

**BY ORDER OF THE COMMANDER
14TH FLYING TRAINING WING**



**COLUMBUS AIR FORCE BASE
INSTRUCTION 13-204**

9 AUGUST 2024

***Nuclear, Space, Missile, Command and
Control***

***AIR FIELD OPERATIONS AND LOCAL
FLYING PROCEDURES***

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This instruction contains information and directives pertaining to the operation of 14th Flying Training Wing (FTW) airfield and Air Traffic Control (ATC) facilities. It implements the guidance from Air Force Manual (AFMAN) 13-204v1, Management of Airfield Operations; AFMAN 13-204v2, Airfield Management; AFMAN 13-204v3, Air Traffic Control; DAFI 13-213, Airfield Driving. This publication applies to Air Force Reserve Command (AFRC) Units. This publication does not apply to the Air National Guard (ANG). Individuals responsible for complying with this guidance should carefully review this volume. This instruction is the source document for airfield and ATC operations. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the DAF Form 847, *Recommendation for Change of Publication* to the OPR, to 14th Operations Support Squadron, Airfield Operations (14 OSS/OSA), 2 Tin Pusher Circle, Columbus AFB MS 39710. Route DAF Form 847 from the field through the appropriate functional's chain of command. Ensure that all records created because of processes prescribed in this instruction are maintained in accordance with Air Force Instruction (AFI) 33-322, *Records Management and Information Governance Program*, and disposed of in accordance with the Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS).

SUMMARY OF CHANGES

This document has been revised and should be completely reviewed. Changes include High Tactical Recovery Procedure, Parking Plan Restrictions, Quiet/Restricted Noise Periods, VFR

Local Training Areas, Sunfish and LiveOak RSU Practice Area of Protection, Local Area Priorities, Breakout/Go-around Procedures, VFR Pattern Breakouts to Radar, Civilian Aircraft Operations, Wing Flying Definition, Runway/Status Selection procedures, Golden Triangle Regional Airport Instrument Approaches, **Chapter 4.** Airfield Management, T-38 Radar Termination Points, T-1 IFR/VFR Clearances, T-6 Departures, Transient Aircraft Landing on an RSU-Controlled Runway, Determine Runway Surface Conditions (RSC).

Chapter 1—AIRFIELD INFORMATION	9
1.1. Airfield Information.....	9
1.2. Command and Control.....	10
1.3. Control of Ground Traffic in the Controlled Movement Area (CMA):.....	10
1.4. Airfield Lighting Systems.....	10
1.5. Permanently Closed Areas on Airfield.	11
1.6. Aircraft Arresting System Configuration and Procedures.	11
1.7. Parking plan/Restrictions.	12
1.8. Air Traffic Control Facilities.	12
1.9. ATCALs Navigational Aids (NAVAIDs).....	14
1.10. Auxiliary Power Requirements.....	14
1.11. Transient Alert.	14
1.12. Special Operations Areas/Ramps.....	14
1.13. Noise Abatement.....	15
1.14. Quiet/Restricted Noise Periods.	15
1.15. Restricted/Classified Areas on the Airfield.	15
1.16. Civilian Use of NAVAIDS.	15
1.17. Weather Dissemination and Coordination Procedures.	15
Chapter 2—AIRFIELD GROUND OPERATIONS	16
2.1. Aircraft Ground Operations.	16
2.2. Aircraft Towing Procedures.....	18
Chapter 3—AIR TRAFFIC CONTROL	19
3.1. Automated Terminal Information Service (ATIS) Procedures.....	19
3.2. Protection of the ILS Critical Areas and Precision Obstacle Free Zone (POFZ). ...	19
3.3. Runway Change Procedures.	20
Table 3.1. Changing from Runway 13 to Runway 31.	21
Table 3.2. Changing from Runway 31 to Runway 13.	22

3.4.	Local Flying Area/Designation of Airspace.	22
3.5.	VFR Local Training Areas.	23
3.6.	Sunfish and LiveOak RSU Practice Area Protection.....	24
3.7.	VFR Weather Minimums.....	24
3.8.	Special Procedures.....	25
3.9.	Reduced Same Runway Separation (RSRS).....	26
3.10.	Intersection Departures.	26
3.11.	Wind Limitations on ATCT.....	26
3.12.	Wind Limitations on the DASR.....	27
3.13.	Unscheduled/Unauthorized Aircraft Arrivals.	27
3.14.	Unlawful Seizure of Aircraft.	27
3.15.	Local Aircraft Priorities.	27
3.16.	Standard/Local Climb Out.	28
3.17.	Opposite Direction Traffic Procedures.	28
3.18.	Breakout/Go-Around Procedures. (Instrument Approach).....	29
3.19.	VFR Pattern Breakouts to Radar.....	29
3.20.	Runway Offset Procedures.	29
3.21.	Civilian Aircraft Operations.	29
3.22.	Supervisor of Flying (SOF) Operating from ATCT.	30
3.23.	Non-Radar Operating Procedures.	30
3.24.	Wing Flying Definition.....	32
3.25.	Golden Triangle Regional Airport (GTR) Instrument Approaches.	32
3.26.	Runway/Status Selection Procedures.....	32
3.27.	Military Operations Area (MOA) Procedures.	33
3.28.	Military Authority Assumes Responsibility for the Separation of Aircraft (MARSA) Operations.	34
Chapter 4—	AIRFIELD MANAGEMENT	36
4.1.	Airfield Maintenance.	36
4.2.	Determining Runway Surface Conditions (RSC).	37
4.3.	Procedures for Conducting Airfield Inspections/Checks.....	38
4.4.	Procedures for Suspending Runway/Taxiway/Airfield Operations.....	38
4.5.	Procedures for Opening and Closing the Runway/Taxiway/Airfield.	38
4.6.	Flight Plans.	40

4.7.	NOTAM Procedures.....	41
4.8.	Flight Information Publications (FLIPs).....	41
4.9.	Airfield Waivers.	41
4.10.	Waivers to Airfield/Airspace Criteria.	42
4.11.	Prior Permission Required (PPR).	42
4.12.	Air Evacuation Notification.	42
4.13.	Distinguished Visitor (DV) Notification/Handling.....	42
4.14.	Dangerous/Hazardous Cargo Procedures.	43
4.15.	Wear of Hats.	43
4.16.	Airfield Smoking Policy.	43
4.17.	Snow Removal Operations.	43
4.18.	Bird/Wildlife Control.....	43
4.19.	Bird Watch Conditions.	43
4.20.	Photography on the airfield.....	43
4.21.	Flightline Visitor Escort Procedures.....	44
4.22.	Classified Material Storage.....	44
Chapter 5—	FLYING STATUS COMMON TO ALL AIRFRAMES	45
5.1.	Restricted.	45
5.2.	OPS/Weather Recall.	45
5.3.	Area Hold.....	45
5.4.	Standby. Standby.	45
5.5.	Terminate.....	45
5.6.	Slots.	45
Chapter 6—	T-6 OPERATIONS	46
6.1.	T-6 Flying Status.	46
6.2.	VFR Traffic Pattern Procedures.....	48
6.3.	Radar Traffic Patterns and Speeds.....	50
6.4.	Standard/Local Climb Out.	50
6.5.	IFR/VFR Clearances.....	50
6.6.	Departures.....	51
6.7.	Radar Termination Points into Sunfish.....	52
6.8.	Radar Vector to Initial Procedures.....	53
6.9.	Center Runway Arrival Procedures.	53

6.10.	VFR Arrivals.....	53
6.11.	Drag Procedures.....	53
6.12.	T-6 MOA Procedures (CBM RAPCON Controlled Airspace).....	54
6.13.	Recovery From Gunshy.	55
6.14.	Lost Communication.....	55
Chapter 7—T-38 OPERATIONS		57
7.1.	T-38 Flying Status.	57
7.2.	VFR Traffic Pattern Procedures.....	57
7.3.	Radar Traffic Patterns.	58
7.4.	Standard/Local Climb Out.	58
7.5.	IFR/VFR Clearances.....	58
7.6.	Departures.....	59
7.7.	Radar Termination Points.	60
7.8.	LiveOak Pattern Entry.	60
7.9.	Radar Vector to Initial Procedures.....	61
7.10.	Tactical/High Tactical Initial.	61
7.11.	High Tactical Recovery.	62
7.12.	Center Runway Arrival Procedures.	63
7.13.	Drag Procedures.....	63
7.14.	Split-to-Land Approach Procedures.	63
7.15.	T-38 MOA Procedures.....	64
7.16.	Lost Communication.....	66
Chapter 8—T-1 OPERATIONS		68
8.1.	T-1 Flying Status.	68
8.2.	VFR Traffic Pattern Procedures.....	68
8.3.	Radar Traffic Patterns and Speeds.....	69
8.4.	Standard/Local Climb Out.	70
8.5.	IFR/VFR Clearances.....	70
8.6.	Departures.....	71
8.7.	Radar Termination Points.	71
8.8.	Radar Vector to Initial Procedures.....	72
8.9.	VFR Arrivals.....	72
8.10.	Center Runway Arrival Procedures.	72

	8.11.	Drag Procedures.....	72
	8.12.	T-1 MOA Procedures.....	73
Table	8.1.	Shuttle Areas.....	75
	8.13.	Lost Communication.....	75
Chapter 9—EMERGENCY PROCEDURES			78
	9.1.	Operation of Primary/Secondary Crash Nets.....	78
	9.2.	Crash Phone Data for Emergencies.	78
Table	9.1.	Facilities on Primary Crash Net.....	79
Table	9.2.	Facilities on Secondary Crash Net.....	79
	9.3.	Emergency Response Procedures.	79
	9.4.	External Stores/Jettison Procedures.....	81
	9.5.	Fuel Dumping.	82
	9.6.	Aircraft Arresting Systems (AAS) Emergency Procedures.....	82
	9.7.	Hot Brakes.	82
	9.8.	Abandonment of Aircraft.....	83
	9.9.	Personnel/Crash Locator Beacon Signal/Emergency Locator Transmitter Response.	83
	9.10.	Armament/Hung Ordnance Procedures.	83
	9.11.	Evacuation of ATC and AMOPS Facilities.	83
	9.12.	Emergency Landing Procedures (ELPs).....	84
	9.13.	Hydrazine/Emergency Power Unit (EPU) Activation.	84
	9.14.	Aircraft Mishap Reporting Procedures.	84
	9.15.	UHF Single Frequency Approach (SFA).....	84
	9.16.	Local ELP Airfields.	84
	9.17.	Remotely Piloted Aircraft (RPA).....	84
Chapter 10—RUNWAY SUPERVISORY UNIT COORDINATION PROCEDURES			85
	10.1.	General.....	85
	10.2.	RSU/SOF Advisories.....	85
	10.3.	Runway Control Transfer.	85
	10.4.	Runway Crossing Procedures for Vehicles/Transient Aircraft.....	85
	10.5.	Sunfish/LiveOak Departures.....	86
	10.6.	Transient Aircraft Landing on an RSU-Controlled Runway.	86
	10.7.	RSU Radio Failure.....	87

10.8. Runway Crossing/Access Procedures for Emergency Response Vehicles.....	87
Chapter 11—MISCELLANEOUS	88
11.1. CBM VORTAC Out Procedures.	88
11.2. Flyby Procedures.	88
11.3. Alert Procedures.	89
11.4. Closed Runway Operations.....	89
11.5. Airfield Operations Board.	90
11.6. VOR/DME or TACAN Approaches.	91
11.7. Aero Club Operations.	91
11.8. Use of Night Vision Device (NVD) Not Authorized.....	91
11.9. Surveillance Approaches and Precision Approach Radar Monitoring.	91
Attachment 1—GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION	92
Attachment 2—COLUMBUS AFB AIRFIELD DIAGRAM	94
Attachment 3—FACILITY FREQUENCIES	95
Attachment 4—COLUMBUS AFB CLASS C AIRSPACE	96
Attachment 5—VFR PATTERN GROUND TRACKS	97
Attachment 6—T-6 SECTOR DEPICTION	101
Attachment 7—T-38/T-1 SECTOR DEPICTION	103
Attachment 8—T-1 SECTOR DEPICTION	108
Attachment 9—SURGE SECTORS DEPICTION	109
Attachment 10—SUNFISH/LIVEOAK PRACTICE AREA	112
Attachment 11—RADAR PATTERN	113
Attachment 12—COLUMBUS AFB RAPCON AIRSPACE	114
Attachment 13—T-6 DEPARTURE PROCEDURES	115
Attachment 14—T-38 DEPARTURE PROCEDURES	120
Attachment 15—T-1 DEPARTURE PROCEDURES	124
Attachment 16—ANNUAL REVIEW ITEMS	126
Attachment 17—T-6 CANNED FLIGHT PLANS	130
Attachment 18—T-38 CANNED FLIGHT PLANS	131
Attachment 19—T-1 CANNED FLIGHT PLANS	132

Attachment 20—LOW ALTITUDE AREA OPERATION (BELOW FL240)	135
Attachment 21—HIGH TACTICAL RECOVERY PROCEDURES (TRP)	136

Chapter 1

AIRFIELD INFORMATION

1.1. Airfield Information.

1.1.1. Columbus AFB has three parallel runways. The inside runway (13R/31L) is the primary runway for T-6 operations. The outside runway (13L/31R) is the primary runway for T-38 pattern operations and is also used by T-1s. The center runway (13C/31C) is the primary instrument runway and is normally used by T-1s and T-38s for initial takeoff. An airfield diagram is in [Attachment 2](#).

NOTE: T-38 aircraft below divert fuel can land on the inside runway with 14 OG/CC approval. Horizontal additional markings on the inside runway indicate the leading edge of the surface suitable for T-38 emergency landings (surface available from start of landing zone to end of roll out is runway 31L 8429'/runway 13R 7555'). The inside runway is not suitable for T-38 night landings due to the placement of the visual approach path indicator Runway Point of Interception.

1.1.1.1. Center Runway: 12,004' long, 300' wide. First and last 1,000' grooved concrete; middle 10,000' - 200' wide grooved concrete and 50' asphalt usable surface edges.

1.1.1.2. Outside Runway: 8,001' long, 150' wide. 1,000' concrete each end, remaining length asphalt.

1.1.1.3. Inside Runway: 6,320' long, 175' wide. Concrete/asphalt.

1.1.1.4. Overruns on each runway extend from the end of runway as follows:

1.1.1.4.1. Runway 13R: 1000', full strength pavement.

1.1.1.4.2. Runway 13C: 1000'.

1.1.1.4.3. Runway 13L: 1000'.

1.1.1.4.4. Runway 31L: 1635', full strength pavement.

1.1.1.4.5. Runway 31C: 1000'.

1.1.1.4.6. Runway 31R: 1000'.

1.1.1.5. Columbus AFB has 14 Taxiways: A, A1, B, C, E, F, F1, G, H, J, K, L, M, and M1. All taxiways are 75-feet wide, except for Taxiway B, which is 50-feet wide. Taxiways A1, H, F, E, G, and K have 50-foot shoulders on each side. 14 FTW assigned aircraft use ramp assigned to specific airframe.

1.1.1.6. Visual Blind Areas. Aircraft located under the aircraft shelters may not be visible from the ATCT. Aircraft taxi at their own risk in this area.

1.1.1.7. Radio Dead Spots. There are no continuous radio dead spots; however, Taxiway L for aircraft on 379.925 (ATCT) and 275.8 (Ground Control) and T-6/T-38 ramp for 269.55 (Clearance Delivery) are problematic.

1.2. Command and Control. The Airfield Operations Flight Commander (AOF/CC) and Airfield Manager (AFM), have the authority to close/suspend and resume airfield, runway or taxiway operations. The ATCT Watch Supervisor (WS) has the authority to suspend runway/taxiway operations in the interest of safety. The SOF may delay a runway closure/suspension in the interest of flight safety.

1.2.1. AMOPS will respond to all in-flight/ground emergencies unless waived by the SOF. "SOF calls" will be documented on AF Form 3616. When the SOF or ATCT WS/CIC requests a foreign object damage (FOD) or RSC check, AMOPS will respond as soon as possible. ATCT/RSU should prioritize access to the runway to allow completion of the requested check. Requested checks will take priority over normal student touch-and-go training.

1.2.2. When responding for an RSC check, AMOPS will wait no longer than 5 minutes to proceed onto the runway. ATCT/RSU shall prioritize runway access to allow for completion of the requested check. Requested checks will take priority over normal student touch and go training. After 5 minutes, ATCT will assume authority of the surface area.

1.2.3. The SOF is the direct representative of the 14 OG/CC and is the focal point for command and control of flying operations. The SOF normally operates in the ATCT during local wing flying. SOF duties are explained in AFI 11-418, Operations Supervision and CAFB Supplement.

1.3. Control of Ground Traffic in the Controlled Movement Area (CMA): CMA includes runways, overruns, and all areas within 100' of a runway edge ([Attachment 2](#)). The CMA requires two-way radio communication with the ATCT/RSU, as appropriate, and approval prior to CMA entry/access. For specific driving procedures, refer to AFI13-213_CAFB_Sup.

1.3.1. CMA Radio Failure. ATCT will turn on the runway edge lights and increase/decrease the intensity of the runway/taxiway lights as an emergency notification to exit the runway/CMA. Ground traffic and personnel will reposition via the most direct route and remain 100' outside of the CMA until two-way radio communications is reestablished.

1.3.2. When direct two-way radio communication is not possible with the ATCT, radio equipped escorts in communication with ATCT are required. ATCT will alternatively use light gun signals to direct the movement of traffic in the CMA.

1.4. Airfield Lighting Systems. When the ATCT is closed, control of the runway/taxiway lights is delegated to Airfield Lighting. Airfield Lighting will operate the airfield lighting system from the lighting vault and conduct airfield lighting checks. CAFB lighting systems consist of the following:

1.4.1. Outside Runway: High-Intensity Runway Edge Lights (HIRL), Runway Remaining Markers, Threshold Lights, Precision Approach Path Indicator (PAPIs).

1.4.2. Inside Runway: Medium-Intensity Runway Edge Lights (MIRL), Runway Remaining Markers, Threshold Lights, PAPIs.

1.4.3. Center Runway: HIRL, Runway Remaining Markers, Threshold Lights, PAPIs, Approach Light System with Sequenced Flashing Lights in ILS Cat-I configuration (ALSF-1).

1.4.4. Taxiways: Taxiway Edge Lights.

1.4.5. Rotating Beacon: Will be operated IAW FAAO JO 7210.3, FAAO JO 7110.65, and AFMAN 13-204v3.

1.5. Permanently Closed Areas on Airfield. The unnamed taxiway between the midpoint of Taxiway A and the inside runway is permanently closed and unusable.

1.6. Aircraft Arresting System Configuration and Procedures. Columbus AFB has two MA-1A AASs authorized for use by T-38 aircraft and two Barrier Arresting Kit-15 (BAK-15) systems authorized for use by all base T-38 and T-1 aircraft. T-6 aircraft will not use either AAS. Runway 13L BAK-15 is located 120 feet into the overrun. Runway 31R BAK-15 is located 119 feet into the overrun. BAK-15s are approximately 14-1/2 feet in the center and rise to 23-1/2 feet near the outside posts. Runway 13C MA-1A is located 101 feet into the overrun. Runway 31C MA-1A is located 103 feet into the overrun. MA-1As are approximately 4 feet high. Standard configuration for the MA-1A is in the up position at the departure end of the runway and down at the approach end. Standard configuration for the BAK-15 is in the down position at both ends of the runway. ATCT and RAPCON issue appropriate advisories to all aircraft when barriers are in a nonstandard configuration and will not advise 14 FTW aircraft when the configuration is standard. On Sundays, the barriers are serviceable but uncertified.

1.6.1. The ATCT is responsible for ensuring the barriers are operational and in proper configuration. ATCT will inform Power Production or the Fire Department (FD) of the active runway when opening the airfield. If any portion of an installed AAS is suspected of a fault or the system needs to be released to barrier maintenance for maintenance or configuration changes, ATCT will inform AMOPS. If an aircraft engages an AAS, ATCT will activate the Primary Crash Alarm System (PCAS). Upon receiving PCAS info AMOPS will activate the Secondary Crash Net (SCN). If notified of a fault with an AAS, ATCT will inform the SOF and coordinate with LiveOak (if necessary) regarding the impact on further operations. If the problem cannot be resolved and impacts operations, the SOF will notify the 14 OG/CC, AMOPS, and each squadron's duty desk.

1.6.2. AMOPS will maintain the status of each installed AAS. Any time there is a status change, AMOPS will inform ATCT. AMOPS will advise ATCT, Power Production, and the Fire Department any time a portion of an installed AAS is suspected of a fault. If any AAS is not available, other than when published in FLIP as not available, AMOPS will transmit a Notice to Airmen (NOTAM) to that effect.

NOTE: Aircraft Arresting Systems status will be reported as "in service" or "out of service".

1.6.3. The Fire Department will respond to all AAS engagements. In addition, the FD will respond to runway changes when Power Production personnel are not available.

1.6.4. Power Production will ensure the correct AASs are operational prior to the airfield opening. They will respond to all AAS engagements and maintain the barriers. Any time any portion of an installed AAS is suspected of a fault, Power Production will advise AMOPS. Finally, after an engagement, Power Production will notify ATCT and AMOPS of the approximate AAS reset time.

1.6.5. Landings (including touch-and-go) are NOT permitted over a raised approach-end barrier. Low approaches over a raised approach-end barrier are restricted to at or above 700' MSL. **NOTE:** Aircraft Arresting System Emergency Procedures are located in [Chapter 9](#) of this document.

1.7. Parking plan/Restrictions.

1.7.1. Aircraft parking plan is on file in Airfield management (AM).

1.7.1.1. There are seven hangars for fighter-type aircraft only on the airfield.

1.7.1.2. Aircraft C-130 or larger will park on the SAC Ramp. All other smaller aircraft will park on the Transient Ramp.

1.7.1.3. All HUREVAC aircraft will be parked IAW CAFB parking plan.

1.7.1.4. Towing movements are conducted IAW the appropriate maintenance technical orders (T.O.) for aircraft being towed in the hangar/maintenance aprons.

1.7.2. Aircraft restrictions of the airfield consist of the following:

1.7.2.1. Taxiways A and J and the transient ramp have a limited load-bearing capability. If a requirement exists to park heavier aircraft closer to Airfield Operations, coordinate with 14 OSS/OSAB, 14 OG/CC and 14 FTW/MX to use taxiway E.

1.7.2.2. Use caution at the intersections of taxiways J/C and C/G. Apron edge is less than 25 feet in the turn.

1.7.2.3. Weights may be increased by 80% for limited emergency use on taxiways by the OG/CC.

1.7.2.4. Not all 50' shoulders are marked with deceptive surface shoulder markings.

1.7.2.5. Contact AMOPS and/or check the local NOTAMs for airfield restrictions (e.g., construction, reduced aircraft rescue and firefighting capabilities, limited transient services, etc.).

1.8. Air Traffic Control Facilities.

1.8.1. Columbus Air Force Base provides both RAPCON and ATCT services to aircraft. During normal T-6 student training, the inside runway is controlled by the RSU, call sign "Sunfish". During normal T-38 SUPT student training, the outside runway is controlled by the RSU, call sign "LiveOak."

1.8.2. Airfield Operating Hours. Normal airfield and ATCT hours of operation are 1200-1700L Sunday, 0700-1900L Monday-Friday, and closed Saturdays. RAPCON hours of operation are as published Sunday, 0700-1900L Monday-Friday, and closed on Saturdays. These hours may vary according to the base flying schedule. ATC and AMOPS facilities are closed on all federal holidays. All facilities will extend hours of operation to support 14 FTW flying as manning permits. Operating hours may be extended by NOTAM to accommodate local flying operations after coordination through the AOF/CC and 14 OG/CC.

1.8.2.1. Standby and on-call procedures. The 14 OG/CC may authorize the use of standby and on-call procedures for Airfield Operations (AO) facilities.

1.8.2.2. Standby: "During published flying hours" AO personnel will be immediately available to return the facility to operations within 1-hour after notification. Consider standby time as "duty time."

1.8.2.3. On-Call: "Outside of normal operating hours" AO personnel must remain within the local area, be able to be contacted and return the facility to operations within 3-hours

after notification. Personnel on-call must not consume alcohol or take medications that affect duty status. Do not consider on-call time as “duty time.”

1.8.2.4. Notification and equipment checks. The AOF/CC or designated representative will notify the normally scheduled crew for standby duties. The on-call crew will be designated based upon available manning and crew rest requirements. All notifications will be accomplished via recall roster. Equipment checks will be accomplished IAW established facility opening checklists.

1.8.3. After-Hours Landing/Departure. The 14 OG/CC is the approving authority for all (base and transient) aircraft landing/departures times outside normal airfield hours. AMOPS is the primary coordination facility for after-hours landings/departures (alternate, 14 FTW Command Post (CP)).

1.8.3.1. AMOPS will:

1.8.3.1.1. Upon request for after-hours landing/departures, ask requester if he/she is aware Columbus AFB will be/is closed. Advise requester of current airfield operating hours. If times cannot be changed, the following information will be gathered: reason published hours cannot be complied with, reason for visit, times of arrival/departure, type of aircraft, services required, distinguished visitor status, names and titles, as applicable. AMOPS shall process NOTAMs when operating hours deviate from published hours and will coordinate changes with the following agencies at a minimum: ATCT/RAPCON, Command Post and Security Forces.

1.8.3.1.2. After the AMOPS specialist has all the information, they will notify the AFM for instructions prior to proceeding. After normal business hours, these individuals may be reached via cell phone.

1.8.3.1.3. Notify transient maintenance of the possibility of an after-hours transient landing/departure. Confirm they can support the transient aircraft.

1.8.3.1.4. Relay request with all available information received above to approving authority and relay approval/disapproval to requester.

1.8.3.1.5. During normal duty hours, contact the AOF/CC to obtain approval.

1.8.3.1.6. If unable to contact the AOF/CC, coordinate with 14 OSS/DO for 14 OG/CC approval.

1.8.3.1.7. After receiving approval, notify the AFM, AOF/CC or 14 OSS/DO, RAPCON, ATCT, FD, Transient Alert (TA) or Maintenance Operations Center (MOC) (whichever is appropriate), Base Weather and Command Post.

NOTE: IAW AFMAN 13-204v3, Air Traffic Control, aircraft flight operations when the ATCT or Airfield Management is closed requires MAJCOM/A3 approval.

1.8.3.1.8. Normally, all facilities (RAPCON, ATCT, and AMOPS) will be open and operational 30 minutes prior to an arrival or departure, based on proposed times. Facility openings will be accomplished IAW facility opening checklists.

1.8.3.1.9. Command Post will coordinate landing/departures outside the daily wing flying window.

1.8.4. Local frequencies. See [Attachment 3](#) for ATC frequencies.

1.8.5. The Digital Airport Surveillance Radar (DASR).

1.9. ATCALs Navigational Aids (NAVAIDs). The following are published in DoD flight information publications as the no-NOTAM preventive maintenance schedule.

NOTE: All times are local. Caledonia VORTAC (identifier CBM). Sunday, 0800-1000; Monday – Friday, 2200-0530.

1.9.1. Instrument landing system. Sunday, 0700-0900; Monday – Friday, 2200- 0530.

1.9.2. Columbus AFB DASR. Saturday – Sunday, 0700-0900; Monday – Friday, 2200- 0530.

1.9.3. The RAPCON is designated as the NAVAID monitoring facility for CAFB.

1.10. Auxiliary Power Requirements.

1.10.1. All NAVAIDs have generator capability that automatically activates when commercial power is unavailable. These automatic transfer generators are tested monthly to ensure proper functioning.

1.10.2. ATCT/RAPCON requirements:

1.10.2.1. The 14 OG/CC has exempted the ATCT/RAPCON from going to auxiliary power 30 minutes prior to the arrival of thunderstorms/severe weather.

1.10.2.2. The auto-start capability is considered reliable enough to warrant exemption.

1.10.2.3. The generator has an integral monitoring system connected to the command center at the Civil Engineering Squadron (CES). This allows CES to track the generator when it starts and stops, during operation and when it fails to start.

1.10.2.4. If the generator fails to start, CES will dispatch personnel to check the generator and manually start it if necessary.

1.10.2.5. When the emergency generator is operating, the operating statistics will be checked and annotated every hour by CES on the form provided in the generator room.

1.11. Transient Alert. TA hours of operation are 1200-1700L Sunday, 0700-1900L Monday-Friday, closed Saturdays and on all federal holidays. Services provided during open hours include: Low pressure and high pressure oxygen (OX), liquid oxygen (LOX), Oil (0-148, 0-156, A/M32A-86 and A/M 32A-95) and Fuel (A++). SOAPs are provided Monday-Friday only.

1.12. Special Operations Areas/Ramps. An airfield diagram is located in [Attachment 2](#). The SAC Alert area is designated as an all-purpose special operations area/ramp for emergencies, exercises and activities. All requests for use of the SAC area must be routed through AMOPS.

1.12.1. The SAC Alert area is designated as an all-purpose special operations area/ramp for emergencies, exercises and activities, and Unmanned Aerial System (UAS) start up area. All requests for use of the SAC area must be routed through AMOPS.

1.12.1.1. Columbus AFB does not have hot pit refueling areas.

1.12.2. Hot Brake Areas are located at the north and south Hammerheads and Taxiway J.

1.12.3. The designated hijacked aircraft location is the SAC ramp. This location should be used during known or suspected hijack situations. Unauthorized landing aircraft should also be placed in this area until otherwise directed by the on-scene commander.

1.12.4. The Arm/De-arm and Drag Chute Jettison Area are located at the north and south Hammerheads.

1.13. Noise Abatement. Columbus AFB noise abatement procedures are as published (per the IFR Supplement and AP1-B) or as NOTAM'd. ATC facilities and AMOPS shall refer noise complaints to base Public Affairs and record information in daily events log. AOF/CC will advise 14 OSS/OSOP of the incident.

1.14. Quiet/Restricted Noise Periods. Time periods for quiet/restricted noise must be approved by the 14 OG/CC. The event POC shall draft an electronic staff summary sheet (eSSS) and submit to scheduling (14 OSS/OSOS). Scheduling will forward the eSSS for 14 OG/CC approval via the 14 OSS/DO. Once approved by the 14 OG/CC, the eSSS shall be returned to scheduling for dissemination to applicable organizations (flying squadron programmers and DOs, AOF/CC, SOF program manager, maintenance, etc.). Quiet periods may be authorized for events in maintenance hangars, while a restricted noise period is typically authorized for an event at the Memorial Plaza. AMOPS shall publish applicable NOTAMs as required.

1.14.1. Quiet Period. The intent of a quiet period is no aircraft/AGE flightline noise. No takeoffs, engine starts, patterns or low approaches are permitted. Flightline use of AGE is prohibited. Only landings due to fuel state or emergency will be approved and these will be accomplished via a straight-in approach to the center runway (any T-6 experiencing an engine malfunction is allowed an ELP). Aircraft will hold after exiting the runway and await further instructions.

1.14.2. Restricted Noise Period. The intent is to minimize noise outside the flightline. Normal engine runs, taxi and vehicle operations on the ramp are authorized. All takeoffs are prohibited except for T-1 and T-6 initial takeoffs on the center runway and/or the outside runway. All aircraft will plan on one landing to a full stop from a straight-in approach. In case of unusual circumstances, such as weather or in-flight emergencies (IFEs), aircrew may deviate from these restrictions.

1.15. Restricted/Classified Areas on the Airfield. There are no restricted/classified areas on the airfield.

1.16. Civilian Use of NAVAIDS. When local flying is not in progress, RAPCON may permit civil aircraft to use CAFB NAVAIDS for practice low approaches to CAFB.

NOTE: RAPCON will approve approaches (military or civilian aircraft) at CAFB only if the ATCT and airfield are open.

1.17. Weather Dissemination and Coordination Procedures. Weather reporting procedures are found in CAFBI 15-101, Weather Support to Columbus AFB.

Chapter 2

AIRFIELD GROUND OPERATIONS

2.1. Aircraft Ground Operations.

2.1.1. Taxi Procedures. (See also paragraphs 1.7.1., 1.7.7., and 1.7.8..)

2.1.1.1. Engine Start. All Columbus based aircraft will monitor GC prior to, during, and immediately following engine start. Obtain ATIS prior to taxiing.

2.1.1.2. Aircraft will advise GC of the ATIS code when calling for taxi. Aircrew will read back the assigned runway, all hold short instructions, or Sunfish procedures (outlined in 2.1.2.).

NOTE: Aircraft located under the aircraft shelters may not be visible from the ATCT. All aircraft taxi at their own risk when in this area.

2.1.1.3. Aircraft should not squawk on the ground.

2.1.1.4. Aircraft taxiing for departure have priority over aircraft returning to the parking area.

2.1.1.5. All aircraft will monitor GC after landing on and clearing runway 31L and 13C. T-6 aircraft landing on runway 13R/31L will monitor GC to parking. All aircraft exiting the outside runway will hold short of runway 31C/13C and contact ATCT (CH 3) for clearance to cross the center runway. Flight lead shall ensure all flight members are on frequency and are ready to cross before contacting ATCT. When runway 31 is in use and Sunfish Procedures are not in effect, all aircraft exiting runway 31C at Taxiway A1 or that have crossed runway 31C at Taxiway M1, will be directed by ATCT to hold short of runway 31L and after crossing monitor GC while taxiing to park. The normal runway exiting point for all aircraft landing on runway 31C is the end of the runway, unless otherwise requested by aircrew or directed by ATC. The preferred runway exiting point for all aircraft landing on runway 13C is Taxiway H, if able.

2.1.1.6. T-6 aircraft entering Taxiways J and L shall enter the designated run-up spots IAW AFMAN 11-2T-6v3 14OGSUP.

2.1.1.7. Standard Taxi Routes: Aircraft will utilize the most expeditious route to its assigned take-off runway unless otherwise instructed by GC.

2.1.1.8. To ensure proper wingtip clearance, dual Taxiways/lanes C, D, and G will be restricted to single-lane taxi for all aircraft when a transient aircraft is involved. All remaining taxiways are single-lane use only.

2.1.2. Sunfish Procedures. Sunfish Procedures are instructions issued by GC/ATCT that inform the aircraft commander of the requirement to hold short of the inside runway. Aircraft will continue to hold short until instructions have been issued by the Sunfish RSU crew to cross the inside runway using the following guidelines:

2.1.2.1. When the Sunfish RSU crew controls runway 13R, GC will advise aircraft taxiing to the inside runway by specifying "SUNFISH PROCEDURES." Runway 13R Sunfish Procedures are: Aircrew will taxi to the inside runway via Taxiway A and hold short of

runway 13R VFR hold short line on Taxiway A. Aircrew will switch to the Sunfish RSU frequency (**CH 2**) no later than Taxiway L to monitor radio transmissions. The use of traffic lights located on the opposite side of the runway will be utilized to indicate when crossing may be accomplished. This will reduce radio transmissions between the aircrew and the RSU crew.

2.1.2.1.1. A red light will indicate to the aircrew that they are required to hold short of runway 13R.

2.1.2.1.2. A green light with no radio call indicates to the aircrew that the Sunfish RSU has given the aircrew permission to taxi across runway 13R. The aircrew will then visually clear final before crossing the active runway.

2.1.2.1.3. If the RSU crew does not intend to cross all aircraft present they will clear the aircraft they wish to cross by transmitting “(NUMBER OF AIRCRAFT), (TYPE OF AIRCRAFT), CROSS RUNWAY 13R.” The green light will be used in conjunction with this radio call. **NOTE:** If at any point there is doubt or confusion, aircrew should stop and hold short, wait for a break in Sunfish pattern radio communications, and query the Sunfish RSU controller about crossing clearance if necessary.

NOTE: GC will issue instructions as follows: “(Callsign), COLUMBUS GROUND, RUNWAY 13 CENTER, TAXI SUNFISH PROCEDURES.” Aircraft shall read back “SUNFISH PROCEDURES” indicating they understand the hold short procedure. If “SUNFISH PROCEDURES” is not read back by the aircraft, GC will state “READ BACK SUNFISH PROCEDURES” to ensure receipt of runway hold short instructions.

2.1.2.2. When the Sunfish RSU crew controls runway 31L, ATCT will advise aircraft exiting/crossing the departure end of runway 31C by specifying “SUNFISH PROCEDURES.” Runway 31L Sunfish Procedures are: Aircrew will hold short of runway 31L VFR hold short line on Taxiway A1. When clear of 31C, aircrew will switch to Sunfish RSU frequency (**CH 2**), and await clearance from the Sunfish RSU crew to cross runway 31L. If the aircraft have not been cleared to cross by the RSU crew after 5 minutes, the lead aircraft will query the RSU crew with “(NUMBER OF AIRCRAFT), (TYPE OF AIRCRAFT), HOLDING SHORT.” Aircrew will refrain from using the term “CROSS” in their transmissions to Sunfish. The RSU crew will acknowledge this radio transmission and, when appropriate, clear the aircraft to cross with “(NUMBER OF AIRCRAFT), (TYPE OF AIRCRAFT), CROSS RUNWAY 31L.” Once clear of runway 31L aircraft will taxi to park via taxiway A and monitor GC. Aircraft taxiing from taxiway L will give right-of-way to aircraft on taxiway A.

NOTE: ATCT will issue instructions as follows: “(Callsign), (TURN LEFT AT THE END), (CROSS RUNWAY 31 CENTER), SUNFISH PROCEDURES.” Aircraft shall read back “SUNFISH PROCEDURES” indicating they understand the hold short procedure. If “SUNFISH PROCEDURES” is not read back by the aircraft, ATCT will state “READ BACK SUNFISH PROCEDURES” to ensure receipt of runway hold short instructions.

2.1.3. Heavy aircraft operations. Due to pavement and jet thrust avoidance considerations, all heavy aircraft will taxi on the center runway to the SAC Alert Ramp unless previously coordinated with AMOPS.

2.1.4. Engine Run-up/Test Procedures. All personnel conducting installed engine runs will notify the ATCT when initiating an engine run and will monitor GC frequency for the duration of the test. The standard T-6 Power Management Unit run-up check in the designated areas on Taxiway J and L do not require this notification.

2.1.4.1. T-1 engine run area. Aircraft parking ramp and maintenance apron adjacent to the parking ramp at the designated/painted spot. To conduct take-off thrust engine runs, T-1s must have at least 200' behind the aircraft clear of all obstacles.

2.1.4.2. T-6 engine run area. Aircraft parking ramp, hangar quadrangle and T-6 trim pads at the south end of the airfield.

2.1.4.3. T-38 engine run area. Aircraft parking ramp and T-38 hush houses at the south end of the airfield.

NOTE: Transient aircraft. Any transient aircraft requiring an engine run must coordinate with the Airfield Manager and the ATCT. The designated take-off thrust engine run area for transient aircraft is either hammerhead (Taxiway A1 or F). Ensure at least 50 ft. of useable concrete is behind the tail of the aircraft and at least 300 ft. behind the tail of the aircraft is clear of all obstacles to ensure proper safety distances.

2.2. Aircraft Towing Procedures.

2.2.1. Vehicles will not pass under any part of an aircraft unless necessary for towing, loading, fueling, defueling or as required by applicable technical orders.

2.2.2. Maximum vehicle speeds while towing are as follows:

2.2.2.1. 15 mph maximum for normal vehicle operations on flightline road and/or when towing a single power unit unless the equipment T.O. mandates a lower towing speed (e.g., MD-3 etc.).

2.2.2.2. 15 mph maximum for towing one maintenance stand or multiple power units.

2.2.2.3. 5 mph maximum for towing aircraft.

2.2.2.4. 5 mph maximum for towing two or more stands.

2.2.3. Tow teams shall contact ATCT on the Ramp Net to proceed onto the CMA. Once clear of the CMA the tow team will advise ATCT when off of the CMA.

Chapter 3

AIR TRAFFIC CONTROL

3.1. Automated Terminal Information Service (ATIS) Procedures. CAFB ATIS is broadcast 24 hours on VHF 115.2 and UHF 273.5. In addition to information that is required IAW FAAO JO 7110.65, the following information (at a minimum) is included in the ATIS broadcast when the ATCT is operational:

- 3.1.1. The temperature and dew point will only be given in Celsius.
- 3.1.2. Only NOTAMs affecting local operations that have taken effect after wing flying commenced for the day are included in the ATIS broadcast.
- 3.1.3. Include bird condition if it is other than “Low”.
- 3.1.4. Alternate fuels are included in ATIS if they differ from the standard fuel requirements in the individual aircraft’s In-Flight Guide (IFG). When alternate fuels differ from the IFG due to icing or other factors, the SOF will direct ATCT personnel to include alternate fuels in the ATIS message.
- 3.1.5. FPCON will be included only when the current level affects flying operations. The SOF will determine when a change in Force Protection Condition (FPCON) status will be included in the ATIS broadcast.
- 3.1.6. Stating which runways the ATCT controls will indicate the operational status of the RSUs.
- 3.1.7. Notification that CBM VORTAC outage procedures are in effect will be included for unannounced NAVAID outages. Long-term NAVAID outages (> 72 hours) are not included.
- 3.1.8. Glider Operations taking place at George M. Bryan Airport (STF) and Monroe County Airport (M40).
- 3.1.9. Airfield advisories that potentially affect all aircraft are included in the ATIS.
- 3.1.10. Remotely Piloted Aircraft (RPA)/Unmanned Aerial Systems (UAS) - Include in the ATIS broadcast remarks that "UNMANNED AIRCRAFT OPERATIONS ARE IN PROGRESS [NUMBER] MILES [CARDINAL DIRECTION] OF [LOCATION/FIX] UP TO [ALTITUDE]" IAW AFMAN13-204v3.
 - 3.1.10.1. Aero Club UAS operations are authorized during certain Saturdays while the airfield is NOTAM closed. Check with AMOPS for Aero Club schedule and operations.
- 3.1.11. When the ATCT is non-operational, the following information will be included in the ATIS as a minimum: “COLUMBUS AFB HAS SUSPENDED OPERATIONS. FOR ADDITIONAL INFORMATION CONTACT MEMPHIS CENTER ON 307.0 OR 127.1.”

3.2. Protection of the ILS Critical Areas and Precision Obstacle Free Zone (POFZ).

- 3.2.1. ILS Critical Areas will be protected IAW AFMAN 13-204v1 and are depicted in [Attachment 2](#).
 - 3.2.1.1. Any time runway edge lights are in use, vehicles are required to hold short of all instrument hold lines and contact ATCT for further instructions. When the reported ceiling

is less than 800 feet and/or visibility is less than 2 miles, the ATCT will not authorize aircraft larger than fighter type size to operate in or over the ILS critical areas when an aircraft conducting an ILS approach is inside the final approach fix (FAF). When the reported ceiling is less than 200 feet and/or visibility is less than ½ mile (runway visual range (RVR) 2,400) the ATCT will not authorize aircraft/vehicle operations in or over the ILS critical areas when an aircraft conducting an ILS approach is inside the FAF.

3.2.2. The POFZ will be protected IAW FAAO JO 7110.65. When an aircraft on a vertically-guided final approach is within 2 miles of the runway threshold and the reported ceiling is below 300 feet or visibility is less than ¾ SM ground control will: instruct ALL aircraft taxiing to or vehicles approaching runway 31C to hold short of the instrument hold line on Taxiway F. Instruct all aircraft taxiing to or vehicles approaching runway 13C to hold short of runway 13R or Taxiway M instrument hold line if approaching from the SAC ramp. All other routes will hold short of the VFR hold lines.

3.3. Runway Change Procedures.

3.3.1. Effective runway change time: Runway changes require a minimum of 30 minute notification. The effective runway change time is the time the center runway resumes full-stop landings in the new direction. Inside and outside runway operations are suspended at this time and will resume when the barrier is in place and the controlling agency is ready to operate. (See Tables 3.1 and 3.2.)

NOTE: During Restricted Overhead/VFR Straight-In status, all aircraft will depart the pattern or full stop 10 minutes prior to initiation of the runway change.

3.3.2. The SOF coordinates all runway changes when local flying is in progress. The SOF will inform the 14 OG/CC, Squadron SUPs/Top 3, RSUs, RAPCON, and ATCT of the runway change. The SOF will ensure all appropriate agencies notify 14 FTW aircraft in radio contact.

3.3.3. ATC agencies will comply with runway change time schedule to the maximum extent possible. The ATCT will notify AMOPS and Weather Flight of the runway change time.

3.3.4. If either Sunfish or LiveOak must complete the runway change with one RSU crew, the ATCT will assume control of the affected runway on the ATCT's frequency once the new pattern is established. The ATCT will inform RAPCON to advise all aircraft canceling IFR for entry to either the Sunfish or LiveOak pattern to contact the ATCT. The ATCT will maintain control until the crew has relocated to the new RSU and assumes control of the runway. The ATCT will advise the SOF of any solo aircraft that enter the pattern(s) while they have control.

