ORDER NCT 7110.65K

NORTHERN CALIFORNIA TRACON AIR TRAFFIC CONTROL FACILITY ORDER

May 8, 2006

U.S. DEPARTMENT OF TRANSPORTATION

FEDERAL AVIATION ADMINISTRATION

Distribution: AWP-530, All NCT AT Personnel **Initiated by: NCT**

FORWARD

This order prescribes air traffic control procedures for use by personnel providing air traffic control services within the airspace delegated to Northern California TRACON. Controllers are required to be familiar with the provisions of this order that pertain to their operational responsibilities and to exercise their best judgment if they encounter situations not covered by it.

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CHAPTER 1. INTRODUCTION

SECTION 1. GENERAL

1-1. PURPOSE.

This order prescribes air traffic control procedures for use by Northern California TRACON (NCT) personnel. This order supplements FAA Order 7110.65, Air Traffic Control and other NCT directives.

1-2. DISTRIBUTION.

This order is distributed to AWP-530 and all air traffic personnel at Northern California TRACON.

1-3. EXPLANATION OF CHANGES.

This Order incorporates outstanding revision notices.

1-4. CANCELLATION.

NCT Order 7110.65J, Air Traffic Control, dated March 12, 2006, NCT Notice 7110.3, SAC-MHR-SFO Jet Routes dated 12/6/05, and NCT Notice 7110.13, Change To NCT Order 7110.65J dated 3/17/06 are canceled.

1-5. RESERVED.

CHAPTER 2. EQUIPMENT

SECTION 1. COMMON ARTS

2-1. SYSTEM DESCRIPTION.

A complete description of the basic ARTS IIIE System can be found in the NAS Management Directives in the facility data systems documentation library.

2-2. CONFLICT ALERT.

a. The Conflict Alert program will be enabled system-wide upon computer start-up. The OS/CIC may inhibit the program for the express purpose of avoiding system derogation. When this action is taken, appropriate notification shall be made to the Air Traffic Division.

b. The OS/CIC shall:

(1) Ensure zone suppression is disabled for all TYPE I and II area “zones” during in-trail operations.

(2) Ensure zone suppression for applicable “zones” during visual or split runway operations.

(3) Monitor weather to ensure timely enable/disable of zone suppression.

c. The OMIC shall make an entry on FAA Form 7230-4, Daily Record of Facility Operation, reflecting the status of zone suppression.

2-3. BEACON CODE BANKS.

a. All NCT Areas use ARTS IIIE Beacon Code Banks.

b. NCT Remote ARTS Color Display (RACD) facilities draw beacon codes from the same beacon code banks.

c. The IFR code bank and VFR4 code bank are interchangeable with each other. For example, if all the IFR beacon codes are used, the ARTS will draw the next IFR code requested from the VFR4 bank.

d. The VFR1 code bank is reserved by the traffic count program for Class B clearance aircraft.

e. The VFR3 code bank is reserved by the traffic count program for VFR practice approach aircraft.

f. The following range of codes are assigned to NCT:

BEACON CODE BANK	FIRST CODE	LAST CODE
IFR	4601	4677

VFR4	5300	5377
VFR	0313	0377
VFR1	5701	5736
VFR2	5601	5677
VFR3	5737	5777

2-4. MSAW.

a. MSAW is automatically enabled on beacon codes drawn from the IFR and VFR4 code banks. MSAW can be inhibited on ARTS datablocks drawn from these beacon code banks.

b. MSAW is automatically inhibited on beacon codes drawn from the VFR, VFR1, VFR2, and VFR3 code banks. MSAW cannot be enabled on ARTS datablocks drawn from the VFR, VFR1, VFR2, and VFR3 beacon code banks. VFR aircraft requesting MSAW processing or an IFR clearance must be given a beacon code from the IFR or VFR4 code banks.

2-5. RADAR SENSOR IDENTIFIERS.

Use the following identifiers when changing radar sensors:

(SRR: Short Range Radar/LRR: Long Range Radar)

SENSOR	ID	SENSOR	ID
BAB: (SRR)	B	OAR: (SRR)	Y
MCC: (SRR)	M	QMV: (LRR)	QQ
MCE: (SRR)	E	PRB: (LRR)	PP
NUQ: (SRR)	N	SAC: (LRR)	SS
OAK: (SRR)	O	SCK: (SRR)	A

2-6. RADAR ASSETS TABLE.

a. Use the following table as a guide to determine the best back-up radar system when a sector's primary radar sensor is out of service.

b. When sectors are combined, controllers should use their best judgment as to which sensor provides the best coverage for the current traffic situation.

SECTOR	PRIMARY SENSOR	B/U 1	B/U 2
FREMONT	OAR	PRB	QMV
HOOKS	NUQ	OAK	QMV

LICKE	NUO	OAK	OMV
MORGAN	OAR	PRB	OMV
SECA	OAR	PRB	OMV
TOGA	NUO	OAK	OMV
TURLOCK	MCE	PRB	
BOULDER	OAK	NUO	OMV
CEDAR	SCK	MCE	OMV
FOSTER	OAK	NUO	OMV
LAGUNA	OAR	OMV	PRB
NILES	OAK	NUO	OMV
WOODSIDE	OAK	NUO	OMV
CASTLE	MCE	PRB	SAC
GROVE	OAK	NUO	OMV
MULFORD	OAK	NUO	OMV
SUNOL	SCK	OMV	SAC
TRACY	SCK	OMV	SAC
VALLEY	SCK	OMV	SAC
DIABLO	OAK	NUO	OMV
FAIRFIELD	SCK	OAK	OMV
OUAKE	NUO	OAK	OMV
RICHMOND	OAK	NUO	OMV
SUTRO	OAK	NUO	OMV
BUTTES	BAB	MCC	SAC
DELTA	MCC	SCK	BAB
ELKHORN	MCC	BAB	SAC
EXPO	MCC	SAC	BAB
KIRKWOOD	SCK	MCC	OMV
PARADISE	BAB	MCC	OMV

2-7. ARSR BACK-UP MODE.

a. When using an ARSR radar sensor, the center of the ACD does not represent the location of the ARSR radar sensor. In some cases, radar returns may be more than 40 miles from the radar antenna.

b. Radar returns are indicated by:

(1) Beacon - “/”.

(2) Primary - "•".

2-8. RADAR GATEWAY (RGW).

a. RGW is the back-up automation mode during Common ARTS outages.

b. Mode C data is uncorrected in RGW mode and shall not be used for separation.

2-9. DIGITAL ALTIMETER SETTING INDICATOR.

a. NCT uses Digital Altimeter Setting Indicators (DASI) within its airspace. Altimeter information is fed directly from the DASI into Common ARTS. Manual entry of an altimeter setting inhibits this automatic update. NCT Altimeter information is displayed in both the System Data Area and the "Altimeter Tab List."

b. DASI's information displayed on ACDs may be issued to aircraft when appropriate.

c. DASI's are located at the following airports:

APC	LVK	MRY	OAK	SCK
SFO	SJC	SMF	SNS	STS

d. DASI regions are geographic and are based on DASI locations.

2-10. WEATHER RADAR GATE / WEATHER LEVEL SETTINGS.

a. Since NCT uses ACDs, weather/radar gate settings are not applicable.

b. On position start-up, the default weather level setting is off.

2-11. PRIMARY AND SECONDARY SCRATCHPAD FIELD USE.

a. The Common ARTS has two 3-character user-defined fields in Field 2 of the ARTS datablock.

b. Usage of the scratchpad fields is defined in Chapter 4 and the area specific chapters.

SECTION 2. FDIO

2-12. SYSTEM DESCRIPTION.

a. The FDIO system distributes and relays flight plan data, weather information, and general information messages between Oakland Center's Host Computer and NCT.

b. The three components of the FDIO system used by air traffic control personnel are the keyboard, the monitor, and the printer. This equipment provides for the input, preview, and retrieval of flight plan data, weather, and other general information.

SECTION 3. ACE-IDS

2-13. SYSTEM DESCRIPTION.

a. The ACE-IDS is an integrated information display system used for the dissemination of:

(1) Real time weather and RVR data.

(2) Airport status.

(3) NOTAMs.

(4) TMU information.

(5) Equipment status.

b. The system also provides controllers with information needed for air traffic control. This data includes but is not limited to:

(1) Maps and charts.

(2) Lists of frequencies and dial codes.

(3) Published airport information and instrument procedures.

(4) Major air traffic documents, e.g., Air Traffic Publications, local orders, and LOAs.

c. The Status Information Area (SIA) page on each controller ACE-IDS workstation provides quick access to:

(1) A position relief checklist.

(2) Emergency procedures.

(3) All available airport weather.

(4) Frequencies pertinent to that area of specialization.

(5) Instrument approaches, departures, and arrivals pertinent to that area of specialization.

(6) An area of specialization main menu.

(7) A video map of the sector associated with the particular SIA.

(8) Airport information pages pertinent to the sector associated with the particular SIA.

d. The weather displayed in the SIA represents the weather information normally included in the ATIS of that specific airport, including the runway and approach in use.

e. The ASOS data for a specific airport is displayed on a page separate from the SIA.

f. The ACE-IDS at NCT is used in lieu of conventional position binders.

2-14. SYSTEM USE PROCEDURES.

a. “Notice of Change” alerts shall be acknowledged in a timely manner.

b. Information deemed necessary to display in the specific area “Miscellaneous” page shall be entered at the Flight Data position in that area.

2-15. ACE-IDS CLOCK PROCEDURES.

a. The ACE-IDS time source is derived from the Rapid Deployment Voice Switch (RDVS) and is fed via a satellite feed through the voice switch.

b. The clock display on the ACE-IDS is certified for ATC use.

c. Should a discrepancy exist between the ARTS Clock and the ACE-IDS Clock, the ARTS source takes precedence.

SECTION 4. RDVS

2-16. SYSTEM DESCRIPTION.

The RDVS is an integrated voice switching system that will provide:

a. Access to air/ground and ground/ground communications from any operational position.

b. Access to an administrative telephone system.

c. Reconfiguration of operational position equipment.

d. Expandability of the voice switch.

2-17. SYSTEM USE PROCEDURES.

a. Radio frequencies are selected by depressing the appropriate frequency button on the TED.

(1) MAIN transmitter/receiver selected: Indicator lamp/light is green.

(2) STANDBY transmitter/receiver selected: Indicator lamp/light is white.

b. Radio and landline buttons on the TED employ locking and non-locking push-button features. All interphone buttons are programmed as "locking" buttons. The non-locking push-button feature is utilized on guard frequencies only.

2-18. TED BUTTON DEFINITIONS.

a. RECON: Reconfiguration will reset the position with a new map. The controller must accept the RECON. If a position is not in use, the RECON will be automatically accepted.

b. FWD: Forwards calls from specific TED to another. When positions are Call Forwarded, all functions follow to the new position.

c. MON: Allows monitoring of another position.

d. REL: Releases the landline in use.

e. RB: Records casual conversation on any headset plugged into the specific RDVS jack.

2-19. CALL FORWARDING.

a. When the hand-off position is not in use, it shall be call forwarded (FWD) to the radar position (FWD button or IA 3, then the position ID number).

b. When radar positions are combined, the RDVS shall be call forwarded to:

(1) The consolidated position's hand-off TED, if available, or

(2) The consolidated radar position's TED.

c. When TMC positions are combined, the RDVS shall be call forwarded to the appropriate position.

d. Call forward is displayed in the Keypad by a flashing IA pad and will display the number to which the position is forwarded in the dial preview area. Call forward can be disengaged at any position and not affect the positions ahead or behind in the call forward chain. To disengage call forwarding, press the FWD button.

SECTION 5. EFSTS

2-20. SYSTEM DESCRIPTION.

a. The Electronic Flight Strip Transfer System (EFSTS) provides real-time flight data departure information.

b. The EFSTS transfers flight strips:

(1) From SFO and OAK South Towers to Area D.

(2) From SJC Tower to Area A.

2-21. RESERVED.

CHAPTER 3. CONTROL ROOM PERSONNEL RESPONSIBILITIES AND DUTIES

SECTION 1. ALL PERSONNEL

3-1. RESPONSIBILITIES.

All personnel assigned to control room duties shall:

a. Read and Initial material contained in the Pre-Duty Binder before assuming responsibilities for the first assigned operational position.

b. Read and Initial material contained in the On-Duty Binder prior to the completion of each workweek.

c. Read and Initial material is located at the supervisor's desk for each area and may only contain information specific for that area.

3-2. OPERATIONAL CONTINUITY.

The following positions are required to maintain operational continuity through a transfer of position responsibility. The transfer shall be accomplished via a position relief briefing and position checklist:

a. All radar positions and their associated handoff positions.

b. All Coordinator (CI) positions.

c. Operations Supervisor (OS) positions.

d. Flight Data (FD) position.

SECTION 2. OPERATIONS MANAGER

3-3. RESPONSIBILITIES.

The Operations Manager shall:

a. Retain overall responsibility for the efficient and effective management of control room personnel, equipment, and administrative functions. OM's maintain oversight responsibility for the entire control room operation and ensure that all the required documentation, relative to personnel, equipment, and administrative functions, is completed in accordance with national, regional, and facility directives.

b. Ensure that at least two operational briefings are conducted daily, one each morning and afternoon shift. Personnel at the briefing shall include, as a minimum, one OS/CIC from each area, the STMC-IC, and a NATCA Representative. Discussion at the briefing shall include weather conditions and forecasts, staffing, runway configurations, and TMU initiatives.

c. Assume Traffic Management responsibilities in the absence of the TMO.

d. Ensure that control data and NOTAM information are entered into the appropriate window in the ACE-IDS.

e. At or after 0000 local time, collect the previous days forms and logs.

f. Use overtime as required.

g. Be the focal point for outage planning.

SECTION 3. OPERATIONS SUPERVISOR/CONTROLLER-IN-CHARGE

3-4. RESPONSIBILITIES.

a. The OS's primary function is general supervision of his/her designated area.

b. The OS signed on to the FAA Form 7230-10, Operations Supervisor Log, or ARTS Automated Sign-On, in each area is designated the OSIC for that area and shall enter information into the record as required.

c. OS's shall:

(1) Monitor and configure area equipment as necessary. Report anomalies to the OM.

(2) Assign and conduct training in accordance with FAA Order 3120.4, Air Traffic Technical Training.

(3) Monitor presidential aircraft movement.

(4) Maintain oversight responsibility, monitor the operation, and assign, direct, and assist controllers in the performance of their air traffic control duties.

(5) Combine and de-combine sectors/positions based on resources available, complexity, and traffic volume.

(6) Perform the watch checklist during each shift.

(7) Coordinate with the OM for overtime needs.

(8) Minimize control room distractions.

(9) Ensure timely position relief and process leave requests.

(10) Keep the TMU and affected sectors apprised of situations or circumstances that may cause congestion or delays.

(11) Coordinate with the TMU to develop appropriate traffic management initiatives for sectors and airports in their area of responsibility.

(12) Continuously review traffic management initiatives affecting his/her area of responsibility and coordinate with TMU for extensions, revisions, or cancellations.

(13) Ensure that traffic management initiatives are carried out in his/her area of responsibility.

(14) Advise TMU prior to entering/exiting holding.

(15) Ensure sectors enter holding data on the NCT Daily Aircraft Delay report, and submit this form to the TMU no later than the end of the shift.

SECTION 4. RADAR TEAM MEMBERS

3-5. RESPONSIBILITIES.

a. All control positions shall keep the OS/CIC advised of matters that require their attention, e.g., emergencies, flow control issues, operational hazards, status of NAVAIDs, etc.

b. Radar Controller:

(1) The first radar sector in the area that contains the aircraft's destination airport shall ensure that the appropriate approach information has been disseminated.

(2) Subsequent controllers shall ensure that pilots are provided any changes to pertinent operational information after the initial confirmation of ATIS information is established.

(3) When required, the first radar sector in the area that contains the aircraft's destination airport shall ensure that the required RVR value is entered in the secondary scratchpad of the datablock.

(4) Ensure ARTS data is in the appropriate tab list prior to release to another sector.

c. Flight Data Positions:

(1) Deliver IFR departure and overflight strips to the sector in which aircraft will initially enter the area.

(2) Record departure strips with destination and first fix if needed.

(3) Collect and retain strips from each sector at the end of each hour. The strips shall be bundled with the date and local time.

3-6. RESERVED.

CHAPTER 4. GENERAL OPERATIONS

SECTION 1. GENERAL CONTROL

4-1. NCT CONTROL AREAS.

AREA A	FREMONT HOOKS LICKE MORGAN SECA TOGA TURLOCK
AREA B	BOLDER CEDAR COYOTE FOSTER LAGUNA NILES WILEY WOODSIDE
AREA C	CASTLE GROVE MULFORD SUNOL TRACY VALLEY
AREA D	DIABLO FAIRFIELD QUAKE RICHMOND SUTRO
AREA E	BUTTES DELTA ELKHORN EXPO KIRKWOOD PARADISE

4-2. NCT AIRPORT COMPLEXES (CX).

