

## 8 IMPLEMENTATION PLAN

### 8.1 Introduction

The previous chapters of the Master Plan evaluated the Austin-Bergstrom International Airport's (ABIA) existing facilities, projected the future activity levels, identified potential facility needs, evaluated alternatives and recommendations for addressing those facility needs, and identified an implementation plan throughout the 20-year planning period. Regardless of the identified need for improvements, the ability to fund the capital program will ultimately determine when the project is implemented.

### 8.2 Construction Implementation Schedule

A construction implementation schedule was developed to assist ABIA with future planning and to provide input to the Financial Plan (see Chapter 9, *Financial Plan*). The recommended Master Plan and 5-year Capital Improvement Program (CIP) projects were grouped into the following four phases corresponding to different planning activity levels (PAL)s:

- Phase 1: PAL 1 – 16.0 MAP (2019)
- Phase 2: PAL 2 – 18.0 MAP (2022)
- Phase 3: PAL 3 – 22.0 MAP (2027)
- Phase 4: PAL 4 – 31.0 MAP (2037)

The projects were grouped into phases based on the overall theoretical demands for infrastructure improvements outlined in Chapters 4 (*Demand/Capacity Facility Requirements*) and 5 (*Alternatives Analysis and Environmental Conditions*). The implementation plan takes into account projected facility needs based on anticipated passenger demand in Million Annual Passengers (MAP), but might be limited by financial capabilities, which will determine when a project can be implemented.

Due to the conceptual nature of a master plan, implementation of these capital projects should occur only as demand warrants and after further refinement of their costs and plan of finance. The projected capital costs presented herein must be viewed as preliminary, reflecting a master plan level of detail subject to refinement in subsequent implementation steps.

Factors that can trigger the need to proceed with a particular airport development project can range from tenant demands for landside and support facilities, to airside and terminal capacity requirements (passenger demand). Federal Aviation Administration (FAA) planning criteria and the need to enhance safety on the airfield must also be considered. The following sections provide lists of airport expansion projects associated with each phase of development.

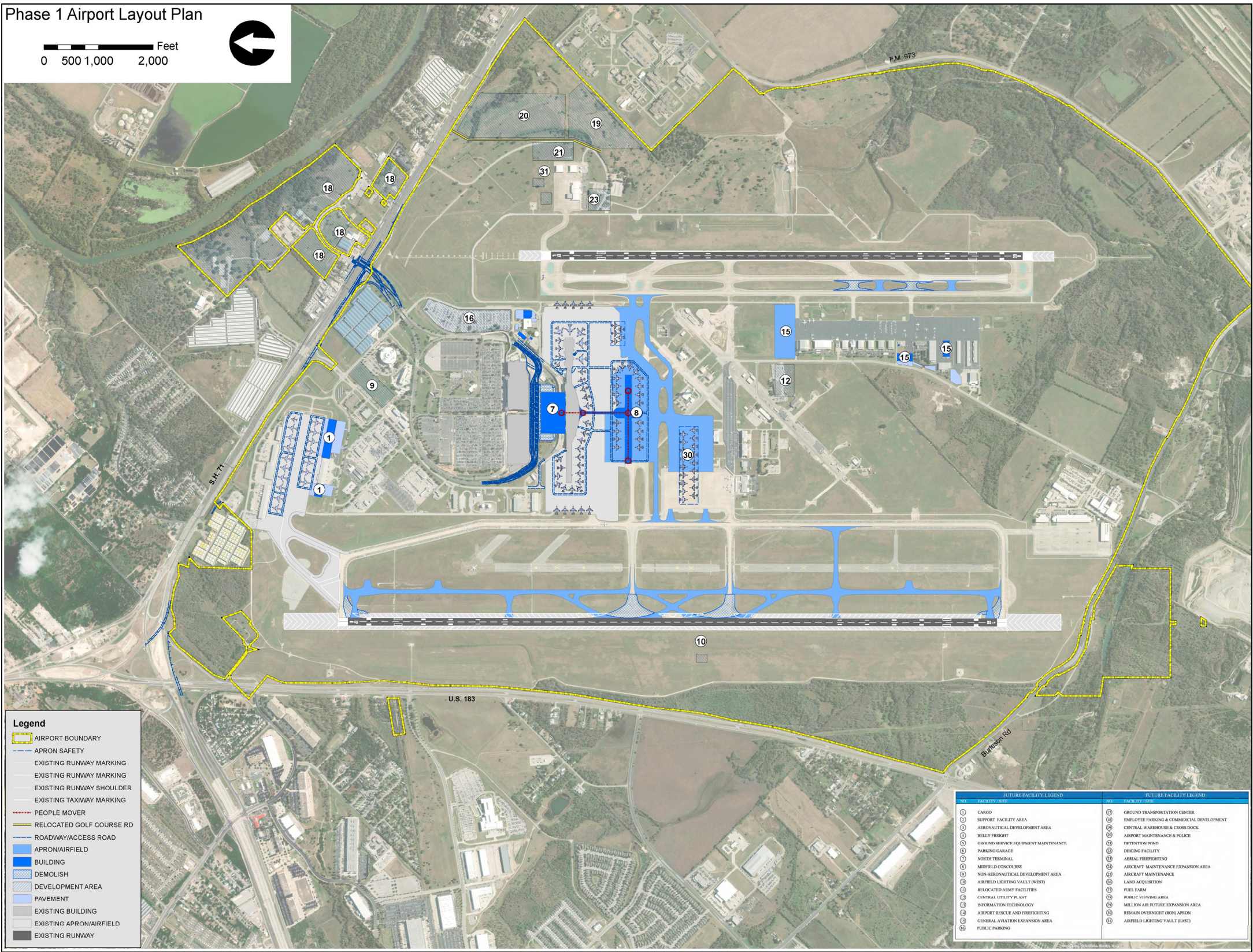
## 8.2.1 Phase 1 Expansion Program (PAL 1 – 16.0 MAP)

Phase 1 development as shown on **Exhibit 8.2-1** includes those projects that are scheduled to meet the PAL 1 (2019) demand. The main focus of the Phase 1 program includes a new north terminal building, midfield concourse gates, and access roadway improvements. These projects are as follows:

1. New 863,000 sq. ft. North Terminal Building for passenger processing (ticketing, security and baggage)
2. New north terminal entrance roadway ramps and curbfront (2-levels) with a separate passenger level between the new terminal and parking garage/Consolidated Rental Car Facility Garage (CONRAC)
3. New 803,000 sq. ft. 20-gate Midfield Concourse, aircraft apron and hydrant fueling system
4. Elevated passenger bridge connection between the Barbara Jordan Terminal and remote Concourse
5. New airport entrance roadway intersection with SH 71 (Braided Left Turn)
6. New Aircraft Design Group (ADG)-VI Taxiway 'D' parallel to existing Runway 17R-35L
7. New Runway 17R-35L rapid exit taxiways
8. Various new ADG-V taxiways and taxilanes (lighting and signage)
9. New Remain Overnight (RON) aircraft apron area
10. General Aviation expansion apron, hangars and auto parking (3<sup>rd</sup> party development)
11. New Aerial Firefighting facility adjacent to Texas Department of Transportation (TxDOT) Aviation (3<sup>rd</sup> party development)
12. New Central Warehouse and Cross Dock facility adjacent to Golf Course Road
13. Relocation of Golf Course Road (Phase 1)
14. Expansion of the existing Catering facility (3<sup>rd</sup> party development)
15. Expansion of the existing north Central Utility Plant
16. New east and west Airfield Lighting Vaults
17. New Employee Parking north of Texas State Highway 71 (SH 71)
18. Expansion of the North Cargo facilities (3<sup>rd</sup> party development)
19. New south Central Utility Plant
20. Miscellaneous utility upgrades
21. Miscellaneous non-aeronautical development area for commercial development (3<sup>rd</sup> party development)



Exhibit 8.2-1: ABIA Phase 1 Airport Layout Plan



Source: Landrum & Brown analysis



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## 8.2.2 Phase 2 Expansion Program (PAL 2 – 18.0 MAP)

