CHAPTER 1
PURPOSE AND NEED

THIS PAGE INTENTIONALLY LEFT BLANK

1.1 INTRODUCTION

This Environmental Assessment (EA) identifies and evaluates potential environmental effects related to the proposed construction and operation of the Midfield Concourse and related improvements at Austin-Bergstrom International Airport (AUS or Airport).

The Federal Aviation Administration (FAA) is the lead federal agency to ensure compliance with the National Environmental Policy Act (NEPA) for airport development actions. This EA is prepared in accordance with NEPA, as amended, Council of Environmental Quality (CEQ) *Regulations for Implementing the Procedural Provisions of NEPA*, FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, 1050.1F Desk Reference, and FAA Order 5050.4B, *National Environmental Policy Act* (*NEPA) Implementing Instructions for Airport Actions*, applicable Executive Orders (EOs), and other applicable federal, state, and local requirements.

1.2 BACKGROUND INFORMATION

In 1991, the closure of Bergstrom Air Force Base was announced, and the City of Austin began actions to relocate aviation services from Robert Mueller Municipal Airport to the former Bergstrom Air Force Base. In May 1999, Austin-Bergstrom International Airport opened for passenger service and continues to serve the Central Texas region. When the Airport opened, a total of 25 aircraft gates were provided. In 2018, nine additional aircraft gates were added to the Airport for a total of 34 aircraft gates.

The Airport is owned and operated by the City of Austin. The Airport is located in the City of Austin, which is in Travis County, Texas. The Airport is the largest commercial service airport in Central Texas and serves residents and businesses throughout the region. **Exhibit 1-1** shows the location of the Airport.

In the National Plan of Integrated Airport Systems (NPIAS), the FAA classifies the Airport as a medium hub primary commercial service airport.[1]

1.2.1 Description of Existing Airport

The Airport covers about 4,242 acres and is located about five miles southeast of downtown Austin. The Airport is bounded by State Highway 71 (S.H. 71) to the

[1] FAA, 2021. Preliminary CY 2020 Enplanements at Commercial Service Airports, Rank Order. Accessed June 2021 at https://www.faa.gov/airports/planning_capacity/passenger_allcargo_stats/passenger/media/preliminary-cy20-commercial-service-enplanements.pdf.

north, Farm-to-Market Road 973 (F.M. 973) to the east, Burleson Road to the south, and U.S. 183 to the west. Primary access to the north side of the Airport is from S.H. 71 via Presidential Boulevard and Spirit of Texas Drive. Primary access to the south side of the Airport is from Burleson Road via Emma Browning Avenue.

1.2.2 Existing Runways and Passenger Terminal Building

1.2.2.1 Existing Runways

The Airport has two runways (see **Exhibit 1-2**). Runway 18L-36R is 9,000 feet long by 150 feet wide and Runway 18R-36L is 12,250 feet long by 150 feet wide.[2]

1.2.2.2 Existing Passenger Terminal Buildings

The Airport has two passenger terminal buildings (see **Exhibit 1-3**). The primary passenger terminal building at the Airport is called the Barbara Jordan Terminal (BJT) and is accessed from the north side of the Airport. The secondary passenger terminal is called the South Terminal and is accessed from the south side of the Airport.

The BJT (see **Exhibit 1-4**) is a four-level structure that provides facilities for passenger processing, inbound and outbound baggage, and 34 aircraft gates for passenger boarding and deboarding. Three of the 34 aircraft gates can accommodate wide body aircraft, 30 aircraft gates accommodate narrow body aircraft, and one aircraft gate accommodates commuter aircraft or busing activity.[3] Specific facilities within the BJT are identified in **Table 1-1**.

TABLE 1-1
BARBARA JORDAN TERMINAL FACILITIES

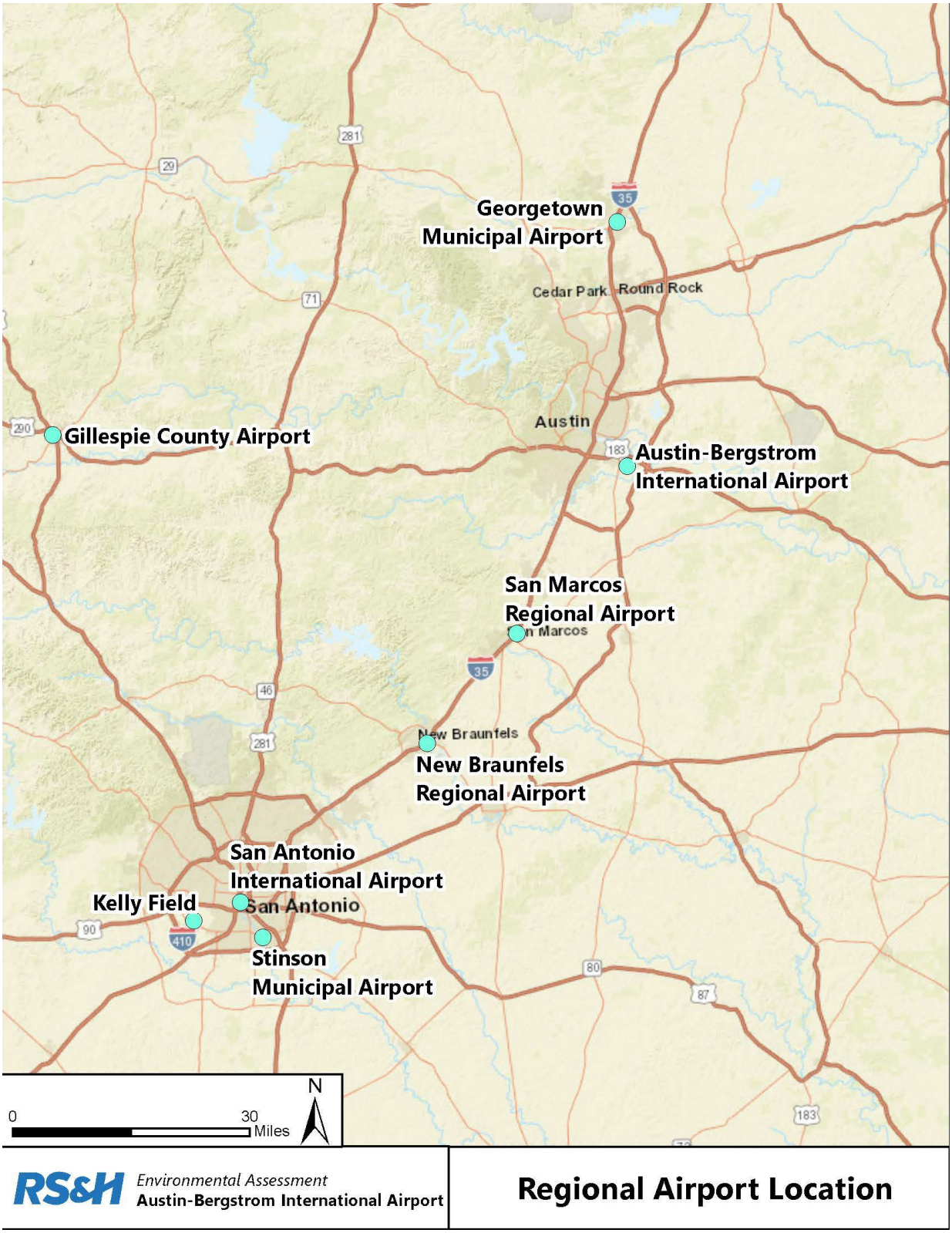
Terminal Component	Square Footage
Ticketing / Check-In	52,333
Passenger Security Screening	57,492
Aircraft Gate Holdrooms	187,815
Outbound Baggage	67,627
Inbound Baggage	75,401
U.S. Customs and Border	47,330
Concessions	75,292
Other Areas	401,590
TOTAL	964,800

Source: AUS, 2021.

[2] FAA. Aeronautical Informational Services, Austin-Bergstrom International Airport. Retrieved May 24, 2021, from FAA: https://nfdc.faa.gov/nfdcApps/services/ajv5/airportDisplay.jsp?airportId=AUS.

