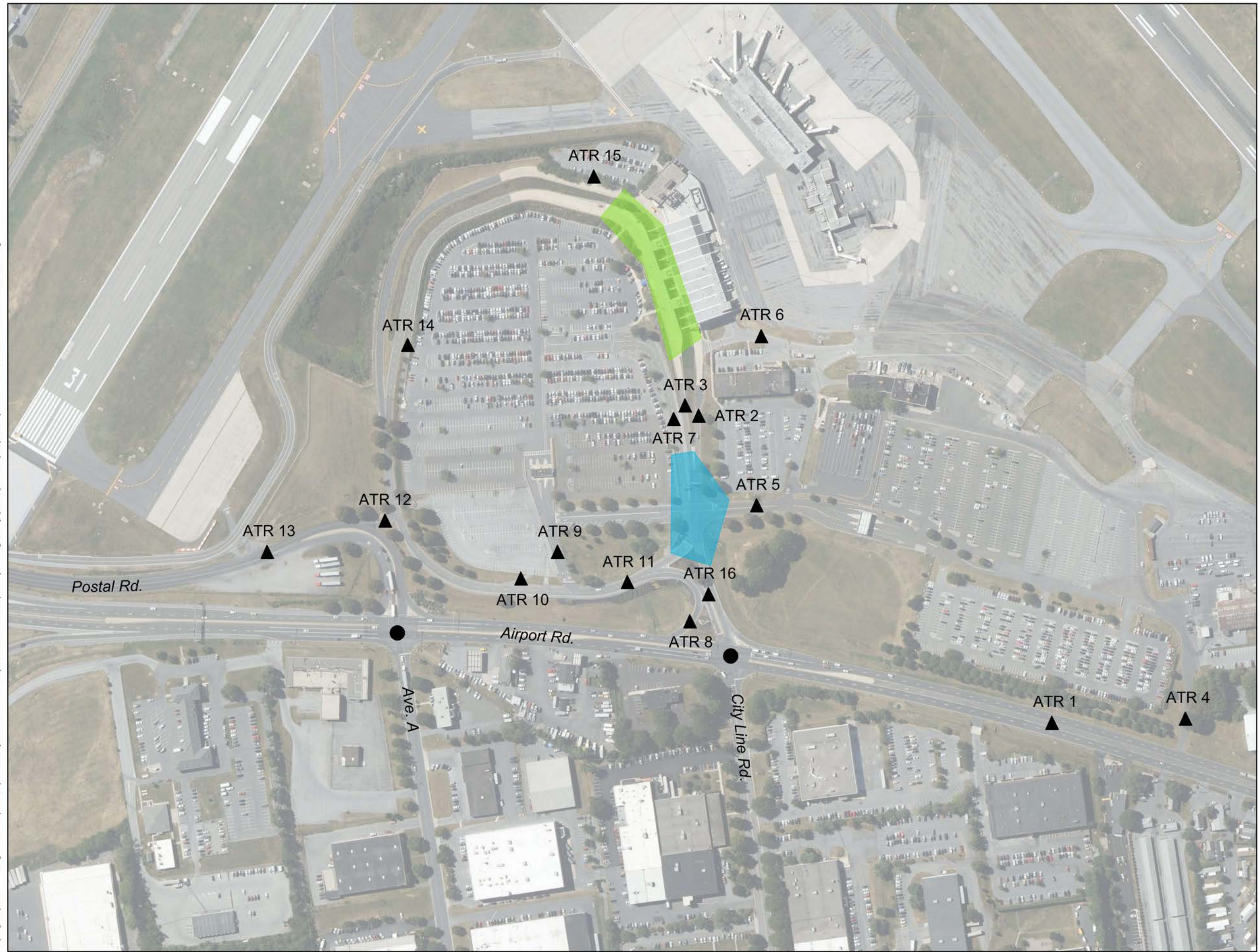


Access, Circulation, and Parking Facilities

Lehigh Valley International Airport
 Master Plan Update

Figure 3.4.1

Jan 18, 2018 - 11:57am
F:\Project\N83 - Lehigh-Northampton Airport Auth\N83012001 ABE Airport Master Plan Update\Planning-Study\CADD\Exhibits\Chapter 3\3.8.2 - Traffic Data Collection Locations.dwg



Legend

- Curbside Activity Survey Area
- Weaving Analysis Survey Area
- Automatic Traffic Recorder (ATR) Counts (24 Hours)
- Turning Movement Counts (4-6 pm)

Not To Scale



Lehigh Valley International Airport
Master Plan Update
Traffic Data Collection
Locations
Figure 3.4.2

Assumptions and Planned Development

A number of development projects are currently under construction or are planned in the near term, which could affect airport access, circulation, or parking:

- In December 2016, the Airport began demolition of a maintenance facility building adjacent to the terminal to begin the construction of a new multi-modal center. Traffic data was collected before construction began and rental car traffic was diverted. This development is not part of the existing condition scenario but will be considered part of the existing Airport for future condition and alternatives analysis.
- Anticipated volumes and infrastructure improvements along Willowbrook and Airport Roads, including the development of a FedEx Ground Distribution Center on former airport property, will be considered for future condition and alternatives analysis. Data associated with this development and future improvement recommendations were obtained through the Environmental Assessment for Land Release dated June 2015.