Mather CX	MHR, AUN, BAB, LHM, MCC, MYV, OVE, PVF, O17,
Modesto CX	MOD, LSN, MCE, MER
Monterey CX	MRY, SNS, WVI, OAR, 3O7
Napa CX	APC, DVO, STS, O69
Oakland CX	OAK, HWD
Sacramento CX	SMF, SAC, O88
San Francisco CX	SFO, HAF, SQL
San Jose CX	SJC, NUQ, PAO, RHV, E16
Stockton CX	SCK, LVK, TCY, C83, O27, 1O3
Travis CX	SUU, CCR, VCB, O41, 0O5, 2Q3

4-3. NCT TRAFFIC FLOW DESCRIPTION.

SFOW	SFO Landing Runways 01 or 28
SFOE	SFO Landing Runways 10 or 19
SJCE	SJC Landing Runways 12 during SFOW operations
SJCW	SJC Landing Runways 30 during SFOE operations
OAKE	OAK Landing Runways 9/11 during SFOW operations
SMFS	SMF Landing Runways 16
SMFN	SMF Landing Runways 34

4-4. AIRCRAFT TYPES.

P	Non-Jet Aircraft (cruise speed 179 knots or less)
T	Non-Jet Aircraft (cruise speed 180 knots or greater)
J	Jet Aircraft And 4-Engine Turboprops

4-5. NCT SECTOR DESCRIPTIONS.

Graphical sector descriptions are contained in the Area Chapters.

4-6. AIRCRAFT BETWEEN SECTORS.

Aircraft operating between the floor of one sector and the ceiling of another are the responsibility of the overlying sector.

4-7. INTRA-FACILITY HAND-OFFS.

a. Aircraft will be on a DP, STAR, or radar vector to the appropriate vector point, appropriate advertised final approach course, or the traffic pattern for the destination airport.

b. Unless there is a designation of “L”, (level), in the altitude column of the specific sector section, aircraft may be climbing or descending to the assigned altitude when transiting a sector boundary.

4-8. TRANSFER OF CONTROL.

a. The receiving controller shall have control of transferred aircraft for speed reduction, turns, and/or descent to the base altitude of the transferring controller’s airspace.

EXCEPTION: Exceptions to transfer of control are listed in the sector specific responsibilities.

b. Aircraft are control for climb for all operations except those transferred or received from an Area E Sector.

4-9. PRE-ARRANGED COORDINATION.

a. Specific prearranged coordination procedures in use at NCT are listed in the Area Chapters where appropriate.

b. Pre-arranged coordination procedures shall not be used in the event of an ARTS failure or aircraft not tracked by the ARTS.

c. When utilizing prearranged coordination procedures:

(1) Verbally coordinate the altitude of aircraft that do not have a valid Mode C readout.

(2) Determine whether the lead aircraft is a heavy or B757 when separating aircraft operating directly behind or directly behind and less than 1,000 feet.

4-10. AUTOMATED POINT OUTS.

a. Automated points-outs utilizing primary and secondary scratch-pad data established by this order may be made in lieu of verbal coordination.

b. Altitude information on non-Mode C aircraft shall be verbally coordinated.

c. Acceptance of an automated point-out constitutes approval for change of altitude without verbal coordination when the altitude change is necessary to comply with receiving controller's exit fix or LOA required altitude.

d. Local Flights: Acceptance of an automated point-out on an aircraft with "LCL" in the primary scratch pad constitutes approval for maneuvering in and out of the receiving controller's area of jurisdiction. Verbal coordination is required when the operation terminates.

4-11. INTRA-FACILITY DEPARTURES LANDING SFO.

Use the following procedures for any aircraft departing HWD or the San Jose CX en route to San Francisco International Airport:

a. Request approval for the release and/or sequence, if appropriate, from Boulder or Niles.

b. Request release from Foster or Woodside as appropriate.

4-12. FLIGHT PROGRESS STRIPS.

The use of flight progress strips is not mandatory. Should flight progress strips be used, they shall be marked in accordance with national directives.

4-13. NOTAMS.

a. When issuing NOTAMs, the following procedures shall be used:

(1) Advise RIU AFSS of the outage and the impact on services provided by NCT. RIU AFSS will then issue the appropriate NOTAM.

(2) Ensure that all facilities affected by shutdown/failures are advised of the NOTAM.

(3) When information is received from sources other than ATC, relay it to RIU AFSS and include the name, address, and telephone number of the source.

b. When NOTAMs are received from the AFSS or other ATC facilities, the OM shall ensure that pertinent information is disseminated throughout NCT and displayed on the Status Information Area in the ACE-IDS.

4-14. MID-SHIFT CONSOLIDATION.

a. All coordinator positions will be combined to their associated radar positions.

b. When appropriate, Boulder, Grove, and Licke will consolidate at Richmond.

c. When appropriate, Richmond will combine to Sutro.

d. When appropriate, Sunol and Valley will combine to Tracy.

e. When appropriate, Seca will combine to Fremont.

f. When appropriate, all Area E radar positions will combine to Elkhorn.

SECTION 2. COMMON ARTS

4-15. ARTS SIGN-ON/SIGN-OFF.

a. ARTS automated sign-on/off procedures shall be used when opening, combining, and closing radar positions. The relieving specialist shall be responsible for all entries.

b. The following position identifiers have been established to utilize the ARTS Automated Sign-On

	AREA A	AREA B	AREA C	AREA D	AREA E	TMU
Supervisor	AS	BS	CS	DS	ES	TS
CIC	AC/A2	BC	CC/C2	DC	EC	TC
FD	AD	BD	CD	DD	ED	

4-16. THE PRIMARY SCRATCH-PAD FIELD.

a. Shall contain the three-character destination airport identifier for aircraft landing within NCT's airspace and shall be modified to reflect the appropriate three-letter destination airport identifier or exit fix, if appropriate, when an aircraft changes destination.

b. Shall contain the appropriate three-character exit fix for aircraft departing NCT's airspace, which is:

(1) The 3-character airport identifier; or

(2) The following adapted fixes; or

EXIT FIX	ROUTE
BS9	Exiting high via BSR
BSA	BSR..AVE
CZ2	PXN..CZQ
CZ9	Exiting high via CZQ
CZQ	Direct or V23 CZQ
DUD	Via DUDES DP

EN9	Exiting high via ENI
FM9	Exiting high via FMG
FRO	Via FROGO DP
FR9	Exiting high via FRA
LI9	Exiting high via LIN
OA9	Exiting high via OAL
OKY	Via OAKEY Intersection
PR2	Via OSI.V25.PRB
PRB	Via EUGEN/NUEVO DP..SNS.V25.PRB
PX9	Exiting high via PXN
RB9	Exiting high via RBL
RD9	Exiting high via RDD
RO2	Via OSI.V25.SNS.V137
ROM	Via EUGEN/NUEVO DP..SNS.V137.ROM
SA8	Exiting laterally via SAC
SA9	Exiting high via SAC
SN8	Exiting laterally via SNS

(3) The first fix on the route outside of NCT's airspace not contained in the above table.

c. Shall contain "LCL" for VFR aircraft with no specific destination, for example, maneuvering in a practice area.

4-17. THE SECONDARY SCRATCHPAD FIELD.

a. Secondary scratchpad field shall be used to display either NCT-specific or area-specific information as required.

b. Absence of secondary scratchpad information indicates an IFR arrival is executing the approach advertised on the ATIS.

c. IFR arrivals executing other than the approach advertised on the ATIS or VFR practice approaches shall contain the type approach cleared for in the second scratchpad field.

d. Any area specific information contained in the secondary scratchpad shall be removed prior to initiating a radar hand-off to another area.

e. The following secondary scratchpad entries are considered NCT-specific and can be used when transiting areas:

SCRATCHPAD ENTRY	MEANING	ARTS SHORTCUT
2ER	Aircraft sight-seeing in the San Francisco Bay Area	ee
AIS	Airport in sight	aa
GPS	Aircraft requesting/assigned a GPS approach to advertised runway	gg
III	Coordination of Category 2 or 3 ILS approach	
ILS	Aircraft requesting/assigned an ILS approach to advertised runway	ii
LOC	Aircraft requesting/assigned a LOC approach to advertised runway	ll
MFU	Aircraft that has declared “Minimum Fuel”	mm
NDB	Aircraft requesting/assigned a NDB approach to advertised runway	nn
OPN	Law Enforcement aircraft in an “Operational” status	oo
PIX	Aircraft conducting photo missions	xx
R##	Specific runway request	

RNV	Aircraft requesting/assigned a RNAV approach to advertised runway	rr
RVA	Aircraft requesting a visual approach	
SVR	Special VFR operation	
TFC	Aircraft providing automobile traffic reporting	ff
V##	RVR landing value required by aircraft in hundreds of feet	
VA	Aircraft assigned a visual approach	
VOR	Aircraft requesting/assigned a VOR approach to advertised runway	vv

f. Entering data into the secondary scratchpad can be accomplished via the following methods:

(1) F7, +###, slew, and enter.

(2) +###, slew, and enter (implied function).

(3) ## (shortcut function).

g. Shortcuts that are specific to the airport displayed in the primary ARTS scratchpad field are listed in the Area Chapters.

4-18. CLASS B CLEARANCE ARTS ENTRY.

For automated traffic count purposes, use “/1” in the second line of the ARTS preview entry when requesting a Class B beacon code.

4-19. PRACTICE INSTRUMENT APPROACH PROCEDURES.

a. For automated traffic count purposes, use “/3” in the second line of the ARTS preview entry when requesting a beacon code for a VFR aircraft practicing instrument approaches. This will also automatically generate an “R” in Field 4.

b. IFR aircraft that are executing multiple approaches shall have an “R” placed in Field 4.

c. VFR aircraft requesting practice instrument approaches shall be on a VFR datablock (with “R” in Field 4 and MSAW inhibited) and the type of instrument approach being executed shall be entered into the secondary scratchpad.

4-20. FIELD 4 DESIGNATOR.

The following single-character designator shall be entered into Field 4 of VFR aircraft datablocks:

ENTRY	MEANING
R	Aircraft executing a practice instrument approach
V	VFR Aircraft (In the absence of an R or X)
X	Aircraft issued a Class B clearance

4-21. NAS VFR (“F9”) FLIGHT PLANS.

a. F9 flight plans should be used for VFR aircraft requesting radar services to destinations outside of NCT’s airspace.

b. F9 flight plans should not be used for VFR aircraft requesting radar services to destinations within NCT.

4-22. EMERGENCY AIRPORT CLASSES.

Airports displayed by utilizing the class switch in the Emergency Airport function are sorted by the following criteria:

a. Class 1: Runway length less than 3,000 feet.

b. Class 2: Runway length of 3,000 feet or greater, but less than 6,000 feet.

c. Class 3: Runway length 6,000 feet or greater.

4-23. NAVAID/FIX DATA FUNCTION.

NAVAID/Fix data is displayed on an adapted NAVAID/Fix in the following format:

a. NAVAID: 3-character fix name, VHF frequency (if appropriate), UHF channel (if appropriate).

b. FIX: 5-character fix name.

4-24. ADJACENT FACILITY HAND-OFFS.

a. ARTS IIIE to ARTCC handoffs shall be directed using the letter "C" and the appropriate sector number.

b. ARTS IIIE to other ARTS/Terminal Facilities handoffs shall be directed using the following symbology:

(1) FAT:

∆3C	CHANDLER

Δ3F	FRIANT

(2) NLC:

Δ4

(3) SUU:

Δ1N	NORTH
Δ1S	SOUTH

4-25. INTRA-FACILITY HANDOFFS.

Handoffs that are contained within an NCT area (including an NCT ARTS facility associated with that area) require only the entry of the CPS. Handoffs between NCT areas require entry of the Subset and CPS.

SECTOR/FACILITY	SUBSET/POSITION SYMBOL
FREMONT	1F
HOOKS	1K
HOOKS H/O	1U
LICKE	1L
LICKE H/O	14
MORGAN	1M
MORGAN H/O	12
MRY 1	1Z
MRY 2	19
NUQ	1N
PAO	1P
RHV 2	16
RHV 1	1R
SECA	1S
SECA H/O	13
SJC 1	1J
SJC 2	1X

TOGA	1T
TOGA H/O	15
TURLOCK	1Q
BOULDER	2B
BOULDER H/O	23
CEDAR	2Z
CEDAR H/O	21
CI-4	2I
COYOTE	2P
FOSTER	2F
LAGUNA	2G
LAGUNA H/O	24
NILES	2N
NILES H/O	22
SFO 1	2V
SFO 2	2Y
SQL	2S
WILEY	2E
WOODSIDE	2W
CASTLE	3K
GROVE	3G
GROVE H/O	34
HWD	3E
LVK	3L
MOD	3P
MULFORD	3M
MULFORD H/O	35
OAK NORTH	3A
OAK SOUTH	3O

SCK	3Z
SUNOL	3S
TRACY	3J
VALLEY	3Y
DIABLO	4D
DIABLO H/O	44
FAIRFIELD	4F
FAIRFIELD H/O	41
QUAKE	4Q
QUAKE H/O	42
RICHMOND	4R
RICHMOND CI	4X
RICHMOND H/O	45
SUTRO	4U
SUTRO H/O	46
SUTRO CI	4Z
BAB #1	5U
BAB RFC	5F
BUTTES	5B
BUTTES H/O	53
DELTA	5D
DELTA H/O	57
ELKHORN	5E
ELKHORN H/O	58
EXPO	5X
EXPO H/O	56
KIRKWOOD	5W
KIRKWOOD H/O	51
PARADISE	5P

PARADISE H/O	54
SAC #1	5Z
SAC #2	59
SMF #1	5V
SMF #2	5A
SMF MONITOR 1	5N
SMF MONITOR 2	5O

4-26. AIRCRAFT IDENTIFIER SHORTCUTS.

SHORTCUT	TYPE	SHORTCUT	TYPE
B2	BE20	HH	HELO
B3	BE36	HX	HXB
B5	BE55	KK	P28A
B6	BE60	LL	PA32
B7	BE76	LR	LR35
B8	BE58	M2	MO21
B9	BE90	MM	MO21
BB	BE55	NA	NA1
BJ	BE40	QA	P28R
C1	C152	QC	PA24
C2	C210	QK	P28A
C3	C310	QN	PA31
C4	C414	QM	PA46
C6	C206	QS	PA44
C7	C172	QT	PA30
C8	C182	QY	PAYE
CC	C172	QZ	PAZT
CJ	C550	RC	AC12
CQ	C441	TC	C421
CV	C208	TO	DHC6

DD	BE76	TZ	BE50
GE	C421	ZZ	BE36
GM	AA5		

4-27. VIDEO MAPS.

SENSOR	ID
MCC	00
BAB	01
NUQ	02
OAK	03
OAR	04
SAC	05
MCE	06
QMV	07
PRB	08
SCK	09

MAP NAME	ID
SFOW - LO / SMFS - LO	01
SFOE - LO / SMFN - LO	02
MVA	03
AIRWAYS	04
EOVM	05
GEOGRAPHY	06
GPS	07
ZOA SECTORS	08
SFOW - HI / SMFS - HI	09
SFOE – HI / SMFN - HI	10

SECTION 3. QUICK-LOOK REGIONS

4-28. DESCRIPTION.

ARTS Quick-Look regions are used for airspace coordination. These regions force the display of full datablocks of a specific CPS onto a different ACD. Once a full datablock leaves a quick-look region, it reverts to a partial datablock.

4-29. QUICK-LOOK REGIONS.

NCT Quick-Look regions exist in the following sectors:

a. All datablocks that contain “SFO” in the primary scratchpad will be displayed at Boulder, Foster, Niles, and Woodside.

b. Between Toga and Diablo.

c. Between Boulder and Quake.

d. Between Boulder and Sutro.

e. Between Grove and Mulford.

f. Between Sunol and Kirkwood.

g. Between Fairfield and Kirkwood.

h. Between Fairfield and Paradise.

i. Between Quake and Sutro.

j. Between Richmond and Diablo.

k. Between Richmond and Grove.

l. Between Richmond and Sutro.

m. Between Delta and Expo.

n. Between Delta and Elkhorn.

o. Between Elkhorn and Expo.

SECTION 4. WEATHER INFORMATION

4-30. SIGMET/CWA/PIREP.

The OM shall ensure that SIGMETs, CWA, PIREPs, and other appropriate weather information are disseminated as necessary to the appropriate ATCTs and/or AFSS(s) via the ACE-IDS.

4-31. RESERVED.

CHAPTER 5. NOISE ABATEMENT

Traffic permitting, control room personnel shall apply the following Noise Abatement Procedures:

5-1. BAB.

When vectoring beyond 9 NM for Runway 15, restrict aircraft when on the TACAN Runway 15 final approach to cross AHART at or above 2,600 feet.

5-2. HWD.

