

GREENVILLE-SPARTANBURG INTERNATIONAL AIRPORT



DECEMBER 2019
AIRPORT MASTER PLAN UPDATE
CHAPTER 7: IMPLEMENTATION PLAN



McFarland Johnson



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7. Implementation Plan

This chapter of the Airport Master Plan incorporates the preferred Airport development alternatives identified in Chapter 6, *Alternatives*, into a phased 20-year Airport Capital Improvement Program (ACIP) for the Greenville-Spartanburg International Airport (GSP or the Airport). The ACIP details a single approach to funding and implementing the preferred development alternatives by providing a schedule for phased improvements, estimations of overall project cost, and the anticipated funding share between typical funding partners including federal, state, and local funding partners. This chronological plan provides guidance for continued maintenance, upgrade, and expansion of facilities consistent with the Airport facility requirements and long-term strategic vision of the Airport District.

The ACIP identified in this chapter does not represent an obligation of local funds, nor does it commit federal or state funding until demonstrating proper project justification and environmental clearance. In addition, other state and local coordination may also be necessary, depending upon the project. Cooperation with the FAA and South Carolina Aeronautics Commission is important to facilitate project formulation and coordinate implementation in a timely manner. It is also important that the development plan receive favorable environmental determination and community and stakeholder support.

7.1. OVERVIEW

The ACIP is a 20-year improvement schedule, including both eligible and non-eligible projects allowable under the federal (FAA) and state (South Carolina Aeronautics Commission) funding programs. This plan focuses on the capital projects necessary to implement the full project recommendations of the Airport Master Plan and includes rehabilitation of Runway 4-22 as recommended in the Airport's Pavement Management Plan (PMP) as discussed in **Appendix A** of this Master Plan.

Projects identified in the ACIP are a response to a facility or user needs, as a reasonable expectation of when demand warrants and funding becomes available. The identification and phasing of projects is largely determined through recommendations resulting from Master Plan findings, in which the assignments of project priorities, phasing, and estimated costs were consulted with the Airport District.

7.2. SOURCES OF CAPITAL FUNDING

To cover project costs as well as the local share, GSP has several ways in which to fund projects. They are summarized in the following sections.

- FAA Grant Funding
- Cargo Service Funding
- South Carolina Aeronautics Commission Funding
- Local Funding Options



7.2.1. FAA Grant Funding

For public-use facilities like GSP, the FAA Airport Improvement Program (AIP) provides up to 90 percent funding for public, non-revenue generating elements of the airport such as runways, taxiways, aprons, and lighting, as well as necessary planning and environmental studies. The remaining 10 percent is typically covered by the Airport District. FAA funding available for the GSP capital program is as follows:

- **Entitlement Funds:** The Airport receives entitlement funding from the FAA based on the number of passengers that are enplaned at the airport annually. GSP also receives a cargo entitlement from the FAA based on the percentage of total cargo weight landed annually. Entitlement funding is applied to projects eligible for federal funding.
- **Discretionary Funds:** Funding above the entitlement amount is then obtained from the FAA through discretionary funding. It should be noted that discretionary funding is competitive. Therefore, GSP competes for these funds nationally as well as with regional airports.

7.2.2. Cargo Service Funding

Cargo service airports are airports that, in addition to any other air transportation services that may be available, are served by aircraft providing air transportation of only cargo with a total annual landed weight of more than 100 million pounds.

Airports qualified as cargo service airports share three percent of AIP apportionment made available to them in accordance with Title 49 U.S. Code 47114(c)(2). Cargo funds are apportioned to each cargo service airport in the same proportion as its proportion of landed weight of cargo aircraft to the total landed weight of cargo aircraft at all qualifying airports. No cargo service airport is entitled to more than eight percent of the total amount apportioned to all-cargo service airports. Cargo service apportionments may only be used at the airport for which the apportionment is made.

GSP exceeds the annual threshold of 100 million pounds and qualifies as a cargo service airport. Therefore, the Airport receives this funding each year with AIP entitlement funding.

7.2.3. South Carolina Aeronautics Commission Funding

The South Carolina Aeronautics Commission (SCAC) funds airport improvements from three primary sources: state tax levied on commercial airlines that service the state's commercial airports, aviation fuel taxes, and the state's General Fund¹.

From these sources, the SCAC funds the state airport maintenance program, repairs and maintains state-owned Automated Weather Observing Systems (AWOS), provides state match of AIP grants at eligible airports, funds other discretionary projects, and provides administrative functions of the SCAC in servicing airport needs. The state airport maintenance program makes funding

¹ South Carolina Aviation System Plan, 2018.

available for pavement repairs, cleaning, marking, and marking removal/cleaning. The program funds 75 percent of costs with the remaining 25 percent required of airport sponsors.

From the 1980-2009 period, GSP received approximately \$382,000 in funding from SCAC. Since 2010, GSP has not pursued and/or received funding from SCAC.

7.2.4. Local Funding Options

GSP has several options to fund their local share for federally-funded projects and other non-eligible discretionary projects, which are summarized in this section.

Airport Operating Reserves and Financing

As noted in the Airport District's financial statements², all foreseeable normal operational capital projects at GSP within a ten-year horizon are projected to be funded internally with Airport District reserve funds and/or with FAA grant funds. For new "special projects" outside the normal operational scope, management has the option to utilize a revolving Line of Credit (LOC), which was approved by the District Commission in May 2016. As special projects are completed, they can be "termed out" (removed from the LOC and replaced with a fixed permanent loan), at management's discretion.

