

**BY ORDER OF THE COMMANDER  
HOLLOMAN AIR FORCE BASE**

**HOLLOMAN AFB INSTRUCTION 11-250**

**12 March 2018**



**Flying Operations**

**AIRFIELD OPERATIONS AND BASE FLYING  
PROCEDURES**

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OPR: 49 OSS/OSA

Certified by: 49 OSS/CC  
(Lt Col Eric K. Hendrickson)

Supersedes: HOLLOMANAFBI11-250, 27 July 2014

Pages: 178

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This instruction complements Air Force Instruction (AFI) 13-204V3, Air Combat Command (ACC) Supplement, *Airfield Operations Procedures and Programs*, Attachment 2, and establishes policies and procedures for conducting airfield and flying operations at Holloman Air Force Base (HMN). It provides descriptions of HMN air traffic control services, the local flying area, and establishes procedures for the orderly control of all aircraft assigned to HMN or operating in HMN airspace. It prescribes HMN standard flight operations as formulated by 49th Wing Flight Managers, the Airspace Manager, and affected support agencies. This instruction is directive in nature with intent to standardize local procedures while not restricting mission accomplishment. Ensure that all records created as a result of processes prescribed in this publication are maintained IAW Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of IAW Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS). Refer recommended changes and questions to the Office of Primary Responsibility using AF Form 847, *Recommendation for Change of Publication*, to 49th Operations Support Squadron Airfield Operations Flight (49 OSS/OSA), Building 577, 1148 Rescue Road, Holloman AFB, NM 88330-8028. The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force.

***SUMMARY OF CHANGES***

This document has been substantially revised and must be completely reviewed. Major changes include removing F-22, QF-4, and MQ-1 procedures, adding F-16 and QF-16 procedures, modifying Airspace and Range operations, and changing Instrument Flight Rules (IFR) procedures. Minor changes throughout but include: updated figures, diagrams, and reference updates.

## Chapter 1

### GENERAL INFORMATION

**1.1. Compliance with this Instruction.** HMN based units and those units on temporary duty (TDY) to HMN flying local missions will comply with this instruction. Requests for deviations from this instruction must be forwarded to 49 OSS/OSA for coordination.

**1.2. Responsibilities.**

1.2.1. 49th Operations Group Commander (49 OG/CC) is the waiver authority for this instruction. 49 OG/CC or designated representative will ensure this instruction is maintained, enforced, and viable.

1.2.1.1. 49th Operations Support Squadron Commander (49 OSS/CC) will ensure revisions to this directive are fully coordinated with applicable base agencies.

1.2.1.2. 49th Operations Group Standardization and Evaluation Office (49 OG/OGV) will validate and disseminate interim changes to local flying procedures.

1.2.1.3. 49 OSS/OSA will compile, consolidate, and coordinate changes to this instruction and is responsible for its content.

1.2.1.4. 49th Wing Plans and Programs Office (49 WG/XP) will ensure TDY units flying local missions from HMN are assigned a host unit. The host unit will coordinate with 49 OG/OGV to ensure all TDY aircrew are briefed on applicable procedures contained in this instruction, to include a local area briefing, before a TDY unit begins flying local sorties.

When necessary, 49 OSS can support TDY unit briefings.

**1.3. Recommending Changes.** The HMN Airfield Operations Board (AOB) reviews this instruction annually. Submit all requested changes via AF Form 847 to 49 OSS/OSA.

**1.4. Dimensional Units.** Visibility distances are in statute miles (SM). All other distances referred to in this instruction are in nautical miles (NM) unless otherwise identified. Altitudes will be identified by feet (ft) in either Above Ground Level (AGL) or Mean Sea Level (MSL). Tactical Air Navigation (TACAN) radial and distance measuring equipment (DME) fixes are listed as HMN R-###/### DME (e.g. HIGGY, HMN R-357/22 DME).

**1.5. Office Identification.** In addition to the offices previously listed in this instruction; the following office identifications will be used throughout for standardization.

1.5.1. White Sands Radar Facility (49 OSS/OSAR) is identified as WSRF and includes Radar Approach Control (RAPCON) functions, Approach Control, Arrival, Departure Control, Clearance Delivery, and United States (US) Army Military Radar Unit, Mission Control known as CHEROKEE. All WSRF positions can provide full Air Traffic Control services, with the exception of CHEROKEE.

1.5.2. Tower refers to HMN Tower (49 OSS/OSAT) and includes Local Control, Ground Control, and Flight Data functions.

1.5.3. AM refers to Airfield Management (49 OSS/OSAA).

1.5.4. ATC (Air Traffic Control) refers to Tower and/or WSRF.

1.5.5. HAM refers to HMN Airspace Manager (49 OSS/OSOA) and Scheduling refers to Wing Scheduling (49 OSS/OSOS).

1.5.6. Ops Sup refers to flying unit Top-3, Operations Supervisor, Duty Officer, etc.

## Chapter 2

### AIRFIELD FACILITIES AND SERVICES

#### 2.1. Runway and Taxiways.

2.1.1. The airfield is defined as all movement areas including runways, taxiways, arm/de-arm areas, and aircraft parking ramps and service areas, which are used for towing, taxiing, takeoff, and landing of aircraft.

2.1.2. Reference Figure 2.1. and HMN Airport Diagram in Low Altitude United States (US) Flight Information Publication (FLIP), Vol. 6 for: airfield elevation, runway slope gradients, runway magnetic headings, and other runway information.

2.1.3. TACAN ground receiver checkpoints on airfield:

2.1.3.1. Taxiway Bravo located just south of Runway 25 hold line.

2.1.3.2. Taxiway Charlie located just north of Runway 25 hold line.

2.1.3.3. Taxiways Alpha, Hotel, Arm/De-Arm areas and Taxiway Romeo.

2.1.4. Visual Flight Rules (VFR) hold lines exist at the intersections of Runway 07/25 and Runway 16/34. The VFR hold lines referred to in this paragraph are for vehicles and taxiing aircraft only. Aircraft given clearance to land or takeoff must disregard the hold lines at the intersections of Runway 07/25, Runway 16/34, and the intersection of Runways 16/34 and 04/22 during landing and takeoff roll.

2.1.5. Arm/De-Arm areas are: Alpha, Bravo, Delta, Echo, Foxtrot, and Hotel End of Runway (EOR) areas.

2.1.6. Taxiway Alpha becomes Taxilane Alpha starting from the west edge of Hangar 565 entrance to Taxiway Bravo. Wingtip clearances are determined utilizing Unified Facilities Criteria (UFC) 3-260-01, *Airfield and Heliport Planning and Design*.

#### 2.2. Runway Selection Procedures.

2.2.1. The primary arrival and departure runway at HMN will be determined by the Tower Watch Supervisor (WS) and the Supervisor of Flying (SOF). Arrivals and departures to or from runways other than the primary runway will be handled on a case-by-case basis by the WS and SOF. Runway 16 is the primary instrument runway.

2.2.2. Runway Selection and Change. When 49 WG and tenant unit flying is in progress, the SOF will determine the active runway after coordination with Tower WS. When no SOF is present, Tower WS makes the determination. Tower will notify WSRF and AM of the runway in use. AM will notify 49 WG Command Post (49 WG/CP).

2.2.3. In the event of conflicting wind information, the SOF or Tower will coordinate with the weather forecaster to determine the most reliable information.

2.2.4. Heavy aircraft primary arrival and departure runway is Runway 04/22. If wind or other factors dictate, heavy aircraft may arrive and depart Runway 16/34 with AM coordination. Runway 07/25 is not usable for heavy aircraft arrival or departures but may be utilized for taxi operations.

**2.3. Runway Condition Reading (RCR) and Runway Surface Condition (RSC).** In accordance with (IAW) AFI 13-204V3, Air Combat Command (ACC) Supplement, Chapter 18, HMN is not required to maintain a decelerometer or report RCRs. RSC readings are conducted and reported by AM.

**2.4. Runway Inspections and Checks.** IAW AFI 13-204V3, Attachment 10, and local checklists, AM will conduct daily airfield inspections and additional airfield checks as required

in response to in-flight emergencies, Foreign Object Damage (FOD), Bird Aircraft Strike Hazard (BASH), construction, daytime and nighttime airfield lighting serviceability, to determine RSC, and any other items affecting the status of the airfield (also see paragraph 8.3 Suspension of Runway Operations due to Aircraft Emergencies).

## **2.5. Opening and Closing a Runway.**

2.5.1. Procedures for opening and closing the runways will be accomplished IAW AFI 13-204V3. Only AM personnel are authorized to open or close runway operations.

2.5.2. Refer to AFI 13-204V3 for permanent closure and activation of runways.

## **2.6. Suspending Runway Operations.**

2.6.1. Tower, SOF, or AM will suspend operations to a runway when there is reason to believe a hazard exists on or near the runway or in the immediate approach area. After suspending a runway, AM personnel will contact SOF/Tower WS and describe the type and location of the FOD and an estimated time of correction. See paragraphs 8.3. and 8.4.1.6. for additional runway suspension procedures.

2.6.2. Only AM personnel are authorized to resume runway operations. 49 OG/CC can temporarily resume a suspended runway for a declared In-flight Emergency (IFE). Runway will be suspended to facilitate AM checks and procedures once IFE is terminated until AM declares runway operations resumed.

2.6.3. Anytime HMN anticipates or reverts to single or no runway operations, Tower will broadcast this information on Ultra High Frequency (UHF) 243.0/Very High Frequency (VHF) 121.5 Emergency Frequency with landing runway, divert base (if applicable), and estimated time of runway closure. Tower will broadcast on UHF/VHF Emergency Frequency when runways have reopened and operations are resumed.

## **2.7. Airfield Lighting Systems.**

2.7.1. Lighting systems available:

2.7.1.1. Precision Approach Path Indicators (PAPI) - Runways 16/34, 22, and 25.

2.7.1.2. High Intensity Runway Lights (HIRL) - Runways 16/34, 04/22, and 07/25.

2.7.1.3. Runway distance remaining markers - Runways 16/34, 04/22, and 07/25.

2.7.1.4. Approach Lighting System with Sequenced Flashing Lights in Instrument Landing System (ILS) Cat-I configuration (ALSF-1) - Runways 16 and 22.

2.7.1.5. Runway end lights - Runways 16/34, 04/22, and 07/25.

2.7.1.6. Gated threshold lighting - Runways 16/34, 04/22, and 07/25.

2.7.1.7. Rotating beacon.

2.7.1.8. Taxiway lights.

2.7.1.9. Runway Guard Lights.

2.7.2. 49th Civil Engineer Squadron - Exterior Electric (49 CES/CEOFE) performs preventive maintenance inspection(s) (PMI) on the airfield lighting system at weekly, monthly, and 90-day intervals. PMIs should be scheduled around local flying and must be coordinated with Tower WS. Any problems found with the system will be reported to AM immediately.

2.7.3. AM will conduct a daily airfield lighting serviceability check IAW AFI 13-204V3, Attachment 11. Outages will be reported to 49 CES/CEOFE daily and documented on the airfield lighting diagram. Outages that will adversely affect flying will be reported to Tower and a Notice to Airmen (NOTAM) will be issued. Refer to AFI 13-204V3 Attachment 11 for fixed-wing aircraft restrictions during lighting system outages.

2.7.4. If an emergency situation requires airfield lighting to be turned on when Tower is





**2.8. Aircraft Arresting Systems (AAS).**

2.8.1. The standard configuration and status of arresting systems is published in the IFR Supplement. Contact Tower to coordinate configuration changes. Any changes to standard configuration will be published in a NOTAM or broadcast in the Automatic Terminal Information Service (ATIS) message.

2.8.1.1. Runway 04/22 midfield Barrier Arresting Kit (BAK)-12 requires 30 minute prior notice for connection.

2.8.2. Table 2.1. lists and Figure 2.2. illustrates available arresting systems for each runway and the distance from runway threshold.

2.8.3. Intervals for successive arresting system engagements:

2.8.3.1. BAK-12 cable: 30 minutes.

2.8.3.2. Runway 16 BAK-15 net (departure end only): 4 hours.

2.8.3.3. Runway 25 BAK-15 net (departure end only): 8 hours.

2.8.4. Arresting gear training program.

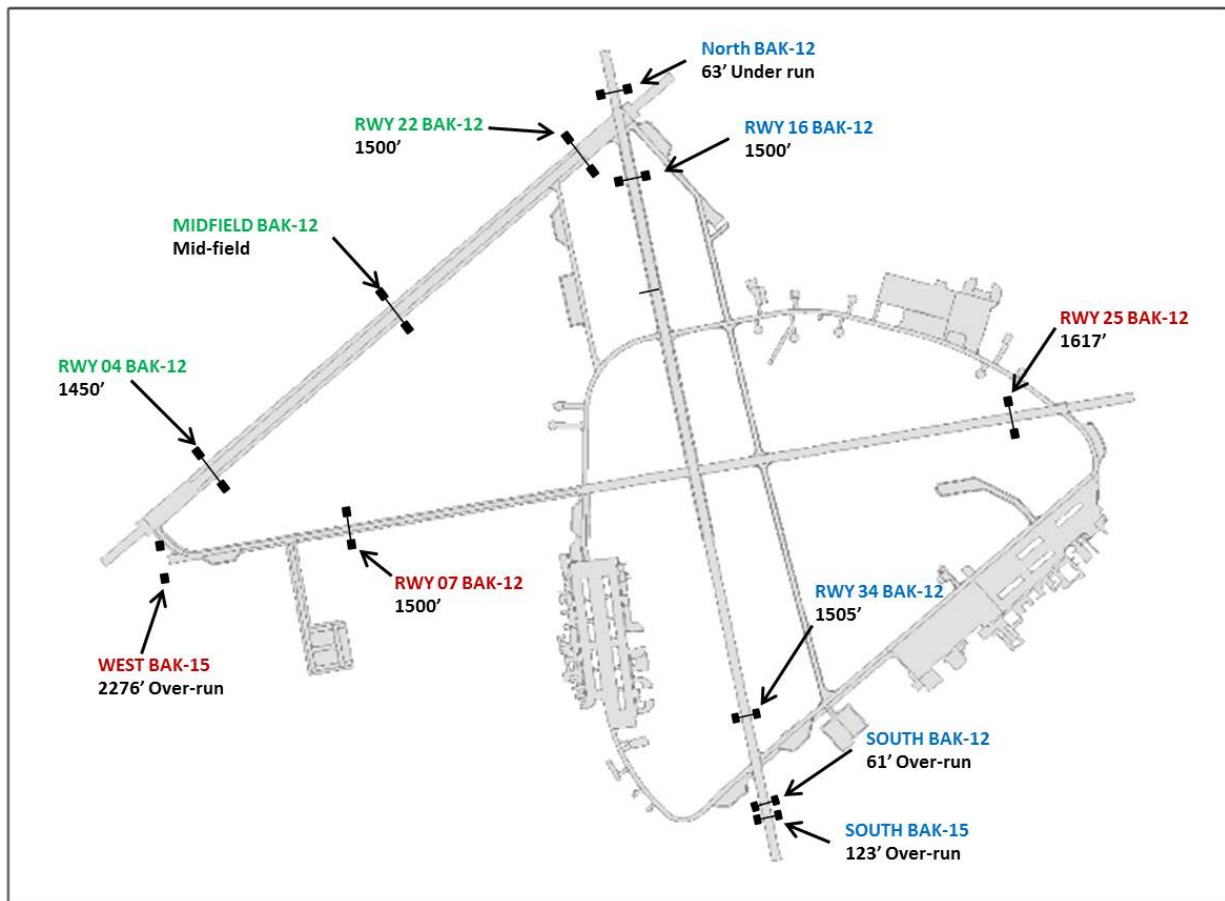
2.8.4.1. All applicable personnel will be trained on arresting gear location, capabilities, and procedures outlined in the 49th Operations Group (49 OG) and 49th Mission Support Group (49 MSG) Aircraft Arresting System Letter of Agreement (AAS LOA).

2.8.4.2. Arresting gear capabilities are covered by Air Force Flight Standards Agency (AFFSA) Computer Based Training (CBT)-E-1 and procedures are covered in the 49 OG – 49 MSG AAS LOA.

**Table 2.1. Arresting System Locations.**

RY 16→ Underrun 1,000 ft Overrun ←RY 34	<b>RY 16→ 12,134 ft ←RY 34</b>			RY 16→ Overrun 1,000 ft Underrun ←RY 34
-63 ft BAK-12 12197 ft←	→1,500 ft BAK-12 10634 ft←	→10,629 ft BAK-12 1505 ft←	→12,195 ft BAK-12 -61 ft	→12,257 ft BAK-15 -123 ft
RY 07→ Underrun 2,276 ft Overrun ←RY 25	<b>RY 07→ 12,924ft ←RY 25</b>		RY 07→ Overrun 1,000 ft Underrun ←RY 25	
-2276 ft BAK-15 15,200 ft←	→1,500 ft BAK-12 11,424 ft←	→11,307 ft→ BAK-12 1,617 ft←	-NA-	
RY 04→ Underrun 1,000 ft Overrun ←RY 22	<b>RY 04→ 10,578 ft ←RY 22</b>			RY 04→ Overrun 1,000 ft Underrun ←RY 22
-NA-	→1,450 ft BAK-12 9,128 ft←	→5,290 ft BAK-12 5,288 ft←	→9,078 BAK-12 1,500 ft←	-NA-

**Figure 2.2. Arresting System Diagram.**



**2.9. Permanently Closed or Unusable Portions of the Airfield.** Permanently closed and unusable portions of the airfield are depicted on the Airfield Diagram, Figure 2.1. Aircraft operations and parking on closed or unusable areas are prohibited.

**2.10. Restricted and Classified Areas.** The restricted and classified areas are identified in Holloman AFB (HAFB) Integrated Defense Plan (IDP).

**2.11. Dangerous/Hazardous Cargo.** Support of aircraft carrying dangerous or hazardous cargo will be executed IAW HAFB Instruction (HAFBI) 11-204, *Support of Aircraft Carrying Hazardous Materials*.

**2.12. Non-Standard Airfield Systems and Configurations.** Non-standard airfield systems and configurations are as follows:

2.12.1. Airfield Markings: Live Ordnance Load Area (LOLA) markings exist on Taxiway Echo LOLA.

2.12.2. Camera box container and aircraft hold marking on Taxiway Foxtrot EOR.

2.12.3. Required airfield signage is incorrectly installed and/or missing throughout airfield.

**2.13. Airfield Waivers.** Permanent and temporary airfield waivers are maintained by 49 CES Engineering Flight Portfolio Optimization (CENP). Temporary airfield construction waivers are maintained by AM.

**2.14. Airfield Maintenance.** AM will coordinate with 49 CES to maintain airfield vegetation growth (to include grass mowing and brush trimming). Daily coordination with 49 CES is required to ensure sweeper is available during airfield operating hours, IAW AFI 13-204V3, ACC

Supplement, Chapter 15 and Airfield Sweeper Operations Letter of Procedure (LOP).

**2.15. Airfield Snow Removal Operations.** The 49 CES Commander (49 CES/CC) has determined there is no requirement for a HMN snow and ice removal plan IAW AFI 32-1002, *Snow and Ice Control*, Chapter 1.

**2.16. Airfield Photography.** Airfield photography must comply with HAFB IDP. Aerial photography (photogrammetric flights, aerial surveys, news media, etc.) operations conducted by non-military organizations within Class D must be coordinated through 49 OSS/OSA 72 hours in advance.

**2.17. Contractors Working on the Airfield.** All contractors will notify AM at Defense Switched Network (DSN) 572-5411/5410 prior to initiating work on the airfield. Additionally, procedures will be followed IAW AFI 13-213\_HAFBSUP, *Airfield Driving*, and the project's Statement of Work. See paragraph 2.10 for restricted and controlled area locations and credentials required.

**2.18. Wear of Hats on Airfield.** Only seasonally approved cold weather type hats are authorized on the airfield. Seasonally approved hats are not to be worn within danger areas of operating jet engines IAW HAFBI 21-37, *Foreign Object Debris/Damage Prevention Program*, and AFI 91-203, *Air Force Consolidated Occupational Safety Instruction*.

**2.19. Smoking on Airfield.** Smoking on the airfield is approved in designated areas only.

**2.20. ATC Facilities.**

2.20.1. Airfield hours are IAW AFI 13-204V3, ACCSUP. Check NOTAMs for actual airfield and ATC operating hours. HMN Airfield opening outside of published hours must be approved by the 49 OG/CC or designated representative.

2.20.2. 49 WG/CP is the point of contact for initiating short-notice emergency procedures to open the airfield outside normal operating hours (DSN 572-7575). 49 WG/CP will request authorization from 49 OG/CC or designated representative. 49 WG/CP will then notify 49 OSS/OSA and 49 OSS Weather Flight (49 OSS/OSW) IAW the airfield standby roster and additional agencies as required. 49 OSS/OSA and 49 OSS/OSW will ensure 49 WG/CP has a current and updated standby roster. The response time for 49 OSS/OSA personnel to open facilities is 1 hour.

**2.21. Uncontrolled Airfield Operations (UAO).** See Attachment 10, UAO. Attachment 10 outlines flying procedures for HMN Aero Club (AC), 704th Test Group (704 TG), and Army Air (AA), to operate during periods when the airfield is closed.

**2.22. Local Frequencies and Channelization.** Local frequencies are listed in Attachment 2.

**2.23. Air Traffic Control and Landing Systems (ATCALs).**

2.23.1. Navigational Aids (NAVAIDs) available at HMN:

2.23.1.1. TACAN. Runways 16, 22, and 34 have TACAN approaches.

2.23.1.2. ILS to Runways 16 and 22.

2.23.1.3. Airport Rotating Beacon is atop the red and white water tower, located at the north-east corner of the airfield.

2.23.2. Tower is designated as the primary NAVAID monitoring facility. When open, Tower continuously monitors the ILS and TACAN for proper operation. Pilots should report any weak or abnormal signals to ATC as soon as practical.

2.23.3. PMI times for NAVAIDs are published in the IFR Supplement.

2.23.4. The following ATC communications facilities and ATCALs have auxiliary backup power generators with auto-start capabilities:

2.23.4.1. Control Tower.

2.23.4.2. WSRF.

2.23.4.3. AM.

2.23.4.4. Runways 16 and 22 ILS.

2.23.4.5. TACAN.

2.23.4.6. Airfield Lighting Systems.

2.23.4.7. HMN Digital Airport Surveillance Radar (DASR).

2.23.5. Civil Use of Military ATCALs. Civilian (non-AC) aircraft may conduct instrument approaches at HMN on a non-interference basis.

**2.24. ATIS Procedures.** ATIS must be operational at least 30 minutes prior to the first scheduled departure until the termination of local scheduled flying.

**2.25. NOTAM Procedures.** Tower is the NOTAM monitor facility for HMN. AM disseminates and issues NOTAM IAW AFI 11-208 Intersevice Publication (IP), *Department of Defense Notice to Airmen (NOTAM) System*. HQ ACC/A3AO Terminal Instrument Procedures (TERPS) will issue "V" series NOTAMs concerning published instrument flight procedures.

**2.26. FLIP Accounts.** HMN flying units are responsible for creating and maintaining their own FLIP accounts. AM will provide 49 OSS flights a publication disk as they are issued, when required. Request FLIP changes through the non-commissioned officer in charge (NCOIC) or civilian equivalent of AM. This individual is responsible for preparing and coordinating FLIP changes to be submitted according to General Planning. 49 OSS/OSA must coordinate all procedural Department of Defense (DoD) FLIP changes with HQ ACC/A3AO TERPS.

**2.27. Weather Dissemination and Coordination Procedures.**

2.27.1. ATC will issue variable wind information when there is a wind direction change of 60 degrees or more in the preceding 2 minutes and when the wind speed is greater than 6 knots. When present, ATC will issue wind gusts to all aircraft.

2.27.2. AM is responsible for disseminating hazardous, severe weather, and lightning information via the Secondary Crash Net (SCN).

2.27.3. Lightning procedures.

2.27.3.1. Lightning Watch. Informative only and will be issued when lightning is forecast to be within 10 NM radius of the airfield in the next 30 minutes.

2.27.3.2. Lightning Warning. Issued when lightning is observed within 5 NM of HMN airfield. When a Lightning Warning is issued, the following will be accomplished:

2.27.3.2.1. Cease refueling and all airfield activity. Evacuate personnel from the airfield to indoor cover or within an airfield vehicle as a minimum.

2.27.3.2.2. Aircraft WILL NOT be armed or de-armed. In the chocks, clear the crew chief off and remain running or shutdown and clear the airfield. The intent is to expeditiously get the crew chief off the airfield and to safety. If taxiing, contact SOF and expect guidance to either continue taxiing, return to arm/de-arm area (primary), or ramp (secondary).

2.27.3.2.3. Aircraft WILL NOT takeoff, land or fly approaches at HMN during periods of lightning within 5 NM of the airfield area. If airborne, aircraft will hold until approaching divert fuel, then divert. If dire circumstances require an aircraft to land during lightning periods, the 49 OG/CC is the approval authority (54 FG/CC is the approval authority for 54 FG assigned F-16s). This guidance does not preclude the SOF from making time-sensitive safety of flight decisions based on his/her situational awareness and Operational Risk Management (ORM) assessment. See paragraph 8.16 for divert procedures.

2.27.4. See HAFBI 15-101, *Weather Support Procedures*, for additional responsibilities and

services.

**2.28. Transient Alert (TA).** TA is available beginning at 0530L on Monday through 2300L Friday and from 0800L-1500L on Saturday unless otherwise prearranged. Services and facilities available to support transient aircraft are published in the IFR Supplement along with the current airport hours of operation.

**2.29. Aircraft Fuel Servicing Priorities.**

2.29.1. Table 2.2 will be adhered to during simultaneous fuel support requests:

**Table 2.2. Fuel Servicing Priority.**

Priority 1	Priority 2	Priority 3	Priority 4	Priority 5	Priority 6
-MedEvac -Alert	-President of the US -Special Air Missions -AA	-704 Test Group	-49th Wing -54th Fighter Group	-German Air Force - Det. 1, 82nd Aerial Target Squadron (82 ATRS)	Transient

2.29.2. AM will determine and provide priority for special mission fuel requirements to the 49th Logistics Readiness Squadron Fuels Service Center (49 LRS/LGRF) for appropriate response.

**2.30. Local Aircraft Priorities.**

2.30.1. ATC will provide highest priority to emergency aircraft then to other missions identified in Federal Aviation Administration (FAA) Order Joint Order (JO) 7110.65, *Air Traffic Control*, and AFJI 11-204, *Operational Procedures for Aircraft Carrying Hazardous Materials*. Aircraft on final inside 5 NM normally are not broken out for higher priorities.

Local operational priority will be as follows:

- 2.30.1.1. FAA Flight Check aircraft.
- 2.30.1.2. Minimum fuel aircraft.
- 2.30.1.3. Weather recall aircraft.
- 2.30.1.4. Actual flight test mission support (approaching controlled mission time).
- 2.30.1.5. Distinguished Visitors (DV) aircraft.
- 2.30.1.6. Full stop landings requested on initial call-up to Tower.
- 2.30.1.7. Departures.
- 2.30.1.8. Locally assigned aircraft requesting touch-and-go/low approach landings IAW paragraph 2.30.2.
- 2.30.1.9. Transient aircraft conducting practice approaches. During periods of high traffic, transient aircraft should expect one approach to a full stop landing.
- 2.30.1.10. HMN AC aircraft.
- 2.30.1.11. Civilian Aircraft Operations. Official United States Air Force (USAF) Auxiliary Civil Air Patrol (CAP) aircraft may execute touch-and-go's or low approaches on a non-interference basis. Civilian (non-AC and non-CAP) aircraft may execute a low approach only on a non-interference basis.

2.30.2. All aircraft requiring multiple patterns or special mission needs will contact the SOF 10 minutes prior to arriving in pattern airspace so the SOF can work with the Tower/WSRF WS to determine aircraft priority. Advance notification and coordination is important to resolve/avoid conflicts. Ops Sups can assist SOF in priority coordination by relaying timely mission information. Priority will be as follows if multiple aircraft are requesting pattern



operations:

2.30.2.1. Aircraft conducting certification or check ride (e.g. JUDGE11, BOBA91).

2.30.2.2. Aircraft requiring a certain amount of pattern work for upgrade training e.g. F-16 Training Ride, MQ-9 Launch and Recovery (LR) training, German Air Force (GAF) AUDI.

2.30.2.3. Aircraft needing patterns for currency.

### **2.31. Noise Abatement and Quiet Hour Procedures.**

2.31.1. HMN daily quiet hours are between 2200-0600L. The 49 OG/CC or designated representative must approve all takeoffs, landings, and multiple approaches (other than scheduled local flying, exercises, and approved Attachment 10 UAO) during quiet hours. See paragraph 5.1.3. for engine run during quiet hours guidelines.

2.31.2. The 49 OG/CC or designated representative is the approving authority for quiet hours in recognition of DVs, ceremonies, etc. The 49 OG/CC or designated representative will specify takeoff, landing, taxi, and Remotely Piloted Aircraft (RPA) restrictions during quiet hours for ceremonies, etc.

2.31.3. Avoid the White Sands National Monument (WSNM) Visitor's Center by at least 2,000 ft AGL or 1 NM (Figure 2.3.), HMN R-203/6 DME, N32 46.78 W106 10.35.

**Figure 2.3. WSNM Visitor's Center (Drawing not to scale).**



## Chapter 3

### AIRSPACE AND RANGE OPERATIONS

#### 3.1. Airspace LOA and Certificates of Authorization (COA).

3.1.1. Airspace LOAs affecting HMN local flying airspace (Figure A3.1.) are located on the 49 OSS/OSA SharePoint® and WSRF shared drive. The 49 OSS/OSA SharePoint® is accessible via the Holloman SharePoint® website. Alternatively, contact 49 OSS/OSA for all airfield and airspace related LOAs. IAW 13-204V3, Airfield Operations LOPs are reviewed annually by 49 OSS/OSA and updated as appropriate.

3.1.2. HAM maintains and updates airspace COAs that authorize RPAs to operate within the National Airspace System outside of restricted airspace. RPA units will inform Scheduling when planning to operate in Wiley East ATC Assigned Airspace (ATCAA). Scheduling will coordinate with the FAA IAW established agreements. Unit schedulers will advise Scheduling no later than (NLT) 2 duty days prior to execution to allow time for proper coordination. Contact the HAM for copies of the COAs.

3.1.3. Airspace and Range Scheduling. Local scheduling operations will be conducted IAW HAFBI 11-101, *Airspace and Range Scheduling*. All locally assigned aircrew will review the daily airspace schedule and restrictions on Center Scheduling Enterprise (CSE) (<https://cseaf.eglin.af.mil/cse/Home.aspx>) prior to conducting flight operations in the local area.

#### 3.2. Range Operations.

3.2.1. Local range operations will be IAW AFI 13-212, HAFB ADDENDUM-A, *Holloman Primary Training Ranges*, and when inside White Sands Missile Range (WSMR) airspace, WSMR Flight Safety Operational Plan (FSOP) governs the specific flight mission.

#### 3.3. Joint Test and Training Operations Cell (JTTOC) Procedures.

3.3.1. The JTTOC is located in the WSMR Operations Control Division to facilitate dynamic allocation of test and training airspace to maximize both. The JTTOC will communicate over HMN WAVE radio network using the call sign “BADGER”.

3.3.2. Pilot Procedures.

3.3.2.1. Coordinate airspace requests with squadron Ops Sup if still on the ground.

3.3.2.2. For airborne airspace extensions, make requests directly to BADGER on UHF 315.9. Expect words to be passed back via the JTTOC on UHF 315.9 (or your airspace discrete frequency, if coordinated). Climbs above 10,000 ft MSL may be required to establish contact in Lava/Mesa airspace or if redundant radio sites have failed.

3.3.2.3. If two-way communication with BADGER cannot be established or if BADGER is unmanned, make your airborne airspace requests with HMN Approach (UHF 269.225).

3.3.3. Ops Sup Procedures.

3.3.3.1. If BADGER is unmanned, make day-of airspace requests via Scheduling, DSN 572-3536. The JTTOC will positively notify Ops Sups via TransVerse® or voice when the position status (manned or unmanned) changes.

3.3.3.2. Notify aircrew at step of the JTTOC operating window.

3.3.3.3. Keep the JTTOC informed of significant changes to the flying schedule.

3.3.3.4. For other requests/assistance, contact the JTTOC at DSN 258-6520.

3.3.3.5. Scheduling is the point of contact for next-day and beyond requests, regardless of JTTOC status.



### 3.3.4. Scheduling Procedures.

3.3.4.1. Scheduling will publish the JTTOC operating window on SharePoint®.

3.3.4.2. When the JTTOC is manned, refer all day-of airspace change requests to the JTTOC.

## 3.4. Local Flying Area. HMN local flying area is defined as a 200 NM radius from the HMN TACAN, excluding Mexico's airspace (Figure A3.1.).

### 3.4.1. Avoidance Areas: (Figure A3.9.).

3.4.1.1. When HMN High Speed Test Track (HSTT) is in use, comply with restrictions issued by WSRF.

3.4.1.2. Explosive Ordnance Disposal (EOD) Demolition Range. When HMN EOD range (HMN R-318/1.5 DME or N32 52 58.06 W106 07 28.29) is in use, comply with NOTAM or restrictions issued by Tower. See 49 OSS-49 CES EOD LOA for additional EOD procedures.

3.4.1.3. Maintain vigilance near Mesa Verde Ranch Strip (FAA identifier 7NM1, HMN R-027/5.4 DME, final Runway 22).

3.4.1.4. Veterans Memorial Park (HMN R-049/7 DME) is occasionally used on weekends and holidays for model rocket and high power rocket launch activities up to 17,000 ft MSL. When in use, avoid the park by 2 NM radius or as instructed by ATC. See Tripoli NM-White Sands-FAA Waiver for additional procedures.

3.4.1.5. WSNM Visitor's Center (HMN R-203/6 DME), N32 46. 78 W106 10.35. Comply with restrictions in paragraph 2.31.3.

3.4.1.6. Avoid overflight of Apache Point Observatory (HMN R-096/15 DME), N32 46.49, W105 49.13 when active during recurring lunar laser research activity. Laser activity is hazardous at an angle of 90 degrees from the surface to 60,000 ft MSL. When active, avoid Sunspot by 5 NM. Check Albuquerque (ABQ) Air Route Traffic Control Center (ARTCC) NOTAMs for Apache Point laser research schedule and restrictions.

3.4.1.7. Avoid overflight of Alamogordo White Sands Regional Airport (KALM) by 2,000 ft AGL or 2 NM N32 50.4767 W105 59.3317. Use caution as parachute landings can occur at the White Sands Landing Zone 7 days a week from sunrise to sunset. Coordinates of the landing zone are N32.881849 W105.977919. Maximum altitude of jumps will be 14,000 ft MSL. Alternate drop zone is located at Griggs Field (N32.92835 W105.95021) in Alamogordo.

3.4.1.8. Remain at or above 3,000 ft AGL within 1.5 NM of the towns of Cloudcroft (N32 57.4 W105 44.4) and High Rolls (N32 56.9 W105 49.9). This restriction is not applicable to helicopters.

3.4.1.9. DO NOT fly within 25 NM of El Paso (ELP) VHF Omni-Directional Radio Range/Tactical Air Navigation (VORTAC) (Channel 99) within Class E airspace without contacting ELP Approach Control.

3.4.1.10. Aerial Cable. Crews must stay above 9,000 ft MSL within 1 NM of the aerial cable. This 2.5 inch thick, 15,000 ft cable spans between Little Burro Mtns (southwest end of cable - N33 36.5 W106 25.5 [HMN R-340/47.85 DME]) and Jim Peak (northeast end of cable - N33 37.5 W106 21.5 [HMN R-345/47.9 DME]) and presents a hazard to low flying aircraft. The site is located near the border of Lava East and Lava West at the northwest corner of Oscura (see Figures A3.9., A3.10., and A3.11.).

3.4.1.11. Chaff and Flare Restrictions. (Figure A3.12.).

3.4.1.11.1. During all fire danger levels except for "Very High" and "Extreme", in

WSMR or R-5103B/C, flares may be dropped from a minimum altitude of 2,000 ft AGL. Within designated impact areas of Red Rio, Oscura, and Yonder, aircraft are authorized to drop flares from a minimum altitude of 500 ft AGL.

3.4.1.11.2. In other Military Operations Areas (MOA) and ATCAA east of HMN (Wiley East, Beaks, Pecos, and Talon), flares WILL NOT be deployed during periods of "Very High" or "Extreme" fire danger. During periods of "High" fire danger, aircraft WILL NOT expend flares below 18,000 ft MSL. If fire danger is less than "High" then minimum altitude for flare release is 2,000 ft AGL.

3.4.1.11.3. Aircraft are authorized to drop chaff in all WSMR airspace areas subject to the limitations of the current chaff permit. The permit is available for review at <https://cs3.eis.af.mil/sites/OO-OP-AC-30/Holloman/SitePages/Home.aspx>. DO NOT release chaff within 60 NM of ELP Approach or ABQ ARTCC facilities. All chaff use must be scheduled through Triad Scheduling on the CSE.

3.4.1.12. North/West Helicopter Corridors (Figure A3.13.). When operating in WSMR north of N33 19, comply with CSE Airspace Schedule helicopter mission restrictions whenever the North or West helicopter corridors are active.

3.4.1.13. Terminal High Altitude Area Defense (THAAD) anti-ballistic missile system. Minimum Operating Altitudes over THAAD: Current restrictions require manned aircraft to maintain a minimum altitude of approximately 18,000 ft AGL (23,000 ft MSL) while operating in the vicinity of the THAAD radar sites in Yonder South (Figure A3.22.) and 5103B airspace (Figure A3.19. and A3.23.). This minimum altitude is based upon aircraft carrying electro-explosive devices (EED). Presently, HMN RPAs do not carry any type of live weapons or devices activated by an electrical charge. All non-EED aircraft must maintain a minimum altitude 8,000 ft AGL (13,000 ft MSL) while operating in the vicinity of THAAD radar sites.

3.4.1.14. Radar Target Scatter (RATSCAT) Advanced Measurement System (RAMS). The RAMS test facility located on WSMR is used to conduct testing that is sensitive in nature. Due to the capabilities of some Full-Motion Video (FMV) equipped aircraft, careful attention must be given to ensure imagery of these tests are not inadvertently collected or to be used for illicit purposes.

3.4.1.14.1. A HMN/WSMR "No Look" area has been established for aircraft that have the capability to view/record/transmit video or imagery. This area lies within the boundaries of Yonder airspace and is centered at (see Figure A3.9.) N33 11.17 W 106 33.85.

3.4.1.14.2. FMV equipped aircraft including but not limited to RPAs, aircraft with targeting pods or FMV sensor suites, or aircraft having the capability to record ground imagery of any kind will not use those sensors while in proximity of the HMN/WSMR "No-Look" area. When active (see CSE restrictions page), crews must stay above 9,600 ft MSL within 2 NM of the HMN/WSMR "No-Look" area.

3.4.1.14.3. Aircraft falling into the categories named above will have their sensors either turned off or trained to areas outside of the HMN/WSMR "No-Look" area. Any aircraft in violation of this directive is subject to a security investigation by the 49 OG. Any aircraft which believes they have inadvertently violated this directive should immediately contact the 49 OG while quarantining the offending sensor or recording device.

3.4.1.15. WSMR Main Post (Figure A3.9.). RPA flights over WSMR Main Post (N32 22

45.56 W106 29 7.45) are not authorized at any altitude within 1 NM.

3.4.1.16. Global Positioning System (GPS) Jamming. GPS interference testing on WSMR may result in unreliable or unavailable GPS signal. Check CSE or ABQ ARTCC NOTAMs for GPS testing schedule, affected area, and restrictions.

### 3.5. ATC Airspace.

3.5.1. HMN Class D Airspace extends from the surface (SFC) up to and including 6,600 ft MSL (2,500 ft AGL) within a 4.8 NM radius of HMN and within 1 NM each side of the HMN ILS localizer northwest course extending from the 4.8 NM radius to 5.4 NM northwest of the airport excluding that airspace within a 2 NM radius of the KALM (Figure A3.2.).

3.5.1.1. Unusual Maneuvers in Class D Airspace. Unusual maneuvers are not authorized in HMN Class D airspace except as specifically authorized by local operating procedures. Unusual maneuvers include any intentional maneuver involving an abrupt change in an aircraft's attitude, an abnormal altitude, or abnormal acceleration not necessary for normal flight. All requests must be coordinated through 49 OSS/OSA and approved by 49 OG/CC or designated representative.

3.5.1.2. Airfield and Landing Restrictions. While heavy aircraft are holding in position for takeoff on Runway 22 approach end, aircraft conducting approaches to Runway 16 will be limited to restricted low approaches due to the possibility of thrust-induced turbulence in the touchdown zone. Restricted low approaches are not authorized over aircraft in takeoff position.

3.5.1.3. Small Unmanned Aircraft System (sUAS) in Class D. All sUAS activity within Class D must be coordinated through 49 OSS/OSA 72 hours in advance. See HAFB sUAS Procedures memorandum.

3.5.2. WSRF and Delegated Airspace. WSRF is located at WSMR. WSRF airspace is within the lateral limits described in Annex 1 of the ABQ ARTCC, 49 WG, and WSMR LOA from SFC to 22,000 ft MSL.

3.5.2.1. VFR Training Areas. VFR training areas in HMN airspace are the AC training area southeast of HMN and AA/AC training area to the northeast (Figure A3.4.). Use of either VFR training area is coordinated real-time with WSRF and subject to restriction based on HMN runway configuration and traffic conditions.

3.5.2.2. Civilian Flyway. A flyway for light aircraft extends between WSMR and Beak MOA/McGregor Airspace. It extends from JUPTR (HMN R-357/90 DME) through KALM to ELP (Newman VORTAC (EWM), HMN R-174/71 DME). When possible, maintain VFR at or above 12,500 ft MSL in the civilian flyway for better ATC identification and deconfliction with civilian aircraft.

3.5.2.3. Minimum Vectoring Altitudes (MVA). HMN DASR MVAs are developed and maintained by HQ ACC/A3AO TERPs. When the HMN DASR is inoperative and WSRF switches to Mosaic Mode (multi-sensor mode), MVAs will change to higher altitudes.

3.5.2.3.1. WSRF may vector VFR aircraft at any altitude. Vectors do not imply an IFR clearance. The pilot is responsible for terrain and obstruction clearance. When a pilot cannot accept an ATC instruction because of terrain, weather, or obstructions, they must advise ATC and obtain an acceptable instruction.

3.5.2.3.2. VFR Climb/Descent Procedures. Aircraft departing or arriving HMN on an IFR clearance must use the terminology "*VFR CLIMB/DESCENT*" to operate below the MVA. Controllers will continue to issue traffic alerts, traffic advisories,

sequencing, and other services requested by the pilots or as deemed necessary by the controller. Pilots on a VFR climb/descent are responsible for maintaining their own terrain, obstacle/cloud clearance, and to see and avoid other aircraft.

3.5.2.4. Diverse Vector Area (DVA). Aircraft may be vectored below the MVA while executing a departure or climb-out instructions. DVA diagrams are available from WSRF. DVA provides separation from obstacles in accordance with TERPS diverse departure criteria.

3.5.2.4.1. When a published instrument departure conflicts with active restricted airspace, aircrews have the option to request a DVA departure with Clearance Delivery. E.g.: "...ON DEPARTURE CLIMB AND MAINTAIN (ALTITUDE). CROSS DEPARTURE END AT OR BELOW 5,600 FT, LEAVING 6,000 FT TURN RIGHT HEADING 010, REMAIN WITHIN 8 DME OF HMN UNTIL ESTABLISHED ON THE 010 HEADING" or as directed by ATC.

3.5.2.4.2. Standard climb gradient will be used unless reported ceiling is 8,000 ft or less or the visibility is 3 SM or less. In those circumstances, ATC must inform the pilot of the following climb gradient for the applicable departure runway and obtain pilot concurrence prior to issuing an ATC departure clearance IAW AFI 13-204V3 paragraph 10.13.

3.5.2.4.2.1. Runway 16 and 25: 510 ft/NM.

3.5.2.4.2.2. Runway 22: 470 ft/NM.

3.5.2.4.2.3. Runway 34: 490 ft/NM.

**3.6. Restricted Airspace/Special Use Airspace (SUA).** HMN local flying airspace utilizes WSMR, multiple MOAs/ATCAAs, and Fort Bliss). Additionally, ACC Working Areas are established within WSMR and Fort Bliss restricted airspace for scheduling and aircraft deconfliction. Joint Use Airspace and Working Areas are depicted in Figure A3.16., Pecos Airspace is depicted in Figure A3.17., Talon Airspace is depicted in Figure A3.1 and Figure A3.18. Figure A3.1 depicts all of HMN local area airspace.

3.6.1. ACC units require "exclusive use" in ACC-managed airspace (See AFI 13-201, *Airspace Management*).

3.6.2. HMN lies within R5107D and can be reserved for research & development and training missions (Figure A3.7). When these portions of R5107D are active, it may prohibit IFR departures, instrument approaches, and Simulated Flameout (SFO) patterns into HMN.

3.6.2.1. Activation of R5107D within the lateral confines of HMN Class D requires 72-hours notice. When scheduled, a NOTAM must be submitted no earlier than 3 days prior to the expected activation.

3.6.3. WSMR. Several restricted areas are combined to form WSMR to include R5107B, R5107C, R5107D, R5107E, R5107F, R5107G, R5107H, R5107J, R5109A, R5109B, R5111A, R5111B, R5111C, and R5111D (Figure A3.7.).

3.6.3.1. Army Air, 704 TG and 704 TG sponsored units, and TDY units will abide by applicable WSMR airspace directives for test aircraft. Where there is a conflict between those directives and this instruction, the WSMR directives take precedence for test aircraft.

3.6.3.2. WSMR Grid has been established for range activity coordination, restriction, and control. Copies of the WSMR grid are available from the HAM. Latitude and Longitude (Lat/Lon) conversions for the grid are listed in Table A3.3. and A3.4.

3.6.4. Fort Bliss. Several restricted areas are combined to form Fort Bliss, to include R5103A/B/C and R5107A/K (at or above 13,000 ft MSL) (Figure A3.7.).

3.6.4.1. High Altitude Mountainous Environmental Training Strategy (HAMETS) (Figure A3.19.). The HAMETS area is a helicopter training area located in the northern section of R-5103C. The area is designated a free fly area and is continuously active. Davis Dome/Bliss Radio provides advisory service to HAMETS aircraft. WSRF must coordinate with Davis Dome/Bliss Radio prior to allowing an aircraft to transit the area. Helicopters will maintain at or below 9,000 ft MSL. When HAMETS is active aircraft transit the HAMETS area at or above 10,000 ft MSL. Units can schedule the HAMETS area through 49 OSS/OSOS if their mission requires access to the airspace. For real time crossing through the area, contact WSRF who will in turn coordinate with Bliss Radio for availability.

3.6.4.2. Wilde Benton Area (Figure A3.19.). This area is designated a free fly area and is active at all times. Helicopters will maintain at or below 6,500 ft MSL, and when present all other aircraft must transit the Wilde Benton area at or above 7,500 ft MSL.

3.6.4.3. HAMETS area has two ingress and egress routes from Fort Bliss proper, the White Corridor on the eastern boundary of 5103C and the Red Corridor on the western boundary of 5103C (Figure A3.19.). These corridors are active from the SFC to 800 ft AGL and must be avoided by non-HAMETS aircraft except during the times and for the missions that the Centennial low-level entry has been scheduled.

3.6.5. There are five MOAs/ATCAAs controlled by HMN when released by Albuquerque Center:

3.6.5.1. Beak Alpha, Bravo, and Charlie MOAs/ATCAAs from 12,500 ft MSL to 23,000 ft MSL. These are normally in use from 0600L through 1800L, Monday through Friday and other times by NOTAM. Beak ATCAAs cannot be used concurrently with Wiley East ATCAA.

3.6.5.2. Wiley East ATCAA from 18,000 ft MSL up to 40,000 ft MSL or as scheduled.

3.6.5.3. Valmont ATCAA. The Valmont ATCAA contains the airspace from 18,000 ft MSL to 60,000 ft MSL or as scheduled and overlays the VFR corridor that extends from HMN to El Paso. This ATCAA can be utilized to bridge the gap between R5107 and R5103 or commensurate ACC Working Areas above 18,000 ft MSL.

3.6.6. ACC Working Areas. There are areas within WSMR and Fort Bliss restricted airspace designated for use by HMN scheduled aircraft conducting training flights also known as ACC Working Areas. These include Wiley West, Wiley East, Wiley West Extension, Lava/Mesa, Casa, Red Rio, Oscura, Yonder, Yonder East, Yonder South, Dona East, Dona West, McGregor North, McGregor South, and the Centennial Fly Area (CFA) (Figure A3.16.). Additionally, the Centennial, Oscura, and Red Rio ranges are available for air-to-surface weapons operations (see HAFB Addendum to AFI 13-212 for details).

3.6.6.1. Entry Procedures: Contact HMN Approach for entry into Wiley West, Wiley East, Wiley West Extension, Lava/Mesa, Casa, Red Rio, Oscura, Yonder, and Yonder East. Contact CHEROKEE for entry into Yonder South, Dona East, Dona West, McGregor North, McGregor South, and the CFA.

3.6.6.1.1. On initial contact, request working airspace, report current airspace restriction code, and working frequency.

3.6.6.1.2. HMN Approach/CHEROKEE will advise aircraft of other known traffic on range. Aircraft can expect radar monitoring and airspace boundary information.

3.6.6.2. Exit Procedures: Aircrew must advise HMN Approach/CHEROKEE 5 minutes prior to exiting. Request approval/clearance from HMN Approach/CHEROKEE prior to

leaving the assigned area. Aircraft requesting IFR service can expect clearance upon exiting SUA. DO NOT exit working airspace without a clearance.

3.6.6.2.1. Airspace and range extensions prior to departure: coordinate airspace extensions through JTTOC, who will then update HMN Approach/CHEROKEE.

3.6.6.2.2. Airspace and range extensions while airborne: airborne airspace extensions will not be accepted within 5 minutes of scheduled airspace end time. An airspace extension does not imply an impact range extension. Requestor must ensure they request an impact range extension if one is needed. JTTOC will attempt to coordinate extensions and/or, if needed, verify aircrew acceptance of Military Authority Assumes Responsibility for Separation of Aircraft (MARSA) between flights. Aircraft scheduled for ACC working areas or Wiley East ATCAA or Beak MOAs/ATCAAs will adhere to the MARSA LOA.

3.6.6.3. Procedures during WSRF closure:

3.6.6.3.1. Aircrews must obtain specific permission from the WSMR Airspace Manager or designated representative to operate within R5107 (excluding Dona West and Dona East) when WSRF is closed. That authority is not delegated to any 49 WG agencies.

3.6.6.3.2. Flights going to Mesa must enter at GALLAGHER; flights to Lava-Mesa must enter at CANYON; and flights to Yonder must enter at CAPES.

3.6.6.3.3. Flights entering or leaving Red Rio or Oscura from other than published entry points must check in on CHEROKEE in the blind stating intentions.

3.6.6.3.4. Flights will not enter early or extend beyond their scheduled airspace/range time. Flights WILL NOT enter any airspace/range in which other aircraft are present unless previously coordinated through WSMR airspace manager. If unable to enter, hold VFR or as directed by WSMR Airspace Manager or ABQ ARTCC outside the restricted airspace until the airspace is clear of the other flight.

3.6.7. Wiley All and ACC Working Area Procedures.

3.6.7.1. Wiley All airspace is composed of three subsections: Wiley East, Wiley West, and Wiley West Extension (Figure A3.24.).

3.6.7.1.1. Wiley East consist of Wiley East ATCAA FL180 – FL400 or as required, Beak A/B/C MOAs (see Table A3.2. for boundary information).

3.6.7.1.2. Wiley West is defined as R5107B/C/D/F/G/H/J, and the Yonder South portion of R5107B above 30,000 ft MSL as scheduled.

3.6.7.1.3. Wiley West Extension is defined as R5111A/B and R5107E as scheduled.

3.6.7.2. Wiley West Airspace Procedures.

3.6.7.2.1. R5107D airspace 14,000 ft MSL to 60,000 ft MSL or as scheduled, is available in conjunction with Wiley West airspace.

3.6.7.2.2. Whenever Wiley West airspace is requested, Scheduling must schedule R5107D with a floor of 14,000 ft MSL and place the request on the CSE Airspace Schedule. However, in order to use a lower altitude than the standard 18,000 ft MSL, the requesting Ops Sup must gain final approval through JTTOC from the WSRF WS (DSN 258-8000) at least 1 hour prior to the mission start time. If unable to approve the request, then WSRF will issue an alternate altitude or time restriction, if available.

3.6.7.2.3. Real-time (unscheduled) requests for R5107D airspace west of the Romeo grid line at 14,000 ft MSL and above may be made by aircrew direction with WSRF. If traffic permits, WSRF may authorize the use of the airspace.

- 3.6.7.2.4. WSRF WS is the final authority on operations within R5107D and can deny or recall the airspace at any time if conditions require (i.e., weather or IFR operation). HMN Approach will contact the lead aircraft on the appropriate working frequency passed by the aircraft (normally 342.4 or 311.5), via the Airborne Warning and Control System controller, or on 243.0.
- 3.6.7.2.5. Conflicts with operations over Class D (F-16 SFO, max performance climbs, etc.) will be addressed real-time by ATC. Advance notification and coordination is important to resolve/avoid conflicts.
- 3.6.7.3. Fort Bliss ACC Working Areas are composed of multiple areas: Dona East, Dona West, McGregor North, McGregor South, and CFA (Figure A3.1. and Table A3.2. for boundary information).
- 3.6.7.3.1. Dona West: The airspace contained in R5107A. The altitude is SFC to 60,000 ft MSL.
- 3.6.7.3.2. Dona East: The airspace contained in R5107K. The altitude is SFC to 60,000 ft MSL.
- 3.6.7.3.3. CFA altitudes are SFC to 60,000 ft MSL.
- 3.6.7.3.4. McGregor North: The airspace contained in R-5103C excluding the portion of the CFA which lies within R-5103C. The altitude is SFC to 60,000 ft MSL.
- 3.6.7.3.5. McGregor South: The airspace contained in R-5103B excluding the portion of the CFA which lies within R-5103B. The altitude is SFC to 60,000 ft.
- 3.6.7.4. Fort Bliss ACC Working Areas Procedures.
- 3.6.7.4.1. CHEROKEE provides airspace control in McGregor North/McGregor South/CFA (R5103B/C) and Dona West/Dona East (R5107A/K) to aircraft not associated with Army Air Defense operations (Figure A3.26.).
- 3.6.7.4.2. CFA is designated a protected operating airspace dedicated primarily to high speed strike aircraft when so scheduled with Fort Bliss Range Scheduling. CFA will be scheduled and transit through this airspace during scheduled operations windows must not be allowed with the exception of declared emergency and then only after notification of aircraft operating in the CFA. When scheduling Centennial range, fast moving aircraft will also request the CFA. Aircraft will be scheduled to fly outside the CFA in McGregor North and/or McGregor South but must observe all Fort Bliss restrictions as depicted in CSE and the restriction page. Ops Sups and aircrews will be notified that the CFA is active via comments in the "Operating Airspace" section of the daily Airspace Schedule available via scheduling software currently in use.
- 3.6.7.4.3. Entry Procedures: Enter only within scheduled range time and after receiving clearance.
- 3.6.7.4.3.1. Radio Contact: Establish two-way radio communications with CHEROKEE prior to entering and departing CFA, McGregor North/South, and Dona East/West airspace. Upon clearance to enter CFA, aircrews may contact Range Operations Center (ROC) for real-time scoring of air-ground munitions (must be pre-coordinated through ROC). If the ROC frequency is not being used for Joint Advanced Weapons Scoring System (JAWSS) scoring, aircrews may use that frequency as a discrete frequency for air-to-air inter-flight communications.
- 3.6.7.4.4. Exit Procedures: Notify CHEROKEE with your intentions 5 minutes prior to exiting the area. Request approval/clearance from CHEROKEE prior to leaving assigned area. DO NOT exit without a clearance.

3.6.8. Talon and Valentine MOA/ATCAAs procedures: Talon Airspace is depicted in Figure A3.1. and Figure A3.18. Figure A3.1 depicts all of local airspace.

3.6.8.1. Talon MOAs/ATCAAs Entry and Exit Procedures (Figure A3.18.):

3.6.8.1.1. Entry Procedures: Obtain clearance ABQ ARTCC. DO NOT enter without clearance when already active.

3.6.8.1.2. Talons: Follow stereo route. ABQ ARTCC will clear aircraft to enter.

3.6.8.2. Exit Procedures: Contact ABQ ARTCC prior to recovery. DO NOT exit without a clearance.

3.6.8.2.1. Talon (ABQ ARTCC): Recoveries from Talon High West and Talon High East will be at 19,000 ft MSL block 20,000 ft MSL until cleared to resume the Talon Stereo. A 20 DME arc off the Chisum VORTAC, parallel to the northern border of Talon High West is set aside as an entry and exit corridor to and from Talon High East. Recovery from Talon West Low will be VFR or via continuance on filed instrument route (IR).

3.6.8.2.2. Valentine MOA. If all flight members are in visual contact with the lead aircraft, lead will squawk the assigned Mode 3 code with Mode C on. If flight members separate in the area outside visual contact with lead, aircraft/elements will squawk assigned Mode 3 with Mode C on until rejoined with the lead aircraft.

Valentine MOA is activated by NOTAM only.

3.6.9. Supersonic Airspace. Supersonic flight is currently conducted only when necessary to accomplish the mission, and is managed IAW AFI 13-201.

3.6.9.1. Supersonic operations are authorized in WSMR at or above 10,000 ft MSL, Wiley East ATCAA at or above 23,000 ft MSL, R5103B/C at or above 10,000 ft MSL, and Valmont ATCAA at or above 18,000 ft MSL (Figure A3.21.).

3.6.9.2. Minimizing Sonic Boom Impact. The following three areas apply to all aircraft operating within the confines of Wiley East ATCAA. See Figure A3.21.

3.6.9.2.1. Sonic Boom Restriction 1 (Subsonic only): N33 15 W105 45, N33 15 W105 32, N33 38 W105 28, and N33 38 W105 48.

3.6.9.2.2. Sonic Boom Restriction 2 is Non-maneuvering Supersonic: 5NM radius circle with the center point at Carrizozo, N33 39.5 W105 53.

3.6.9.2.3. Sonic Boom Restriction 3 (Non-maneuvering Supersonic): N33 11 W105 52, N33 01 W106 05, N32 50 W105 59, N32 51 W105 40, and N33 05 W105 38

3.6.9.3. NON-MANEUVERING is defined as no transition from subsonic to supersonic and no turning under G (level or descending) while supersonic. Approaching the confines of non-maneuvering supersonic areas, pilots should not maneuver aggressively but instead decelerate and climb slightly to avoid "throwing" focused booms.

3.6.9.4. Mission planners and all pilots are responsible to mitigate sonic boom exposure in these areas.

3.6.9.5. Commanders of units operating aircraft capable of supersonic flight will establish internal methods to document supersonic flight activities over land. The remarks section in the Aircrew Resource Management System (ARMS) may be used for this purpose. Training or scheduling/utilization tools are also acceptable. Minimum information to be retained includes call sign, type aircraft, unit, location of supersonic event, and route of flight.

### **3.7. Reduced/Covert/Lights-Out Operations in ATCAA.**

3.7.1. Night Vision Goggles/Lights-out Training (NVGT) may be conducted in the Talon High



East/West ATCAAs, Beak A/B/C ATCAAs, Wiley East ATCAA, and Valmont ATCAA IAW FAA Exemption No. 7687.

3.7.2. When conducting NVGT the following provisions must be adhered to:

3.7.2.1. NVGT/Lights-out operations are limited to USAF aircraft and to other military aircraft participating in joint-air operations.

3.7.2.2. Aircrews performing NVGT must alter course, as appropriate, and remain well clear of non-participating aircraft until such traffic is no longer a factor.

3.7.2.3. Lights-out operations must be terminated immediately in the event of:

3.7.2.3.1. Conflicting traffic.

3.7.2.3.2. Spill out of a participating NVGT aircraft.

3.7.2.3.3. Loss of communications.

3.7.2.3.4. Loss of positive control (radar outage).

### **3.8. Military Training Routes (MTR).**

3.8.1. Procedures: Visual Route (VR)-176, Instrument Route (IR)-133, IR-134, IR-142, IR-192, IR-194, or IR-195 (managed by HMN) can be filed by local stereos or Department of Defense (DD) Form 175, *Military Flight Plan*, for other entries and exits. All routes must be scheduled through 49 OSS/OSOS. Aircrews must receive a local MTR brief from the HAM (DSN 572-2638) prior to operating these MTRs.

3.8.2. Aircrews using low-level routes are responsible for all military training route procedures in FLIP Area Planning 1B–*Military Training Routes (AP/1B)*. Scheduling will deconflict entry times, but MARSAs applies at the entry point, alternate entry point, along the route, and at the exit and alternate exit points. Avoid all noise sensitive areas.

3.8.3. Expect clearance from ABQ ARTCC for VR-176. Expect enroute entry clearance from WSRF for IR-133, IR-134, IR-192, IR-194 and IR-195. If unsure of clearance into the route, contact ATC.

3.8.4. Clearance for VR-176 and IR-133 stereo does not mean that WSRF has approved entry into R5107B or R5107H. DO NOT enter WSMR airspace without WSRF approval. For IR-134P, maintain 12,000 ft MSL until point Alpha.

3.8.5. Clearance to fly IR-134, IR-192, IR-194, or IR-195 does not authorize entry into R5103B/C. DO NOT enter R5103 without approval from the controlling agency.

3.8.6. Information on bird hazards and periods of peak activity is available for low-level routes on the following US BASH website: <http://www.usahas.com>.

3.8.7. R5113, on VR-176 will be avoided. Within R5113, there are several aerial cables and antennas that are not adequately described in AP/1B Chart (Western US) or the IFR Enroute Low Altitude Chart L-4. Aircrews will take extra caution when operating in the vicinity of R5113.

## Chapter 4

### FLIGHT PLANNING

#### 4.1. Flight Plan Procedures.

4.1.1. Standardized Routes and Stereo Flight Plans: HMN standardized routes and stereos (See 49 WG Basic In-Flight Guide (49 WG IFG) and RPA Annex) are designed to reduce adverse environmental impact, provide smooth-flow sequencing, and enhance flight safety.

4.1.2. All aircraft departing HMN IFR, VFR, or on a stereo must have a signed flight plan on file in either their designated squadron(s) or at AM.

4.1.2.1. HMN assigned aircrew and tenant assigned units have the option of faxing, emailing, or calling DD Form 175, *Military Flight Plans*, to file VFR or stereo departures to AM for sorties originating from HMN.

4.1.2.2. DD Form 175 must be faxed or called to AM not later than 1 hour prior to departure time.

4.1.2.2.1. The agency submitting flight plans must confirm via telephone at least 30 minutes prior to proposed departure time to ensure receipt and acceptance of flight plan(s) by AM.

4.1.2.3. HMN assigned and tenant units must maintain original flight plan (DD Form 175, DD Form 1801, *DoD International Flight Plan* or Stereo), passenger manifest, weight and balance forms, and any other forms associated with the flight plan for 3 months, IAW RDS, Table 13-07, Rule 03.00.

4.1.2.3.1. Units may use an AF Form 4327, *Aviation Resource Management System Fighter Flight Authorization*; or AF Form 4327a, *Crew Flight Authorization*, to meet the 3 month requirement. A unit approved remark or remarks code or legend as required on the AF Form 4327/4327a to reference a HMN 49 WG IFG standardized route or stereo may fulfill the signature requirement as follows:

4.1.2.3.1.1. The pilot in command's (PIC) signature next to the applicable remark or remarks code on the AF Form 4327/4327a constitutes the act of filing a VFR or stereo flight plan.

4.1.2.3.1.2. The Ops Sup (or representative) will convey, verbatim, to AM the applicable blocks from the AF Form 4327/4327a for which the PIC signed.

4.1.2.3.2. HMN assigned and tenant units will comply with paragraph 4.1.2.3. for the TDY units that they host.

4.1.2.4. Transient aircrew filing flight plans with AM in person may submit computer generated flight plans via email.

4.1.2.5. NCOIC, AM Operations, or a designated representative will inspect squadrons quarterly to ensure records are maintained IAW paragraph 4.1.2. and 4.1.2.3.

4.1.3. AM will file flight plans through ABQ ARTCC for all aircraft and provide flight tracking for locally assigned and inbound transient aircraft. In addition, 49 WG/CP will track all 49 WG aircraft. Tenant and attached units will track respective unit-assigned aircraft.

4.1.4. Flight Plan Changes for HMN assigned and tenant units:

4.1.4.1. Coordinate changes to local flight plans by calling AM at least 15 minutes prior to takeoff with the revision. After departure, revisions to local flight plans cannot be made by AM.

4.1.5. Formation Flights:

4.1.5.1. Aircraft aborting/separated from the original formation must re-file prior to

departure.

4.1.6. Stopover flight/divert aircraft (weather or maintenance):

4.1.6.1. Aircraft commander may re-file or amend the flight plan with AM via any means (radio, telephone, etc.) provided AM personnel verify an original flight plan was filed. AM may verify original flight plans by contacting the original departure location via telephone or flight plan processing computer.

4.1.7. Daily Flying Schedule. HMN assigned units and locally hosted TDY units will provide AM a daily flying schedule NLT 1630L the day before the flight. If able, include mission details (e.g., check rides, extended VFR pattern work, cross country, etc.) that will be useful for ATC/AM to plan/coordinate staffing, airfield maintenance, and training. AM will compile the unit schedules into the HMN Daily Flying Schedule. Contact AM for inclusion to the daily flying schedule distribution list.

4.1.8. VFR departures may be made on local stereos if weather and mission requirements dictate. AA flight operations not annotated on the daily flying schedule and changes to AA call signs or departure times will be coordinated by AA Operations with the Tower WS.

4.1.9. MARSAs. MARSAs are authorized for special military IFR operations when coordinated with the air traffic control agency having jurisdiction over the area in which the operations will be conducted. See HMN MARSAs LOA.

4.1.9.1. Flight leads must coordinate with all flights involved in the operation and receive approval from the controlling agency prior to entering active SUA. While aircraft are in SUA, MARSAs will be applied between all flights.

**4.2. Prior Permission Required (PPR) Procedures.** AM administers PPR restrictions IAW AFI 13-204V3 and the IFR Supplement.

**4.3. Unscheduled and Unauthorized Aircraft Arrivals.** See HAFB IDP, Appendix 18, *Arrival of Unidentified or Unannounced Military or Civilian Aircraft*. Immediately report unauthorized aircraft movement via the Primary Crash Alarm System (PCAS) and Secondary Crash Net to 49 WG/CP and Base Defense Operations Center (BDOC). Unscheduled aircraft arrivals will be IAW 49 OSS/OSA Ops Letter.

**4.4. DV Notification Procedures.** Upon notification, AM will notify WSRF, Tower, and 49 WG/CP of inbound DVs. Based on controller workload (WSRF and Tower), WSRF will notify AM of the DV aircraft position when 50-flying miles out and Tower will notify AM at 15-flying miles. Airborne request to ATC for priority will be forwarded to 49 WG/CP for protocol notification or verification.