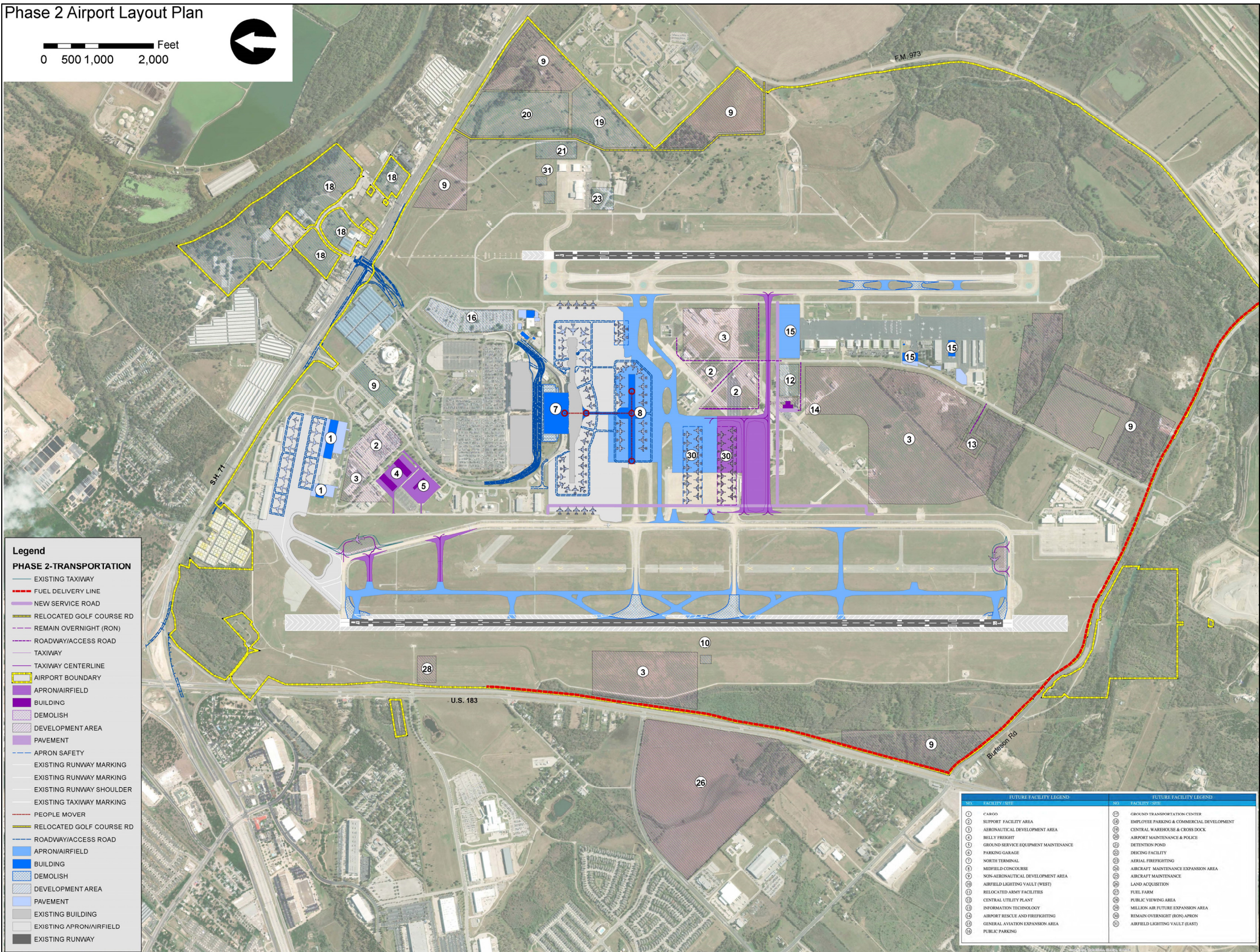
Phase 2 development as shown on **Exhibit 8.2-2** includes those projects that are scheduled to meet the PAL 2 (2022) demand. These projects are as follows:

1. Renovation of the existing Barbara Jordan Terminal interior space allocation
2. New ADG-V crossfield taxiway (lighting and signage)
3. Depress Emma Browning Road under the new crossfield taxiway
4. New north and south aircraft hold pads for Runway 17R-35L
5. Expansion of the Remain Overnight aircraft apron area
6. New South Airport Firefighting Station
7. Expansion of the Belly Freight facility (3<sup>rd</sup> party development)
8. Expansion of the Ground Support Equipment Maintenance (GSEM) facility (3<sup>rd</sup> party development)
9. New south Information Technology facility
10. Expansion of the General Aviation facilities (3<sup>rd</sup> party development)
11. Extension of Golf Course Road to the south (Phase 2)
12. Expansion of the North Cargo facilities (3<sup>rd</sup> party development)
13. New west side Aircraft Maintenance hangars and apron (3<sup>rd</sup> party development)
14. Miscellaneous aeronautical development areas for support facilities
15. Miscellaneous non-aeronautical development area for commercial development (3<sup>rd</sup> party development)
16. Public viewing area

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Exhibit 8.2-2: ABIA Phase 2 Airport Layout Plan



Source: Landrum & Brown analysis



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### 8.2.3 Phase 3 Expansion Program (PAL 3 – 22.0 MAP)

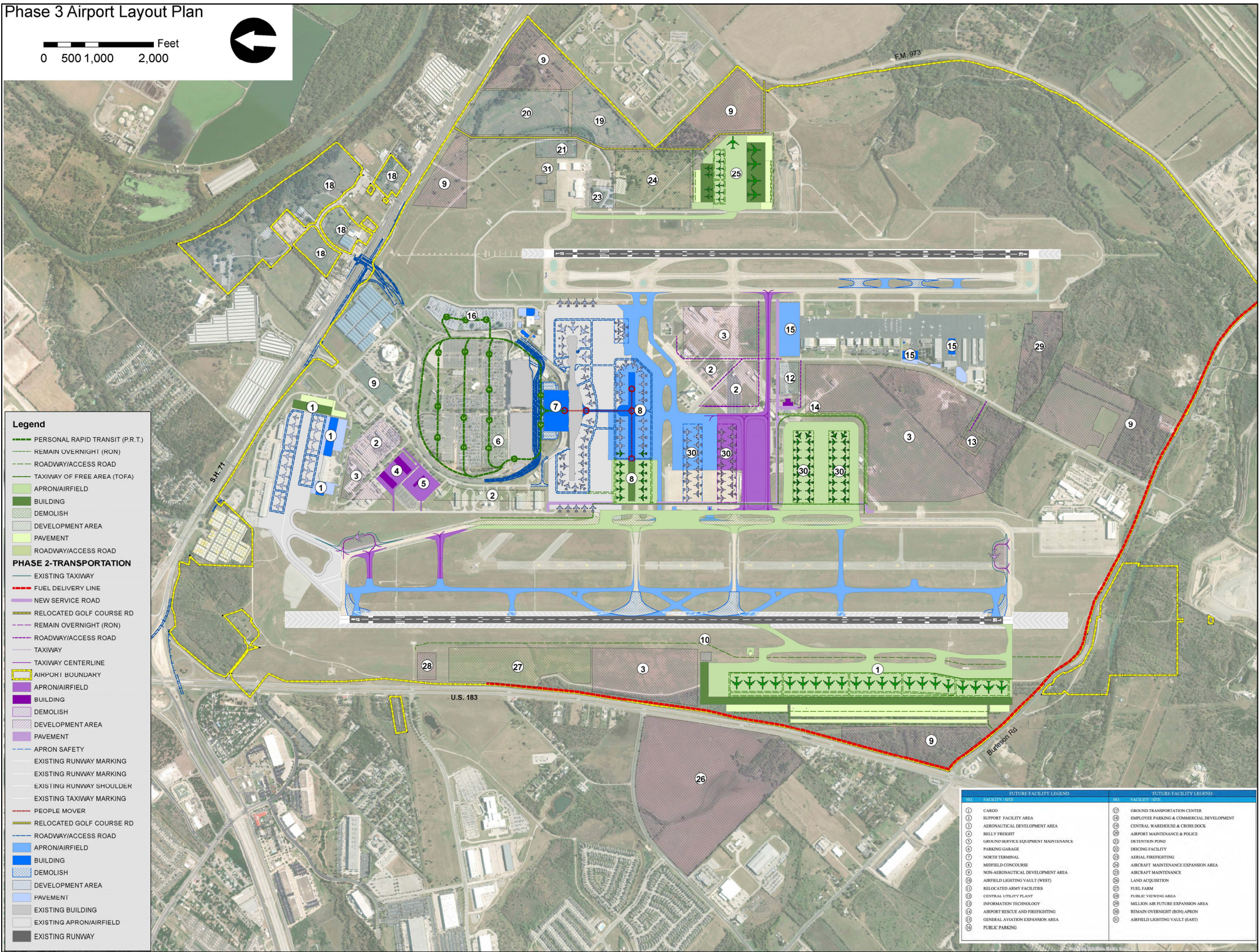
Phase 3 development as shown on **Exhibit 8.2-3** includes those projects that are scheduled to meet the PAL 3 (2027) demand. These projects are as follows:

1. 458,000 sq. ft. expansion of the North Terminal building
2. 232,500 sq. ft. 12-gate expansion of the Midfield Concourse building and apron
3. Expansion of the Remain Overnight aircraft apron area
4. Relocation of existing Taxiway 'C' to the west with various connector taxiways
5. New east side Aircraft Maintenance hangars and apron area (3<sup>rd</sup> party development)
6. Personal Rapid Transit (PRT) system throughout the public parking areas to the new Terminal Building
7. Land acquisition (126 acres) west of US 183 for west side development flood control
8. Expansion of the North Cargo facilities (3<sup>rd</sup> party development)
9. Expansion of the GSEM facility (3<sup>rd</sup> party development)
10. Expansion of the Belly Freight facility (3<sup>rd</sup> party development)
11. Expansion of the Catering facility (3<sup>rd</sup> party development)
12. Expansion of the General Aviation facilities (3<sup>rd</sup> party development)
13. New Fuel Farm on the west side of Runway 17R-35L (3<sup>rd</sup> party development)
14. Miscellaneous aeronautical development areas for support facilities
15. Miscellaneous non-aeronautical development area for commercial development (3<sup>rd</sup> party development)

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Exhibit 8.2-3: ABIA Phase 3 Airport Layout Plan



Source: Landrum & Brown analysis



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## 8.2.4 Phase 4 Expansion Program (PAL 4 – 31.0 MAP)

