



TEXARKANA
— REGIONAL AIRPORT —
AIRPORT MASTER PLAN





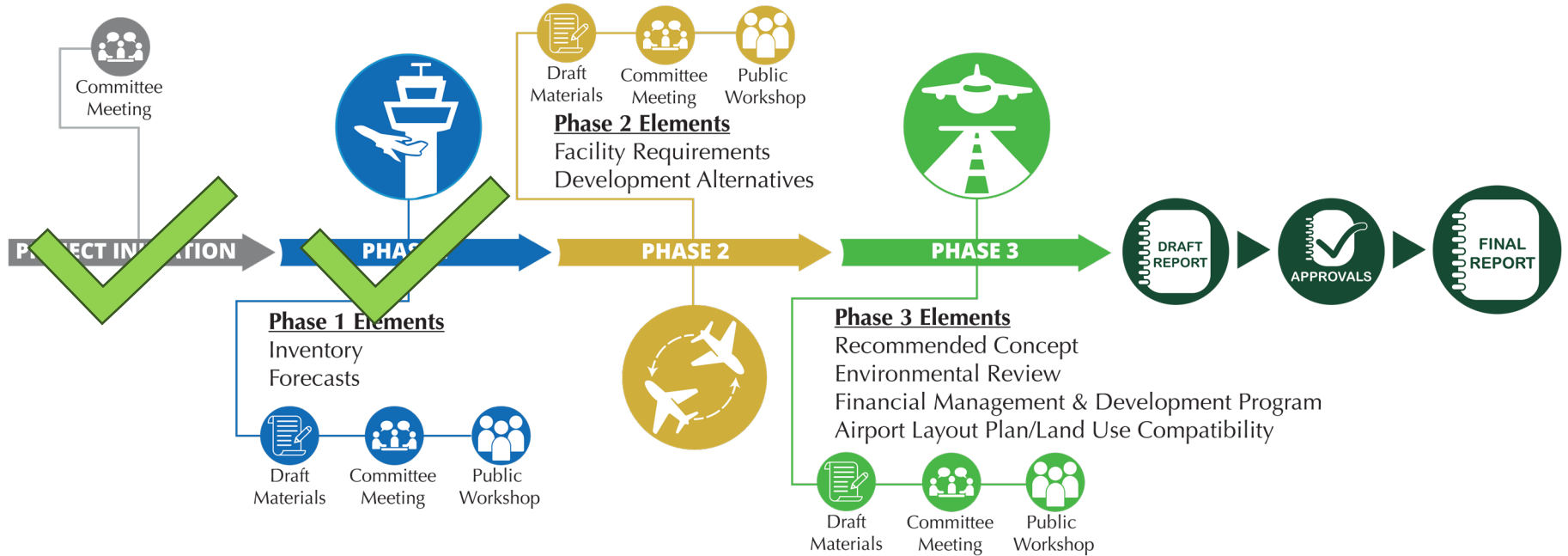
AIRPORT MASTER PLAN PLANNING ADVISORY COMMITTEE MEETING #3

July 12, 2023

AGENDA

1. Welcome/Introductions
2. Status of the Master Plan
3. Review of Draft Working Papers
 - ✓ Ch3 – Facility Requirements
 - ✓ Ch4 – Alternatives
 - ✓ Air Cargo Development Feasibility Study
4. Questions/Comments
5. Next Steps

Master Plan Study Process





Chapter Three

Facility Requirements



Table 3A:
Planning Horizon Activity Levels

	PLANNING HORIZON			
	Base Year (2022)	Short Term (1-5 Years)	Intermediate Term (6-10 Years)	Long Term (11-20 Years)
ENPLANEMENTS	35,699	39,080	42,412	48,789
ANNUAL OPERATIONS				
<i>Itinerant</i>				
Air Carrier	386	1,983	2,001	2,099
Air Taxi	5,361	3,583	3,746	4,094
General Aviation	11,724	12,955	13,500	14,634
Military	841	841	841	841
<i>Local</i>				
General Aviation	11,507	12,873	13,449	14,664
Military	926	926	926	926
Total Annual Operations	30,745	33,161	34,463	37,258
BASED AIRCRAFT	63	67	73	84

Exhibit 3A: Airfield Capacity Factors



Exhibit 3B: Demand/Capacity Analysis

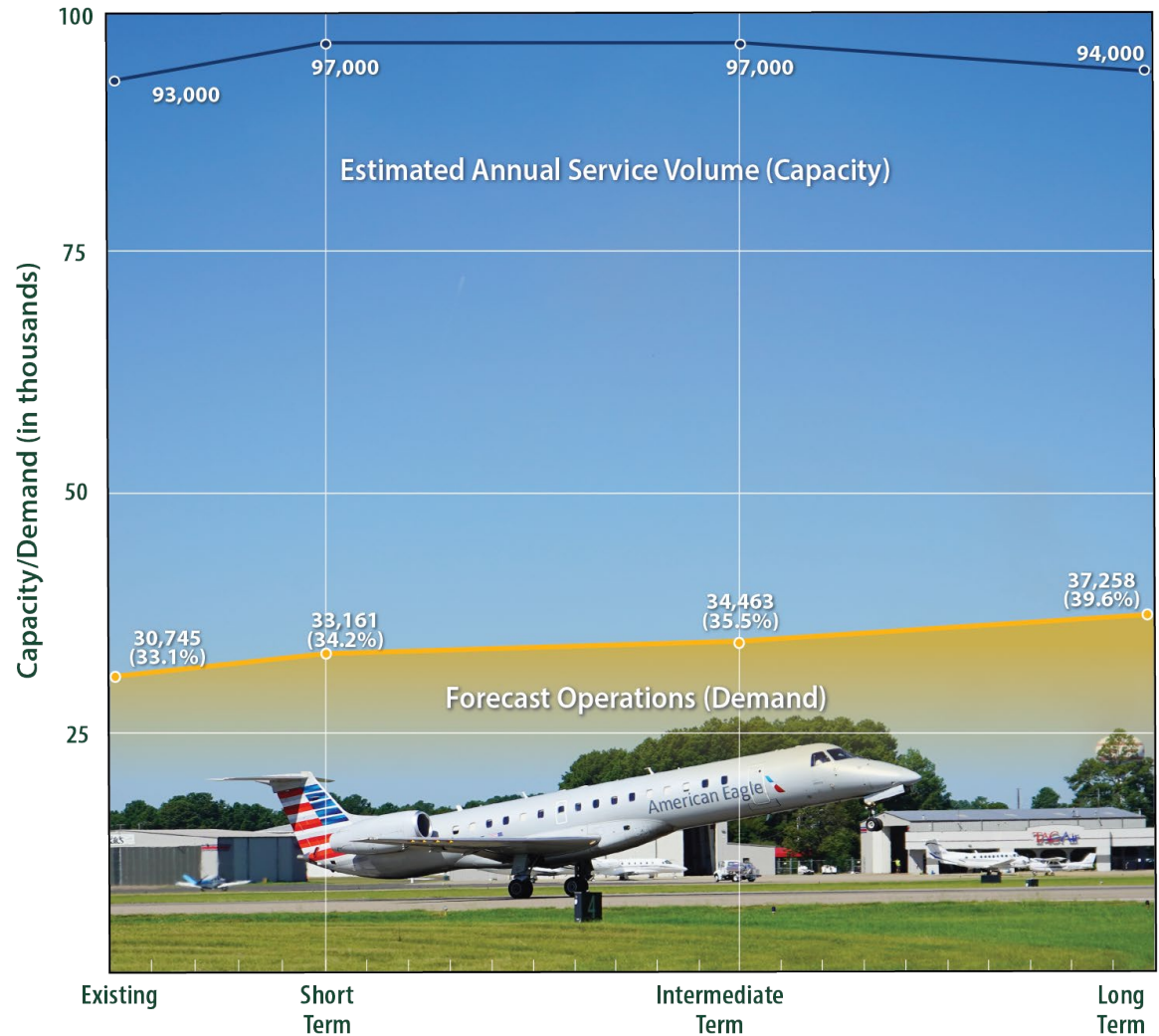
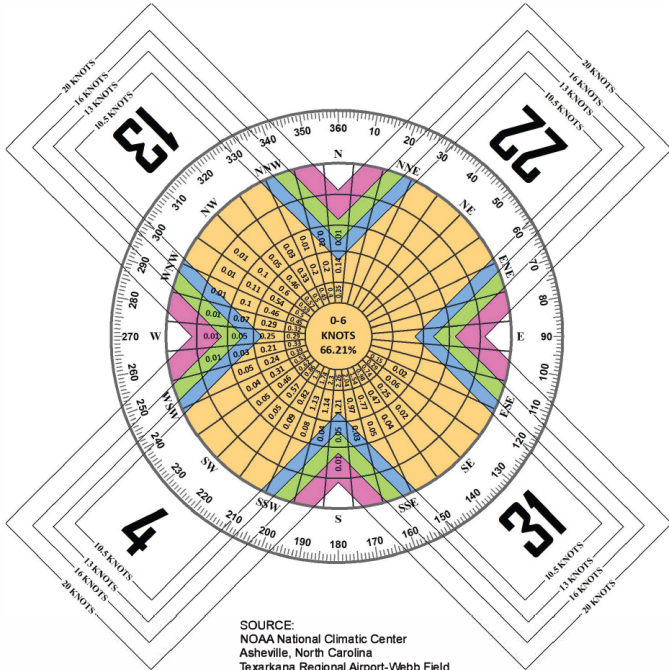


Exhibit 3C: Windroses

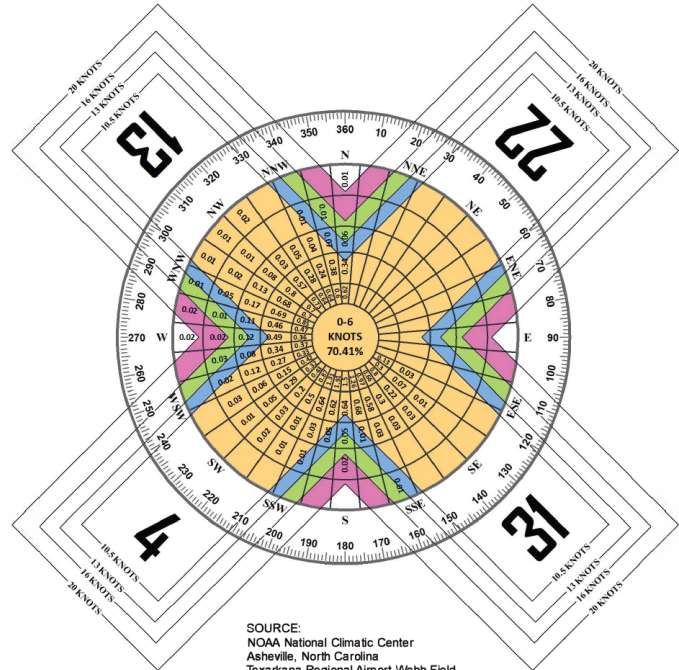
ALL WEATHER WIND COVERAGE				
Runways	10.5 Knots	13 Knots	16 Knots	20 Knots
Runway 13/31	94.62%	97.26%	99.50%	99.92%
Runway 4/22	95.41%	97.65%	99.45%	99.89%
All Runways	99.54%	99.92%	99.98%	100.00%



SOURCE:
 NOAA National Climatic Center
 Asheville, North Carolina
 Texarkana Regional Airport-Webb Field
 Texarkana, Arkansas