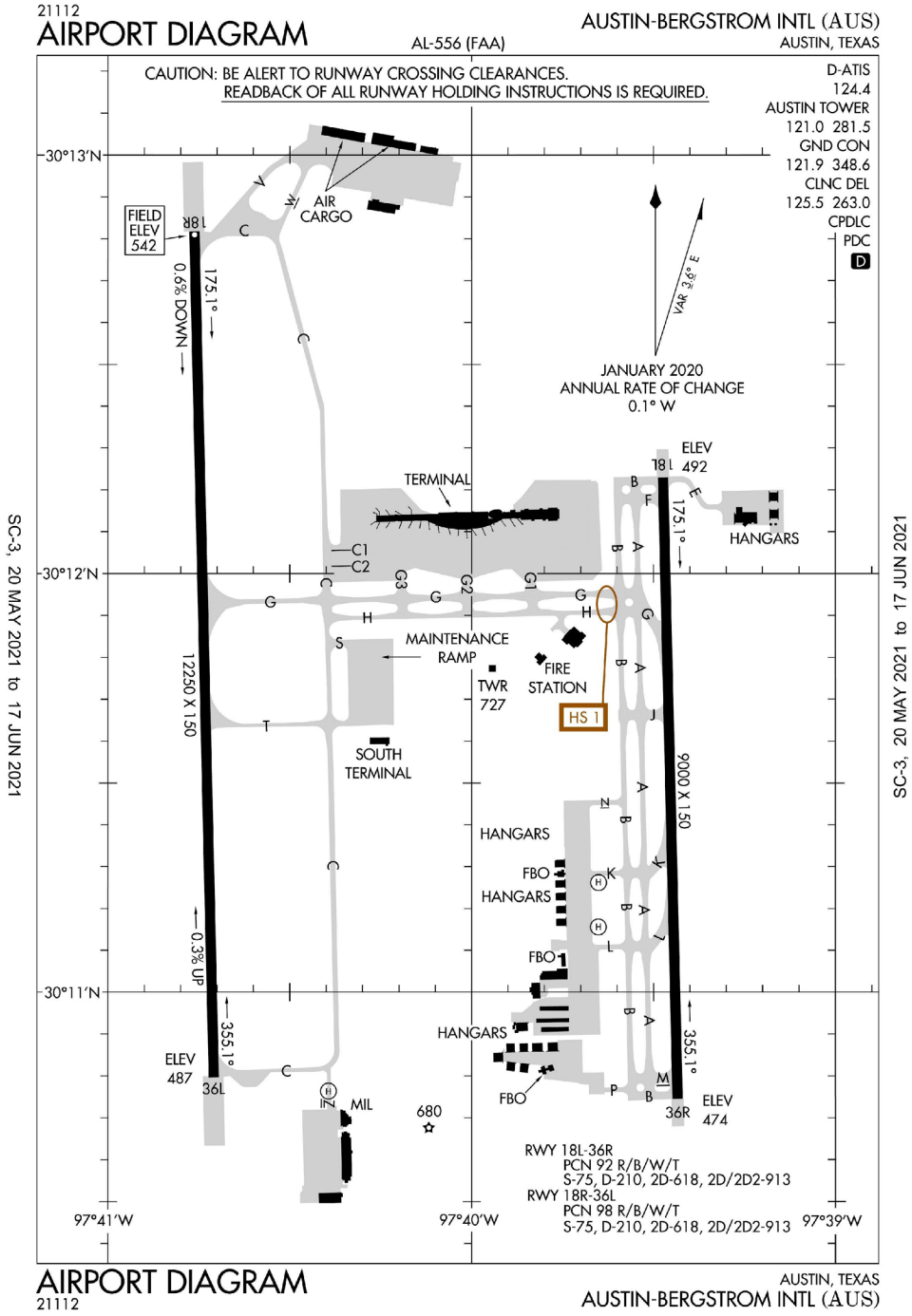
[3] A wide body aircraft is an aircraft usually configured with multiple aisles with more than 7-abreast seating in a cabin that is greater than 5 meters in width. A narrow-body aircraft or single-aisle aircraft is an aircraft with a single aisle with up to 6-abreast seating in a cabin that is less than 4 meters in width.

EXHIBIT 1-1
REGIONAL LOCATION OF AIRPORT



Source: RS&H, 2021.

EXHIBIT 1-2
FAA AIRPORT DIAGRAM

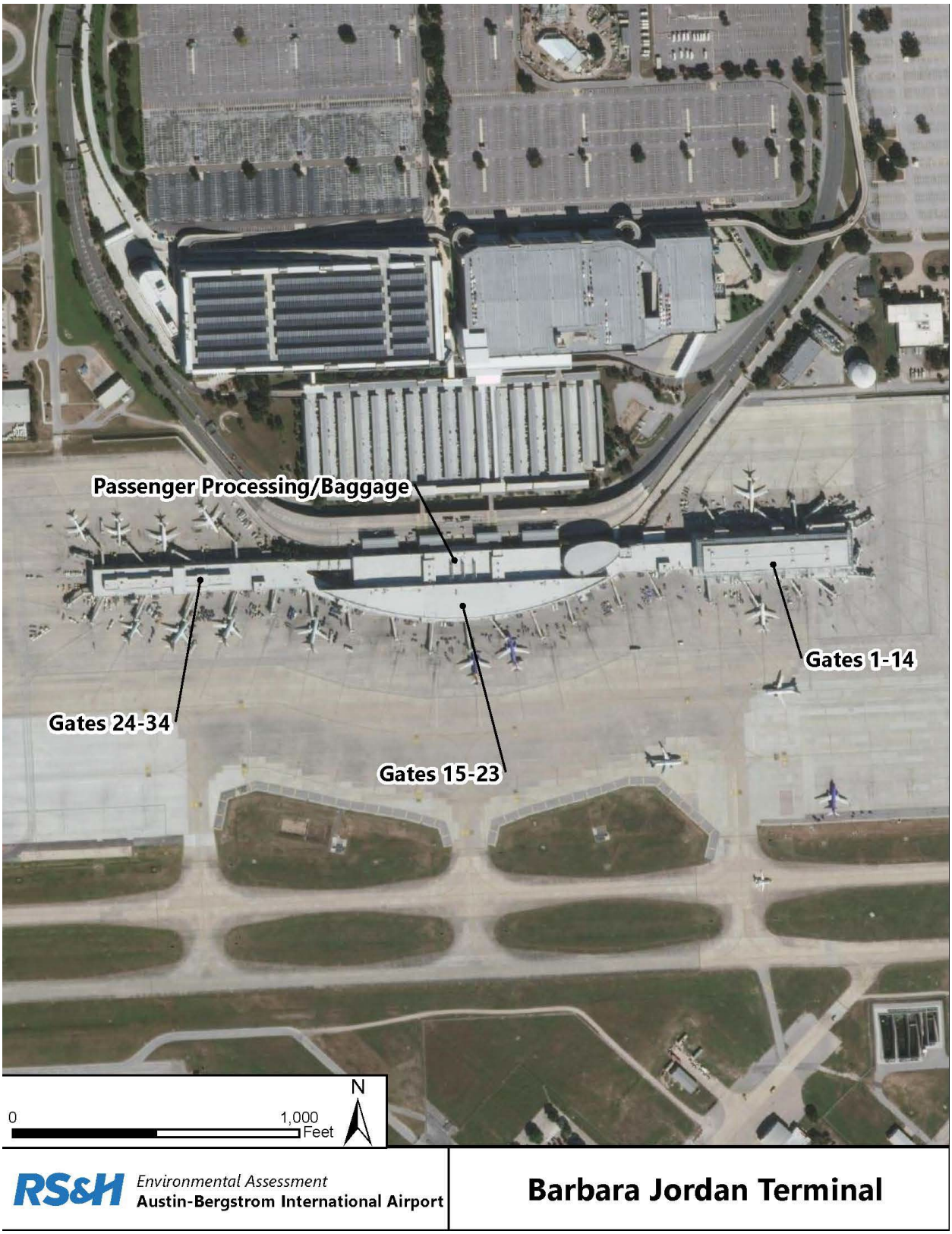


RS&H *Environmental Assessment*
Austin-Bergstrom International Airport

FAA Airport Diagram

EXHIBIT 1-3
PASSENGER TERMINAL BUILDINGS AT AUS

EXHIBIT 1-4
BARBARA JORDAN TERMINAL LAYOUT



The South Terminal (see **Exhibit 1-5**) contains approximately 25,191 square feet of space and three aircraft gates for passenger boarding and deboarding, ticketing/check-in lobby, passenger security screening, aircraft gate holdrooms, outbound baggage area, inbound baggage area, and concessions (see **Table 1-2**).