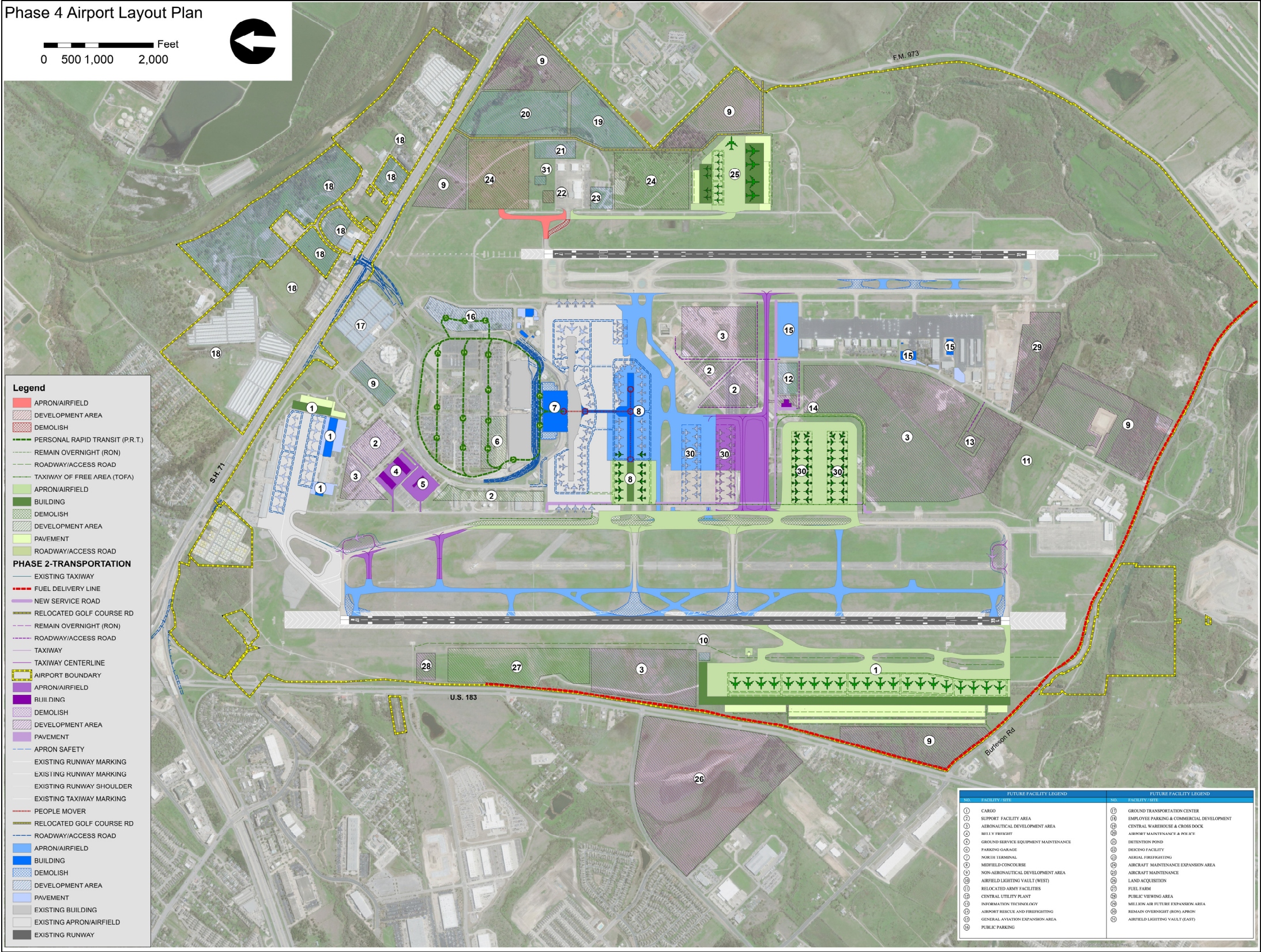
Phase 4 development as shown on **Exhibit 8.2-4** includes those projects that are scheduled to meet the PAL 4 (2037) demand. These projects are as follows:

1. New southwest Cargo complex to accommodate the expansion of e-commerce at ABIA (3<sup>rd</sup> party development)
2. Expansion of the east side Aircraft Maintenance facilities (3<sup>rd</sup> party development)
3. Relocation and expansion of the GSEM facility (3<sup>rd</sup> party development)
4. Relocation and expansion of the Belly Freight facility (3<sup>rd</sup> party development)
5. Expansion of the Catering facility (3<sup>rd</sup> party development)
6. Expansion of the General Aviation facilities (3<sup>rd</sup> party development)
7. Miscellaneous aeronautical development areas for support facilities
8. Miscellaneous non-aeronautical development area for commercial development (3<sup>rd</sup> party development)

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Exhibit 8.2-4: ABIA Phase 4 Airport Layout Plan



Source: Landrum & Brown analysis



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## 8.2.5 Post 20-Year Expansion Program

The following projects have been identified for potential development at ABIA, and are beyond the 20-year Master Plan horizon.

### 8.2.5.1 Future Runway

This Master Plan Study looked at the need for a future runway to meet the future forecast demand. As noted in Chapter 3, *Aviation Activity Forecast*, the need for a new runway is beyond the 20-year (2037) planning horizon and will not be needed until approximately year 2048, or 445,000 annual aircraft operations. However, this Master Plan Study assessed the preferred location and length for this long-term runway to assure the land was preserved for its future development. As shown on **Exhibit 8.2-5**, a future 10,000-foot long Runway 17C-35C is located 1,200 feet east of existing Runway 17R-35L and will have a various rapid exit taxiways and a full-length parallel taxiway to the east. In addition, an end around taxiway is located off the south threshold to provide unrestricted taxiing for ADG-III aircraft that are landing on Runway 17R-35L while departures are being conducted on the new Runway 17C.

### 8.2.5.2 Future Runway Protection Zone

The runway protection zones (RPZ) for the new Runway 17C-35C will require relocation of various facilities. The US Army Reserve facilities (hangars and apron) are located within the 35C RPZ, and The Parking Spot facility is located within the 17C RPZ. It is proposed to relocate the US Army Reserve facilities northeast of the current complex, while it is recommended to purchase The Parking Spot land (22 acres).

### 8.2.5.3 Runway Maintenance Impact on Airfield Capacity

Due to the anticipated deterioration of the runway pavement over time, ABIA will be required to renew the surface periodically. This might require full or partial closure of the runways during construction. Closure of a runway will result in reduced capacity and higher delays.

Closure of the longer Runway 17R-35L (12,250 feet) will require all heavy and wide-body aircraft to use the shorter runway 17L-35R (9,000 feet), and might result in reduced takeoff weight or a refueling stopover to maintain the higher payload. The average delay per operation will exceed the 10-minute threshold around year 2032, or approximately 360,000 annual operations when Runway 17R-35L is closed.

When Runway 17L-35R is closed, the average delay per operation will exceed the 10-minute threshold around year 2029, or approximately 313,000 annual operations. Delays will rise faster when Runway 17L-35R is closed due to the taxiway exit locations, and dual parallel Taxiways A and B.

#### **8.2.5.4 State Highway 71 Relocation**

An additional long-term airport project is to coordinate with TxDOT and relocate SH 71 to the north between US 183 and Texas 130. This will require approximately 165 acres of land to provide a 400-foot right-of-way for the relocated SH 71. All land south of relocated SH 71 will become ABIA property that can be developed for airport support facilities and commercial development.

#### **8.2.5.5 Runway 17L-35R Extension**

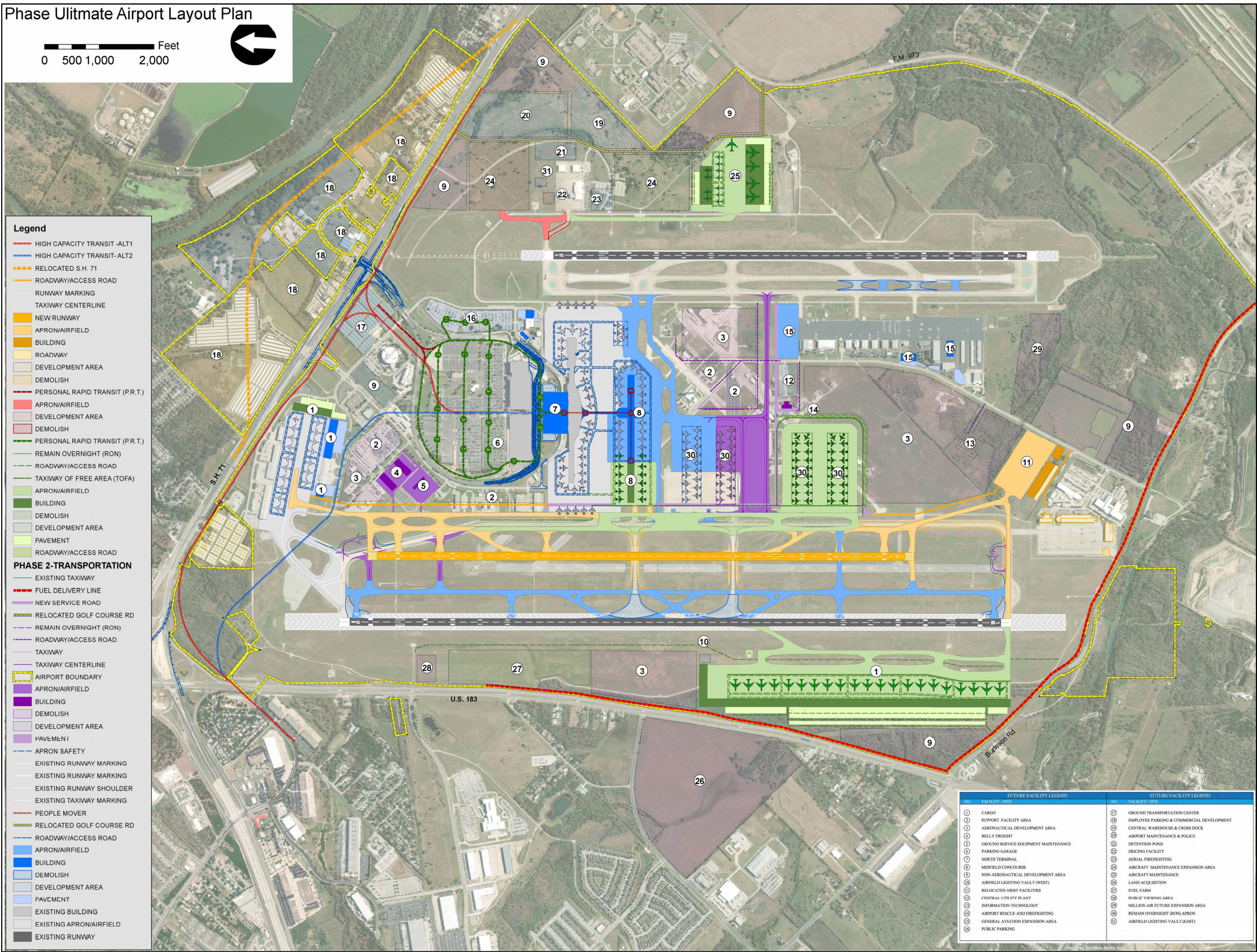
It is also recommended that existing Runway 17L-35R (9,000 feet) be extended in the future to be comparable in length to existing Runway 17R-35L (12,250 feet). This will help to balance the runway usage by long-haul international aircraft and cargo aircraft operations. Chapter 4, *Demand/Capacity Facility Requirements*, presents the runway length analysis, and recommends that any new runways or runway extension result in a runway length no less than 10,000 feet to serve the future aircraft fleet mix. The most likely runway extension (1,000 feet) would be on the 17L end, which will require the relocation of SH 71 to the north as noted above.