Other Transportation Plans

The Lehigh Valley Transportation Study (LVTS), the Metropolitan Planning Organization (MPO) for the region, documented a number of goals for the region's airports in its latest long range transportation plan, MoveLV, which are derived from the Lehigh and Northampton Counties' Comprehensive Plan – The Lehigh Valley...2030. Some of these goals relevant to LVIA include:

1. To be a model aviation system, providing the highest levels of service to diverse customers while serving as a gateway to the community, region, and world.
2. To maximize the compatibility of LVIA operations and nearby land uses.
3. To optimize the operational efficiency, effectiveness, and safety of the facility.

While MoveLV does not specifically address airport needs or future projects, it does identify a number of infrastructure improvement projects surrounding the Airport such as the US Route 22 widening from Airport Road to Route 309 and Schoenersville Road Corridor improvements. MoveLV also documents goals for freight, transit, and bicycle/pedestrian modes that should be taken into consideration as the future of the Airport is developed and evaluated.

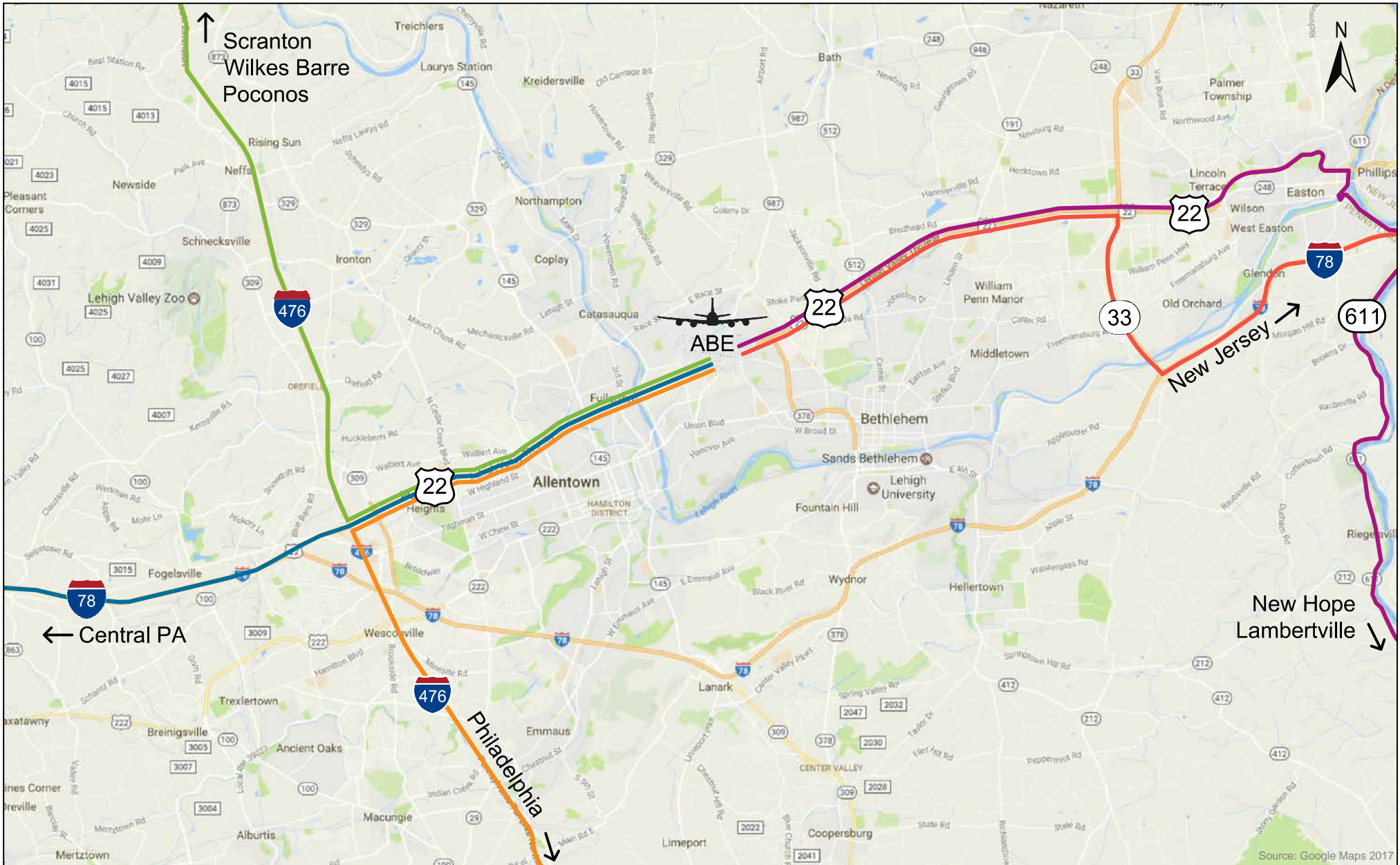
Access and Circulation

This section describes the access to the Airport and circulation throughout for all modes of travel. It describes the access to the Airport via the highway system and local roadway network, the internal roadway circulation, the curbside areas, and multi-modal accommodations.

Regional Access

The Airport's website, <http://www.flylv.com/contact/directions/>, provides directions to the Airport as noted below and shown on **Figure 3.4.3**:

- From the West/Central PA – take Route 78 to Route 22 East to Route 987 (Airport Road)
- From the East/New Jersey – take Route 78 West to Route 33 North to Route 22 West to Route 987 North (Airport Road)



Regional Access Routes



- From Scranton, Wilkes-Barre, or Poconos – Take PA Turnpike South (Route 476) to Lehigh Valley Exit to Route 22 East to Route 987 North (Airport Road)
- From Philadelphia and Southern New Jersey – Take the Northeast Extension (Route 476) to the PA Turnpike North to Route 22 East to Route 987 North (Airport Road)
- From New Hope/Lambertville – Take Route 32 North to Route 611 North to Route 22 West to Route 987 North (Airport Road)