Public Financing or Bonding

For large projects that are not eligible for federal funding but may have widespread local public impact and interest, airports frequently utilize capital market bonds to finance long-term construction projects. There are four basic types of municipal bonds available to GSP: general obligation (GO) bonds, general airport revenue bonds (GARB), Passenger Facility Charges (PFC) - backed bonds, and special facility bonds. Bond proceeds are the largest sources of funds for airport capital needs, accounting for approximately 54 percent of the total³.

In August 2001, the Airport District issued \$4.99 million of taxable revenue bonds (GARB), the proceeds from which were used to construct a new rental car facility and related improvements.

A summary of the other bond types is as follows:

- **GO Bonds:** Supported by the overall tax base of the issuing entity (the airport sponsor), GO bonds often carry the lowest interest rate.
- **GA Revenue Bonds:** Repaid by the revenues generated by the airport, or other revenues as defined in the bond indenture, GARBs are the most common form of airport debt.
- **PFC-Backed Bonds:** Either stand-alone or "double-barrel", PFC-backed bonds are backed solely by PFC revenues or by a combination of PFC revenues and other airport revenues generated by rentals, fees, and charges. General airport revenues can be pledged as a backup if enplanement activity decreases and PFC revenues do not meet the obligation.

² Greenville-Spartanburg Airport District, Financial Statements and Schedule of Expenditures of Federal Awards, as of and for the Years Ended June 30, 2017 and June 30, 2016.

³ Airports Council International – North America



- **Special Facility Bonds:** Special facility bonds are used to construct a terminal or facility for a named airline and are backed by lease payments which are structured to cover debt service to the bonds.

A recent Airports Council International – North America (ACI-NA) survey indicated that large hub airports were anticipating financing 58 percent of planned projects through bonds, medium hubs at 23 percent, and small hubs at 22 percent.

Passenger Facility Charges (PFC)

With oversight from the FAA, GSP has the authority to impose PFCs up to \$4.50 for each passenger enplaning at the Airport. PFCs are collected by the air carriers on behalf of the airport and are remitted monthly. The Airport District does not currently impose PFCs at the Airport.

PFCs can be utilized on projects that are considered AIP eligible, as well as for additional improvements to the passenger terminal. A summary of eligible uses of PFC revenues include:

- All or part of the allowable cost of an FAA approved project,
- Debt service and financing costs associated with bond issuance, and
- Combined with AIP and Aviation Capital Grants on eligible projects as the local match to reach 100 percent funding.

To be considered eligible for PFC funding, projects must meet certain criteria and address one or more of the following:

- Preserve or enhance safety, security, or capacity of the national air transportation system;
- Reduce noise or mitigate noise impacts resulting from an airport; and
- Present opportunities to enhance competition between or among air carriers.

While the PFC program is complementary to Federal airport grant programs, there are limitations and restrictions. Most notably, medium and large hub airports that impose a PFC face a reduction in the AIP apportionment funds they would normally receive.

Private Funding

Private funding is an option for certain projects at airports, generally including design and construction of hangars and/or office/hangar facilities for fixed base operators (FBOs), other aeronautical businesses, or corporate flight department, aircraft charter, and/or aircraft management operators. At GSP, the short-term ACIP considered here does not include projects likely to be privately funded. However, in some instances project funding can be mobilized more quickly by partnering with private interests to advocate for state tax incentives or job creation tax credits if the projects are of a substantial scale and scope. In this way, GSP can partner with private interests to broker development deals that will benefit the Airport over the long term by increasing operations, utilization of other on-airport maintenance providers, and fuel sales.

7.3. AIRPORT CAPITAL IMPROVEMENT PLAN (ACIP)

7.3.1. Order of Magnitude Cost Estimates

Order of magnitude estimates of construction cost for the preferred development alternatives identified in Chapter 6, *Alternatives*, and their enabling projects, were prepared to support the development of the ACIP and inform Airport decision making. Detailed quantity-based cost estimates are presented in **Appendix D** of this Master Plan and are expressed in 2018 dollars. Project cost reflected in the ACIP were developed from this information.

7.3.2. Project Phasing Periods

Projects are phased to facilitate systematic development over the course of the next 20 years. Projects appearing in the first phase are of greater importance to the Airport and have the least tolerance for delay. Additionally, some projects included in an early phase may be a prerequisite for other planned improvements in a later phase. The development phasing for GSP has been divided into four distinct phases as follows:

- Phase I: (0 to 5 years), 2019-2023
- Phase II: (6 to 10 years), 2024-2028
- Phase III: (11 to 20 years), 2029-2038
- Phase IV: Beyond 2038 or as demand materializes.

The phasing of individual projects should undergo periodic review to determine the need for changes based upon variations in forecast demand, available funding, economic conditions, and/or other factors that may reasonably influence airport development. Additionally, other projects not foreseen in this report may be identified in the future and would, therefore, likely necessitate changes in the phasing of projects and the overall ACIP. Further, the projects and overall development identified in the ACIP, though tied to a time table, will only occur once the triggering demand and/or need is realized.

Phase One – Zero to Five Years

The phasing plan established for each of the identified projects was developed to ensure a logical and feasible implementation of the master plan. Special attention has been placed on the first five years of the ACIP. These projects slated for immediate implementation have been identified as critical to the Airport in terms of both providing adequate facilities to meet the needs of its users as well as supporting the strategic economic development initiatives of the Airport District.

Phase One improvements include projects generated from the recommendations of this Master Plan and the runway rehabilitation project currently outlined in the Airport's CIP.

Phase One improvements are identified, described and costed in **Table 7-1** and graphically depicted in **Figure 7-1**.