Runway 28 departures shall be issued a departure procedure that will ensure a left turn to at least 250° until clear of the Bay shoreline.

5-3. MCC.

Do not vector jet and 4-engine prop aircraft departing Runway 16 to the left below 3,000 feet.

5-4. MHR.

a. Runway 22 Arrivals:

(1) Do not issue an altitude below 3,000 feet to jet aircraft that are more than 10 miles from MHR until the aircraft is established on final.

(2) Vector pattern traffic to remain within 10 miles MHR.

(3) Between the hours 2200 and 0700 local:

(a) Vector aircraft inbound from ZOA 23/24 to intercept I-MHR east of LDOOR at or above 5,000 feet.

(b) Vector aircraft inbound from ZOA 42/44 to intercept I-MHR east of CAMRR at or above 6,500 feet.

(c) If unable to vector aircraft inbound from the south onto the final within 10 miles of MHR, then vector onto I-MHR east of LDOOR at or above 5,000 feet.

(d) If holding for more than 10 minutes is required, hold aircraft east of CAMRR, left turns, at or above 7,000 feet.

b. Runway 4 Departures: Between the hours of 2200 and 0700 local, do not vector jet aircraft until passing 4,000 feet and then right turns only.

c. Runway 22 Departures:

(1) Do not vector jets to the right.

(2) Between the hours of 2200 and 0700 local, do not vector jet aircraft until passing 4,000 feet (6,000 feet for northbound departures).

5-5. NUQ.

Between the hours of 2300 and 0700 local, weather permitting, assign all NUQ arrivals Runway 14.

5-6. OAK.

a. Arrivals:

(1) All oceanic jet arrivals inbound from the west shall cross OSI at or above 8,000 feet MSL. Do not descend this traffic below 6,000 feet until east of V25 centerline.

(2) Runways 9/11:

(a) The Port of Oakland prohibits all jets, turbo-props in excess of 17,000 pounds, and all four-engine aircraft from landing on Runways 9 except when Runways 11/29 are not available.

(b) To the extent possible, vector all jet aircraft from the south or west over the Golden Gate Bridge and away from the city of San Francisco.

(c) The Port of Oakland has requested that no aircraft land on Runway 9L/R or Runway 15 between the hours of 2200 and 0600 local.

(3) Runway 29.

(a) Instruct jet aircraft on a visual or VFR approach northeast of OAK to cross the OAK 100° radial at or above 3,000 feet.

(b) Between the hours of 2200 and 0700 local and at other times when traffic permits, vector jet aircraft from the west south of OAK to remain over the Bay.

(c) Vector jet aircraft practicing instrument approaches south of OAK to remain over the Bay.

b. Runways 27/29 Departures:

(1) Vector oceanic departures over the Bay to pass over the north end of the Golden Gate Bridge.

(2) Do not vector jet aircraft over the Oakland Hills below 3,000 feet.

(3) Between 0000 and 0600 local, vector prop aircraft as much as possible over the Bay until passing 3,000 feet.

5-7. SFO.

a. Arrivals:

(1) Runways 19: Jet aircraft executing visual approaches from the south and west shall be vectored north of a line from Hunter’s Point to the Golden Gate Bridge at 5,000 feet or above prior to being issued an approach clearance.

(2) Runways 28:

(a) Regardless of time of day, Runway 28R is the preferred arrival runway and shall be assigned whenever traffic permits without increasing delays.

(b) Instruct aircraft assigned Runway 28R that request Runway 28L to make that request to the Tower.

(c) When traffic requires side-by arrivals, utilize the Quiet Bridge Approach and the Tipp Toe Approach to the extent possible.

(d) Between the hours of 2200 and 0700 local, utilize the Quiet Bridge Approach to the maximum extent possible, including arrivals from the south, sequencing jet aircraft in-trail. The ILS 28R is the primary approach when Quiet Bridge Approaches are not feasible.

(e) Jet aircraft executing visual approaches from the south shall be vectored so as to turn final no closer than 9 miles from the runway.

NOTE: Traffic permitting, apply this procedure to prop aircraft also.

(f) All oceanic jet arrivals inbound from the west shall cross OSI at or above 8,000 feet MSL. Do not descend this traffic below 6,000 feet until east of V25 centerline.

b. Departures:

(1) Runways 1:

(a) Do not vector aircraft on the PORTE DP below 2,000 feet. Do not vector this traffic any further left than 180° until crossing the SFO 281° radial southbound.

(b) Vector aircraft enroute to the San Jose CX along the PORTE DP route until crossing the SFO 281° radial, then direct OSI to depart OSI heading 110° (heading 130° during SJCE).

(c) When lateral spacing is required, vector LIN, RBL, and SAC transition jet departures to the northwest to remain over the Bay whenever possible.

(d) During periods of light traffic, randomly vector SAC, LIN, and RBL jet departures to minimize concentrating successive departures over the same geographical location.

(e) Oceanic departures may be vectored to conform with the PORTE DP route if the aircraft crosses 4 miles north of SFO at or above 2,000 feet. After the aircraft passes the SFO 281° radial, a direct route to the appropriate oceanic composite fix may be approved. Vector aircraft which are unable to comply with this climb restriction over the Bay and pass over the north end of the Golden Gate Bridge.

(f) Between the hours of 2200 and 0700 local (Sundays to 0800), vector oceanic departures over the Bay to pass over the north end of the Golden Gate Bridge.

(g) Between the hours of 2200 and 0700 local (Sundays to 0800) and other periods of light traffic, issue the QUIET DP jet aircraft routed via SAC, LIN, and RBL. Also during these hours and during other periods of light traffic, an effort should be made to vector LIN and PORTE departures eastbound over the Bay until abeam DECOT then proceed on course.

(2) Runways 10: Between the hours of 2200 and 0700 local (Sundays to 0800), vector oceanic departures over the Bay to pass over the north end of the Golden Gate Bridge.

(3) Runways 28:

(a) Do not vector jet aircraft prior to crossing the SFO 6 DME.

NOTE: This does not pertain to aircraft issued the SHORELINE DP.

(b) Between the hours of 2200 and 0700 local (Sundays to 0800), do not vector aircraft off the MOLEN DP.

(c) Between the hours of 2200 and 0700 local (Sundays to 0800), vector aircraft issued the SFO DP west of the Peninsula Shoreline and over the north end of the Golden Gate Bridge.

5-8. SJC.

a. Arrivals:

(1) Runway 12: Between the hours of 2100 and 0700 local, vector jet aircraft on the final approach course prior to SUNNE intersection.

(2) Runway 30:

(a) The Fairgrounds Visual Approach shall be utilized to the fullest extent possible.

(b) Do not descend jet aircraft below 5,000 feet until the aircraft is east of the SJC 176° radial and west of a line that runs through BORED and KLIDE.

b. Departures:

(1) Runway 12: Do not give a right turn to jet traffic until at or above 3,000 feet.

(2) Runway 30:

(a) Do not vector jet aircraft until after passing the SJC 1.8 DME and leaving 2,000 feet.

(b) Do not turn jet aircraft toward Woodside until abeam NUQ at or above 3,000 feet.

5-9. SMF.

a. Arrivals:

(1) Assign jet aircraft a downwind that is west of the airport.

(2) Instruct jet aircraft on a downwind to make a base leg at least 4 miles from the airport; otherwise instruct jet aircraft to maintain 3,000 feet until turning base or turn base to final at or above 1,500 feet.

(3) Between the hours of 2145 and 0745 local:

(a) Assign jet aircraft practicing approaches Runway 16L only.

(b) Vector jet aircraft practicing approaches on a 3-mile wide left downwind leg at or above 3,000 feet and vector to intercept the ILS-16L final approach course not less than 8 miles from the airport.

5-10. RESERVED.

CHAPTER 6. SPECIAL OPERATIONS

6-1. PARACHUTE JUMP ZONES.

The following parachute jump zones are located within NCT (altitudes are maximum MSL unless noted):

a. Byron Airport: ECA 250°, 23NM, 15,000 feet.

b. Hollister Muni: SNS 017°, 16.6NM, 17,999 feet (1NM radius).

c. Lodi Airport: LIN 285°, 15NM, 15,000 feet (1NM radius).

d. Marina Muni: SNS 259°, 7.6NM, 12,500 feet.

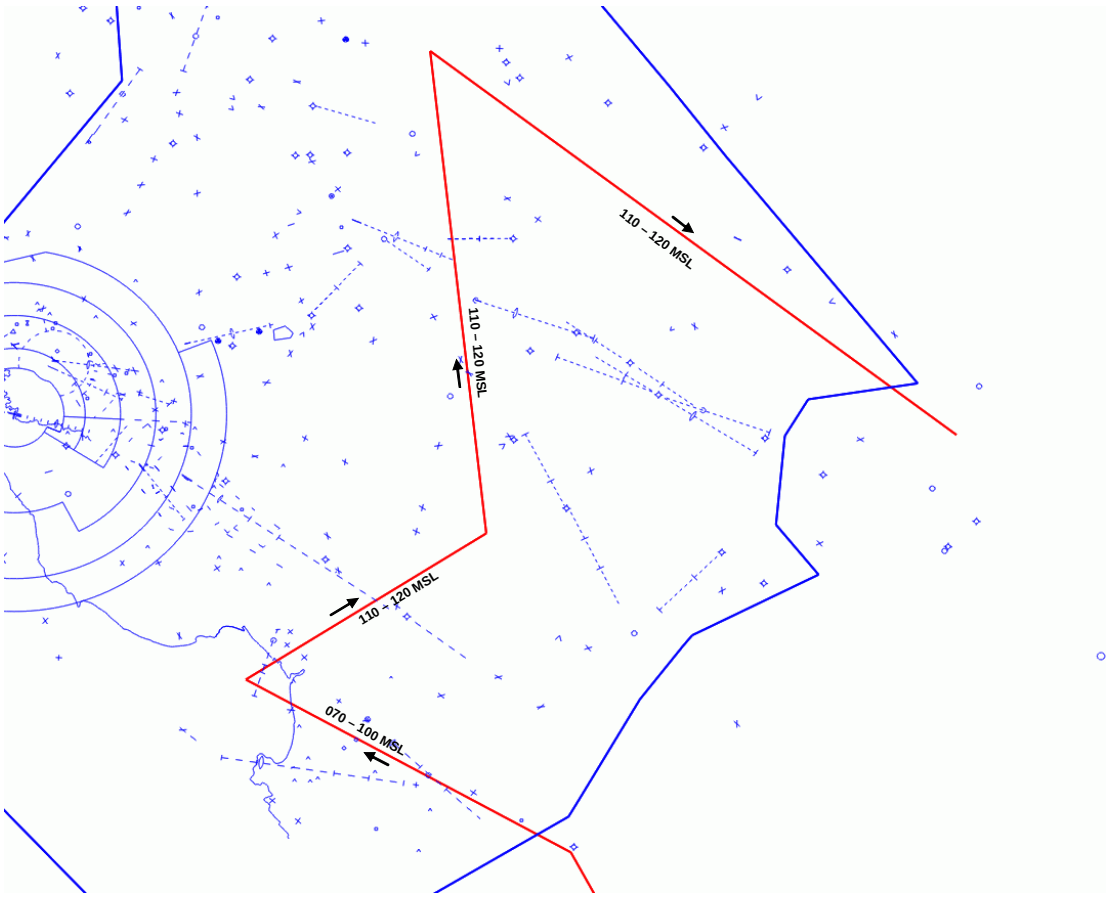
e. Salinas, Davis Road Drop Zone: SNS 235°, 6NM, 18,000 feet (1NM radius).

f. Tres Pinos: SNS 045°, 16NM, 12,500 feet (1NM radius).

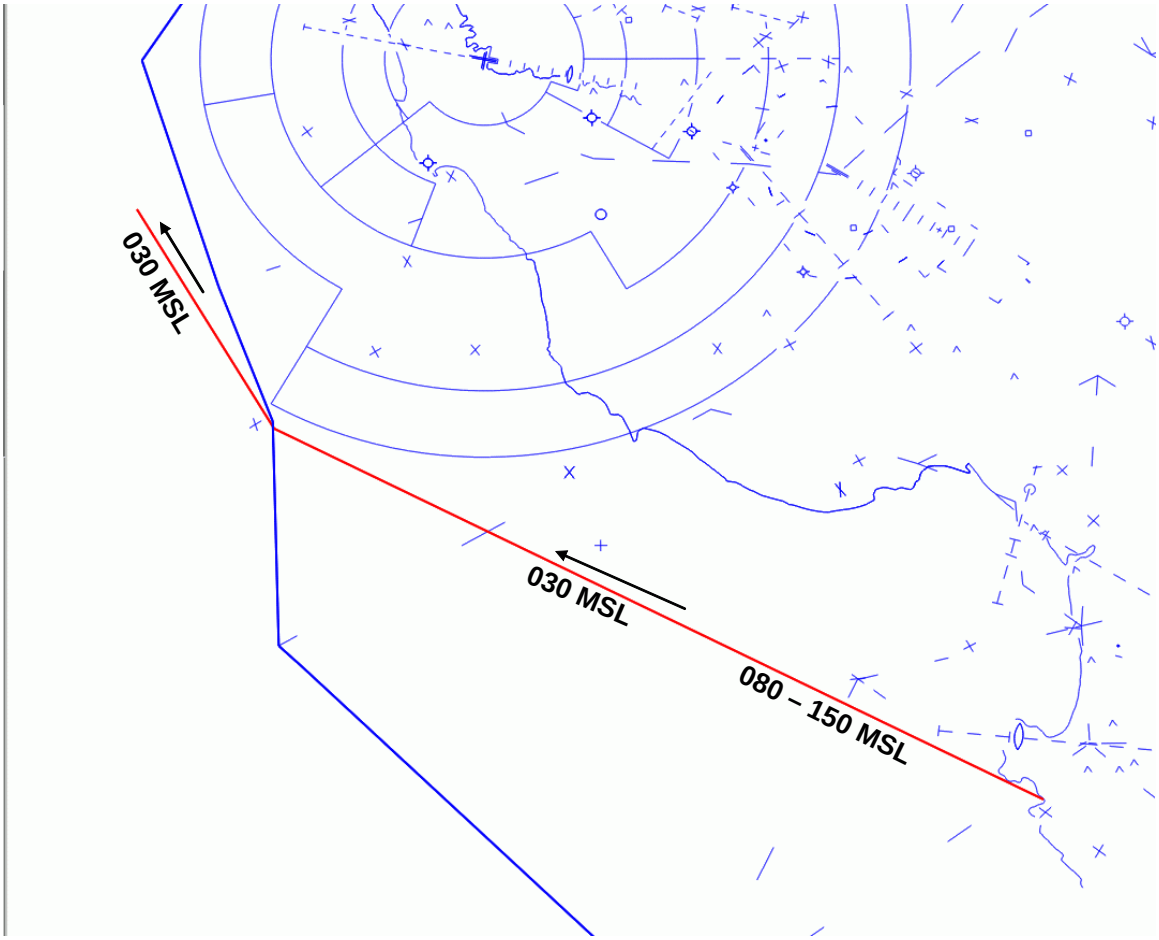
g. The Wilton Drop Zone: SAC 080°, 17.5NM, 1,500 feet AGL.

6-2. IFR MILITARY TRAINING ROUTES.

a. IR203: The route width is 6 nautical miles either side of centerline.

