September 17, 2025

Response to FAA request for public comment on U.S. Air Force Proposal to lower floors of Military Operations Areas (MOA) and military support of training that requires supersonic flight at lower altitudes.

Arizona Aviation Safety Advisory Group

The Arizona Aviation Safety Advisory Group is a 501 (c) 3 collaborating with all users of Arizona's airspace. We wish to support the Air Force's mission but feel the lowering of the MOA floors to 500 feet AGL, and in the case of the Tombstone MOA proposing 100' AGL, as is currently allowed in Jackal Low and Fuzzy, and proposing "adjusting the attributes to allow for supersonic speed at lower altitude" [1] are serious impediments to safe use of Arizona's airspace by General Aviation Pilots.

Our concerns are:

1. Current General Aviation flight instruction practice areas extensively use the airspace below the existing MOA floors as shown in Figure 1. The Gladden and Bagdad MOAs overlap the practice areas used by the Prescott area flight schools that include Embry-Riddle Aeronautical University, Leighnor, and Yavapai Community College. The proposed expansion of these MOAs will eliminate approximately 25% of the available airspace currently in use, and force flight activity into already saturated areas. This increases the potential for a mid-air collision which has happened multiple times among training aircraft in our state.[2] The Prescott area also sits close to noise-sensitive areas and the flight schools must be mindful of noise complaints over many of their eastern practice areas. Moving one quarter of the flight operations to other areas will only exacerbate the noise problem. Prescott Airport ranks fourth in the state behind Mesa, Falcon, and Phoenix Deer Valley, and is 24th in the nation for all airports for total traffic counts. See Table 2. Student and general aviation VFR southwest cross-country flights to locations such as Wickenburg, Parker, Blythe, Yuma, and southern California will not be possible under the proposed MOA expansion.

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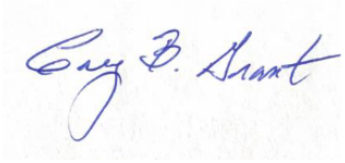
[11] Draft EIS Cover Sheet page 7 of the 212-page document.
[2] NTSB Investigation WPR13FA254, WPR13LA004, WPR09FA437, WPR22FA001,

2. The Outlaw MOA expansion will have a similar impact to flight operations using the airspace in the Southeast Practice Area as shown in Figure 1. This area is primarily used by pilots and dozens of flight schools based out of Gateway, Chandler, and Falcon Fields, but also sees use from flight schools and pilots based at any of the seven Phoenix area general aviation airports. These schools include University of North Dakota, Arizona State University, CAE Oxford Academy, ATP Flight Schools, California Aeronautical University, Aeroguard Training Academy, Sierra Charlie Flight Academy, United Aviate Academy, Lufthansa's Flight Training Academy, as well as many smaller training schools. Together, Falcon, Gateway, and Chandler account for 818,732 operations as shown in Table 1. The Phoenix area has four airports in the top 100 busiest in the nation, with Phoenix Sky Harbor 9th, Mesa Falcon 20th, Phoenix Deer Valley 21st, and Scottsdale 72nd. If we include Prescott, as previously mentioned, the state has five of the busiest airports in the top 100. Aviation Performance Systems, based at IWA, provides upset recovery training for various airlines and government operators globally. They operate a fleet of Extra 300s and jet trainers, operating southeast of IWA and are equally concerned with the mid-air collision potential with today's traffic intensity and the MOA expansion will impact them negatively. In addition, there are military contractor training providers using both Falcon and Gateway airports providing high speed flight maneuvering using the airspace around the Outlaw MOA. Also affected will be Superior Airport glider operations, training high school students for Glider ratings which is located inside the western part of the Outlaw MOA. Figure 2 shows the traffic tracks for the Phoenix area during a 24-hour period. Figure 3 depicts the traffic out of IWA for a 24-hour period and as pointed out, over 800 aircraft a day transit below 5000'AGL in or near the western area of the Outlaw MOA. Figure 4 shows the area between Phoenix and Tucson and the gray circles show the Notice to Airmen for active parachute drop operations. Many of these operations are conducted by other government agencies and contractors operating around the clock. ASAG, the jump operators, FAA, and flight training providers are genuinely concerned about the potential for a mid-air collision between aircraft and jumpers and we have an extensive education program in place to try and mitigate the risk. The expansion of the Outlaw MOA will force more aircraft into an already dangerous airspace.
3. ASAG is concerned about access to any airport underlying the MOA. Many of these airports are used for student cross-country training as well as by other general aviation pilots. Under the proposed lowering of the floor to 500 feet AGL, VFR access to these airports is almost impossible and is impossible under IFR if the MOA is active. Numerous backcountry airstrips are used by slow-moving aircraft that generally operate between 1000 to 2000 AGL. Access will be impossible for these pilots. The mountains east of IWA are used annually in the spring for wild-

land fire training with extensive flight training taking place for air-attack lead and bomber pilots.

4. Due to the floor of the MOAs being lowered to 500 AGL and lower, ASAG is concerned about the extent of supersonic flight within the MOAs. With the large amount of training activity by both military and civilian pilots in and around the MOAs, the task saturation, and demands of maneuvering flight, will leave truly little time for pilots to devote to traffic awareness or avoidance. Will pilots be counting on Air Traffic Control to separate VFR traffic in the MOA? This will not be possible when aircraft are maneuvering below ATC's RADAR coverage at 500 feet AGL. Using Luke AFB's own Mid-Air Collision Avoidance charts, see Figures 5,6, and 7, and speeds for the F-16, the time to see and react to a target is 12.5 seconds. This presumes clear conditions and clearing for traffic. These numbers cannot be counted on while maneuvering, at higher speeds, at lower altitudes, with terrain and ground clutter obscuring the view of other airplanes. How do supersonic speeds affect the times shown in Figure 7? Will a civilian or military pilot have any hope of picking up a converging aircraft? Very unlikely.
5. According to the FAA's FY2024, see Table 5, Albuquerque Center has experienced a 40% increase in Loss of Standard Separation counts ranking among the highest centers in the country along with Salt Lake City, Chicago, and Boston.[3] The majority of the MOA expansion is within Albuquerque Center's area of responsibility and there has been little increase in manning levels as shown in Table 6.[4]

ASAG wishes to support the U.S. Air Force's mission; however, the proposed expansion of the floors to 500 AGL, and in the case of Tombstone to 100 AGL, and aircraft maneuvering at supersonic speeds, creates hazards for which we do not see a safe way of mitigating the risks and we cannot endorse this plan as it is currently proposed.