The Airport is generally bound by US Route 22 to the south, Airport Road (Route 987) to the east, East Race Street to the north, and Irving and Lehigh Streets to the west. US Route 22 is a 4-lane divided highway with a full interchange at Airport Road. The average annual daily traffic on the portion of US Route 22 just east of Airport Road was 82,000 and 90,000 just west in 2015. Airport Road is generally a 5-lane roadway with two lanes in each direction and a center left turn lane. The average annual daily traffic on Airport Road was noted as 23,000 in 2015 by PennDOT. Access to the Main Terminal and parking areas for the Airport are via the intersection at City Line Road and Airport Road. Access to the air cargo and GA facilities are via the intersection at Ave A/Postal Road and Airport Road. Airport Road is oriented north/south and is under the jurisdiction of PennDOT.

As stated previously, turning movement counts were collected on Friday, December 2, 2014 from 4:00 – 5:00 PM at the intersections of Airport Road with Ave A/Postal Road and City Line Road. **Table 3.4.1** shows the intersection turning movement counts at these two locations during the peak hour.



Table 3.4.1.: Intersection Turning Movement Counts

		Direction of Movement	Peak Hour Volume (4-5 PM)
Airport Road & Ave A/Postal Road			
Airport Road	Northbound	Left	144
		Thru	1,259
		Right	147
	Southbound	Left	13
		Thru	1,119
		Right	78
Postal Rd	Eastbound	Left	188
		Thru	58
		Right	428
Ave A	Westbound	Left	317
		Thru	111
		Right	52
Airport Road & City Line Road			
Airport Road	Northbound	Left	143
		Thru	1,238
		Right	151
	Southbound	Left	36
		Thru	883
		Right	51
LVIA Driveway	Eastbound	Left	40
		Thru	25
		Right	120
City Line Road	Westbound	Left	257
		Thru	53
		Right	105

Source: C&S Engineers, Inc. December 2, 2016

The two intersections were analyzed using the computer model, SYNCHRO 9, which implements methods presented in the Highway Capacity Manual 2010. SYNCHRO determines the level of service (LOS), which is defined in terms of delay, as well as anticipated queue lengths.

The LOS for both signalized and unsignalized intersections are defined in terms of control delay. Control delay is a measure of the total travel time lost and includes slowing delay, stopped delay, queue move-up time, and start-up lost time. LOS thresholds are defined as average delay in seconds per vehicle over a fifteen-minute analysis period and range from LOS A to F for both signalized and unsignalized intersections. An overall intersection LOS D or better is generally considered acceptable at a signalized intersection. The following table provides a summary of the LOS thresholds as defined in the Highway Capacity Manual.