OBSERVATIONS:
 111,027 All Weather Observations
 Jan. 1, 2012 - Dec. 31 2021

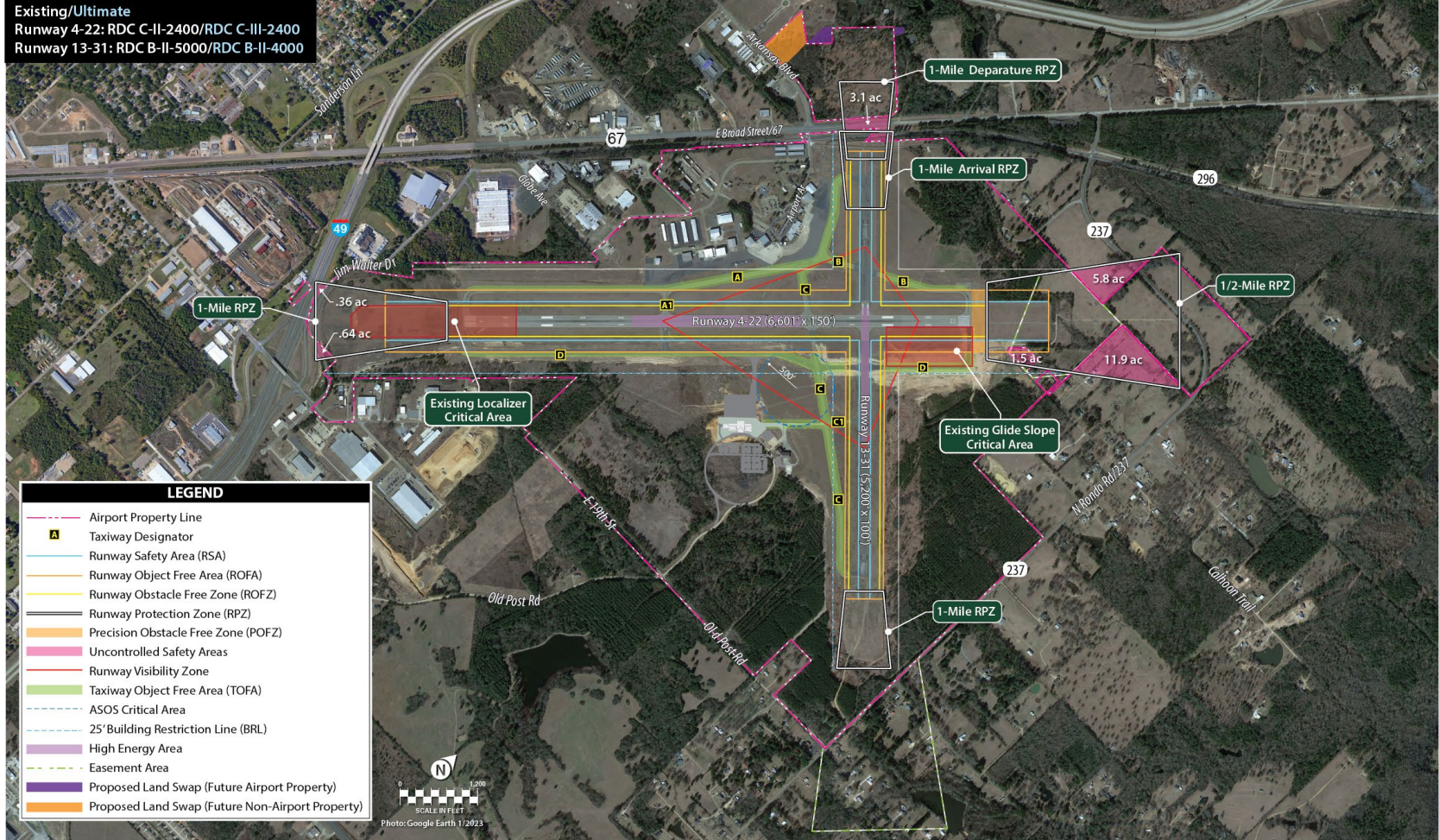
IFR WIND COVERAGE				
Runways	10.5 Knots	13 Knots	16 Knots	20 Knots
Runway 13/31	94.99%	97.28%	99.41%	99.87%
Runway 4/22	95.89%	97.81%	99.41%	99.85%
All Runways	99.44%	99.85%	99.96%	99.99%

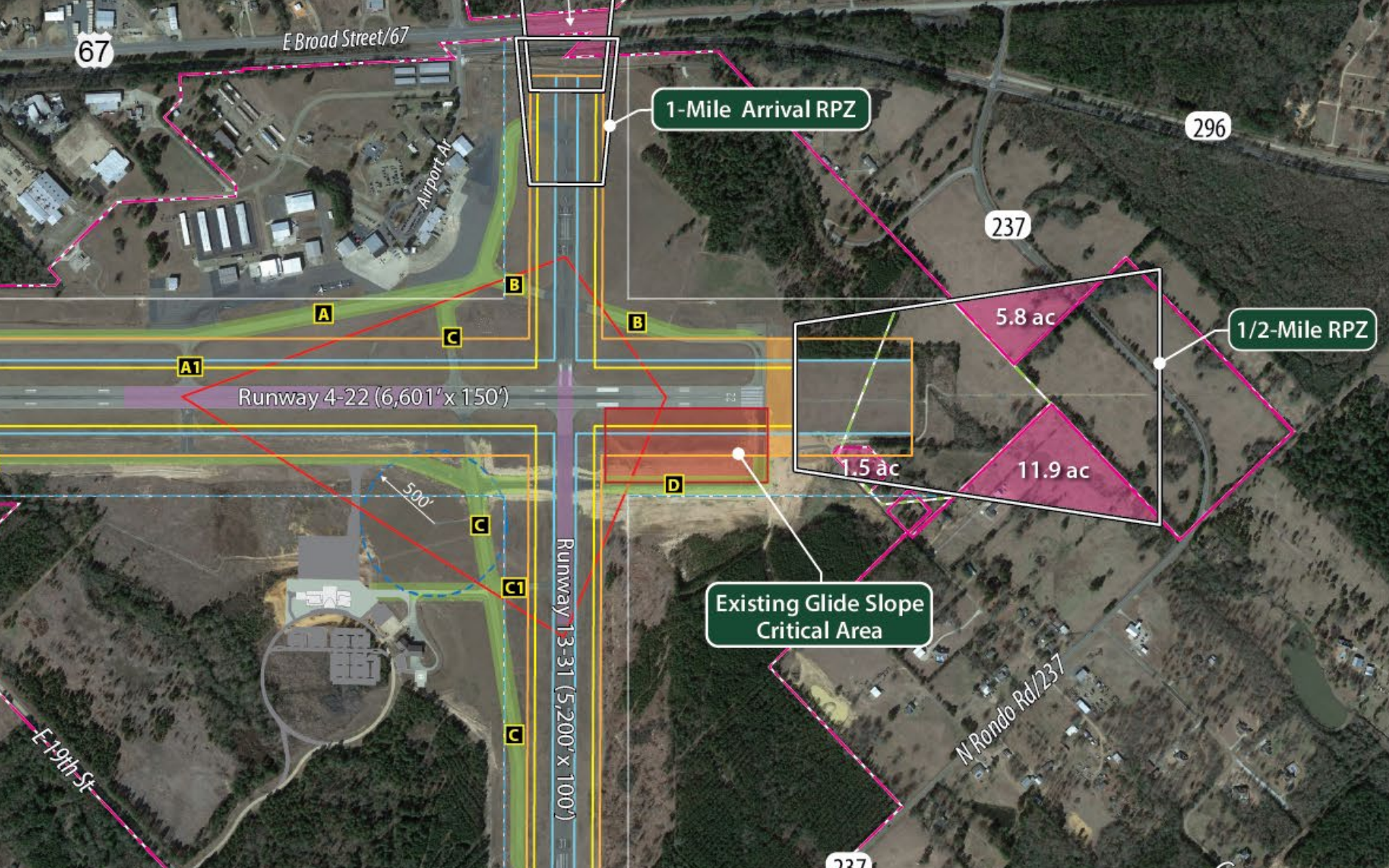


SOURCE:
 NOAA National Climatic Center
 Asheville, North Carolina
 Texarkana Regional Airport-Webb Field
 Texarkana, Arkansas

OBSERVATIONS:
 20,568 IFR Observations
 Jan. 1, 2012 - Dec. 31 2021

Exhibit 3E: Existing Safety Areas





67

E Broad Street/67

Airport Av

1-Mile Arrival RPZ

296

237

1/2-Mile RPZ

5.8 ac

1.5 ac

11.9 ac

Existing Glide Slope
Critical Area

A1

Runway 4-22 (6,601' x 150')

A

C

B

D

Runway 13-31 (5,200' x 100')

500'

C

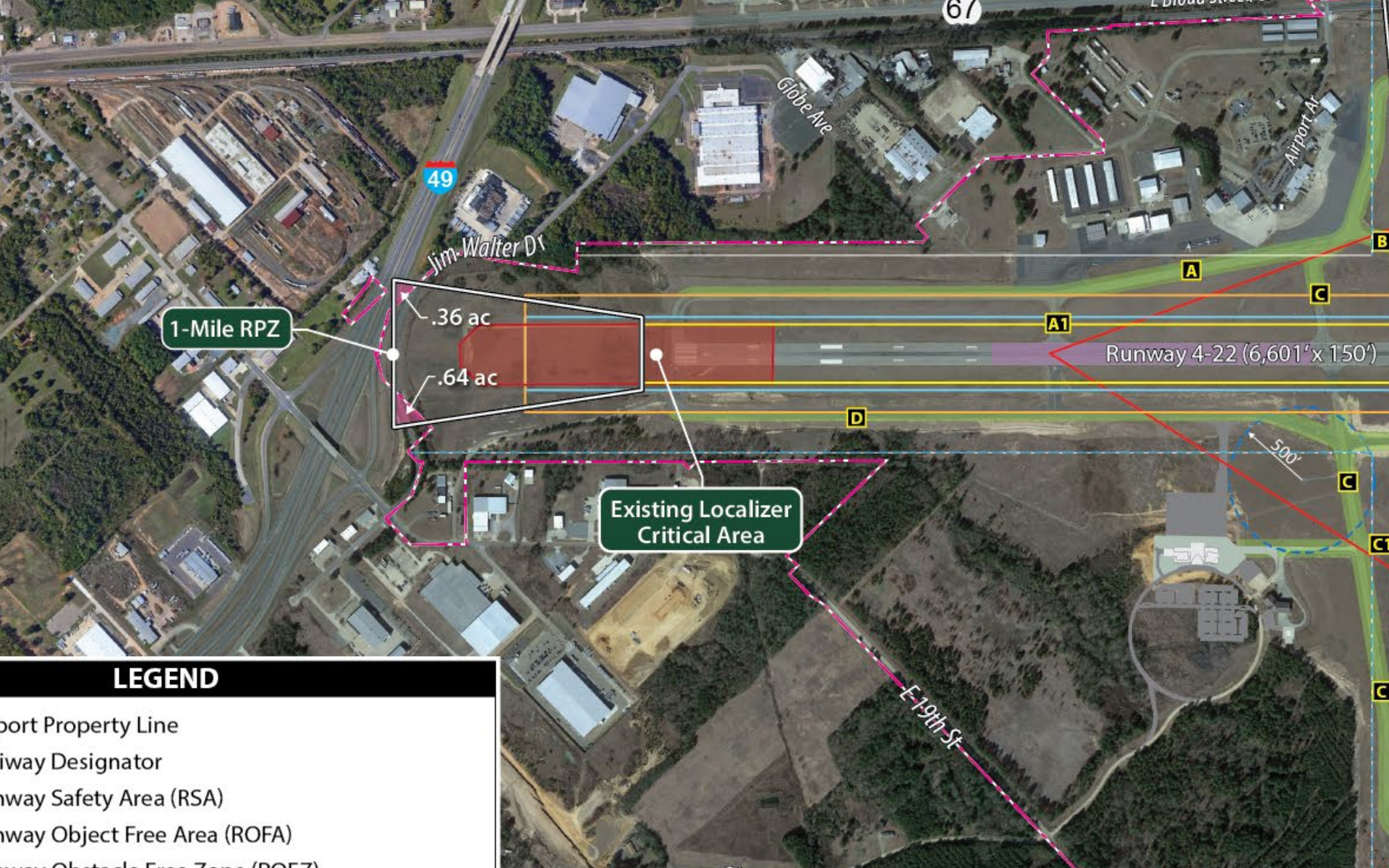
C1

C

E 19th St

N Rondo Rd/237

237



1-Mile RPZ

.36 ac
.64 ac

Existing Localizer
Critical Area

Runway 4-22 (6,601' x 150')

LEGEND

- Support Property Line
- Runway Designator
- Runway Safety Area (RSA)
- Runway Object Free Area (ROFA)
- Runway Obstacle Free Zone (ROFZ)

Runway 13 641' Displaced Threshold

(4,599 → 5,200)