Cary B. Grant

President, Arizona Aviation Safety Advisory Group

[3] Federal Aviation Administration, Air Traffic By The Numbers, June 2025, page 33
[4] Federal Aviation Administration, Air Traffic By The Numbers, June 2025, page 4

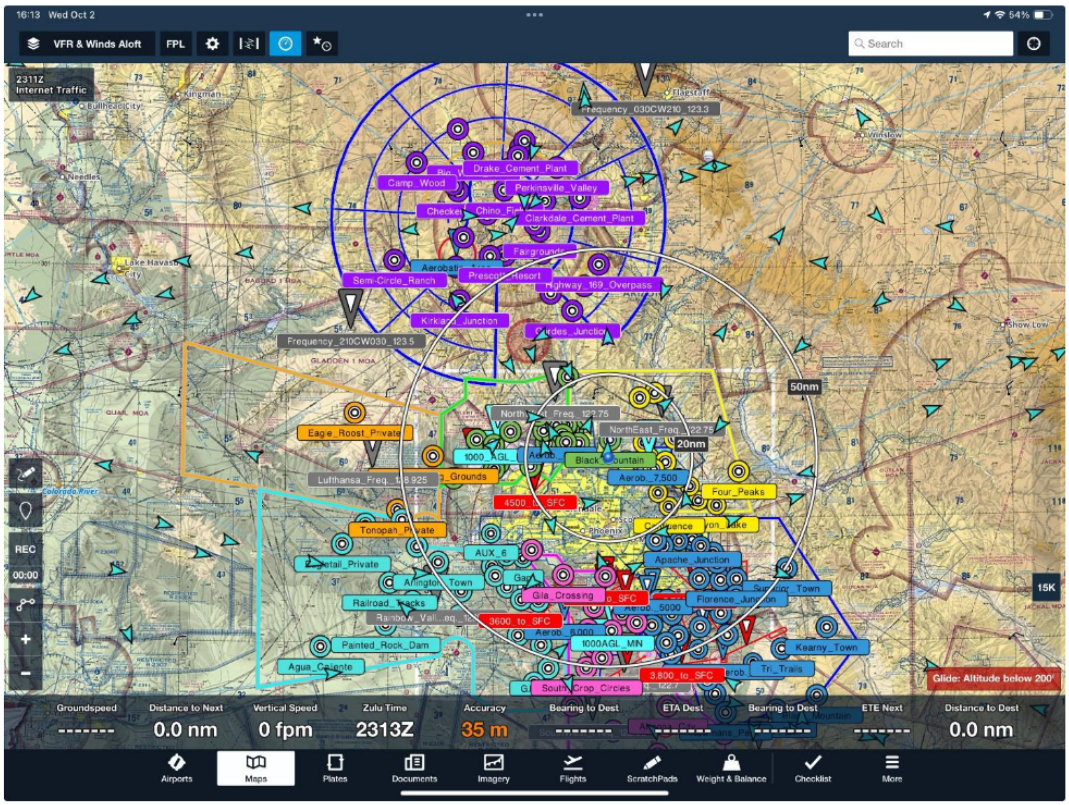

16:13 Wed Oct 2
54%
VFR & Winds Aloft
FPL
Search
2311Z
Internet Traffic
Drake_Cement_Plant
Camp_Wood
Perkinsville_Valley
Clarkdale_Cement_Plant
Fairgrounds
Aerobat
Prescott_Resort
Semi-Circle_Ranch
Highway_169_Overpass
Kirkland_Junction
Prides_Junction
Frequency_210CW030_123.5
50nm
20nm
15K
Eagle_Roost_Private
1000_AGL
Aerob_7,500
Four_Peaks
4500_to_SFC
Tonopah_Private
AUX_6
Apache_Junction
Gila_Crossing_to_SFC
Railroad_Tracks
3600_to_SFC
1000AGL_MIN
Painted_Rock_Dam
Agua_Caliente
Kearny_Town
3,800_to_SFC
South_Crop_Circles
Glide: Altitude below 200'
REC
00:00
Groundspeed
Distance to Next
Vertical Speed
Zulu Time
Accuracy
Bearing to Dest
ETA Dest
Bearing to Dest
ETE Next
Distance to Dest
0.0 nm
0 fpm
2313Z
35 m
0.0 nm
Airports
Maps
Plates
Documents
Imagery
Flights
ScratchPads
Weight & Balance
Checklist
More

Figure 1.

