



### 3.8 Building Assessments

The intent of this building evaluation report is to review the existing buildings, observe existing conditions, report the evaluations, and offer recommendations to correct noted issues and Code deficiencies. It should be noted that no hazardous material testing investigations or remediation measures were included. However, exposed assumed hazardous materials and known contaminants based on the installation have been noted accordingly.

The following buildings were visually inspected on November 17, 2016:

- Former Government Building
- Hangar 1 – Rental Car Quick Turn Around (QTA)
- Hangar 2
- Hangar 3
- Hangar 7
- First Floor of Wiley Terminal

These buildings are depicted in **Figure 3.8.1** and summarized in **Table 3.8.1**. Costs indicated in this table are preliminary estimates only and will be reexamined during the development of the capital improvements program. The full building inventory assessment report is available in **Appendix C - Inventory Materials**.





**Legend**

- Airport Property Line
- Assessed Buildings

0 100 200 400 600 Feet  
1 inch = 400 feet  
When printed at 11" x 17"





Lehigh Valley International Airport  
Master Plan Update


### Building Assessments


Figure 3.8.1





**Table 3.8.1: Building Assessment Existing Conditions and Recommendations**

	Structural	Architectural	Plumbing	Fire Sprinkler & Fire Alarm System	HVAC	Electric Service	Security & Communications/IT
<b>Former Government Building</b>							
Existing Conditions 	<ul style="list-style-type: none"> <li>• Foundation in good condition</li> <li>• First Floor in satisfactory condition</li> <li>• Second &amp; Third Floor in very poor condition</li> </ul>	<ul style="list-style-type: none"> <li>• Exterior walls, exterior doors, exterior windows, roof, interior finishes, floor coverings, ceiling, interior doors in poor condition</li> <li>• Basement in good condition</li> </ul>	<ul style="list-style-type: none"> <li>• Poor condition (have been decommissioned)</li> </ul>	<ul style="list-style-type: none"> <li>• Equipped, but in poor condition</li> <li>• Fire alarm notification system does not exist</li> </ul>	<ul style="list-style-type: none"> <li>• In poor condition and not salvageable</li> </ul>	<ul style="list-style-type: none"> <li>• In poor condition</li> </ul>	<ul style="list-style-type: none"> <li>• Access control or video surveillance systems do not exist</li> <li>• Telephone service is in poor condition and has been abandoned</li> </ul>
Recommendation(s)	<ul style="list-style-type: none"> <li>• Demolition of facility</li> </ul>						
<b>Hangar 1 – Rental Car Quick Turn Around (QTA)</b>							
Existing Conditions 	<ul style="list-style-type: none"> <li>• Satisfactory condition</li> </ul>	<ul style="list-style-type: none"> <li>• Siding and interior finishes in fair condition</li> <li>• Exterior doors and windows in poor condition</li> <li>• Roof condition could not be verified</li> <li>• Functionally meets current needs</li> </ul>	<ul style="list-style-type: none"> <li>• Water service is in poor condition/state of disrepair</li> <li>• Car wash section in good condition</li> </ul>	<ul style="list-style-type: none"> <li>• Fire suppression system does not exist</li> <li>• Fire alarm notification system does not exist</li> </ul>	<ul style="list-style-type: none"> <li>• De-icing side in poor condition</li> <li>• Hertz Rental Car Wash side in good condition</li> </ul>	<ul style="list-style-type: none"> <li>• In good condition and meets current facility needs</li> </ul>	<ul style="list-style-type: none"> <li>• Access control or video surveillance systems do not exist</li> <li>• Telephone service is in adequate condition</li> </ul>
Recommendation(s)	<ul style="list-style-type: none"> <li>• Keep stockpile as far as possible from CMU wall</li> </ul>	<ul style="list-style-type: none"> <li>• Remove existing metal wall panels, reinstall, and reinsulate the wall cavity during replacement</li> <li>• Replace existing metal roof panels and exterior doors</li> </ul>	<ul style="list-style-type: none"> <li>• Re-assemble domestic water service (\$10,000)</li> </ul>	<ul style="list-style-type: none"> <li>• Install fire sprinkler and fire alarm notification systems (\$90,000)</li> </ul>	<ul style="list-style-type: none"> <li>• Remove and install new electric infrared heaters in De-icing storage area (\$1,200 per heater)</li> <li>• Install new fan coil unit with electric/gas heat to supply the necessary outdoor air required per PA State Mechanical Code in QTA Servicing Area (\$2,500)</li> </ul>	<ul style="list-style-type: none"> <li>• Upgrade lighting to high-efficiency LED fixtures</li> <li>• Re-support conduit and cables</li> </ul>	<ul style="list-style-type: none"> <li>• Install access control or video surveillance system</li> </ul>

