CHAPTER 4 - FACILITY REQUIREMENTS

4.1 INTRODUCTION

The Westfield-Barnes Regional Airport's main challenges are those of meeting the changes emerging in the aviation industry and the future development requirements these changes may create. Airport development is often costly, and since each project is typically planned to last many years, care must be taken to ensure that each development project accommodates airport activity.

This chapter analyzes the ability of BAF and its existing facilities to accommodate the current and anticipated levels of activity as described in **Chapter 3, Forecasts of Aviation Demand.** This analysis is used to identify any deficiencies and determine facility needs throughout the 20-year planning period that can be satisfied through planning and development activities.

The facility requirements assessed in this chapter include recommendations for the taxiway and taxilane system, aprons and hangars, the requirement to address the Runway 15 displaced threshold, and additional facilities and development sites.

- **Taxiway/Taxilane Requirements** – Requirements related to existing and future demand, meeting FAA design criteria, and the needs of the airport. Included is an assessment of lighting and signage.
- **Aprons and Hangars** – Requirements related to meeting existing and future demand versus capacity.
- **Runway 15 Threshold** – Requirements to regain all or part of the 490-foot displaced threshold, to include the possibility of avigation easements.
- **Additional Facilities / Development Sites** – Requirements of the need for additional facilities and possible development sites and their compatibility with aircraft operations and consistent with FAA design standards.

4.2 SUMMARY OF AVIATION DEMAND FORECASTS

The aviation forecasts presented in Chapter 3 were developed by examining historical Airport trends, analyzing current and anticipated economic influences within the industry, and producing projections based on the collected data. The findings from Chapter 3 are summarized in Table 4.1 provides a summary of the forecasts presented in Chapter 3 and the PALs used to estimate when Airport activity levels trigger the need for various improvements.

Table 4.1. Forecast Summary

MEASUREMENT	BASELINE (2018)	SHORT-TERM (2019-2023)	INTERMEDIATE-TERM (2024-2028)	LONG-TERM (2029-2038)
Airport Reference Code	C-III	C-III	C-III	C-III
Runway 2-20	C-III	C-III	C-III	C-III
Runway 15-33	B-II	B-II	B-II	B-II
Small Aircraft Aprons	A-I	A-I	A-I	A-I
Taxiways				
A, B, F				
Design Code	TDG-3	TDG-3	TDG-3	TDG-3
Width[1]	50’	50’	50’	50’
Shoulder Width	25’	25’	25’	25’
D, E, G, S				
Design Code	TDG-2	TDG-2	TDG-2	TDG-2
Width	35’	35’	35’	35’
Shoulder Width	15’	15’	15’	15’
B1, B2, B4				
Design Code	TDG-1A	TDG-1A	TDG-1A	TDG-1A
Width	25’	25’	25’	25’
Shoulder Width	10’	10’	10’	10’
Based Aircraft				
Single Engine	100	107	111	124
Multiengine	6	5	5	4
Helicopters	1	6	6	7
Jets	4	6	6	7
Total	111	124	129	143
Operations				
Local	18,600	19,300	19,900	21,000
Itinerant	21,814	22,600	23,300	24,800
Total	40,414	41,900	43,200	45,800

4.3 TAXIWAY REQUIREMENTS

The existing taxiways at Westfield-Barnes Regional Airport were examined for dimensional criteria, location, width, and pavement type and found to generally provide for the efficient movement of aircraft, both civil and military. While several sections of the taxiway network require reconstruction, the primary concern is the two Hot Spots noted in Chapter 2 (see paragraph 2.5.2.1).

[1] Meets Air National Guard requirements

There are twelve taxiways at the airport, and each is examined and compared to current and future demand for design and pavement condition. See Chapter 2.

This section determines whether the taxiway system is within FAA design criteria and meets the needs of the airport. It is important to note that a portion of the taxiway system is designed to meet USAF Unified Facilities Requirements (UFC 3-260-01)[2] supporting the ANG F-15 and other military aircraft and operations.

4.3.1 Taxiway A

Taxiway A is a parallel taxiway serving Runway 15-33. Taxiway "A" varies in width from 35 feet on both ends and 50 feet wide between Taxiway G and Runway 2-20. The taxiway also has two FAA-identified "Hot Spots."