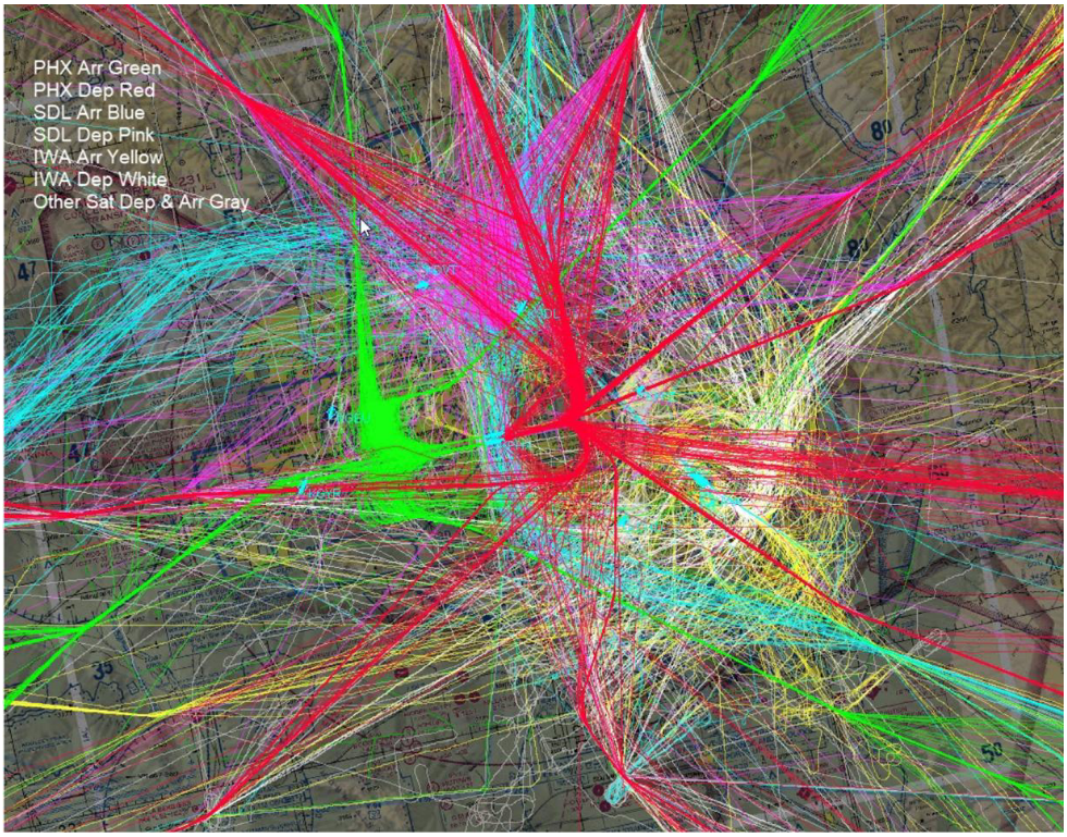


Figure 2

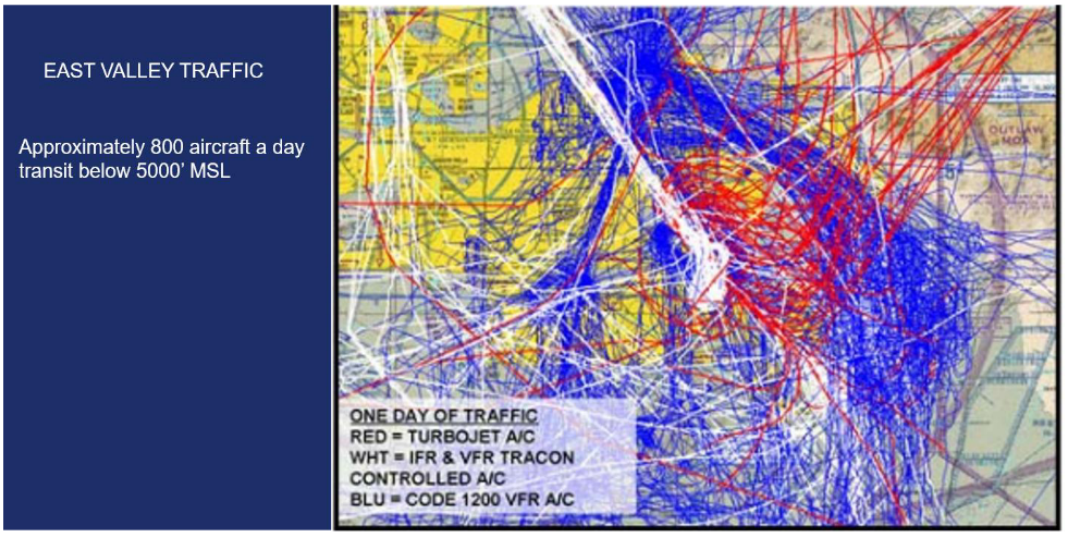


Figure 3.


19:50 Wed Oct 2
21%
VFR & Winds Aloft
FPL
Search
Internet Traffic
Tonopah_Private
Four_Peaks
Canyon_Lake
Apache_Junction
Gap
Gila_Crossing
Superior_Town
Florence_Junction
Railroad_Tracks
Painted_Rock_Dam
Kearny_Town
Tri_Trails
Black_Mountain
Arizona_City
Newmans_Peak
Crome_Peak
Red_Rock_Practice_Area
Sawtooth_Street_Patterns
Komelk_Mine
Silverbell_Mine
Cement_Plant
Pumping_Station
RESTRICTED R-2304
R-2305
Glide: 74KIAS, 8.5:1 (N3157U)
Groundspeed
Distance to Next
0.0 nm
Vertical Speed
0 fpm
Zulu Time
0250Z
Accuracy
35 m
Bearing to Dest
ETA Dest
Bearing to Dest
ETE Next
Distance to Dest
0.0 nm
Airports
Maps
Plates
Documents
Imagery
Flights
ScratchPads
Weight & Balance
Checklist
More

Figure 4.

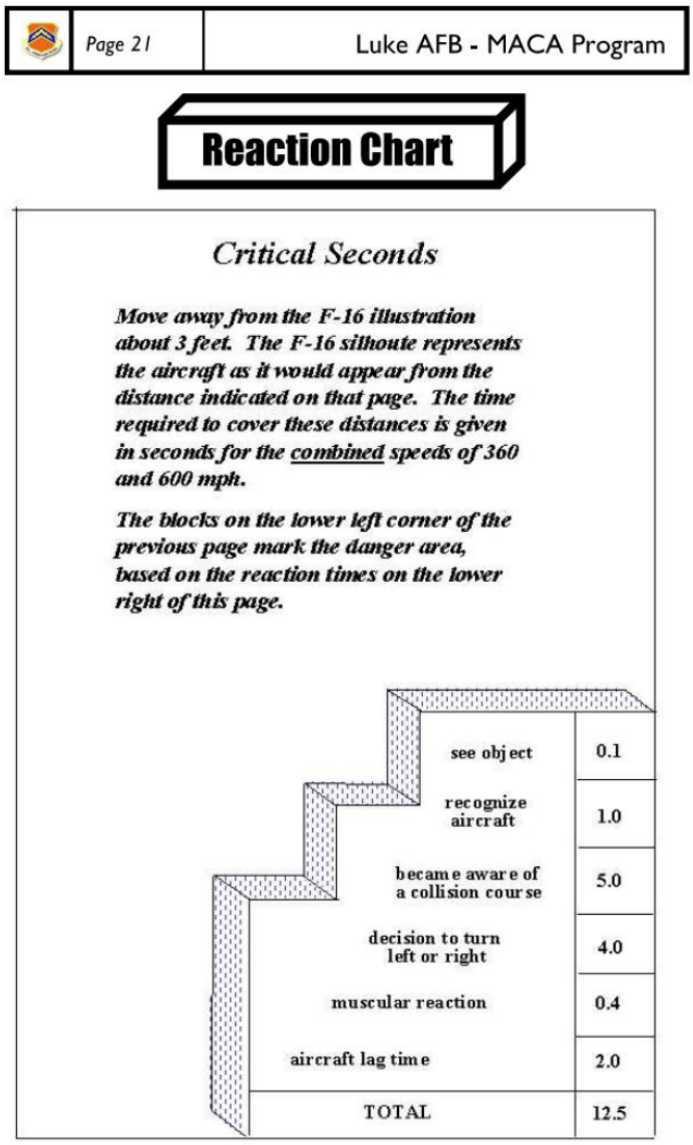

Page 21
Luke AFB - MACA Program
Reaction Chart
Critical Seconds
Move away from the F-16 illustration about 3 feet. The F-16 silhoute represents the aircraft as it would appear from the distance indicated on that page. The time required to cover these distances is given in seconds for the combined speeds of 360 and 600 mph.
The blocks on the lower left corner of the previous page mark the danger area, based on the reaction times on the lower right of this page.
see object 0.1
recognize aircraft 1.0
became aware of a collision course 5.0
decision to turn left or right 4.0
muscular reaction 0.4
aircraft lag time 2.0
TOTAL 12.5

Figure 5.

