



Redding Regional Airport



Airport Master Plan

AGENDA

Planning Advisory Committee (PAC)

Meeting #2

Thursday, October 26, 2023

1:30 pm

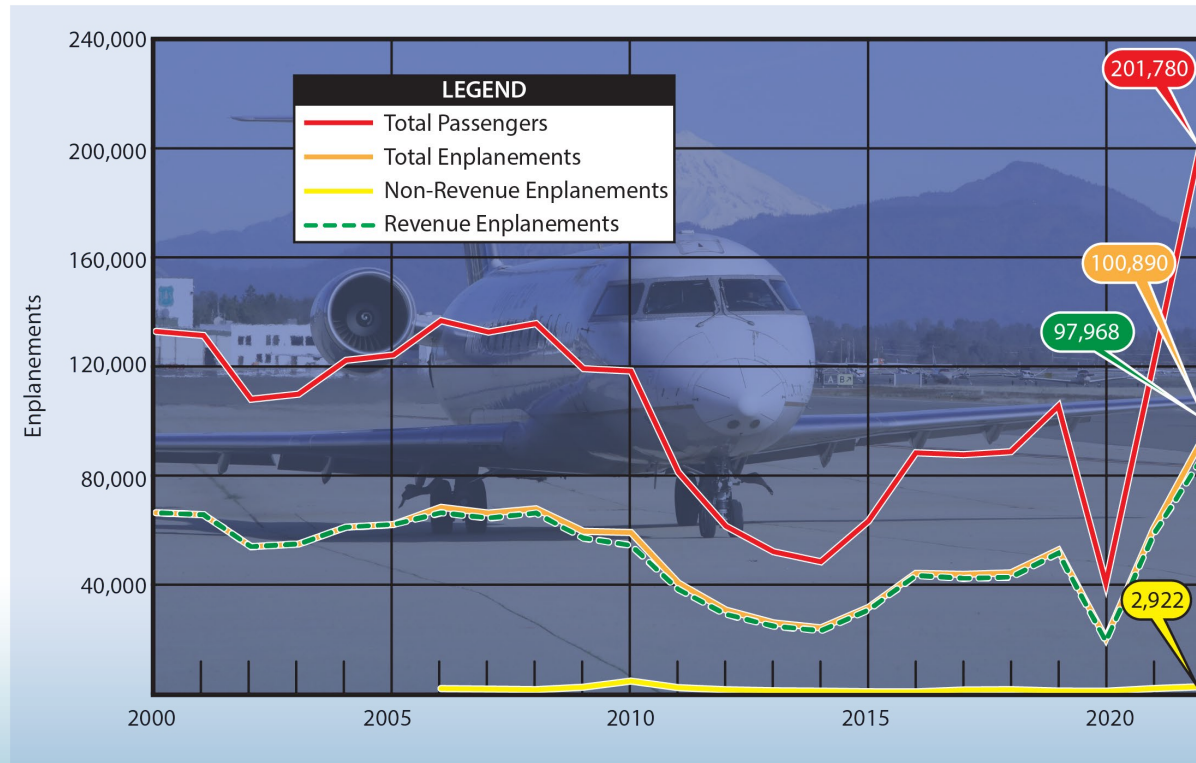
Redding Electrical Utility – Shasta Conference Room

1. Welcome/Introductions
2. Review of the Master Plan Process
3. Inventory
4. Forecasts
5. Discussion

MASTER PLAN PROCESS



Historical Enplanement Data

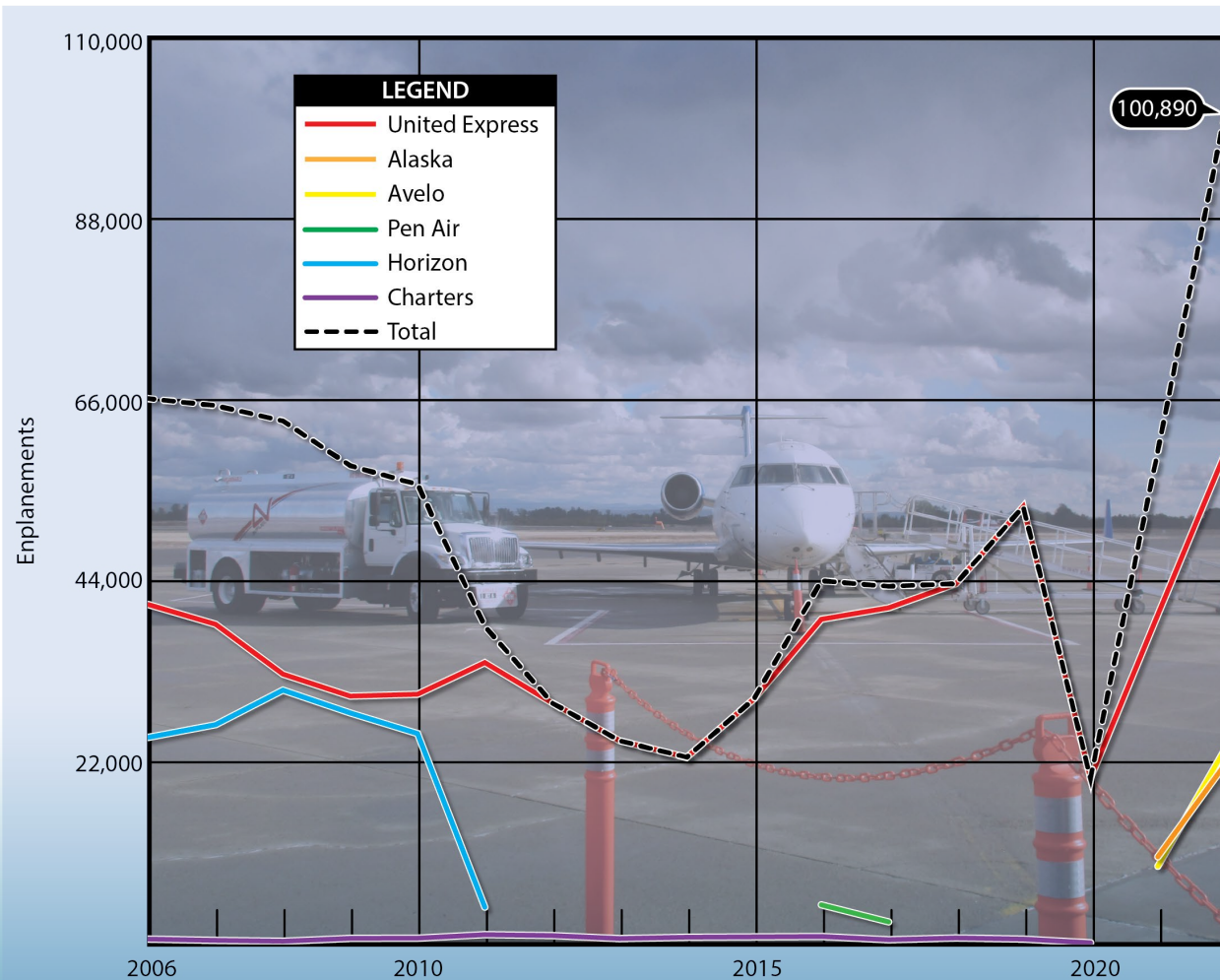


Year	Revenue Enplanements ¹	Non-Revenue Enplanement ²	Total Enplanements	Total Passengers ³
2022	97,968 ²	2,922	100,890	201,780
2021	58,295	1,997	60,292	120,584
2020	19,270	1,016	20,286	40,572
2019	51,639	1,087	52,726	105,452
2018	42,775	1,601	44,376	88,752
2017	42,361	1,466	43,827	87,654
2016	43,414	769	44,183	88,366
2015	30,852	821	31,673	63,346
2014	23,170	1,044	24,214	48,428
2013	24,875	1,184	26,059	52,118
2012	29,175	1,561	30,736	61,472
2011	38,290	2,316	40,606	81,212
2010	54,420	4,732	59,152	118,304
2009	57,094	2,495	59,589	119,178
2008	66,239	1,598	67,837	135,674
2007	64,478	1,799	66,277	132,554
2006	66,390	1,986	68,376	136,752
2005	62,085		62,085	124,170
2004	61,113		61,113	122,226
2003	54,921		54,921	109,842
2002	53,987		53,987	107,974
2001	65,666		65,666	131,332
2000	66,405		66,405	132,810

Sources: ¹Air Carrier Activity Information System (ACAIS) - FAA ²Airport records.