3.3.5. AMOPS will notify the FD and power production personnel of the runway change time. AMOPS will also ensure the FD and power production personnel are in place to change barriers 15 minutes prior to runway change time.

3.3.6. Runway change time schedules: the ATCT/RSU may deviate from these times with SOF approval if appropriate for emergencies. All agencies listed above will be informed of the new adjusted time.

Table 3.1. Changing from Runway 13 to Runway 31.

PRIOR TO RUNWAY CHANGE	ATCT/RAPCON	SUNFISH/LIVEOAK
30 Min	Broadcast anticipated runway change.	Broadcast anticipated runway change.
25 Min	Stop T-38/T-1 taxi.	
15 Min	Broadcast runway change time. RAPCON diverts runway 13C traffic to runway 13L/R. Start taxi to runway 31 at WS discretion. Ensure Fire Dept. and Power Production personnel are in place.	Give priority to full stops. Takeoffs can continue. Direct solos with less than 600# (T-6) or 1500# (T-38) to full stop.
10 Min	Stop runway 13C Ops. Start barrier change.	Direct aircraft with less than 500# (300# if GTR is open) -T-6, or 1200# - T-38/T-1 to full stop or depart the pattern.
05 Min	RAPCON stops entries to the VFR patterns.	Stop all pitchouts except full stops.
Between 5-1 Mins	Start operations with runway 31C to full- stops. Direct Sunfish/LiveOak to “Implement runway change procedures.”	T-38: Direct aircraft to climb to 2500’ MSL and depart the pattern from the turn to downwind and reenter the pattern via SOUTH gate. T-1/T-6: Direct aircraft to climb to 2200’ MSL and depart the pattern from the turn to downwind and accomplish VFR reentry
Runway 13R/L established	Start runway 31C normal traffic Ops. ATCT advises RAPCON to allow entries to VFR patterns.	The RSU will advise ATCT when new pattern is established.

Table 3.2. Changing from Runway 31 to Runway 13.

PRIOR TO RUNWAY CHANGE	ATCT/RAPCON	SUNFISH/LIVEOAK
30 Min	Broadcast anticipated runway change.	Broadcast anticipated runway change.
15 Min	Broadcast runway change time. At WS discretion, reverse taxi direction (Hold all aircraft on north end for back taxi on runway 31C and close Taxiway A to ramp bound traffic). Ensure Fire Dept. and Power Production personnel are in place. RAPCON diverts traffic from runway 31C to runway	Give priority to full stops. Takeoffs can continue. Direct solos with less than 600# (T-6) or 1500# (T-38) to full stop. Exception; T-38 solo sorties which only
10 Min	Stop runway 31C and taxi aircraft in north hammerhead via runway 13C. Start barrier change.	Direct aircraft with less than 500# (300# if GTR is open) -T-6, or 1200# -T-38/T-1 to full stop.
05 Min	RAPCON stops VFR pattern entries.	Stop all pitchouts except full stops.
Between 5-1 Mins	Start runway 13C to full stops. Direct Sunfish/LiveOak to "Implement runway change procedures." Continue back taxi on runway 13C as traffic permits.	T-38: Direct aircraft to climb to 2500' MSL and depart the pattern from the turn to downwind and reenter the pattern via NORTH gate. T-1/T-6: Direct aircraft to climb to 2200' MSL and depart the pattern from the turn to downwind and accomplish VFR reentry
Runway 13R/L established	Start runway 13C to normal traffic. ATCT advises RAPCON to allow entries to Sunfish/LiveOak.	Advise ATCT when new pattern is established.

3.4. Local Flying Area/Designation of Airspace.

3.4.1. CAFB RAPCON Airspace. RAPCON airspace spans approximately 50 nautical miles (NM) around Columbus AFB from the surface up to and including FL 230. Columbus airspace includes two T-6 MOAs--west and southeast of CAFB. The floor of each MOA is from 8,000' MSL up to but not including FL180. The ATC Assigned Airspace (ATCAA) is from FL180 to FL 230. There is one T-38/T-1 MOA north of the airfield. The floor of the T-38/T- 1 MOA is from 8,000' MSL up to but not including FL180. ATCAA spans from FL180 to FL 230. There is a major victor airway (V278/T370) that runs East/West directly through Columbus airspace

from approximately 15 nautical miles south of the airfield. V245 joins V278/T370 from the southwest at the Bigbee VORTAC and splits to the southeast at the MINIM (CBM106/21) intersection. Q30 Q30, which overlies V278/370, is a route for numerous civilian aircraft into Birmingham International and Hartsfield-Jackson Atlanta International Airport. CAFB RAPCON airspace is depicted in [Attachment 12](#).

3.4.2. Columbus AFB Class C Airspace. Columbus AFB Class C airspace includes an outer area, which is a non-regulatory area, 20NM radius of CBM, surface to 17,500' MSL. The airspace includes a regulatory area 5NM radius of CBM, surface to 4,200' MSL and from 5NM to 10NM, 1,500' MSL – 4,200' MSL. Columbus AFB Class C airspace is depicted in [Attachment 4](#). 14 FTW aircraft recovering to CBM VFR shall contact RAPCON and attain two way radio communications NLT 20 DME from CBM VORTAC.

3.4.3. CAFB Class C Airspace (ATCT Airspace). RAPCON delegates to the ATCT the airspace within designated RSU airspace from the surface to 3,500' MSL. Additionally, ATCT delegates airspace to Sunfish (3.5.1.) and LiveOak (3.5.2.) upon request.

3.5. VFR Local Training Areas.

3.5.1. Sunfish airspace extends from the surface to 3,500' MSL along the 7 DME arc to the south of the inside runway but excludes airspace past 3NM beyond the departure end. The T-6 VFR pattern altitudes are as follows:

NOTE: VFR aircraft not talking with ATC may transition through the area under the Class C shelf. This area is Class G and E airspace and includes 5-7 DME below 1,500 MSL.

OVERHEAD: 1,200' MSL
BREAKOUT OVERHEAD: 2,200' MSL
STRAIGHT-IN: 700' MSL
LOW KEY/ELP: 1,700' MSL
HIGH KEY/ELP:
2,700'- 3,200' MSL
STRAIGHT-IN
BREAKOUT: 700' MSL
LOW CLOSED: 800'
MSL
HIGH PATTERN: 3,200' MSL

NOTE: For situational awareness, controller may query for a specific altitude "Verify HIGH KEY at XXXX (specific altitude within blocked altitude)."

3.5.2. LiveOak airspace extends from the surface to 3,500' MSL along the 10 DME arc to the north of the outside runway, excluding airspace past 3NM beyond the departure end. The T- 38 VFR pattern altitudes are as follows:

OVERHEAD: 1,200' MSL
OVERHEAD BREAKOUT: 2,500' MSL
STRAIGHT- IN: 1,200' MSL
STRAIGHT-IN BREAKOUT: 1,200' MSL
LOW CLOSED: 800' MSL
LOW CLOSED BREAKOUT: 1,200' MSL
HIGH PATTERN: 3,000' MSL

3.5.3. T-1 VFR pattern altitudes are as follows:

RECTANGULAR: 1,700' MSL
TACTICAL: 1,700' MSL
STRAIGHT-IN: 1,200' MSL
STRAIGHT-IN
BREAKOUT: 1,200' MSL
PATTERN BREAKOUT:
2,500' MSL
LOW CLOSED: 800'
MSL
LOW CLOSED BREAKOUT: 1,200' MSL

3.5.4. RAPCON and ATCT will ensure all transients (arrivals or departures) are aware of the practice areas.

3.6. Sunfish and LiveOak RSU Practice Area Protection. When Sunfish RSU or LiveOak RSU has control of their respective runway/practice area, RAPCON will not vector aircraft below 4,000' MSL within the immediate lateral dimensions of their practice area. RAPCON will ensure separation is provided between RSU traffic and aircraft transitioning the Columbus Class "C" airspace.

3.6.1. Emergencies/MEDEVAC aircraft will have priority to transition thru the practice areas without restrictions. ATC will notify the appropriate RSU.

NOTE: ATC shall not invoke restrictions to higher priority aircraft.

3.7. VFR Weather Minimums. VFR weather for USAF aircraft consists of a ceiling of 1,500 feet and visibility of 3 statute miles or greater. IFR weather for USAF aircraft operating at Columbus AFB consists of a ceiling of less than 1,500 feet and/or visibility less than 3 statute miles.

NOTE: For ATC VFR is defined as a ceiling of 1,000 feet and visibility of 3 statute miles or greater within Columbus AFB Class C airspace IAW FAR Part 91 Sec 91.155 and AIM 3-1-4 **Table 3.1.**

3.8. Special Procedures.

3.8.1. Helicopter Arrivals.

3.8.1.1. The ATCT will advise Sunfish RSU when an arriving helicopter departs the CBM240/011 DME fix (helicopter VFR entry point). Sunfish RSU will discontinue straight-in operations.

3.8.1.2. The ATCT will advise Sunfish RSU when the helicopter is at the 4NM orbit point (CBM240/004). Do not clear the helicopter to land or depart the orbit point until Sunfish RSU advises there are no T-6 aircraft maneuvering to the 2NM point.

3.8.1.3. When the T-6 status is Restricted Overhead, the ATCT will advise RAPCON to stop radar entries when the helicopter reaches the CBM240/011 DME fix. The ATCT will advise RAPCON when radar entries may be resumed.

3.8.1.4. The ATCT will advise Sunfish RSU when the arriving helicopter is over the ramp and straight-in approaches may be resumed.

NOTE: Helicopter arrival procedures can be modified with prior coordination.

3.8.2. Helicopter Departures.

3.8.2.1. The ATCT will advise Sunfish RSU when a helicopter is waiting to depart. The ATCT will not clear the helicopter to depart until Sunfish RSU advises radar entries have been stopped, and there are no aircraft between the termination point and 2NM. Advise Sunfish RSU when the departing helicopter passes the CBM240/004 outbound so straight-in operations may be resumed.

3.8.2.2. When the T-6 status is Restricted Overhead, the ATCT will advise RAPCON to stop radar entries. The ATCT will not clear the helicopter to depart until Sunfish RSU advises there are no T-6 aircraft between the termination point and 2NM. Advise RAPCON and Sunfish RSU when the helicopter departs the CBM240/004 outbound so radar and straight-in entries may be resumed.

NOTE: Helicopter departure procedures may be modified with prior coordination.

3.8.3. Flight Check Procedures. FAA flight inspection aircraft operating in the vicinity of Columbus AFB with flight profiles that will impact wing flying shall be handled IAW FAAO JO 7110.65 and ATCT/RAPCON checklists. The SOF may reduce or terminate local flying IAW applicable SOF quick reaction checklist. Flight Check aircraft will typically fly VFR while conducting their checks.

3.8.4. Heavy/Large (non-fighter type) Aircraft Arrival/Departure Notification Procedures.

3.8.4.1. RAPCON shall notify Sunfish and/or LiveOak RSUs when arriving aircraft is 25NM out.

3.8.4.2. The ATCT shall notify Sunfish and/or LiveOak RSUs when arriving aircraft is 5NM out.

3.8.4.3. The ATCT will notify Sunfish and LiveOak RSUs when aircraft starts engines.

3.8.4.4. The ATCT will notify Sunfish RSU when aircraft requests taxi from the alert area.

3.8.5. Functional Check Flight Procedures. Aircraft performing checks of aircraft/aircraft equipment are designated by the call sign "FLAT" and do not receive any special handling unless requested.

3.9. Reduced Same Runway Separation (RSRS). ATCT will provide RSRS IAW AFMAN 13-204v3 AETC_Sup, and RSUs will provide RSRS IAW AFI 11-202v3 and AETCI 11-204. Required separation distance is measured from the threshold to the nearest aircraft on the runway.

3.9.1. The RSRS for similar trainer-type aircraft is:

3.9.1.1. 3,000 ft. minimum separation is required, or preceding aircraft is airborne for all AETC T-38s and T-6s when:

3.9.1.1.1. Full Stop (FS): behind FS, Low Approach (LA) or Touch and Go (TG).

3.9.1.1.2. LA: behind LA or FS.

3.9.1.1.3. TG: behind TG or LA.

3.9.1.1.4. Single ship FS or LA behind a preceding formation flight if both formation aircraft are positioned on the cold (exit) side of the runway.

3.9.1.2. 6,000 ft. minimum separation is required, or preceding aircraft is airborne:

3.9.1.2.1. Anytime a T-1 is involved.

3.9.1.2.2. LA behind TG.

3.9.1.2.3. TG behind FS.

3.9.1.2.4. Anytime alternate runway side procedures are not or cannot be employed.

3.9.1.2.5. Formation flight (holding hands) FS behind a preceding single ship or formation flight.

3.9.2. Wet Runway RSRS. RSRS is authorized at Columbus AFB on all runways during wet runway operations.

3.9.2.1. Wet Runway RSRS Operations for Similar Trainer-Type Aircraft (T-38 behind T-38 or T-6 behind T-6). Similar trainer-type may only be applied to T-6 and T-38 operations when using alternate runway side procedures.

3.9.2.2. Wet Runway RSRS Operations for Dissimilar Trainer-Type Aircraft (T-38 behind T-6, T-38 behind T-1, etc.). The RSRS for dissimilar trainer-type aircraft is 6,000 ft. minimum in all cases.

3.10. Intersection Departures. Aircraft may utilize intersection takeoffs if coordinated/approved through GC. Controllers will state the number of feet remaining on the runway for the departing aircraft to utilize.

3.11. Wind Limitations on ATCT. When wind velocity reaches sustained 78 knots, the ATCT personnel will complete the appropriate evacuation checklist and relocate to the RAPCON. If rapid approaching weather condition does not permit evacuation of the ATCT to the RAPCON, locate to one of the lower floors and away from windows until wind subsides.

3.12. Wind Limitations on the DASR. RAPCON will normally coordinate with radar maintenance to shut off the DASR antenna anytime the wind or wind gusts reaches or exceeds 85 knots. Radar maintenance will place the antenna in free-wheel mode to prevent damage to the equipment. If possible, notify Tupelo ATCT before shutting off the radar. Airborne traffic is the primary consideration when opting to shut off the DASR antenna.

3.13. Unscheduled/Unauthorized Aircraft Arrivals. Any aircraft that conducts approaches or lands at Columbus AFB without approval is considered an unauthorized aircraft.

NOTE: If the aircrew declares an emergency, they may land at Columbus AFB without a PPR from AMOPS.

3.13.1. In the event that an aircraft conducts unauthorized approaches at Columbus AFB:

3.13.1.1. ATCT shall notify RAPCON of unauthorized aircraft and shall discontinue departures. ATCT WS, in conjunction with the SOF, will deem if it is necessary to break aircraft out of the RSU pattern.

3.13.1.2. RAPCON shall cease all inbounds and prepare for RSU aircraft breaking out of the VFR pattern. RAPCON shall also prepare to divert aircraft if needed.

3.13.1.3. Both facilities shall attempt to gather data on the aircraft to include: call sign, type, color, tail number and route through Columbus AFB Class C airspace. RAPCON shall track the aircraft for as long as possible. WS shall notify the AOF/CC. Data on the incident (STARS, Daily Events Log, etc.) will be safeguarded.

3.13.1.4. For civil aircraft, AFM shall notify Security Forces and ensure the aircrew reports to AMOPS to fill out a DD 2402 (Hold Harmless Agreement) and a DD 1131 (Cash Collection Voucher) for collection of landing fees, if applicable.

3.13.1.5. AFM or AOF/CC will notify 14 OG/CC and brief him the details of the incident. The 14 FTW/CC makes the final decision whether the landing is inadvertent or intentional.

3.13.2. If the aircraft lands at Columbus AFB, implement CAFB Plan 31-101, Base Defense Plan, Appendix 12 to Annex K.

3.14. Unlawful Seizure of Aircraft. Implement CAFB Plan 31-101, Base Defense Plan, Appendix 12 to Annex K.

3.15. Local Aircraft Priorities. Controllers will provide traffic priority IAW FAAO JO 7110.65. If necessary, the ATCT WS/CIC may coordinate with the SOF for temporary amendment to local priorities.

3.15.1. DV aircraft have priority over all other aircraft except for those listed in FAAO JO 7110.65.

3.15.2. Transient arrivals and departures will be given priority over local aircraft and will only land on ATCT controlled runway unless they are a like type AETC assigned aircraft. Normally, transient aircraft are not authorized multiple approaches during local flying operations.

3.15.3. Functional Check Flight aircraft have priority over local training sorties.

3.15.4. Departing aircraft have priority over arriving aircraft at the discretion of the ATCT WS. Priority should not be given to departing aircraft if the arriving aircraft is a delay mission, check-ride, or full-stop landing.

3.15.5. To ensure the expeditious flow of traffic and prevent delays in the hammerhead, priority may be given to departing aircraft by coordinating with RAPCON to send aircraft to initial.

3.16. Standard/Local Climb Out. In order to protect the 360-degree overhead pattern when the weather is VFR (see [para. 3.7](#)), the standard instrument climb out procedure for the center runway is, “FLY RUNWAY HEADING, CROSS DEPARTURE END AT OR BELOW 700’, CLIMB AND MAINTAIN 4000’. CONTACT DEPARTURE CHANNEL 16.” When the weather is less than VFR, “FLY RUNWAY HEADING, CLIMB AND MAINTAIN 4,000’. CONTACT DEPARTURE CHANNEL 16.” RAPCON may abbreviate climb out instructions for local aircraft by stating, “AFTER COMPLETING LOW APPROACH/TOUCH AND GO/OPTION, EXECUTE LOCAL CLIMBOUT.”

3.17. Opposite Direction Traffic Procedures.

3.17.1. Opposite direction operations are not authorized when Undergraduate Pilot Training (UPT) flying is in progress, with the following exceptions:

3.17.1.1. Emergency aircraft (only when opposite direction operation is specifically required).

3.17.1.2. Flight check.

3.17.1.3. Special missions.

3.17.1.4. Weather.

3.17.2. In the event one of the exceptions above requires an opposite direction approach while SUPT is in progress, or an opposite direction operation is requested when SUPT flying is not in progress, the following cutoffs shall apply:

3.17.2.1. Arrival vs. Arrival. When an opposite direction arrival reaches 10 miles on final, arrivals to the active runway will not be allowed to proceed closer than 10 miles on final. VFR aircraft in the pattern will be restricted from turning base leg until the aircraft has landed or executed missed approach.

3.17.2.2. Arrival vs. Departure. Opposite direction departure must be airborne and turned 45 degrees off the inbound radial of the final approach course or climbed through the altitude of the arrival before the normal arrival reaches 10 miles on final.

3.17.2.3. Departure vs. Arrival. When opposite direction arrival reaches 10 miles on final, all normal operations will be terminated.

NOTE: If opposite direction arrival intends to circle to land on the active runway, normal departures can be resumed after the opposite direction arrival has begun its circling maneuver into the downwind and visual separation is applied by the ATCT. If ATCT cannot apply visual separation, the opposite direction must full stop before normal departures can be resumed.

3.17.3. Opposite direction operations may be approved to any runway if ATCT has control of all three runways, and the provisions of FAAO JO 7110.65 and AFMAN 13-204 shall be complied with.

3.17.4. Landing over a raised barrier is prohibited for AETC aircraft except during an emergency. If opposite direction approach is required for an AETC aircraft the web barrier must be lowered prior to the aircraft reaching the FAF on an instrument approach, being established on final for a visual straight-in or reaching 3 to 5 mile initial.

3.17.4.1. Opposite direction arrivals are NOT authorized for tail hook-equipped aircraft over a raised barrier/cable. Tail hook-equipped aircraft will conduct only restricted low-approaches over raised barrier/cable except in an emergency.

3.18. Breakout/Go-Around Procedures. (Instrument Approach)

3.18.1. In order to protect the 360-degree overhead pattern, unless ATC specifies otherwise, breakout from an IFR approach/go-around procedures shall be as follows:

3.18.1.1. Inside FAF, follow instructions in [paragraph 3.16](#).

3.18.1.2. Outside FAF but within 10 miles on final, "FLY RUNWAY HEADING, CLIMB AND MAINTAIN 4,000."

3.18.2. Anytime an aircraft is given a breakout inside of 10-mile final, ATCT shall automatically stop departures until informed by RAPCON that the breakout aircraft is no longer a factor.

3.19. VFR Pattern Breakouts to Radar.

3.19.1. Only authorized for 13/31C and 13L/31R. Aircraft will climb to 2,500' MSL, heading 040, contact RAPCON (CH 16), and make a request. Prior to break-out, LiveOak or ATCT must coordinate with RAPCON.

3.20. Runway Offset Procedures.

3.20.1. Center Runway. Aircraft will offset the center runway in the direction given only as far as necessary to not directly overfly the center runway and to not create a traffic conflict with the outside or inside runways. Aircrews must be aware that the potential exists for a simultaneous go-around and/or offset by another aircraft from either side.

3.20.2. Outside Runway. Aircraft should offset only as far as necessary to not directly overfly the runway and no farther than the RSU. Aircrews must be aware that the potential exists for a simultaneous go-around and/or offset by another aircraft from center runway.

3.20.3. Inside Runway. Aircraft should offset only as far as necessary to not directly overfly the runway and no farther than the RSU. Aircrews must be aware that the potential exists for a simultaneous go-around and/or offset by another aircraft from the center runway.

3.21. Civilian Aircraft Operations. Civil aircraft operations are authorized if the required landing permit has been granted. AMOPS shall process all civilian aircraft landing requests IAW AFI 10- 1001, Civil Aircraft Landing Permits. All civilian aircraft operations must have 14 OG/CC approval prior to landing. The following procedures will be used for civilian air traffic that could potentially impact Sunfish or LiveOak operations.

3.21.1. RAPCON will:

3.21.1.1. On initial contact, advise the civilian aircraft to remain outside of Columbus AFB Class C airspace for coordination.

3.21.1.2. Coordinate the operation with the affected RSU or ATCT.

3.21.1.3. After coordination with RSU or the ATCT, allow the aircraft to enter the practice area.

3.21.1.4. Issue a traffic advisory to the civilian aircraft along with the approval to proceed into Columbus AFB Class C airspace. As a minimum, the traffic advisory will include that numerous training aircraft are operating in the immediate vicinity of Columbus AFB.

3.21.2. The ATCT will:

3.21.2.1. Provide traffic advisories on observed conflicts if in visual contact with the civilian aircraft. If transfer of communication has not been made, the traffic advisory will be given to RAPCON.

3.21.3. The impacted RSU will:

3.21.3.1. Excluding priority operations, request RAPCON hold the civilian aircraft outside of the RSU practice area if there are aircraft within the RSU practice area on a straight-in approach.

3.21.3.2. **(Sunfish RSU only)** Request RAPCON to stop radar entries if the status is restricted overhead when receiving notification of the civilian operation.

3.21.3.3. **(Sunfish RSU only)** If the status is dual or better, do not clear aircraft to the 5 mile point.

3.21.3.4. Return to normal operations after RAPCON or the ATCT reports the civilian aircraft has exited the RSU practice area.

3.21.4. The ATC facility in communication with the civilian aircraft when it departs RSU practice area will call the appropriate RSU, and the other ATC facility, to advise that the aircraft is clear of RSU practice area .

3.22. Supervisor of Flying (SOF) Operating from ATCT. The SOF is the direct representative of the 14 OG/CC and is the focal point for command and control of flying operations. The SOF normally operates in the ATCT anytime local wing flying is active.

3.23. Non-Radar Operating Procedures. When the CAFB DASR is out of service, aircrews will follow normal operating procedures with exceptions listed in this paragraph.

3.23.1. Radar failure is a catastrophic limitation for ATC. All initial radar failure procedures are accomplished to prevent a collision between aircraft operations in the system and to organize and expedite the flow of traffic. Additionally, these procedures enable the later transition to either long-term non-radar procedures or the return to normal radar operations.

3.23.2. Initial Radar Failure.

3.23.2.1. Crews established in Columbus RAPCON controlled MOAs can expect to cease maneuvering and standby for ATC instructions.

3.23.2.2. RAPCON will transmit, "ATTENTION ALL AIRCRAFT, COLUMBUS RADAR OUT OF SERVICE. RADAR CONTACT LOST." In the MOAs, RAPCON will transmit, "INITIATE AREA HOLD PROCEDURES." Otherwise, "STANDBY FOR FURTHER INSTRUCTIONS."

3.23.2.3. RSUs and ATCT will stop all departures. SOF and RSUs should direct full stops as pattern saturation dictates.

3.23.2.4. SOF will confirm/initiate Area Hold procedures and direct single ship solo students to cancel IFR and remain in their assigned areas until directed by RAPCON to recover. These instructions shall be relayed through ATC controllers. Area Hold procedures direct aircraft to cease maneuvering, climb to the top of their assigned altitude block, and hold at maximum endurance airspeed. Additionally, the aircraft shall contact the squadron SUP for their primary divert base, and relay their fuel status and intentions. The aircrew may request with the squadron SUP to continue maneuvering depending on situation and fuel status. These requests will be approved/disapproved by the squadron SUP on a case-by-case basis.

3.23.2.5. Should VFR conditions permit, SOF may direct all assigned aircraft established in Columbus controlled MOAs to cancel IFR, remain in their assigned areas, and standby for RAPCON directed VFR recoveries. Fuel permitting, aircrews should not execute recovery without RAPCON concurrence to avoid Sunfish/LiveOak saturation.

NOTE: All aircraft must descend to 17,500' MSL or below prior to canceling IFR.

3.23.2.6. In the event conditions do not permit VFR recoveries, aircrew can expect to be placed in IFR holding patterns by RAPCON for IFR recovery sequencing via non-radar ATC procedures.

3.23.3. Long-Term Radar Outage Procedures (expected to exceed 2 hours following initial radar failure).

NOTE: The outage need not be expected to last longer than 2 hours to implement long-term procedures. SOF in coordination with RAPCON will determine when a transition is made.

3.23.3.1. VFR – Unlimited launches per hour are authorized.

NOTE: In the event of a radar outage, CAFB owns SFC-7000' after coordination with Memphis Center. Any Columbus 1/Meridian 1 East MOA operations will be contingent upon Memphis Center Approval.

3.23.3.1.1. Local MOA sorties will be flown VFR. Aircrews will use self-reporting procedures on the appropriate local frequencies. RAPCON will provide traffic advisory assistance when workload allows. All T-6 recoveries will be to the Sunfish pattern. T-38 and T-1s will recover to the center or outside runways.

3.23.3.1.2. Local Instrument canned departures will be flown VFR until an IFR pickup can be obtained from an adjacent controlling agency. Cancel IFR upon contact with RAPCON during recovery.

3.23.3.1.3. VFR to IFR pickup – WS/CICs will restrict the number of launches to 10 aircraft per hour to prevent saturation of Memphis ARTCC. Aircrew who desire a planned VFR departure with an IFR pickup will file a DD-175. Local canned profile flight plans suffice for this requirement.

3.23.3.2. IFR – RAPCON can provide Non-Radar IFR service to a combined total of approximately 10 aircraft per hour. Memphis Air Route Traffic Control Center (ARTCC) assumes control of all Columbus RAPCON airspace FL180 and above in the CBM1 MOA/ATCAA and MEI 1 East MOA/ATCAA, and above 7,000' MSL elsewhere. Arrivals will cancel IFR as soon as practical to allow RAPCON to expedite departure/recovery traffic. T-6 aircraft will not fly the Tupelo, Tuscaloosa or CATRN (LDK005/16) canned profiles during radar outages.

3.23.3.2.1. RAPCON will provide a release, climb out instructions, and non-radar approach control service for each IFR departure.

3.23.3.2.2. Practice instrument approaches are not authorized unless coordinated with the SOF and RAPCON.

3.23.4. MOA Procedures. Operations in the CBM1 MOA and the MEI 1 East MOA use VFR. Vertical operating limits of these areas are 8,000' to 17,500' MSL. Aircrews are solely responsible for maintaining area boundaries. RAPCON will provide traffic advisories when workload permits. Aircrew using the CBM2 MOA/ATCAA, CBM 3 MOA/ATCAA, and CBM 4 MOA/ATCAA will depart VFR and request an IFR pickup with Memphis Center. Aircrew using other MOAs or VR low-level routes will fly VFR enroute and contact the appropriate agencies prior to entry.

3.24. Wing Flying Definition. For ATC manning purposes, wing flying is defined as simultaneous operations by 2 or more airframes with 5 or more 14 FTW aircraft conducting local training (i.e., utilizing MOAs, multiple approaches/patterns) within the CBM delegated airspace. In the event a large volume of aircraft are flying, the ATC Watch Supervisor will ensure adequate staffing levels to ensure safe and efficient operations.

3.25. Golden Triangle Regional Airport (GTR) Instrument Approaches.

3.25.1. Aircrew will minimize requests for opposite direction approaches at GTR.

3.25.2. Due to airspace complexity and limitations, practice approaches will be approved at the discretion of ATC. GTR airport can be used as an alternate airport due to weather or runway limitations at CBM.

3.26. Runway/Status Selection Procedures. Runway 31 is designated the calm wind runway when winds are less than 5 knots. The SOF determines the landing runway, flying status and restrictions appropriate for the weather and status of facilities. The SUPs/Top 3 may further restrict their flying operations and must coordinate the restrictions with the SOF. Flying status will be implemented in accordance with definitions outlined in Chapter 5, 6, 7, and 8. Any deviations from defined flying status will be coordinated with the RAPCON prior to departure. Pilot Reports (PIREPs) will be given if an aircrew believes the status could be improved or degraded due to weather. PIREPs will be reported to the SOF or the RSU crew if in the pattern. If local training is not in progress, the ATCT WS/CIC determines the landing runway.

3.26.1. The SOF must use sound operational risk management (ORM) for weather conditions throughout the day when selecting a runway. Selecting a runway upon opening for visibility issues should be coordinated with other factors (e.g. winds) throughout the day in order to minimize runway changes during the flying day.

3.27. Military Operations Area (MOA) Procedures. This section contains general MOA procedures applicable to all airframes. Airframe-specific information is located in sections 6.12. (T-6), 7.14. (T-38), and 8.12. (T-1).

3.27.1. General MOA information:

3.27.1.1. All wing assigned aircraft will proceed to and from MOAs under IFR to the maximum extent possible.

3.27.1.2. Altimeter Settings. All 14 FTW aircraft will set the local altimeter setting once established in the MOA/ATCAA. Aircrew will adhere to vertical limitations given by ATC upon entering their controlled MOAs.

3.27.2. Columbus RAPCON Controlled MOA/ATCAA.

3.27.2.1. Columbus RAPCON MOA discrete frequencies. UHF frequencies are listed in [Attachment 3](#). MOA discrete frequencies will NOT be continuously monitored by Columbus RAPCON. The RAPCON will still provide work calls and acknowledge initial communication checks on the discrete frequency.

3.27.2.1.1. Aircraft will maintain a listening watch on the discrete MOA UHF frequency and 243.0. Aircraft will request recovery from the Columbus RAPCON controlled MOAs on the following UHF frequencies: 317.5 (T-6 CBM1 MOA), 263.15 (T-6 MEI1E MOA), 239.25 (T- 1/T-38 CBM1 MOA).

3.27.2.2. Formation aircraft shall use transponder mode 3 code of “0000” in the CBM RAPCON controlled MOAs to facilitate safety. One aircraft will continuously use the ATC assigned mode 3 code.

3.27.2.3. Area assignment. RAPCON will assign areas for T-6 MOAs. T-38 and T- 1 sector assignments will be established by the appropriate squadron prior to takeoff. RAPCON should assign the predetermined sector to these aircraft.

3.27.2.4. RAPCON will:

3.27.2.4.1. Provide IFR separation between MOA participants and other non-participating IFR traffic.

3.27.2.4.2. Apply merging target procedures between participating 14 FTW aircraft. Merging target procedures are defined as a form of radar separation that ensures targets do not touch.

3.27.2.4.3. Issue instructions necessary to help keep aircraft in an area or to separate them from other traffic, even if the aircraft is maintaining the proper area boundaries and provide assistance with area orientation by using “(CALL SIGN), WORK (DIRECTION)” control techniques.

3.27.2.4.4. Provide traffic advisories on known or observed VFR traffic transitioning through the airspace.

NOTE: 14 FTW aircraft are MARSA IAW [paragraph 3.27](#). CBM RAPCON will assist aircraft as necessary.

3.27.2.4.5. RAPCON will apply adjacent airspace separation IAW FAAO JO 7110.65.

3.27.3. Memphis Center Controlled MOA/ATCAA.

3.27.3.1. Area Assignment. Aircraft operating in CBM2, 3, 4 MOA/ATCAA will request sector assignment from Memphis Center.

3.27.3.2. For procedural deconfliction, the T-1 squadron schedules the two southern most sectors of CBM 3 MOA/ATCAA. The T-38 squadrons schedule the rest of the sectors of CBM3 MOA/ATCAA. Aircrew desiring to use sectors their squadron does not schedule must deconflict with the appropriate squadron.

3.27.3.3. Memphis Center may instruct flights to change direction and/or compress their altitude block within the MOA (not sectors) to separate nonparticipating aircraft. Aircrew shall abort the maneuver in progress and instantly comply with their instructions. Instructions may be given in abbreviated phraseology. Example: "(Call sign), WORK SOUTH."

3.28. Military Authority Assumes Responsibility for the Separation of Aircraft (MARSA) Operations. MARSA is defined as a condition whereby the military services involved assume responsibility for separation between participating military aircraft in the Air Traffic Control system (DoD FLIP, General Planning). MARSA operations will be conducted IAW AFI 13-201 AETC Sup 1 and this regulation.

3.28.1. Implementation of MARSA and terms of use will be coordinated with the controlling agency having jurisdiction over the area in which the operations are conducted.

3.28.2. 14 FTW aircraft participating in CBM1 or MEI1E MOA/ATCAA are MARSA with other 14 FTW aircraft participating in the same MOA/ATCAA. Participation begins when aircraft cross the boundaries of the MOA/ATCAA, to include all departure and recovery corridors established in the confines of that MOA/ATCAA.

3.28.3. Simultaneous departures from parallel runways are MARSA IAW AFI 13-201 AETC Sup 1 (7.5 Note).

3.28.3.1. 14 FTW aircraft arriving and departing runway 31L/13R are MARSA with 14 FTW aircraft arriving and departing runways 31C/13C and 31R/13L.

3.28.3.2. 14 FTW aircraft arriving runway 31C/13C are MARSA with 14 FTW aircraft arriving runway 31R/13L.

3.28.3.3. When a non-participating aircraft is on a departure/approach, MARSA procedures will be suspended.

NOTE: When the weather conditions are VFR, ATCT may release 14FTW aircraft off runway 31L/13R simultaneously with other 14FTW aircraft departing runway 31C/13C, 31R/13L.

3.28.4. Dissimilar Aircraft Combat Training (DACT)

3.28.4.1. 49 FTS IFF aircraft are MARSA with aircraft participating in dissimilar aircraft combat training (DACT) in the Columbus 1-4 MOA/ATCAAs, Meridian 1 East MOA/ATCAA, and the Birmingham MOA/ATCAA. DACT will be coordinated IAW AETCI 11-207.

3.28.4.2. Non-DACT 14FTW aircraft, within the Columbus 1 MOA/ATCAAs, are MARSA with DACT aircraft to allow the use of separately defined sectors and corridors within the Columbus 1 MOA/ATCAA.

Chapter 4

AIRFIELD MANAGEMENT

4.1. Airfield Maintenance.

4.1.1. Sweeper Operations. Most sweeper operations will primarily be conducted at night once wing flying has terminated. The below schedule provides daily coverage of high traffic areas and weekly coverage of other areas. In the event inclement weather prohibits coverage of a particular area, the missed area is assigned to the remaining work week and the work hours expanded.

4.1.1.1. To ensure weekly coverage of the entire airfield, sweeper operations will be as follows:

MONDAY: Outside runway, twy M1/F1, and access roads to RSU's 2/3/5/6.

TUESDAY: Center runway, twy F, and South Hammerhead.

WEDNESDAY: Center runway, twy A1/M, and North Hammerhead.

THURSDAY: Inside runway, twy A, L, K, J, H, E, access roads to RSU 1&4, and Auxiliary Airfield Gunshy at Shuqualak, MS. **NOTE:** Civil Engineering personnel will coordinate an alternate day with the AAFM if sweeping operations cannot be conducted on that day.

FRIDAY: T-1 parking (twy B), Transient Ramp (twy C), T-6 Parking & T-38 parking (Twy G)

DAILY: In addition to the above, T-1 parking ramp (twy B), Transient parking ramp (twy C), T-6 / T-38 parking ramp (twy G), twy E, all flight line access roads, T-6 / T-38 Trim Pad, and the SAC Ramp are swept daily.

4.1.2. Petroleum, Oil and Lubricants (POL) parking area, front of Bldg. 262 and between the dock hangars will be swept during wing flying. Flightline Road will be swept three times a day at approximately 0800, 1200 and 1600 hours. This includes both lanes of traffic from the T-38 ramp entry to the T-1 hangar entry.

4.1.3. Sweeper operations may be increased due to airfield construction projects or decreased due to flying schedule as directed by the AFM.

4.1.4. AMOPS shall monitor sweeper operations to prevent and control FOD. Aircrew shall contact ATCT/SOF to relay any FOD problems. AMOPS shall divert sweepers, as necessary, to areas requiring immediate attention. AMOPS shall provide the exact location of the area needing swept and coordinate with ATCT and maintenance (if needed).

4.1.5. Airfield Mowing Schedule. The annual mowing season at Columbus AFB is typically mid- April through late November. The 14 CES Ground Maintenance Supervisor will advise AMOPS before mowing on the airfield. AMOPS will notify the ATCT.

4.1.5.1. Mowing at Columbus AFB is done using techniques prescribed in Columbus AFB BASH Plan 91-202, Bird Aircraft Strike Hazard (BASH), and this instruction.

4.1.5.2. Two-way radio contact with the ATCT is mandatory any time a person or vehicle is within 100' of the active runways. Mowing may occur outside of the 100' adjacent to the runways on any day without two-way radio contact with the ATCT.

4.1.5.3. CES mowing crews will notify AMOPS when mowing operations are completed for the day.

4.1.6. Airfield Construction.

4.1.6.1. All construction and/or maintenance work on or in the immediate vicinity of the airfield will be coordinated with and approved by AFM and the Terminal Instrument Procedures (TERPS) specialist prior to beginning work.

4.1.6.2. A temporary construction waiver signed by the 14 FTW/CC (or delegated authority) must be on file with the AFM prior to beginning any construction on the airfield.

4.1.6.3. AFM will coordinate any flight restrictions to the AOF (e.g., prohibit low approaches, restricted low approaches and practice landings, etc.). The AOF will then coordinate with the 14 OG/CC for approval.

4.2. Determining Runway Surface Conditions (RSC). The AMOPS personnel on duty will monitor weather conditions which can affect the RSC (rain, ice, slush etc.) and determine the RSC for runway(s) as required. For wet runways(s), AMOPS will determine RSC to include depth of water for each runway. The individual completing the RSC checks will ensure the dissemination of the RSC data. At a minimum, this individual will notify: ATCT, RAPCON, Command Post and Weather Flight.

4.2.1. For determining the RSC, the following definitions will be used. These references are from AFMAN 13-204V2 and T.O. 33-1-23.

4.2.1.1. Wet Runway: When water is the only form of visible moisture on 25% or more of the runway surface area (whether in isolated areas or not), report the RSC as "wet runway".

4.2.1.2. Wet Runway with Standing Water: When applicable and measurable water is present, AMOPS will report the runway as "Wet with standing water, to the nearest tenth of an inch". **NOTE:** Regardless of a Wet or Dry RSC, report the existence, location and depth of any standing water (ponding, water patches, puddles, etc.).

4.2.2. ATCT will transmit the RSC "Wet with standing water to the nearest tenth of an inch" to aircrew when received from AMOPS. The SOF will inform the T-1 superintendent the depth of the water, when given.

4.2.3. AMOPS will conduct RSC checks in the following order: center, inside, outside runway, or as requested by ATCT/SOF as flying requirements and/or weather conditions dictate.

4.2.4. AMOPS personnel will not wait longer than 5 minutes to conduct an RSC check. Once the 5 minutes have lapsed, AMOPS personnel may return to their duty location.

4.2.5. When a runway is identified as wet or rapidly changing weather conditions dictate, RSC checks will be conducted more frequently or as requested by the SOF or ATCT WS/CIC.

4.2.6. If SOF receives RSC change request from RSU's, aircrew or ATCT, the SOF will notify AMOPS whom will conduct an RSC check and report any updated information.

4.2.7. AMOPS will issue a NOTAM to report other than "dry" surface conditions for runways and predominate RSC conditions IAW AFMAN 13-204V2.

4.3. Procedures for Conducting Airfield Inspections/Checks.

4.3.1. AMOPS personnel are the only individuals authorized to conduct official airfield inspections. Airfield checks may be conducted by personnel trained and authorized IAW AFMAN 13-204V2.

4.3.1.1. The airfield inspection should be conducted in a manner and at a time least likely to impact flying operations.

4.3.2. AMOPS will conduct additional airfield checks throughout the day IAW AFMAN 13-204V2.

4.3.2.1. At a minimum an airfield check will be conducted after the arrival/take-off of all heavy aircraft (e.g., B-52, B-747, C- 17, C-5, KC-10, etc.) and remote piloted aircraft.

4.4. Procedures for Suspending Runway/Taxiway/Airfield Operations. AMOPS/ATCT must temporarily suspend runway/taxiway/airfield operations when any unsafe condition affects flying operations (e.g., FOD, bird condition, arresting systems maintenance, airfield construction, pavement repair, etc.). The suspension announcement will be accompanied with the estimated time operations are expected to resume. AMOPS personnel will complete an airfield check and report the airfield status/runway condition prior to resuming operations.

4.5. Procedures for Opening and Closing the Runway/Taxiway/Airfield.

4.5.1. When opening the airfield, AMOPS will:

4.5.1.1. Contact Security Forces to notify them that Airfield Management is open.

4.5.1.2. Complete a dual pass runway inspection, FOD, lighting, BASH/wildlife and barrier check prior to opening the airfield.

4.5.1.3. Notify ATCT when the runway/taxiway/airfield can be opened. The ATCT will then request the location and call sign of any vehicles to check in if not already called. Upon official opening of airfield by AM, ATCT will make the following announcement to all agencies on the FM/Crash net. "COLUMBUS AIRFIELD IS OPEN, CONTACT TOWER FOR APPROVAL ONTO ANY MOVEMENT AREAS AND ACTIVE RUNWAYS." AMOPS shall contact Weather Flight when the airfield is called open and shall notify Command Post and Security Forces at a minimum of the airfield's status.

4.5.1.4. Under no circumstances will the airfield be opened when the ATCT is closed.

4.5.2. When closing the airfield, AMOPS personnel will:

4.5.2.1. Contact the ATCT or SOF to ensure that wing flying has been terminated.

4.5.2.2. Issue NOTAMS when operating hours deviate from published hours and will coordinate changes with the following agencies at a minimum: ATCT/RAPCON, Command Post and Security Forces.

4.5.2.3. Advise ATCT, Weather Flight, Command Post and Security Forces that AMOPS and the airfield is closed. Upon official closing of airfield by AMOPS, ATCT will make the following announcement to all agencies on the FM/Crash net. "COLUMBUS AIRFIELD IS CLOSED."

4.5.2.4. Complete all necessary documentation.

4.5.3. Runway/Taxiway Closing Procedures.

4.5.3.1. Whenever a runway/taxiway closes, the controlling agency of that runway/taxiway (RSU or ATCT) will advise the SOF. The SOF will then determine the course of action (e.g., recover aircraft, divert or continue operations with restrictions).

4.5.3.2. During normal operations, if an operational runway/taxiway needs to be temporarily closed due to an incident or accident, AMOPS will transmit a NOTAM within 15 minutes of receipt/discovery (per AFI 11-208 para 4.8) and will notify all applicable agencies IAW AFMAN 13-204v2. At a minimum, AMOPS will inform the following agencies with all pertinent information to include estimated opening time, if known, and the initials/time of member notified will be documented on the NOTAM form or Airfield Advisory Sheet:

4.5.3.2.1. ATCT/RAPCON/SOF/all flying units.

4.5.3.2.2. Job Control (as applicable).

4.5.3.2.3. AFM or AAFM and Airfield Driving Program Manager (ADPM).

4.5.3.2.4. Command Post/CE/Safety/Fire Department/Security Forces.

4.5.3.3. During dual/single runway procedures, notify the above agencies if it is probable that the remaining runway(s) could temporarily be out of service due to an IFE or for any other reason. This action is required to ensure prompt notification is made to aircraft and to preclude the hazardous situation of arriving at CAFB with no runway available.