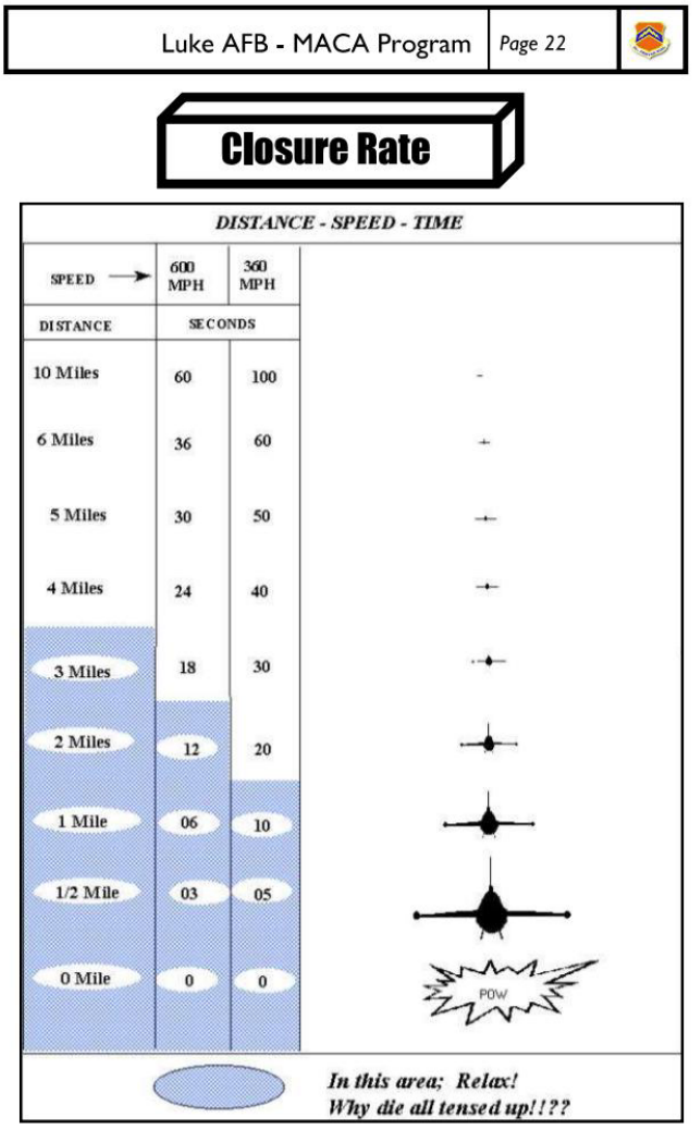

Luke AFB - MACA Program
Page 22
Closure Rate
DISTANCE - SPEED - TIME
SPEED
600 MPH
360 MPH
DISTANCE
SECONDS
10 Miles 60 100
6 Miles 36 60
5 Miles 30 50
4 Miles 24 40
3 Miles 18 30
2 Miles 12 20
1 Mile 06 10
1/2 Mile 03 05
0 Mile 0 0
POW
In this area; Relax!
Why die all tensed up!!??

Figure 6.

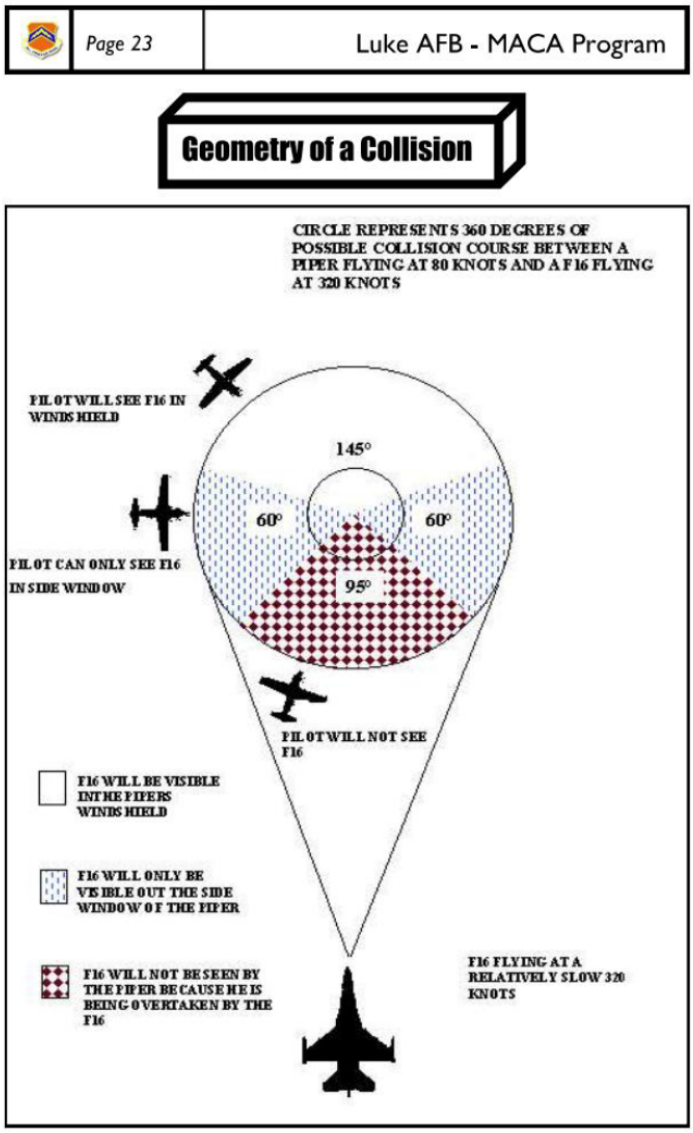

Page 23
Luke AFB - MACA Program
Geometry of a Collision
CIRCLE REPRESENTS 360 DEGREES OF POSSIBLE COLLISION COURSE BETWEEN A PIPER FLYING AT 80 KNOTS AND A F16 FLYING AT 320 KNOTS
PILOT WILL SEE F16 IN WINDSHIELD
145°
60°
60°
95°
PILOT CAN ONLY SEE F16 IN SIDE WINDOW
PILOT WILL NOT SEE F16
F16 WILL BE VISIBLE IN THE PIPERS WINDSHIELD
F16 WILL ONLY BE VISIBLE OUT THE SIDE WINDOW OF THE PIPER
F16 WILL NOT BE SEEN BY THE PIPER BECAUSE HE IS BEING OVERTAKEN BY THE F16
F16 FLYING AT A RELATIVELY SLOW 320 KNOTS

Figure 7

ID	YEAR	IFR Itinerants	IFR Overflights	VFR Itinerants	VFR Overflights	Local VFR	Total Tower Ops
DVT	2023	13241	1387	101402	6027	229743	351800
FFZ	2023	6600	542	134926	5050	207341	354459
PHX	2023	443440	5954	11225	29447	0	490066
PRC	2023	18174	37	82542	1149	234864	336766
SDL	2023	61469	132	69137	4672	45212	180622
TUS	2023	69880	125	48718	4057	27535	150315
CHD	2023	4,211	47	70,636	2,792	140,874	218,560
FLG	2023	6,972	4	18,087	1,694	5,701	32,458
GEU	2023	2,420	669	33,565	2,289	72,115	111,058
GYR	2023	5,650	374	75,218	3,034	119,641	203,917
IFP	2023	1,398	12	7,000	1,197	2,378	11,985
IWA	2023	23,976	252	68,855	4,153	148,477	245,713
RYN	2023	2,409	10	31,999	325	66,206	100,949

Table 1.