TABLE 1-2
SOUTH TERMINAL FACILITIES

Terminal Component	Square Footage
Ticketing / Check-In	3,904
Passenger Security Screening	4,407
Aircraft Gate Holdrooms	6,208
Outbound Baggage	5,109
Inbound Baggage	1,673
Concessions	3,056
Other Areas	834
TOTAL	25,191

Source: AUS, 2021.

1.2.3 Aviation Activity

The FAA publishes the annual Terminal Area Forecast (TAF) for each airport in the federal system.[4,5] TAF data is reported based on the FAA fiscal year, which is October through September.

The FAA released the 2020 TAF, which was the most recent version when the preparation of this EA began. **Table 1-3** provides the 2020 TAF historical aircraft operations data for years 2001 through 2020 and the forecast aircraft operations for years 2021 through 2032. **Exhibit 1-6** illustrates the historical and forecast TAF aircraft operations data for the Airport. Because of the COVID-19 Pandemic, aircraft operations in 2021 are forecast to be at the lowest level. However, the 2020 TAF forecasts operations to increase and exceed pre-Pandemic levels by 2024. Aircraft operations are forecast to increase to 246,076 in 2027 (the year of the proposed opening year of the midfield concourse) and to 277,056 in 2032 (five years after the proposed opening of the midfield concourse).[6]

[4] FAA. (2021). *Federal Aviation Administration Terminal Area Forecast Summary, Fiscal Years 2021-2045*.
[5] FAA. (2021). Terminal Area Forecast (TAF). Retrieved June 2021 from https://www.faa.gov/data_research/aviation/taf/.
[6] The forecasts used in this EA are based on the recovery of operations to pre-Pandemic levels. The aviation activity forecast included in this EA is based on the best available data and valid assumptions. The forecast assumes that temporary downturns or upswings may occur during the forecast period. In the past, aviation activity has undergone significant, although temporary, reductions in response to economic downturns or security events such as the recession in 2008, the terrorist attacks on September 11, 2001, and the Persian Gulf War. Thus, the forecasts for 2027 and 2032 were prepared with an understanding that the Pandemic would be a temporary downturn in aviation demand.

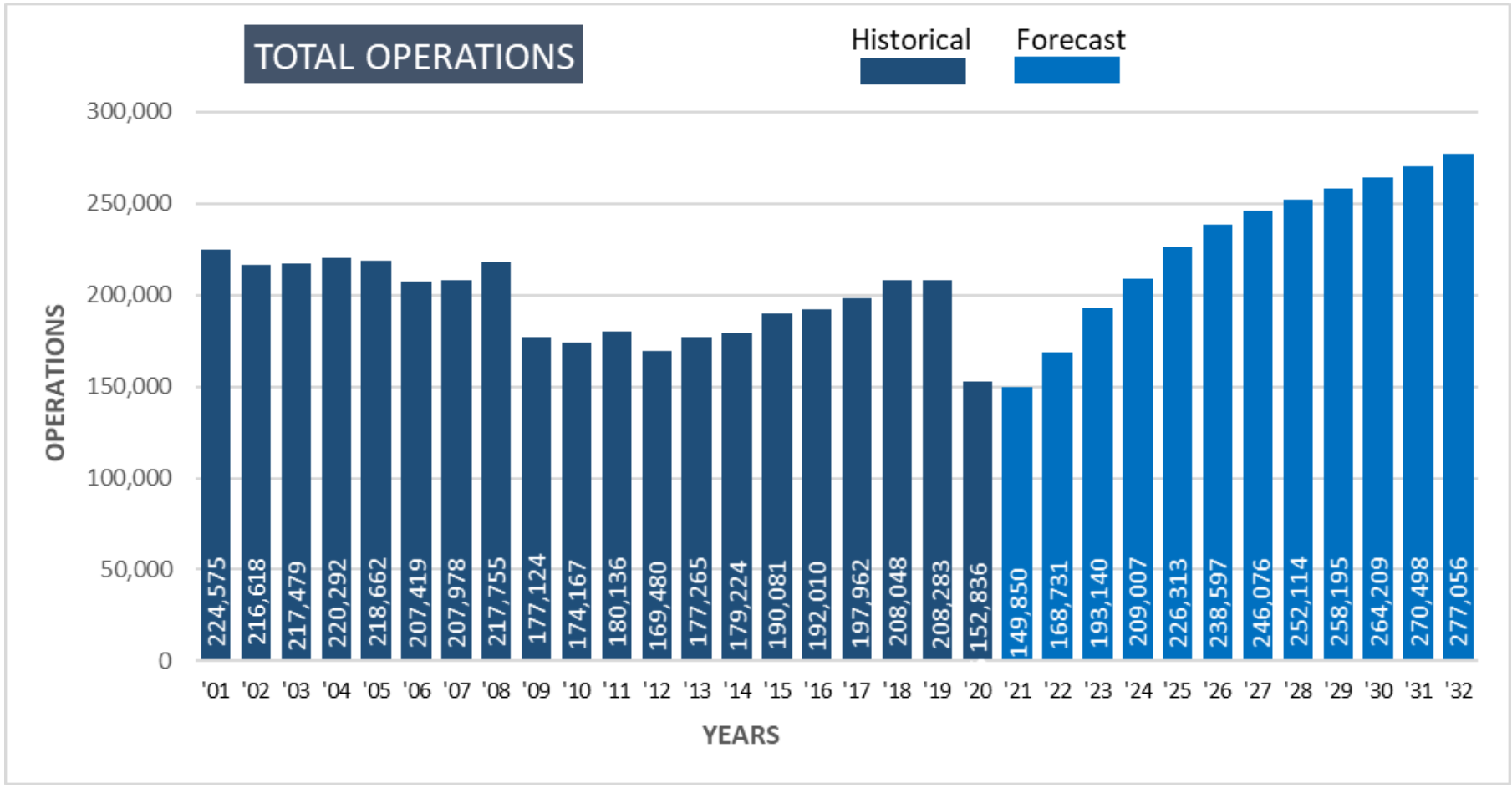
EXHIBIT 1-5
SOUTH TERMINAL LAYOUT

TABLE 1-3
HISTORICAL AND FORECAST AIRCRAFT OPERATIONS AT THE AIRPORT

	Historic Aircraft Operations				
TAF Year	**Air Carrier**	**Air Taxi & Commuter**	**General Aviation**	**Military**	**Total Operations**
2002	93,206	17,268	83,762	8,333	216,618
2003	92,602	21,993	81,378	8,211	217,479
2004	92,298	26,048	79,720	9,396	220,292
2005	101,296	27,242	75,524	7,913	218,662
2006	94,611	24,973	76,133	6,119	207,419
2007	100,672	28,177	69,421	4,658	207,978
2008	106,362	30,820	71,936	4,146	217,755
2009	94,484	17,157	57,302	4,609	177,124
2010	92,372	17,433	54,245	6,011	174,167
2011	95,095	18,466	56,513	6,495	180,136
2012	96,823	15,962	48,695	5,317	169,480
2013	101,006	16,979	50,188	6,072	177,265
2014	103,710	17,289	49,081	6,370	179,224
2015	112,079	15,830	50,720	7,003	190,081
2016	114,150	16,194	48,323	9,653	192,010
2017	120,242	15,181	49,980	9,242	197,962
2018	132,334	17,198	47,177	8,832	208,048
2019	139,470	16,296	43,122	8,317	208,283
2020	97,567	13,909	35,890	4,782	152,836
	Forecast Aircraft Operations				
TAF Year	**Air Carrier**	**Air Taxi & Commuter**	**General Aviation**	**Military**	**Total Operations**
2021	89,876	14,081	40,428	4,782	149,850
2022	105,558	14,506	43,201	4,782	168,731
2023	129,281	14,805	43,354	4,782	193,140
2024	144,633	15,165	43,507	4,782	209,007
2025	161,392	15,557	43,661	4,782	226,313
2026	173,349	15,728	43,816	4,782	238,597
2027 /a/	180,504	15,895	43,971	4,782	246,076
2028	186,208	16,072	44,127	4,782	252,114
2029	191,953	16,251	44,283	4,782	258,195
2030	197,627	16,432	44,440	4,782	264,209
2031	203,575	16,615	44,597	4,782	270,498
2032 /b/	209,788	16,801	44,755	4,782	277,056