#### **8.2.5.6 Ground Transportation Center (GTC)/PRT System Extension and High Capacity Transit System**

The Master Plan post 20-year plan includes a new GTC and PRT system extension along SH 71, as well as two possible alignment options for high capacity-transit serving ABIA from Riverside Drive. These alignments are being studied through Capital Metro's Project Connect process. Further study is needed to determine the recommended alignment.



Exhibit 8.2-5: ABIA Post 20-Year Airport Layout Plan



Source: Landrum & Brown analysis



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## 8.2.6 Major Project Description

**Table 8.2-1** provides a summary of the following information for each of the proposed major Master Plan projects at ABIA:

- Project Description
- Agency Coordination
- Enabling Projects
- NEPA Action
- Airport Improvement Program (AIP) Eligibility

Further details of each project will be refined and updated during their design phase and coordination with the Federal, State and Local agencies.

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Table 8.2-1: ABIA Master Plan Project Development Description

PROJECT DESCRIPTION	AGENCY COORDINATION	ENABLING PROJECTS	NEPA ACTION	AIP ELIGIBILITY
<p><b><i>New North Terminal</i></b> – Upon completion of the East Terminal expansion in early 2019, most of the terminal components will be operating at or below capacity. By 2037, there will be a need to double the terminal processing space (1.32 million sq. ft.) to accommodate future passenger demand. This additional space cannot be accommodated within the existing Barbara Jordan Terminal (BJT), therefore it is recommended to develop a new terminal for passenger processing facilities (ticketing, bag drop-off and claim, security, etc.) during the PAL 1 timeframe. The existing BJT space will be reconfigured to accommodate the increase in passenger hold rooms, concessions, airline lounges, and other amenities.</p>	FAA Airlines Tenants	1. Demolish existing Parking Garage (#7040) 2. New terminal curbfront roadway 3. Renovation of existing BJT	CATEX	Yes
<p><b><i>Midfield Concourse</i></b> – The existing BJT has 32 domestic and 4 international gate positions. Based on the aviation forecast, by PAL 4 (2037), the airport will need 57 domestic and 7 international gate positions. All airlines are assumed to be “preferential use”, except for Allegiant and the foreign flag carriers. International flights will be accommodated on dedicated gates that are not shared with domestic flights, except for periods outside the international carrier operating times.</p> <p>A new 803,000 sq. ft. 20-gate Midfield Concourse, aircraft apron and hydrant fueling system is needed due to demand during the PAL 1 timeframe. A 232,500 sq. ft. 12-gate expansion of the Midfield Concourse is needed due to demand during the PAL 3 timeframe.</p>	FAA Airlines Tenants	1. Reconfiguration of Taxiways Golf, G1, G2, G3, Hotel and Romeo 2. Relocation of Department of Aviation (DOA) Hazardous Storage facility (#8150) 3. Relocation of Airfield Lighting Vault (#8105)	EA	Yes
<p><b><i>Remain Overnight Aircraft (RON) Apron</i></b> – Upon completion of the East Terminal gate expansion there are 42 RON positions located around the BJT (32) and south Maintenance Ramp (10). Based on the aviation forecast, by PAL 4 (2037), the airport will need 74 RON positons. Approximately 15 RON positons will be located between the BJT and new Midfield Concourse, while the remaining RON positions will be located on three new apron areas to the south. These apron areas will be developed as the demand for RON positions increases throughout the planning period.</p>	FAA Airlines Tenants	<p><u>North RON Apron (PAL 1)</u></p> <p>1. Demolition of old Texas National Guard facilities (#8125, #8130, #8135) 2. Reconfiguration of the Maintenance Ramp parking</p> <p><u>Center RON Apron (PAL 2)</u></p> <p>1. Demolition of old Texas National Guard facilities (#8175, #8180, #8185, #8190, #8200, #8205, #8215) 2. Demolition of the South Terminal (#8170)</p> <p><u>South RON Apron (PAL 3)</u></p> <p>1. Demolition of DOA Wash Bay (#8248) 2. Demolition of DOA Maintenance Parking Canopy (#8249) 3. Demolition of DOA Above Ground Storage Tank Canopy (#8251) 4. Demolition of DOA Field Maintenance Shop Building (#8253) 5. Demolition of DOA Airport Maintenance Facility (#8255) 6. Demolition of DOA Hazardous Storage Facility (#8260)</p>	CATEX	Yes

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PROJECT DESCRIPTION	AGENCY COORDINATION	ENABLING PROJECTS	NEPA ACTION	AIP ELIGIBILITY
<p><b><u>New Airport Entrance/Exit Roadway</u></b> – The proposed Braided Left roadway geometry improves traffic flows by crossing the entering and exiting roadways of Presidential Boulevard. The point of crossing would be configured by a grade separation of the two roadways allowing for free flow in both directions. The east bound frontage road will be elevated over Presidential Boulevard.</p> <p>Extension of Spirit of Texas Drive to the north and Crozier lane to the west are proposed to create a loop for access to the north development area (north of SH 71). Cardinal Loop traffic will no longer be able to access Presidential Boulevard directly from Cardinal Loop, as a portion of the road will be made one-way only allowing northbound traffic from the SH 71 intersection. Vehicles needing to access Presidential Boulevard will be required to circulate in a clockwise direction and turn right onto the westbound frontage road from the eastern roadway. Traffic will also be able to take the U-Turn to travel east or continue straight to access westbound SH 71. Also, with the extensions of Spirit of Texas Drive and Crozier lane, access to Spirit of Texas Drive and the new North Terminal area will be possible from Cardinal Loop.</p>	<p>TxDOT Off-Airport Businesses City of Del Valle Austin Transportation Department Austin Fire Department &amp; EMS</p>	<p>1. One-way clockwise traffic flow on Cardinal Loop 2. Land acquisition north of SH 71</p>	<p>CATEX</p>	<p>Yes</p>
<p><b><u>New Taxiway Delta</u></b> – A new full-length Taxiway Delta is proposed to be located 550 feet east of the existing Runway 17R-35L centerline that meets ADG-VI standards. This new taxiway will be undertaken in place of rehabbing existing Taxiway Charlie as a means of providing additional Runway 17R-35L efficiency and aircraft taxi flexibility. The location of new Taxiway Delta is in accordance with the standard FAA airport design, where existing Taxiway Charlie is a non-standard layout. The location of new Taxiway Delta will allow construction of a new closely spaced Runway 17C-35C in the future.</p>	<p>FAA</p>	<p>1. Relocate two wind cones 2. Periodic closure of Runway 17R-35L</p>	<p>CATEX</p>	<p>Yes</p>
<p><b><u>Runway 17R-35L Rapid Exit Taxiways</u></b> – It is proposed to construct two rapid exit taxiways (RETs) in each direction on existing Runway 17R-35L. In addition, various 90-degree exit taxiways will be constructed in each direction. A combination of these RETs and 90-degree exits will help to reduce the average runway occupancy time (ROT) from 58.5 seconds to less than 50 seconds and increase runway capacity. This will allow for 2.5 nautical miles separation between aircraft established on the final approach course within 10 nautical miles of the landing runway. The leading aircraft's weight class must be the same or less than the trailing aircraft.</p>	<p>FAA</p>	<p>1. Periodic closure of Runway 17R-35L</p>	<p>CATEX</p>	<p>Yes</p>
<p><b><u>General Aviation Expansion</u></b> – The following General Aviation (GA) expansion will be needed to meet the projected PAL 4 demand:</p> <ul style="list-style-type: none"><li>• 56,000 sq. ft. of additional hangar space</li><li>• Hangar space for larger corporate/business jet aircraft</li><li>• 94,000 sq. ft. of additional aircraft apron</li><li>• Additional auto parking spaces</li><li>• 1,000 sq. ft. of additional ground support equipment maintenance area</li><li>• 4,600 sq. ft. of U.S. Customs and Border Protection (USCBP) space</li></ul>	<p>FAA Atlantic Aviation Signature Flight Support Million Air</p>	<p>1. On-site ground water retention</p>	<p>CATEX</p>	<p>No</p>
<p><b><u>Catering Facility Expansion</u></b> – The current catering facility serves 1,500 to 3,000 meals per day in approximately 65,000 sq. ft. of building space. The proposed catering expansion requirements can be contained within the existing lease area. The following will be required to meet future demand:</p> <ul style="list-style-type: none"><li>• 9,000 sq. ft. of additional building space by PAL 3 to serve approximately 4,100 meals</li><li>• 38,000 sq. ft. of area by PAL 4 to serve approximately 6,000 meals</li></ul> <p>A second work shift can be implemented, along with a second level to the catering building to provide the needed capacity.</p>	<p>LSG Sky Chefs</p>	<p>1. Reconfiguration of the lease area</p>	<p>CATEX</p>	<p>No</p>