ID	Feature	Penetration/Obstruction Value* (ft.)	Ground Elevation (ft. msl.)	Adjustment Height (ft.)	Top elevation (ft. msl.)	Surface Analyzed	Height of Surface @ Point (ft. msl.)	Distance to Surface Beginning (ft.)
1	Railroad	0.24	346.00	23.00	369.00	Ult 13 Approach	368.76	272.74
		-43.32	346.00			Ex 13B#5	412.32	926.37
2	Railroad	-0.14	346.00	23.00	369.00	Ex 13 Approach	369.14	285.64
		-0.14	346.00			Ult 13 Approach	369.14	285.64
3	Railroad	-6.02	344.00	23.00	367.00	Rwly 13 End Departure Sect. 1	373.02	491.12
		-45.59	344.00			Ex 13B#5	412.59	931.85
		-36.73	344.00			Ex 13B#6	403.73	1,131.85
		-2.30	344.00			Ex 13 Approach	369.30	291.12
		-2.30	344.00			Ult 13 Approach	369.30	291.12
4	Railroad	-6.23	344.00	23.00	367.00	Rwly 13 End Departure Sect. 1	373.23	499.56
		-46.01	344.00			Ex 13B#5	413.01	940.29
		-37.01	344.00			Ex 13B#6	404.01	1,140.29
		-2.55	344.00			Ex 13 Approach	369.55	299.56
		-2.55	344.00			Ult 13 Approach	369.55	299.56
5	Railroad	-6.48	344.00	23.00	367.00	Rwly 13 End Departure Sect. 1	373.48	509.79
		-46.53	344.00			Ex 13B#5	413.53	950.52
		-37.35	344.00			Ex 13B#6	404.35	1,150.52
		-2.85	344.00			Ex 13 Approach	369.85	309.79
		-2.85	344.00			Ult 13 Approach	369.85	309.79
6	Railroad	-46.81	344.00	23.00	367.00	Ex 13B#5	413.81	956.19
		-3.02	344.00			Ex 13 Approach	370.02	315.46
		-3.02	344.00			Ult 13 Approach	370.02	315.46
7	Railroad	-4.36	343.05	23.00	366.05	Ult 13 Approach	370.41	328.78
		-4.36	343.05			Ult 13 Approach	370.41	328.78
8	E Hwy 67/Broad St.	-16.79	342.98	15.00	357.98	Ult 13 Approach	374.77	477.12
		-57.46	348.80			Ex 13B#5	421.26	1,105.16
		-10.60	348.80			Ex 13 Approach	374.40	464.43
9	E Hwy 67/Broad St.	-10.60	348.80	15.00	363.80	Ult 13 Approach	374.40	464.43
		-12.16	350.00			Rwly 13 End Departure Sect. 1	377.16	656.96
		-55.88	350.00			Ex 13B#5	420.88	1,097.69
10	E Hwy 67/Broad St.	-44.26	350.00	15.00	365.00	Ex 13B#6	409.26	1,297.69
		-9.18	350.00			Ex 13 Approach	374.18	456.96
		-9.18	350.00			Ult 13 Approach	374.18	456.96
		-9.68	352.00			Rwly 13 End Departure Sect. 1	376.68	637.79
		-52.93	352.00			Ex 13B#5	419.93	1,078.52
11	E Hwy 67/Broad St.	-41.62	352.00	15.00	367.00	Ex 13B#6	408.62	1,278.52
		-6.62	352.00			Ex 13 Approach	373.62	437.79
		-6.62	352.00			Ult 13 Approach	373.62	437.79
		-9.27	352.00			Rwly 13 End Departure Sect. 1	376.27	621.38
		-52.11	352.00			Ex 13B#5	419.11	1,062.11
12	E Hwy 67/Broad St.	-41.07	352.00	15.00	367.00	Ex 13B#6	408.07	1,262.11
		-6.13	352.00			Ex 13 Approach	373.13	421.38
		-6.13	352.00			Ult 13 Approach	373.13	421.38
13	E Hwy 67/Broad St.	-51.73	352.00	15.00	367.00	Ex 13B#5	418.73	1,054.66
		-5.91	352.00			Ex 13 Approach	372.91	413.93
		-5.91	352.00			Ult 13 Approach	372.91	413.93
14	E Hwy 67/Broad St.	-5.35	352.00	15.00	367.00	Ult 13 Approach	372.35	394.70

*Negative number indicates the point is clear of the surface.

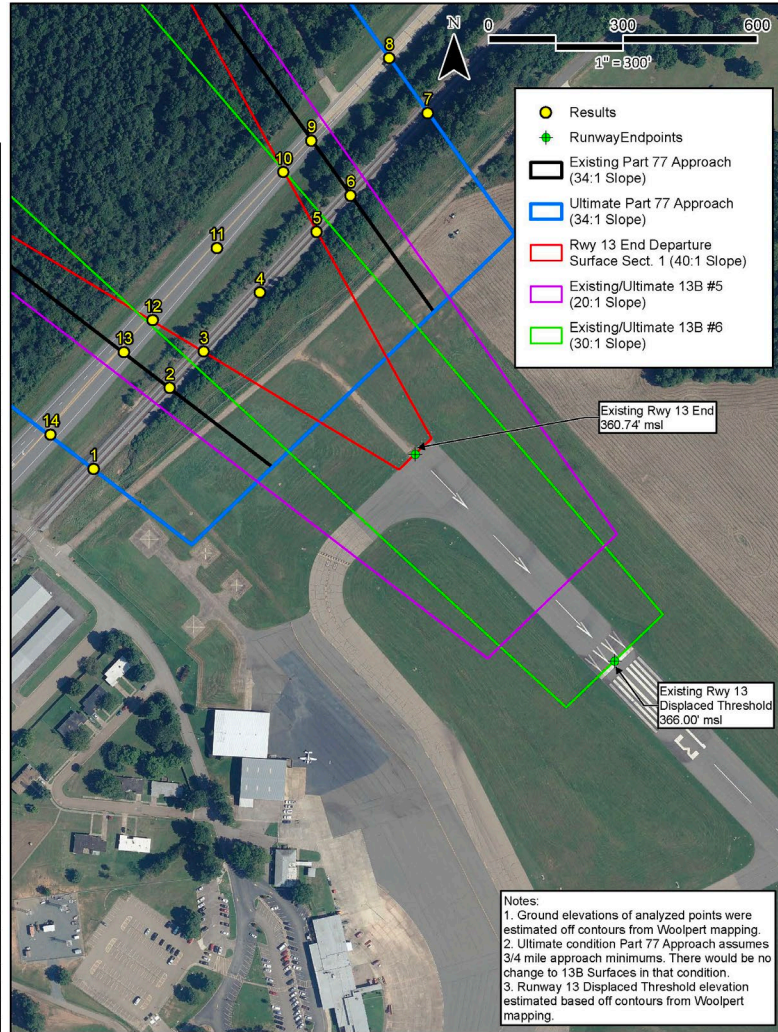




Table 3F: Small Airport and Business Jet Runway Length Requirements

Airport Elevation:	389.5 feet above MSL			
Average High Monthly Temp:	92.8 degrees (August)			
Runway Gradient:	46.2' elevation difference on Runway 4-22 (max difference of all runways)			
Fleet Mix Category	Raw Runway Length from FAA AC	Runway Length with Gradient Adjustment	Wet Surface Landing Length for Jets (+15%) ¹	Final Runway Length
100% of small airplanes	3,800	N/A	N/A	3,800
100% of small airplanes (10+ seats)	4,300	N/A	N/A	4,300
75% of fleet at 60% useful load	4,752	5,214	5,464	5,500
100% of fleet at 60% useful load	5,628	6,090	5,500	6,100
75% of fleet at 90% useful load	6,908	7,370	7,000	7,400
100% of fleet at 90% useful load	8,848	9,310	7,000	9,300
¹ Max 5,500' for 60% useful load and max 7,000' for 90% useful load in wet conditions				
Note: All lengths are in feet				



Table 3G: Commercial Aircraft Takeoff Length Requirements

Aircraft	MTOW	Runway Length (ft) Needed At % Payload				
		60%	70%	80%	90%	100%
Embraer E170	79,344	3,500	3,900	4,400	4,900	5,300
Embraer E190	110,892	3,900	4,500	5,200	6,600	7,600
Boeing 737-600	144,500	4,100	5,000	5,900	6,600	7,600
Bombardier CRJ-700	75,000	4,300	4,800	5,400	5,600	6,000
Boeing 767-200	315,000	4,400	4,900	5,300	5,800	6,300
Boeing 757-200	240,000	4,800	5,300	5,800	6,500	7,800
Boeing 737-500	133,500	4,800	5,300	6,000	7,000	9,000
Bombardier CRJ-900	82,500	5,000	5,700	6,100	6,500	7,000
Boeing 737-700	154,500	5,000	5,900	6,800	8,000	10,100
Boeing 777-200	508,000	5,000	5,500	6,100	6,800	7,100
Boeing 757-300	255,000	5,100	5,800	6,300	7,000	7,800
Boeing 737-800	174,200	5,100	5,900	6,500	7,100	8,100
Boeing 747-SP	670,000	5,500	5,800	6,100	6,600	7,400
Boeing 767-300F	412,000	6,000	6,800	7,400	7,900	11,500
Boeing 767-400	450,000	6,800	7,800	8,500	9,600	11,700

Boldface indicates current critical design aircraft for Runway 4-22 length determination.

Calculation assumptions: 389.5' MSL field elevation; zero wind; zero gradient; dry surface; 86°F ambient temperature.

MTOW: Maximum Takeoff Weight



Exhibit 3D: Runway Length Analysis (Takeoff)

Aircraft	MTOW	Runway Length (ft.) Needed At % Useful Load				
		60%	70%	80%	90%	100%
Pilatus PC-12	9,921	2,119	2,292	2,473	2,663	2,861
Citation V	15,900	3,168	3,445	3,742	4,054	4,383
Citation CJ3	13,870	3,179	3,429	3,718	4,016	4,371
Citation Mustang	8,645	3,272	3,654	4,134	4,780	5,519
Citation Encore	16,630	3,316	3,685	4,030	4,445	4,915
King Air 200 GT	12,500	3,447	3,560	3,680	3,804	3,935
Citation CJ2	12,375	3,487	3,775	4,094	4,412	4,701
Citation II	13,300	3,499	3,871	4,248	4,646	5,063
King Air 350	15,000	3,617	3,776	3,966	4,275	4,656
Citation Sovereign	30,300	3,653	3,762	3,968	4,270	4,623
Citation Excel/XLS	20,200	3,768	4,072	4,412	4,744	5,141
Lear 31A	17,000	4,237	4,604	5,008	5,450	5,933
Beechjet 400A	16,300	4,250	4,574	4,893	5,227	5,714
Citation Bravo	14,800	4,292	4,617	4,980	5,399	5,862
Lear 40XR	21,000	4,353	4,655	5,039	5,454	5,836
Falcon 900EX	49,200	4,370	4,950	5,650	6,360	7,000
Premier 1A	12,500	4,419	4,945	5,563	6,241	6,945
Lear 45XR	21,500	4,490	4,846	5,272	5,715	6,151
Gulfstream V	90,500	4,522	5,072	5,899	6,901	8,050
Citation CJ1	10,600	4,527	5,297	6,162	7,113	8,127
Gulfstream 280	39,600	4,536	5,004	5,542	6,128	6,838
Global 5000	92,500	4,548	5,066	5,608	6,175	6,768
Hawker 4000	39,500	4,599	5,021	5,470	6,001	6,744
Falcon 7X	70,000	4,649	5,220	5,837	6,523	7,260
Lear 40	21,000	4,684	5,154	5,684	6,089	6,999
Gulfstream 450	74,600	4,684	5,161	5,702	6,277	6,904
Falcon 50 EX	41,000	4,690	5,199	5,737	6,304	6,826
Hawker 800/850 XP	28,000	4,722	5,166	6,141	Climb Limited	Climb Limited
Gulfstream IV	74,600	4,783	5,095	5,683	6,228	Climb Limited
Gulfstream 550	91,000	4,803	5,507	6,223	7,013	7,964
Challenger 300	38,850	4,866	5,336	5,825	6,338	6,873
Global Express	98,000	4,956	5,560	6,196	6,860	7,558
Lear 45	21,500	4,976	5,496	5,891	6,617	7,802
Falcon 2000	35,800	5,113	5,729	6,593	7,217	8,202
Gulfstream 650	99,600	5,119	5,639	6,236	6,926	7,719
Challenger 604/605	48,200	5,170	5,724	6,348	7,013	7,688
Citation III	21,500	5,170	5,743	6,366	Climb Limited	Climb Limited
CRJ-200	53,000	5,237	5,831	6,522	7,293	8,211
Challenger 601	45,100	5,240	5,850	6,520	7,400	8,470
Gulfstream 150	26,100	5,251	5,536	5,800	6,359	Climb Limited
Lear 55	21,500	5,270	5,878	6,670	7,741	Field Limited
Citation X	35,700	5,295	5,799	6,382	6,992	7,681
Citation VII	23,000	5,300	5,735	6,206	6,730	Climb Limited
Lear 60	23,500	5,606	6,212	6,857	7,521	8,358
Hawker 1000	31,000	5,610	6,290	6,970	Climb Limited	Climb Limited
Embraer 135	49,604	5,717	6,336	6,704	7,188	7,925
Lear 35A	19,600	5,765	6,541	7,375	Climb Limited	Climb Limited
Average Takeoff Length		4,518	4,973	5,490	5,928	6,476

Calculation assumptions: 389.5' MSL field elevation; 0.7% runway grade; 98.2°F ambient temperature.

Green figures are less than Runway 13-31.

Yellow figures are those that are greater than Runway 13-31 but less than Runway 4-22.

Red figures are greater than the available runway lengths at TXK.

Boldface indicates current critical design aircraft for Runway 13-31 length determination.

MTOW: Maximum Takeoff Weight.