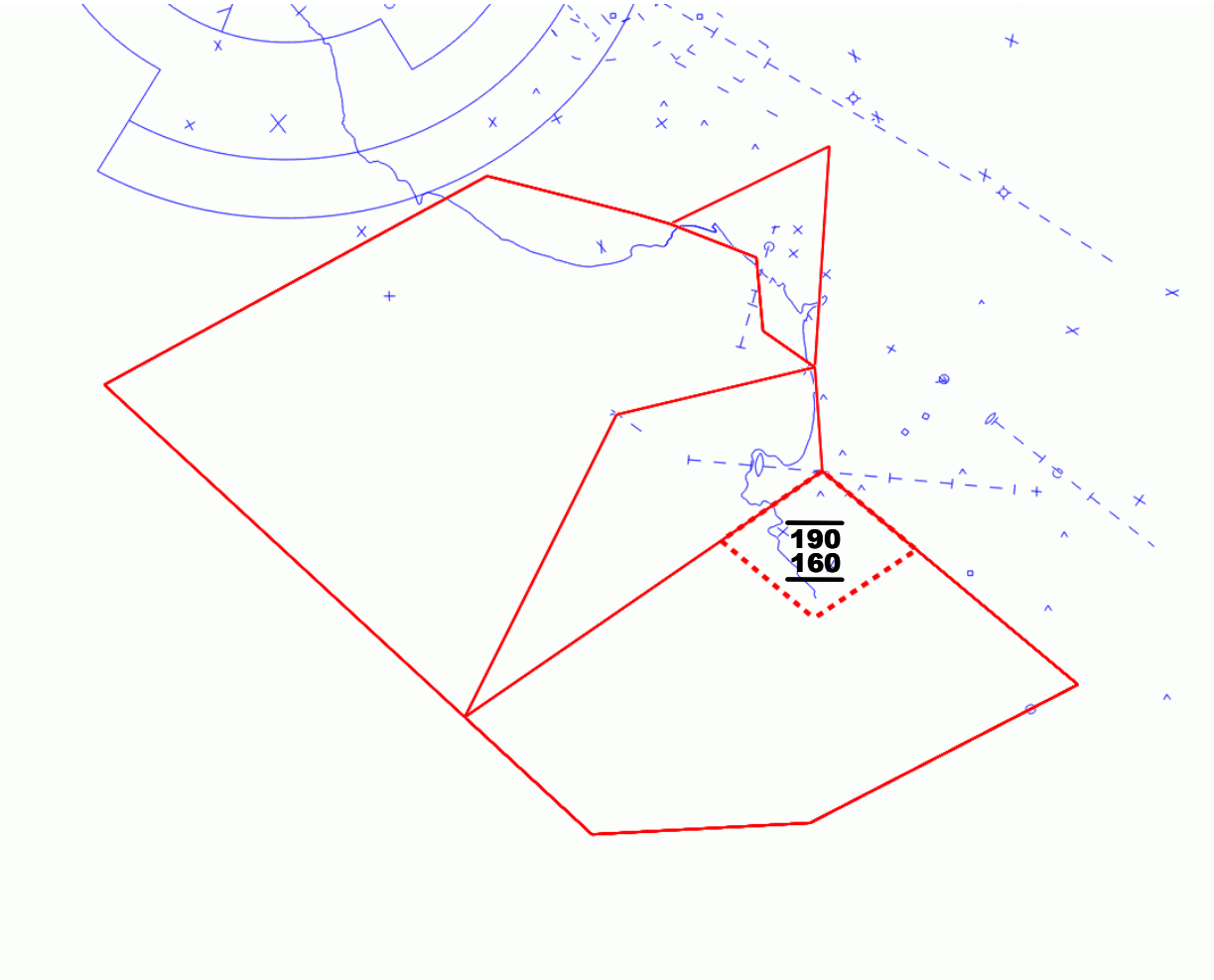


b. IR207: The route width is 2.5 nautical miles either side of centerline.



6-3. BARRY AREA.

Used during SFOW operations.



6-4. SFO RUNWAYS 1 ARRIVALS.

a. Straight-in approaches to SFO Runways 1 are not authorized for jet aircraft.

b. Straight-in approaches to SFO Runways 1 may be initiated by NCT only during daylight hours.

c. During darkness, approve these approaches only if requested by the pilot and with SFO Tower approval.

6-5. SFO SOIA/PRM PROCEDURES.

a. NCT OM shall:

(1) Ensure the SOIA/PRM checklist is complete at both NCT and SFO prior to SOIA/PRM procedures being implemented.

(2) Ensure the Conflict Alert has been inhibited prior to beginning SOIA/PRM operations.

(3) Not initiate SOIA/PRM during SJCE or OAKE operations.

(4) Ensure the SOIA/PRM Blunder Data Report form is completed in accordance with FAA Order 7110.112, Simultaneous ILS/MLS Blunder Data Collection.

b. Area B OS/CIC shall complete the Supervisors SOIA/PRM checklist prior to initiating PRM operations.

c. NCT TMU shall:

(1) Complete the TMU SOIA/PRM Procedures Checklist.

(2) Notify ZOA TMU when SOIA/PRM approaches will be conducted.

(3) Advise SFO to transmit SOIA/PRM ATIS as soon as practicable.

(4) Advise the ATCSCC that SOIA/PRM procedures are in use, coordinate slot times for aircraft unable to use SOIA/PRM procedures, and adjust the airport arrival rate accordingly.

(5) Inform SFO OS/CIC of the first and last aircraft that are conducting SOIA/PRM approaches.

(6) Coordinate the arrival of an aircraft without a transponder, or one that is not PRM qualified with the Area B OS/CIC.

(7) Advise ZOA TMU when SOIA/PRM approaches are no longer in use.

(8) Log all blunders and go-arounds with their corresponding reasons in the TMU log.

d. Niles shall:

(1) Vector non-participating aircraft for an ILS Runway 28L approach.

(2) Consider all international carriers, regardless of arrival fix, to be participants although they can only accept the ILS/PRM Runway 28L approach.

e. Woodside shall:

(1) Vector all international air carriers, regardless of arrival fix, for the ILS/PRM Rwy 28L approach. International air carriers are considered participants although they can only accept the ILS/PRM Runway 28L approach.

(2) Vector any non-participating aircraft for a single-file ILS Runway 28L approach. “ILS” shall be put in the secondary scratchpad and the aircraft shall be

instructed to contact SFO Tower as soon as practical after approach clearance is issued.

(3) Maintain radar separation from Foster's Arrivals to Runway 28R until aircraft are cleared for approach and switched to Tower frequency.

(4) Ensure aircraft are established on the localizer at a point at least 2 miles from ROKME.

(5) Ensure that "LFT" is in the secondary scratchpad prior to transferring the aircraft to Tower frequency.

(6) Transfer communications of PRM aircraft to Tower prior to ROKME.

f. Foster shall:

(1) Not clear an aircraft for approach until both aircraft in the pair are established on the localizers. Maintain radar separation from Woodside's Arrivals to Runway 28L until aircraft are cleared for approach and switched to Tower frequency.

(2) Ensure aircraft are established on the localizer at a point at least 2 miles from BATKE.

(3) Ensure that "RGT" is in the secondary scratchpad prior to transferring the aircraft to Tower frequency.

(4) Transfer communications to Tower prior to BATKE.

(5) Vector any non-participating aircraft for a single-file ILS Runway 28L approach. "ILS" shall be put in the secondary scratchpad and the aircraft shall be instructed to contact SFO Tower as soon as practical after approach clearance is issued.

(6) Consider all international carriers, regardless of arrival fix, to be participants although they can only accept the ILS/PRM Runway 28L approach.

g. Wiley (Final Monitor Controller) shall:

(1) Enter altimeter setting into the PRM display.

(2) Complete the SOIA/PRM Equipment checklist prior to conducting SOIA/PRM approaches.

(3) Be responsible for longitudinal separation on the Runway 28L final approach course and with traffic on the LDA/PRM Runway 28R final approach course until NEPIC.

(4) Ensure the aircraft on the ILS/PRM Runway 28L approach is ahead of the aircraft on the LDA/PRM Runway28R approach by the time the 28L arrival descends through 2,100 feet.

(5) Accomplish the following actions in response to unusual situations:

(a) In the event an aircraft enters "coast status" (CST), potentially conflicting aircraft on the adjacent localizer shall be pulled out and re-sequenced if

the coast aircraft position cannot be verified in a reasonable amount of time, and/or the aircraft data "drops" into the Coast/Suspend list.

(b) If an indication is received of an aircraft being in a NORDO, emergency, or hijack situation, conflicting traffic on the adjacent localizer shall immediately be pulled off the final approach course. The aircraft in the unusual situation should be allowed to continue.

(6) In the event that an aircraft must be taken off the final approach course for any reason, the controller that gives the control instruction is responsible for ensuring that the appropriate coordination and handoff are made to the receiving controller.

(7) Assign the following standard breakout instruction for Runway 28L: Climb and maintain 3,000' or higher and fly heading 235º. Coordinate alternate instructions, as necessary.

h. Coyote (Final Monitor Controller) shall:

(1) Enter altimeter setting into the PRM display.

(2) Complete the SOIA/PRM Equipment checklist prior to conducting SOIA/PRM approaches.

(3) Be responsible for longitudinal separation on the Runway 28R final approach course and with traffic on the Runway 28L final approach course until DARNE.

(4) Ensure the aircraft on the ILS/PRM Runway 28L approach is ahead of the aircraft on the LDA/PRM Runway 28R approach by the time the 28L arrival descends through 2,100 feet.

(5) Accomplish the following actions in response to unusual situations:

(a) In the event an aircraft enters "coast status" (CST), potentially conflicting aircraft on the adjacent localizer shall be pulled out and re-sequenced if the coast aircraft position cannot be verified in a reasonable amount of time, and/or the aircraft data "drops" into the Coast/Suspend list.

(b) If an indication is received of an aircraft being in a NORDO, emergency, or hijack situation, conflicting traffic on the adjacent localizer shall immediately be pulled off the final approach course. The aircraft in the unusual situation should be allowed to continue.

(6) In the event that an aircraft must be taken off the final approach course for any reason, the controller that gives the control instruction is responsible for ensuring that the appropriate coordination and handoff are made to the receiving controller.

(7) Assign the following standard breakout instruction for Runway 28R: Climb and maintain 3,000' or higher and fly heading 280º. Coordinate alternate instructions, as necessary.

i. No aircraft shall be routed through the SOIA/PRM No Transgression Zone (NTZ) below 5,500 feet.

(1) SQL departures to the north through northeast shall be radar vectored over or south of PAO heading 110° at or climbing to 3,000’ for vectors to the appropriate departure routing and handed off to Toga. Woodside shall request release from Toga prior to releasing these aircraft.

(2) SQL arrivals from the north through northeast shall be routed east, then south of SJC through Toga/Licke airspace and handed off to Woodside at 4,000 feet.

(3) SQL arrivals from the northwest shall be routed west and then south of SFO and handed off to Woodside at 4,000 feet.

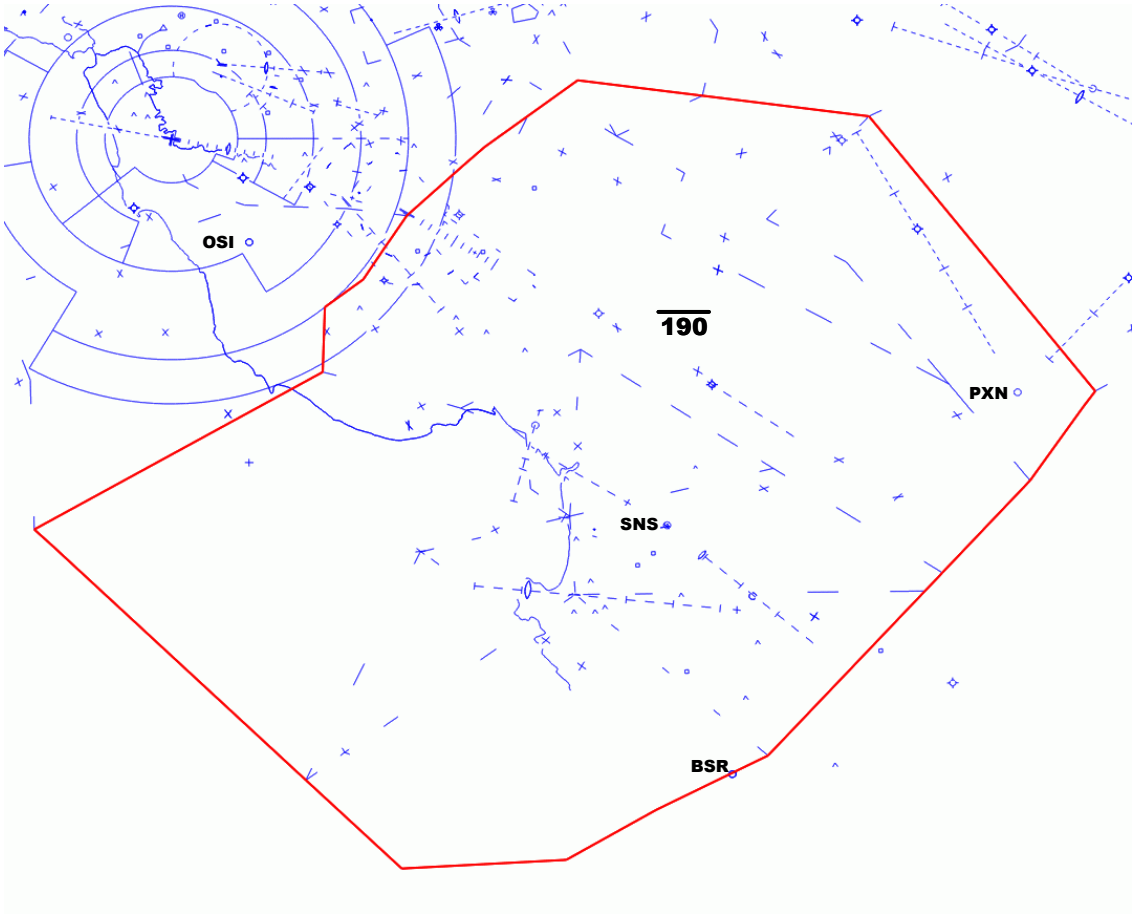
(4) HWD departures requesting routing via OSI V25 shall be issued routing via ALTAM ECA PXN.

(5) All other VFR/IFR aircraft shall be issued routing which avoids the SOIA/PRM NTZ (below 5,500 feet).

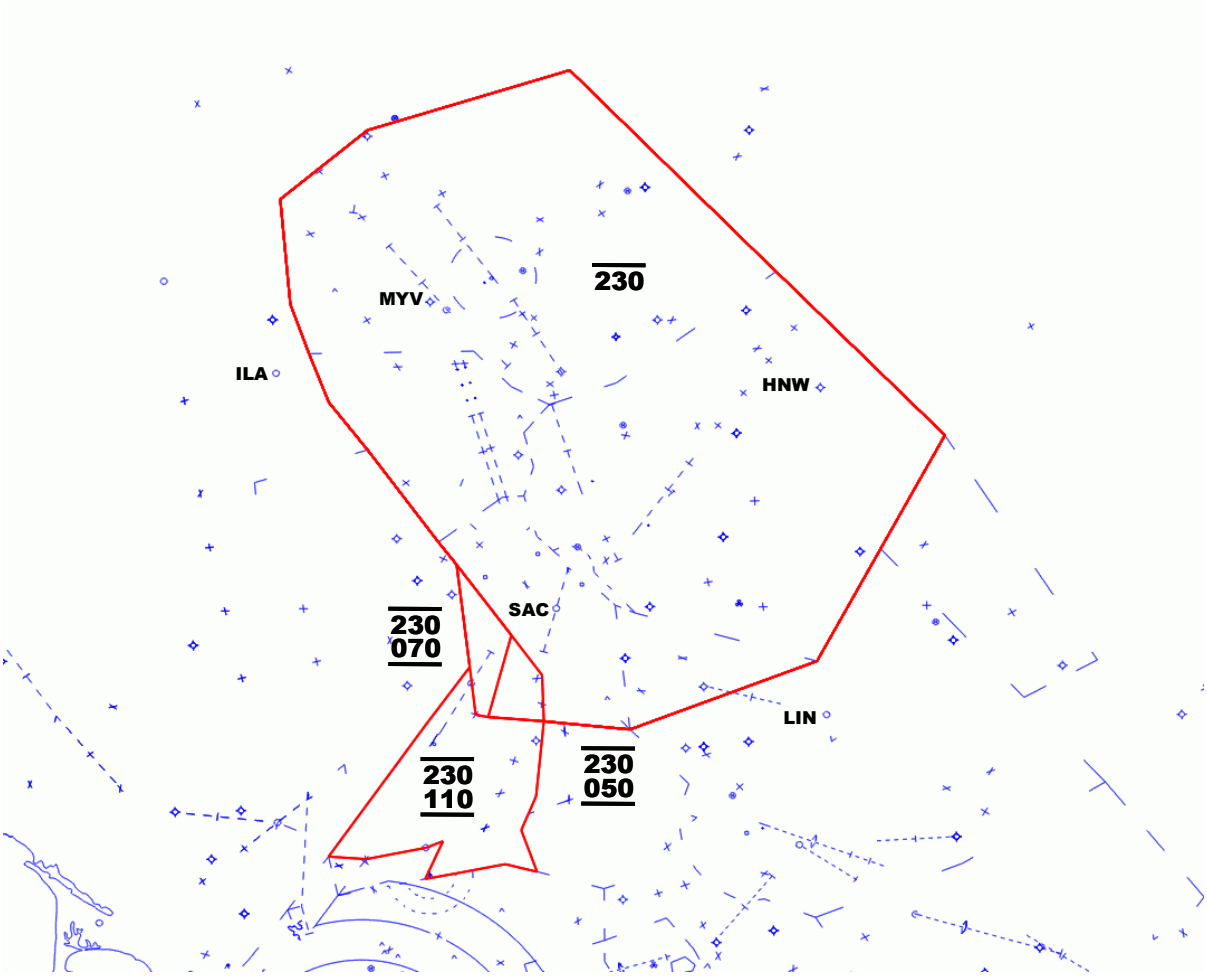
6-6. RESERVED.

CHAPTER 7. MID-SHIFT AIRSPACE.