## Chapter 5

### GROUND OPERATIONS

#### 5.1. Engine Test and Run-up Procedures.

5.1.1. Engine Run-up Areas. Engine run-up areas are located on Runway 25 approach end, Runway 34 approach end, on run-up pad west of Taxiway Hotel near Building 801, and Pad 19.

5.1.2. Reciprocating or Turboprop Run-up. Designated location is 200 ft short of the VFR hold lines for Runway 16/34 at Taxiways Alpha and Delta. Run-up for Runway 07/25 is at Taxiway Bravo favoring the infield edge of the taxiway. For all other runways, run-up on appropriate taxiway or approach end of runway as approved by AM.

5.1.3. Military Power Engine Runs. Suppressed engine runs required for maintenance may be accomplished during quiet hours. Non-suppressed engine runs will only be accomplished on the first 1,000 ft of the approach end of any runway to avoid surface damage. Non-suppressed engine runs must be approved by 49 OG/CC or designated representative if conducted outside of wing flying hours or during quiet hours. Coordinate all requests for military power engine runs by transient aircraft through AM (DSN 572-5411). AM will determine the location for transient engine runs and AM will advise Tower of time, location, and call sign.

#### 5.2. Aircraft Special Operations Areas and Ramps.

5.2.1. Drag Chute Jettison Areas. All aircraft will maintain chutes until parking. If chute must be jettisoned prior to parking, coordinate with AM or Tower for area to jettison chute.

5.2.2. Hot Pit Refueling Areas. Alpha Arm/De-Arm, Hotel Arm/De-Arm, and the north or south end of West Ramp are designated hot pit refueling areas. Hot pit refueling in any areas must be coordinated with AM 72 hours in advance.

5.2.3. Live Load Areas (GAF and Echo LOLA). Live load operations on the GAF and/or Echo LOLA must be coordinated with AM 5 days in advance. See HAFBI 11-204, *Support of Aircraft Carrying Hazardous Materials*, for additional live load procedures.

5.2.4. Forward Area Refueling Point (FARP). Taxiway Echo LOLA is the only area surveyed and authorized for FARP operations on HMN IAW AFI 11-235, *FARP Operations*. FARP operations on Echo LOLA must be coordinated with AM 72 hours in advance. When in use, simultaneous live munitions loading/arming and FARP is NOT authorized.

#### 5.3. Aircraft Taxiing Requirements and Routes.

5.3.1. Taxi speed is restricted to a maximum of 30 knots on all taxiways. DO NOT exceed 10 knots ground speed in parking areas, ramps, and in the West Ramp.

5.3.2. Only base assigned aircraft that are approved to park in the West Ramp may taxi through the West Ramp (refer to paragraph 2.10.). Notify BDOC (DSN 572-7171) prior to parking or taxiing aircraft not assigned to 54th Fighter Group (54 FG) in or through the West Ramp.

5.3.3. Taxiway Golf Hot Spot (Figure 5.1.). **WARNING:** Taxiway Golf has a history of aircraft runway incursions due to multiple runway/taxiway intersections and short distance between Runway 04/22 and Taxiway Golf. Be aware of the VFR hold lines on Taxiway Romeo and Lima. Taxiway Golf is an extension of the Runway 07/25 controlled movement area and requires Tower approval prior to taxiing on the taxiway. Tower will issue specific runway exiting and taxi instructions before aircraft exit Runway 22 or before aircraft enter Taxiways Golf and Romeo.

#### Figure 5.1. Taxiway Golf Hot Spot.



5.3.4. Taxi routes will be per Tower instructions.

5.3.5. Standardized Taxi Route (STR). 54 FG aircraft may request or Tower may assign the MEANDER ONE STR when taxiing from the West Ramp to runway 25 for departure. When authorized, aircraft will taxi to runway 25 via Taxiways Juliet, Delta, Alpha, Bravo, and Arm/De-Arm Bravo. Tower must include runway 16 hold short or crossing instructions when issuing the STR.

5.3.5.1. Example: “WARHAWK91 RUNWAY 25 TAXI VIA MEANDER ONE, HOLD SHORT RUNWAY 16”.

5.3.5.2. Example: “WARHAWK91 RUNWAY 25 TAXI VIA MEANDER ONE, CROSS RUNWAY 16 AT JULIET”.

5.3.6. During arrival operations, Tower will not authorize vehicles/aircraft to cross a runway in front of a landing RPA or fighter type aircraft that has verbally committed to exiting the runway prior to the point at which the crossing is intended. See FAAO JO 7110.65 paragraph 3-7-2f.2.b.

5.3.7. 180-degree turns on runway asphalt surfaces are not authorized. F-15, F-16, F-18, F-22, F-35, T-38, MQ-9, C-12, AC, and Tornado aircraft are exempt from this restriction.

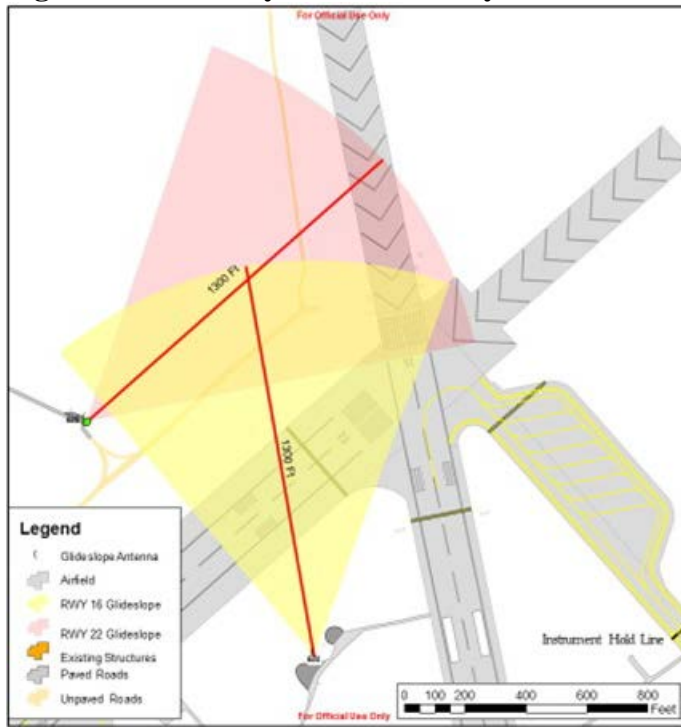
5.3.8. Pilots will ensure taxi deconfliction from heavy aircraft jet thrust.

5.3.9. Wingtip, Jet Blast, and Parking Restrictions. 49 WG Master Aircraft Parking Plan is maintained IAW AFI 13-204V3, ACCSUP using UFC 3-260-01. This plan ensures wingtip clearances, jet blast safe distance requirements, and parking restrictions are maintained to protect personnel, aircraft, facilities, and equipment. HMN Master Aircraft Parking Plan is maintained by AM. See FLIP Area Planning – North and South America (AP/1) or IFR Supplement for wingtip clearance restrictions.

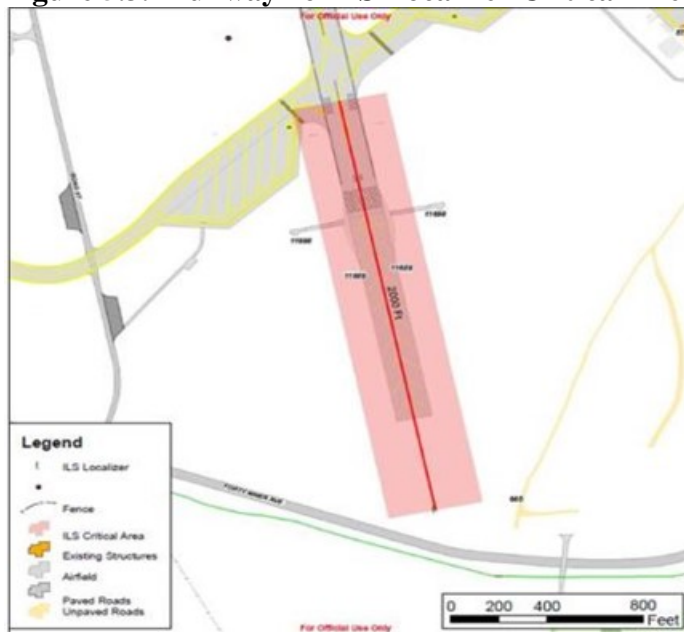
5.3.10. Precision Approach Critical Areas. When weather conditions are reported to be less than an 800 ft ceiling and/or visibility is less than 2 SM, Tower will protect the ILS Critical Areas IAW AFI 13-204V3 ACCSUP. An Instrument Hold Line is located on Taxiway Delta to protect Runways 16 and 22 Glideslope signals and both Precision Obstacle Free Zones (POFZ). See Figures 5.2. – 5.4. for ILS Glideslope and Localizer critical area locations. When weather dictates, Tower will broadcast “INSTRUMENT HOLD LINE IN EFFECT” on Tower

frequencies and ATIS.

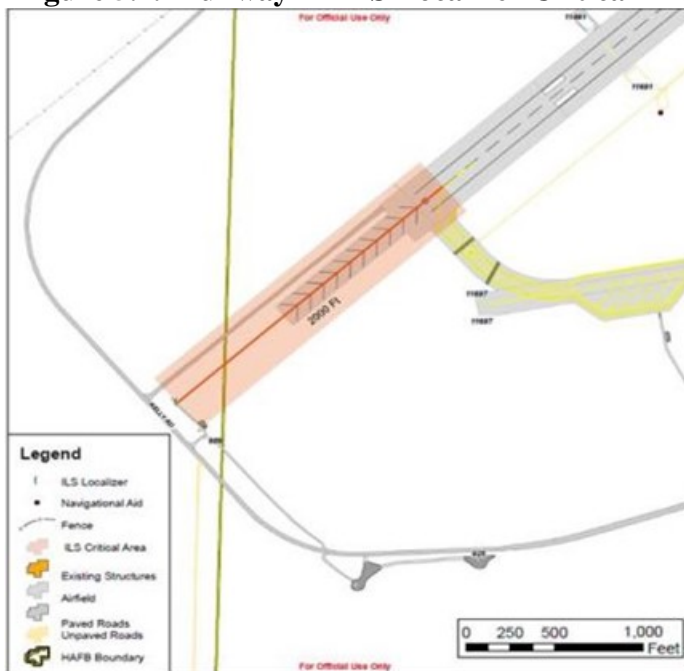
Figure 5.2. Runway 16 and Runway 22 ILS Glideslope Critical Areas.



**Figure 5.3. Runway 16 ILS Localizer Critical Area.**



**Figure 5.4. Runway 22 ILS Localizer Critical Area.**



5.3.11. Fighter Index of Thermal Stress (FITS). Bioenvironmental Engineering (49 AMDS/SGPB) determines the FITS zone IAW AFI 48-151, *Thermal Injury Prevention Program*. When reported, Tower will include FITS CAUTION or DANGER advisory in the ATIS message.

5.3.12. Taxiway Lighting Outages. During taxiway lighting outages, RPA with operational infrared (IR) camera or sensor may use unlit taxiways at night or low visibility. Movement of all other aircraft on unlit taxiways at night or low visibility must have 49 OG/CC approval and the aid of follow-me vehicles or ground support personnel.

5.3.13. FOD Abatement. Before authorizing multi-engine (i.e., 4 or more wing mounted engines) aircraft (e.g., C-130, C-17, AN-124, etc.) to taxi, Tower must request the aircraft taxi with outboard engines at idle. Example: “*SHADOW11 IF ABLE, TAXI WITH OUTBOARD ENGINES AT IDLE.*” or “*RCH157 IF ABLE, TAXI WITH INBOARD ENGINES ONLY*”.

#### **5.4. Startup/Taxi Procedures.**

5.4.1. Monitor ATIS prior to calling for IFR/VFR clearance or taxi instructions.

5.4.2. Contact Clearance Delivery no earlier than 30 minutes prior to proposed departure time. If your departure time has changed from your original proposed time, notify Clearance Delivery on initial call-up.

5.4.2.1. Request VFR/IFR departures with Clearance Delivery. Include proposed departure time, type, number in flight, and intentions.

5.4.3. Call Ground Control for taxi instructions prior to taxiing.

5.4.3.1. Inform Ground Control of any special requirements such as non-standard departures.

5.4.3.2. Include call signs of other flight members if not filed as a single flight. Example: “*GROUND, FIGHTIN11 WITH WOOL01, TAXI WITH ALPHA FROM SPOTS 2 AND 5...*”

5.4.3.3. Use the arm/de-arm nearest the departure runway unless mission needs dictate otherwise.

**5.5. General Departure Procedures.** Contact Tower when ready for departure. When cleared for takeoff, the pilot will acknowledge clearance and departure runway. If instructed to hold short of the runway or line up and wait, the pilot will acknowledge the instructions verbatim. When Tower instructs the pilot to change or contact departure, the pilot will change to the assigned frequency given them by Clearance Delivery.

#### **5.6. Line Up Procedures.**

5.6.1. Line up IAW applicable aircraft flight manual directives except during dual runway operations with Runway 22 departure and Runway 16 arrival or Runway 16 departure and Runway 22 arrival, aircraft will line up at the intersection of Runway 22 and Taxiway Echo or 2,000 ft down Runway 16 as applicable. Any aircraft requesting full length on Runway 16 or Runway 22 will advise Tower as soon as possible after completion of EOR checks.

5.6.2. When QF-16 drone aircraft are on final to Runway 04, all aircraft departing Runway 16 will line up with the last flight element no further north than the BAK-12 located 1,500 ft from Runway 16 threshold.

5.6.3. Takeoff restrictions:

5.6.3.1. For BAK-15 barrier equipped runways, Tower will ensure the departure end BAK-15 barrier is armed and in the lowered position. Crews can request the BAK-15 to be raised prior to departure. During BAK-15 malfunctions, the SOF will determine the need to keep the departure end BAK-15 in the raised position. All non-standard barrier/cable configurations will be published in a NOTAM and broadcasted on the ATIS.

5.6.3.2. Tower and WSRF approval is required for maximum performance climbs.

5.6.4. Aborting Takeoffs:

5.6.4.1. Aborted takeoffs automatically cancel takeoff clearance for all remaining stationary elements in the flight. If any element of the flight has begun takeoff roll, the decision to continue takeoff or abort rests with the pilot in command. Takeoff clearance for any remaining elements must be re-issued prior to re-attempting takeoff.

5.6.4.2. If conditions permit, pilots will call “*BARRIER, BARRIER, BARRIER,*” or



“CABLE, CABLE, CABLE, RUNWAY (*name*)” on Tower frequency if a barrier or cable engagement is anticipated.

5.6.5. Intersection Departures. The distance remaining from intersection to end of runway are not issued to locally-assigned aircraft to include AC unless requested by the pilot. Departure from the following intersections:

- 5.6.5.1. Runway 16 from Taxiways Charlie and Foxtrot – 8,150 ft remaining.
- 5.6.5.2. Runway 16 from intersection of Runway 07/25 – 5,750 ft remaining.
- 5.6.5.3. Runway 16 from Taxiway Juliet – 4,750 ft remaining.
- 5.6.5.4. Runway 34 from Taxiways Charlie and Foxtrot – 3,950 ft remaining.
- 5.6.5.5. Runway 34 from intersection of Runway 07/25 – 6,300 ft remaining.
- 5.6.5.6. Runway 34 from Taxiway Juliet – 7,350 ft remaining.
- 5.6.5.7. Runway 22 from Taxiway Echo – 8,950 ft remaining.
- 5.6.5.8. Runway 07 from Taxiway Delta – 5,150 ft remaining.
- 5.6.5.9. Runway 07 from intersection of Runway 16 and Runway 07 – 6,250 ft remaining.
- 5.6.5.10. Runway 07 from Taxiway Foxtrot – 8,100 ft remaining.
- 5.6.5.11. Runway 25 from Taxiway Delta – 7,750 ft remaining.
- 5.6.5.12. Runway 25 from intersection of Runway 16/25 – 6,550 ft remaining.
- 5.6.5.13. Runway 25 from Taxiway Foxtrot – 4,800 ft remaining.

**5.7. Airfield Vehicle/Pedestrian Operations.** See AFI 13-213\_HAFBSUP, *Airfield Driving*.

**5.8. Control of Ground Traffic in the Controlled Movement Area (CMA).** The CMA at HMN is defined as all runways, underruns, Taxiway Golf, and all areas within 100 ft of all runways, underruns, and Taxiway Golf. Vehicle operators are required to establish and maintain direct two-way radio contact with the Tower prior to proceeding within the CMA. See AFI 13-213\_HAFBSUP, *Airfield Driving*, for entering, operating within, and exiting instructions.

**5.9. Aircraft Towing Procedures.** Aircraft towing procedures are IAW AFI 13-213\_HAFBSUP, *Airfield Driving*.

## Chapter 6

### VFR PROCEDURES

#### 6.1. VFR Stereo Departures (See 49 WG IFG).

6.1.1. Aircraft wishing to fly directly into WSMR Restricted Airspace will file a Romeo or Yonder Departure through squadron operations. Squadron operations should include number of aircraft in flight, proposed departure time, and destination within WSMR airspace. Requests for Romeo and Yonder Departures may also be made directly with Clearance Delivery, but aircraft should expect a delay prior to clearance being issued due to required facility coordination.

6.1.1.1. Romeo and Yonder Departures are not authorized for range crossings and may only be used from Runway 04 and Runway 07 with Tower approval. If range crossing is desired, specifically request VFR range crossing.

6.1.1.2. Romeo Departure aircraft will depart VFR on the Romeo line (3 NM west of HSTT) to Salinas Corridor, then to assigned work area at or below 8,500 ft MSL.

6.1.1.3. Yonder Departure aircraft will depart VFR and proceed westbound (into Yonder airspace) at or below 8,500 ft MSL.

#### 6.2. VFR Departures.

6.2.1. VFR Departures may be conducted from any runway. Due to restricted airspace, Clearance Delivery will issue initial VFR departure instructions. Use caution for other aircraft in the overhead/VFR patterns on other runways. Aircraft commanders wishing to turn to the north or west will coordinate with Clearance Delivery on initial contact. Clearance Delivery will inform Tower if the requested turn is not possible or practical; Tower will issue new instructions from WSRF prior to departure.

6.2.2. VFR Departures to ELP. Fly the appropriate VFR altitudes enroute from HMN to ELP in the VFR corridor. Remain clear of KALM. Follow the railroad tracks south to ELP remaining within 2 NM west of the railroad tracks. The VFR corridor is bounded by R5107K (Dona East) to the west and R5103B/C (McGregor North/South) to the east. DO NOT fly east of the railroad tracks until reaching EWM. This is a civilian flyway with potential live missile firings conducted on either side. If possible, maintain at or above 12,500 ft MSL for better radar identification and deconfliction with light aircraft. Contact ELP Approach Control abeam Oro Grande if radar services are not being provided by WSRF. For return to HMN, follow the VFR corridor northbound and call WSRF abeam Oro Grande if ELP Approach is not providing radar services. Helicopters are exempt from altitude restrictions.

#### 6.3. Position Reporting.

6.3.1. Position Calls. When possible, use DME for all position calls. Runway 34 visual straight-in final will always be DME due to the position of the TACAN on the airfield. Aircraft reporting 90-to-initial are not acknowledged by Tower.

6.3.2. Initial Aircraft Contact. Initial contact with applicable information, to include call sign, number of aircraft in flight, position, pattern/approach request, and type landing.

6.4. **VFR Recoveries.** Pilots returning to HMN VFR will contact WSRF NLT than 20 NM from HMN with intentions. Pilots leaving SUA will obtain current ATIS and contact WSRF or ABQ ARTCC prior to leaving the SUA. When possible, maintain 300 Knots Indicated Air Speed (KIAS) when proceeding to initial or slow to 250 KIAS for straight-in NLT 10 NM from HMN.

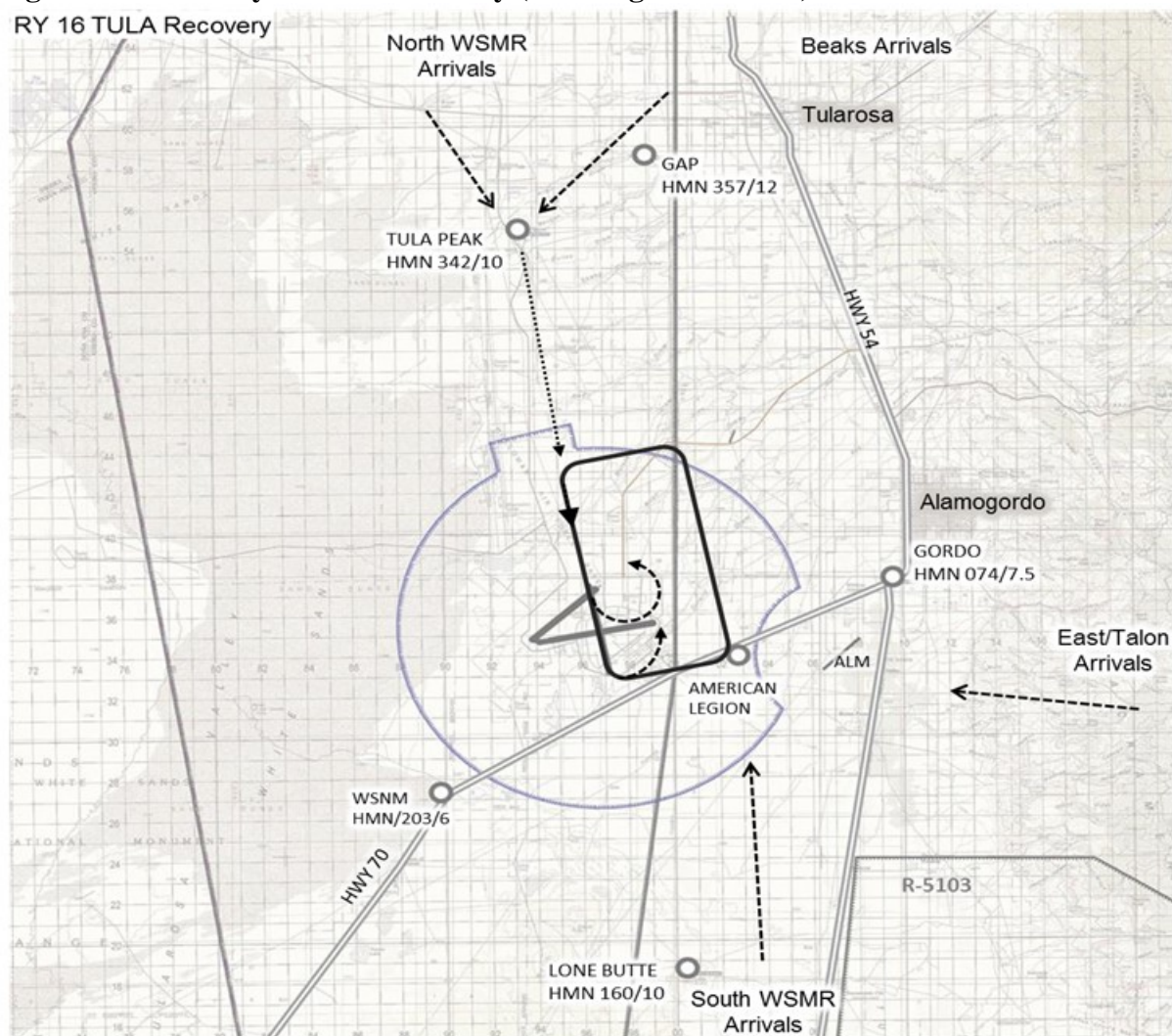
#### 6.5. Radar Vector to Initial/Downwind/VFR Straight-In.

6.5.1. Aircraft may request vectors to initial, inside/outside downwind, or VFR straight-in for any runway, except Runway 25 (see paragraph 6.8. for Runway 25 straight-in restrictions).

6.5.2. IFR aircraft recovering to the VFR traffic pattern, requesting initial or VFR straight-in will advise WSRF of cancellation of IFR or will report the airport/VFR reporting point in sight NLT 15 DME.

6.5.3. A pilot report of the airport or VFR reporting point in sight will constitute automatic cancellation of IFR flight plan. Upon receiving a pilot report of the airport or VFR reporting point in sight and leaving Class A airspace, WSRF will no longer provide standard IFR separation, but will provide basic radar service, sequencing, and advisories until frequency change to Tower. Exception to automatic IFR cancellation procedures are GAF aircraft flying nighttime overheads will remain IFR until reporting initial/3 NM final.

**6.6. VFR Recovery to Runway 16 (Figure 6. 1.).** The primary VFR recovery point for Runway 16 is TULA PEAK. When authorized by ATC, aircraft may recover via the outside downwind from the south or east. See paragraph 6.13.8.1. for Runway 16 VFR pattern procedures.

**Figure 6.1. Runway 16 VFR Recovery (Drawing not to scale).**

6.6.1. Runway 16 Initial transition from the north: report TULA PEAK at 6,100 ft MSL and report initial.

6.6.2. Runway 16 Initial transition from the south or east: request direct to outside downwind from WSRF. Tower will sequence aircraft into outside downwind as conditions permit. When cleared, enter outside downwind at 6,100 ft MSL while visually clearing for traffic. Follow the pattern to initial. If unable to be sequenced into the outside downwind, proceed VFR to Tula Peak.

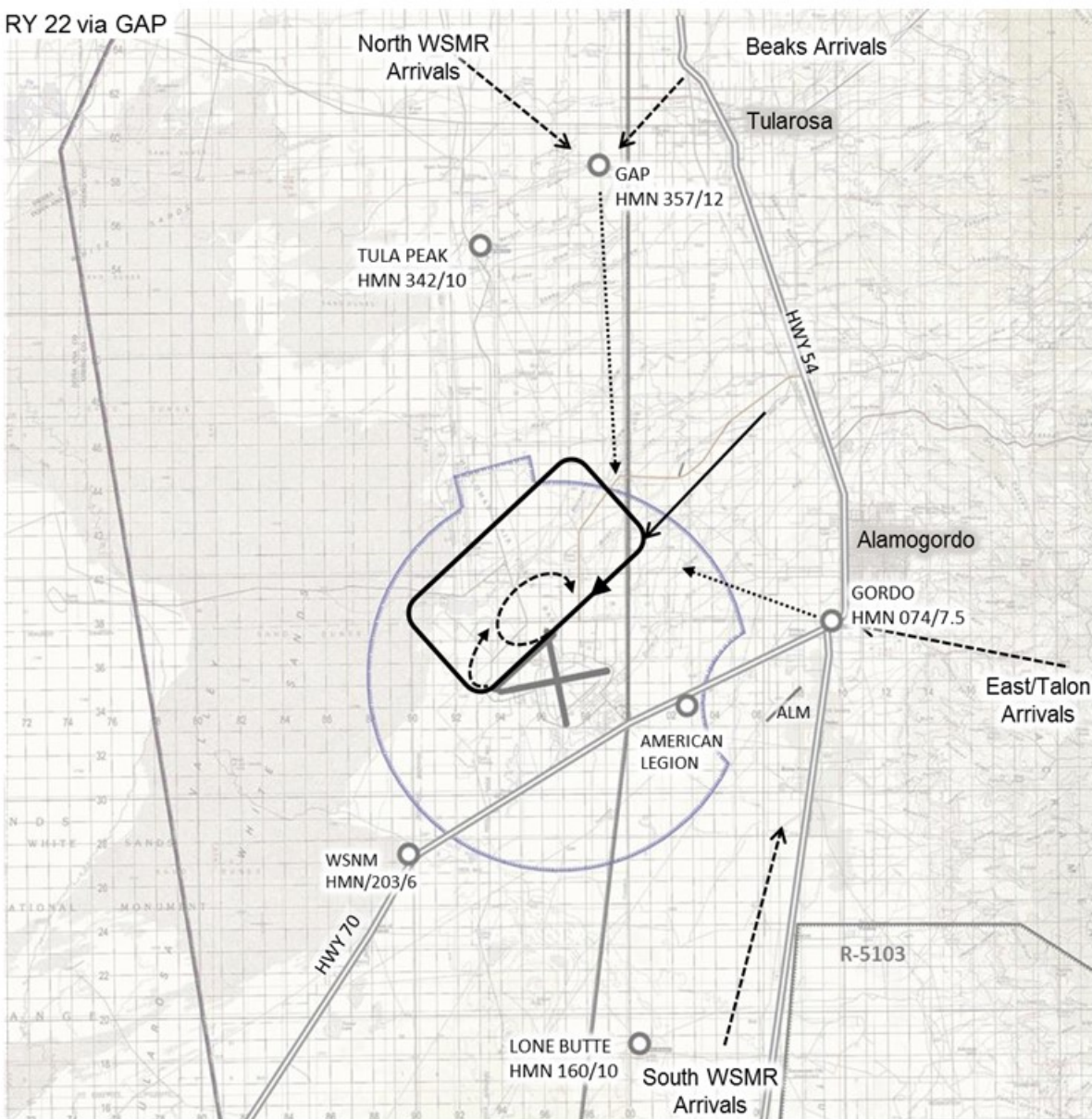
6.6.3. Runway 16 Straight-in transition from the north: report TULA PEAK at 5,600 ft MSL and report 5 NM final.

6.6.4. Runway 16 Straight-in transition from the south or east: request direct outside downwind from WSRF. Tower will sequence aircraft into outside downwind as conditions permit. When cleared, enter outside downwind at 6,100 ft MSL while visually clearing for traffic. Follow the pattern to straight-in transition. If unable to be sequenced in to the outside downwind, proceed VFR to Tula Peak.

**6.7. VFR Recovery to Runway 22 (Figure 6.2).** The primary VFR recovery point for Runway 22 is from the north via GAP. When authorized by ATC, aircraft may recover via GORDO from

the south or east. See paragraph 6.13.8.3. for Runway 22 VFR pattern procedures.

**Figure 6.2. Runway 22 VFR Recovery (Drawing not to scale).**



6.7.1. Runway 22 Initial transition from north: report GAP at 6,100 ft MSL. From GAP, turn (approximate heading 160) to intercept 4-5 NM initial Runway 22 and report initial.

6.7.2. Runway 22 Initial transition from south or east: report GORDO at 6,100 ft MSL. Turn to intercept 4-5 NM initial Runway 22 and report initial. Use caution for KALM traffic.

6.7.3. Runway 22 Straight-In Transition from north: report GAP at 5,600 ft MSL. Turn (approximate heading 145) to intercept 7 DME base turn and report 5 NM final. Runway 22 Straight-In Transition from south or east: report GORDO at 6,100 ft MSL. Descend to 5,600 ft MSL and proceed to a 7 DME base turn and report 5 NM final.

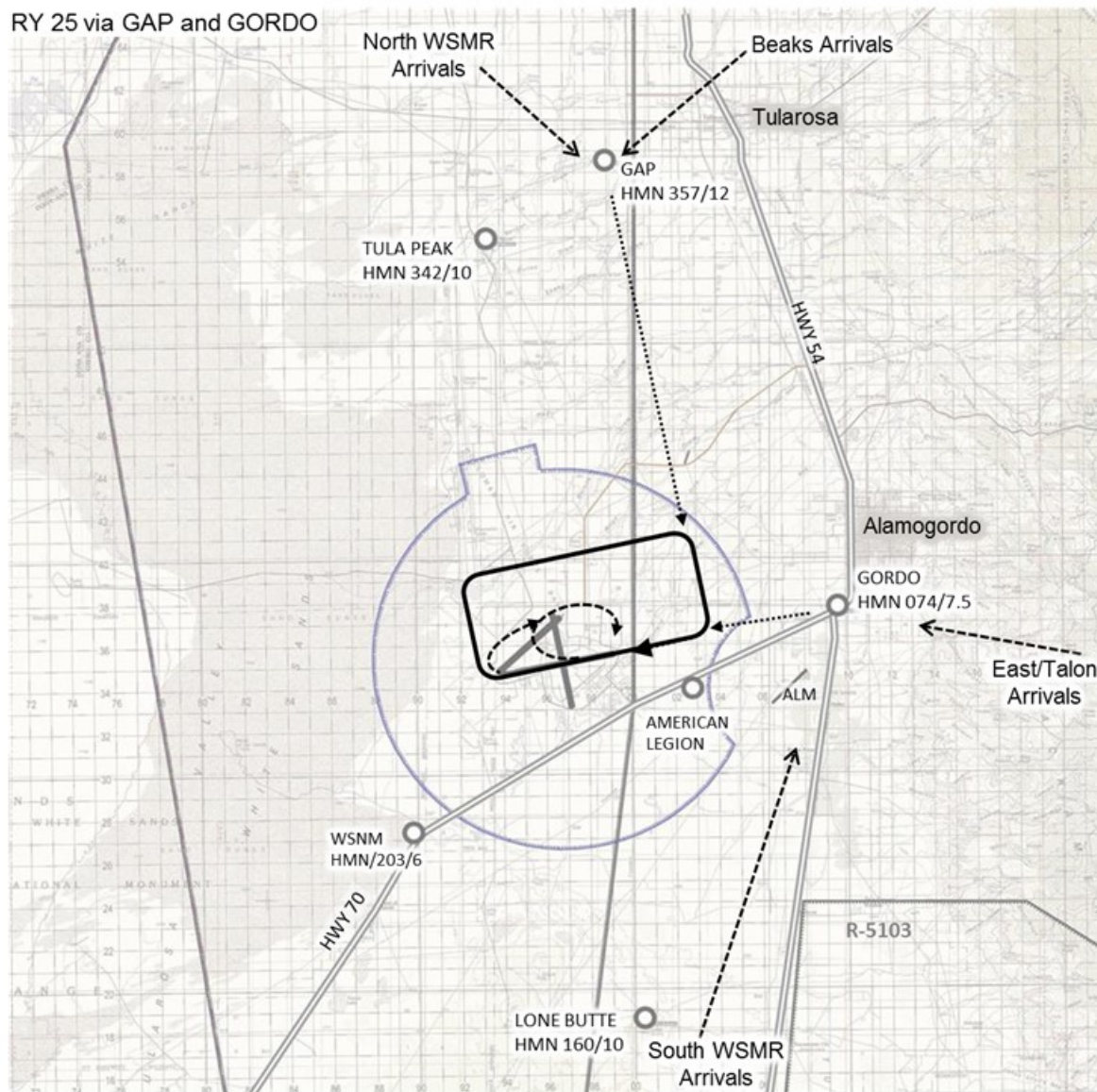
6.7.4. Runway 22 Straight-In Transition from south or east: report GORDO at 6,100ft MSL. Descend to 5,600ft MSL and proceed to a 7-DME base turn and report 5 NM final.

**6.8. VFR Recovery to Runway 25 (Figure 6.3.).** The primary VFR recovery point for runway



25 is from the north via GAP. When authorized by ATC, aircraft may recover via GORDO from the south or east. See paragraph 6.13.8.5. for Runway 25 VFR pattern procedures.

**Figure 6.3. Runway 25 VFR Recovery (Drawing not to scale).**



6.8.1. Runway 25 Initial transition from north: report GAP at 6,100 ft MSL. From GAP, turn (approximate heading 155) to intercept 4-5 NM 90-to-initial Runway 25 and report initial.

6.8.2. Runway 25 Initial transition from south or east: report GORDO at 6,100 ft MSL. Turn direct to the airfield and report initial. Use caution for KALM traffic.

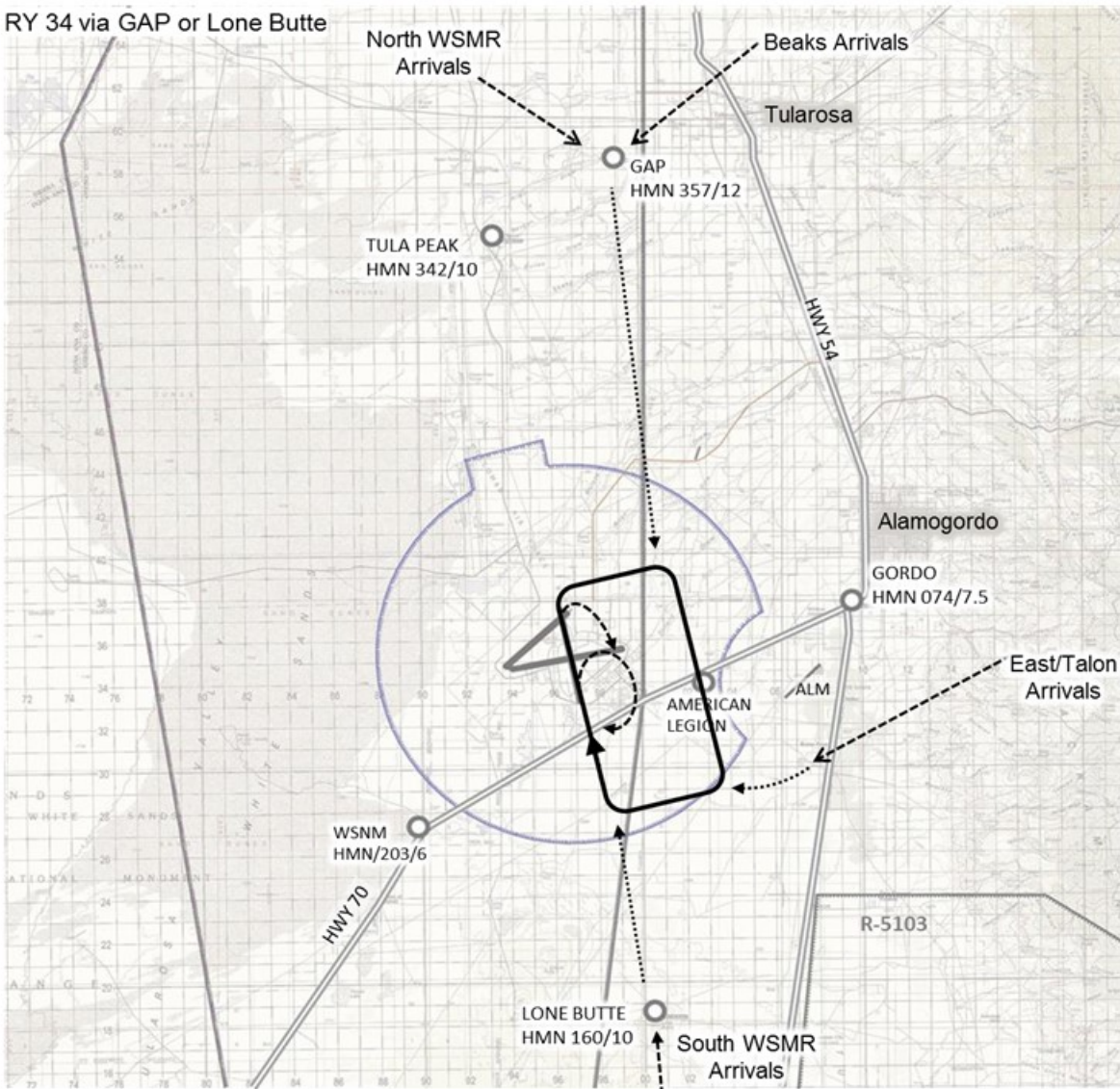
6.8.3. Runway 25 Straight-In Transition is not allowed except for emergencies, hung, ordnance, check rides, or when approved by the SOF. Runway 25 Straight-in from the north: report GAP at 5,600 ft MSL, turn (approximate heading 145) to intercept 7 DME base and report 5 NM final. Use caution for KALM traffic.

6.8.4. Runway 25 Straight-In Transition is not allowed except for emergencies, hung, ordnance, check rides, or when approved by the SOF. Runway 25 Straight-in from the south or east: report GORDO at 6,100 ft MSL, descend to 5,600 ft MSL and report 5 NM final. Use

caution for KALM traffic.

**6.9. VFR Recovery to Runway 34 (Figure 6.4).** The primary VFR recovery point for Runway 34 is from the north via GAP. When authorized by ATC, aircraft may recover via LONE BUTTE from the south or direct outside downwind from the east. See paragraph 6.13.8.2. for Runway 34 VFR pattern procedures.

**Figure 6.4. Runway 34 VFR Recovery (Drawing not to scale).**



6.9.1. Runway 34 Initial transition from the north: report GAP at 6,100 ft MSL. Proceed direct (approximate heading 160 degrees) outside downwind follow standard pattern procedures.

6.9.2. Runway 34 Initial transition from the south: report LONE BUTTE at 6,100 ft MSL and report initial.

6.9.3. Runway 34 Initial transition from the east: proceed direct 90-to-initial at 6,100 ft MSL and follow standard pattern procedures. Remain south of KALM and outside R5103.

6.9.4. Runway 34 Straight-in Transition from south: report LONE BUTTE at 5,600 ft MSL and report 7 DME final.

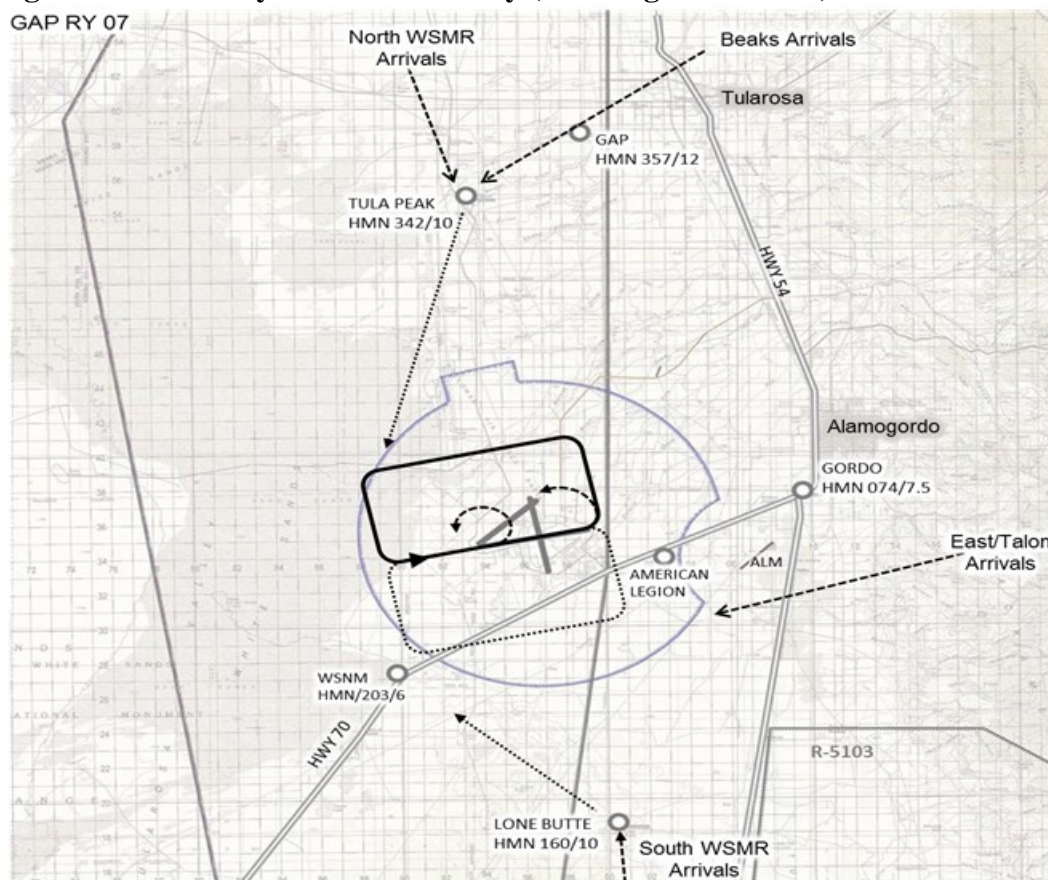
6.9.5. Runway 34 Straight-in Transition from north: cross GAP at 6,100 ft MSL then fly



heading 160 degrees to outside downwind, report descending straight-in.

**6.10. VFR Recovery to Runway 07 (Figure 6.5).** The primary VFR recovery point for Runway 07 is from the north via TULA PEAK. When authorized by ATC, aircraft may recover via LONE BUTTE from the south or direct south outside downwind from the east. See paragraph 6.13.8.6. for Runway 07 VFR pattern procedures.

**Figure 6.5. Runway 07 VFR Recovery (Drawing not to scale).**



6.10.1. Runway 07 Initial transition from the north: report TULA PEAK at 6,100 ft MSL. Proceed (approximate heading 190 degrees) direct outside downwind and follow standard pattern procedures.

6.10.2. Runway 07 Initial transition from the south: report LONE BUTTE at 6,100 ft MSL. Proceed (approximate heading 300 degrees) direct right 90-to-initial, report 90-to-initial over WSNM visitor's center.

6.10.3. Runway 07 Initial transition from the east: proceed direct the south outside downwind and follow standard pattern procedures. Remain south of KALM and outside R5103.

6.10.4. Runway 07 Straight-in transition from the north: report TULA PEAK at 5,600 ft MSL. Proceed (approximate heading 190 degrees) direct outside downwind and follow standard pattern procedures.

6.10.5. Runway 07 Straight-in transition from the south: report LONE BUTTE at 5,600 ft MSL. Proceed (approximate heading 290 degrees) direct an 8 DME base turn runway 07, report 6 DME final.

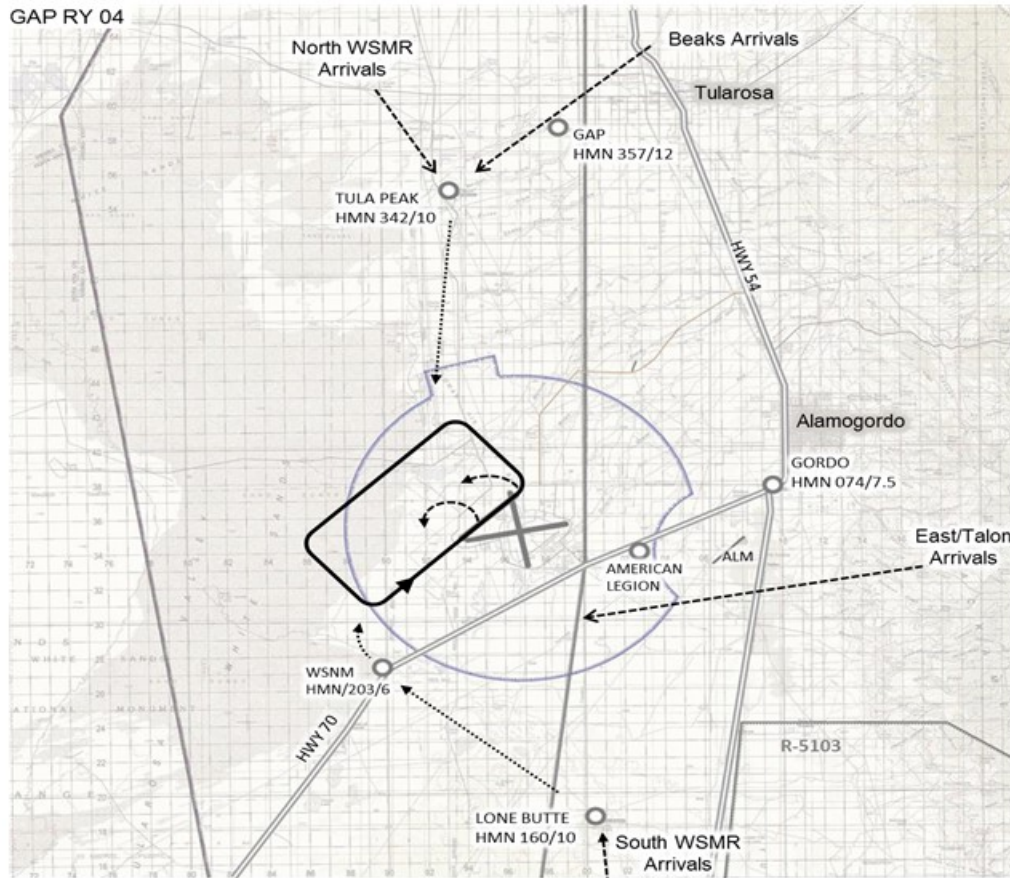
6.10.6. Runway 07 Straight-in transition from the east: proceed direct the south outside downwind at 5,600 ft MSL, remain south of KALM and outside R5103. Intercept 8 DME base



turn runway 07, report 6 DME final.

**6.11. VFR Recovery to Runway 04 (Figure 6.6).** The primary VFR recovery point for Runway 04 is from the north via TULA PEAK. When authorized by ATC, aircraft may recover via LONE BUTTE from the south or east. See paragraph 6.13.8.4. for Runway 04 VFR pattern procedures.

**Figure 6.6. Runway 04 VFR Recovery (Drawing not to scale).**



6.11.1. Runway 04 Initial transition from the north: report TULA PEAK at 6,100 ft MSL. Proceed (approximate heading 190 degrees) direct outside downwind and follow standard pattern procedures.

6.11.2. Runway 04 Initial transition from the south: report LONE BUTTE at 6,100 ft MSL. Proceed (approximate heading 300 degrees) direct right 90-to-initial, report 90-to-initial over WSNM visitor's center.

6.11.3. Runway 04 Initial transition from the east: at 6,100 ft MSL, proceed direct and report right 90-to-initial over WSNM visitor's center.

6.11.4. Runway 04 Straight-in Transition from the north: report TULA PEAK at 5,600 ft MSL. Proceed (approximate heading 190 degrees) direct outside downwind and follow standard pattern procedures.

6.11.5. Runway 04 Straight-in Transition from the south: report LONE BUTTE at 5,600 ft MSL. Proceed (approximate heading 290 degrees) direct an 8 DME base turn runway 04, report 6 DME final.

6.11.6. Runway 04 Straight-in Transition from the east: proceed direct WSNM visitor's center at 6,100 ft MSL, remain south of KALM and outside R5103. After passing WSNM visitor's center, descend to 5,600 ft MSL and intercept 8 DME base turn runway 04, report 6 DME

final.

#### **6.12. VFR Pattern Weather Minimums.**

6.12.1. VFR weather minimums – 1,500 ft ceiling and 3 SM visibility unless otherwise stated below:

6.12.1.1. Overhead Pattern – 3,000 ft AGL (7,100 ft MSL) ceiling and 3 SM visibility.

6.12.1.2. Rectangular Pattern – 3,000 ft AGL (7,100 ft MSL) ceiling and 3 SM visibility

6.12.1.3. Straight-In (Outside downwind) Pattern – 3,000 ft AGL (7,100 ft MSL) ceiling and 8 SM visibility.

6.12.1.3.1. Restricted Straight-in Pattern. When weather minimums are at least 2,000 ft AGL (6,100 ft MSL) ceiling and 8 SM visibility, an amended straight-in pattern may be flown at 5,600 ft MSL. The same outside downwind and rectangular pattern ground track will be used. There is no breakout available and no more than four aircraft may be in this pattern at any given time.

6.12.1.4. Periods of Civil Twilight are considered daytime. Refer to unit-specific instructions for additional guidance regarding use of Civil Twilight.

**6.13. VFR Traffic Patterns.** The following general pattern information applies to all runways. See paragraph 6.13.8. for runway specific pattern information. See Attachment 6 for helicopter specific pattern information. See Attachment 9 for RPA specific pattern information. See Attachment 12 for F-16 specific pattern information.

6.13.1. Overhead Pattern. Pattern altitude (initial) is 6,100 ft MSL and airspeed is 300 KIAS.

6.13.1.1. Initial point for all runways is 3 NM from the approach end. At initial, pilots will report: “(*call sign*), *INITIAL*, (*full stop/touch-and-go/low approach/option*)”.

6.13.1.1.1. Standard break is away from the West Ramp (Runway 16/34 east, Runway 22/04 25/07 north). Tower may change direction of breaks when necessary due to traffic conditions, active airspace, weather, etc. Tower will not change the direction of breaks when aircraft are inside initial unless necessary for safety of flight.

6.13.1.2. Tower will respond with “(*call sign*) *REPORT BASE*”, may be followed with “*BREAK MIDFIELD/DEPARTURE END*”, or with sequencing instructions “*BREAK TO FOLLOW*” or “*CARRY INITIAL STRAIGHT THROUGH*”. If Tower does not respond with any of the above, carry initial straight through, DO NOT break. To carry initial straight through, remain at 6,100 ft MSL, continue to departure end then turn to enter the outside downwind. When turning base, fly the final turn to roll out on a 1 NM final at 300 ft AGL. Request to return to radar should be made NLT base turn.

6.13.1.3. Tactical Initial. Request tactical initial upon initial contact with WSRF. Maximum flight size will be four aircraft and maximum speed is 350 KIAS. Formation will be within 6,000 ft unless otherwise coordinated. For formations instructed to carry initial straight-through, tactical initial is automatically terminated and the flight should rejoin as elements as soon as practical.

6.13.1.4. Nighttime Overhead. MQ-9, GAF Tornado, 586th Flight Test Squadron (586 FLTS), and 54 FG aircraft may conduct night overhead and closed patterns provided they are conducted for training or syllabus requirements. All other aircraft must have 49 OG/CC approval to conduct overhead patterns at night. After 2200L, night overheads must be conducted to Runway 22. Overheads WILL NOT be conducted after 2230L, unless coordinated with Wing Scheduling and 49 OG/CC. See Attachment 9 for RPA nighttime overhead procedures or see Attachment 12 for 54 FG F-16 nighttime overhead procedures. Tower has the authority to deny night overhead patterns.

6.13.1.4.1. Night overheads will only be flown to Runway 16, 34, 22, or 25. Runway 25 will only be used if the other runways are not available. The minimum operational airport lighting requirements are HIRL, PAPI, and Runway Threshold Lights.

6.13.1.4.2. Maximum of four aircraft in the night overhead/rectangular pattern.

6.13.1.4.3. GAF aircraft flying overhead patterns at nighttime will be IFR until reporting initial point.

6.13.1.4.4. Outside downwind not available for reentry at night.

6.13.1.4.5. All night breakouts will return to arrival for re-sequencing. When Tower advises an aircraft to “BREAKOUT”, the following procedures apply:

6.13.1.4.5.1. Prior to the break point aircraft will climb to 6,600 ft MSL, continue to 5 DME outbound, and contact arrival.

6.13.1.4.5.2. Runway 22/25/16/34 Breakout: Climb to 6,600 ft MSL runway heading. Execute Local Climb-out (paragraph 7.7.) and contact WSRF for re-sequencing.

6.13.2. Rectangular (Closed Traffic) Pattern. The standard direction of turns is away from the West Ramp (Runways 16/34 east, Runways 22/04 and 25/07 north). Tower may change direction of the turns when necessary. The inside downwind ground track is displaced 1 NM from the runway. Pilots WILL NOT enter the rectangular pattern without Tower approval. The outside downwind ground track is displaced 3 NM from the runway (see paragraph 6.13.4., 6.13.6.1.-6.13.6.6.).

6.13.2.1. Rectangular Pattern altitudes are listed in Table 6.1.

**Table 6.1. Rectangular Pattern Altitudes and Airspeeds.**

Type Aircraft	Altitude MSL	KIAS
Fighter	6,100 ft	300
Reciprocating / Turboprop / MQ-9	5,600 ft	As required
AC	5,100 ft	As required
Helicopters	4,600 ft	As required
Field Elevation 4,100ft		

6.13.2.2. When turning base, pilots should fly their final turn to roll out on a 1 NM final at 300 ft AGL. Request to return to radar should be made NLT base turn. Initiate closed pattern only after instructed by Tower, normally at departure end of runway, or the extreme west end Taxiway Golf for Runway 25.

6.13.3. Protection of the 360 Degree Overhead Pattern. After completing approach, maintain at or below 5,600 ft MSL until departure end unless otherwise directed by Tower. Advise Tower of intentions (i.e., *request closed traffic, re-enter, re-enter straight-in*). For Runway 25, maintain at or below 5,600 ft MSL until west end of Taxiway Golf.

6.13.4. Outside Downwind. An outside downwind has been established for each runway and is used for pattern sequencing, VFR practice straight-in, pattern re-entry after breakout, return to WSRF for instrument pattern, or initial entry into the traffic pattern. Outside downwind ground track is displaced 3 NM from the runway and intercepts 90-to-initial approximately 45 degrees/5NM from the runway threshold (see paragraph 6.13.6.1.-6.13.6.6.).

6.13.4.1. Tower must include reason when directing re-entry (e.g., “*LOBO 11 re-enter due to straight-in traffic*”, “*SUN 12 unable closed, re-enter for departures*”).

6.13.4.2. Aircrew may request re-entry during climb-out from low approach/or touch-and-go. Aircrew must include reason for re-entry (e.g., “CORONA 13 request re-enter straight-in”, “DANGER 14 request re-enter straight-in SFO”).

6.13.5. Go-Around and Breakout.

6.13.5.1. Standard Go-Around. For Tower issued or pilot initiated Go-Around, the pilot will maintain at least 500 ft vertical separation from aircraft on the runway (DO NOT overfly the aircraft on the runway). Remain below 5,600 ft MSL until departure end or the west end of Taxiway Golf if using Runway 25. If an aircraft is cleared for a restricted low approach, ATC will issue the appropriate altitude to maintain.

6.13.5.2. Standard Breakout. Pattern breakouts will climb to 6,600 ft MSL in the direction of the pattern until clear of the outside downwind. Aircraft must be wings level prior to 90-to-initial and orbit at 6,600 ft MSL until approved by Tower to re-enter.

6.13.5.3. Tower must include the reason for the Go-Around or breakout when able.

6.13.6. Landing Clearance.

6.13.6.1. Gear reports. Pilots will report position, gear down, intentions, and runway.

6.13.6.2. Formations. Landing clearance for a flight lead is clearance for the entire flight to land. Aircraft after the flight lead will make gear down calls, which will be acknowledged with “Roger”. Same type landings (full stop, low approach) are assumed for all members of the flight. If a succeeding flight member wants a clearance different than that of the flight lead, that individual will state intentions with the gear down call. Appropriate runway separation will be set by flights and monitored/enforced by Tower. Unless aircrew state “with chase”, Tower will consider aircraft no longer in formation on subsequent landings.

6.13.7. RPA Orbit Points. To relieve radio congestion during pattern operations, the RPA orbit points are established for use by HMN-assigned RPAs as directed by Tower (see paragraph A9.2.5.).

6.13.7.1. When directed to orbit at a point, the RPA must not fly any closer to any runway centerline than the "No-Closer" point. The orbits are elliptical, 1 NM wide by 1.5 NM long, and are aligned with the expected runway for use. These orbits are positioned to maintain 0.5 NM spacing from the edge of Class D airspace and 1.5 NM spacing from all extended centerlines.

6.13.7.2. Tower controllers will assign each aircraft in orbit a set altitude and include the assigned altitude during all traffic advisories.

6.13.8. Runway Specific Pattern Procedures and Diagrams:

6.13.8.1. Runway 16 (Figure 6.7.): Runway 16 patterns are left traffic/turns/breaks.

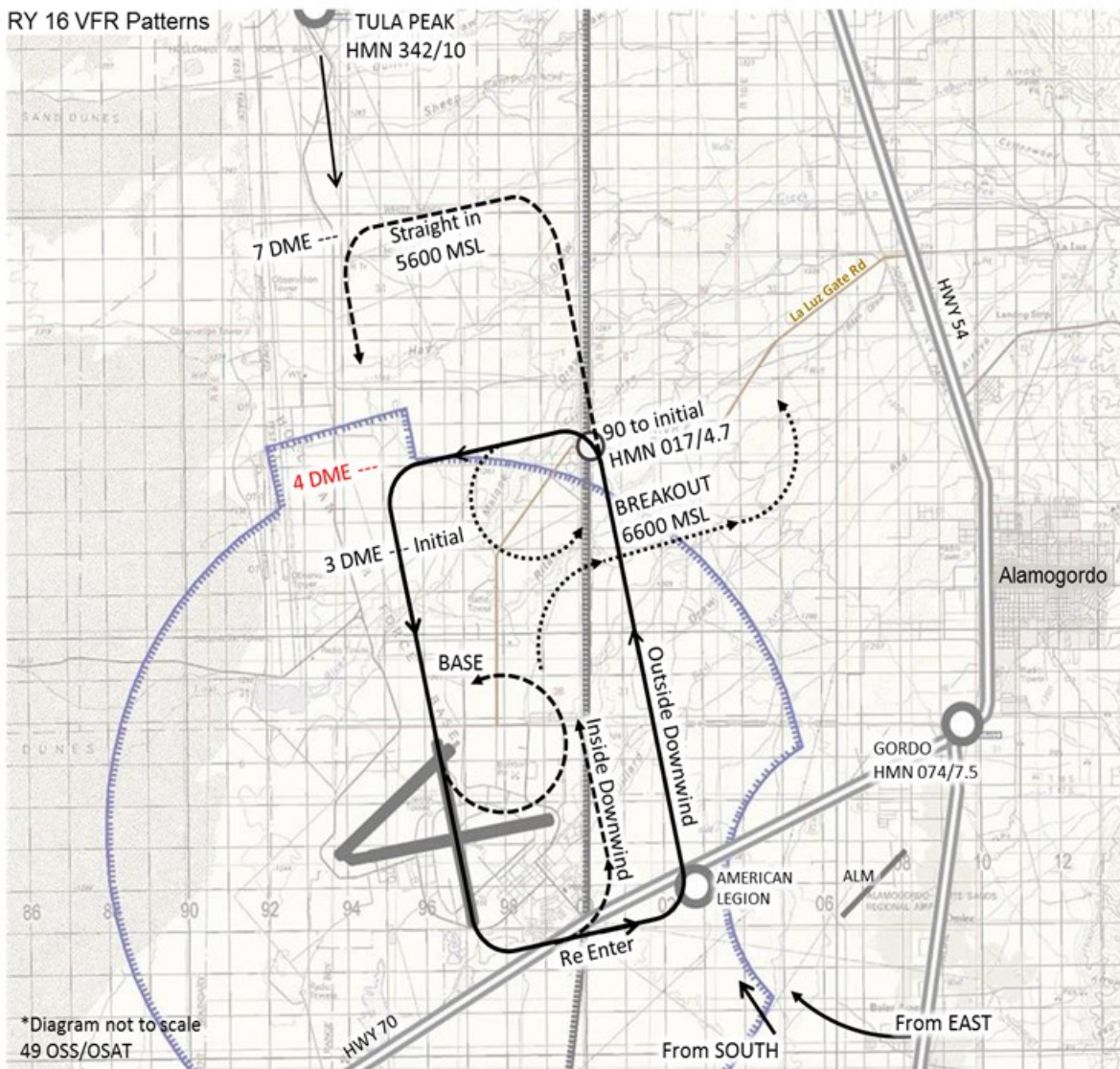
6.13.8.1.1. Runway 16 Outside Downwind. The outside downwind ground track is displaced 3 NM east of the runway. Fly the outside downwind pattern ground track at 6,100 ft MSL just inside of the American Legion heading 340 degrees. Pattern altitude is 6,100 ft MSL and airspeed is 300 KIAS. The 90-to-initial point is the La Luz gate.

6.13.8.1.2. Runway 16 Re-enter Initial. At departure end, initiate a left turn, maintain at or below 5,600 ft MSL until clear of the overhead/closed pattern. At 90-to-initial, pilots will report “(call sign) 90-TO-INITIAL”.

6.13.8.1.3. Runway 16 Re-enter Straight-In. At 90-to-initial report “(call sign) DESCENDING STRAIGHT-IN.”, descend to 5,600 ft MSL and slow to 250 KIAS. Extend 2 NM before turning base to intercept a 7 DME final. Report established on final with gear and intentions.



**Figure 6.7. VFR Traffic Patterns for Runway 16 (Drawing not to scale).**



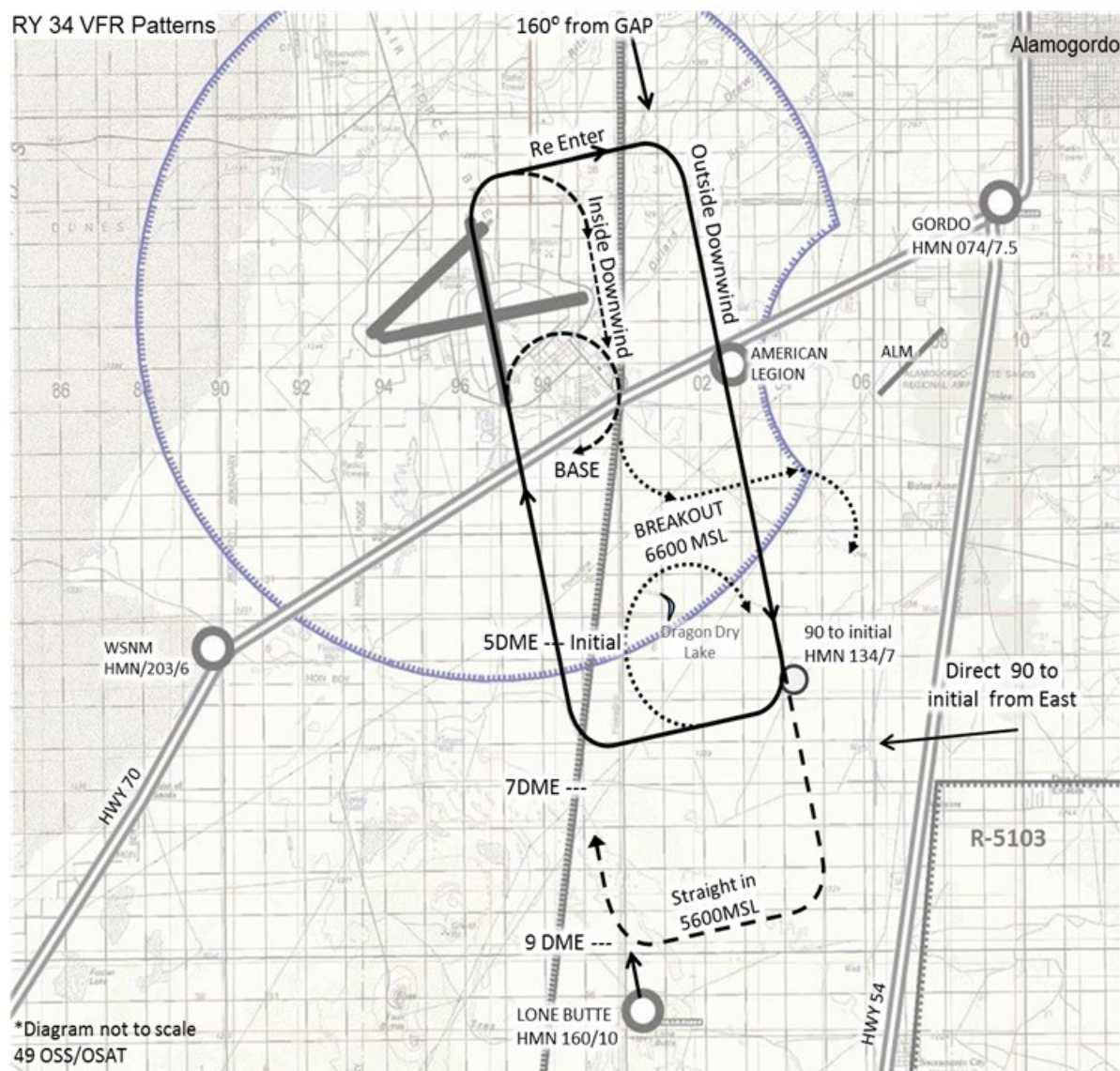
6.13.8.2. Runway 34 (Figure 6.8.): Runway 34 patterns are right turns/traffic/breaks.