Climb Limited: Minimum required one engine out climb performance not met

Field Limited: Takeoff field length limited

Source: Ultranan software; Coffman Associates analysis



Exhibit 3D: Runway Length Analysis (Landing)

Aircraft	MLW	Dry Runway Condition			Wet Runway Condition		
		Part 25	80% Rule	60% Rule	Part 25	80% Rule	60% Rule
King Air 200 GT	12,500	1,218	1,523	2,030			
Pilatus PC-12	9,921	2,372	2,965	3,953			
Citation II	12,700	2,467	3,084	4,112	5,961	7,451	9,935
Challenger 300	33,750	2,626	3,283	4,377	5,033	6,291	8,388
Hawker 800/850 XP	23,350	2,675	3,344	4,458	4,219	5,274	7,032
Global 5000	78,600	2,690	3,363	4,483	3,093	3,866	5,155
Global Express	78,600	2,690	3,363	4,483	3,093	3,866	5,155
Embraer 135	40,785	2,705	3,381	4,508	3,101	3,876	5,168
Gulfstream 550	75,300	2,794	3,493	4,657	5,380	6,725	8,967
Challenger 604/605	38,000	2,808	3,510	4,680	4,378	5,473	7,297
Gulfstream V	75,300	2,809	3,511	4,682	3,230	4,038	5,383
Citation Mustang	8,000	2,811	3,514	4,685	3,967	4,959	6,612
Lear 40	19,200	2,891	3,614	4,818	3,727	4,659	6,212
Lear 40XR	19,200	2,893	3,616	4,822	3,727	4,659	6,212
Lear 45	19,200	2,893	3,616	4,822	3,727	4,659	6,212
Lear 45XR	19,200	2,893	3,616	4,822	3,727	4,659	6,212
CRJ-200	47,000	2,930	3,663	4,883	5,616	7,020	9,360
Hawker 1000	25,000	2,934	3,668	4,890	4,014	5,018	6,690
Falcon 7X	62,400	2,944	3,680	4,907	3,386	4,233	5,643
Falcon 50 EX	35,715	2,949	3,686	4,915	3,392	4,240	5,653
King Air 350	15,000	3,002	3,753	5,003	3,452	4,315	5,753
Lear 31A	16,000	3,084	3,855	5,140	4,317	5,396	7,195
Falcon 2000	33,000	3,149	3,936	5,248	3,621	4,526	6,035
Citation Sovereign	27,100	3,216	4,020	5,360	4,174	5,218	6,957
Gulfstream 280	32,700	3,245	4,056	5,408	3,731	4,664	6,218
Citation CJ1	9,800	3,246	4,058	5,410	4,419	5,524	7,365
Gulfstream 450	66,000	3,285	4,106	5,475	5,964	7,455	9,940
Lear 35A	15,300	3,305	4,131	5,508	4,627	5,784	7,712
Citation V	15,200	3,307	4,134	5,512	4,897	6,121	8,162
Gulfstream 150	21,700	3,331	4,164	5,552	4,917	6,146	8,195
Challenger 601	36,000	3,349	4,186	5,582	4,019	5,024	6,698
Citation CJ3	12,750	3,368	4,210	5,613	4,600	5,750	7,667
Citation Encore	15,200	3,387	4,234	5,645	5,127	6,409	8,545
Lear 55	18,000	3,423	4,279	5,705	5,478	6,848	9,130
Citation VII	20,000	3,440	4,300	5,733	4,691	5,864	7,818
Hawker 4000	33,500	3,455	4,319	5,758	3,974	4,968	6,623
Premier 1A	11,600	3,464	4,330	5,773	4,497	5,621	7,495
Citation CJ2	11,500	3,549	4,436	5,915	5,113	6,391	8,522
Gulfstream IV	66,000	3,653	4,566	6,088	7,002	8,753	11,670
Lear 60	19,500	3,668	4,585	6,113	5,006	6,258	8,343
Citation Excel/XLS	18,700	3,714	4,643	6,190	5,921	7,401	9,868
Beechjet 400A	15,700	3,800	4,750	6,333	5,748	7,185	9,580
Citation Bravo	13,500	3,964	4,955	6,607	6,241	7,801	10,402
Gulfstream 650	83,500	4,086	5,108	6,810	5,301	6,626	8,835
Citation III	19,000	4,180	5,225	6,967	6,063	7,579	10,105
Falcon 900EX	44,500	4,251	5,314	7,085	4,251	5,314	7,085
Citation X	31,800	4,296	5,370	7,160	6,169	7,711	10,282
Average Landing Length		3,175	3,968	5,291	4,580	5,725	7,633

Calculation assumptions: 389.5' MSL field elevation; 0.7% runway grade; 98.2°F ambient temperature.

Green figures are less than Runway 13-31.

Yellow figures are those that are greater than Runway 13-31 but less than Runway 4-22.

Red figures are greater than the available runway lengths at TXK.

Boldface indicates current critical design aircraft for Runway 13-31 length determination.

MLW: Maximum Landing Weight

N/A: Aircraft landing length not adjusted for wet runway conditions

Source: Ultratnav software; Coffman Associates analysis

Exhibit 3F: Airside Facility Requirements

	AVAILABLE	SHORT TERM	LONG TERM			
RUNWAYS 	RDC C-II-2400 6,601' x 150' 50,000 lbs. S 86,000 lbs. D 120,000 lbs. 2D Standard RSA; Standard ROFZ; Foliage within ROFA RPZs partially owned, extends over private property, public roads	Runway 4-22 Maintain 7,101' x 150' Maintain Remove foliage within ROFA; Mitigate incompatibilities with extension Mitigate RPZ incompatibilities	RDC C-III-2400 Consider extensions up to 10,001' x 150' Consider width reduction to 100' if AIP funding is unavailable Consider 200,000 lbs. D 400,000 lbs. 2D 600,000 lbs. 3D 900,000 lbs. 2D2 Maintain corrected condition Maintain corrected condition			
	RDC B-II-5000 5,200' x 100' 25,000 lbs. S Standard RSA; Standard ROFA; Standard ROFZ RPZs partially owned, extends over public roads	Runway 13-31 Maintain Maintain Maintain Maintain Mitigate RPZ incompatibilities	RDC B-II-4000 Consider width reduction to 75' if AIP funding is unavailable 30,000 lbs. SWL 70,000 lbs. DWL Maintain Mitigate new RPZ incompatibilities with upgrading to RDC B-II-4000 standards			
	TAXIWAYS 	TDG 2B All taxiways at least 50' wide Main ramp provides direct access to runways Acute angle runway intersections - TWYs B, C Non-standard holding bay - TWY B High-energy runway crossings - TWYs A1, D1	Maintain Maintain Consider corrective measures Consider corrective measures Consider corrective measures Consider corrective measures	TDG 3 Maintain Maintain corrected condition Maintain corrected condition Maintain corrected condition Maintain corrected condition		
		NAVIGATIONAL AND APPROACH AIDS 	ILS or LOC - RWY 22 RNAV (GPS) with ½-mile Visibility Minimum - RWY 22 RNAV (GPS) with 1-mile Visibility Minimum - RWYs 4, 13, 31 LOC BC - RWY 4 VOR - RWY 13 MALSR - RWY 22 VASI-4 - RWY 4 PAPI-4 - RWYs, 13, 31 REILs - None ATCT ASOS Segmented Circle/Lighted Windcones	Maintain Maintain Maintain Maintain Maintain Maintain Consider PAPI-4 Maintain Consider REILs for RWYs 4, 13, 31 Maintain Relocate ASOS outside RVZ Relocate Segmented Circle/Wind Cone outside RVZ	Maintain Maintain Consider ¾-mile Visibility Minimums - RWYs 4, 13, 31 Maintain Maintain Maintain Maintain Maintain Maintain Maintain corrected condition Maintain corrected condition	
			LIGHTING, MARKING, AND SIGNAGE 	Rotating Beacon Precision Markings - RWY 4-22 Non-Precision Markings - RWY 13-31 HIRL - RWY 4-22 MIRL - RWY 13-31 RWY 4-22 Holding Position Markings, located 250' from centerline RWY 13-31 Holding Position Markings - located on turns, not parallel Lighted airfield location, directional, distance remaining signage	Maintain Maintain Maintain Maintain Maintain Maintain Consider corrective measures Maintain	Maintain Maintain Maintain Consider replacement with LED technology Consider replacement with LED technology Maintain Maintain corrected condition Consider replacement with LED technology
				KEY		
AIP - Airport Improvement Program ATCT - Airport Traffic Control Tower DME - Distance Measuring Equipment DOD - Department of Defense DWL - Dual Wheel Loading	DTWL - Dual Tandem Wheel Loading HIRL - High Intensity Runway Lighting HILS - High Altitude Instrument Landing System LED - Light Emitting Diode LOC - Localizer			MALSR - Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights NDB - Non-Directional Beacon PAPI - Precision Approach Path Indicator PFC - Passenger Facility Charge	RDC - Runway Design Code REIL - Runway End Identification Light RNAV - Area Navigation RSA - Runway Safety Area ROFA - Runway Object Free Area	ROFZ - Runway Obstacle Free Zone S - Single Wheel Loading SWL - Single Wheel Loading TACAN - Tactical Air Navigational Aid TDG - Taxiway Design Group

Exhibit 3G: Terminal Requirements

	Unit	Available	Short Term	Intermediate Term	Long Term
Enplanements		35,699	39,080	42,412	48,789
DEPARTURE PROCESSING					
<i>Ticket Counters</i>					
Counter Frontage	lf	60	6	18	18
Airline Ticketing	sf	647	70	200	200
Ticketing Queuing	sf	2,237	575	1,104	1,195
Airline Offices	sf	1,013	250	740	740
Agent Positions	#	6	1	3	3
Kiosk Positions	#	4	1	1	2
Outbound Baggage	sf	1,486	290	860	860
EDS Automated Machines	#	1	1	1	1
<i>Security</i>					
Security Queuing	sf	1,232	130	280	310
Security Screening Lanes	#	1	1	1	1
Security Screening	sf	2,223	875	875	875
TSA Office Space	sf	736	700	700	700
Walk-thru Metal Detectors (WTMD)	#	1	1	1	1
Whole Body Imagers (WBI)	#	1	1	1	1
Bag X-Ray Machines	#	1	1	1	1
CONCOURSE FACILITIES					
<i>Passenger Holdrooms</i>					
Gates	#	2	2	2	2
Gate Check-In	sf	1,000	584	584	584
Holdroom	sf	2,260	1,000	1,000	1,100
Concourse Circulation	sf	1,651	924	1,414	1,498

Note: **Red** indicates demand is greater than available capacity

Exhibit 3G: Terminal Requirements

	Unit	Available	Short Term	Intermediate Term	Long Term
ARRIVALS PROCESSING					
Inbound Baggage	sf	1,420	366	915	1,098
Baggage Claim Display Frontage	lf	80	20	50	60
Claim Device Floor Area	sf	480	100	250	300
Baggage Claim Lobby	sf	1,650	830	1,780	1,940
PUBLIC SPACES					
Greeting Lobby/Circulation	sf	10,021	3,280	7,040	7,680
Restrooms	sf	1,928	530	1,140	1,250
Food/Beverage/Retail	sf	798	710	760	880
Rental Car Counter Frontage	lf	36	10	20	20
Rental Car Counter & Office Space	sf	435	150	300	300
Rental Car Queuing	sf	450	80	160	160
ADDITIONAL OFFICE SPACES					
Administrative Offices	sf	1,798	1,798	1,798	1,798
FUNCTIONAL AREA TOTAL	sf	33,465	13,242	21,900	23,468
<i>Building Systems/Support</i>					
HVAC/Mechanical/Server Room	sf	1,738	1,059	1,752	1,877
TOTAL TERMINAL	sf	35,203	14,301	23,652	25,345