Hot Spot 2 (HS-2) is tied directly to the displaced Runway 15 threshold and can only be resolved by converting the existing displacement into a relocated runway threshold, meaning the removal of the existing displaced 490 feet of the runway from service. This action would permit shifting the hold-short line to the traditional location closer to the runway entrance. A second option is to remove the obstructions that are causing the displacement. The third option is to remove the displacement pavement and shift the end of the runway to the current displaced threshold.

HS1 is more problematic because it results from two runways aligned at an angle higher than 90 degrees, which causes the large pavement area required to meet FAA design standards. The simple option is to realign the taxiways, which would result in a "dog leg" turn in one of them to reduce the amount of pavement at the intersection of the two taxiways.

Recommendations

- Maintain Taxiway "A" at its current width as the aircraft using Runway 15-33 (ADG III) is not anticipated to change. In addition, the portion of Taxiway "A" adjacent to the Terminal and Transient Aprons should remain 50 feet in width since it functions as the primary access to the Terminal and Transient Aprons to be used by aircraft regularly Runway 2-20 (ADG III).
- HS-1 is problematic because of the acute angle of the two taxiways, which would require a significant realignment of one or both taxiways.
- HS-2 is resolved by eliminating the displaced threshold on Runway 15, which would move the runway hold short line to its usual location at the end of the taxiway.
- Replace the incandescent edge lights with LED lights during the next pavement reconstruction project.

[2] Department of Defense, Airfield and Heliport Planning and Design criteria (UFC 3-260-01) requires a 75’ wide taxiway with 25’ wide shoulders at BAF. In addition, the runway to taxiway separation (centerline to centerline) is 500’. This requirement is applicable to Taxiway B and associated stub taxiways and is discussed in detail in paragraph 4.3.2.

- Construct an aircraft runup area at the approach end of Runway 33 (per ALP dated February 2004).[3]

4.3.2 Taxiway B

Taxiway B is the primary parallel taxiway serving the west side of Runway 2-20 and is the primary taxiway for military operations on Runway 2-20. Except for the intersection with Taxiway A, the PCI rating is 69 (Fair). The intersection is only very slightly better with a 79 (Very Good) PCI. The northern portion of Taxiway B meets military standards with 75 feet wide with 25-foot paved shoulders. The southern portion of Taxiway B is in design for reconstruction to meet the same military standards of 75-feet wide with 25-foot paved shoulders. Also, the minimum runway to taxiway separation (centerline to centerline) is 500 feet.

The Department of Defense (DOD) has design standards independent of FAA requirements that prescribe in part the required width of taxiways and adjoining shoulders. The standards require 75-foot wide taxiways with an additional 25-foot wide paved shoulder. The northern part of Taxiway B (from Runway 15-33) to the approach end of Runway 20 meets standards, whereas the southern portion, from the crosswind runway to the approach end of Runway 2, does not. This application includes Taxiway E.

Recommendations: Continue with plans to widen the southern part of Taxiway B and Taxiway E to meet military requirements. This effort should include examining the taxiway's current alignment that provides a uniform runway to taxiway separation. In addition, any redesign must consider HS1 addressed in Paragraph 4.3.1.

4.3.3 Taxiways B1, B3, B4

The three stub taxiways leading from Taxiway B to separate apron and hangar areas are B1, B3, and B4 and all three should meet TDG-1A standards (see Table 4.1).

B1 is a 280-foot-long by 35-foot-wide feeder taxiway to Hangars 12 -15, with a PCI of 24, or Very Poor.

B3 is 150 feet long and 30 feet wide and leads to Hangars 6 - 10. The pavement was recently repaved and had a perfect PCI rating of 100 (Excellent). Therefore, no changes in location or configuration are required at this time.

B4, which provides access to Hangars 1-5, is 260 feet long and 50 feet wide and is in fair condition with a 56 PCI. Therefore, the solution is to construct this taxiway to ADG II standards of 35 feet in width.

Recommendations: Reconstruct Taxiway B1 as soon as possible to a width of 25 feet. Narrow Taxiways B3 and B4 to 25 feet at the next reconstruction project and install LED lighting.

[3] FAA Approved ALP by Gale Associates.