6.13.8.2.1. Runway 34 Outside Downwind. The outside downwind ground track is displaced 3 NM east of the runway. Fly the outside downwind pattern ground track at 6,100 ft MSL just inside of the American Legion heading 160 degrees, airspeed is 300 KIAS. The 90-to-initial point (7 DME) is 2 NM south-east of Dragon Dry Lake.

6.13.8.2.2. Runway 34 Re-enter Initial. At departure end, initiate a right turn, maintain at or below 5,600 ft MSL until clear of the overhead/closed pattern. At 90-to-initial, pilots will report “(call sign) 90-TO-INITIAL”.

6.13.8.2.3. Runway 34 Re-enter Straight-In. At departure end report “(call sign) DESCENDING STRAIGHT-IN”, descend to 5,600 ft MSL and slow to 250 KIAS. Extend 2 NM before turning base to intercept a 9 DME final. Report established on final with gear and intentions.

**Figure 6.8. VFR Traffic Patterns for Runway 34 (Drawing not to scale).**



6.13.8.3. Runway 22 (Figure 6.9.): Runway 22 patterns are right turns/traffic/breaks.

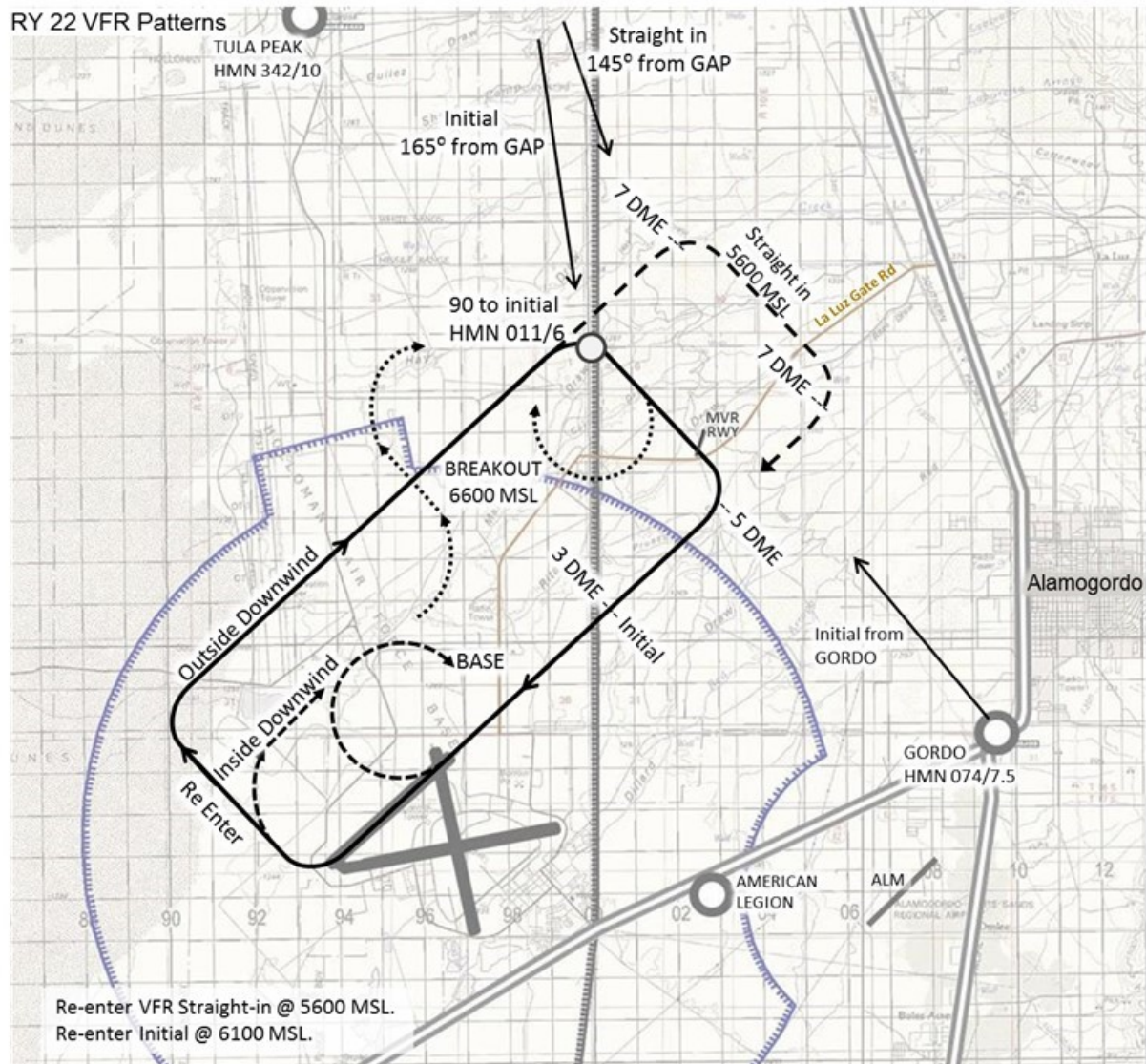
6.13.8.3.1. Runway 22 Outside Downwind. The outside downwind ground track is displaced 3 NM north of the runway. Fly the outside downwind pattern ground track at 6,100 ft MSL heading 040 degrees, airspeed is 300 KIAS. There is no 90-to-initial reference point, turn at 5 DME.

6.13.8.3.2. Runway 22 Re-enter Initial. At departure end, initiate a right turn, maintain at or below 5,600 ft MSL until clear of the overhead/closed pattern. At 90-to-initial, pilots will report "(call sign) 90-TO-INITIAL".

6.13.8.3.3. Runway 22 Re-enter Straight-In. Fly the outside downwind pattern ground track at 5,600 ft MSL in order to deconflict the VFR entry from GAP at 6,100 ft MSL. There is no 90-to-initial visual reference point (5 DME). At the 90-to-initial point, report "(call sign), APPROACHING BASE" and reduce speed to 250 KIAS. Extend 2 NM before turning base to provide a 7 DME final. Report established on final with gear and intentions.

**Figure 6.9. VFR Traffic Patterns for Runway 22 (Drawing not to scale).**





6.13.8.4. Runway 04 (Figure 6.10.): Runway 04 patterns are left turns/traffic/breaks. Use caution, PAPI/Visual Approach Slope Indicator (VASI) not available.

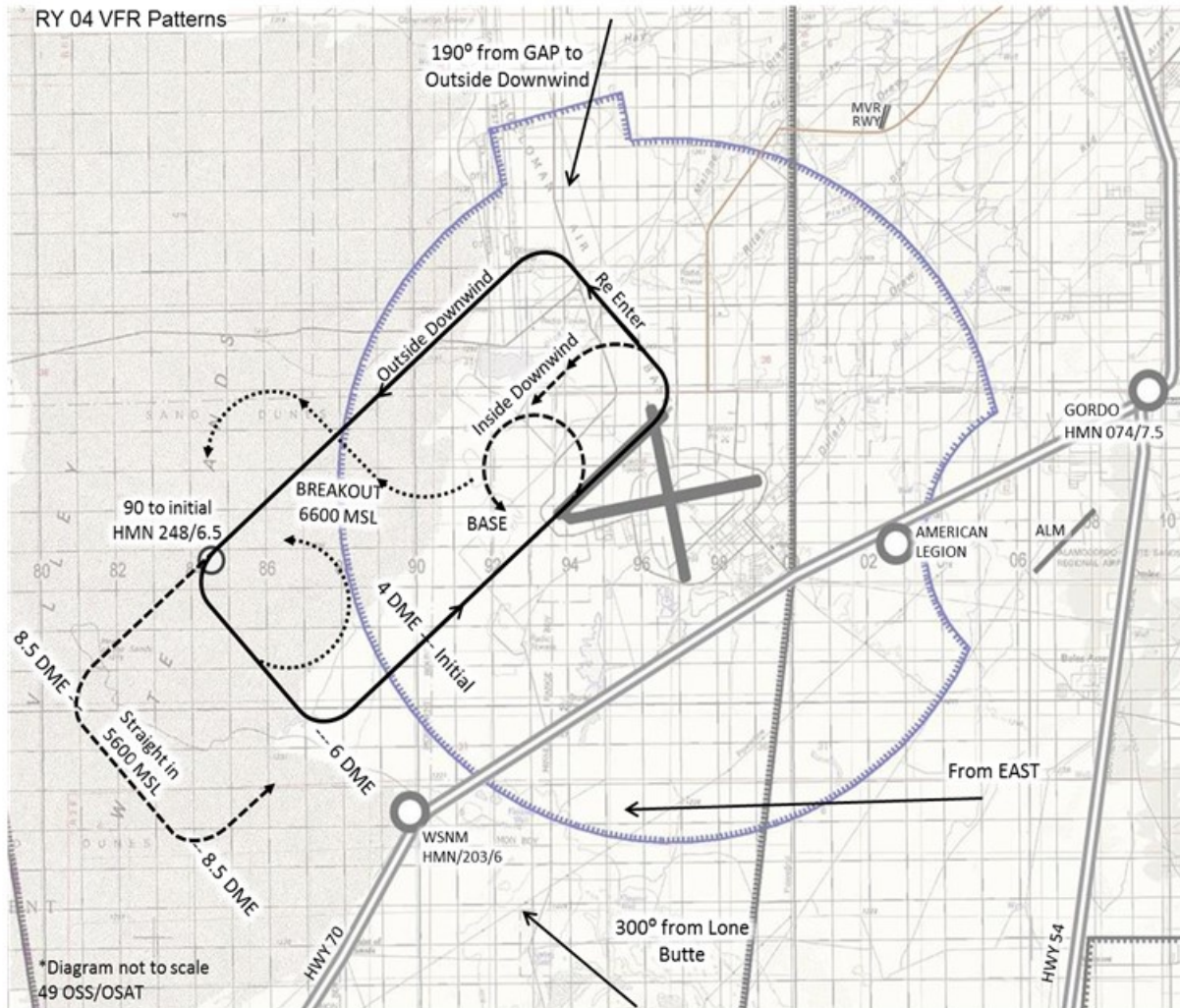
6.13.8.4.1. Runway 04 Outside Downwind. The outside downwind ground track is displaced 3 NM north of the runway. Fly the outside downwind pattern ground track at 6,100 ft MSL heading 220 degrees, airspeed is 300 KIAS. There is no 90-to-initial reference point, turn at 6.5 DME.

6.13.8.4.2. Runway 04 Re-enter Initial. At departure end, initiate a left turn, maintain at or below 5,600 ft MSL until clear of the overhead/closed pattern. At 90-to-initial, pilots will report "(call sign) 90-TO-INITIAL".

6.13.8.4.3. Runway 04 Re-enter Straight-In. At 90-to-initial report "(call sign) DESCENDING STRAIGHT-IN.", descend to 5,600 ft MSL and slow to 250 KIAS. Extend 2 NM before turning base to intercept an 8.5 DME final. Report established on final with gear and intentions.

6.13.8.4.4. See Attachment 5 for Runway 04 QF-16 Drone Pattern information.

**Figure 6.10. VFR Traffic Patterns for Runway 04 (Drawing not to scale).**



6.13.8.5. Runway 25 (Figure 6.11): Runway 25 patterns are right turns/traffic/breaks.

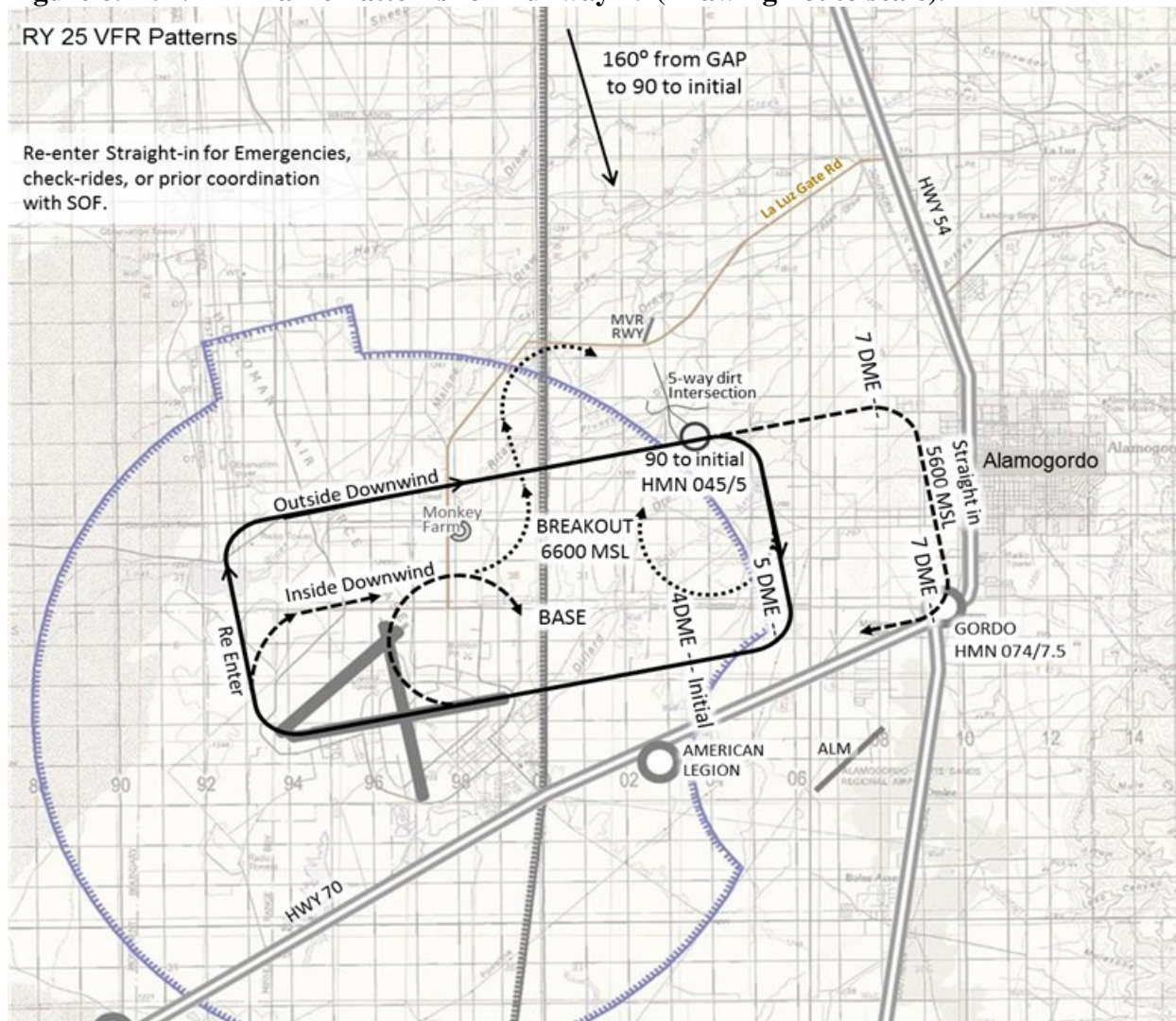
6.13.8.5.1. Runway 25 Outside Downwind. The outside downwind ground track is displaced 3 NM north of the runway. Fly the outside downwind pattern ground track at 6,100 ft MSL heading 070 approximately 1 NM north of the Monkey Farm. Base leg point is over a ranch and road intersection at 5 DME. DO NOT extend base turn due to overflight of the city of Alamogordo. Remain vigilant for initial entries.

6.13.8.5.2. Runway 25 Re-enter Initial. At departure end, initiate a right turn, maintain at or below 5,600 ft MSL until west end of Taxiway Golf, clear of the overhead/closed pattern. At 90-to-initial, pilots will report “(call sign) 90-TO- INITIAL”.

6.13.8.5.3. Runway 25 Re-enter Straight-In. VFR Practice Straight-ins Runway 25 are only allowed for emergencies, check rides, or with prior coordination with the SOF. Fly the outside downwind pattern ground track at 5,600 ft MSL in order to de-conflict the VFR entry from GAP at 6,100 ft MSL. There is no 90-to-initial visual reference point (5 DME). At the 90-to-initial point, report “(call sign), APPROACHING BASE” and reduce speed to 250 KIAS. Extend 2 NM before turning base to provide a 7 DME final. Report established on final with gear and intentions.



**Figure 6.11. VFR Traffic Patterns for Runway 25 (Drawing not to scale).**



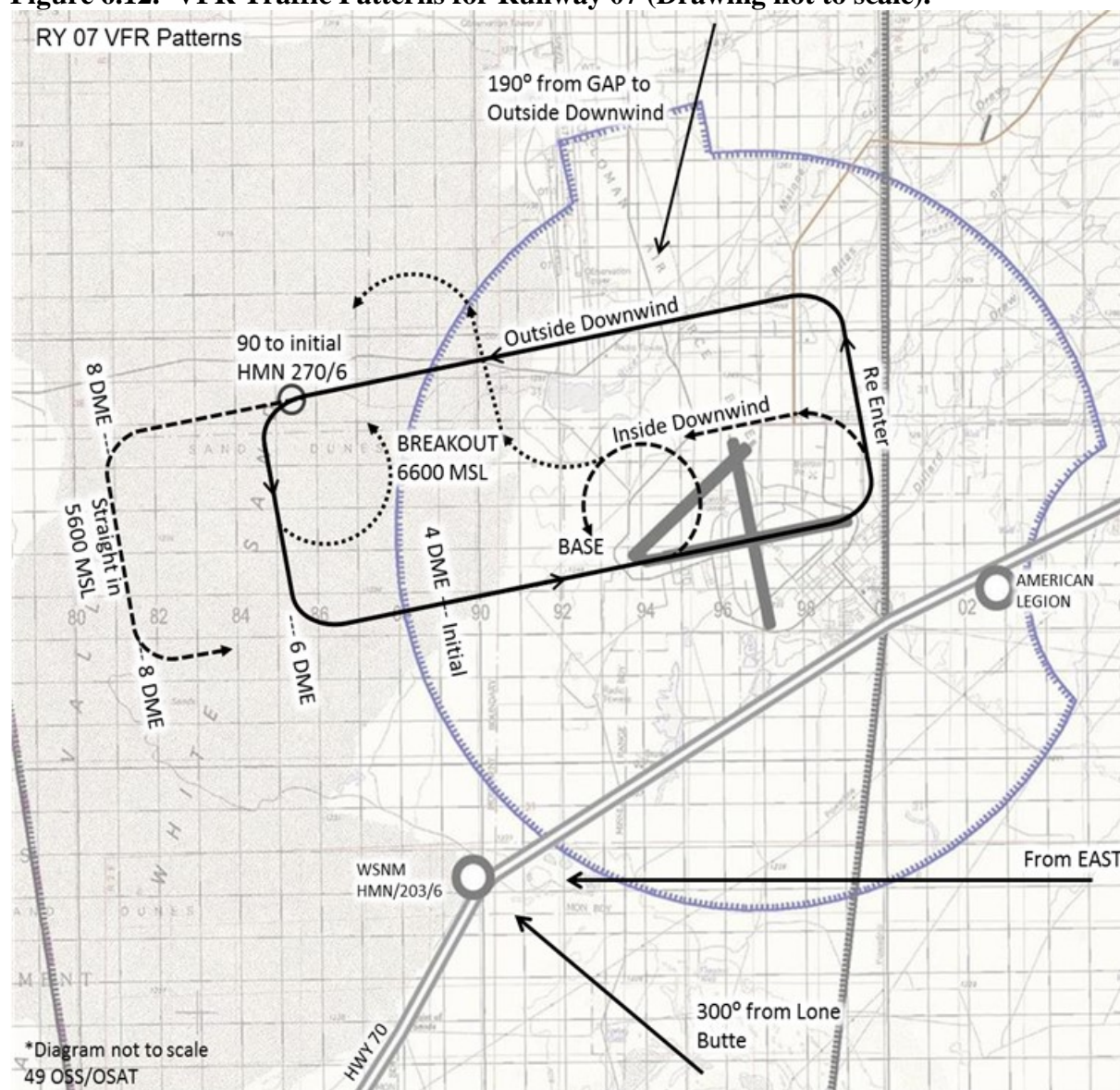
6.13.8.6. Runway 07 (Figure 6.12.): Runway 07 patterns are left turns/traffic/breaks. Avoid landing on Taxiway Golf. Use caution PAPA/VASI not available.

6.13.8.6.1. Runway 07 Outside Downwind. The outside downwind ground track is displaced 3 NM north of the runway. Fly the outside downwind pattern ground track at 6,100 ft MSL heading 250 degrees, airspeed is 300 KIAS. There is no 90-to-initial reference point, turn at 7 DME.

6.13.8.6.2. Runway 07 Re-enter Initial. At departure end, initiate a left turn, maintain at or below 5,600 ft MSL until clear of the overhead/closed pattern. At 90-to-initial, pilots will report “(call sign) 90-TO-INITIAL”.

6.13.8.6.3. Runway 07 Re-enter Straight-In. At 90-to-initial report “(call sign) DESCENDING STRAIGHT-IN.”, descend to 5,600 ft MSL and slow to 250 KIAS. Extend 2 NM before turning base to intercept an 8 DME final. Report established on final with gear and intentions.

Figure 6.12. VFR Traffic Patterns for Runway 07 (Drawing not to scale).



**6.14. Simulated Flameout (SFO).** Only locally assigned F-16 and RPA are authorized to conduct SFO approaches at HMN; see Attachment 9 for RPA SFO and Attachment 12 for F-16 SFO. Other units requesting SFO operations must establish an LOA with the 49 OG prior to employment.

**6.15. Reduced Same Runway Separation (RSRS) Procedures.**

6.15.1. IAW USAF and ACC directives, RSRS WILL NOT be applied to emergency aircraft. Pilot-in-command or Tower may refuse RSRS. RSRS criteria are used for ACC assigned, GAF Flight Training Center (FTC), 54 FG, and 704 TG aircraft IAW Tables 6.2. – 6.5. Elements within a flight are responsible for their own runway separation. All other non-ACC aircraft officially deployed to HMN will be required to sign a LOA with the 49 OG/CC or designated representative and obtain appropriate briefings prior to utilizing RSRS.

6.15.2. RSRS procedures are applied IAW AFI 11-202 Vol 3, ACCSUPent, *General Flight Rules*.

**Table 6.2. Separation Touchdown Minima for Same Fighter Type Aircraft.**

<b>TYPE LANDING</b>	<b>BEHIND</b>	<b>RSRS</b>
Full Stop	Full Stop / Touch-and-Go / Low Approach	3,000 ft
Touch-and-Go	Touch-and-Go / Low Approach	3,000 ft
Low Approach*	Full Stop / Low Approach	3,000 ft
Low Approach	Touch-and-Go	6,000 ft
Touch-and-Go*	Full Stop	6,000 ft

**Note:** A Touch-and-Go behind a Full Stop is authorized with 6,000 ft RSRS during daylight hours, VFR weather, and dry runway conditions.

\* Low Approach or Touch-and-Go behind a Full Stop: For all situations involving a Low Approach or Touch-and-Go behind a Full Stop, DO NOT overfly aircraft on the runway.

**Table 6.3. Separation Touchdown Minima for Dissimilar Fighter Type Aircraft.**

<b>TYPE LANDING</b>	<b>BEHIND</b>	<b>RSRS</b>
Full Stop	Full Stop / Touch-and-Go / Low Approach	6,000 ft
Low Approach*	Full Stop / Touch-and-Go / Low Approach	6,000 ft
Touch-and-Go*	Full Stop / Touch-and-Go / Low Approach	6,000 ft

**Note:** A Touch-and-Go behind a Full Stop is authorized with 6,000 ft RSRS, during daylight hours, VFR weather, and dry runway conditions.

\* Low Approach or Touch-and-Go behind a Full Stop: For all situations involving a Low Approach or Touch-and-Go behind a Full Stop, DO NOT overfly aircraft on the runway.

6.15.3. RSRS does not apply to any situation involving aircraft cleared for the “option”.

6.15.4. Apply a minimum of 6,000 ft separation for aircraft landing behind a formation landing (8,000 ft for dissimilar type aircraft).

6.15.5. Nighttime fighter separation for all type landings (except Emergencies or Touch-and-Go behind full stop) is 6,000 ft between similar fighter type aircraft and 8,000 ft for dissimilar fighter type aircraft.

6.15.6. When the runway is reported wet by AM, a full-stop aircraft will require 6,000 ft RSRS when landing behind another full stop aircraft. RSRS must not be applied to all other combinations during wet runway operations. In this situation, ATC will apply FAA same runway separation IAW FAAO JO 7110.65.

6.15.7. Wake Turbulence. When wake turbulence is expected due to calm winds (<3 knots) or light (3-6 knots) tailwind, pilots will increase same type spacing to 6,000 ft. During periods of extended (more than 1 hour) calm wind or light tailwind conditions, an advisory “*INCREASED SPACING PROCEDURES ARE IN EFFECT, WIND* (direction and velocity or *CALM*)” will be included in the ATIS broadcast. During variable wind conditions, the advisory will be issued directly to aircrew.



## Chapter 7

### IFR PROCEDURES

#### 7.1. IFR Departures.

7.1.1. IFR departures are not authorized from Runways 04 and 07.

7.1.2. Runways 16, 22, and 25 use CLOUD FOUR ALPHA or CLOUD FOUR BRAVO departure IAW FLIP.

7.1.3. Runway 34 use HIGGY TWO departure IAW FLIP.

7.1.4. Restrictions: When restricted area R5107D is active, IFR departures may or may not be authorized from Runway 22 and Runway 25 due to separation requirements associated with SUA. If WSRF cannot approve an IFR departure, Clearance Delivery will advise, *“DUE TO RESTRICTED AIRSPACE 5 NM WEST OF THE FIELD, IFR DEPARTURE IS NOT AUTHORIZED SAY INTENTIONS...”*

7.1.4.1. If instructed to depart VFR turn as directed by ATC to avoid the eastern boundary of these areas (approximately 5 DME west of HMN), DO NOT cross the extended centerline of Runways 16/34 until above 6,600 ft MSL and proceed VFR.

7.1.4.2. If an IFR pick-up is required, proceed on a northeasterly heading to CLOUD. Expect IFR pickup when clear of the restricted areas and above the applicable MVAs. If weather dictates Instrument Meteorological Conditions (IMC) flight, expect a departure from Runway 16 or Runway 34.

7.1.4.3. See paragraphs 3.5.2.3. for MVA and 3.5.2.4. for DVA guidelines.

7.1.5. Night/IFR. This will be all encompassing for IFR departures (not only night). The following night/IFR procedures are based on airspace and runway in use.

7.1.5.1. Wiley East: file and fly a Beak stereo or Gallagher 1 as described in the 49 WG IFG.

7.1.5.2. R5103B/C: file and fly a diverse departure as described in the 49 WG IFG. At or prior to CLOUD, coordinate with Departure Control to turn direct to R5103B/C.

7.1.5.3. LAVA/MESA: file and fly a Gallagher 1 as described in the 49 WG IFG.

7.1.6. Local Climb-out (see paragraph 7.7.) may be requested with Clearance Delivery on initial departure for IFR pattern delays, expedited routing, active airspace avoidance, etc.

**7.2. Non-Standard Formation Departures.** Advise Departure Control of non-standard formation. ATC can expect all F-16 departures to be nonstandard. Lead aircraft will squawk the Identification Friend or Foe (IFF) mode 3C code assigned. Last trailing flight element will squawk 4,000 or as assigned by ATC. Flight leads will advise ATC once standard formation is achieved.

#### 7.3. IFR Arrivals.

7.3.1. IFR arrivals can expect radar vectors from WSRF for an instrument approach to the active landing runway. Instrument arrival procedures are published for Runways 16, 22, and 34 in Low Altitude US FLIP, Vol. 6 and High Altitude FLIP, Southwest US.

7.3.2. Pilots will check in with ATIS code, type approach/landing requested, and any special requirements/information. Special requirements/information includes non-standard formation, radar-in-trail spacing, circling approach requests, practice missed approach, multiple practice instrument patterns, etc.

7.3.3. Pilots wishing to conduct practice instrument approaches under VFR will execute the following (does not apply to RPA):

7.3.3.1. IAW AFI 13-204V3, VFR aircraft practicing instrument approaches at the

approach control's primary airport must be provided IFR separation. Published missed approach is NOT available unless specifically requested and approved prior to executing the VFR practice approach.

7.3.3.1. If approaching HMN from a working area, use the following phrase with HMN Approach: "*Request vectors for VFR practice approach for (desired approach) at (desired altitude).*"

7.3.3.2. If multiple approaches are desired, use the following phrase with HMN Approach: "*Request VFR practice approach for (desired approach) at (desired altitude) followed by local climb-out VFR at (desired altitude).*" Pilots can expect to be switched to HMN Arrival for RADAR vectors.

7.3.3.3. Pilots may also depart the Tower VFR pattern for a VFR practice approach by making the following request with Tower: "*Request local climb-out VFR at (desired altitude) for a VFR practice approach.*" Pilots can expect to be switched to HMN Arrival for RADAR vectors (see paragraph 7.7.).

7.3.3.4. If the local climb-out ground track is not available due to airspace restrictions, expect clearance for a VFR turnout. Pilots will fly toward the base leg of their intended approach by way of their own VFR navigation. Once the airspace restriction is no longer a factor (i.e., in the opposite direction of the current ground track) pilots will request practice approaches IAW the sub-paragraphs above.

7.3.4. Alternate Missed Approach. The published missed approach holding pattern at HEDLU (HMN R-180/12-19 DME) is occasionally not available because of R5107D and/or R5107B activity. During these times, WSRF will advise aircrew and assign Local Climb-out (see paragraph 7.7.) or other alternate missed approach instructions. E.g.: "*PUBLISHED MISSED APPROACH PROCEDURE NOT AVAILABLE, IN THE EVENT OF MISSED APPROACH EXECUTE LOCAL CLIMB-OUT RUNWAY (XX).*"

7.3.5. TACAN-Out Procedures.

7.3.5.1. When HMN TACAN DME is not available or unreliable for ILS approaches at HMN (i.e., TACAN out of service or not certified), radar is required for pilots to execute ILS approaches. Aircrew can expect to be provided radar navigational guidance while flying published ILS procedures annotated with the term RADAR REQUIRED.

7.3.5.2. When it is not feasible for ATC to provide descent instructions at every intermediate step down fix, the following options are available for pilots to legally and safely recover to HMN:

7.3.5.2.1. Weather conditions allow pilots to get to Visual Meteorological Conditions (VMC) while being radar vectored at or above the MVA at which point pilots can cancel IFR and proceed to the field in VMC. Pilots will plan accordingly and carry extra fuel during recovery if required. MVA charts are available from WSRF.

7.3.5.2.2. Weather conditions in the restricted airspace (WSMR only) allows a descent below the Minimum Safe Altitude (MSA) specified for that airspace at which point pilots can proceed to the field in VMC. Reference 54 FG IFG for WSMR MSAs or specific instrument approach plate MSA information.

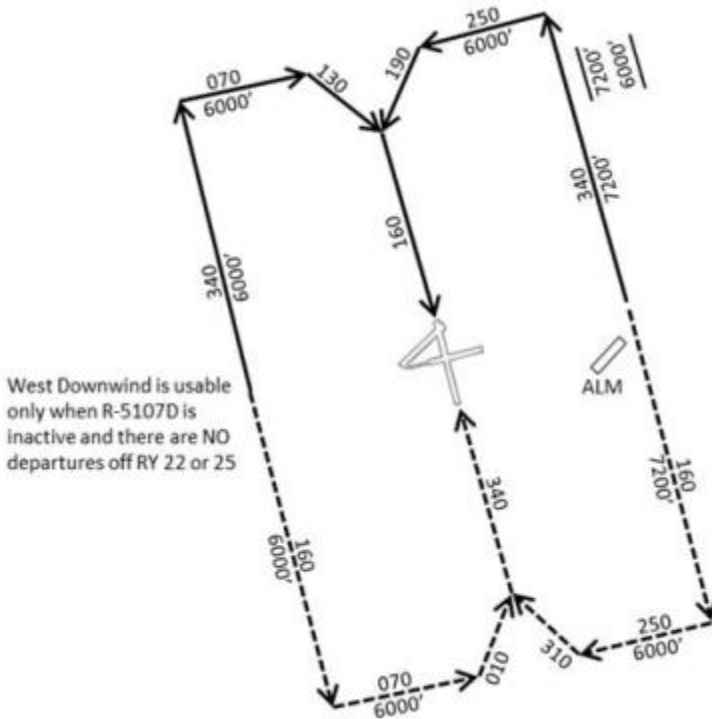
7.3.5.2.3. Weather conditions allow for pilots to get established on an approach and remain VMC until the final approach fix or glide slope intercept altitude at which point pilots can continue on the approach until reaching individual Pilot Weather Category (PWC) minimums. At a minimum, for pilot situational awareness, ATC will inform pilots when at 15 DME, 10 DME, and over the final approach fix.

7.3.5.2.4. In all cases, the SOF will work closely with the 49 OSS/OSW and squadron Ops Sups to develop a plan that will be approved by the 49 OG/CC or 54 FG responsible officer. If none of the three options are available, aircraft will be placed on weather hold. If any of the above options are available, but weather is forecast to eliminate all options (+/-1 hour of proposed landing) an appropriate alternate will be declared by the SOF. Pilots arriving at HMN with none of the above options will divert upon reaching divert fuel.

#### **7.4. Radar Traffic Patterns.**

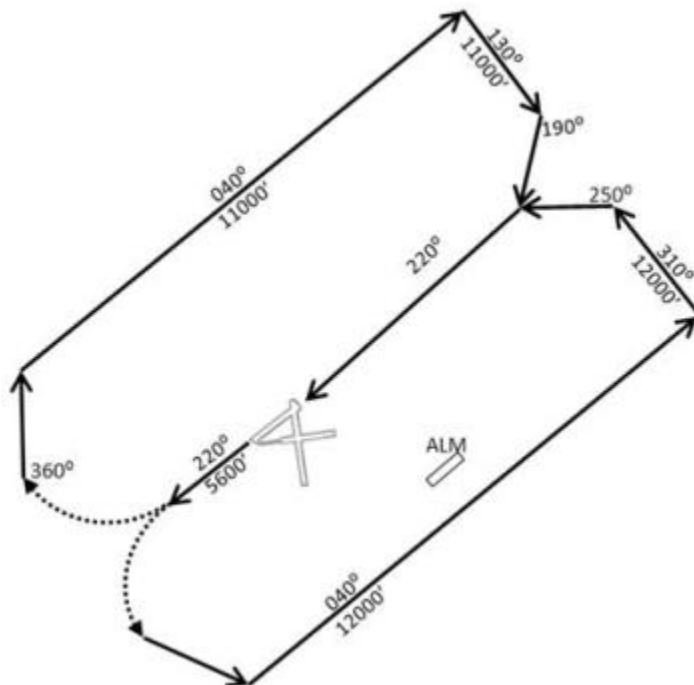
7.4.1. Runway 16/34 radar traffic patterns are normally configured east of HMN (Figure 7.1). A west radar traffic pattern is available only when R5107D is inactive and there are no departures from Runway 22 or Runway 25.

Figure 7.1. Runway 16/34 Radar Traffic Patterns (Drawing not to scale).



7.4.2. Runway 22 radar traffic pattern may be configured to the northeast or southeast of HMN (Figure 7.2.). Aircraft must be vectored to intercept final and be established by 15 DME final; however, aircrews may request vectors to be established inside of 15 DME final.

**Figure 7.2. Runway 22 Radar Traffic Patterns (Drawing not to scale).**



### 7.5. Practice Circling Approach.

7.5.1. Practice circling approaches in VFR conditions may be flown to any runway with published circling minimums.

7.5.2. Once approved, begin circling between 5 and 2 NM final and maintain at or below 5,600 ft MSL during the circling approach maneuver (see Figures 7.3. – 7.4.).

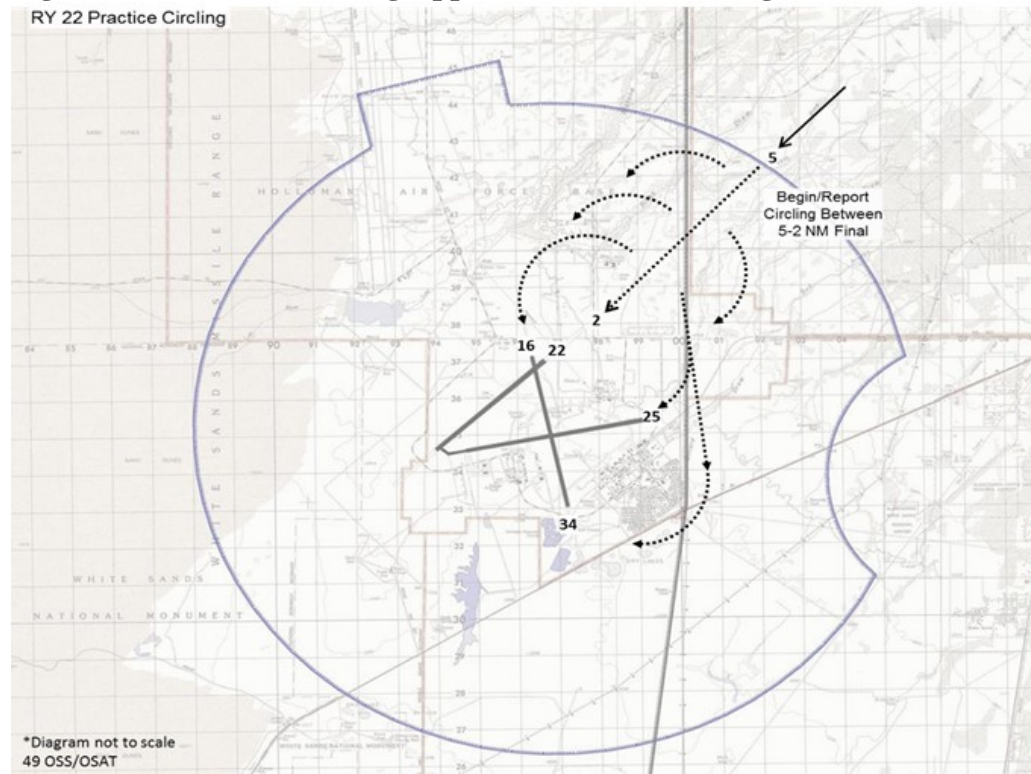
7.5.3. Comply with the published circling approach restrictions for the procedure being flown.

7.5.4. Transient aircraft may conduct practice circling approaches on a non-interference basis.

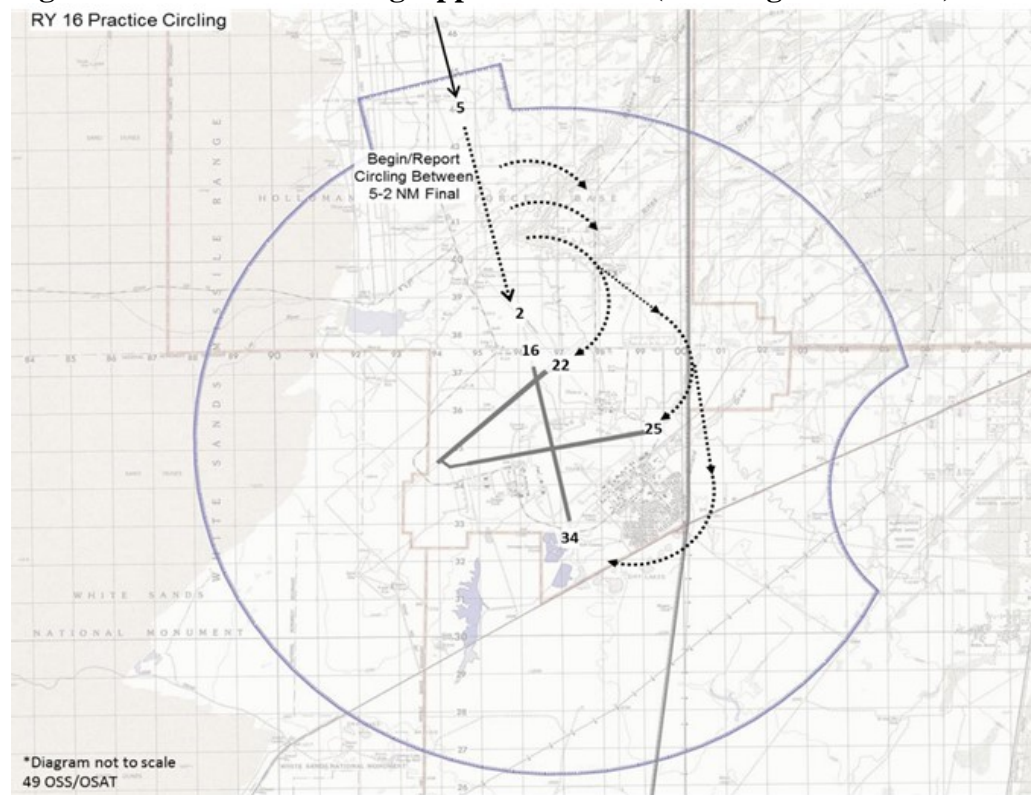
7.5.5. Tower is the final approval authority for practice circling approaches.



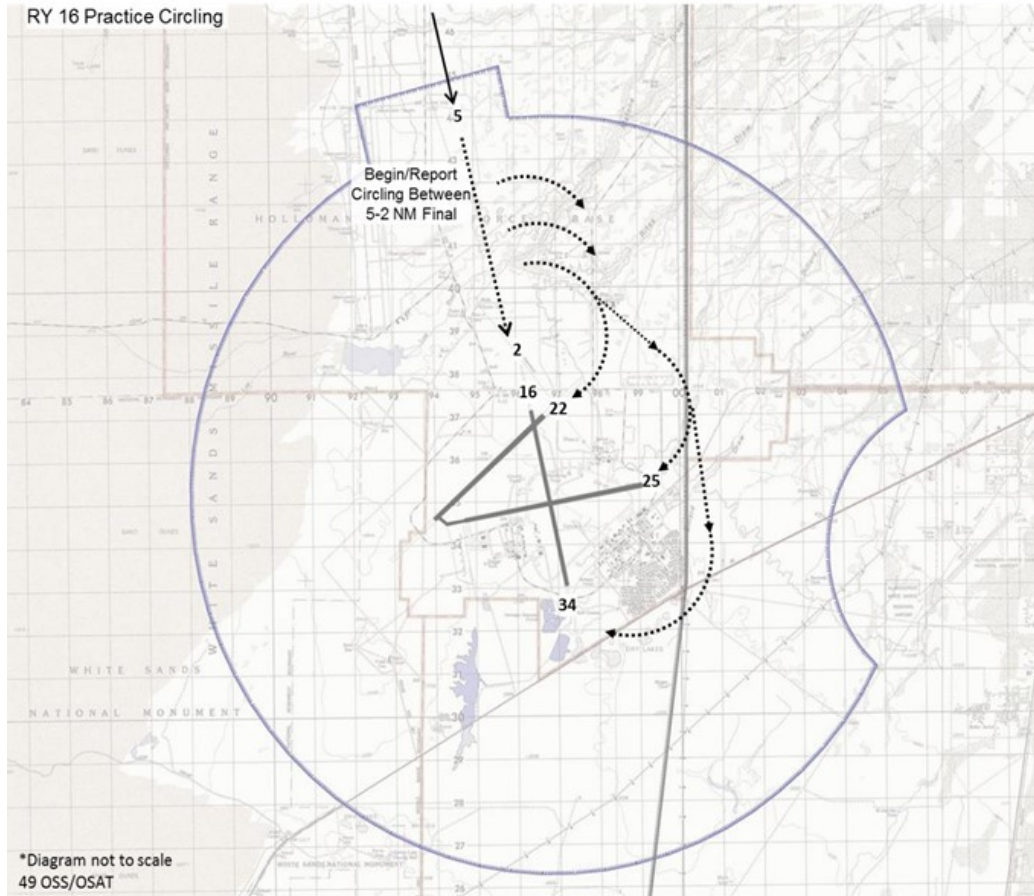
**Figure 7.3. Practice Circling Approach RY 22 (Drawing not to scale).**



**Figure 7.4. Practice Circling Approach RY 16 (Drawing not to scale).**



**Figure 7.5. Practice Circling Approach RY 34 (Drawing not to scale).**



**7.6. Availability/Restrictions for Airport Surveillance Radar (ASR) Approaches and Precision Approach Radar (PAR) Approaches/Monitoring.** ASR and PAR approaches are not available at HMN.

**7.7. Local Climb-out Instructions.**

7.7.1. HMN assigned units and locally hosted TDY units will use the following climb-out procedures when ATC directs “EXECUTE LOCAL CLIMB-OUT”: for Runway 16 the direction of downwind will be directed by the controller “EXECUTE LOCAL CLIMB-OUT (West or East) DOWNWIND”.

7.7.1.1. Runway 16 East Downwind (Figure 7.6.): “FLY RUNWAY HEADING, CLIMB AND MAINTAIN 7,200 FT (MSL), CROSS DEPARTURE END AT OR BELOW 5,600 FT (MSL) WHEN LEAVING 6,000 FT (MSL) TURN LEFT HEADING 360 EXPECT RADAR VECTORS”.

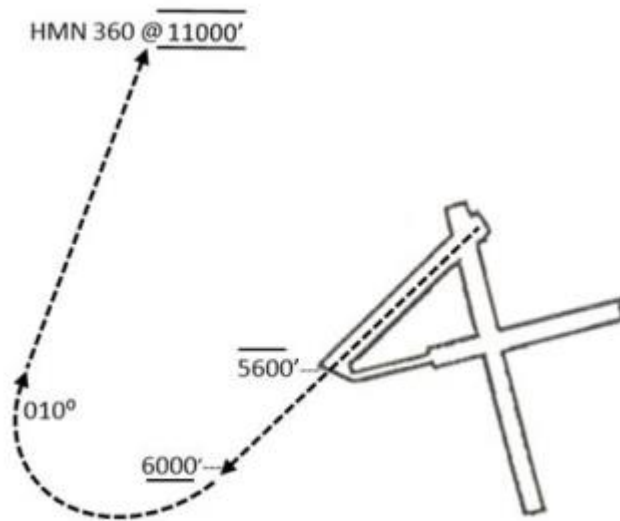
7.7.1.2. Runway 16 West Downwind (Figure 7.6.): “FLY RUNWAY HEADING, CLIMB AND MAINTAIN 7,200 FT (MSL), CROSS DEPARTURE END AT OR BELOW 5,600 FT (MSL) WHEN LEAVING 6,000 FT (MSL) TURN RIGHT HEADING 300 EXPECT RADAR VECTORS”.

**Figure 7.6. Runway 16 Local Climb-out (Drawing not to scale).**



7.7.1.3. Runway 22 (Figure 7.7.): “FLY RUNWAY HEADING, CLIMB AND MAINTAIN 11,000 FT (MSL), CROSS DEPARTURE END AT OR BELOW 5,600 FT (MSL) WHEN LEAVING 6,000 FT (MSL) TURN RIGHT HEADING 010, CROSS HMN 360 RADIAL AT 11,000 FT (MSL) EXPECT RADAR VECTORS”.

**Figure 7.7. Runway 22 Local Climb-out (Drawing not to scale).**



7.7.1.4. Runway 34: “FLY RUNWAY HEADING. CLIMB AND MAINTAIN 7,200 FT (MSL), CROSS DEPARTURE END AT OR BELOW 5,600 FT (MSL), EXPECT RADAR VECTORS”.

7.7.1.5. Runway 25: “FLY RUNWAY HEADING, CLIMB AND MAINTAIN 11,000 FT (MSL), CROSS DEPARTURE END AT OR BELOW 5,600 FT (MSL), WHEN LEAVING 6,000 FT (MSL) TURN RIGHT HEADING 010, CROSS HMN 360 RADIAL AT 11,000 FT (MSL), EXPECT RADAR VECTORS.”

7.7.2. There are no published local climb-out procedures for other Runways; climb-out will be directed by WSRF.

**7.8. HMN Non-Radar Procedures.** The following procedures are in effect in the event WSRF experiences total radar failure:

7.8.1. Cancel IFR if on an IFR flight plan and proceed VFR.

7.8.2. VFR aircraft must adhere to the following procedures:

7.8.2.1. Contact WSRF (Channel 8) NLT 20 DME from HMN TACAN with current ATIS. On initial contact pilots must state position and altitude. Recoveries will be to a full stop or to the VFR traffic pattern.

7.8.2.2. Exit Beak airspace at or below 14,500 ft MSL to deconflict with 16,500 ft MSL departures. McGregor recoveries should exit VFR and contact Tower. Salinas Corridor recoveries will report CAPES.

7.8.2.3. Final approach instrument training may be accomplished by requesting a VFR straight-in, advising Tower of the type of final approach to be flown, and using normal straight-in ground track until established on final. This is a VFR maneuver.

7.8.2.4. All flight briefings will include adherence to flying VFR altitudes, potential traffic conflict areas, and see-and-avoid operations.

7.8.2.5. Aircraft departing VFR will advise Clearance Delivery of intentions. Clearance Delivery will amend flight plans in the Flight Data System as applicable. VFR departures will follow normal ground tracks. All aircraft will report CLOUD and, if going northbound, report BENTT and KARIE. Fly the appropriate VFR hemispheric altitude (16,500 ft MSL or 17,500 ft MSL) until switched to ABQ ARTCC. Departure control will coordinate with ABQ ARTCC for an IFR pick-up if time permits.

7.8.3. Aircraft requesting IFR separation and services can expect up to a 30-minute delay based on air traffic, runway in use, weather, and airspace configuration. In the event that aircraft are unable to depart/arrive VFR, the following procedures are in effect:

7.8.3.1. WSRF will advise ABQ ARTCC of the altitudes assigned. Aircraft held below their final altitude can expect higher with ABQ ARTCC or as higher altitudes become available.

7.8.3.2. Departure Control will request aircraft to provide the estimated time to reach the appropriate transfer of control points: SKEEN (HMN R-078/40 DME), KARIE (HMN R-009/44 DME), SHYLY (HMN R-291/51 DME), or Oro Grande (HMN R-176/37 DME). WSRF will coordinate this time with ABQ ARTCC and transfer communications NLT the transfer control point.

7.8.3.3. Arrival aircraft will normally be routed to MONGO (HMN R-034/20 DME) for holding unless an ATC operational advantage can be obtained. Aircraft that are directed to hold will be given an “*Expect Further Clearance*” time. Recoveries will be via a published instrument approach to a full stop or to the VFR traffic pattern.

7.8.3.3.1. Aircraft in the arrival pattern unable to maintain VMC can expect a non-radar routing.

7.8.3.3.2. All aircraft will report commencing the approach at 15 NM and 10 NM final.



## Chapter 8

### EMERGENCY AND PRECAUTIONARY PROCEDURES

#### 8.1. Primary Crash Alarm System (PCAS) and Secondary Crash Net (SCN).

8.1.1. In the event of an aircraft mishap or emergency, Tower will activate the PCAS IAW FAAO JO 7110.65.

8.1.2. Agencies with two-way voice communication on the PCAS are: Tower, FD, AM, and the Ambulance Response Element. Tower will activate the PCAS for the following reasons (list is not all inclusive):

8.1.2.1. In-flight (IFE) and ground emergencies (GE).

8.1.2.2. Aircraft mishaps.

8.1.2.3. Notification of external stores jettison.

8.1.2.4. Planned or unplanned arresting gear/cable engagements excluding barrier certifications.

8.1.2.5. Suspected or confirmed hot brakes.

8.1.2.6. Gun malfunctions and hung forward firing ordnance.

8.1.2.7. Stop Alerts.

8.1.2.8. Hydrazine mishaps.

8.1.2.9. Fluid spills or other emergencies when notified by any first responder base agency.

8.1.2.10. Single ship aircraft experiencing complete radio failure (NORDO).

8.1.3. AM will forward all initial and updated information verbatim via the SCN as it becomes available. AM records the SCN.

**8.2. Command and Control of IFEs.** The primary discrete emergency channel for HMN is the Single Frequency Approach (SFA - Local Channel 18, Attachment 2). This channel is intended to provide a SFA to emergency aircraft and facilitate communication between the control agency, the SOF, and the aircrew. WSRF will assign the SFA or a UHF/VHF discrete frequency as soon as practical unless otherwise requested by aircrew. Tower will relinquish control of the SFA or UHF/VHF discrete frequency to senior FD officer once the aircraft comes to a complete stop. When an aircraft declares a GE or emergency abort on takeoff and the senior FD officer or designated representative requests use of the SFA or UHF/VHF discrete frequency, Tower will coordinate with WSRF then relinquish the SFA as soon as possible.

**8.3. Suspension of Runway Operations due to Aircraft Emergencies.** Runway operations will be suspended for all known or suspected FOD conditions and emergencies. 49 OG/CC (or SOF) may waive requirement to suspend operations for runway inspection following an emergency if in his/her judgment a FOD check is unnecessary. If operations are suspended, AM must conduct a runway check before operations can be resumed.

8.3.1. Emergency aircraft parked on Taxiways Romeo or Golf impact or suspend flying operations to Runways 07, 22, and 25. Discretion should be used when directing emergency aircraft to Taxiway Romeo or Golf.

#### 8.4. Emergency Response Procedures.

8.4.1. IFEs:

8.4.1.1. Notify controlling agency of squawk if other than 7,700. RPA will set Lost Link squawk 7,400.

8.4.1.2. IFEs will be given full runway separation.

8.4.1.3. The preferred runway for cable engagements is Runway 04/22, winds permitting.

8.4.1.4. Except in an emergency, the SOF will not transmit over ATC frequencies without prior coordination with ATC (this does not apply to dedicated SOF frequencies). All radio transmissions to a distressed aircrew, from other than the SOF or ATC, are coordinated through the SOF (this does not apply to the Ops Sup if communicating to the aircrew via a squadron common frequency).

8.4.1.5. Emergency aircraft will normally remain on the emergency frequency until the emergency is terminated.

8.4.1.6. Runway operations will be suspended upon aircraft landing and require AM to conduct a FOD check of the entire runway surface. The SOF may waive the requirement to conduct a FOD check at his/her discretion.

8.4.2. GEs may be worked from the Ground Control frequency.

8.4.3. Tower will direct taxiing aircraft to hold position while emergency response vehicles are responding to the emergency. Emergency vehicles responding to an aircraft emergency will be given priority to cross all active runways over non-emergency airborne aircraft and departures. Ground Control may approve specific aircraft movement if there is no conflict with emergency response vehicles.

8.4.4. Discontinue any operation that would interfere with availability of landing runway and broadcast on the fire/crash Frequency Modulation (FM) net when the emergency aircraft is next to land.

8.4.5. AM will respond to all GEs to conduct a FOD check.

8.4.6. For any IFE or GE (on or off base), the senior FD representative is the incident commander until the emergency is terminated. FD is the only agency with the authority to terminate an emergency. If there is an associated mishap, the incident commander will be designated and assume the responsibilities as directed in 49 WG Mishap Response Plan.

8.4.7. Simulated Emergencies: ATC will exercise the same procedures as in an actual emergency. Unless previously coordinated, simulated emergency aircraft WILL NOT receive priority over other aircraft. The 49 OSS/OSA must be briefed at least 72 hours in advance of any exercise or inspection that involves 49 OSS/OSA personnel, facilities to include ATCALs, or airfield (i.e., Major Accident Response Exercise [MARE], see AFI 13-204V3 Chapter 11).

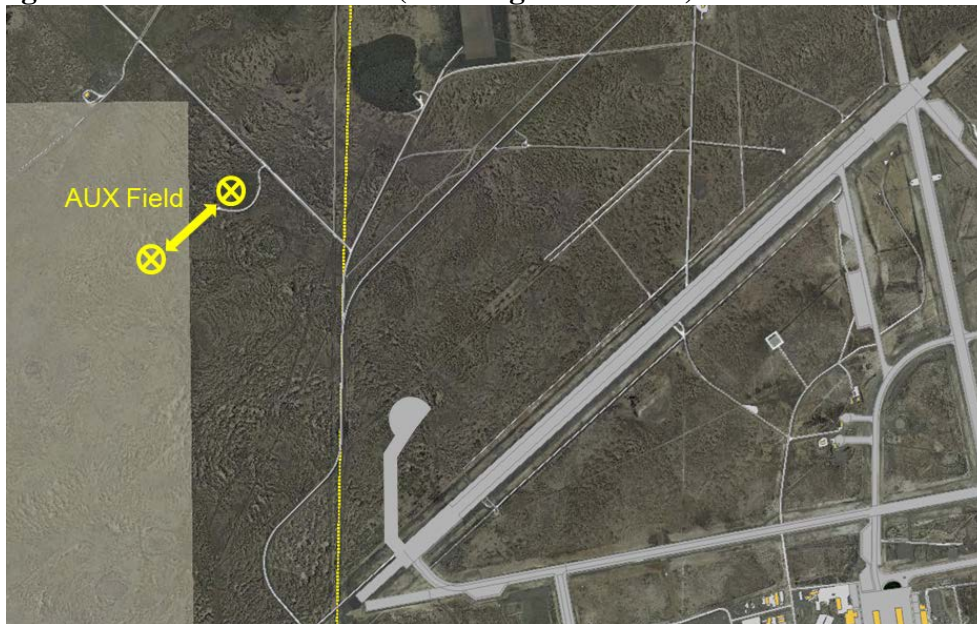
## **8.5. External Stores Jettison Area Procedures.**

8.5.1. When possible, jettison external and internal stores on Red Rio or Centennial ranges in one of the approved impact areas. Drops in any other areas will be for emergency situations only and must be reported to ATC. Obtain permission from ROC or WSRF to drop stores on the range impact areas. Expect minimum delays if the impact areas are in use or designated hot.

8.5.2. If the areas are not in use or designated cold, WSRF must coordinate with Fort Bliss.

8.5.3. In the Class D and with Tower approval, jettison external and internal stores at the AUX field (HMN R-259/1.7 DME or N32 51.65 W106 08.6). VFR Jettison Area (AUX field) is for fuel tanks, inert ordnance, and non-hazardous stores only (Figure 8.1.)

**Figure 8.1. Jettison on HMN (Drawing not to scale).**



8.5.3.1. Hold for jettison on final Runway 04 or Runway 22 at or above 8,500 ft MSL. The aircraft commander is responsible for visually clearing the jettison area.

8.5.3.2. From the West, fly parallel to and 5,800 ft left of Runway 04 heading 038 degrees at or below 5,600 ft MSL.

8.5.3.3. From the East, fly parallel to and 5,800 ft right of Runway 22 heading 218 degrees at or below 5,600 ft MSL.

8.5.4. IFR jettison will be at 6,000 ft MSL outbound on the HMN R-321 between 10 and 14 DME. IFR jettison location must be checked every 5 years for manmade obstacles or hazards. IFR jettison location was last verified July 2015.

8.5.4.1. Contact WSRF on the Approach frequency (Channel 8).

8.5.4.2. ATC will provide a vector to intercept the R-321 and advise the pilot when at 10 DME and again at 14 DME. If WSRF radar is out, WSRF will issue clearance outbound on the R-321 prior to 10 DME at 6,000 ft MSL.

8.5.5. Tower will activate the PCAS when alerted that an aircraft will use the IFR/VFR jettison area (PCAS WILL NOT be activated for areas over the range) and again upon termination of jettison. AM will alert agencies involved in cleanup/recovery operations.

**8.6. Fuel Dumping.** There is no defined fuel dumping area. Location of fuel dumping will occur as directed by ATC. Aircrew should attempt to dump above 5,000 ft AGL and avoid populated areas, safety constraints permitting.

**8.7. Abandonment of Aircraft.**

8.7.1. The designated bailout area is northwest of HMN between HMN R-270 and R-300 between 3 and 5 DME. Bailout at or above 10,000 ft MSL on a northwesterly heading.

8.7.2. In the event that an aircrew abandons an aircraft, the pilot should make every effort to advise ATC of the aircraft position prior to abandonment. When alerted that an aircrew abandons an aircraft, Tower will plot the position on base crash grid maps or on a sectional chart for crash recovery efforts and activate the PCAS to pass along all applicable information.

**8.8. Hung Ordnance Procedures.** Primary runway for hung ordnance is Runway 22 and alternate is Runway 25. Prior to recovery, notify the SOF and relay type of munitions and nature of problem.

Recover via straight-in with chase (if possible) and avoid flying over populated areas.

8.8.1. Aircraft with hung-secure INERT ordnance (to include training or practice ordnance), will normally not declare an IFE and after landing, may taxi to EOR for de-arming. When possible, use EOR spot closest to the runway (e.g. EOR Foxtrot spot 10, EOR Alpha spot 5) to allow for outlet of other aircraft and standardized emergency response in the event de-arming escalates to a ground emergency.

8.8.2. Aircraft with hung-secure LIVE or hung-unsecure LIVE or INERT ordnance (to include training or practice ordnance) will declare an IFE. After landing, stop straight ahead on Runway 22 just before the departure end BAK 12 or after landing Runway 25 stop on Taxiway Golf just past Taxiway Lima. Weapons personnel will evaluate and safe munitions with EOD assistance if needed. If ordnance can be safely pinned and secured, taxi to LOLA or parking (as required) when released by the incident commander. If not, shut down and have the aircraft towed to LOLA or parking (as required).

8.8.3. TDY units, 704 TG, or Det. 1, 82 ATRS projects involving ordnance requiring actions different from above should coordinate with 49 OG/CC or designated representative, the SOF, AM, and 49th Wing Weapons Safety (49 WG/SEW) prior to launch.

**8.9. Gun Malfunctions/Hung Forward Firing Ordnance.** Safe switches and declare an IFE. Avoid pointing aircraft at populated areas. As required, recover with chase ship straight-in Runway 22 (primary) or Runway 25 (alternate).

8.9.1. After landing Runway 22, stop and point the aircraft's nose to runway heading and de-arm on end of runway. If able, aircraft will stop on the right/north side of runway to allow FD/Emergency vehicles access via Taxiway Romeo.

8.9.2. After landing Runway 25, stop on Taxiway Golf just past Taxiway Lima, to safe/de-arm aircraft.

8.9.3. When gun or ordnance is declared safe, aircraft may taxi to chocks/authorized Live Ordnance Load/Unload area respectively. Expect Tornado and F-16 aircraft to shut down on the runway with a gun malfunction. Upon notification via the SCN, 49th Security Forces Squadron (49 SFS) will secure the appropriate area(s) IAW 49 SFS Quick Reaction Checklist 3, *In-Flight Emergency*.

8.9.4. De-arming of simultaneous gun malfunctions/hung forward firing ordnance emergencies will be directed by the incident commander on a case-by-case basis.

**8.10. Lost Communications Instructions (NORDO).**

8.10.1. If able, squawk 76XX (16, 25, 34, etc.) for expected landing runway. If a greater emergency exists, squawk 7700. See Attachments 4, 6, 8, and 9 for additional NORDO procedures.

8.10.2. If able to return VFR, follow the steps below:

8.10.2.1. Have a wingman lead the NORDO aircraft to a straight-in if possible. NORDO aircraft will be passed the lead on final with clearance to land.

8.10.2.2. Maintain appropriate VFR altitudes while returning to base.

8.10.2.3. Proceed to initial, rock wings at initial, and break at departure end.

8.10.2.4. Look for a steady green light gun signal from Tower for clearance to land.

8.10.2.5. GAF Tornados will indicate the use of the approach end or departure end cable by flashing landing light on final inside 5 NM.

8.10.3. If weather conditions requires an IFR return to base, follow the guidance below:

8.10.3.1. Maintain 16,000 ft MSL or the lowest practical altitude where VMC is obtainable at or above 16,000 ft MSL



8.10.3.2. If recovering from the north or west, proceed direct SMATI (HMN R-357/12 DME) and descend to 13,000 ft MSL in holding. If able, execute one complete turn in holding followed by the published approach to the expected landing runway.

8.10.3.3. If recovering from the south or east, proceed direct FITZZ (HMN R-093/20 DME) at 16,000 ft MSL. Descend in holding of FITZZ using standard turns and 1-minute legs. Cross FITZZ at or above 13,000 ft MSL and execute the published procedure to the expected landing runway.

#### **8.11. Air Evacuation Notification and Response Procedures.**

8.11.1. Tower will notify AM of arriving AirEvac or MedEvac aircraft by 15-flying miles.

8.11.2. AM will relay AirEvac or MedEvac information via the SCN. If not already informed, AM will also notify Tower, FD, Ambulance Response Element, and Gerald Champion Regional Medical Center Emergency Room and provide all data possible [Estimated Time of Arrival (ETA), number of patients off-loading, litter/ambulatory, special equipment, physician required, etc.]. 49th Aerospace Medicine Squadron Flight Medicine (49 AMDS/SGPF) should be notified 30 minutes or more prior to landing so appropriate receiving medical units can be postured for receipt of casualties. AM will coordinate with TA for servicing equipment and parking and provide other priority service as required in the area of transportation and flight planning, etc.

#### **8.12. Emergency Aircraft Arresting System Procedures.**

8.12.1. HMN aircraft arresting system locations are displayed in Table 2.1. Landing zone for a BAK-15 barrier is displaced. Aircraft may only land over a raised BAK-15 arresting barrier in an emergency. Tower will issue the distance of the barrier from the approach end of the runway.

8.12.2. All BAK-15s are remotely controlled by Tower. When the approach end of the primary landing runway is equipped with a BAK-15 barrier, the barrier will be rendered safe (taking remote capability away from the Tower) and placed in the “down” position. The BAK-12 cable will be disconnected from the BAK-15. If weather conditions demand an immediate runway change, it is permissible to land over an armed BAK-15 in the “down” position. However, Tower will immediately notify 49 CES/CEOFP, Power Production Barrier Maintenance (BM), or FD to render the barrier safe if continued landings are expected. BM will advise Tower of barrier configuration and whether the BAK-15 barrier is armed or safe.

8.12.3. When Runway 22 approach end BAK-12 engagement is anticipated and aircraft are holding in Echo Arm/De-Arm or on Taxiway Echo, Tower will either clear the aircraft for takeoff (emergency outside 10 NM) or direct the aircraft to taxi well clear of Runway 22.

8.12.4. Crash Recovery, FD, BM, and AM will respond immediately to all barrier engagements. Barrier certifications are pre-coordinated with all required responding agencies.

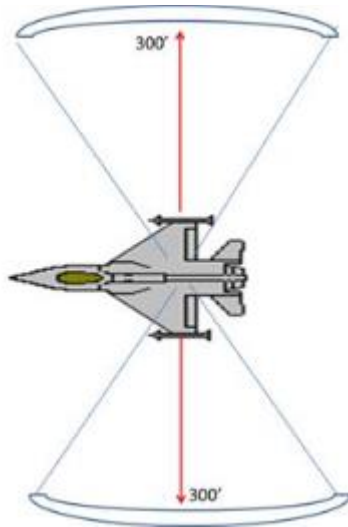
#### **8.13. Hot Brake Area and Procedures.**

8.13.1. 49 WG/CP will advise maintenance. If able, crews will taxi to the nearest hot brake area (nearest arm/de-arm, farthest parking spot from the runway). Crash Recovery personnel will determine if hot brakes exist and if the aircraft is cleared to continue taxiing.

8.13.2. Incident commander will ensure a 300 ft safety zone (see Figure 8.2.) that extends outward from the aircraft’s tires. Other aircraft WILL NOT taxi within the 300 ft safety zone.