Table 3.4.2: Intersection Level of Service Criteria

Level of Service (LOS)	Signalized Intersections
	Delay (sec)
A	0-10
B	> 10-20
C	> 20-35
D	> 35-55
E	> 55-80
F	over 80

Source: Highway Capacity Manual 2010

The analysis was performed for the two intersections using the PM peak hour traffic volumes with existing roadway and intersection geometry information, as well as field verified signal timing and phasing information. While volumes may be higher for some movements during an AM peak hour, the overall peak hour for the day was used for analysis purposes. **Table 3.4.3** shows the LOS, delay in seconds, v/c ratio, and 95th percentile queues for each lane group of each study intersection. The 95th percentile queue is defined as the queue length (in feet) that has only a 5-percent probability of being exceeded during the analysis time period and is often used to determine storage lengths for dedicated turn lanes. Movements with a LOS E or F are italicized.

While the intersection of Airport Road with City Line Road is operating at an acceptable LOS, the intersection with Ave A/Postal Road is currently operating at an average intersection LOS E with LOS F for the Ave A left-turn movement and Postal Road movements during the PM peak hour. The southbound shared through/right-turn movement is also a LOS F. Due to the high v/c ratios, queue length calculations may be inaccurate but field observations confirmed that queues on Postal Road reach up to 400 feet and the southbound approach of Airport Road at Ave A/Postal Road can reach the City Line Road intersection.

The existing condition output files from the Synchro models are included in **Appendix C - Inventory Materials**.



Table 3.4.3: Existing Condition Intersection Capacity Analysis – PM Peak Hour

		LOS	Delay (sec)	v/c Ratio	95th % Queue (ft)
Airport Road & Ave A/Postal Road					
Airport Road	Northbound	Left	C	21.6	109
		Thru	C	22.3	430
		Right	A	2.6	30
	Southbound	Left	D	39.9	m15
		Thru/Right	F	119.4	#696
		Left/Thru	F	151.3	#370
Postal Road	Eastbound	Right	F	94.4	#360
Ave A	Westbound	Left	F	121	#461
		Thru/Right	D	44.1	178
		Average Intersection	E	78.2	
Airport Road & City Line Road					
Airport Road	Northbound	Left	B	11.2	m31
		Thru/Right	A	7.4	m133
	Southbound	Left	C	29	54
Thru		C	23.4	354	
Right		A	0.2	0	
LVIA Driveway	Eastbound	Left/Thru	E	66.3	88
		Right	B	12.2	22
City Line Road	Westbound	Left	D	53.2	239
		Thru/Right	C	22.3	111
		Average Intersection	B	19.2	

- 95th % volume exceeds capacity, queue may be longer

m - volume for 95th % queue is metered by upstream signal Source: C&S Engineers, Inc.

Internal Airport Roadways and Intersections

The terminal and parking areas are served by a loop road with counter-clockwise traffic flow that can be accessed via Airport Road at its intersection with City Line Road as shown on **Figure 3.4.1**. From Airport Road, there are two lanes from which drivers can choose to go to the rental car area, arrival curbside roadway, departure curbside roadway, short-term parking, long-term parking, the cell phone parking area, or exit the Airport. After driving through the terminal curbside area, drivers could enter the long-term parking area, turn onto Postal Road, exit the Airport, or return to the terminal curbside area. **Figure 3.4.4** shows the PM peak hour volumes throughout the internal roadway system of the Airport along with the intersections of Airport Road at City Line Road and Ave A/Postal Road. Approximately 2,100 vehicles entered and 1,900 exited the Airport via City Line Road on December 2, 2016. A summary of hourly volume data is available at all locations shown in **Figure 3.4.2** in **Appendix C - Inventory Materials**.



Curbside Area

Figure 3.4.5 shows the curb frontage roadways for the terminal. The lower, northern roadway is dedicated for arrivals. There is approximately 300 feet of curb frontage (15 spaces) with a designated police parking space as you exit the terminal area. The arrival curb frontage is split by a crosswalk that guides pedestrians from the parking area to the terminal. There are two through lanes and one loading/unloading lane. There are also 5 marked and signed taxi parking spaces approaching the terminal.