	Structural	Architectural	Plumbing	Fire Sprinkler & Fire Alarm System	HVAC	Electric Service	Security & Communications/IT
<b>Hangar 2</b>							
Existing Conditions 	<ul style="list-style-type: none"> <li>Satisfactory condition</li> </ul>	<ul style="list-style-type: none"> <li>Exterior walls, doors, roof, and roof gutter system in good condition</li> <li>Interior wall, ceiling, and floor finishes in fair condition</li> <li>Animal roosting in ceiling</li> <li>Facility and toilet rooms inaccessible</li> </ul>	<ul style="list-style-type: none"> <li>Plumbing system functional and in fair condition</li> <li>Plumbing fixtures lack code required vacuum breakers</li> </ul>	<ul style="list-style-type: none"> <li>Consists of a combined domestic/fire service that is in fair condition</li> <li>Does not have foam fire suppression system</li> <li>Fire alarm system in good condition</li> </ul>	<ul style="list-style-type: none"> <li>Boiler, bath exhaust, and SAYNO heat pump system, in working condition but have exceeded useful life</li> <li>Water unit heaters in operational condition</li> <li>No make-up air system present</li> <li>First Co. hot water furnace and DX cooling coil cabinet in good condition</li> </ul>	<ul style="list-style-type: none"> <li>Adequate overhead utility service</li> <li>Electrical panels in basement beyond useful life</li> <li>129/340 volt panel with a wild leg on Phase B</li> <li>Danger concern regarding existing 5kW Onan generator appears undersized for emergency loads</li> </ul>	<ul style="list-style-type: none"> <li>Access control or video surveillance systems do not exist</li> <li>Telephone service is in working condition</li> </ul>
Recommendation(s)	<ul style="list-style-type: none"> <li>Fill cracks in slab on grade</li> </ul>	<ul style="list-style-type: none"> <li>Routine roof maintenance</li> <li>Provide office aesthetics upgrade if desired</li> </ul>	<ul style="list-style-type: none"> <li>Provide modernized ADA compliant toilet room arrangement (\$70,000)</li> </ul>	<ul style="list-style-type: none"> <li>Required installation of foam fire suppression system (\$500,000)</li> </ul>	<ul style="list-style-type: none"> <li>Install make-up air unit with interlocked exhaust fans as required per Pennsylvania State Mechanical Code (\$25,000)</li> <li>Install new hot water unit heaters (\$850 per hot water heater)</li> <li>Remove and install new ductless split system in adjacent office to hangar (\$3,100)</li> </ul>	<ul style="list-style-type: none"> <li>Upgrade basement panels and generator.</li> <li>Remove wild leg panel and provide dedicated feeds/transformers for 120/240 volt loads</li> <li>Upgrade to LED style fixtures</li> </ul>	<ul style="list-style-type: none"> <li>Install access control or video surveillance system</li> </ul>

	Structural	Architectural	Plumbing	Fire Sprinkler & Fire Alarm System	HVAC	Electric Service	Security & Communications/IT
<b>Hangar 3</b>							
Existing Conditions 	<ul style="list-style-type: none"> <li>• Excellent Condition</li> </ul>	<ul style="list-style-type: none"> <li>• Exterior walls in good condition with small areas of damaged insulation</li> <li>• Doors, exterior windows, roof gutter system, in good condition</li> <li>• Roof and interior wall in fair condition</li> <li>• Facility and toilet rooms inaccessible</li> <li>• Functionally meets the needs of an FBO of this size/type</li> </ul>	<ul style="list-style-type: none"> <li>• Plumbing in functional and good condition</li> <li>• Heating system in good condition</li> <li>• Air dryer not functioning</li> <li>• Toilet facilities in hangar and office areas in good condition</li> <li>• Fueling system in good condition</li> </ul>	<ul style="list-style-type: none"> <li>• Does not have automatic foam fire suppression system</li> <li>• Fire alarm system in good condition</li> </ul>	<ul style="list-style-type: none"> <li>• Heating and make-up air system, water heaters, exhaust fan, and RTU in good condition</li> <li>• Diffusers in ACT ceiling in fair condition</li> </ul>	<ul style="list-style-type: none"> <li>• Service is adequate for facility</li> <li>• Electric panels, wiring, and lighting in good condition</li> </ul>	<ul style="list-style-type: none"> <li>• Local access control and video surveillance system in place</li> <li>• Telephone service is in working condition</li> </ul>
Recommendation(s)	<ul style="list-style-type: none"> <li>• Fill cracks in slab on grade</li> </ul>	<ul style="list-style-type: none"> <li>• Patch damaged insulation</li> <li>• If desired for aesthetics upgrade office throughout</li> <li>• Inspect and re-caulk roof eave and wall joint</li> <li>• Repair epoxy floor around trench drain</li> <li>• install weather-stripping on door</li> </ul>	<ul style="list-style-type: none"> <li>• Provide modernized ADA compliant toilet room (\$10,000)</li> </ul>	<ul style="list-style-type: none"> <li>• Required installation of automatic foam fire suppression system (\$500,000)</li> </ul>	<ul style="list-style-type: none"> <li>• Replace hot water unit heaters that are no longer performing efficiently (\$850 per unit heater)</li> <li>• Remove and replace damaged diffuser/grilles with new (\$75 each)</li> <li>• Acquire more detailed inspection of all major equipment</li> </ul>	<ul style="list-style-type: none"> <li>• Replace interior and exterior apron lights with LED fixtures</li> </ul>	