4.3.4 Taxiway D

Taxiway D is a stub taxiway connecting Taxiway A with Runway 15-33, and Taxiway G. Delta is 50 feet wide and has a PCI rating of 77 on the taxiway A side and 40 on the Runway 15-33 side.

Recommendations: Because the taxiway serves as the primary access for ADG II aircraft, it should be reduced in size to a width of 35 feet (TDG-2 requirements) during the next reconstruction project.

4.3.5 Taxiway E

Taxiway E, which serves civil and military operations, is a stub taxiway connecting the southern portion of Runway 2-20 with Taxiway B. It is approximately 400 feet in length and is 50 feet wide. However, because the taxiway intersects both the runway and Taxiway B at an acute angle (not the recommended 90 degrees), the layout is inconsistent with FAA design standards.[4] Therefore, the current PCI rating is 80 on the taxiway side and 90 on the runway side.

Recommendations: Widen to 75 feet with 25-foot-wide shoulders consistent with DOD requirements (see paragraph 4.3.2), and realign to provide 90-degree intersections with both Runway 2-20 and Taxiway B.

4.3.6 Taxiway F

Taxiway F provides access from the primary runway to the Gulfstream facility. The pavement is approximately 55 feet wide with no shoulders, with a PCI rating of 98 inward from the runway edge for approximately 230 feet and then 58 for the portion leading up to the Gulfstream ramp.

Recommendations: Reconstruct to 50 feet at the next reconstruction project.

4.3.7 Taxiway G

Taxiway G serves the Army National Guard (ARNG) and provides direct access to Runway 15-33 and continued access to the rest of the airport. The taxiway primarily serves Army Blackhawk and other model helicopters, plus an occasional support aircraft. The pavement is 50 feet wide from the runway to a point where it turns toward the Army Guard facility, where it widens to 50 feet plus 25-foot shoulders on both sides. The taxiway edge lighting along the 35' wide section of the taxiway is out of service. The taxiway regulator was removed during the rehab of the Air National Guard Hangar project. This 440-foot section is in poor condition with a PCI rating of 40. The rest of the taxiway is new with a PCI of 100.

Recommendations: Construct a new taxiway that meets DOD standards by extending TW G from the ARNG ramp easterly until it intersects TW B. The new lighting circuit should be tied to the ARNG regulator. After this extension is complete, the existing section of TW G that provides direct access to Runway 15-33 can be removed.

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[4] FAA AC 5300-13A, Airport Design, Paragraph 401.b.(5)(e).

4.3.8 Taxiway H

Taxiway H connects Taxiway B to Runway 2-20 and was initially constructed to minimize back taxiing along Runway 2-20 when accessing the eastern Air Guard facility, compass rose, and maintenance runup area via taxiway S. Under a current design project, the airport/ANG have plans on extending TW H to the east side of Runway 2-20 and connecting it with Taxiway S. The north-south leg of the taxiway will double-up as a parking apron to be utilized by the airport for aircraft that are parked overnight and by the ANG for F-15 training (i.e., hot pit refueling and hot cargo maneuvers) and remote parking for large cargo aircraft (i.e. C-17s, C-130s, etc.). The existing western leg of Taxiway H was newly reconstructed and has a perfect PCI of 100.

Recommendations: In the next two years, construct the TW H extension/remote parking apron project.

4.3.9 Taxiway S

Taxiway S serves as a connector to the ANG engine testing "hush house," and the Airport's maintenance runup area and compass rose. It also serves as an overflow parking apron for the Airport during peak conditions. The PCI rating is 59-60 (Fair). This taxiway once served the Airport as its third runway before it was converted to taxiway use. Because of this, the taxiway S pavement width is much broader than that needed for a taxiway.

Recommendations: The western section of TW S will be reconstructed as part of the TW H extension and remote parking apron project. This section will meet DOD standards. The middle section of TW S shall be rehabilitated and reduced to a narrower section to maintain access to the compass rose and maintenance runup area but without lighting, since it is seldom used at night. The easternmost section of TW S shall be removed in its entirety and replaced with green space.

4.4 AIRCRAFT PARKING

The Westfield-Barnes Regional Airport has four aircraft parking aprons. The FBO uses the Terminal Apron for itinerant aircraft parking and the flight school. The other four aprons are used primarily by based aircraft, with occasional overnight parking by visiting pilots. The total aircraft parking apron area is approximately 35,600 square yards, of which 16,700 are available in front of the terminal building exclusively for itinerant aircraft. The remaining 18,900 square yards are available in three other parking aprons.