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PROJECT DESCRIPTION	AGENCY COORDINATION	ENABLING PROJECTS	NEPA ACTION	AIP ELIGIBILITY
<p><b><u>Central Utility Plant (CUP)</u></b> – The anticipated chilled water and heating hot water loads for future airport expansions will require an increase to the existing CUP capacity. The existing north CUP and Cooling Tower will remain in place and will be inter-connected with a proposed new expansion to provide base loading of the existing facilities, in addition to the proposed future terminal at the initial stage of the airport expansion. A new cooling tower will be included in the expansion. These facilities will be located on the north side of the entrance driveway to the existing CUP.</p> <p>A new CUP is proposed to be located on the south side of the airport near the DOA Maintenance complex (#8220). Expansion of the airport beyond 2037 will be in the south direction and will require a new CUP to accommodate the additional facility heating and cooling loads. This south CUP will also provide backup to the existing north CUP in the case of emergency.</p>	Austin Energy	<ol style="list-style-type: none"><li>1. Vacate construction staging area along Service Ave.</li><li>2. Demolition of DOA Maintenance Complex (#8220)</li></ol>	CATEX	No
<p><b><u>New South Airport Firefighting (ARFF) Station</u></b> – The existing ARFF station is currently certified as Classification I, Index D. The larger aircraft forecast to be operating at ABIA in the future will require an upgrade of the ARFF certification to Index E. The existing ARFF station is scheduled to be relocated in the PAL 2 timeframe to a site south of the new midfield taxiway. This new station location will be in compliance with the FAR Part 139 three-minute response time to the existing and future runways at ABIA. The new ARFF station will be sized to comply with Index E equipment, with a minimum of 20,000 sq. ft. of building space.</p>	FAA Austin Fire Department	<ol style="list-style-type: none"><li>1. Demolition of old Texas National Guard facilities (#8225)</li><li>2. Demolition of DOA Maintenance Parking Canopy (#8247)</li></ol>	CATEX	Yes
<p><b><u>Midfield Taxiway</u></b> – A new ADG-V midfield taxiway is proposed to connect the east and west side of the airport. This taxiway will be located south of the existing South Terminal and connect to Taxiways Bravo and Charlie. This will provide a second crossfield taxiway for the transition of aircraft from each side of the airport to the runway system.</p>	FAA	<ol style="list-style-type: none"><li>1. Demolition of old Texas National Guard facilities (#8195)</li><li>2. Demolition of DOA Maintenance Complex (#8220)</li><li>3. Demolition of DOA Maintenance Parking Canopy (#8247)</li></ol>	CATEX	Yes
<p><b><u>North Cargo Expansion</u></b> – The existing north cargo area can accommodate the anticipated PAL 4 base case cargo forecast demand. The additional capacity can be accommodated by converting the existing cargo buildings that are not being used for cargo activity (#6029 and #6040). These two buildings have a total area of 46,080 sq. ft. In addition, building #6040 can be expanded to the west by approximately 212,000 sq. ft. The eastern portion of the cargo aircraft ramp can be reclaimed (currently used for overflow auto parking) as cargo demand increases.</p>	Cargo Operators	<ol style="list-style-type: none"><li>1. Relocate overflow public auto parking</li><li>2. Vacate non-cargo tenants</li></ol>	CATEX	No
<p><b><u>New Southwest Cargo Complex</u></b> – The introduction of e-commerce at ABIA will require development of additional cargo facilities that cannot be accommodated in the existing north cargo complex. A large cargo distribution center will drive the need for an extensive expansion of the all-cargo facilities around the PAL 3 timeframe, or about 540,000 tonnes of cargo. This cargo distribution center is proposed to be located on the southwest side of the airport and will require approximately 167 acres of land.</p>	Cargo Operators	<ol style="list-style-type: none"><li>1. Relocate Remote Transmitter/Receiver (RTR)-2</li><li>2. Relocate ASOS</li><li>3. Relocate airside service roadway and security fence</li><li>4. Land-fill of drainage channel</li><li>5. Land acquisition (126 acres) west of US 183 for west side development flood control</li></ol>	EA/CATEX	No
<p><b><u>Relocated Belly Freight Facility</u></b> – Future belly cargo requirements indicates that additional belly freight facilities will be needed around the PAL 3 timeframe, or about 25,500 tonnes of belly cargo. This will require a double in size of the existing facility to approximately 8 acres in size. This will require a relocation of this facility due to site constraints, and is proposed to be relocated to the north in the current rental car storage area. In addition, construction of the new Runway 17C-35C and parallel taxiway will require relocation of the belly freight facility.</p>	Cargo Operators Airlines	<ol style="list-style-type: none"><li>1. Relocate rental car storage area</li></ol>	CATEX	No



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PROJECT DESCRIPTION	AGENCY COORDINATION	ENABLING PROJECTS	NEPA ACTION	AIP ELIGIBILITY
<p><b><u>New Fuel Farm and Pipeline</u></b> – An additional 2.3 million nominal gallons of Jet-A aircraft fuel storage will be required by the PAL 4 (2037) timeframe. The current Airline Consortium has proposed an expansion of the existing fuel farm area or a new fuel farm facility can be developed on the west side of the airport. Construction of the new Runway 17C-35C and east parallel taxiway will require relocation of the existing fuel farm facility. It is recommended that all new aircraft gates and cargo aircraft positions be equipped with a hydrant fueling system. Also, the existing BJT gates will be upgraded with a hydrant fueling system. It is also recommended to provide a continuous feed of fuel from the Flint Hills Bastrop Terminal that has 8.2 million gallons of nominal Jet-A storage capacity.</p>	Fuel Consortium FAA Land Owners	1. Relocate airside security roadway 2. Relocate security fence 3. Relocate Perimeter Road facility (#13005)	EA	No
<p><b><u>New Aircraft Maintenance Facility</u></b> – Three aircraft maintenance development sites are provided on the east side of Runway 17L-35R. The PAL 3 (2027) development site provides the following facilities:</p> <ul style="list-style-type: none"><li>• 142,967 sq. ft. of narrow-body aircraft hangar space</li><li>• 330,766 sq. ft. of wide-body aircraft hangar space</li><li>• 261,400 sq. ft. of shop/storage building space</li><li>• 80,153 sq. ft. of ground service equipment storage space</li><li>• 220,736 sq. ft. of auto parking space</li><li>• 190,000 sq. ft. of truck dock space</li></ul> <p>Two additional expansion areas are provided on the north and south sides of the TxDOT Aviation Services facility. A dedicated ADG-V taxiway will be provided for access to these aircraft maintenance facility areas.</p>	FAA Airlines	1. New ADG-V parallel taxiway 2. Relocate Golf Course Road 3. Potential ASR-9 signal shielding	EA	No
<p><b><u>New Central Warehouse and Cross Dock Facility</u></b> – This facility is proposed to be located on the east side of Golf Course Road, along the eastern airport property boundary. The following facility requirements are needed in the PAL 1 timeframe:</p> <ul style="list-style-type: none"><li>• Each existing concessionaire will need approximately 17,000 sq. ft. for their operations. This includes storage space and kitchens.</li><li>• Approximately 4,000 sq. ft. for cross-dock operation.</li><li>• Approximately 5,000 sq. ft. for other space (restrooms and break rooms).</li><li>• Approximately 7,000 sq. ft. for a third concessionaire for operational expansion of the existing concessionaire.</li></ul> <p>This site can accommodate a 50,000 sq. ft. facility with the potential to expand to 75,000 sq. ft.</p>	FAA Concessionaires	1. Relocate access roadway to the Golf Course Irrigation Control – PARDS (#2060) and Golf Course Maintenance Facility – PARDS (#2065)	CATEX	No
<p><b><u>New Consolidated Maintenance and Police Facility</u></b> – This facility is proposed to be located on the east side of Golf Course Road, northeast of the Runway 17L end. This facility will be 13.42 acres in size and house the following facilities:</p> <ul style="list-style-type: none"><li>• Maintenance Operations</li><li>• Motor Pool</li><li>• Warehouse Storage</li><li>• Truck Wash</li><li>• Recycling</li><li>• Spoil Bins</li><li>• Airport Police Department</li></ul> <p>Also, the deicing material storage facility is 0.84 acres in size and will be located immediately north of the existing TxDOT Aviation facility. This facility will be able to accommodate the 2037 demand without requiring additional expansion.</p>	FAA Police Department	1. Relocate Golf Course Road 2. Relocate drainage channel	CATEX	No