Table 7-1: Airport Capital Improvement Program – Phase One

Project ID	Project	Description	Funding			Estimated Cost
A	Runway 4-22 Rehabilitation	Runway 4-22 Rehabilitation as identified and recommended in the PMP report (Appendix A)	90%	FAA Share:	\$ 11,558,981	\$12,843,313
			5%	State Share:	\$ 642,166	
			5%	Local Share:	\$ 642,166	
1	Relocated and Expanded Employee Lot Design	Construct approximately 17,700 square yards (SY) automobile parking lot south of Airport Fuel Farm.	0%	FAA Share:	\$ -	\$181,000
			0%	State Share:	\$ -	
			100%	Local Share:	\$ 181,000	
2	Economy Surface Lot Expansion Design / Construction	Design an expansion of new economy lot totaling approximately 72,500 SY and access road connection to Aviation Parkway.	0%	FAA Share:	\$ -	\$11,849,595
			0%	State Share:	\$ -	
			100%	Local Share:	\$ 11,849,595	
3	Aviation Parkway Improvement Phase 1 Design / Construction	Design mill and overlay rehabilitation of Aviation Parkway from I-85 to GSP Drive.	90%	FAA Share:	\$ 925,200	\$1,028,000
			5%	State Share:	\$ 51,400	
			5%	Local Share:	\$ 51,400	
4	ARFF Relocation Construction	Construct approximately 21,200 square feet (SF) ARFF building and associated pavements. Demolish existing ARFF building.	90%	FAA Share:	\$ 7,010,852	\$7,789,835
			5%	State Share:	\$ 389,492	
			5%	Local Share:	\$ 389,492	
5	Garage C Utility Upgrade Design/Construction	Enabling utility extension project.	0%	FAA Share:	\$ -	\$930,000
			0%	State Share:	\$ -	
			100%	Local Share:	\$ 930,000	
6	Master Environmental Assessment	Prepare an Environmental Assessment which considers the impacts of projects listed within Phase I and Phase II of this CIP.	90%	FAA Share:	\$ 450,000	\$500,000
			5%	State Share:	\$ 25,000	
			5%	Local Share:	\$ 25,000	
7	Air Cargo Apron Expansion - Phase 2 Construction	Construct Air Cargo Apron Expansion Phase 2 previously designed.	90%	FAA Share:	\$ 11,711,610	\$13,012,900
			5%	State Share:	\$ 650,645	
			5%	Local Share:	\$ 650,645	

Project ID	Project	Description	Funding			Estimated Cost
8	Relocated and Expanded Employee Lot Construction	Construct new employee parking lot near maintenance building south of CDF totally approximately 500 parking spaces.	0%	FAA Share:	\$ -	\$2,531,050
			0%	State Share:	\$ -	
			100%	Local Share:	\$ 2,531,050	
9	Garage C (incl. CONRAC) and GSP Dr. Realignment Construction	Construct the previously designed Garage C (incl. CONRAC) and realignment of GSP Drive around Garage C to provide garage access.	0%	FAA Share:	\$ -	\$48,000,000
			0%	State Share:	\$ -	
			100%	Local Share:	\$ 48,000,000	
10	Concourse A and B Jet bridges (A 0.5 and B 4.5) Design/Construction	Install new jet bridge at Gate A 0.5 and B 4.5 and improve Gate A1 holdroom as able to accommodate additional holdroom demand.	90%	FAA Share:	\$ 3,816,540	\$4,240,600
			5%	State Share:	\$ 212,030	
			5%	Local Share:	\$ 212,030	
11	Airport Fuel Farm Expansion - Phase 1 Design/Construction	Design and construct fuel farm expansion to provide an additional 150,000-gallon Jet-A fuel capacity.	90%	FAA Share:	\$ 1,510,020	\$1,677,800
			5%	State Share:	\$ 83,890	
			5%	Local Share:	\$ 83,890	
12	Closure of Taxiway E & F and Removal of Pavement	Mark and publish Taxiway E and Taxiway F as closed. Remove pavement and stockpile for future use. Return area to grass.	90%	FAA Share:	\$ 229,973	\$255,525
			5%	State Share:	\$ 12,776	
			5%	Local Share:	\$ 12,776	
13	FBO Expansion and GA FIS Relocation Design	Expand FBO building by 5,000 SF -10,000 SF to include general aviation FIS facilities.	0%	FAA Share:	\$ -	\$129,680
			0%	State Share:	\$ -	
			100%	Local Share:	\$ 129,680	
14	Apron Edge Taxilane Widening and GA Apron Rehabilitation Design	Widen apron edge taxilane from TWYs L3 to L6 to maintain centerline alignment of apron edge taxilane from TWY L3 to L2 and rehabilitate the GA apron.	90%	FAA Share:	\$ 228,600	\$254,000
			5%	State Share:	\$ 12,700	
			5%	Local Share:	\$ 12,700	
15	Concourse B Expansion - Gate B5 Design	Design expansion to Concourse B capable of immediately providing one additional gate and eventually a second gate position upon relocation of the ATCT.	90%	FAA Share:	\$ 726,300	\$807,000
			5%	State Share:	\$ 40,350	
			5%	Local Share:	\$ 40,350	