4.4.1 Itinerant Aircraft Parking

Advisory Circular 5300-13A, Airport Design, suggests a methodology by which transient apron requirements are assessed from the knowledge of busy-day operations. For example, at Westfield-Barnes Regional Airport, the number of itinerant spaces required is 20 percent of the busy-day itinerant operations. Therefore, a planning criterion of 800 square yards was used for single and multiengine

itinerant aircraft (Airport Design Group – ADG I and II). A planning criterion of 1,600 square yards was used to determine the area for transient turboprop and jet aircraft in ADG-III and higher.[5]

Table 4.2 breaks down the itinerant aircraft parking requirements. It assumes the busiest day parking demand is 15% of itinerant aircraft (aircraft that stop and occupy ramp space for more than a short period). Of those aircraft, it is assumed that 70% are single or multiengine piston aircraft in ADG I or II, and the remaining 30% are larger turboprop or jet aircraft in ADG III and higher. The itinerant ramp calculation also allows for aircraft maneuvering (25% of the ramp), with the remaining 75% (12,525 square yards) for parking. Given the space requirements of 800 square yards for ADG I & II and 1,600 square yards for ADG III and higher, the airport needs approximately 12,900 square yards of apron space for parked itinerant aircraft.

Table 4.2 - Itinerant Aircraft Parking Demand

LN		CALC	UNIT	EXISTING (2019)	SHORT TERM (2020-2024)	INTERMEDIATE TERM (2025-2029)	LONG TERM (2030-2039)
A	Annual Itinerant Operations (Existing and Forecast)		Operation	21,000	21,500	22,600	25,000
B	Busiest Month (20% of annual itinerant operations)	A * 20%	Operation	4,200	4,300	4,520	5,000
C	Average Busiest Day (1/30 of busiest month)	B ÷ 30	Operation	140	143	151	167
D	Itinerant Aircraft Parking Demand (15% of busiest day)	C * 15%	Aircraft	21	22	23	25
E	Single and Multiengine Piston ADG I & II (70% of peak day)	D * 70%	Aircraft	15	15	16	18
F	Turboprop and Jet Aircraft ADG III and higher (30% of peak day)	D * 30%	Aircraft	6	6	7	8
G	ADG I & II Aircraft Space Requirements (800^{2yd} per aircraft)	E * 800	Space (^{2YD})	4,410	4,515	4,746	5,250
H	ADG III & higher Aircraft Space Requirements ($1{,}600^{2yd}$ per aircraft)	F * 1,600	Space (^{2YD})	8,505	8,708	9,153	10,125
I	Existing Terminal Ramp Size		Space (^{2YD})	16,700	16,700	16,700	16,700
J	Allowance for Aircraft Maneuvering (25% of existing capacity)	J * 25%	Space (^{2YD})	4,175	4,175	4,175	4,175
K	Apron Capacity for Parking	J – K	Space (^{2YD})	12,525	12,525	12,525	12,525
L	Total Aircraft Parking Space Demand	G + H	Space (^{2YD})	12,915	13,223	13,899	15,375
M	Surplus (Deficit)	K - I	Space (^{2YD})	(390)	(698)	(1,374)	(2,850)

Source: Stantec analysis

[5] As an example, the Bombardier 700 with a wingspan of 76.3 feet and a length of 106.6 feet covers an area of $8{,}133FT^2$ ($904YD^2$). The additional space required for maneuvering adds an additional 50% for a total parking area requirement of 1,356 YD^2. The newer Gulfstream 650 has a wingspan of 99'-9" and a length of 99'-6" covering an area of slightly more than $1{,}100YD^2$ with a parking requirement of 1,660 YD^2

As listed, the airport has a deficit of almost 400 square yards on a peak activity day, which increases to 2,800 square yards by 2039. The data in Table 4.1 assumes several assumptions, including the actual itinerant activity, what the actual peaking numbers are, and the percentage of small and large aircraft, plus the actual demand at any given time.