4.5.3.4. When opening a closed runway/taxiway notify all agencies listed in 4.5.3.2 and transmit a NOTAM (if required).

4.5.4. Scheduled Runway/Taxiway Closures: The AFM or designated representative is responsible for coordinating planned runway/taxiway closures. MAJCOM coordination is required, and requests shall be processed IAW AFMAN 13-204V2. When closing a runway, consideration should be given to PPR and Official Business Only (OBO) aircraft. AMOPS will complete the "Airfield Coordination Sheet" IAW the AFM's instructions.

NOTE: Airfield restrictions establishing limitation on the number or type of aircraft using an airfield should be coordinated with MAJCOM, Wing/CC, OG/CC, AOF/CC, AFM, and CP.

4.5.5. Civil Engineering shall be required to place yellow “X” s, either temporary or permanent, at both ends of the closed runway/taxiway if it will remain closed for more than 5 days.

NOTE: AMOPS will coordinate with OG/CC, CES, and Safety to ensure closed, unsuitable, or non-operational areas are properly marked and published in the Airfield Operations Instruction (AOI) and FLIP. Additionally, AMOPS will publish a NOTAM to report conditions that will exist for less than 90 days.

4.5.6. Prior to re-opening a closed runway/taxiway to normal operations, the AFM or AAFM shall conduct an inspection of the area to ensure it is safe to resume operations.

4.5.7. AMOPS will follow the same notification/documentation procedures outlined in [paragraph 4.5.3](#) (closures) when the runway/taxiway is opened.

4.6. Flight Plans. All aircraft departing Air Force installations must have a flight plan on file with AMOPS prior to taxi. All flight plans will be emailed/faxed/hand carried to AMOPS for approval/submission.

4.6.1. Aircrews shall use DD Form 1801, DoD International Flight Plan, or other authorized forms according to AFMAN 11-202 Volume 3, General Flight Rules and FLIP General Planning. Original flight plans will not be accepted via radio. IAW AFMAN 13-204V2, locally filed flight plans can be amended prior to takeoff with AMOPS, after takeoff amendments will be done through the appropriate ATC agency or Flight Service Station (FSS) via any means provided if the original flight plan is on file at AMOPS. ATCT shall notify AMOPS of the actual departure/arrival time of all aircraft that depart on a DD Form 1801 and will notify AMOPS when they make an amendment to a DD Form 1801 flight plan that impacts the departure/arrival time, or final destination of an aircraft. For aircraft departing on canned/local area flight plans the responsible flying squadron will notify AMOPS via TIMS (telephone hotlines as backup) to input the flight plan. IAW AETCI 11-204 the responsible flying squadron in coordination with the RSU Recorder will record/track takeoff and landing times along with any appropriate comments to ensure aircraft accountability. The RSU Recorder or the responsible flying squadron shall notify AMOPS immediately when an aircraft cannot be located and has failed to land within 30 minutes of its proposed landing time.

4.6.2. Aircrew shall file DD Form 1801 flight plans no later than 1 hour and 15 minutes prior to planned takeoff time.

4.6.3. If a DD Form 1801 is sent to AMOPS, aircrew shall call AMOPS within 10 minutes to ensure flight plans have been received and are accurate.

4.6.4. Squadrons shall ensure that DD Forms 1801 and accompanying documents are retained for at least 3 months IAW Air Force Records Disposition Schedule (RDS) located at <https://www.my.af.mil/gcss-af61/afrims/afrims/rims.cfm>. In the case of an accident, incident or ATC deviation, retain for at least 1 year after appropriate investigation is complete.

4.7. NOTAM Procedures. AMOPS is the base NOTAM dispatch center. RAPCON is responsible for the NAVAID status and is the ATCT NOTAM monitor facility for 14 FTW operated and maintained ATCALS facilities. All NOTAMs will be transmitted according to AFI 11-208, AFMAN 13-204V2 and all applicable agencies as outlined in [paragraph 4.5.3](#) will be notified. The initials/time of member notified will be documented on the NOTAM form or Airfield Advisory Sheet.

4.7.1. AMOPS will advise FSS and Memphis ARTCC, as applicable, when disseminating NOTAMs for Columbus AFB ATCALS facilities.

4.7.2. The ATCT will notify AMOPS and RAPCON of all changes to ATCT equipment status that directly affect the control of air traffic.

4.7.3. RAPCON will check the appropriate NOTAMs for all adjacent airports and will advise ATCT and AMOPS of any pertinent NOTAMs. RAPCON will also notify AMOPS of status changes in all ATCALS facilities which require NOTAM action. In addition, RAPCON will notify the following agencies as appropriate:

4.7.3.1. Memphis ARTCC.

4.7.3.2. Atlanta ARTCC.

4.7.3.3. Meridian Approach.

4.7.3.4. Birmingham Approach.

4.7.3.5. ATCT.

4.7.3.6. Consolidated Maintenance Support Staff (14 OSS/OSM).

4.8. Flight Information Publications (FLIPs).

4.8.1. AMOPS will order FLIP and aeronautical charts for base units according to established distribution procedures. 14 FTW flying squadrons have FLIP accounts and are to use AMOPS products for flight planning at AM only.

4.8.2. Prepare and coordinate nonprocedural FLIP changes with appropriate local agencies before submitting according to General Planning, [Chapter 11](#). The AFM approves/submits nonprocedural FLIP change requests. TERPS will prepare and coordinate procedural changes.

4.9. Airfield Waivers. AFM will coordinate on all waivers that affect airfield criteria.

4.9.1. AMOPS will maintain a copy of the MAJCOM approved airfield waiver package and ensure access to all AM personnel that conduct airfield inspection/checks.

4.9.2. AMOPS, CES, Wing Safety and TERPS will participate in the annual review of waivers to airfield criteria.

4.9.3. Do not authorize temporary airfield construction unless a waiver has been approved by the 14 FTW/CC or delegated authority (See Unified Facilities Criteria (UFC) 3-260-01, Airfield and Heliport Planning and Design Criteria.). A copy of the approved waiver must be provided to the AFM prior to the start of construction.

4.9.3.1. The AFM, Flight Safety, SFS, and the TERPS specialist must be coordinated with prior to beginning any construction/repairs on the airfield or in areas that could affect flying operations. Appropriate NOTAMs, waivers, and/or closures may be required. AMOPS

shall advise the ATCT about any personnel or equipment operating within the CMA. Construction personnel will inform AMOPS when they start work each day and when they stop work each day.

4.9.3.2. The AFM will conduct and document an inspection with representatives from CES and Flight Safety, before and after completion of any airfield construction, changes or additions to the flying mission or changes affecting existing aircraft parking/taxi procedures. Emphasis will be on mission impact of affected area(s), necessary changes to the safety plan and construction, and temporary or permanent waiver.

4.10. Waivers to Airfield/Airspace Criteria.

4.10.1. Request for waivers to airfield, terminal airspace, and TERPS criteria should be submitted to CES (Community Planner). All requests for airfield, airspace and TERPS waivers will be coordinated with AOF/CC prior to submission. CES will provide a copy of all approved waivers to AOF/CC.

4.10.1.1. MAJCOM/CV is the approval authority for all operational waivers involving airfield and/or airspace operations, unless delegated to MAJCOM or other authority. Waiver implementation entails posting approved waiver to the AETC Community Planner (CoP), forwarding approved waiver package to senior leadership, and briefing new waivers at the Airfield Operations Board (AOB).

4.10.1.2. The number and status of permanent/temporary waivers is defined in the waiver package in the AFM's office; additionally, this information is briefed quarterly during the AOB and reported in the AOB minutes. If necessary, contact the AFM for the most current list of airfield waivers.

4.11. Prior Permission Required (PPR). Columbus AFB requires a PPR for all transient aircraft as published in DoD FLIP and Official Business Only (OBO) if a NOTAM is issued. AMOPS will issue PPR numbers once necessary information is received from transient aircrew.

4.11.1. AMOPS will limit transient traffic to PPR restrictions, except aircraft with DV-6 or higher grade on board, aircraft emergencies, or as an alternate for IFR flights.

4.11.2. Aero Medical Evacuation (AIREVAC) or Special Air Missions (SAM) are exempt from PPR/OBO restrictions but are required to obtain a PPR number for tracking/notification.

4.12. Air Evacuation Notification. AMOPS is designated as the agency responsible for coordinating support for Air Evacuation flight information. ATCT will notify AMOPS when an Air Evacuation flight is approximately 15 miles from landing, time/workload permitting. AMOPS will make appropriate notifications IAW internal checklist.

4.13. Distinguished Visitor (DV) Notification/Handling.

4.13.1. AMOPS is the focal point for DV arrival/departure notification. When a PPR request involves a DV, AMOPS will obtain the DV's Rank, Name, and Duty title. A DV notification email containing pertinent PPR/DV information will be sent to CP, Wing Protocol, and 14OG/CC will be sent.

4.13.1.1. RAPCON shall inform AMOPS when aircraft carrying DV code is in Columbus AFB airspace (approximately 40NM). The SOF will monitor the aircraft's progress and relay any information over the commanders' net when the aircraft is 25NM and 10NM to fly. Include the aircraft call sign, distance and estimated chock time.

4.13.2. DV aircraft landing: Transient DV aircraft will land on the center runway and follow ATCT taxi instruction to their designated parking location set by AM. Aircraft will be parked by transient alert personnel.

4.13.3. DV aircraft departures: DV aircraft will taxi to the to the center runway for departure utilizing normal taxi procedures.

4.13.3.1. At the discretion of the ATCT WS/CIC, DV aircraft may be taken to Taxiway H and back-taxi to the approach end of the active runway.

4.13.3.2. ATCT will make the DV aircraft number one for departure after entering the hammerhead. **NOTE:** This is secondary to priorities listed in FAAO JO 7110.65 and [paragraph 3.15](#) of this regulation.

4.14. Dangerous/Hazardous Cargo Procedures. If an inbound aircraft advises ATCT/RAPCON of dangerous or inert cargo/nuclear weapons onboard:

4.14.1. ATCT/RAPCON will notify AMOPS and/or have the aircraft contact AMOPS via pilot to dispatch.

4.14.2. AMOPS will obtain the net explosive weight and hazardous classification if it wasn't provided in PPR coordination.

4.14.3. When a prior load message has been received, only the estimated time of arrival and call sign need to be passed.

4.14.4. All explosives-loaded aircraft are parked at the SAC alert area, as directed by AMOPS.

4.15. Wear of Hats. Except for 14 FTW MX personnel, hats are prohibited on the airfield, to include the flightline side of Bldg. 847 (AMOPS). Hats or caps will not be worn in the intake danger zone of the aircraft while the engines are operating. Hats will be secured on a lanyard if worn on the airfield.

4.16. Airfield Smoking Policy. Smoking is prohibited on the airfield except for designated areas only.

4.17. Snow Removal Operations. CAFB does not conduct snow removal operations due to its geographical location.

4.18. Bird/Wildlife Control. BASH program guidelines and duties are described in CAFB Plan 91-202, Bird Aircraft Strike Hazard Plan.

4.19. Bird Watch Conditions. Locally established Bird Watch Conditions (BWC) are described in CAFB Plan 91-202, Bird Aircraft Strike Hazard Plan.

4.20. Photography on the airfield. Airfield photography procedures are outlined in CAFBI 31-101.

4.21. Flightline Visitor Escort Procedures.

4.21.1. Civilian visitors must check-in/out on DD form 1109 located at AMOPS counter (this does not apply to the static displays in front of the Walker Center).

4.21.2. Aircraft commander approval is required to visit an aircraft.

4.21.3. Visitors must be escorted to and from the aircraft by authorized personnel. In addition, visitors are not authorized on the flightline when the airfield is closed without prior approval from AMOPS. During certain events, such as graduation and public events, visitors may be permitted on designated portions of the airfield for the duration of that event.

NOTE: During FPCON CHARLIE or higher, the aircraft parking ramps are controlled areas and must be accessed at entry control points located along the ramp. Aircrew must be listed on the squadron access list or escorted by proper authority.

4.22. Classified Material Storage. Command Post shall store classified materials for transient aircrews.

Chapter 5

FLYING STATUS COMMON TO ALL AIRFRAMES

5.1. Restricted. Weather conditions and/or facilities do not permit full use of training areas, VFR patterns or outlying instrument facilities.

5.2. OPS/Weather Recall. Conditions require recovery to CAFB. Coordinate all launches with the SOF.

5.3. Area Hold. Conditions prohibit normal aircraft recovery to CAFB. Coordinate all launches with the SOF.

5.4. Standby. Standby. All local flying is suspended for an indefinite period of time until conditions improve to support a better status.

5.4.1. When the Wing Flying Status is “Standby” and a MWS SUP/Top 3 desires to launch a non-local sortie, the SOF can coordinate for OG/CC approval when the weather will temporarily support Pilot Weather Category (PWC) or published approach minimums, whichever is higher.

5.5. Terminate. Local flying terminated for the remainder of the day.

5.6. Slots. Slot times are a landing window. Weather requirements are based on the published precision approach minimums and SOF recommendations. Slots provide the capability to continue local flying operations when weather precludes simultaneous T-38 and T-6 recoveries because an IFR approach to the center runway is required by all aircraft.

5.6.1. Slot times will be coordinated between flying squadrons

5.6.2. All squadron aircraft must land within the agreed upon window.

5.6.2.1. If actual or forecast weather precludes a wing landing, extra time must be added for single ship landings.

5.6.2.2. Cross-country launches or out and backs should be coordinated with all other squadron SUP/Top 3s and the SOF shall be notified of the plan.

5.6.3. All approaches will be a full stop.

5.6.3.1. Aircrew requiring a radar delay or multiple approaches must coordinate approval through SUP/Top 3 to the SOF and RAPCON approval.

5.6.3.2. The squadron SUP/Top 3s will inform the SOF of coordinated slot times. The SOF will relay slot times to the RAPCON. For planning purposes, SUP/Top 3s will plan for no more than 1 aircraft to land every 3 minutes.

5.6.4. Any deviations from defined flying status will be coordinated with the RAPCON prior to departure.

Chapter 6

T-6 OPERATIONS

6.1. T-6 Flying Status. NOTE: ATC instructions must be adhered to. In the event aircraft encounters weather phenomena, it is their responsibility to request deviation with ATC. Aircraft shall relay the respective weather report to the SOF.

6.1.1. Unrestricted. Weather and facilities permit full use of all training areas for both dual and solo missions.

6.1.2. Wing Solo. Weather 2,500/3. In-flight visibility 5 miles or greater. Weather permits formations with solos to maintain VMC. Solos will remain clear of clouds.

6.1.3. Pattern Solo. Weather 2,500/3. In-flight visibility 5 miles or greater. Solos are not permitted outside of the VFR pattern. Weather permits VFR pattern operations including breakout and re-entry.

6.1.4. Dual. Weather 2,500/3. No solo sorties permitted. Weather permits VFR pattern operations including breakout and re-entry. Any combination of the statuses in 5.1.1 and 6.1.1 through 6.1.4 may be set for individual MOAs. For example, a T-6 flying status of “Wing Solo South, Dual West” or “Restricted – No solos to Gunshy” may be used to facilitate proper determination of the actual status for geographically separated working areas.

6.1.5. Restricted Overhead (RSU controls the inside runway) -Weather 1,500/3 (2,100/3 required to enter the pattern via Marble/Stennis). Aircraft will enter the VFR pattern via initial takeoff, straight in from radar termination point, or closed/crosswind from the center runway. Maximum number of aircraft in the VFR pattern is eight. No breakouts. Aircrew will carry straight through initial with straight-ins between 5 and 2NM. Center runway arrivals must full stop or have sufficient fuel to return to RAPCON for vectors to another instrument approach.

NOTE: T-6 approaches to the CBM center runway will be by exception and require RAPCON approval. Other airfields that can accommodate T-6 syllabus requirements should be utilized first. The RAPCON may deny T-6 center runway requests based on radar pattern congestion or aircraft awaiting takeoff on the center runway. During "ITS DANGER" conditions, T-38 aircrew will advise ATC of any takeoff time limitations and ATC will prioritize T-38 departures over other aircraft departures and arrivals to the max extent practical.

6.1.5.1. VFR Straight-in. Weather 1,500/3. At the discretion of the RSU crew and with SOF and T-6 SUP approval, restricted overhead status may be modified to operate as follows: Sunfish is restricted, straight-ins to a full stop only.” This status is used with few or scattered clouds interfering with pattern operations, but not straight-ins. Enter the pattern via a straight-in from radar termination point. Center runway arrivals must full stop. Initial takeoffs must depart the pattern.

6.1.6. IFR Recovery. Weather requirements are based on the published circling approach minimums and based on SOF recommendations. Aircraft will execute the published circling approaches to a full stop on the inside runway. Weather status requirements may be reduced to 300/1 for 31C/13C approaches if T-38s are not flying. MARSA applies IAW [para 3.27](#).

Any time that runway 13R is in use, aircraft shall circle west of the field for a right base. If runway 31L is in use, aircraft shall circle east of the field for a left base.

6.1.7. Contact Recoveries (ATCT controls the inside runway) weather is greater than or equal to 1500/3 in the pattern and between 1600 and 2100 over radar termination. ATCT will control the inside runway prior to this status change. The status will be “contact recoveries” and T-6A aircrews will use the following guidance:

6.1.7.1. Arrival/Entering pattern. Aircraft will enter the VFR pattern via initial takeoff or via initial from a contact approach flown to radar termination. Aircraft will not plan to enter the pattern from the center runway unless directed by ATC. When weather precludes a VFR descent below minimum vectoring altitude, aircrew may request a contact approach. Once clear of clouds, aircrew will declare “contact,” receive approach clearance from RAPCON, achieve appropriate VFR cloud clearances (1500-3), and cancel IFR as soon as practical. Aircrew will then enter the pattern. Aircrews will let RAPCON know as soon as possible if they are unable to cancel IFR. Once VFR aircrews will switch to ATCT frequency and make a request.

6.1.7.2. RAPCON may vector crews to the vicinity of “crossroad” instead of Stennis/Marble. If this is the case, RAPCON will inform crews which point they are being vectored to. Pattern. Aircrew will plan on reporting initial for the active runway, but may request straight-in from radar termination if desired. Once in the pattern aircraft will squawk 0000, follow the normal pattern ground track, and make FAA required radio calls. The maximum number of aircraft in the ATCT controlled pattern is four and the ATCT WS has the authority to reduce that based on ATC safety of flight. Departures have priority and depending on traffic ATCT may not allow aircraft to pattern delay. Aircrew will fly a maximum of three patterns per sortie (including the straight-in if accomplished). There will be no breakouts or ELPs (if the CBM ceiling permits, ELPs can be coordinated with the SOF).

6.1.7.3. Departure. Once cleared for takeoff (if straight out) or approved to depart the pattern (if pattern delaying), aircrews will fly the IFR departure procedure.

NOTE: An aircrew’s IFR clearance is already active when departing with ATCT.

6.1.7.4. Formation. Options for formation recoveries (in order of preference) will be: 1) split the formation in the area prior to recovery 2) formation landing from the straight-in 3) sequential closed/crosswind from a formation low approach or 4) standard pitchout if ATCT directs the formation to report initial. Additionally, formations will not plan to rejoin in the pattern for training purposes.

6.1.7.5. Deconfliction. Landing aircraft must be off runway and maintaining forward momentum beyond the hold short line before aircraft begin takeoff roll. ATCT is not allowed to use restricted low approaches for deconfliction. As a last resort they will issue “Go around” instructions to an aircraft on final.

6.1.7.6. GTR Return. If the status is contact recoveries or worse, aircrews may coordinate for an IFR climb out from GTR or execute the racetrack recovery at the discretion of the aircrew.

6.2. VFR Traffic Pattern Procedures. UHF shall be the primary frequency used in the Sunfish pattern. Aircraft shall squawk 0000 while in the VFR pattern. When departing the VFR pattern, squawk the ATC assigned code.

6.2.1. When ATCT controls the pattern, standard FAA communications shall be used by aircrew and controllers.

6.2.2. T-6 Pattern Description. T-6 ground tracks and reporting points are depicted in [Attachment 5](#). The overhead pattern is flown at 1,200' MSL and 200 KIAS.

6.2.2.1. ATCT Pattern Use. When ATCT controls the inside runway, the T-6 pattern for ground tracks and reporting points should be used. ATCT may amend the pattern as necessary.

6.2.3. Minimum ceiling for use of the VFR patterns is 500' above intended pattern altitude.

6.2.4. Low closed patterns are prohibited southwest of the airfield.

6.2.5. T-6 VFR Pattern Departure Procedures are described in [Attachment 13](#).

6.2.6. Night Pattern Procedures. Aircraft shall land on the centerline with a minimum of 6,000' spacing between all aircraft.

6.2.7. T-6 Practice Emergency Landing Procedures (ELP).

6.2.7.1. ELP approaches requested under Sunfish Control. ELPs will be coordinated and approved using standard verbiage and procedures in accordance with AFI11-2T-6 V3 14OGSUP.

6.2.7.2. Practice ELP approaches requested under ATCT's control are only approved between sunrise and sunset. ELP will be coordinated and approved using standard verbiage and procedures in accordance with this instruction. ATCT may disapprove the ELP approach at any time.

6.2.7.2.1. The ELP will be initiated from High Key or Low Key. The T-6 may make any type landing from this maneuver. The ceiling must be at least 500' above the approved high key/low key altitude and flight/ground visibility must be reported to be at least 3 miles (FAAO JO 7610.4). High key is directly over the first third of the runway at 2,700 to 3,200' MSL and low key is at 1,700' MSL abeam an aim-point which is 500-1,000' short of the intended touchdown point. All turns will be made to the Southwest unless otherwise directed.

6.2.7.2.2. ELP entry will normally be made from initial or the departure leg depending on traffic complexity.

6.2.7.2.3. High key from initial. Aircrew shall transmit, "INITIAL, REQUEST HIGH KEY." If approved ATCT will transmit, "REPORT HIGH KEY". If disapproved or unable ATCT will transmit "NEGATIVE HIGH KEY" or "UNABLE HIGH KEY" respectively followed with alternate ATC instructions. If approved, aircrew shall climb to an altitude between 2,700' and 3,200' MSL (high key) and maintain VFR cloud clearances. Once at the high key position, the aircrew shall report "HIGH KEY." The ATCT will either transmit "REPORT LOW KEY" for authorization to begin the ELP, or "HOLD AT HIGH KEY" to begin a 360-degree level orbit. Upon reaching the high key position again, the same process applies.

6.2.7.2.4. Low key from initial. Aircrew will transmit "INITIAL, REQUEST LOW KEY." If approved ATCT will transmit, "REPORT LOW KEY". The aircraft will climb to low key altitude (1,700' MSL) while in the break. At low key, the aircraft will transmit "LOW KEY, GEAR DOWN" to receive a landing clearance from ATCT. If disapproved ATCT will transmit "UNABLE LOW KEY" respectively, after which the aircrew will perform an overhead pattern.

6.2.7.2.5. High key from departure leg. Aircrew shall transmit, "REQUEST CLOSED HIGH KEY." If approved ATCT will transmit, "REPORT HIGH KEY". If disapproved ATCT will transmit "UNABLE HIGH KEY" respectively followed with alternate ATC instructions. If approved, the aircrew shall climb to 3,200' MSL for high key. Once at the high key position, the aircrew shall report "HIGH KEY." ATCT will either transmit "REPORT LOW KEY" for authorization to begin the ELP, or "HOLD AT HIGH KEY" to begin a 360-degree level orbit. Upon reaching the high key position again, the same process applies.

6.2.7.2.6. Low key from departure leg. Aircrew will transmit "REQUEST CLOSED, LOW KEY." The ATCT will transmit "REPORT LOW KEY". If disapproved ATCT will transmit "UNABLE LOW KEY, CLOSED APPROVED" respectively. If low key is approved, the aircraft will report "HIGH DOWNWIND" when established on High Closed Downwind. At low key, the aircraft will transmit "LOW KEY, GEAR DOWN" to receive a landing clearance from ATCT. If a low key request from closed pattern is denied, but closed is approved, normal closed procedures apply (ATCT will not allow aircraft to climb to high closed downwind altitude). If ATCT should transmit "UNABLE LOW KEY, UNABLE CLOSED" and the aircrew will depart the closed pattern and enter the crosswind pattern.

6.2.7.2.7. No aircraft will be cleared for takeoff on the runway to which the ELP is being conducted once the ELP aircraft departs high key.

6.2.7.2.8. ELP aircraft will not be allowed to depart high key with an aircraft in the initial pattern going to the same runway.

6.2.7.2.9. IFR/VFR straight-in approaches going to the same runway as the ELP aircraft must be within one mile final or outside of 5NM prior to the ELP aircraft leaving high key.

6.2.7.2.10. The minimum separation standard between successive ELP aircraft is the second aircraft will not be cleared out of high key until the preceding aircraft reports low key.

6.2.7.2.11. ATCT controllers must have visual contact or ATCT radar display position confirmation with ELP traffic when the aircraft leaves high key or the aircraft will be broken out and sent back to high key to hold or given alternate ATC instructions.

6.2.7.2.12. If required for sequencing, ATCT may direct holding at high key. Holding will be in the same direction as the pattern to be flown. Aircraft are not allowed to hold at low key.

6.2.7.2.13. If ATCT clearance is not received at low key or traffic dictates discontinuing the ELP, the aircrew shall report "GOING AROUND." Turn parallel to the intended runway but offset over Taxiway A so as not to cross the intended runway centerline, maintain 700' MSL and follow ATCT instructions.

6.2.7.3. Transient aircraft are not authorized to conduct simulated ELPs at CAFB. Simulated flameout procedures do not exist for Columbus Air Force Base.

6.2.7.4. ELP training will only be conducted at airfields approved by the 14 OG/CC IAW 14 OG T-6A Non-Towered Airfields training letter.

6.3. Radar Traffic Patterns and Speeds. Radar patterns are depicted in [Attachment 11](#). T-6 Aircraft shall fly 200 KIAS on RADAR downwind and base until on final approach and inside 13 DME.

6.4. Standard/Local Climb Out. In order to protect the 360 degree overhead pattern when the weather is VFR, the standard instrument climb out procedure for the center runway is, "FLY RUNWAY HEADING. CROSS DEPARTURE END AT OR BELOW 700'. CLIMB AND MAINTAIN 4000'. CONTACT DEPARTURE CHANNEL 16." When the weather is less than VFR, "FLY RUNWAY HEADING, CLIMB AND MAINTAIN 4,000'. CONTACT DEPARTURE CHANNEL 16." RAPCON may abbreviate climb out instructions for local aircraft by stating, "AFTER COMPLETING LOW APPROACH/TOUCH AND GO/OPTION, EXECUTE LOCAL CLIMBOUT."

6.5. IFR/VFR Clearances. Aircrew should receive their IFR/VFR clearance prior to taxi for missions prior to departure.. Clearance Delivery (CD) will issue Columbus AFB Class C departure instructions, squawk, and a frequency for VFR departures (If other than the inside runway, T-6 will advise clearance delivery which runway they will depart from). If advised by ATC of an extended delay,, aircrew may taxi and inform Ground Control "AWAITING CLEARANCE." Aircrew will inform Ground Control if encountering a problem with the clearance and contact Squadron Ops for assistance.

NOTE: During Radar Outage procedures, clearances will be handled IAW [paragraph 3.22](#).

6.5.1. VFR pattern-only sorties are required to file a local flight plan. The aircrew will state "PATTERN ONLY" to Ground Control on taxi request.

6.5.2. Multiple Radar Patterns. No more than five local aircraft will be scheduled in the radar traffic pattern during multiple radar pattern operations. If the pattern becomes saturated with more than five aircraft, RAPCON may direct aircraft to the VFR pattern or to full stop.

6.5.3. Any time an aircraft departs from Sunfish's runway, it will remain VFR until advised by the RAPCON controller: "(CALLSIGN), RADAR CONTACT, CLEARED (departure profile)". Clearance on the departure profile activates the IFR clearance issued by CD. Aircraft are responsible for separation between themselves and other aircraft within a practice area.

6.5.4. Canceling IFR/Flight Following. To reduce verbiage, RAPCON may acknowledge 14 FTW aircraft canceling IFR or flight following with "C/S, ROGER." Aircrew will understand that radar service is terminated, will squawk stand-by or the appropriate code at entry/termination point.

6.5.5. IFR Recovery/Slots Status. Prior to departing on either status, aircrew must receive an IFR clearance. The IFR clearance is effective once cleared for takeoff by the ATCT.

6.6. Departures.

6.6.1. Sunfish VFR Pattern Departure IFR Pickup. When departing the Sunfish traffic pattern, all T-6s will maintain VFR. Ninety second spacing is required between aircraft. When cleared for takeoff, aircraft shall squawk normal. When aircraft is clear of the VFR pattern, aircrew shall contact Departure Control **CH 4**.

6.6.1.1. T-6 Canned Flight Plans. RAPCON will state “(CALLSIGN), RADAR CONTACT, CLEARED BENGAL/BUZZSAW etc.” Aircraft will then proceed with their IFR clearance.

6.6.1.2. Cross-Country/Out-and-Back (DD175). Aircraft will fly “VFR PATTERN DEPARTURE PROCEDURES,” per the IFG, until told “CLEARED AS FILED” at which point aircraft is cleared to initial fix as listed below and then as filed.

6.6.1.2.1. Westbound departure will file IGB.SQS as initial route of flight.

6.6.1.2.2. Northbound departure will file CBM ARONN (CBM293/26) TUP as initial route of flight. Aircraft will be restricted at or below 7000’ until clear of Columbus 1 and 3 MOAs.

6.6.1.2.3. Eastbound departures will file NARRO (CBM189/09)-MINIM (CBM106/21) as initial route of flight.

6.6.1.2.4. Southbound departures will file NARRO (CBM189/09) (Destination airport) as the route of flight. Aircraft will file and maintain 6,000’ MSL until ATC authorizes higher.

6.6.2. Clearance Limits on Departure.

6.6.2.1. To comply with Columbus AFB Class C airspace, aircrew must establish two-way radio communication with RAPCON prior to 7 DME and 3,500’ MSL. If unable, aircraft shall remain inside 7 DME and below 3,500’ MSL and return to the radar termination point. Another departure from the Sunfish pattern may be attempted.

6.6.2.2. If for any reason (separation, workload, etc.) the RAPCON states “RETURN TO SUNFISH”, remain inside the practice area and contact Sunfish RSU.

6.6.2.3. If not given clearance “CLEARED (DEPARTURE PROFILE), THEN AS FILED” or “CLEARED AS FILED” by RAPCON and the weather will not allow a VFR climb to 3,000’ MSL, aircraft shall remain clear of the breakout area/VFR entry point and continue with the departure ground track. If clearance is not received prior to CBM 7 DME and aircraft is unable to continue VFR, aircraft shall initiate a descending turn toward the radar termination point and return to the pattern.

6.6.3. During Restricted Overhead status, multiple straight-ins require prior coordination with the SUP and SOF. On initial contact with Columbus Departure Control (**CH 4**), aircraft shall request radar vectors back to the radar termination point. The original flight plan will remain open until activated on a subsequent departure.

6.6.4. If departing local area VFR, aircraft shall contact Clearance Delivery for a squawk and advise them of the requested profile (Bengal, Buzzsaw, GTR or Gunshy). Aircraft will contact Departure Control (**CH 4**) for Columbus AFB Class C service and request flight following. Aircraft will fly the profile ground track to 10 DME and then proceed via flight planned route.

6.6.5. For departure to an area or fix following an instrument delay, aircraft shall contact Sunfish for departure sequencing. If no conflict exists, expect clearance to fly the standard turn out of traffic. If delayed in the VFR pattern, aircraft shall squawk 0000 until pattern departure.

6.6.6. Static and Rolling takeoffs.

6.6.6.1. RSU control. All sorties are expected to perform a rolling takeoff unless prior notice is given to the RSU. Aircrew desiring a static takeoff will advise the RSU they are "STATIC" when arriving at the number one position.

6.6.6.2. ATCT control. All sorties will notify ATCT of rolling takeoff.

6.6.7. Instrument Trail Departure. If unable to maintain trail, the lead aircraft should contact ATC immediately. The formation is MARSA until ATC issues separate clearance to individual aircraft.

6.6.7.1. Takeoff spacing will be no less than 20 seconds.

6.6.7.2. If a visual join up cannot be accomplished at level-off, the lead aircraft may request 1,000' of altitude separation for each succeeding aircraft or element.

6.6.7.3. Aircrew will include "XX SECOND TRAIL DEPARTURE" when requesting clearance, taxi, and takeoff.

6.6.7.4. When airborne, in a nonstandard formation, only the last aircraft will squawk 0400.

6.6.7.5. Aircrew will inform RAPCON when standard formation is achieved. Formations must be rejoined to standard formation prior to leaving Columbus airspace or coordinate for separate clearances.

6.7. Radar Termination Points into Sunfish.

6.7.1. Aircraft will be descended no lower than the Minimum Vectoring Altitude until canceling IFR.

6.7.2. The radar termination points are defined as:

6.7.2.1. Marble (runway 31 for T-6 use) [CBM179/007]. Defined by the Marble Works building on the West side of Highway 45 North.

6.7.2.2. Stennis (runway 13 for T-6 use) [CBM196/008]. Defined by the lock and dam located on Columbus Lake.

6.7.3. RAPCON may continue to provide vectors after the aircrew has cancelled IFR to provide Class C service and to aid in separation between other aircraft on recovery. Aircrew shall comply with these vectors until the conflict is resolved either by visual contact or other means.

6.7.3.1. When approaching the radar termination point and able to proceed VFR, aircraft shall cancel IFR with RAPCON. RAPCON will respond with "C/S, ROGER" IAW par 6.5.4.

6.7.3.1.1. T-6s shall remain outside 7 DME until reaching the radar termination point. After canceling IFR, aircrew shall change to Sunfish (**CH 2**) and report “MARBLE” or “STENNIS”. If unable to cancel IFR due to frequency congestion, aircraft will proceed to the radar termination point and continue to attempt to cancel IFR. If still unable to cancel IFR due to radio congestion within one mile of the termination point the IFR clearance will be automatically cancelled upon squawking 0000. Aircrew shall then switch to Sunfish frequency. After crossing the radar termination point, aircraft shall follow their respective ground track and be at 1,200’ MSL no later than radar initial (31L) or the 7-mile-farm (13R).

6.8. Radar Vector to Initial Procedures.

6.8.1. Radar vectors to initial may be conducted at any time the ATCT has operational control of the center and outside and/or inside runways, traffic permitting.

6.8.2. Aircrew shall request the overhead approach on initial contact with RAPCON or prior to reaching 15 flying miles from the runway. Aircrew shall report, “COLUMBUS APPROACH, (CALL SIGN), 20 MILES SOUTHEAST WITH (ATIS), REQUESTING OVERHEAD (TYPE LANDING).”

6.8.3. When requesting radar vectors to initial, aircraft shall normally be vectored to a 10- mile final. The aircraft’s IFR flight plan is automatically cancelled when the aircraft reaches the initial point.

6.9. Center Runway Arrival Procedures.

6.9.1. Contact Straight-In Approach. Aircrew shall declare “CONTACT” with RAPCON prior to 10 DME, but not prior to base leg. After RAPCON approves the approach, aircrew shall maintain 2,000’ MSL until intercepting a visual glide path. Runway centerline will be established prior to 10 DME and maintained to the runway.

6.9.2. If T-6 status is less than Dual or T-38 status is Restricted Overhead, VFR straight-in, or IFR recovery, RAPCON will approve center runway approaches as traffic permits.

6.10. VFR Arrivals. During recovery, aircraft shall contact Columbus Approach at approximately 30NM or as soon as possible after ELP training is terminated at an outlying non-towered airfield for radar advisory service and runway approach clearance.

6.11. Drag Procedures.

6.11.1. The Drag procedure allows a formation to achieve nonstandard formation spacing on final. The trailing aircraft gains separation by reducing airspeed and shall squawk 0400. All communications are directed to the lead aircraft.

6.11.2. The lead aircraft will request the drag procedure upon initial call to ATC. Aircraft shall accomplish the drag and approach in daytime, during VMC conditions.

6.11.3. If landing clearance is canceled, both aircraft shall fly runway heading and await ATC instructions. If IMC, lead shall climb to 4,000’ MSL and the wingman shall climb to 3,000’ MSL following standard climb out instructions until separate clearances are obtained.

6.12. T-6 MOA Procedures (CBM RAPCON Controlled Airspace). MOA procedures common to all airframes are located in section 3.26. On departure, aircrew shall request sector assignments with Columbus Approach (**CH 8/18**) and may expect low block of 8,000' to 14,000' or high block of 16,000' to 22,000'.

6.12.1. Clearance from CAFB. When approved, the aircraft is cleared to CAFB via VFR pattern departure procedures or published IFR departure procedure as appropriate, then assigned profile/canned flight plan. Aircraft shall climb and maintain 15,000' and the departure frequency will be **CH 4**.

6.12.2. Area Entry. Aircraft should expect departure control to issue a frequency change to Columbus Approach (**CH 8**) prior to reaching the BENRE (CBM293/09) or CH 18 prior to reaching BUZLI (CBM170/15).

6.12.2.1. South Area Entry from Gunshy. Aircraft should expect either Columbus Approach or Meridian Approach to issue a frequency change to Columbus Approach (CH 18) for area assignment.

6.12.3. Area assignment will be made on initial contact with RAPCON on **CH 8** (CBM1) or CH 18 (MEI1E). Once established in the area, aircrew shall switch to Area Monitor on **CH 9** (CBM1) or CH 19 (MEI1E) and report, "C/S, ESTABLISHED IN (ASSIGNED AREA)." Aircrew must ensure Area Monitor acknowledges and shall monitor this frequency until ready for recovery.

6.12.3.1. Formations will use a combination of areas 1/3, 2/4, 5 or 6 in the western areas. In the southern areas, T-6 formations will use a combination of area red/green, area white or area blue.

6.12.4. Priorities. When a T-6 MOA is full, the MOA monitor will make the following broadcast: "ATTENTION ALL AIRCRAFT, THE WEST/SOUTH MOA IS FULL." The RAPCON WS/CIC will notify the SOF. Aircraft that have completed mission requirements should initiate recovery. The T-6 SUP may prioritize aircraft recovery and relay that information to the SOF for RAPCON coordination.

6.12.5. FCF sorties normally use area 6 in the west MOA and AHC sorties normally use area white in the south MOA. The high and low sectors in the west/south MOA, including the sterile block, may be combined on FCF and AHC sorties.

NOTE: The above will be adhered to as best as possible, however, area assignments will be at the controller's discretion to facilitate traffic flow.

6.12.6. Area Exit.

6.12.6.1. Aircraft shall obtain ATIS (273.5 or VOR voice) and remain within the assigned area.

6.12.6.2. Aircraft shall contact Columbus Approach on **CH 8** (CBM1) or CH 18 (MEI1E) with request and ATIS. Include if desiring recovery to Sunfish, Gunshy or Golden Triangle.

6.12.6.2.1. If recovering anywhere other than Columbus AFB or Golden Triangle Airport, aircraft must notify RAPCON at least 5 minutes prior to exiting area to initiate coordination for follow-on procedures. If unable to comply with 5-minute notification, aircraft can expect delays.

6.12.6.3. If departing Columbus AFB designated airspace, formation aircraft anticipating flight split-up shall have a separate flight plan on file for each flight lead. Flight plans shall include CBM as the departure point.

6.12.6.4. If aircraft desires a center runway approach at Columbus, include desired request after completion of approach (i.e., Radar, Sunfish, or Full Stop).

6.13. Recovery From Gunshy. Aircraft should expect clearance for the Pickens or Sunfish II Recovery from Meridian approach.

6.14. Lost Communication.

6.14.1. Lost Communications on the Ground. When communication loss procedures require an aircraft to enter or cross an active runway, the ATCT/RSU will ensure the operation is safe and will assume pre-coordination and safety measures are complete.

6.14.1.1. T-6 aircrew shall alert RSU/ATCT by flashing the landing and taxi lights. When given a flashing green light by the RSU/ATCT, aircrew shall perform the following:

6.14.1.1.1. Holding for runway 31L (Taxiway J), aircraft shall taxi down runway 31L and Taxiway E and return to park.

6.14.1.1.2. Holding for runway 13R (Taxiway L), aircraft shall taxi down runway 13R and return via normal routing to park.

6.14.1.2. Holding for runway 31C/13C, aircraft shall taxi down the center runway and return via Taxiway H to park.

6.14.1.3. Arriving aircraft to all runways will exit at the end of the runway and follow standard taxiing procedures to parking. Aircraft will hold short of all runways and monitor RSU/ATCT for a flashing green light. RSU/ATCT will issue a flashing green light to authorize the aircraft to cross the runway.

6.14.1.4. Aircrew shall return to the parking area using caution and shall monitor ATCT for additional light signals.

6.14.2. Lost Communication in CAFB Class C Airspace. If the aircraft loses communication in CAFB Class C Airspace prior to receiving landing clearance, aircraft will continue the approach, squawk 7600, and aircrew will watch the ATCT for a green light (clearance to land). If a flashing red light, steady red light is observed, aircraft will execute the go around/missed approach procedures and follow lost communication procedures.

6.14.3. Lost communication while in RAPCON airspace:

6.14.3.1. Aircraft shall squawk 7600. If fuel does not permit compliance with FLIP or local procedures or if another Emergency exists, squawk Emergency code 7700 continuously. Expect ATC to attempt contact on GUARD (243.0).

6.14.3.2. If in the local operating area, VFR can be maintained and VFR pattern is open, aircraft shall fly the recovery ground track at VFR hemispherical altitudes to the appropriate radar termination points.

6.14.3.3. Canned Profiles. If aircraft is still in RAPCON airspace, aircraft shall return and intercept the 13 DME arc and arc for an ILS final to the last known active runway. Once established with an outside controlling agency, aircrew shall follow the procedures in the Flight Information Handbook.

6.14.3.4. West MOA (Low Area). If field is IFR, aircraft shall descend and maintain 7,000' MSL in lateral confines of area, proceed direct CBM13 DME and arc north or east to last assigned runway. Once established on the 13 DME arc, descend and maintain 4,000' and fly an ILS approach to the center runway.

6.14.3.5. West MOA (High Area). Aircraft shall descend and maintain 15,000' MSL in lateral confines of area and proceed direct CBM293 at 31 DME fix. Once aircraft is established on radial, aircraft shall track inbound descending to 7,000' MSL. Aircraft shall cross CBM293/13 DME at 7,000' MSL. Aircrew shall intercept CBM13 DME arc, arc north or east to last assigned runway. Once established on the 13 DME arc, descend and maintain 4,000' and fly an ILS approach to the center runway.

6.14.3.6. South MOA (Low Area). Aircraft shall descend and maintain 7,000' MSL in lateral confines of area, proceed direct CBM13 DME, arc north or east to last assigned runway. Once established on the 13 DME arc, descend and maintain 4,000' and fly an ILS approach to the center runway.

6.14.3.7. South MOA (High Area). Aircraft shall descend and maintain 15,000' MSL in lateral confines of area and proceed direct CBM173 at 30 DME fix. Once established on radial, aircraft shall track inbound descending to 7,000' MSL. Aircraft shall cross CBM173/15 DME at or below 9,000' MSL. Aircraft shall intercept CBM13 DME arc and arc north or east to last assigned runway. Once established on the 13 DME arc, descend and maintain 4,000' and fly an ILS approach to the center runway.

6.14.4. All aircraft returning to CAFB from the East, not covered above, will intercept V278/T370, maintain 7,000'. Intercept CBM13 DME, arc to last assigned runway. Once established on the 13 DME arc, descend and maintain 4,000' and fly an ILS approach to the center runway.

6.14.5. All aircraft returning to CAFB from the West, not covered above, will intercept V278/T370, maintain 7,000'. Intercept CBM13 DME, arc to last assigned runway. Once established on the 13 DME arc, descend and maintain 4,000' and fly an ILS approach to the center runway.

Chapter 7

T-38 OPERATIONS

7.1. T-38 Flying Status. **NOTE:** ATC instructions must be adhered to. In the event aircraft encounters weather phenomena, it is their responsibility to request deviation with ATC. Aircraft shall relay the respective weather report to the SOF.

7.1.1. Unrestricted. Weather and facilities permit full use of all training areas for dual and solo missions.

7.1.2. Weather Solo. Weather 5,000/5. Solo students will remain clear of clouds or maintain weather solo criteria.

7.1.3. Pattern Solo. Weather 3,300/5. 50th Flying Training Squadron solo students are not permitted outside of the VFR pattern. Weather permits VMC pattern operations including breakout and re-entry.