OPSNET : Tower Operations : Ranking Report

From 05/01/2023 To 05/31/2024 | FAA Only
Ranked by : Tower operations

		IFR Itinerant				IFR Overflight					VFR Itinerant					VFR Overflight					Local			Airport	Tower
#	Facility	Air Carrier	Air Taxi	General Aviation	Military	Total	Air Carrier	General Aviation	Military	Total	Air Carrier	Air Taxi	General Aviation	Military	Total	Air Carrier	Air Taxi	General Aviation	Military	Total	Civil	Military	Total	Operations	Operations
1	ATL	837,597	9,374	5,544	237	852,752	721	153	707	8	1,589	4	56	1,599	31	1,690	0	2,392	2,126	238	4,756	0	0	0	854,442	860,787
2	ORD	654,664	134,985	3,650	110	793,409	175	174	71	3	423	3	64	824	17	908	0	300	335	19	654	0	0	0	794,317	795,394
3	DFW	747,561	16,637	4,993	87	769,278	2,564	1,236	810	25	4,635	23	207	927	77	1,234	0	1,031	2,265	34	3,330	0	0	0	770,512	778,477
4	DEN	648,948	83,915	3,190	163	736,216	1,254	381	117	10	1,762	21	116	366	16	519	0	257	546	136	939	0	0	0	736,735	739,436
5	LAS	448,679	56,659	38,617	9,896	553,851	394	1,414	2,003	52	3,863	3	108,875	2,552	697	112,127	0	10,903	6,677	207	17,787	0	0	0	665,978	687,628
6	LAX	593,499	21,751	13,115	355	628,720	436	71	59	3	569	18	21	680	141	860	0	169	15,552	1,248	16,969	0	0	0	629,560	647,118
7	CLT	483,143	93,227	21,836	813	599,019	468	161	201	4	834	1	595	4,839	65	5,500	0	1,908	5,190	170	7,268	0	0	0	604,519	612,621
8	EWR	438,104	10,022	4,784	43	452,953	275	307	407	24	1,013	28	968	10,848	111	11,955	1	12,288	96,086	6,496	114,871	0	0	0	464,908	580,792
9	PHX	440,251	32,746	16,781	2,255	492,033	359	3,243	1,423	1,683	6,708	35	4,434	7,600	387	12,456	0	25,059	5,839	3,987	34,885	0	0	0	504,489	546,082
10	JFK	493,438	5,637	3,358	244	502,677	427	61	77	4	569	5	1,297	12,497	169	13,968	0	767	19,515	543	20,825	0	0	0	516,645	536,039
11	MIA	475,283	26,521	12,461	431	514,696	364	15	9	12	400	1,193	620	2,093	67	3,973	3	53	7,432	220	7,708	0	0	0	518,669	526,777
12	IAH	402,036	55,597	7,874	54	465,561	592	164	82	4	842	2	335	638	76	1,051	0	796	3,959	826	5,581	0	0	0	466,612	473,035
13	LGA	376,742	5,282	2,559	119	384,702	1,029	28	106	18	1,181	2	391	1,793	77	2,263	0	11,748	59,263	5,982	76,993	0	0	0	386,965	465,139
14	SEA	455,491	4,190	1,014	38	460,733	418	622	369	21	1,430	9	22	353	12	396	0	64	595	14	673	0	0	0	461,129	463,232
15	MCO	428,760	16,595	12,769	186	458,310	194	8	2	2	206	21	971	1,888	65	2,945	0	286	366	9	661	0	0	0	461,255	462,122
16	BOS	362,013	51,100	8,428	163	421,704	251	1,322	1,268	26	2,867	39	9,977	2,251	159	12,426	0	7,357	5,730	276	13,363	0	0	0	434,130	450,360
17	LGB	38,387	8,752	24,820	420	72,379	30	76	280	17	403	1	6,043	94,826	297	101,167	0	203	14,013	473	14,689	241,626	13	241,639	415,185	430,277
18	VNY	93	36,841	41,131	106	78,171	31,386	10,925	5,945	108	48,364	0	745	95,972	391	97,108	0	312	19,640	298	20,250	180,596	7	180,603	355,882	424,496
19	SFO	390,364	25,929	6,841	400	413,534	318	75	608	21	1,022	1	972	672	2,527	4,172	0	487	4,326	115	4,928	0	0	0	417,706	423,656
20	FFZ	15	2,746	3,839	125	6,725	335	85	93	19	532	0	79,108	70,846	1,371	151,325	0	1,267	3,796	79	5,142	254,939	8	254,947	412,997	418,671
21	DVT	11	6,651	8,045	16	14,723	0	736	835	4	1,575	2	66,254	55,259	80	121,595	1	1,733	4,362	275	6,371	272,118	274	272,392	408,710	416,656
22	APA	34	32,688	38,908	2,278	74,108	4	43	97	34	178	56	24,527	85,116	1,447	111,146	2	422	999	90	1,513	209,428	332	209,760	395,014	396,705
23	MYF	0	3,086	27,619	529	31,234	11	89	259	99	458	1	4,218	89,604	1,014	94,837	6	352	6,631	2,724	9,713	259,885	232	260,117	386,188	396,359
24	PRC	7	14,030	7,173	270	21,480	0	30	10	4	44	0	57,759	34,190	229	92,178	0	1,087	237	33	1,357	259,171	140	259,311	372,969	374,370
25	MSP	325,997	21,600	8,508	1,928	358,033	112	1,489	3,960	33	5,594	2	87	562	121	772	0	3,939	3,729	298	7,966	0	0	0	358,805	372,365
26	DCA	315,629	3,136	2,225	387	321,377	350	21	553	44	968	7	64	48	2,084	2,203	24	12,532	17,533	16,179	46,268	0	0	0	323,580	370,816
27	SLC	257,493	38,210	24,647	1,685	322,035	9	26	131	8	174	9	3,586	18,630	3,244	25,469	1	4,673	10,595	601	15,870	984	0	984	348,488	364,532
28	HNL	182,700	44,125	7,477	13,917	248,219	0	11	4	19	34	1	59,695	52,009	2,020	113,725	0	17	4	6	27	44	5	49	361,993	362,054
29	DAB	6,465	44,672	14,897	53	66,572	1	46	52	1	100	0	137,186	28,408	229	165,823	0	634	685	60	1,379	124,449	9	124,458	356,853	358,332
30	FLL	264,659	30,903	27,714	581	323,857	784	60	98	29	971	791	3,408	9,096	1,236	14,531	7	447	16,398	759	17,611	0	0	0	338,388	356,970
31	SNA	104,851	29,666	40,257	80	174,854	677	262	390	59	1,588	3	224	65,949	148	66,324	1	82	5,185	153	5,421	94,015	62	94,077	335,255	342,264
32	PHL	244,458	67,591	10,785	226	323,060	300	234	148	8	690	0	250	1,734	274	2,258	0	5,544	3,388	347	9,279	0	0	0	325,318	335,287