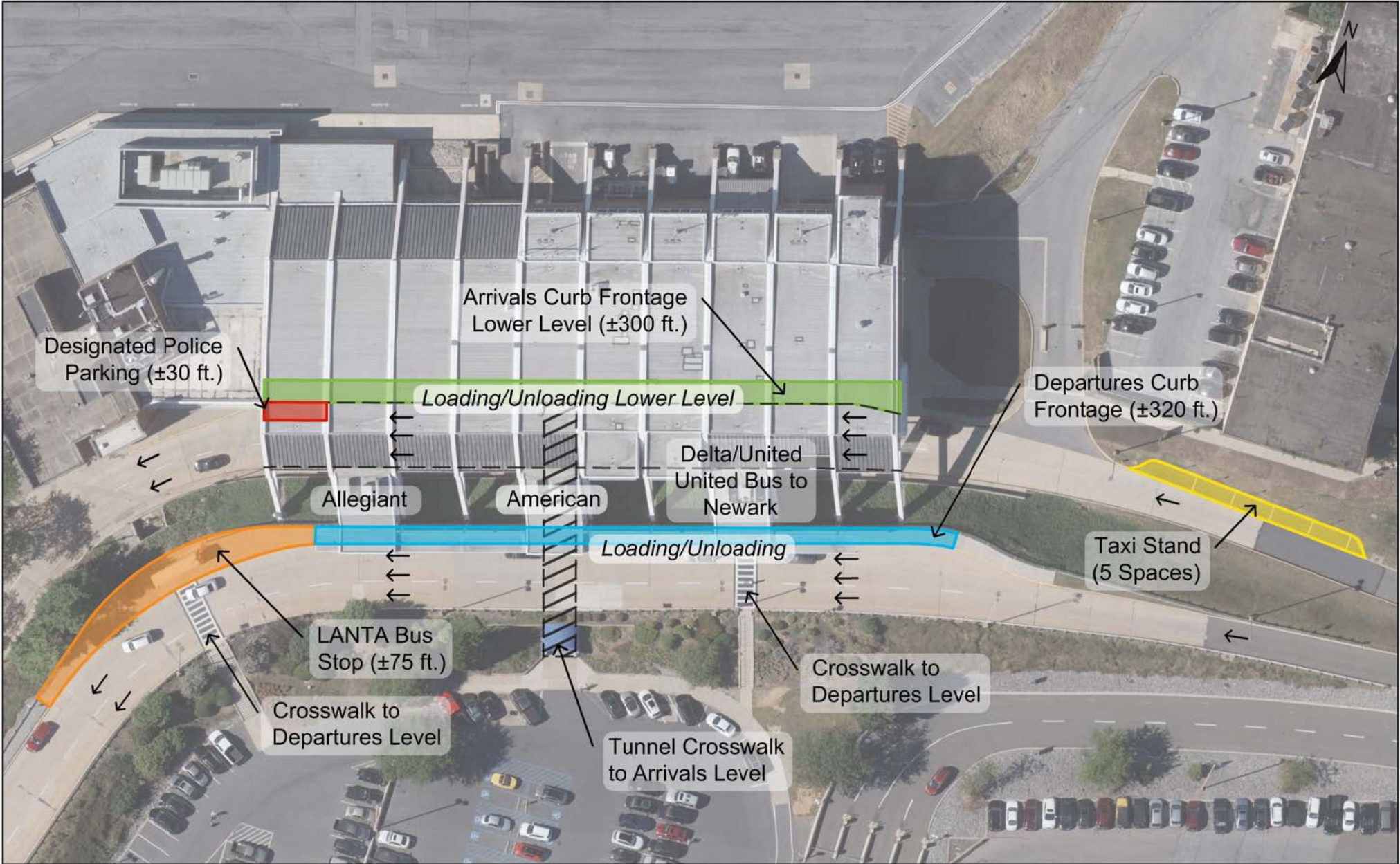
The upper, southern roadway is dedicated for departures, a United bus to Newark, New Jersey, and a LANta bus stop and shelter. The departures curb frontage can accommodate approximately 19 parked vehicles, including the area dedicated to the LANta and United buses. There are three signed walkways, noted as you drive along the roadway: Delta/United, American, and Allegiant. There is a marked crosswalk at the walkway marked for Delta/United passengers and one at the LANta bus stop, as shown in **Figure 3.4.5**. Similar to the arrivals roadway, there are two through lanes and one loading/unloading lane.



Source: C&S Engineers, Inc./Google Arrow: Thru lane L/U: Loading/unloading lane

The Airport currently charges vehicles for hire/courtesy vehicles an annual fee per vehicle to operate curbside. The LNAA is currently under negotiations with transportation network companies (Uber/Lyft) to operate at the Airport. The Airport currently does not have the technology to collect per trip fees from any ride service providers.

Table 3.6.4 summarizes the vehicles counted along both curb frontage areas on Friday, December 2, 2016 from 4:00 – 5:00 PM. The average dwell time for all vehicles stopped along the arrivals curbside area was 6 minutes 40 seconds while the average dwell time along the departures curb was 4 minutes 24 seconds. Most of the vehicles stopped at either curbside area were passenger vehicles. There was one taxi that was noted to park at the arrivals curb, not in the designated taxi spaces, for over 25 minutes. The other taxi and bus activity at either curb was minimal.