7.1.4. Dual. Weather 2,800/3. No 50th Flying Training Squadron solo student sorties permitted. Weather permits VMC pattern operations including breakout and re-entry.

7.1.5. Restricted Overhead. Weather 2,000/3. If ATCT controls the outside pattern, entry from vectors to initial, gate and center runway side-step may be approved, traffic permitting. Under LiveOak Procedures, aircraft will enter the pattern from initial takeoff or crosswind entry from the center runway. Maximum number of aircraft in the RSU pattern is eight. No breakouts. Aircrew will carry straight through initial with straight-ins between 9 and 4NM. Center runway arrivals must full stop or have sufficient fuel to return to RAPCON for vectors to another instrument approach.

7.1.6. VFR Straight-in. Weather 1500/3. If ATCT controls the outside pattern, entry from the gate, low closed and center runway side-step may be approved, traffic permitting. Under LiveOak Procedures, aircraft may enter the pattern from initial takeoff, low closed, or crosswind entry from the center runway. Pattern altitude is 1,200' MSL for straight-ins and 800' MSL for low closed. There are no breakouts or normal overheads permitted. Maximum aircraft in the pattern is five. T-38s will fly the pattern at 300 KIAS until 9 miles.

7.1.7. IFR Recovery. Weather requirements will be either the T-6 circling approach minima or 300/1 if T-6s are not flying. T-38s recover to the center runway. MARSA applies IAW [para 3.27](#).

7.1.8. Weather Solo Criteria. Weather solos may climb/descend through IMC. T-38 SUPT SUPs/Top 3s will coordinate with the SOF. IFF Top 3 will determine IFF student training restrictions and inform the SOF.

7.2. VFR Traffic Pattern Procedures. UHF shall be the primary frequency used in the LiveOak pattern. Aircraft shall squawk 0000 while in the VFR pattern.

7.2.1. When ATCT controls the pattern, standard FAA communications shall be used by aircrew and controllers.

7.2.2. T-38 Pattern Description. T-38 ground tracks and reporting points are depicted in [Attachment 5](#). The overhead pattern is flown at 1,700' MSL and 300 KIAS. When turning crosswind, maintain 1,200' MSL until clear of inside downwind.

7.2.2.1. ATCT Pattern Use. When ATCT controls the outside runway, the T-38 pattern for ground tracks and reporting points should be used. ATCT may amend the pattern as necessary.

7.2.3. Minimum ceiling for use of the VFR patterns is 500 feet above intended pattern altitude.

7.2.4. On takeoff leg, go-around, or straight through initial, aircraft shall not turn crosswind earlier than the departure end of the outside runway.

7.2.5. VFR Pattern Breakout to Radar. Aircraft will climb to 2,500' MSL heading 040, contact RAPCON (CH 16) and make a request for MOA1 and MOA1 departure profiles only.

7.2.6. Night Procedures. Pattern procedures are the same as during the day except there are no practice breakouts between sunset and sunrise. For night breakouts, follow the above paragraph.

7.3. Radar Traffic Patterns. Radar patterns are depicted in [Attachment 11](#).

7.4. Standard/Local Climb Out. In order to protect the 360 degree overhead pattern when the weather is VFR (see [para. 3.7](#)), the standard instrument climb out procedure for the center runway is, "FLY RUNWAY HEADING. CROSS DEPARTURE END AT OR BELOW 700'. CLIMB AND MAINTAIN 4000'. CONTACT DEPARTURE CHANNEL 16." When the weather is less than VFR, "FLY RUNWAY HEADING, CLIMB AND MAINTAIN 4,000'. CONTACT DEPARTURE CHANNEL 16." RAPCON may abbreviate climb out instructions for local aircraft by stating, "AFTER COMPLETING LOW APPROACH/TOUCH AND GO/OPTION, EXECUTE LOCAL CLIMBOUT."

7.5. IFR/VFR Clearances.

7.5.1. Aircrew should receive their IFR/VFR clearance prior to taxi for all missions prior to departure. Clearance delivery will issue Columbus AFB Class C departure instructions, squawk, and a frequency for VFR departures. If advised by ATC of an extended delay, aircrew may taxi and inform Ground Control "AWAITING CLEARANCE." Aircrew will inform Ground Control if encountering a problem with the clearance and contact Squadron Ops for assistance.

NOTE: During Radar Outage procedures clearances will be handled IAW [para. 3.22](#).

7.5.2. VFR pattern-only sorties are required to file a local flight plan. The aircrew will state "PATTERN ONLY" to Ground Control on taxi request.

7.5.3. Local Night Sortie Clearances. Clearance Delivery assigns the night route and an altitude when issuing IFR clearance.

7.5.4. Multiple Radar Patterns. No more than five local aircraft will be scheduled in the radar traffic pattern during multiple radar pattern operations. If the pattern becomes saturated with more than five aircraft, RAPCON may direct aircraft to the VFR pattern or to full stop.

7.5.5. VFR Delay Departures from LiveOak. When an aircraft departs IFR from LiveOak's pattern, the IFR clearance will be considered activated when the aircraft crosses the approach end of the runway (see [paragraph 10.5.2](#)). When an aircraft breaks out to RAPCON from the VFR pattern, the aircraft will be VFR until issued an IFR clearance from RAPCON. Aircraft are responsible for separation between themselves and other aircraft within a practice area. RAPCON assumes separation responsibility when an aircraft clears the lateral/vertical

boundary of the appropriate practice area. To comply with Columbus AFB Class C airspace, aircrew must establish two-way radio communication with RAPCON prior to leaving a practice area. (For example, "SNAKE 21, STANDBY" is clearance to depart the practice area, whereas, "AIRCRAFT CALLING DEPARTURE, STANDBY" is not). If unable, remain inside the practice area and return to the pattern. Another departure from the pattern may be attempted. If for any reason (separation, workload, etc.) the RAPCON states "RETURN TO THE PRACTICE AREA" (LiveOak), remain inside the practice area and contact the RSU.

7.5.6. T-38 Departures with LiveOak. Initial IFR Student Solo Departures (Single ship or formation), pre-initial solo dual students for purposes of procedure familiarization and center runway contingency departures will use the following procedures.

7.5.6.1. LiveOak departures will follow normal taxi procedures. Aircraft will hold short of runway 31C/13C and advise ATCT "CONDA02, READY FOR DEPARTURE FROM LIVEOAK" ATCT will instruct the aircraft to "CROSS RUNWAY 31C/13C, HOLD SHORT OF RUNWAY 31R/13L, CONTACT LIVEOAK."

7.5.6.2. ATCT is the sole releasing authority for IFR aircraft departing from LiveOak. LiveOak will call ATCT and request an IFR release (Example: "REQUEST RELEASE CONDA02"). ATCT will respond with either "RELEASED" or "HOLD FOR RELEASE" and state the reason for holding.

7.5.6.3. LiveOak will inform ATCT that the aircraft has begun departure roll (Example: "CONDA02, DEPARTURE ROLL").

NOTE: All departures will maintain at or below 700' MSL until past departure end of runway.

7.5.7. Student Solo recoveries to runway 31C/13C (UPT only).

7.5.7.1. In the event a student solo is required to land on runway 31C/13C, LiveOak will notify ATCT, state aircraft position, and request a landing clearance. ATCT will respond with either a landing clearance or "UNABLE" and state reason. (Example: "CONDA02 RUNWAY (31C/13C) (WIND) CLEARED TO LAND" or "UNABLE, TRAFFIC T-1 FOUR MILE FINAL"). LiveOak will read back instructions verbatim to the ATCT. Once the aircraft exits the center runway they will contact Ground Control.

7.5.8. Canceling IFR/Flight Following. To reduce verbiage, RAPCON may acknowledge 14 FTW aircraft canceling IFR or flight following with "C/S, ROGER." Aircrew will understand that radar service is terminated, will squawk stand-by or the appropriate code.

7.5.9. IFR Recovery/Slots Status. Prior to departing on either status, aircrew must receive an IFR clearance. The IFR clearance is effective once cleared for takeoff by the ATCT.

7.6. Departures.

7.6.1. Aircraft shall maintain at or below 700' MSL until departure end of the runway during VFR weather.

7.6.2. Static and Rolling takeoffs.

7.6.2.1. RSU control. All sorties are expected to perform a static takeoff unless prior notice is given to the RSU. Aircrew desiring a rolling takeoff will advise the RSU they are "ROLLING" when arriving at the number one position.

7.6.2.2. ATCT control. All sorties will notify ATCT of rolling takeoff.

7.6.3. Trail Departures.

7.6.3.1. Aircrew shall include “C/S, NON STANDARD, TRAIL DEPARTURE, <approximate range from the beginning of the flight to the end> FRONT to BACK” when requesting takeoff. If two flights are MARSA, Clearance Delivery will issue the squawks for both flights and one clearance for the combined flight.

7.6.3.2. The lead aircraft will squawk ATC assigned code. All trailing aircraft in a nonstandard formation will squawk 0400 until standard formation.

7.6.3.3. Once airborne, the lead aircraft will call “C/S, airborne, out of X (altitude) for Y (final altitude), NON STANDARD, TRAIL DEPARTURE.” If MARSA, aircrew shall use both flights’ C/Ss on initial contact with each ATC agency (i.e., Snake MARSA Gundog).

7.7. Radar Termination Points.

7.7.1. The radar termination points are defined as:

7.7.1.1. North Gate (runway 13 for T-38 use) [CBM348/011]. Defined by the clover leaf on HWY 45.

7.7.1.2. South Gate (runway 31 for T-38 use) [CBM094/010]. Defined by a large field with a red barn on the south edge.

7.7.2. RAPCON may continue to provide vectors after the aircrew has cancelled IFR to provide Class C service and to aid in separation between other aircraft on recovery. Aircrew shall comply with these vectors until the conflict is resolved either by visual contact or other means.

7.7.3. When approaching the radar termination point and able to proceed VFR, aircraft shall cancel IFR with RAPCON. RAPCON will respond with “C/S, ROGER” IAW [para 7.5.8](#).

7.7.4. Aircraft shall remain outside 10 DME until reaching the radar termination point. Aircrew shall change to LiveOak/ATCT and report the gate. Aircrews are expected to cancel IFR no later than 3 miles prior to radar termination. If unable to cancel IFR due to frequency congestion, aircraft will squawk 0000 (meaning “Cancel IFR”) and contact LiveOak/ATCT.

7.8. LiveOak Pattern Entry.

7.8.1. LiveOak may be entered via initial takeoff from LiveOak, North/South Gate entries, crosswind/closed from the center runway.

7.8.2. North/South Gate Entry Procedures. The status must be at least Dual to accomplish gate entries when LiveOak is controlling the outside runway. The gate entry points are also used to re- enter the pattern following a breakout. If on an IFR clearance and proceeding direct to north/south gate, aircrew must cancel IFR on their own prior to switching to LiveOak’s frequency.

7.8.2.1. With the exception of emergencies and aircraft accomplishing runway change procedures, aircraft shall not make a north/south gate entry between runway change time and 10 minutes past runway change time.

7.8.3. Center Runway. When the status is Restricted Overhead or VFR straight-ins, aircraft on departure leg will contact LiveOak, when instructed, for pattern entry.

7.8.3.1. If closed/crosswind entry is denied, aircrew shall maintain VFR and accomplish one of the following: Contact RAPCON (CH 16) for vectors to another approach or climb to 2,500' MSL on runway heading (Dual or better status), then turn toward the appropriate gate entry point, notifying controller of intentions "TRANSITION TO NORTH/SOUTH GATE."

7.9. Radar Vector to Initial Procedures.

7.9.1. Radar vectors to initial may be conducted at any time the ATCT has operational control of the center and outside and/or inside runways, traffic permitting.

7.9.2. Aircrew shall request the overhead approach on initial contact with RAPCON or prior to reaching 15 flying miles from the runway. Aircrew shall report, "COLUMBUS APPROACH, (CALL SIGN), 20 MILES SOUTHEAST WITH (ATIS), REQUESTING OVERHEAD (TYPE LANDING)."

7.9.3. When requesting radar vectors to initial, aircraft shall normally be vectored to a 10- mile final. The aircraft's IFR flight plan is automatically cancelled when the aircraft reaches the initial point.

7.10. Tactical/High Tactical Initial. All 14 FTW T-38s may fly Tactical (TAC)/High Tactical (HITAC) initial in accordance with their MDS series regulations and the following guidance. TAC/HITAC initial will only be available for use when ATCT is controlling at a minimum center and outside runways simultaneously, with a Dual status or better. TAC/HITAC initial may be flown in 2, 3, or 4 ship formation.

7.10.1. Tactical Initial.

7.10.1.1. Pilots will request "TAC-INITIAL" on first contact with RAPCON.

7.10.1.2. When ATCT approves tactical initial, flight leads will line up east of the outside runway but not to be a conflict with inside downwind (lineup with tree line east of the outside runway) and wingmen will lineup no further West than the center runway in spread line-abreast; this will provide approximately 3000' spacing between aircraft. If in a 3-ship, the trailing aircraft will line up between the leading element, approximately 6,000 feet in trail. If in a 4-ship, the formation will be a box (not offset), with the trailing element approximately 6,000 feet behind the leading element.

7.10.1.3. Add "FOR TAC-INITIAL" with first radio call to ATCT and report "TAC-INITIAL" at 5NM from the runway.

7.10.1.4. In the break zone, the element will perform an in-place 90 degree turn towards inside downwind (045° heading). The flight lead(s) will continue the turn to roll out on the normal inside downwind ground track. The wingmen will roll out after 90 degrees of turn, 045° heading, and delay their next turn to roll out on inside downwind, behind their flight leads on the normal inside downwind ground track. If in a 3 or 4-ship formation, the trailing element will delay their turn until the preceding element is clear of the formation and minimum spacing IAW AFMAN 11-2T-38 Vol. 3 can be attained. If told to "CARRY STRAIGHT THRU," flight lead(s) may rejoin flight or remain in tactical and re-request Tac- Initial on outside downwind.

7.10.2. High Tactical Initial.

7.10.2.1. Pilots will request “HITAC-INITIAL” on first contact with RAPCON.

7.10.2.2. When ATCT approves high tactical initial, flight leads will line up east of the outside runway (line-up with tree line east of the outside runway) and wingmen will line-up no further West than the center runway in spread line-abreast; this will provide approximately 3,000’ spacing between aircraft.

7.10.2.3. “C/S FOR HITAC-INITIAL” will be the first radio call to ATCT and report “HITAC INITIAL” at 5NM.

7.10.2.4. At departure end of runway, break to enter downwind at 1,700’. If told to “CARRY STRIAGHT THRU,” maintain 3,500’, report standard formation, and make request.

7.11. High Tactical Recovery. (See [Attachment 21](#))

7.11.1. All 14 FTW aircraft may fly the High Tactical Recovery (High TRP) in accordance with their MDS specific regulation and the following guidance. The High TRP will only be available for use when ATCT is controlling at a minimum center and outside runways simultaneously, with a Dual status or better. The High TRP may be flown up to a 4-ship formation.

7.11.2. Expect ATC to approve the High TRP by directing aircraft to “Report over the field, entry altitude” (VFR hemispheric between 4,500’ and 6,500’). When approved, flight leads will fly direct to the field at their VFR hemispheric altitude between 4,500’ and 6,500’ and 300 KCAS minimum.

7.11.3. Report “Over the field, High TRP”, and with approval, begin a descending turn while remaining northeast of the center runway. Arrive at a normal inside downwind at 1,700’ between midfield and the perch. Flight members maintain normal pattern spacing.

7.11.3.1. When the aircraft reports “Over the field, High TRP”, expect Tower to approve the High TRP with a “Report base for RWY XX”. If not approved, expect to “Hold over the field at present altitude and Northeast of the runway extended centerline” and execute a 360° spin. Report “Over the field, High TRP” once spin is complete.

7.11.3.2. Differentiate between East and West TRP on initial contact. West TRP will be flown 5,500’ to 6,500’ feet.

7.11.4. Do not descend below 4,500’ if traffic at High Tactical/Tactical Initial, Initial, inside downwind, or other factor traffic not in sight.

7.11.5. If told to breakout, proceed to another High TRP if above 4,500’. If below 4,500’, breakout in accordance with VFR pattern breakout procedures in [para 7.2.5](#).

NOTE: The West TRP will be conducted through the T-6 departure corridor and in the vicinity of Golden Triangle Airport. Due to the heavily congested area, West TRP requests may be denied by ATC at any time.

7.12. Center Runway Arrival Procedures.

7.12.1. Contact Straight-In Approach. Aircrew shall declare “CONTACT” with RAPCON prior to 10 DME, but not prior to base leg. After RAPCON approves the approach, aircrew shall maintain 2,000’ MSL until intercepting a visual glide path. Runway centerline will be established prior to 10 DME and maintained to the runway.

7.13. Drag Procedures.

7.13.1. The Drag procedure allows a formation to achieve nonstandard formation spacing on final. The trailing aircraft(s) will gain separation by reducing airspeed and all trailing aircraft shall squawk 0400. Aircraft are still treated as a single formation by ATC, and communications are directed to the lead aircraft. However, each aircraft in the formation shall call gear down.

7.13.2. The lead aircraft will request the drag procedure upon initial call to ATC. Aircraft shall accomplish the drag and approach in daytime, during VMC conditions.

7.13.3. The flight is considered a non-standard formation throughout the drag procedure. Each aircraft will confirm and call gear down at the Final Approach Fix.

7.13.4. If landing clearance is canceled, both aircraft shall fly runway heading until turning crosswind or, if IMC, lead shall climb to 4,000’ MSL and the wingman shall climb to 3,000’ MSL following standard climb out instructions until separate clearances are obtained.

7.14. Split-to-Land Approach Procedures.

7.14.1. Split-to-Land maneuvers are authorized for all 14 FTW aircraft. Aircrew and ATC may request a split-to-land maneuver for more expeditious recoveries.

7.14.2. Weather conditions for Split-to-Land maneuvers must be at or above the sidestep minimums for the approach being flown. In the absence of sidestep minimums, circling minimums will be used.

7.14.3. ATCT must have control of all of the runways involved.

7.14.4. In order to request a Split-to-Land maneuver, an aircrew must either:

7.14.4.1. Advise RAPCON of request for Split-to-Land maneuver and state type of landing when requesting an approach prior to 10 miles. RAPCON shall contact ATCT for approval to allow a Split-to-Land maneuver.

7.14.4.2. Aircrew shall request a Split-to-Land maneuver with ATCT prior to the Final Approach Fix.

7.14.5. Split-to-Land maneuvers may be executed off all applicable approaches and will commence no earlier than the FAF. Flight lead shall advise ATC when commencing the Split-to-Land maneuver. Aircrew shall maintain their own separation during the Split-to-Land maneuver. **NOTE:** When controlling other aircraft in conjunction with a flight which will execute a Split-to-Land, the rule is, the flight which has been cleared for a split-to-land “OWNS” both runways until the last element lands.

7.14.6. Split-to-Land maneuvers shall terminate in a full stop. If unable to full stop, VFR aircraft shall maintain VFR and contact ATCT. IFR aircraft shall execute climb out or proceed as directed by RAPCON. Aircrew shall maintain their own separation upon missed approach and until standard separation is achieved.

7.15. T-38 MOA Procedures. MOA procedures common to all airframes are located in [para. 3.26](#).

7.15.1. Priorities. If an aircraft is airborne and assigned airspace is not available, CBM RAPCON will advise the aircrew. The aircrew will then state their intentions (i.e., continue departure, return to LiveOak/CAFB Class C Airspace). CBM RAPCON will typically not assign sectors not specifically requested by the aircrew.

7.15.2. North Areas. T-1, T-38 SUPT, and IFF squadrons will finalize sector(s).

7.15.2.1. Once established in a sector, T-38s shall automatically switch to Area Monitor ([CH 8](#)) and report established.

7.15.2.2. T-38s should expect a block of 8,000-22,000'.

7.15.2.3. North Area Recoveries.

7.15.2.3.1. Sectors 1-6. Aircrew will contact RAPCON ([CH 7](#)) and request vectors for desired recovery.

7.15.2.3.2. VFR Recoveries. The North/South gate recoveries are CAFB VFR arrival procedures that require RAPCON coordination. North/South gate entries must cancel IFR NLT 3NM prior to the gate. If unable to contact ATC due to frequency congestion by 3NM, squawk 0000 to indicate IFR cancellation and contact LiveOak.

7.15.2.3.3. Direct North/South Gate entry. Aircraft will fly at or below 7,000' MSL prior to departing the lateral boundaries of ATC assigned area, unless otherwise coordinated. North gate is the primary point of entry to the pattern for runway 13 and is located at CBM348/11. South gate is the primary entry point to the pattern for runway 31 and is located at CBM094/10. The first aircraft to arrive at the gate has the right-of-way. Aircraft will fly a heading of 220 at 300 KIAS at 1,700' MSL and report to the ATCT when one mile from the gate with intentions when under ATCT control. Straight-in approaches may be requested at this point if desired.

7.15.3. CBM3 (West) MOA.

7.15.3.1. Aircrew will receive their area assignment from Memphis Center ([CH 5](#)).

7.15.3.2. Aircrew shall switch to discrete frequency ([CH 6](#)) when directed.

7.15.3.3. West MOA Recoveries. CBM 3 MOA/ATCAA is controlled by Memphis ARTCC ([CH 5](#)). Aircrews will use TOMLN, EGUPT or HOUSTON IFR recoveries to return to CAFB.

7.15.3.3.1. TOMLN Recovery. Depart the lateral confines of the assigned sector(s) at 15,000' and proceed direct TOMLN (SQS086/40) direct IGB direct CBM.

7.15.3.3.2. EGUPT Recovery. Aircraft shall remain within the lateral confines of assigned sector(s) until at 7,000' MSL or center assigned altitude. Proceed direct CBM318/45DME fix and track the CBM318 inbound.

7.15.3.3.3. HOUSTON Recovery. Remain within lateral confines of assigned sector until at 7,000' MSL or center assigned altitude. Proceed direct to Houston (CBM297/42). Be at 5,000' MSL by Houston, and upon reaching Houston fly heading 090, expect radar vectors.

7.15.4. CBM2 (Echo) MOA.

7.15.4.1. Memphis (CH 17) will clear aircraft into the MOA/ATCAA. Aircraft will remain on this discrete frequency.

7.15.4.2. Echo MOA Recovery. Aircraft shall request “Echo Recovery” from Memphis Center. Memphis Center issues an abbreviated clearance for an Echo recovery “(CALL SIGN), CLEARED ECHO RECOVERY, MAINTAIN (ALTITUDE).” Aircraft shall remain in the area until at 14,000’ MSL or Center assigned altitude, and then proceed direct KOBRE CBM. Aircraft should expect radar vectors at KOBRE.

7.15.5. BHM 1/2 MOA. Aircrew must schedule with the Montgomery Air National Guard (ANG) (DSN 358-9255) at least 1 hour prior to use. If area time is prior to 0700L, aircrew shall notify the ANG the day prior. On Mondays or ANG down days, aircrew shall schedule through Atlanta.

7.15.5.1. Atlanta Center (297.4) will clear aircraft into the area. Aircrew shall switch to discrete frequency (normally 252.9) when directed.

7.15.5.2. Center may assign the entire MOA, including MOA 2, (500' AGL to FL 230). Aircrew shall clarify altitude block and apply training rules.

7.15.5.3. When entering the MOA, aircrew shall advise center of estimated time of departure. Wingmen shall squawk the first two digits of the Flight Lead's IFF code plus Lead and number three shall squawk during 4-ship operations.

7.15.5.4. BHM 1/2 MOA Recovery. Aircrew shall request recovery from Atlanta.

7.15.6. R-4404 (SeaRay) Restricted Area. Meridian Approach (CH 25) will clear aircraft into the restricted area. 14 FTW aircraft will utilize the Range Control Officer frequency (CH 26) in the area.

7.15.6.1. R-4404 “Smurf Recovery.” Prior to exiting the restricted area, remain VMC between 4,000’ and 6,000’ and obtain clearance from Meridian RATCF. Expect to be cleared to Columbus AFB via direct IGB VORTAC, direct CBM VORTAC, direct Columbus AFB maintaining 5,000’ or as assigned. Expect radar vectors.

7.15.7. Other Recoveries. If an aircraft is monitoring a discrete frequency, aircrew will return to the previously assigned frequency for recovery. On initial contact with CAFB RAPCON, aircraft will state desired recovery/approach option (Initial, north/south gate, Instrument/Contact Approach) and current ATIS information. For center runway approaches, aircraft shall indicate how the approach will terminate (e.g., full stop, option LiveOak, etc.). Aircraft shall utilize a single radio call when practical to reduce radio congestion. On all recoveries, aircraft shall maintain their altitude until ATC assigns a vector. Upon entering the pattern, aircraft will follow procedures depicted in [Attachment 11](#).

7.15.8. VFR Arrivals. During recovery, aircraft shall contact Columbus Approach at approximately 30NM for radar advisory service and runway approach clearance.

7.16. Lost Communication.

7.16.1. Lost Communications on the Ground. When communication loss procedures require an aircraft to enter or cross an active runway the ATCT/RSU will ensure the operation is safe and any required coordination is completed prior to initiating a light gun signal that will allow the aircraft with no radio capabilities to enter the runway.

7.16.1.1. Holding for runway 31C. Aircrew shall hold in the hammerhead and flash the taxi light at the RSU/ATCT. T-38 may also raise and lower the canopy. The ATCT will flash a green light at the aircraft when cleared to taxi via Taxiway F to park. Aircrews will then taxi forward of the run-up area, turn left and proceed to the parking area against traffic. Ground Control will issue “give way” instruction to outbound traffic to mitigate conflicts.

7.16.1.2. Holding for runway 13C. Aircrew shall hold in the hammerhead and flash the taxi light at the RSU/ATCT. T-38 may also raise and lower the canopy. After receiving a flashing green light from the ATCT, taxi down the runway and turn off at Taxiway H and return to park.

7.16.1.3. Holding for runway 13L. Aircrew shall hold short of the runway and flash the taxi light at the RSU/ATCT. T-38 may also raise and lower the canopy. After receiving a flashing green light from the RSU/ATCT, the aircraft shall taxi down the runway and exit at the end. The aircraft will then hold short of runway 13C and shall accomplish the alerting signal to obtain approval from the ATCT to cross the runway. The ATCT shall again issue a flashing green to allow the aircraft to continue taxiing across runway 13C. Once the aircraft has exited runway 13C it will taxi to park.

7.16.1.4. Holding for runway 31R. Aircrew shall hold short of the runway and flash the taxi light at the RSU/ATCT. T-38 may also raise and lower the canopy. After receiving a flashing green light from the RSU/ATCT, the aircraft shall taxi down the runway and exit at the end. The aircraft will then hold short of runway 31C and accomplish the alerting signal to obtain approval from the ATCT to cross the runway. The ATCT shall issue a flashing green to allow the aircraft to continue taxiing across runway 31C. Once the aircraft has exited runway 31C it will hold short of runway 31L and accomplish the alerting signal to obtain approval from the RSU/ATCT to cross the runway. The RSU/ATCT shall issue a flashing green to allow the aircraft to continue taxiing across runway 31L. Once the aircraft has exited runway 31L it will taxi to park.

7.16.1.5. Arriving aircraft to all runways will exit at the end of the runway and follow standard taxiing procedures to parking. Aircraft will hold short of all runways and monitor RSU/ATCT for a flashing green light. RSU/ATCT will issue a flashing green light to authorize the aircraft to cross the runway.

7.16.1.6. Aircrew shall return to the parking area using caution and shall monitor ATCT for additional light signals.

7.16.2. Lost Communications in CAFB Class C Airspace. If the aircraft loses communication in CAFB Class C Airspace prior to receiving landing clearance, aircraft will continue the approach, squawk 7600, and aircrew will watch the ATCT for a green light (clearance to land). If a flashing red light, steady red light or flare is observed, aircraft will execute the go around/missed approach procedures and follow lost communication procedures.

7.16.3. Lost Communications while in RAPCON Airspace:

7.16.3.1. Aircraft shall squawk 7600. If fuel does not permit compliance with FLIP or local procedures or if another emergency exists, squawk 7700 continuously. Expect ATC to attempt contact on GUARD (243.0).

7.16.3.2. Outside local area, comply with FLIP procedures.

7.16.3.3. North Areas. Aircraft shall descend and maintain 7,000' in lateral confines of area, proceed direct CBM13 DME and arc east or west to last assigned runway. Once established on the 13 DME arc, descend and maintain 4,000' for an ILS approach to the center runway. **NOTE:** Sector 6. Columbus RAPCON does not own 7,000' in the vicinity of Tupelo. Aircraft shall descend to 8,000' and proceed to CBM 330 radial (not entering Sector 4). Upon intercepting CBM 330 radial inbound, descend and maintain 7,000', intercept CBM13 DME arc and arc east or west to last assigned runway. Once established on the 13 DME arc, descend and maintain 4,000' for an ILS approach to the center runway.

7.16.3.4. CBM3 (West) MOA. Aircraft shall climb to FL 230 in the lateral confines of the area and proceed direct KOBRE. Execute the HI ILS or LOC/DME RUNWAY 31C/13C approach to the last assigned runway.

7.16.3.5. CBM2 (Echo) MOA. Aircraft shall proceed direct KOBRE at FL 230 and execute the HI ILS or LOC/DME RUNWAY 31C/13C approach to the last assigned runway.

7.16.4. All aircraft returning to CAFB from the East, not covered above, will intercept V278/T370, maintain 7,000'. Intercept CBM13 DME, arc to last assigned runway. Once established on the 13 DME arc, descend and maintain 4,000' for an ILS approach to the center runway.

7.16.5. All aircraft returning to CAFB from the West, not covered above, will intercept V278/T370, maintain 7,000'. Intercept CBM13 DME, arc to last assigned runway. Once established on the 13 DME arc, descend and maintain 4,000' for an ILS approach to the center runway.

7.16.6. Lost Communication While Flying Drag Approach.

7.16.6.1. If the lead aircraft loses communications prior to receiving landing clearance, aircrew shall continue the approach, squawk 7600, and observe the ATCT for a green light. If the aircrew observes a red light, aircrew shall execute the go around/missed approach procedures and follow lost communications procedures.

7.16.6.2. If the trailing aircraft loses communications, aircrew shall squawk 7600, follow the lead aircraft and land (if sufficient spacing exists and no red light are observed). If a go around is required, aircrew shall execute the go around/missed approach procedures and follow lost communications procedures.

Chapter 8

T-1 OPERATIONS

8.1. T-1 Flying Status. **NOTE:** ATC instructions must be adhered to. In the event aircraft encounters weather phenomena, it is their responsibility to request deviation with ATC. Aircraft shall relay the respective weather report to the SOF.

8.1.1. Unrestricted. Weather or facility status does not require an alternate for the home field.

8.1.2. Restricted Overhead. Weather 1,500/3. Aircraft will enter the VFR pattern via initial takeoff or closed/crosswind from the center runway. ATCT may approve entries from initial, side-step, and North/South Gate, traffic permitting. No VFR breakouts. Center runway arrivals must full stop or have sufficient fuel to return to RAPCON for vectors to another instrument approach.

8.1.3. IFR Recovery. If other wing aircraft are operating under Slots status, T-1s will plan all approaches to a full stop. Departures will be made in accordance with published weather minimums. Aircraft are MARSIA IAW [para 3.27](#).

8.1.4. Weather Alert. Coordinate all launches with the SOF. Weather conditions may impede recovery to CAFB. Contact the SUP. T-1s with enough fuel to continue their profile with divert fuel or on an out-and-back may continue with SUP approval.

NOTE: All requests to RAPCON/ATCT that are not IAW SOF-determined status will be pre-coordinated.

8.2. VFR Traffic Pattern Procedures. UHF shall be the primary frequency used in the pattern. Aircraft shall squawk 0000 while in the VFR pattern.

8.2.1. When ATCT controls the pattern, standard FAA communications shall be used by aircrew and controllers.

8.2.2. Control. The ATCT will operate a normal FAA pattern when LiveOak is not in place. T-1 aircrews should follow the normal outside downwind and VFR entry ground tracks when able.

8.2.3. Minimum ceiling for use of the VFR patterns is 500' above intended pattern altitude.

8.2.4. Aircrews are required to repeat all ATCT clearances, including the specified runway. Examples of these clearances include takeoff, landing, traffic advisory, pattern extension, ATCT directed breakout and ATCT directed go-around.

8.2.5. T-1 Pattern Description. Pattern Altitudes. The T-1 VFR pattern will normally be flown at 1,700' MSL with the option of flying 1,200' MSL patterns if requested by aircrew. Outside downwind should be flown at 1,700' MSL (When turning crosswind, maintain 1,200' MSL until clear of inside downwind). T-1s will normally recover to a full stop landing when the outside runway is under RSU control. When the ATCT controls the outside runway, T-1s may conduct local pattern operations (200 KIAS minimum is recommended in the downwind pattern).

8.2.6. Initial Takeoff from the center or outside runway. When taking off on the center runway for a VFR delay, aircrew shall request closed or crosswind from the ATCT. If turning crosswind, the aircrew shall remain at or below 1,200' MSL until clear of the inside downwind track, then shall climb to pattern altitude (1,700' MSL). Aircrew shall squawk 0000 until departing on IFR clearance unless the ATCT directs otherwise. To depart the VFR pattern on an IFR clearance, aircrew will obtain IFR clearance prior to takeoff when able. If unable, aircrew shall place clearance on request at least 10 minutes prior to departure to prevent delays.

8.2.7. Entering the Pattern from North/South gate. North gate is the primary point of entry to the pattern for runway 13 and is located at CBM348/11. South gate is the primary entry point to the pattern for runway 31 and is located at CBM094/10. The first aircraft to arrive at the gate will have right-of-way. Aircraft will fly a heading of 220 at 200 KIAS at 1,700' MSL and report to the ATCT when one mile from the gate with intentions. Straight-in approaches may be requested at this point if desired.

8.2.8. Straight-In from North/South Gate. Aircraft will report "NORTH/SOUTH GATE REQUEST STRAIGHT IN." For North Gate entries, aircrew shall make a "C/S XX, POND" call once over the north tip of the catfish ponds. For South Gate entries, aircrew shall make a "C/S XX, POND" call once over the string of ponds crossing Steens Vernon Road (Hwy 9). If approved, aircraft descend to 1,200' MSL and slow to 180 KIAS as soon as practical. Aircraft will report "4 MILES" with gear configuration. If unable to grant approval or any delay is encountered, aircraft will maintain 200 KIAS and 1,700' MSL and continue to initial.

8.2.9. Emergencies. Aircraft returning to the ATCT pattern with an emergency will notify the ATCT as soon as possible after RAPCON hand-off. If aircraft need to analyze a problem (burn down fuel, etc.) the ATCT controller may reserve an altitude or block at or above 2,700' MSL. Emergency aircraft should follow the normal pattern ground track at the requested altitude. If unable, advise the ATCT controller.

8.2.10. Formations in the VFR Pattern. At the break point in the pattern, formation flights will split-up and continue their approaches as single ships. If a formation must pass the break point and fly straight through, formations will split-up past the departure end and turn into the crosswind pattern.

8.2.11. VFR Pattern Breakout to Radar. Aircraft will climb to 2,500' MSL, heading 040, contact RAPCON (CH 16), and make a request.

NOTE: RAPCON will not provide IFR services until the aircraft is outside 10 DME.

8.2.12. Night Procedures. Pattern procedures are the same as during the day except there are no practice breakouts between sunset and sunrise. For night breakouts, see [para. 8.2.11](#).

8.2.13. Aircraft will NOT re-enter the pattern at North/South gate.

8.3. Radar Traffic Patterns and Speeds. Radar patterns are depicted in [Attachment 11](#). T-1 Aircraft shall fly 250 KIAS on RADAR downwind and base. Aircraft shall maintain 250 KIAS until on final approach and inside 13 DME. If being vectored on base inside 13 DME, aircraft should begin slowing from 250 KIAS at 13 miles from touchdown. Aircraft shall maintain 180 KIAS until inside 9 DME.

8.4. Standard/Local Climb Out. In order to protect the 360 degree overhead pattern when the weather is VFR, the standard instrument climb out procedure for the center runway is, "FLY RUNWAY HEADING. CROSS DEPARTURE END AT OR BELOW 700'. CLIMB AND MAINTAIN 4000'. CONTACT DEPARTURE CHANNEL 16." When the weather is less than VFR (see [para. 3.7](#)), "FLY RUNWAY HEADING, CLIMB AND MAINTAIN 4,000' CONTACT DEPARTURE CHANNEL 16." RAPCON may abbreviate climb out instructions for local aircraft by stating, "AFTER COMPLETING LOW APPROACH/TOUCH AND GO/OPTION, EXECUTE LOCAL CLIMBOUT."

8.5. IFR/VFR Clearances.

8.5.1. Aircrew should receive their IFR/VFR clearance prior to taxi for all missions prior to departure. Clearance delivery will issue Columbus AFB Class C departure instructions, squawk, and a frequency for VFR departures. If advised by ATC of an extended delay, aircrew may taxi and inform Ground Control "AWAITING CLEARANCE." Aircrew will inform Ground Control if encountering a problem with the clearance and contact Squadron Ops for assistance

8.5.2. VFR pattern-only sorties are required to file a local flight plan. The aircrew will state "PATTERN ONLY" to Ground Control on taxi request. .

8.5.3. Multiple Radar Patterns. No more than five local aircraft will be scheduled in the radar traffic pattern during multiple radar pattern operations. If the pattern becomes saturated with more than five aircraft, RAPCON may direct aircraft to the VFR pattern or to full stop.

8.5.4. IFR/VFR departures from LiveOak. When an aircraft departs IFR from initial takeoff or from LiveOak's pattern, the IFR clearance will be considered activated when the aircraft crosses the approach end of the runway (see [para. 10.5.2](#)). When an aircraft breaks out to RADAR from the VFR pattern, the aircraft will be VFR until issued an IFR clearance from RAPCON. Aircraft are responsible for separation between themselves and other aircraft within a practice area. RAPCON assumes separation responsibility when an aircraft clears the lateral/vertical boundary of the appropriate practice area. To comply with Columbus AFB Class C airspace, aircrew must establish two-way radio communication with RAPCON prior to leaving a practice area. For example, "SNAKE 21, STANDBY" is clearance to depart the practice area, whereas, "AIRCRAFT CALLING DEPARTURE, STANDBY" is not. If unable, remain inside the practice area and return to the pattern. Another departure from the pattern may be attempted. If for any reason (separation, workload, etc.) the RAPCON states return to the practice area (LiveOak), remain inside the practice area and contact the appropriate RSU.

8.5.5. Canceling IFR/Flight Following. To reduce verbiage, RAPCON may acknowledge 14 FTW aircraft canceling IFR or flight following with "C/S, ROGER." Aircrew will understand that radar service is terminated, will squawk stand-by or the appropriate code.

8.5.6. IFR Recovery/Slots Status. Prior to departing on either status, aircrew must receive an IFR clearance. The IFR clearance is effective once cleared for takeoff by the ATCT.

8.6. Departures.

8.6.1. Center Runway Procedures. Normal T-1 departures are via the center runway. T-1 aircraft may utilize intersection takeoffs from H (runway 31C) if coordinated through Ground Control. **NOTE:** If the weather is greater than or equal to 1500'/3NM, cross the departure end at or below 700'.

8.6.2. Outside Runway. ATCT will control T-1 launches on the outside under normal operations. T-1s should not plan to takeoff on the outside runway when LiveOak has control of the runway. Aircraft shall not stagger on the taxiway. If the preflight requires an engine run-up for engine/wing anti-icing checks, aircrew shall perform these checks in the center runway hammerhead before taxiing to the outside runway.

NOTE: If the weather is greater than or equal to 1500'/3, cross the departure end at or below 700'.

8.6.3. Static and Rolling takeoffs. All sorties will notify ATCT of rolling takeoff.

8.6.4. Formation Departures. Aircrew may fly a delay up to 1 minute and add "15 SECOND (OR 1 MINUTE) INTERVAL" to the end of the ready for takeoff call and any subsequent calls to ATC until back in standard formation.

8.6.5. T-1 aircraft should fly local departures at 220 KIAS until level.

8.6.6. Formation Departures. Formation flights that require a one-minute interval will obtain separate squawks from clearance delivery and will be a nonstandard formation until rejoined. The lead aircraft will squawk the formation assigned code. The second aircraft in the formation will squawk 0400 until rejoined as a standard formation.

8.6.7. ATCT will treat the formation as a flight and will clear both aircraft for takeoff as a flight.

8.6.8. Flights will rejoin to standard formation prior to leaving Columbus airspace. Centers will not accept nonstandard formations. Aircraft shall inform RAPCON when standard ATC formation is achieved.

8.6.9. If on the ground and the aircrew determines that weather will prevent a rejoin prior to Memphis Center airspace, both aircraft will takeoff single-ship (separate clearances) and rejoin in the MOA or at the low-level entry point.

8.6.10. Once airborne, if the aircrew determines that weather will prevent a rejoin prior to Memphis Center airspace, the aircrew will advise RAPCON as soon as possible and request altitude separation. Each aircraft can expect to squawk individual assigned codes given by clearance delivery.

8.7. Radar Termination Points.

8.7.1. The radar termination points are defined as:

8.7.1.1. North Gate (runway 13 for T-1 use) [CBM348/011]. Defined by the clover leaf on HWY 45.

8.7.1.2. South Gate (runway 31 for T-1 use) [CBM094/010]. Defined by a large field with a red barn on the south edge.

8.7.2. Aircraft will be descended no lower than the Minimum Vectoring Altitude until cancelling IFR.

8.7.3. T-1s will monitor RAPCON and squawk assigned code until within approximately 3 miles of the radar termination point (IFR or VFR). RAPCON may continue to provide vectors after the aircrew has cancelled IFR to aid in separation between other aircraft on recovery. Aircrew shall comply with these vectors until the conflict is resolved either by visual contact or other means.

8.7.3.1. When approaching the radar termination point and able to proceed VFR, aircraft shall cancel IFR with RAPCON. RAPCON will respond with “ROGER” meaning radar service is terminated, squawk 0000.

8.7.3.2. T-1s shall remain outside 10 DME until reaching the radar termination point. Aircraft shall be wings level at 1,700’ one mile prior to termination point. Aircrew shall change to ATCT and report the gate. Aircrews are expected to cancel IFR no later than 3 miles prior to radar termination. If unable to cancel IFR due to frequency congestion, aircraft will squawk 0000 and contact ATCT. After crossing the radar termination point, aircraft shall follow their respective ground track.

8.8. Radar Vector to Initial Procedures.

8.8.1. Radar vectors to initial may be conducted at any time the ATCT has operational control of the center and outside and/or inside runways, traffic permitting.

8.8.2. Aircrew shall request the overhead approach on initial contact with RAPCON or prior to reaching 15 flying miles from the runway. Aircrew shall report, “COLUMBUS APPROACH, (CALL SIGN), 20 MILES SOUTHEAST WITH (ATIS), REQUESTING OVERHEAD (TYPE LANDING).”

8.8.3. When requesting radar vectors to initial, aircraft shall normally be vectored to a 10- mile final. The aircraft’s IFR flight plan is automatically cancelled when the aircraft reaches the initial point.

8.9. VFR Arrivals. During recovery, aircraft shall contact Columbus Approach at approximately 30NM for radar advisory service and runway approach clearance.

8.10. Center Runway Arrival Procedures.

8.10.1. Contact Straight-In Approach. Aircrew shall declare “CONTACT” with RAPCON prior to 10 DME, but not prior to base leg. After RAPCON approves the approach, aircrew shall maintain 2,000’ MSL until intercepting a visual glide path. Runway centerline will be established prior to 10 DME and maintained to the runway.

8.11. Drag Procedures.

8.11.1. The Drag procedure allows a formation to achieve nonstandard formation spacing on final. The trailing aircraft gains separation by reducing airspeed and shall squawk 0400. Aircraft are still treated as a single formation by ATC, and communications are directed to the lead aircraft.

8.11.2. The lead aircraft will request the drag procedure upon initial call to ATC. Aircraft shall accomplish the drag and approach in daytime, during VMC conditions.

8.11.3. The flight is considered a non-standard formation throughout the drag procedure.

8.11.4. If landing clearance is canceled, both aircraft shall fly runway heading until turning crosswind or, if under IMC procedures, lead aircraft shall climb to 4,000' MSL and the wingman shall climb to 3,000' MSL following standard climb out instructions until separate clearances are obtained.