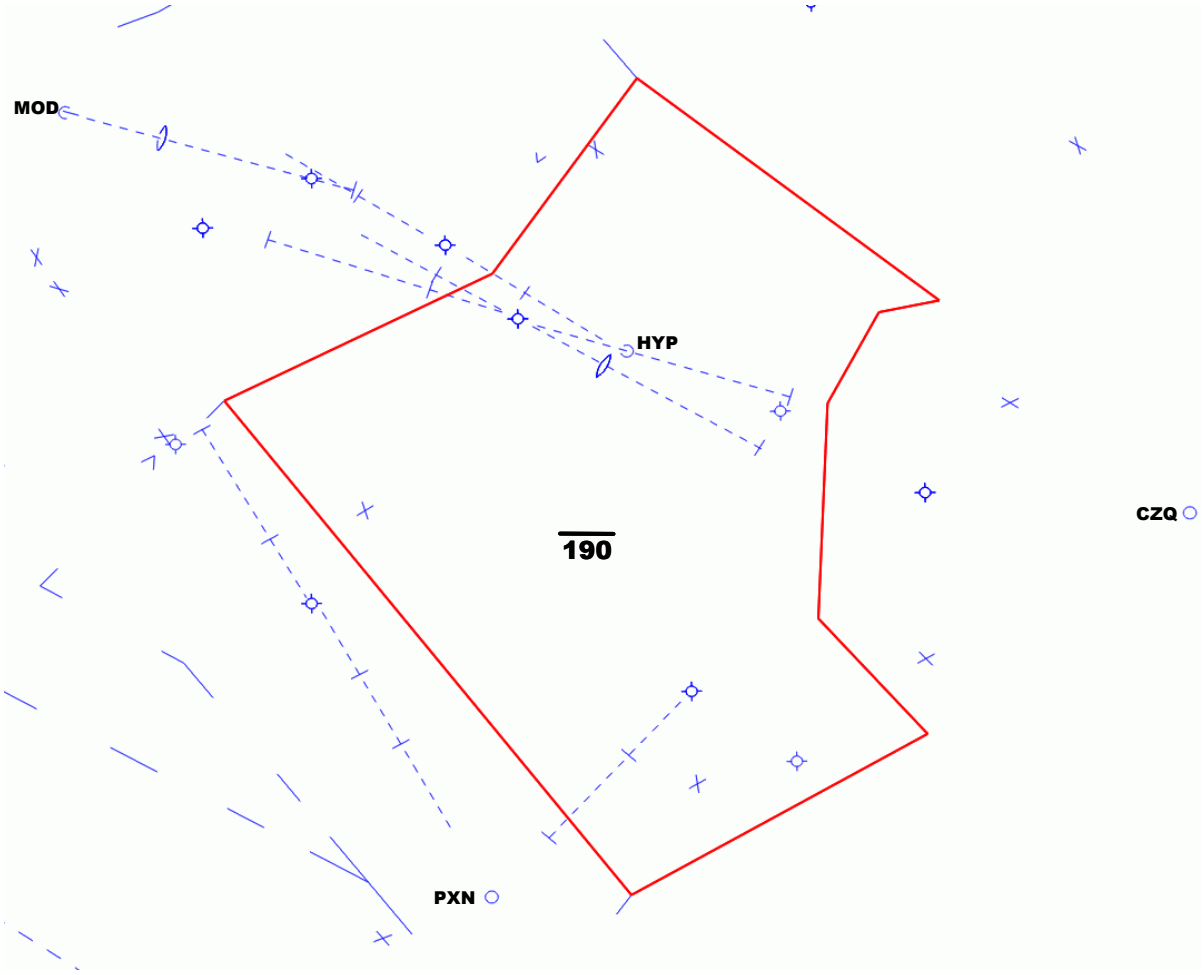
7-1. MARINA SENSOR AIRSPACE



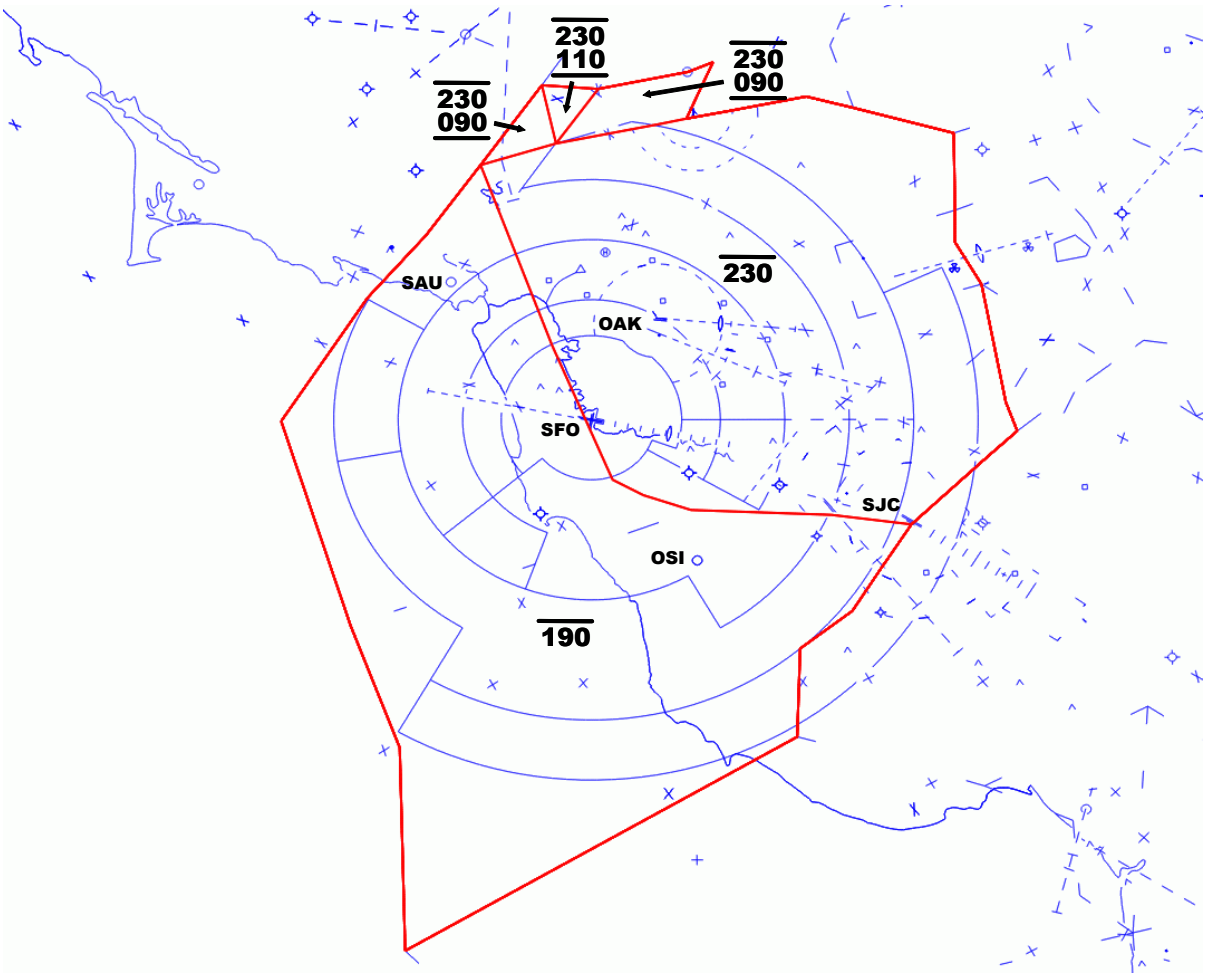
7-2. McCLELLAN SENSOR AIRSPACE.



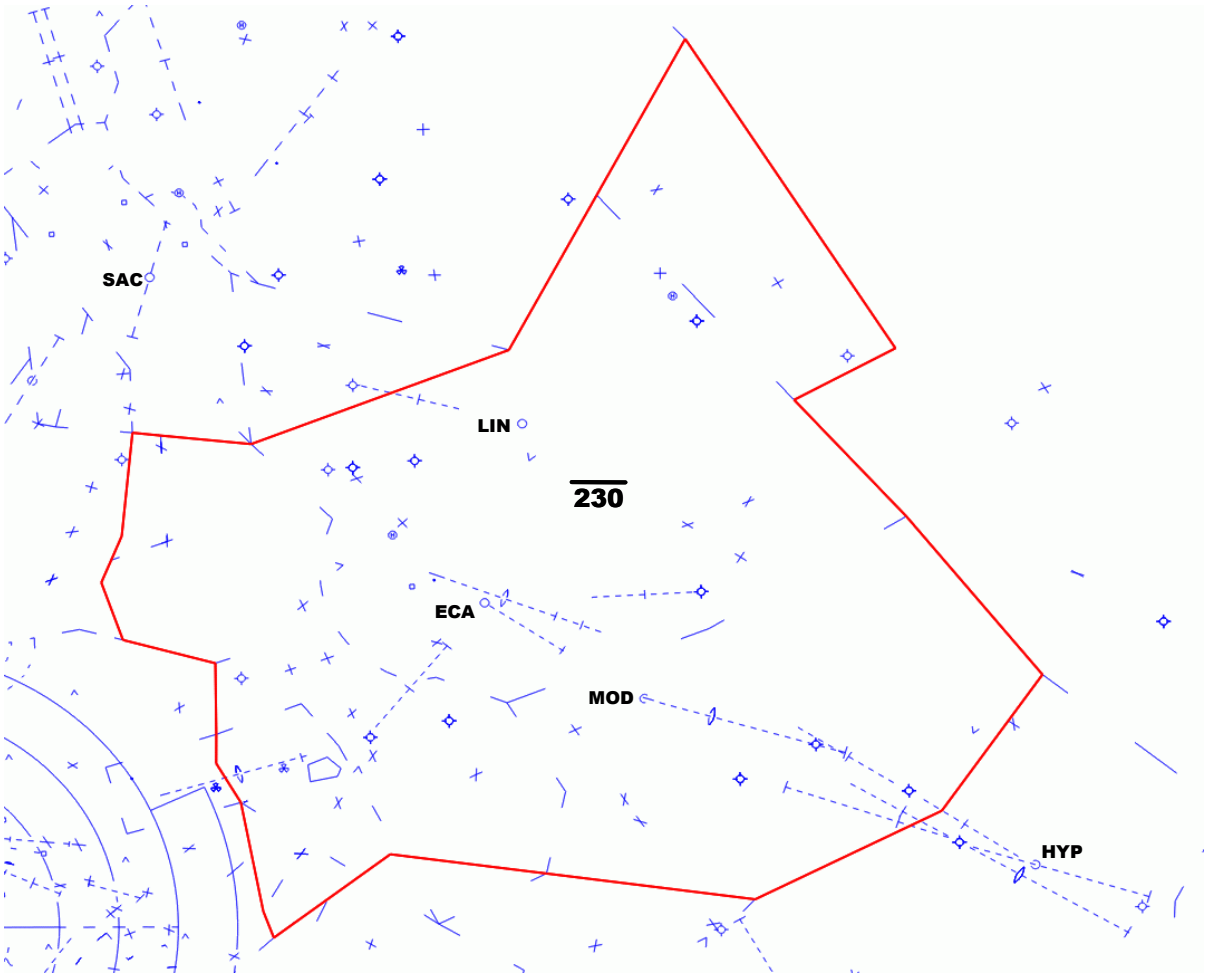
7-3. MERCED SENSOR AIRSPACE



7-4. OAKLAND SENSOR AIRSPACE.



7-5. STOCKTON SENSOR AIRSPACE.



7-6. RESERVED.

CHAPTER 8. AREA A

SECTION 1. AREA A SPECIFIC RESPONSIBILITIES

8-1. RESPONSIBILITIES.

The first Area A sector to receive a departure shall enter the following appropriate fix into the primary scratchpad:

SCRATCHPAD ENTRY	MEANING
AA(#)	Aircraft routed high or low via AVE
MOO	Aircraft routed via MOONY DP
PX(#)	Aircraft routed high or low via PXN
SNS	Aircraft routed via SNS

SECTION 2. AREA A SPECIFIC ARTS ENTRIES

8-2. SECONDARY SCRATCHPAD ENTRIES.

The following entries can be used within Area A:

a. All airports

SCRATCHPAD ENTRY	MEANING
AMD	San Jose CX Practice Area
CVR	Calaveras Practice Area
UTC	United Tech Practice Area
SVY	Salinas Valley Practice Area

b. MRY

SCRATCHPAD ENTRY	MEANING	ARTS SHORTCUT
LFT	Aircraft requesting / assigned the left runway	Δ
RGT	Aircraft requesting / assigned the right runway	.

c. NUQ

SCRATCHPAD ENTRY	MEANING	ARTS SHORTCUT
TAC	Aircraft requesting / assigned a TACAN Approach	tt

d. SJC

SCRATCHPAD ENTRY	MEANING	ARTS SHORTCUT
AIS	Airport in sight	+
LFT	Aircraft requesting / assigned the left runway	Δ
R29	Aircraft requesting / assigned Runway 29	/
RGT	Aircraft requesting / assigned the right runway	.

8-3. RESERVED.

SECTION 3. FREMONT

8-4. FREQUENCIES.

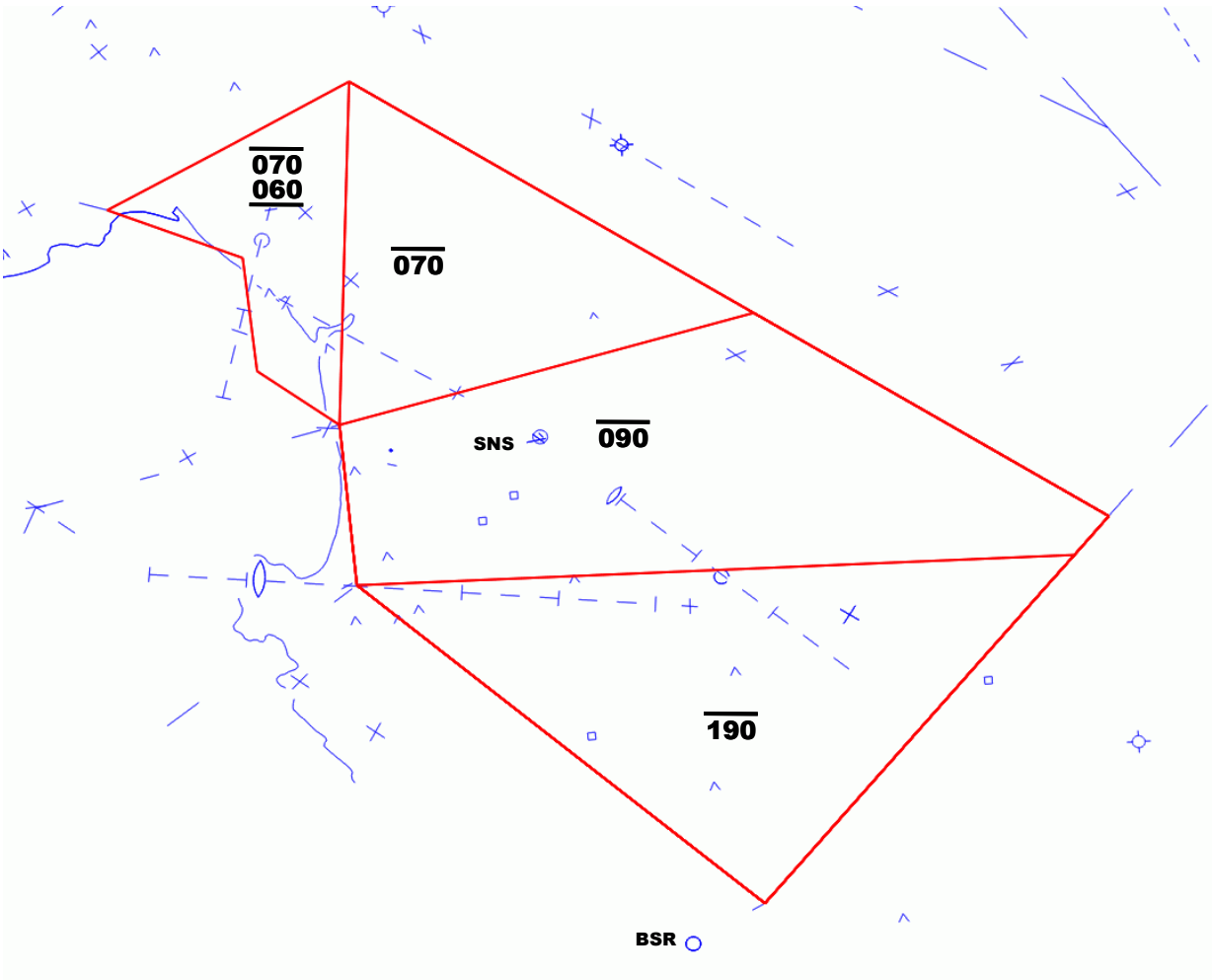
a. 133.00 MHz. – Primary.

b. 133.50 MHz. – Standby.

c. 251.15 MHz. – Primary.

d. 288.25 MHz. – Standby.

8-5. AIRSPACE DIAGRAM.