8.13.3. GAF Tornados that suspect hot brakes while in their hangar/shelter may reposition to Main Ramp India Row spot 7.

#### **Figure 8.2. Hot Brake Danger Zone.**



#### **8.14. Hydrazine Procedures.**

8.14.1. Airborne: If conditions permit, the aircraft will land Runway 22 and stop straight ahead on the runway. Once the aircraft is on the ground, evacuate an area at least 100 ft upwind and 600 ft downwind of all non-essential personnel. If landing on Runway 22 is not possible, aircraft will clear at the first available taxiway.

8.14.2. Ground: Parked aircraft will remain in their spot. If conveniently aligned with an intersecting taxiway, affected aircraft will exit the flow of traffic and stop, else taxiing aircraft will stop immediately. In all cases, aircraft commanders will declare a ground emergency.

#### **8.15. Personnel/Crash Locator Beacon Signal/Emergency Locator Transmitter (ELT) Response Procedures.**

8.15.1. Scheduled operational testing of beacon/ELT will be conducted IAW FAAO JO 7110.65 during the first 5 minutes of the hour for no more than three audible sweeps.

8.15.2. 49 WG/CP is designated as the HMN single point of contact for ATC notification. The PCAS IS NOT activated in response to unscheduled personnel, crash locator beacon/ELT. 49 WG/CP will attempt to determine the source of the signal or personnel and will direct Tower to activate the PCAS as necessary.

8.15.3. Aircrew Emergency Beacon Risk Mitigation Measures. Aircrew will monitor Emergency Frequency (UHF 243.0) at all times while airborne. Aircrew will diligently monitor other flight members and maintain situational awareness on them throughout the sortie. In the event of an ejection, the on-scene Rescue Combat Air Patrol (RESCAP) commander will follow procedures in the HMN 49 WG IFG. The on-scene commander will attempt to contact the downed aircrew on 243.0 and 282.8 while marking the position of the downed aircrew via a GPS mark point. The mark point coordinates will be passed as soon as possible to the SOF and/or Search and Rescue (SAR) forces.

#### **8.16. Weather Recall/Divert Procedures.**

8.16.1. 49 OSS/OSW will immediately notify the SOF and Tower with pertinent adverse conditions and location. Any pilot or controller observing such conditions should immediately pass that information to their Ops Sup, SOF, Tower WS or WSRF WS, and 49 OSS/OSW.

8.16.2. The SOF will determine whether to recall, divert, discontinue departures, or direct all aircraft to a full-stop. Time and conditions permitting, the SOF will coordinate with affected Ops Sups prior to diverting, holding, or recalling aircraft.

8.16.3. WSRF will pass weather and route recall notification to ABQ ARTCC and will coordinate range and restricted area crossings for aircraft with regard to weather avoidance areas. Route recalls must include the specific call signs of the aircraft affected.

8.16.4. Pilots will acknowledge weather and route recall on their current controlling frequency and arrange to return to base (RTB). Range crossings cannot be guaranteed. Pilots will contact the SOF and relay their available hold time prior to contacting WSRF.

8.16.5. IFR Divert to ELP. Contact WSRF for emergency service. Expect hand off to ELP Approach for sequencing into ELP.

8.16.6. Unmanned Aircraft Divert Base Designation. HMN is designated as an emergency divert base for locally assigned unmanned aircraft only. Any units requesting to use HMN as a divert location for unmanned aircraft must coordinate with the 49 OSS/OSA and 49 WG/XP.

### 8.17. Alternate Airfields.

8.17.1. HMN has two primary alternate airfields for practice patterns and approaches: Biggs Army Air Field (KBIF), located 62 NM to the South South East, and Roswell Industrial Air Center (KROW), located 84 NM to the North East. In addition, El Paso International Airport (KELP) is available for practice instrument approaches.

8.17.2. HMN primary divert airfields are listed in Table 8.1.

**Table 8.1. Primary Divert Airfields.**

Airfield - Identifier		TACAN - Channel	Bearing	Distance
Alamogordo-White Sands	KALM	n/a	090 °	006 NM
Albuquerque International	KABQ	ABQ 079X*	341 °	134 NM
Biggs AAF	KBIF	EWM 071X*	185 °	062 NM
Cannon AFB	KCVS	CVS 053X	048 °	167 NM
Davis-Monthan AFB	KDMA	DMA 123X	253 °	246 NM
El Paso International	KELP	ELP 099X*	184 °	064 NM
Midland International	KMAF	MAF 095X*	096 °	206 NM
Roswell International	KROW	CME 108X*	063 °	084 NM
Sierra Blanca Regional	KSRR	n/a	028 °	046 NM
* TACAN not co-located with airfield.				

**8.18. Anti-Hijacking/Unlawful Seizure Procedures.** Refer to the 49 WG Integrated Defense Plan 101, Tab 1 to Appendix 2 to Annex C; *Unauthorized Movement/Hijacking of Aircraft*. Immediately report such incursions via the PCAS/SCN to 49 WG/CP and BDOC. See HQ AFFSA Message, *Aircraft Hijack and Suspicious In-flight Activities (classified For Official Use Only)* and FAAO 1600.75, *Protecting Sensitive Unclassified Information*.

**8.19. Wind Limitations on Control Tower (Building 864).** 49 CES has determined the wind velocity Tower can safely withstand to be 70 knots. Tower personnel will evacuate when the winds reach 55 knots sustained or gusts to 65 knots.

### 8.20. Evacuation/Loss Communications of Airfield Operations Facilities.

8.20.1. The 49 OG/CC has determined that there is no requirement for alternate ATC facilities.

8.20.2. Tower Evacuation Procedures:

8.20.2.1. IAW AFI 13-204V3, airfield operations are not authorized when Tower is not open, except for approved UAO (see Attachment 10). Alternate airfields are listed in Table

8.1.

8.20.2.2. Potential reasons for evacuation include high winds, bomb threats, electrical failures, and other natural disasters.

8.20.2.3. Tower will transmit on all assigned frequencies, to include UHF/VHF Emergency Frequency, that Tower is evacuating and that airfield operations are suspended. Tower will advise all airborne aircraft in the pattern to contact WSRF for further instruction.

8.20.2.4. Aircraft taxiing for departure will pull into the closest arm/de-arm area and monitor Ground Control frequency (Attachment 2) for further instructions.

8.20.3. WSRF loss of communication. Aircraft under control of WSRF that can maintain VFR will recover with Tower. All other aircraft will contact ABQ ARTCC for an instrument approach. See paragraph 3.6.1.4. for restricted/SUA procedures during WSRF closure.

8.20.4. AM Evacuation Procedures. AM will evacuate IAW AFI 13-204V3, and HMN IEMP 10-2, *Installation Emergency Management Plan*.

## Chapter 9

### MISCELLANEOUS PROCEDURES

#### 9.1. Opposite Direction Departures and Landings.

9.1.1. Tower will have final approval authority on opposite direction arrivals. WSRF will have final approval authority on opposite direction IFR departures. Cutoffs prescribed below also apply to helicopter operations except when helicopters are established on arrival/departure routes described in paragraph A6.3.

9.1.2. Arrival versus (vs.) Arrival (applies to IFR and VFR aircraft):

9.1.2.1. Opposite direction arrivals will be restricted to straight-in full stops.

9.1.2.2. An opposite direction arrival will proceed no closer than 10-flying miles from the runway until the preceding arrival to the active or opposing runway has landed or has completed a practice approach and has turned at least 45 degrees from the reciprocal course of the opposite direction arrival.

9.1.2.3. Aircraft in or entering the VFR traffic pattern will be restricted from base and final until after the opposite direction arrival lands.

9.1.3. Arrival vs. Departure (applies to IFR and VFR aircraft):

9.1.3.1. When opposite direction arrivals reach a point 10-flying miles from the runway, IFR departures will be suspended.

9.1.3.2. Aircraft departing VFR, remaining in the VFR pattern, must have departed or turned to avoid the arrival before the arrival reaches a point 10 miles from the runway.

9.1.3.3. Arrivals to either Runway 04 or Runway 07 will be considered opposite direction to both Runway 22 and Runway 25 departures.

9.1.4. Departure vs. Arrival:

9.1.4.1. IFR opposite direction departures will be established on a course diverging by at least 45 degrees from the reciprocal of the final approach course to avoid any conflict prior to an arrival reaching a point 10-flying miles from the active/opposing runway.

9.1.4.2. VFR opposite direction traffic will be airborne and turning to avoid any conflict before an arrival reaches a point 10-flying miles from the runway.

**9.2. Special Procedures.** Land and Hold Short Operations are not authorized at HMN.

**9.3. Bird Watch Conditions/Wildlife Control.** See 49 WG Bird Aircraft Strike Hazard (BASH) Plan, for local BASH program guidelines.

**9.4. SOF Operating in the Tower.** The SOF's responsibilities while operating in the Tower are outlined in AFI 11-418\_HAFBSUP, *Operations Supervision*.

**9.5. Night Vision Device (NVD) Operations.** The use of NVDs on HMN airfield for air operations are authorized for AA only (see Attachment 6). Other units requesting NVD operations must establish an LOA with the 49 OG prior to employment.

**9.6. Paratroop/Parachute Operations.** Paratroop/Parachute operations are not authorized in HMN Class D.

#### 9.7. Functional Check Flights (FCF).

9.7.1. Pilots on FCF profile that require maximum performance climb on takeoff will make their initial request with Clearance Delivery and expect approval/disapproval with Ground Control or Tower. Approval for max climbs will be contingent upon traffic conditions and/or airspace limitations.

9.7.2. Taxi check only FCF must be coordinated with AM.



9.7.3. FCF profiles that require non-standard operations (e.g. extended line-up, pattern delay after initial departure, multiple VFR or IFR patterns, etc.) should be coordinated with ATC prior to departure. Use of standard FCF call signs (T-38 – BREAK, GAF – FILTER) or annotation on daily flying schedule will not afford the FCF priority over other operations.

**9.8. Installation Security Plan.** See HAFB IDP.

HOUSTON R. CANTWELL, Colonel, USAF  
Commander, 49th Wing

## Attachment 1

### GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

#### *References*

AFI 11-202V3, *General Flight Rules*, 10 August 2016

AFI 11-202V3\_ACCSUP\_I, *General Flight Rules*, 28 November 2012

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AFI 11-235, *Forward Area Refueling Point (FARP) Operations*, 8 April 2015

AFI 11-2F-16V3 AETCSUP 1, *F-16 Operations Procedures*, 21 May 2014

AFI 11-2MQ-1&9V3, *MQ-1 and MQ-9--Operations Procedures*, 1 November 2012

AFI 11-418, *Operations Supervision*, 14 October 2015

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AFI 13-201, *Airspace Management*, 21 August 2012

AFI 13-204V3, *Airfield Operations Procedures and Programs*, 1 September 2010

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AFI 13-212, HAFB ADDENDA-A, *Holloman Primary Training Ranges*, 15 March 2011

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AFI 32-7063, *Air Installations Compatible Use Zones Program*, 18 December 2015

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AFJI 11-204, *Operational Procedures for Aircraft Carrying Hazardous Materials*, 11 Nov 1994

AFMAN 11-217V1, *Instrument Flight Procedures*, 22 October 2010

AFMAN 33-363, *Management of Records*, 1 March 2008

Army Regulation (AR) 95-1, *Flight Regulations*, 11 March 2014

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UFC 3-260-01, *Airfield and Heliport Planning and Design*, 17 November 2008

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HAFBI 15-101, *Weather Support Procedures*, 19 February 2014

HAFBI 21-37, *Foreign Object Debris/Damage Prevention Program*, 15 February 2012

HAFB IDP, *Integrated Defense Plan 101*, 23 December 2015

HAFB IEMP 10-2, *Installation Emergency Management Plan*, 18 June 2015

49 OG – 49 MSG AAS LOA, *Aircraft Arresting System Letter of Agreement*, 25 May 2014

49 OSS – 49 CES EOD LOA, *Explosive Ordnance Disposal*, 28 May 2008

49 WG Bird Aircraft Strike Hazard (BASH) Plan, November 2015

49 WG IFG, *Basic In-flight Guide*, Change 8, 23 August 2016

49 WG Master Aircraft Parking Plan, 1 May 2016

49 WG Mishap Response Plan, 30 May 2016

607 ACS-WSRF Tactical Monitor LOA, 1 March 2015

WSMR FSOP, *White Sands Missile Range Flight Safety Operational Plan*

WSMR Operating Instruction 70-3, *Daily Operations Scheduling Execution and Control*, 1 March 2014

Det.1, 82 ATRS, 49 WG, WSMR Safety Memorandum of Agreement, 30 November 2005

ABQ ARTCC, 49 WG, WSMR LOA, *Air Traffic Control and Flight Operations*, 1 November 2014

*Airfield Sweeper Operations Letter of Procedure*, 13 February 2012

49 OSS/OSA Ops Letter, 23 April 2013

**Note:** FLIPs available from 49 OSS/OSAA or National Geospatial-Intelligence Agency website.

### ***Prescribed Forms***

None

### ***Adopted Forms***

AF Form 847, *Recommendation for Change of Publication*

AF Form 4327, *ARMS Flight Authorization (FA)*

AF Form 4327a, *Crew Flight Authorization*

DD Form 175, *Military Flight Plan*

DD Form 1801, *DoD International Flight Plan*

### ***Abbreviations and Acronyms***

**6 ATKS**—6th Attack Squadron

**8 FS**—8th Fighter Squadron

**9 ATKS**—9th Attack Squadron

**29 ATKS**—29th Attack Squadron

**49 AMDS/SGPF**—49th Aerospace Medicine Squadron Flight Medicine

**49 AMDS/SGPB**—49th Aerospace Medicine Squadron Bioenvironmental Engineering

**49 CES**—49th Civil Engineer Squadron

**49 CES/CC**—49th Civil Engineer Squadron Commander

**49 CES/CEF**—49th Civil Engineer Fire Protection Flight

**49 CES/CEO**—49th Civil Engineer Squadron Operations Flight

**49 CES/CEOFE**—49th Civil Engineer Squadron Exterior Electric

**49 CES/CEOFP**—49th Civil Engineer Squadron Barrier Maintenance

**49 CES/CEN**—49th Civil Engineer Squadron Engineering Flight

**49 CES/CENP**—49th Civil Engineer Squadron Engineering Flight Portfolio Optimization

**49 CS**—49th Communications Squadron

**49 CS/SCO**—49th Communications Squadron Operations Flight

**49 LRS/LGRF**—49th Logistics Readiness Squadron Fuels Service Center

**49 MSG**—49th Mission Support Group

**49 MXG/MOC**—49th Maintenance Group Maintenance Operations Control

**49 OG**—49th Operations Group

**49 OG/CC**—49th Operations Group Commander

**49 OG/OGV**—49th Operations Group Standardization and Evaluation Office

**49 OSS/CC**—49th Operations Support Squadron Commander

**49 OSS/OSA**—49th Operations Support Squadron Airfield Operations Flight

**49 OSS/OSAA**—49th Operations Support Squadron Airfield Management  
**49 OSS/OSAR**—49th Operations Support Squadron White Sands Radar Facility  
**49 OSS/OSAT**—49th Operations Support Squadron Tower  
**49 OSS/OSK**—49th Operations Support Squadron Wing Weapons  
**49 OSS/OSOA**—49th Operations Support Squadron Airspace Manager  
**49 OSS/OSOS**—49th Operations Support Squadron Wing Scheduling  
**49 OSS/OSW**—49th Operations Support Squadron Weather Flight  
**49 MDG**—49th Medical Group  
**49 SFS**—49th Security Forces Squadron  
**49 WG**—49th Wing  
**49 WG/CP**—49th Wing Command Post  
**49 WG/SEW**—49th Wing Weapons Safety  
**49 WG/XP**—49th Wing Plans and Programs Office  
**54 FG**—54th Fighter Group  
**54 OSS**—54th Operations Support Squadron  
**82 ATRS**—Detachment 1, 82nd Aerial Target Squadron  
**311 FS**—311th Fighter Squadron  
**314 FS**—314th Fighter Squadron  
**586 FLTS**—586th Flight Test Squadron  
**607 ACS**—607th Air Control Squadron  
**704 TG**—704th Test Group  
**AA**—Army Air  
**AAS**—Aircraft Arresting System  
**ABQ**—Albuquerque  
**AC**—Aero Club  
**ACC**—Air Combat Command  
**ACC/A3A**—ACC/Airspace, Ranges, and Airfield Operations  
**ADPM**—Airfield Driving Program Manager  
**AETC**—Air Education and Training Command  
**AFB**—Air Force Base  
**AFFSA**—Air Force Flight Standards Agency  
**AFI**—Air Force Instruction  
**AFM**—Airfield Manager  
**AFMAN**—Air Force Manual  
**AFRL/RVEI**—Air Force Research Laboratory/Balloon Operations  
**AFRIMS**—AF Records Information Management System  
**AGL**—Above Ground Level  
**AICUZ**—Air Installation Compatible Use Zone  
**AIM**—Aeronautical Information Manual  
**ALSF-1**—Approach Lighting System with Sequence Flashing Lights  
**ALV**—Airfield Lighting Vault  
**AM**—Airfield Management  
**AOB**—Airfield Operations Board  
**AP**—Area Planning  
**AR**—Air Refueling  
**ARMS**—Aircrew Resource Management System

**ARTCC**—Air Route Traffic Control Center  
**ASR**—Airport Surveillance Radar  
**ATC**—Air Traffic Control  
**ATCAA**—Air Traffic Control Assigned Airspace  
**ATCAL**S—Air Traffic Control and Landing Systems  
**ATIS**—Automatic Terminal Information Service  
**AUX**—Auxiliary  
**AV**—Air Vehicle  
**AWOS**—Automated Weather Observing System  
**BAK**—Barrier Arresting Kit  
**BASH**—Bird/Wildlife Aircraft Strike Hazard  
**BDOC**—Base Defense Operations Center  
**BM**—Barrier Maintenance  
**BRU**—Bomb Rack Unit  
**CAP**—Civil Air Patrol  
**CBT**—Computer Based Test  
**CC**—Commander  
**CD**—Current Day  
**CDCS**—Containerized Data Control System  
**CES**—Civil Engineer Squadron  
**CFA**—Centennial Fly Area  
**CMA**—Controlled Movement Area  
**CMM**—Carbon Monoxide Monitor  
**COA**—Certificate of Authorization  
**CSE**—Center Scheduling Enterprise  
**CTAF**—Common Traffic Advisory Frequency  
**DAFM**—Deputy Airfield Manager  
**DASR**—Digital Airport Surveillance Radar  
**DD**—Department of Defense  
**DME**—Distance Measuring Equipment  
**DoD**—Department of Defense  
**DSN**—Defense Switched Network  
**DV**—Distinguished Visitor  
**DVA**—Diverse Vector Area  
**EED**—electro-explosive devices  
**ELP**—El Paso, Texas  
**ELT**—Emergency Locator Transmitter  
**EOD**—Explosive Ordnance Disposal  
**EOR**—End of Runway  
**EP**—Simulated Single Engine and Swept Wing  
**ETA**—Estimated Time of Arrival  
**ETD**—Estimated Time of Departure  
**EWM**—Newman VORTAC  
**FAA**—Federal Aviation Administration  
**FAOO**—FAA Order  
**FAR**—Federal Aviation Regulation



**FARP**—Forward Area Refueling Point  
**FCF**—Functional Check Flights  
**FD**—Fire Department  
**FGCS**—Fixed Facility Ground Control System  
**FITS**—Fighter Index of Thermal Stress  
**FLIP**—Flight Information Publication  
**FM**—Frequency Modularization  
**FMV**—Full-Motion Video  
**FOD**—Foreign Object Damage  
**FSS**—Force Support Squadron  
**FSOP**—Flight Safety Operational Plan  
**FSS**—Flight Service Station  
**FT**—Feet or foot  
**FTC**—Flight Training Center  
**GAF**—German Air Force  
**GBU**—Guided Bomb Unit  
**GCS**—Ground Control Station  
**GDT**—Ground Data Terminal  
**GE**—Ground Emergency  
**GPS**—Global Positioning System  
**GVNR**—Governor  
**HAFB**—Holloman Air Force Base  
**HAM**—Holloman Airspace Manager  
**HAMETS**—High Altitude Mountain Environmental Training Strategy  
**HIRL**—High Intensity Runway Lights  
**HMN**—Holloman Air Force Base  
**HQ ACC/A3AO**—Air Combat Command - Airfield Operations  
**HSTT**—High Speed Test Track  
**HUD**—Head-Up Display  
**IAA**—Internal Aids Approach  
**IAC**—Industrial Air Center  
**IAW**—In Accordance With  
**IDP**—Integrated Defense Plan  
**IFE**—In-Flight Emergency  
**IFF**—Identification Friend or Foe  
**IFG**—In-Flight Guide  
**IFR**—Instrument Flight Rules  
**ILLA**—Initial Lost Link Altitude  
**ILLH**—Initial Lost Link Heading  
**ILS**—Instrument Landing System  
**IMC**—Instrument Meteorological Conditions  
**IP**—Interservice Publication  
**IR**—Instrument Route  
**JAWSS**—Joint Advanced Weapon Scoring System  
**JO**—Joint Order  
**JTTOC**—Joint Test and Training Operations Cell

**KABQ**—Albuquerque International Sunport Airport  
**KALM**—Alamogordo-White Sands Regional Airport  
**KBIF**—Biggs Army Air Field  
**KCAS**—Knots Calibrated Airspeed  
**KCVS**—Cannon AFB  
**KDMA**—Davis-Monthan AFB  
**KELP**—El Paso International Airport  
**KIAS**—Knots Indicated Air Speed  
**KMAF**—Midland International Airport  
**KROW**—Roswell Industrial Air Center Airport  
**KSRR**—Sierra Blanca Regional Airport  
**LED**—Light-emitting Diode  
**LEP**—Laser Eye Protection  
**LMR**—Land Mobile Radio  
**LOA**—Letter of Agreement  
**LOLA**—Live Ordnance Load Area  
**LOP**—Letter of Procedure  
**LOS**—Line-of-Sight  
**LR**—Launch and Recovery  
**LRD**—Laser Range Designator  
**LRIP**—Launch/Recovery Instructor Pilot  
**LRE**—Launch and Recovery Element  
**LTM**—Laser Target Marker  
**MARE**—Major Accident Response Exercise  
**MARSA**—Military Authority Assumes Responsibility for Separation of Aircraft  
**MCE**—Mission Control Element  
**MDS**—Mission Design Series  
**MGCS**—Mobile Ground Control Station  
**MHZ**—Megahertz  
**mIRC®**—Mardam-Bey Internet Relay Chat  
**MMG**—Material Maintenance Group  
**MOA**—Military Operating Area  
**MOC**—Maintenance Operations Control  
**MSA**—Minimum Safe Altitude  
**MSL**—Mean Sea Level  
**MTR**—Military Training Route  
**MTS**—Multi-spectral Targeting System  
**MVA**—Minimum Vectoring Altitude  
**NAVAID**—Navigational Aid  
**NCOIC**—Non-Commissioned Officer In-Charge  
**ND**—Next Day  
**NTIA**—National Telecommunications and Information Agency  
**NLT**—No Later Than  
**NM**—Nautical Miles  
**NORDO**—No Radio  
**NOTAM**—Notice to Airmen

**NVD**—Night Vision Devices  
**NVGT**—Night Vision Goggles/Lights-Out Training  
**ODO**—Operations Duty Officer  
**OG**—Operations Group  
**OI**—Operating Instruction  
**ORM**—Operational Risk Management  
**PAPI**—Precision Approach Path Indicators  
**PAR**—Precision Approach Radar  
**PCAS**—Primary Crash Alarm System  
**PHETS**—Permanent High Explosive Test Site  
**PIC**—Pilot in Command  
**PMI**—Preventative Maintenance Inspection  
**POFZ**—Precision Obstacle Free Zone  
**ppm**—Parts-per Million  
**PPR**—Prior Permission Required  
**PWC**—Pilot Weather Category  
**RAMS**—Radar Target Scatter Advanced Measurement System  
**RAPCON**—Radar Approach Control  
**RATSCAT**—Radar Target Scatter  
**RCO**—Range Control Officer  
**RCR**—Runway Condition Reading  
**RDS**—AF Records Disposition Schedule  
**RESCAP**—Rescue Combat Air Patrol  
**ROC**—Range Operations Center  
**RPA**—Remotely Piloted Aircraft  
**RSC**—Runway Surface Condition  
**RSRS**—Reduced Same Runway Separation  
**RTB**—Return to Base  
**RWR**—Radar Warning Receiver  
**SAR**—Search and Rescue  
**SCN**—Secondary Crash Net  
**SFA**—Single Frequency Approach  
**SFC**—Surface  
**SFO**—Simulated Flameout  
**SI**—Straight-in  
**SM**—Statute Miles  
**SMS**—Stores Management System  
**SOF**—Supervisor of Flying  
**SRS**—Same Runway Separation  
**STR**—Standardized Taxi Route  
**SUA**—Special Use Airspace  
**sUAS**—Small Unmanned Aircraft System  
**SVFR**—Special Visual Flight Rules  
**TA**—Transient Alert  
**TACAN**—Tactical Air Navigation  
**TDW**—Tower Display Workstation

**TDY**—Temporary Duty  
**TERPS**—Terminal Instrument Procedures  
**THAAD**—Terminal High Altitude Area Defense  
**T.O.**—Technical Order  
**TX**—Transmitter  
**UAO**—Uncontrolled Airfield Operations  
**UAS**—Unmanned Aircraft System  
**UFC**—Unified Facilities Criteria  
**UHF**—Ultra High Frequency  
**US**—United States  
**VASI**—Visual Approach Slope Indicator  
**VFR**—Visual Flight Rules  
**VHF**—Very High Frequency  
**VMC**—Visual Meteorological Conditions  
**VORTAC**—Very High Frequency Omni-Directional Radio Range Tactical Air Navigation  
**VR**—Visual Route  
**WS**—Watch Supervisor  
**WSMR**—White Sands Missile Range  
**WSNM**—White Sands National Monument  
**WSRF**—White Sands Radar Facility

## Attachment 2

## UHF/VHF FREQUENCIES

**A2.1. Frequency Management.** HMN Frequency Management Program is administered by 49 CS Operations Flight Base Radio/Land Mobile Radio (49 CS/SCOT) IAW AFI 17-220, *Spectrum Management*. Changes to HMN frequencies or new requests must be made through unit frequency managers and will be coordinated through 49 OSS/OSA (DSN 572-3421) for deconfliction and update requirements for this document. Frequency changes with the 49 CS radio shop will be directed by the OSA/CC. For radio outages on an ATC frequency, contact ATCALs Maintenance Operations Control (MOC). For additional information, see HMN Spectrum Management SharePoint® at [https://holloman.eim.acc.hedc.af.mil/49\\_MSG/49\\_CS/SCO/Spec.Management/Unit%20Information/Forms/AllItems.aspx](https://holloman.eim.acc.hedc.af.mil/49_MSG/49_CS/SCO/Spec.Management/Unit%20Information/Forms/AllItems.aspx).

Table A2.1. HMN Radio Channelization.

Local Channel	UHF	VHF	Agency	TOR Emergency UHF	
1	A/R		Squadron Ops	E1	243.4
2	275.8	127.05	HMN Ground	E2	242.4
3	255.9	119.3	HMN Tower	E3	242.6
4	284.0	128.1	HMN Departure	E4	243.8
5	305.5	126.95	CHEROKEE Primary		
6	336.2	149.0	HMN Approach (MOA)		
7	257.6	132.65	ABQ Center		
8	269.22 5	120.6	HMN Approach		
9	335.62 5	125.7	HMN Arrival		
10	289.4	126.7	Clearance Delivery		
11-17	A/R		A/R		
18	277.4		SFA		
19	395.15	139.6	SOF		
20	273.5		HMN ATIS		

**Table A2.2. Manual Frequencies.**

<b>MANUAL FREQUENCIES</b>			
<b>Freq.</b>	<b>HMN Agency</b>	<b>Freq.</b>	<b>SUA / Range</b>
229.3	Army Air	315.9	BADGER (JTTOC)
343.2	311 FS Ops	353.6	Beak A
378.8	314 FS Ops	256.7	Beak B
277.1	RPA Common	259.2	Beak C
149.4	6 ATKS Discrete	348.8	Centennial Range
149.4	9 ATKS Discrete	305.5	CHEROKEE Primary
149.4	29 ATKS Discrete	346.7	CHEROKEE B/U
253.4	Det. 1, 82 ATRS	252.5	CHEROKEE Discrete
231.55	586 FLTS Common	245.4	CHEROKEE Discrete
143.875	GAF FTC Ops	336.2	HMN Approach (MOA)
381.3	HMN CP (RAYMOND)	149.0	HMN Approach (MOA)
346.55	HMN Metro	303.0	IR-133 Discrete
372.2	HMN Pilot-to-Dispatch	363.9	IR-134 Discrete
<b>Freq.</b>	<b>ATC Facility</b>	279.7	Lava East / Red Rio
353.6	ABQ ARTCC B/U	311.5	Lava West
255.4	ABQ FSS	314.2	Mesa West
122.8	ALM Unicom	376.15	Melrose Range
342.25	BIF Tower	356.8	McGregor Discreet
358.3	CVS Approach	245.4	McGregor / Dona Ana
298.85	ELP Approach	397.7	McGregor Range Control
239.275	ELP Tower	342.2	Oscura Range
239.0	ROW Approach East	348.8	ROC / CFA
229.4	ROW Approach West	299.25	ROC B/U
233.7	ROW Tower	340.8	Talon East
282.8	SAR B/U	297.5	Talon Low
<b>Freq.</b>	<b>Air Refueling</b>	257.3	Talon West
249.525	Air Refueling	282.7	TOD / Mickey
255.775	Air Refueling B/U	342.4	Yonder
324.4	AR-644 Tanker Primary	234.8	Yonder South Discrete
319.5	AR-644 Tanker		

**A2.2. HMN Assigned Frequencies.** Ground to Air frequencies listed in this table are serviced by 49 WG at local/remote locations spanning local flying area. Use of these frequencies will be in accordance with AFI 17-220 paragraph 6 and approved frequency authorizations. Area discrete is reserved for WSRF and aircrew for ATC and tactical usage. The 607 ACS-WSRF Tactical Monitor LOA was established between the 607 ACS, 49 WG, and WSMR and approved by ACC/A3A. While the LOA authorizes ATC to give frequency control to the 607 ACS, WSRF maintains the requirement to protect airspace borders and will have priority in radio traffic.



**Table A2.3. HMN Assigned Frequencies.**

Frequency	Purpose		Local Use	AFI 17-220 Frequency Type
119.3	HMN Tower		ATC	ATC
120.6	HMN Approach		ATC	ATC
121.5	Emergency		ATC	ATC
125.7	HMN Arrival		ATC	ATC
126.7	Clearance Delivery		ATC	ATC
127.05	HMN Ground		ATC	ATC
128.1	HMN Departure		ATC	ATC
139.6	SOF		C2	Tactical
143.875	GAF Ops		C2	Tactical
149.0	HMN Approach (MOA)		ATC	ATC
225.875	N/A - Currently Not in Use		Any	Tactical
234.8	HMN Approach (MOA Yonder South Discrete)		Area Discrete	Tactical
243.0	Emergency		ATC	ATC
255.9	HMN Tower		ATC	ATC
256.7	Beak B		Area Discrete	Tactical
259.2	Beak C		Area Discrete	Tactical
269.225	HMN Approach		ATC	ATC
273.5	HMN ATIS		ATC	ATC
275.8	HMN Ground		ATC	ATC
277.1	RPA Common		C2	Tactical
277.4	SFA Discrete		ATC	ATC
279.7	Lava East/Red Rio		Range/Area Disc	Tactical
284	HMN Departure		ATC	ATC
289.4	Clearance Delivery		ATC	ATC
311.5	Lava West		Area Discrete	Tactical
314.2	Mesa West		Area Discrete	Tactical
315.9	JTTOC		Area Discrete	Tactical
335.625	HMN Arrival		ATC	ATC
336.2	HMN Approach (MOA)		ATC	ATC
342.4	Yonder		Area Discrete	Tactical
343.2	311 FS Ops		C2	Tactical
348.8	ROC		Range	Tactical
353.6	Beak A		Area Discrete	Tactical
378.8	314 FS Ops		C2	Tactical
381.3	Command Post C2		C2	Tactical
395.15	SOF		C2	Tactical
397.875	HMN Discrete		ATC	ATC

## Attachment 3

## AIRSPACE FIGURES

Table A3.1. Local Working Areas.

AREA	ALTITUDE (ft)	CONTACT AGENCY
Casa (R5107B)	300 AGL to 10,000 MSL	49 OSS/OSOS
Lava E/W	500 AGL to 60,000 MSL	49 OSS/OSOS
Mesa E/W (R5107C/H)	500 AGL to 60,000 MSL	49 OSS/OSOS
Oscura (R5107B)	SFC to 15,000 MSL	49 OSS/OSOS
R5107E	SFC to 600 MSL	49 OSS/OSOS
R5111A/C	13,000 MSL to Unlimited	49 OSS/OSOS
R5111B/D	SFC to 13,000 MSL	49 OSS/OSOS
Red Rio (R5107B/J)	SFC to 15,000 MSL	49 OSS/OSOS
Yonder (R5107B/F/G)	500 AGL to 60,000 MSL	49 OSS/OSOS
Yonder E (R5107B/D)	18,000 MSL to 60,000 MSL	49 OSS/OSOS
Yonder S (R5107B)	3,000 AGL to 60,000 MSL	49 OSS/OSOS
Beak A/B/C ATCAA	18,000 MSL to 23,000 MSL	49 OSS/OSOS
Beak A/B/C MOA	12,500 MSL to 17,999 MSL	49 OSS/OSOS
CFA (R5103B/C)	SFC to 60,000 MSL	49 OSS/OSOS
McGregor North (R5103C)	SFC to 60,000 MSL	49 OSS/OSOS
McGregor South (R5103B)	SFC to 60,000 MSL	49 OSS/OSOS
Dona West (R5107A)	SFC to Unlimited	49 OSS/OSOS
Dona East (R5107K)	SFC to Unlimited	49 OSS/OSOS
MTR (IR133/142)	100 AGL varies to 12,000	49 OSS/OSOS
MTR (IR134/195)	100 AGL varies to 13,000	49 OSS/OSOS
MTR (IR192/194)	100 AGL varies to 13,000	49 OSS/OSOS
MTR (VR176)	100 AGL varies to 1,500 AGL	49 OSS/OSOS
Talon E/W H ATCAA	18,000 MSL to 29,000 MSL	49 OSS/OSOS
Talon E/W H MOA	12,500 MSL to 17,999 MSL	49 OSS/OSOS
Talon Low MOA	300 AGL to 12,499 MSL	49 OSS/OSOS
Valentine ATCAA	18,000 MSL to 51,000 MSL	49 OSS/OSOS
Valentine MOA	15,000 MSL to 17,999 MSL	49 OSS/OSOS
Valmont ATCAA	18,000 MSL to 60,000 MSL	49 OSS/OSOS
Wiley East ATCAA	18,000 MSL to 60,000 MSL	49 OSS/OSOS
Capitan Bridge	18,000 MSL to 32,000 MSL	27 SOW/Cannon AFB
Melrose Range, A	SFC to 17,999 MSL	27 SOW/Cannon AFB
Melrose Range, B	18,000 MSL to 23,000 MSL	27 SOW/Cannon AFB
Pecos E/W MOA (LOW)	500 AGL to 11,000 MSL	27 SOW/Cannon AFB
Pecos E/W/S ATCAA	18,000 MSL to assigned	27 SOW/Cannon AFB
Pecos E/W/S MOA	11,000 MSL to 17,999 MSL	27 SOW/Cannon AFB
Taiban MOA	500 AGL to 17,999 MSL	27 SOW/Cannon AFB

**Table A3.2. Local Airspace Boundaries.**

<b>Area</b>	<b>Coordinate Boundaries</b>
Mesa East	N34° 16.4747' W106° 24.0015', N34° 17.0000' W106° 12.0334', N34° 17.0000' W106° 04.0333', N33° 52.1540' W106° 04.0333', N33° 52.0633' W106° 23.9832'
Mesa West	N34° 15.7500' W106° 40.5334', N34° 16.4747' W106° 24.0015', N33° 48.7649' W106° 23.9806', N33° 48.6668' W106° 45.5638'
Lava East	N33° 19.0780' W106° 23.9583', N33° 19.1673' W106° 04.0333', N33° 52.1540' W106° 04.0333', N33° 52.0633' W106° 23.9831'
Lava West	N33° 18.9570' W106° 50.9559', N33° 19.0780' W106° 23.9583', N33° 48.7648' W106° 23.9807', N33° 48.6668' W106° 45.5638'
Red Rio Airspace	N33° 52.0633' W106° 23.9832', N33° 37.2200' W106° 23.9720', N33° 37.3100' W106° 04.0333', N33° 52.1540' W106° 04.0333'
Oscura Airspace	N33° 52.0633' W106° 23.9832', N33° 37.2200' W106° 23.9720', N33° 37.3100' W106° 04.0333', N33° 52.1540' W106° 04.0333'
Yonder	N33° 13.0000' W106° 52.0333', N33° 15.6557' W106° 51.5531', N33° 15.7969' W106° 20.0273', N32° 32.9107' W106° 20.0270', N32° 32.8115' W106° 42.6318'
Yonder East	N32° 36.0000' W106° 06.0343', N32° 50.0000' W106° 04.0333', N33° 15.8685' W106° 04.0333', N33° 15.7968' W106° 20.0273', N32° 32.9107' W106° 20.0271', N32° 32.9722' W106° 06.0333'
Yonder South	N32° 32.9722' W106° 06.0333', N32° 25.0000' W106° 06.0333', N32° 23.3000' W106° 07.0833', N32° 24.8000' W106° 09.0333', N32° 19.5000' W106° 20.6333', N32° 19.5000' W106° 39.5333', N32° 32.8114' W106° 42.6318'
McGregor North	N32° 30.0165' W105° 30.0191', N32° 29.9201' W105° 48.5405', N32° 29.3790' W105° 48.5357', N32° 29.3728' W105° 49.4935', N32° 26.1105' W105° 51.6975', N32° 14.9997' W105° 51.5919', N32° 15.0000' W106° 10.0333', then along the Southern Pacific Railroad, N32° 28.0000' W106° 02.0333', N32° 27.6667' W106° 00.0334', N32° 36.0000' W106° 00.0000', N32° 45.0000' W105° 59.0333', N32° 45.0000' W105° 53.0333', N32° 45.0000' W105° 52.3667', N32° 33.3333' W105° 30.0333'
McGregor South	N32° 15.0000' W106° 10.0333', N32° 15.0002' W105° 51.5933', N32° 10.4152' W105° 51.5492', N32° 10.4460' W105° 46.7051', N32° 03.5000' W105° 53.8333', N32° 03.9167' W106° 10.0000', N32° 05.0333' W106° 09.3667', N32° 06.0000' W106° 15.5333'

CFA	N32° 30.0165' W105° 30.0191', N32° 29.9201' W105° 48.5405', N32° 29.3790' W105° 48.5357', N32° 29.3728' W105° 49.4935', N32° 26.1105' W105° 51.6975', N32° 10.4152' W105° 51.5492', N32° 10.4460' W105° 46.7765', N32° 26.2279' W105° 29.9983'
Wiley East ATCAA	N34° 17.0000' W106° 04.0333', N34° 17.0000' W105° 51.0000', N33° 34.0000' W105° 00.0334', N33° 00.0334' W105° 00.0334', N32° 45.0334' W105° 12.0000', N32° 26.3333' W105° 30.0334', N32° 33.3334' W105° 30.0334', N32° 45.0000' W105° 53.0333', N32° 45.0000' W106° 06.0334', N32° 50.0000' W106° 04.0333'
Valmont ATCAA	N32° 45.0000' W106° 04.7666', N32° 36.0000' W106° 06.0334', N32° 25.0000' W106° 06.0334', N32° 23.3000' W106° 07.0834', N32° 06.0000' W106° 17.7500', N32° 06.0000' W106° 15.5333', N32° 15.0000' W106° 10.0333', N32° 24.0667' W106° 03.1667', N32° 27.8833' W106° 01.5334', N32° 27.8333' W106° 00.3167', N32° 36.0000' W106° 00.0000', N32° 45.0000' W105° 59.0333'
Dona East	*Same as R5107K
Dona West	*Same as R5107A
Wiley West	*Same as outer boundaries of R510B/C
Wiley West Extension	* Same as outer boundaries of R5111A/R5107E
R-5103B/C and R5107A/K (Fort Bliss)	Available in FAAO JO 7400.8 Special Use Airspace or DoD FLIP AP/1A
R5107B/C/D/E/F/G/H/J, R5109A/B (WSMR)	Available in FAAO JO 7400.8 Special Use Airspace or DoD FLIP AP/1A
Beak A/B/C, Talon Low, Talon High East/West, Valentine, Pecos North Low/High, Pecos South, Taiban, Cato/Smitty MOAs	Available in FAAO JO 7400.8 Special Use Airspace or DoD FLIP AP/1A

Figure A3.1. HMN Local Flying Area (Drawing not to scale).

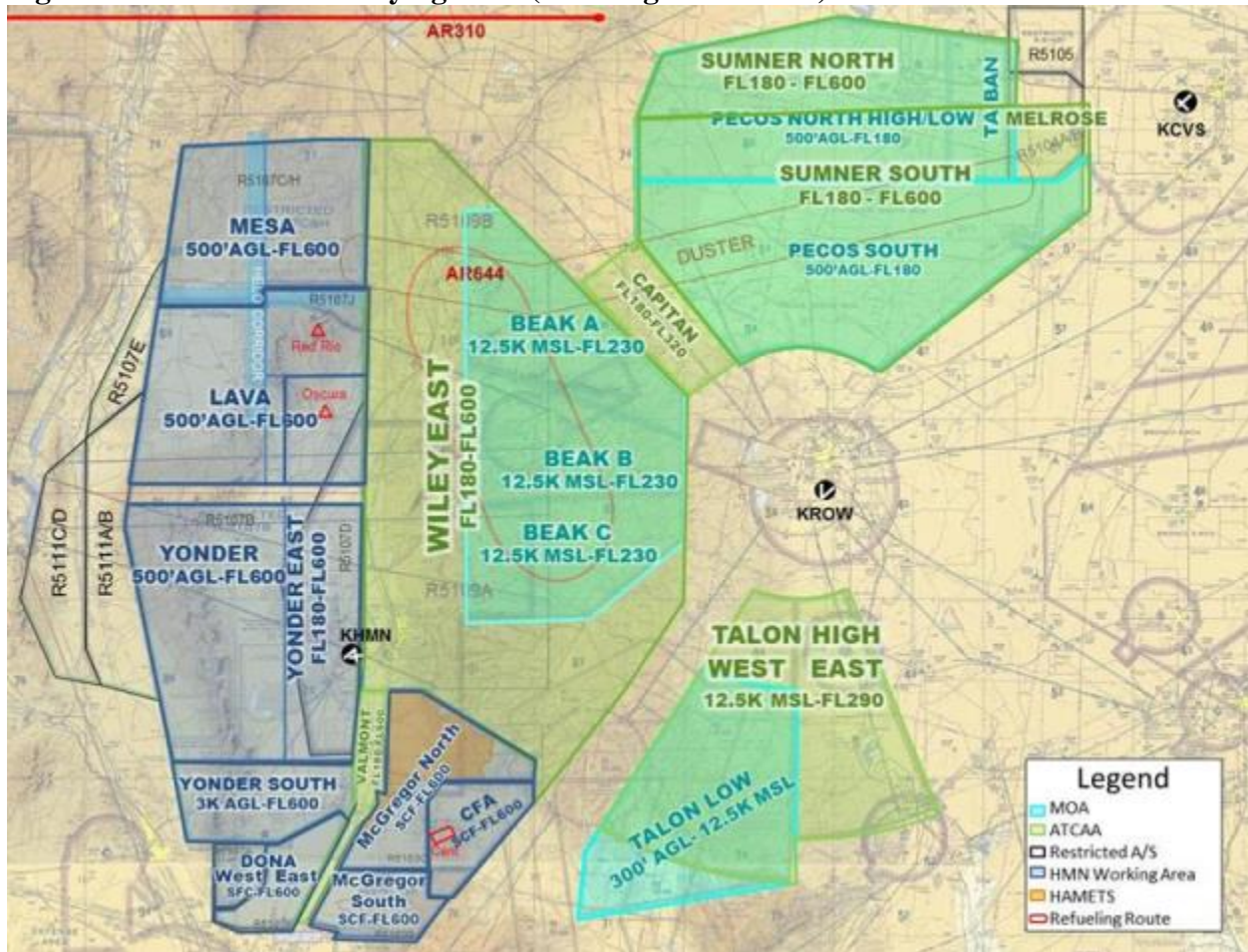


Figure A3.2. Class D Airspace (Drawing not to scale).

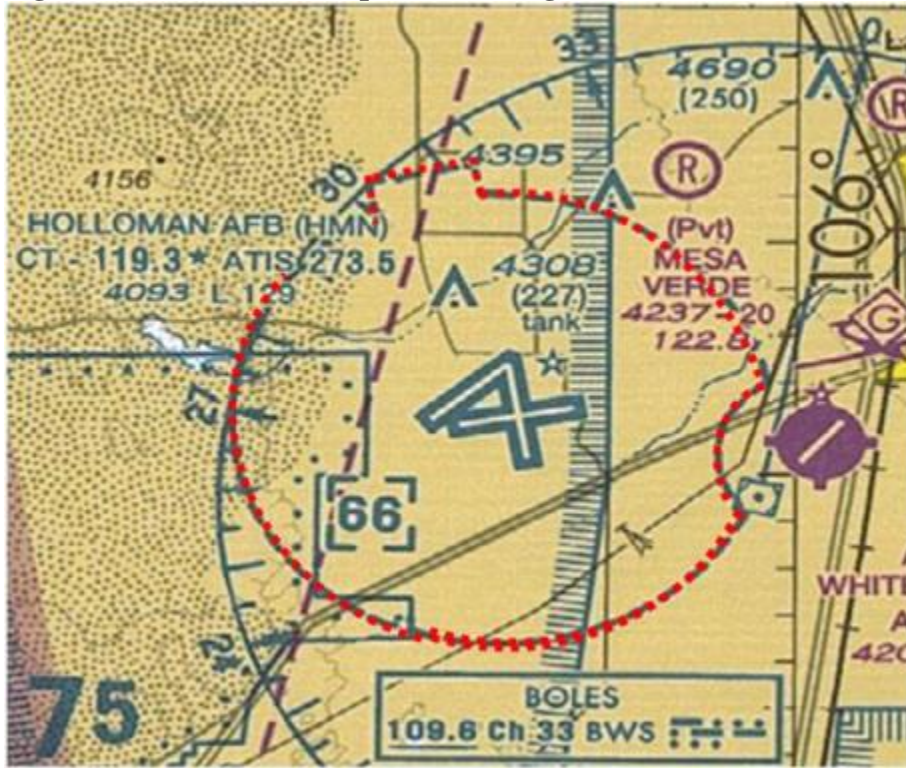




Figure A3.3. Holloman Approach Airspace (Drawing not to scale).

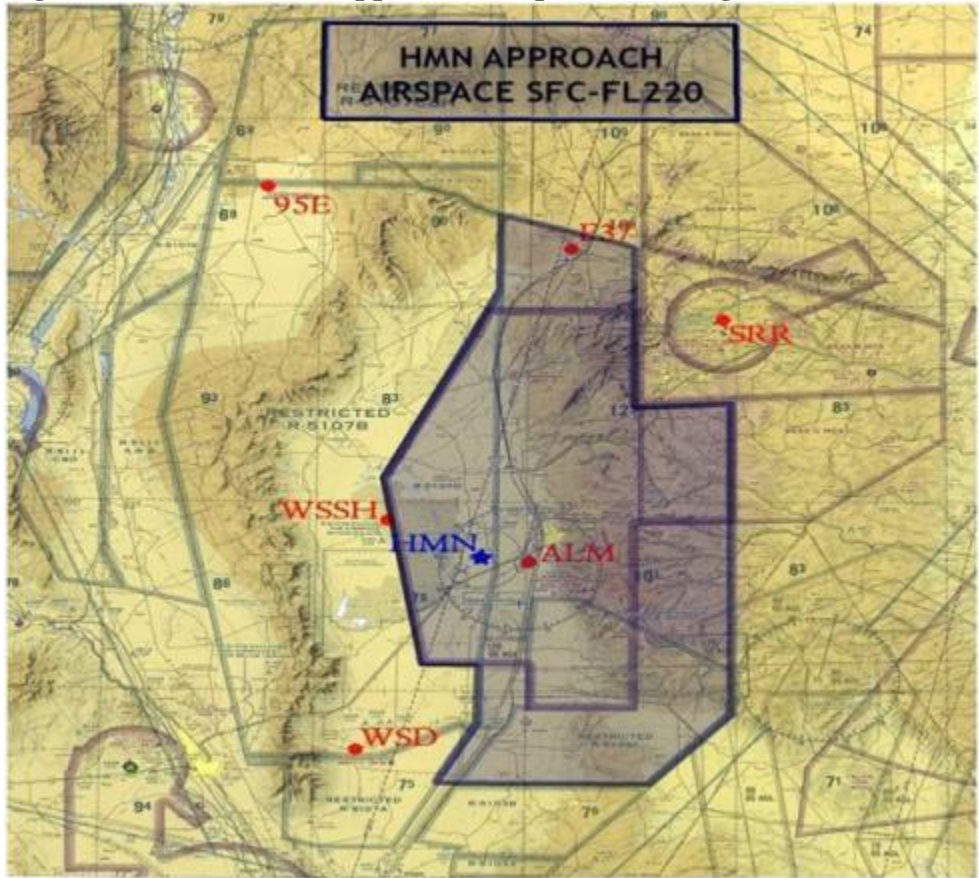
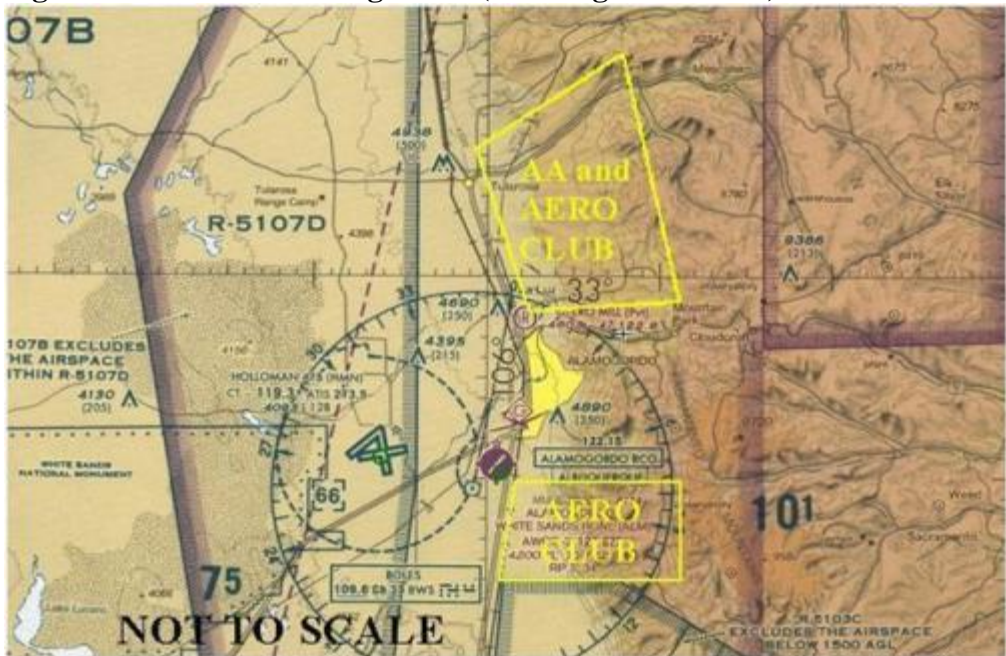


Figure A3.4. VFR Training Areas (Drawing not to scale).



**Figure A3.5. Reserved.**

**Figure A3.6. Reserved.**

**Figure A3.7. Restricted Airspace (Drawing not to scale).**



Figure A3.8. Reserved.  
Figure A3.9. Avoidance Areas (Drawing not to scale).

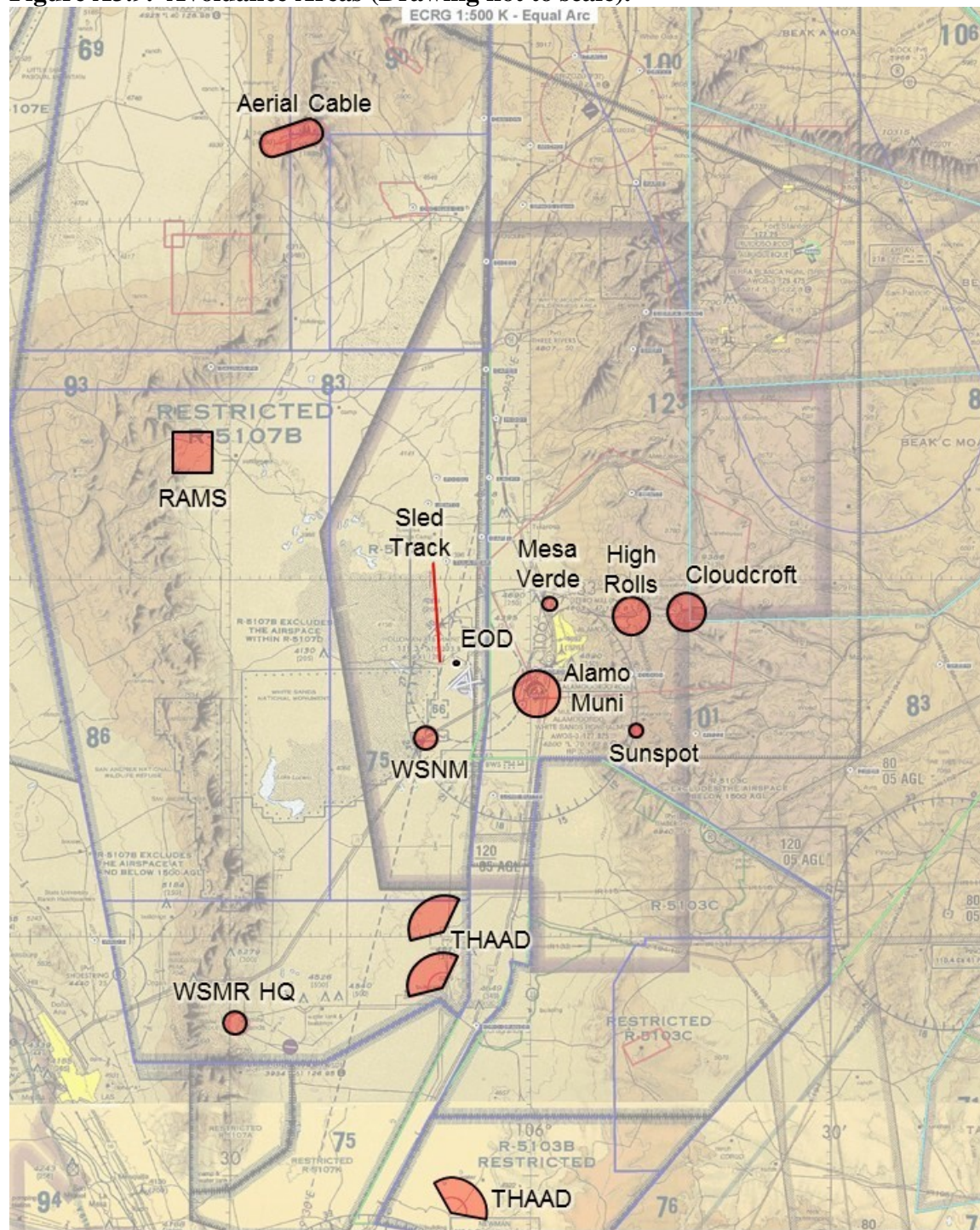


Figure A3.10. Lava Airspace Suspended Cable Hazard (Drawing not to scale).

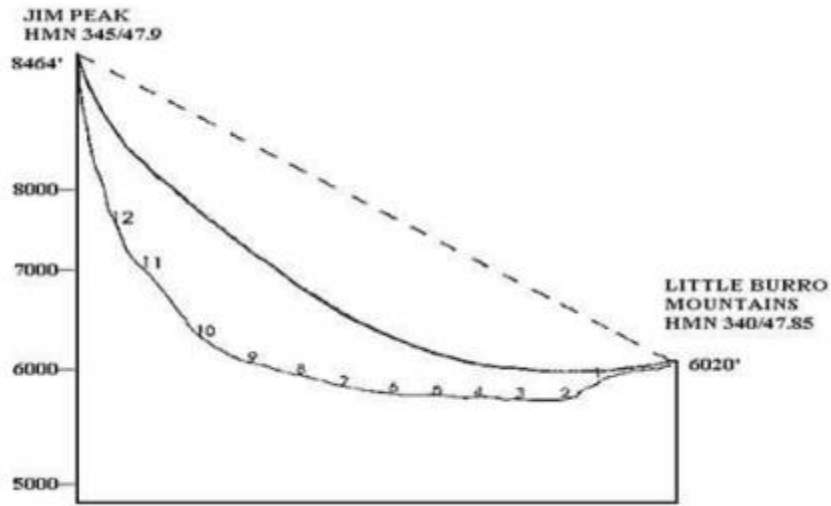


Figure A3.11. (Reserved).



Figure A3.12. Chaff Restrictions (Drawing not to scale).

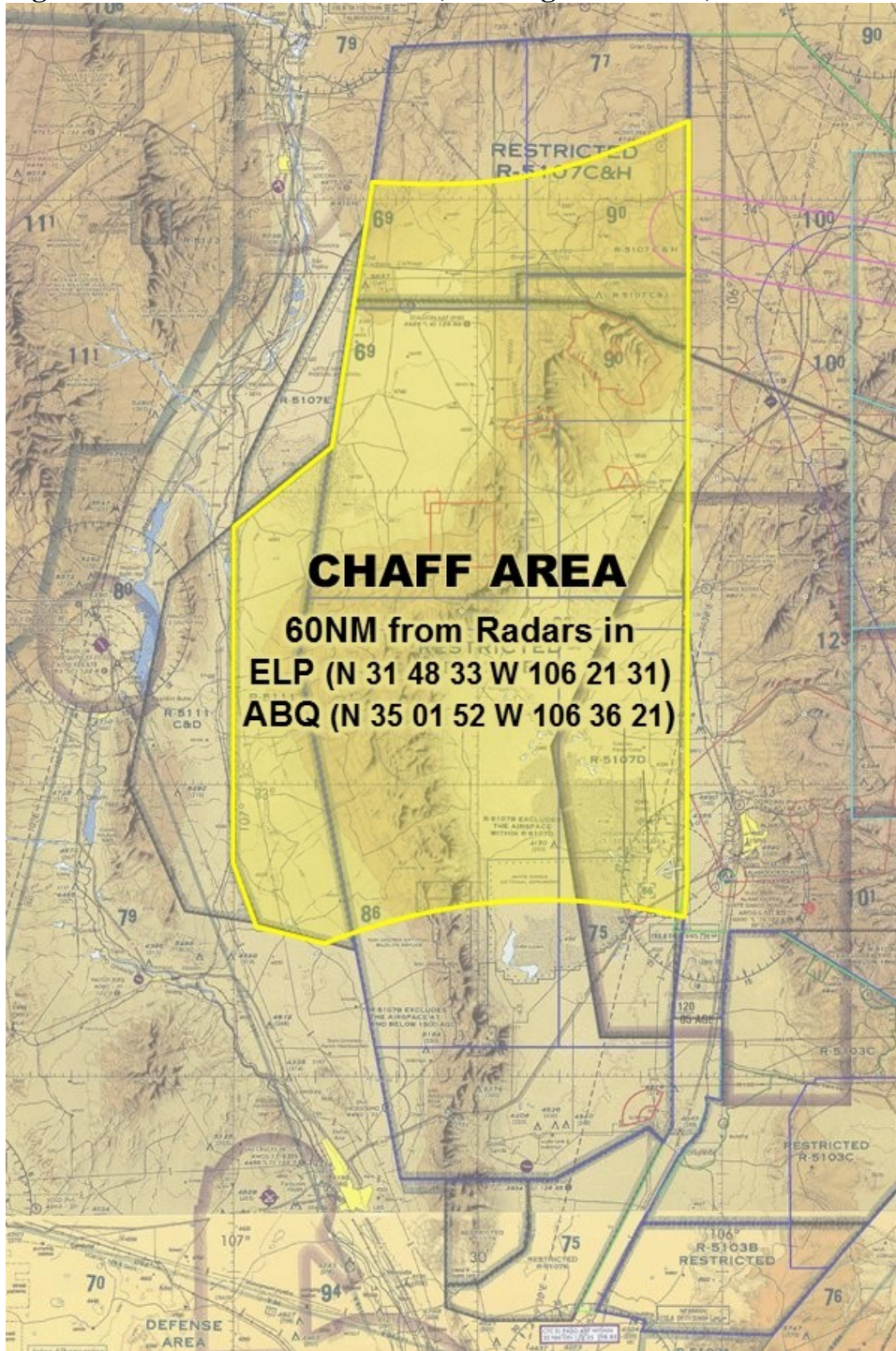


Figure A3.13. Flare Restrictions (Drawing not to scale).

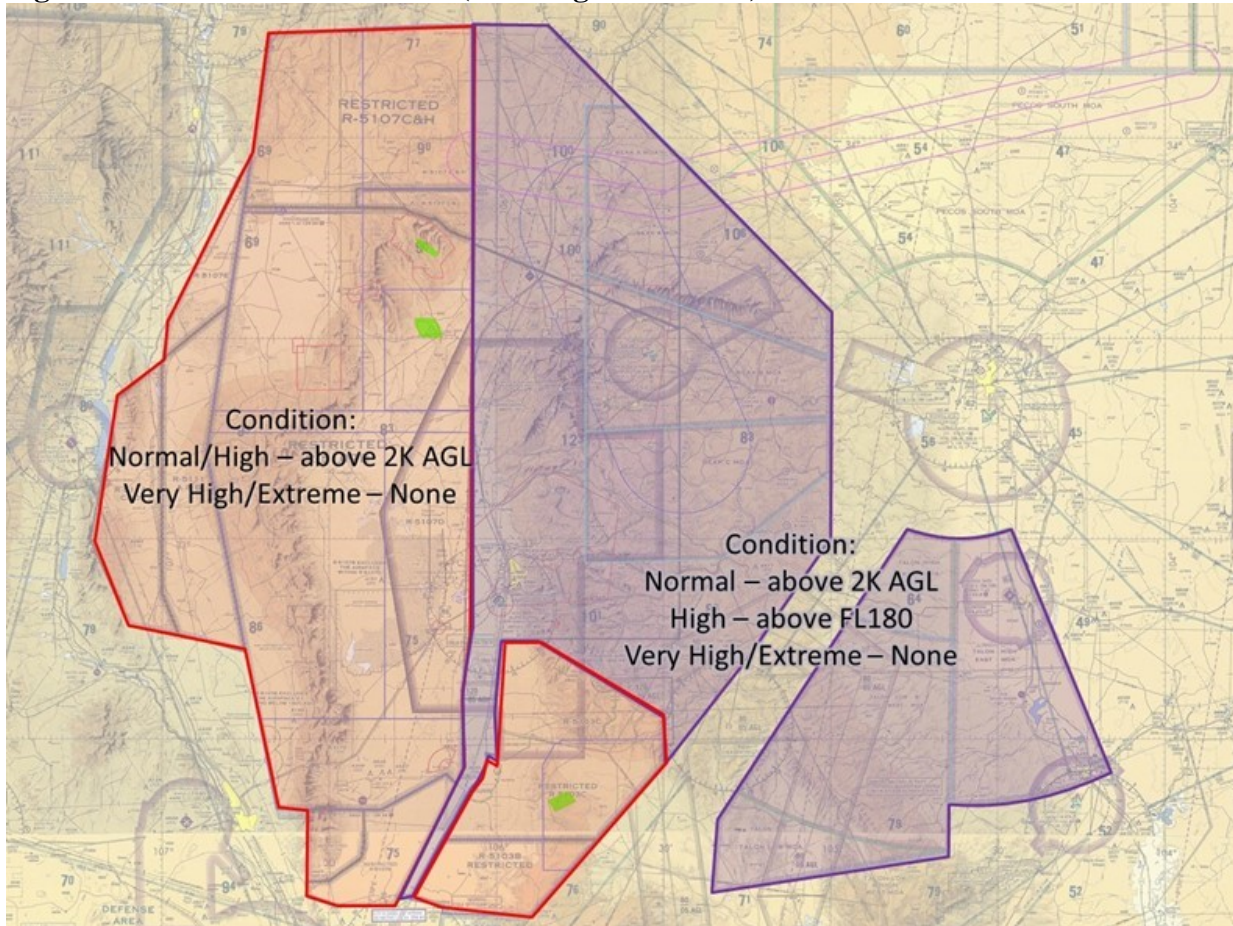




Figure A3.14. R5107 Helicopter Transit Corridor (Drawing not to scale).

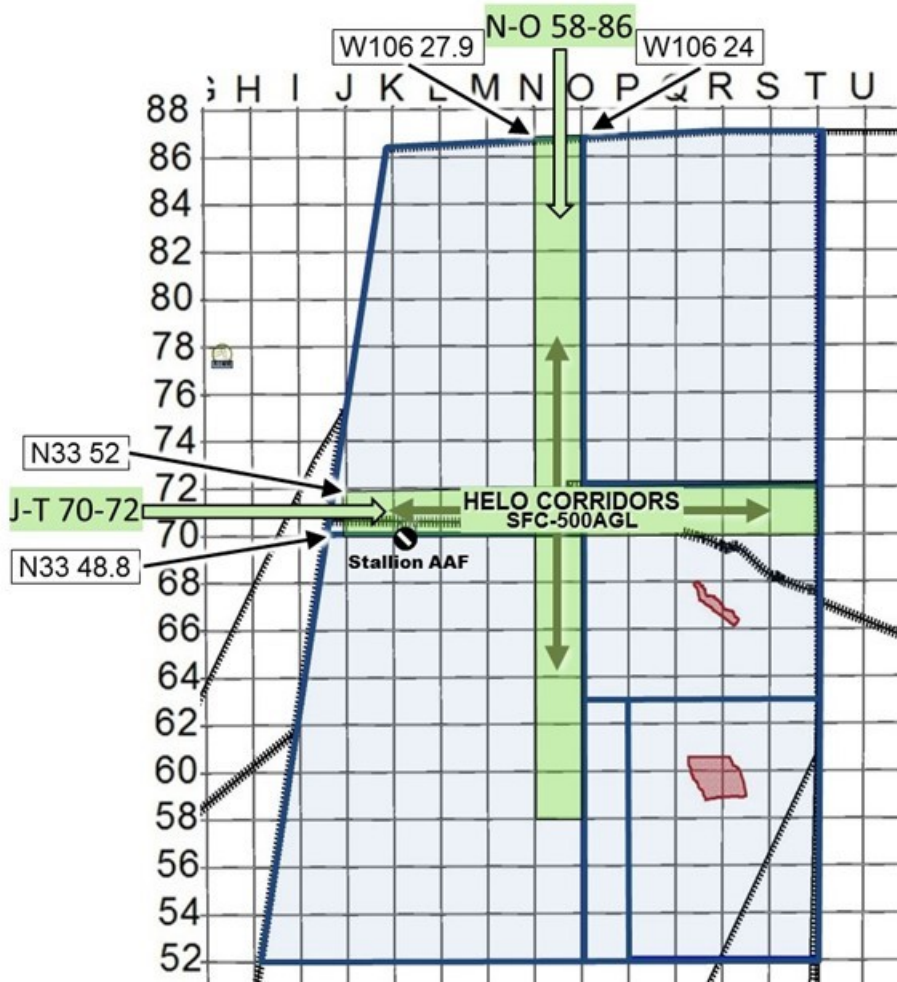


Figure A3.15. Local Reporting Points (Drawing not to scale).