³Total enplanements times two(2)

Yearly Enplanements by Airline

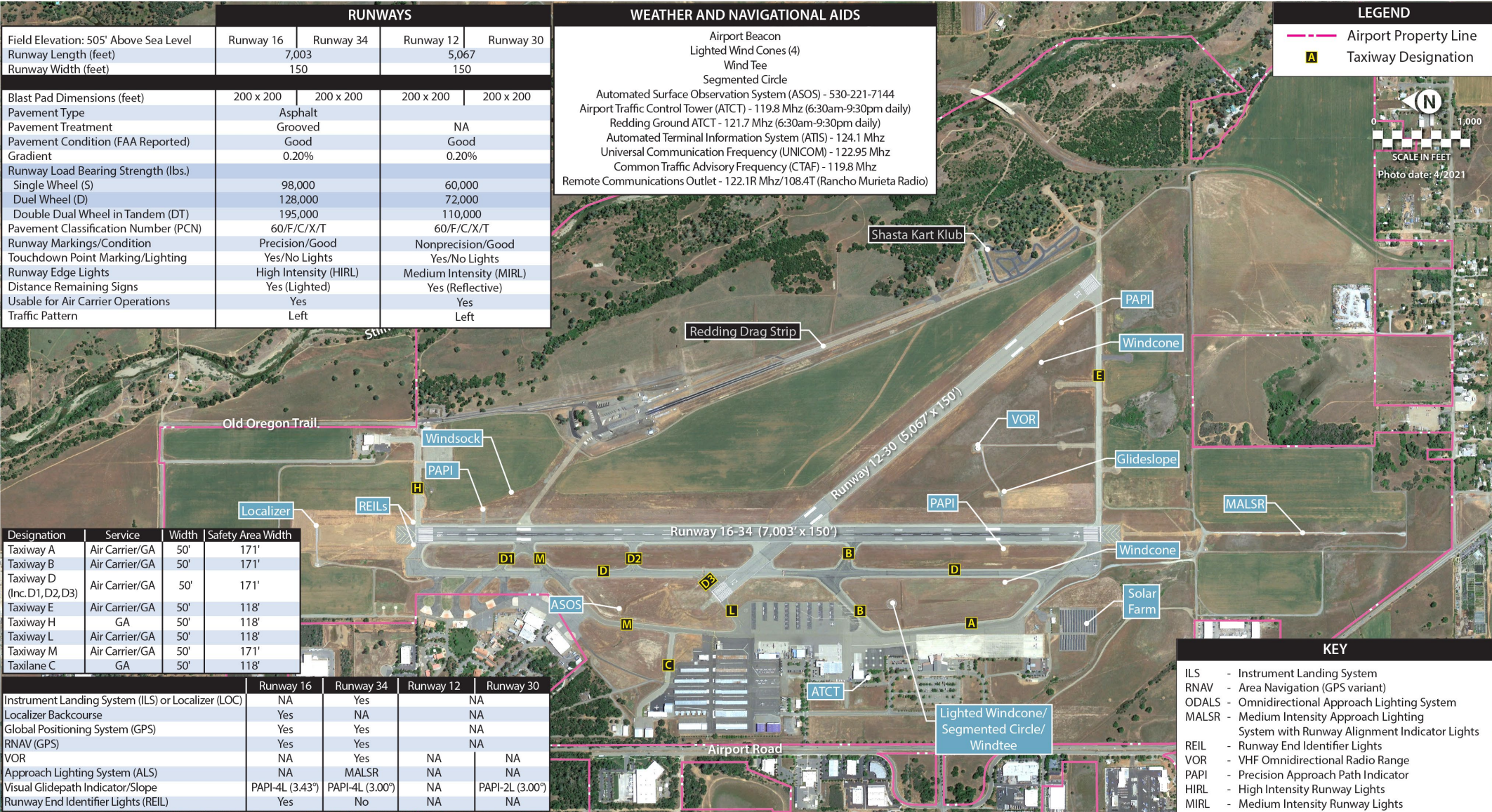


Year	United Express	Alaska	Avelo	Pen Air	Horizon	Charters	Total
2022	56,536	21,447	22,907	-	-	-	100,890
2021	39,980	10,526	9,371	-	-	-	59,877
2020	20,107	-	-	-	-	66	20,107
2019	53,117	-	-	-	-	519	53,117
2018	43,750	-	-	-	-	655	43,750
2017	40,816	-	-	2,608	-	436	43,424
2016	39,423	-	-	4,682	-	836	44,105
2015	29,740	-	-	-	-	787	29,740
2014	22,625	-	-	-	-	740	22,625
2013	24,657	-	-	-	-	577	24,657
2012	29,253	-	-	-	-	943	29,253
2011	34,151	-	-	-	4,398	1,059	38,549
2010	30,303	-	-	-	25,517	628	55,820
2009	30,072	-	-	-	28,026	603	58,098
2008	32,748	-	-	-	30,802	254	63,550
2007	38,812	-	-	-	26,599	360	65,411
2006	41,212	-	-	-	25,056	516	66,268