33	TMB	9	5,403	26,977	123	32,512	17	11	63	2	93	0	797	122,859	207	123,863	0	40	2,952	43	3,035	172,030	203	172,233	328,608	331,736
34	TEB	69	102,689	72,040	149	174,947	123,691	2,454	1,304	9	127,458	2	4,537	12,353	295	17,187	18	2,377	3,481	393	6,269	0	0	0	192,134	325,861
35	GFK	2,370	35,109	4,738	88	42,305	0	44	3	1	48	24	90,938	8,676	45	99,683	0	92	342	14	448	180,203	0	180,203	322,191	322,687
36	DTW	305,371	6,748	4,491	81	316,691	892	673	601	8	2,174	5	15	606	13	639	0	62	851	23	936	0	0	0	317,330	320,440
37	IAD	212,845	68,256	30,473	527	312,101	294	384	348	55	1,081	12	330	840	83	1,265	0	1,751	2,507	959	5,217	0	0	0	313,366	319,664
38	ANC	144,335	50,725	14,214	3,880	213,154	443	437	543	4,155	5,578	45	28,710	54,903	3,296	86,954	0	851	2,734	420	4,005	9,725	0	9,725	309,833	319,416
39	BWI	222,511	32,771	26,818	1,064	283,164	420	622	1,629	58	2,729	3	413	10,939	1,961	13,316	0	3,558	10,104	402	14,064	8	0	8	296,488	313,281
40	BJC	13	13,590	16,514	343	30,460	8	139	293	9	449	35	9,417	95,324	1,093	105,869	0	501	2,388	58	2,947	171,846	1,441	173,287	309,616	313,012
41	SFB	19,986	26,151	11,846	564	58,547	4	56	57	0	117	3	50,626	24,432	160	75,221	2	146	489	7	644	175,621	158	175,779	309,547	310,308
42	AUS	213,517	26,261	37,044	2,663	279,485	990	415	492	67	1,964	79	1,057	10,046	3,158	14,340	1	2,813	5,084	3,332	11,230	366	226	592	294,417	307,611
43	DAL	163,713	56,064	46,285	616	266,678	176	1,736	5,682	26	7,620	1	1,622	5,088	95	6,806	1	10,308	11,685	432	22,426	0	0	0	273,484	303,530
44	FRG	103	11,285	12,839	74	24,301	11,748	110	191	9	12,059	35	16,990	81,397	899	99,321	17	1,029	2,739	569	4,354	135,585	78	135,663	259,285	275,698
45	BWI	234,871	15,558	9,647	711	260,787	426	73	335	7	841	1	250	1,683	223	2,157	0	3,040	6,712	644	10,396	0	0	0	262,944	274,181
46	SAN	213,981	16,037	8,668	317	239,003	116	47	22	94	279	13	143	1,112	744	2,012	1	1,234	17,253	13,148	31,636	1	0	1	241,016	272,931
47	CNO	46	732	12,046	606	13,430	29	657	1,128	60	1,874	0	602	56,432	1,154	58,188	0	220	11,089	439	11,748	182,063	849	182,912	254,530	268,152
48	TPA	197,603	24,218	22,697	366	244,884	268	661	734	28	1,691	173	900	6,839	392	8,304	3	1,019	1,229	9,557	34	0	34	253,222	263,335
49	VRB	1,409	16,339	16,274	155	34,177	0	106	199	0	305	2	46,168	39,367	69	85,606	1	55	1,929	52	2,037	132,507	84	132,591	252,374	254,716
50	MDW	188,080	32,138	20,299	96	240,613	173	63	86	24	346	3	761	8,358	251	9,373	0	803	2,449	334	3,586	0	0	0	249,986	253,918
51	PDX	168,603	17,184	7,349	2,777	195,913	86	52	1,032	27	1,197	4	4,049	4,910	314	9,277	0	1,594	40,735	177	42,506	1,993	0	1,993	207,183	250,886
52	RVS	3	12,118	10,203	37	22,361	25	17	54	9	105	1	45,622	35,152	136	80,911	0	825	2,037	82	2,944	143,398	8	143,406	246,678	249,727
53	VGT	3	5,915	6,588	93	12,599	1	29	14	61	105	1	16,136	69,501	1,295	86,933	1	2,380	1,443	339	4,163	139,729	583	140,312	239,844	244,112
54	HOU	132,826	31,417	40,471	142	204,856	253	356	487	83	1,179	9	578	14,064	487	15,138	0	11,640	6,185	1,603	19,428	0	0	0	219,994	240,601
55	OAK	121,525	24,403	11,472	175	157,575	88	792	2,075	5	2,960	6	2,659	18,730	297	21,692	2	1,041	11,772	340	13,155	43,538	97	43,635	222,902	239,017
56	MEM	199,317	13,624	15,535	996	229,472	328	62	138	9	537	4	309	1,323	159	1,795	18	975	2,455	174	3,622	0	0	0	231,267	235,426
57	FTW	212	11,267	33,022	1,449	45,950	1,067	446	1,120	1,177	3,810	1	789	47,301	394	48,485	1	3,663	6,183	138	9,985	123,032	1,035	124,067	218,502	232,297
58	RDU	147,241	20,421	25,760	1,623	195,045	233	22	33	4	292	7	5,823	24,274	3,102	33,206	0	83	730	82	895	981	198	1,179	229,430	230,617
59	MYR	32,081	7,283	8,574	4,037	51,975	33	96	424	49	602	22	94,235	11,343	388	105,988	1	63,878	1,073	130	65,082	5,839	940	6,779	164,742	230,426
60	IND	135,367	16,399	13,993	1,068	166,827	41	951	2,627	9	3,628	4	40,124	2,681	204	42,813	0	525	1,689	109	2,323	0	0	0	209,840	214,113
61	SEE	0	293	9,113	906	10,312	1	1,262	8,863	350	10,476	2	207	58,157	230	58,596	0	358	7,074	399	7,831	126,502	55	126,557	195,465	213,772
62	FXE	27	22,442	41,968	125	64,562	7	144	1,093	7	1,251	6	6,539	81,367	272	88,184	1	278	5,312	196	5,787	52,927	18	52,945	205,691	212,729
63	PDK	35	27,672	45,158	322	73,187	1	217	291	98	607	3	1,896	59,874	137	61,910	0	2,227	9,829	208	12,264	62,267	43	62,310	197,407	210,278
64	BUR	68,222	26,575	12,728	213	107,738	10,710	3,997	1,907	17	16,631	3	1,177	16,801	213	18,194	14	920	34,457	700	36,091	28,985	13	28,998	154,930	207,652
65	HIO	10	3,127	10,514	63	13,714	1	123	415	2	541	13	844	57,319	119	58,295	1	236	3,415	67	3,719	130,622	122	130,744	202,753	207,013