8.12. T-1 MOA Procedures. MOA procedures common to all airframes are found in [para. 3.26](#).

8.12.1. North Areas. On departure, aircrew shall request sector assignments with Columbus Departure ([CH 4](#)) and may expect low block of 8,000' to 14,000' or high block of 16,000' to 22,000'.

8.12.1.1. If aircraft is cleared to a high sector but is unable to reach the block before entering other sectors or blocks, aircrew shall inform ATC. ATC will issue further instructions.

8.12.1.2. Once established in the assigned sector, T-1s will automatically switch to Columbus Area Monitor ([CH 8](#)) and report established.

8.12.1.3. North Area Recoveries.

8.12.1.3.1. Sectors 1-6. Aircrew will contact RAPCON ([CH 7](#)) and request vectors for desired recovery.

8.12.1.3.2. VFR Recoveries. The North/South gate recoveries are CAFB VFR arrival procedures that require RAPCON coordination. North/South gate entries must cancel IFR NLT 3NM prior to the gate. If unable to cancel IFR due to radio congestion, squawk 0000 to indicate IFR cancellation and contact ATCT ([CH 3](#)).

8.12.1.3.3. Direct North/South Gate entry. Aircraft will fly at or below 7,000' MSL prior to departing the lateral boundaries of ATC assigned area. North gate is the primary point of entry to the pattern for runway 13 and is located at CBM348/11. South gate is the primary entry point to the pattern for runway 31 and is located at CBM094/10. The first aircraft to arrive at the gate has the right-of-way. Aircraft will fly a heading of 220 at 200 KIAS at 1700' MSL and report to the ATCT when one mile from the gate with intentions. Straight-in approaches may be requested at this point if desired.

8.12.2. CBM3 (West) MOA.

8.12.2.1. Aircrew will be cleared into the MOA/ATCAA by Memphis Center.

8.12.2.2. Aircrew shall switch to discrete frequency when directed.

8.12.2.3. Aircraft will proceed to CLOUT (CBM247/24) then TOMLN (SQS086/40). Aircrew shall fly direct to the assigned sector after reaching TOMLN (SQS086/40) or as directed. Aircrew will establish in a low block of 8,000' to 14,000' or high block 16,000' to 22,000'. Aircrew shall not climb or descend into block altitudes until reaching lateral limits of the assigned area unless coordinated with other aircraft in the MOA.

8.12.2.4. West MOA Recoveries. CBM3 MOA/ATCAA is controlled by Memphis ARTCC ([CH 5](#)). Aircrews will use TOMLN (SQS086/40), EGUPT (CBM 318/40), or HOUSTON (CBM297/42) IFR recoveries to return to CAFB.

8.12.2.4.1. TOMLN Recovery. Depart the lateral confines of the assigned sector at 15,000' and proceed direct TOMLN (SQS086/40) direct IGB direct CBM.

8.12.2.4.2. EGUPT recovery. Aircraft shall remain within the lateral confines of assigned sector(s) until at 7,000' MSL or center assigned altitude. Proceed direct CBM318/45 DME fix and track the CBM318 inbound. When handed off to Columbus Approach, make the same request as if returning from the North Area.

8.12.2.4.3. HOUSTON recovery. Depart sector at 7,000' MSL or Center assigned altitude, proceed direct to Houston (CBM297/42). Be at 5,000' MSL by Houston, and upon reaching Houston, fly heading 090, expect radar vectors.

8.12.3. CBM4 (Pickwick) MOA.

8.12.3.1. Aircrew will be cleared into the MOA/ATCAA by Memphis Center.

8.12.3.2. T-1s will automatically switch to Memphis discrete (**CH 10**) and report established.

8.12.3.3. CBM4 (Pickwick) MOA Recovery. Aircrews returning to CAFB should request the Pickwick recovery from Memphis Center.

8.12.3.3.1. Pickwick High Recovery. Aircraft shall remain within assigned sector(s) until at FL 230 or Center assigned altitude and then proceed direct KOBRE direct CBM.

8.12.3.3.2. Pickwick Low Recovery. Aircraft shall remain within assigned sector(s) until reaching either 7,000 feet or Center assigned altitude and then proceed direct KOBRE direct CBM.

8.12.4. CBM2 (Echo) MOA.

8.12.4.1. Aircrew will be cleared into the MOA/ATCAA by Memphis Center. Aircrew will remain on this frequency.

8.12.4.2. Aircrew must coordinate times with the T-38 SUPT and IFF operations (see **Attachment 15 paragraph A15.3.1**. North Profile for departure procedures). T-1 aircraft may have difficulty making published climb restrictions and should coordinate for altitude deletions if required.

8.12.4.3. CBM2 (Echo) MOA Recovery. Aircrew shall request Echo recovery from Memphis Center. Memphis Center issues an abbreviated clearance for an Echo recovery "(CALL SIGN), CLEARED ECHO RECOVERY, MAINTAIN (ALTITUDE)." Aircraft shall remain in the area until at 14,000' MSL or Center assigned altitude and then proceed direct KOBRE CBM. Aircraft should expect radar vectors at KOBRE.

8.12.5. High Shuttle Areas. This airspace is primarily used for functional check flight (FCF) profiles. In accordance with the LOA, Memphis Center will assign a shuttle and a 4,000' altitude block, usually FL 250 - FL 290 or as requested. Aircrew shall proceed direct to assigned area after reaching FL 240. Shuttles may be denied depending on traffic. The shuttle areas are defined below.

Table 8.1. Shuttle Areas.

CAL 1 R-264 to R-333 - 12 - 40 DME CAL 2
 R-358 to R-089 12 - 34 DME GRW R-267 to
 R-288 45 - 81 DME OXF R-295 to R-317 45
 - 79 DME MEM R-076 to R-09365 - 100
 DME

8.12.6. Delay Areas. T-1 aircraft may request coordinated blocks of airspace identified as “standard patterns” from ATC to accomplish area work. These airspace blocks are not military operating areas and should be used when the local MOAs are unavailable or at other times on a limited basis only.

8.12.6.1. Aircrew may reference the appropriate publication for the planned locations to conduct random holding. These areas have less congestion and will minimize conflicts. The controlling agency may restrict the lateral and vertical limits of the area temporarily to route traffic through, which may affect training accomplished.

8.12.6.2. The “standard pattern” airspace must be coordinated. Aircrew shall file and retain an IFR clearance while using the “standard pattern” to maintain adequate separation between other IFR or participating VFR traffic.

8.12.6.3. Aircrews should request a “DELAY AT THE (NAVAID, RADIAL/DME FIX), BLOCK TO, STANDARD PATTERN.” The “standard pattern” is defined as 10 radials each side of the requested radial and out 20 DME from the requested holding fix. Normal block altitudes include 8,000’ to 11,000’ and 12,000’ to 15,000’ or as approved.

8.12.6.4. Aircrew shall call entering and exiting the delay areas in the blind on UHF CH 20 (Jayhawk Ops).

8.12.7. Simulated Air Refueling Anchors. The Tupelo, Greenville, and the Berry Simulated Anchors are letter of agreement (LOA) airspace with Memphis Center.

8.12.7.1. Memphis Center will normally assign a 2000’ block between FL 250 and FL310 and the Tupelo Anchor and between FL180 and FL 230 for the Greenville Anchor and Berry Anchor.

8.12.7.2. The Tanker will declare MARSA prior to beginning the rendezvous. Both aircraft must squawk IFF when separated by more than 3 miles. Aircraft shall advise Memphis Center prior to splitting up for a second rendezvous.

8.12.7.3. T-1s may stack in air refueling areas with at least 1,000’ between each altitude block with Memphis Center Approval. This is unlikely to occur during the following Memphis departure “push” times (1400Z-1530Z; 1815Z-1945Z; 2130Z-2345Z).

8.13. Lost Communication.

8.13.1. Lost Communications on the Ground. When communication loss procedures require an aircraft to enter or cross an active runway the ATCT/RSU will ensure the operation is safe and any required coordination is completed prior to initiating a light gun signal that will allow the aircraft with no radio capabilities to enter the runway.

8.13.1.1. Holding for Runway 31C. Aircrew shall hold in the hammerhead and flash the taxi light at the RSU/ATCT. The ATCT will flash a green light at the aircraft when cleared

to taxi via Taxiway F to park. Aircrews will then taxi forward of the run-up area, turn left and proceed to the parking area against traffic. Ground Control will issue “give way” instruction to outbound traffic to mitigate conflicts.

8.13.1.2. Holding for Runway 13C. Aircrew shall hold in the hammerhead and flash the taxi light at the RSU/ATCT. After receiving a flashing green light from the ATCT, taxi down the runway and turn off at Taxiway H and return to park.

8.13.1.3. Holding for Runway 13L. Aircrew shall hold short of the runway and flash the taxi light at the RSU/ATCT. After receiving a flashing green light from the RSU/ATCT, the aircraft shall taxi down the runway and exit at the end. The aircraft will then hold short of runway 13C and shall accomplish the alerting signal to obtain approval from the ATCT to cross the runway. The ATCT shall again issue a flashing green to allow the aircraft to continue taxiing across runway 13C. Once the aircraft has exited runway 13C it will taxi to park.

8.13.1.4. Holding for Runway 31R. Aircrew shall hold short of the runway and flash the taxi light at the RSU/ATCT. After receiving a flashing green light from the RSU/ATCT, the aircraft shall taxi down the runway and exit at the end. The aircraft will then hold short of runway 31C and accomplish the alerting signal to obtain approval from the ATCT to cross the runway. The ATCT shall issue a flashing green to allow the aircraft to continue taxiing across runway 31C. Once the aircraft has exited runway 31C it will hold short of runway 31L and accomplish the alerting signal to obtain approval from the RSU/ATCT to cross the runway. The RSU/ATCT shall issue a flashing green to allow the aircraft to continue taxiing across runway 31L. Once the aircraft has exited runway 31L it will taxi to park.

8.13.1.5. Arriving aircraft to all runways will exit at the end of the runway and follow standard taxiing procedures to parking. Aircraft will hold short of all runways and monitor RSU/ATCT for a flashing green light. RSU/ATCT will issue a flashing green light to authorize the aircraft to cross the runway.

8.13.1.6. Aircrew shall return to the parking area using caution and shall monitor ATCT for additional light signals.

8.13.2. Lost Communications in CAFB Class C Airspace. If the aircraft loses communication in CAFB Class C Airspace prior to receiving landing clearance, aircraft will continue the approach, squawk 7600, and aircrew will watch the ATCT for a green light (clearance to land). If a flashing red light, steady red light is observed, aircraft will execute the go around/missed approach procedures and follow lost communication procedures.

8.13.3. Lost Communications while in RAPCON Airspace:

8.13.3.1. Aircraft shall squawk 7600. If fuel does not permit compliance with FLIP or local procedures or if another emergency exists, squawk 7700 continuously. Expect ATC to attempt contact on GUARD (243.0).

8.13.3.2. Outside local area, comply with FLIP procedures.

8.13.3.3. North Area (except Sector 6). Aircraft shall descend and maintain 7,000' in lateral confines of area, proceed direct CBM13 DME and arc east or west to last assigned runway for an ILS approach to the center runway.

8.13.3.4. Sector 6. Columbus RAPCON does not own 7,000' in the vicinity of Tupelo. Aircraft shall descend to 8,000' and proceed to CBM 330 radial (not entering sector 5). Upon intercepting CBM 330 radial inbound, descend and maintain 7,000', intercept CBM13 DME arc and arc east or west to last assigned runway. Once established on the 13 DME arc, descend and maintain 4,000' for an ILS approach to the center runway.

8.13.3.5. North Area (High Sectors). Aircraft shall climb to FL 230 in lateral confines of area, proceed direct KOBRE and execute the HI ILS or LOC/DME RUNWAY 31C/13C approach to the center runway.

8.13.3.6. CBM3 (West) High. Aircraft shall climb to FL 230 in the confines of the area then direct to KOBRE at FL 230 and execute the HI ILS or LOC/DME RUNWAY 31C/13C Approach to the last assigned runway.

8.13.3.7. CBM3 (West) Low. Aircraft shall descend to 7,000' in lateral confines of area. Intercept V278/T370, IGB, maintain 7,000'. Intercept CBM13 DME Arc and arc east or west to last assigned runway. Once established on the 13 DME arc, descend and maintain 4,000' for an ILS approach to the center runway.

8.13.3.8. CBM2 (Echo) / CBM4 (Picks) HIGH. Aircraft shall climb to FL 230 in the lateral confines of the area, proceed to KOBRE, execute HI ILS or LOC/DME RUNWAY 31C/13C approach to the last assigned runway.

8.13.3.9. CBM2 (Echo) / CBM4 (Picks) LOW. Aircraft shall descend to 7,000' within the lateral confines of the area, then intercept the 13 DME Arc, and arc east or west to last assigned runway. Once established on the 13 DME arc, descend and maintain 4,000' for an ILS approach to the center runway.

8.13.4. All aircraft returning to CAFB from the East, not covered above, will intercept V278/T370, maintain 7,000'. Intercept CBM13 DME, arc to last assigned runway. Once established on the 13 DME arc, descend and maintain 4,000' for an ILS approach to the center runway.

8.13.5. All aircraft returning to CAFB from the West, not covered above, will intercept V278/T370, maintain 7,000'. Intercept CBM13 DME, Arc to last assigned runway. Once established on the 13 DME arc, descend and maintain 4,000' for an ILS approach to the center runway.

8.13.6. Lost Communication While Flying Drag Approach.

8.13.6.1. If the lead aircraft loses communications prior to receiving landing clearance, aircrew shall continue the approach, squawk 7600, and observe the ATCT for a green light. If the aircrew observes a red light, aircrew shall execute the go around/missed approach procedures and follow lost communications procedures.

8.13.6.2. If the trailing aircraft loses communications, aircrew shall squawk 7600, follow the lead aircraft and land (if sufficient spacing exists and no red light is observed). If a go around is required, aircrew shall execute the go around/missed approach procedures and follow lost communications procedures.

Chapter 9

EMERGENCY PROCEDURES

9.1. Operation of Primary/Secondary Crash Nets. The ATCT activates the PCAS for emergencies or any situation deemed appropriate by the ATCT supervisor to include, but not limited to: barrier engagements, 14 FTW aircraft accidents within RAPCON or ATCTs area of jurisdiction, hijack, hot brakes, unannounced dangerous/hot cargo, and ATCT evacuation. AMOPS will activate the Secondary Crash Net after the activation of the PCAS. AMOPs will respond in accordance with [paragraph 1.2.1](#).

9.1.1. The PCAS is not activated when emergency locator transmitter (ELT) beacon signals are heard unless an actual crash/emergency is known to exist. The ATCT will notify AMOPS if an ELT is transmitting. AMOPS is designated as the control coordinator and will notify those agencies listed in its checklist by landlines.

9.1.2. Aircraft Crash Off-Base. When notification is received by another agency that a crash has occurred outside of ATCT/RAPCON's airspace, AMOPS shall activate the Secondary Crash Net and relay the information received. RAPCON/ATCT will direct all aircraft not directly involved in search and rescue efforts to remain clear of the crash area.

9.2. Crash Phone Data for Emergencies. The following information concerning emergency aircraft is transmitted via the crash circuits:

9.2.1. Minimum information required for emergencies:

9.2.1.1. Nature of emergency: In-flight emergency, ground emergency, or crash.

9.2.1.2. Aircraft identification: Call sign/type of aircraft/tail number.

9.2.1.3. Aircrew intentions/grid location. If applicable, location of cargo, safe firefighting time, and specific requirements relayed by the aircrew (aircraft carrying dangerous cargo).

9.2.2. Additional information that may be gathered if time permits:

9.2.2.1. Landing runway.

9.2.2.2. Aircraft altitude.

9.2.2.3. Fuel remaining, in time.

9.2.2.4. Estimated time of arrival.

9.2.2.5. Number of people on board.

9.2.2.6. Emergency equipment on board.

9.2.2.7. Crew location.

9.2.2.8. Recovery frequency.

9.2.2.9. Wind direction.

9.2.3. The PCAS will be tested daily.

9.2.4. Facilities Contacted On the Primary/Secondary Crash Phone/Net.

Table 9.1. Facilities on Primary Crash Net.

Facility	Phone #
ATCT	3563
AMOPS	2998
Crash	2287
Hospital	2216

Table 9.2. Facilities on Secondary Crash Net.

Facility	Phone #
Safety	2522
ECC (SFS/FD)	7128
Hospital	2172
14 MSG/CC	7093
T-6 SUP	7666
T-38 SUP	7734
T-1 SUP	7847
49th Top 3	1649
Command Post	7021
Maint. Control	2896
Weather Flight	2992
CE/Readiness	7289

9.2.5. The ATC facility having knowledge of a crash or suspected crash within Columbus airspace involving 14 FTW aircraft or any aircraft at GTR will notify the opposite facility.

9.3. Emergency Response Procedures. Procedures for responding to a major aircraft crash or emergency are listed in CAFB IEMP 10-2, Columbus AFB Installation Emergency Management Plan. In addition to the procedures spelled out in CAFB IEMP 10-2, the following emergency response procedures apply to emergencies or mishaps occurring on the airfield. AMOPS will respond IAW with [paragraph 1.2.1](#).

NOTE: Wing Safety and Aerospace Medicine personnel will respond IAW DAFI 91-202 CAFB Supplement 1 and 14 MDGI 48-109.

9.3.1. Emergency Vehicle Crossing RSU controlled runways (runway crossing only).

9.3.1.1. RSUs will afford priority to emergency response vehicles destined for the center runway or the outside runway.

9.3.1.1.1. Discontinue departures that will delay the emergency response vehicles.

9.3.1.1.2. Issue restricted low approach instructions at or above 700' MSL to airborne aircraft conducting approaches to the inside runway until all emergency response vehicle crossings are complete.

9.3.1.2. ATCT will coordinate with RSUs as soon as practical to facilitate crossing of the inside runway by emergency response vehicles. IAW [paragraph 10.8.2.1](#), the RSU (Sunfish/LiveOak) controlling agency will relinquish the runway surface area to ATCT.

9.3.1.2.1. ATCT will retain control of emergency response vehicles for the duration of the crossing and will cross the vehicles only after RSUs relinquishes the runway.

9.3.1.2.2. ATCT will notify RSUs when all crossings are complete so they may resume normal operations.

9.3.2. Transfer of the inside or outside runway to the ATCT during emergencies.

9.3.2.1. The ATCT will assume control of the inside or outside runway only after coordination with the RSU. When the RSU crew becomes aware of an emergency/mishap involving aircraft operating on or near the runway surface under their control, they will:

9.3.2.1.1. Immediately issue restricted low approach instructions at or above 700' MSL to airborne aircraft conducting approaches to the affected runway. Coordinate with the ATCT for any aircraft requesting to proceed to the center runway.

9.3.2.1.2. Discontinue all departures.

9.3.2.1.3. Relinquish the runway surface via landlines or radios using the phraseology, "ATCT ASSUMES CONTROL OF RUNWAY 13R/31L or 13L/31R SURFACE AREA, SUNFISH/LIVEOAK RETAINS THE PATTERN."

NOTE: Assuming control of a runway surface area only authorizes the ATCT to grant vehicles access to the affected runway. Responsibility for aircraft operating in the RSU patterns remains with the appropriate RSU, unless otherwise coordinated. ATCT will NOT assume control of the runway until specifically relinquished by RSU crew.

9.3.2.2. Once the emergency is terminated, AMOPS will conduct a runway check, if applicable, per [para 1.2.1](#) and notify the ATCT of runway status. Prior to resuming normal operations, the ATCT will confirm all vehicles are off the runway and return control of the runway surface to the appropriate RSU using the phraseology, "ALL VEHICLES OFF THE RUNWAY, SUNFISH/LIVEOAK ASSUMES CONTROL OF RUNWAY 13R/31L or 13L/31R SURFACE AREA."

9.3.3. Center runway recoveries during RSU operations. When the inside or outside runway is closed or operations are suspended, and it becomes necessary to recover a solo student on the center runway due to a minimum fuel state, physiological emergency, or aircraft malfunction, the ATCT will relay landing clearance through the RSU. This procedure will only be used for emergency/minimum fuel solo students and will not be used for normal T-6/T-38 training aircraft. In order to ensure a safe and orderly flow of traffic the following procedures will apply:

9.3.3.1. ATCT will direct all aircraft under their control to execute the following procedures:

9.3.3.1.1. Aircraft at or inside of the FAF for IFR approaches, 4 miles to fly or closer for VFR approaches, will continue their approach and either full stop or low approach, return to radar or turn crosswind and climb to 1,700' if the VFR pattern is open.

9.3.3.1.2. Aircraft conducting an IFR approach that are between FAF and the Initial Approach Fix (IAF) will be directed to execute breakout procedures.

NOTE: If the T-38 status is Restricted Overhead or better, aircraft will be directed to climb to 1,700', continue along final approach course, and either return to radar or turn crosswind at the departure end of the center runway and enter the VFR pattern.

9.3.3.1.3. Aircraft conducting a VFR approach that are between 4-9 miles will be directed to climb to the overhead pattern altitude of 1,700' MSL, carry through initial and turn crosswind at the departure end of the center runway.

9.3.3.1.4. Aircraft conducting an IFR approach that are at or outside of the IAF will be broken off of the approach and sent back to Approach Control.

9.3.3.1.5. Aircraft conducting a VFR approach with more than 9 miles to fly will be broken off the approach and directed to one of the VFR entry gates.

9.3.3.1.6. ATCT will transmit, "ALL AIRCREWS PLAN ON CARRYING STRAIGHT THROUGH INTIAL UNTIL FURTHER ADVISED."

9.3.3.2. Once ATCT has ensured all aircraft in the VFR pattern are established at 1,700' and there are no other aircraft inbound, they will transfer the center runway to Sunfish using established transfer procedures. Sunfish will advise emergency aircraft to remain at or below 1,200' MSL. Sunfish will retain the center runway for the minimum time necessary for the emergency student solo to execute a full stop. ATCT will maintain control of all other aircraft in the center runway pattern. Practice approaches by student solos or any type approaches by additional aircraft are not authorized.

9.3.3.3. Once the student solo lands safely and is at a safe taxi speed, Sunfish will direct them to contact ATCT. Sunfish will then contact ATCT and relinquish the center runway using established transfer procedures.

9.3.3.4. Once the runway transfer is complete, ATCT will restore the normal flow of traffic.

9.4. External Stores/Jettison Procedures. Aircraft assigned at CAFB are not equipped with jettison capability. The external stores jettison area is the grass area north of the outside runway. Once an emergency has been declared that requires the aircrew to jettison external stores, the SOF determines if the RSU needs to be evacuated.

9.4.1. VFR Jettison Procedures (aircrew may visually navigate to avoid over flight of populated areas).

9.4.1.1. RAPCON will vector the aircraft to 10 mile straight-in final. Once the aircraft reaches 10-mile final, all aircraft in the LiveOak pattern will climb and maintain 2,700' MSL or breakout to RAPCON. The ATCT assumes control of the outside runway.

9.4.1.2. The ATCT will instruct vehicles to remain south of the center runway.

9.4.1.3. Time permitting and/or at SOF's request; AMOPS personnel will coordinate with SFS to ensure all personnel in the jettison area are evacuated and will conduct a FOD check IAW [paragraph 1.2.1](#).

9.4.1.4. ATC will instruct the aircraft to make an approach parallel to the runway in the direction of traffic at or below 1,000' AGL, approximately 1,000' northeast of the outside runway.

9.4.1.5. The ATCT controllers will not advise the aircrew when to jettison external stores.

9.4.1.6. Resume normal airfield operations after AMOPS has checked the area.

9.4.2. IFR Jettison Procedures:

9.4.2.1. RAPCON will provide vectors to aircraft for a straight-in approach.

9.4.2.2. When the aircraft is 25 flying miles from Columbus AFB, the ATCT will suspend airfield operations and ensure all vehicles remain south of the center runway. ATC will instruct the aircrew to fly a published approach until breaking out of the weather. After reaching VMC, the aircrew should proceed VFR to the external stores jettison area.

9.5. Fuel Dumping. Should fuel dumping become necessary the pilot should immediately advise ATC. Columbus has no designated fuel dumping area. Fuel dumping will be IAW FAAO JO 7110.65.

9.6. Aircraft Arresting Systems (AAS) Emergency Procedures.

9.6.1. BAK-15 will be raised IAW FAAO JO 7110.65 at the request of aircrew, LiveOak, SOF, AMOPS and Barrier Maintenance. The barrier will be raised when the aircrew calls "BARRIER, BARRIER, BARRIER" on either ATCT or LiveOak frequency. The primary responsibility for raising the barrier rests with the agency that is controlling the runway (i.e., ATCT or LiveOak). The agency responsible for the runway in use shall make the first attempt to raise the barrier. Other agencies with the capability of raising the BAK-15 will not do so unless specifically requested by the agency controlling the runway or the SOF.

9.6.2. If not on ATCT or LiveOak frequency during approaches, aircrew may call for the barrier on the approach frequency. RAPCON will call the controlling agency to raise the barrier.

9.6.3. If an aircraft under RAPCON control requires the barrier in a specific position, RAPCON will notify the controlling agency as soon as practical. During normal duty hours, a minimum of 2 ½ hours is required between successive engagements to allow maintenance the opportunity to inspect and reconfigure the MA-1A barrier and 8 hours for the BAK-15. After normal duty hours, a 4-hour window between successive MA-1A engagements and 10 hours for BAK-15 engagements may be required due to increased response times of on-call maintenance personnel.

9.6.4. AMOPS shall conduct a runway check IAW para [1.2.1](#) and [4.5.6](#).

9.7. Hot Brakes. If hot brakes are suspected, aircraft will inform Ground Control, taxi to a designated hot brake area, and park aircraft facing upwind. Designated hot brake areas are the North and South Hammerheads and Taxiway J.

9.8. Abandonment of Aircraft. The controlled bailout area is over the uninhabited area northwest of Caledonia, MS. CBM 050/006 (IGB 028/016), at 7,000' MSL. Aircrew will abandon the aircraft on a heading that appears to be the least inhabited (approximately 050).

9.9. Personnel/Crash Locator Beacon Signal/Emergency Locator Transmitter Response.

9.9.1. The RAPCON and the ATCT will advise the opposite facility when an unscheduled ELT is heard.

9.9.2. The ATCT will advise AMOPS of an ELT's start/stop time. AMOPS will notify (at a minimum) the following facilities: Maintenance Operations Center (MOC), all squadron aircrew flight equipment facilities, and Transient Alert.

9.9.3. The RAPCON will advise Memphis ARTCC of an ELT's start/stop time.

9.9.4. The ATCT and RAPCON assume the responsibility of the other facility if either is closed.

9.9.5. In the event of a crash, the ATC facility responsible for that traffic will plot the aircraft's coordinates and advise all aircraft not participating in air rescue to remain clear of the crash area. 14 FTW aircraft will not participate in Search and Rescue (SAR) without 14 FTW/CC approval.

9.10. Armament/Hung Ordnance Procedures.

9.10.1. Aircraft landing at Columbus AFB with armament are directed to the De-arm Area (Taxiway A1 or F) for de-arming. Aircraft with "hot" guns, rockets, etc., will park with weapons facing 310° (Rwy 31) or 130° (Rwy 13) until ordnance is safe. The ATCT will notify AMOPS of ordnance status. The ATCT will not allow vehicles or aircraft to operate in front of an aircraft awaiting de-arming of unsafe forward propelled/firing munitions.

9.10.2. De-arming, safing and arming of transient aircraft will be accomplished by qualified individuals IAW DAFI 21-101, Chapter 16, or the aircrew of the aircraft. Columbus AFB TA personnel are not qualified to perform this function IAW DAFI 21-201. TA personnel will notify the ATCT after all munitions have been safe.

9.11. Evacuation of ATC and AMOPS Facilities.

9.11.1. If ATCT becomes unusable for any reason and the airfield is open they will relocate to their alternate location at RSU 2 (RWY 13) or 5 (RWY 31).

9.11.2. If AMOPS becomes unusable for any reason and the airfield is open they will relocate to their alternate location, the RAPCON training room.

9.11.3. The CCTLR/ACCTLR/AMOPS is the final authority in determining whether the ATCT/RAPCON/AMOPS will be evacuated. In their absence, the WS/CIC/AMOPS will make the determination and ensure that evacuation checklists are accomplished prior to evacuating the facility.

9.11.4. CCTLRs/AFMs shall ensure controllers/airfield managers are scheduled for initial and refresher training on alternate facility equipment, operating procedures, and fly-away kits. Fly-away kits contain materials to permit operations in the alternate facility for at least 24 hours. **NOTE:** RAPCON/Tower/AMOPS evacuations will only take place for real-world emergencies.

9.12. Emergency Landing Procedures (ELPs). ELP patterns are authorized for local T-6 aircraft (any runway).

9.13. Hydrazine/Emergency Power Unit (EPU) Activation. ATCT will activate the crash phone when EPU activation is suspected or confirmed and advise all vehicles (except those responding) and aircraft to remain well clear of the area. Direct aircraft to the designated parking area, Taxiway M, and inform the aircrew of the wind.

NOTE: EPU activation may produce a white puff of smoke underneath the right wing.

9.14. Aircraft Mishap Reporting Procedures. Mishap/Accident reporting procedures are located in CAFB IEMP 10-2, Columbus AFB Installation Emergency Management Plan.

9.15. UHF Single Frequency Approach (SFA). Aircrew with an emergency can request an SFA (CH 15/307.175) for recovery and landing from ATC. The aircrew may request an SFA to minimize channel changes and coordinate the safe recovery with the controlling agency, SUP and SOF. The SOF, RAPCON, and ATCT are available on this frequency for assistance. Aircrew must return to the RSU frequency prior to entering an RSU pattern.

9.16. Local ELP Airfields. T-6 Aircraft may utilize any local airfield for emergency engine-out landing purposes. ELP operations will be conducted IAW [paragraph 6.2.7](#).

9.17. Remotely Piloted Aircraft (RPA). Columbus AFB has been designated as an emergency divert base for the RQ-4 assigned to the 69th Reconnaissance Group at Grand Forks AFB, ND and Beale AFB, CA. Procedures are established in an LOA between both bases.

Chapter 10

RUNWAY SUPERVISORY UNIT COORDINATION PROCEDURES

10.1. General.

10.1.1. The RSU practice area operations within Columbus AFB Class C airspace are governed by this instruction and AETCI 11-204. Practice area operations are exempt from Columbus AFB Class C requirements IAW FAA Order 7210.3 and are in effect when a runway is controlled by the respective RSU.

10.1.2. RAPCON will not allow non-base assigned aircraft to enter the practice area airspace delegated to the RSUs, when RSU operations are in progress, unless prior coordination is made with the ATCT and applicable RSU. ATCT/RAPCON will ensure separation is provided between RSU traffic and aircraft transitioning the Columbus AFB Class C airspace.

10.2. RSU/SOF Advisories. The ATCT and RAPCON controllers will relay RSU/SOF advisories when workload and traffic permit. Advisories will be prefaced with “RSU/SOF ADVISES.”

10.3. Runway Control Transfer. Transfer of the runway is as follows: “ATCT/LIVEOAK/SUNFISH ASUMES CONTROL OF RUNWAY (applicable) AND BARRIERS (if applicable),” followed by the individual’s initials. When transfer occurs at the beginning of daily operations or after a runway change, ATCT advises the RSU of barrier status.

10.4. Runway Crossing Procedures for Vehicles/Transient Aircraft.

10.4.1. When Sunfish Controls Runway 13R:

10.4.1.1. The ATCT will coordinate with Sunfish RSU for approval prior to crossing transient aircraft on runway 13R.

10.4.1.2. While aircraft/vehicles are crossing runway 13R, radio contact will be maintained with the ATCT. If the vehicle is UHF radio equipped, ATCT may direct the vehicle to contact Sunfish (374.1).

10.4.1.3. Sunfish RSU crews are responsible for ensuring that all low approaches are conducted at or above 700’ MSL when a vehicle is present on the runway and shall resume normal operations when the vehicle is off of the runway.

10.4.1.4. The ATCT will coordinate with Sunfish RSU for approval prior to allowing an aircraft to taxi across the extended centerline of Runway 13R when utilizing the alert area.

10.4.2. When Sunfish RSU Controls the Inside Runway or LiveOak RSU Controls the Outside Runway:

10.4.2.1. The ATCT will coordinate with the appropriate RSU for approval prior to crossing transient aircraft or vehicles on runway(s) 13L/31R/31L.

10.4.2.2. While transient aircraft/vehicles are crossing runway(s) 13L/31R/31L, radio contact will be maintained with the ATCT.

10.4.2.3. Sunfish RSU crews are responsible for ensuring that all low approaches are conducted at or above 700' MSL when a vehicle is present on the runway and shall resume normal operations when the vehicle is off the runway. Vehicles are crossing runway(s) 13L/31R/31L, radio contact will be maintained with the ATCT.

10.5. Sunfish/LiveOak Departures.

10.5.1. Unless coordinated with RAPCON, Sunfish will provide RAPCON 90 seconds between departures.

10.5.2. The LiveOak RSU controller will obtain an IFR release from ATCT before allowing an IFR aircraft to depart the VFR pattern. LiveOak will call ATCT at 9 and 4 miles for release, and when the aircraft is at the approach end.

10.5.2.1. If ATCT is unable to release an aircraft, the aircraft may opt to conduct another pattern to attempt obtaining IFR release or the aircraft may conduct a breakout from the pattern.

10.5.3. LiveOak will contact RAPCON when an aircraft departs VFR to the MOAs.

10.6. Transient Aircraft Landing on an RSU-Controlled Runway.

10.6.1. At receipt of an inbound transient from AMOPS, ATCT will relay call sign, aircraft type, and ETA to both RSUs. When the transient is at 5NM, ATCT will notify the RSUs via landline. If the runway is controlled by an RSU, the RSU will provide ATCT with landing approval. If the transient is unable to get landing approval at 5NM, a go-around will be directed at 700' MSL over the runway of intended landing.

10.6.1.1. During dual runway operations, the ATCT and RAPCON in conjunction with the SOF will determine the landing runway. RAPCON will notify the appropriate RSU when the aircraft is 25 flying miles from touchdown. When 15NM from touchdown, ATCT will notify the appropriate RSU via landline. When 10NM from touchdown, ATCT will notify the appropriate RSU via landline. At that time, the RSU will not allow straight- ins, closed patterns, or pitchouts until the transient is inside 5NM.

10.6.1.2. If the transient will land on the inside runway, Sunfish will direct aircraft on 90-to- initial to climb to 2200' MSL and carry straight-through-initial. (If weather precludes this, aircraft will fly an offset initial to avoid flying directly over the runway). At 5NM, normal operations may resume. Aircraft may expect to descend on the turn from crosswind to downwind. Aircraft will execute a restricted low approach (at or above 700' MSL) and offset until the transient is off the runway.

10.6.1.3. If the transient will land on the outside runway and LiveOak controls the runway, LiveOak will direct aircraft on 45 and 90-to-initial legs to "GIVE WAY." (If weather precludes this, fly an offset initial, avoiding over-flight of the runway, and carry straight through initial). LiveOak will direct all subsequent aircraft to report 90-to-initial and issue instructions to ensure proper separation. At 5NM, normal operations may resume. Aircraft will execute a restricted low approach (at or above 700' MSL) and offset until the transient is off the runway.

10.6.1.4. Departure Procedures: ATCT will relay the type of aircraft and proposed departure times to the appropriate RSU and will notify both RSUs as the transient aircraft begins to taxi.

10.6.1.4.1. Transient departing LiveOak runway: ATCT will receive authorization from LiveOak for the transient to depart. LiveOak will cease all other departures until notified by ATCT that departures may resume.

10.7. RSU Radio Failure.

10.7.1. When an RSU experiences complete radio failure during local flying training, the RSU will notify ATCT via landline. ATCT assumes control of the respective runway on the appropriate RSU frequency and then directs a frequency change to **CH 3**. The RSU will notify the ATCT and SOF if any solos are in the pattern.

10.7.2. If landlines are inoperative, the RSU will utilize RSU Net to contact ATCT. Prior to assuming control, ATCT will check communications on the landlines and the RSU radio frequency to ensure radio failure has occurred.

10.7.3. For an RSU radio failure, ATCT will full stop all solo students, but may allow continued operations by dual aircraft as directed by the SOF. Aircrew can expect the ATCT or the SOF to direct aircraft to full stop or to leave the pattern. If student training is to continue utilizing the RSU, the SOF shall reference AETCI 11-204 for minimum RSU requirements.

10.7.4. ATCT will make a call on Guard, "ALL AIRCRAFT IN SUNFISH/LIVEOAK'S PATTERN, CONTACT TOWER, CH 3."

10.8. Runway Crossing/Access Procedures for Emergency Response Vehicles.

10.8.1. All Runway Crossings/Access will be given to emergency vehicles over the Crash Net by the ATCT.

10.8.2. When Sunfish (inside runway) or LiveOak (outside runway) are under RSU control:

10.8.2.1. The RSU (Sunfish/LiveOak) controlling agency will relinquish control of the runway surface area to ATCT but maintain control of the pattern/aircraft in order to expedite emergency response vehicles onto/across the RSU controlled runway.

NOTE: Emergency response vehicles have priority over arriving/departing aircraft.

Exception: additional emergency aircraft. This only applies to emergency vehicles enroute to the emergency, or until terminated.

10.8.2.2. At the most extent possible, ATCT should call the appropriate RSUs when the Crash Phone has been activated to inform them of the emergency location; this will allow the RSU time to prepare for vehicle crossing/access.

10.8.2.3. ATCT will call the RSU for control of the runway surface area only. The RSUs are responsible for ensuring all landing aircraft have exited the runway and all airborne aircraft have been issued low approaches at or above 700' MSL before giving ATCT of the surface area (Phraseology: "TOWER OWNS RUNWAY (designator) SURFACE AREA"). To return control of the surface area back to the RSU: (Phraseology: "SUNFISH/LIVEOAK OWNS RUNWAY (designator) SURFACE AREA").

10.8.2.4. If any RSU controlled aircraft needs to land while ATCT controls the surface area, the RSU will coordinate with the ATCT for available options.

Chapter 11

MISCELLANEOUS

11.1. CBM VORTAC Out Procedures. CBM VORTAC out procedures will be implemented any time the Caledonia VORTAC is out of service.

11.1.1. Departure Procedures.

11.1.1.1. T-6 Operations. Remain unchanged.

11.1.1.2. T-38 and T-1 Operations. CD will issue “FLY RUNWAY HEADING, MAINTAIN 5000”.

11.1.2. MOA Procedures. All wing aircraft will maintain area boundaries by visual references or GPS points. If unable, aircrew will notify RAPCON as soon as practical.

11.1.3. Recovery/Arrival Procedures.

11.1.3.1. T-6 Operations. For any status equal to or better than restricted overhead, aircraft should expect radar vectors to standard radar termination points. For IFR recovery status, aircraft should expect radar vectors to the Columbus RNAV (GPS) E or F. Slots status procedures are unchanged. If the radar goes out, aircrews can either request RNAV (GPS) 31C/13C, recover to the standard entry points, or divert to an airport that has a useable approach and/or radar service. 11.1.3.1.1. In contingency situations (e.g., Lost Comm), aircrew shall use published canned flight plan routings in addition to good judgment as a guide to determine the best course of action.

11.1.3.2. T-38 and T-1 Operations.

11.1.3.2.1. For any status equal to or better than dual, aircrew may expect radar vectors to the standard radar termination points.

11.1.3.2.2. For any status equal to or worse than restricted overhead, aircrew may expect radar vectors to ILS/LOC final.

11.1.3.2.2.1. If radar is not functioning, T-1 and T-38 aircraft may request the RNAV (GPS) 31C/13C, recover to the standard entry points, or divert to an airport that has a usable approach and/or radar service.

11.1.3.2.2.2. In contingency situations (e.g., Lost Comm), aircrew shall use published canned flight plan routings in addition to good judgment as a guide to determine the best course of action.

NOTE: All 14 FTW aircraft arriving at Columbus AFB may use Area Navigation (RNAV) DME substitution when the DME portion of the CBM VORTAC is not available.

11.2. Flyby Procedures.

11.2.1. Local Flybys. The flight lead of local (CAFB) flybys will brief the squadron SUPs, SOF, and AMOPS prior to all actual and practice events. The SOF will be the on-scene commander for local flybys. The flight lead is responsible for ensuring flybys are documented on all squadron's ops notes the day prior to the event. Procedures will be coordinated between all required agencies prior to the flyby and a flyby time table will be developed.

11.2.2. Inclement Weather. During inclement weather, 14 OG/CC will make the go/no-go decision 2 hours prior to TOT.

11.3. Alert Procedures.

11.3.1. Columbus AFB does not have an alert mission.

11.4. Closed Runway Operations.

11.4.1. Center Runway Closure. Sunfish will continue normal operations from the T-6 VFR pattern on the inside runway. Minimum forecast weather conditions for returning to CAFB are side-step minimums. Radar delay patterns and multiple approaches should be minimized. These affect departures and must be coordinated by the SUPs and the SOF with RAPCON. Contact/instrument restricted low approaches to the center runway will descend no lower than 700' MSL.

11.4.1.1. During LiveOak recoveries, LiveOak will continue normal operations of the T-38 VFR pattern on the outside runway. T-1 aircraft will request one VFR straight in to a full stop.

11.4.1.2. When ATCT controls the outside runway, aircraft shall minimize pattern operations. Departures have priority; aircraft shall anticipate restricted low approaches.

11.4.1.3. A restricted low approach to the center may be flown if that aircraft is authorized in the outside pattern. It should be followed by a crosswind entry to outside pattern. Aircrew shall plan on sufficient fuel to return to radar. If scheduled for the outside pattern and denied a crosswind entry, aircrew shall maintain runway heading and climb to 2,000' MSL. Aircrew shall proceed to the VFR entry point and remain clear of the outside pattern ground track.

11.4.2. Outside Runway Closure. LiveOak will operate the T-38 VFR pattern on the center runway. No practice approaches or radar delays will be flown to the center runway during LiveOak pattern operations.

11.4.3. Inside Runway Closure. Sunfish will operate the T-6 VFR pattern on the center runway. No practice approaches or radar delays will be flown to the center runway during Sunfish pattern operations. T-6s should takeoff on the center runway. Aircraft shall hold for takeoff on the taxi line perpendicular to the center runway. Aircraft will provide enough room for T-1s and T-38s to taxi by to cross the center runway.

11.4.3.1. During T-38 Recoveries, LiveOak will continue normal operations of the T-38 VFR pattern on the outside runway. T-1s will request one straight in to a full stop.

11.4.3.2. When the ATCT controls the outside runway, minimize pattern time.

11.4.4. Single Runway Operating Procedures. Takeoffs for local flying will be temporarily discontinued. If runway availability or fuel do not permit landing at CAFB, aircrew will divert. The SOF may direct Area Hold procedures. Aircrew will adjust Joker/Bingo fuels to land with 1200 lbs. (T-38/T-1), 350 lbs. (T-6), or fuel to divert, whichever is higher. Solo students/team will be directed to full stop as soon as possible.

11.4.4.1. Recovery Procedures With Both Overhead Patterns Open.

11.4.4.1.1. Each aircraft will recover using normal procedures. All T-6s will utilize the Sunfish pattern ground track and frequency. T-38 or T-1 aircraft already operating in the pattern will continue in the pattern, while the other aircraft will approach via the center to a side-step/circle.

11.4.4.1.2. Once established in the pattern, carry straight through initial. Report initial with 1,200/700 lbs. and expect clearance from the controller to break and land on the open runway. When flying the final turn, aircrew shall use caution for aircraft on initial.

11.4.4.2. Recovery Procedures With LiveOak Pattern Closed.

11.4.4.2.1. T-6s shall use procedures prescribed in [paragraph 11.4.4.1](#).

11.4.4.2.2. All T-38/T-1s will recover via an instrument approach and shall expect to land, side- step, or circle to land on the open runway.

11.4.4.3. Recovery with Both Overhead Patterns Closed. Recovery shall be via the VOR/DME A/B or vectors to an instrument approach. Aircrew shall expect to land/side-step/circle to land on the open runway.

11.5. Airfield Operations Board. The AOB provides a forum for discussing, updating and tracking various activities in support of the wing flying mission.

11.5.1. The Airfield Operations Board meetings should be conducted at the following intervals: Jan–Mar = first quarter, conducted in April; Apr–Jun = second quarter, conducted in July; Jul– Sep = third quarter, conducted in October; Oct–Dec = fourth quarter, conducted in January. The AOB shall convene at least once per quarter. The following is a list of minimum appointees to the AOB. Members may designate a representative to attend in his/her place.