	Structural	Architectural	Plumbing	Fire Sprinkler & Fire Alarm System	HVAC	Electric Service	Security & Communications/IT
<b>Hangar 7</b>							
Existing Conditions 	<ul style="list-style-type: none"> <li>• Good condition</li> </ul>	<ul style="list-style-type: none"> <li>• Exterior walls, hangar doors, in fair condition</li> <li>• Office doors, roof in good condition</li> <li>• Toilet rooms inaccessible</li> </ul>	<ul style="list-style-type: none"> <li>• Plumbing systems in good condition</li> <li>• Hangar toilet facilities not operational</li> <li>• Office toilet facilities in good condition</li> <li>• Eye wash stations and service sinks/hose bibs in fair condition</li> </ul>	<ul style="list-style-type: none"> <li>• Equipped with sprinkler and standpipe system in poor, abandoned condition</li> <li>• Requires installation of automatic foam fire suppression system</li> <li>• Has high level detection in hangar bay area</li> </ul>	<ul style="list-style-type: none"> <li>• Unclear whether supply discharge diffuser is operational</li> <li>• Infrared heating system in good condition</li> <li>• Gas-fired unit heaters not operational</li> <li>• Radiation heaters have exceeded useful life</li> <li>• Boilers, piping, pumps, valves, controls, and insulation in good condition</li> </ul>	<ul style="list-style-type: none"> <li>• Needs replacement for primary switch and transformers</li> <li>• Wiring in fair condition</li> </ul>	<ul style="list-style-type: none"> <li>• Operated access control or video surveillance system not in place</li> <li>• Telephone service is in working condition</li> </ul>
Recommendation(s)	<ul style="list-style-type: none"> <li>• Repair cracks in CMU wall</li> </ul>	<ul style="list-style-type: none"> <li>• Replace hangar sliding doors</li> <li>• Repaint exterior metal siding</li> <li>• Upgrade furnished office to modernize</li> <li>• Replace aluminum windows</li> <li>• Paint interior hangar walls to brighten space</li> <li>• Acquire detailed inspection of roof top unit dedicated for office spaces and training rooms</li> </ul>	<ul style="list-style-type: none"> <li>• Upgrade/modernize toilets to ADA accessibility (\$250,000)</li> </ul>	<ul style="list-style-type: none"> <li>• Install automatic foam fire suppression system (\$500,000)</li> </ul>	<ul style="list-style-type: none"> <li>• Remove and install new make-up air unit to meet Pennsylvania State Mechanical Code (\$75,000)</li> <li>• Install new hot-water convectors in office/training rooms where necessary (\$450 per convector)</li> </ul>	<ul style="list-style-type: none"> <li>• Upgrade building lighting to LED</li> <li>• Upgrade electrical devices</li> </ul>	<ul style="list-style-type: none"> <li>• Remove abandoned phone systems</li> </ul>

	Structural	Architectural	Plumbing	Fire Sprinkler & Fire Alarm System	HVAC	Electric Service	Security & Communications/IT
<b>First Floor of Wiley Terminal</b>							
Existing Condition 	<ul style="list-style-type: none"> <li>• Good condition</li> </ul>	<ul style="list-style-type: none"> <li>• Exterior walls and interior doors in good condition</li> <li>• Exterior windows in fair condition</li> <li>• Roof is in poor condition</li> <li>• Functionally space is not well utilized</li> </ul>	<ul style="list-style-type: none"> <li>• Plumbing, electric water heaters, and sump pump in mechanical room in good condition</li> <li>• Natural gas supplies in good condition</li> <li>• Toilet facilities in good condition</li> </ul>	<ul style="list-style-type: none"> <li>• Equipped with automatic sprinkler system in good condition</li> <li>• Equipped with building alarm fire notification system in good condition</li> </ul>	<ul style="list-style-type: none"> <li>• RTUs may be causing water damage to gypsum ceiling system</li> <li>• Water-to-water heat exchanger may be “old”</li> </ul>	<ul style="list-style-type: none"> <li>• Gear, electric panels, wiring, and lighting in good condition</li> </ul>	<ul style="list-style-type: none"> <li>• Building access control and video surveillance systems in good condition</li> <li>• Telephone service is in working condition</li> </ul>
Recommendation(s)		<ul style="list-style-type: none"> <li>• Replace roof of main building area and damaged ceiling tiles</li> <li>• Remove trailer addition</li> <li>• Reconfigure or repurposes space for efficient use</li> </ul>	<ul style="list-style-type: none"> <li>• Provide FRP panel surround at janitor’s sink</li> </ul>		<ul style="list-style-type: none"> <li>• Acquire detailed inspection of RTUs and fan coil units located above the ACT ceiling</li> <li>• Acquire detailed inspection of the water-to-water heat exchanger located in the mechanical room adjacent to elevator shaft</li> </ul>	<ul style="list-style-type: none"> <li>• Perform scheduled maintenance on lower level transformer and switches</li> <li>• Change out lighting to LED fixtures</li> </ul>	

Source: LNAA, Lehigh Valley International Airport Building Conditions Report from 11/17/16 visual inspection by AIA and C&S Engineers, Inc.