66	CMA	33	3,170	25,141	299	28,643	3	13	5,283	3,056	8,355	99	162	60,637	161	61,059	6	0	4,356	334	4,696	103,190	113	103,303	193,005	206,056
67	LVK	5	3,180	9,699	48	12,932	0	13	44	6	63	0	89	53,369	58	53,516	0	155	1,839	48	2,042	134,017	47	134,064	200,512	202,617
68	SDF	157,965	14,650	8,594	1,230	182,439	126	111	1,113	8	1,358	4	1,006	2,011	727	3,748	0	7,796	6,651	463	14,910	51	13	64	186,251	202,519
69	GRL	19	12,159	27,392	50	39,620	1	26	36	3	70	0	2,230	55,505	38	57,773	0	671	5,242	15	7,228	96,199	3	96,202	193,595	200,893
70	PBI	65,456	55,483	43,650	439	165,028	24	79	131	41	275	16	2,392	19,959	1,164	23,531	0	844	6,807	742	8,393	576	0	576	189,135	197,803
71	BFI	6,892	24,919	26,841	613	59,265	707	523	3,482	49	4,761	5	14,910	48,635	350	63,900	9	6,690	8,707	453	15,859	53,491	124	53,615	176,780	197,400
72	SDL	17	31,819	36,048	294	68,178	0	59	112	3	174	12	33,590	40,679	175	74,456	6	2,025	3,127	27	5,185	47,309	1	47,310	189,944	195,303
73	SJU	95,885	30,767	9,262	765	136,679	0	80	17	2	99	69	35,017	6,273	236	41,595	3	8,065	6,787	335	15,190	816	14	830	179,104	194,393
74	COS	25,373	12,991	16,896	5,261	60,521	65	56	97	95	313	15	5,899	34,410	7,780	48,104	0	1,639	422	1,015	3,076	70,909	10,820	81,729	190,354	193,743
75	SJC	118,085	24,827	20,152	92	163,156	38	2,492	2,270	264	5,064	2	374	8,192	65	8,633	0	1,175	8,685	530	10,390	5,968	12	5,980	177,669	193,123
76	PIE	16,780	19,912	22,171	2,807	61,670	37	93	810	14	954	3	3,990	24,606	3,408	32,007	3	193	4,924	533	5,653	87,452	1,732	89,184	182,861	189,468
77	RHV	34	52	2,506	0	2,592	48	15	25	0	88	1	478	63,489	6	63,974	0	158	3,614	21	3,793	118,031	0	118,031	184,597	188,478
78	MRI	1	2,396	2,466	13	4,876	31	77	50	386	544	1	14,436	69,236	32	83,705	2	334	2,265	511	3,112	95,254	4	95,258	183,839	187,495
79	SRQ	36,405	16,482	32,453	919	86,259	36	16	32	5	89	5	917	47,991	602	49,515	0	195	2,262	188	2,645	48,307	282	48,589	184,363	187,097
80	DWH	7	2,704	16,996	506	20,213	19	12	57	4	92	1	1,328	56,839	1,901	60,069	0	237	1,651	70	1,958	103,432	1,050	104,482	184,764	186,814
81	SAT	105,737	18,711	33,498	2,463	160,409	229	33	164	80	506	14	7,169	11,331	1,186	19,700	0	1,181	3,692	735	5,608	32	7	39	180,148	186,262
82	STL	152,112	16,031	5,293	940	174,376	166	1,843	2,107	111	4,227	595	232	798	495	2,120	1	1,166	2,333	16	3,516	142	697	839	177,335	185,078
83	PAE	8,614	2,917	13,843	395	25,769	18	70	247	8	343	95	567	54,739	20	55,421	0	606	3,176	9	3,791	97,507	557	98,064	179,254	183,388
84	TOA	0	575	11,477	39	12,091	4	18	169	3	194	0	21	77,644	67	77,732	0	12	6,958	285	7,255	84,975	7	84,982	174,805	182,254
85	OVG	168,624	6,011	3,775	49	178,459	154	286	459	7	906	6	262	1,566	35	1,869	0	190	353	30	573	216	0	216	180,544	182,023
86	ISP	11,222	7,213	10,571	290	29,296	16	1	12	1	30	0	7,257	41,768	1,035	50,060	52	166	946	82	1,246	98,712	322	99,034	178,390	179,666
87	HPN	29,651	51,263	34,167	44	115,125	94	93	158	0	345	0	4,752	36,614	52	41,418	0	325	2,871	50	3,246	17,052	2	17,054	173,597	177,188
88	PAO	4	218	4,842	0	5,064	600	2,041	2,155	37	4,833	3	646	54,263	22	54,934	2	1,191	4,532	298	6,023	105,710	0	105,710	165,708	176,564
89	CRQ	4	14,093	36,392	287	50,776	1	64	427	7	499	27	5,445	47,359	83	52,914	1	724	4,390	315	5,430	65,004	70	65,074	168,764	174,693
90	HWD	33	1,612	9,115	8	10,769	39,137	1,446	634	16	41,235	0	578	34,886	183	35,647	4	231	2,305	177	2,717	81,448	2	81,450	127,866	171,818
91	ABQ	58,609	20,000	12,582	3,498	94,689	40	18	16	12	86	11	5,318	25,453	9,851	40,633	3	5,116	2,331	562	8,012	23,067	4,250	27,317	162,639	170,737
92	DPA	21	10,758	19,554	56	30,389	8	33	99	0	140	7	1,516	43,818	84	45,425	0	59	2,572	3	2,634	90,871	240	91,111	166,925	169,699
93	PTK	386	11,525	34,053	44	46,008	1	79	816	21	917	38	1,576	38,449	97	40,160	0	81	2,469	13	2,563	79,027	0	79,027	165,195	168,675
94	PNS	26,816	8,497	19,552	9,220	64,087	15	29	54	84	182	2	1,525	36,343	11,051	48,921	1	2,607	645	3,106	6,359	45,818	3,123	48,941	161,949	168,490
95	PUB	77	4,577	6,143	1,828	12,625	0	5	13	14	32	4	3,911	10,774	51,562	66,251	1	85	173	109	368	13,590	75,149	88,739	167,615	168,015
96	FPR	40	14,039	16,482	72	30,633	3	156	190	0	349	4	23,362	22,198	69	45,633	15	626	2,464	176	3,281	86,568	80	86,648	162,914	166,544
97	SUS	76	17,034	22,123	778	40,011	5	36	155	4	200	7	6,025	37,697	429	44,158	0	156	1,937	33	2,126	73,180	244	73,424	157,593	159,919
98	BOI	60,012	8,924	20,559	2,023	91,518	67	55	28	13	163	67	3,322	33,827	4,630	41,846	0	4,445	761	54	5,260	18,072	854	18,926	152,290	157,713
99	FCM	5	6,247	22,719	16	28,987	1	52	127	2	182	2	2,383	46,128	80	48,593	0	387	1,277	33	1,697	70,395	56	70,451	148,031	149,910
100	LOU	1	635	8,858	30	9,524	12	75	86	5	178	4	6,486	45,931	746	53,167	2	687	1,073	181	1,943	84,871	0	84,871	147,562	149,683