Notes: /a/ Opening year for the additional passenger terminal building.
/b/ Five years after the additional passenger terminal building opens.
Source: FAA, 2020. TAF. Retrieved June 2021. https://www.faa.gov/data_research/aviation/taf/

EXHIBIT 1-6
HISTORICAL AND FORECAST AIRCRAFT OPERATIONS AT AIRPORT



Source: FAA, 2021. Terminal Area Forecast (TAF). Retrieved June 2021, from FAA: https://taf.faa.gov/Home/RunReport

Airport capacity and aircraft delay, for the purpose of airport planning and design, is discussed and measured according to methods in FAA Advisory Circular 150/5060-5, *Airport Capacity and Delay*.[7] The operational capacity and capability of the Airport is determined by its movement areas including its two runways and the length and strength of the runways. The capacity of an airport is not determined by the non-movement areas (e.g., aircraft parking aprons).[8] As presented in the Master Plan, the existing airfield is able to accommodate about 445,000 annual aircraft operations at reasonable levels of delay. The runways do not currently operate at or near their operational capacity. Operations demand is not expected to reach annual capacity until 2048.

Table 1-4 provides the 2021 TAF historical enplanement data for years 2001 through 2020 and the forecast enplanements for years 2021 through 2032. **Exhibit 1-7** illustrates the historical and forecast TAF enplanement data for the Airport. Because of the Pandemic, enplanements in 2021 are forecast to be at the same level that occurred in 2011. However, the 2021 TAF forecasts enplanements to increase and exceed pre-Pandemic levels by 2024. Enplanements are forecast to increase to about 10,800,000 in 2027 (the year of the proposed opening year of the midfield concourse) and to about 12,600,000 in 2032 (five years after the proposed opening of the midfield concourse).[9]

Terminal building capacity is measured as the maximum rate of passengers (both enplaned and deplaned) over a given period and is typically measured hourly or annually. The key elements that influence passenger activity include economic and demographic characteristics as well as the geographic attributes of the area where the airport is located. In addition, aviation-related factors such as local business activity, business developments in the airline industry (mergers, alliances and new market strategies), and other elements such as changes in air fares, changes in the level of local taxes, new environmental regulations, and attitudes of residents towards aviation also affect passenger activity.[10]

---

7 FAA. (1983, September 23). Federal Aviation Administration, Advisory Circular 150/5060-5, *Airport Capacity and Delay*.

8 FAA. (2014, February 26). Federal Aviation Administration, Advisory Circular 150/5300-13A, Change 1, *Airport Design*, Chapter 5.

9 The forecasts used in this EA are based on the recovery of operations to pre-Pandemic levels. The aviation activity forecast included in this EA is based on the best available data and valid assumptions. The forecast assumes that temporary downturns or upswings may occur during the forecast period. In the past, aviation activity has undergone significant, although temporary, reductions in response to economic downturns or security events such as the recession in 2008, the terrorist attacks on September 11, 2001, and the Persian Gulf War. Thus, the forecasts for 2027 and 2032 were prepared with an understanding that the Pandemic would be a temporary downturn in aviation demand.

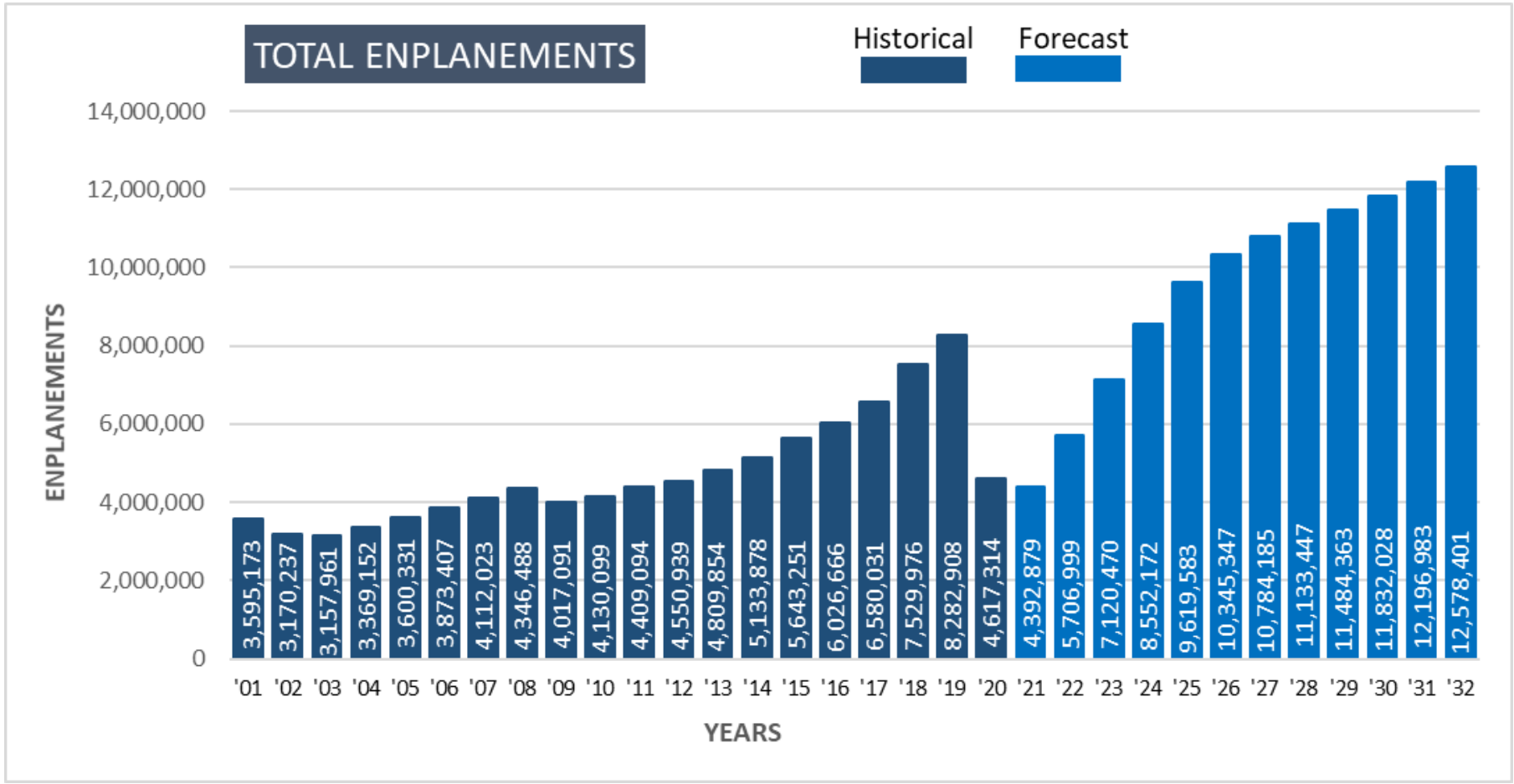
10 FAA Advisory Circular 150/5070-6B, Chapter 7, Section 703, *Factors Affecting Aviation Activity*.