Curb Frontage

Table 3.4.4: Curb Frontage Usage Data

	Arrivals		Departures	
	Vehicle Count	Average Dwell Time (min:sec)	Vehicle Count	Average Dwell Time (min:sec)
All vehicles	52	6:40	58	4:24
Passenger vehicles	50	6:25	54	4:22
Taxis	1	25:22	1	2:48
Buses	1	0:19	3	5:41

Source: C&S Engineers, Inc. Data collected 12/2/16 from 4-5 PM

Video was recorded along both curbside roadways for 24-hours on Friday, December 2, 2016. Activity along the departure curb was well distributed from 4:00 – 5:00 PM with no double parking observed. The arrival curbside was close to capacity with a few instances of double parking observed between 4:30 – 5:00 PM which aligns with the flight schedule that indicates four flights arrived at LVIA between 4:30 – 5:00 PM.

Based on the average dwell time for all vehicles and the number of available parking spaces along each curbside area, the arrivals curb could accommodate approximately 135 vehicles during the peak hour while the departure curb could accommodate up to 260 vehicles. With peak hour parked vehicles observed to be 52 for the arrivals curb and 58 for the departures curb, the curbside areas are operating at approximately 40% and 22% capacity, respectively.

A microsimulation model has been created for the 4:00 – 5:00 PM hour that includes the Airport’s circulation and curb frontage roadways. The model simulates curbside activity, the weaving area as vehicles approach the terminal and parking areas from Airport Road, and the circulation roadways based on actual volume, vehicle classification, and dwell time data collected. As future scenarios are developed, this model will be revised and the changes in roadway density and vehicle delays will be documented to assist in the evaluation of alternatives.

Multi-modal Accommodations

There are no sidewalks or dedicated bicycle infrastructure along Airport Road or to the Airport terminal or parking areas. A few pedestrians at the intersections without sidewalks or crosswalks were observed during the peak hour turning movement counts at Airport Road with City Line Road and Ave A/Postal Road. No bicycles were observed.

Pedestrians are accommodated throughout the parking areas via stripped, signed, or barricaded areas separated from vehicle driving lanes in some places. As noted in the curbside area

Pedestrian Access to Terminal



Source: C&S Engineers, Inc.



discussion, there is a striped, signed, and lit crosswalk in the center of the arrival curb frontage area between the parking area and the terminal building. There are two crosswalks along the departure curb area at the Delta/United walkway and at the LANta bus stop that provide access to the parking areas via staircases. Based on observations between 4:00 – 5:00 PM at both curbside areas, 120 pedestrians were observed using the arrivals crosswalk while 17 pedestrians crossed the departures roadway (3 near the bus stop, 9 at Delta/United, and 5 at unmarked points).

The Airport is currently served by three LANta bus routes: 215 – South Bethlehem/LV Airport, 319- LV Mall – Bethlehem Square via LV Airport, and 324 – Allentown/LV Airport.

- Route 215 makes its first stop heading northbound at the Airport at 6:40 AM then at 10 minutes past the hour from 7:10 AM – 5:10 PM. The route travels between the Hellertown-Creekside shopping center and the Lehigh Valley Industrial Park III.
- Route 319 makes its first stop at the Airport at 6:36 AM and makes 18 stops throughout the day, ending at 5:55 PM.
- Route 324 makes 7 stops at the Airport between 6:46 AM and 5:46 PM. The route travels between the Airport and the Allentown Transportation Center.

Ridership information for these routes is not available at this time, however the schedule is subject to change based on the new Multimodal Transportation Center under construction at the Airport.

As stated previously and shown in **Figure 3.4.1**, the current rental car staging areas will be the home of a new multi-modal facility that will accommodate rental car functions as well as provide a base for transit activity. The center is expected to open in the summer of 2017. The center will double existing taxi stands and create seven bus slips and a loop for LANta and TransBridge, Inc. activity at the Airport. TransBridge currently operates from the Lehigh Valley Industrial Park, east of the Airport. Other improvements, as noted on <http://www.flylv.com/multi-modal-transportation-center-arrival-2017/>, include the following:

- Reduced walking distances to rental cars from the terminal
- Weather protected walkways
- Improved safety by eliminating passengers/vehicles conflict points
- Designated areas for bus services from LANta and TransBridge Lines, Inc.

Rental Car Facilities

There are currently a number of rental car companies operating at LVIA: Avis, Budget, Enterprise, National, Alamo, Hertz, Dollar, and Thrifty. While each company has their own signage and contact information on the LVIA website, the LNAAL has contracts with these entities in groups: Enterprise Holdings (Alamo, Enterprise, and National), Avis Budget Group, and Hertz Global Holdings (Hertz, Dollar, and Thrifty). Prior to construction of the multi-modal center, the rental car ready lot was located east of the terminal, past Building 10 that was begin used for maintenance. The multi-modal center will allow for more direct access between the terminal and the rental ready lot. The rental car quick turnaround area is currently, and is expected to remain, north of the overflow parking areas.