Note: **Red** indicates demand is greater than available capacity



Figure 3A: Terminal Apron Parking

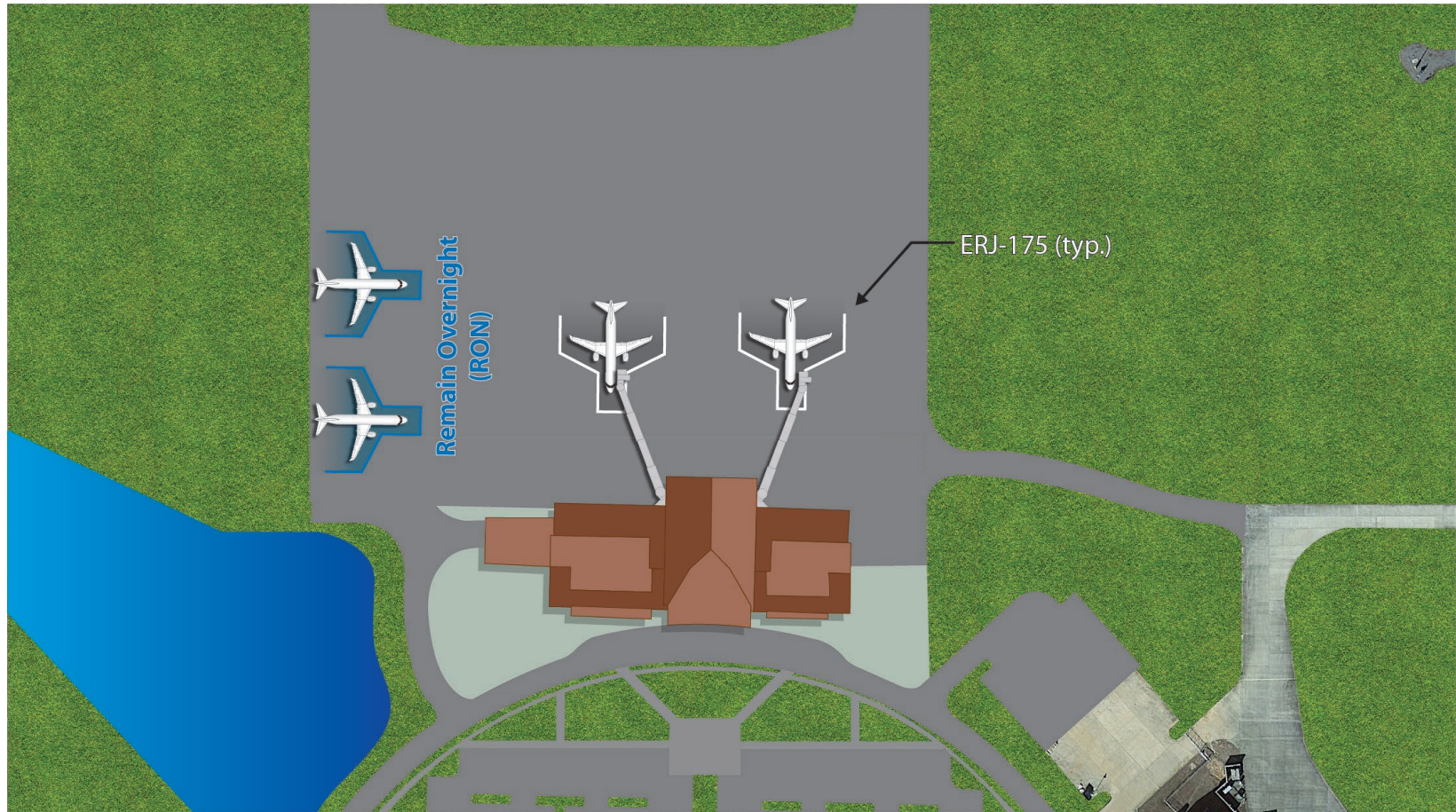




Exhibit 3H: Landside Facility Requirements

	AVAILABLE	SHORT-TERM	INTERMEDIATE TERM	LONG-TERM
--	-----------	------------	-------------------	-----------

AIRCRAFT STORAGE HANGARS				
T-Hangar Area (sf)	55,900	55,900	57,300	58,700
Conventional Hangar Area (sf)	125,600	137,600	140,600	152,600
Total Hangar Storage Area (sf)	181,500	193,500	197,900	211,300



AIRCRAFT PARKING APRON				
Local Apron Area (sy)	41,400	6,500	7,000	7,000
Transient Apron Area (sy)	13,000	32,600	33,600	36,400
Total Apron Area (sy)	54,400	39,100	40,600	43,400



GENERAL AVIATION TERMINAL FACILITY AND AUTOMOBILE PARKING				
Building Space (sf)	2,000	3,200	4,100	5,000
Parking Spaces	200+	102	123	148



SUPPORT FACILITIES				
14-Day Fuel Storage, Jet A	40,000	33,054	37,352	43,610
14-Day Fuel Storage, AvGas (100LL)	13,200	1,960	1,988	2,086
ARFF Index	A	ARFF Index B		



Red numbers indicate a deficiency in meeting demand.



Chapter Four

Alternatives



Airside Planning Considerations

- Meet runway design code (RDC) C-III-2400 standards on Runway 4-22
- Meet RDC B-II-4000 standards on Runway 13-31
- Extend Runway 4-22 to more safely accommodate larger commercial aircraft
- Increase strength rating on both Runway 4-22 and 13-31
- Relocate Automated Surface Observing System (ASOS) and Segmented Circle/Wind Cone outside the runway visibility zone (RVZ)
- Consider corrective measures for non-standard taxiway design