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PROJECT DESCRIPTION	AGENCY COORDINATION	ENABLING PROJECTS	NEPA ACTION	AIP ELIGIBILITY
<p><b><u>Relocated Ground Service Equipment Maintenance (GSEM) Facility</u></b> – The existing GSEM facility will require minor expansion during the PAL 1 and PAL 2 timeframes. This expansion can be accommodated within the existing GSEM lease area. However, to meet the PAL 3 and PAL 4 demand, the GSEM facility will need to be relocated due to the limited expansion space of the existing site. The proposed relocated GSEM facility will be located in the area currently occupied by the rental car storage area and will include the following facilities:</p> <ul style="list-style-type: none"><li>• 27,500 sq. ft. of building</li><li>• 107,000 sq. ft. of area for auto parking and truck docks</li><li>• 6.0 acre total site area</li></ul>	<p>GSEM Tenants FAA Rental Car Tenants</p>	<p>1. Relocate rental car storage area</p>	<p>CATEX</p>	<p>No</p>
<p><b><u>Public and Employee Parking</u></b> – It is anticipated that public and employee parking demand will continue to grow at the same average annual passenger growth rate of 4.5%. By PAL 4 (2037), the following demand for parking spaces will be required:</p> <ul style="list-style-type: none"><li>• 6,519 spaces for On-Site Public (Short-Term)</li><li>• 16,560 spaces for On-Site Public (Long-Term)</li><li>• 1,116 spaces for On-Site Public (Valet)</li><li>• 3,304 spaces for On-Site Employee</li><li>• 22,040 spaces for Off-Site Public</li><li>• 6,474 spaces for the CONRAC</li></ul> <p>The public auto parking requirements can be accommodated in the existing employee parking Lot J and with the construction of new parking garages in the Lot B and C areas. The employee parking will be relocated to the north side of SH 71.</p>	<p>Parking Operators Tenants Utilizing Lots</p>	<p>1. Relocate employee parking north of SH 71</p>	<p>EA</p>	<p>No</p>
<p><b><u>Personal Rapid Transit (PRT) System</u></b> – A PRT system is proposed to provide transportation for passengers and employees from the remote parking and GTC facility to the New North Terminal. In addition, the PRT line is proposed to connect between the New North Terminal and Midfield Concourse for passenger access to the gate areas.</p>	<p>Tenants Airlines Hotel Operators Regional Transportation Authorities</p>	<p>1. Incorporate into the New North Terminal and Midfield Concourse design</p>	<p>CATEX</p>	<p>No</p>
<p><b><u>New Ground Transportation Center (GTC)</u></b> – A long-term GTC is proposed to be located south of SH 71 at the current location of the Park &amp; Zoom Scott Parking facility. The location of the GTC will connect into a proposed High Capacity Transit line serving ABIA from Riverside Drive. Various alignments are being studied through the Capital Metro’s Project Connect process.</p>	<p>FAA TxDOT Capital Metro</p>	<p>1. Demolition of the Park &amp; Zoom facility 2. Tunnel construction</p>	<p>EA</p>	<p>Yes</p>
<p><b><u>New West Runway 17C-35C</u></b> – A future 10,000-foot long west Runway 17C-35C is located 1,200 feet east of existing Runway 17R-35L. This new runway will have various rapid exit taxiways and a full length parallel taxiway 500 feet to the east. In addition, an end-around taxiway will be located off the Runway 35L threshold to provide unrestricted taxiing for ADG-III aircraft. The need for this new runway is based on two factors: 1) the need to meet long-term airfield capacity beyond 2040 or, 2) the need to maintain existing airfield capacity if one of the existing runway is closed for an extended period for maintenance.</p>	<p>US Army Reserve FAA Airport Tenants The Parking Spot</p>	<p>1. US Army Reserve facility relocation 2. The Parking Spot property acquisition 3. Fuel Farm relocation 4. Belly Freight relocation 5. GSEM relocation 6. ABIA Fuel Station relocation 7. Rental Car Storage relocation 8. Airside Service Road relocation 9. Relocation of 5 RON positions</p>	<p>EIS</p>	<p>Yes</p>

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PROJECT DESCRIPTION	AGENCY COORDINATION	ENABLING PROJECTS	NEPA ACTION	AIP ELIGIBILITY
<b><u>Relocated SH 71</u></b> – Long-term project is the relocation of SH 71 to the north between US 183 and Texas 130. The current alignment will be abandoned and become airport property. This will provide a contiguous land area to the north for future airport and commercial development.	TxDOT FAA City of Del Valle Land Owners CTRMA	1. Land acquisition (approx. 165 acres)	EIS	No
<b><u>Runway 17L-35R Extension</u></b> – Extension of the Runway 17L threshold to the north to help balance the runway usage by long-haul international aircraft and cargo aircraft operations. Further study is required to determine the potential runway extension length.	TxDOT FAA	1. Relocation of SH 71 2. Reconfiguration of airport entrance/exit roadways 3. Relocation of runway navigational aids and lighting system	EIS	Yes
<b><u>High Capacity Transit System</u></b> – The Master Plan shows two possible options for a high capacity transit line to ABIA. The Alternative 1 alignment runs parallel and south of SH 71, while the Alternative 2 alignment will traverse the existing Runway 17R approach area and south of the north cargo facility. Each alternative alignment will enter onto airport property at the intersection of E. Riverside Dr. and US 183. The transit line can terminate at the future Ground Transportation Center or at the front door of the new North Terminal.	Capital Metro Austin Transportation Department FAA	1. Land transfer to Capital Metro 2. Tunnel on airport property (Alt. 2)	EIS	No

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## 8.3 Construction Schedule

**Exhibit 8.3-1** presents a detailed construction schedule for the ABIA Master Plan and 5-Year CIP projects. Each airport project has been identified as a “NEW” Master Plan project or a 5-year CIP project with its corresponding reference number. Each project has been divided into two segments; design, engineering, procurement, and environmental approvals time; and construction and system testing time. The New Terminal Building and 20 gate remote Concourse are scheduled to be completed and operational by the end of 2025. Regardless of the identified need for improvement, the ability to fund the capital program will ultimately determine when the project is implemented.



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Exhibit 8.3-1: ABIA Master Plan Construction Schedule

Project Description			2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Airfield Projects																								
A-1	1246.001	Rwy. 17R-35L Rapid Exit Taxiways (incl. shoulders)																						
A-2	New	New Twy. Delta & Connectors (incl. shoulders)																						
A-3	New	New Taxiway Pavement (incl. shoulders)																						
A-4	New	South Crossfield Taxiway Bridge																						
A-5	New	Airside Access Road Pavement																						
A-6	7861.067	Security Fencing																						
A-7	New	Taxiway Lighting (edge, centerline, signage)																						
A-8	New	Navigational Aids																						
A-9	New	Airfield Pavement Demolition																						
A-10	7860.059	Existing Runway Keel Replacements																						
A-11	6000.120	Airfield Electrical and Pavement Improvements																						
A-12	7860.056	Aircraft Rescue and Firefighting 3 replacement w/Comm. Package																						
A-13	7860.040	Runway and Taxiway Restoration - Charlie																						
A-14	7860.060	Terminal Apron Trench Drain Repairs																						
Terminal Projects																								
T-1		Existing BJT Renovations																						
T-1.1	7719.072	West Infill-Temp Ground Load																						
T-1.2	7719.072	Interior Demo																						
T-1.3	New	Renovate Existing Terminal for Passenger Bridge																						
T-2	12460.006	New North Terminal Building																						
T-3	12460.005	New Midfield Concourse (Ph. 1 & 2)																						
T-4	12460.005	New Passenger Bridge to Concourse																						
T-5	12460.004	New Apron Area (Ph. 1 & 2)																						
T-6	3rd Party	New Apron Hydrant Fuel System (Ph. 1 & 2)																						
T-7	12460.005	New Midfield Concourse Loading Bridges (Ph. 1 & 2)																						
T-8	7860.054	New RON Apron Area (Ph. 1 & 2)																						
T-9	New	New Ramp Tower (Ph. 1)																						
T-10	12460.002	New Centralized Baggage Handling System (BHS)																						
T-11	New	Personal Rapid Transit System (Terminal/Concourse) (Ph. 1 & 2)																						
T-12	7719.068	Renovate Existing BJT Loading Bridges																						
T-13	3rd Party	BJT Hydrant Fuel System																						
T-14	7719.066	Chilled Water Valve Loop Replacement																						
T-15	7719.077	Elevator Refurbishments Rebid																						
T-16	5415.098	Restroom Completion																						
T-17	7719.075	Customs Escalator Refurbishment																						
T-18	7719.074	IT Hardware Upgrades																						

Source: Landrum & Brown analysis

Design/Engineering/Procurement/Environmental Approval

Construction/System Testing

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Exhibit 8.3-1: ABIA Master Plan Construction Schedule (continued 2 of 3)

Project Description			2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Landside Projects																								
L-1	12460.006	Demo Existing Parking Garage #1																						
L-2	12460.006	Demo Exist. Upper Terminal Roadway																						
L-3	New	Depressed Emma Browning Road																						
L-4	7861.089	New Employee Parking Lot (north of SH 71)																						
L-5	7861.076	Golf Gourse Road Realignment																						
L-6	7861.046	New Airport Entrance Roadway (Braided Left Turn)																						
L-7	7861.079	Upgrade Existing Access Roadway Network																						
	7861.046																							
	7861.091																							
L-8	New	New North Terminal Curbside Roadway w/ Vertical Circulation																						
L-9	New	PRT System in Parking Lots (track, station & pods)																						
L-10	7861.088	Ground Transportation Center (South of SR 71)																						
L-11	New	PRT System to New GTC (track, station & pods)																						
L-12	New	New Parking Garage #2																						
L-13	7861.085	Autonomous Shuttle																						
L-14	7861.064	Airport Landscaping & Irrigation Improvements																						
L-15	7861.090	Lot J Covered Parking																						
Support Facility Projects																								
S-1	3rd Party	Existing New North Cargo Buildings/Apron Expansion																						
S-2	3rd Party	New Southwest Cargo Complex																						
S-3	3rd Party	New West Fuel Farm																						
S-4	3rd Party	Fuel Pipeline from Flint Hills Bastrop Terminal																						
S-5	3rd Party	Relocated Ground Service Equipment Maintenance																						
S-6	3rd Party	LSG Sky Chefs Expansion																						
S-7	New	New South ARFF Station																						
S-8	3rd Party	Relocated Belly Freight Facility																						
S-9	3rd Party	New Aircraft Maintenance Facility																						
S-10	3rd Party	Atlantic Aviation & Signature Flight Services Expansion																						
S-11	3rd Party	Million Air Facility																						
S-12	3rd Party	New Aerial Firefighting Facility																						
S-13	6001.117	Consolidated Maintenance Facility																						
S-14	6001.114	Renovate Learning Resource Center for Aviation Office Space																						
S-15	6001.128	Planning and Engineering HVAC and Office Space																						
S-16	7861.077	Maintenance Facility Storage Bldg. w/ Airside Access																						