Parking

Passenger Parking

On-airport passenger parking is available in a number of forms as shown in **Figure 3.4.1**: cell phone, short-term, long-term, and Aero Club dedicated spaces. The cell phone lot contains 15 spaces and is located along the one-way southbound roadway just east of the parking areas. These spaces are signed for 30-minute use. The short-term lot is accessed via the right lane of the parking entrance approaching the terminal area and is most closely adjacent to the pedestrian tunnel leading to the arrivals level of the main terminal. Two gates provide access to 159 short-term parking spaces that include 10 accessible spaces.

Parking Wayfinding Signage



Source: Google

Long-term parking includes 1,473 spaces (including 183 A-lot spaces and 13 accessible spaces) and has two access points: the left lane of the parking entrance approaching the terminal (adjacent to the short-term access) and along the departures roadway past the terminal area. The main access has two ticket gates and the alternate access has one. As stated previously, the rental car operations are currently allocated 330 spaces in the long-term parking lot.

Aero Club Parking



Source: C&S Engineers, Inc.

The Airport offers a parking program for frequent customers which provide conveniently located parking on a first-come, first-served basis. Normal parking rates apply, but the 55 spaces allocated to the Aero Club are located next to the short-term parking area but charged long-term pricing. This program is available to individuals that have used the Airport a total of 15 times within the last 12-month period.

Exit for all paid parking is consolidated within the long-term parking area. There are four gates: two express exits (credit only) and two for other users. Users may pre-pay for

parking using the terminal pay station located on the lower level of the main terminal or pay using a credit card or cash at the exit booth.



The current parking rates are shown in **Table 3.4.5**.

Table 3.4.5: Parking Rates

	Time	Rates
Short-Term Parking (159 spaces)	0-10 minutes	Free
	11-40 minutes	\$1.00
	41-60 minutes	\$2.00
	Per Hour	\$2.00
	Per Day	\$22.00
Long-Term /Aero Club Parking (1,528 spaces)	Per Day	\$14.00
	Per Week	\$79.00

Source: Lehigh Valley International Airport, Parking Rates.
Accessible at: <http://www.flylv.com/parking/parking-rates/>.
Accessed 12/29/16

Parking information associated with Friday, December 2, 2016 was available to provide a snapshot of activity in terms of the duration of stay for those that exited the parking facilities that day, the number of vehicles that entered/exited and a running total of parked vehicles, and transaction amounts. The day began with 418 vehicles parked in the short-term, long-term, and Aero Club spaces. For the purposes of these comparisons, it is assumed that the parking area is reduced by 330 spaces due to rental car functions for a total of 1,357 available spaces. The occupation of the lots peaked at 34 percent during most of the morning and experienced the lowest occupancy at 7:00 PM (16 percent), as shown in **Table 3.4.6**.