Exhibit 4A: Airside Alternative 1

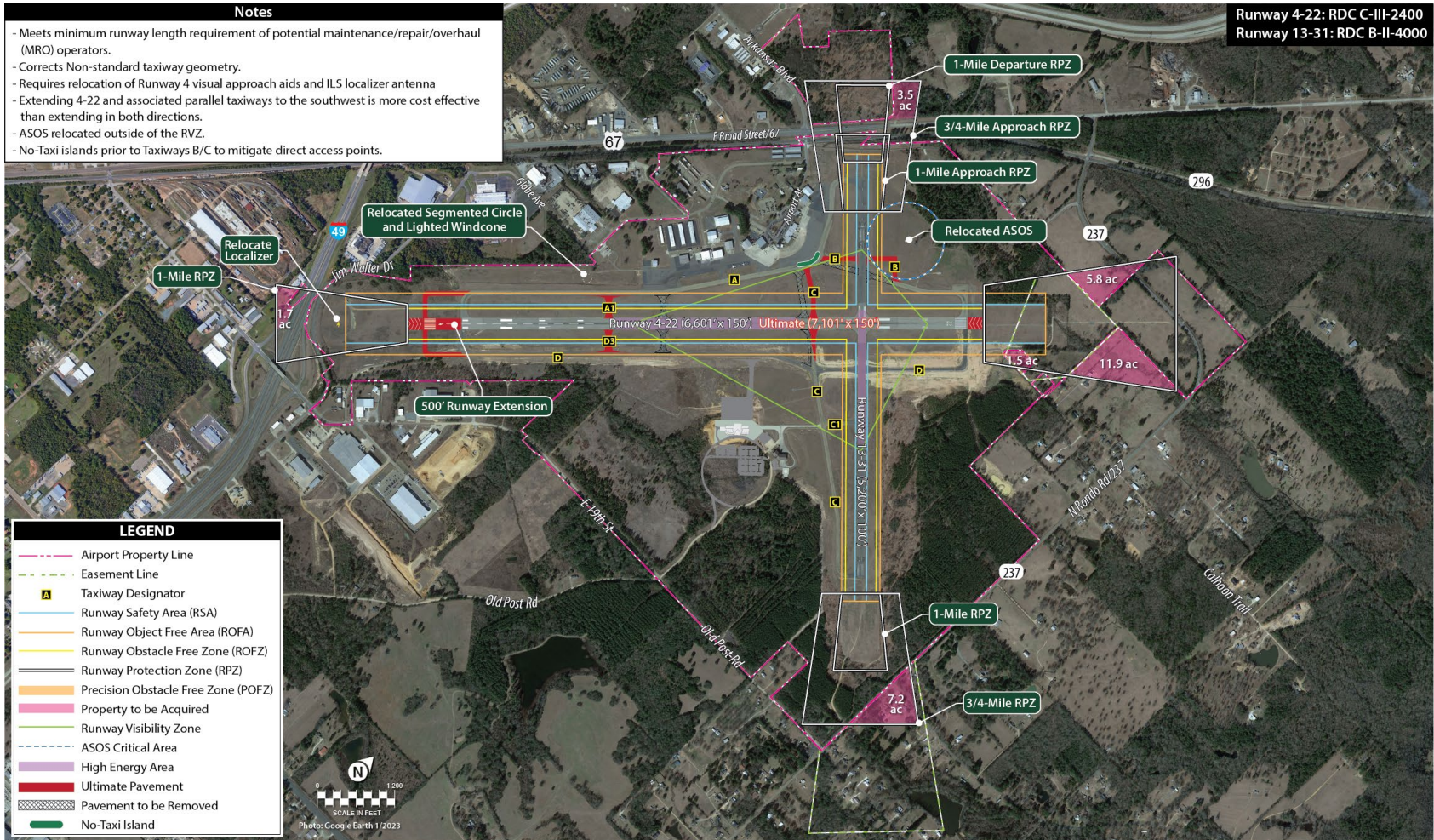


Exhibit 4B: Airside Alternative 2

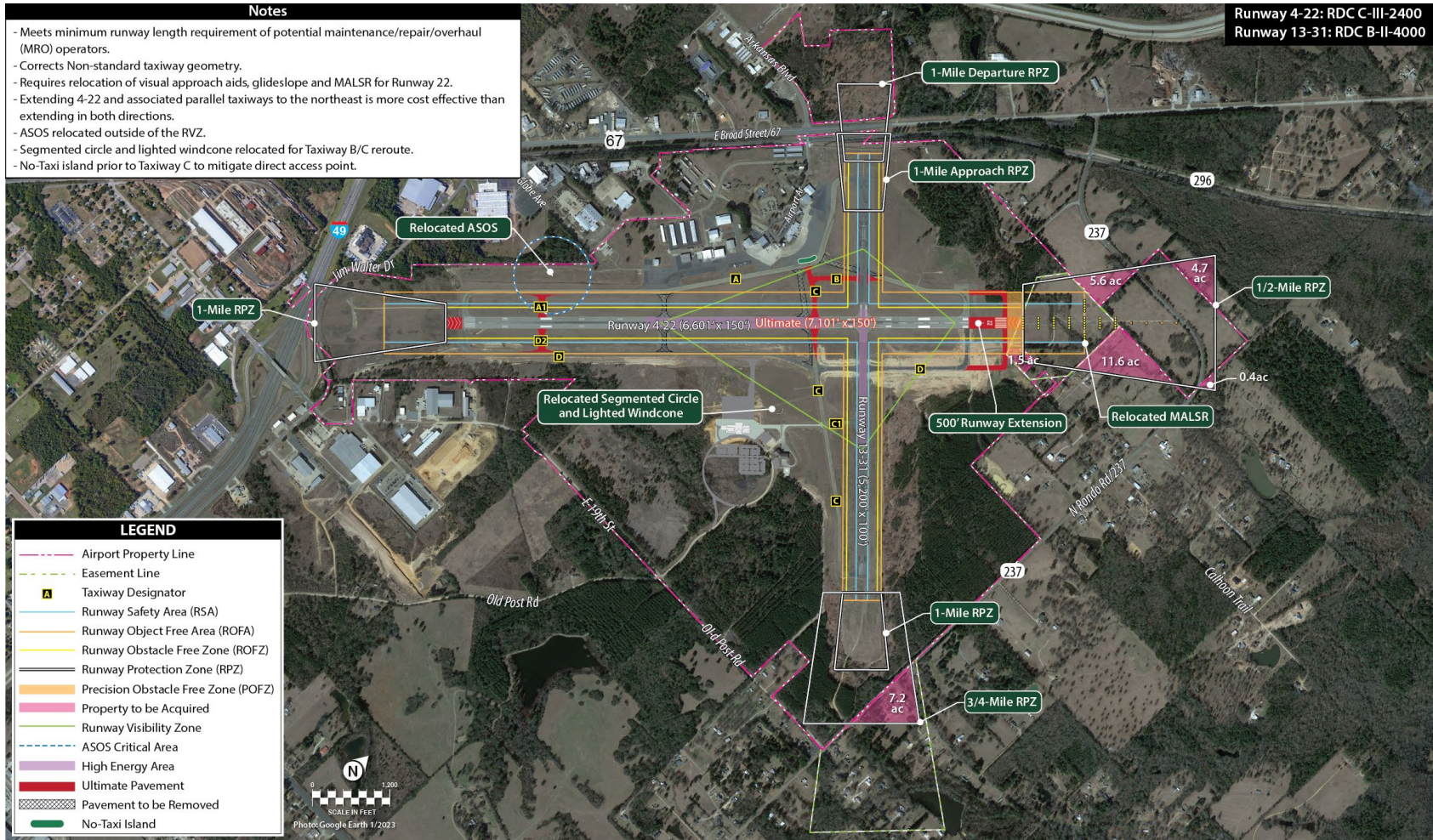


Exhibit 4C: Airside Alternative 3

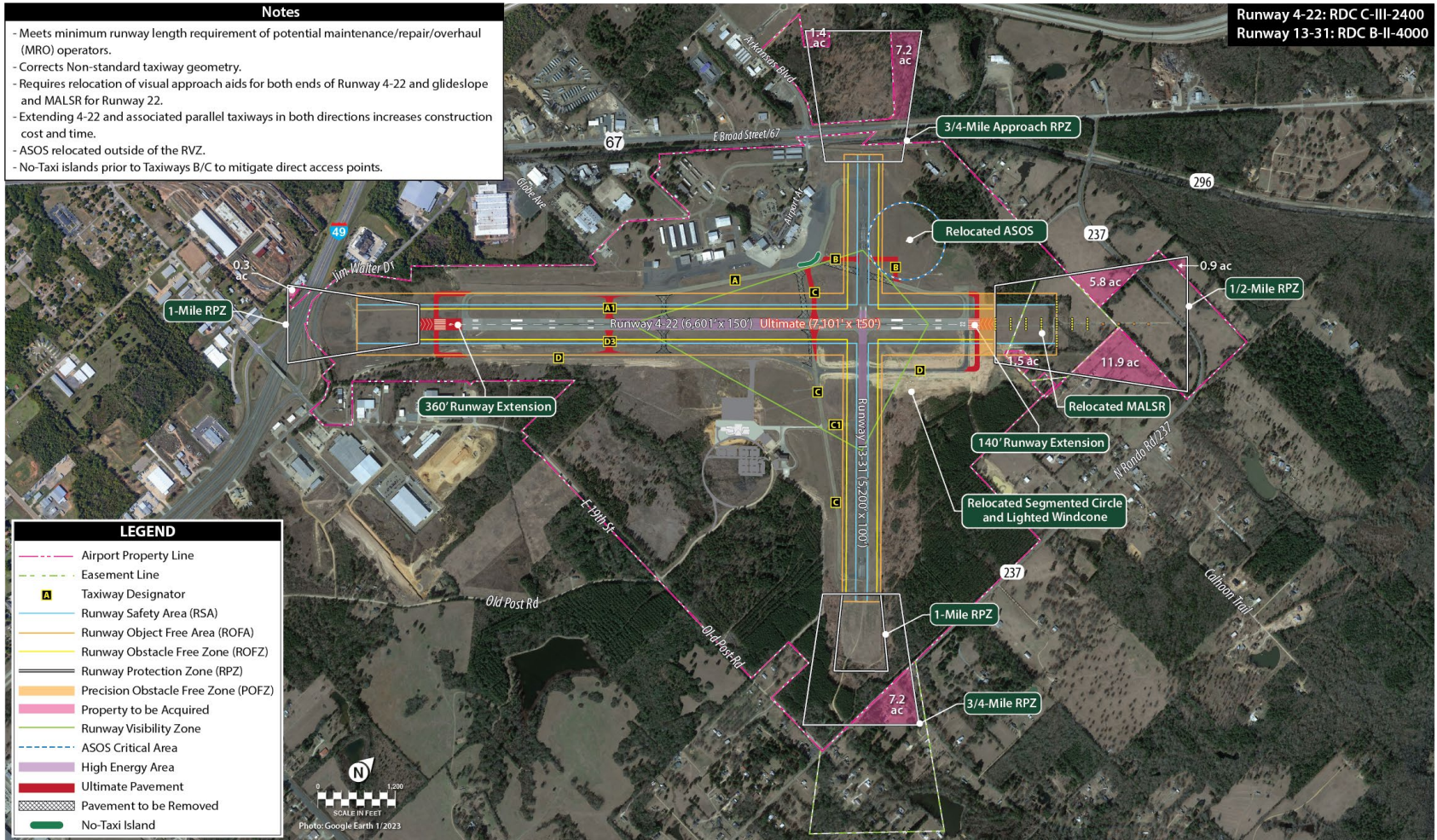


Exhibit 4D: Airside Alternative 4

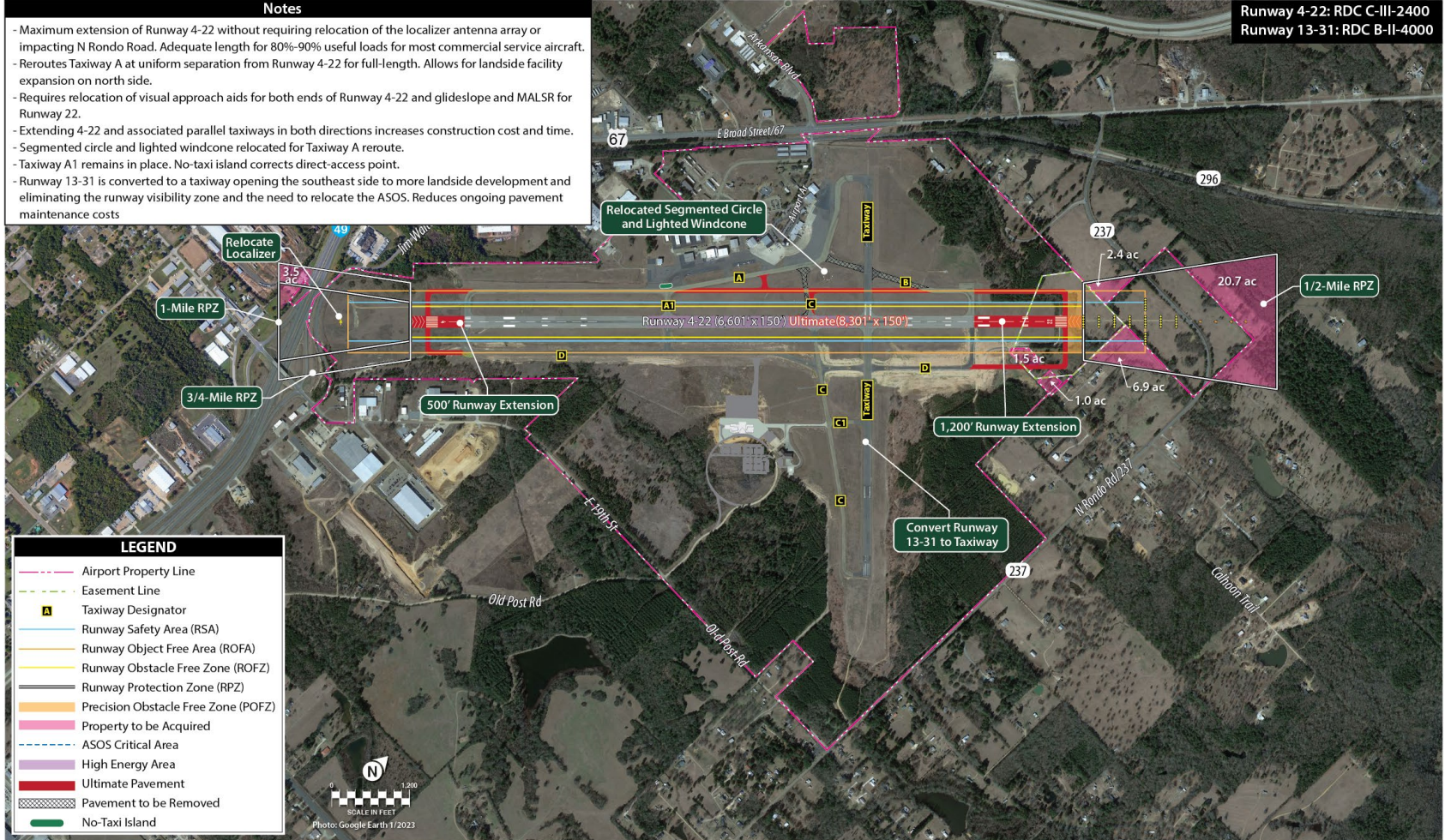
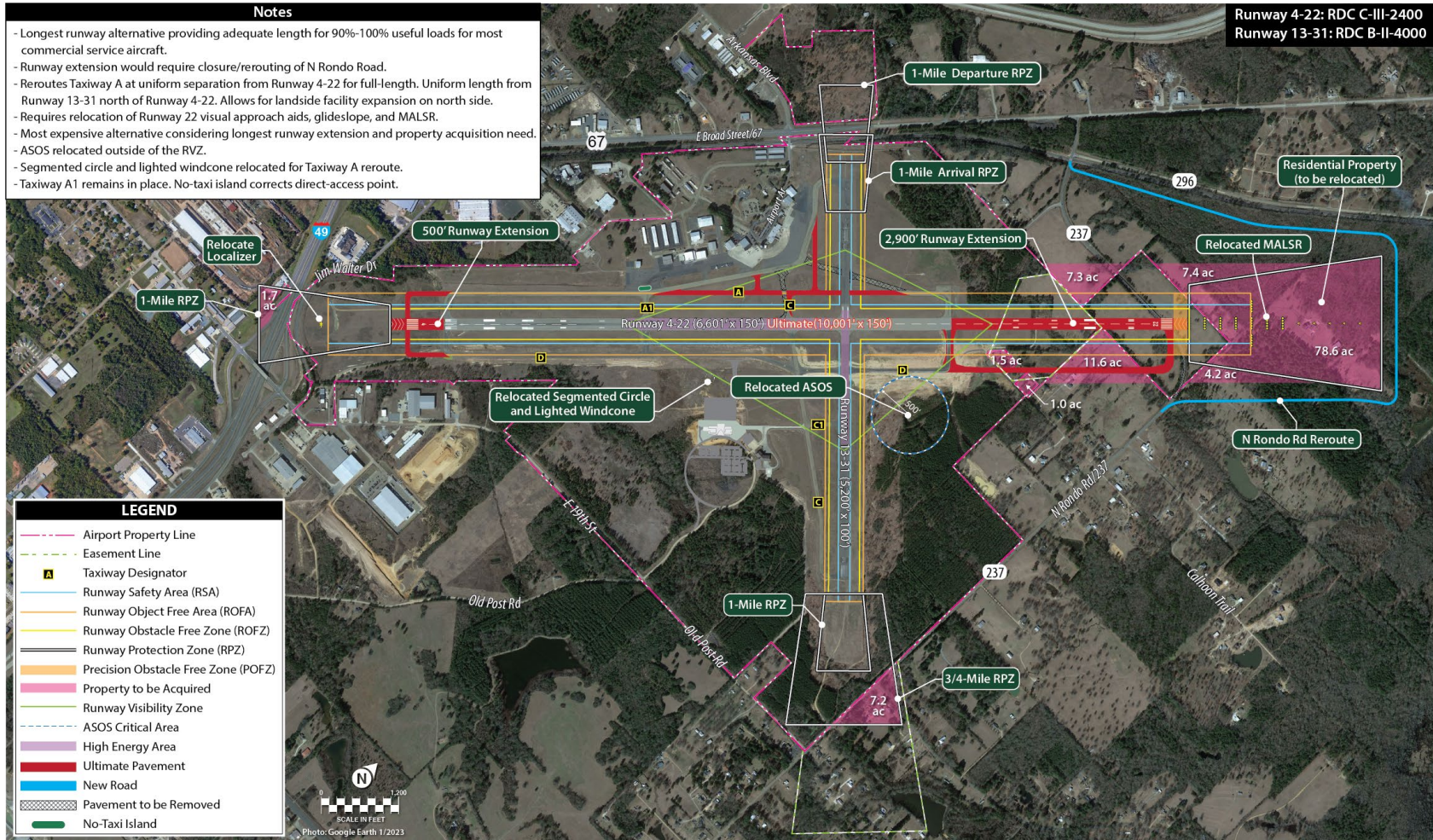


Exhibit 4E: Airside Alternative 5



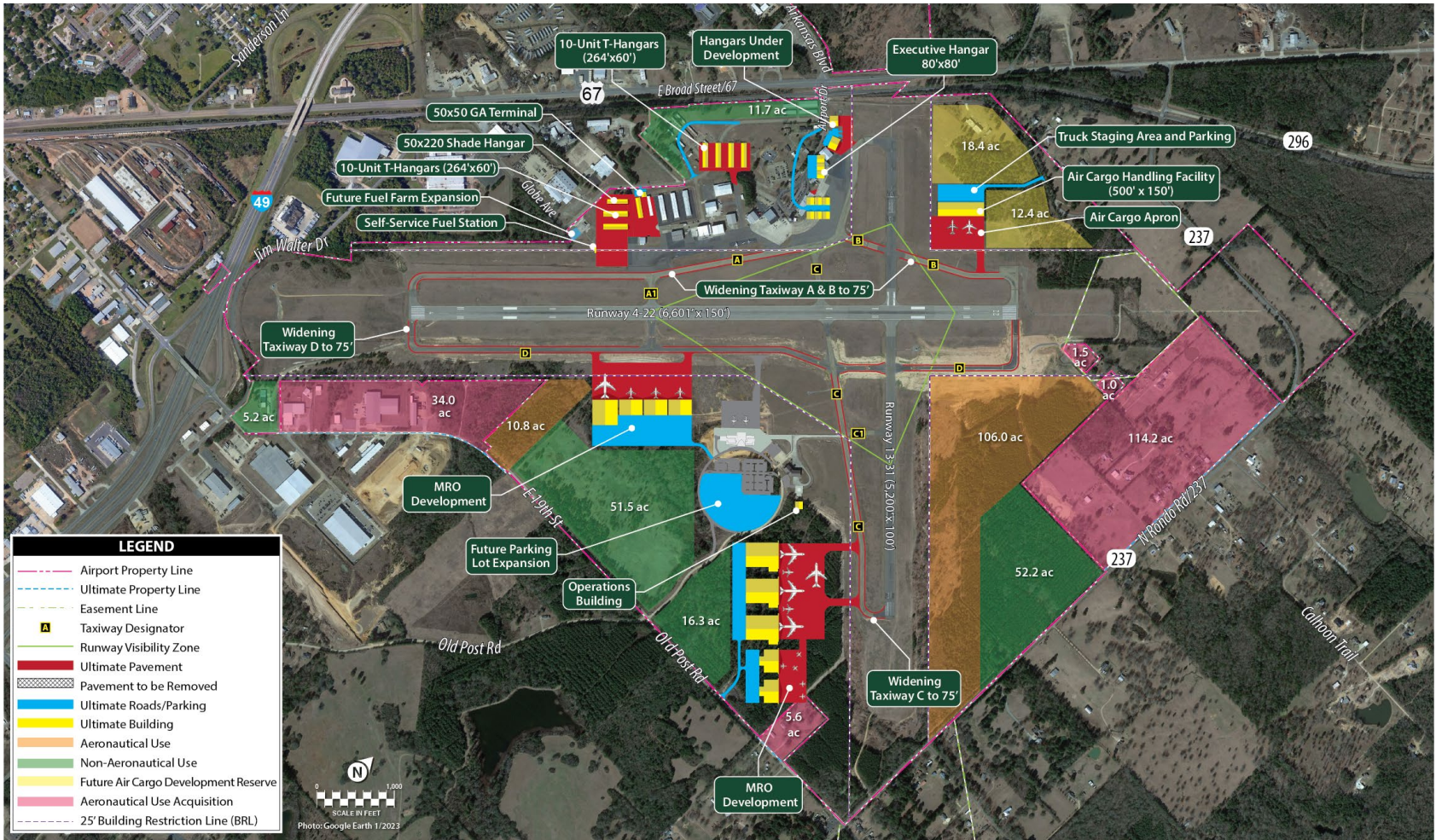


Landside Planning Considerations

- Terminal area improvements
- Identify locations for hangar development
- Development potential for FBO or specialized aviation service operators (SASO)-related facilities
- Identify locations for incoming large-scale maintenance/repair/overhaul (MRO) businesses
- Development potential for future air cargo operations
- Non-aviation use development for revenue enhancement
- Identify land areas optimal for future acquisition