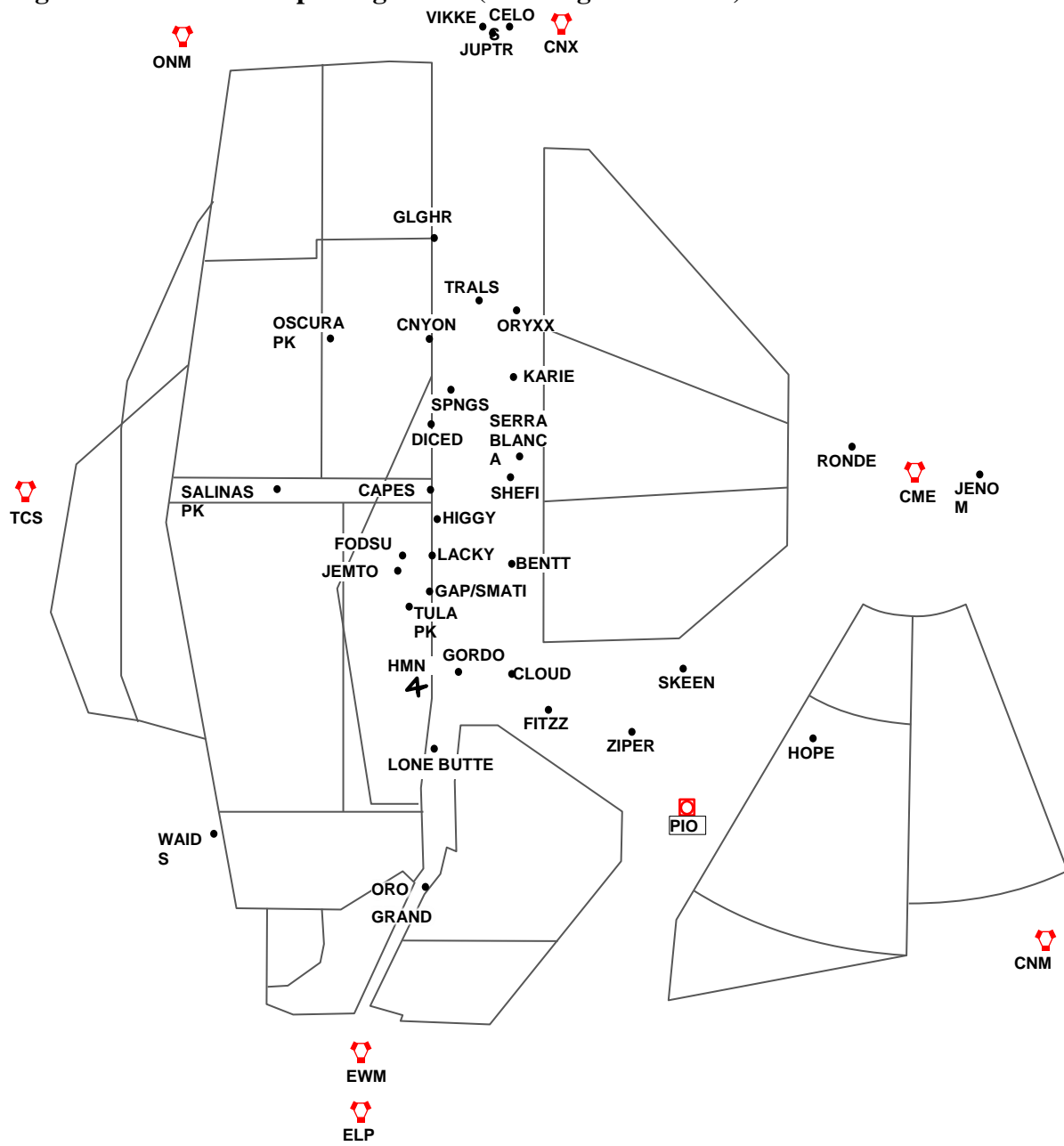


Figure A3.16. Joint Use Airspace and ACC Working Areas (Drawing not to scale).

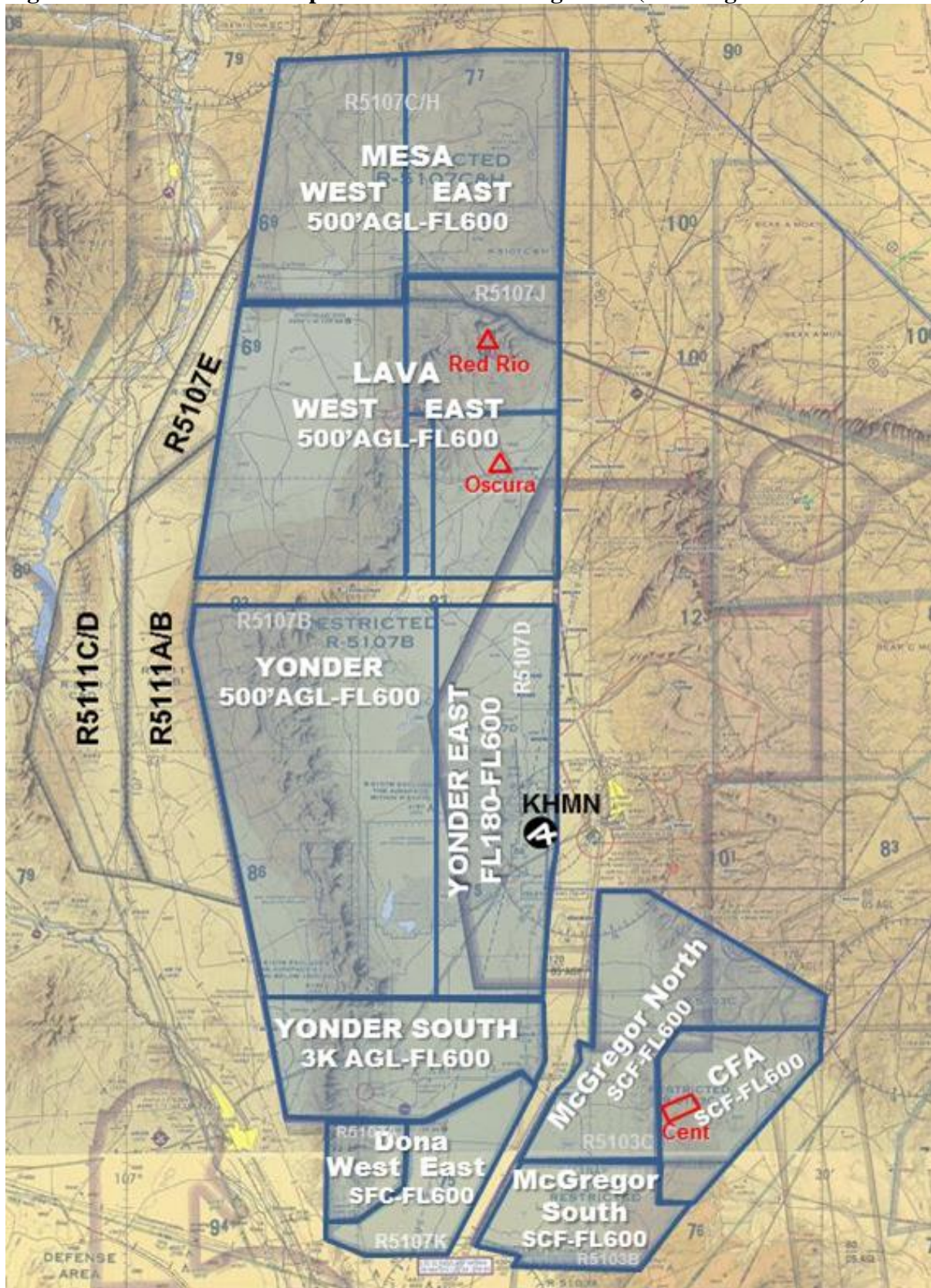




Figure A3.17. PECOS – Joint Use Airspace and Working Areas (Drawing not to scale).

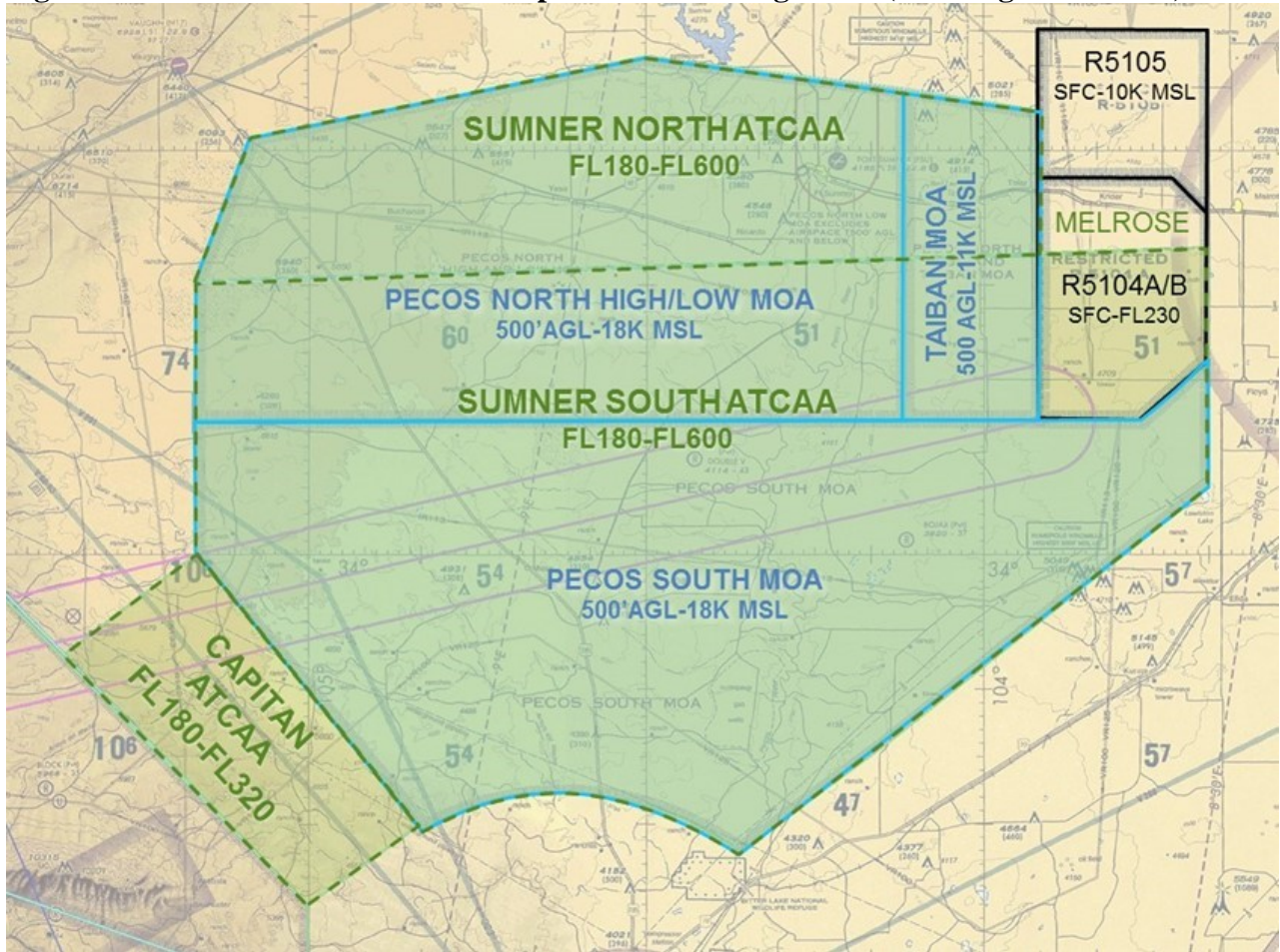


Figure A3.18. Talon – Joint Use Airspace and Working Areas (Drawing not to scale).

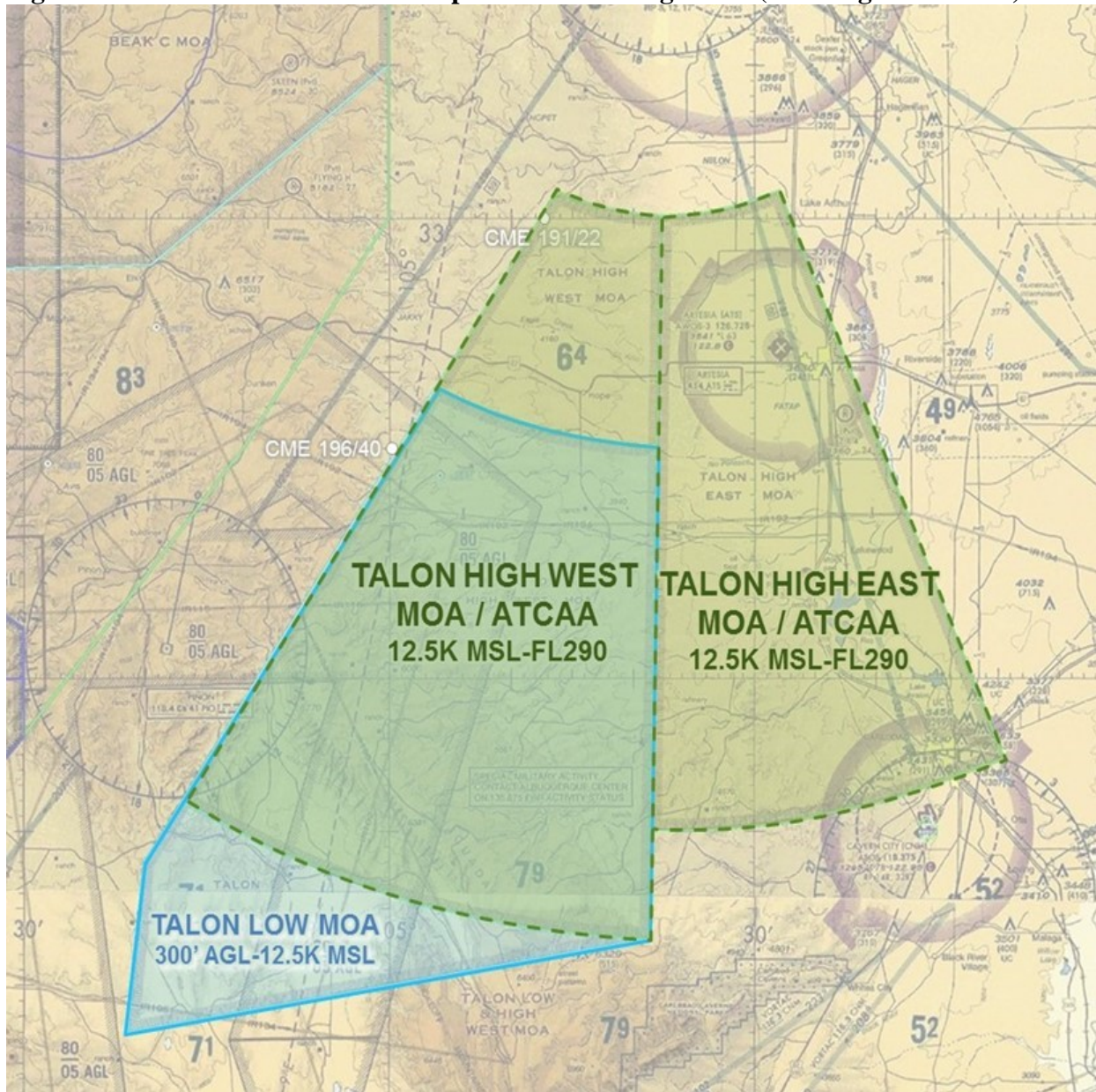








Figure A3.20. Area Entry procedures (Drawing not to scale).

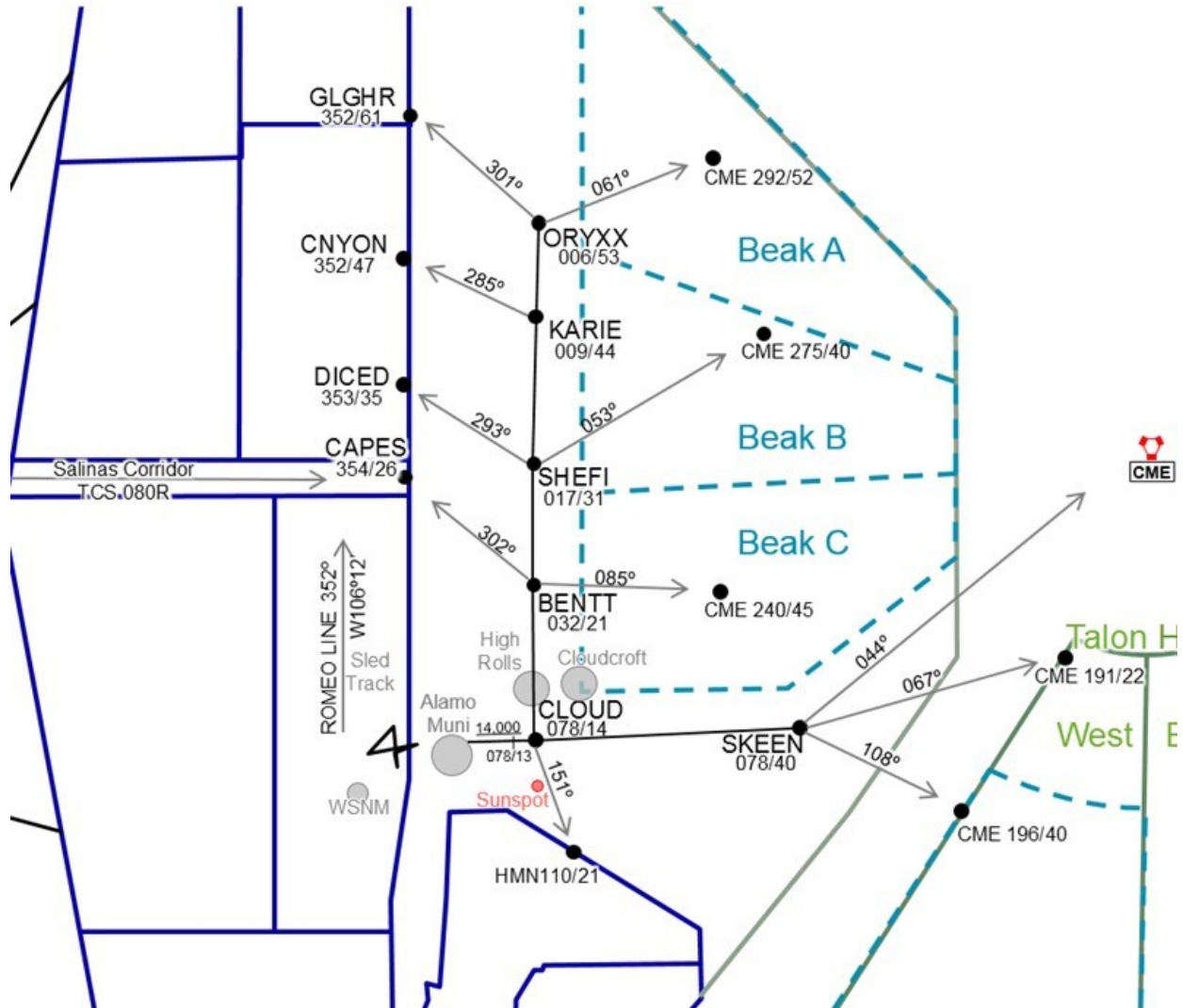


Figure A3.21. Supersonic Airspace (Drawing not to scale).

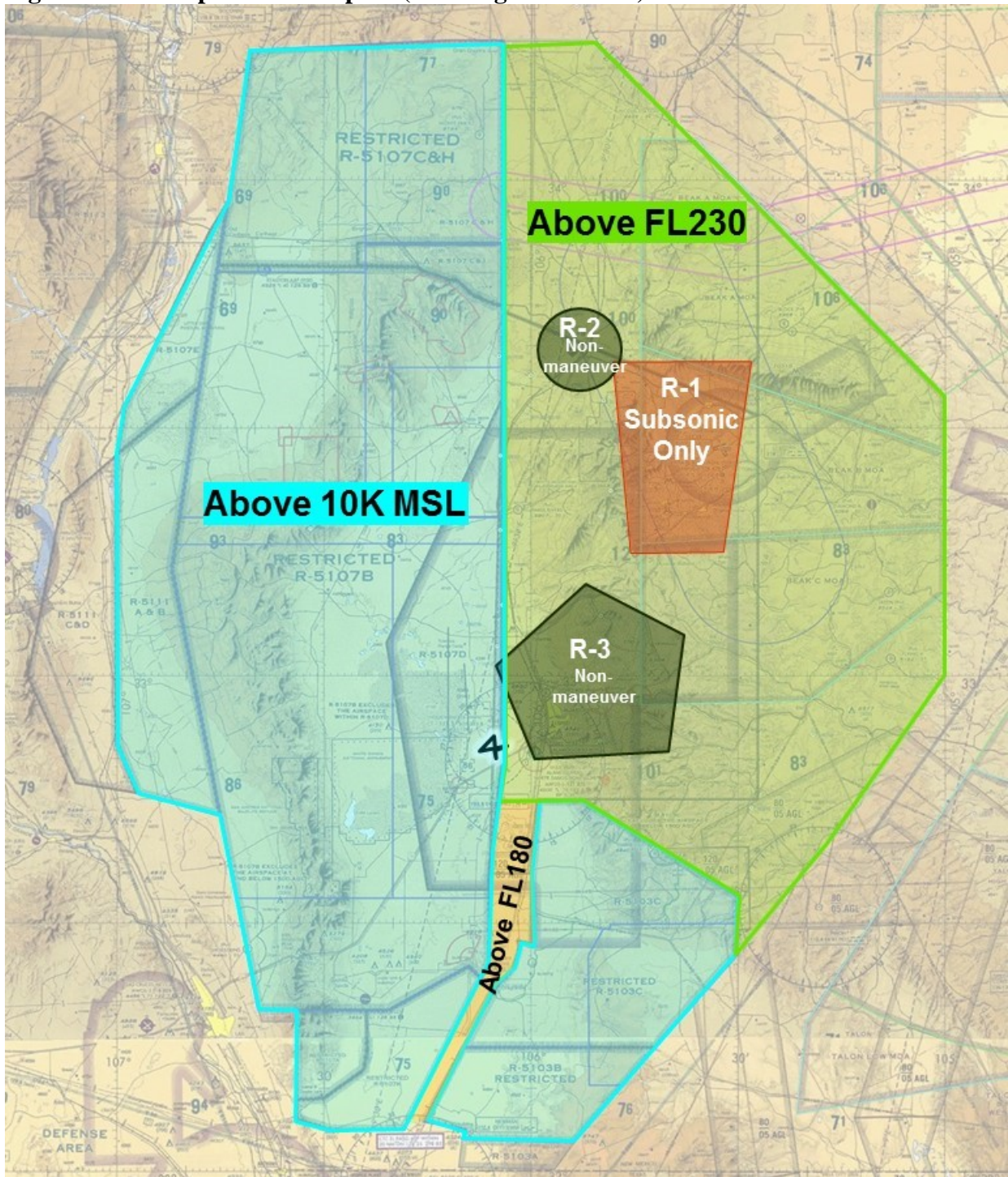




Figure A3.22. WSMR THAAD Avoidance Area – Yonder South (Drawing not to scale).

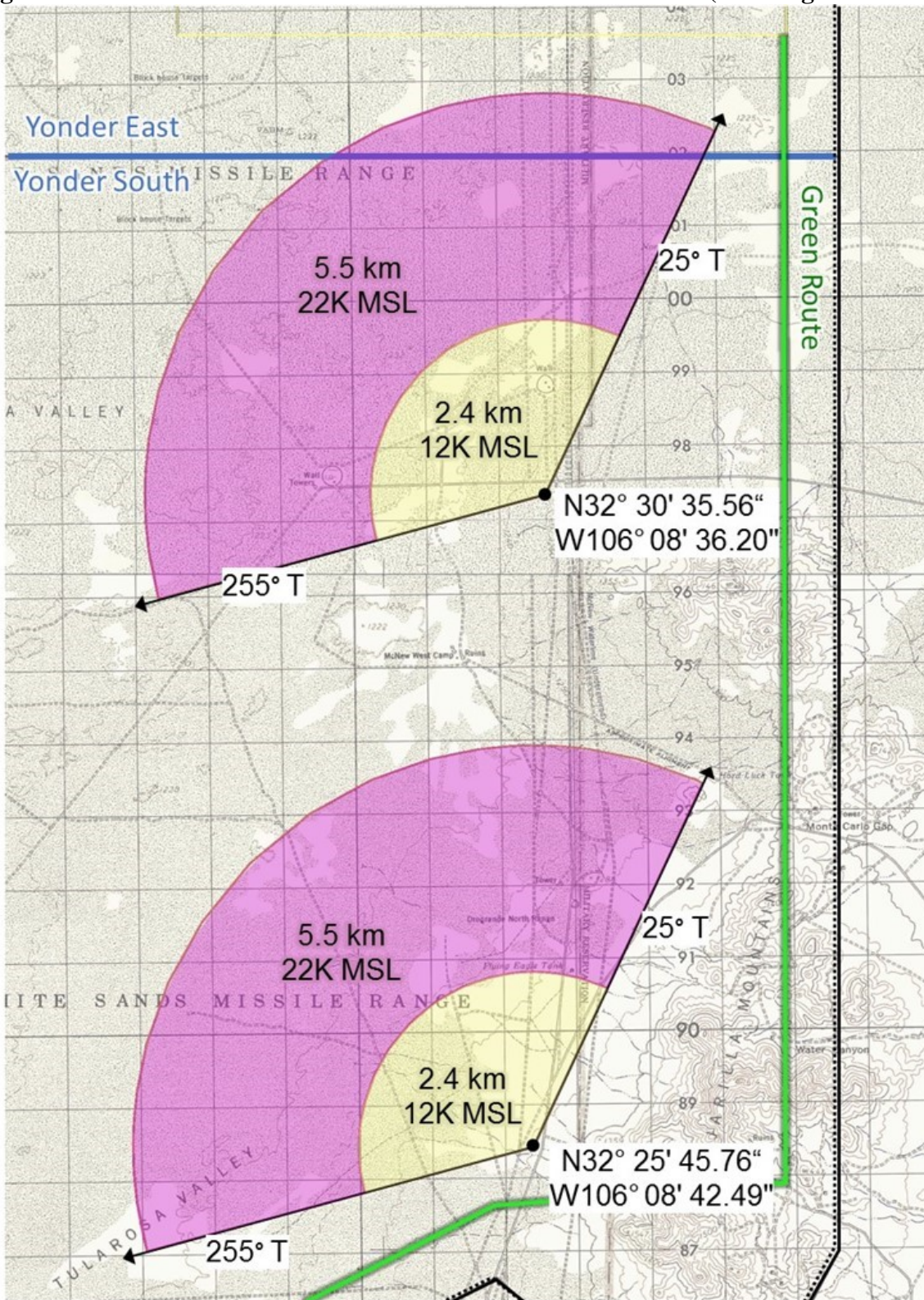


Figure A3.23. Fort Bliss THAAD Avoidance Area – R-5103B (Drawing not to scale).

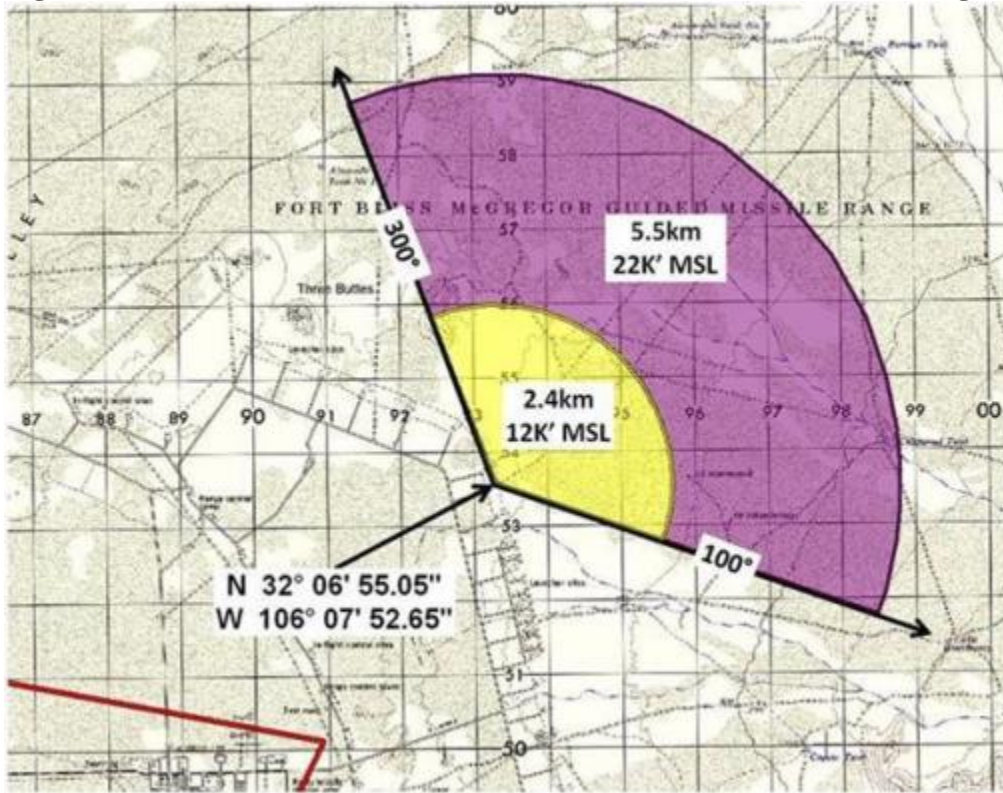




Figure A3.24. Wiley Airspace.

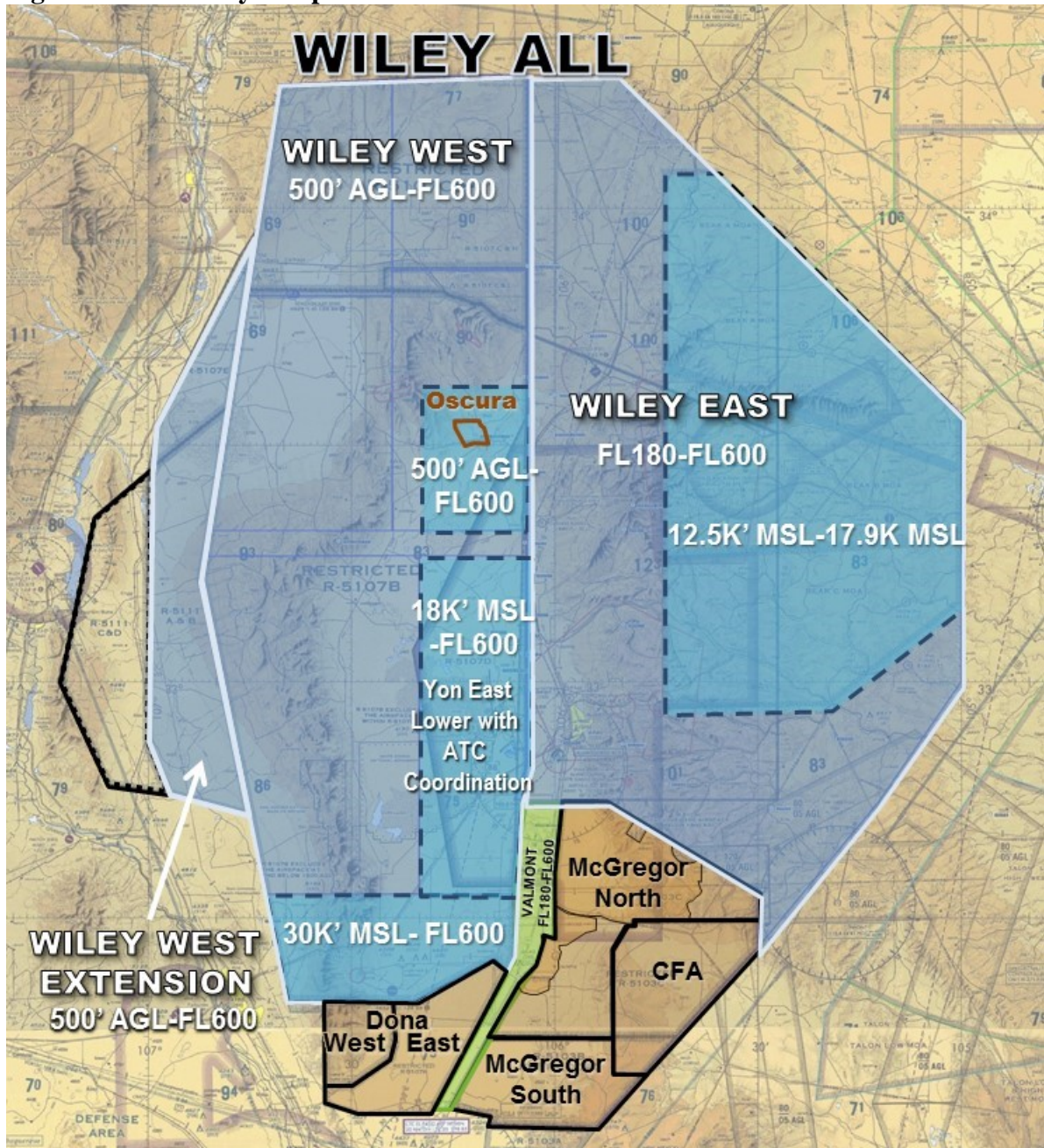


Table A3.3. WSMR Grid (A – N, 0 – 44) Conversion to Latitude and Longitude.

Vertical lines			Horizontal Lines		
ID	Starting Pt	End Pt	ID	Starting Pt	End Pt
	N34.465918 W107.926751	N31.882502 W107.88066	0	N31.890876 W105.818083	N31.881701 W107.945092
	N34.466765 W107.860399	N31.88327 W107.816226	2	N31.945872 W105.817777	N31.936678 W107.946051
	N34.467576 W107.794045	N31.884006 W107.751789	4	N32.000867 W105.817469	N31.991653 W107.947012
	N34.468351 W107.727687	N31.884708 W107.68735	6	N32.055862 W105.817161	N32.046629 W107.947977
	N34.46909 W107.661328	N31.885379 W107.622908	8	N32.110856 W105.816852	N32.101603 W107.948943
	N34.469793 W107.594966	N31.886016 W107.558465	10	N32.16585 W105.816542	N32.156578 W107.949913
	N34.47046 W107.528601	N31.886621 W107.49402	12	N32.220843 W105.816231	N32.211551 W107.950885
	N34.471091 W107.462235	N31.887193 W107.429572	14	N32.275836 W105.815919	N32.266525 W107.951859
	N34.471686 W107.395866	N31.887733 W107.365123	16	N32.330829 W105.815606	N32.321497 W107.952837
A	N34.472245 W107.329496	N31.888239 W107.300672	18	N32.385821 W105.815293	N32.37647 W107.953817
B	N34.472768 W107.263124	N31.888714 W107.23622	20	N32.440812 W105.814979	N32.431441 W107.954799
C	N34.473255 W107.19675	N31.889155 W107.171766	22	N32.495803 W105.814664	N32.486413 W107.955785
D	N34.473706 W107.130375	N31.889564 W107.107311	24	N32.550794 W105.814348	N32.541383 W107.956773
E	N34.474121 W107.063998	N31.88994 W107.042855	26	N32.605784 W105.814031	N32.596354 W107.957763
F	N34.4745 W106.99762	N31.890283 W106.978397	28	N32.660773 W105.813713	N32.651323 W107.958757
G	N34.474842 W106.931241	N31.890594 W106.913939	30	N32.715762 W105.813394	N32.706292 W107.959753
H	N34.475149 W106.864861	N31.890872 W106.849479	32	N32.770751 W105.813075	N32.761261 W107.960752
I	N34.47542 W106.798479	N31.891118 W106.785019	34	N32.825739 W105.812755	N32.816229 W107.961753
J	N34.475654 W106.732097	N31.89133 W106.720558	36	N32.880727 W105.812433	N32.871197 W107.962758
K	N34.475853 W106.665715	N31.89151 W106.656096	38	N32.935714 W105.812111	N32.926164 W107.963765
L	N34.476015 W106.599331	N31.891658 W106.591634	40	N32.9907 W105.811788	N32.981131 W107.964774



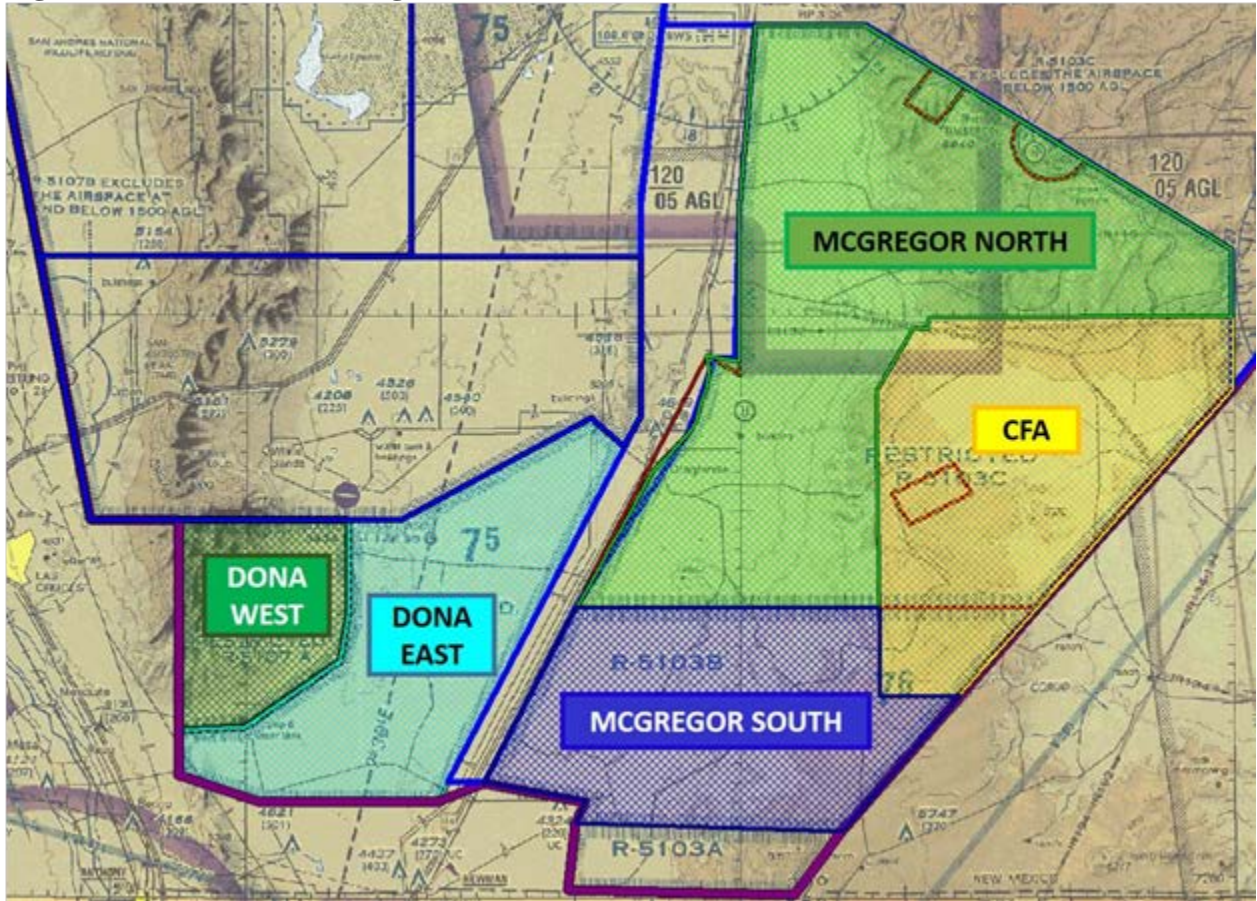
M	N34.476142 W106.532948	N31.891772 W106.527171	42	N33.045686 W105.811464	N33.036097 W107.965787
N	N34.476232 W106.466564	N31.891854 W106.462708	44	N33.100672 W105.81114	N33.091062 W107.966802

Table A3.4. WSMR Grid (O – W, 46 – 94) Conversion Latitude and Longitude.

O	N34.476287 W106.400179	N31.891904 W106.398245	46	N33.155657 W105.810814	N33.146028 W107.96782
P	N34.476305 W106.333795	N31.89192 W106.333781	48	N33.210642 W105.810488	N33.200992 W107.968841
Q	N34.476287 W106.26741	N31.891904 W106.269318	50	N33.265626 W105.81016	N33.255956 W107.969865
R	N34.476233 W106.201026	N31.891855 W106.204855	52	N33.32061 W105.809832	N33.31092 W107.970891
S	N34.476143 W106.134642	N31.891774 W106.140392	54	N33.375593 W105.809503	N33.365883 W107.97192
T	N34.476017 W106.068258	N31.89166 W106.075929	56	N33.430576 W105.809173	N33.420845 W107.972952
U	N34.475855 W106.001874	N31.891513 W106.011467	58	N33.485558 W105.808842	N33.475807 W107.973987
V	N34.475657 W105.935492	N31.891333 W105.947005	60	N33.54054 W105.80851	N33.530769 W107.975024
W	N34.475423 W105.86911	N31.891121 W105.882544	62	N33.595521 W105.808177	N33.58573 W107.976065
			64	N33.650502 W105.807844	N33.64069 W107.977108
			66	N33.705482 W105.807509	N33.69565 W107.978154
			68	N33.760462 W105.807174	N33.75061 W107.979203
			70	N33.815441 W105.806837	N33.805568 W107.980255
			72	N33.87042 W105.8065	N33.860527 W107.981309
			74	N33.925398 W105.806162	N33.915485 W107.982367
			76	N33.980376 W105.805822	N33.970442 W107.983427
			78	N34.035353 W105.805482	N34.025399 W107.98449
			80	N34.09033 W105.805141	N34.080355 W107.985556
			82	N34.145306 W105.8048	N34.135311 W107.986625
			84	N34.200282 W105.804457	N34.190266 W107.987697
			86	N34.255257 W105.804113	N34.245221 W107.988772
			88	N34.310232	N34.300175

	W105.803768	W107.98985
90	N34.365206 W105.803423	N34.355129 W107.99093
92	N34.42018 W105.803076	N34.410082 W107.992014
94	N34.475153 W105.802729	N34.465035 W107.9931

Figure A3.25. ACC Working Areas.



## Attachment 4

### GAF TORNADO OPERATIONS

**A4.1. Tornado Engine Governor Check.** A Tornado requiring a governor (GVNR) test will include this information upon initial contact with Ground Control. On initial contact with Tower the pilot will state “*(call sign), NUMBER ONE, REQUEST LINEUP GOVERNOR*”. Tower, when able, will instruct the aircraft to line up and wait. If cleared onto the runway, the pilot will conduct GVNR test and after completion of GVNR test will call “*(call sign), READY FOR DEPARTURE*”. At this time, traffic permitting, Tower will clear the aircraft for departure. If cleared for takeoff, the aircraft/flight will line up, execute the GVNR check and depart thereafter. Other aircraft on Tower frequency should consider that the GVNR test will take up to 2 minutes on the runway.

**A4.2. VFR Extended Straight-In.** Extended straight-in is only authorized to Runway 16/34. Request for extended straight-in will be made with ATC. If currently under WSRF control, expect vectors to a 10 NM straight-in. If requested on the go, expect to be transferred to WSRF after Tower coordination. The VFR Extended Straight-In follows the normal straight-in ground track. At 90-to-initial point, descend to 5,600 ft MSL. Base turn will be initiated at 10 NM from touchdown point. Expect handover to Tower when initiating base turn. Extended straight-in is used for Simulated Single Engine and Swept Wing (EP) pattern or for multiple formation approaches requiring a longer than normal straight-in final. For runways with no published extended straight-in, the normal straight-in may be extended beyond the published base distance. All restrictions (highway, restricted areas, or noise sensitive areas) have to be adhered to and tower has to be informed. Example: “*(call sign), request a 9 DME base.*”

**A4.3. Tornado EP Procedures.**

A4.3.1. Swept wing or simulated single engine indicates a pilot request for an EP pattern. Simulated EP Pattern approaches may be flown to any runway except Runway 25. For multiple approaches, pilots will request, as soon as possible to either Tower or WSRF, extended straight-in or using standard terminology and will add “*SIMULATED SINGLE ENGINE*” or “*SWEPT WING*” “*(call sign) ON THE GO, REQUEST EXTENDED STRAIGHT-IN SWEPT WING*”. For multiple EP patterns to Runway 22, refer to A4.2. or pilots will request “*RUNWAY 22 LOCAL CLIMB-OUT*” for radar vectors to TACAN final.

A4.3.2. IMC/Nighttime. Simulated single engine approaches can be flown in IMC and IFR or at nighttime under IFR. Swept wing approaches can be flown in IMC during the daytime under IFR. Expect a published instrument approach or radar vectors to a TACAN Runway 16/34 or Runway 22. Additional approaches can expect local climb-out or alternate instructions.

A4.3.3. Daytime VMC: When flying VFR, Aircrews are responsible for their own terrain avoidance. Aircrews flying the VFR pattern will request extended straight-in or a later base (refer to A4.2.) on the go and follow the standard HMN straight-in ground track. If approved, Tower will direct the aircrew to contact Arrival Channel 9. Aircrews should squawk last assigned code or 1200 as appropriate. On outside downwind at 5 DME (7 DME Runway 34), aircrews will transmit “*(call sign) DESCENDING FOR STRAIGHT-IN / EXTENDED STRAIGHT-IN SWEPT WING/SIMULATED SINGLE ENGINE*” and begin a descent to 5,600 ft MSL. Arrival will approve or disapprove the extended straight-in while providing traffic advisories and sequencing as required. If the extended straight-in is approved, aircrews will plan to turn base abeam Tula Peak for Runway 16 or Lone Butte for Runway 34. DO NOT

over extend the pattern. Aircrews should inform arrival of their base turn. Expect a hand off to Tower shortly thereafter.

A4.3.4. If Tower does not approve extended straight-in, aircrews are expected to continue for a normal straight-in via the standard straight-in procedures/ground track or request to report initial at 6,100 ft MSL.

A4.3.5. During Simulated Single Engine patterns, crews should fly a normal glide path, maintaining between 180 and 200 KIAS on final. If no Touch-and-Go, Tower can expect the Go-Around to be accomplished on short final.

A4.3.6. Swept wing patterns will slow from 300 KIAS to approximately 230 KIAS for a 67-degree swept wing (200 KIAS for a 45-degree swept wing pattern) approximately at 10 NM on final course. Aircrews will initiate a Go-Around between 1 to 2 NM on final. Swept wing pattern WILL NOT be conducted at nighttime.

#### **A4.4. Tornado Internal Aids Approach (IAA).**

A4.4.1. Tornado aircraft may conduct VFR IAA IAW the GAF FTC Inflight Guide. Approaches will be flown in VMC and VFR only. IAA will be flown out of a VFR recovery, a straight-in, extended straight-in or out of any IFR approach after cancelling IFR. IAA procedures will NOT be conducted at night.

#### **A4.5. Tornado Trail Procedures.**

A4.5.1. The Tornado Trail Departure is a non-radar trail departure, flown under IFR in VMC and IMC in non-standard formation, if weather, crosswind or the number of aircraft preclude the execution of a formation takeoff or a rejoin of the formation below clouds. The aim of the Tornado Trail Departure is to reach VMC for a rejoin of the formation above a cloud layer. The Tornado Trail Departure can be flown in two ships (two by two), single ships (one by one) or a two ship following a single ship(s), the two-ship being allowed as last element only to cope for a lost wingman situation. In the following, each single unit will therefore be referred to as an entity.

A4.5.2. WSRF will inform ABQ ARTCC if a flight will be non-standard formation in their airspace.

A4.5.3. Procedure:

A4.5.3.1. Procedure to be used under IFR on any departure.

A4.5.3.2. VMC for formation join up must be attainable within HMN assigned airspace (See Figure A4.1.).

A4.5.3.3. The formation files separate flight plans. An altitude block of 1,000 ft (2 entities)/2,000 ft (3-4 entities) will be filed.

A4.5.3.4. Flight plans will include the remarks: Tornado Trail Departure MARSAs with call sign.

A4.5.3.5. Formation lead will request Trail Departure with Clearance Delivery and inform Tower upon check in.

A4.5.3.6. Each entity will be assigned a separate squawk.

A4.5.3.6.1. The first and the last entity will squawk as assigned, all others will squawk standby and will be tracked by ATC as primary targets.

A4.5.3.7. Take off spacing between entities is 20 seconds, which equals a longitudinal spacing of approximately 2 NM during flight.

A4.5.3.8. The maximum distance between lead and last aircraft of the formation will be 10 NM.

A4.5.3.9. The first and last entity will report airborne and level off on assigned altitude to



ATC.

A4.5.3.10. Each entity will:

A4.5.3.10.1. Cancel Reheat (afterburner) at 300 calibrated airspeed in knots (KCAS).

A4.5.3.10.2. Establish a 5 degree climb angle in the Head Up Display (HUD) up to 10,000 ft MSL and then reduce to a 3 degree climb until level off.

A4.5.3.10.3. Adjust power as required to maintain 300 KCAS (use reheat if necessary).

A4.5.3.10.4. Use 30 degree angle of bank during turns.

A4.5.3.11. All entities are strictly to adhere to the headings, turn points, airspeed, climb angles, and altitudes in order to fly the same ground track as the entity in front, to maintain the spacing and to ensure terrain clearance to the east of HMN.

A4.5.3.12. ATC instructions issued to the lead aircraft will apply to the entire formation, while maintaining the relative position to each other.

A4.5.3.13. Entities will maintain the 20 seconds trail position until join up in close formation is guaranteed in VMC.

A4.5.3.14. Unless every entity in the formation has indicated a radar contact or lock-on (tied-on), lead will call all changes in airspeed, altitude, and heading. During climbs and descents, lead will call passing each 2,000 ft altitude increment with altitude and heading (or heading passing) until joined, leveled off, or the following entity called tied-on.

A4.5.3.15. Should a level off on an intermediate altitude become necessary, or if unable to reach VMC at the assigned altitude, each trailing entity will level off 500 ft below the preceding entity and inform ATC.

A4.5.3.16. Formation lead will report to ATC, when standard formation has been established.

A4.5.3.17. Joining aircraft will strangle squawk/squawk stand-by upon join up on the preceding aircraft.

A4.5.3.18. The IFR portion of the flight plan can be cancelled by formation lead at the earliest when all formation members reached and reported VMC.

A4.5.4. In case of radio failure:

A4.5.4.1. Try to establish contact on UHF/VHF Emergency Frequency.

A4.5.4.2. If unsuccessful, squawk Mode A/7600.

A4.5.4.3. Continue departure on defined parameters to assigned altitude.

A4.5.4.4. Lead aircraft: If unable to reach VMC on assigned altitude, set squawk Mode A/7700 for 30 seconds, thereafter continue according to NORDO procedures.

A4.5.4.5. Wingmen: If unable to reach VMC for formation join up, set squawk Mode A/7700 for 30 seconds, thereafter continue according to NORDO procedures.

A4.5.4.6. ATC will inform remaining formation members of the NORDO situation.

A4.5.5. In case of lost wingman:

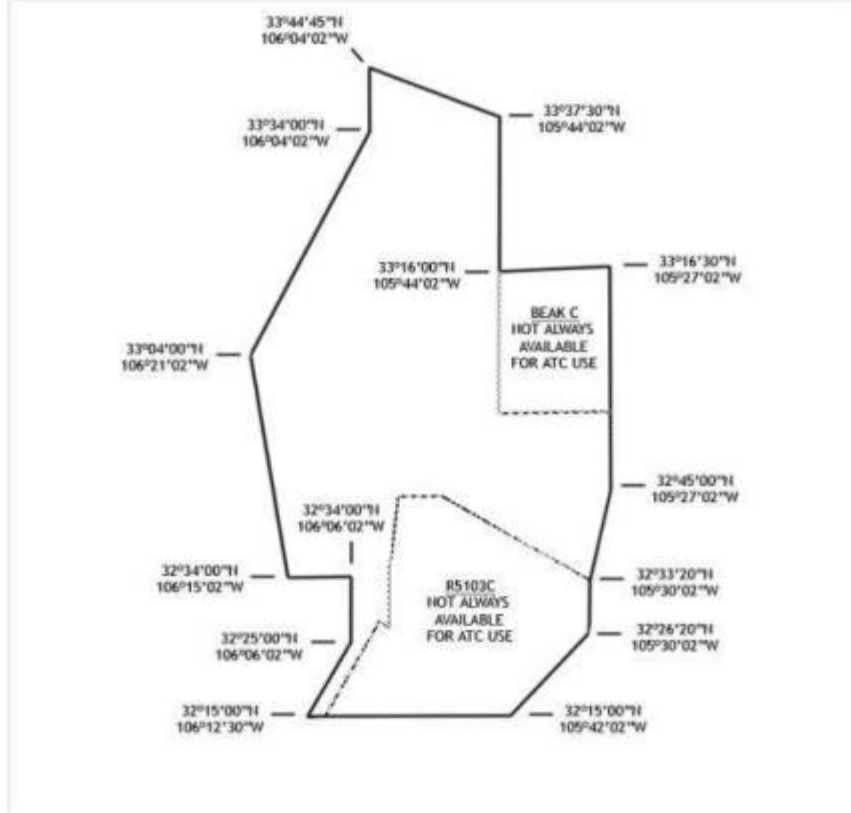
A4.5.5.1. Execute lost wingman procedure.

A4.5.5.2. Observe published terrain clearance limits.

A4.5.5.3. Squawk assigned code.

A4.5.5.4. Obtain separate clearance from ATC.

Figure A4.1. HMN assigned airspace (Drawing not to scale).



## Attachment 5

### QF-16 OPERATIONS

**A5.1. Drone Operations:** see 82 ATRS, 49 WG, and WSMR Safety Memorandum of Agreement for additional procedures.

**A5.1.1. 82 ATRS Responsibilities.**

A5.1.1.1. Brief Tower WS at least 1 hour prior to takeoff for all drone missions. Information will include but is not be limited to:

A5.1.1.1.1. Estimated time of departure (ETD) and ETA.

A5.1.1.1.2. Mission frequency.

A5.1.1.1.3. Manned or unmanned.

A5.1.1.1.4. Mission summary (i.e., type of departure, length of time on range, number of approaches, etc.).

A5.1.1.2. Release Runway 22 at Taxiway Echo to Tower for departures until 5 minutes prior to drone takeoff time (manned drone only).

A5.1.1.3. Advise Tower when manned drone is 18-flying miles (normally at the start of the recovery leg) and at 5 miles from touchdown Runway 04.

A5.1.1.4. Provide two-way radio equipped vehicle to assist in approach/departure area evacuation (unmanned drone operations only).

A5.1.1.5. Advise Tower when all personnel are clear of the runway and that normal operations may resume.

**A5.2. Tower Responsibilities.**

**A5.2.1. Manned QF-16 Drone Procedures:**

A5.2.1.1. Issue taxi instructions to aircraft.

A5.2.1.2. Limit Runway 22 to drone operations only. Tower will verbally coordinate with X-Ray Control to confirm authorization of exceptions.

**A5.2.2. Chase Aircraft:**

A5.2.2.1. Once takeoff clearance has been issued, if pickup is immediate, the chase aircraft is automatically cleared to takeoff from any runway.

A5.2.2.2. If pickup is not immediate (i.e., chase aircraft is already airborne), obtain clearance from Tower before conducting drone takeoff and pickup operations.

A5.2.2.3. Suspend all departures from Runway 25 when the drone is 15-flying miles to Runway 04. Limit straight-in approaches to Runway 16/34 as necessary to allow full runway or missed approach separation for the drone. Arriving aircraft can expect to be delayed when drone operations are in progress.

**A5.2.3. Unmanned Drone Procedures:**

A5.2.3.1. Clear BM or FD personnel onto the runway for arresting gear configuration.

A5.2.3.2. The area surrounding Runway 22/04 will be evacuated 2,000 ft from the runway during drone launch/recovery to include the Delta, Echo, Arm/De-Arm Areas, and Taxiway Golf. 82 ATRS personnel will visually insure the areas are clear prior to permitting drone launch and prior to recovery.

A5.2.3.3. Unmanned Drone Departures. Tower will assist 82 ATRS personnel with evacuating all non-participating vehicles and aircraft within a 2,000 ft radius of the unmanned drone before authorizing the drone destruct system to be armed (see Figure A5.2.). Once notified the destruct system is being armed, Tower will ensure a 2,000 ft

cordon from Runway 04/22 is in place for all non-participating vehicles and aircraft until the drone departs. This cordon includes portions of Taxiways Delta, Echo, Romeo, and Golf as well as their corresponding arm/de-arm areas (see Figure A5.3.).

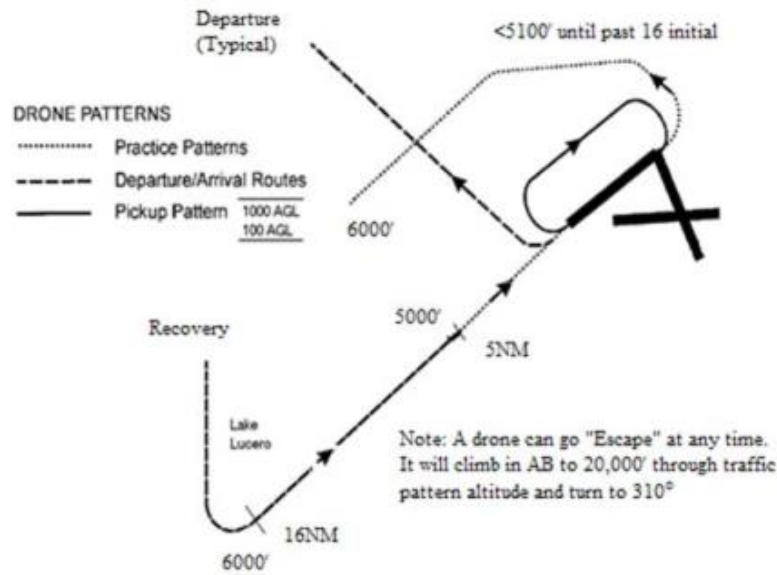
A5.2.3.4. Unmanned Drone Arrivals. Prior to issuing landing clearance, Tower will ensure a 2,000 ft cordon from Runway 04/22 is in place for all non-participating vehicles and aircraft. The cordon will remain in effect until the drone is stopped on the runway, at which time the cordon will be adjusted to a 2,000 ft radius around the aircraft and will be canceled once the drone's destruction system is de-armed.

**A5.3. Pick Up Pattern for Chase Aircraft.**

A5.3.1. Normally QF-16 chase aircraft will fly a pattern altitude of 5,100 ft MSL north of runway 04/22.

A5.3.2. During manned QF-16 operations, the chase aircraft will normally depart from the same runway. During unmanned operations, the chase aircraft will normally depart from runway 25 or 16.

**Figure A5.1. Drone Traffic Pattern/Departure/Recovery Routes (Drawing not to scale).**



**Figure A5.2. Unmanned QF-16 Drone 2,000 ft Line-up Cordon (Drawing not to scale).**



**Figure A5.3. Unmanned QF-16 Drone 2,000 ft Runway Cordon (Drawing not to scale).**





**Attachment 6****HELICOPTER OPERATIONS****A6.1. HMN Class D Helicopter Operations.**

A6.1.1. Within 5 NM of HMN, VFR arrivals and departures will be at or below 4,600 ft MSL.

A6.1.2. Remain clear of all runways until approval to cross is obtained from Tower or IAW a specific arrival or departure route, which includes clearance to cross. Remain clear of the extended runway centerlines by at least 1,500 ft (lateral) within the airfield boundary. DO NOT over-fly aircraft in run-up areas, taxiing, holding in takeoff position or in parking ramps (Transient Parking Area, North Ramp, Drone Parking, or West Ramp).

A6.1.3. Takeoff or landing in uncontrolled areas (i.e., ramps and parking areas) is at pilot's own risk. Helicopter operations conducted to and from areas not approved for helicopter use (i.e., the North Side ramp, Main ramp, Transient Ramp, Track, Auxiliary Field) will request specific arrival or departure stereo routings by name.

A6.1.4. Normal airfield traffic departs Runway 22 or Runway 25 and recovers Runway 16. Any change of the recovery runway will be relayed by Tower to approaching aircraft. Locally assigned helicopters are authorized to depart and arrive on the helipad on the northwest end of the North Ramp. Transient helicopters must use the runways for arrival and departure. Arrival or departure operations from non-CMA areas must be authorized by the Airfield Manager (AFM).

A6.1.5. Arriving helicopters will be informed, “(name of specific arrival) ARRIVAL APPROVED”. When reporting for landing, Tower will state “LANDING AT NORTH RAMP WILL BE AT YOUR OWN RISK” and if necessary “USE CAUTION (reason)”. Departing helicopters will be informed “DEPARTURE FROM NORTH RAMP WILL BE AT YOUR OWN RISK” and if necessary “USE CAUTION (reason)”.

**A6.2. Helicopter Operations Outside HMN Class D.** After departure from HMN Class D, helicopter operations will be IAW AA Operations standard operating procedures.

**A6.3. Standard VFR Arrival and Departure Routes (Figure A6.1).** Request specific departure/arrival stereo routings by name. Tower will specify an alternate routing if requested route cannot be provided.

A6.3.1. Monument. (Water tower HMN R-195/5.6 DME). When departing the North Side, proceed directly across Runway 16 and Runway 25 intersection and remain west of the West Ramp enroute to the water tower abeam WSNM Headquarters (departure routing approval from Tower constitutes clearance to cross the Runway 16 and Runway 25 intersection). Aircraft departing from the Transient Ramp will proceed directly across Runway 16. On arrival call “MONUMENT” then report southwest of the West Ramp. Tower will sequence the helicopter to cross Runways 16 and Runway 25. Specific clearance from Tower is required. Tower may hold aircraft over the West Ramp or issue instructions to adjust route for traffic separation.

A6.3.2. Track. (HSTT HQ HMN R-295/2.4 DME; King 1 HMN R-316/0.9 DME). Departing North Side, cross the approach ends of Runway 16 and Runway 22 enroute to King 1 then to Track. Departure routing approval from Tower constitutes clearance to cross the Runway 16 and Runway 22 intersection. Departures from the Transient Ramp will proceed directly to Runway 16 and Runway 22 intersection enroute to King 1, then to Track. Departure routing approval from Tower constitutes clearance to cross Runway 07/25. On arrival, call Track then

report over King 1. Tower will hold aircraft at King 1 or issue instructions to adjust route for traffic separation.

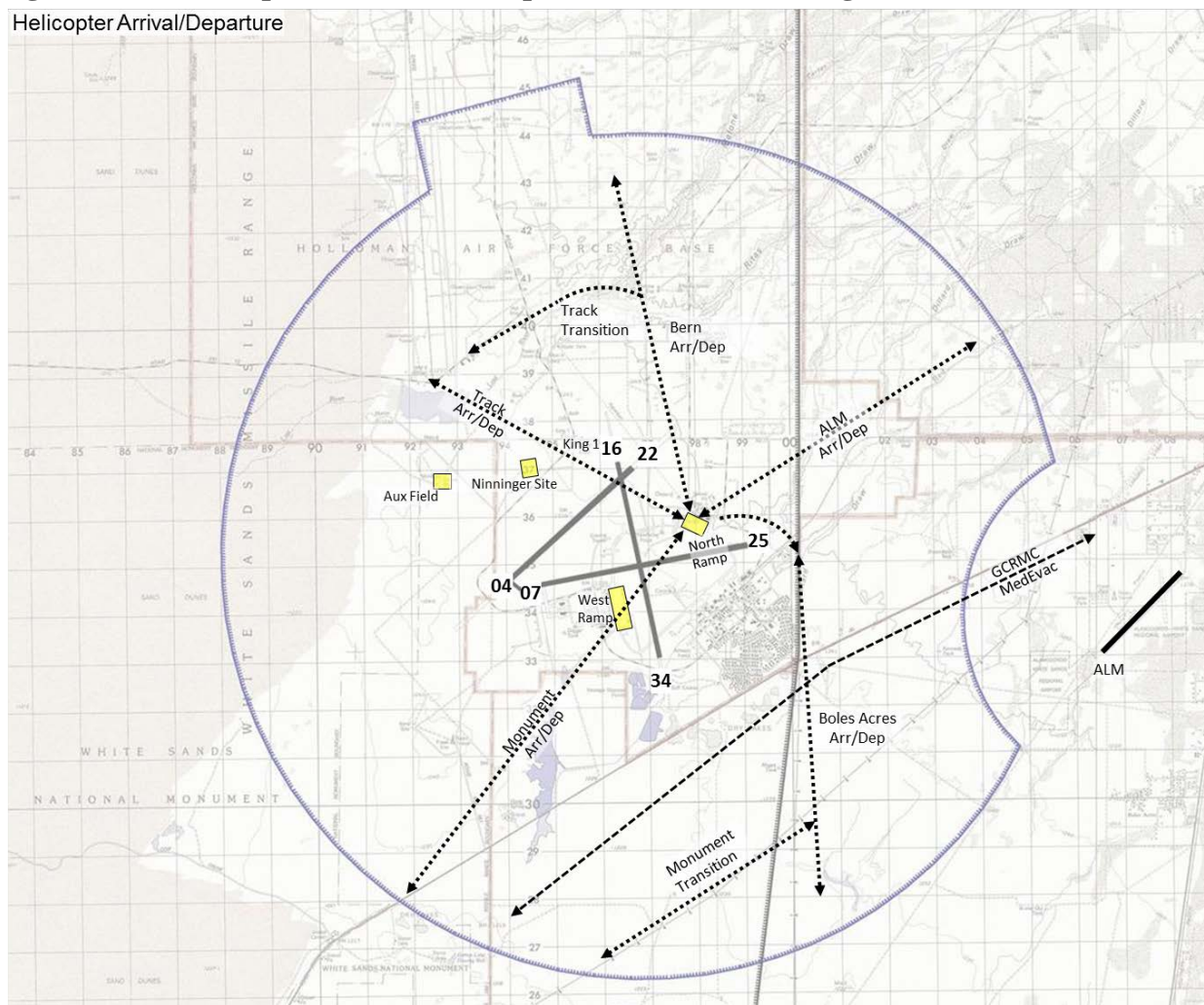
A6.3.3. Alamogordo. Depart North Side to the northeast of Runway 07/25 and east of Runway 04/22. Departure routing approval for aircraft departing the Transient Ramp constitutes clearance to cross Runway 07/25 directly to the North Side. On return call Alamogordo, then report 1-mile from the North Side. When Runway 07/25 is the primary landing runway, exercise caution, and make approach from the north-northeast quadrant. DO NOT over-fly the HMN small arms range.