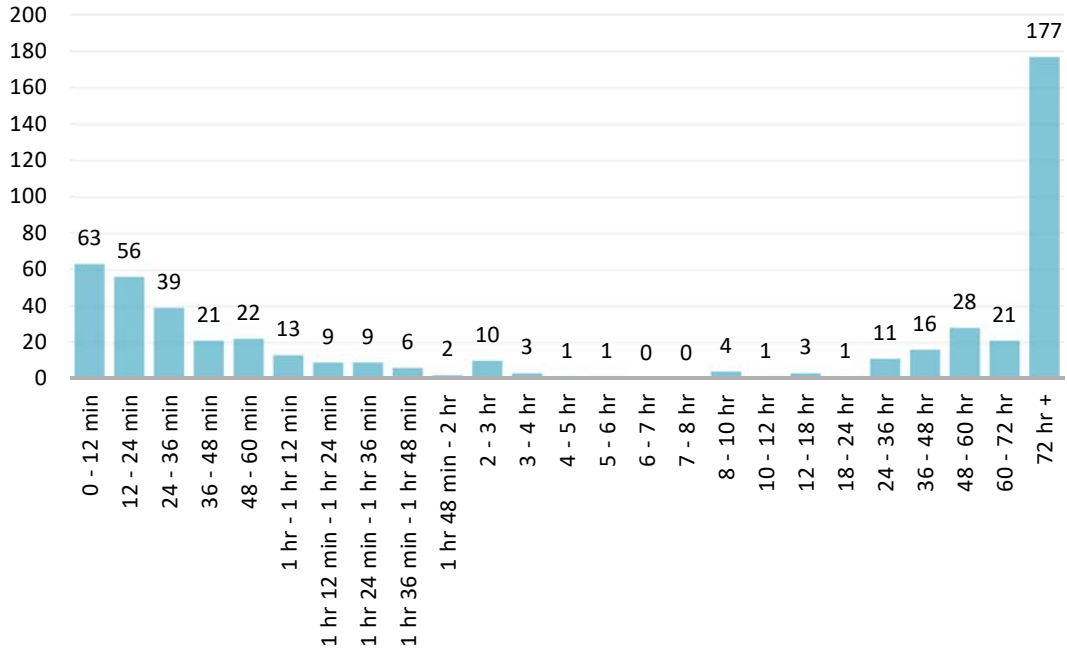
Table 3.4.6: Parking Entry/Exit Data

Hour	Entry	Exit	Occupied spaces	Percent Occupied ¹
12:00 AM	0	0	418	31%
1:00 AM	0	0	418	31%
2:00 AM	1	1	418	31%
3:00 AM	1	0	419	31%
4:00 AM	29	0	448	33%
5:00 AM	14	7	455	34%
6:00 AM	3	4	454	33%
7:00 AM	3	1	456	34%
8:00 AM	9	7	458	34%
9:00 AM	18	12	464	34%
10:00 AM	25	33	456	34%
11:00 AM	19	18	457	34%
12:00 PM	13	36	434	32%
1:00 PM	14	8	440	32%
2:00 PM	9	26	423	31%
3:00 PM	42	33	432	32%
4:00 PM	42	45	429	32%
5:00 PM	16	110	335	25%
6:00 PM	6	10	331	24%
7:00 PM	9	21	219	16%
8:00 PM	3	3	319	24%
9:00 PM	22	44	297	22%
10:00 PM	9	35	271	20%
11:00 PM	20	63	228	17%
Totals	327	517		

¹ Assumes there are a total of 1,357 available spaces
Source: LNAA – data collected 12/2/2016

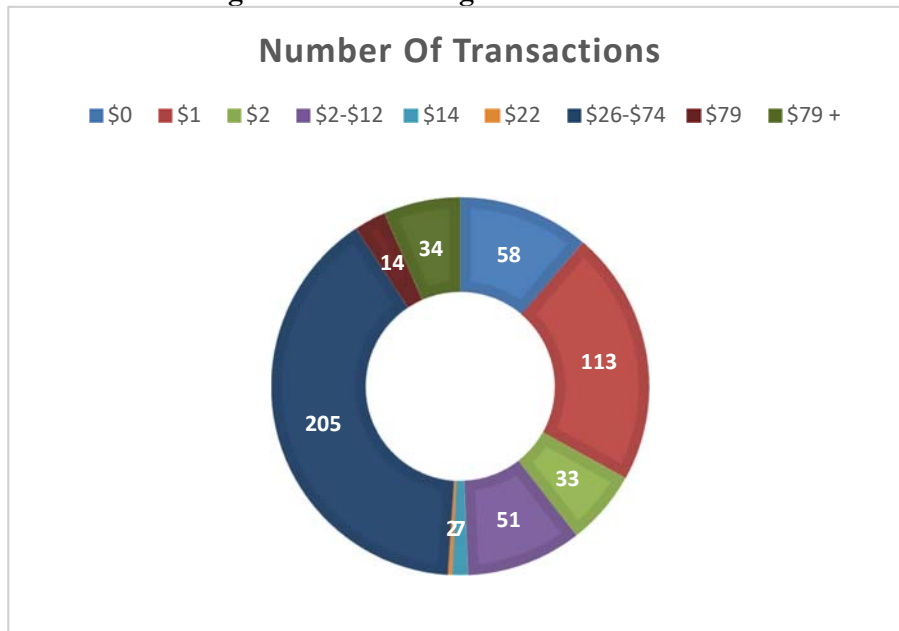
The duration of stay for the 517 vehicles that exited the parking areas on Friday, December 2, 2016 is provided in **Figure 3.4.6** on the following page. Based on this information, 39 percent were parked for less than an hour, 51 percent were there less than 24 hours, and 34 percent were there more than three days. With 51 parking tickets validated worth a total of \$124, the Airport collected \$16,290 on the 466 paying vehicles that exited the parking facilities that day. For the 466 paid tickets, the average fee collected was approximately \$35. The distribution of ticket values is shown in **Figure 3.4.7** on the following page.

Figure 3.4.6: Parking Duration of Stay



Data as noted for December 2, 2016 Source: LNAA, C&S Engineers, Inc.

Figure 3.4.7 – Parking Transaction Values



Source: LNAA, C&S Engineers, Inc.



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>