Table 2.

In summary, the floor of several MOAs would be lowered to provide additional airspace for low-altitude training for the current missions of the primary aircraft using each MOA. The proposed floor compared to the existing floor of the MOAs is presented in **Table 2.1-2**. In addition, required training terrain variety in the region would be improved by establishing new low-altitude training airspace that covers a variety of vertical terrain features. The only vertical change to the ATCAAs would be the default scheduling for Outlaw and Jackal ATCAAs to FL510.

Table 2.1-2 Summary of Proposed Altitude Changes

MOA	Existing Floor (No Action)	Proposed Floor
Tombstone	500 feet AGL	100 feet AGL
Outlaw	8,000 feet MSL or 3,000 feet AGL, whichever is higher	500 feet AGL
Jackal	11,000 feet MSL or 3,000 feet AGL, whichever is higher	500 feet AGL
Jackal Low	100 feet AGL	No change
Morenci	1,500 feet AGL	No change
Reserve	5,000 feet AGL	No change
Bagdad	7,000 feet MSL or 5,000 feet AGL, whichever is higher	500 feet AGL
Gladden	7,000 feet MSL or 5,000 feet AGL, whichever is higher	500 feet AGL
Sells	10,000 feet MSL	No change
Sells Low	3,000 feet AGL	No change
Ruby	10,000 feet MSL	No change
Fuzzy	100 feet AGL	No change

Legend: AGL = above ground level; ATCAA = Air Traffic Control Assigned Airspace; FL = Flight Level; MOA = Military MSL = mean sea level.

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Table 3.

Supersonic flight is currently authorized in Gladden, Bagdad, and Sells MOAs at 10,000 feet MSL and above and would remain unchanged with the Proposed Action. The Proposed Action includes authorizing supersonic flight down to 5,000 feet AGL in Tombstone, Outlaw, Jackal, Morenci, and Reserve MOAs. The existing and proposed supersonic flight authorizations are provided in **Table 2.1-3**. These changes would increase the capacity of the regional airspace to support non-hazardous training that requires supersonic flight at lower altitudes.

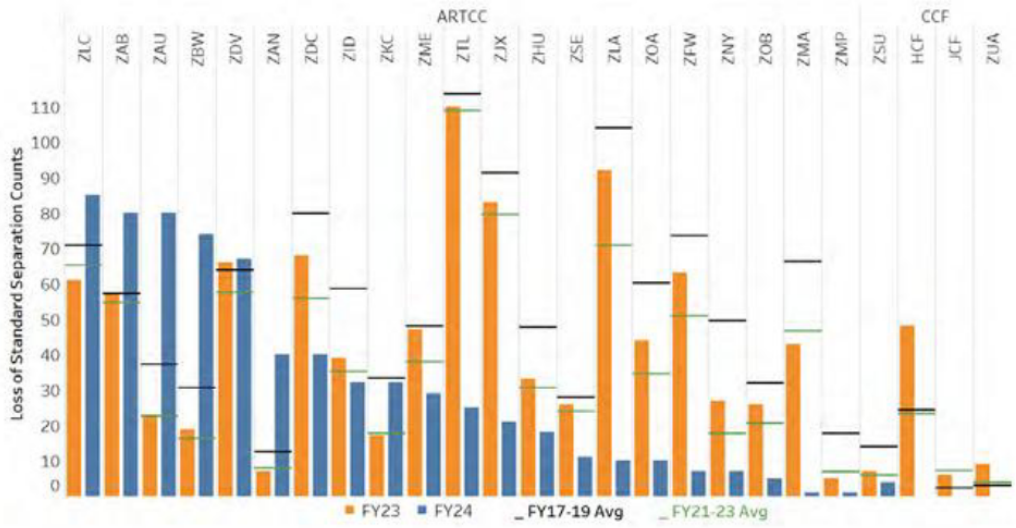
Table 2.1-3 Existing and Proposed Supersonic Flight Authorization

MOA/ATCAA	Existing Minimum Altitude (No Action)	Proposed Minimum Altitude
Tombstone	FL300	5,000 feet AGL
Outlaw	FL300	5,000 feet AGL
Jackal	FL300	5,000 feet AGL
Morenci	FL300	5,000 feet AGL
Reserve	FL300	5,000 feet AGL
Bagdad	10,000 feet MSL	No change
Gladden	10,000 feet MSL	No change
Sells	10,000 feet MSL	No change
Ruby	Not authorized	No change
Fuzzy	Not authorized	No change

Legend: AGL = above ground level; ATCAA = Air Traffic Control Assigned Airspace; FL = Flight Level; MOA = Military Operations Area; MSL = mean sea level.

2-7 Draft Environmental Impact Statement (EIS)

Table 4.



Total Losses of Standard Separation

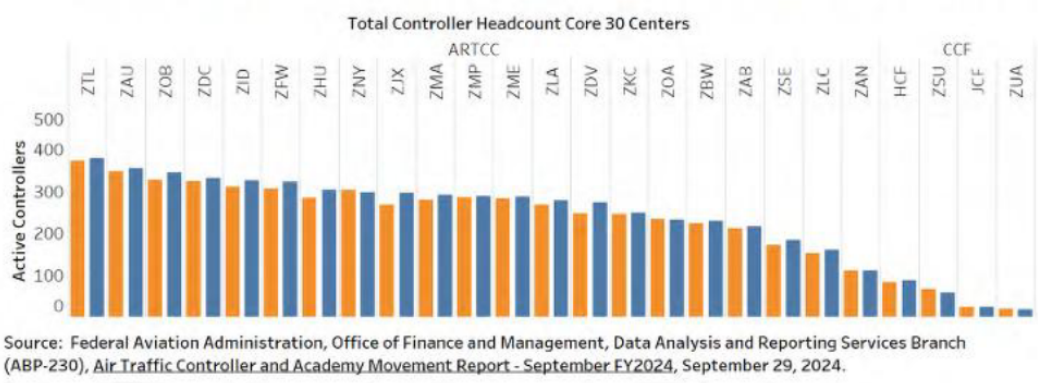
FY17-19 Avg	FY21-23 Avg	FY23	FY24	% Change
1,221	904	1,026	679	-33.8%

Center	FY17-19 Avg	FY21-23 Avg	FY23	FY24
HCF	24	23	48	0
JCF	2	7	6	0
ZAB	57	55	57	80
ZAN	13	8	7	40
ZAU	37	23	23	80
ZBW	31	16	19	74
ZDC	80	56	68	40
ZDV	64	58	66	67
ZFW	74	51	63	7
ZHU	48	31	33	18
ZID	59	35	39	32
ZJX	91	80	83	21
ZKC	33	18	17	32

Center	FY17-19 Avg	FY21-23 Avg	FY23	FY24
ZLA	104	71	92	10
ZLC	71	65	61	85
ZMA	66	47	43	1
ZME	48	38	47	29
ZMP	18	7	5	1
ZNY	50	18	27	7
ZOA	60	35	44	10
ZOB	32	21	26	5
ZSE	28	24	26	11
ZSU	14	6	7	4
ZTL	114	109	110	25
ZUA	3	4	9	0

Source: Federal Aviation Administration, Air Traffic Organization, Safety and Technical Training, Office of Policy and Performance (AJI-3), unpublished Airborne Loss Event data, April 30, 2025.

Table 5



Source: Federal Aviation Administration, Office of Finance and Management, Data Analysis and Reporting Services Branch (ABP-230), Air Traffic Controller and Academy Movement Report - September FY2024, September 29, 2024.

Table 6.