TABLE 1-4
HISTORICAL AND FORECAST PASSENGER ENPLANEMENTS AT THE AIRPORT

	Historic Passenger Enplanements		
TAF Year	**Air Carrier**	**Commuter**	**Total Enplanements**
2002	3,118,149	52,088	3,170,237
2003	2,943,678	214,283	3,157,961
2004	2,918,012	451,140	3,369,152
2005	3,073,647	526,684	3,600,331
2006	3,280,190	593,217	3,873,407
2007	3,541,992	570,031	4,112,023
2008	3,631,551	714,937	4,346,488
2009	3,397,403	619,688	4,017,091
2010	3,469,100	660,999	4,130,099
2011	3,690,630	718,464	4,409,094
2012	3,765,420	785,519	4,550,939
2013	3,993,075	816,779	4,809,854
2014	4,358,020	775,858	5,133,878
2015	4,891,569	751,682	5,643,251
2016	5,320,688	705,978	6,026,666
2017	6,012,255	567,776	6,580,031
2018	7,125,069	404,907	7,529,976
2019	7,915,566	367,342	8,282,908
2020	4,430,051	187,263	4,617,314
	Forecast Passenger Enplanements		
TAF Year	**Air Carrier**	**Commuter**	**Total Enplanements**
2021	4,209,204	183,675	4,392,879
2022	5,465,531	241,468	5,706,999
2023	6,815,936	304,534	7,120,470
2024	8,186,734	365,438	8,552,172
2025	9,210,424	409,159	9,619,583
2026	9,906,335	439,012	10,345,347
2027 /a/	10,326,972	457,213	10,784,185
2028	10,661,332	472,115	11,133,447
2029	10,997,280	487,083	11,484,363
2030	11,330,130	501,898	11,832,028
2031	11,679,578	517,405	12,196,983
2032 /b/	12,044,838	533,563	12,578,401

Notes: /a/ Opening year for the additional passenger terminal building.
/b/ Five years after the additional passenger terminal building opens.
Source: FAA, 2020. TAF. Retrieved June 2021. https://www.faa.gov/data_research/aviation/taf/

EXHIBIT 1-7
HISTORICAL AND FORECAST PASSENGER ENPLANEMENTS AT AIRPORT



Source: FAA, 2021. Terminal Area Forecast (TAF). Retrieved June 2021, from FAA: https://taf.faa.gov/Home/RunReport

As presented in a report prepared by the Airport Cooperative Research Program (ACRP), Synthesis Report No. 2, *Airport Aviation Activity Forecasting*,[11] there is no specific correlation between the size of a passenger terminal building and the number of enplanements at an Airport. Specifically, the report found that:

> *"Air travel is fundamentally a derived demand. In the case of business travel, it represents an input of productivity; in the case of leisure travel, it is part of the consumption of a broader activity (e.g., taking a vacation or visiting friends or relatives). In both cases, air travel demand derives from the desire or need to be at a certain location for a certain purpose and perhaps a certain time."*

The report also discusses the drivers of airport aviation activity including: macroeconomic and demographic factors, airline market factors, air transport production costs and technology, regulatory factors, infrastructure constraints and improvements, and substitutes for air travel. The report does not include the construction of an expanded passenger terminal as a driver of aviation activity.

1.3 PROPOSED PROJECT PURPOSE AND NEED

The following section discusses the purpose of and need for the Proposed Project.

1.3.1 Purpose and Need Statement

The purpose and need of the Proposed Project is to provide facilities that will accommodate forecast increases in enplanements at an adequate level of service and enhance the operational efficiency of the airfield.

1.3.2 Needs

The Proposed Project addresses three independent needs that affect the future ability of AUS to maintain its essential function as the primary commercial service airport in Central Texas. The four needs are:

- insufficient passenger processing facilities and gates to accommodate forecast enplanements at an adequate level of service;
- inefficient taxiways on the west airfield;

[11] The Transportation Research Board (TRB) Airport Cooperative Research Board (ACRP) was established as an industry-driven, applied research program that develops near-term, practical solutions to problems faced by airports. ACRP is managed by the TRB of the National Academies of Sciences, Engineering, and Medicine.

- achieve Airport Design Group (ADG) VI[12] design standards for designated taxiways; and
- maintain efficient movement area access between the east and west airfields.

1.3.2.1 Insufficient Passenger Processing Facilities and Gates

The Proposed Project is intended to resolve several problems with the existing passenger terminal building. The Master Plan provided a terminal demand/capacity analysis that examined the ability of the existing passenger terminal to accommodate existing and future passenger demand. The analysis covered all key functional components of the passenger terminal building, including aircraft gates, ticketing/check-in, passenger security screening, baggage handling systems, U.S. Customs and Border Protection, gate holdrooms, concessions, and other areas of the terminal complex. The analysis assessed the ability of each of these key functional components to accommodate existing and future passenger demand. **Table 1-5** provides an overview of the ability of the functional components of the

TABLE 1-5
TERMINAL COMPONENTS MEETING EXISTING AND FUTURE STANDARDS

Terminal Component	Existing (2019)	Future (2027)
Aircraft Gates		
Narrowbody Aircraft Gates	Meets	Deficient
Widebody Aircraft Gates	Meets	Deficient
Ticketing / Check-In		
Curbside Check-In	Meets	Meets
Full-Service Agent Positions	Meets	Deficient
Bag Drop Positions	Meets	Deficient
Kiosks	Deficient	Deficient
Check-In Hall Area	Deficient	Deficient
Arrivals Curb Front	Deficient	Deficient
Departures Curb Front	Deficient	Deficient
Airline Ticket Offices	Meets	Deficient
Passenger Security Screening		
Security Checkpoint Lanes	Deficient	Deficient
Security Checkpoint Area	Deficient	Deficient
Outbound Baggage		
Outbound Baggage Screening Machines	Meets	Meets
Outbound Baggage Screening Area /1/	Deficient	Meets
Outbound Baggage Makeup Area	Meets	Deficient

[12] ADG is an FAA-defined grouping of aircraft types based on wingspan and tail height. ADG VI aircraft have a wingspan between 214 feet and 262 feet and a tail height between 66 feet and 80 feet. Aircraft that are in ADG VI include the Boeing 747 and Airbus 380.

TABLE 1-5 (CONT.)
TERMINAL COMPONENTS MEETING EXISTING AND FUTURE STANDARDS

Terminal Component	Existing (2019)	Future (2027)
Inbound Baggage		
Baggage Claim Devices	Meets	Deficient
Baggage Claim Hall	Deficient	Deficient
Baggage Service Offices	Deficient	Deficient
Inbound Baggage Handling Area	Deficient	Deficient
U.S. Customs and Border Protection		
Sterile Corridor	Deficient	Deficient
Document Verification Officer Positions	Meets	Deficient
Global Entry Kiosks	Meets	Meets
Automated Passport Control Kiosks	Deficient	Deficient
Primary Processing and Inspection	Deficient	Deficient
Secondary Processing and Inspection	Meets	Meets
Operational Support	Meets	Deficient
Baggage Claim Devices	Deficient	Deficient
Baggage Claim Hall	Deficient	Deficient
Aircraft Gate Holdrooms		
Narrowbody Aircraft Holdrooms	Meets	Deficient
Widebody Aircraft Holdrooms	Deficient	Deficient
Circulation Corridor	Deficient	Deficient
Concessions		
Pre-Security Concessions	Deficient	Deficient
Post-Security Concessions	Deficient	Deficient
Concessions Support	Deficient	Deficient
Other Areas		
Public Restrooms	Deficient	Deficient
Airline Support Space	Deficient	Deficient
Airline Clubs / Premium Lounges	Deficient	Deficient
Airport Operations	Meets	Deficient
Maintenance, Mechanical, Electrical, Vertical Circulation, Open-Covered	Meets	Deficient

Source: City of Austin, Austin-Bergstrom International Airport Master Plan, 2020.
Notes: /1/ The existing baggage handling system project will result in meeting the current deficiency in the outbound baggage screening area.

existing terminal to accommodate the forecast increase in passengers. The Master Plan used Planning Activity Levels (PALs) to determine when facility improvements would be necessary. Four separate PALs were identified. PAL 1 corresponded to 16 million annual passengers (MAP). PAL 2, PAL 3, and PAL 4 corresponded to 18, 22, and 31 MAP, respectively. For purposes of this EA, the TAF for 2027, which is forecast for AUS to have approximately 21.6 MAP, and PAL 3 are considered to be

equivalent. Thus, the development of additional aircraft gates is needed to accommodate 22 MAP in 2027, which is the year of project implementation (or the year Concourse B would open).