Note: Includes revenue and non-revenue passengers

Source: Airport monthly enplanement records

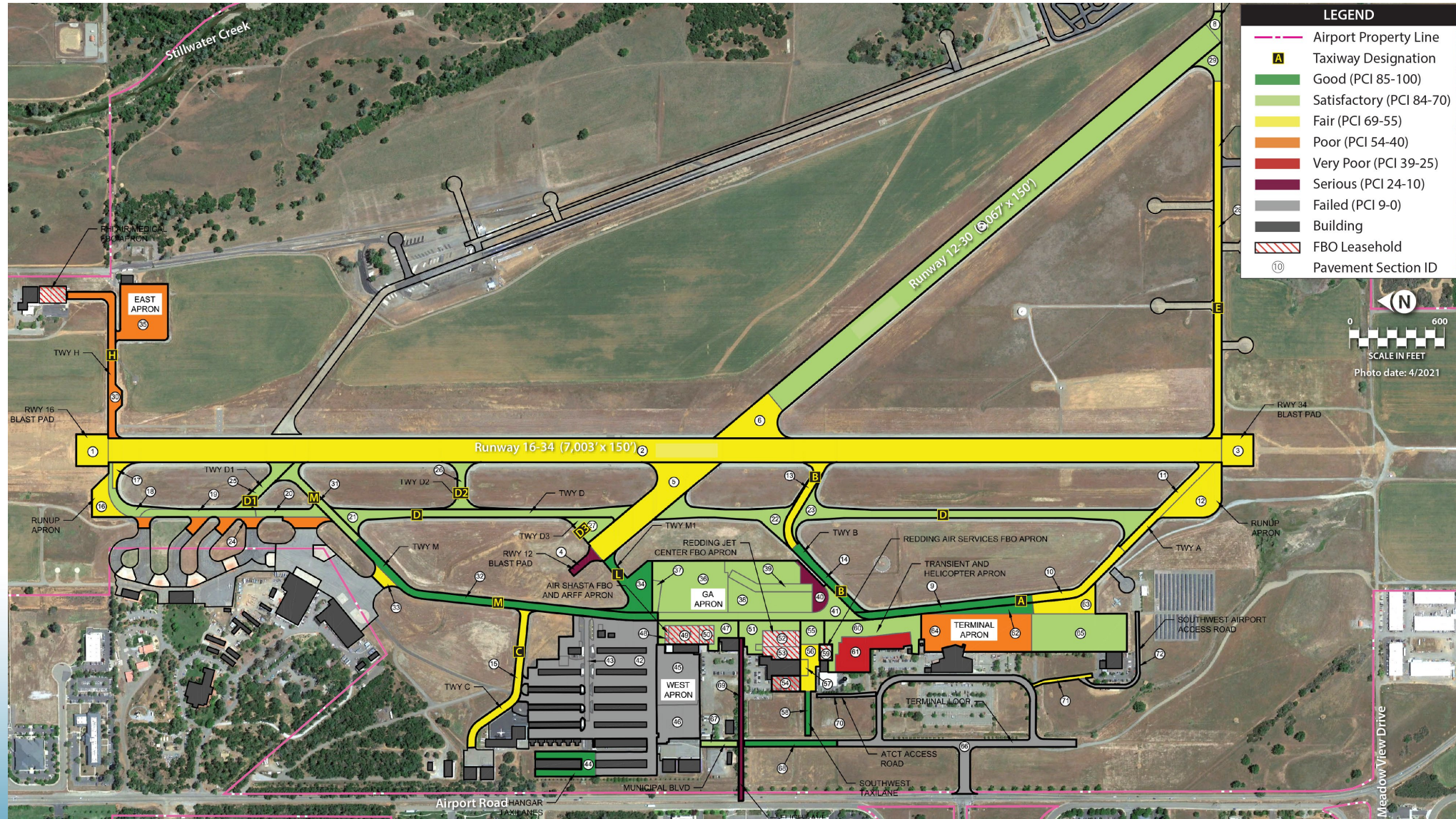
Airside Facilities



Firefighting Apron Improvements



Pavement Condition 2017



Landside Facilities



Terminal Complex



Terminal Building Layout

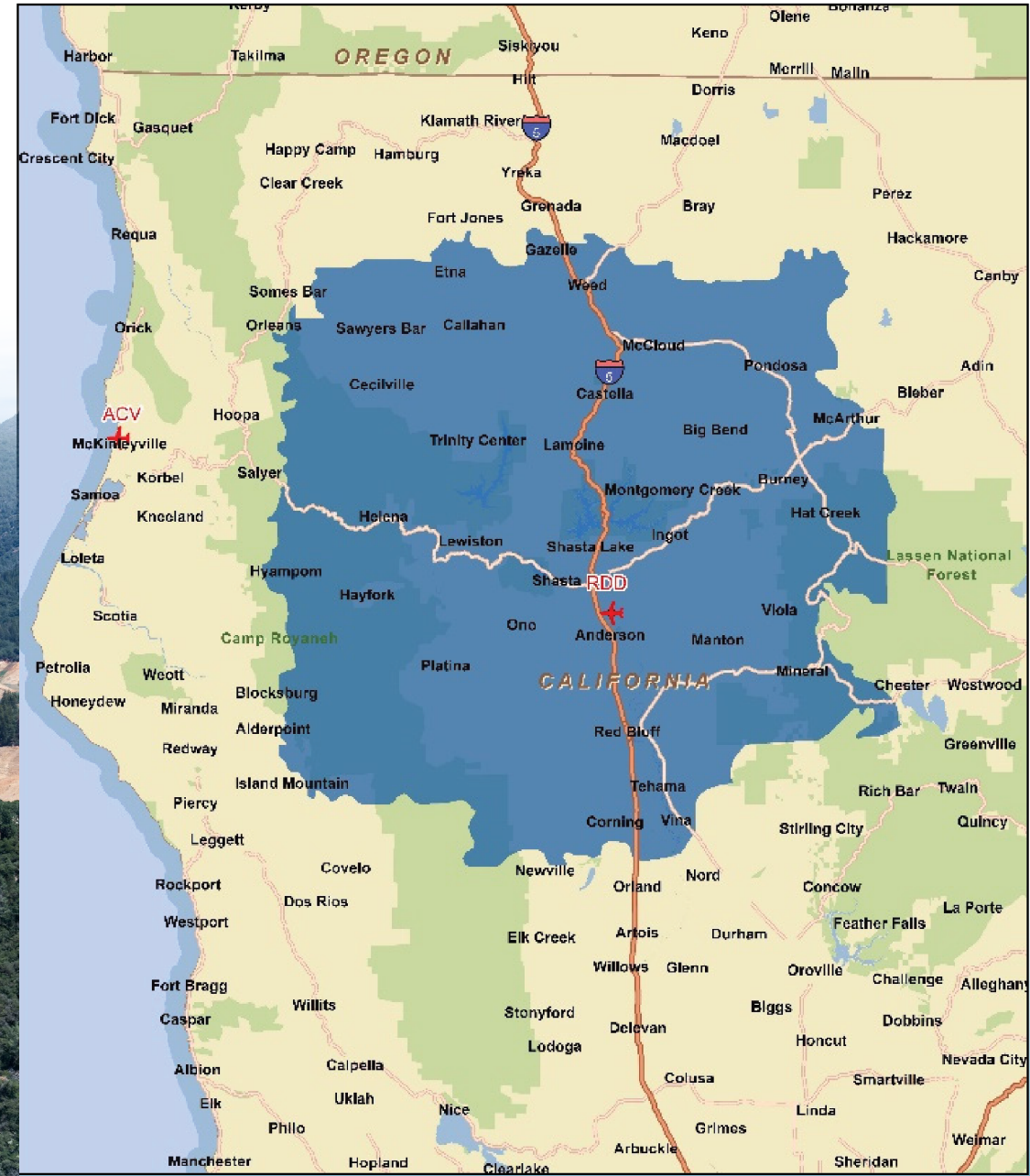
Abbreviation	Functional Area	Level 1 (sf)	Level 2 (sf)
Ticketing/Check-In			
TCA	Ticket Counter Area	650	-
TLQ	Ticket Lobby Que Area	1,650	-
TLC	Ticket Lobby Circulation	1,750	-
AO	Airline Ops/Bag Makeup	2,820	-
Security Screening			
SCA	Security Checkpoint Area	2,360	-
SQA	Security Queue Area	1,050	-
Passenger Holdroom			
H	Passenger Holdroom	1,740	-
G	Gate Area/Loading	1,760	-
HC	Holdroom Circulation	850	-
Baggage Claim			
BCD	Bag Claim Device	370	-
BCA	Bag Claim Area	300	-
BCL	Bag Claim Lobby/Circulation	1,200	-
Rental Car			
RCC	Counter/Office Area	1,100	-
RCQ	Rental Queue Area	690	-
Public Spaces			
RS	Restrooms (Secure)	280	-
RU	Restrooms (unsecure)	770	415
RC	Restaurant/Concessions/Gift Shop	540	4,828
PL	Public Lobby/Waiting Area	3,180	-
PC	Public Circulation	1,670	830
Administrative Space			
AD	Administration Offices	-	1,690
BC	Business Center	230	-
General Building Areas			
GS	General Storage	1,090	-
ME	Mechanical/Electrical	1,530	920
VC	Vertical Circulation/Structural Space	840	450
Gross Terminal Building Area		28,420	9,130
Total Area		37,550	