14 OG/CC (Appointed Chairman)	14 FTW/CP
14 MSG/CC	14 FTW/MX
14 FTW/SE	14 CS/CC
14 OG/OGV	14 OSS/OSA (Recorder)
14 OSS/CC	14 OSS/OSM (ATCALS)
37 FTS/CC	14 OSS/OSW (Weather)
41 FTS/CC	14 OSS/OSAB (Airfield Management)
43 FTS/CC	14 OSS/OSAR (RAPCON)
48 FTS/CC	14 OSS/OSAP (TERPS)
49 FTS/CC	14 OSS/OSOP (Airspace)
50 FTS/CC	14 OSS/OSAT (ATCT)
14 CES/CE-2	14 OSS/OSAD (Data Automation)
14 SFS	14 OSS/OSAQ (Airfield Management)
COR)	
FAA Representative(s)	

11.6. VOR/DME or TACAN Approaches.

11.6.1. Conduct VOR/DME or TACAN approaches to runway 13C/31C only when an emergency exists or the ATCT controls all three runways.

11.6.2. Conduct VOR/DME or TACAN approaches to runway 13L/31R when the ATCT controls both the center and outside runways.

11.6.3. Conduct VOR/DME or TACAN when the ATCT controls both the center and outside runways at a minimum. Any time runway 13 is in use, aircraft shall circle north of the field for a left base. If runway 31 is in use, aircraft shall circle south of the field for a right base.

NOTE: In the event of missed approach, turn should begin no later than WIKUB, DO NOT fly south of RWY 13L/31R. If unable to execute missed approach, turn within 1.9 NM request a Visual Approach and enter the Tower pattern.

11.7. Aero Club Operations. Columbus AFB does not have Aero Club Operations.

11.8. Use of Night Vision Device (NVD) Not Authorized.

11.9. Surveillance Approaches and Precision Approach Radar Monitoring. Columbus AFB RAPCON does not provide monitoring service for surveillance or precision approaches.

JUSTIN T. GRIEVE, Colonel, USAF
Commander, 14th Flying Training Wing

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AETCI 11-204, *Runway Supervisory Unit (RSU) Operations*
AFI 11-202v3, *General Flight Rules*
AFI 11-208, *Department of Defense Notice to Airmen (NOTAM)*
AFMAN 11-2T-38v3, *T-38 Operations Procedures*
AFI 11-418, *Operations Supervision*
AFI 13-201 AETC Sup, *Airspace Management*
AFMAN 13-204v1, *Management of Airfield Operations*
AFMAN 13-204v1 AETC Sup, *Management of Airfield Operations*
AFMAN 13-204v2, *Airfield Management*
AFMAN 13-204v2 AETC Sup, *Airfield Management*
AFMAN 13-204v3 AETC Sup, *Air Traffic Control*
AFI 21-101, *Aircraft and Equipment Maintenance Management*
AFI 32-1043, *Managing, Operating, and Maintaining Aircraft Arresting Systems*
AFMAN 33-363, *Management of Records*
Air Force Policy Directive 13-2, *Air Traffic Control, Airfield, Aerospace, and Range Management*. FAAO JO 7110.65, *Air Traffic Control*
FAAO JO 7610.4H, *Special Military Operations*
FAAO JO 7210.3, *Facility Operation and Administration*
FLIP General Planning
Technical Order (T.O.) 33-1-23, *Flight Information Handbook*
Unified Facilities Criteria (UFC) 3-260-01, *Airfield and Heliport Planning and Design Criteria*

Prescribed Forms

There are no prescribed forms.

Adopted Forms

DAF 847, *Recommendation for Change of Publication*
DD 175, *Military Flight Plan*
DD 1801, *DoD International Flight Plan*

Acronyms and Abbreviations

AETC—Air Education and Training Command

Attachment 3
FACILITY FREQUENCIES

Table A3.1. Frequencies/Channels ATCT Frequencies/Channels.

Operating Position	UHF Frequency	VHF Frequency	T-6 Channel		T-38/T-1 Channel	
			UHF	VHF	UHF	VHF
Local Control (LC)	379.925	126.65	3	3	3	3
Ground Control (GC)	275.8	121.9	1	1	1	1
ATIS	273.5	115.2	20	N/A	18	18 (T-1 only)

Table A3.2. RAPCON Frequencies/Channels.

Operating Position	UHF Frequency	VHF Frequency	T-6 Channel		T-38/T-1 Channel	
			UHF	VHF	UHF	VHF
Airway Control (AWY)	350.3	134.55	7	N/A	4	4
North Approach Control (NAC)	239.25/282.2	126.075	14	N/A	7/8	7
Arrival (AR)	307.8	133.25	16	16	16	16
Clearance Delivery (CD)	269.55	126.25	13	N/A	19	19
South Approach Control (SAC)	263.15/351.95	132.025	18/19	N/A	N/A	N/A
West Arrival (WAAR)	323.275	135.6	4	4	14	14
West Approach Control (WAC)	317.5/349.0	121.075	8/9	N/A	N/A	N/A

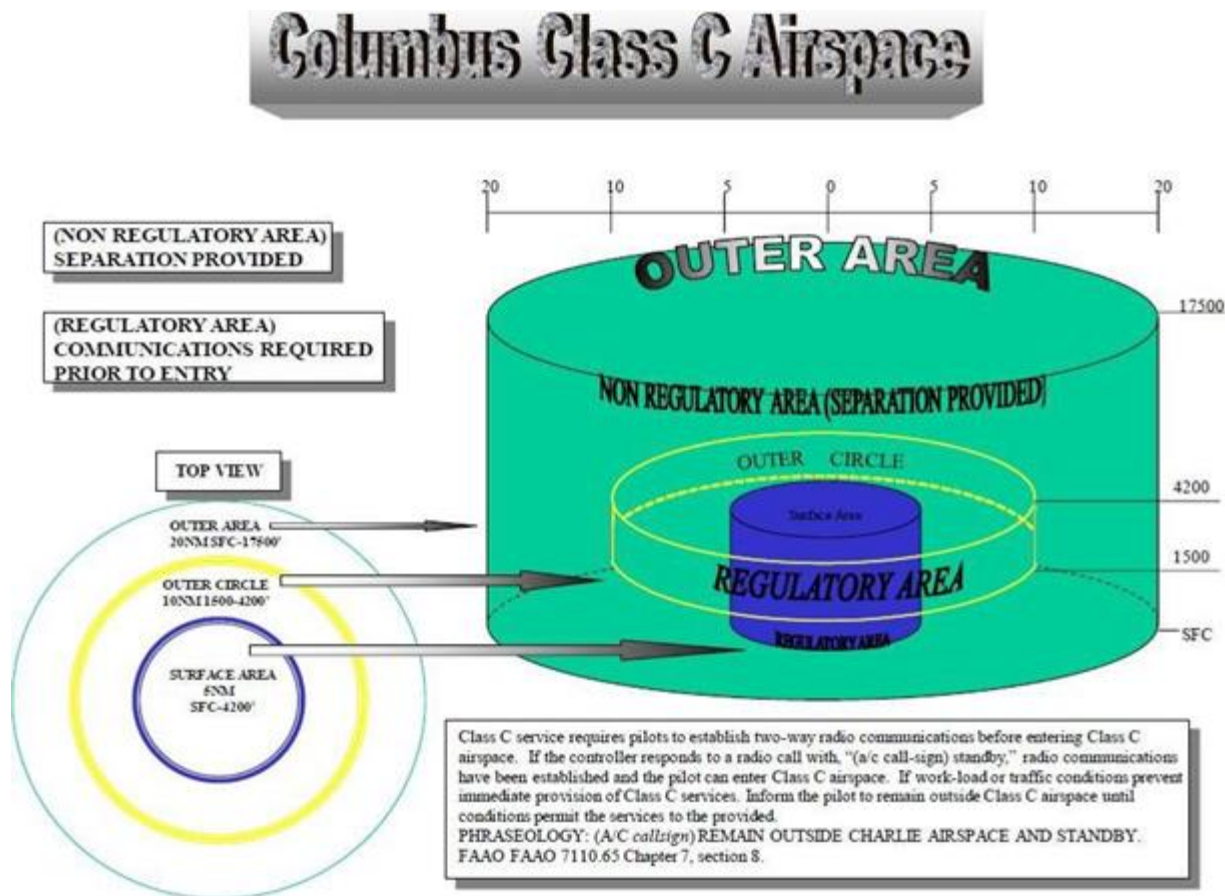
Table A3.3. Miscellaneous Frequencies/Channels.

Operating Position	UHF Frequency	VHF Frequency	T-6 Channel		T-38/T-1 Channel	
			UHF	VHF	UHF	VHF
Sunfish (T-6) RSU	374.1	143	2	2	2	2
LiveOak (T-38) RSU	317.9	N/A	N/A	N/A	13	N/A
PMSV (Metro)	354.6	N/A	N/A	N/A	N/A	N/A
PTD	376	N/A	N/A	N/A	N/A	N/A
Supervisor of Flying (SOF)	252.1	140.975	12	12	12	12
Emergency/SFA	307.175	N/A	15	N/A	15	N/A
Texan (37th/41st) Squadron Ops	369	149.4	N/A	20	N/A	N/A
Snake (50th) Squadron Ops	270.9	143.6	N/A	N/A	20(50th only)	20(50th only)
Jayhawk (48th) Squadron	293.4	141.7	N/A	N/A	20(48th only)	20(48th only)
Knight (49th) Squadron Ops	341.75	139	N/A	N/A	20(49th only)	20(49th only)

Attachment 4

COLUMBUS AFB CLASS C AIRSPACE

Figure A4.1. Columbus Class C Airspace.



Attachment 5

VFR PATTERN GROUND TRACKS

Figure A5.1. Sunfish Runway 13 R.

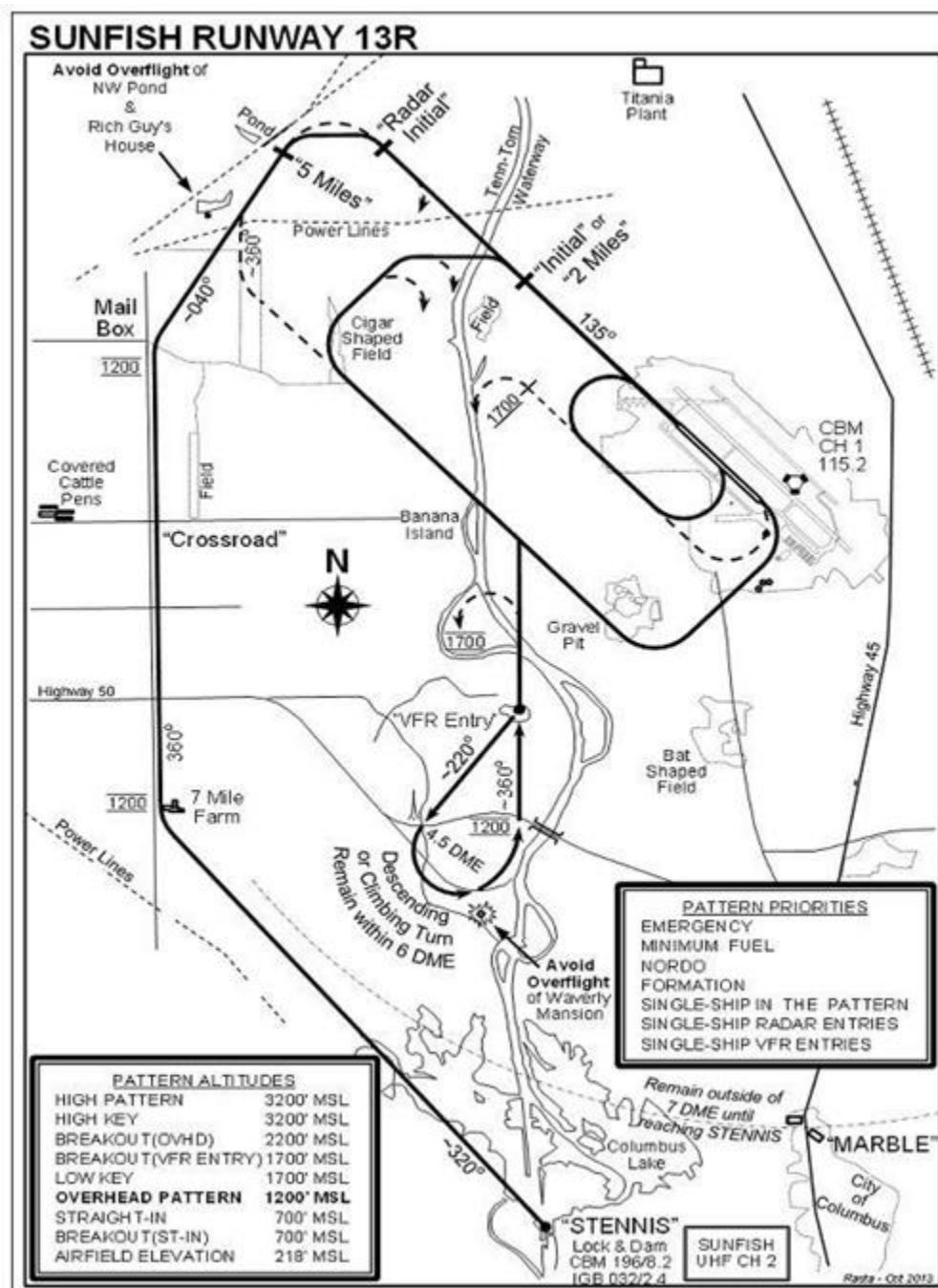


Figure A5.2. Sunfish Runway 31L.

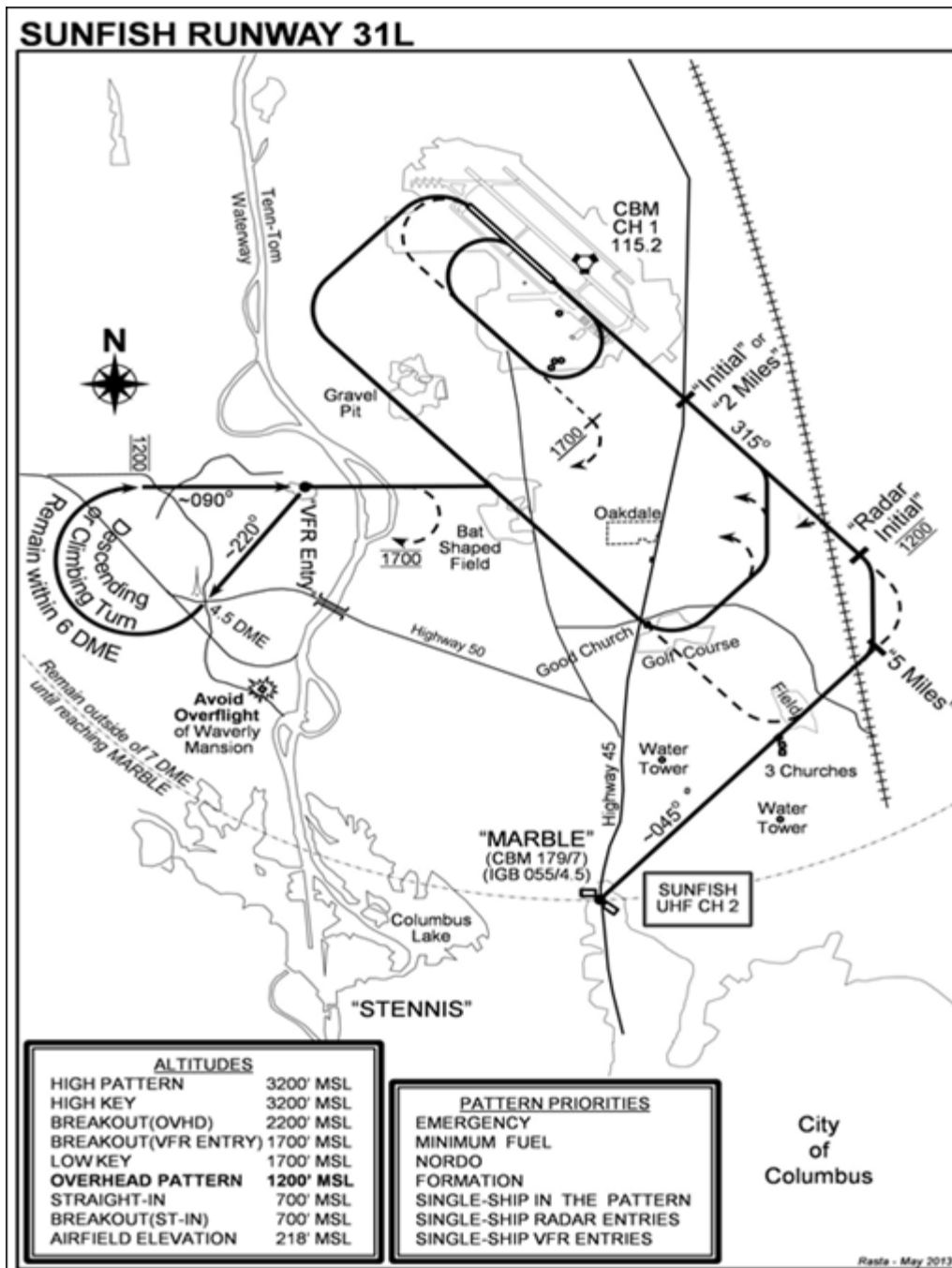


Figure A5.3. North Gate – Traffic Pattern Runway 13L.

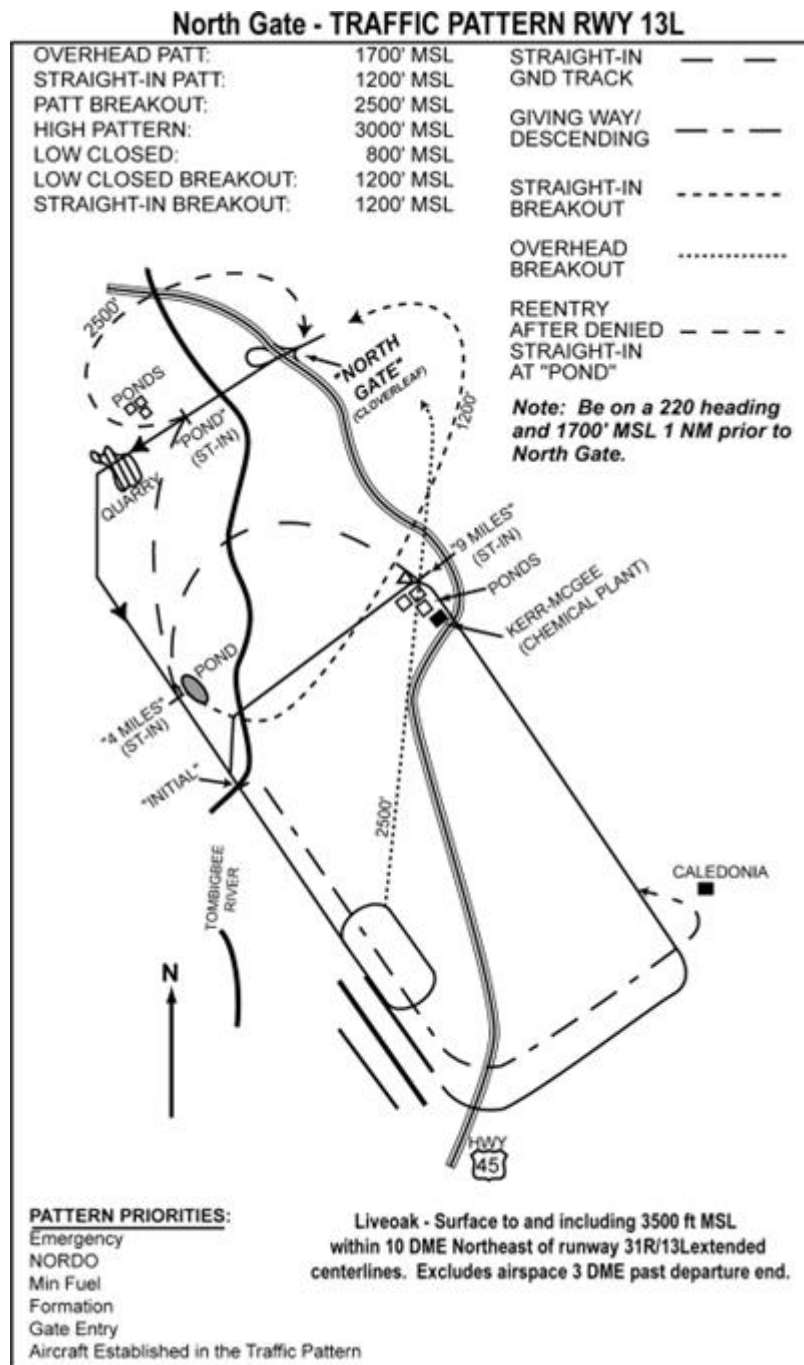
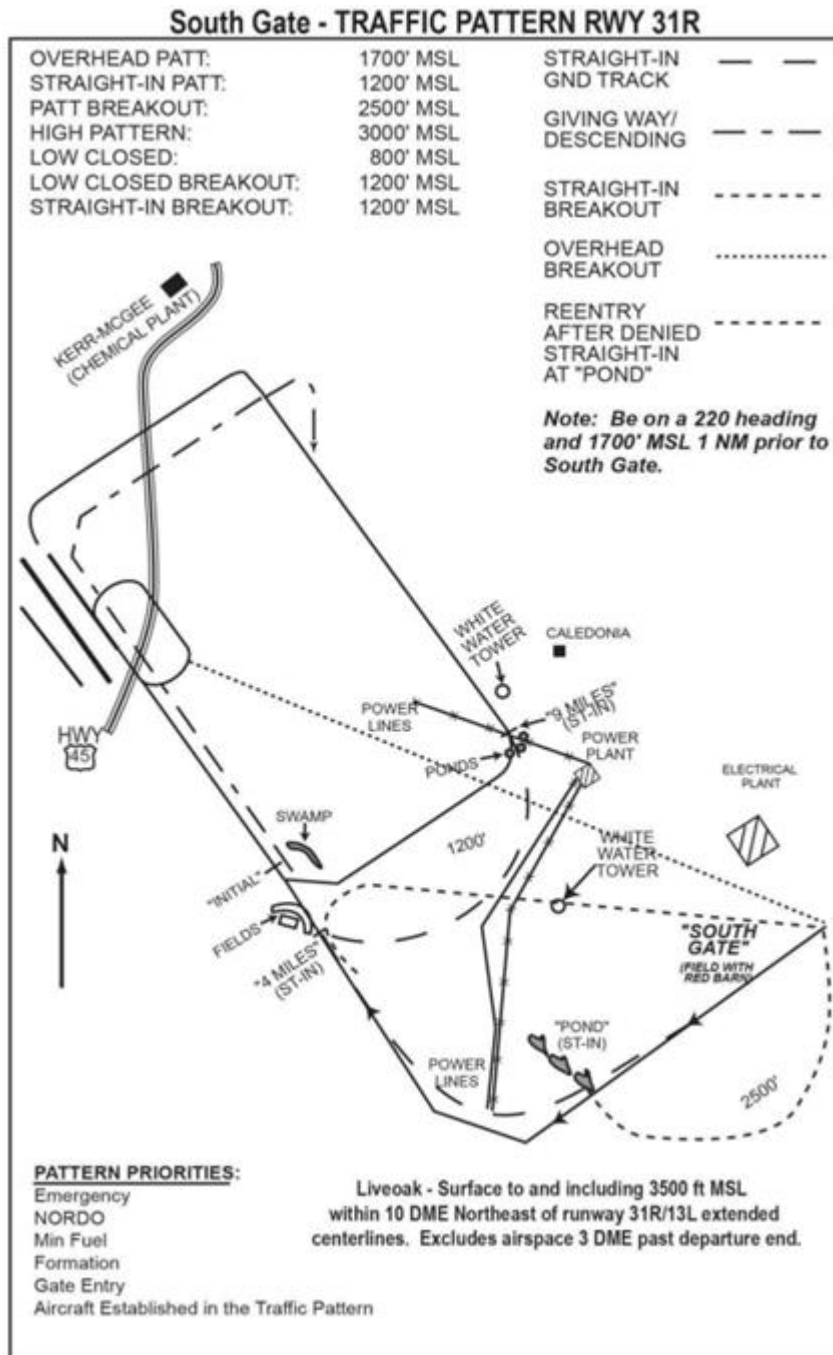


Figure A5.4. South Gate – Traffic Pattern Runway 31R.



Attachment 6

T-6 SECTOR DEPICTION

Figure A6.1. T-6 Sector Depiction.

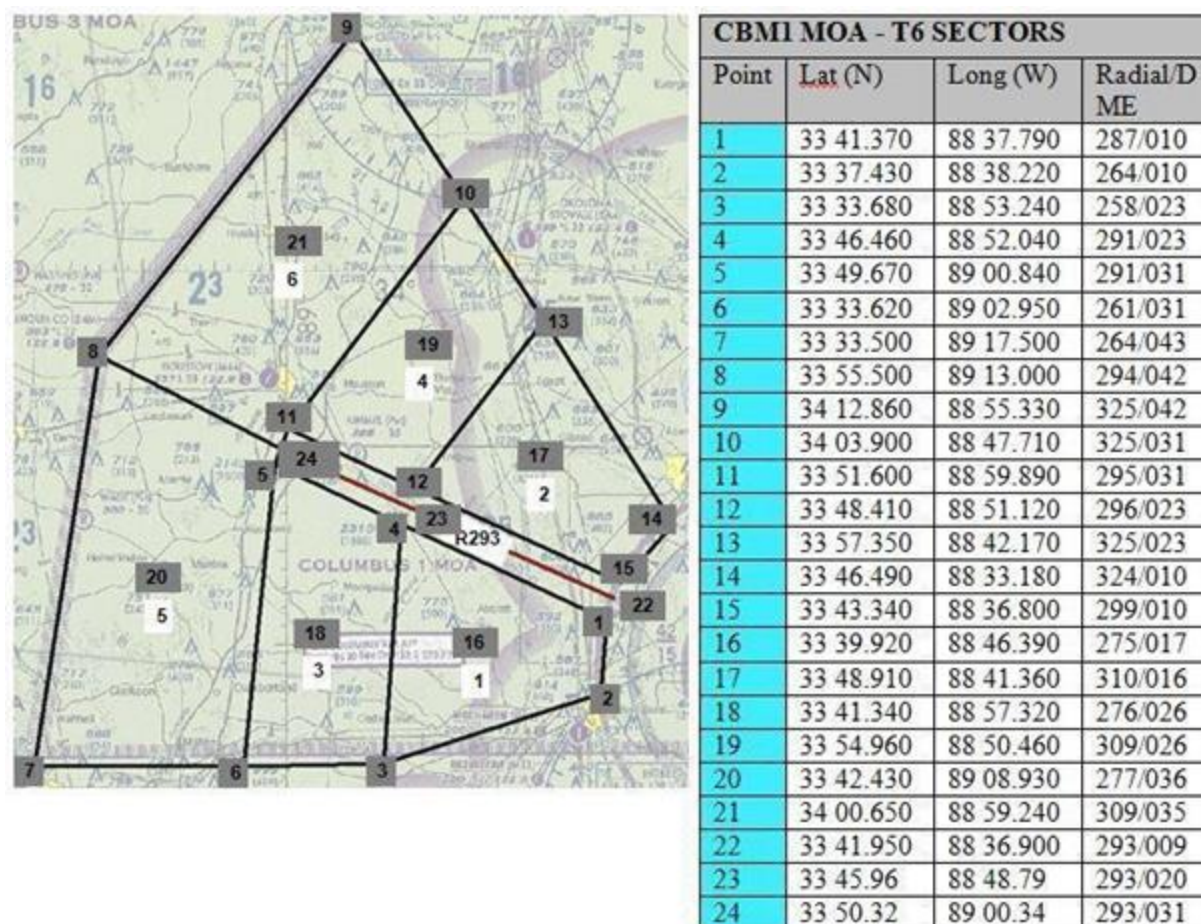
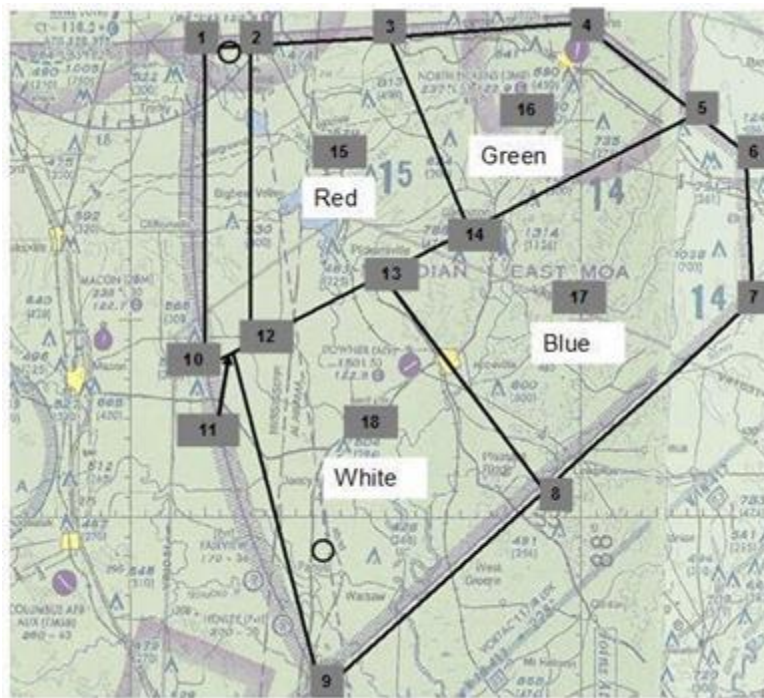


Figure A6.2. T-6 Sector Depiction Continued.



ME1E MOA			
Point	Lat (N)	Long (W)	Radial/DME (CBM)
1	33 23.500	88 25.070	176/015
2	33 23.690	88 21.970	166/015
3	33 24.245	88 12.790	142/018
4	33 25.000	88 00.000	121/026
5	33 20.490	87 52.370	122/034
6	33 18.500	87 49.000	123/037
7	33 11.000	87 48.500	131/042
8	33 01.390	88 02.380	152/042
9	32 51.165	88 17.264	171/048
10	33 07.660	88 24.900	178/031
11	33 08.240	88 23.350	SANDS 175/030
12	33 08.790	88 21.970	173/030
13	33 12.270	88 13.200	157/028
14	33 14.550	88 07.450	PIKMI 146/029
15	33 17.630	88 15.450	156/023
16	33 20.550	88 04.530	135/026
17	33 11.190	87 59.120	140/036
18	33 04.270	88 15.290	165/035
BUZLI	33 23.850	88 23.350	CBM 170/015
PIKEN	32 58.900	88 18.870	CBM 171/040

Attachment 7

T-38/T-1 SECTOR DEPICTION

Figure A7.1. T-38/T-1 Sector Depictions.

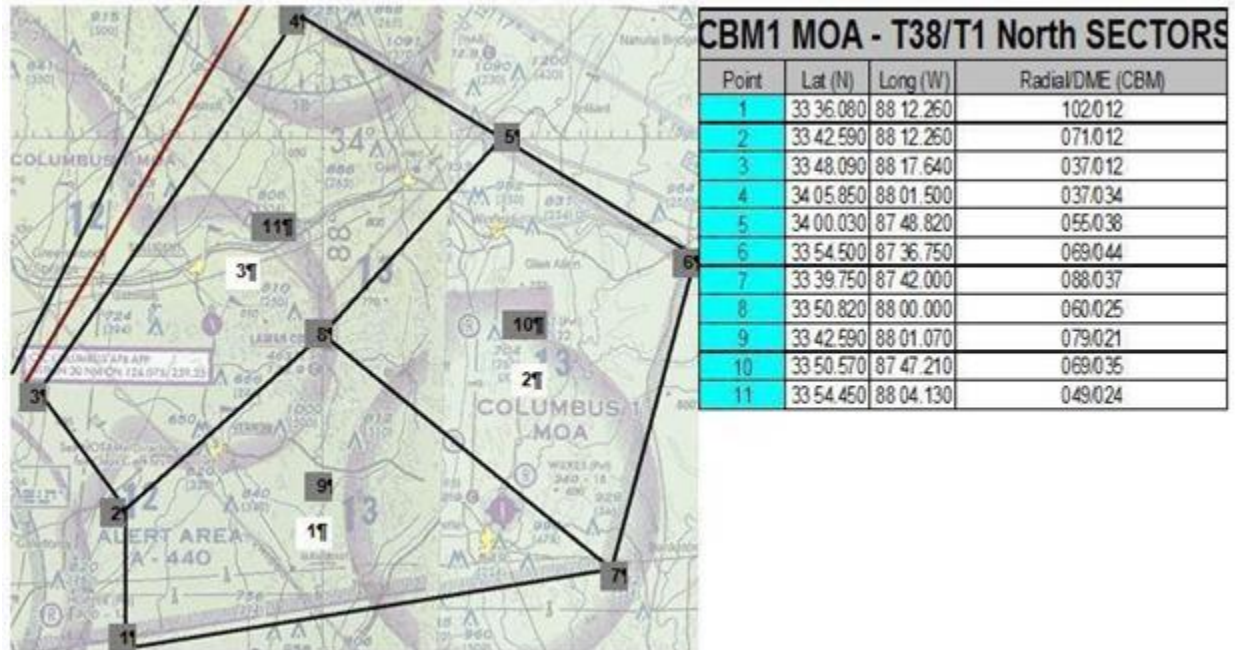


Figure A7.2. T-38/T-1 Sector Depiction.

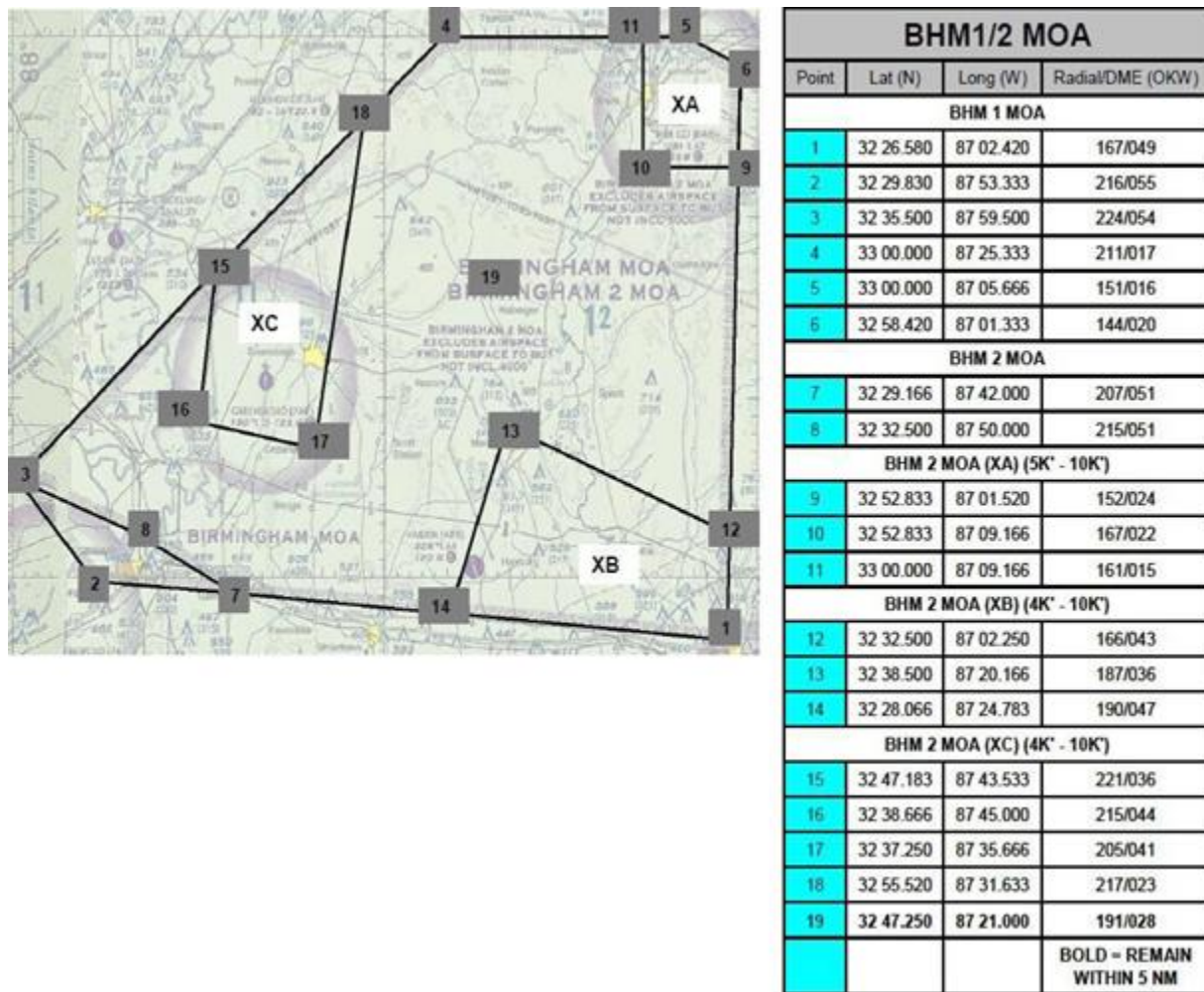
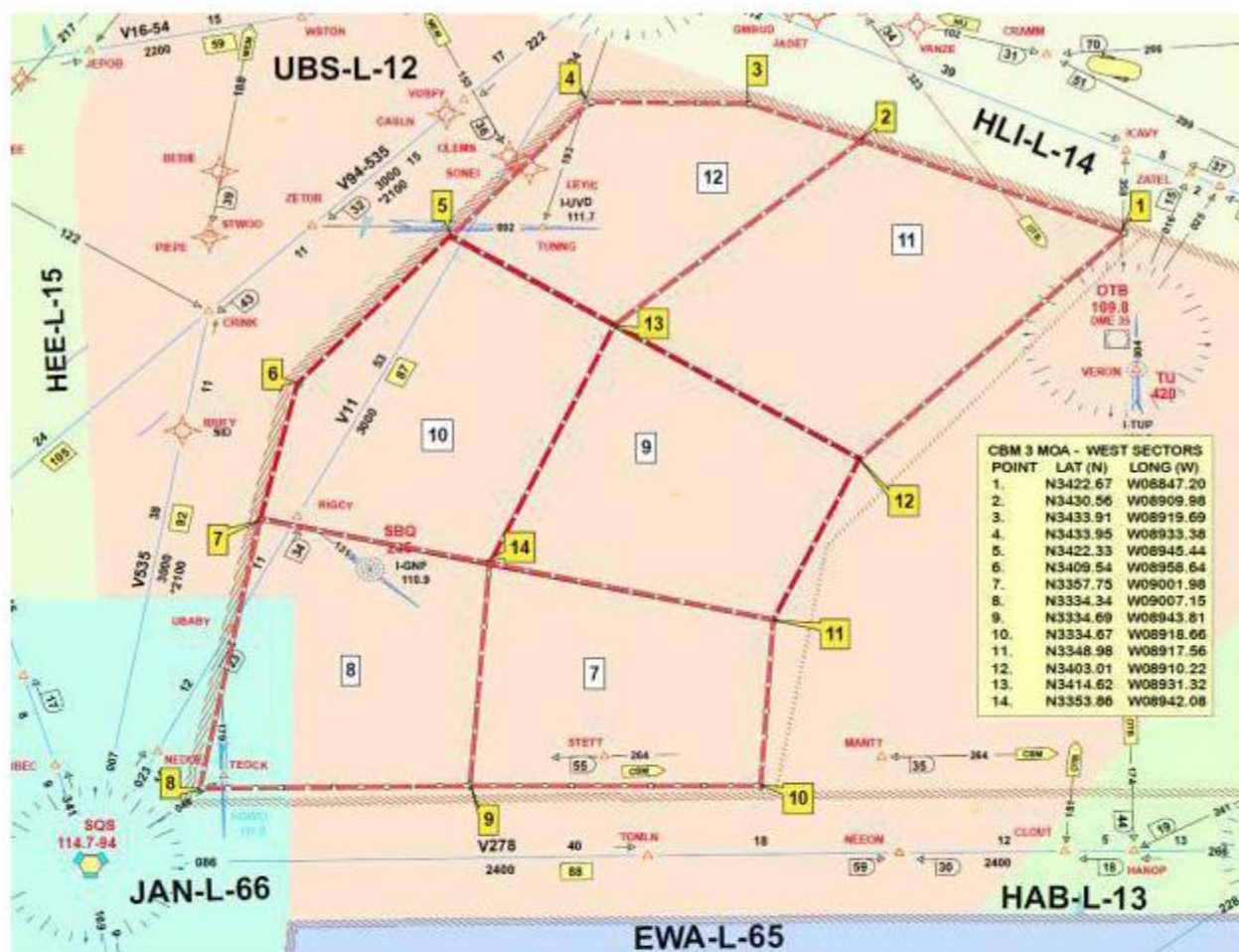


Figure A7.3. T-38/T-1 Sector Depiction.



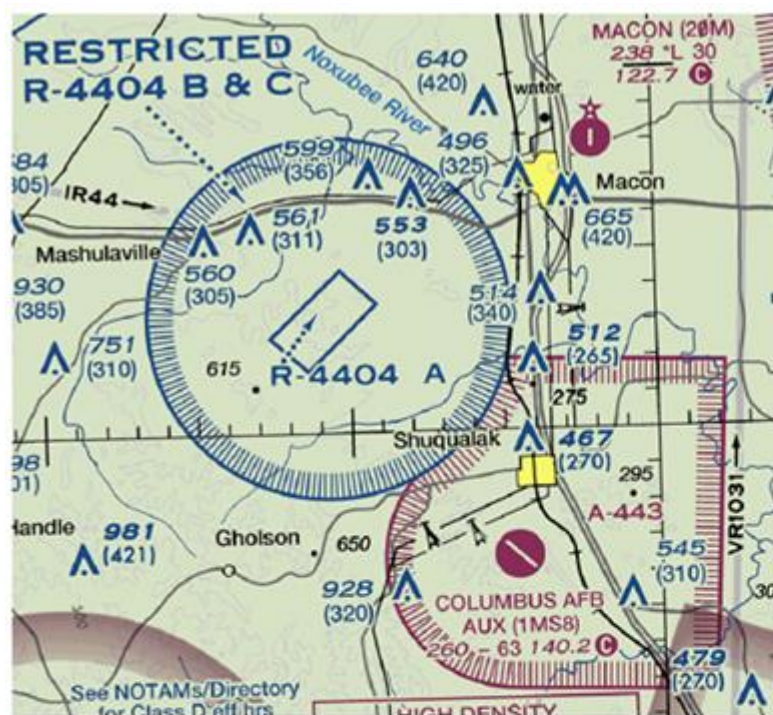
CBM2 MOA - ECHO SECTOR			
Point	Lat (N)	Long (W)	Radial/DME
1	34 39.000	88 07.000	347/028
2	34 38.230	87 42.110	028/031
3	34 38.000	87 35.000	037/034
4	34 10.000	87 34.500	092/022
5	34 11.500	87 48.500	089/010
6	34 16.960	87 57.640	024/006
7	34 22.500	88 07.000	332/012
8	34 26.650	87 48.440	CBM033/057

Figure A7.4. T-38/T-1 Sector Depiction.



CBM 3 MOA West Sectors			
Number	FRD	LAT (N)	LONG(W)
1	CBM339047	3422.67	8847.20
2	CBM325063	3430.56	8909.98
3	CBM322071	3433.91	8919.69
4	CBM315079	3433.95	8933.38
5	CBM304079	3422.33	8945.44
6	CBM292083	3409.54	8958.64
7	CBM284082	3357.75	9001.98
8	CBM268084	3334.34	9007.15
9	CBM267065	3334.69	8943.81
10	CBM265044	3334.67	8918.66
11	CBM284044	3348.98	8917.56
12	CBM304044	3403.01	8910.22
13	CBM304065	3414.62	8931.32
14	CBM284065	3353.86	8942.08

Figure A7.5. R4404 Depiction.



R-4404A		R-4404B		R-4404C	
Boundaries		Boundaries		Boundaries	
Lat	Long	A circle with a 5-nautical-mile radius centered at lat. 33 03'11"N., long. 88 40'41"W		A circle with a 5-nautical-mile radius centered at lat. 33 03'11"N., long. 88 40'41"W	
33 02'39"N	88 42'37"W				
33 04'37"N	88 40'18"W				
33 03'34"N	88 39'08"W				
33 01'43"N	88 41'23"W				
Altitudes	Times	Altitudes		Altitudes	
SFC-11,500'MSL	0700L-1800L	1,200'MSL-11,500'MSL		11,500'MSL-14,500'MSL	

Attachment 8

T-1 SECTOR DEPICTION

Figure A8.1. T-1 Sector Depiction.