8-6. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
HOOKS (SFOW) LICKE (SFOE / SJCE)	PAO	P, T, J	6,000	RV DOCAL
HOOKS (SFOW) LICKE (SFOE / SJCE)	NUQ	P, T, J	6,000	RV HOOKS
HOOKS (SFOW) LICKE (SFOE / SJCE)	SJC / RHV	P, T, J	6,000	RV SJC
HOOKS (SFOW) LICKE (SFOE / SJCE)	SQL	P, T, J	6,000	RV AMEBY
SECA	MRY Runway 10R	P, T, J	5,000	RV over or north of MARNA
SECA	HADLY STAR	P, T, J	7,000	
SECA	BSR STAR	J	7,000	
SECA	V25	P, T	6,000	
SECA	V27	P, T, J	7,000 or lower filed altitude	
MORGAN	V111 or RV KARNN	P, T J	5,000 7,000	
MORGAN	SANTY V25	P, T	12,000 or lower filed altitude	
MORGAN	Sacramento and Mather CX	J	7,000	RV SJC RV ALTAM (SFOE)

8-7. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
HOOKS / LICKE / TOGA	MRY (MRY Landing RY 10)	P, T, J	7,000	RV MUNSO
HOOKS / LICKE / TOGA	Monterey CX	P, T, J	7,000	RV SNS
MORGAN	PAO, SQL Via V485	P, T, J	6,000	
SECA	MRY CVFP	P, T, J	5,000	MUNSO heading 120°
SECA	MRY departures via SNS	P	7,000	RV SNS
SECA	MRY Runway 28	P, T, J	5,000	
SECA	SNS Runway 31	P, T, J	6,000	
SECA	Sacramento and Mather CX	J	7,000	RV SJC RV ALTAM (SFOE)

8-8. RESPONSIBILITIES.

a. Sequence to OAR.

b. Coordinate with Seca aircraft that are going to execute a practice missed approach at MRY and all approaches at OAR.

c. Obtain release from Seca for aircraft departing SNS en route to HADLY STAR.

d. Protect the WVI published missed approach when coordinated by Seca.

8-9. EXCEPTIONS TO TRANSFER OF CONTROL.

a. Aircraft handed off from Seca for SNS Runway 13 approaches are Fremont control only to establish the aircraft on final. Fremont shall not climb without coordination.

b. Aircraft handed off from Seca for SNS Runway 31 approaches are Fremont control turns towards the east.

c. Aircraft handed off from Seca for WVI approaches are Fremont control for approach clearance unless the aircraft is held or delay vectored for more than 3 minutes.

d. Aircraft handed off from Seca on heading 360° are Fremont control for turns only towards the east, not to exceed 100°.

e. Laguna does not have control for descent prop and turbo-props below 10,000 feet while in Fremont, Morgan, or Seca’s airspace.

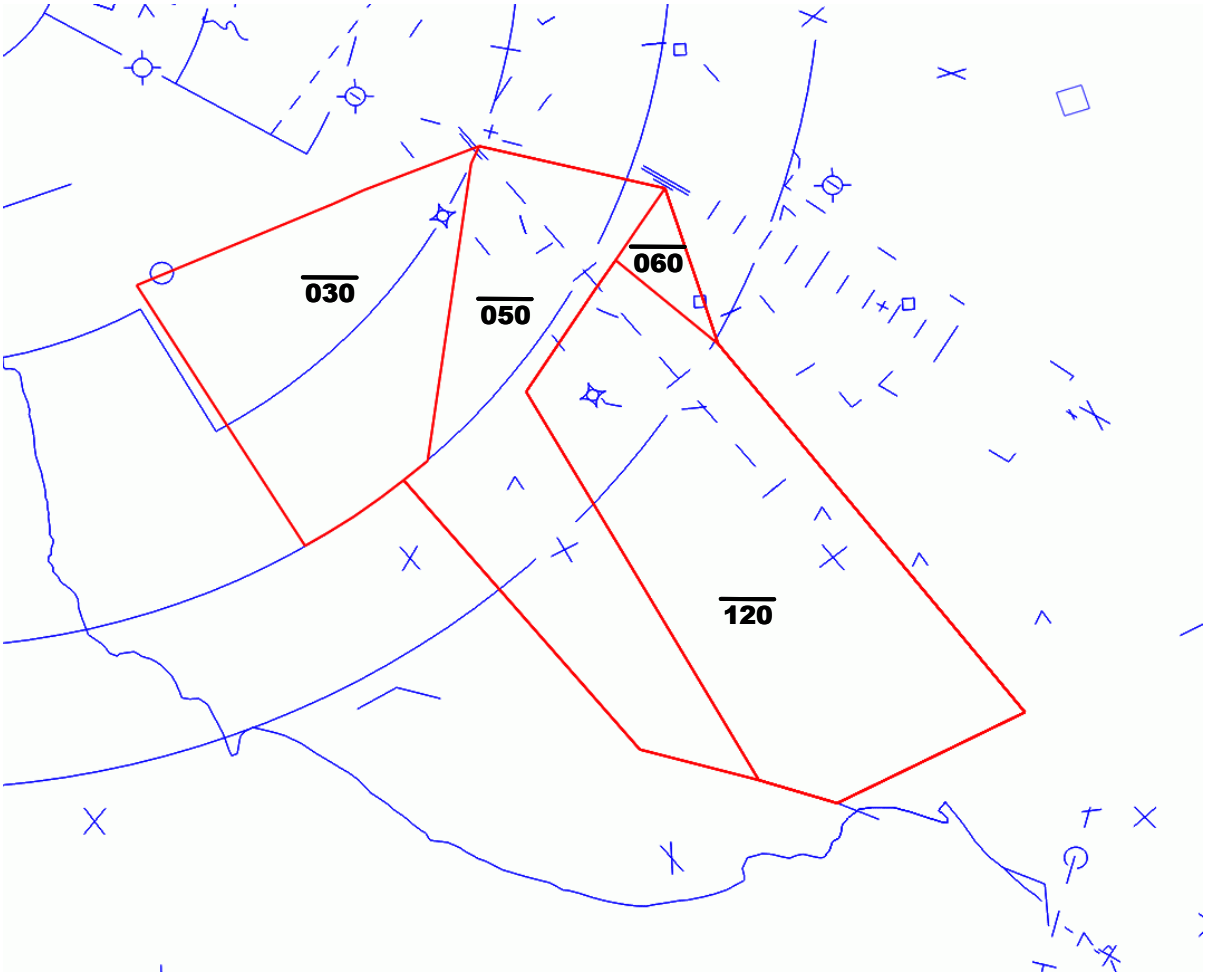
SECTION 4. HOOKS – SFOW

8-10. FREQUENCIES.

a. 135.20 MHz.

b. 379.10 MHz.

8-11. AIRSPACE DIAGRAM.



8-12. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
FREMONT	MRY (MRY Landing RY 10)	P, T, J	7,000	RV MUNSO
FREMONT	Monterey CX	P, T, J	7,000	RV SNS
WOODSIDE	VFR SFO Arrivals and Bay Tours	P, T, J	At or below 3,500	Via south and west of the Bayshore Freeway

8-13. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
BOULDER	San Jose CX	J	7,000	Abeam OSI heading 110°
FREMONT / SECA	NUQ	P, T, J	6,000	RV HOOKS
FREMONT / SECA	SQL	P, T, J	6,000	RV AMEBY
FREMONT / SECA	PAO	P, T, J	6,000	RV DOCAL
FREMONT / SECA	SJC / RHV	P, T, J	6,000	RV SJC
WOODSIDE	SQL GPS Approach	P, T, J	4,000	RV JEFNY
WOODSIDE	San Jose CX	J	5,000	OSI heading 110°

8-14. RESPONSIBILITIES.

When clearing an aircraft for the SQL RNAV(GPS) procedure, point-out the aircraft to:

a. Woodside.

b. Toga.

c. NUQ Tower.

d. PAO Tower.

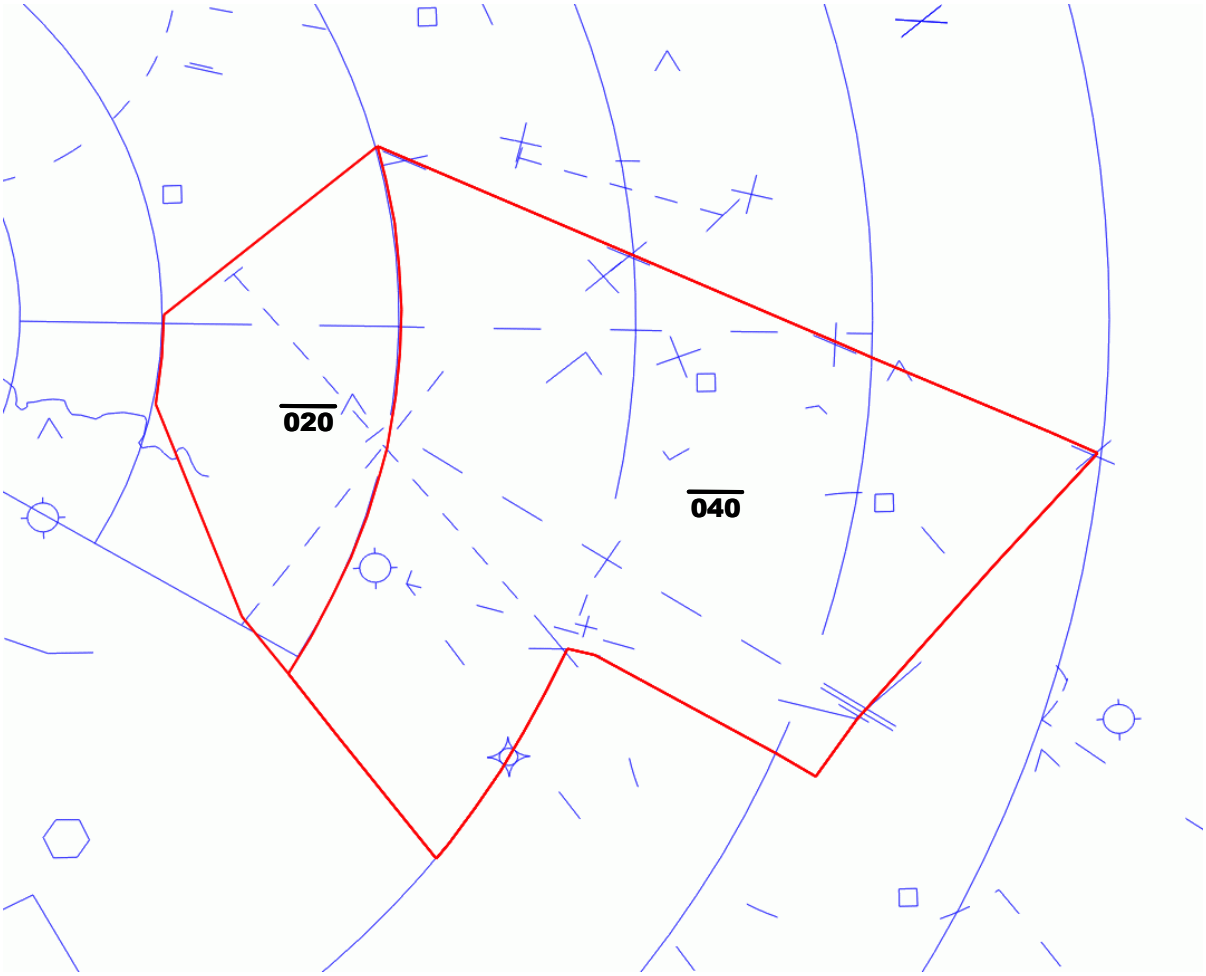
SECTION 5. HOOKS – SFOE

8-15. FREQUENCIES.

a. 135.20 MHz.

b. 379.10 MHz.

8-16. AIRSPACE DIAGRAM.



8-17. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
SUTRO	Napa and Oakland CX (PAO depts. Only)	P, T, J	3,000	RV 280 south of PAO
TOGA	V334, V107, V485	P, T	4,000	

8-18. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
DIABLO	San Jose CX	P, T	4,000	Direct SJC
DIABLO	VFR SJC Arrivals	P	Cross Embassy Suites at or above 2,000	
DIABLO	VFR SJC Arrivals	T, J	At or above 3,500	RV Nummi Plant

8-19. RESPONSIBILITIES.

Coordinate with Toga on PAO V334 departures.

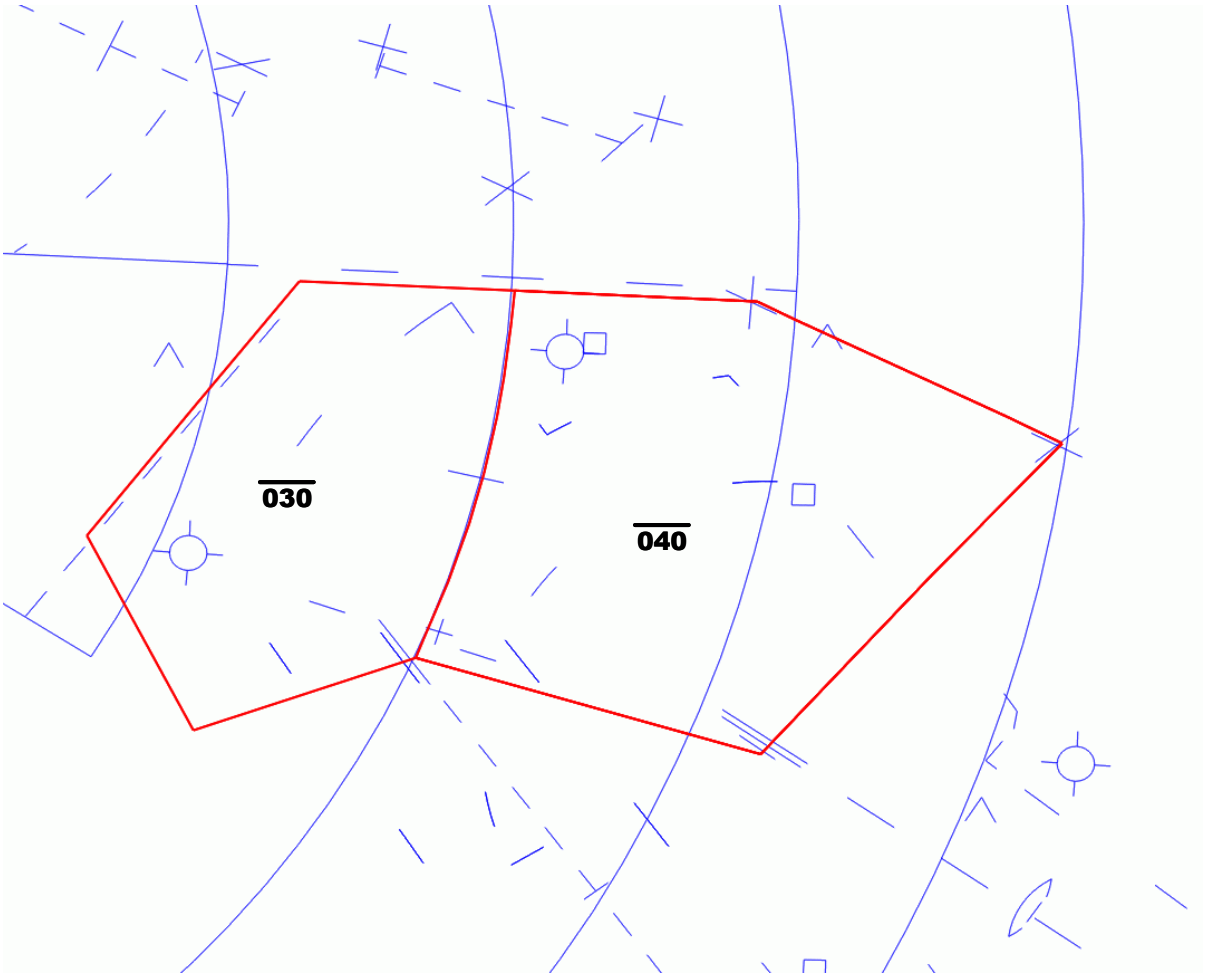
SECTION 6. HOOKS – SJCE

8-20. FREQUENCIES.

a. 135.20 MHz.

b. 379.10 MHz.

8-21. AIRSPACE DIAGRAM.



8-22. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
MULFORD	Napa, Oakland, Travis CX (PAO departures)	P, T, J	3,000	Via Dumbarton bridge
MULFORD	Napa, Oakland, Travis CX	P, T, J	4,000	RV MISON
TOGA	V334, V107, V485, or RV ALTAM	P, T	4,000	
WOODSIDE	VFR SFO Arrivals	P, T, J	3,500	Via Bayshore Freeway

8-23. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
GROVE	VFR SJC Arrivals	P	Cross Embassy Suites at or above 2,000	
GROVE	VFR SJC Arrivals	T, J	At or above 2,500	RV Nummi Plant
MULFORD	SJC (HWD Departures)	P, T, J	2,000	RV to SJC 12R Localizer
WOODSIDE	SQL departures to Stockton / Modesto CX, or ALTAM V244	P, T, J	2,000	RV over PAO

8-24. RESPONSIBILITIES.

a. Coordinate with Woodside prior to release on aircraft departures routed through Woodside's airspace.

b. Ensure that aircraft intercept V334 northbound east of MISON.

c. Coordinate with Toga on PAO departures that enter Grove's airspace.