Top 20 Destinations

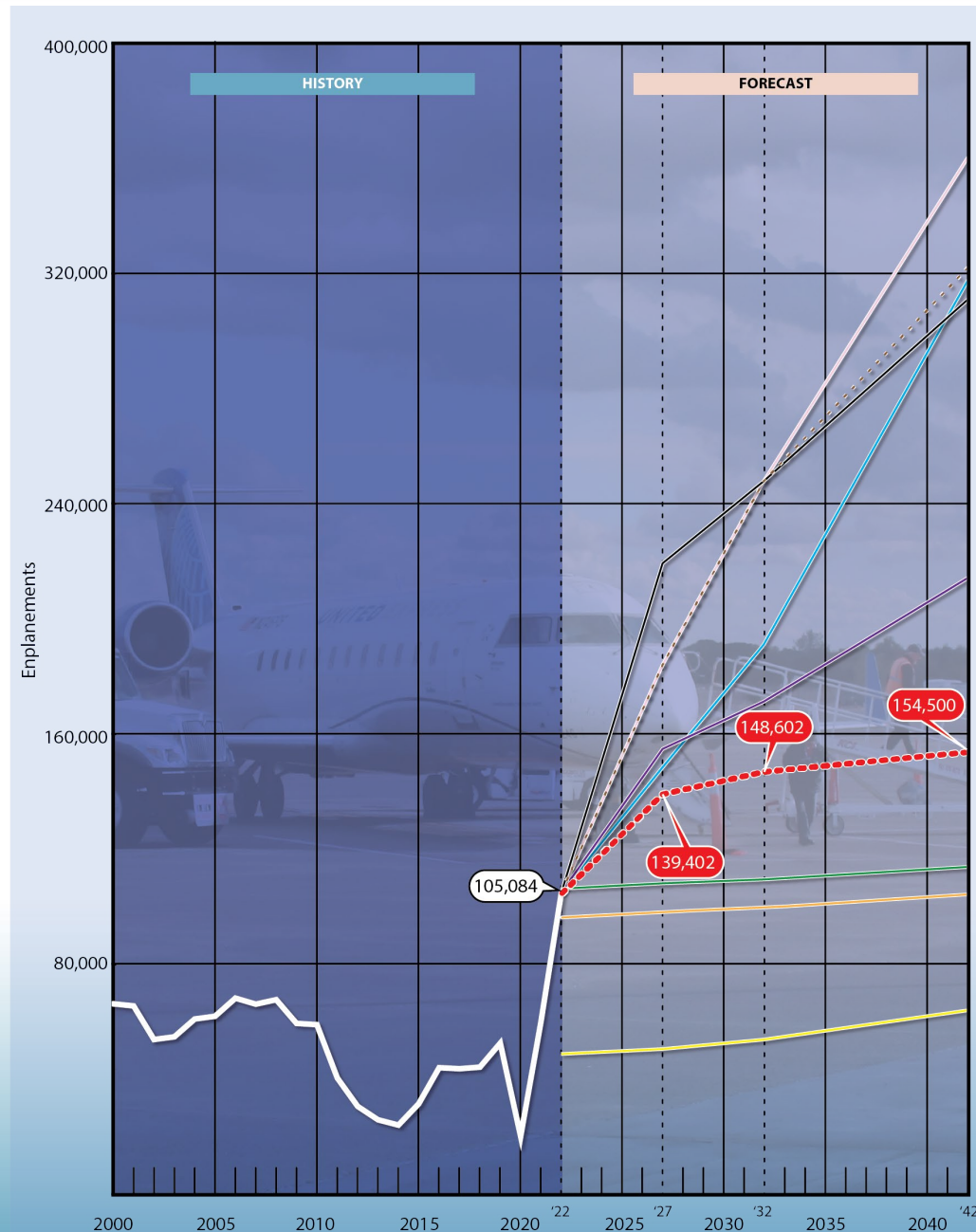


Figure 2-1 Catchment Area

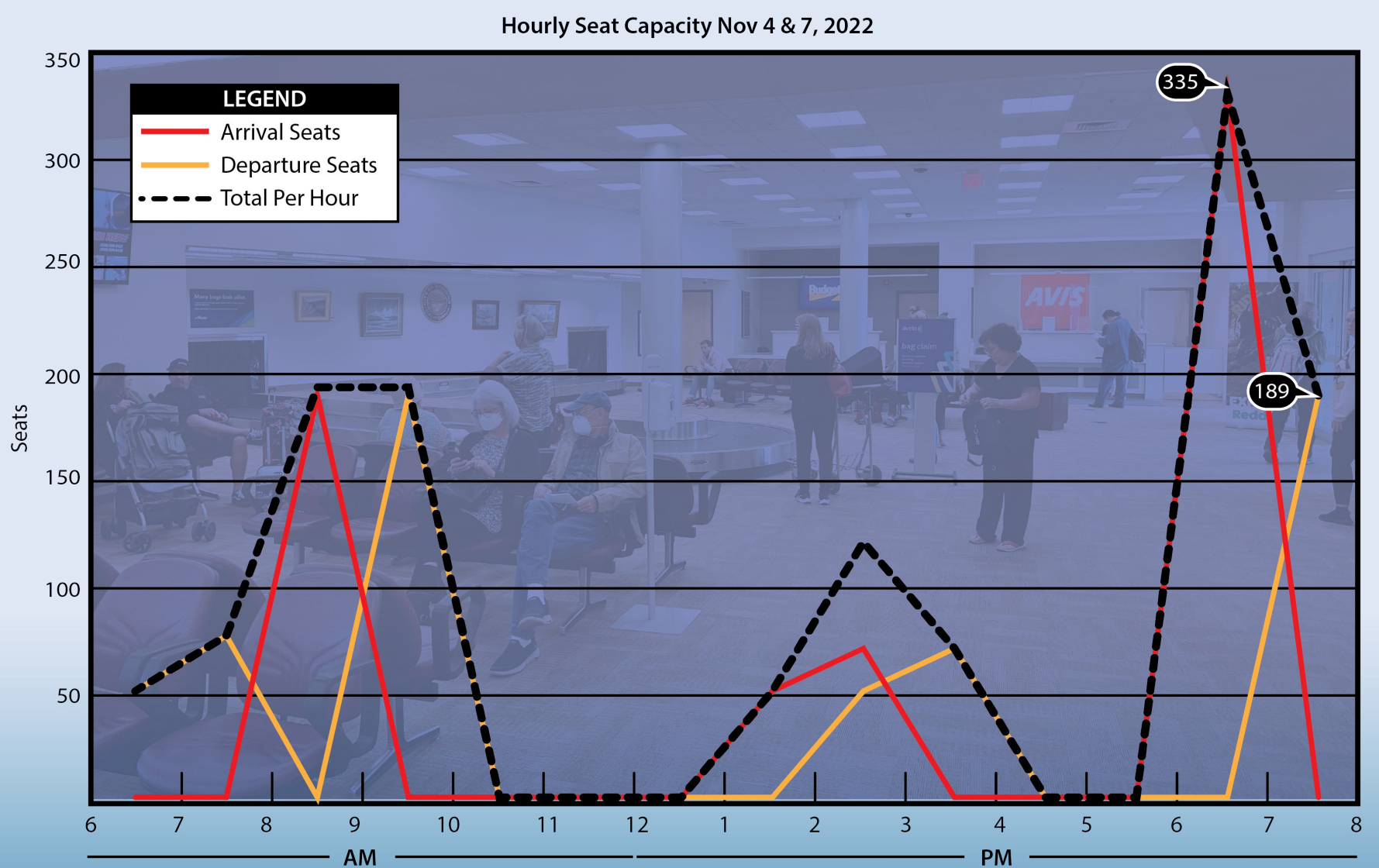


Enplanement Summary

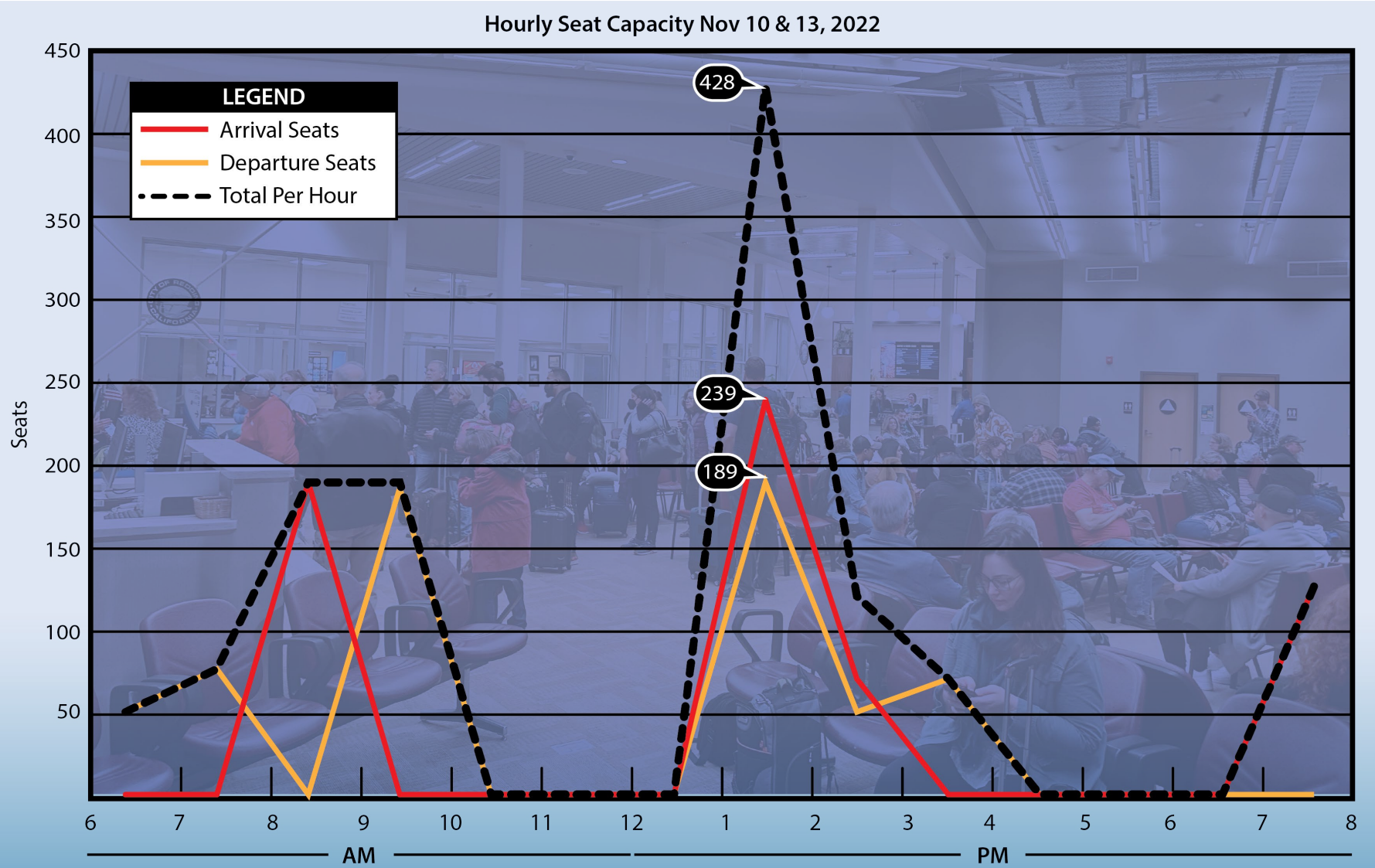
LEGEND	CAGR
Existing Enplanement Forecasts	
— Terminal Capacity Study (2022)	5.58%
— FAA Terminal Area Forecast ¹ (2022)	0.39%
— 2015 Airport Master Plan (2013 base year)	-2.58%
Travel Propensity Factor (TPF) Projections	
— Constant Share of 2022 TPF	0.19%
— Increasing Share of 2022 TPF	5.68%
Market Share of U.S. Domestic Enplanements	
— Constant Market Share of U.S. Domestic Enplanements	3.43%
— Increasing Market Share of U.S. Domestic Enplanements	6.48%
— Blended Market Share of U.S. Domestic Enplanements	5.88%
TAF¹ Growth Rate Plus Denver Service Forecast	
--- Constrained TAF Growth Rate Forecast - Selected Forecast	1.95%