Exhibit 4F: Landside Alternative 1





10-Unit T-Hangars
(264'x60')

Hangars Under
Development

67

E Broad Street/67

11.7 ac

50x50 GA Terminal

50x220 Shade Hangar

10-Unit T-Hangars (264'x60')

Future Fuel Farm Expansion

Self-Service Fuel Station

Globe Ave

A1

Widening Taxiway

A

DX

Ark

Exhibit 4G: Landside Alternative 2

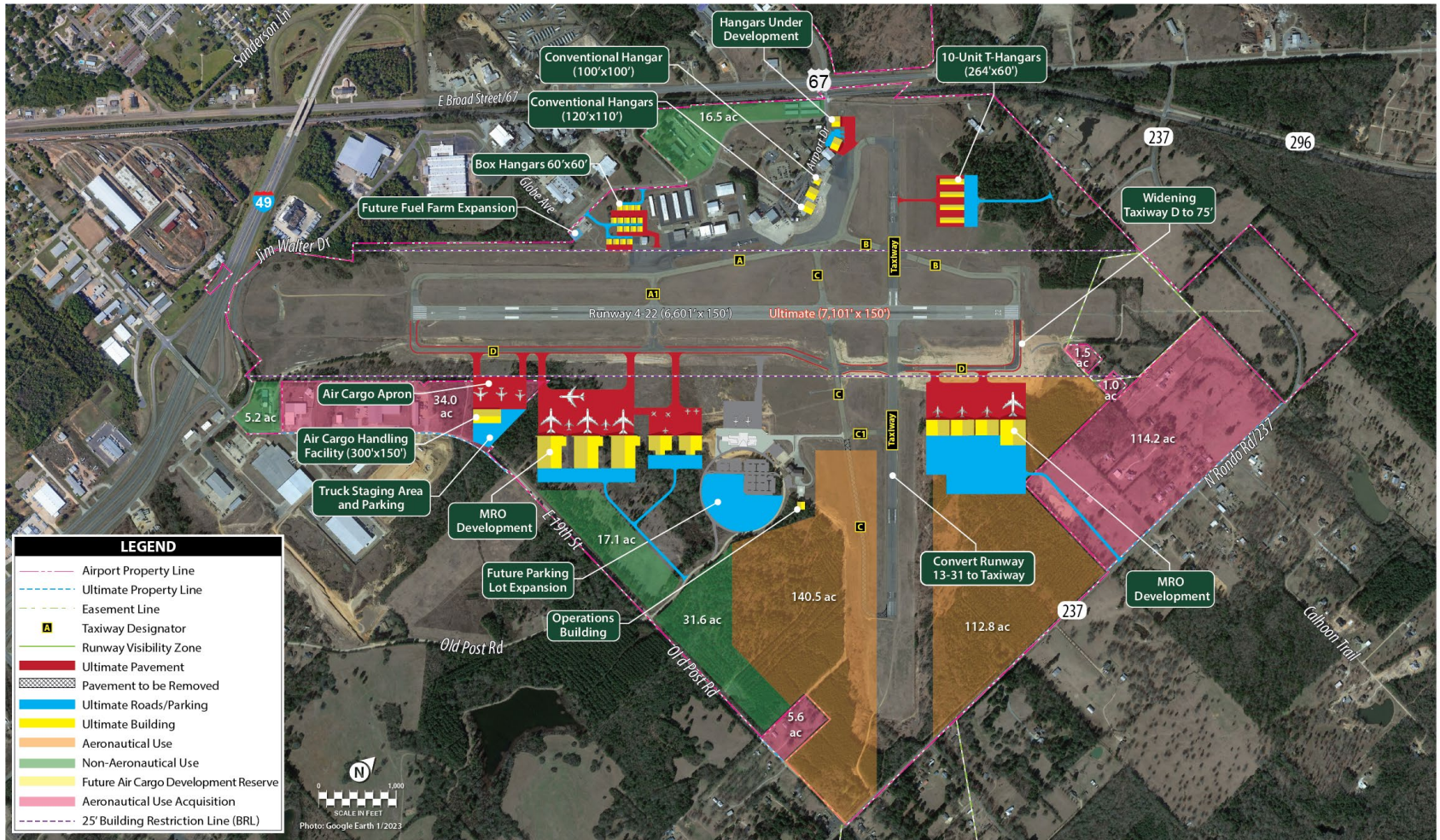
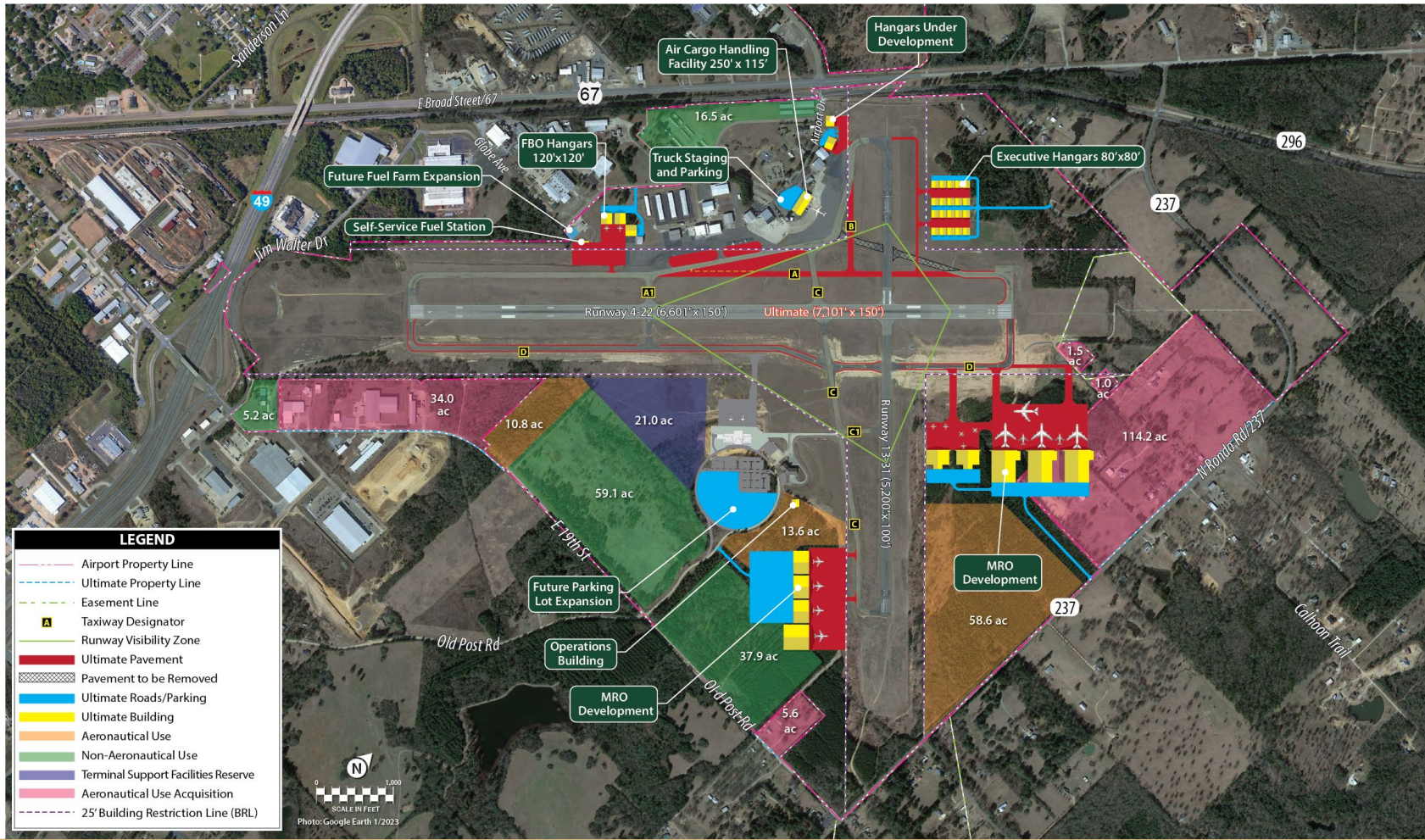
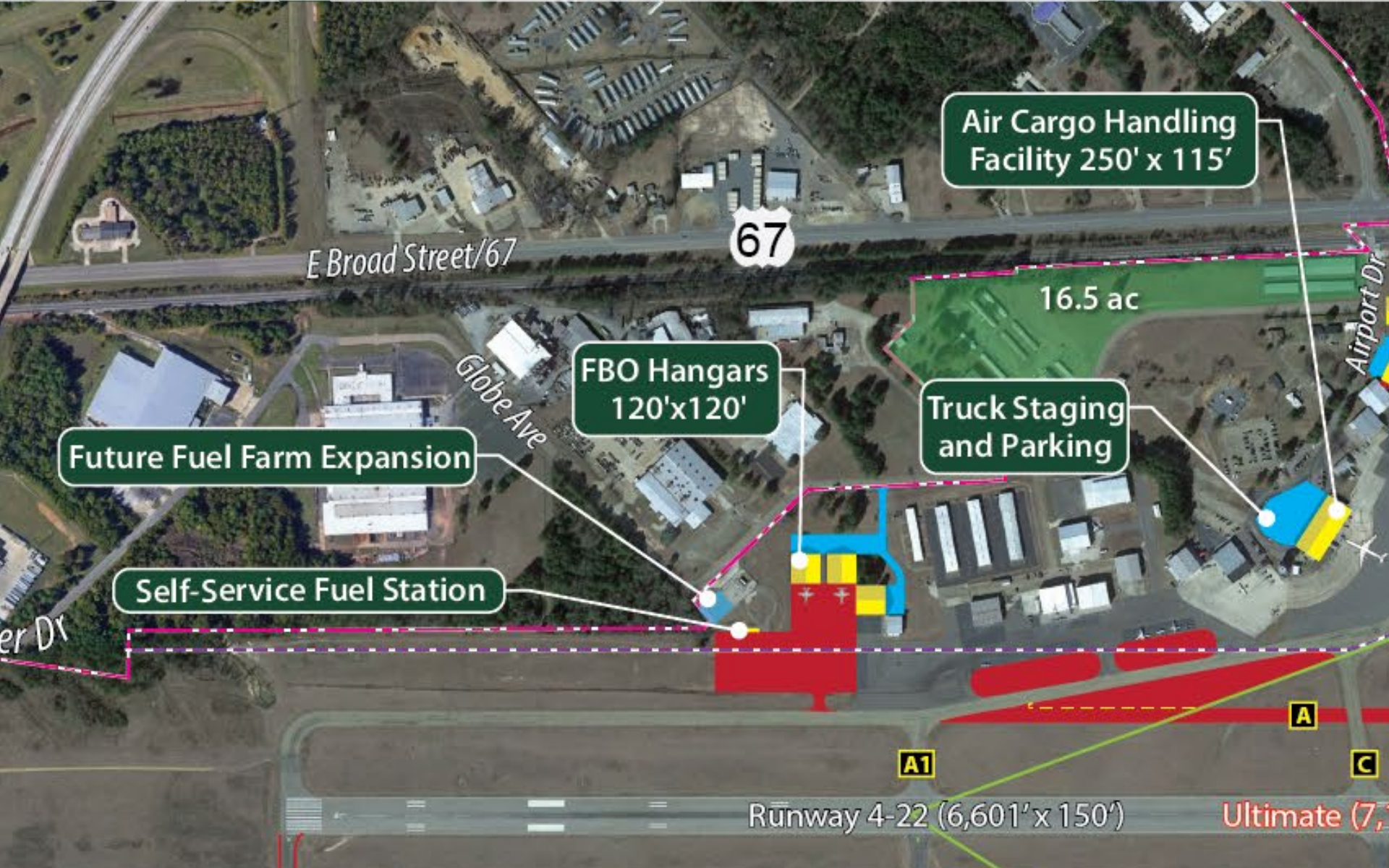