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Project ID	Project	Description	Funding			Estimated Cost
16	Maintenance Yard Expansion - Phase 1 Design	Expand airport maintenance apron by approximately 3,500 SY supported by a vehicle storage and servicing building of approximately 12,500 SF.	90%	FAA Share:	\$ 109,800	\$122,000
			5%	State Share:	\$ 6,100	
			5%	Local Share:	\$ 6,100	
17	FBO Expansion and GA FIS Relocation Construction	Construct the previously designed FBO Expansion and relocation of GA FIS facilities.	0%	FAA Share:	\$ -	\$1,815,520
			0%	State Share:	\$ -	
			100%	Local Share:	\$ 1,815,520	
18	New Economy Parking Lot Phase 1 Design	Design new economy parking lot of approximately 35,000 SY by expanding overflow lot and relocating cell phone lot.	0%	FAA Share:	\$ -	\$228,000
			0%	State Share:	\$ -	
			100%	Local Share:	\$ 228,000	
19	Apron Edge Taxilane Widening and GA Apron Rehabilitation Construction	Construct the previously designed widening of apron edge taxilane (L3-L6) and rehabilitation of GA apron.	90%	FAA Share:	\$ 3,906,752	\$4,340,835
			5%	State Share:	\$ 217,042	
			5%	Local Share:	\$ 217,042	
20	Concourse B Expansion - Gate B5 Construction	Construction of Concourse B expansion and installation of Gate B5 jet bridge.	0%	FAA Share:	\$ -	\$11,302,600
			0%	State Share:	\$ -	
			100%	Local Share:	\$ 11,302,600	
21	Aviation Pkwy. & GSP Dr. North Intersection Roundabout Design	Design roundabout to replace full stop intersection of GSP Drive and Aviation Parkway near the south east corner of Garage B.	0%	FAA Share:	\$ -	\$48,000
			0%	State Share:	\$ -	
			100%	Local Share:	\$ 48,000	
22	Maintenance Yard Expansion - Phase 1 Construction	Construct the previously designed phase 1 maintenance yard expansion.	90%	FAA Share:	\$ 1,533,591	\$1,703,990
			5%	State Share:	\$ 85,200	
			5%	Local Share:	\$ 85,200	
23	New Economy Parking Lot Phase 1 Construction	Construct previously designed new economy parking lot.	0%	FAA Share:	\$ -	\$3,197,650
			0%	State Share:	\$ -	
			100%	Local Share:	\$ 3,197,650	


Project ID	Project	Description	Funding			Estimated Cost
24	Airfield Electrical Vault Relocation Design/Construction	Design and construct the relocation of the airfield electrical vault as part of the ARFF relocation.	90%	FAA Share:	\$ 1,861,200	\$2,068,000
			5%	State Share:	\$ 103,400	
			5%	Local Share:	\$ 103,400	
25	ARFF and Airfield Electrical Vault Demo	Demolish and return to turf the existing ARFF building and the airfield electrical vault contained within.	90%	FAA Share:	\$ 489,600	\$544,000
			5%	State Share:	\$ 27,200	
			5%	Local Share:	\$ 27,200	
26	Aviation Pkwy. & GSP Dr. North Intersection Roundabout Construction	Construct previously designed roundabout for northern intersection of Aviation Parkway and GSP Drive near the southeast corner of Garage B.	0%	FAA Share:	\$ -	\$768,645
			0%	State Share:	\$ -	
			100%	Local Share:	\$ 768,645	
27	Runway 22 ALSF-2 Design/Construction	Design and construct an upgrade of the existing Runway 22 ALS (MALSR) to an ALSF-II system.	90%	FAA Share:	\$ 5,185,980	\$5,762,200
			5%	State Share:	\$ 288,110	
			5%	Local Share:	\$ 288,110	
28	GA Apron Expansion - Phase 1a Design & Site Preparation	Design GA Apron expansion of 18,000 SY and site prep for GA hangars	90%	FAA Share:	\$ 2,044,922	\$2,272,135
			5%	State Share:	\$ 113,607	
			5%	Local Share:	\$ 113,607	
29	South MRO Development Area - Phase 1 Design & Site Preparation	Design and site preparation Phase 1 of the South MRO development area to include 2,000-foot access taxiway, 9,000 SY apron, 70,000 SF MRO hangar, and associated landside access and parking.	90%	FAA Share:	\$ 2,878,470	\$3,198,300
			5%	State Share:	\$ 159,915	
			5%	Local Share:	\$ 159,915	
TOTAL Phase 1				FAA Share:	\$ 56,178,389	\$132,656,528
				State Share:	\$ 3,121,022	
				Local Share:	\$ 73,357,117	


Source: McFarland Johnson, 2018; Avcon, 2018.