**CBM4 MOA - PICKWICK**

Point	Lat (N)	Long (W)	Radial/DME (MEM)
1	34 56.35	088 46.19	093/060
2	34 54.41	088 18.32	093/083
3	34 53.98	088 12.26	093/088
4	34 52.46	087 51.68	093/105
5	35 23.49	087 53.85	076/105
6	35 19.98	088 14.19	076/088
7	35 18.94	088 20.17	076/083
8	35 14.50	088 45.24	076/062
9	35 12.02	088 47.12	078/060

Attachment 9

SURGE SECTORS DEPICTION

Figure A9.1. Surge Sector Depiction.

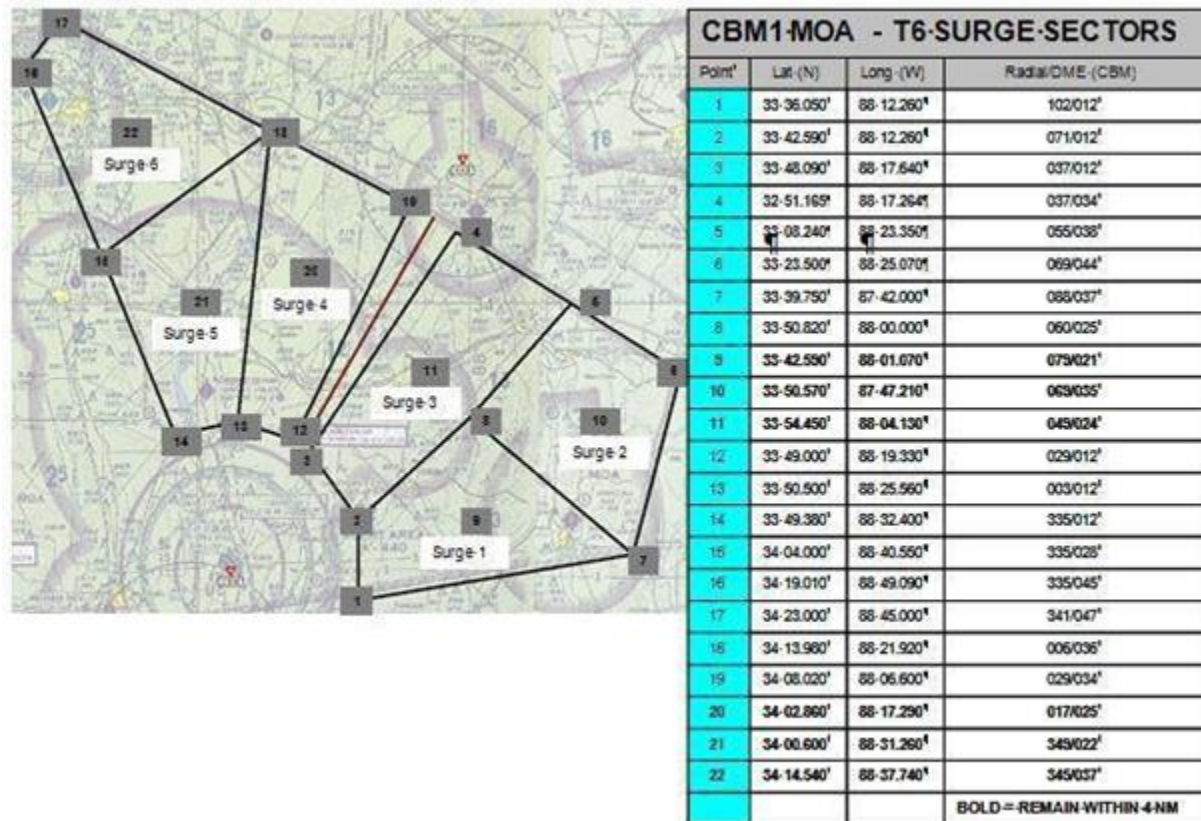
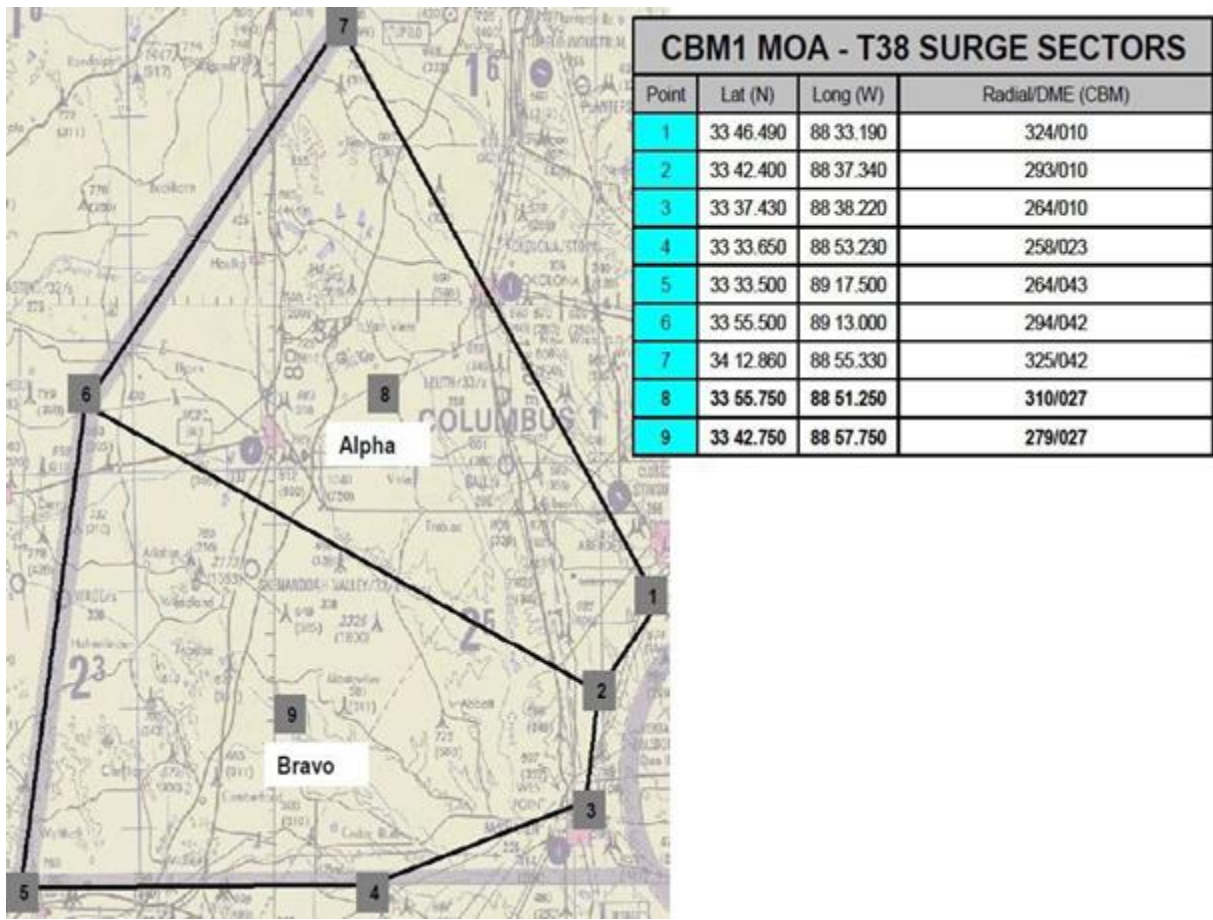


Figure A9.2. Surge Sector Depiction.



MEI1E MOA - T38 SURGE			
Point	Lat (N)	Long (W)	Radial/DME (CBM)
1	33 25.000	88 00.000	121/026
2	33 18.500	87 49.000	123/037
3	33 11.000	87 48.500	131/042
4	32 51.170	88 17.270	171/048
5	33 07.620	88 25.000	178/031
6	33 23.780	88 25.000	176/015
7	34 28.38	87 41.50	149/029
			BOLD = REMAIN WITHIN 5 NM

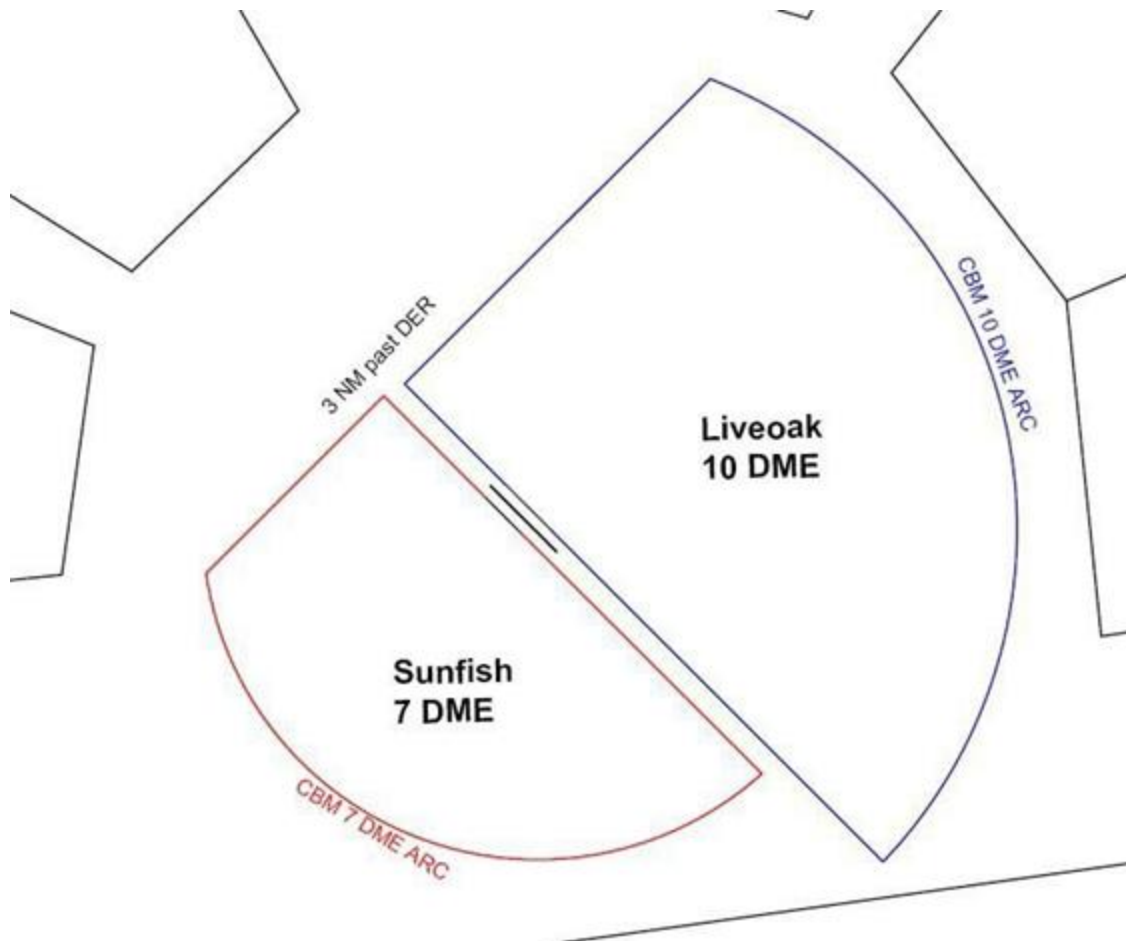
Attachment 10

SUNFISH/LIVEOAK PRACTICE AREA

A10.1. RUNWAY 31 Sunfish. SFC to 3,500 feet MSL. Inside runway centerline to 7 DME semicircle, excluding past 3NM beyond departure end of runway (DER). Pattern altitude is 1,200 feet MSL.

A10.2. RUNWAY 31 LiveOak. SFC to 3,500 feet MSL. Outside runway centerline to 10 DME semicircle, excluding past 3NM beyond DER. Pattern altitude is 1,700 feet MSL.

Figure A10.1. Sunfish/LiveOak Practice Area.

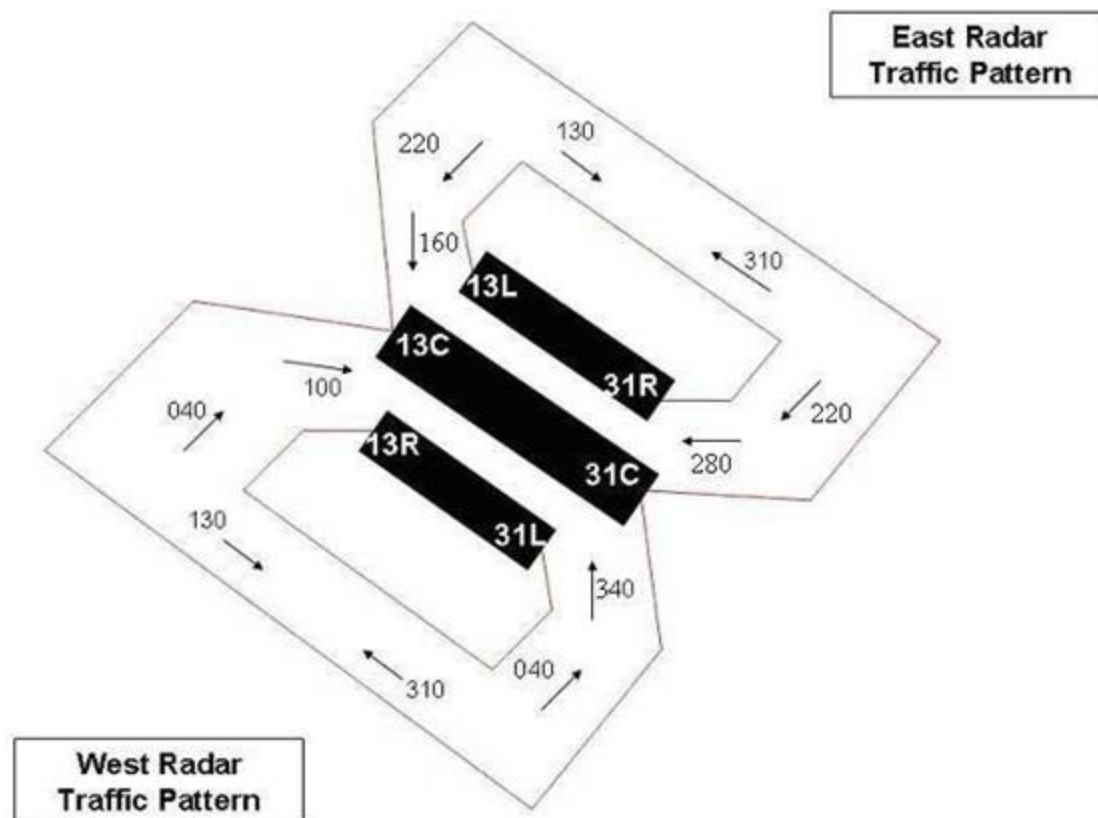


A10.3. RWY 13 Sunfish. SFC to 3,500 feet MSL. Inside runway centerline to 7 DME semicircle, excluding past 3NM beyond departure end of runway (DER). Pattern altitude is 1,200 feet MSL.

A10.4. RWY 13 LiveOak. SFC to 3,500 feet MSL. Outside runway centerline to 10 DME semicircle, excluding past 3NM beyond DER. Pattern altitude is 1,700 feet MSL.

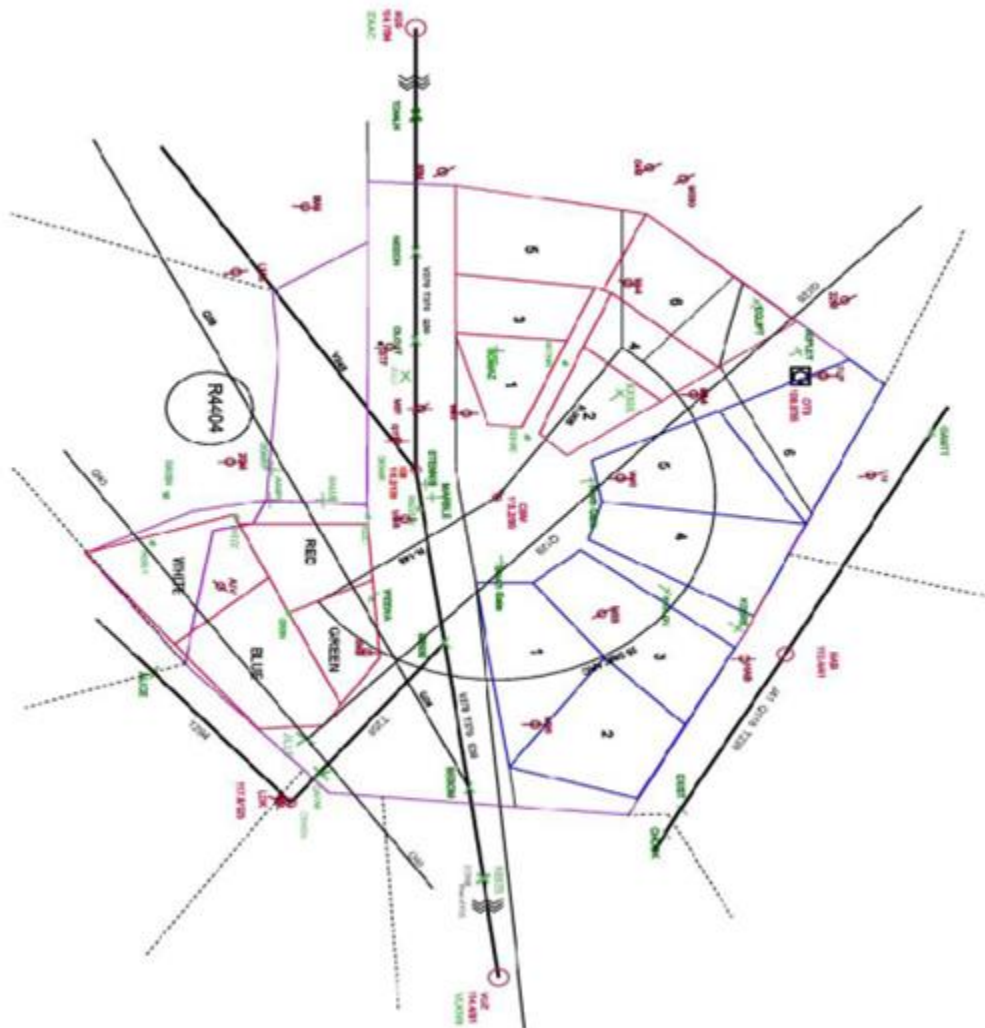
Attachment 11
RADAR PATTERN

Figure A11.1. Radar Pattern.



COLUMBUS AFB RAPCON AIRSPACE

Figure A12.1. COLUMBUS AFB (CAFB) Airspace.



Attachment 13**T-6 DEPARTURE PROCEDURES**

A13.1. T-6 Departure Procedures. When ATCT controls the inside runway, aircrew shall fly the IFR departure procedure. When Sunfish controls the inside runway, aircrew shall fly the VFR pattern departure procedure.

A13.1.1. VFR Pattern Departure Procedure.

A13.1.1.1. RUNWAY 31L: Aircrew shall track runway heading remaining at or below 700' MSL until turn. When aircraft is abeam alert ramp, aircrew shall turn left heading 290°. When aircraft is clear of inside downwind aircrew shall begin climb. Passing 3,500' MSL aircrew shall proceed with assigned profile.

A13.1.1.2. RUNWAY 13R: Aircrew track runway heading at or below 700' MSL. When aircraft is abeam departure end of 13C, aircrew shall begin climb. After aircraft crosses Highway 45, aircrew shall turn right heading 180°. Passing 3500' MSL, aircrew shall proceed with assigned profile.

A13.1.2. IFR Departure Procedure

A13.1.2.1. If the status is Contact Recovery or better (when there is a VFR pattern), remain at or below 700' MSL until departure end of the inside runway.

A13.1.2.2. Aircraft shall fly the published IFR departure procedure, track runway heading then:

A13.1.2.2.1. Runway 31L/31C: Leaving 1,500' MSL, turn left heading 290°. Passing 3500' MSL, proceed with assigned profile.

A13.1.2.2.2. Runway 13R/13C: Leaving 1,500' MSL, turn right heading 180°. Passing 3500' MSL, proceed with assigned profile.

A13.1.3. WEST PROFILES.

A13.1.3.1. BENGAL: "CLEARED BENGAL, SQUAWK (XXXX)". The aircraft is cleared to CBM via VFR pattern departure procedures or IFR departure procedure as appropriate, Bengal profile/canned flight plan. Aircrew shall climb and maintain 15,000'; departure frequency will be **CH 4**. Aircraft shall proceed direct BENRE (CBM293/09), direct ARONN (CBM293/26), direct QUIBL (CBM293/31), and maintain 15,000' MSL (7,000' MSL for low transition, if requested by aircrew). Aircraft shall be at or above 5,000' MSL by BENRE (CBM293/09) and remain at or below 7,000' MSL until BENRE (CBM293/09). Aircraft shall be at 15,000' by QUIBL (CBM293/31); upon reaching 15,000' (7,000' MSL low transition, if requested by aircrew) aircraft shall proceed direct to assigned area.

NOTE: Aircraft may climb/descend once established within area boundaries. Refer to **paragraph A13.1.3.1.1.** for additional BENGAL departure verbiage.

A13.1.3.1.1. BENGAL Profile Amendments.

A13.1.3.1.1.1. “PROCEED DIRECT BLOCKS ENROUTE”. Upon hearing this amendment, the aircrew is then cleared to fly direct the assigned area while maintaining the respective block altitudes.

A13.1.3.1.1.2. “AT POINT XXXX, PROCEED DIRECT BLOCKS ENROUTE”. This amendment will follow the published departure until point XXXX, then fly direct the assigned area while maintaining the respective block altitudes.

A13.1.3.1.1.3. “MAINTAIN BLOCKS ON THE BENGAL”. This amendment will follow the published departure procedure ground track, while maintaining the respective block altitudes. The aircrew will not turn to the assigned area until directed to do so.

A13.1.3.1.1.4. “LOW TRANSITION APPROVED” This amended will allow the aircraft to proceed from present position direct to their assigned area at 7,000 MSL. Upon reaching the assigned area, the aircrew is authorized to climb to block altitudes.

A13.1.3.2. ARONN (CBM293/26): “CLEARED ARONN (CBM293/26), SQUAWK (XXXX)”. The aircraft is cleared to CBM via VFR pattern departure procedures or IFR departure procedure as appropriate, ARONN (CBM293/26) profile/canned flight plan. Aircrew shall climb and maintain 14,000’; departure frequency will be **CH 4**. Aircraft shall proceed direct BENRE (CBM293/09), direct ARONN (CBM293/26). Aircraft shall be at or above 5,000’ MSL by BENRE (CBM293/09) and remain at or below 7,000’ MSL until BENRE (CBM293/09). Aircraft shall be at 14,000’ by ARONN (CBM293/26). On initial call-up request VOR/DME G or VOR/DME H and expect clearance via ARONN (CBM293/26). After passing ARONN (CBM293/26) execute approach to missed approach holding and upon completion of holding remain within the low blocks of the respective area.

A13.1.3.3. TUPELO: “CLEARED TUPELO, SQUAWK (XXXX)”. The aircraft is cleared to Tupelo via VFR pattern departure procedures or IFR departure procedure as appropriate, Tupelo profile/canned flight plan. Aircrew shall climb and maintain 5,000’; departure frequency will be **CH 4**. Aircraft shall proceed direct BENRE (CBM293/09) direct ARONN (CBM293/26) and maintain 5,000’. Aircraft shall be at 5,000’ MSL by BENRE (CBM293/09). At ARONN (CBM293/26), aircrew shall proceed direct to Tupelo (OTB).

A13.1.3.4. GREENWOOD: “CLEARED GREENWOOD, SQUAWK (XXXX)”. The aircraft is cleared to Greenwood via VFR pattern departure procedures or IFR departure procedure as appropriate, Greenwood profile/canned flight plan. Aircrew shall climb and maintain 10,000’ MSL; departure frequency will be **CH 4**. Aircraft shall turn direct HANOP (CBM241/19) and maintain 10,000’ MSL. At HANOP (CBM241/19), aircrew shall join V278/T370 to SIDON (SQS), then direct Greenwood (GWO).

A13.1.3.5. SR-137: “CLEARED SR-137, SQUAWK (XXXX)”. The aircraft is cleared to SR-137 Point A via VFR pattern departure procedures or IFR departure procedure as appropriate, SR-137 profile/canned flight plan. Aircrew shall climb and maintain 4,000’ MSL, departure frequency will be **CH 4**. Aircraft shall turn direct HANOP (CBM241/19) and maintain 4,000’ MSL. At HANOP (CBM241/19) aircrew shall proceed direct to SR-137 point A.

A13.1.3.6. GTR: “CLEARED Golden Triangle, SQUAWK (XXXX)”. The aircraft is cleared to GTR via VFR pattern departure procedures or IFR departure procedure as appropriate, GTR canned flight plan. Aircraft shall climb and maintain 4,000’; departure frequency will be **CH 4**. Aircraft shall turn direct Bigbee (IGB). Expect radar vectors prior to reaching Bigbee (IGB).

NOTE: *Make follow-on request with GTR ATCT prior to last pattern/approach.*

A13.1.3.7. GRENADA: “CLEARED GRENADA, SQUAWK (XXXX)”. The aircraft is Cleared to Grenada via VFR pattern departure procedures or IFR departure procedure as appropriate, Grenada profile/canned flight plan. Aircrew shall climb and maintain 6,000’; departure frequency will be **CH 4**. Aircraft shall proceed direct BENRE (CBM293/09), direct KGNF and maintain 6,000’. Aircraft shall be at 6,000’ MSL by BENRE (CBM293/09).

A13.1.3.8. OXFORD: “CLEARED OXFORD, SQUAWK (XXXX)”. The aircraft is cleared to Oxford via VFR pattern departure procedures or IFR departure procedure as appropriate, Oxford profile/canned flight plan. Aircrew shall climb and maintain 6,000’; departure frequency will be **CH 4**. Aircraft shall proceed direct BENRE (CBM293/09), direct KUOX and maintain 6,000’. Aircraft shall be at 6,000’ MSL by BENRE (CBM293/09).

A13.1.4. SOUTH PROFILES.

A13.1.4.1. GUNSHY: “CLEARED GUNSHY, SQUAWK (XXXX)”. The aircraft is cleared to DAVSN (CBM185/37) via VFR pattern departure procedures or IFR departure procedure as appropriate, Gunshy profile/canned flight plan. Aircrew shall climb and maintain 6,000’; departure frequency will be **CH 4**. Aircraft shall proceed direct NARRO (CBM189/09), direct DDART (CBM189/26) and be at 6000’ MSL by NARRO (CBM189/09). Upon reaching DDART (CBM189/26), aircraft proceed direct DAVSN (CBM185/37).

A13.1.4.2. MERIDIAN: “CLEARED MERIDIAN, SQUAWK (XXXX)”. The aircraft is cleared to Meridian via VFR pattern departure procedures or IFR departure procedure as appropriate, Meridian profile/canned flight plan. Aircrew shall climb and maintain 6,000’; departure frequency will be **CH 4**. Aircraft shall proceed direct NARRO (CBM189/09), direct TOMEI (CBM189/41) and be at 6000’ MSL by NARRO (CBM189/09). At TOMEI (CBM189/41), aircraft shall proceed direct MEI.

A13.1.4.3. BUZZSAW: “CLEARED BUZZSAW, SQUAWK (XXXX)”. The aircraft is cleared to CBM via VFR pattern departure procedures or IFR departure procedure as appropriate, Buzzsaw profile/canned flight plan. Aircrew shall climb and maintain 15,000’; departure frequency will be **CH 4**. Aircraft shall proceed direct BUZER (CBM170/09) direct BUZLI (CBM170/15) and maintain 15,000’ MSL (7,000’ MSL for low transition, if requested by aircrew). Aircraft shall be at or above 6,000’ MSL by BUZER (CBM170/09) and at or below 10,000’ MSL until BUZLI (CBM170/15). Aircraft shall depart BUZLI (CBM170/15) direct PATZZ (CBM175/30), direct GRIIN (CBM146/29). Upon aircraft reaching 15,000’ (7,000’ MSL low transition, if requested by aircrew), aircraft shall proceed direct to the assigned area. Aircraft may climb/descend once established within area boundaries.

A13.1.4.3.1. BUZZSAW Profile Amendments.

A13.1.4.3.1.1. “PROCEED DIRECT BLOCKS ENROUTE”. Upon hearing this amendment, the aircrew is then cleared to fly direct the assigned area while maintaining the respective block altitudes.

A13.1.4.3.1.2. “AT POINT XXXX, PROCEED DIRECT BLOCKS ENROUTE”. This amendment will follow the published departure until Point XXXX, then fly direct the assigned area while maintaining the respective block altitudes.

A13.1.4.3.1.3. “MAINTAIN BLOCKS ON THE BUZZSAW”. This amendment will follow the published departure procedure ground track, while maintaining the respective block altitudes.

The aircrew will not turn to the assigned area until directed to do so.

A13.1.4.3.1.4. “LOW TRANSITION APPROVED” This amendment will allow the aircraft to proceed from present position direct to their assigned area at 7,000 MSL. Upon reaching the assigned area, the aircrew is authorized to climb to block altitudes.

A13.1.5. EAST PROFILES.

A13.1.5.1. TUSCALOOSA: “CLEARED TUSCALOOSA, SQUAWK (XXXX).” The aircraft is cleared to TCL via VFR pattern departure procedures or IFR departure procedure as appropriate, TCL profile/canned flight plan. Aircrew shall climb and maintain 6,000’; departure frequency will be **CH 4**. Aircraft shall proceed direct NARRO (CBM189/09), direct MINIM (CBM106/21) and maintain 6,000’ MSL. Aircraft shall be at 6,000’ MSL by NARRO (CBM189/09). At MINIM (CBM106/21) aircrew shall intercept V-245 to LDK.

A13.1.5.2. CATRN: “CLEARED CATRN (LDK005/16), SQUAWK (XXXX).” The aircraft is cleared to TCL via VFR pattern departure procedures or IFR departure procedure as appropriate, CATRN (LDK005/16) profile/canned flight plan. Aircrew shall climb and maintain 10,000’; departure frequency will be **CH 4**. Aircraft shall proceed direct NARRO (CBM189/09), direct MINIM (CBM106/21) and maintain 10,000’ MSL. Aircraft shall be at or above 6,000’ MSL by NARRO (CBM189/09). At MINIM (CBM106/21) aircrew shall proceed direct to CATRN (LDK005/16).

A13.1.5.3. VULCAN: “CLEARED VULCAN, SQUAWK (XXXX).” The aircraft is cleared to BHM via VFR pattern departure procedures or IFR Departure procedure as appropriate, Vulcan profile/canned flight plan. Aircrew shall climb and maintain 9,000’; departure frequency will be **CH 4**. Aircraft shall proceed direct NARRO (CBM189/09), direct MINIM (CBM106/21), direct VUZ and maintain 9,000' MSL. Aircraft shall be at or above 6,000' MSL by NARRO (CBM189/09).

A13.1.5.4. VR-1014: “CLEARED VR 1014, SQUAWK (XXXX).” The aircraft is cleared to the CBM122/19 via VFR pattern departure procedures or IFR departure procedure as appropriate, VR 1014 profile/canned flight plan. Aircrew shall climb and maintain 4,000’; departure frequency will be **CH 4**. Aircraft shall proceed direct NARRO (CBM189/09), then proceed direct Point A and maintain 4,000' MSL.

A13.1.5.5. RADAR PATTERN PROFILES: “(C/S, CLEARED RADAR PATTERN, SQUAWK (XXXX))”. The aircraft is cleared to CBM, via radar vectors. Aircraft shall fly runway heading, maintain 4,000’. Aircrew shall expect radar vectors for an instrument approach. Departure frequency is CH 16.

NOTE: *Departure shall be via the center runway.*

A13.1.6. VFR Profiles.

A13.1.6.1. Non-Tower Airfield (NTA) North (RWY 31 in use). The aircraft will depart CBM VFR via the VFR pattern departure procedure direct to HANOP (CBM241/19), then via flight plan route. After 5A4 the aircraft will be radar vectored with arrival in the RWY 31 radar pattern until the aircraft can be cleared direct 3M8.

A13.1.6.2. Non-Tower Airfield (NTA) South (RWY 13 in use). The aircraft will depart CBM VFR via the VFR pattern departure procedure direct to NARRO (CBM189/09) then via flight plan route. After 3M8 the aircraft will be radar vectored with arrival in the RWY 13 radar pattern until the aircraft can be cleared direct M44.

Attachment 14**T-38 DEPARTURE PROCEDURES**

A14.1. T-38 Departure Procedures. COLUMBUS STANDARD INSTRUMENT DEPARTURE (SID) Flown to the CBM1, 2, 3, and 4 MOA/ATCAA, Meridian MOA/ATCAA, Birmingham MOA, VR1031, IR68, and instrument and navigation profiles to the North, East, and West.

A14.1.1. Aircraft will fly the COLUMBUS SID Departure, then proceed with assigned profile.

A14.1.2. Canned routes.

A14.1.2.1. Canned routing to JAN, MEI and GWO will utilize West Profile.

A14.1.2.2. Canned routing to BHM, MGM and HSV will utilize East Profile.

A14.1.3. Cross-country (DD175). Aircraft will fly profile best suited for projected route of flight:

A14.1.3.1. Westbound departures will file IGB or CLOUT (CBM247/24) as initial fix and will fly West profile.

A14.1.3.2. Eastbound departures will file MINIM (CBM106/21) as initial fix and will fly East profile.

A14.1.3.3. Northbound departures will file HAB or CBM008/41 as initial fix and will fly North profile.

A14.2. Departure Profiles. All departure profiles begin at the end of the COLUMBUS SID.

A14.2.1. North Profile.

A14.2.1.1. Runway 13C/13L: Aircraft will execute a left turn to intercept CBM 7 DME arc, arc northwest. Cross CBM080 radial at or above 6000'. Aircraft listing CBM008/41DME as initial fix will intercept CBM008 outbound to CBM008/41DME; cross CBM008/41DME at 7000' or as assigned. Aircraft listing HAB (Hamilton VORTAC) as initial fix will intercept CBM033 outbound to HAB; cross HAB at 7000' (15,000' for MOA 2) or as assigned. Aircraft listing WOLOV as initial fix will intercept CBM033 outbound to WOLOV; cross WOLOV at 7000'.

A14.2.1.2. Runway 31C/31R: Aircraft will execute a right turn to intercept CBM 7 DME arc, arc northeast. Cross CBM024 radial at or above 6000'. Aircraft listing CBM008/41DME as initial fix will intercept CBM008 outbound to CBM008/41DME; cross CBM008/41DME at 7000' or as assigned. Aircraft listing HAB (Hamilton VORTAC) as initial fix will intercept CBM033 outbound to HAB; cross HAB at 7000' (15,000' for MOA 2) or as assigned. Aircraft listing WOLOV as initial fix will intercept CBM033 outbound to WOLOV; cross WOLOV at 7000'.

A14.2.2. East Profile.

A14.2.2.1. Runway 13C/13L: Aircraft will turn left heading 110 to join V278/T370 to MINIM (CBM106/21), expect requested altitude five minutes after departure.

A14.2.2.2. Runway 31C/31R: Aircraft will execute a right turn to intercept CBM 7 DME arc, arc northeast. Cross CBM024 radial at or above 6000'; intercept CBM106 to MINIM (CBM106/21).

A14.2.3. West Profile.

A14.2.3.1. Runway 13C/13L. Aircraft will execute a left turn to intercept CBM 7 DME arc, arc northwest. Cross the CBM080 radial at or above 6000'; cross the CBM310 radial at or above 16,000'; intercept CBM247 to CLOUT (CBM247/24), then TOMLN (SQS086/40).

A14.2.3.2. Runway 31C/31R. Aircraft will execute a right turn to intercept CBM 7 DME arc, arc northeast. Cross the CBM024 radial at or above 6000'; cross the CBM140 radial at or above 16,000'; proceed direct IGB VORTAC via IGB 060 radial, then TOMLN (SQS086/40).

A14.2.4. Ripley Profile.

A14.2.4.1. Runway13C/13L. Aircraft will execute a left turn to intercept CBM 7 DME arc, arc northwest. Cross the CBM080 at or above 6000'. Intercept CBM330 outbound to RIPLEY (CBM330/40). Be at or above 8000' by 30 DME; cross Ripley at FL 230. Aircraft must remain clear of CBM1 MOA sectors.

A14.2.4.2. Runway 31C/31R. Aircraft will execute a right turn heading 360° to intercept CBM330 outbound to RIPLEY (CBM330/40). Be at or above 8000' by 30 DME; cross Ripley at FL 230. Aircraft must remain clear of CBM1 MOA sectors.

NOTE: The RIPLEY (CBM330/40) shall only be utilized if your destination is CBM 3 MOA or Sectors 5/6 in MOA 1. It shall not be filed for cross country flights.

A14.3. Departure Clearances.

A14.3.1. North MOA: "(C/S, CLEARED NORTH MOA, SQUAWK (XXXX))." The aircraft is cleared to clearance limit via the COLUMBUS SID, north profile/canned flight plan, climb and maintain 7,000', departure frequency is **CH 4**. Aircraft will intercept CBM033 radial outbound to WOLOV. RAPCON will clear aircraft into assigned sector in MOA 1. If aircrew reaches WOLOV without sector assignment, aircrew shall enter holding at WOLOV at 7,000', request either MOA 2/3, or request vectors back to the pattern.

A14.3.2. Echo MOA: "(C/S, CLEARED ECHO MOA, SQUAWK (XXXX))." The aircraft is cleared to CBM via the COLUMBUS SID, North profile/canned flight plan, climb and maintain 15,000', departure frequency is **CH 4**. Aircraft will intercept CBM033 radial outbound to Hamilton VORTAC. Memphis Center will assign the Echo MOA (MOA 2) on CH 17. If aircrew has no contact with RAPCON or Memphis Center, aircraft shall proceed to Echo MOA and return to base using standard recovery routings.

A14.3.3. Echo MOA: “(C/S, CLEARED ECHO 4, SQUAWK (XXXX).” The aircraft is cleared to CBM via the COLUMBUS SID, North profile/canned flight plan, climb and maintain 150B170, departure frequency is **CH 4**. Aircraft will intercept CBM033 radial outbound to Hamilton VORTAC. Memphis Center will assign the Echo MOA (MOA 2) on CH 17. If aircrew has no contact with RAPCON or Memphis Center, aircraft shall proceed to Echo MOA and return to base using standard recovery routings.

A14.3.4. West MOA: “(C/S, CLEARED WEST MOA VIA (West or Ripley Profile), SQUAWK (XXXX).” The aircraft is cleared to CBM via the COLUMBUS SID, West profile or Ripley profile. Aircraft shall climb and maintain FL 230, departure frequency is **CH 4**. Memphis Center will assign MOA 3 (West MOA) on **CH 5**. If communication is lost prior to contact with Memphis Center, turn in the shortest direction to KOBRE and intercept the 33 DME arc, arc North to KOBRE and execute the penetration.

A14.3.5. West MOA: “(C/S, CLEARED WEST MOA VIA RIPLEY (CBM330/40) 4, SQUAWK (XXXX).” The aircraft is cleared to CBM via the COLUMBUS SID, Ripley profile. Aircraft shall climb and maintain 210B230, departure frequency is **CH 4**. Memphis Center will assign MOA 3 (West MOA) on **CH 5**. If communication is lost prior to contact with Memphis Center, turn in the shortest direction to KOBRE and intercept the 33 DME arc, arc North to KOBRE and execute the penetration.

A14.3.6. RADAR DELAY PROFILES: “(C/S, CLEARED RADAR DELAY, SQUAWK (XXXX).” The aircraft is initially cleared to CBM, via radar vectors. Aircraft shall fly runway heading, maintain 4,000’. Aircrew shall expect radar vectors for an instrument/contact approach. Departure frequency is CH 16. After completion of the last practice approach advise Arrival of planned profile departure to follow i.e., NORTH/ECHO MOA.

A14.3.7. RADAR PATTERN PROFILES: “(C/S, CLEARED RADAR PATTERN, SQUAWK (XXXX).” The aircraft is cleared to CBM, via radar vectors. Aircraft shall fly runway heading, maintain 4,000’. Aircrew shall expect radar vectors for an instrument approach.

A14.3.8. VR 1014: “(C/S, CLEARED VR 1014, SQUAWK (XXXX).” The aircraft is cleared to the CBM122/019. Aircrew shall fly runway heading, climb and maintain 4,000’. Aircrew shall expect radar vectors to VR 1014 Point A. Departure frequency is CH 16.

A14.3.9. VR 1031: “(C/S, CLEARED VR 1031, SQUAWK (XXXX).” The aircraft is cleared to the VUZ 168/043 via the COLUMBUS SID, East profile/canned flight plan, then V245 to LDK, then direct VUZ 168/043 and shall climb and maintain 17,000’. Departure frequency is **CH 4**.

A14.3.10. IR 66: “(C/S, CLEARED IR 66, SQUAWK (XXXX).” The aircraft is cleared to CBM. Aircrew shall fly runway heading, climb and maintain 5,000’. Aircrew shall expect radar vectors to IR-66 Point B (HAB 105/016). Departure frequency is CH 4.

A14.3.11. IR 68: “(C/S, CLEARED IR 68, SQUAWK XXXX).” The aircraft is cleared via the COLUMBUS SID, West profile/canned flight plan, climb and maintain FL 220 to CLOUT (CBM247/24) then SQS then direct the entry point A (SQS348/012). Departure frequency is **CH 4**.

A14.3.12. IR 91: “(C/S, CLEARED IR 91, SQUAWK XXXX).” The aircraft is cleared to CBM. Aircrew shall fly runway heading, climb and maintain 4,000’. Aircrew shall expect radar vectors to IR-91 Point A (CBM269/026). Departure frequency is CH 14.

A14.3.13. VFR Class “C” departure: “(C/S, FLY RUNWAY HEADING, MAINTAIN XXXX’, SQUAWK (XXXX).” Aircrew shall fly runway heading, maintain VFR at assigned altitude; departure frequency will be **CH 4**. Aircrew shall expect own navigation and altitude outside 10 DME.

A14.3.14. SEARAY: “(C/S, CLEARED SEARAY, SQUAWK XXXX).” The aircraft is cleared to CBM. Aircrew shall fly runway heading, climb and maintain 4,000’ and contact departure CH 14. Expect radar vectors to R4404 (IGB 199/027).

A14.4. Outside Runway Departures. Aircraft receive takeoff clearance from the controlling agency. When departing on an IFR clearance, aircrew shall switch to the departure frequency after takeoff passing the departure end.

NOTE: For breakouts, aircraft will be VFR until issued an IFR clearance from RAPCON. (Break outs requesting IFR shall be on a North MOA or Echo profile)

A14.4.1. Outside Runway VFR Departures. (Status must be Dual or better) Aircraft filed on a COLUMBUS SID to the North MOA have the following VFR departure option. After takeoff from LiveOak, aircraft shall turn crosswind and break out to radar after informing LiveOak. Aircrews will fly 040 heading, climb to 2,500’ MSL and squawk assigned IFF code. Aircrew shall contact arrival on CH 16 with intentions. Aircraft will be VFR until issued an IFR clearance from RAPCON. If no sector available/assigned, aircraft shall remain VFR and proceed to the North/South Gate or obtain clearance for a radar approach.

A14.5. TORCH-TWO Profile (used for T-38 FCF only). IAW the Memphis Center UPT LOA, this is a day/VMC use only profile for supersonic FCFs. Aircrew shall obtain clearance (CH 19) when holding number one. Aircrew shall request a frequency change from ATCT, prior to contacting clearance delivery, once aircraft is confirmed number one for takeoff. Aircrew shall inform the runway controlling agency when ready for takeoff and add any void time associated with the clearance. Aircrew shall expect block FL 310 to FL 390 from Memphis for the supersonic run.

Attachment 15**T-1 DEPARTURE PROCEDURES**

A15.1. General. T-1 aircraft should fly local departures at 220 KIAS until level.

A15.2. VFR Departures. Prior to departure, aircrew shall contact Clearance Delivery (**CH 19**) for Class “C” departure instructions to include a squawk and departure frequency for flight following. On initial taxi and ready for takeoff calls, aircrew shall include the route of flight.

Once airborne, aircrew shall request flight following and remain clear of Columbus pattern and MOA airspace.

A15.3. Departure Profiles. All departure profiles begin at the end of the COLUMBUS SID.