Hourly Capacity



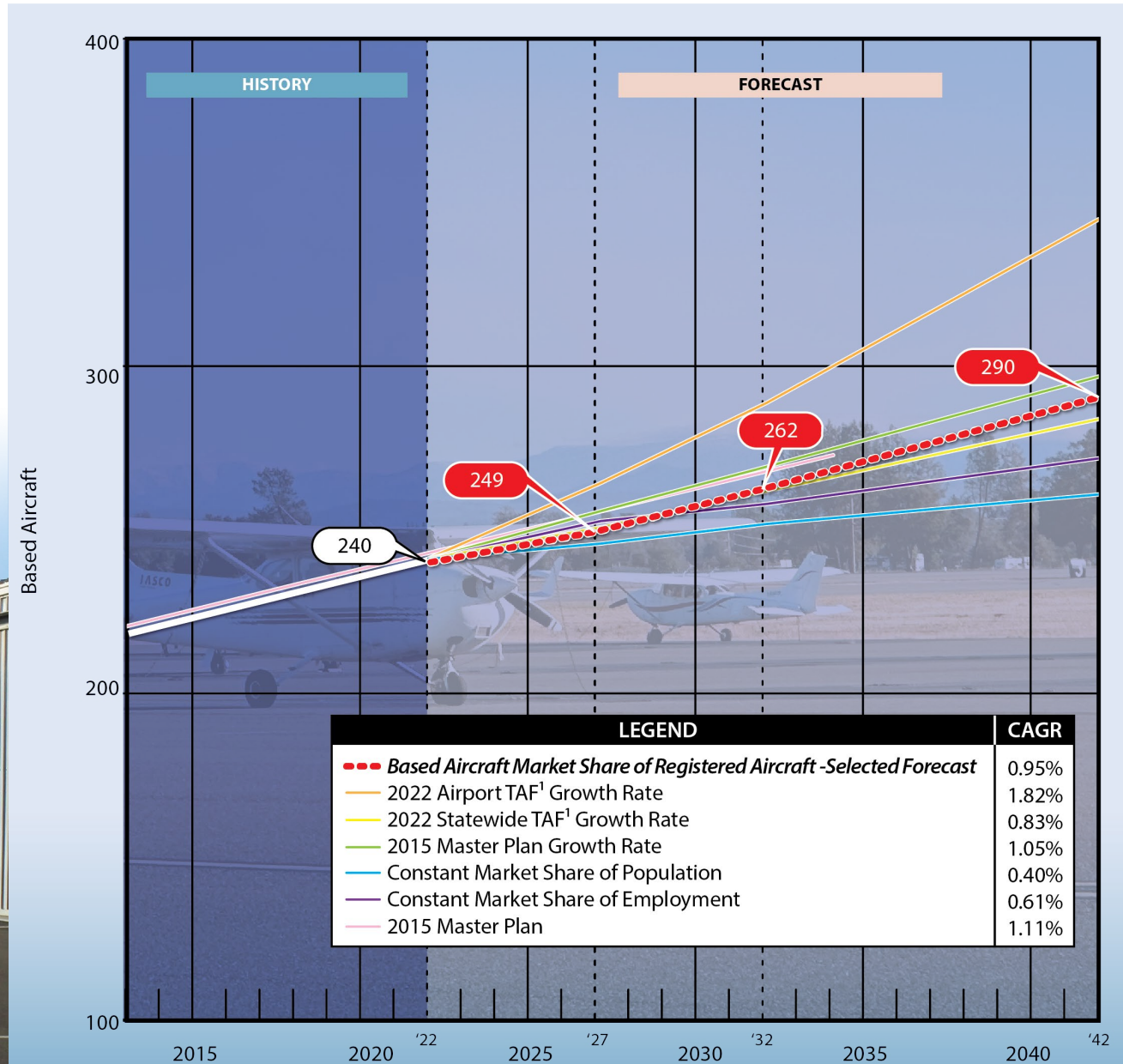
Hourly Capacity



Commercial Fleet Mix Forecast

Seating Capacity	Projected Aircraft	HISTORICAL		FORECAST			
		2021	2022	2027	2032	2042	High Range
159	B737-900	0.0%	0.0%	0.0%	0.0%	10.0%	10.0%
189	B737-800	6.5%	10.9%	16.0%	20.0%	25.0%	30.0%
150	A320	0.0%	0.0%	0.0%	10.0%	25.0%	25.0%
90	CRJ-900	0.0%	0.0%	0.0%	30.0%	20.0%	20.0%
76	ERJ-175	15.0%	18.3%	25.0%	30.0%	10.0%	10.0%
70	CRJ-700	22.0%	18.4%	30.0%	10.0%	10.0%	5.0%
50	CRJ-200	56.5%	52.4%	29.0%	0.0%	0.0%	0.0%
Total		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Avg. Seats per Departure		67.3	73.6	84.7	109.6	133.3	139
Boarding Load Factor		67.3%	70.2%	85.0%	85.0%	85.0%	85.0%
Enplaned per Departure		45	52	72	93	113	113
Annual Enplanements		60,292	100,890	139,402	148,602	154,500	311,200
Annual Departures		1,330	1,952	1,935	1,595	1,364	2,748
Annual Operations		2,661	3,905	3,871	3,190	2,728	5,495

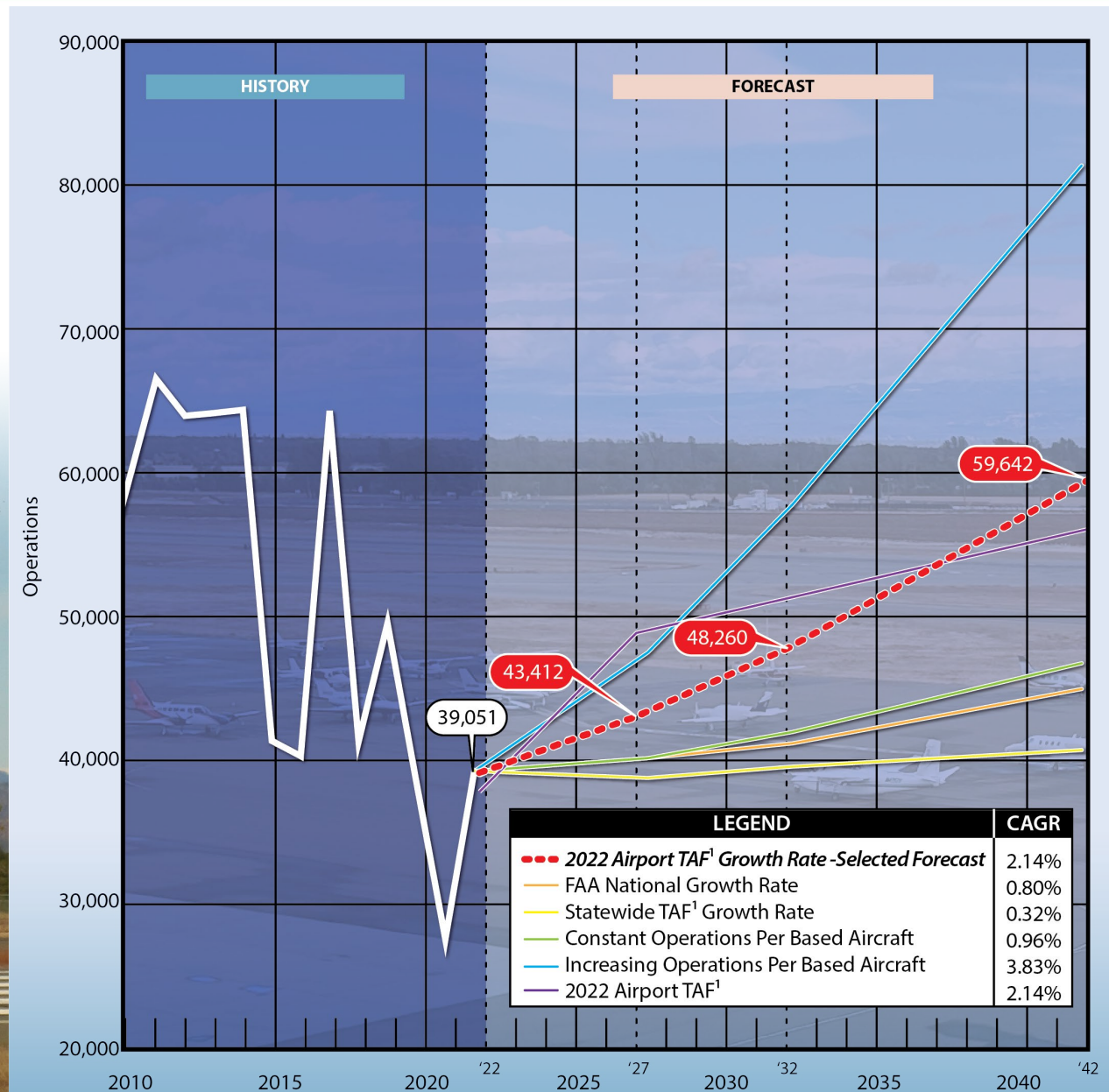
Based Aircraft Forecast



CAGR: Compound Annual Growth Rate

¹TAF published in Feb. 2023

General Aviation Operations Forecast



CAGR: Compound Annual Growth Rate

¹ TAF published in Feb. 2023

Total Operations Summary

Year	ITINERANT OPERATIONS					LOCAL OPERATIONS		TOTAL OPERATIONS
	Air Carrier	Commuter/ Air Taxi	Other Air Taxi	GA	MIL	GA	MIL	
2022	1,860	2,044	18,538	17,100	548	21,951	345	62,387
2027	2,748	1,123	21,535	19,101	549	24,311	298	69,665
2032	3,190	0	25,142	21,234	549	27,026	298	77,439
2042	2,728	0	30,653	26,242	549	33,400	298	93,870
CAGR 2022-2042	1.93%	NA	2.55%	2.16%	NA	2.12%	NA	2.06%
CAGR = Compound annual growth rate								