The existing terminals at AUS have 37 aircraft gates. Three of those aircraft gates are for widebody aircraft (ADG V), 33 aircraft gates are for narrowbody aircraft (ADG III), and one gate is for commuter aircraft (ADG II) or bus operations. In 2019, the 37 aircraft gates at AUS accommodated almost 16.6 MAP. The Master Plan shows that to accommodate 22 MAP in 2027, a total of 57 aircraft gates are needed. Of these 57 aircraft gates, 4 would be for widebody aircraft and the remaining 53 would be for narrowbody aircraft (see **Table 1-6**). The increase in aircraft gates is needed to accommodate the forecast increase in operations (needed to accommodate the forecast passengers) at an adequate level of service.

TABLE 1-6
AIRCRAFT GATE REQUIREMENTS

Facility	Units	Existing (2019)	Future (2027)
ADG II /a/	Gates	1	0
ADG III	Gates	33	53
ADG V	Gates	4	4
TOTAL	Gates	37	57

Note: /a/ Gate also can accommodate bussing operations.
Source: City of Austin, Austin-Bergstrom International Airport Master Plan, 2020.

1.3.2.2 Inefficient Taxiways on West Airfield

The operational functionality of the west airfield limits the overall efficiency of the Airport. A measure of the efficiency of the operation of a runway is the runway occupancy time (ROT), which is the number of seconds that an arriving aircraft is on a runway once the aircraft has crossed the arrival threshold. Using the FAA's Runway Exits Interactive Design Model (REDIM), the ROT for the existing Runway 18R-36L is about 53.9 seconds for aircraft arriving in a south flow and about 55.7 seconds for aircraft arriving in a north flow. This is above the optimal average ROT of 50 seconds (that would be needed to reduce aircraft arrival separation and increase runway arrival capacity) or less and is primarily due to the fact that the exit taxiways from Runway 18R-36L are right-angled (or 90 degree angle) exits. The provision of acute angled exit taxiways would reduce the ROT to about 48.2 seconds in both the south and north flow, which would be an improvement by 5.7 seconds for aircraft arriving in south flow and by 7.5 seconds for aircraft arriving in north flow (see **Appendix A**).

In addition, given the current geometry of the west airfield, it is not economical to build high speed exit taxiways due to the distance from Runway 18R-36L of the existing Taxiway C. Thus, construction of Taxiway D would improve surface efficiency as well as the operational flexibility by allowing simultaneous taxiing operations rather than the current one way in or out operation. This also allows for two entrances/exits from the existing cargo facility to allow aircraft to more efficiently operate in this area. The proposed Taxiway D would include holding bays to facilitate the safe and efficient metering of aircraft between the runway and taxiway system.

1.3.2.3 Achieve ADG VI Design Standards for Designated Taxiways

AUS occasionally receives ADG VI aircraft as diversions from other surrounding airports (e.g., Dallas-Fort Worth International Airport and George Bush Intercontinental Airport in Houston). Runway 18R-36L has sufficient width and length to accommodate ADG VI aircraft. However, the existing Taxiway C fillets are not sufficient to accommodate aircraft greater than ADG V. The construction of a new full-length parallel Taxiway D with a separation of 500 feet would comply with the design standards associated with ADG VI aircraft. In addition, this new geometry would be constructed in accordance with new FAA design criteria that would allow the pavement to adequately support the larger aircraft in the current fleet mix. This would replace the existing Modification of Standards (MOS) that allows these larger aircraft to operate on smaller than intended pavements.

1.3.2.4 Maintain Efficient Movement Area Access Between East and West Airfields

The east airfield consists of Runway 18L-36R and its associated taxiways. The west airfield consists of Runway 18R-36L and its associated taxiways. Access between the east and west airfield is currently provided by Taxiways G and H, which are located immediately south of the BJT. The proposed construction of Concourse B would result in the removal of Taxiways G and H. Therefore, this would result in the need to relocate these taxiways to ensure that access within the aircraft movement area between the east and west airfields is maintained and allow for the aircraft to use either runway as required by air traffic control.

1.3.3 Purposes

Based on the needs described above, the purposes of the Proposed Project are to:

- provide passenger processing facilities and gates to accommodate forecast enplanements at an adequate level of service;
- provide high-speed exit taxiways on the west airfield;

- achieve ADG VI design standards to better support diversion aircraft; and
- maintain efficient access between the east and west airfields.

1.4 DESCRIPTION OF PROPOSED PROJECT

The Proposed Project is shown on **Exhibit 1-8** includes 34 project components. These project components are associated with demolition, airfield, terminal, support, and utility projects. In addition to the specific utility improvement project components, each airfield, terminal, and support project component would have improvements to the utilities that provide service to that project component. All of these project components were included in the Master Plan. For purposes of this EA, the project component numbers have been changed from those presented in the Master Plan. For reference purposes, **Appendix B** provides a listing of each project component of the Proposed Project compared to the numbering from the Master Plan.

1.4.1 Facility Demolition Projects

The following three project components are enabling projects that must be completed to allow for construction of other project components.

Project D-1: Demolition of Existing Parking Garage

The existing parking garage would be demolished to provide space for the construction of the new/expanded arrival/departure hall (Project T-5) and construction of the new terminal curbside roadway (Project R-2).

Project D-2: Demolition of South Buildings

Numerous buildings in the south campus of the Airport, including the existing South Terminal, would be demolished to provide space for a variety of airfield and support projects associated with construction of the new Concourse B (Project T-1), the relocated Taxiways H and J (Project A-1), and the new Remain Overnight (RON) apron (Project A-2).

Project D-3: Demolition of Existing Terminal Upper Roadway

The existing terminal upper roadway would be demolished to provide space for the construction of the new/expanded arrival/departure hall (Project T-5) and construction of the new terminal curbside roadway (Project R-2).

1.4.2 Airfield Projects

The following eight project components are associated with improvements to airfield pavements for the purpose of aircraft parking and movement.

Project A-1: Relocation of Taxiways H and J

The crossfield taxiways (Taxiways H and J) would be realigned to provide space for the new Concourse B (Project T-1) and other ancillary facilities.

Project A-2: Construction of New Remain Overnight (RON) Apron

A new RON apron would be constructed south of the new Concourse B (Project T-1) and would provide space for RON aircraft at the Airport.

Project A-3: Construction of Concourse B Apron and Airfield Connections

The Concourse B apron and airfield connections would be constructed to provide pavement for aircraft arriving to, parking at, and departing from the new Concourse B (Project T-1).

Project A-4: Construction of Runway 18R-36L Rapid Exit Taxiways

Rapid exit taxiways from Runway 18R-36L would be constructed to facilitate the efficient exiting of aircraft from the runway after arriving on Runway 18R-36L at the Airport. This would improve the overall efficiency of the airfield by reducing the amount of time that arriving aircraft are on the runway.

Project A-5: Construction of New Taxiway D

Taxiway D would be a full parallel taxiway that provides access to and from Runway 18R-36L. This would improve the overall efficiency and operation of aircraft using the west side of the airfield.

Project A-6: Demolition of Airfield Pavement

This project component would demolish airfield pavements on the west side of the airfield that are no longer warranted or necessary for the movement of aircraft at the Airport.