Source: Landrum & Brown analysis

Design/Engineering/Procurement/Environmental Approval

Construction/System Testing

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Exhibit 8.3-1: ABIA Master Plan Construction Schedule (continued 3 of 3)

Project Description			2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Miscellaneous Projects																								
M-1	New	Relocate Public Viewing Area																						
M-2	7861.083 7861.047	Demo South Buildings																						
M-3	New	Land Acquisition (west of US 183)																						
Utility Projects																								
U-1	7861.082	South Campus Storm Water Improvements																						
U-2	12460.003	Upgrade Utility Infrastructure																						
U-3	12460.003	Water & Electric Power																						
U-4	12460.003	New South Central Utility Plant (CUP)																						
U-5	7861.093	Upgrade Existing Central Utility Plant (CUP)																						
U-6	6001.104	New South IT Building/Lines																						
U-7	12460.003	New South Sub-Station																						
U-8	12460.003	Relocated Airfield Lighting Vault (East																						
U-9	12460.003	Relocated Airfield Lighting Vault (West)																						
U-10	12460.003	Utility Tunnel (between remote concourse & BJT)																						
U-11	7861.078	Stormwater Improvements and Modeling																						
U-12	7861.084	Hotel Pond Repairs																						
U-13	7861.062	Environmental and Sustainability Management																						
U-14	7861.080	Stormwater Improvements FY2021																						

Source: Landrum & Brown analysis

Design/Engineering/Procurement/Environmental Approval

Construction/System Testing



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## 8.4 Construction Costs

A summary of the order-of-magnitude construction cost estimate for each phase of development is provided in **Table 8.4-1**. These costs have been divided into two categories; ABIA costs and 3<sup>rd</sup> Party costs. All costs are in 2018 dollars and have not been inflated to reflect timing of the anticipated construction year. Chapter 9, *Financial Plan*, will make inflationary adjustments to the costs to reflect their anticipated construction timeframe.

A detailed cost estimate for each development project is provided in **Appendix 8.1**. These costs include the following soft costs:

- 10% Architect and Engineering Services
- 4.6% Management
- 0.75% Surveying
- 0.75% Testing
- 1.05% Inspections
- 0.55% Miscellaneous Fees (Permits)
- Equipment / Furnishing (Terminal/Concourse only)
  - 10% Furniture
  - 12% Equipment
  - 1% Data & Voice
  - 10% Audio/Visual
  - 12% Security

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Table 8.4-1: ABIA Summary Construction Costs

ITEM DESCRIPTION	PHASE 1		PHASE 2		PHASE 3		PHASE 4		TOTAL COSTS	
	ABIA	3RD PARTY	ABIA	3RD PARTY	ABIA	3RD PARTY	ABIA	3RD PARTY	ABIA	3RD PARTY
Airfield Projects	\$ 365,980,816	\$ -	\$ 34,978,488	\$ -	\$ 39,841,748	\$ -	\$ 7,500,000	\$ -	\$ 448,301,052	\$ -
Terminal Projects	\$ 1,810,160,889	\$ 35,000,000	\$ 55,764,000	\$ -	\$ 772,004,556	\$ 21,000,000	\$ -	\$ -	\$ 2,637,929,444	\$ 56,000,000
Landside Projects	\$ 55,880,041	\$ -	\$ 46,097,727	\$ -	\$ 150,000,000	\$ -	\$ 43,881,818	\$ -	\$ 295,859,587	\$ -
Support Facility Projects	\$ 84,158,795	\$ 73,499,789	\$ 10,182,242	\$ 147,172,075	\$ -	\$ 223,617,855	\$ -	\$ 467,758,395	\$ 94,341,037	\$ 912,048,114
Miscellaneous Facility Projects	\$ 3,240,000	\$ -	\$ -	\$ -	\$ 3,351,200	\$ -	\$ -	\$ -	\$ 6,591,200	\$ -
Utility Projects	\$ 199,120,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 199,120,000	\$ -
Hard Costs	\$ 2,518,540,541	\$ 108,499,789	\$ 147,022,458	\$ 147,172,075	\$ 965,197,504	\$ 244,617,855	\$ 51,381,818	\$ 467,758,395	\$ 3,682,142,321	\$ 968,048,114
Soft Costs	\$ 1,139,954,376	\$ 19,204,463	\$ 26,022,975	\$ 26,049,457	\$ 491,847,008	\$ 43,297,360	\$ 9,094,582	\$ 82,793,236	\$ 1,666,918,941	\$ 171,344,516
TOTAL PROJECT COSTS	\$ 3,658,494,917	\$ 127,704,252	\$ 173,045,433	\$ 173,221,532	\$ 1,457,044,512	\$ 287,915,215	\$ 60,476,400	\$ 550,551,631	\$ 5,349,061,262	\$ 1,139,392,630

Notes: Costs are in 2018 dollars  
Source: Landrum & Brown analysis



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## 8.5 Environmental Action Plan

This section provides recommendations for the anticipated level of environmental documentation that would be required prior to implementation of the development actions identified in the ABIA Master Plan and as part of the ABIA Capital Improvement Program. **Table 8.5-1** includes Master Plan and 5-Year CIP projects that would occur within the 2019 to 2025 timeframe. For each of these actions, the anticipated level of documentation required for compliance with the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321 et seq.) is identified based on the guidelines provided in Federal Aviation Administration (FAA) Order 1050.1F, Environmental Impacts: Policies and Procedures (effective July 16, 2015).

In addition to the guidelines outlined in FAA Order 1050.1F, the anticipated levels of NEPA documentation listed in Table 8.5-1 are based on the environmental constraints discussed in this Master Plan as well as the level of documentation typically required for similar actions per coordination with ABIA. This section provides recommendations of what is anticipated to be required by the FAA for NEPA compliance; however, NEPA documentation requirements and approvals will ultimately be determined at the FAA's discretion. Documentation efforts required for NEPA compliance will be undertaken as funding and design plans are available for each project.

Per FAA Order 1050.1F, there are three levels of NEPA documentation that could be required for a proposed action. These include:

- **Categorical Exclusion (CATEX):** This category typically includes actions that FAA has found do not individually, or cumulatively have a significant effect on the human environment. The responsible FAA official must determine whether a proposed action is within the scope of a CATEX, but if the FAA official determines that extraordinary circumstances exist, an EA or EIS must be prepared. A CATEX should not be used for segmentation or an interdependent part of a larger proposed action. Actions that fall within the CATEX category can include, but are not limited to the following:
  - o administrative or general actions;
  - o issuance of certificates or compliance with certification programs;
  - o actions involving installation, repair, or upgrade of equipment or instruments necessary for operations and safety;
  - o acquisition, repair, replacement, maintenance, or upgrading of grounds infrastructure, buildings, structures, or facilities that are generally minor in nature;
  - o procedural actions related to airspace and air traffic; and,
  - o actions involving establishment of, compliance with, or exemptions to regulatory programs or requirements.

**Table 8.5-1: Anticipated NEPA Action**

#	PROJECT DESCRIPTION	PROJECT INITIATION (DESIGN START DATE)	ANTICIPATED LEVEL OF NEPA DOCUMENTATION	ENVIRONMENTAL COORDINATION CONSIDERATIONS
<b>MASTER PLAN PROJECTS</b>				
1	New North Terminal Building	4/2019	CATEX	<ul style="list-style-type: none"> <li>Recommended to combine with Action #2</li> <li>Located in previously developed area</li> </ul>
2	Demo of Existing Parking Garage #1	4/2019	CATEX	<ul style="list-style-type: none"> <li>Recommended to combine with Action #1</li> <li>Located in previously developed area</li> </ul>
3	New Midfield Concourse Contact Gates	4/2019	EA	<ul style="list-style-type: none"> <li>Recommended to combine with Action #4 and Action #6</li> <li>Located in previously developed area</li> </ul>
4	New Apron Area	4/2019	EA	<ul style="list-style-type: none"> <li>Recommended to combine with Action #3 and Action #6</li> <li>Located in previously developed area</li> </ul>
5	New RON Apron Area	1/2021	CATEX	<ul style="list-style-type: none"> <li>Located in previously developed area</li> </ul>
6	New Midfield Concourse Hydrant Fueling System	4/2019	EA	<ul style="list-style-type: none"> <li>Recommended to combine with Action #3 and Action #4</li> <li>Located in previously developed area</li> </ul>
7	New Passenger Bridge to Midfield Concourse	4/2019	None	<ul style="list-style-type: none"> <li>No documentation anticipated; no impacts to surrounding environment if entirely elevated</li> </ul>
8	Personal Rapid Transit System (PRT)	1/2020	CATEX	<ul style="list-style-type: none"> <li>Assumes system would be overhead and not at ground level</li> <li>Potential need for coordination with other agencies based on connection to other transportation systems</li> </ul>