A6.3.4. Bern (HMN R-005/3.0 DME). Depart the North Side to the north, parallel to Runway 16 extended centerline and fly over perimeter road that leads to La Luz Gate. Departure routing approval for aircraft departing the Transient Ramp constitutes clearance to cross Runway 07/25 directly to the North Side. DO NOT over-fly the Monkey Farm or small arms range enroute to Malone Draw (Bern), and then proceed to Tula Peak. If transitioning to the Track or Aux Field, advise Tower. Turn left at Malone Draw (3 DME), descend to 50 ft AGL and cross the extended centerline of Runway 16 to the Track. On return, state your location and call for the Bern; report 2 NM north of the North Side. From Track, cross 3 DME north of Runway 16 extended centerline at 50 ft AGL.

A6.3.5. Boles Acres (South of KALM to Twin Butte). Depart the North Side to the east to remain east of the tank farm, then south along power lines staying east of the lines and housing area. Aircraft departing the Transient Ramp will proceed directly to the tank farm without over-flying the Main Ramp and remain south of Runway 07/25. Aircraft departing the North Side will remain north of Runway 07/25. At power line intersection proceed to Boles Acres or toward WSMR. If going west toward WSMR from power line intersection, descend to 50 ft AGL to be low when crossing the extended centerline of Runway 34. On arrival (opposite departure routing), call "*BOLES ACRES*" then report the tank farm. When Runway 07/25 is the primary landing Runway, exercise extreme caution. Report the tank farm inbound and DO NOT proceed until clearance is obtained from Tower.

A6.3.6. If instructed to orbit to hold for runway crossing, ensure that orbit pattern does not over-fly any ramp areas. In West Ramp Orbit, remain west/southwest of the West Ramp hangars and ramp. In North Side Orbit, remain east of Runway 16/34 and north of Runway 07/25, remain north/northeast of the North Side parking area. In King Orbit, remain northwest of Runway 22. In Transient Orbit remain northwest of Taxiway Alpha and east of Runway 16/34 and south of Runway 07/25.

A6.3.7. Auxiliary (AUX) Field Transition. Helicopters may modify any of the above departures by requesting an "*AUX FIELD TRANSITION*" in addition to the specific type of departure. All clearances/restrictions of the applicable departure still apply. AUX Field transition simply clarifies the destination of the helicopter. See Bern departure above for applicable restrictions on AUX Field Transitions.

**Figure A6.1. Helicopter Arrival and Departure Routes (Drawing not to scale).**

**A6.4. Non-standard VFR Departures and Arrivals.** Traffic permitting, non-standard routes may be approved by Tower. In non-emergency situations, helicopters will cross the fewest possible active Runways at designated points. Helicopters may obtain special VFR clearances from Tower or WSRF to operate within the Class D. Helicopters with radio failure will plan their approach to avoid crossing any extended runway centerline within 5 SM of the airfield.

**A6.5. Helicopter NORDO Procedures.** In the event of radio failure in the HMN area the following procedures apply:

A6.5.1. If IFR, follow two-way radio failure procedures IAW the flight information handbook.

A6.5.2. If VFR, squawk 76 and the last two number of your call sign.

A6.5.2.1. If communication is lost after initial contact with Tower, continue to the established reporting point for that approach and look for a light gun signal from Tower.

A6.5.2.2. If not established on an approach and have not talked to Tower, circumnavigate the Class D and proceed inbound on the Alamogordo Arrival. Proceed inbound to a quarter mile from the north side and look for a light gun signal from the Tower.

**A6.6. Autorotation/Running Landing Areas.** The primary autorotation/running landing area for AA or transient wheeled helicopters is Runway 22 between the approach end and departure

end BAK-12 cables. AA may use Runway 25/07 or 16/34 between the approach end and departure end BAK-12 cables when Runway 22/04 is not available. Transient helicopters with skid-type landing gear (e.g., UH-1, OH-6, OH-58, AS-350, etc.) must have AM approval to perform autorotation landings on any runway.

**A6.7. Helicopter NVD Operations.** Only locally assigned AA helicopters are authorized to conduct NVD operations at HMN.

A6.7.1. NVD Scheduling. AA NVD operations will normally be scheduled through Scheduling and coordinated with AM NLT 24 hours in advance. Schedulers will include NVD in the AA aircraft's remarks section of the flying schedule. Changes within 24 hours of NVD start time will be coordinated with AM. Short notice NVD operations, if the pattern is available, may be coordinated directly with Tower real time.

A6.7.2. Notification/Coordination. Prior to commencing and at the conclusion of NVD operations:

A6.7.2.1. Tower must advise AM and WSRF that NVD operations are being conducted or terminated. Tower will include a NVD operations advisory in the ATIS broadcast.

A6.7.2.2. AM will confirm (scheduled) or publish (non-scheduled) a local NOTAM.

A6.7.3. Airfield Lighting. When closed traffic or extended operations within the class D airspace is requested:

A6.7.3.1. Runway 22/04. Prior to starting NVD operations, Tower will turn off all Runway 22/04 lights (HIRLs, PAPIs, distance remaining markers, ALSF-1, SFL, and Threshold Lights).

A6.7.3.2. Runway 16/34 or 25/07. Lighting associated with Runways 16/34 or 25/07 may be operated as required for non-NVD aircraft arrival/departure/taxi operations.

A6.7.3.3. Taxiway lights on Taxiways Romeo, Echo, and Delta may remain illuminated as required for non-NVD aircraft taxi operations.

A6.7.4. Internal Tower Cab Lighting. Tower cab lights will be set as required for ATC operations. Tower will not wear or use NVDs.

A6.7.5. Aircraft Lighting (Position, Anti-collision, Strobe, etc.). AA will operate helicopter lighting IAW Army Regulation (AR) 95-1.

A6.7.6. Vehicle Lighting Requirements. Vehicle operations in the Runway 22/04 CMA are not authorized during NVD operations. Vehicle operations in the Runway 16/34 or 25/07 CMA are authorized on a non-interference basis.

A6.7.7. Weather Requirements. IAW AR 95-1.

A6.7.8. Communication.

A6.7.8.1. Communications with ATC will be normal for the approach being flown. Departure and landing clearances for unlit runway will be as follows: *"DEPARTURE FROM (runway or location) WILL BE AT YOUR OWN RISK"* (additional instructions, as necessary). *"USE CAUTION"* (if applicable) or *"LANDING AT (runway or location) WILL BE AT YOUR OWN RISK"* (additional instructions, as necessary). *"USE CAUTION (if applicable)"*.

A6.7.8.2. Aircraft performing NVD operations will add the word *"aided"* to the call sign (e.g.: *NIKE 43 aided*).

A6.7.9. Traffic Pattern Procedures. NVD Closed traffic operations will only be flown to Runway 22/04 IAW VFR pattern procedures listed in Chapter 6.

A6.7.9.1. Non-NVD aircraft will not mix with AA NVD helicopters in the Runway 22/04 traffic patterns or conduct pattern operations on other runways during AA NVD operations

on Runway 22.

A6.7.9.2. Non-NVD departures from Runway 16 or 07 during AA NVD operations to Runway 22/04 are authorized. Non-NVD departures from Runway 34 or 25 or arrivals to Runways 16/34 or 25/07 during AA NVD operations to Runway 22/04 are not authorized. Non-NVD AA helicopter arrivals/departures from the North Ramp are authorized on a non-interference basis (do not use the Track arrival/departure).

A6.7.9.3. NVD Operational missions departing from or arriving to the Class D airspace may land and take off directly from the North Ramp. Tower will issue landing or take off “*at pilots own risk*” instructions.

A6.7.9.4. NVD operations at the Aux field are authorized with proper coordination with Tower.

A6.7.10. Suspension/Restart Procedures.

A6.7.10.1. NVD operations will be suspended when a non-NVD aircraft reaches 15-flying NM from Runway 22/04. Should a non-NVD aircraft need to use Runway 22/04, Tower will inform the NVD aircraft that “*NORMAL LIGHTS COMING UP, (reason)*” and direct them where to go in the pattern. NVD helicopters can hold, or continue with overt lighting while waiting to continue with NVD operations.

A6.7.10.2. Resume NVD operations after non-NVD aircraft have exited the landing runway or departed the Class D and the Runway 22/04 lights have been reconfigured for NVD operations.

A6.7.10.3. Emergency/KNOCK-IT-OFF. Aircrew or ATC may initiate a “*KNOCK-IT-OFF.*” In such cases, the Tower will turn airfield lighting back on. Tower will state “*NORMAL LIGHTS COMING UP,*” wait 10 seconds, and then turn the lights on. This will allow the aircrew to take off NVD equipment prior to the lights coming up. Tower will issue any additional instructions.

A6.7.11. Taxi Routes. NVD air taxi between North Ramp and Runway 22/04 is authorized. NVD ground and hover taxi is authorized provided aircraft lighting is configured for unaided flight (position, anti-collision, and taxi lights on).



## Attachment 7

### BALLOON OPERATIONS

#### A7.1. Balloon Operations.

A7.1.2. Air Force Research Laboratory/Balloon Operations (AFRL/RVEI) responsibilities.

A7.1.2.1. All balloon flights in the US are governed by Federal Aviation Regulation (FAR) Part 101, *Moored Balloons, Kites, Amateur Rockets, Unmanned Free Balloons, and Certain model Aircraft*, and the FAA-H-8083-11A, *Balloon Flying Handbook*.

A7.1.2.2. Notify AM of estimated time of balloon launch, location, altitude climbing to, and whether it is tethered or un-tethered, 2 weeks before, then a follow-up telephone call 2 days before the scheduled balloon launch.

A7.1.2.3. Notify the FAA and ensure a NOTAM is published. All balloon launches must be approved by the 49 OG/CC or designated representative.

A7.1.2.4. Contact the Tower to request clearance to launch a balloon, stating the location of balloon launch, whether it is tethered or un-tethered, and altitude climbing to, or passing through all altitudes.

A7.1.2.5. After obtaining clearance from Tower, advise Tower when the balloon is passing through 2,000 ft AGL or if the launch is aborted or canceled.

A7.1.3. Tower Responsibilities.

A7.1.3.1. Approve or disapprove a balloon launch based on traffic in the VFR pattern. Ensure traffic is deconflicted with the balloon launch prior to clearance for the balloon launch.

A7.1.3.2. Coordinate with WSRF on any balloon launches affecting their airspace.

## Attachment 8

### AERO CLUB OPERATIONS

**A8.1. AC Standard VFR Arrival Procedures.** AC aircraft will descend and maintain 5,100 ft MSL and establish two-way radio contact with Tower before entering HMN Class D. Ingress call points (see Figure A8.2.) are the Otero Mill Airport (FAA identifier 72 NM) 2 NM southwest of La Luz, GORDO (Highway 54/70 intersection, see Chapter 6), or American Legion. Call when departing KALM. If Tower is unable to allow the aircraft to proceed inbound, comply with controller holding instructions.

**A8.2. AC Runway Specific Procedures.**

A8.2.1. Runway 16:

A8.2.1.1. Departure. Climb to 5,100 ft MSL, cross Highway 70, climb to 5,600 ft MSL, and then proceed east until clearing Class D airspace.

A8.2.1.2. Arrival. Descend and maintain 5,100 ft MSL before entering Class D airspace. Maintain a westerly heading, turn southwest over Otero Mill Airport. Maintain heading until abeam the extended Runway 16 centerline and turn left to align with the centerline. Watch for helicopters operating at the same altitude.

A8.2.2. Runway 34:

A8.2.2.1. Departure. Reverse Runway 16 arrival procedures. Maintain 5,100 ft MSL until clear of the Class D.

A8.2.2.2. Arrival. Reverse Runway 16 departure procedures.

A8.2.3. Runway 22:

A8.2.3.1. Departure. Maintain 5,100 ft MSL after clearing departure end, and fly south crossing Highway 70, then proceed the same as the Runway 16 departure.

A8.2.3.2. Arrival. Same procedure for Runway 16 arrival, except turn south at the curve and follow the road until abeam extended Runway 22 centerline. Turn to align with the centerline.

A8.2.4. Runway 04:

A8.2.4.1. Departure. Reverse Runway 22 arrival procedures.

A8.2.4.2. Arrival. Reverse Runway 22 departure procedures.

A8.2.5. Runway 25:

A8.2.5.1. Departure. Maintain 5,100 ft MSL after clearing beyond Material Maintenance Group area. Turn left and fly south, remaining east of WSNM Gate, across Highway 70, then proceed as a Runway 16 departure.

A8.2.5.2. Arrival. Enter Class D at 5,100 ft MSL. If exiting KALM Runway 21 right downwind, expect extended left base. If inbound from the north or east, report GORDO and make straight-in approach. If inbound from the south, remain clear of KALM traffic patterns and report American Legion.

**A8.3. Pattern Work/Departure.** Coordinate with Tower for pattern work. Tower's approval is subject to pattern traffic. If no pattern work is desired or if Tower determines the pattern is not usable for AC aircraft, AC aircraft will depart the area.

**A8.4. AC Practice Areas.** Procedures for the AC VFR Training Areas are listed in paragraph 3.5.3.2. The boundaries are depicted in Figure A3.4. and include the altitudes from 500 ft AGL up to but not including 18,000 ft MSL. AC aircraft will monitor WSRF Approach frequency when using the practice area during 49 WG flying window. The boundaries of the areas are as follows:

A8.4.1. North Practice Area: North: Tularosa; South: La Luz; East: Mountains; West: Highway 70/54.

A8.4.2. South Practice Area: North: Boles Acres; South: 2 NM north of Dog Canyon Road; East: Mountains; West: Highway. Use caution for helicopter periodic operations between KALM and R5103C.

### A8.5. AC NORDO Procedures.

A8.5.1. If outside HMN Class D, land at KALM.

A8.5.2. If inside Class D or landing at HMN is necessary, follow procedures in paragraph 8.10.

A8.5.2.1. AC NORDO Orbit Area may be used for better visibility of Tower light gun signals or to give way to other aircraft and continue circling.

A8.5.3. After landing, exit the runway at the first available taxiway and look for a light gun signal before taxiing to parking or crossing any runways.

**Figure A8.1. Runway 25 NORDO Orbit Area (Drawing not to scale).**

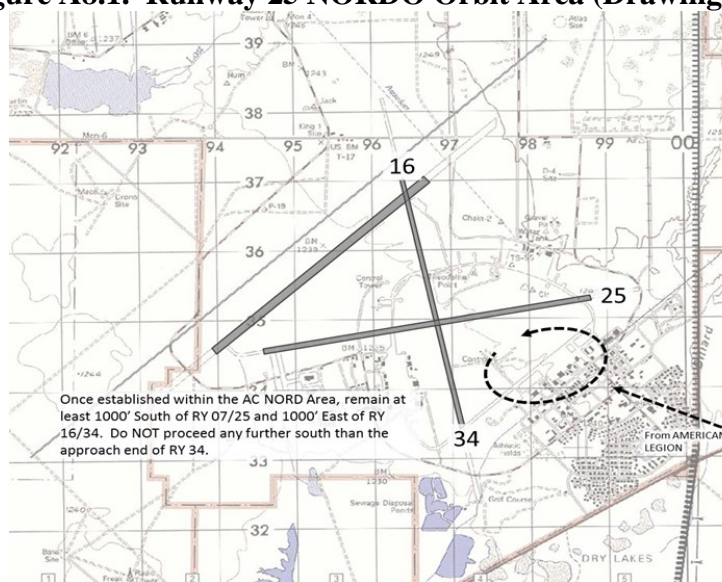
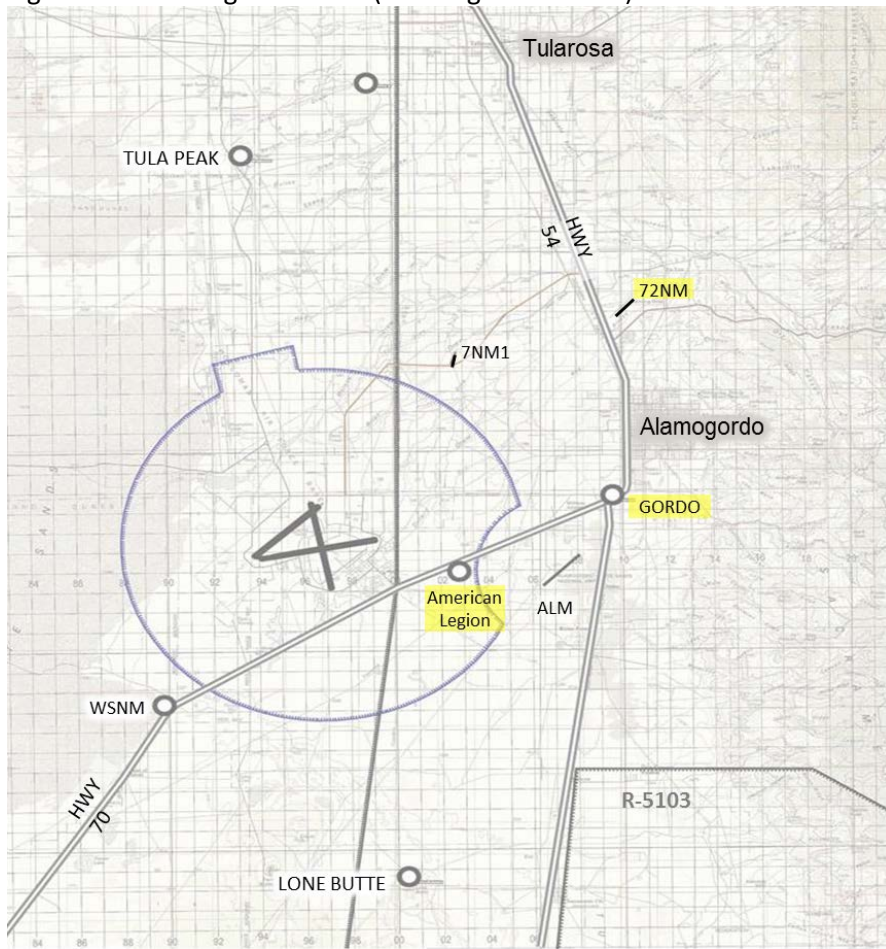


Figure A8.2. AC Ingress Points (Drawing not to scale).



## Attachment 9

### MQ-9 OPERATIONS

#### A9.1. Introduction.

A9.1.1. This attachment complements AFI 13-204V3. It also outlines specific procedures for local Unmanned Aircraft System (UAS) operations IAW AFI 11-2MQ-1&9V3, *MQ-1 and MQ-9 Operations Procedures*.

A9.1.2. RPA refers to MQ-9.

#### A9.2. General Policy.

A9.2.1. Primary point of contact for command and control of RPA missions is the Squadron Ops Sup. All communication with the crew not directly associated with the mission will be routed through the Ops Sup. RPA Ops Sup will coordinate actions with the SOF IAW AFI 11-418 and AFI 11-418\_HAFBSUP.

A9.2.2. Ground Control Station (GCS) refers to Mobile Ground Control Station (MGCS), Fixed Facility Ground Control System (FGCS), and Containerized Data Control System (CDCS). The GCS is to be considered a cockpit environment. The PIC is the final authority for entry/exit and number of personnel in the cockpit. Entry/exit of the Control Station and personnel within the cockpit occupancy should be limited to aircrew and mission essential ground crew. During in-flight troubleshooting and emergencies, additional personnel will be limited to the minimum maintenance personnel required. Tours of the GCS will be approved by the Ops Sup and coordinated with the PIC.

A9.2.3. Crew changeovers and Mission Control Element (MCE) seat swaps will only occur at or above 2,000 ft AGL. Launch and Recovery (LR) sorties may accomplish seat swaps above 500 ft AGL.

A9.2.4. RPA Separation. RPA are unable to accept see-and-avoid clearances; therefore, ATC must be more vigilant of separation when potential conflicts arise and must notify all aircraft involved immediately. ATC must not ask aircrews to maintain visual separation. However, aircrews are able to report the runway in sight for continuation of VFR maneuvers. Other than the aforementioned, ATC will handle RPA as follows:

A9.2.4.1. During Tower control:

A9.2.4.1.1. FAA SRS Category I has been deemed insufficient for RPA separation. Instead, ATC may apply SRS Category III minima and use FAA Wake Turbulence Category "small" for all RPA separation. ACC RSRS will not be applied to RPA.

A9.2.4.1.2. Issue cautionary wake turbulence advisories, the position, altitude, and direction of flight to landing RPA pilot/operator, if in your opinion, wake turbulence may have an adverse effect on it. Wake turbulence rules cannot be waived by the RPA pilot/operator.

A9.2.4.2. During WSRF control:

A9.2.4.2.1. WSRF will provide an authorized route of flight for RPA aircraft arriving and departing SUA. This route of flight will normally consist of the RPA colored routes. These RPA colored routes are not considered an ATC IFR Clearance. An IFR ATC clearance when requested and issued will consist of a clearance limit, SID or route of flight, altitude, frequency, and transponder code.

A9.2.4.2.2. RPA vs. Manned Aircraft; Standard Radar Separation IAW FAAO JO 7110.65 will be applied until the RPA enters the HMN Class D or upon entering their



assigned ACC working areas (excluding Yonder East).

A9.2.4.3. Issue cautionary wake turbulence advisories, the position, altitude, and direction of flight to landing RPA pilot/operator, if in your opinion, wake turbulence may have an adverse effect on it. Wake turbulence rules cannot be waived by the RPA pilot/operator.

A9.2.5. RPA Orbit Locations. Due to lack of instrument navigation equipment, aircraft are unable to hold IAW AFMAN 11-217V1, *Instrument Flight Procedures*. RPA will “orbit” or “delay” as directed by ATC for aircraft deconfliction.

A9.2.5.1. To relieve radio congestion during pattern operations, the following orbit points (Table A9.1. and Figure A9.1.) are established for use by HMN-assigned RPAs as directed by Tower.

**Table A9.1. RPA Orbit Point Information.**

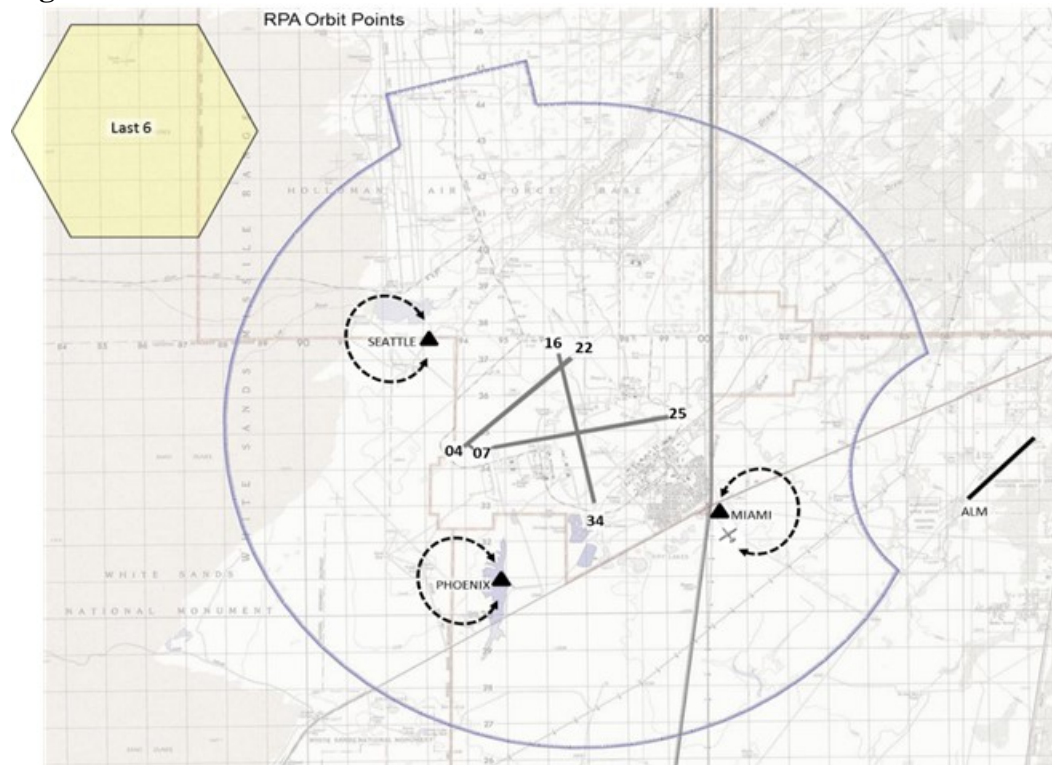
Name	Center Point	Orientation	No-Closer Point	Primary Use	Orbit Offset
Miami	N 32 49 12 W 106 02 57	250 M	N 32 49 40 W 106 03 50	RY 25	Remain South and East of point
Phoenix	N 32 47 49 W 106 08 00	340 M	N 32 48 40 W 106 07 25	RY 34	Remain South and West of point
Seattle	N 32 53 13 W 106 09 04	340 M	N 32 52 30 W 106 08 30	RY 16/22	Remain North and West of point

A9.2.5.2. When directed to orbit at a point, the RPA must not fly any closer to any runway centerline than the "No-Closer" point. The orbits are elliptical, 1 NM wide by 1.5 NM long, and are aligned with the expected runway for use. These orbits are positioned to maintain 0.5 NM spacing from the edge of Class D airspace and 1.5 NM spacing from all extended centerlines. Direction of holding will be as requested or directed by ATC.

A9.2.5.3. Tower will assign each aircraft in orbit a set altitude and include the assigned altitude during all traffic advisories. Spacing and traffic advisory requirements have not changed; however, the orbits are now defined and may be referred to by name. Tower will continue to deconflict aircraft in the priority order listed in paragraph 2.30.

A9.2.5.4. Point Miami requires extra vigilance to remain inside the lateral confines of the Class D airspace, points Phoenix and Seattle are the primary orbit locations. Aircraft unable to maintain orbit parameters will inform Tower immediately. RPA crews will not conduct pattern operations without graphical representation of the orbit points available in the GCS.

**Figure A9.1. RPA Class D Orbit Points.**



A9.2.6. RPA will normally operate in VMC and are not authorized to operate under Special Visual Flight Rules (SVFR). RPA must avoid IMC to the maximum extent possible due to airframe limitations. RPA may operate in IMC conditions when inside Restricted Airspace while expediting any transitions through precipitation and avoiding icing. Due to a lack of onboard instrumentation, colored routes (A9.3.4.) listed in this addendum will be used to the maximum extent.

A9.2.7. Due to line-of-sight (LOS) restrictions, RPA are only able to land on HMN airfield or other locations with C-Band capabilities.

A9.2.8. ATIS Procedures. During RPA flight operations, Tower will include in the ATIS broadcast an advisory that *“UNMANNED AIRCRAFT OPERATIONS ARE BEING CONDUCTED IN THE LOCAL AREA”*.

A9.2.9. Filing of Stereo Routings. To comply with Flight Plan Procedures of this instruction, the launching PIC will annotate, and sign for, a stereo routing in the remarks section of the AF Form 4327a which has a RDS of 1 year. In order to activate the stereo the launching PIC or Squadron Ops Sup must call AM with the proposed call sign, departure times, arrival times, DSN phone number of the respective GCS, and working airspace. AM will then file the appropriate stereo. LR crews must contact Clearance Delivery to prior to departure.

A9.2.10. All RPA aircrews will monitor the RPA Common frequency while in HMN Class D airspace and should monitor RPA Common while outside the Class D airspace for RPA traffic and frequency deconfliction.

A9.2.11. Position Reporting. All RPA assigned to HMN are not TACAN equipped and will use distance from their respective Ground Data Terminal (GDT) for position reporting. ATC must consider that this distance will be different for each RPA as each uses a different GDT. Fixed GDTs are located on the infield approximately 200 ft east of Taxiway Delta midway between Runway 25 and Taxiway Charlie. Mobile GDTs are located north of Taxiway Alpha

on the pad for the former ASR site.

A9.2.12. Vehicles/Equipment/Personnel Near Runways. For safety concerns, Tower will ensure all vehicles, equipment, or personnel are outside the CMA of the runway in use before RPA takeoff or landing.

### **A9.3. Mission Planning/Local Airspace Procedures.**

A9.3.1. FAA COA. HAM maintains airspace COA that directly impact HMN local flying area. RPA units will inform Scheduling when planning on operating in National Airspace System and adjacent ranges. Scheduling will do appropriate coordination with FAA and ranges IAW established agreements. Unit schedulers will advise Scheduling NLT 2 duty days prior to execution to allow time for proper coordination. The COAs are located on the 49 OSS SharePoint® and are updated annually or as listed within the COA.

A9.3.2. Frequency Deconfliction. RPA Ops Sups are responsible for real-time frequency deconfliction of their aircraft. Ops Sup will assign frequencies to their aircrew at crew step IAW the published schedule to the maximum extent possible. In the event that additional frequencies are needed, respective squadron Ops Sup will coordinate with each other for real-time deconfliction. C-Band sharing between RPA squadrons will be prioritized as follows: Emergencies, Check-rides, Normal Program Flying Training, LR, and Continuation Training.

A9.3.2.1. The National Telecommunications and Information Agency (NTIA) prohibits RPA GDT transmissions on 5850 megahertz (MHz) in the continental US. RPA C-band transmitters are only authorized within the 5250-5850 MHz range. Setting the GDT transmitter to 5850 MHz actually results in transmissions that extend slightly above 5850 MHz due to the non-zero width of the signal.

A9.3.2.2. Prior to applying power to the GDT, aircrew will establish reasonable certainty that no RPAs are established inside the perch through 500 ft climb out (using Zeus).

A9.3.2.2.1. Crews will make an advisory radio call on RPA Common Frequency in the following situations: prior to applying power to the GDT, prior to changing C-Band frequencies in use, and after removing power from the GDT.

A9.3.2.2.1.1. This advisory call will include ATC call sign (or GCS) and all frequencies being used (Example: “*Bones 34, Going Hot Pool 3 and 5800*”).

A9.3.2.2.1.2. Crews must monitor RPA Common Frequency for 5 seconds after making this call prior to turning GDT power on or changing C-Band frequencies, and continue to monitor the RPA Common Frequency, ready to turn GDT power back off, for 10 seconds afterwards.

A9.3.2.2.2. Crews will post GDT status in the Holloman Launch and Recovery Element (LRE) Mardem-Bey Internet Relay Chat® (mIRC) room to indicate going hot or cold on specific frequencies. The post format will be “hot p#” or “cold p#” to facilitate searches. The nickname will be <ATC call sign> or <ATC call sign in GCSXX> as applicable. Other coordination applicable to all LREs may also occur in the Holloman LRE room. Squadron specific coordination should occur in the respective Ops Sup rooms.

### **A9.3.3. RPA Airspace Deconfliction.**

A9.3.3.1. The primary means of airspace deconfliction must be through the scheduling process with a backup of real time deconfliction utilizing CHEROKEE. This deconfliction does not alleviate the requirement for airspace clearance from WSRF. R5111C/D is only available for RPA operations, if previously requested by units and annotated in the CSE scheduled. To facilitate departures and recoveries, WSRF may direct RPAs to maintain an

altitude and descend over the field, within the confines of HMN Class D airspace.

A9.3.3.2. Yonder East. The use and scheduling of the airspace underlying the confines of Yonder East Areas (P – T, 28 – 50) are as follows:

A9.3.3.2.1. The “Yellow Container” (WSMR grid Romeo to Tango, 24 to 28, 10,000 ft MSL to assigned altitude) will be scheduled 15 minutes prior to the first scheduled RPA launch until 45 minutes after the last scheduled RPA launch. The confines of the Yellow Container may be extended as agreed upon at the weekly airspace scheduling meeting. When scheduled, WSRF may still use this airspace for departures or recoveries of other aircraft.

A9.3.3.2.2. When scheduled, the Yellow Container will be added to the HMN Airspace Restrictions page by Scheduling. RPA Squadrons that desire to use this airspace in conjunction with Wiley Airspace must coordinate with Wiley Ops Sups. If launches are delayed, RPA Ops Sups must notify Wiley Airspace owning Ops Sups and Scheduling of the extended launch window.

A9.3.3.2.3. Yonder East airspace east of the Romeo grid line within R5107D 10,000 ft MSL to 22,000 ft MSL, may be scheduled in conjunction with Wiley Airspace. When requested, Scheduling will place this request on the CSE Airspace Schedule. In addition, requesting Ops Sup must gain final approval from the WSRF WS (DSN 258-8000 or 8001) for use of the altitudes 10,000 ft MSL to 18,000 ft MSL NLT 1 hour prior to mission start time.

A9.3.3.2.4. Yonder East airspace west of the Romeo grid line within R5107D at 10,000 ft MSL and above may be scheduled real-time by requesting Ops Sup through the WSRF WS.

A9.3.3.2.5. WSRF WS is the final authority on operations within Yonder East and can deny or recall the airspace at any time if conditions require. CHEROKEE must contact aircraft on the appropriate working frequency passed by the aircraft, via an Airborne Warning and Control System controller, or on 243.0.

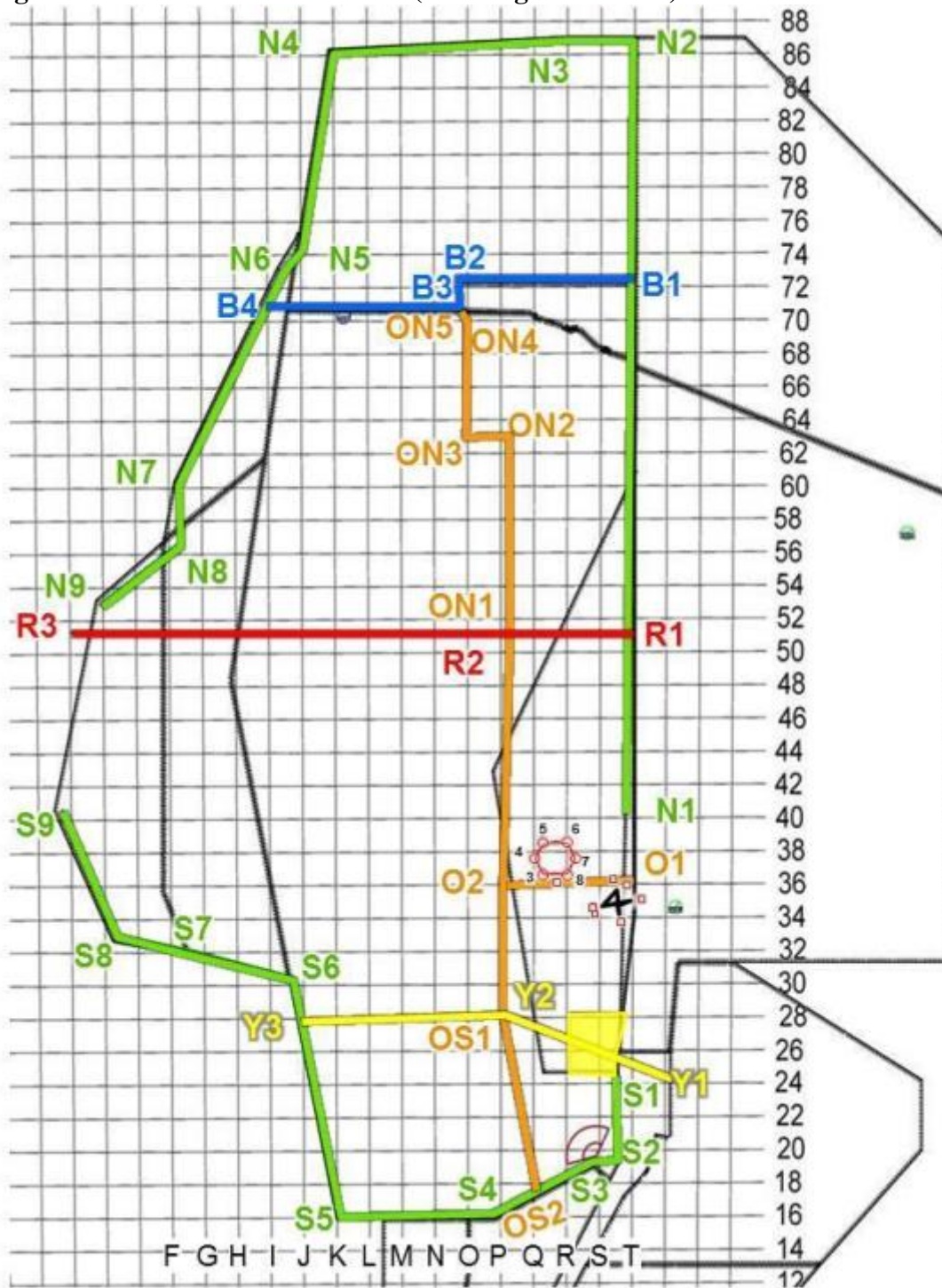
A9.3.4. RPA Colored Routes. RPA aircrew must fly the colored routes (Figure A9.2. and Table A9.2.) to transition restricted airspace unless otherwise directed by CHEROKEE. RPA colored routes are scheduled and used as follows:

A9.3.4.1. Green Route (South) SFC to Assigned Altitude (Green Route points S1 through S9) may be used by RPA aircraft to facilitate departures and recoveries between working airspace and HMN, regardless of airspace ownership by 49 WG units. However, RPA aircraft are still required to abide by all airspace restrictions affecting the Green Route. The Green Route corridor is ½ NM inside WSMR Restricted Airspace perimeter.

A9.3.4.2. Departures and recoveries along any other colored route require RPA Ops Sup to coordinate with affected airspace owners. RPA Ops Sups will notify WSRF WS of the coordinated route and altitudes.

A9.3.4.3. WSRF will advise airspace users if a colored route is active, i.e. “*Green Route (South) is active at Fight Level 180.*” WSRF will include amplifying information if RPA aircraft are climbing or descending, by providing the associated block altitude information. Aircraft transiting RPA colored routes will fly altitudes as assigned by CHEROKEE.

Figure A9.2. RPA Colored Routes (Drawing not to scale).





**Table A9.2. Departure/Arrival Routing Points, Lat./Long.**

Green Routes	
N1: N 33° 00' 00" / W 106° 05' 00"	S1: N 32° 36' 00" / W 106° 06' 30"
N2: N 34° 16' 30" / W 106° 04' 30"	S2: N 32° 25' 30" / W 106° 06' 30"
N3: N 34° 16' 30" / W 106° 12' 10"	S3: N 32° 25' 20" / W 106° 09' 03"
N4: N 34° 15' 10" / W 106° 40' 00"	S4: N 32° 20' 15" / W 106° 20' 50"
N5: N 33° 56' 20" / W 106° 43' 25"	S5: N 32° 19' 55" / W 106° 39' 07"
N6: N 33° 53' 30" / W 106° 45' 54"	S6: N 32° 43' 26" / W 106° 44' 34"
N7: N 33° 32' 30" / W 106° 58' 10"	S7: N 32° 46' 14" / W 106° 56' 47"
N8: N 33° 26' 30" / W 106° 58' 10"	S8: N 32° 47' 38" / W 107° 05' 29"
N9: N 33° 20' 30" / W 107° 07' 30"	S9: N 33° 00' 06" / W 107° 12' 03"
Blue Route	
B1: N 33° 53' 00" / W 106° 04' 45"	B3: N 33° 50' 15" / W 106° 25' 10"
B2: N 33° 53' 00" / W 106° 25' 10"	B4: N 33° 50' 15" / W 106° 48' 00"
Red Route	
R1: N 33° 17' 45" / W 106° 04' 30"	R3: N 33° 17' 45" / W 107° 11' 00"
R2: N 33° 17' 45" / W 106° 19' 00"	
Yellow Route	
Y1: N 32° 33' 40" / W 106° 00' 00"	Y3: N 32° 39' 20" / W 106° 44' 15"
Y2: N 32° 40' 00" / W 106° 19' 45"	
Yellow Container	
NE: N 32° 40' 00" / W 106° 05' 20"	SW: N 32° 34' 00" / W 106° 11' 50"
E: N 32° 36' 00" / W 106° 06' 30"	NW: N 32° 40' 00" / W 106° 11' 50"
SE: N 32° 34' 00" / W 106° 06' 30"	
Orange Routes	
ON1: N 33° 17' 45" / W 106° 19' 00"	O1: N 32° 53' 15" / W 106° 04' 30"
ON2: N 33° 37' 20" / W 106° 19' 20"	O2: N 32° 52' 45" / W 106° 19' 55"
ON3: N 33° 37' 20" / W 106° 24' 25"	
ON4: N 33° 48' 45" / W 106° 24' 25"	OS1: N 32° 40' 00" / W 106° 19' 45"
ON5: N 33° 50' 15" / W 106° 25' 10"	OS2: N 32° 22' 10" / W 106° 15' 45"

**A9.4. Ground Operations.**

A9.4.1. RPA Designated Start Areas: Main Ramp, Sunshades, Hangar 564, Hangar 565, GAF LOLA, Echo LOLA, North Ramp, and all arm/de-arms.

A9.4.2. RPA Towing Procedures. Towing procedures are IAW HAFBSUP 13-213, *Airfield Driving*.

A9.4.3. RPA Taxi Restrictions.

A9.4.3.1. Due to LOS communication issues, RPA must not be taxied to or through the West Ramp, MMG Ramp, or on Taxilane Alpha abeam the T-38/GAF engine run hush houses at any time.

A9.4.3.2. Taxiing RPAs are extremely susceptible to heat extremes above 95°F. During these times, aircraft should be given the most direct taxi routing and expedited takeoff clearance so as to reduce exposure on the ground.

A9.4.3.2.1. All RPA LOS flight and ground movement operations at HMN should be conducted with both Air Vehicle (AV) transmitter (TX) 1 and 2 set to "On" with AV TX Power Control set to "High". This does not prohibit crews from using AV TX

Power Control “Low” to manage transmitter temperatures and interference with other RPAs as required while taxiing. Crews will stop and return to “High” if downlinks become degraded. Crews will not taxi with GDT uplink power “Low”.

A9.4.3.3. Sunshades. Aircrews may taxi out of the sunshades from south to north. A marshaller will be used until clear of the sunshade. When recovering to the sunshades, aircrew will use a marshaller to taxi into the parking area and then shut down. Crews will not taxi into the sunshades.

A9.4.4. RPA AAS Configurations.

A9.4.4.1. RPA are unable to taxi over BAK-12 cables therefore Scheduling will provide BM the flight schedule NLT the day prior for AM coordination.

A9.4.4.2. 15 minutes prior to takeoff and landing, Tower must ensure all applicable cables are de-strung. During overlapping fighter/RPA flying, the SOF determines the cable configuration for the runway(s) in use.

A9.4.4.3. Runway 16/34 is the primary RPA departure and arrival runway.

A9.4.5. The current airfield locations of the GDT towers have been sited IAW UFC 03-260-01 and USAF TERPS criteria. Changes to the tower locations or use of additional mobile GDT towers will be coordinated with AM.

#### **A9.5. Departure Procedures.**

A9.5.1. RPA must depart via stereo route listed in 49 WG IFG RPA Annex or Colored Route. PIC must contact Clearance Delivery and request a specific colored routing. Clearance Delivery must issue the clearance with stereo route or colored route, departure frequency, and transponder code.

A9.5.2. RPA must have an operational transponder and squawk as determined by ATC.

A9.5.3. If active restricted airspace dictates, Clearance Delivery must issue crossing restrictions along the route such as “*CROSS THE 44 LINE AT OR ABOVE 13,000*”. Outside HMN Class D airspace, RPA must resume the preprogrammed departure route requested via the aircraft’s flight plan.

A9.5.4. Example Flight Plan Clearances:

A9.5.4.1. “*BONES25, MOUNTAIN 2 DEPARTURE AUTHORIZED AT 0000Z, DEPARTURE FREQUENCY CHANNEL 4, SQUAWK 0271*”.

A9.5.4.2. “*CLAW20, ORANGE NORTH TO RED WEST DEPARTURE AUTHORIZED, DEPARTURE FREQUENCY CHANNEL 4, SQUAWK 0271*”.

A9.5.4.3. “*KNIGHT09, ORANGE NORTH DEPARTURE AUTHORIZED, CROSS THE 44 LINE AT OR ABOVE 13,000, DEPARTURE FREQUENCY CHANNEL 4, SQUAWK 0271*”.

A9.5.4.4. “*CLAW24, SANDS1 DEPARTURE AUTHORIZED, DEPARTURE FREQUENCY CHANNEL 4, SQUAWK 0261.*”

#### **A9.6. Range Operations/Weapons Employment.**

A9.6.1. Local range operations will be IAW AFI 13-212\_HAFB ADDENDA-A, and when inside WSMR airspace, WSMR FSOP governing the specific flight mission.

A9.6.2. Laser bore-sight runs on Oscura range must be south to north only and IAW WSMR FSOP governing the specific flight mission.

A9.6.3. In the event of unexploded ordnance, the PIC will pass aircraft release parameters and intended target to RCO. If impact point is observed, pass coordinates as well.

A9.6.4. Prior to turning on the AV transmitter to push over, aircrew will establish reasonable certainty that no RPAs are established inside the perch through 500 ft climb out (using Zeus).

A9.6.5. HMN and TDY RPAs must comply with SUA avoidance area restrictions listed in paragraph 3.4.1.

A9.6.6. Under current agreements, WSRF controls all aircraft above the coordination altitude in R5103, to include aircraft dropping ordnance from above the coordination altitude, along with all fast movers below the coordination altitude. Bliss Radio controls all aircraft below the coordination altitude with the exception of fast movers.

A9.6.6.1. Aircraft that will operate in McGregor North/South and are scheduled to use the CFA/Centennial Range at a later time will contact CHEROKEE 5 minutes prior to using the CFA/Centennial Range (for example, RPAs dropping GBU-12s on Centennial). Once CHEROKEE has coordinated with Bliss Radio they will clear the aircraft to use the CFA/CR. Aircrew WILL NOT utilize the CFA/Centennial Range until this clearance has been granted. **Note:** This does not prevent aircraft from overflying the CFA/Centennial Range, above the coordination altitude, as scheduled. However, it will improve safety by ensuring that CHEROKEE provides Bliss Radio notification prior to aircraft either flying below the coordination altitude or releasing ordnance that will pass below the coordination altitude.

A9.6.6.2. Ops Sups and Aircrew will be notified that the CFA is active via comments in the "Operating Airspace" section of the Daily Airspace Schedule available via CSE.

A9.6.7. RPA discrete frequency in assigned airspace. Once established in assigned airspace, RPA crews may request to switch from monitoring CHEROKEE primary to CHEROKEE discrete frequency listed in the IFG. Aircrews that choose to monitor the discrete frequency instead of CHEROKEE will comply with the following procedures:

A9.6.7.1. Crews will notify CHEROKEE once established in cleared airspace and advise CHEROKEE of their discrete frequency (see Attachment 2). If the frequency is not available, crews will continue to monitor the primary CHEROKEE frequency.

A9.6.7.2. Crews that switch to the discrete frequency will continuously monitor for CHEROKEE radio calls and minimize communication to ensure a sterile radio environment. Any airspace coordination calls from the crews will be accomplished on the primary CHEROKEE frequency.

A9.6.8. Laser Procedures.

A9.6.8.1. Aircrew are ultimately responsible for laser safety and will clear the area for personnel prior to any Laser Range Designator (LRD) or Laser Target Marker (LTM) use. The term "area" is defined as 100 meters around the point of designation.

A9.6.8.2. LRD Employment. Aircrew will only use the LRD when scheduled and cleared onto approved ranges. The LRD will not be used when personnel are in the area unless the PIC has confirmed that Laser Eye Protection (LEP) is being used. The LRD footprint must fall within the LRD approved range.

A9.6.8.3. LTM Employment. LTM operations will not be conducted outside of range boundaries for any reason. If all personnel in the area are confirmed wearing LEP, the minimum LTM employment altitude is 1,000 ft AGL. If non-LEP equipped personnel are in the area: When working with military or contracted ground parties, and it has been verified that no image-magnifying devices (binoculars, scope, etc.) are in use, the LTM may be employed as long as the aircraft slant range exceeds 324 meters/1,063 ft (MQ-9).

If no personnel are in the area, the LTM may be employed as long as the aircraft slant range exceeds 324 meters/1,063 (MQ-9). If personnel are in the area and aircrew are unable to ensure the absence of personnel using image-magnifying devices, the LTM will not be used.

**A9.6.9. Guided Bomb Unit-12 (GBU-12) Training with Bomb Rack Unit-71/A (BRU-71/A).**

A9.6.9.1. The BRU-71/A may be flown in two pressurized configurations per the 1Q-9(M)A-34-1-1. The BRU-71/A will be pressurized to 3,100 – 3,400 pounds per square inch by ground crews for all stations loaded with releasable ordnance (GBU-12 live or inert). For simulated GBU-12s, the rack will remain unpressurized (zero pressure) and hooks closed. Firing of unpressurized BRU-71/As will not result in system damage. LR crews will continue to adhere to standard-34 checklist steps.

A9.6.9.2. The caution “*Station N: BRU-71 Pressure Low*” will appear for simulated GBU-12s in the stores management system (SMS) Status Mode – Warnings display. This is an expected caution and crews should continue normally. If this caution is not observed for simulated GBU-12s, remain two switch actuations away. If this caution is observed for a BRU-71/A loaded with a live/inert, crews should safe the system and RTB.

A9.6.9.3. Per 11-2MQ-9V3 paragraph 6.7.3., cocked station(s) will not be fired until all live or inert ordnance has been visually confirmed released with the Multi-spectral Targeting System (MTS).

A9.6.9.4. Crews may select and fire any unpressurized BRU-71/A during simulated weapons employment using the procedures outlined below.

A9.6.9.4.1. All crews must visually inspect stations with the MTS prior to the first simulated GBU-12 employment and ensure no GBU-12 live/inert weapons are loaded.

A9.6.9.4.2. The pilot-in-command will verify the caution “*Station N: BRU-71 Pressure Low*” exists prior to firing the BRU-71/A for that specific station.

A9.6.9.4.3. When fired, the HUD GBU icon for the unpressurized BRU-71/A will turn solid red and the warning “*Hung*” and “*Error*” will flash in the SMS Store Information Box for that station.

A9.6.9.4.4. All fired, unpressurized BRU-71/As may be reset by re-inventorying them via the SMS Inventory page, similar to the M36E11, to allow for additional simulated weapon releases.

**A9.7. Arrival Procedures.**

A9.7.1. All RPAs must recover from restricted airspace IAW A9.3.4. or as directed by ATC. If required, appropriate altitude restrictions along recovery route must be issued by CHEROKEE. Generally, fighter aircraft will have traffic priority during their recovery and RPA may be requested to “*ORBIT PRESENT POSITION*”, “*PROCEED TO LAST SIX*”, or orbit as directed by ATC.

A9.7.2. All RPA will cross Valmont ATCAA between 18,000 and 30,000 ft MSL. Aircrew will remain with CHEROKEE for coordination and adhere to any further restrictions. RPA aircrew will ensure their emergency mission crosses the Valmont ATCAA at or above FL180.

A9.7.3. RPAs must enter HMN Class D airspace via the Orange or Green Routes outlined in paragraph A9.3.4. or as directed by ATC. If necessary for clarification, the controller will specify route points and the order in which to fly them.

A9.7.4. Example recovery phraseology:

A9.7.4.1. ATC: “*CLAW24, CLEARED OFF RANGE VIA GREEN, SOUTH*”.

A9.7.4.2. ATC: “*BONES38, CLEARED OFF RANGE VIA RED, EAST, ORANGE,*

*SOUTH*'.

A9.7.4.3. ATC: *"KNIGHT30, CLEARED OFF RANGE VIA ORANGE, SOUTH, CROSS THE 44 LINE AT OR ABOVE 13,000"*.

A9.7.5. **RESERVED** for RPA Self-Contained Approach.

#### **A9.8. VFR Traffic Patterns.**

A9.8.1. RPA operations in Class D outside of R5107D. Aircrew and ATC will adhere to the following procedures when conducting RPA operations within Class D airspace outside of R5107D:

A9.8.1.1. RPA pilots will coordinate with Tower prior to conducting approaches to Runway 25.

A9.8.1.2. During night time, operations mixing of civil manned and RPA traffic within Class D airspace is prohibited.

A9.8.1.3. Tower will monitor the Tower Display Workstation (TDW), if available, as a supplement to ensure no traffic is approaching the controlled airspace without making the required radio contact. Additionally, information from the TDW will be used to help reduce possible night time optical illusions. If the TDW is not operational, night operations will not be authorized.

A9.8.1.4. A ground based observer will monitor the RPA as it makes its approach to Runway 25. The SOF, Tower WS, or any other controller in the tower cab can act as the Ground Observer, in that order of preference, and in accordance with below:

A9.8.1.4.1. The local controller will notify the ground observer when the RPA exits R5107D for approach to Runway 25.

A9.8.1.4.2. The Tower WS or any Tower controller will not perform observer duties while also acting in an air traffic capacity. The SOF will not perform observer duties while assisting with a separate emergency or other abnormal situation.

A9.8.1.5. While outside of R5107D airspace, the observer must maintain sufficient visual contact with the RPA in order to ensure avoidance of other air traffic with the RPA. Should a traffic conflict arise, the ground observer is expected to alert ATC to the situation. **Note:** Only ATC personnel may authorize direct communication over ATC frequencies; however, this does not preclude the ground observer from using whatever communication is necessary to prevent an unsafe situation that could immediately jeopardize safety.

A9.8.1.6. Incident/Accident/Mishap reporting procedures: Immediately after an incident or accident, and before additional flights, RPA Ops Sup, or designated representative will inform the HAM.

A9.8.2. RPA VFR Pattern Weather Minimums. Overhead/Rectangular: Ceiling must be 500 ft above the requested Overhead/Rectangular pattern altitude or orbit area and 3 SM visibility. SFO: Ceiling must be 1,000 ft above pattern altitude and visibility 5 SM.

A9.8.3. Overhead Pattern. Pattern altitude (initial point) is 5,600 ft MSL or as directed by ATC. RPA overhead patterns at night are permitted with operational infrared (IR) camera or sensor. RPA overhead break must normally be away from the main base (RY 16/34 west break; RY 22/04/25/07 north break).

A9.8.4. Rectangular Pattern. MQ-9 pattern altitude for is 5,600 ft MSL.

A9.8.4.1. Runway 16 is normally west patterns. Expect orbits at Phoenix, Seattle, on downwind, or as directed by Tower for deconfliction from departing and arriving traffic.

A9.8.4.2. Runway 34 is normally west patterns. Expect orbits at Phoenix, Seattle, on downwind, or as directed by ATC for deconfliction from departing and arriving traffic.



A9.8.4.3. Runway 07/25 is normally north patterns. Expect orbits at Miami, Phoenix, on downwind, or as directed by Tower for deconfliction from departing and arriving traffic. Avoid left traffic to runway 25 to the max extent possible.

A9.8.4.4. Runway 04/22 is normally north patterns. Expect orbits at Phoenix, Miami, on downwind, or as directed by Tower for deconfliction from departing and arriving traffic.

A9.8.4.5. Tower may direct other non-standard deconfliction orbits or pattern altitudes when required.

A9.8.4.6. Unless directed by Tower, RPA crews will avoid closed pattern turns from Runways 34 and 25 in the direction of the Control Tower until at least 400 ft AGL or at the departure end of the runway.

A9.8.5. Protection of the 360 Degree Overhead Pattern. After completing approach, maintain at or below 5,600 ft MSL until departure end unless otherwise directed by Tower. For Runway 25, maintain at or below 5,600 ft MSL until west end of Taxiway Golf. Fighter overhead pattern breakouts may climb to 6,600 ft MSL in the direction of the pattern until clear of the outside downwind. When an orbit area conflicts with overhead pattern breakout, Tower will direct RPA orbits at or above 7,100 ft MSL.

A9.8.6. RPA Straight-in. RPA will be at or below 5,600 ft MSL prior to departing 3 NM final.

A9.8.7. RPA SFO Restrictions/Cut-offs.

A9.8.7.1. Only locally assigned RPA may conduct SFO approaches at HMN.

A9.8.7.2. Prior coordination with Tower WS is required to conduct an SFO. Prior coordination does not constitute blanket approval. Approval or disapproval must take place real time after considering traffic volume and safety concerns. Straight-in or Alternate-Entry SFOs are not authorized.

A9.8.7.3. No more than two RPA will be allowed to execute SFO procedures simultaneously. Maximum number of aircraft operations while an SFO approach is being conducted are: Fighters: two; Heavy aircraft: one; Turboprop: two; RPA: three. Aircraft operations include aircraft requesting departure, inbound aircraft within 15-flying miles (regardless of frequency) and over flights within the Class D airspace (regardless of frequency). Tower WS will determine the number of aircraft that can safely operate in the VFR pattern. Tower must consider other aircraft characteristics, climb-out, missed approach, availability of the Tower Radar Display, active restricted airspace, and FAA mandated intersecting/same runway separation before authorizing other operations during SFO patterns.

A9.8.7.4. RPA SFO vs. Other IFR/VFR Straight-in Arrivals. Other aircraft inbound to the same or intersecting runway must be more than 15-flying miles away for fighters and 10-flying miles away for all other aircraft before the RPA leaves high-key. Aircraft inside the 15/10-mile cutoff may be sequenced behind the RPA or held outside the Class D.

A9.8.7.5. RPA SFO vs. Other VFR Rectangular/Overhead Pattern. Tower may allow RPA SFOs to leave high key and follow traffic that has passed base turn.

A9.8.7.5. RPA SFO vs. Other IFR/VFR Departures. Departures from the same or intersecting runway must be rolling before an SFO reports low key.

A9.8.7.6. SFOs are only authorized to terminate in a low approach.

A9.8.7.7. SFOs at night are permitted IAW ACC/A3A approval and MQ-9 Class D MoA, night SFOs must remain within R5107D. Simultaneous non-UAS pattern ops are not authorized.

A9.8.8. SFO Pattern Specifications:

A9.8.8.1. Once Tower approves the SFO recovery, climb or descend to 6,600 ft MSL (MQ-9) along the inside or outside downwind ground track. Report High Key and perform engine-out procedures while remaining within the inside downwind ground track.

A9.8.8.2. All SFO patterns begin with the RPA aligned with the runway centerline, at the approach end of the landing runway, defined as the first one-third of the runway in use. SFO patterns will be flown toward the inside downwind as appropriate for MQ-9 (Figures A9.3. through Figure A9.8.). Patterns to Runway 16/34 will remain to the west of the runway and patterns to Runway 04/22 and 07/25 will remain to the north of the runway.

A9.8.8.3. All SFO patterns will remain clear of HMN housing when able.

A9.8.8.4. MQ-9 SFOs above 8,500 lbs gross weight will terminate to a low approach at no less than 100 ft AGL.

A9.8.8.5. MQ-9 SFO High Key is over the runway approach end at 6,600 ft MSL and airspeed approximately 100 knots.

A9.8.8.6. MQ-9 SFO Low Key is at a point abeam the intended touchdown zone, between 5,200 ft and 5,500 ft MSL.

A9.8.8.7. MQ-9 SFO Base Key is at a point halfway through the final turn between 4,900 ft and 5,100 ft MSL.

A9.8.8.8. SFO Breakouts are listed in Table A9.3.

**Table A9.3. SFO Breakouts.**

Runways 16/34: Westerly climbing turn back to high key altitude.
Runways 04/22/07/25: Northerly climbing turn back to high key altitude.
Different breakout procedures may be directed by Tower for deconfliction purposes or approved upon pilot request. “ <i>BREAKOUT</i> ” will normally not be used once an RPA has departed Low Key, instead Tower will use “ <i>GO-AROUND (additional instructions as</i>

A9.8.9. SFO Phraseology:

A9.8.9.1. Request SFO approach with Tower by stating “(call sign), *REQUEST HIGH KEY*”.

A9.8.9.2. Traffic permitting, Tower will approve the SFO by stating “(call sign), *REPORT HIGH KEY*”.

A9.8.9.3. Report High Key, “(call sign), *HIGH KEY*”.

A9.8.9.4. Tower will request the RPA to report Low Key “(call sign), *REPORT LOW KEY*”.

A9.8.9.5. Report Low Key, “(call sign), *LOW KEY, GEAR DOWN, LOW APPROACH*”.

A9.8.9.6. At Low Key, Tower will issue low approach clearance or alternate instructions.

A9.8.9.7. Report Base Key (Optional). “(call sign), *BASE KEY*”.

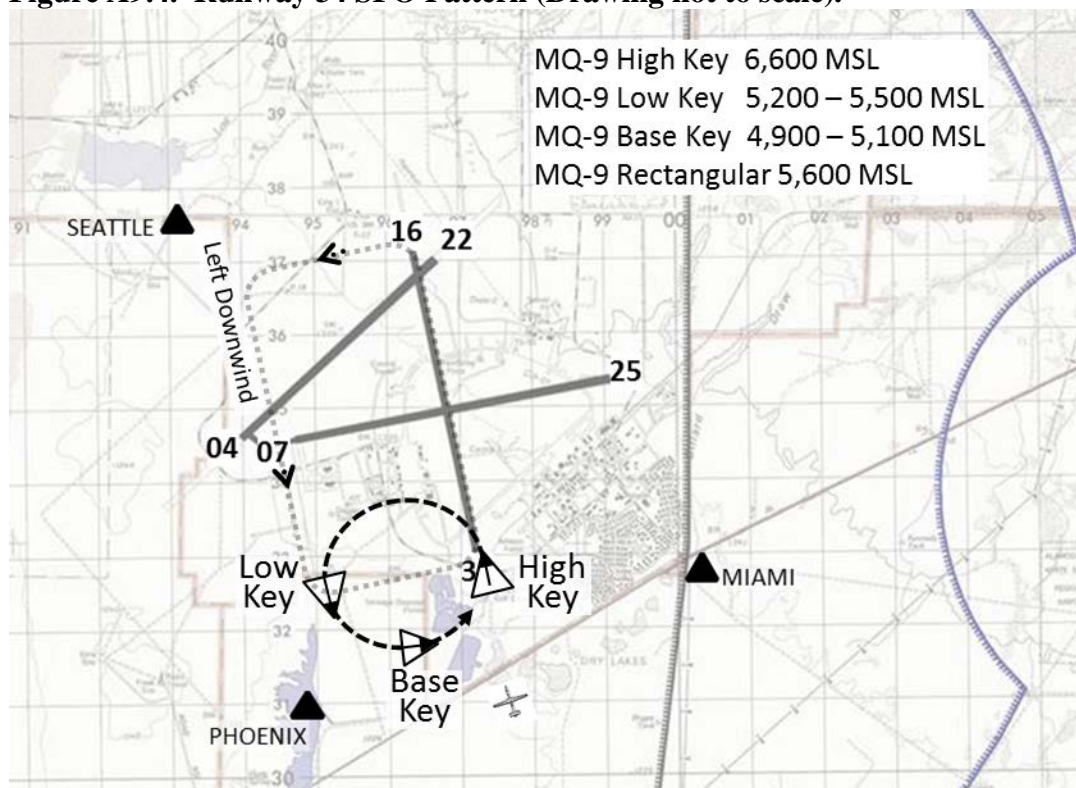
A9.8.9.8. At Base Key, Tower will issue low approach clearance or alternate instructions.

A9.8.10. West Outside Downwind/Re-Entry (Runway 16/34 only) may be used for training or deconfliction from departing and arriving traffic. West Outside Downwind ground track is displaced 3 NM west of Runway 16 or 34. See Figures A9.3. and A9.4.

A9.8.10.1. At departure end initiate a right turn (Runway 16) or a left turn (Runway 34), maintain at or below 5,600 ft MSL. Higher than standard pattern altitudes may be requested or directed. Coordinate intentions (overhead, straight-in, or SFO) with Tower when established on the West Outside Downwind. Turn 90-to-initial or base to intercept 3 NM. At 90-to-initial, pilots will report: “(call-sign) *90-TO-INITIAL, or (call-sign) DESCENDING STRAIGH-IN*”. Tower will acknowledge the position report and may issue additional reporting instructions or non-standard deconfliction orbits when required.



**Figure A9.4. Runway 34 SFO Pattern (Drawing not to scale).**



**Figure A9.5. Runway 04 SFO Pattern (Drawing not to scale).**

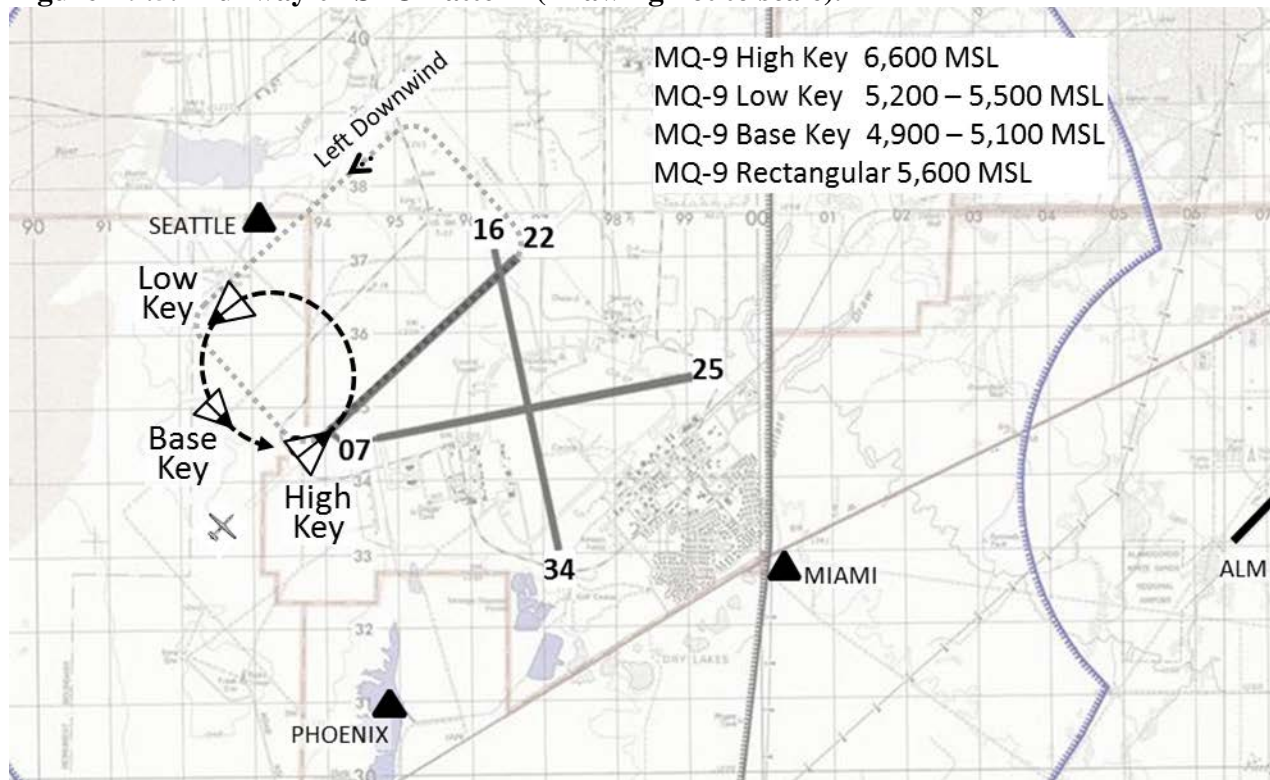




Figure A9.6. Runway 22 SFO Pattern (Drawing not to scale).