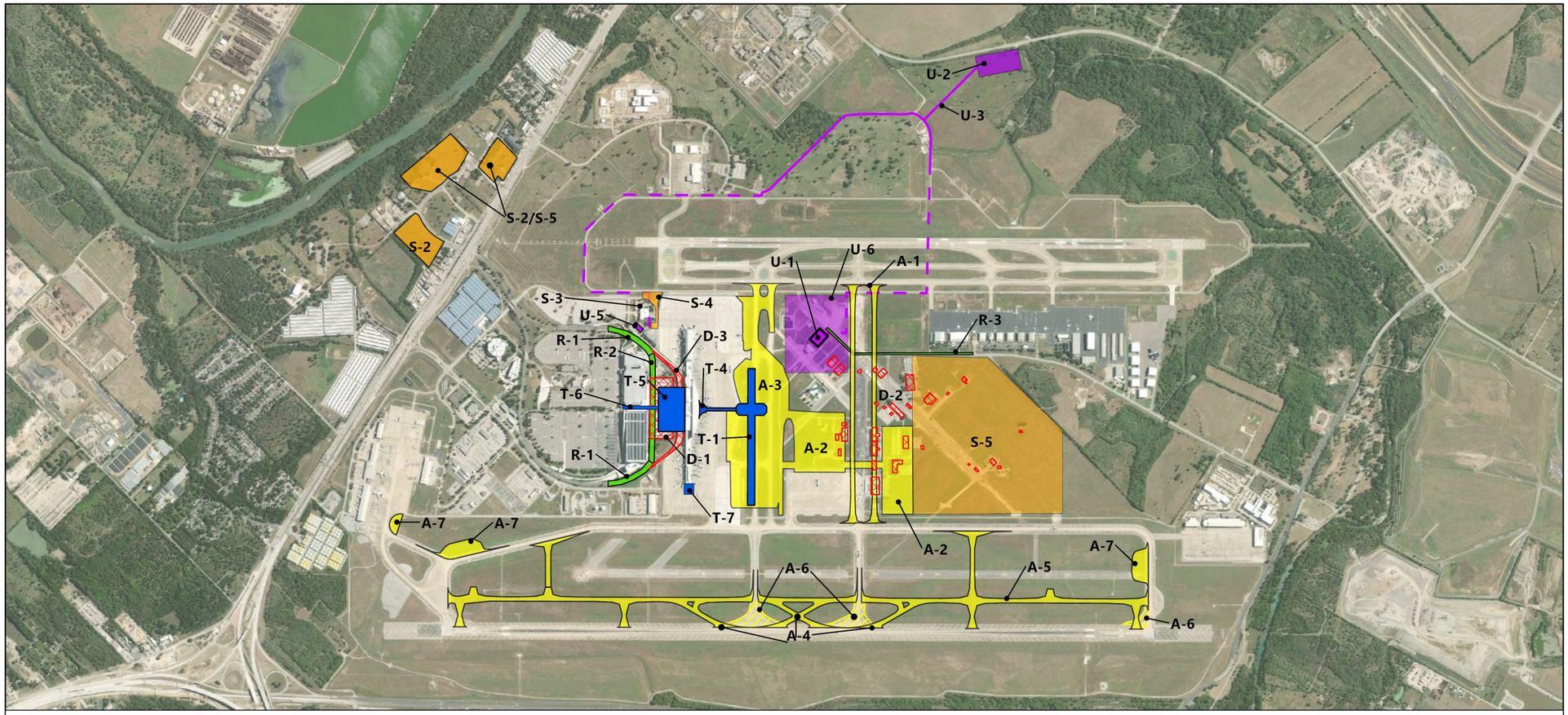
Project A-7: Construction of Other Airfield Pavements

The construction of the other airfield pavements is associated with meeting FAA standards for taxiway and apron pavements at the Airport.

Project A-8: Installation of Taxiway Lighting and Signage

Lighting and signs would be installed on all new taxiways that would be constructed at the Airport. This includes the relocated Taxiways H and J (Project A-1) and the construction of Taxiway D (Project A-5).

EXHIBIT 1-8
PROPOSED PROJECT



Legend

Airfield
A-1 Relocation of Taxiways H and J
A-2 New RON Apron
A-3 Concourse B Apron and Airfield Connections
A-4 Runway 18R-36L Rapid Exit Taxiways
A-5 New Taxiway D
A-6 Demolition of Airfield Pavement
A-7 Other Airfield Pavement
A-8 Taxiway Lighting and Signage (Not Pictured)

Terminal
T-1 New Concourse B
T-2 New Concourse B Loading Bridges (Not Pictured)
T-3 New Ramp Tower (Not Pictured)
T-4 Connector to Concourse B
T-5 New/Expanded Arrival/Departure Hall
T-6 Pedestrian Bridge to CONRAC/Parking Garage
T-7 BJT West Concourse Gate Expansion

Facility Demolition
D-1 Existing Parking Garage
D-2 South Buildings
D-3 Existing Terminal Upper Roadway

Roadways
R-1 Upgrade Existing Access Roadway Network
R-2 New Terminal Curbside Roadway
R-3 Emma Browning Road

Support
S-1 Hydrant Fueling System for Concourse B (Not Pictured)
S-2 New Employee Parking Lot
S-3 Catering Facility
S-4 New Checkpoint Alpha Guard Shack
S-5 Construction Laydown Zone

Utilities and Infrastructure
U-1 New Central Utility Plant
U-2 New Austin Energy Substation
U-3 New Electrical Lines
U-4 South Campus Stormwater Infrastructure (Not Pictured)
U-5 Rehabilitation/Replacement of Existing Central Utility Plant
U-6 Utility Zone

Note: Exhibit depicts the general location of project components and is subject to change based on final design.

Environmental Assessment
Austin-Bergstrom International Airport

0 1 Miles

N

Proposed Project

Source: City of Austin, 2021.

THIS PAGE INTENTIONALLY LEFT BLANK

1.4.3 Terminal Projects

The following seven project components are associated with the construction of the new Concourse B, the new/expanded arrival/departure hall, and all other ancillary projects to support these facilities.

Project T-1: Construction of New Concourse B

The construction of new Concourse B would result in an additional 20 gates at the Airport. The new Concourse B would be constructed south of the existing BJT.

Project T-2: Installation of New Concourse B Loading Bridges

Each of the 20 aircraft gates at the new Concourse B would have loading bridges to provide access from the Concourse B holdrooms to and from aircraft parked at the new Concourse B.

Project T-3: Construction of New Ramp Tower

A new ramp tower would be constructed in the vicinity of the new Concourse B (Project T-1) to provide space for ramp traffic controllers to monitor and direct the movement of aircraft associated with the new Concourse B.

Project T-4: Construction of Connector to Concourse B

This connector would provide access between the existing BJT and the new Concourse B (Project T-1). The connector either would be a tunnel between the existing BJT and the new Concourse B.

Project T-5: Construction of New/Expanded Arrival/Departure Hall

This project component would construct a new/expanded arrival/departure hall to accommodate arriving and departing passengers at the Airport. This building would accommodate the ticketing lobby, TSA security area, and baggage claim.

Project T-6: Construction of Pedestrian Bridge to CONRAC/Parking Garage

A pedestrian bridge would be constructed between the new/expanded arrival/departure hall (Project T-5) and the existing consolidated rental car facility (CONRAC) and parking garage.

Project T-7: Construction of BJT West Concourse Gate Expansion

Three aircraft gates would be constructed at the west end of the existing BJT. This would increase the number of aircraft gates at BJT from 34 to 37.

1.4.4 Roadway Projects

The following three project components are enabling projects that are associated with supporting the construction of the new Concourse B and the new/expanded arrival/departure hall.

Project R-1: Upgrade of Existing Access Roadway Network

As a result of the new/expanded arrival/departure hall (Project T-5) the existing access roadway network would be upgraded to provide vehicular access to both the arrival and departure levels of the new/expanded arrival/departure hall.