A15.3.1. North Profile.

A15.3.1.1. Runway 13C/13L: Aircraft will execute a left turn to intercept CBM 7 DME arc, arc northwest and remain within 1 nm on arc. Cross CBM080 radial at or above 6000'. Aircraft listing CBM008/41DME as initial fix will intercept CBM008 outbound to CBM008/41DME; cross CBM008/41DME at 7000' or as assigned. Aircraft listing HAB (Hamilton VORTAC) as initial fix will intercept CBM033 outbound to HAB; cross HAB at 7000' or as assigned. Aircraft listing WOLOV as initial fix will intercept CBM033 outbound to WOLOV; cross WOLOV at 7000'.

A15.3.1.2. Runway 31C/31R: Aircraft will execute a right turn to intercept CBM 7 DME arc, arc northeast and remain within 1 nm on arc. Cross CBM024 radial at or above 6000'. Aircraft listing CBM008/41DME as initial fix will intercept CBM008 outbound to CBM008/41DME; cross CBM008/41DME at 7000' or as assigned. Aircraft listing HAB (Hamilton VORTAC) as initial fix will intercept CBM033 outbound to HAB; cross HAB at 7000' or as assigned. Aircraft listing WOLOV as initial fix will intercept CBM033 outbound to WOLOV; cross WOLOV at 7000'.

A15.3.2. East Profile.

A15.3.2.1. Runway 13C/13L: Aircraft will turn left heading 110 to join V278/T370 to MINIM (CBM106/21).

A15.3.2.2. Runway 31C/31L: Aircraft will execute a right turn to intercept CBM 7 DME arc, arc northeast and remain within 1 nm on arc. Cross CBM024 radial at or above 6000'; intercept CBM106 to MINIM (CBM106/21).

A15.3.3. West Profile.

A15.3.3.1. Runway 13C/13L. Aircraft will execute a left turn to intercept CBM 7 DME arc, arc northwest and remain within 1 nm on arc. Cross the CBM080 radial at or above 6000'; cross the CBM310 radial at or above 16,000'; intercept CBM247 to CLOUT (CBM247/24).

A15.3.3.2. Runway 31C/31R. Aircraft will execute a right turn to intercept CBM 7 DME arc, arc northeast and remain within 1 nm on arc. Cross the CBM024 radial at or above 6000'; cross the CBM140 radial at or above 16,000'; proceed direct IGB VORTAC via IGB 060 radial.

A15.4. Simulated Air Refueling Tracks. Use the COLUMBUS SID, West profile/canned flight plan for the Berry Anchor, Tupelo Anchor and Greenville Anchor. After hand-off to center, aircrew shall coordinate continued climb/descent to desired altitude. For the Tupelo Anchor, aircrew may anticipate FL 230 when receiving clearance from CD.

A15.5. Canned Routes. See [Attachment 19](#).

A15.5.1. The following canned flight plans will utilize the West profile: C1, C3, C5, C10, D1, D3, D5, W1-W5, AR1-AR6, IR1-IR3, and VR5.

A15.5.2. The following canned flight plans will utilize the East profile: C2, C4, C6-C8, VR1, VR2, and VR7.

A15.5.3. The following canned flight plans will utilize the North profile: C9, N1-N6, P1-P4, IR5, VR4, and VR8.

A15.6. Cross-country (DD 1801). Aircraft will fly profile best suited for projected route of flight.

A15.6.1. Westbound departures will file IGB or CLOUT (CBM247/24) as initial fix and will fly West profile.

A15.6.2. Eastbound departures will file MINIM (CBM106/21) as initial fix and will fly East profile.

A15.6.3. Northbound departures will file HAB, or CBM008/41DME as initial fix and will fly North profile.

Attachment 16**ANNUAL REVIEW ITEMS****A16.1. 1st Quarter AOB – Review Month (March):****A16.1.1. Letters of Agreement:**

A16.1.1.1. Memphis ARTCC and Columbus RAPCON, Approach Control Service (OPR: 14 OSS/OSA).

A16.1.1.2. Memphis ARTCC and 14 FTW, SUPT Operations (OPR: 14 OSS/OSOP; 14 OSS/OSA).

A16.1.1.3. Birmingham ATCT and Columbus RAPCON, EnRoute Approach Control Service (OPR: 14 OSS/OSA).

A16.1.1.4. Golden Triangle Regional Airport and Headquarters Air Education and Training Command (OPR: HQ AETC/A3OS).

A16.1.1.5. AMOPS and Command Post (OPR: 14 OSS/OSAB).

A16.1.1.6. AMOPS and Fire Department (Gunshy) (OPR: 14 OSS/OSAB).

A16.1.1.7. AMOPS and Weather (OPR: 14 OSS/OSAB).

A16.1.2. Operations Letters:

A16.1.2.1. Use of Emergency Power Units/Generators (OPR: 14 OSS/OSA; 14 OSS/OSW; 14 CES/CEOIE; 14 OSS/OSM).

A16.1.2.2. Maintenance/Operation of Aircraft Arresting Systems (OPR: 14 OSS/OSA; 14 CES/CEO).

A16.1.3. Operating Instructions:

A16.1.3.1. CAFBI 13-204, Airfield Operations Instruction (OPR: 14 OSS/OSA)

A16.1.3.2. CAFBI 15-101, Weather Support to Columbus Air Force Base (OPR: 14 OSS/OSW).

A16.1.4. Plans.

A16.1.4.1. CAFB Plan 280, Aircraft Dispersal Reception Plan (OPR: 14 OG/CAG).

A16.1.4.2. CAFB 91-1, Mishap Response Plan (OPR: 14 FTW/SE).

A16.1.4.3. CAFB 64-106, Labor Strike Plan (OPR: 14 CONS/CC).

A16.2. 2nd Quarter AOB – Review Month (June):**A16.2.1. Letters of Agreement:**

A16.2.1.1. Memphis ARTCC, Meridian RATCF, Training Air Wing One and 14 FTW, Meridian One East/West MOA and ATC Assigned Airspace (OPR: 14 OSS/OSOP; 14 OSS/OSA).

A16.2.1.2. 14th Ops Group and Meridian RATCF, Airspace Operations (OPR: 14 OSS/OSOP; 14 OSS/OSA).

A16.2.1.3. Memphis ARTCC and Columbus AFB ATC, Service Contingency Plan Support (OPR: 14 OSS/OSA).

A16.2.1.4. Moody AFB and Columbus AFB (OPR: 14 OSS/OSAB).

A16.2.1.5. AMOP, Airfield Lighting, and Power Production (OPR: 14 OSS/OSAB).

A16.2.1.6. Columbus AFB and Keesler AFB, Backup AIS-R (OPR: 14 OSS/OSAB).

A16.2.1.7. 14 FTW and 69 Reconnaissance Group Emergency RQ-4 Procedures (OPR: 14 OSS/OSA; 319 OSS/OSO).

A16.2.2. Operations Letters:

A16.2.2.1. a. Reporting ATCALS Outages/Restoral Priorities (OPR: 14 OSS/OSA; 14 OSS/OSM).

A16.2.3. Operating Instructions:

A16.2.3.1. AOF OI 36-2807, Airfield Operations Awards Program (OPR: 14 OSS/OSA).

A16.2.3.2. AFI 13-213_CAFBSUP, Airfield Driving Instruction (OPR: 14 OSS/OSA).

A16.2.3.3. AMTOI-01 Airfield Management Training Operating Instruction (OPR: 14 OSS/OSA)

A16.2.3.4. AFI 11-418, 14 OG SUP (OPR: 14 OG/OGV)

A16.2.4. Plans:

A16.2.4.1. CAFB Plan 91-202, Bird Aircraft Strike Hazard Plan (OPR: 14 FTW/SEF)

A16.2.4.2. CAFB Wing Plans Handbook (OPR: 14 FTW/XPO)

A16.3. 3rd Quarter AOB – Review Month (September):**A16.3.1. Letters of Agreement:**

A16.3.1.1. Birmingham TRACON, Columbus RAPCON, and 14 FTW, Hi-Tide Penetration (OPR:

A16.3.1.2. 14 OSS/OSA)

A16.3.1.3. Birmingham TRACON, TCL ATCT, and 14 FTW, Practice Instrument Approaches and Patterns (OPR: 14 OSS/OSOP)

A16.3.1.4. Columbus RAPCON and GTR Contract ATCT, Approach Control Services (OPR: 14 OSS/OSA)

A16.3.1.5. Golden Triangle Regional ATCT and 14 FTW, T-6 ELP procedures (OPR: 14 OSS/OSOP)

A16.3.1.6. Backup NOTAM (OPR: 14 OSS/OSAB)

A16.3.1.7. Seymour AFB and Columbus AFB (OPR: 14 OSS/OSAB)

A16.3.1.8. 14 FTW and Brignac Flying Service (OPR: 14 OSS/OSA; Brignac Flying Service)

A16.3.2. Operations Letters:

A16.3.2.1. a. STARS and DVRS Drive Cleaning (OPR: 14 OSS/OSA)

A16.3.3. Operating Instructions:

A16.3.3.1. RAPCON OI 13-204, Facility Operating Procedures (OPR: 14 OSS/OSA)

A16.3.3.2. ATCT OI 13-204, Facility Operating Procedures (OPR: 14 OSS/OSA)

A16.3.3.3. AOF OI 13-5, Controller Training Program (OPR: 14 OSS/OSA)

A16.3.3.4. AOF OI 91-1, HATR/MISHAP/Accident Response (OPR: 14 OSS/OSA)

A16.3.4. Plans

A16.3.4.1. CAFB Plan 506, Search and Rescue Plan (OPR: 14 OG)

A16.3.4.2. CAFB IEMP 10-2, Columbus AFB Installation Emergency Management Plan (OPR: 14 CES/CEX)

A16.4. 4th Quarter AOB – Review Month (December):

A16.4.1. Letters of Agreement:

A16.4.1.1. Memphis ARTCC and 14 FTW, Special IFR Procedures for Utilization of MTRs (OPR: 14 OSS/OSOP; 14 OSS/OSA)

A16.4.1.2. Atlanta ARTCC and Columbus RAPCON, Inter-facility Coordination Procedures (OPR: 14 OSS/OSA)

A16.4.1.3. Hawkeye Helicopter and 14th Operations Group (OPR: 14 OSS/OSA)

A16.4.1.4. Mississippi State University's RASPET Flight Research Lab and 14th Ops Group (OPR: 14 OSS/OSA)

A16.4.1.5. Mississippi State University's Soaring Club and 14th Ops Group (OPR: 14 OSS/OSA)

A16.4.1.6. Mississippi State University Aerospace Engineering and Columbus RAPCON (OPR: 14 OSS/OSAR)

A16.4.1.7. Shaw AFB and Columbus AFB (OPR: 14 OSS/OSAB)

A16.4.1.8. MCAS Cherry Point and Columbus AFB (OPR: 14 OSS/OSAB)

A16.4.2. Operations Letters:

A16.4.2.1. a. Airfield Preventive Maintenance Inspection (OPR: 14 OSS/OSA)

A16.4.3. Operating Instructions:

A16.4.3.1. AOF OI 13-1, Automation Procedures (OPR: 14 OSS/OSA)

A16.4.3.2. AOF OI 13-204, Airfield Management (OPR: 14 OSS/OSA)

A16.4.3.3. AOF OI 13-201, ATCT/RAPCON/Airfield Management Coordination Procedures (OPR: 14 OSS/OSA)

A16.4.4. Plans:

A16.4.4.1. CAFB Plan 555, Hurricane Evacuation Plan (OPR: 14 OG/CAG)

A16.4.4.2. CAFB Plan 31-101, Base Defense Plan (FOUO) (OPR: 14 SFS/S5P)

Attachment 17

T-6 CANNED FLIGHT PLANS

Figure A17.1. T-6 Canned Flight Plans.

CANNED	ALTITUDE DEP/RTB	ROUTE OF FLIGHT	ETE
BENGAL	15,000/4,000	KCBM DCT BENRE DCT ARONN DCT QUIBL/D0+30 DCT KCBM	0+55
BUZZSAW	15,000/5,000	KCBM DCT BUZER DCT BUZLI DCT PATZZ DCT GRIIN/D0+30 KCBM	0+55
GREENWOOD	10,000/9,000	KCBM DCT HANOP T486 IZAAC DCT KGWO/D0+15 DCT TOMLN T486 HANOP KCBM	1+15
GRENADA	6,000/5,000	KCBM DCT BENRE DCT KGNF/D0+20 KCBM	1+10
GTR	4,000	KCBM DCT HRISN DCT KGTR/D0+30 DCT KCBM	0+40
GUNSHY PICKENS	6,000/7,000	KCBM DCT NARRO DCT DDART DCT DAVSN DCT 1MS8/D0+20 DCT HUDLY DCT PATZZ DCT GRIIN/D0+20 DCT KCBM	1+00
GUNSHY SUNFISH	6,000/4,000	KCBM DCT NARRO DCT DDART DCT DAVSN DCT 1MS8/D0+20 DCT KCBM	0+40
JACKSON	6,000/7,000	KCBM DCT HRISN DCT SARKK DCT KJAN/D0+15 DCT HRISN DCT KCBM	1+15
NTA NORTH	3,500/VFR	KCBM DCT HANOP DCT KSTF DCT M44 DCT 5A4 DCT 3M8 DCT KAIV DCT KUBS DCT KCBM	1+15
NTA SOUTH	3,500/VFR	KCBM DCT NARRO DCT KUBS DCT KAIV DCT 3M8 DCT M44 DCT KSTF DCT KCBM	1+15
MERIDIAN	6,000/7,000	KCBM DCT NARRO DCT TOMEI DCT KMEI/D0+20 DCT HRISN DCT KCBM	1+00
MOA3/ GREENWOOD	10,000/9,000	KCBM DCT HANOP DCT CLOUT T486 TOMLN DCT CBM267066/D0+30 DCT KGWO	0+55
		KGWO DCT TOMLN DCT CBM267066/D0+20 DCT TOMLN T486 HRISN DCT KCBM	0+55
OXFORD	6,000/5,000	KCBM DCT BENRE DCT KUOX/D0+20 DCT KCBM	1+10
SR-137	4,000	KCBM DCT HANOP DCT IGB271021 SR137 IGB220039 DCT KCBM (RMK/ EXITING ECHO)	1+20
TUPELO	5,000/4,000	KCBM DCT BENRE DCT ARONN DCT OTB DCT KTUP/D0+30 DCT CBM330020 DCT KCBM	1+00
TUSCALOOSA	6,000/4,000	KCBM DCT NARRO DCT MINIM T258 CRMSN DCT KTCL/D0+15 DCT MINIM DCT HRISN DCT KCBM	1+05
VIPER (FCF ONLY)	25,000 – 31,000	KCBM DCT CLOUT DCT CBM260040 DCT CBM293040 DCT CBM/D0+30 DCT KCBM	0+30
VR-1014	4,000	KCBM DCT NARRO DCT CBM122019 VR1014 CBM349023 DCT KCBM	1+10
VULCAN	9,000/8,000	KCBM DCT NARRO DCT MINIM T486 VLKNN DCT KBHM/D0+10 DCT JOEYE DCT HRISN DCT KCBM	1+05
NOTE: Locally defined waypoints: ARONN (CBM 293/26)GRIIN (CBM 146/29) BENRE (CBM 293/09)HUDLY (CBM 171/40) BUZER (CBM 170/09)NARRO (CBM 189/09) BUZLI (CBM 170/15)PATZZ (CBM 175/30) DAVSN (CBM 185/37)QUIBL (CBM 293/31) DDART (CBM 189/26)TOMEI (CBM 189/41)			

Attachment 18

T-38 CANNED FLIGHT PLANS

Figure A18.1. T-38 Canned Flight Plans.

CANNED	ALTITUDE DEP/RTB	ROUTE OF FLIGHT	ETE
BHM (BHM AIRPORT)	16,000 / FL 200	KCBM DCT MINIM DCT VUZ DCT KBHM/D0+20 DCT JOEYE DCT HRISN DCT KCBM	0+55
BHM HIGH MOA (BHM 1 MOA)	11,000 / 12,000	KCBM DCT MINIM T258 CRMSN DCT OKW196039/D0+30 DCT OKW DCT MINIM DCT KCBM (RMK/ BHM1 MOA 100B230)	0+55
BHM HI/LO MOA (BHM 1&2 MOA)	11,000 / 12,000	KCBM DCT MINIM T258 CRMSN DCT OKW196039/D0+30 DCT OKW DCT MINIM DCT KCBM (RMK/ BHM1 MOA 005B230)	0+55
BHM N MOA DELAY	16,000 / FL 200	KCBM DCT MINIM DCT VLKNN DCT KBHM/D0+10 DCT KELCC DCT WOLOV/D0+10 DCT KCBM (RMK/ RETURN ALT FL 200)	1+00
ECHO MOA	15,000 / (expect 14,000)	KCBM DCT HAB DCT HAB030020/D0+30 DCT KOBRE DCT KCBM	1+00
ECHO 4 NSF	15,000 B17,000	KCBM DCT HAB DCT HAB030020/D0+30 DCT KOBRE DCT KCBM	1+00
HSV HIGH (HSV AIRPORT)	FL 230 / FL 220	KCBM DCT MINIM DCT VUZ DCT ERRTH DCT KHSV/D0+20 DCT SMITZ DCT HAB DCT KOBRE DCT KCBM	1+10
HSV LOW (HSV AIRPORT)	FL 230 / 6,000	KCBM DCT MINIM DCT VUZ DCT ERRTH DCT KHSV/D0+20 DCT SMITZ DCT HAB DCT KCBM	1+10
HSV LOW LOW (HSV AIRPORT)	7,000 / 6,000	KCBM DCT HAB DCT ERRTH DCT KHSV/D0+20 DCT HAB DCT KCBM	1+10
HSV ECHO DELAY	FL 230 / FL 200	KCBM DCT MINIM DCT VUZ DCT ERRTH DCT KHSV/D0+10 DCT SMITZ DCT HAB030020/D0+10 DCT HAB DCT KOBRE DCT KCBM (RMK/ RETURN ALT FL 200)	1+00
IR 66	5,000 / 3,000	KCBM DCT CBM052047 IR066 OTB111022 DCT KCBM	1+00
IR 68	FL 220 / ON REQ	KCBM DCT CLOUT DCT SQS DCT SQS348012 IR068 SQS079036 DCT KCBM	1+05
IR 91	4,000 / 4,000	KCBM DCT CBM269026 IR091 OTB226025 DCT CBM312030 DCT KCBM	1+05
JAN (JAN AIRPORT)	FL 220 / FL 210	KCBM DCT CLOUT DCT SQS DCT KJAN/D0+10 DCT SQS DCT IGB DCT KCBM	1+10
MEI (MEI AIRPORT)	FL 250 / 14,000	KCBM DCT CLOUT DCT TOMLN DCT MEI170035 DCT KMEI/D0+10 DCT MEI T294 CRMSN T258 MINIM DCT KCBM	0+55
MEI LOW LOW (MEI AIRPORT)	6,000 / 7,000	KCBM DCT MEI DCT KMEI/D0+20 DCT IGB DCT KCBM	0+55
MGM (MGM AIRPORT)	FL 230 / FL 220	KCBM MINIM T258 CRMSN DCT LOMAX DCT KMGM/D0+10 DCT OKW DCT MINIM DCT KCBM	1+10
NORTH MOA	7,000	KCBM DCT WOLOV/D0+30 DCT KCBM	0+50
NORTH MOA DELAY	4,000	RMK/ RADAR DELAY	
SEARAY	4,000 / (expect 5,000)	KCBM DCT IGB199027/D0+30 DCT IGB DCT KCBM (RMK/ DELAY IN R4404)	1+00
SEARAY DELAY	4,000 / 5,000	KCBM DCT IGB199027/D0+30 DCT MEI DCT IGB DCT KCBM (RMK/ DELAY IN R4404)	1+00
VR 1014	4,000 / 4,000	KCBM DCT CBM122019 VR1014 CBM349023 DCT KCBM	0+45
VR 1031	17,000 / 6,000	KCBM DCT MINIM T258 CRMSN VUZ168043 VR1031 LDK166023 DCT LDK186018 DCT KCBM (RMK/ ENTERING ECHO EXITING JULIET)	1+15
WEST MOA Ripley	FL 230	KCBM DCT RPLEE DCT OTB270025/D0+30 DCT EGUPT DCT KCBM	1+00
WEST 4 Ripley NSF	FL 210 B FL 230	KCBM DCT RPLEE DCT OTB270025/D0+30 DCT EGUPT DCT KCBM (RMK/ NONSTANDARD DEPARTURE)	1+00
WEST MOA WEST	FL 230	KCBM DCT CLOUT DCT TOMLN DCT CBM267066/D0+30 DCT EGUPT DCT KCBM	1+00

Attachment 19

T-1 CANNED FLIGHT PLANS

Figure A19.1. T-1 Canned Flight Plans.

ST	PROFILE	TAS	DEP	ALT	ROUTE OF FLIGHT	ETE
C1	CBM-GLH	330	KCBM	160	DCT CLOUT T486 IZAAC DCT KGLH/D0+00	0+30
C2	CBM-HSV	335	KCBM	150	DCT MINIM T486 VLKNN DCT ERRTH DCT KHSV/D0+00	0+35
C3	CBM-JAN	280	KCBM	60	DCT CLOUT DCT SARKK DCT KJAN/D0+00	0+35
C4	CBM-CHA	335	KCBM	210	DCT MINIM DCT VLKNN DCT JILIS DCT KCHA/D0+00	0+45
C5	CBM-MEI	285	KCBM	70	DCT CLOUT DCT MERDN DCT KMEI/D0+00	0+30
C6	CBM-MGM	335	KCBM	150	DCT MINIM T258 CRMSN DCT HERKO DCT FRDDO DCT KMGM/D0+00	0+35
C7	CBM-GTR	270	KCBM	40	DCT HRISN DCT KGTR/D0+00	0+15
C8	CBM-MXF	335	KCBM	150	DCT MINIM T258 CRMSN DCT HERKO DCT BLLBO DCT KMXF/D0+00	0+25
C9	CBM-NQA	280	KCBM	60	DCT CBM008041 DCT SULLY DCT KNQA/D0+00	0+30
C10	CBM-MLU	370	KCBM	240	DCT CLOUT DCT IZAAC DCT KMLU/D0+00	0+40
C90	CHA-CBM	350	KCHA	200	DCT JILIS DCT VLKNN DCT MINIM DCT KCBM	0+45
C91	GLH-CBM	325	KGLH	150	DCT IZAAC T486 HRISN DCT KCBM	0+25
C92	HSV-CBM	280	KHSV	60	DCT SWIKI DCT KOBRE DCT KCBM	0+25
C93	JAN-CBM	285	KJAN	70	DCT SARKK DCT HRISN KCBM	0+25
C94	MEI-CBM	305	KMEI	110	DCT BOYDD T294 CRMSN T258 MINIM DCT KCBM	0+25
C95	MGM-CBM	350	KMGM	140	DCT FRDDO DCT HERKO DCT CRMSN T258 MINIM DCT KCBM	0+30
C96	GTR-CBM	265	KGTR	30	DCT KCBM	0+15
C97	MXF-CBM	350	KMXF	140	DCT HERKO DCT CRMSN T258 MINIM DCT KCBM	0+25
C98	NQA-CBM	325	KNQA	110	DCT SWIKI DCT KOBRE DCT KCBM	0+30
C99	MLU-CBM	355	KMLU	210	DCT IZAAC Q30 HRISN DCT KCBM	0+40
X1	CHA-HSV	320	KCHA	140	DCT COMAR DCT FILUN DCT KHSV/D0+00	0+20
X2	HSV-MGM	340	KHSV	180	DCT VLKNN DCT FRDDO DCT KMGM/D0+00	0+30
X3	MLU-JAN	305	KMLU	110	DCT WOVAS DCT SARKK DCT KJAN/D0+00	0+25
X4	HSV-MXF	340	KHSV	180	DCT VLKNN DCT BLLBO DCT KMXF/D0+00	0+30
X5	JAN-MLU	310	KJAN	120	DCT ZIPGI DCT WOVAS DCT KMLU/D0+00	0+25
X6	JAN-MEI	305	KJAN	110	DCT SARKK DCT MERDN DCT KMEI/D0+00	0+15
X7	MEI-JAN	300	KMEI	100	DCT MERDN DCT SARKK DCT KJAN/D0+00	0+15
X8	MEI-MGM	325	KMEI	150	DCT KWANE DCT MGMRY DCT KMGM/D0+00	0+25
X9	MEI-MXF	325	KMEI	150	DCT KWANE DCT MGMRY DCT KMXF/D0+00	0+25
X10	MGM-HSV	340	KMGM	180	DCT MORDR DCT VLKNN DCT ERRTH DCT KHSV/D0+00	0+30
X11	MGM-MEI	320	KMGM	140	DCT RABEC T290 KWANE DCT KMEI/D0+00	0+25
X12	MLU-GTR	365	KMLU	230	DCT IZAAC Q30 HRISN DCT KGTR/D0+00	0+30
X13	MXF-HSV	340	KMXF	180	DCT MORDR DCT VLKNN DCT ERRTH DCT KHSV/D0+00	0+30
X14	MXF-MEI	320	KMXF	140	DCT RABEC T290 KWANE DCT KMEI/D0+00	0+25
D1	CBM-DA-GLH	350	KCBM	220	DCT CLOUT DCT IZAAC DCT GLH155020/D0+20 DCT KGLH/D0+00	0+55
D2	GLH-DA-CBM	310	KGLH	120	DCT GLH155020/D0+20 DCT IZAAC T486 HRISN DCT KCBM	0+50
D3	CBM-DA-MLU	370	KCBM	220	DCT CLOUT DCT IZAAC DCT GLH203020/D0+20 DCT KMLU/D0+00	1+00

ST	PROFILE	TAS	DEP	ALT	ROUTE OF FLIGHT	ETE
D4	MLU-DA-CBM	305	KMLU	110	DCT GLH203020/D0+20 DCT IZAAC T486 HRISN DCT KCBM	1+00
D5	CBM-DA-JAN	360	KCBM	220	DCT CLOUT DCT IZAAC DCT MHZ255020/D0+20 DCT KJAN/D0+00	1+00
D6	JAN-DA-CBM	310	KJAN	120	DCT MHZ255020/D0+20 DCT IZAAC T486 HRISN DCT KCBM	1+00
N1	CBM-NMOA-CBM	365	KCBM	230	DCT CLOUT DCT CBM015020/D0+30 DCT KCBM	0+50
N2	CBM-NMOA-GLH	365	KCBM	230	DCT CLOUT DCT CBM015020/D0+30 DCT NEEON DCT IZAAC DCT KGLH/D0+00	1+00
N3	CBM-NMOA-HSV	365	KCBM	230	DCT CLOUT DCT CBM015020/D0+30 DCT BESOM DCT ERRTH DCT KHSV/D0+00	0+55
N4	CBM-NMOA-MEI	365	KCBM	230	DCT CLOUT DCT CBM015020/D0+30 DCT MERDN DCT KMEI/D0+00	1+10
N5	CBM-NMOA-MGM	365	KCBM	230	DCT CLOUT DCT CBM015020/D0+30 DCT BESOM DCT HERKO DCT FRDDO DCT KMGM/D0+00	1+10
N6	CBM-NMOA-MXF	365	KCBM	230	DCT CLOUT DCT CBM015020/D0+30 DCT BESOM DCT HERKO DCT BLLBO DCT KMXF/D0+00	1+10
N7	CBM-NMOA-SEM	365	KCBM	230	DCT CLOUT DCT CBM015020/D0+30 DCT BESOM DCT HERKO DCT RABEC DCT KSEM/D0+00	1+05
N8	SEM-NMOA-CBM	350	KSEM	200	DCT HERKO DCT CBM015020/D0+30 DCT KCBM	1+00
N9	MEI-NMOA-CBM	365	KMEI	230	DCT CRMSN DCT CBM015020/D0+30 DCT KCBM	1+15
N10	MGM-NMOA-CBM	350	KMGM	200	DCT HERKO DCT CBM015020/D0+30 DCT KCBM	1+10
N11	MXF-NMOA-CBM	350	KMXF	200	DCT HERKO DCT CBM015020/D0+30 DCT KCBM	1+10
W1	CBM-WMOA-CBM	330	KCBM	160	DCT CLOUT T486 TOMLN DCT CBM267066/D0+30 DCT NEEON T486 HRISN DCT KCBM	1+15
W2	CBM-WMOA-GLH	330	KCBM	160	DCT CLOUT T486 TOMLN DCT CBM267066/D0+30 DCT IZAAC DCT KGLH/D0+00	1+10
W3	CBM-WMOA-JAN	330	KCBM	160	DCT CLOUT T486 TOMLN DCT CBM267066/D0+30 DCT IZAAC DCT SARKK DCT KJAN/D0+00	1+15
W4	CBM-WMOA-MEI	330	KCBM	160	DCT CLOUT T486 TOMLN DCT CBM267066/D0+30 DCT MERDN DCT KMEI/D0+00	1+10
W5	CBM-WMOA-UTA	330	KCBM	160	DCT CLOUT T486 TOMLN DCT CBM267066/D0+30 DCT IZAAC DCT KUTA/D0+00	1+10
W6	GLH-WMOA-CBM	325	KGLH	150	DCT IZAAC T486 TOMLN DCT CBM267066/D0+30 DCT NEEON T486 HRISN DCT KCBM	1+05
W7	JAN-WMOA-CBM	325	KJAN	150	DCT IZAAC T486 TOMLN DCT CBM267066/D0+30 DCT NEEON T486 HRISN DCT KCBM	1+10
W8	MEI-WMOA-CBM	280	KMEI	60	DCT MERDN DCT TOMLN DCT CBM267066/D0+30 DCT NEEON T486 HRISN DCT KCBM	1+10
W9	UTA-WMOA-CBM	325	KUTA	150	DCT IZAAC T486 TOMLN DCT CBM267066/D0+30 DCT NEEON T486 HRISN DCT KCBM	1+05
P1	CBM-PICKS-CBM	285	KCBM	70	DCT CBM008041 DCT CBM008080/D0+30 DCT KOBRE DCT KCBM	1+10
P2	CBM-PICKS-HSV	285	KCBM	70	DCT CBM008041 DCT CBM008080/D0+30 DCT ERRTH DCT KHSV/D0+00	1+05
P3	CBM-PICKS-UTA	285	KCBM	70	DCT CBM008041 DCT CBM008080/D0+30 DCT GOINS DCT KUTA/D0+00	1+10
P4	CBM-PICKS-NQA	285	KCBM	70	DCT CBM008041 DCT CBM008080/D0+30 DCT KNQA/D0+00	1+10
P5	HSV-PICKS-CBM	300	KHSV	100	DCT HAGIE DCT CBM008080/D0+30 DCT KOBRE DCT KCBM	1+05

ST	PROFILE	TAS	DEP	ALT	ROUTE OF FLIGHT	ETE
P6	UTA-PICKS-CBM	325	KUTA	150	DCT GOINS DCT CBM008080/D0+30 DCT KOBRE DCT KCBM	1+10
P7	NQA-PICKS-CBM	325	KNQA	150	DCT CBM008080/D0+30 DCT KOBRE DCT KCBM	1+10
AR1	ARTUP/TNK-CBM	370	KCBM	260	DCT CLOUT DCT OTB290035/D1+00 DCT OTB DCT OTB165025 DCT KOBRE DCT KCBM	1+50
AR2	ARTUP/REC-CBM	370	KCBM	240	DCT CLOUT DCT OTB110035 DCT OTB290035/D1+00 DCT OTB DCT OTB165025 DCT KOBRE DCT KCBM	1+50
AR3	ARGLH/TNK-CBM	360	KCBM	220	DCT CLOUT DCT IZAAC DCT GLH DCT GLH309064/D1+00 DCT GLH DCT GLH254024 DCT IZAAC Q30 HRISN DCT KCBM	2+00
AR4	ARGLH/REC-CBM	360	KCBM	220	DCT CLOUT DCT IZAAC DCT GLH129006 DCT GLH309064/D1+00 DCT GLH DCT GLH254024 DCT IZAAC Q30 HRISN DCT KCBM	2+00
AR5	ARBER/TNK-CBM	365	KCBM	230	DCT CLOUT DCT HLI073035 DCT HLI073105/D1+00 DCT HLI073085 DCT MEM075075 DCT KOBRE DCT KCBM	1+55
AR6	ARBER/REC-CBM	365	KCBM	230	DCT CLOUT DCT HLI073035 DCT HLI073105/D1+00 DCT HLI073085 DCT MEM075075 DCT KOBRE DCT KCBM	1+55
IR1	CBM-IR68-CBM	330	KCBM	160	DCT CLOUT T486 IZAAC DCT SQS348012 IR068 SQS079036 DCT HRISN DCT KCBM	1+25
IR2	CBM-IR70(A-J)-CBM	350	KCBM	200	DCT CLOUT DCT IZAAC DCT MHZ311034 IR070 SQS348012 DCT IZAAC/F190 Q30 HRISN DCT KCBM	2+00
IR3	CBM-IR70(A-E)-CBM	350	KCBM	200	DCT CLOUT DCT IZAAC DCT MHZ311034 IR070 MON285033 DCT RICKG/F190 Q30 HRISN DCT KCBM (RMK/ EXITING ECHO)	1+45
IR4	CBM-IR91-CBM	270	KCBM	40	DCT CBM269026 IR091 OTB226025 DCT KCBM	1+00
IR5	CBM-IR67(B-E)-CBM	285	KCBM	70	DCT SWIKI DCT CBM052047 IR067 BNA277061 DCT KOBRE DCT KCBM (RMK/ ENTERING BRAVO EXITING ECHO)	1+25
VR1	CBM-VR1031(C)	275	KCBM	50	DCT MINIM DCT LDK266037 VR1031 (RMK/ ENTERING CHARLIE)	0+15
VR2	CBM-VR1031(E)	305	KCBM	110	DCT MINIM T258 CRMSN DCT VUZ168043 VR1031 (RMK/ ENTERING ECHO)	0+25
VR3	VR1031(K)-CBM	280	ZZZZ	60	DCT KCBM (DEP/ LDK195032)	0+15
VR4	CBM-VR1051(C)	285	KCBM	70	DCT CBM008041 DCT CBM008080 DCT OTB031056 VR1051 (RMK/ ENTERING CHARLIE)	0+25
VR5	CBM-VR1072(A)	360	KCBM	220	DCT CLOUT DCT IZAAC DCT SARKK DCT MHZ185023 VR1072	0+35
VR6	VR1072(F)-CBM	335	ZZZZ	170	DCT SOSOE DCT MERDN DCT CRMSN T258 MINIM DCT KCBM (DEP/ MHZ174050)	0+40
VR7	CBM-VR1050(A)	285	KCBM	70	DCT MINIM T486 VLKNN DCT VUZ001016 VR1050	0+25
VR8	CBM-VR1050(E)	285	KCBM	70	DCT CBM008080 DCT MKL138024 VR1050 (RMK/ ENTERING ECHO)	0+30
VR9	VR1050(J)-CBM	270	ZZZZ	40	DCT KCBM (DEP/ CBM110034)	0+10

Attachment 20

LOW ALTITUDE AREA OPERATION (BELOW FL240)

Figure A20.1. Low Altitude Operation (Below FL240).

Low Altitude Area Operation (Below FL 240)			
MOA/ATCAA	Altitude Assignment	Phraseology	Definition
2	Echo	“assigned Echo”	Maintain last assigned altitude and proceed direct HAB direct Echo. When established in Echo maintain 080-220.
	Low block	“assigned Echo low”	Maintain last assigned altitude and proceed direct HAB direct Echo. When established in Echo maintain 080-130.
	High block	“assigned Echo high”	Maintain last assigned altitude and proceed direct HAB direct Echo. When established in Echo maintain 150-220.
3	High & Low (full block)	“assigned sector/s”	Maintain last assigned altitude and proceed direct sector/s. When established in sector/s maintain 080-220.
	Low block	“assigned sector/s low”	Maintain last assigned altitude and proceed direct sector/s. When established in sector/s maintain 080-140.
	High block	“assigned sector/s high”	Maintain last assigned altitude and proceed direct sector/s. When established in sector/s maintain 160-220.
4	Pickwick 1 or 2 High & Low (full block)	“assigned Pickwick 1/2”	Maintain last assigned altitude and proceed direct Pickwick 1 or Pickwick 2. When established in the assigned area maintain 100-220.
	Pickwick 1 or 2 low	“Assigned Pickwick 1/2 low”	Maintain last assigned altitude and proceed direct Pickwick 1 or Pickwick 2. When established in the assigned area maintain 100-140.
	Pickwick 1 or 2 high	“Assigned Pickwick 1/2 high”	Maintain last assigned altitude and proceed direct Pickwick 1 or Pickwick 2. When established in the assigned area maintain 160-220.
		“maintain block altitudes enroute”	Aircraft is cleared to maintain the assigned altitude block prior to entering the assigned MOA.

Attachment 21

HIGH TACTICAL RECOVERY PROCEDURES (TRP)

Figure A21.1. High TRP.

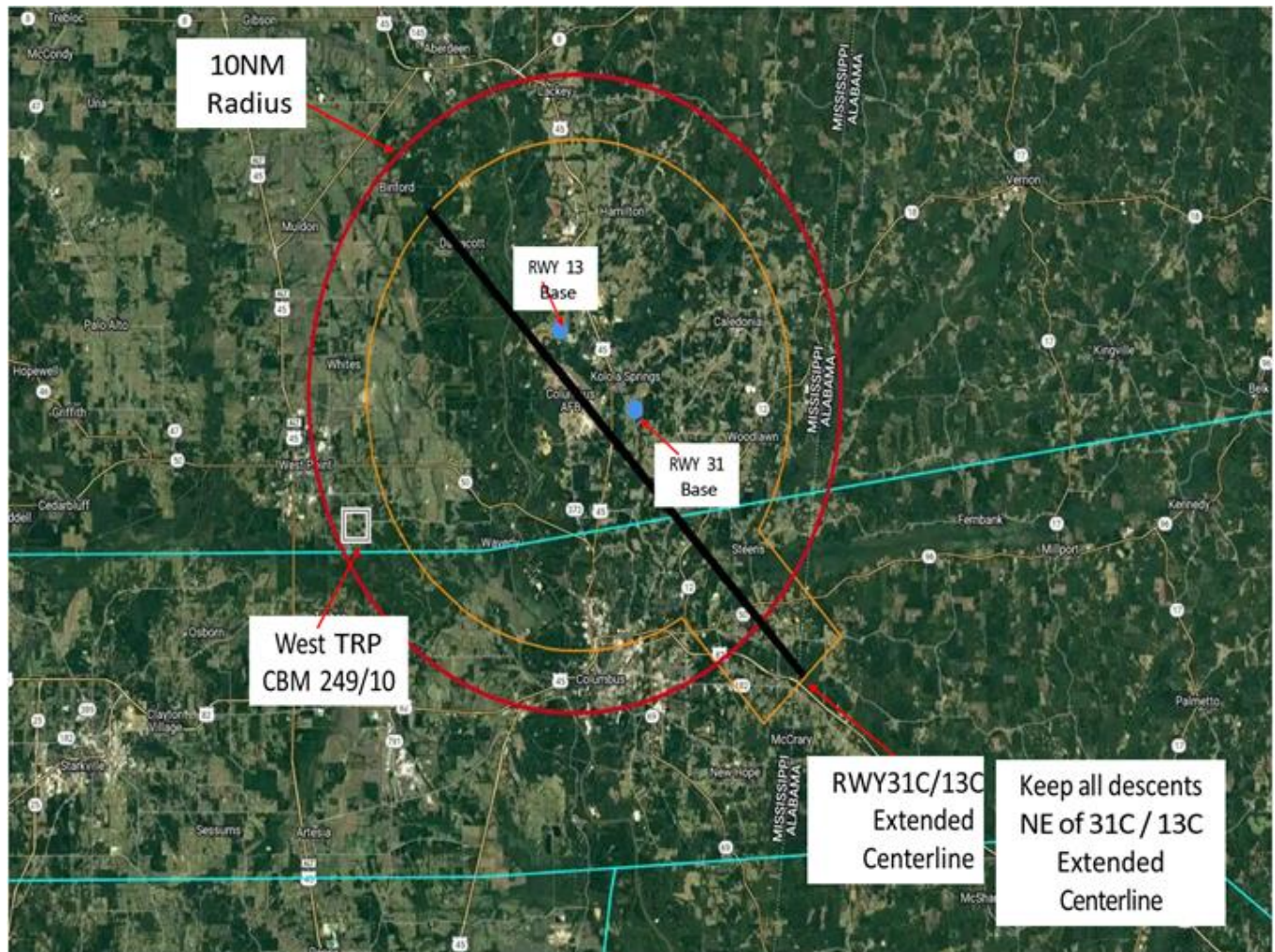


Figure A21.2. West TRP Recovery from SEARAY.

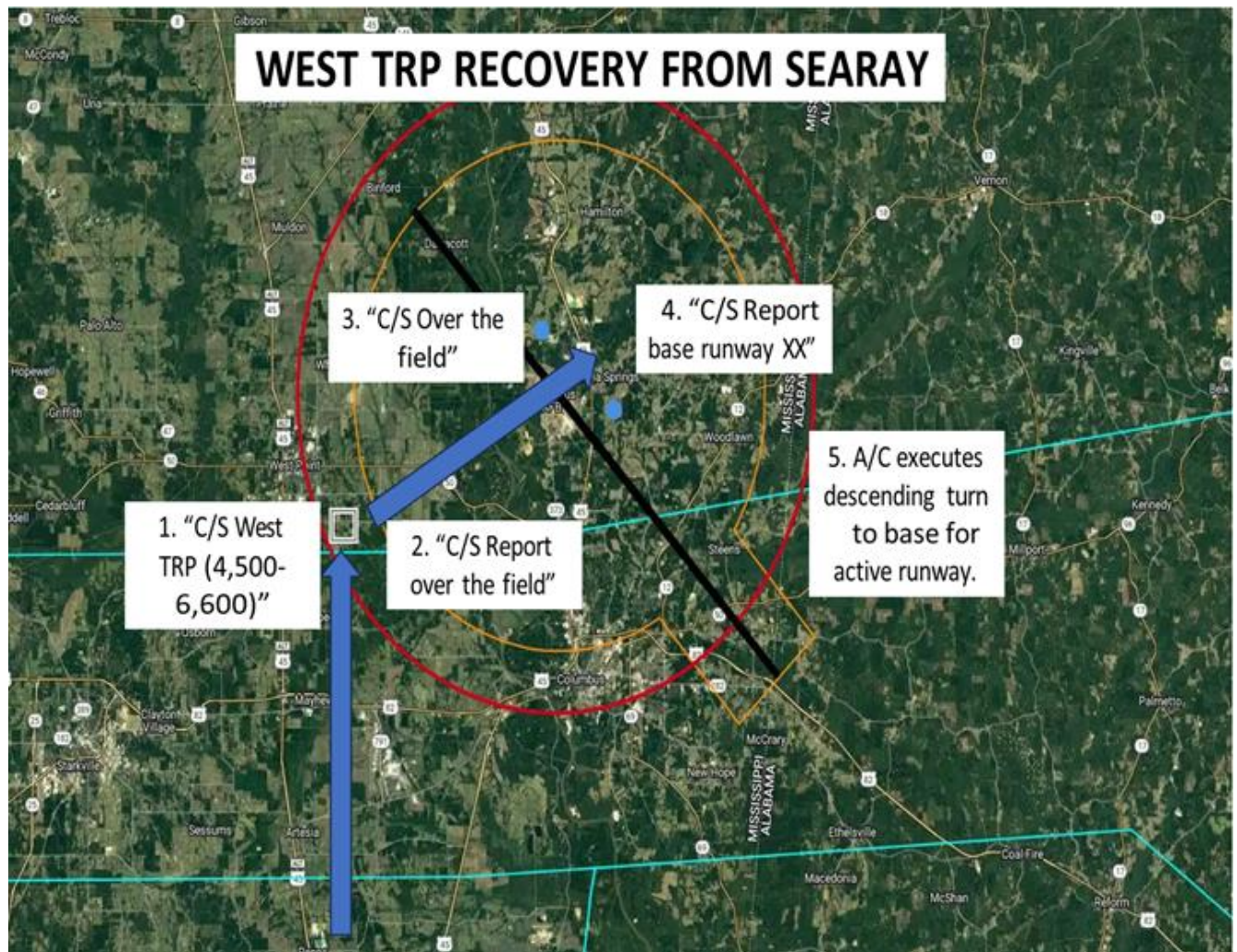


Figure A21.3. East TRP Recovery from BHM.