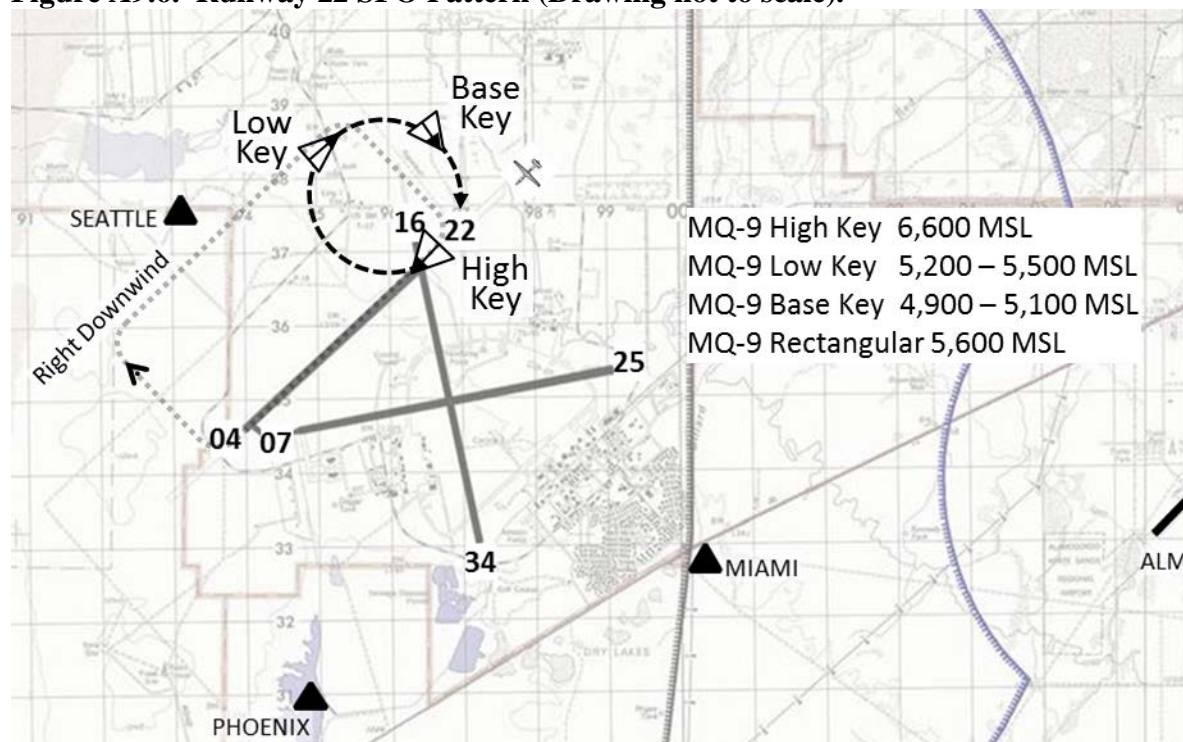
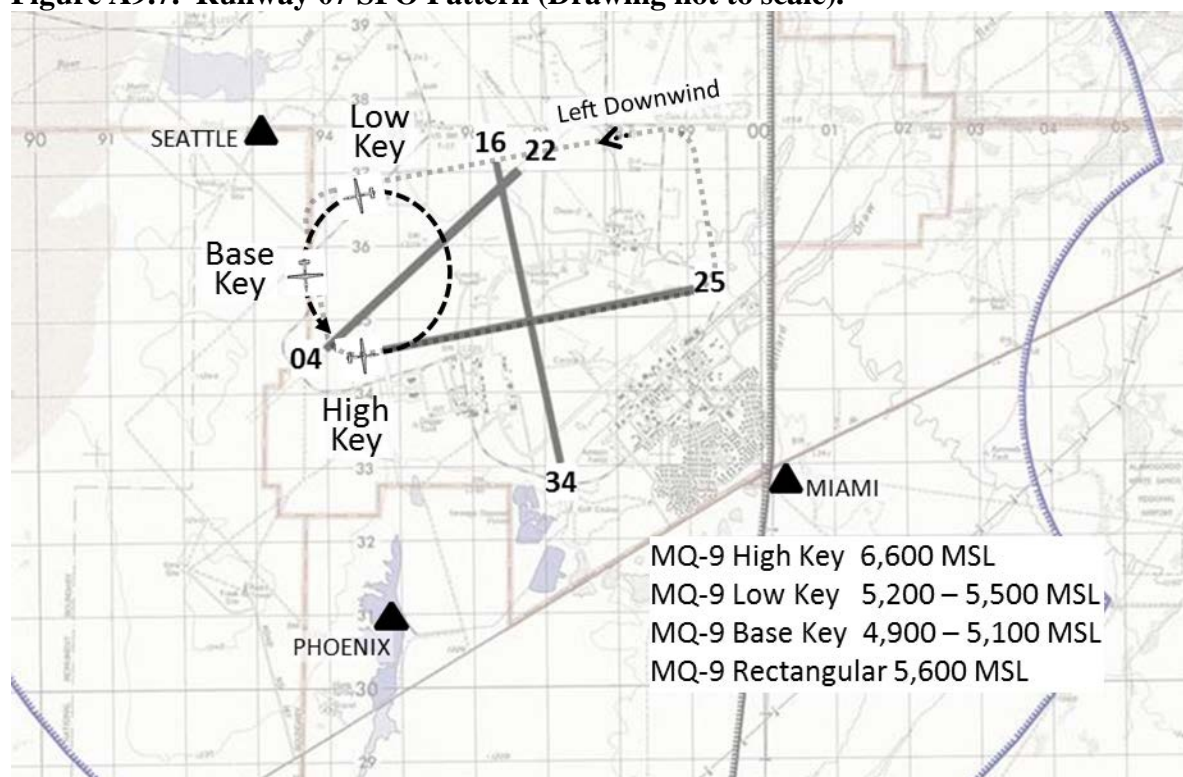
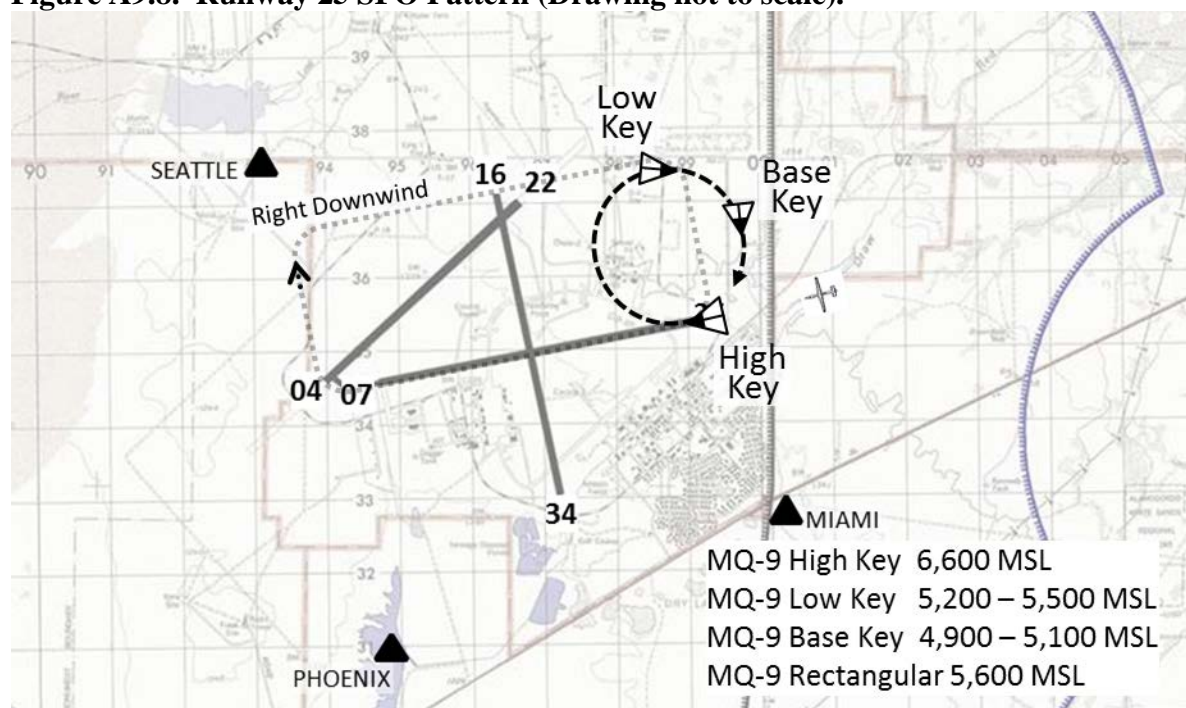


Figure A9.7. Runway 07 SFO Pattern (Drawing not to scale).





**Figure A9.8. Runway 25 SFO Pattern (Drawing not to scale).**



### **A9.9. Abnormal/Emergency Procedures.**

A9.9.1. Loss of Thrust or Engine Failure East of the Valmont. An emergency such as a loss of thrust or engine failure that prevents the aircraft from crossing the Valmont corridor at or above FL180 does not preclude the crew from attempting to glide back to HMN. The crew will declare the emergency with the appropriate ATC agency as soon as possible in order to receive priority as well as assistance with coordination and deconfliction.

A9.9.2. RPA Hung Forward Firing Ordnance (see paragraph 8.9.).

A9.9.3. **(MQ-9 only)** Hung Free-Fall Ordnance. MQ-9s with hung free-fall ordnance will comply with the Hung Ordnance Procedures identified in Chapter 8.

A9.9.4. RPA Emergency Divert Base Designation. HMN assigned RPAs do not currently have an emergency divert base other than HMN.

A9.9.5. Lightning:

A9.9.5.1. RPA MD-1 GCS do not have integral lightning protection. Until a lightning protection system is installed, the following steps will be followed to mitigate the hazard and risk to aircrew.

A9.9.5.2. The GCS Farm located on the ramp behind Building 302 is surrounded by taller buildings with lightning protection installed; per T.O. 1Q-1(M)A-1 paragraph 7.2.2.3., the GCS “*may be protected by area lightning protection systems at the operating location.*” Mission Control Element operations may continue in the event a lightning within 5 NM warning has been issued; however, personnel will not transit to or from the GCS until the lightning within 5 NM warning has been rescinded.

A9.9.5.3. Thunderstorm Avoidance for RPA operations. MQ-9 aircrew will adhere to provisions listed in AFI 11-202v3 ACCSUP, paragraph 5.26. Specifically, paragraph 5.26.1. for LRE operations and 5.26.3. for MCE operations. As always, RPA Ops Sups and PICs will use sound judgment based on existing and forecast weather conditions.

A9.9.5.4. Aircrew, in coordination with their Ops Sup and SOF will be expected to have aircraft safely recovered prior to forecast/reported hazardous thunderstorm activity within 10 NM of the field.

A9.9.5.5. ACC/A3 waives the turbulence description of “*Light/Category I aircraft*” from paragraph 4.2.2.1 of AF11-2MQ-1&9V3. MQ-9 aircrews will not takeoff if severe turbulence is forecast or reported along the route of flight. ACC/A3 is confident aircrews will work closely with weather forecasters to determine if local conditions permit PRA operations and adhere to turbulence guidance provided in the Adverse Weather Operations section of their respective Flight Manual.

A9.9.6. RPA Weather Recall Procedures.

A9.9.6.1. 49 OSS/OSW will immediately notify the SOF and Tower with pertinent adverse conditions and location. Any pilot or controller observing such conditions should immediately pass that information to their Ops Sup, SOF, Tower WS or WSRF WS, and 49 OSS/OSW.

A9.9.6.2. The SOF will coordinate with RPA Ops Sup when determining whether to recall, discontinue departures, or direct full-stops. RPAs will recover IAW AFI 11- 2MQ-1&9V3 specific guidance.

A9.9.7. RPA Forced Landing Procedures. If unable to glide back to HMN using LOS link, avoid populated areas and glide to the nearest uninhabited, undeveloped site. RPAs with live ordnance will make every effort to remain within the impact area of assigned range. Avoid the following areas:

A9.9.7.1. Red Butte (N33.8262 W106.6645).

A9.9.7.2. Stallion Range Center (N33.8157 W106.6679).

A9.9.7.3. Trinity Site (N33.6783 W106.4785).

A9.9.7.4. Permanent High Explosive Test Site (PHETS) (N33.6518 W106.5382).

A9.9.7.5. Aerial Cable Facility (N33.6219 W106.4064).

A9.9.7.6. Oscura (N33.5190 W106.2125).

A9.9.7.7. Salinas Peak (33.2987 W106.5323).

A9.9.7.8. RAMS (N33.1725 W106.5692).

A9.9.7.9. Rhodes Canyon (N33.1612 W106.4871).

A9.9.7.10. Andre Site (N32.8676 W106.4902).

A9.9.7.11. Main Site (N32.8817 W106.3472).

A9.9.7.12. HSTT (N32.9320 W106.1478).

A9.9.7.13. WSNM ((N32 46.78 W106.1035).

A9.9.7.14. High Energy Laser System Test Facility (HELSTF) (N32.6321 W106.3323).

A9.9.7.15. Small Missile Range (SMR) (N32.4803 W106.4190).

A9.9.7.16. Oro Grande Range Camp (N32.4053 W106.1520).

A9.9.7.17. 500 ft Met tower (LC-236) (N32.4119 W106.3267).

A9.9.7.18. Main Post Area + Launch Complexes on Nike Blvd (N32.3784 W106.4814).

A9.9.7.19. SV Directorate (N32 20' 51.87" W106 26' 45.27").

A9.9.7.20. NASA WSTF (N32 30' 58.80" W106 35' 53.70").

A9.9.8. RPA Lost Link Procedures.

A9.9.8.1. As soon as conditions permit, the PIC must notify controlling agency the following: time of Lost Link, last known position, altitude, direction of flight, and confirm execution of Lost Link procedures.

A9.9.8.2. In the event a RPA goes Lost Link, it will fly its pre-programmed emergency

mission which will terminate in the Last Six waypoints (Figure A9.9.). The PIC must immediately notify the controlling agency (Tower, WSRF, or ABQ ARTCC) of the Lost Link condition. The PIC will advise the controlling agency of the RTB timetable and routing. ATC will advise any aircraft or agencies that might be affected by the Lost Link aircraft. Upon declaration of Lost Link, radar service/IFR clearance is automatically terminated/cancelled. A Lost Link aircraft that reaches the Last Six area and is within 1 hour of fuel exhaustion will be considered an emergency aircraft and the PIC must declare an IFE with the controlling agency.

A9.9.8.3. RPA aircrew will deconflict their emergency missions over Last Six in 1,000 ft increments. In the event weather and/or airspace preclude use of scheduled orbits, the Ops Sup(s) will coordinate 500 ft altitude stacks or direct the RPA to RTB as required. Ops Sups will develop and brief Lost Link deconfliction plan for ALL RPAs and Airspaces.

A9.9.8.3.1. MCE RPA aircrew will keep current mission information updated in Skynet. Emergency Mission altitudes below 11,100 ft MSL require the PIC to coordinate with the Ops Sup for deconfliction from LRE mission altitudes.

A9.9.8.3.2. LRE RPA aircrew will deconflict emergency mission altitudes. The standard altitudes are as follows: Pool 1--7,100'; Pool 2--7,600'; Pool 3--8,100'; Pool 4--8,600'; Pool 5--9,100'; Pool 6--9,600'. Blocks 10,100' and 10,600' are reserved to use as needed in the future. PICs using additional Pools or deviating from the standard altitudes will deconflict altitudes via the Ops Sups.

A9.9.8.4. Unless specifically mission planned, briefed, and executed in compliance with all applicable guidance/instructions, all RPA aircrew will set a range Minimum Altitude MSL that will provide a mountainous terrain clearance of 2,000 ft above the highest obstacle/terrain feature (rounded to the next highest 100 ft) within 5 NM of the operating area. During LR, all RPA aircrews will set Initial Lost Link Heading (ILLH) to planned runway heading and Initial Lost Link Altitude (ILLA) to 4,600 ft MSL; MQ-9 aircrew will set a Minimum Altitude MSL altitude to 5,600 ft MSL. Except for airspace delays, RPAs must be pre-programmed to squawk 7400 when they are lost link.

A9.9.8.5. On departure, the preprogrammed emergency mission will be set to follow the cleared departure routing and delay in the assigned airspace for no less than 30 minutes before recovering.

A9.9.8.6. While in assigned airspace, the preprogrammed emergency mission will be set to begin with no less than a 30 minute delay at the assigned altitude (squawk normal), then recover as described above (squawk 7400). If altitude change is required for deconfliction, aircraft will climb/descend upon departing loiter enroute to WP 2 and remain at new altitude for RTB.

A9.9.8.6.1. Ensure emergency mission crosses Valmont at/above 18,000 ft MSL. Waypoint 1; 30 minute loiter at assigned altitude. If Ku link cannot be re-established Ops Sups will attempt to coordinate for crews to acquire link via LOS during this loiter prior to aircraft departing R5103.

A9.9.8.6.2. If below 18,000 ft MSL in R5103, Waypoint 2; 30 minute loiter climbing to Skynet deconflicted altitude above 18,000 ft MSL. Remain at new altitude for RTB. Waypoint 2 will be Ops Sup assigned/deconflicted (Points A or B from current IFG RPA annex).

A9.9.8.7. During recovery, the preprogrammed emergency mission will be set fly a predictable ground track along the cleared recovery routing. If approaching the field from

the southwest to northwest quadrant, the RPA must fly to O2 of the Orange Route and then proceed direct to the Last Six. If approaching the field from any other quadrant, the RPA will fly to a point overhead the field and then proceed direct to the Last Six. Lost Link planning will not descend the RPA below 7,100 ft MSL until after the LR crew has established two-way communication with the Tower.

A9.9.8.8. In the event Lost Link occurs in the Class D airspace the preprogrammed emergency mission will be set to fly the RPA direct to a point 1 NM past the departure end of the active runway. The RPA will then turn to its second waypoint, 0.3 NM south of the Last Six. The RPA will climb no higher than 1,500 ft AGL. After reaching the second waypoint, the Lost Link aircraft will then climb to its assigned altitude as it flies the Last Six waypoints.

A9.9.8.9. If the RPA departs its Lost Link route and the PIC has aircraft positional awareness, he/she must notify the controlling agency immediately.

A9.9.8.10. If control of the RPA cannot be regained, it will orbit at the Last Six until fuel exhaustion.

A9.9.8.11. If the data link cannot be re-established within 1 hour of fuel exhaustion, the SOF (or Ops Sup, if no SOF on duty) must coordinate with the 49 OG/CC for the probable activation of the HMN Installation Emergency Management Plan 10-2, On/Off Base Aircraft Accident Checklist(s).

A9.9.8.12. The Last Six orbit area (Figure A9.9. and Table A9.4.) is the primary C-band recovery orbit for aircraft that have lost Ku band command and control links, but may also be used as a delay orbit during periods of traffic pattern saturation.

A9.9.8.13. Romeo Departures may be restricted when a Lost Link RPA is orbiting at the Last Six.

A9.9.8.14. Lost Link while on ground/taxiing. If an RPA loses link while on the ground (less than approximately 50 KIAS—software and MQ-9 specific), the throttle will be set to ground idle, brakes will be set, and the engine will be killed all within 7 seconds. Approximately 25 seconds later the brakes will be released and the aircraft may roll. Crash Recovery will have to respond and tow the aircraft off of the runway or taxiway.

Figure A9.9. RPA Last Six Orbit Points (Drawing not to scale).





**Table A9.4. Last Six Lost Link Orbit Points.**

Emergency Mission Waypoint 3	N 32° 53' 50.10" W 106° 15' 03.54"
Emergency Mission Waypoint 4	N 32° 55' 25.26" W 106° 16' 01.36"
Emergency Mission Waypoint 5	N 32° 56' 58.46" W 106° 15' 04.83"
Emergency Mission Waypoint 6	N 32° 57' 01.38" W 106° 12' 15.21"
Emergency Mission Waypoint 7	N 32° 55' 27.20" W 106° 11' 14.84"
Emergency Mission Waypoint 8	N 32° 53' 49.13" W 106° 12' 11.36"
LL4	N32 52.898 W106 05.287
LL7	N32 51.409 W106 03.498
LL16	N32 49.022 W106 05.712
LL22	N32 50.098 W106 08.933
LL25	N32 50.576 W106 09.001
LL34	N32 53.262 W106 06.786
Pattern Lost Link Entry Point #2	N32 53.003 W106 13.536

**A9.9.9. RPA Lost Communications/No Radio (NORDO).**

A9.9.9.1. Squawk 76XX (16, 34, 07, 25, 04, 22) for intended landing runway. If a greater emergency exists, squawk 7700.

A9.9.9.2. Direct telephone communications between ATC and a NORDO RPA are the primary means of back-up communication. NORDO RPA WILL NOT conduct multiple VFR practice patterns. NORDO RPA will use the telephone to coordinate recovery and landing clearance. ATC will advise all effected aircraft of a NORDO RPA's intentions.

A9.9.9.3. RPAs must configure their MTS or targeting pod (video cameras) to position mode while operating below 500 ft AGL. Consequently, the use of standard light gun signals by Tower during RPA NORDO situations on final would normally be ineffective and is not recommended.

**A9.9.10. Carbon Monoxide Monitor.** All HMN GCSs are equipped with Pro-Tech 8505 Carbon Monoxide Monitors (CMM), located directly above/behind the pilot. When a carbon monoxide level of 20 parts per million (ppm) or greater is detected, a Flashing Red Light-emitting Diode (LED) and audible alarm will activate. When this occurs:

A9.9.10.1. Crews will verify what level the monitor reads (10 - 999 ppm) and notify Maintenance/Ops-Sup.

A9.9.10.2. Ops-Sups will contact Bioenvironmental Engineering at 575-491-6748 or DSN 572-7938.

A9.9.10.3. If 50 ppm or greater is observed, crews will execute the "*Smoke, Fumes, or Fire in the GCS*" checklist, and contact Ops Sup (as time/conditions permit without compromising personal safety).

A9.9.10.4. If at any point crews experience symptoms outlined in "*Carbon Monoxide Exposure*" checklist, regardless of ppm level, crews should execute the "*Smoke, Fumes, or Fire in the GCS*" checklist.

**A9.10. GPS Jamming and RPA Operations.**

A9.10.1. This section identifies RPA procedures for scheduling and flying during GPS jamming activities. The Office of Primary Responsibility for guidance in this section is 49th Operations Support Squadron Wing Weapons (49 OSS/OSK).

A9.10.2. Scheduling is responsible for coordinating and tracking GPS jamming in HMN Local Airspace. The following timeline is stated in WSMROI 70-3 for scheduling GPS jamming. However in execution, the timeline may happen significantly closer to the execution date.

A9.10.2.1. T-60 - WSMR Range Scheduling enters event into schedule.

A9.10.2.2. T-28 - Scheduling is provided information package at weekly scheduling meeting. This includes program description, jammer locations, GIANT L1 and L2 Jam to Signal (J/S) ratio plots, schedule, etc. GIANT plots will include the scheduled flying window,  $\pm 1$  hour, for:

A9.10.2.2.1. HMN Ramp at 15 ft AGL, for initial L1 acquisition.

A9.10.2.2.2. HMN Airspace at 10,000, 15,000, 20,000, and 25,000 ft MSL.

A9.10.2.3. T-14 - GPS Jamming Mission submitted for Conduct Approval.

A9.10.2.4. T-7 - WSMR mission is coded and committed to schedule, schedule locked.

A9.10.2.5. T-0 - Test Execution Day.

A9.10.3. Scheduling will forward applicable information to the effected squadrons as soon as possible to enhance squadron awareness. To aid in real-time execution by RPA Ops Sup's, Next Day (ND) and Current Day (CD) GIANT plots, and/or lines of deconfliction, for each specific CSE Airspace Restriction Mission ID/Name will be posted or linked in/from the CSE home page under "*Scheduling Documents*".

A9.10.4. Aircrew will also add GPS jamming events into their Operational Risk Management (ORM), by defining GPS jamming as "*Mission Issues – Airspace: Real-time Coord*". While not driving overall Mission ORM to any specific level, this should be considered in weighing overall mission risk and mitigation strategies.

A9.10.5. See 49 WG IFG / RPA Annex for additional GPS Jamming guidance.

## Attachment 10

### UNCONTROLLED AIRFIELD OPERATIONS (UAO)

**A10.1. Introduction.** This attachment implements AFI 13-204V3, Attachment 4, *ORM Considerations For Operations When Essential Services Are Not Available*.

A10.1.1. It outlines flying procedures for HMN AC, 704 TG, and AA to operate during periods when HMN ATC Tower and AM are closed.

A10.1.2. This attachment also outlines airfield operating procedures for the units that are authorized access to the runways, Taxiway Golf, and North Ramp when the airfield is closed. In addition to the units above, airfield drivers include: FD, 49 SFS, Ambulance Response, Crash Recovery, Operations Duty Officers (ODO), BM and Airfield Maintenance, Exterior Electric, ATCALS maintenance, 49 LRS/LGRF, 82 ATRS, and its contractors.

A10.1.3. Additionally, the 49 OSS/OSA and 49 WG/CP have duties in this publication. All of the above units are responsible for understanding the UAO process and their responsibilities within this publication. The intent is to ensure the safe arrival/departure of aircraft during UAO.

**A10.2. UAO Limitations.** Operations conducted under the scope of this attachment have specific limitations. **Note:** AC refers to all locally assigned aero club aircraft. 704 TG refers solely to aircraft operating under or hosted by the 704 TG. AA refers to all Army Air rotary wing and fixed wing aircraft assigned to HMN. At no time will any organization operate a jet aircraft. Unit will be cognizant of weight restrictions for taxiways and parking areas.

A10.2.1. HMN airfield hours of operation are as published in paragraph 2.20.1. UAO will take place during periods when the airfield is closed. If a unit would like to operate during hours of darkness, the ODO will be trained on airfield lighting system operation.

A10.2.2. Aircraft must not depart if weather is forecasted to go below VFR minimums within 1 hour plus or minus the scheduled departure/arrival time.

A10.2.2.1. Minimum ceiling is 1,500 ft AGL with minimum visibility of 3 SM.

**Exception:** Rotary wing aircraft may adhere to service minimums.

A10.2.3. UAO must be limited to a single departure/arrival for each aircraft. Pattern work is prohibited. Pilots must depart the aerodrome following initial takeoff unless experiencing a situation that requires an immediate landing. Pilots returning HMN to land must make one pattern to a full stop landing.

A10.2.4. AC, 704 TG, and AA must ensure operations at the airfield do not conflict with scheduled PMI of ATCALS or airfield equipment. PMI schedules are published in the FLIP. If a situation arises where UAO will impact airfield/ATCALS/barrier/lighting maintenance, the ODO and maintenance unit will coordinate and attempt to resolve. If both the ODO and maintenance unit deem safe, UAO and maintenance may occur simultaneously. If no resolution is possible, the maintenance operation will have priority.

A10.2.4.1. The unit manager for each participating unit will provide AM with up to date ODO contact lists, to include assigned ODOs and ODO's cell phone number. AM will provide unit ODOs, 49 WG/CP, 49 CES, 49 CS, 49 SFS, Tower, WSRF, FD, and Ambulance Response with the updated ODO contact list.

**A10.3. UAO - Procedures.**

A10.3.1. AM will ensure critical information/procedures for HMN UAO are published in the FLIP.

A10.3.2. The ODO is the focal point for operations conducted under the scope of this instruction. In supervising UAO, the ODO operates in lieu of the ATC Tower and AM to ensure operations are conducted safely, airfield security is not compromised, and that emergency response is available as required. If multiple ODOs are present, paragraph A10.3.14.2. identifies who will have the lead until termination of their unit's ops. The ODO will coordinate with other ODOs prior to terminating to hand off the lead to another ODO. 49 WG/CP will be advised by the incoming lead ODO of the "ODO lead" transfer.

A10.3.2.1. The ODO MUST NOT perform ATC functions and may not issue ATC instructions. Each unit conducting operations in the local area during UAO will have an ODO on duty. The ODO will be on duty until their last aircraft shuts down. For aircraft arriving from outside of the local flying area (i.e., cross-country arrivals), the unit will have an ODO on duty 1 hour prior to scheduled arrival and will remain until the aircraft is parked and the engines are shut down. For aircraft departing the local area, the ODO will be on duty from 1 hour prior to departure to 30 min after takeoff. The ODO must provide updated arrival/departure times to the 49 WG/CP. 49 WG/CP will pass the arrival/departure times to AM on the next duty day via the schedule which will have columns for departure and land times.

A10.3.3. ODO Schedule. The unit manager must manage the ODO schedule. Pilots planning to fly when HMN is closed must ensure an ODO has been scheduled.

A10.3.4. Preparation. The ODO accomplishes the following steps prior to commencing operations.

A10.3.4.1. Scheduling UAO. The ODO for the requesting unit must complete the **Figure A10.1., UAO Setup Checklist**, the duty day prior to requested operations. If UAO will occur on multiple days, coordination must be accomplished for each day. For example, if the requested ops are on Saturday or Sunday, the checklist must be accomplished on Friday by 1500L (assuming it is not a Holiday or "Down" day). If the requested ops are, for example, Wednesday night after the airfield closes or Thursday morning before the airfield opens, the checklist must be completed on Wednesday by 1600L.

A10.3.4.1.1. The ODO must obtain an in-person briefing from the AFM or their designated representative prior to commencing operations. This briefing must be the last checklist item completed. The briefing must address airfield facilities status, construction avoidance areas, and planned airfield maintenance activities during the period of UAO. Once the checklist is complete, a copy will be given to AM for final approval. When ODO calls CE and CS, the ODO will ensure that there are no maintenance or PMIs scheduled outside of what is published in the FLIP. If an irreconcilable conflict exists, maintenance operations will have priority IAW paragraph A10.2.4. **Note:** If the full setup checklist, including AM briefing is not accomplished, the respective unit must not participate in UAO.

A10.3.4.1.2. AM will retain (see Figure A10.1.) UAO Setup Checklist for record keeping. AM will notify 49 WG/CP and email CP a copy of the upcoming UAO schedule when the checklist is turned in.

A10.3.4.1.3. WSRF/CE/CS/49 OSS/OSA reserve the right to cancel/modify scheduled UAO at any time due to unforeseen conflicts. These agencies will call 49 WG/CP to verify whether UAO will be occurring. If so, CP will refer the agency to the lead ODO. The agency will contact the lead ODO and attempt to coordinate deconfliction. If deconfliction is not possible, then the agency must inform the

ODO that ops will terminate due to mission essential activities. The agency will inform CP of the termination. The ODOs will then notify the CP once ops have terminated.

A10.3.4.2. The ODO must obtain a weather briefing for HMN and the surrounding area. Any official weather source is acceptable including a self-brief from Direct User Access Terminal Service or the National Oceanic and Atmospheric Administration internet aviation weather services.

A10.3.4.3. The ODO must contact CP to coordinate commencement of UAO prior to their unit's first aircraft engine start. CP must in turn notify the 49 MDG Ambulance response Element, FD, and 49 SFS.

A10.3.4.4. Prior to aircraft movement, the ODO must perform an airfield check on all taxi routes and runway(s) to be utilized by their aircraft to ensure movement areas are clear of FOD, wildlife, obstructions, etc. AM must provide initial and recurring training to all unit ODOs to ensure quality education on appropriate airfield checks. (See Figure A10.2., *ODO Training Checklist*).

A10.3.5. Flight Plans. IAW AFI 13-204V3, *Airfield Operations Procedures and Programs*, all aircraft departing USAF installations must have a flight plan on file with AM (or locally assigned unit with approved flight plan processing procedures in place) prior to takeoff. Use DD Form 175, *Military Flight Plan*, or other authorized forms IAW AFI 11-202V3, *General Flight Rules*. In the remarks section of the flight plan(s) the pilot will annotate "UAO". Flight plans will be retained by originating unit, pilot must file, activate, and close flight plans with ABQ Flight Service Station (FSS) or other applicable facility.

A10.3.5.1. Units will maintain the original flight plan according to AFRIMS RDS available from the Air Force Portal link. Suspension of UAO privileges may occur if unit records are not maintained properly.

A10.3.6. Step briefing. The ODO must accomplish an in-person briefing with each aircrew prior to launch. The ODO must ensure knowledge of each aircrew's intentions. Additionally, the ODO must brief aircrews on any airfield taxi, departure, and landing restrictions.

A10.3.7. Taxi Routes. Pilots must taxi in the most direct route to and from the runway consistent with safety and taxi restrictions. Pilots must not taxi into restricted areas (to include the West Ramp) and all taxi operations must be overt. Pilots must give right of way to all emergency vehicles.

A10.3.8. Runways. Operations are unrestricted on Runway 04/22 and Runway 16/34. Runway 07 at or east of Taxiway Foxtrot may be used for departures only. Runway 07 WILL NOT be used for landings under any circumstances. Runway 25 WILL NOT be used for landings and takeoffs under any circumstances. The ODO must determine runway in use based on existing and forecasted wind direction. ODOs must coordinate this information with other participating unit ODOs to alleviate conflicts.

A10.3.8.1. AA Helicopters may depart and land at the North Ramp in lieu of using the runways.

A10.3.9. Patterns. Pilots will adhere to recommended pattern procedures for UAO as described in the Aeronautical Information Manual (AIM) and other related FAA regulations. Observe traffic pattern and VFR procedures identified in Chapter 6, Attachment 6, and Attachment 8.

A10.3.9.1. In order to ensure deconfliction with KALM, which is within 6 NM of HMN, the south east sector of HMN Class Delta airspace must not be used. The southeast sector



consists of an imaginary line extending off of the departure ends of Runways 16 and 07 to extend to 5 NM. **Note:** Exception standard downwind to Runway 16/34 is allowed.

A10.3.10. Altimeter Setting. Pilots must obtain an altimeter setting from the KALM Automated Weather Observing System (AWOS) @ 127.825 or the HMN Weather Observer, if on duty.

A10.3.11. Airfield Lighting Training. All unit ODOs planning flight operations during hours of darkness will schedule training with CE Exterior Electric for lighting procedures at the Airfield Lighting Vault (ALV) (Building 863) prior to scheduling night ops.

A10.3.12. If aircraft are departing/arriving at night, the ODO must turn on airfield lighting at the ALV no more than 30 minutes prior to taxi and no less than 30 minutes prior to landing. Airfield lighting must be turned off by the ODO no earlier than 30 minutes after departure and prior to terminating operations. **Note:** If airfield lighting is not turned on prior to landing, aircraft must divert to KALM or other airports as required until lighting is turned on.

A10.3.13. Commencement/Termination of Operations. The ODO must report commencement/ termination of operations to 49 WG/CP. 49 WG/CP will ensure that a new lead ODO has been coordinated if applicable or will notify the 49 MDG Ambulance Response Element, FD, and SFS that UAO has been terminated.

A10.3.14. Communication procedures.

A10.3.14.1. Radio Communications. Common Traffic Advisory Frequency (CTAF) is HMN Tower frequency, 119.3. (119.3 is continuously recorded as an ATC frequency) **Note:** Use of UHF for the purpose of HMN CTAF is not authorized. Pilots must adhere to the recommended radio procedures for UAO as described in the AIM. Departing pilots must establish contact with the ODO before taxiing to the runway for departure. Arriving pilots must establish contact with the ODO at least 10 NM prior to landing. The ODO must provide airfield advisories as appropriate. All communication between the ODO and the aircraft will be via the CTAF on a VHF radio.

A10.3.14.2. The ODO must use unit specific call signs:

**Table A10.1. Unit Specific Call Signs.**

AA -	“ODO One”
AC -	“ODO Two”
TG -	“ODO Three”
<b>Note:</b> The above order of ODOs designates a priority to who will be the lead ODO. Example: AA is the first and only ODO on the scene. If AC arrived to commence ops, the lead ODO would be transferred to AC.	

A10.3.14.3. The primary method for the ODOs to communicate with vehicular traffic will be via land mobile radio (LMR) “Tower FM Net”. Each participating unit will ensure the ODO has an operable LMR (Tower Net). All vehicle operators that will be accessing the runways, Taxiway Golf, or North Ramp will have an operable LMR (Tower FM Net) to ensure two-way communication between the ODO and the vehicle operators. ODO should communicate via cell phone as a last resort. The ODO must monitor all ops on VHF and LMR radios.

A10.3.14.4. At a minimum the ODO will transmit a blanket broadcast on the LMR Tower FM Net at the following times. Each unit ODO is responsible for broadcasting the arrival and departure advisories of their unit’s aircraft.

A10.3.14.4.1. Commencing operations (after calling 49 WG/CP)—“*Attention on the Tower Net, Uncontrolled Airfield Operations is commencing*”.

A10.3.14.4.2. When aircraft calls to taxi for departure--“*Attention on the Tower Net, aircraft departing Runway XX or North Ramp*”.

A10.3.14.4.3. When aircraft call inbound--“*Attention on the Tower Net, aircraft XX minutes from Holloman, will be landing Runway XX or North Ramp*”.

A10.3.14.4.4. Terminating operations (prior to calling 49 WG/CP)--“*Attention on the Tower Net, Uncontrolled Airfield Operations is terminated*”. **Note:** Ensure that no other ODOs are operating prior to making this broadcast.

A10.3.14.5. AM will have a limited number of LMRs with Tower FM Net capability that will be available for use, if needed, by the ODOs. LMRs will be hand receipted out on a first come, first served basis, when the ODO comes to AM to complete the (see Figure A10.1., *UAO setup checklist*). On the next duty day, the ODO will return the LMR to AM. Failure to return the LMR could result in the loss of the unit’s UAO privilege.

A10.3.14.6. The 49 WG/CP will provide vehicle operators the cell phone number of the lead ODO if the vehicle operator cannot establish communication with the ODO via LMR (Tower FM Net).

#### A10.4. UAO - Aircraft Mishap/Emergency.

A10.4.1. The PIC and the ODO have the authority to declare an emergency at any time. In the event of an aircraft mishap or declared emergency, the ODO must immediately notify FD with pertinent information (i.e., type aircraft and location) to assist rescue efforts to the maximum extent possible. The ODO must then notify 49 WG/CP, who then must, at a minimum, again notify FD, Ambulance Response Element, and SFS for immediate mishap/emergency response. 49 WG/CP will also notify 49 OSS/OSA/CC or OSA Director of Operations (49 OSS/OSA/DO) immediately, to ensure they are aware of potential impact to airfield operations. If neither 49 OSS/OSA/CC nor DO can be contacted, 49 WG/CP will call 49 OSS/DO or 49 OSS/CC. If unavailable, 49 WG/CP will call the 49 OG/CC.

A10.4.2. ODO must restrict vehicle access to emergency response vehicles only until the emergency has been terminated by the FD. After an emergency, the ODOs are responsible

for ensuring that the runway or North Ramp is clear of all debris, damage, and fluid spills. Following an aircraft mishap, aircraft debris WILL NOT be moved without Emergency Operations Control Commander approval. ODO will notify AM on the next duty day of any declared emergencies or any pertinent info to include damage to airfield or fluid spills that occurred.

#### **A10.5. UAO - Vehicle Operations.**

A10.5.1. In order to minimize the potential for incidents, only a select few agencies must come within 100 ft of any runway, Taxiway Golf, and or North Ramp when the airfield is closed. These agencies are FD, SFS, Ambulance Response, Crash Recovery, ODOs, Tower, AM, BM, Airfield Maintenance, Exterior Electric, ATCALs Maintenance, LRS Fuels, 82 ATRS, and 586 FLTS. **Note:** The 49 OG/CC may authorize additional base agencies to come within 100 ft of any runway, Taxiway Golf, and or the North Ramp when the airfield is closed as the mission dictates.

A10.5.1.1. If any other unit needs access to a runway, Taxiway Golf, and/or North Ramp for mission essential reasons when the airfield is closed, prior coordination and training must be accomplished with the AFM. The AFM will be the approval authority. Under no circumstances will any non-approved units drive on any portion of a runway, Taxiway Golf, and/or North Ramp when the airfield is closed.

A10.5.1.2. If live load operations and UAO have a conflict, live loads will take priority. 49 OSS/OSA/CC must monitor and approve UAO when live loads (that require runway crossings) are scheduled to be in effect. The ODO will be advised of non-availability of UAO when ODO comes to AM to complete the setup checklist. Supplemental training is not required for vehicle operators who are involved in live load operations because AM will deconflict and disapprove UAO during that time period if live load vehicle operators require runway access.

A10.5.2. Airfield Driving Training. Current Airfield drivers from the units referenced in paragraph A10.5.1. will receive supplemental training regarding UAO procedures. This supplemental training will be tracked by the Deputy Airfield Manager (DAFM) and unit Airfield Driving Program Manager (ADPM) to ensure compliance. Units not listed in paragraph A10.5.1. ARE NOT allowed access to the runway, Taxiway Golf, and/or North Ramp when the airfield is closed.

A10.5.3. Vehicles operating on the airfield when the airfield is closed must exercise extreme caution when operating in the proximity of taxiways/runways and/or North Ramp.

A10.5.4. Vehicle operations on the runways, Taxiway Golf, and North Ramp when the airfield is closed will be kept to the absolute minimum. Vehicles WILL NOT be left unattended on the runway at any time. In the event a vehicle requires access to a runway, Taxiway Golf, and/or North Ramp when the airfield is closed, they must call 49 WG/CP prior to entering the runway (defined as the runway and the area within 100 ft of any runway surface, Taxiway Golf, and North Ramp). If CP verifies that UAO are not being conducted, the vehicle may proceed to enter the runway environment.

A10.5.4.1. If UAO are or will be in effect, the 49 WG/CP will provide a schedule of UAO and ODO contact information and instruct them to contact the ODO for access. If UAO is scheduled during the time the vehicle requires access to a runway, Taxiway Golf, and/or North Ramp, the vehicle operator must contact the lead ODO for permission via LMR (Tower FM Net) to cross or enter any runway, Taxiway Golf, and/or North Ramp. The driver will advise the ODO of number of vehicles entering the runway, Taxiway Golf,

and/or North Ramp and notify the ODO once crossing/access is complete. Vehicle operators must visually clear the runway, Taxiway Golf, and/or North Ramp and adjoining airspace in both directions prior to proceeding across or onto a runway, Taxiway Golf, and/or North Ramp. If the 49 WG/CP or vehicle attempting to access the runway, Taxiway Golf, and/or North Ramp cannot contact the scheduled ODO via LMR (Tower FM Net) or cell phone, the vehicle must not enter or cross the runway, Taxiway Golf, and/or North Ramp. **Note:** Scheduled ODOs must be accessible via LMR and the provided contact numbers or risk suspension from UAO at the discretion of the 49 OG/CC.

A10.5.4.2. The unit ODO must transmit a blanket broadcast via LMR (Tower FM Net) prior to commencing UAO, upon receiving notification of a landing or departing unit aircraft, and prior to terminating UAO. Refer to paragraph A10.3.14.4.

A10.5.4.3. Vehicles responding to an emergency do not need to contact the ODOs prior to entering the runways, Taxiway Golf, and/or North Ramp; however, they must ensure the emergency aircraft is at a full stop before entering the runway in use. All participating emergency response vehicles must utilize extreme caution when entering, exiting, and operating within the runways, Taxiway Golf, and or North Ramp environment during UAO. FD will advise lead ODO and 49 WG/CP when emergency is terminated and all emergency vehicles are off the airfield.

A10.5.4.4. When the airfield lights are turned on and the airfield is closed, all vehicle traffic will immediately clear the runways and use increased caution while operating on the airfield until the airfield lights are turned off. Operators will call 49 WG/CP to verify UAO status. If active, the driver will contact the ODO for approval prior to crossing or entering any runway, Taxiway Golf, and or North Ramp and will state their intentions.

#### **A10.6. UAO - ODO Qualifications and Selection.**

A10.6.1. ODOs must be knowledgeable of unit aircraft operations and have sound decision-making ability. ODOs will possess either a Restricted Area Badge or an FAA pilot certificate. AC ODO candidates must be submitted to the 49 MSG/CC by both the AC Manager and AC Chief Instructor Pilot. The 49 MSG/CC will appoint the AC ODOs for 49 OG/CC approval. TG and AA must appoint ODOs and submit justification and appointment memorandum for 49 OG/CC approval. All ODO candidates must personally interview with 49 OG/CC prior to final approval. **Note:** All ODO appointments must be via official memorandum.

A10.6.2. ODO Training. The unit must develop a training program for ODOs. The training must include, but not be limited to:

A10.6.2.1. Airfield driver's training leading to an Airfield driver's license. This training will be conducted by the sponsoring unit's ADPM.

A10.6.2.2. AM will provide each unit with Airfield Inspection and Maintenance CBT and Airfield Criteria Course CBT. Prior to meeting with the AFM or designated representative the ODO must complete the CBT and provide the AFM with the certificates of completion.

A10.6.2.3. Briefing from the FD Chief or assistant.

A10.6.2.4. Briefing from the SFS Operations NCOIC.

A10.6.2.5. Airfield Lighting training conducted by CE Exterior Electric. (If unit requires night ops).

A10.6.2.6. Review of service applicable regulations.

A10.6.2.7. Briefing from the AFM or designated representative.

A10.6.2.8. Airfield orientation with qualified ODO or AM personnel if no qualified ODO

exists.

A10.6.2.9. ODOs will possess either a Restricted Area Badge or an FAA pilot certificate.

A10.6.2.10. Completed (see Figure A10.2.) ODO Training Checklist must be submitted to AM prior to assuming duties as ODO.

#### **A10.7. UAO - ODO Responsibilities.**

A10.7.1. Complete all necessary checklists.

A10.7.2. ODOs will possess either a Restricted Area Badge or an FAA pilot certificate and all items listed in paragraph A10.8.1.1. when acting as the ODO.

A10.7.3. Schedule training with CE Exterior Electric for lighting procedures and obtain access to the ALV control computer prior to scheduling night ops IAW (see Figure A10.2.) ODO Training Checklist.

A10.7.4. Ensure no unscheduled maintenance/PMIs are scheduled outside of what is published in the FLIP when coordinating with CE and CS Job Control during setup checklist completion.

A10.7.5. Coordinate with WSRF per setup checklist to ensure R5107D Area 1 IS NOT active for the proposed period of UAO. If Area 1 is scheduled to be active, UAO must be postponed.

**Note:** This paragraph is not applicable if the affected flying unit is an Area 1 participant.

A10.7.6. Ensure flight plans and any amendments are on file.

A10.7.7. Obtain an in-person briefing with AFM or designated representative prior to commencing operations during setup checklist completion.

A10.7.8. Ensure setup checklist is accomplished (Figure A10.1., *UAO Setup Checklist*).

A10.7.9. Be familiar with each pilot's intentions and flight plans.

A10.7.10. Obtain a weather briefing for HMN and the surrounding area IAW Figure A10.3., *ODO Ops Checklist*.

A10.7.11. Be on duty at respective duty location 1 hour prior to any UAO. See paragraph A10.3.2.1.

A10.7.12. Determine runway in use based on current and forecasted wind direction and coordinate with other ODOs IAW Figure A10.3., *ODO Ops Checklist*.

A10.7.13. Accomplish an in-person step brief with each aircrew prior to launch IAW Figure A10.3., *ODO Ops Checklist*. If the pilot is returning from a cross country flight (or the pilot departed when the airfield was open), it is the responsibility of the ODO to ensure the pilot is contacted and given a step briefing prior to landing at HMN.

A10.7.14. Immediately prior to commencing ops, conduct an airfield check of all taxi routes and runways, and/or North Ramp to be utilized by the aircraft IAW Figure A10.3., *ODO Ops Checklist*.

A10.7.15. Notify 49 WG/CP when commencing or terminating UAO IAW Figure A10.3., *ODO Ops Checklist*, and make blanket broadcasts IAW A10.3.14.3.

A10.7.16. All communication between the ODO and the aircraft will be via the CTAF.

A10.7.17. If more than one ODO is active, ODOs must identify a lead ODO IAW paragraph A10.3.14.2., inform CP, and all coordination must go through lead ODO.

A10.7.18. Monitor the weather and direct pilots as necessary to ensure safe operations.

A10.7.19. When called by a vehicle operator, approve or disapprove runway, Taxiway Golf, and/or North Ramp access based on UAO arriving/departing traffic.

A10.7.20. The ODO must transmit a blanket broadcast via LMR (Tower FM Net) of landing or departing aircraft.

A10.7.20.1. Check-out an LMR (with Tower FM Net), if needed, from AM. LMR will be hand receipted out on a first come, first served basis, when the ODO comes to



AM to complete the Figure A10.1., *UAO Setup Checklist*. On the next duty day, the ODO will return the LMR to AM. Failure to return the LMR could result in the loss of the unit's UAO privilege.

A10.7.21. Report unauthorized aircraft/vehicles in the airfield environment to SFS.

A10.7.22. In the event of an aircraft mishap or emergency, immediately notify FD then notify 49 WG/CP. After an emergency, ensure the runway, Taxiway Golf, and/or North Ramp is clear of all debris, damage, and fluid spills.

A10.7.23. Notify and direct emergency response to the site of an aircraft mishap.

A10.7.24. Act as the on-scene final authority for UAO until relieved by a higher authority. Higher authority may include but is not limited to SFS, FD, AM, 49 OG/CC, or designated representative.

A10.7.25. Be accessible via provided contact numbers or risk suspension from UAO.

A10.7.26. If aircraft are departing/arriving at night, the ODO must turn on airfield lighting at the ALV no more than 30 minutes prior to taxi and no less than 30 minutes prior to landing. Airfield lighting must be turned off by the ODO no earlier than 30 minutes after departure and prior to terminating operations. **Note:** If airfield lighting is not turned on prior to landing, aircraft must divert to KALM or other airports as required until lighting is turned on.

**A10.8. UAO – Participating Unit Manager Responsibilities.** (Responsibilities may be delegated to or shared with designated representatives.)

A10.8.1. Ensure respective equipment is available to the ODO and is in good working order.

A10.8.1.1. At minimum the following equipment must be provided:

A10.8.1.1.1. A Government Owned Vehicle for airfield driving.

A10.8.1.1.2. VHF radio to include spare batteries or automotive adapter.

A10.8.1.1.3. Portable LMR (Tower FM Net) to include spare batteries and/or charger.

A10.8.1.1.4. Cellular phone including a spare battery or automotive adapter. **Note:** Each unit must have a dedicated ODO cellular phone number. The unit will provide AM with the ODO cell number to be distributed to all units directed under this instruction.

A10.8.1.1.5. Publications/continuity binder which includes all applicable unit/base directives and ODO checklists and procedures.

A10.8.1.1.6. Provide updates for critical phone number listing.

A10.8.2. Manage the ODO schedule.

A10.8.3. Assign qualified unit personnel to be appointed as ODO. The ODOs will be appointed by unit commanders and approved by the 49 OG/CC. Minimize change to the maximum extent possible.

A10.8.4. Develop a training program for ODOs. Refer to paragraph A10.6.2. for the minimum training criteria.

A10.8.5. Oversee initial and periodic training for ODOs on HMN UAO.

A10.8.6. Ensure unit specific checklists are created and maintained as necessary.

**A10.9. Pilot UAO Responsibilities.**

A10.9.1. Must depart the aerodrome following initial takeoff unless experiencing a situation that requires an immediate landing. Pilots returning to HMN to land must make one pattern to a full stop landing. UAO must be limited to a single departure and/or single arrival for each aircraft. Pattern work is prohibited.

A10.9.2. Ensure an ODO has been scheduled if planning to fly when HMN airfield is closed.

A10.9.3. File, activate, and close flight plan with ABQ FSS or other applicable facilities.

Pilots must file a flight plan before participating in UAO. In the remarks section of the DD Form 175, the pilot will annotate "UAO".

A10.9.4. Taxi in the most direct route to and from the runway consistent with safety and taxi restrictions. Pilots must not taxi into restricted areas (to include the West Ramp) and all taxi operations must be overt. Pilots must give right of way to all emergency vehicles.

A10.9.5. Adhere to recommended pattern procedures for UAO as described in the AIM and other related FAA regulations. Observe traffic patterns identified in this regulation.

A10.9.5.1. In order to ensure deconfliction with KALM, which is within 6 NM of HAFB, the south east sector of HMN Class Delta airspace must not be used. The southeast sector consists of an imaginary line extending off of the departure ends of Runway 16 and 07 to extend to 5.0 NM. **Exception:** Standard downwind to Runway 16/34 is allowed.

A10.9.6. Obtain an altimeter setting from the KALM AWOS (127.825) or the HMN weather observer, if on duty.

A10.9.7. Adhere to the recommended radio procedures for UAO as described in the AIM. Departing pilots must establish contact with the ODO before taxiing to the runway for departure. Arriving pilots must establish contact with the ODO at least 10 NM prior to landing. All communication between the ODO and the aircraft will be via the CTAF.

A10.9.8. The PIC or the ODO have the authority to declare an emergency at any time.

A10.9.9. Ensure the ODO is familiar with each pilot's intentions and flight plans.

A10.9.10. If returning from a cross country flight (or if pilot departed when the airfield was open) ensure the ODO is contacted and that pilot has been given a step briefing prior to returning to HMN to land.

#### **A10.10. 49 OG/CC UAO Responsibilities.**

A10.10.1. Approve all unit ODOs.

A10.10.1.1. Interview each ODO candidate and sign appointment letter prior to ODO assuming duties.

#### **A10.11. AM UAO Responsibilities.**

A10.11.1. Provide unit ODOs, CP, CE, CS, SFS, WSRF, Tower, FD/crash recovery, and Ambulance Response with the updated ODO contact list.

A10.11.2. Ensure critical information/procedures for HMN UAO are published in the FLIP.

A10.11.3. Confirm presence of the arrival/departure times received from 49 WG/CP on the schedule and maintain records, See Figure A10.2., *ODO Training Checklists*, and setup checklists.

A10.11.4. Provide in person briefing to ODO on airfield status prior to commencing operations and sign the completed setup checklist.

A10.11.5. Notify 49 WG/CP of upcoming UAO schedule via email.

A10.11.6. UAO Procedures for Airfield Driving have been added to AFI 13-213\_HAFBSUP, *Airfield Driving*.

A10.11.7. Provide each unit with airfield inspection and airfield criteria course CBTs.

A10.11.8. Brief ODO candidates prior to them assuming ODO responsibilities.

A10.11.9. Conduct airfield orientation for ODO nominees if a qualified ODO is not available.

A10.11.10. Solicit arrival/departure information from CP.

A10.11.11. Deconflict UAOs with live load operations that require runway access that conflicts with UAO proposed ops. Live load ops must have priority if a conflict exists.

#### **A10.12. 49 WG/CP Responsibilities.**

A10.12.1. Maintain ODO contact list and UAO schedule, as received from AM.

A10.12.2. Upon receiving notification of UAO commencement and termination, notify FD, SFS, and Ambulance Response.

A10.12.3. Notify FD, SFS, Ambulance Response, 49 OSS/OSA/CC, or OSA/DO upon receiving notification of an emergency or mishap. If neither 49 OSS/OSA/CC nor OSA/DO can be contacted, 49 WG/CP will call 49 OSS/CC/DO. If they are unavailable, 49 WG/CP will call the 49 OG/CC.

A10.12.4. Record arrival and departure times and pass to AM the next duty day.

A10.12.5. When contacted by any agency regarding airfield access/UAO during periods of airfield closure, provide a schedule of UAO, ODO contact information, and positive information handoff between the vehicle operators and the ODO(s) if necessary. Track lead ODO if multiple ODOs exist.

**A10.13. WSRF UAO Responsibilities.**

A10.13.1. When ODO calls, advise whether R5107D is scheduled during proposed UAO window. If R5107D unexpectedly goes active, WSRF will call the 49 WG/CP to verify status of UAO. If UAO are in progress, WSRF will immediately advise 49 WG/CP and ODOs that ops are terminated.

**A10.14. CE UAO Responsibilities.**

A10.14.1. CE Exterior Electric will train ODOs on airfield lighting procedures and ensure ODOs have access to the ALV lighting control computer for airfield lighting activation.

A10.14.2. BM and Airfield Maintenance/Exterior Electric will deconflict any airfield work (scheduled or unscheduled) when ODO calls to coordinate. For maintenance during hours of airfield closure, contact 49 WG/CP and then ODO to deconflict any unexpected airfield work.

A10.14.3. FD will advise lead ODO and 49 WG/CP when emergency is terminated and all emergency vehicles are off the airfield.

**A10.15. 49 CS/Job Control UAO Responsibilities.**

A10.15.1. 49 CS Job Control will deconflict any potential CS airfield work when ODOs call to coordinate. Contact 49 WG/CP and then ODO via provided ODO contact information to coordinate any unexpected airfield work.

**A10.16. 49 SFS UAO Responsibilities.**

A10.16.1. Maintain situational awareness of UAO through CP notification of commencement/termination and related emergencies/mishaps.

A10.16.2. Investigate reports of suspicious activities to include unauthorized vehicle/aircraft movement.

**A10.17. Approved Airfield Vehicle Operator UAO Responsibilities.**

A10.17.1. In order to minimize the potential for incidents, only a select few agencies must have access to the runways, Taxiway Golf, and/or North Ramp when the airfield is closed. These agencies are FD, SFS, Ambulance Response, Crash Recovery, ODOs, Tower, AM, Barrier and Airfield Maintenance, Exterior Electric, ATCALs Maintenance, LRS Fuels, 82 ATRS, and 586 FLTS. **Note:** The 49 OG/CC may authorize additional base agencies to come within 100 ft of any runway, Taxiway Golf, and or the North Ramp when the airfield is closed as the mission dictates.

A10.17.1.1. If any other unit needs access to a runway, Taxiway Golf, and/or North Ramp for mission essential reasons, prior coordination and training must be accomplished with the AFM.

A10.17.2. Call 49 WG/CP prior to accessing the runway, Taxiway Golf, and/or North Ramp during periods when HMN airfield is closed. Abide by all requirements in paragraph A10.5. of this attachment to allow deconfliction of vehicle operations and UAOs.

A10.17.3. If there is any doubt as to whether UAO is in effect, call the 49 WG/CP.

**A10.18. Legal Implications.**

A10.18.1. Each pilot/unit will be responsible for their aircraft operating under these provisions if involved in an accident/incident. Under no circumstances will aircraft be scheduled during uncontrolled airfield conditions without proper notification to the appropriate agencies listed in this instruction.





Figure A10.2. ODO Training Checklist.

The unit chief pilot shall develop a training program for ODOs. The training shall include, but is not limited to:

ODO Name:	Unit:	Training Start Date:
1. Airfield driver's training leading to an Airfield driver's license.		AF IMT 483 #:
2. Airfield Inspection and Maintenance CBT. Certificate will be turned in to AM.		AM Initials:
3. Airfield Criteria Course CBT. Certificate will be turned in to AM.		AM Initials:
4. Airfield Lighting Training by CE Exterior Electric. Exterior Electric coordinates ODO access to the ALV lighting control computer. (Required for night ops)		Date Completed: Exterior Electric Initials:
5. Training from the AFM or designated representative. Includes parking plan (weight restrictions)		Date Completed: AFM Initials:
6. Training from the ODO or AFM, includes: Airfield checks. Airfield Orientation with AM personnel or qualified ODO.		Date Completed: AM/ODO Initials:
7. Briefing from the FD Chief or assistant.		Date Completed: FD Initials:
8. Briefing from the SFS Operations NCOIC		Date Completed: SFS Initials:
9. Review of service applicable regulations.		ODO Initials:
10. Possess either a Restricted Area Badge or an FAA pilot certificate.		AM Initials:
11. 49 OG/CC Interview I have interviewed _____ (ODO name) and approve him/her to be an ODO for the _____ (unit name).  _____		
Commander, 49th Operations Group		Date
12. Complete Checklist turned into AM.		AM Initials: ODO initials:

Figure A10.3. ODO OPS Checklist.

Initials	Actions / Responsibilities
	1. Be on duty at respective duty location one hour prior to any UAO. See paragraph A10.3.2.1.
	2. Obtain a weather brief and review NOTAMs/FCIF/ORFs.
	3. Be familiar with each pilot's intentions/flight plans.
	4. Contact 49 WG/CP (572-7575) to coordinate commencement of UAO prior to their unit's first aircraft engine start.
	5. If more than one ODO is active, ODOs shall identify a lead ODO, inform 49 WG/CP, and all coordination shall go through lead ODO.
	6. Perform an airfield check of routes to be used, immediately prior to aircraft movement.
	7. Accomplish an in-person briefing with each aircrew prior to launch and brief applicable FCIF/ORFs.
	8. Determine runway in use based on current and forecasted wind direction and coordinate with other ODOs.
	9. Visually observe all takeoffs and landings.
	10. Monitor the weather and direct pilots as necessary to ensure safe operations.
	11. Turn on/off airfield lighting as necessary per INSTRUCTION.
	12. In the event of an aircraft mishap or emergency, immediately notify FD then notify 49 WG CP.  After an emergency, ensure the runway, Taxiway Golf, and/or North Ramp is clear of all debris, damage, and fluid spills. Coordinate with on-scene Commander.
	13. Be accessible via LMR and provided contact numbers or risk suspension from UAO at the discretion of the 49 OG/CC.
	14. Inform vehicle operators of arriving or departing aircraft. Inform any arriving/departing aircraft, on initial contact, of any known ground traffic.
	15. Make LMR broadcast for UAO commencement, arriving/departing aircraft and UAO termination of ops IAW paragraph A10.3.14.4. of HAFBI 11-250 Attachment 10.
	16. Report unauthorized aircraft/vehicles in the airfield environment to SFS.
	17. Report termination of operations to 49 WG/CP.
<b>NOTE:</b> This checklist does not preclude reading, understanding, and applying the entire instruction.	

## Attachment 11

### Airfield Operations Board

A11.1. The AOB provides a forum for discussing, updating, and tracking various activities associated with support of the HMN flying missions. The AOB will convene quarterly. The 49 OSS/OSA/CC is the focal point for scheduling AOB meetings, preparing the agenda, and recording the minutes. The agenda shall include mandatory items and any other pertinent issues the AOB Chairperson deems appropriate. See AFI 13-204V3\_ACCSUP\_I for additional AOB guidelines.

A11.1.1. The 49 WG/CV or designated representative (not delegated lower than the 49 OG/CC) is the Chairman of the HMN AOB.

A11.1.2. The individuals (or designated representative) and units/offices listed in Table A11.1. are members of the AOB and are therefore are required to attend:

**Table A11.1. HMN AOB Members.**

<b>HMN AOB Members</b>	
<b>49 WG</b>	<b>Tenant Units</b>
49 WG/SEF	54 FG/CC
49 WG/XP	54 FG/FGV
49 WG/CP	54 OSS/CC
	8 FS/CC
49 OG/CC	311 FS/CC
49 OG/OGV	314 FS/CC
49 OSS/CC	GAF FTC Stan/Eval
49 OSS/OSA/CC	704 TG/CC
49 OSS/OSAA AFM	586 FLTS
49 OSS/OSAM ATCAL	Det. 1 82 ARTS
NCOIC	AA
49 OSS/OSAR WSRF CCTL	
49 OSS/OSAT Tower CCTL	
49 OSS/OSOA HAM	
49 OSS/OSOS Scheduling	
49 OSS/OSW Weather Flight	
CC	
6 ATKS/CC	
9 ATKS/CC	
29 ATKS/CC	
49 MSG/CC	
49 CES/CC	
49 CES/CEO Operations Flight	
49 CES/CEN Engineering	
Flight	
49 CS/CC	
49 CS/SCO Operations Flight	

49 CS/SCOT Frequency Manager 49 FSS/Aero Club Manager  49 MXG/MOC	
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A11.1.3. The following items will be reviewed annually during the 3rd Quarter AOB, or as changes occur, and briefed in the 1st Quarter AOB:

A11.1.3.1. Local airfield and flight environment LOPs.

A11.1.3.2. TERPs. All instrument procedures to validate the continuing need for each.

A11.1.3.3. Air Installation Compatible Use Zone (AICUZ) as required by AFI 32-7063, *Air Installation and Compatible Use Zone*.

A11.1.3.4. Results of annual self-inspections.

A11.1.3.5. Special interest items results.

A11.1.3.6. Results of the Annual Airfield Certification/Safety Inspection.

A11.1.3.7. Master Aircraft Parking Plan.

A11.1.3.8. Status of airfield waivers.

A11.1.3.9. Airfield projects.

## Attachment 12

### F-16 OPERATIONS

#### A12.1. Introduction.

A12.1.1. This attachment complements AFI 13-204V3, *Airfield Operations Procedures and Programs*. It also outlines specific procedures for locally assigned AETC F-16 operations IAW AFI 11-2F-16V3\_AETCSUP 1, *F-16 Operations Procedures*, AFI 13-204V3\_ACCSUP, and FAA JO 7610.4, *Special Military Operations*.

#### A12.2. General Policy.

A12.2.1. 54 FG pilots are not required to carry 49 WG IFG in flight if carrying 54 FG-approved IFG. 54 FG/FGV and each squadron Stan/Eval must maintain at least one current 49 WG IFG for reference. 54 FG/FGV must ensure that all applicable 49 WG IFG updates are incorporated into the 54 FG IFG immediately. 49 OG/OGV will notify 54 FG/FGV of pending 49 WG IFG updates prior to publishing in order to enable 54 FG/FGV to simultaneously publish a corresponding update to the 54 FG IFG.

A12.2.2. Application of RSRS criteria outlined in paragraph 6.15. may be applied to locally assigned F-16s.

#### A12.3. Ground Operations.

A12.3.1. F-16 Taxi Operations.

A12.3.1.1. F-16s will call for taxi from their parking spots and be cleared to arming (normally the arm/de-arm area closest to the departure runway). Clearance for the flight lead is clearance for the flight. If required, once armed, flight leads will request to continue taxiing to the active runway.

A12.3.1.2. F-16s unable to taxi with their flights from parking will call for taxi individually until rejoined with the flight, presuming the remainder of the flight is still on the ground. F-16s unable to rejoin with their flights will taxi single ship and comply with paragraph 4.1.5.1.

A12.3.1.3. F-16s plan to use full runway length for takeoffs and will only ask for intersection takeoffs by exception. Ground Control will clear taxiing F-16s to the end of the active runway unless otherwise requested by the flight lead. Intersection departures will be conducted IAW 54 FG/CC guidance.

A12.3.1.4. After landing, F-16s will request taxi to the applicable de-arm and/or parking area. Aircraft not ready to taxi with the flight lead will make their own radio calls separately. A taxi call for aircraft going from De-arm Foxtrot to the West Ramp is not required.

A12.3.2. F-16 Aircraft Arresting System Configurations. F-16s must have 54 FG/CC approval to depart or arrive without a departure end cable (overrun BAK-12s excluded). SOF (or Tower Watch Sup if there is no SOF on duty) will coordinate with F-16 Ops Sups for any expected or unexpected absence of departure end cables on the active runway.

A12.3.3. F-16 Radar Warning Receiver (RWR) Checks. 54 FG may conduct RWR checks south of Taxiway Juliet without any outside coordination. RWR checks in other locations require AM coordination and approval.

A12.3.4. F-16 Hot Pit Refueling. F-16 hot pit refueling may be conducted on the north or south end of the West Ramp IAW paragraph 5.2.2.

A12.3.5. F-16 Arm/De-arm. Desired F-16 arm/de-arm locations are IAW Table A12.1.