Project R-2: Construction of New Terminal Curbside Roadway

In concert with the upgrading of the existing access roadway network (Project R-1), this project component would include the construction of the new terminal curbside roadway on both the arrival and departure levels of the new/expanded arrival/departure hall (Project T-5).

Project R-3: Realignment of Emma Browning Road

The existing Emma Browning Road would be depressed to allow for grade separation between the road and the relocated Taxiways H and J (Project A-1).

1.4.5 Support Projects

The following five project components are enabling projects that are associated with supporting the construction of the new Concourse B and the new/expanded arrival/departure hall.

Project S-1: Construction of Hydrant Fueling System for Concourse B

A hydrant fueling system would be constructed to provide aircraft fuel to aircraft operating at new Concourse B (Project T-1). The system would be connected to the airport's bulk jet fuel storage facility and operated by a third party.

Project S-2: Construction of New Employee Parking Lot

Two parcels north of S.H. 71 would initially be used as a construction laydown zone for construction of a variety of the components of the Proposed Project (Project S-5). After completion of construction of these project components, these two parcels would be converted to a new employee parking lot. A third parcel north of S.H. 71 would be developed as a new employee parking lot.

Project S-3: Construction of Catering Facility

A new catering facility would be constructed by a third party to provide adequate space for catering functions serving the airlines operating at the Airport. This project component would be east of existing central utility plant.

Project S-4: Construction of New Checkpoint Alpha Guard Shack

The new Checkpoint Alpha Guard Shack would be constructed to provide space for security personnel monitoring access to the east side of the Airport. This project component also would include security fencing and improvements to the access

road in the vicinity of the new Checkpoint Alpha Guard Shack. This project component would be east of existing central utility plant.

Project S-5: Construction Laydown Zone

Two construction laydown zones are proposed as part of the Proposed Project. One construction laydown zone would be provided south of the realigned Taxiways H and J (Project A-1) and west of Emma Browning Road (Project R-3). The second construction laydown zone would be north of S.H. 71 and ultimately would be developed for employee parking (Project S-2). These areas would provide staging for all of the other project components of the Proposed Project.

1.4.6 Utilities and Infrastructure Projects

The following six project components are enabling projects that are associated with supporting the operation of the new Concourse B and the new/expanded arrival/departure hall.

Project U-1: Construction of New Central Utility Plant

A new central utility plant would be constructed to provide the heating and cooling capacity needed to operate the new Concourse B (Project T-1).

Project U-2: Construction of New Austin Energy Substation

A new Austin Energy substation would be constructed to accommodate the demand for electricity at the Airport. This project component would be on the east side of the Airport.

Project U-3: Construction of New Electrical Lines

New electrical lines would be constructed between the new Austin Energy substation (Project U-2), the new central utility plant (Project U-1), and the existing central utility plant (U-5). The electrical lines would be overhead outside the Air Operations Area (AOA) fence and in ductbanks inside the AOA.

Project U-4: Construction of South Campus Stormwater Infrastructure

The construction of the south campus stormwater infrastructure would accommodate the increase in impervious surfaces that would occur south of the new Concourse B (Project T-1), as well as changes to the existing drainage infrastructure resulting from airport improvements.

Project U-5: Rehabilitation/Replacement of Existing Central Utility Plant

The existing central utility plant would be rehabilitated or replaced to accommodate the increase in demand for heating and cooling capacity from the new/expanded arrival/departure hall (Project T-5) and the increase in the number of aircraft gates in the existing BJT.

Project U-6: Utility Zone

This area would be the location of any additional utility facilities that are related to the new central utility plant (Project U-1).

1.5 REQUESTED FEDERAL ACTIONS

Section 163 of the FAA Reauthorization Act of 2018, H. R. 302, (P.L. 115-254) limits FAA's approval authority to portions of Airport Layout Plans (ALPs) that meet certain statutorily defined criteria, and further, prohibited the FAA from directly or indirectly regulating airport land use unless certain exceptions exist. While the Proposed Project details the City's intended development at AUS, only some of these development components now are subject to federal approval and/or funding. However, the entire Proposed Project is analyzed in this EA.

The following federal actions and approvals from the FAA are subject to NEPA review. Where FAA approval authority exists, the Authority may not implement the Proposed Project components absent prior FAA approval (see **Table 1-7**).

- Unconditional approval of portions of the Airport Layout Plan (ALP) that depict those components of the Proposed Project subject to FAA review and approval pursuant to 49 USC § 47107(a)(16).
- Determinations under 49 USC §§ 47106 and 47107 that are associated with the eligibility of the Proposed Project for federal funding under the Airport Improvement Program.
- Determinations under 49 USC § 40117, as implemented by Title 14 CFR § 158.25, to impose and use passenger facility charges (PFCs) collected at the Airport to assist with construction of potentially eligible development items shown on the Airport Layout Plan.

TABLE 1-7
PROPOSED PROJECT COMPONENTS AND IDENTIFICATION OF ASSOCIATED FEDERAL ACTIONS

Proposed Project Component	Airside or Landside Improvement	Identification of FAA ALP Approval (YES[a] or NO[b])
D-1: Demolition of Existing Parking Garage	Landside	No
D-2: Demolition of South Buildings [c]	Landside	Yes
D-3: Demolition of Existing Terminal Upper Roadway	Landside	No
A-1: Relocation of Taxiways J and J	Airside	Yes
A-2: New RON Apron	Airside	Yes
A-3: Concourse B Apron and Airfield Connectors	Airside	Yes
A-4: New Runway 18R-36L Rapid Exit Taxiways	Airside	Yes
A-5: New Taxiway D	Airside	Yes
A-6: Demolition of Airfield Pavement	Airside	Yes
A-7: Other Airfield Pavements	Airside	Yes
A-8: Taxiway Lighting and Signage	Airside	Yes
T-1: New Concourse B	Landside	Yes
T-2: New Concourse B Loading Bridges	Landside	Yes
T-3: New Ramp Tower	Landside	Yes
T-4: Connector to Concourse B	Landside	Yes
T-5: New/Expanded Arrival/Departure Hall	Landside	Yes
T-6: Pedestrian Bridge to CONRAC/Parking Garage	Landside	No
T-7: BJT West Concourse Gate Expansion [c]	Landside	Yes
R-1: Upgrade Existing Access Roadway Network	Landside	No
R-2: New Terminal Curbside Roadway	Landside	No
R-3: Emma Browning Road	Landside	Yes
S-1: Hydrant Fueling System for Concourse B	Airside	Yes

Proposed Project Component	Airside or Landside Improvement	Identification of FAA ALP Approval (YES[a] or NO[b])
S-2: New Employee Parking Lot	Landside	No
S-3: Catering Facility	Landside	No
S-4: New Checkpoint Alpha Guard Shack	Landside	Yes
S-5: Construction Laydown Zone	Landside	No
U-1: New Central Utility Plant	Landside	Yes
U-2: New Austin Energy Substation	Landside	Yes
U-3: New Electrical Ductbanks	Landside	Yes
U-4: South Campus Stormwater Infrastructure	Landside	Yes
U-5: Rehabilitation/Replacement of Existing Central Utility Plant	Landside	Yes
U-6: Utility Zone	Landside	Yes

Sources: FAA, 2021; City of Austin, 2021.

Notes:

/a/ Because portions of the Proposed Project involve the demolition of existing, and construction of new terminal buildings and aircraft movement and aircraft parking areas, these portions may have a material impact to the safe and efficient operation of aircraft at, to, or from the Airport. Therefore, the FAA retains the legal authority to approve or disapprove these changes to the ALP.

/b/ These portions of the Proposed Project would have no material impact on aircraft operations at, to, or from the Airport, and would not adversely affect the safety of people or property on the ground adjacent to the Airport as a result of aircraft operations. In addition, these portions of the Proposed Project would not have an adverse effect on the value of prior Federal investments to a significant extent. Therefore, the FAA lacks the legal authority to approve or disapprove the changes to the ALP.

/c/ A "Yes" in the far right column denotes that the project component is eligible for AIP or PFC funding granted that it meets the requirements in the AIP Handbook.