4.4.2 Based Aircraft Parking

A parking apron should also provide space for the number of locally-based aircraft not stored in hangars. The typical small aircraft requires 360 square yards of apron space[6]. Ninety percent of all aircraft, including all jets, use hangars. The current apron demand for based aircraft is in the range of 10 percent of total based aircraft, plus an additional 10 percent for aircraft identified for maintenance needs. If the number of based aircraft grows as forecast, demand for parking, both apron, and hangar will increase. If hangar capacity does not meet demand, then apron capacity will shrink in the planning years. In addition to based aircraft parking, maintenance activity requires an additional 10% apron space. The based aircraft demand is presented in Table 4.3, indicating sufficient space through the long-term planning period.

Table 4.3 - Based Aircraft Parking Demand

	EXISTING (2019)	SHORT TERM (2020-2024)	INTERMEDIATE TERM (2025-2029)	LONG TERM (2030-2039)
Based Aircraft (BA)	116	128	141	172
Based Aircraft Parking Demand (10% of BA)	12	13	14	17
Maintenance Parking Demand (10% of BA)	12	13	14	17
Total Aircraft Demand	23	26	28	34
Apron Demand (360^{2YD} / Aircraft	8,352	9,216	10,152	12,384
Current Capacity (^{2YD})	18,000	18,000	18,000	18,000
Surplus (Deficit) (^{2YD})	9,648	8,784	7,848	5,616

Source: Stantec analysis

Table 4.4 list the total apron parking requirements. Currently, there are approximately 34,700 square yards of parking space at Westfield-Barnes Regional Airport. Of this, 48 percent (16,700 square yards) supports itinerant parking and the balance for based aircraft. When all parking areas are considered, the Airport has adequate apron space available to accommodate aircraft parking through the planning period of this study. However, there is an imbalance during peaking operating periods, with a shortfall in the itinerant terminal ramp. This requirement is principally fundamental, with large jet aircraft parked on the ramp, such as the Bombardier 700 parked in front of the terminal.

[6] This area accounts for the aircraft footprint plus additional space for maneuvering and taxiing.

Recommendations: While there is a surplus of apron space, the allocation of parking areas is not balanced. As a result, demand in the terminal apron area requires either an adjustment in parking space, allocating some based aircraft apron space, or constructing new space. Both are examined in the next chapter.

Table 4.4 - Total Apron Demand

	EXISTING (2019)	SHORT TERM (2020-2024)	INTERMEDIATE TERM (2025-2029)	LONG TERM (2030-2039)
Itinerant Demand	12,915	13,223	13,899	15,375
Based Aircraft Demand	8,352	9,216	10,152	12,384
Total Demand	21,267	22,439	24,051	27,759
Existing Total Capacity	34,700	34,700	34,700	34,700
Surplus (Deficit)	13,433	12,262	10,649	6,941

Source: Stantec analysis
Data in square yards

4.4.3 Aircraft Hangars

Hangar demand depends on the airport's location, type of aircraft housed, garaging costs, and prevailing weather conditions. Currently, there are 21 hangars (6 tee style, 14 conventional, and 1 hybrid hangar) at Westfield-Barnes Regional Airport. The 21 hangars have an approximate capacity of 109 aircraft, depending on their size.

The current ratio of aircraft in hangars and parked on aprons is 90/10 (90 percent in hangars and 10 percent parked on an apron with a tie-down anchor). With 111 based aircraft, approximately 100 are in hangars and, as noted in the previous section, with the balance parked in tie-down spaces on aprons. The 100 hangered aircraft include 91 single-engine pistons, 3 jets, 5 multiengine pistons, and 1 helicopter.[7]

The six tee hangars support single-engine and an occasional multiengine piston aircraft. The more extensive conventional hangars support larger jets, turboprops, helicopters, and the balance is single-engine piston aircraft. Also, several conventional hangars are privately owned, and the number of aircraft is restricted to owner preference.

Table 4.5 lists the estimate for hangar space required to meet forecast demand. As calculated, and assuming the number of based aircraft increases as shown, and demand continues to increase, the

[7] It is important to note that the number of based aircraft and those hangered and in tie downs on aprons changes on a regular basis. The intent is to demonstrate the approximately breakdown of the various type and size of aircraft.

airport needs 19 additional hangar spaces by the year 2038. A hangar space can be a single hangar or a large hangar that holds more than one aircraft.