#	PROJECT DESCRIPTION	PROJECT INITIATION (DESIGN START DATE)	ANTICIPATED LEVEL OF NEPA DOCUMENTATION	ENVIRONMENTAL COORDINATION CONSIDERATIONS
9	New North Terminal Parking and Roadway Network	4/2019	CATEX	<ul style="list-style-type: none"> <li>Exact location of impacts currently unknown</li> <li>Coordination with other agencies may be required (including Texas Department of Transportation [TxDOT])</li> </ul>
10	New Airport Entrance Roadway Intersection with SH 71 (Braided Left Turn)	4/2019	EA	<ul style="list-style-type: none"> <li>Full extent of potential right of way currently unknown</li> <li>Coordination with other agencies may be required (including TxDOT, USACE based on impacts to potential wetlands)</li> </ul>
11	New Full-Length Taxiway Delta (550' separation) to Runway 17R-35L	4/2019	CATEX	<ul style="list-style-type: none"> <li>Located in previously developed area</li> <li>Located in proximity to Solid Waste Management Unit (SWMU) 2 (prohibition of use of soils; no further action required)</li> </ul>
12	Runway 17R-35L Rapid Exit Taxiway	4/2019	CATEX	<ul style="list-style-type: none"> <li>Located in previously developed area</li> <li>Located in proximity to SWMU 2 at northern end of Runway 17R-35L (prohibition of use of soils; no further action required)</li> </ul>
13	Existing North Cargo Building/Apron Expansion (3 <sup>rd</sup> party development)	1/2024	CATEX	<ul style="list-style-type: none"> <li>Located in previously developed area</li> <li>Located in proximity to potential wetlands in northern portion of ABIA property</li> </ul>
14	Existing of Existing Catering Facility (3 <sup>rd</sup> party development)	1/2030	CATEX	<ul style="list-style-type: none"> <li>Located in previously developed area</li> </ul>
15	Existing Signature and Atlantic Aviation Hangar, Apron and Auto Parking expansion (3 <sup>rd</sup> party development)	1/2020	CATEX	<ul style="list-style-type: none"> <li>Located in previously developed area</li> <li>Located in proximity to 100-year floodplain and potential wetlands in southern portion of ABIA property</li> </ul>
16	Existing ARFF building expansion	4/2019	CATEX	<ul style="list-style-type: none"> <li>Located in previously developed area</li> </ul>



#	PROJECT DESCRIPTION	PROJECT INITIATION (DESIGN START DATE)	ANTICIPATED LEVEL OF NEPA DOCUMENTATION	ENVIRONMENTAL COORDINATION CONSIDERATIONS
17	New South ARFF Station	1/2022	CATEX	<ul style="list-style-type: none"> <li>Located primarily in previously undeveloped area</li> <li>Located in proximity to 100-year floodplain and potential wetland in southwestern portion of ABIA property</li> </ul>
18	Relocate Belly Freight Facility (3 <sup>rd</sup> party development)	1/2025	CATEX	<ul style="list-style-type: none"> <li>Located in previously developed area</li> </ul>
19	Relocated Ground Service Equipment Maintenance (GSEM) Facility (3 <sup>rd</sup> party development)	1/2025	CATEX	<ul style="list-style-type: none"> <li>Located in previously developed area</li> </ul>
20	New West Fuel Farm (3 <sup>rd</sup> party development)	1/2027	EA	<ul style="list-style-type: none"> <li>Located in previously developed area</li> <li>In proximity to 100-year floodplain and potential wetlands in southwestern portion of ABIA property</li> </ul>
21	New Fuel Pipeline from Flint Hills Bastrop Terminal to New Fuel Farm (west side)	1/2025	EA	<ul style="list-style-type: none"> <li>Recommended to combine with Action #20</li> <li>Located in both previously developed and undeveloped areas</li> <li>Partially within 100-year floodplain and potential wetlands in southwestern portion of ABIA property</li> </ul>
22	New South Central Utility Plant (CUP)	1/2020	CATEX	<ul style="list-style-type: none"> <li>Located in previously undeveloped area</li> <li>Located in proximity to stream and potential wetlands in southern portion of ABIA property</li> </ul>
23	Water Runoff Mitigation (each project)	Variable	Unknown	<ul style="list-style-type: none"> <li>Extent of action currently unknown</li> </ul>
<b>5-YEAR CIP PROJECTS</b>				
24	Stormwater Improvements and Modeling	1/2020	Unknown	<ul style="list-style-type: none"> <li>Extent of action currently unknown</li> </ul>
25	Building Demolition Fiscal year (FY)19	1/2020	CATEX	<ul style="list-style-type: none"> <li>Extent of action currently unknown</li> <li>Asbestos containing material (ACM) must be abated prior to submittal to FAA</li> </ul>

#	PROJECT DESCRIPTION	PROJECT INITIATION (DESIGN START DATE)	ANTICIPATED LEVEL OF NEPA DOCUMENTATION	ENVIRONMENTAL COORDINATION CONSIDERATIONS
26	New South Information Technology Building	1/2020	CATEX	<ul style="list-style-type: none"> <li>Located in previously undeveloped area</li> </ul>
27	New Central Warehouse and Cross Dock Facility Adjacent to Golf Course Road	4/2019	CATEX	<ul style="list-style-type: none"> <li>Located in previously undeveloped area</li> <li>Former golf course area; cultural resources surveys have been conducted and approved by State Historic Preservation Office (SHPO)</li> </ul>
28	New West Cargo Area	1/2030	CATEX/EA	<ul style="list-style-type: none"> <li>Located in previously undeveloped area</li> <li>Located within SWMU 216 (some surface and subsurface activities are limited and may require approval from the Texas Commission on Environmental Quality [TCEQ])</li> <li>Located in proximity to 100-year floodplain and potential wetland in southwestern portion of ABIA property</li> </ul>
29	Scott Parking Expansion	4/2019	CATEX	<ul style="list-style-type: none"> <li>Located in previously developed area</li> <li>Located in proximity to potential wetlands in northern portion of ABIA property</li> </ul>
30	Million Air Fixed Base Operator (FBO)	Complete	CATEX	<ul style="list-style-type: none"> <li>Located in previously undeveloped area</li> </ul>
31	New South Terminal & Midfield Concourse	4/2019	CATEX/EA	<ul style="list-style-type: none"> <li>Located in previously developed area</li> <li>Potential for noise impacts that could trigger an EA</li> </ul>

Note: \*USACE coordination could be triggered for any action that would impact potential wetlands and/or waters of the U.S.; however, further field verification and detailed design plans would be required to determine the full extent of potential coordination and permitting requirements.

- Environmental Assessment (EA):** The purpose of an EA is to determine whether an action has the potential to significantly affect the human environment. An EA provides sufficient evidence for determining whether a Finding of No Significant Impact (FONSI) or an Environmental Impact Statement (EIS) (discussed next) should be prepared. To determine the scope of an EA or an EIS, the responsible FAA official must consider whether actions are connected; whether, when viewed with other proposed actions, the action under consideration would have cumulatively significant impacts; and whether similar actions,

either in timing or geography, should be considered in the same environmental document. Actions that typically require an EA include, but are not limited to the following:

- o acquisition of land greater than three acres for construction of new office buildings and similar FAA facilities;
  - o establishment of FAA housing, sanitation systems, fuel storage and distribution systems, and power source and distribution systems;
  - o unconditional Airport Layout Plan (ALP) approval of, or federal financial participation in a new runway at an existing airport not located in a Metropolitan Statistical Area (MSA);
  - o runway strengthening having the potential to significantly increase off-airport noise impacts;
  - o construction or relocation of entrance or service road connections to public roads that substantially reduce the level of service rating to such public roads below the acceptable level determined by the appropriate transportation agency; and,
  - o land acquisition associated with these actions.
- Environmental Impact Statement: An EIS must be prepared for actions that would significantly affect the quality of the human environment. The considerations listed above regarding connected actions, cumulatively significant impacts, and actions that would be similar in timing or geography must also be taken into account when determining the scope of an EIS. Direct, indirect, and cumulative impacts must be considered when determining significance. Actions for which an EIS is typically required include but are not limited to the following:
  - o unconditional ALP approval, or federal financial participation in, the location of a new commercial service airport in an MSA; and,
  - o a new runway to accommodate air carrier aircraft at a commercial service airport in an MSA, and major runway extension.

For some environmental resource impact categories, the FAA has identified significance thresholds (including for air quality, federally threatened or endangered species, Section 4(f) resources, and noise and noise-compatible land uses). For other environmental resource impact categories, the FAA has identified factors to consider when determining whether an action would have a significant impact.

Table 8.5-1 lists the Master Plan and 5-Year CIP actions in the 2019 to 2025 timeframe; the anticipated level of NEPA documentation; and environmental and coordination considerations that could affect the overall level of effort associated with documentation of each anticipated action. Some actions could be documented in combination with other actions in a single environmental document based on their level of connectedness; these combined documentation recommendations are also included in Table 8.5-1.

## 8.6 Acronyms and Abbreviations

**Table 8.6-1: Acronyms and Abbreviations**

ACRONYMS AND ABBREVIATIONS	DESCRIPTION
ABIA	Austin-Bergstrom International Airport
ADG	Aircraft Design Group
AIP	Airport Improvement Program
ALP	Airport Layout Plan
ARFF	Airport Rescue and Firefighting
BJT	Barbara Jordan Terminal
CATEX	Categorical Exclusion
CIP	Capital Improvement Program
CONRAC	Consolidated Rental Car Facility Garage
CTRMA	Central Texas Regional Mobility Authority
CUP	Central Utility Plant
DOA	Department of Aviation
EA	Environmental Assessment
EIS	Environmental Impact Statement
FAA	Federal Aviation Administration
FBO	Fixed Base Operator
FONSI	Finding of No Significant Impact
FY	Fiscal Year
GA	General Aviation
GSEM	Ground Service Equipment Maintenance
GTC	Ground Transportation Center
MAP	Million Annual Passengers
MSA	Metropolitan Statistical Area
NEPA	National Environmental Policy Act
PAL	Planning Activity Levels
PRT	Personal Rapid Transit
RET(s)	Rapid Exit Taxiway(s)
RON	Remain Overnight Parking
ROT	Runway Occupancy Time
RPZ	Runway Protection Zone
RTR	Remote Transmitter / Receiver
SH 71	Texas State Highway 71
SWMU	Solid Waste Management Unit
TCEQ	Texas Commission on Environmental Quality
TxDOT	Texas Department of Transportation
USACE	U.S. Army Corps of Engineers
USCBP	U.S. Customs and Border Protection

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