8-25. EXCEPTIONS TO TRANSFER OF CONTROL.

Hooks does not have control for climb on aircraft received from Woodside.

SECTION 7. LICKE – SFOW

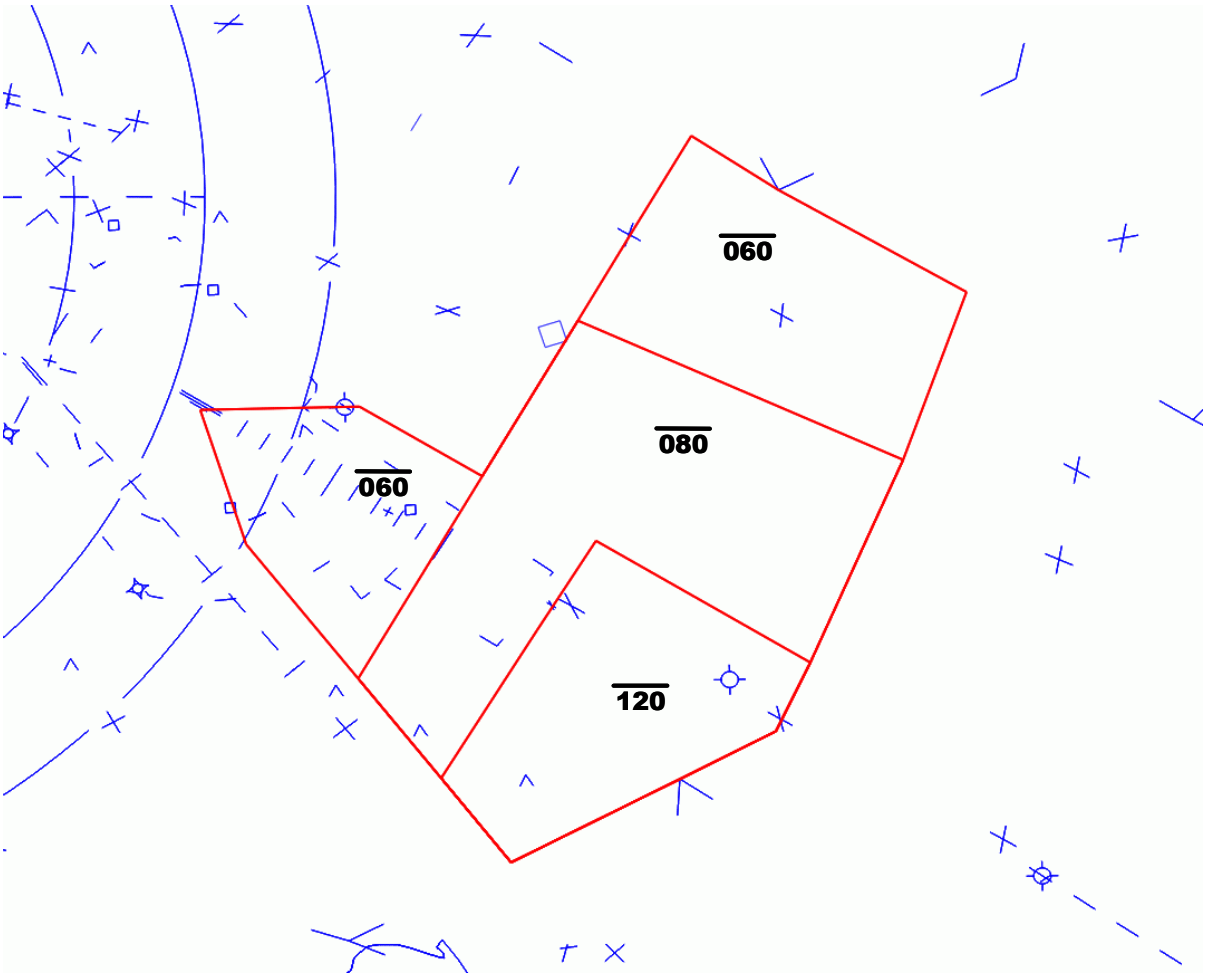
8-26. FREQUENCIES.

a. 120.10 MHz. – Primary.

b. 134.60 MHz. – Secondary.

c. 290.25 MHz.

8-27. AIRSPACE DIAGRAM.



8-28. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
FREMONT	MRY (MRY Landing RY 10)	P, T, J	7,000	RV MUNSO
FREMONT	Monterey CX	P, T, J	7,000	RV SNS
MORGAN	Departures via SNS	P, T	12,000 or lower filed altitude	
TRACY	Modesto and Stockton CX via MOD 216R	J	6,000	

8-29. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
FREMONT/ SECA	PAO	P, T, J	6,000	RV DOCAL
FREMONT/ SECA	NUQ	P, T, J	6,000	RV HOOKS
FREMONT/ SECA	SJC / RHV	P, T, J	6,000	RV SJC
FREMONT/ SECA	SQL	P, T, J	6,000	RV AMEBY
MORGAN	SJC, RHV	P T, J	6,000 8,000	
SUNOL	San Jose CX via MOD 216R	T, J	7,000	
TOGA	V107	P, T, J	6,000	
TOGA	MRY (MRY Landing RY 10)	P, T, J	7,000	RV MUNSO
TOGA	Monterey CX	P, T, J	7,000	RV SNS

8-30. RESPONSIBILITIES.

RESERVED.

SECTION 8. LICKE – SFOE

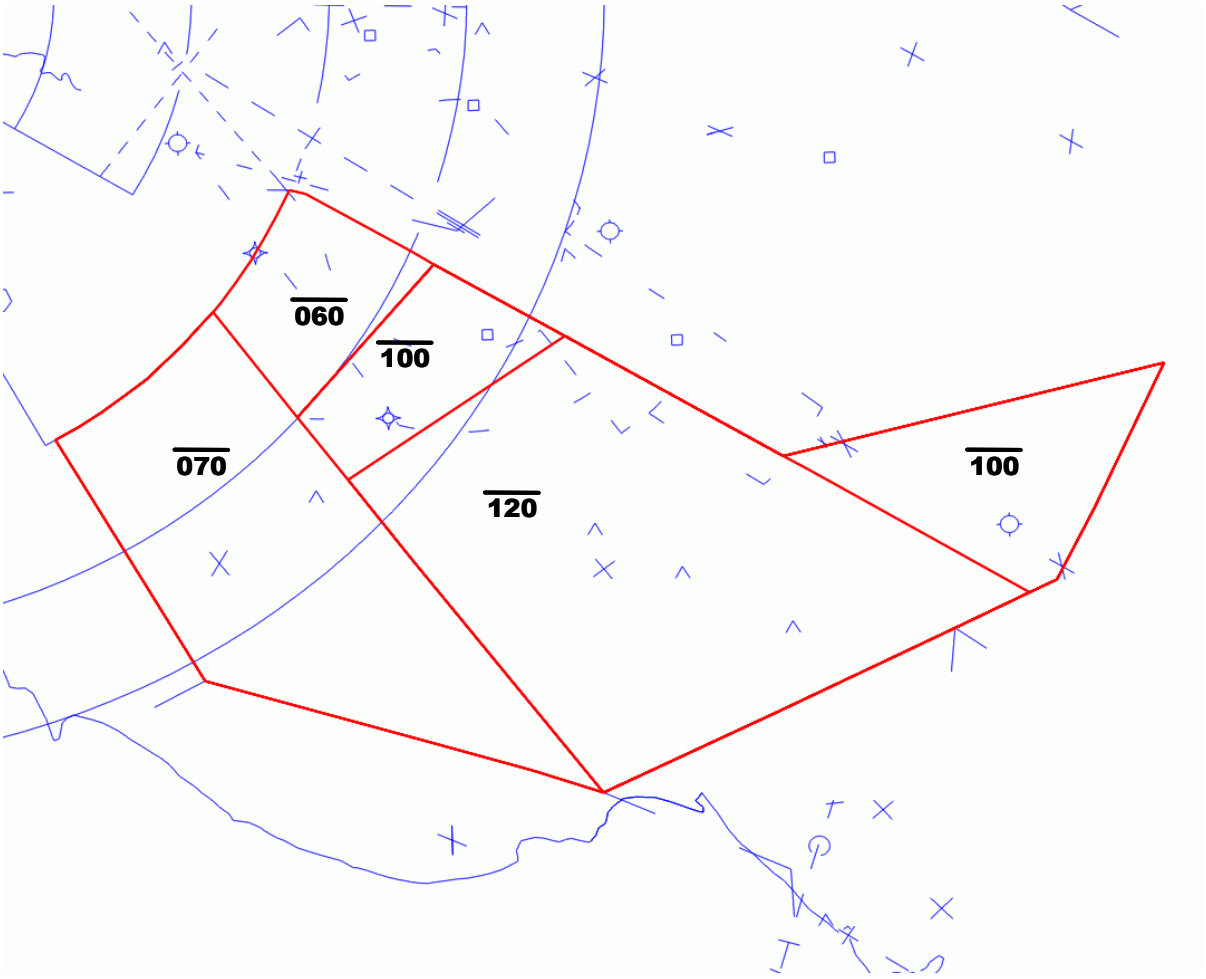
8-31. FREQUENCIES.

a. 120.10 MHz.

b. 134.60 MHz.

c. 290.25 MHz.

8-32. AIRSPACE DIAGRAM.



8-33. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
BOULDER	Oceanic Fix	P, T, J	6,000	RV BOLDR
FREMONT	Monterey CX	P, T, J	7,000	RV SNS
SECA	V25	P, T	6,000	
TOGA	Sacramento and Mather CX	J	11,000	RV ALTAM / Speed 250K

8-34. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
MORGAN	SJC	T, J	8,000	
FREMONT/ SECA	SQL	P, T, J	6,000	RV AMEBY
FREMONT/ SECA	PAO	P, T, J	6,000	RV DOCAL
FREMONT/ SECA	NUQ	P, T, J	6,000	RV HOOKS
FREMONT/ SECA	SJC, RHV	P, T, J	6,000	RV SJC
MORGAN	Sacramento and Mather CX	J	11,000	RV ALTAM / Speed 250K
SUTRO	SQL	P, T, J	4,000	RV JEFNY
SUTRO	San Jose CX	T, J	7,000	OSI heading 140°
SUTRO	V25	P, T	6,000	Filed 7,000 or below

TOGA	MRY (MRY Landing RY 10)	P, T, J	7,000	RV MUNSO
TOGA	Monterey CX	P, T, J	7,000	RV SNS
TOGA	Oceanic Fix	P, T, J	6,000	RV BOLDR

8-35. RESPONSIBILITIES.

When clearing an aircraft for the SQL RNAV(GPS) procedure, point-out the aircraft to:

a. Hooks.

b. Sutro.

c. NUQ Tower.

d. PAO Tower.

8-36. RESERVED.

SECTION 9. LICKE – SJCE

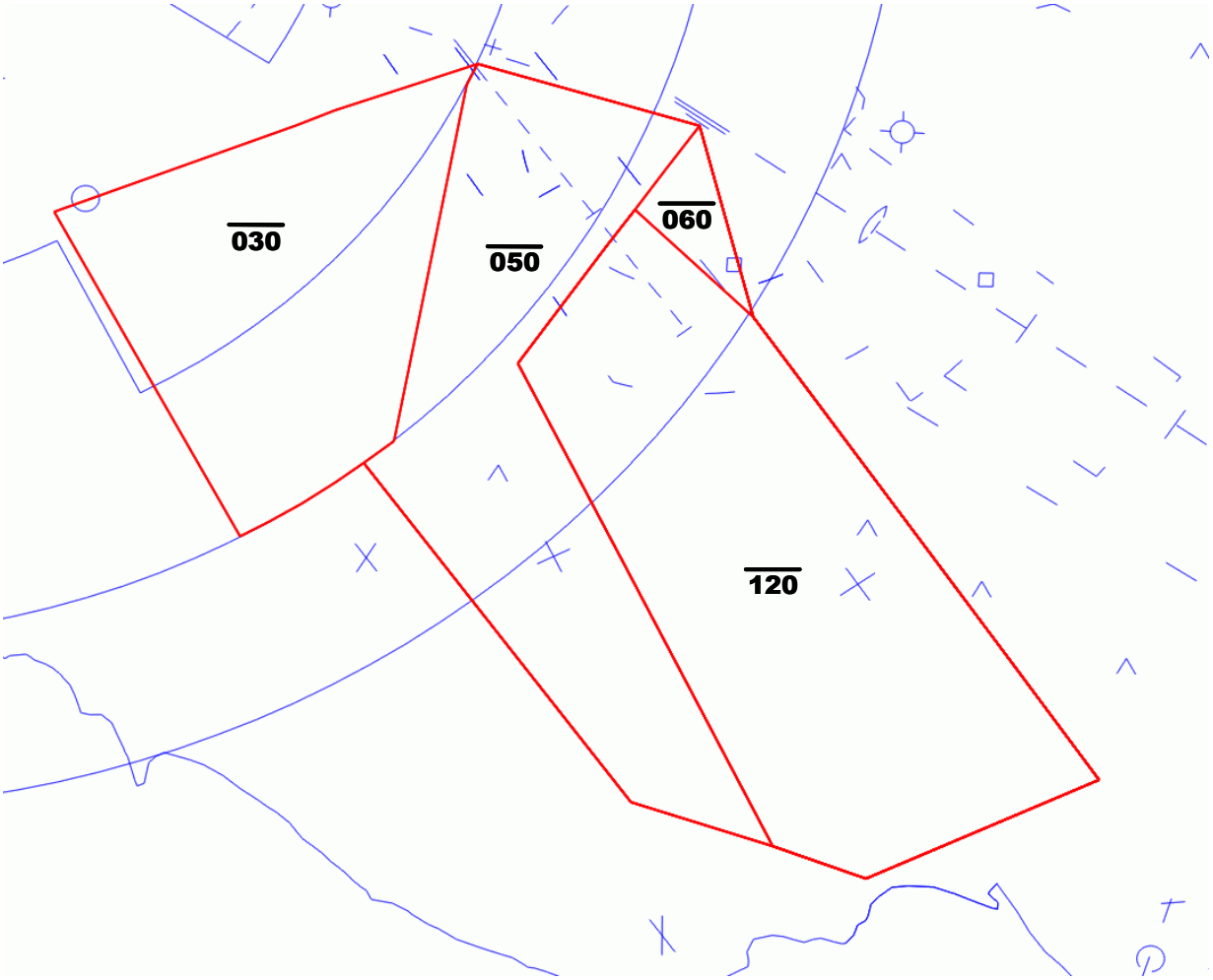
8-37. FREQUENCIES.

a. 120.10 MHz.

b. 134.60 MHz.

c. 290.25 MHz.

8-38. AIRSPACE DIAGRAM.



8-39. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
FREMONT	Monterey CX	P, T, J	7,000	RV SNS
MORGAN	V107	P, T	7,000	
WOODSIDE	VFR SFO Arrivals and Bay Tours	P, T, J	At or below 3,500	Via south and west of Bayshore F-way

8-40. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
BOULDER	San Jose CX	J	7,000	Abeam OSI heading 140°
FREMONT/ SECA	NUQ	P, T, J	6,000	RV HOOKS
FREMONT/ SECA	PAO	P, T, J	6,000	RV DOCAL
FREMONT/ SECA	SQL	P, T, J	6,000	RV AMEBY
FREMONT/ SECA	SJC, RHV	P, T, J	6,000	RV SJC
MORGAN	SJC	T, J	8,000	
WOODSIDE	SQL GPS Approach	P, T, J	4,000	RV JEFNY
WOODSIDE	San Jose CX	J	5,000	OSI heading 110°

8-41. RESPONSIBILITIES.

When clearing an aircraft for the SQL RNAV(GPS) procedure, point-out the aircraft to:

a. Hooks.

b. Woodside.

c. NUQ Tower.

d. PAO Tower.