Design/Peak Hour Calculation

Time	Friday 8.5.22	Tuesday 8.9.22	Tuesday 8.16.22	Wednesday 8.24.22
6:30-7 am	18	6	27	18
7-8 am	47	35	52	44
8-9 am	23	44	40	48
9-10 am	29	49	57	21
10-11 am	28	29	47	50
11-12 am	28	17	20	39
12-1 pm	20	17	13	29
1-2 pm	38	23	22	24
2-3 pm	15	21	23	19
3-4 pm	22	27	18	26
4-5 pm	14	9	14	11
5-6 pm	10	13	2	13
6-7 pm	20	7	3	5
7-8 pm	8	6	7	4
8-9 pm	6	4	4	8
9-9:30 pm	1	1	1	1
Total	327	308	350	360
Peak Hour %	14.37%	15.91%	16.29%	13.89%
Design Hour is the average of 47, 49, 57, 50, which equals 51. Note: Peak Hour is <i>BOLD italicized</i> .				

TAF Forecast Comparison

	2022	2027	2032	2042	CAGR 2022-2042
Passenger Enplanements					
Master Plan Forecast	100,890	139,402	148,602	154,500	2.15%
FAA TAF 2022 ¹	96,563	98,474	100,412	104,462	0.39%
% Difference	4.4%	34.4%	38.7%	38.6%	
TAF Growth Rate-RDD Base+DEN ²	100,890	126,729	129,219	134,348	1.44%
% Difference	0.0%	9.5%	14.0%	14.0%	
Commercial Operations (Air Carrier/Commuter/Air Taxi)					
Master Plan Forecast	22,443	25,406	28,332	33,381	2.00%
FAA TAF 2022 ¹	19,731	24,535	25,728	28,298	1.82%
% Difference	12.9%	3.5%	9.6%	16.5%	
Total Operations					
Master Plan Forecast	62,387	69,665	77,439	93,870	2.06%
FAA TAF 2022 ¹	57,401	74,148	77,714	85,384	2.01%
% Difference	8.3%	6.2%	0.4%	9.5%	
Based Aircraft					
Master Plan Forecast	240	249	262	290	0.95%
FAA TAF 2022 ¹	240	263	288	344	1.82%
% Difference	0.0%	5.1%	9.5%	17.0%	
¹ TAF published in Feb. 2023 ² TAF baseline adjusted to actual 2022 enplanements then 0.39% TAF annual growth rate applied and DEN service enplanements of 23,579 added in 2024. CAGR: Compound annual growth rate					

Forecast Summary

	2022	2027	2032	2042	CAGR 2022-2042
ENPLANEMENTS AND AIR CARGO					
Annual Enplanements	100,890	139,402	148,602	154,500	2.15%
Air Cargo (lbs.)	2,643,117	3,361,260	4,057,350	5,737,840	3.95%
ANNUAL OPERATIONS					
Commercial Operations (Itinerant)					
Air Carrier (>59 seats)	1,860	2,748	3,190	2,728	1.93%
Commuter Airline (<60 seats)	2,044	1,123	0	0	-100.00%
Air Cargo	2,235	2,841	3,430	4,850	3.95%
Other Air Taxi	16,304	18,694	21,712	25,803	2.32%
Total Commercial Operations	22,443	25,406	28,332	33,381	2.00%
General Aviation Operations					
Itinerant	17,100	19,101	21,234	26,242	2.16%
Local	21,951	24,311	27,026	33,400	2.12%
Total General Aviation Operations	39,051	43,412	48,260	59,642	2.14%
Military Operations					
Itinerant	548	549	549	549	0.01%
Local	345	298	298	298	-0.73%
Total Military Operations	893	847	847	847	-0.26%
Total Itinerant Operations	40,091	45,056	50,116	60,173	2.05%
Total Local Operations	22,296	24,609	27,324	33,698	2.09%
TOTAL ANNUAL OPERATIONS	62,387	69,665	77,439	93,870	2.06%
BASED AIRCRAFT					
Single Engine Piston	175	176	182	197	0.59%
Multi-Engine Piston	15	14	13	11	-1.54%
Turboprop	19	23	25	29	2.14%
Jet	12	15	18	25	3.74%
Helicopter	19	21	24	28	1.96%
TOTAL BASED AIRCRAFT	240	249	262	290	0.95%

CAGR - Compound annual growth rate

Forecast Summary

PEAKING ACTIVITY PROJECTIONS	BASE YEAR	2027	2032	2042
AIRLINE PASSENGER ACTIVITY				
Annual Enplanements	100,890	139,402	148,602	154,500
Peak Month Enplanements	9,806	13,549	14,443	15,017
Design Day Enplanements	530	732	781	812
Design Hour Enplanements	182	251	268	279
Design Hour Deplanements	244	337	359	374
AIRLINE OPERATIONS				
Annual Operations	3,905	3,871	3,190	2,728
Peak Month	350	347	286	245
Design Day	12	12	10	8
Design Hour	4	4	3	3
TOTAL AIRPORT OPERATIONS				
Annual Operations	62,387	69,665	77,439	93,870
Peak Month	7,403	8,267	9,189	11,139
Design Day	239	267	296	359
Busy Day	340	381	424	514
Design Hour	51	57	63	77

Historical Jet and Turboprop Operations

AIRPORT REFERENCE CODE (ARC) SUMMARY

ARC	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
A-I	102	94	68	104	126	136	74	82	252	212
A-II	1,636	1,694	1,760	1,766	1,872	2,434	2,148	2,504	2,866	2,828
A-III	0	0	0	0	0	0	2	0	0	0
B-I	1,846	2,400	2,064	1,260	1,234	1,212	1,110	996	800	590
B-II	4,206	4,164	2,470	3,112	2,658	2,474	2,542	2,590	3,530	3,502
B-III	4	10	10	16	4	8	24	10	14	8
C-I	28	58	42	36	64	34	36	22	70	48
C-II	92	62	1,244	2,024	2,110	2,352	2,782	1,360	2,150	2,862
C-III	24	60	54	90	84	90	96	68	500	920
C-IV	32	30	40	28	22	32	10	38	38	24
C-V	0	0	0	0	0	0	0	0	8	24
D-I	34	40	24	16	52	46	34	24	30	24
D-II	22	30	22	18	36	20	26	10	34	2
D-III	34	26	38	24	6	14	24	14	164	462
D-IV	0	2	0	0	0	0	0	2	2	0
E-I	2	0	0	0	0	0	0	0	0	0
TOTAL	8,062	8,670	7,836	8,494	8,268	8,852	8,908	7,720	10,458	11,506

Historical Jet and Turboprop Operations

APPROACH CATEGORY (AC)

AC	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
A	1,738	1,788	1,828	1,870	1,998	2,570	2,224	2,586	3,118	3,040
B	6,056	6,574	4,544	4,388	3,896	3,694	3,676	3,596	4,344	4,100
C	176	210	1,380	2,178	2,280	2,508	2,924	1,488	2,766	3,878
D	90	98	84	58	94	80	84	50	230	488
E	2	0	0	0	0	0	0	0	0	0
TOTAL	8,062	8,670	7,836	8,494	8,268	8,852	8,908	7,720	10,458	11,506