Table 4.5. Hangar Demand

	EXISTING (2019)	SHORT TERM (2020-2024)	INTERMEDIATE TERM (2025-2029)	LONG TERM (2030-2039)
Based Aircraft	111	124	129	143
Percent in Hangars	90%	90%	90%	90%
Based Aircraft Hangar Demand	100	112	116	129
Existing Hangar Spots	109	109	109	109
Surplus (Deficit)	9	(3)	(7)	(20)

Source: Stantec analysis

This update agrees with the previous Master Plan Update (2004) that stated that Airport Management (at the time) indicated that the layout of the Airport's current T-hangars was poor. The current layout makes access by aircraft to the T-hangars difficult, and snow removal operations are complicated in the hangars' areas.

Recommendations: Construct new hangars to satisfy the short-term demand and plan to construct additional units over the medium to long term. Given the total number of hangar spaces need in the long term, tee-style hangars may be the best option.

4.5 RUNWAY REQUIREMENTS

This ALP Update does not include reviewing the runway length and width requirements and assessing whether the useable runway length is sufficient. The Runway 2-20 and Runway 15-33 length, width, and orientation are acceptable, and additional study and analysis were not considered in this project. However, an analysis of Runway 15-33, the airport's crosswind runway, was performed as part of an assessment to evaluate opportunities to regain all or part of the 490-foot displaced threshold (see Chapter 2).

4.5.1 Runway 15-33

Since the start of this project, the trees in the Obstacle Clearance Surface (OCS) that resulted in the Runway 15 threshold displacement has been removed. Therefore, the only remaining project is to acquire an avigation easement over the property located at 761 Southampton Road (Map/Parcel 64R-7).

4.6 ADDITIONAL FACILITIES/DEVELOPMENT SITES

Developable land at the Westfield-Barnes Regional Airport is limited, but there are areas where some development is possible. One area addressed under a separate study was two new helicopter operating areas. Another option is space for a possible second FBO. However, before the airport considers additional facilities, demand for existing and future aeronautical activity must be assessed. Then land available for aeronautical and non-aeronautical activity can be identified.

The previous paragraphs indicated the need for a couple of additional hangars and a reallocation of aircraft parking space (a surplus of based aircraft space and a deficit of itinerant parking). Otherwise, the airport meets most demands placed on it.

In 2017 the airport examined potential helicopter operating sites, one near the approach end of Runway 2, between Taxiway B and Sergeant Thomas Deon Way (Study Area 1). The second, Study Area 2) is adjacent to Taxiway A near the approach end of Runway 15. Area 1 measures 6.5 acres, and Area 2 is approximately 2.5 acres. Figure 4.1 illustrates the two sites. Air Methods leased Site 1 in 2017.