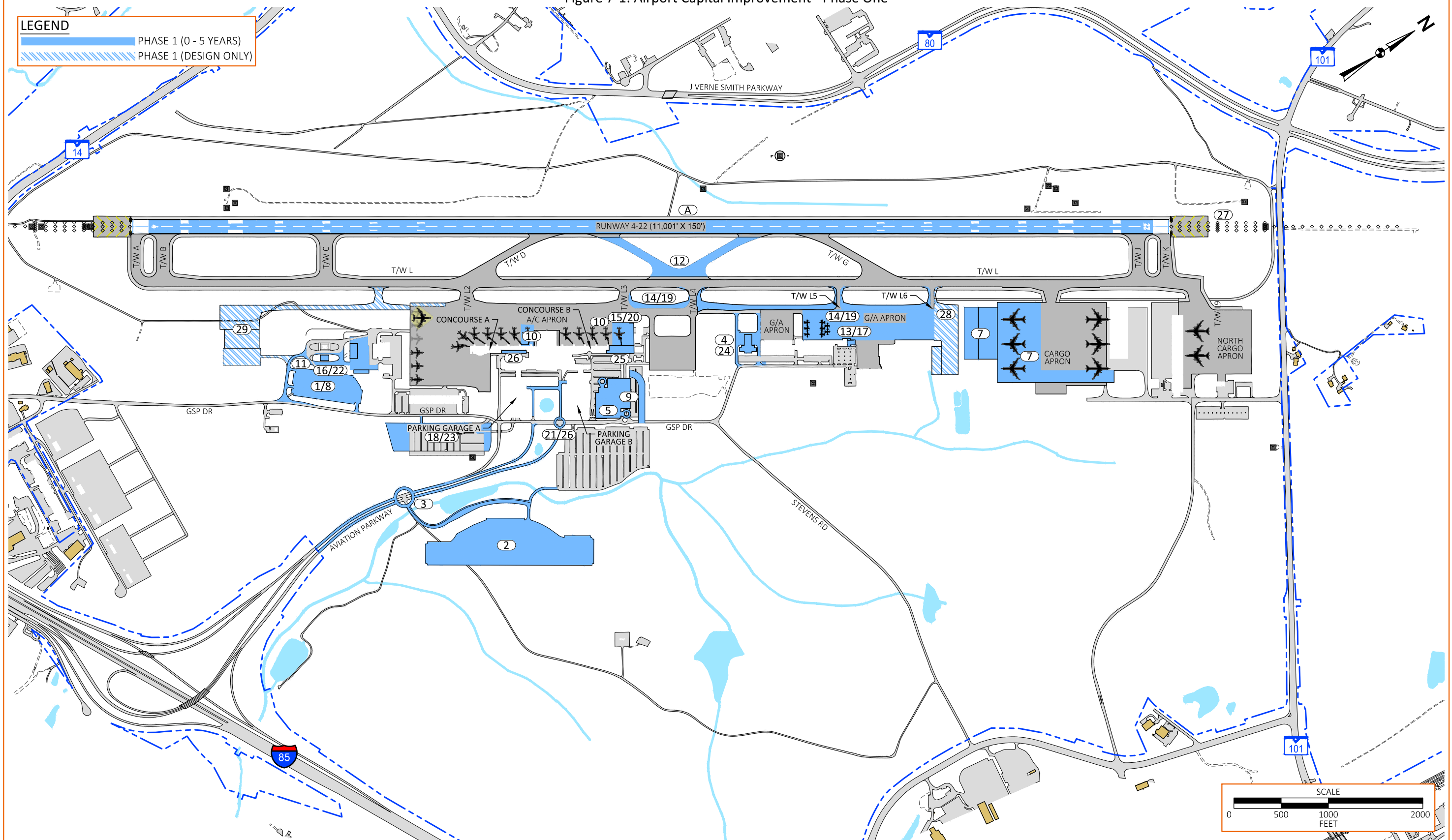


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 PHASE 1 (0 - 5 YEARS)

 PHASE 1 (DESIGN ONLY)





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Phase Two – Six to Ten Years

Phase Two of the ACIP focuses on terminal expansion (airside and concourse), landside access improvements, the continued growth of the air cargo area, and opportunities in the Southside Aviation area.

Phase Two improvements are identified, described and costed in **Table 7-2** and graphically depicted in **Figure 7-2**.

Table 7-2: Airport Capital Improvement Program – Phase Two

Project ID	Project	Description	Estimated Cost
30	Concourse A Expansion and FIS Development Design	Design Concourse A expansion and FIS corridor development	\$617,000
31	GA Apron Expansion - Phase 1b Construction	Construct the previously designed GA apron expansion of approximately 18,000 SYSY north of the existing GA apron as well as one 300'x300' aircraft hangar.	\$16,092,535
32	Taxiway H Design/Construction	Design and construct an 90-degree entrance/exit taxiway to Runway 4-22 from Taxiway L approximately 1,100 feet south of Taxiway J.	\$3,573,435
33	South MRO Development Area - Phase 1 Construction	Construct Phase 1 of the South MRO development area previously designed and site prepared. Includes extended taxilane and concrete apron.	\$6,125,445
34	Transient Apron Rehabilitation for Airline Remote Hardstand Design / Construction	Design and construct rehabilitation of the Airport's existing transient apron of approximately 19,500 SY.	\$14,776,500
35	Air Cargo Apron and Building Expansion - Phase 3 Design / Construction	Construct an air cargo apron expansion of approximately 42,000 SYSY east of Phase 1 air cargo apron along with air cargo support building, landside access and parking.	\$15,298,800



Project ID	Project	Description	Estimated Cost
36	GA Apron Expansion - Phase 2 Design / Construction	Design and construct a GA apron expansion of approximately 17,000 SY east of the Phase 1 GA apron expansion.	\$4,649,600
37	ATCT Relocation Design / Construction	FAA Project to relocate ATCT to a new tower site including demolition of existing tower.	\$20,843,150
38	Terminal Baggage Claim and Terminal Curb Expansion Design / Construction	Design and construct expansion of terminal core of approximately 30,000 SF to the north to provide for a second baggage claim area, and design/construct widening of terminal loop road.	\$9,477,005
39	Concourse A Reconfiguration and FIS Corridor Construction	Design and construct expansion of Concourse A of approximately 20,000 SF to accommodate two new flex gates capable of supporting widebody aircraft and opportunity to provide a sterile corridor to FIS to support international air carrier operations.	\$8,641,290
40	GSP Dr. Realignment and Aviation Pkwy. Intersection Roundabout Design / Construction	Realign GSP Drive from a point south of the Airport's fuel farm to intersect Aviation Parkway near an existing service road juncture and integrate via dual land roundabout. Provide new ingress to the new surface lot.	\$2,260,554
41	New Surface Economy Lot - Phase 2 Design / Construction	Design and construct an expansion to the Phase 1 of the new surface economy lot of approximately 25,500 SY.	\$4,265,800
42	Maintenance Yard Expansion - Phase 2 Design / Construction	Expand the maintenance apron by approximately 3,250 SY to expand exterior storage and support a new 6,000 SF maintenance building.	\$1,403,600

Project ID	Project	Description	Estimated Cost
43	Aviation Pkwy to Northbound I-85 Flyover Design / Construction	State to design/construct Aviation Parkway flyover of I-85 to enable seamless integration with northbound lanes.	\$8,373,450
Total Phase 2:			\$116,398,164