DESIGN GROUP (DG)

DG	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
I	2,012	2,592	2,198	1,416	1,476	1,428	1,254	1,124	1,152	874
II	5,956	5,950	5,496	6,920	6,676	7,280	7,498	6,464	8,580	9,194
III	62	96	102	130	94	112	146	92	678	1,390
IV	32	32	40	28	22	32	10	40	40	24
V	0	0	0	0	0	0	0	0	8	24
TOTAL	8,062	8,670	7,836	8,494	8,268	8,852	8,908	7,720	10,458	11,506

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Jets	1,404	1,450	2,520	3,266	3,436	3,742	3,974	2,294	3,958	4,952
TP	6,658	7,220	5,316	5,228	4,832	5,110	4,934	5,426	6,500	6,554

Runway Classification

	CURRENT	FUTURE
Airport Reference Code (ARC)	C-III	D-III
Airport Design Aircraft	C-III-3	D-III-3
Runway Design Code (RDC)		
Runway 16-34	C-III-2400	D-III-2400
Runway 12-30	C-III-VIS	C-III-VIS
Approach Reference Code (APRC)		
Runway 16-34	D-IV-2400/D-V-2400	D-IV-2400/D-V-2400
Runway 12-30	NA	NA
Departure Reference Code (DPRC)		
Runway 16-34	D-IV/D-V	D-IV/D-V
Runway 12-30	NA	NA
<i>Source: Current Airport Layout Plan; FAA AC 150/5300-13B, Airport Design</i>		

FAA Forecast Approval Letter



U.S. Department
of Transportation
**Federal Aviation
Administration**

Western-Pacific Region
Airports Division

San Francisco Airports District Office
2999 Oak Creek Rd., Suite 200
Walnut Creek, CA 94597

August 29, 2023

Mr. James Wadleigh
Airport Manager
Redding Regional Airport
6751 Woodrum Circle #200
Redding, CA 96002

SENT VIA E-MAIL

Dear Mr. Wadleigh,

RE: FAA Review Comments for Updated Aviation Activity Forecast – 28 August 2023;
Redding Regional Airport (RDD); AIP Grant/Project 3-06-0194-063-2022

The San Francisco Airports District Office (SFO-ADO) has completed the review of the updated Aviation Activity Forecasts for the Redding Regional Airport (RDD). The SFO-ADO review comments are as follows:

- FAA concurs with the forecast approach and methodologies presented in the updated aviation forecast validation document. The COVID-19 adjusted forecast alternative recovery scenario analysis and forecast assumptions presented are considered reasonable and well supported.
- FAA concurs with the forecast levels and growth rates for the total operations, and based aircraft, as presented in **Exhibit 2J – Forecast Summary** of the RDD Chapter 2 Forecasts – dated August 25, 2023. The subject aviation activity forecast is considered generally consistent with the FAA 2022 Terminal Area Forecast (TAF).
- FAA concurs with the near-term forecast presented for peak passenger enplanements through 2027 presented in the **Exhibit 2J – Forecast Summary**. This correlates with the maximum number of departing seats RDDs current Airlines contract(s). Per Table 3-4 of the AIP Handbook, to determine whether a project (e.g., expanded passenger terminal) is justified, there must be an actual need for the project at the airport within the next five years. Thus, the forecasted enplanements in 2027 are the most relevant.
- FAA concurs that the Runway Design Code (RDC) for Runway 16-34 is C-III-2400. Due to magnetic variation adjustment, the future runway designation is 17-35. Based on the most recent year of aircraft activity (2022) it appears reasonable that the Future RDC will be D-III-2400 for Runway 17-35.

Terminal Space Requirements

			Planning Activity Levels				
			Existing	Current Need 100,890	Short 139,402	Intermediate 148,602	Long 154,500
DEPARTURES PROCESSING							
Ticket Counters							
Utilization Factor	90%	0	164	226	241	251	
Agent Positions	#	5	7	9	10	10	
Frontage	LF	94	42	54	60	60	
Area	SF	650	460	590	660	660	
Ticket Lobby							
Queing Area	SF	1,650	920	1,270	1,360	1,410	
TSA Baggage Check	SF	580	840	1,080	1,200	1,200	
Outbound Baggage	SF	Outside	2,020	2,590	2,880	2,880	
Airline Ticket Office/Baggage Screening	SF	2,240	1,720	2,210	2,460	2,460	
Ticket Lobby Circulation	SF	1,750	480	620	690	690	
Subtotal Airline Operations	SF	6,220	5,980	7,770	8,590	8,640	
Public Area							
Circulation	SF	2,500	11,930	16,460	17,560	18,280	
Lobby/Waiting Area	SF	3,180	Included in Circulation				
Security Stations							
Number	#	1	1	2	2	3	
Queing Area	SF	1,050	590	810	860	900	
Station Area	SF	2,360	360	720	720	1,080	
TSA Administration/Operations	SF	0	700	1,400	1,400	2,100	
CONCOURSE FACILITIES							
Passenger Holdrooms							
Gates	#	1	2	2	2	3	
Gate Area	SF	1,760	Included in Holdroom Area				
Holdroom Area	SF	1,740	3,540	4,570	4,830	5,860	
Airline Operations	SF	0	2,000	2,000	1,500	0	
Concourse Circulation							
Circulation Area	SF	850	1,062	1,371	1,449	1,758	

Note: Level of Service C+ is applied

Terminal Space Requirements

			Planning Activity Levels				
			Existing	Current Need 100,890	Short 139,402	Intermediate 148,602	Long 154,500
ARRIVALS PROCESSING							
Baggage Claim							
Passengers claiming bags	85%	207	207	286	305	318	
Claim Display Frontage	LF	45	150	200	220	220	
Claim Device Floor Area	SF	670	750	1,000	1,100	1,100	
Inbound Baggage	SF	0	1,800	2,400	2,640	2,640	
Baggage Service Office	SF	0	300	400	440	440	
Claim Lobby							
Area Excl. Device Area	SF	600	4,930	6,810	7,260	7,560	
Circulation Area	SF	600	2,970	4,100	4,360	4,550	
PUBLIC SPACES							
Restrooms							
Area	SF	1,465	2,040	2,820	3,010	3,130	
Concessions							
Food & Beverage	SF	5,365	1,210	1,670	1,780	1,850	
Retail	SF	0	500	700	740	770	
Support	SF	0	340	470	500	520	
Rental Car							
Counter Frontage	LF	50	43	59	63	65	
Counter and Office Area	SF	1,100	640	880	940	980	
Counter Queuing Area	SF	690	340	470	500	520	
Airport Administration							
Administration/Operations	SF	1,690	5,100	7,100	7,500	7,800	
Business Center	SF	230	Included in Admin				
FUNCTIONAL AREA TOTAL							
Total Functional Area	SF	32,720	46,702	63,431	67,139	69,938	
BUILDING SYSTEMS/SUPPORT							
Mechanical/HVAC	SF	2,450	1,870	2,540	2,690	2,800	
Vertical Circulation/Structural Space	SF	1,290	1,900	2,500	2,700	2,800	
General Storage	SF	1,090	3,270	4,440	4,700	4,900	
TOTAL TERMINAL							
Gross Building Area	SF	37,550	53,742	72,911	77,229	80,438	

Note: Level of Service C+ is applied

NEXT STEPS



Inventory, Forecasts