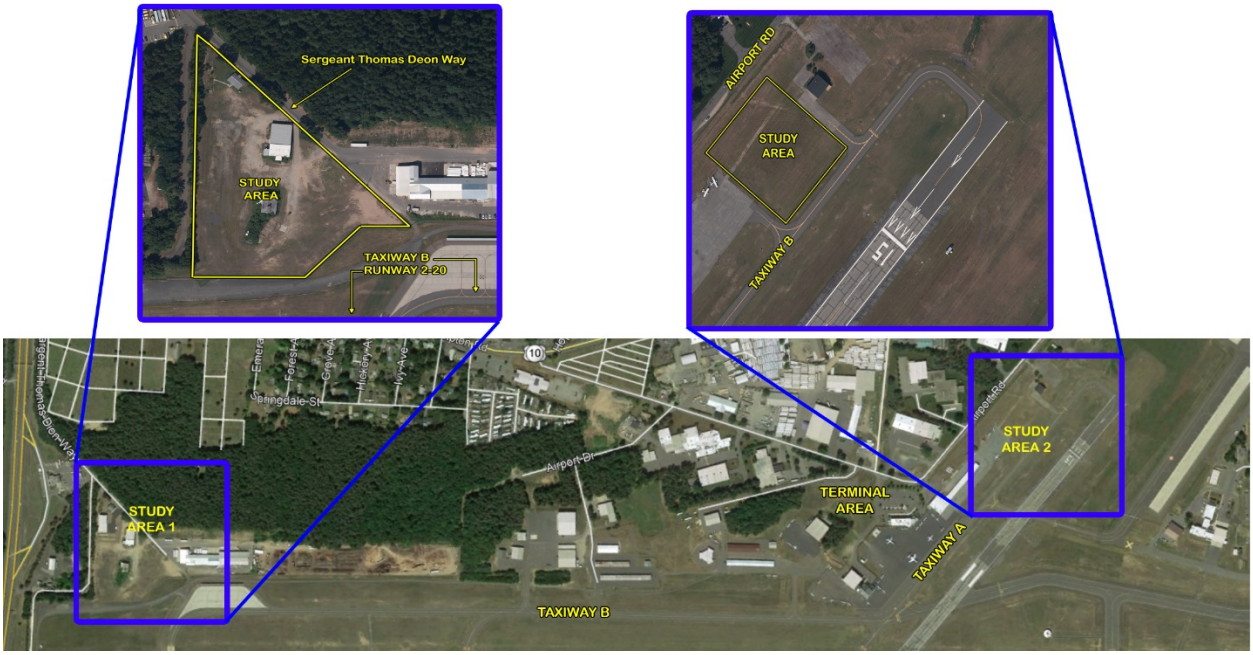

Figure 4.1. Potential Helicopter Development Sites

4.7 SUMMARY

This chapter evaluated the airport's capacity and operational efficiency and the airport's ability to meet future demand. The analysis includes assessing facilities that consider more than current and future demand, where capacity exceeds demand. Taxiways, parking aprons, and hangars were examined, and the Runway 15 displaced threshold and each is addressed in this section.

4.7.1 Taxiways

The assessment examined the airport's taxiway system on the airside and apron and hangars on the landside. The analysis indicated that the taxiway system, except for two "hot spots" and the alignment and width of Taxiway B, meet the airport's requirements. Specific requirements considered in the next 10 years include the following.

- **Taxiway A.** Realign the intersection of Taxiway A and B to eliminate Hot Spot 1. This project should be accomplished with the Taxiway B widening project (see next bullet). The elimination of Hot Spot 2 (near the Runway 15 threshold) is through removing the runway displacement by shifting the threshold to the beginning of the runway pavement or removing the displaced section of the runway and moving the end of pavement to the current displaced location.
- **Taxiway B.** Widen the southern end of the taxiway (from Taxiway A to the approach end of Runway 02) to meet DOD standards of 75 feet plus a 25-foot shoulder on each side. As part of this project, a realignment of the taxiway should be considered.
- **Taxiways B1.** Reconstruct to TDG-1A standards (25 feet wide). This project should be done as part of the Taxiway B widening project. Timing is critical because of the poor pavement condition estimated as a PCI of 20 (very poor).
- **Taxiway B4.** Reconstruct to a width of 25 feet (TDG-1A standards). The pavement in Section TWB4BM-10 has a PCI of 52 and is expected to "poor" with a PCI of 48 in 2022. This project should be done as part of the Taxiway B widening project.
- **Taxiway E.** Reconstruct to current FAA design standards and eliminate the acute intersect angle with Taxiway B. This project is not critical but should be accomplished with the Taxiway B widening project.

4.7.2 Parking Aprons

The capacity of the airport's parking aprons exceeds existing and forecast demand. However, there is an imbalance in the allocation of space. While the based aircraft aprons have excess capacity, the terminal apron is burdened during peak operational periods. Therefore, two sections of parking aprons should be reconstructed as soon as possible. These are AO1BM-30 (PCI 28, or poor) and AO1BM-20 (PCI 33, also poor). These two sections are south of the terminal apron close to the tee-hangar complex off of Taxiway B4.

4.7.3 Hangars

The capacity of the airport's hangars meets current demand; however, forecasts indicate the airport will have a capacity shortfall in the next few years, a deficit that will grow during the planning period.

- **Short-Term.** In the next 5 years, the airport needs space for 3-5 more aircraft or a small conventional or 6-bay tee-hangar.
- **Intermediate-Term**. In the next 5 to 10 years, the airport requires space for 7 additional aircraft (inclusive of the 3-5 needed in the short term).
- **Long-Term.** Looking beyond the next 10 years, the airport requires a total of 20 additional hangar spaces over the current capacity.