**Table A12.1. F-16 Arm/De-arm Locations.**

<b>Departure Runway</b>	<b>Arm</b>	<b>Arrival Runway</b>	<b>De-arm</b>	<b>Driving Factor</b>
25	Bravo	16	Alpha	Desired standard ops
25	Bravo	22/25	Foxtrot	22/25 arrival
25	Bravo	34	Echo	34 arrival
34	Alpha	34	Echo	34 arrival
34	Alpha	22/25	Foxtrot	22/25 arrival
16	Echo	16	Alpha	16 arrival
16	Echo	22/25	Foxtrot	22/25 arrival
22	Echo	22/25	Foxtrot	22/25 arrival
22	Echo	16	Alpha	16 arrival

A12.3.5.1. The 54 FG SOF is responsible for setting F-16 arm/de-arm locations. Setting an arm/de-arm location does not override guidance in paragraphs 2.2. and 5.3. Carefully consider weather, winds, restrictions, syllabus requirements, and airfield status when making the decision to change. The SOF will confer with squadron Ops Sups and contact 54 AMXS/MXA (x3294 / x6924 / x3296) with direction to change arm and/or de-arm locations. Expect the change to take up to 30 minutes. In the absence of a 54 FG SOF, squadron Ops Sups will confer and designate one Ops Sup to contact 54 AMXS/MXA.

A12.3.5.2. Table A12.1. assumes all taxiways and runways are available. Based on airfield construction, or other factors, if some taxiways or runways are unavailable the SOF may be required to create a new plan not included in Table A12.1.

**A12.4. Departure Procedures:** For IFR departures, F-16s must confirm the desired IFR departure with clearance delivery upon initial contact.

**A12.5. Range Operations/Weapons Employment:** Local F-16 range operations will be IAW AFI 13-212V1 HAFB ADDENDA A and when inside WSMR airspace, WSMR FSOP governing the specific flight mission.

**A12.6. Arrival Procedures:**

A12.6.1. Chased F-16s will add “*WITH CHASE*” to the initial call to Tower when entering the pattern. Tower will assume “with chase” until informed otherwise by the chased aircraft.

A12.6.1.1. Chase aircraft will not overfly aircraft holding short of the runway awaiting departure.

A12.6.2. For formations arriving in the pattern together (i.e., high key, initial, straight-in SFO, or visual straight-in/instrument approach in trail), landing clearance for the flight lead constitutes clearance for the entire flight. Tower will only acknowledge subsequent flight members’ gear down call with “*ROGER.*” Upon low approach, the formation is considered terminated and each aircraft will be handled individually.

A12.6.3. Locally assigned F-16s may conduct nighttime overhead patterns (Figures A12.1. – A12.3) IAW paragraph 6.13.1.4.

Figure A12.1. F-16 Night Overhead Pattern – Runway 16/34.

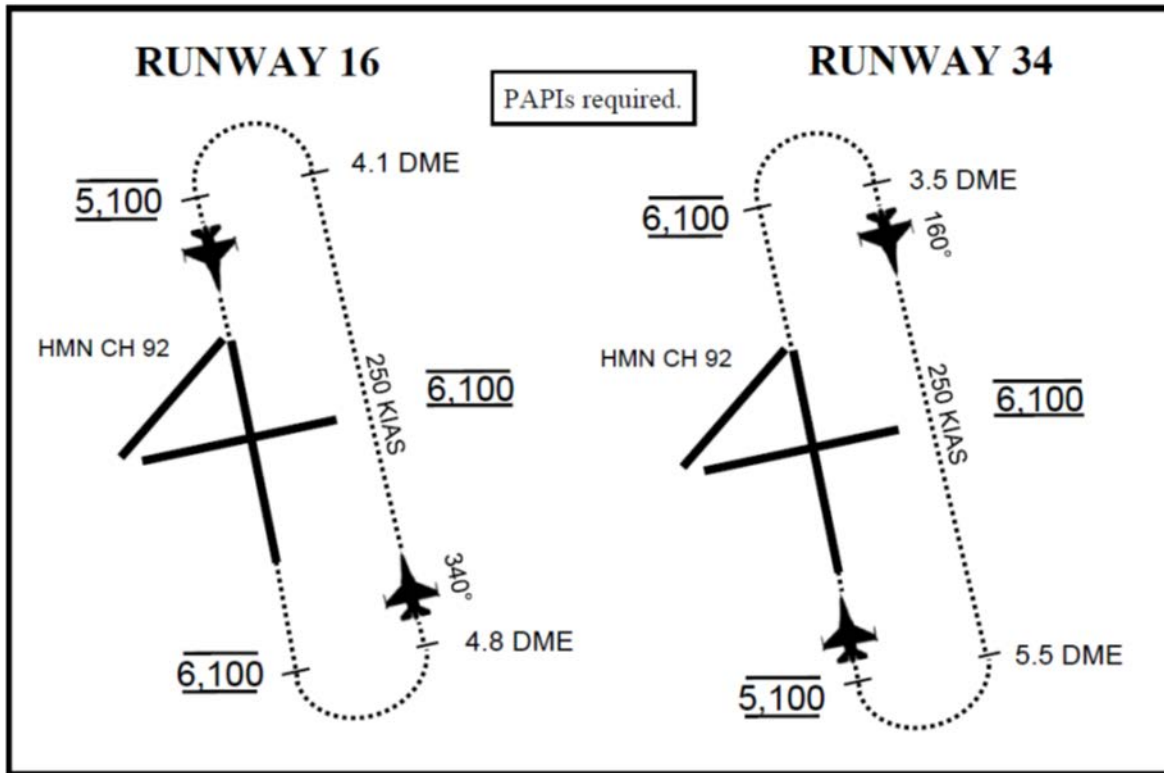


Figure A12.2. F-16 Night Overhead Pattern – Runway 22.

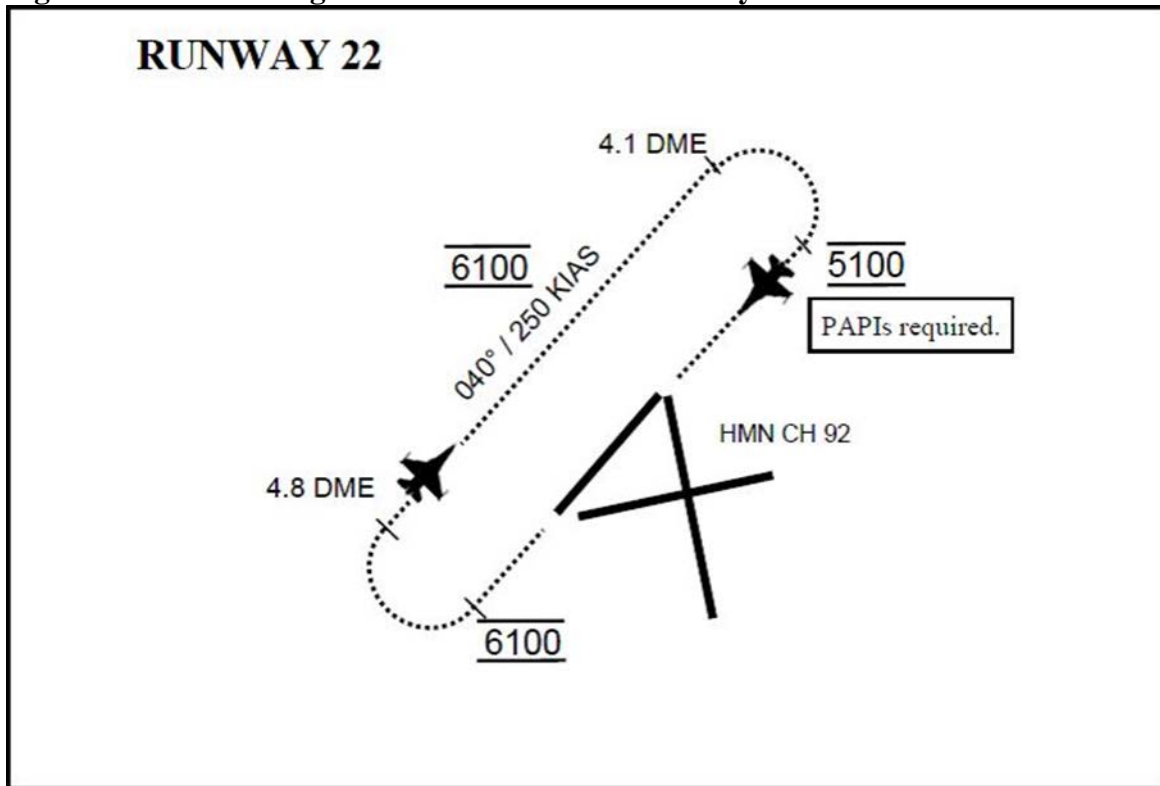
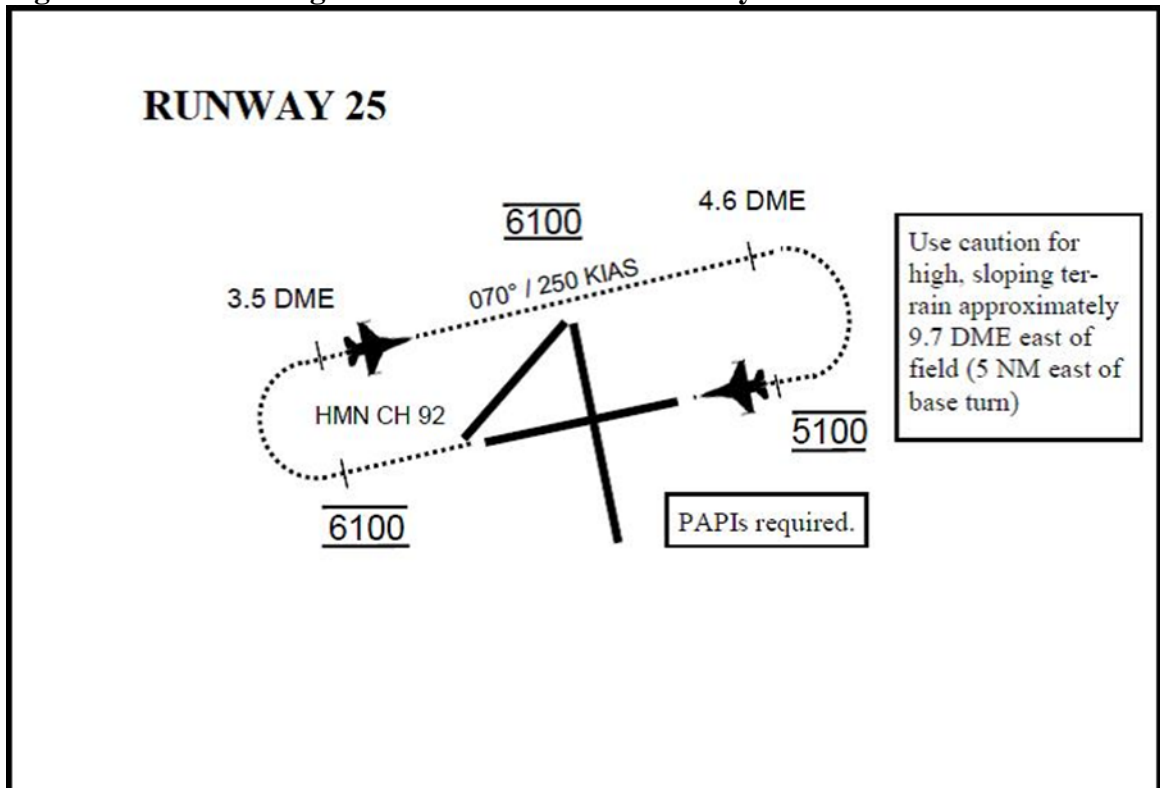


Figure A12.3. F-16 Night Overhead Pattern – Runway 25.



A12.6.4. F-16 Radar Trail Recovery Procedures.

A12.6.4.1. F-16 radar-in-trail recovery must be requested and approved by WSRF prior to beginning the approach and spacing maneuver. **Note:** Pilots will not request radar-trail recoveries with ABQ ARTCC. Phraseology, “(call sign) *REQUEST RADAR TRAIL (type) APPROACH.*” Flight leads will execute IAW AFI 11-2F-16V3 and the 54 FG standards.

A12.6.4.2. Radar-in-Trail Spacing.

A12.6.4.2.1. F-16 radar-in-trail recovery is limited to a maximum of four aircraft.

A12.6.4.2.2. Aircrews conducting radar-in-trail recoveries are responsible for their own separation between elements of their flight while on final for full-stop landings. To ensure appropriate departure separation, multiple practice radar in-trail approaches that do not terminate with a full-stop landing must be conducted only in VMC. During practice approaches in VMC, after an executed low approach/landing, the flight is responsible for their own separation until ATC initiates flight split-ups for individual control.

A12.6.4.2.3. Spacing will be 2 NM between each aircraft in the formation. The trail aircraft squawks 4000 on mode 3C. Attempt to establish spacing in VMC. If IMC, accomplish spacing maneuver in wings level flight. Requests other than this will be made with ATC.

A12.6.4.3. Missed Approach/Breakout/Go-Around procedures.

A12.6.4.3.1. Missed approach during radar-in-trail will be IAW published procedures. Unless a separate clearance is requested, aircraft will remain in radar trail during missed approach.

A12.6.4.3.2. Breakout/Go-around during radar-in-trail will be IAW ATC instructions. Pilot initiated breakout or Go-Around must advise ATC.

A12.6.4.4. In the event of lost communications, execute lost comm procedures IAW paragraph 8.10.

#### **A12.7. F-16 SFO PROCEDURES:**

A12.7.1. F-16 Overhead SFO/Straight-In SFO (SI-SFO) Restrictions/Cut-offs.

A12.7.1.1. Tower WS has the authority to limit F-16 multiple approaches for safety reasons.

A12.7.1.2. Only 54 FG F-16s and 82 ATRS QF-16s may conduct overhead SFO/SI-SFO approaches at HMN.

A12.7.1.3. F-16 overhead SFO/SI-SFO patterns must terminate with a low approach.

A12.7.1.4. F-16 overhead SFO/SI-SFO patterns are not authorized at night. Remain VMC. Ceiling must be 1,000 ft above the F-16 overhead SFO high key/10-mile SI-SFO final and visibility 5 SM.

A12.7.1.5. F-16 overhead SFO patterns are not authorized to Runway 07. F-16 SI-SFO patterns are not authorized to Runways 25 or 07.

A12.7.1.6. F-16 SFO Pattern Volume Restrictions:

A12.7.1.6.1. Typically, only one type of SFO will be accomplished at one time. Overhead, SI-SFO, or alternate entry SI-SFO may run concurrently at the discretion of the Tower WS. Additionally, only one overhead SFO pattern will be active at a time. All simultaneous SFO patterns must be accomplished to the same runway.

A12.7.1.6.2. No more than three flights (single aircraft or formation flights) of F-16s will be allowed to execute overhead SFO/SI-SFO/alternate entry SI-SFO procedures simultaneously. Additionally, no more than 20 aircraft operations will be conducted during an F-16 overhead SFO/SI-SFO approach/alternate entry SI-SFO. Aircraft

operations include aircraft requesting departure, inbound aircraft within 15-miles (regardless of frequency), and overflights within the Class D airspace (regardless of frequency). Aircraft climbing to high key or holding at high key are not included in the three flights in the SFO pattern.

A12.7.1.6.3. Regardless of the maximum number allowed, the Tower WS will make the final determination on the number of aircraft that can safely operate in the VFR patterns. Tower must consider other aircraft characteristics, climb-out, missed approach, availability of the tower radar display, active restricted airspace, and FAA mandated intersecting/same runway separation, as well as Tower controller experience and capabilities before authorizing other operations during F-16 overhead SFO/SI-SFO/alternate entry SI-SFO patterns. Tower will not issue instructions that require the division of the pilot's attention between the SFO and sequencing with traffic.

A12.7.1.7. F-16 SFO vs. Other IFR/VFR Straight-In Arrivals: Other IFR/VFR aircraft inbound to the same or intersecting runway must be more than 10-flying miles out or inside 4-flying miles prior to SFO aircraft leaving high key. Aircraft inside the 10- to 4-mile cutoff may be sequenced behind the F-16 SFO or held outside the Class D. F-16s may be instructed to hold at high key, 10-mile SI-SFO final, or at specific alternate entry SI-SFO final (10-14 DME) for the intended runway whenever a conflict exists with arriving or departing traffic.

A12.7.1.8. F-16 SFO Cut-Off Points:

A12.7.1.8.1. F-16 SFO vs. Other IFR/VFR Departures: Departing aircraft must be rolling before the SFO reaches low key.

A12.7.1.8.2. SI-SFO vs. IFR/VFR Departures: Departing aircraft must be rolling before the SI-SFO reports 5-mile SI-SFO final.

A12.7.1.9. For easterly turnouts on Runway 16 or 34 or northerly turnouts Runway 04, 22, or 25; if Tower has advised that other traffic is ahead in the SFO pattern, pilots will delay the turnout until 1-mile past the departure end unless the traffic is in sight and reported to Tower. If the traffic is still not in sight by 1-mile past the departure end, pilots will fly a wide pattern remaining below 7,100 ft MSL until 3 DME. Pilots may climb above 7,100 ft MSL once at 3 DME. Pilots may not turn inside 3 DME until the traffic is in sight and reported to Tower, or instructed to do so by Tower issuing "*REPORT HIGH KEY.*" When pilots report the preceding traffic in sight they will maintain visual separation from the traffic in sight IAW FAA JO Order 7110.65.

A12.7.1.9.1. Aircraft established in the SFO pattern will remain within 3 DME to deconflict from aircraft climbing to high key.

A12.7.2. F-16 Overhead SFO Pattern:

A12.7.2.1. F-16s have three options for entering the overhead SFO pattern at high key: radar vectors from WSRF, outside downwind re-entry (see Figure A12.4. – A12.8.), or VFR climb after completion of an approach.

A12.7.2.2. All overhead SFO patterns begin with the F-16 aligned with the runway centerline, at the approach end of the landing runway, defined as the first one-third of the runway in use. Overhead SFO patterns will be flown toward the inside downwind (Figures A12.4. – A12.8.). Overhead SFO patterns to Runway 16 or 34 will remain to the east of the runway. Overhead SFO patterns to Runway 04, 22, or 25 will remain to the north of the runway.

A12.7.2.3. Overhead SFO High Key: Over the runway approach end normally between



11,000 ft MSL and 14,000 ft MSL, airspeed approximately 200 to 300 knots.

A12.7.2.4. Overhead SFO Low Key: A point abeam the point of rollout on final, normally between 7,000 ft MSL and 9,500 ft MSL.

A12.7.2.5. Overhead SFO Base Key: A point halfway through the final turn at a minimum of 6,100 ft MSL.

A12.7.2.6. Overhead SFO Breakouts:

A12.7.2.6.1. Runways 16/34: Easterly climbing turn back to high key altitude.

Runways 04/22/25: Northerly climbing turn back to high key altitude.

A12.7.2.6.2. Different breakout instructions may be directed by Tower for deconfliction purposes or approved upon pilot request. “*BREAKOUT*” will normally not be used once an F-16 has departed low key, instead Tower will use “*GO-AROUND (additional instructions as necessary)*.”

A12.7.2.7. Overhead SFO Phraseology:

A12.7.2.7.1. Request overhead SFO approach with Tower by stating “*(call sign), REQUEST HIGH KEY.*”

A12.7.2.7.2. Traffic permitting, Tower will approve the request by stating “*(call sign), REPORT HIGH KEY.*”

A12.7.2.7.3. Report high key, “*(call sign), HIGH KEY.*” If more than one aircraft is required to hold at high key, pilots will orbit east or north of the runway and advise Tower of holding altitude. When Tower instructs the aircraft “*REPORT LOW KEY*” the SFO is approved.

A12.7.2.7.3.1. For flights arriving from the airspace directly to high key, only the flight lead will report high key. SFO clearance for the flight lead is clearance for the entire flight.

A12.7.2.7.4. Tower will approve the SFO and request the F-16 to report low key “*(call sign), REPORT LOW KEY.*”

A12.7.2.7.4.1. For flights that arrived from the airspace directly to high key, all flight members will report low key individually.

A12.7.2.7.5. Report low key, “*(call sign), LOW KEY.*”

A12.7.2.7.6. At low key, Tower will NOT acknowledge unless issuing “*BREAKOUT*” instructions, or alternate instructions.

A12.7.2.7.7. Report base key, “*(call sign), BASE KEY, GEAR, LOW APPROACH.*”

A12.7.2.7.7.1. For flights that arrived from the airspace directly to high key, all flight members will report base key individually.

A12.7.2.7.8. At base key, Tower will issue appropriate landing clearance or “*(call sign) GO-AROUND.*” During formation SFOs, for flight members other than the flight lead, Tower will respond IAW paragraph A12.6.2.

A12.7.2.8. Standard overhead outside downwind/re-entry (see paragraph 6.13.) may be used to enter high key. When requested, Tower will direct the F-16 to “*(call sign) RE-ENTER, SFO ON REQUEST.*” Once approved, Tower will direct the F-16 to “*(call sign) REPORT HIGH KEY.*” If overhead SFO is not available (because of traffic, weather, active airspace, etc.) by the 90-to-initial point, Tower will direct the F-16 “*UNABLE SFO, REPORT INITIAL*” or issue additional instructions.

A12.7.2.8.1. VFR “climb to” may be used to enter high key. When requested after completing an approach, Tower will direct the F-16 to “*(call sign) REPORT HIGH KEY.*”

- A12.7.2.8.2. F-16 Overhead SFO Holding. Aircraft may be instructed to hold at high key for the intended runway whenever a conflict exists with arriving or departing traffic. Holding must normally be left turns for Runways 16 and 04, right turns for Runways 34, 22, and 25. Different turns may be used when necessary or requested. F-16s must remain within 3 NM of high key. Tower will issue “(call sign) *HOLD AT HIGH KEY, (time permitting, reason).*”
- A12.7.2.9. F-16 Overhead SFO Conflicts.
- A12.7.2.9.1. IFR aircraft on the CLOUD-Four Alpha departure from Runways 16, 22, or 25 and the CLOUD-Four Bravo departure from Runways 22 or 25 may conflict with overhead SFO patterns (and holding) to Runways 16, 34, 04, 22, and 25. Tower will not allow aircraft to execute the noted IFR departure procedures while F-16s are holding at high key or leaving high key until reaching base key of the overhead SFO maneuver.
- A12.7.2.9.2. VFR aircraft in the overhead pattern (e.g., departure end break) may conflict with an F-16 VFR climb to high key. When necessary, Tower must issue traffic before allowing F-16s to climb to high key and issue sequencing instructions to ensure separation.
- A12.7.2.9.3. An F-16 overhead SFO on the outside downwind climbing to high key may conflict with straight-in traffic inside 10-mile final. Tower must issue traffic before allowing F-16s to climb to high key and issue sequencing instructions to ensure separation.
- A12.7.2.9.4. An F-16 overhead SFO on the outside downwind climbing to high key may conflict with an IFR aircraft on the radar downwind. Tower must issue traffic before allowing F-16s to climb to high key and issue sequencing instructions to ensure separation.
- A12.7.2.9.5. An F-16 overhead SFO on the outside downwind climbing to high key may conflict with a VFR aircraft breaking out of the overhead pattern to the 90-to-initial point. Tower must issue traffic whenever an aircraft executes the overhead breakout maneuver.
- A12.7.2.9.6. Base key with aircraft at 3-mile initial. This conflict can be prevented by:
- A12.7.2.9.6.1. Traffic call issued to aircraft inside 10-miles for the overhead and aircraft near high key.
- A12.7.2.9.6.2. Traffic call issued to aircraft inside 5-mile initial and aircraft near low key. **Note:** SFO conflicts frequently occur when aircraft are at initial and SFO aircraft do not have each other in sight.
- A12.7.2.9.6.3. Aircraft inside of 5-mile initial will be directed to offset either south (Runway 22) or west (Runway 16) in order to deconflict with SFO traffic.
- A12.7.2.9.7. If the SFO aircraft does not have initial traffic in sight or the pilot cannot complete the approach, do not descend below 6,600 ft MSL. If the SFO traffic has NOT started the base turn, the pilot will advise Tower of intentions to either breakout to the short re-entry point or climb back to high key. Pilots who initiate the base turn will maintain at or above 6,600 ft MSL, fly runway heading, and advise Tower of intentions. Do not breakout or climb back to high key after initiating the turn to base key.
- A12.7.2.9.8. An F-16 overhead SFO leaving high key will conflict with aircraft on the

inside downwind. Tower may allow F-16 overhead SFOs to leave high key and follow traffic that has passed midfield downwind to final. Tower will issue traffic information and the F-16 at high key must call traffic in sight and maintain visual separation.

A12.7.2.10. Standard Low Key SFO Entry. For use when ceiling is below 8,000 ft AGL, but greater than 4,000 ft AGL; or if required due to airspace restrictions.

A12.7.2.10.1. For use when training dictates low key SFO procedures. Random or alternate entry low key SFOs are not authorized at HMN.

A12.7.2.10.2. Low key procedures are identical to standard SFO procedures with the following exceptions:

A12.7.2.10.2.1. Weather Requirements. Ceiling 1,000 ft above the low key altitude and 5 SM visibility. VFR re-entry pattern must be open during low key operations.

A12.7.2.10.2.2. Only one aircraft/flight at a time may use the SFO during low key operations.

A12.7.2.10.2.3. On a case by case basis, Tower may authorize aircraft to hold at low key. Aircraft must re-enter or climb to high key if the low key SFO cannot be approved. Breakout procedures will be directed by Tower.

A12.7.2.10.2.4. Overhead Direct. Pilots will request low key and state intentions to carry straight through initial for a right/left turn out to the low key SFO. Prior to initial, traffic permitting and with prior coordination, pilots may request direct low key from any direction.

A12.7.2.10.3. Standard Radio Calls:

A12.7.2.10.3.1. To request low key SFO on the go: “(call sign), *REQUEST LOW KEY.*”

A12.7.3. F-16 SI-SFO Patterns:

A12.7.3.1. F-16s have two options for entering the SI-SFO pattern at 10-mile final: radar vectors from WSRF or outside downwind re-entry (see Figures A12.9. – A12.12.).

A12.7.3.2. All SI-SFO patterns begin with the F-16 aligned with the runway centerline at 10 NM final (see Figures A12.9. – A12.12.).

A12.7.3.3. 10-mile SI-SFO final: located 10 NM final to Runway 04, 16, 22, or 34, altitude will normally be 14,500 ft MSL, or as requested, airspeed approximately 200 to 300 KIAS.

A12.7.3.4. 5-mile SI-SFO final: altitude approximately 8,000 ft MSL to 10,000 ft MSL, wheels should be down.

A12.7.3.5. SI-SFO Breakouts:

A12.7.3.5.1. As directed by Tower, an east or west climbing turn back to 10-mile SI-SFO final. Tower controllers must have visual contact, or see the aircraft on the tower radar display, by 3 NM or the SI-SFO/alternate entry SI-SFO will be broken out or directed to go-around.

A12.7.3.5.2. Different breakout instructions may be directed by Tower for deconfliction purposes or approved upon pilot request. “*BREAKOUT*” will not normally be used once an F-16 has departed 5-mile SI-SFO final, instead Tower will use “(call sign) *GO-AROUND (additional instructions as necessary).*”

A12.7.3.6. SI-SFO Phraseology:

A12.7.3.6.1. Request SI-SFO approach with WSRF by stating “(call sign), *REQUEST STRAIGHT-IN SFO.*” WSRF will issue approval to fly the SI-SFO by stating “(call sign), *STRAIGHT-IN SFO APPROVED, (radar vectors, when/where*

*to contact Tower, as necessary)*" or direct aircraft to hold, if required.

A12.7.3.6.2. On initial contact, Tower will direct the F-16 to "*(call sign), REPORT 10-MILE SIMULATED FLAMEOUT FINAL*" or issue holding instructions, as necessary.

A12.7.3.6.3. Report 10-mile SI-SFO "*(call sign), 10-MILE SIMULATED FLAMEOUT FINAL.*"

A12.7.3.6.3.1. Tower will respond with, "*(call sign), REPORT 5-MILE SIMULATED FLAMEOUT FINAL.*"

A12.7.3.6.4. For flights arriving from the airspace directly to 10-mile SI-SFO final, only the flight lead will report 10-mile SI-SFO. SFO clearance for the flight lead is clearance for the entire flight.

A12.7.3.6.5. Report 5-mile SI-SFO final "*(call sign), 5-MILE SIMULATED FLAMEOUT FINAL, GEAR, LOW APPROACH.*"

A12.7.3.6.6. For flights that arrived from the airspace directly to 10-mile SI-SFO final, all flight members will report 5-mile SI-SFO final individually.

A12.7.3.6.7. At 5-mile SI-SFO final, Tower will issue appropriate landing clearance, issue "*(call sign) GO-AROUND,*" or alternate instructions. During formation SFOs, for flight members other than the flight lead, Tower will respond IAW paragraph A12.6.2.

A12.7.3.7. Outside downwind/re-entry (see paragraph 6.13.) may be used to enter SI-SFO final. When requested, Tower will direct the F-16 to "*(call sign) RE-ENTER, STRAIGHT-IN SFO ON REQUEST.*" Once approved, Tower will direct the F-16 to "*REPORT 10-MILE SIMULATED FLAMEOUT FINAL.*" If SI-SFO is not available (because of traffic, weather, active airspace, etc.) by the 90-to-initial point, Tower will direct the F-16 "*UNABLE SFO, REPORT INITIAL*" or issue additional instructions.

A12.7.3.8. F-16 SI-SFO Holding. Aircraft may be instructed to hold at 10-mile SI-SFO for the intended runway whenever a conflict exists with arriving or departing traffic. Tower or WSRF will issue "*(call sign) HOLD OVER 10-MILE FINAL.*" Holding must normally be left turns for Runways 16 and 04, right turns for Runways 34 and 22. Different turns may be used when necessary or requested. F-16s must remain within 3 NM of 10-mile SI-SFO final. When holding is no longer necessary, Tower will issue "*(call sign), REPORT 10-MILE SIMULATED FLAMEOUT FINAL.*"

A12.7.3.9. F-16 SI-SFO Conflicts.

A12.7.3.9.1. An F-16 SI-SFO holding over the 10-mile SI-SFO final may conflict with IFR/VFR straight-in arrivals to the same runway. WSRF/Tower must issue traffic and issue sequencing instructions to ensure separation.

A12.7.3.9.2. An F-16 SI-SFO on the outside downwind climbing to the 10-mile SI-SFO final may conflict with aircraft in the radar pattern or IFR/VFR straight-in arrivals. WSRF/Tower must issue traffic and issue sequencing instructions to ensure separation.

A12.7.3.9.3. An F-16 SI-SFO may conflict with a VFR aircraft on the outside downwind turning 90-to-initial. Tower must issue traffic and ensure aircraft do not turn 90-to-initial in front of an F-16 SI-SFO.

A12.7.3.10. F-16 Alternate Entry SI-SFO. An alternate entry SI-SFO is defined as an SFO approach that commences at a point other than aligned within +/- 5 degrees of the runway but intercepts the SI-SFO pattern prior to short final (no closer than 3-miles).

A12.7.3.10.1. F-16s have two options for entering an alternate entry SI-SFO pattern at

12-mile final: radar vectors from WSRF or outside downwind re-entry (see Figures A12.13. – A12.17.).

A12.7.3.10.2. Alternate entry SI-SFOs are only authorized to Runways 22, 16, and 34.

A12.7.3.10.3. North runway 22 alternate entry SI-SFO patterns begin with the F-16 at 12 DME anywhere between the HMN R-347 through R-029. Altitude will normally be between 12,500 ft MSL to 14,500 ft MSL, or as requested, airspeed approximately 200 to 300 KIAS (see Figure A12.13.).

A12.7.3.10.4. South Runway 22 alternate entry SI-SFO patterns begin with the F-16 at 12 DME anywhere between the R-039 through R-070. Altitude will normally be between 12,500 ft MSL to 14,500 ft MSL, or as requested, airspeed approximately 200 to 300 KIAS (see Figure A12.14.).

A12.7.3.10.5. East Runway 16 alternate entry SI-SFO patterns begin with the F-16 at 12 DME anywhere between the R-347 through R-034. Altitude will normally be between 12,500 ft MSL to 14,500 ft MSL, or as requested, airspeed approximately 200 to 300 KIAS (see Figure A12.15.).

A12.7.3.10.6. West runway 16 alternate entry SI-SFO patterns begin with the F-16 at 12 DME anywhere between the R-290 through R-337. Altitude will normally be between 12,500 – 14,500 ft MSL, or as requested, airspeed approximately 200 to 300 KIAS (see Figure A12.16.).

A12.7.3.10.7. West Runway 34 alternate entry SI-SFO patterns begin with the F-16 at 14 DME anywhere between the R-204 through R-159. Altitude will normally be between 12,500 – 14,500 ft MSL, or as requested, airspeed approximately 200 to 300 KIAS (see Figure A12.17.).

A12.7.3.10.8. 5-mile SI-SFO final: altitude approximately 8,000 ft MSL to 10,000 ft MSL, wheels should be down.

A12.7.3.10.9. All alternate entry SI-SFOs will intercept the runway extended centerline NLT 3 NM final (Runways 16 and 22 approximately 3 DME, Runway 34 approximately 5 DME).

A12.7.3.10.10. Alternate Entry SI-SFO Breakout. As directed by Tower or requested by the pilot. Runway 22 is either a northwest or southeast climbing turn back to alternate entry SI-SFO final. Runway 16 and 34 is either an easterly or westerly turn back to alternate entry SI-SFO final.

A12.7.3.10.11. Alternate Entry SI-SFO Holding. Left or right turns as necessary, holding must remain within 3 NM of the 12-mile alternate entry SI-SFO final. When possible, avoid crossing the runway extended centerline during holding.

A12.7.3.10.12. Alternate entry SI-SFO phraseology, outside downwind re-entry, holding, and conflicts are the same as for standard SI-SFOs (see paragraphs A12.7.3.6. – A12.7.3.9.) except the term “*ALTERNATE ENTRY*” will be included and a “*12-MILES*” call will be made at 12-miles instead of 10 (14 DME for Runway 34).

Figure A12.4. Runway 16 Overhead SFO (Drawing not to scale).

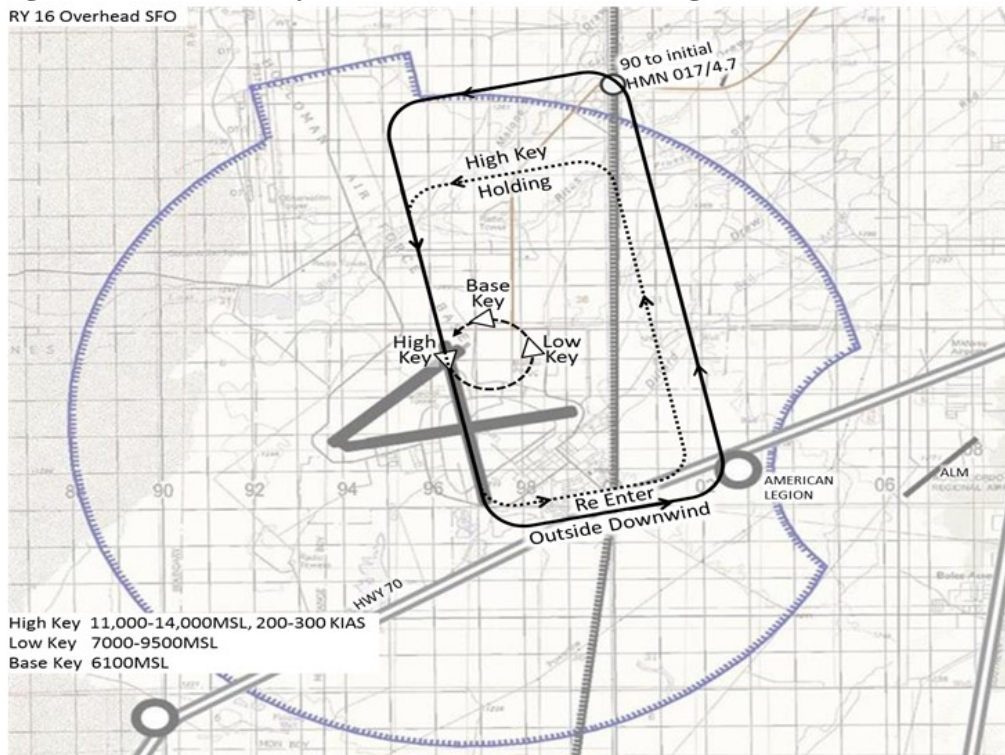
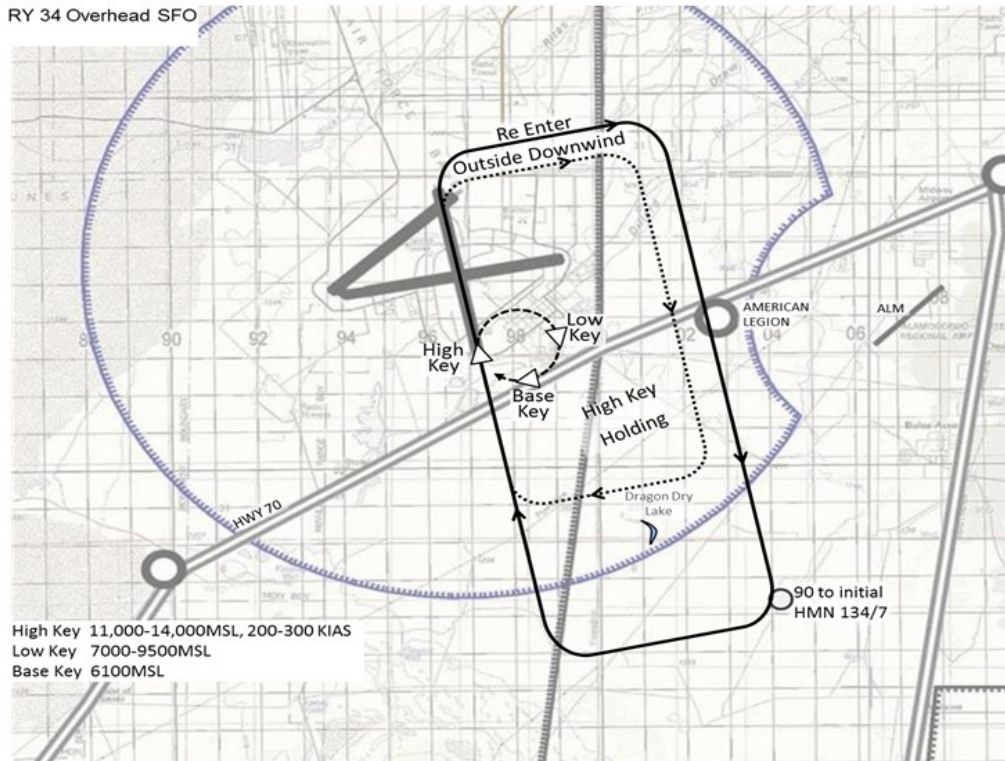
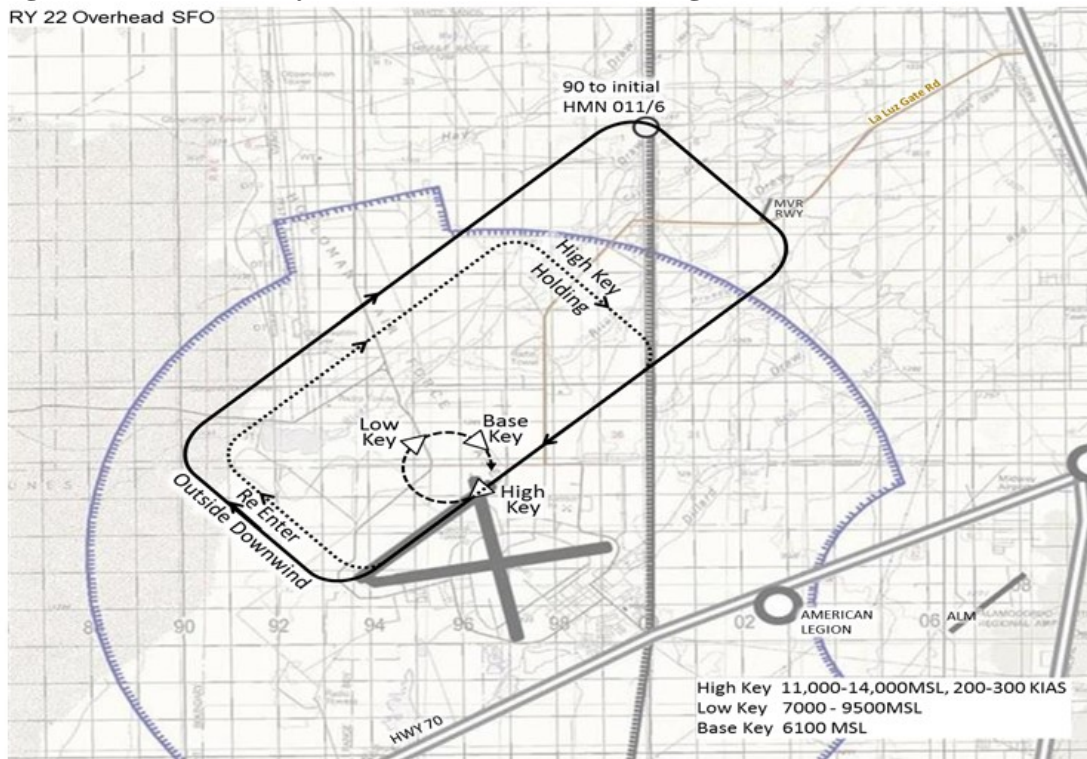


Figure A12.5. Runway 34 Overhead SFO (Drawing not to scale).





**Figure A12.6. Runway 22 Overhead SFO (Drawing not to scale).**



**Figure A12.7. Runway 04 Overhead SFO (Drawing not to scale).**

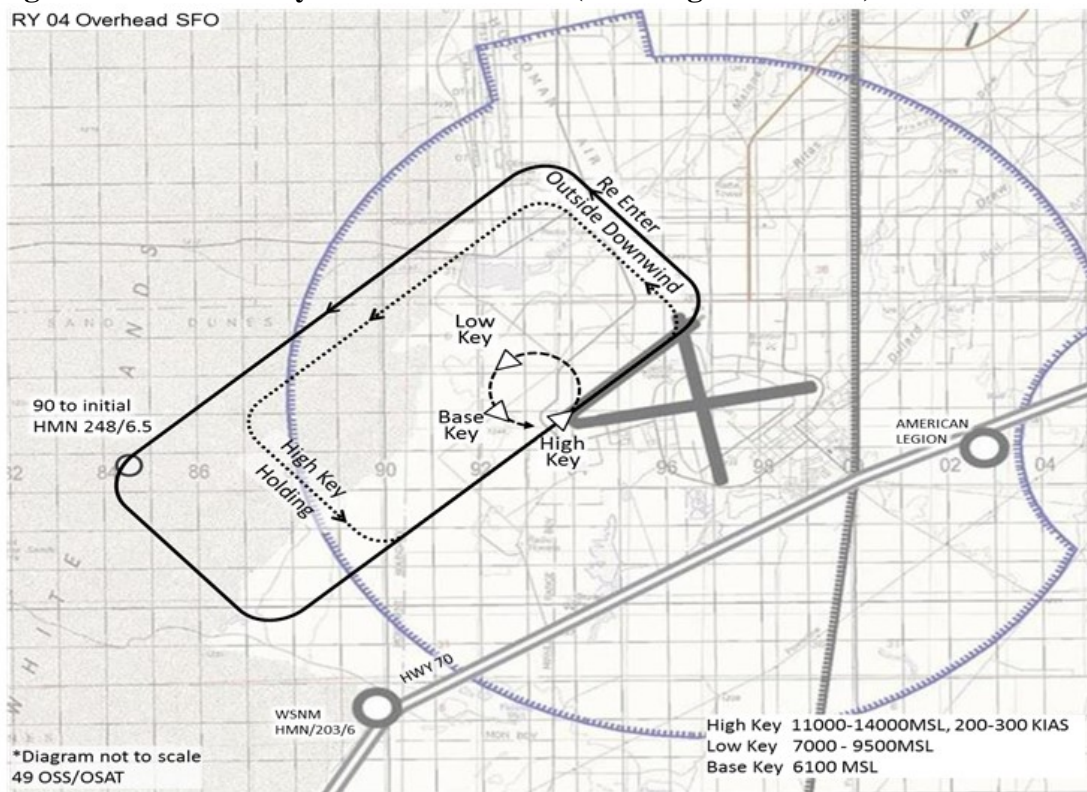


Figure A12.8. Runway 25 Overhead SFO (Drawing not to scale).

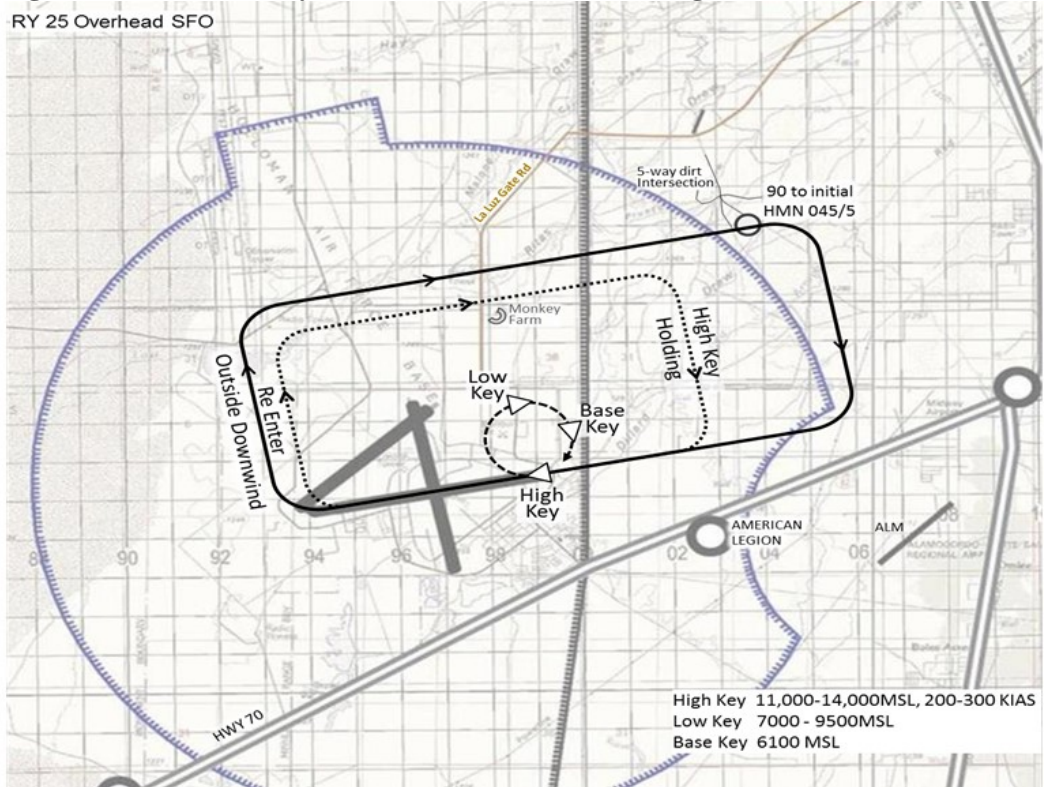


Figure A12.9. Runway 16 SI-SFO (Drawing not to scale).

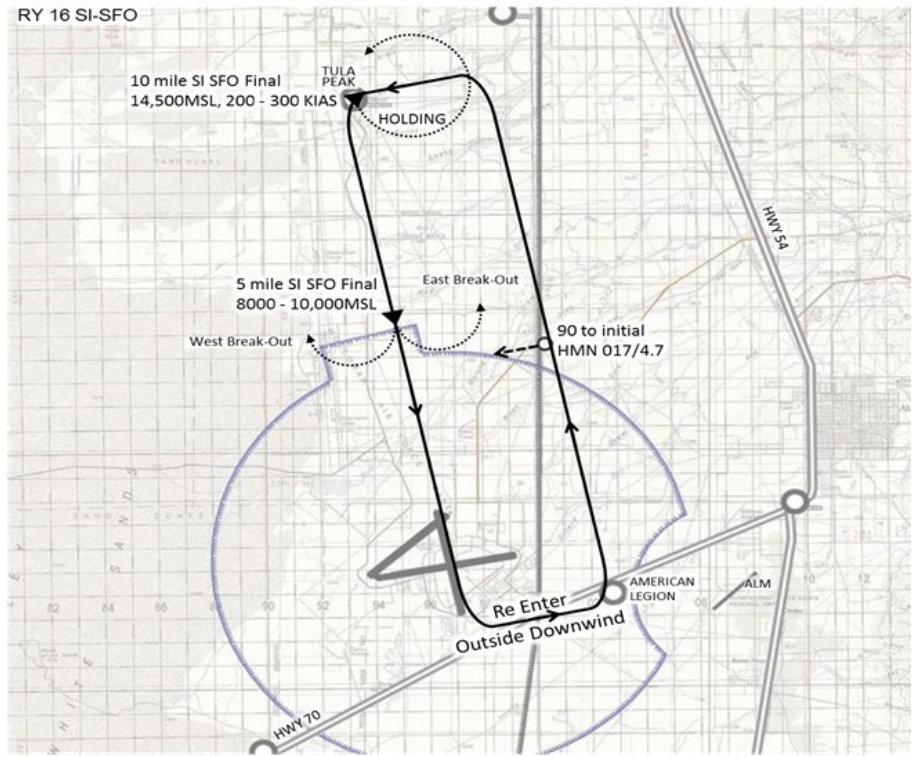




Figure A12.10. Runway 34 SI-SFO (Drawing not to scale).

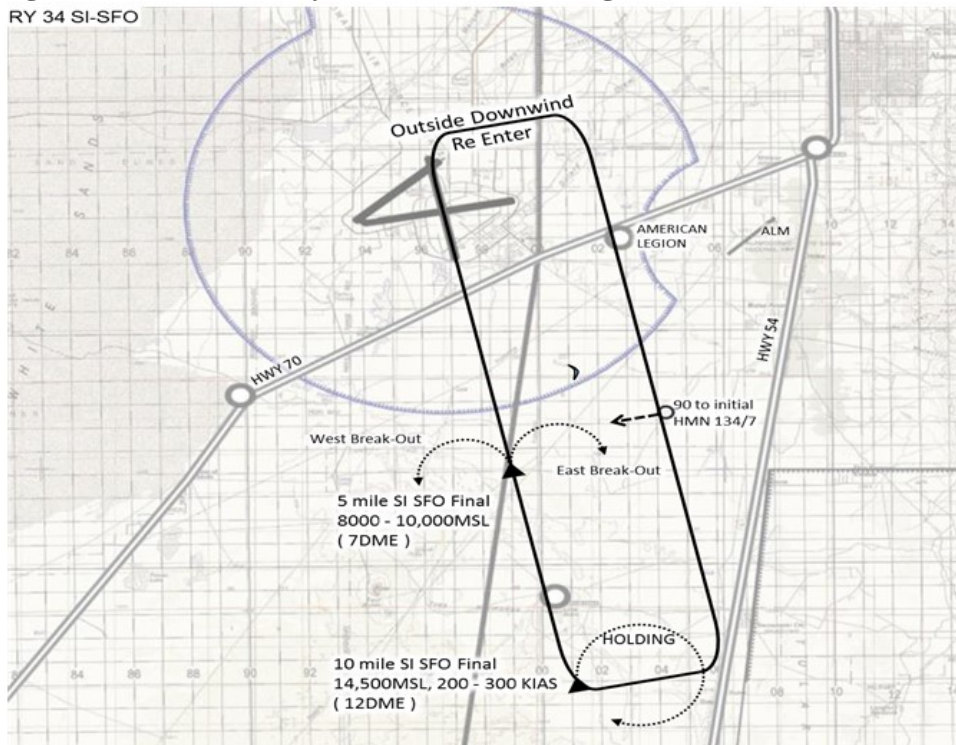


Figure A12.11. Runway 04 SI-SFO (Drawing not to scale).

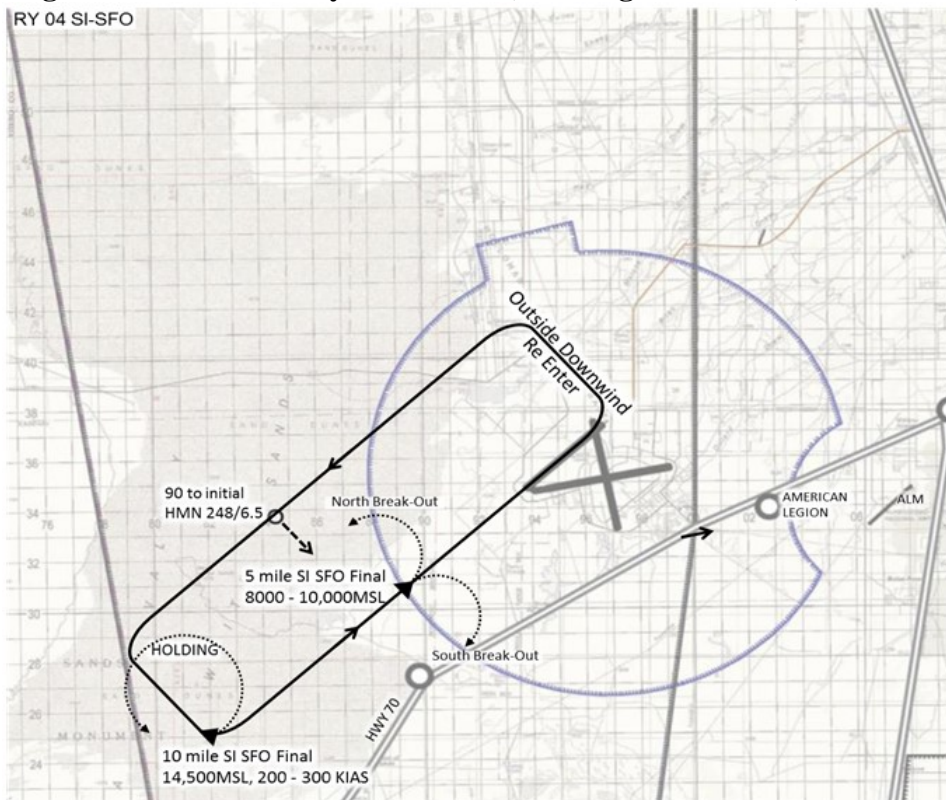


Figure A12.12. Runway 22 SI-SFO (Drawing not to scale).

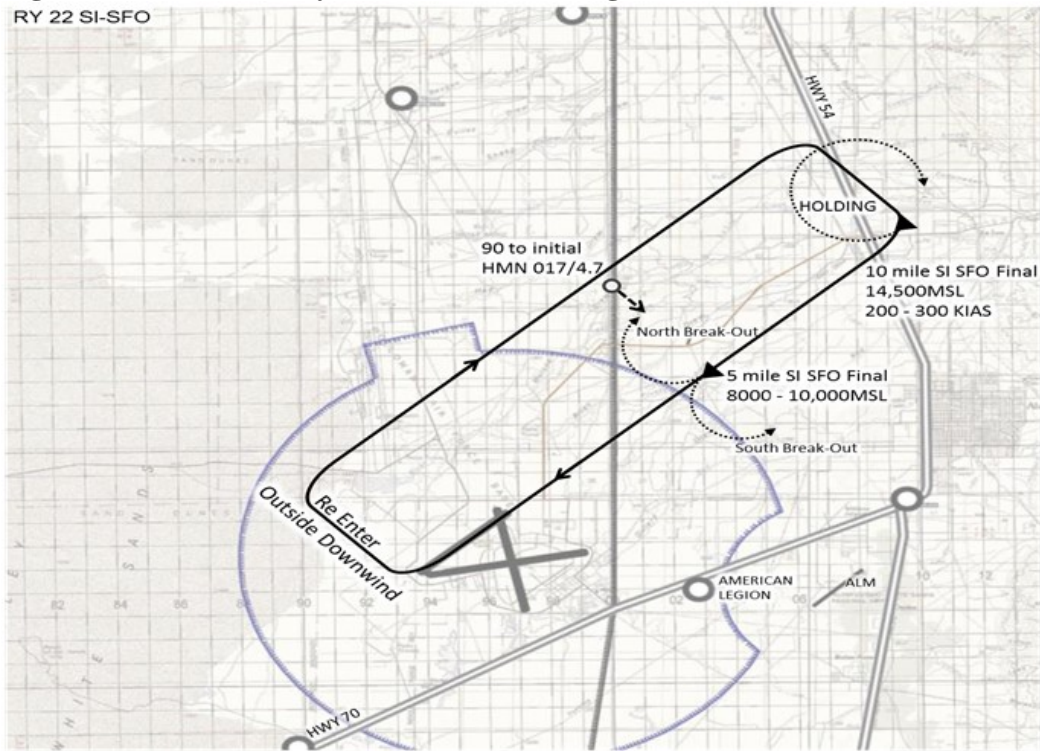


Figure A12.13. North Runway 22 Alternate Entry SI-SFO (Drawing not to scale).

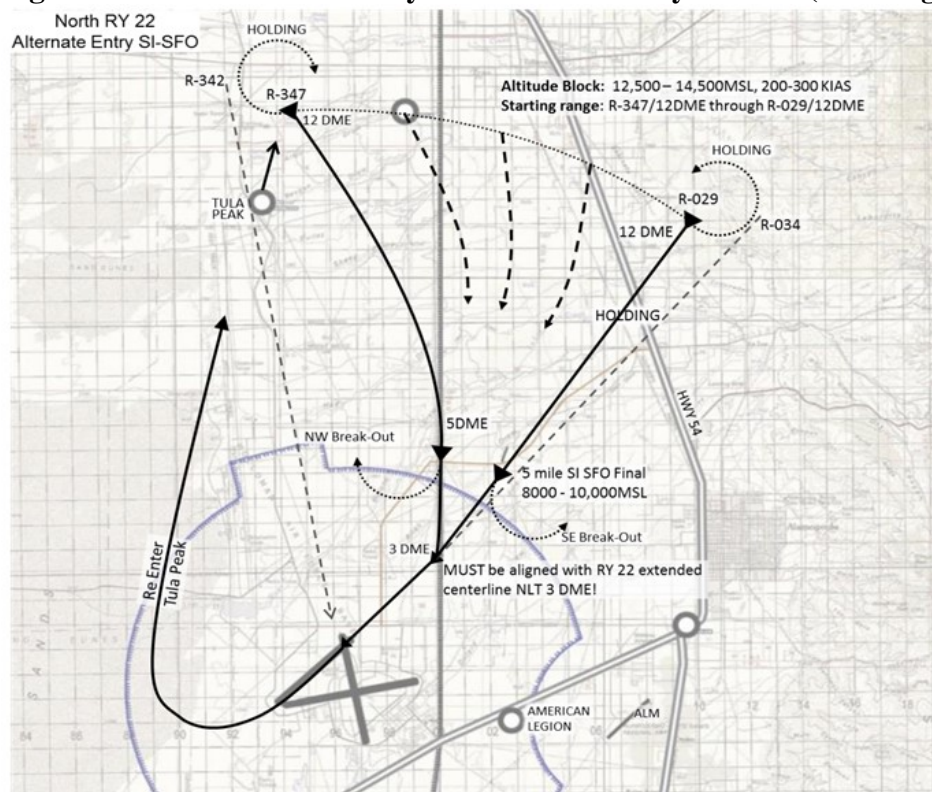




Figure A12.14. South Runway 22 Alternate Entry SI-SFO (Drawing not to scale).

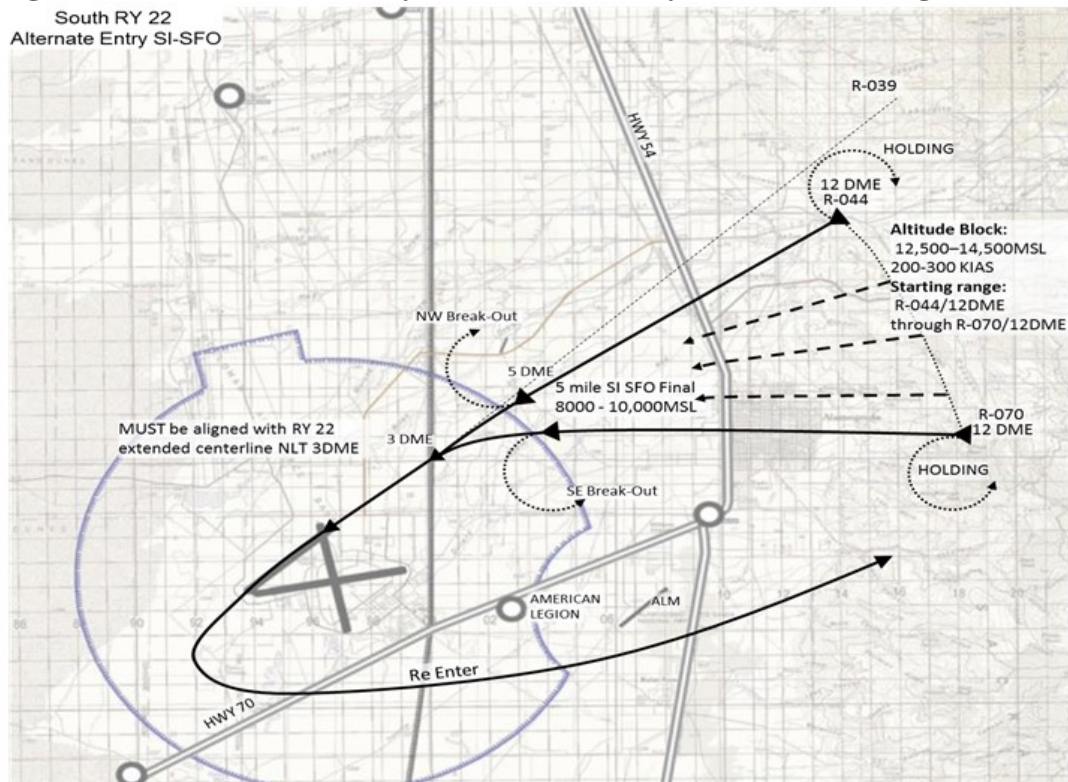


Figure A12.15. East Runway 16 Alternate Entry SI-SFO (Drawing not to scale).

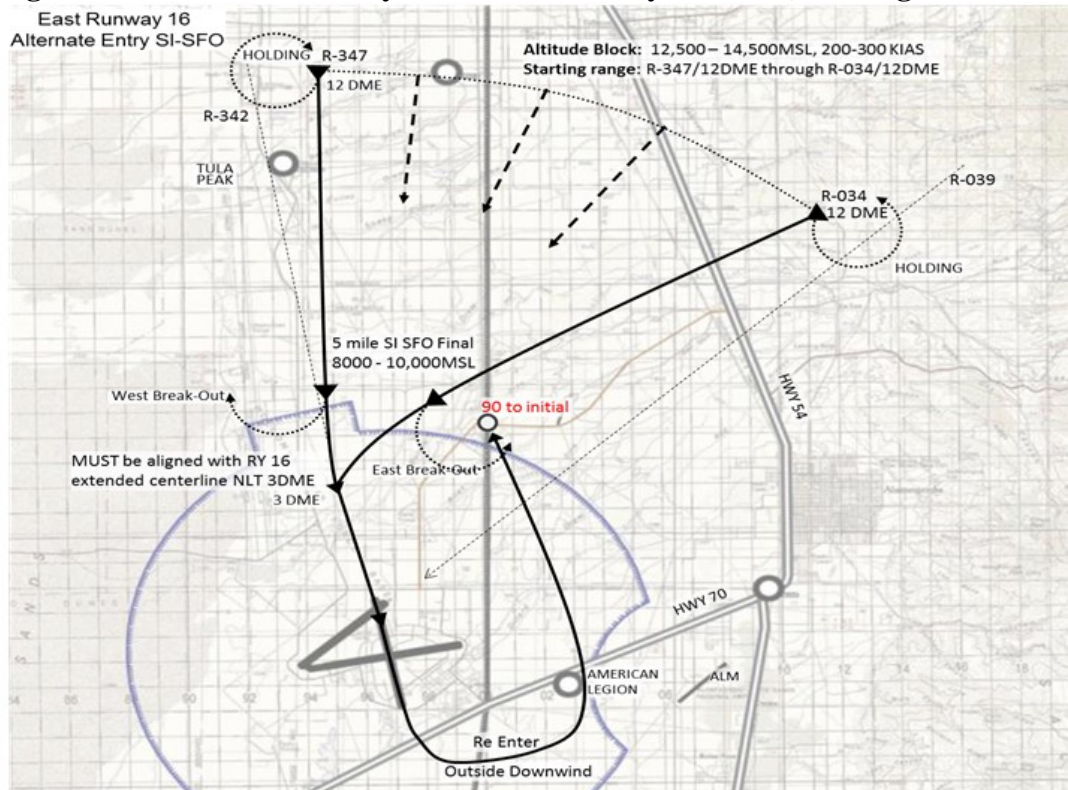


Figure A12.16. West Runway 16 Alternate Entry SI-SFO (Drawing not to scale).

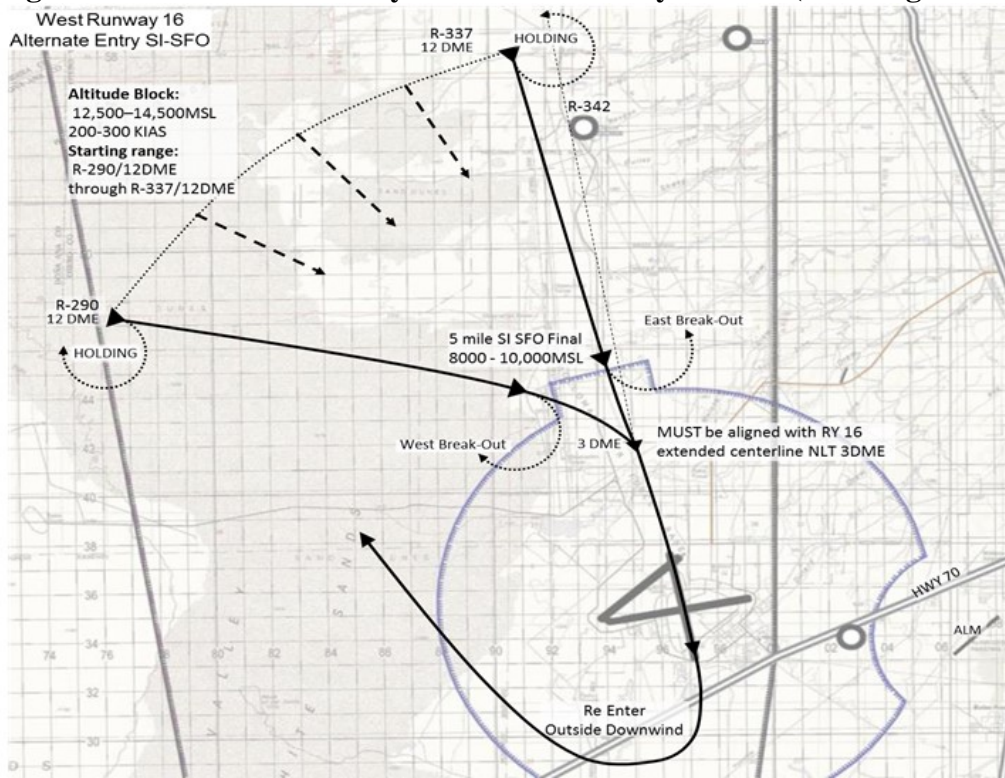


Figure A12.17. West Runway 34 Alternate Entry SI-SFO (Drawing not to scale).