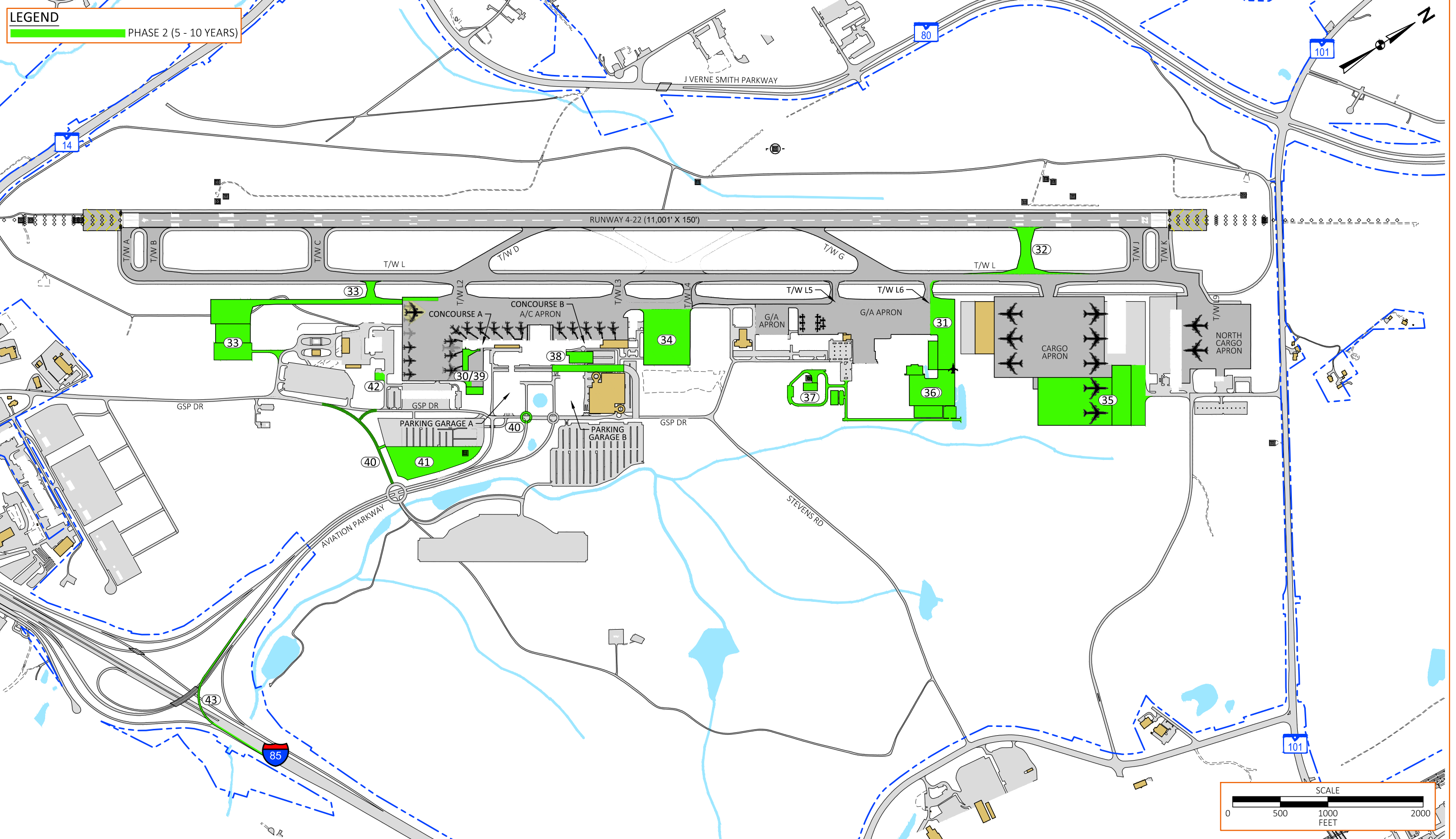
Source: McFarland Johnson, 2018; Avcon, 2018



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Figure 7-2: Airport Capital Improvement - Phase Two



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Phase Three – Eleven to Twenty Years

Phase Three of the ACIP focuses on cargo facility development, Concourse B construction, airfield support facilities, and continued development in the Southside Aviation area.

Phase Three improvements are identified, described and costed in **Table 7-3** and graphically depicted in **Figure 7-3**.

Table 7-3: Airport Capital Improvement Program – Phase Three

Project ID	Project	Description	Estimated Cost
44	South MRO Development Area - Phase 2 Environmental / Design / Construction	Environmentally determine, design, and construct extension to common access taxilane, 9,000 SY MRO apron, 70,000 SF MRO hangar, and associated landside access and parking facilities.	\$3,962,800
45	Taxiway L9 Realignment Environmental / Design / Construction	Environmentally determine, design, and construct the realignment of Taxiway L9 to provide access to the North Cargo Apron perpendicularly and allow for an additional parking position.	\$8,538,730
46	Cargo Apron and Building Expansion - Phase 4 Environmental / Design / Construction	Environmentally determine, design, and construct an approximately 24,500 SY expansion to the Cargo Apron, and associated air cargo building, landside access, and parking facilities.	\$8,800,600
47	GA Apron Expansion - Phase 3 Environmental / Design / Construction	Environmentally determine, design, and construct a GA apron expansion of approximately 14,500 SY south of the phase 2 GA apron expansion.	\$38,775,640
48	Concourse B Buildout and Apron Expansion Environmental / Design / Construction	Environmentally determine, design, and construct an expansion of the transient apron to connect with the air carrier apron, 15,000 SF expansion to Concourse B to provide for up to four additional gates, one of which being flexible to accept widebody aircraft.	\$18,370,000
49	Maintenance Office Expansion incl. Parking Environmental / Design / Construction	Environmentally determine, design, and construct an expansion of the airport maintenance office or approximately 5,000 SF and associated parking facilities nearing 7,500 SF.	\$1,202,050