Exhibit 4H: Landside Alternative 3





Air Cargo Handling Facility 250' x 115'

67

E Broad Street/67

16.5 ac

FBO Hangars 120'x120'

Truck Staging and Parking

Future Fuel Farm Expansion

Globe Ave

Self-Service Fuel Station

er Dr

Airport Dr

A1

A

C

Runway 4-22 (6,601' x 150')

Ultimate (7,

TXK Cargo Air Service Development Feasibility Study



July 12, 2023

Background and Objectives

- Assess the current situation for air cargo at TXK
- Analyze the regional air cargo market
- Determine the feasibility for air cargo services at TXK
- Develop long-term air cargo forecasts based on the findings of the Study

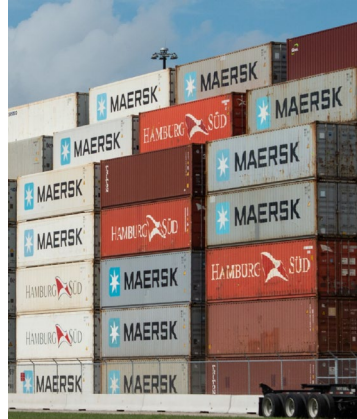
Industry trends

E-commerce Evolution



- Pandemic-era high growth
- Post-pandemic slower growth
- Cyclical environment and maturing industry

Supply Chain Constraints



- Widespread crisis has passed, pockets of disruption remain
- System remains fragile
- Air cargo adds to portfolio
- New air cargo entrants innovate

Smaller Airport Activity



- Secondary airports have proven their advantages and long-term value
- Potential for volatility
- Assess two-way flows

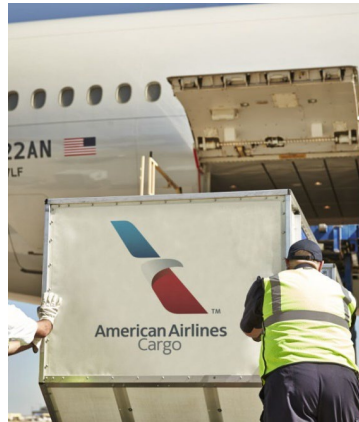
Industry trends

Carrier Strategies



- Economic cycle leads to cost-cutting and potentially permanent structural change
- Pilot shortage and cost impacts

Belly Cargo Emphasis



- Importance of cargo revealed during pandemic
- Commitments to continue cargo focus
- Cargo influences route development

Nearshoring



- Real-time situation with potentially major long-term implications
- Possibilities of smaller aircraft service on international routes serving smaller U.S. airports

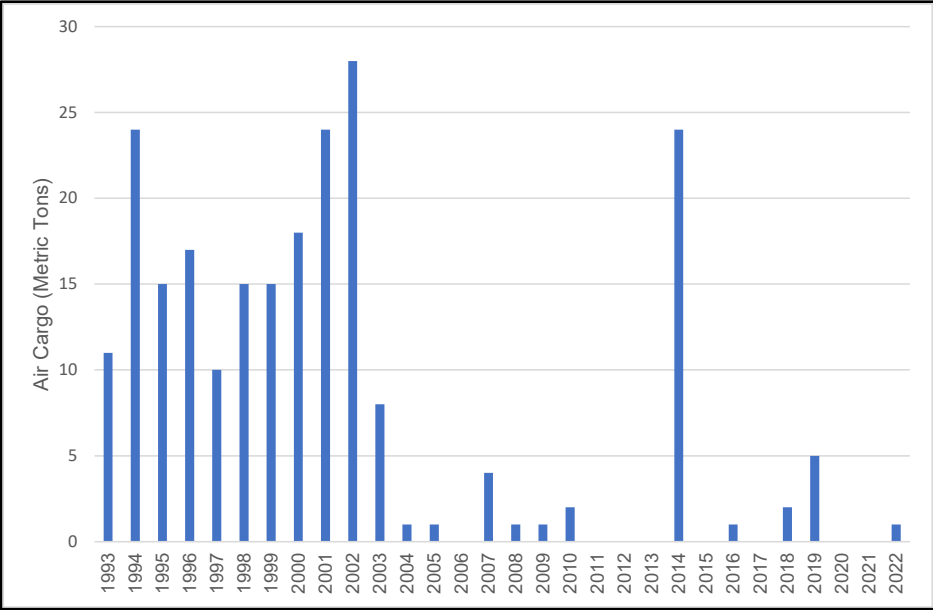
Current Situation of Air Cargo at TXK

- No current air cargo operators
- Passenger aircraft (regional jets) have minimal air cargo capacity
- No current air cargo facility
- Land acquisition south of new passenger terminal site could accommodate air cargo operations
- Improves trucking access to I-49
- Primary runway 6,601 ft can handle narrowbody aircraft

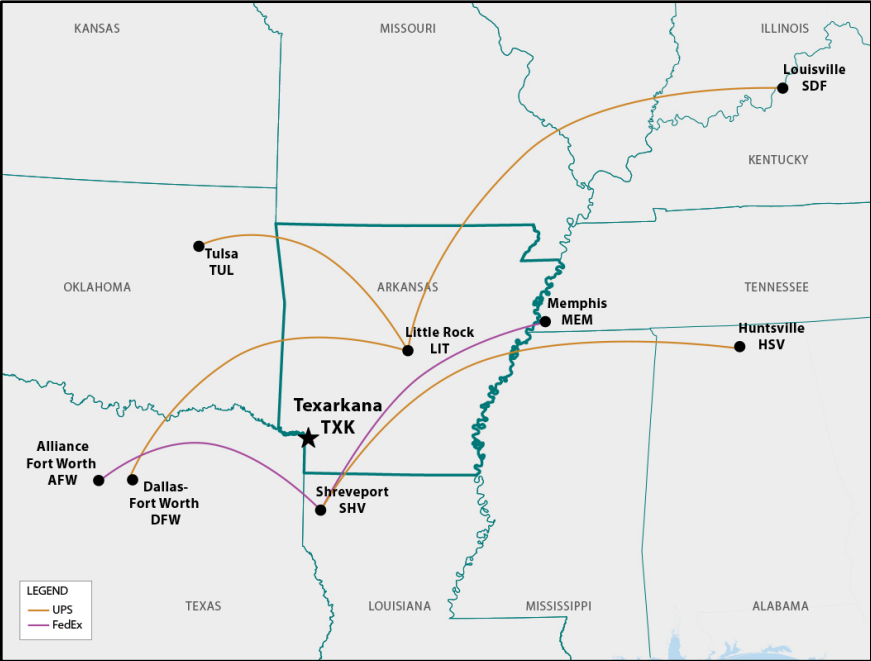


Current Situation of Air Cargo at TXK

TXK Air Cargo Tonnage (1993-2022)



Primary Air Cargo Routes Operated by FedEx and UPS at Nearby Airports

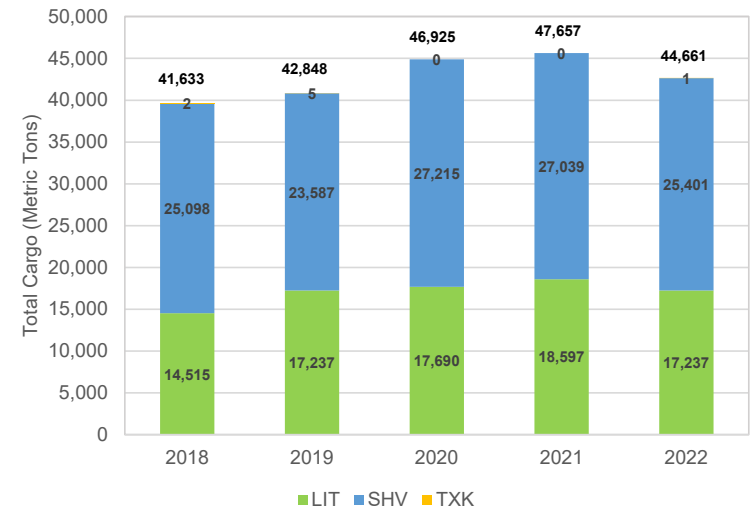


Regional Market Overview

Demand Drivers for Air Cargo Services

- Business and consumer activity in the relevant market area
- Traditional air cargo shipments – high value, low weight, time-sensitive
- Air cargo shipments for the TXK region include: e-commerce, machine and industrial parts, pharmaceuticals, medical supplies, biologics and tissue samples, electronics and documents

Air Cargo Tonnage in TXK, SHV, LIT Region (2018-2022)



Regional Market Overview

Logistics and Manufacturing Centers with Proximity to TXK



Relevant Carriers and Outlook for TXK



- In early stages of massive restructuring combining FedEx Express and FedEx Ground
 - Increasing ground operations, reducing flights, retiring jet aircraft - but adding smaller planes
 - TXK located less than 1.5 hours to FedEx at SHV and less than 3.5 hours from AFW hub
-



- Current initiatives to cut costs, improve network efficiencies and improve customer service
 - Ongoing moratorium on capital spending at existing airport facilities
 - Still aligned with Amazon Air, but increasing head-to-head competition could lead to tensions
-



- As a German company, cannot serve U.S. domestic market -- international shipments only in U.S.
 - Serve e-commerce companies and large industrial companies (e.g. automotive)
 - Typically utilize B767 aircraft which currently cannot operate at TXK due to runway length
-



- Serves over 50 U.S. cities with a variety of aircraft
 - Critical requirement for Amazon Air service is nearby presence of a large fulfillment center
 - Recently ended contract with airline operating to small airports from AFW
-

TXK Master Plan - SWOT

STRENGTHS

- Efficiencies from uncongested airport environment
- Nearby access to interstate highway system (I-49, I-30, I-20)
- Available airport land for cargo-related development with no constraints
- Progressive airport management seeks growth beyond traditional operations
- Aggressive Economic Development group seeks opportunities aligned with air cargo growth

WEAKNESSES

- No current cargo operations at TXK
- No available cargo facility for potential new operators
- Existing runways lack the required length and strength to accommodate certain common freighter aircraft
- No existing cargo ramp for freighter aircraft
- Lack of belly cargo capacity on passenger aircraft serving TXK

TXK Master Plan - SWOT

OPPORTUNITIES

- Economic Development positioning to attract automotive manufacturer to Texarkana
- Potential for new domestic heavy freight air cargo operator in the U.S. domestic market
- Diversified group of companies at nearby TexAmericas Center may generate air cargo demand
- Potential for e-commerce fulfillment centers at nearby logistics parks which can generate air cargo demand

THREATS

- No current manufacturer of air-eligible commodities in Texarkana region
- Lack of concentrated and consistent demand for air cargo services
- TXK close to existing airports with integrated express and international cargo services
- Small regional population constrains consumer demand
- No large nearby Amazon fulfillment center in close proximity to TXK

Potential Air Cargo Development Opportunities

- **Integrated Express Carrier**

- Even with current lack of expansion, still present lowest hurdle for potential air cargo service at TXK
- Regularly operate in smaller communities with smaller aircraft
- Operational profile matches existing cargo capabilities at TXK

- **E-commerce Carrier**

- Amazon Air likely to continue expanding U.S. network; monitor fleet strategies
- Pursuit of large e-commerce fulfillment centers may lead to interest in TXK air cargo operations

- **General Cargo Freighter**

- Potential initiation of a General Cargo Freighter operation in the U.S. Domestic market
- Generally utilize larger aircraft requiring longer runways
- Pursuit of large manufacturers (e.g. automotive industry) and runway extension may enable cargo ops



Questions?



NEXT STEPS

NOTICE OF PUBLIC INFORMATION WORKSHOP

Regarding the ongoing



TEXARKANA
REGIONAL AIRPORT
AIRPORT MASTER PLAN

WEDNESDAY, JULY 12, 2023
5:30-6:30 PM

TEXARKANA CONVENTION CENTER
HILTON GARDEN INN TEXARKANA
2910 S COWHORN CREEK LOOP
TEXARKANA, TX 75503

EVERYONE WELCOME!

FOR MORE INFORMATION, PLEASE CONTACT:
PAUL MEHRlich
AIRPORT DIRECTOR
(870) 774-2171
DIRECTOR@TXK.AIRPORT.COM
WWW.TXK.AIRPORTSTUDY.NET

Public Information Workshop TONIGHT

Incorporation of Comments/Feedback

Ch5 – Recommended Concept

Ch6 – Capital Improvement Program

Next Meeting ≈ October/November



THANK YOU!