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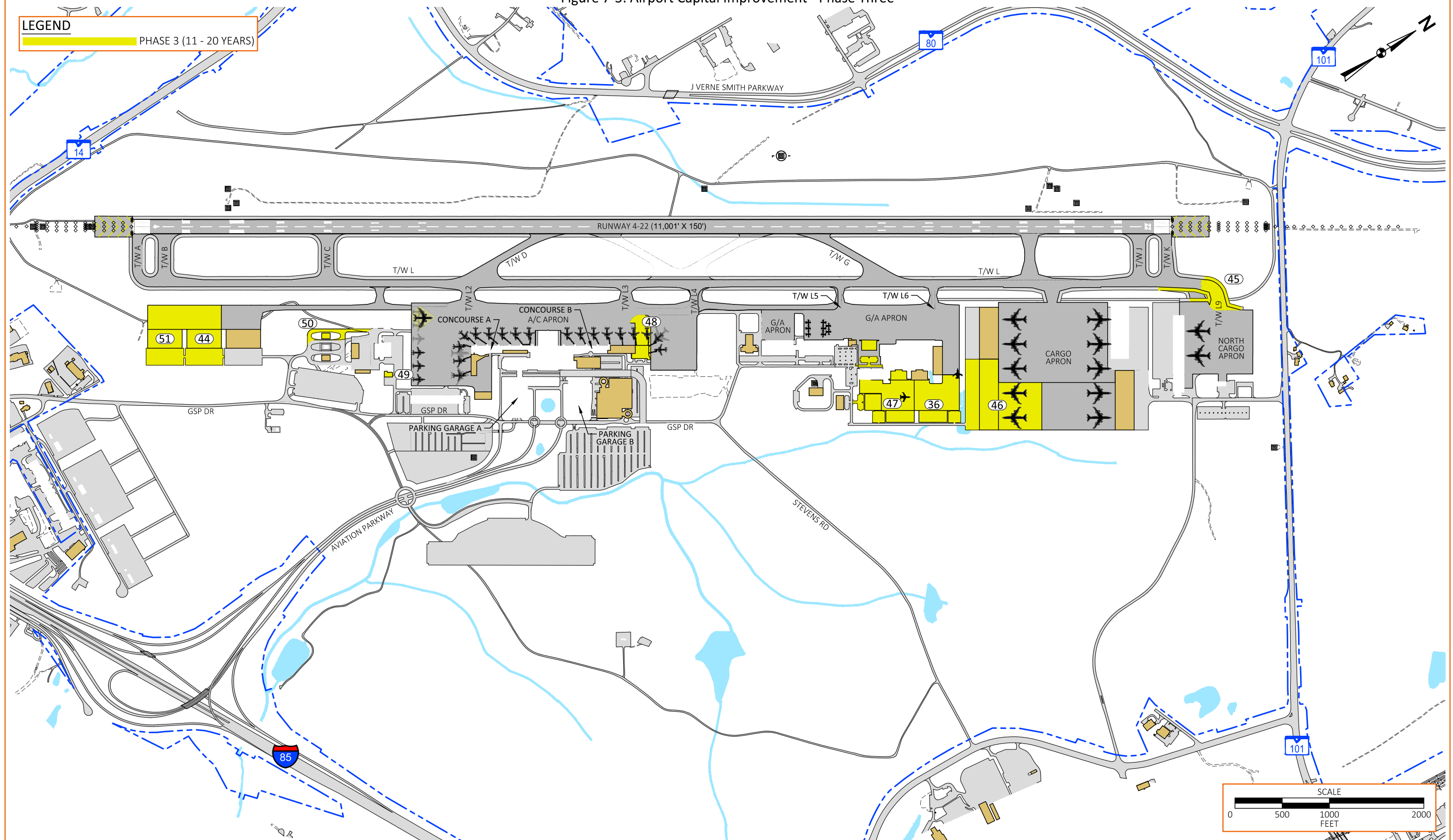


Project ID	Project	Description	Estimated Cost
50	Airport Fuel Farm Expansion - Phase 2 Environmental / Design / Construction	Environmentally determine, design, and construct fuel farm expansion to provide an additional 150,000-gallon Jet-A fuel capacity.	\$1,059,080
51	South MRO Development Area - Phase 3 Environmental / Design / Construction	Environmentally determine, design, and construct extension to common access taxiway, 9,000 SY MRO apron, 70,000 SF MRO hangar, and associated landside access and parking facilities.	\$3,591,300
Total Phase 3:			\$84,300,200

Source: McFarland Johnson, 2018; Avcon, 2018

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 PHASE 3 (11 - 20 YEARS)





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Phase Four – Beyond Twenty Years

Phase Four of the ACIP loosely explores projects which can be reasonably anticipated beyond the typical 20-year planning horizon.

Phase Four improvements are identified, described, and costed in **Table 7-4** and graphically depicted in **Figure 7-4**. The full phasing plan is shown in **Figure 7-5**.

Table 7-4: Airport Capital Improvement Program – Phase Four

Project ID	Description	Estimated Cost
B	Proposed Runway 4R-22L	\$32,483,130
C	Proposed Parallel Taxiway and Connectors	\$38,154,065
D	Proposed Taxiway L4	\$17,162,921
E	New Airport Long Economy Parking Lot	\$6,653,500
F	Apron and Terminal Expansion	\$49,738,250
G	Apron Expansion	\$13,278,500
H	Hangars and Parking Lot	\$13,484,485
I	Hangars and Parking Lot	\$15,658,560
J	Cargo Apron Expansion and Connectors - Phase 4	\$78,627,000
K	Cargo Apron - Hangars, Parking Lots and Roads - Phase 4	\$79,828,550
L	Proposed Taxiway Northwest of Runway	\$43,863,644
M	Large Aircraft Apron Northwest of Runway	\$35,771,100
N	Aircraft Apron Northwest of Runway	\$10,488,800
O	Northwest Apron - Phase 4: 3 Hangars, Parking, and Roads	\$77,417,000
P	Northwest Apron - Phase 4: Hangars, Parking, and Roads	\$50,999,650
Q	Northwest Apron - Phase 4: Aviation Support Buildings	\$15,330,790
R	Northwest Apron - Phase 4: Fuel Farm Expansion	\$2,237,700
S	Northwest Apron - Phase 4: Hangars, Parking, and Roads	\$39,879,700
T	Northwest Apron - Phase 4: Hangars, Parking, and Roads	\$24,349,500
U	Entrance Road to Terminal, Road to/from GA	\$7,662,140
V	Cargo Apron Expansion Northeast	\$20,295,600
W	Cargo Apron Expansion Northeast - Hangar and Parking	\$12,677,850
X	Cargo Apron Expansion Northeast - Hangar and Parking	\$9,222,420
Y	Road to Fuel Farm, Cargo Apron, and Logistics Park	\$2,864,440
Z	Fuel Farm Expansion - Near Logistics Park	\$3,268,000
Total Phase 4:		\$701,397,295

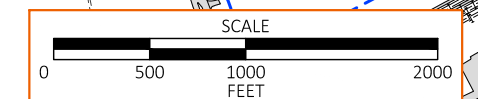
Source: McFarland Johnson, 2018; Avcon, 2018



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LEGEND

 PHASE 4 (> 20 YEARS)

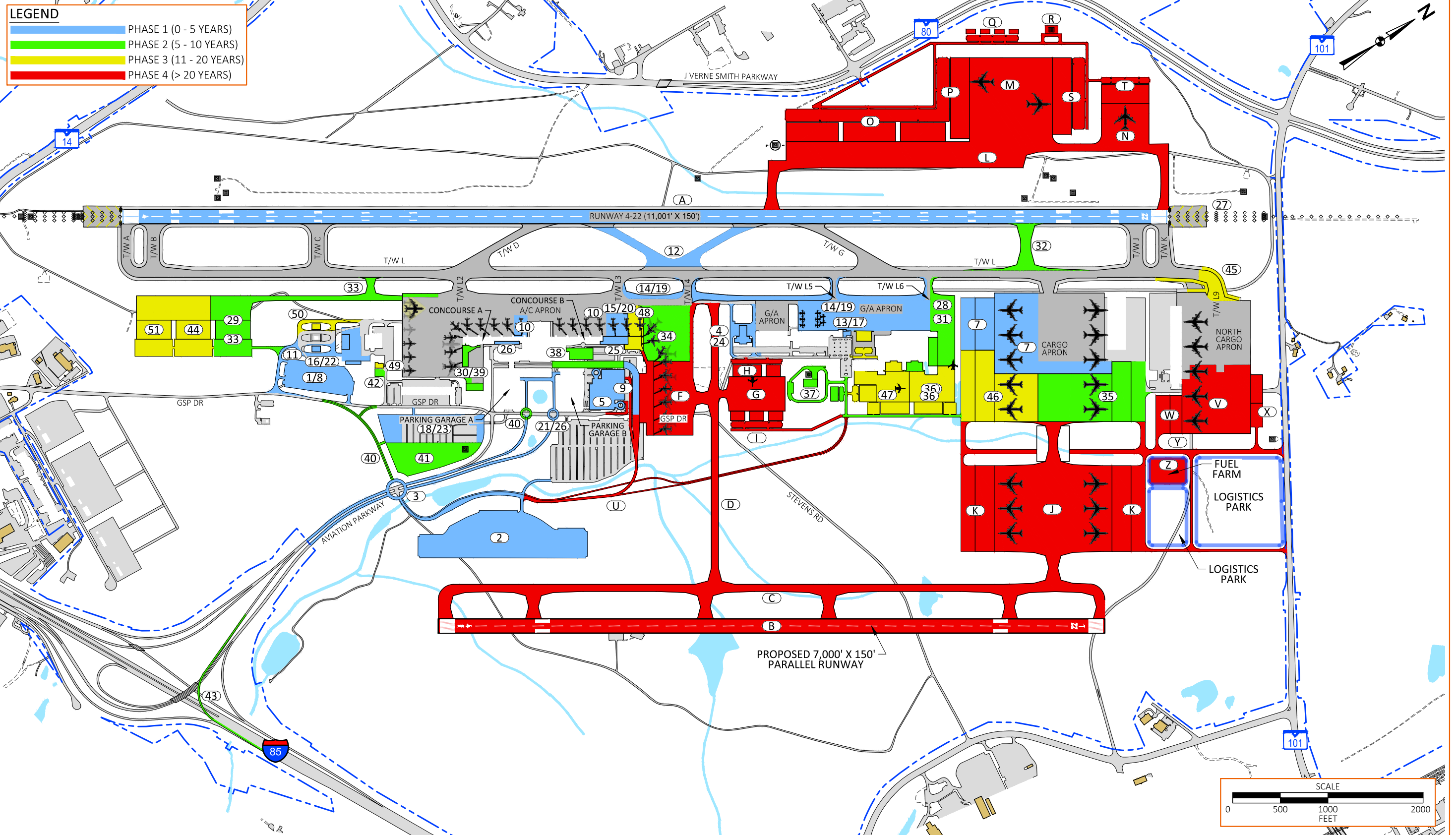




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Figure 7-5: Phasing Plan



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