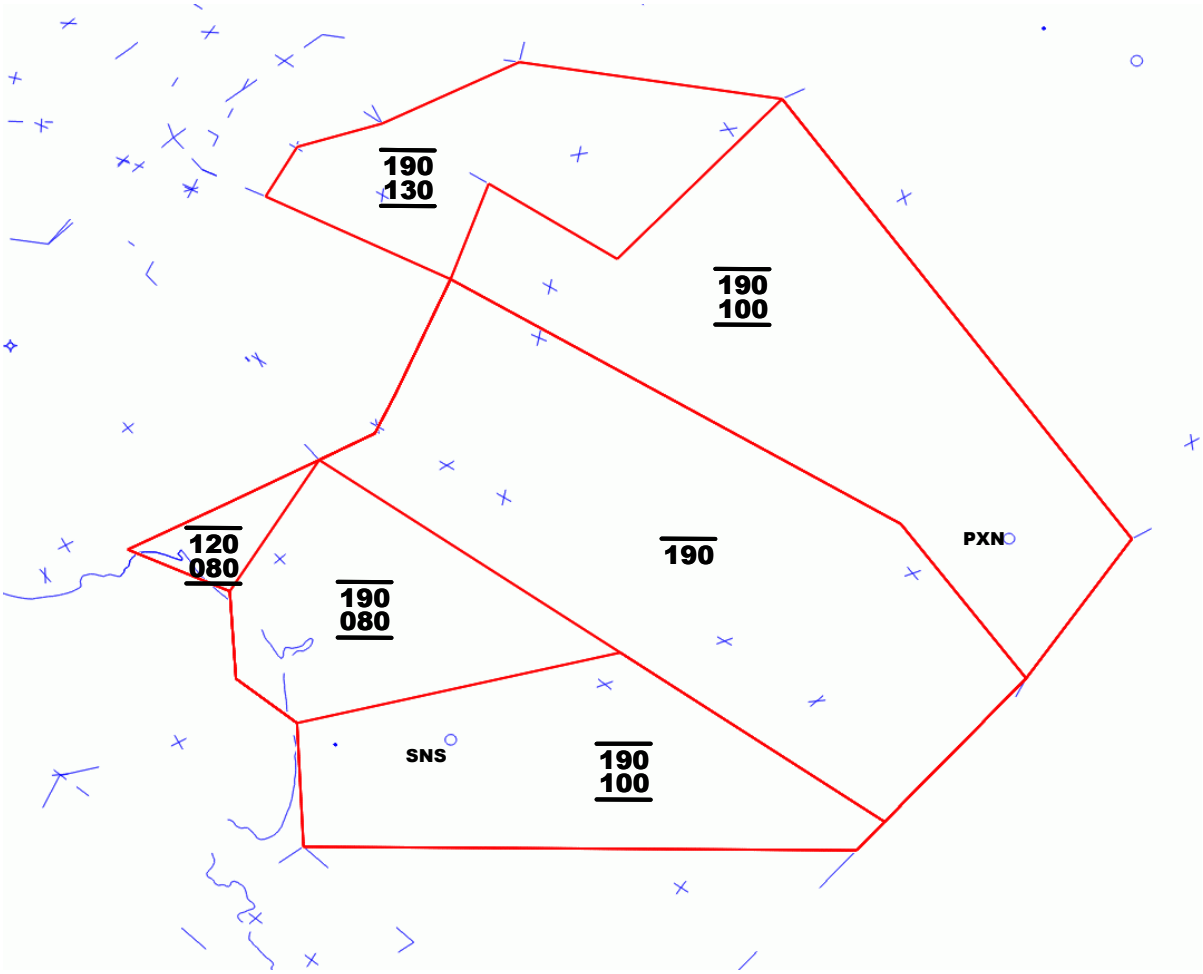
SECTION 10. MORGAN - SFOW

8-42. FREQUENCIES.

a. 124.52 MHz.

b. 348.67 MHz.

8-43. AIRSPACE DIAGRAM.



8-44. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
CASTLE	V111	P, T J	7,000 9,000	
CASTLE	PXN STAR or V301	P, T	10,000	
LAGUNA	SANTY V25	P, T	12,000 or lower filed altitude	
LICKE (SFOW)	SJC, RHV	P T, J	6,000 8,000	
LICKE (SFOE, SJCE)	SJC	T, J	8,000	
QUAKE	Sacramento and Mather CX	J	13,000	RV SJC
SUNOL	PXN STAR or V301	J	Cross BORED @10,000	
SUNOL	COMMO STAR	J	Cross VOLTA @ 12,000	
TOGA (SFOE, SJCE)	SJC, RHV	P	6,000	

8-45. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
CASTLE	V111	P, T	6,000	
CASTLE	V111 from Modesto CX only	P, T, J	6,000	
CEDAR	Direct first fix outside NCT airspace	T, J	FDIO	
FREMONT	V111 or RV KARNN	P, T J	5,000 7,000	
FREMONT	SANTY V25	P, T	12,000	
FREMONT	Sacramento and Mather CX	J	7,000	RV SJC RV ALTAM (SFOE)
LICKE	Departures via SNS	P, T	12,000 or lower filed altitude	

TOGA (SJCE)	V107	P, T	7,000	
SUNOL	V111	J	10,000	
TOGA	Moony, San Jose and Southland DP's	T, J	Assign FL190 or filed lower altitude	
TOGA (SJCE)	V485	P, T	7,000	
TURLOCK	HYP STAR	J	10,000	Cross PAPEE aob 160
	JAWWS STAR	J	10,000	Cross PAPEE aob 110

8-46. RESPONSIBILITIES.

Morgan shall protect the JAWWS / El Nido STARs at or below:

a. 16,000 (SFOW).

b. 11,000 (SFOE or SJCE).

8-47. EXCEPTIONS TO TRANSFER OF CONTROL.

Laguna does not have control for descent prop and turbo-props below 10,000 feet while in Fremont, Morgan, or Seca's airspace.

8-48. RESERVED.

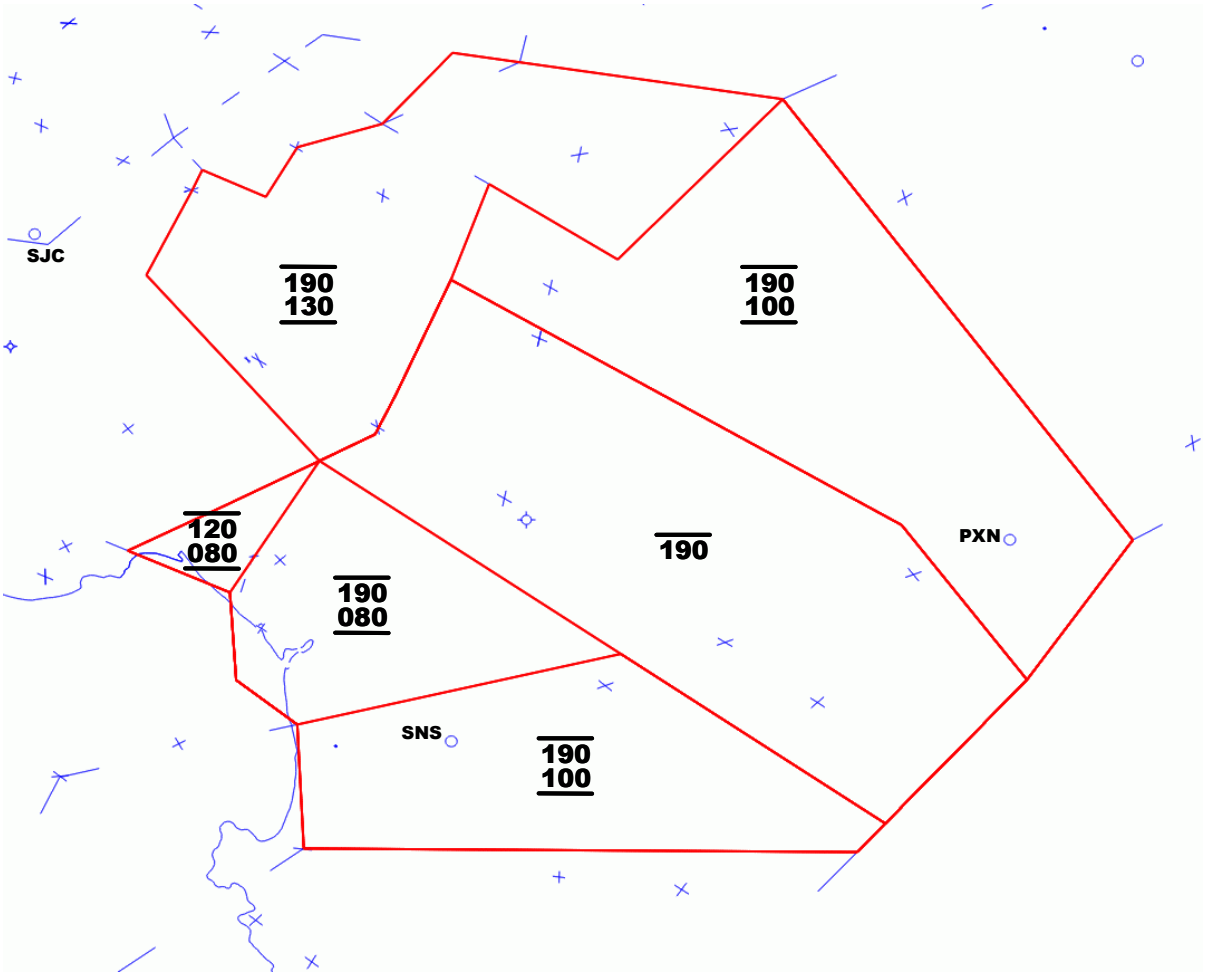
SECTION 11. MORGAN – SFOE/SJCE

8-49. FREQUENCIES.

a. 124.52 MHz.

b. 348.67 MHz.

8-50. AIRSPACE DIAGRAM.



8-51. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
CASTLE	V111	P, T, J	7,000	
LAGUNA	SANTY V25	P, T	12,000 or lower filed altitude	
LICKE (SFOW)	SJC, RHV	P T, J	6,000 8,000	
LICKE (SFOE, SJCE)	SJC	T, J	8,000	
LICKE	Sacramento and Mather CX	J	11,000	RV ALTAM / Speed 250K
SUNOL	V111	J	9,000	
SUNOL	COMMO STAR	J	Cross VOLTA @ 12,000	
TOGA (SFOE, SJCE)	SJC, RHV	P	6,000	

8-52. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
CASTLE	V111	P, T	6,000	
CASTLE	V111 from Modesto CX only	P, T, J	6,000	
CEDAR	Direct first fix outside NCT airspace	T, J	FDIO	
FREMONT	V111 or RV KARNN	P, T J	5,000 7,000	
FREMONT	SANTY V25	P, T	12,000	
FREMONT	Sacramento and Mather CX	J	7,000	RV SJC RV ALTAM (SFOE)
LICKE	Departures via SNS	P, T	11,000 or lower filed altitude	
LICKE (SJCW)	V107	P, T	7,000	

SUNOL	V111	J	10,000	
TOGA	Moony, San Jose and Southland DP's	T, J	Assign FL190 or filed lower altitude	
TOGA (SJCE)	V485	P, T	7,000	
TURLOCK	HYP STAR	J	10,000	Cross PAPEE aob 160
	JAWWS STAR	J	10,000	Cross PAPEE aob 110

8-53. RESPONSIBILITIES.

Morgan shall protect the JAWWS / El Nido STARs at or below:

a. 14,000 (SFOW).

b. 11,000 (SFOE or SJCE).

8-54. EXCEPTIONS TO TRANSFER OF CONTROL.

Laguna does not have control for descent prop and turbo-props below 10,000 feet while in Fremont, Morgan, or Seca's airspace.

8-55. RESERVED

SECTION 12. SECA

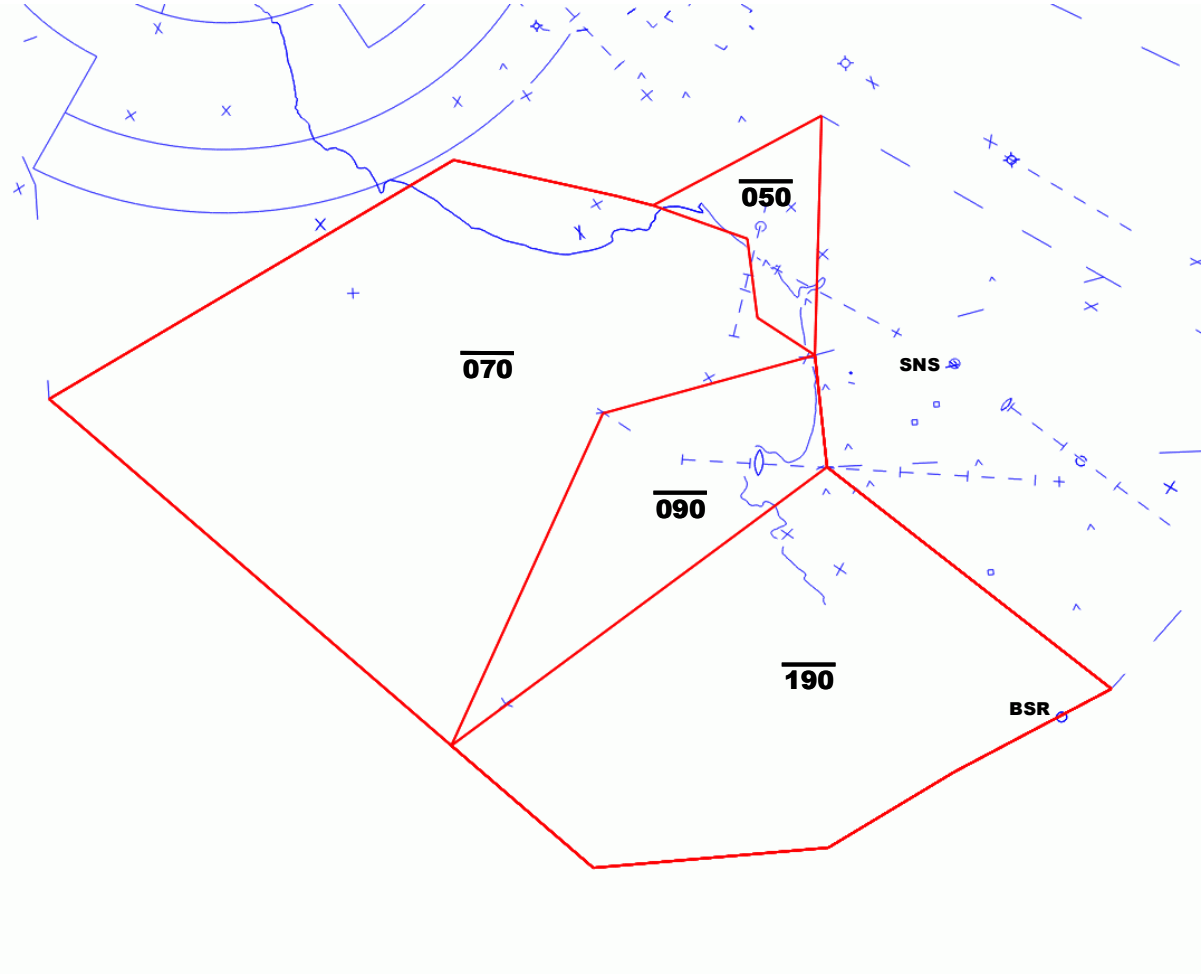
8-56. FREQUENCIES.

a. 126.25 MHz.

b. 127.15 MHz.

c. 387.00 MHz.

8-57. AIRSPACE DIAGRAM.



8-58. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
LAGUNA	San Francisco CX (SFOW)	P, T	12,000 or lower filed altitude	
LAGUNA	Monterey CX depts	P, T, J	7,000	Laguna control for climb
BOULDER	San Francisco CX via V25 (SFOW & OAKE)	P, T	6,000	
BOULDER	SFO via HADLY STAR (SFOE)	P, T	7,000	
FREMONT	Monterey CX CVFP	P, T, J	5,000	MUNSO heading 120°
FREMONT	MRY Runway 28	P, T, J	5,000	
FREMONT	MRY departures via SNS	P	7,000	RV SNS
FREMONT	SNS Runway 31	P, T, J	6,000	
FREMONT	Sacramento and Mather CX	J	7,000	RV SJC RV ALTAM (SFOE)
HOOKS (SFOW) LICKE (SFOE / SJCE)	PAO	P, T, J	6,000	RV DOCAL
HOOKS (SFOW) LICKE (SFOE / SJCE)	SJC, RHV	P, T, J	6,000	RV SJC
HOOKS (SFOW) LICKE (SFOE / SJCE)	SQL	P, T, J	6,000	RV AMEBY
HOOKS (SFOW) LICKE (SFOE / SJCE)	NUQ	P, T, J	6,000	RV HOOKS

8-59. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
BOULDER	EUGEN / NUEVO DP	P, T	7,000	
FREMONT	BIG SUR STAR (SFOW / OAKE)	J	7,000	
FREMONT	HADLY STAR	P, T, J	7,000	
FREMONT	MRY Runway 10R	P, T, J	5,000	RV over or north of MARNA
FREMONT	V25	P, T	6,000	
FREMONT	V27	P, T, J	7,000 or lower filed altitude	
LAGUNA	MRY	P, T, J	8,000	Direct MUNSO
LAGUNA	Monterey CX	P, T, J	8,000	Direct SNS
LICKE (SFOE)	V25	P, T	6,000	

8-60. RESPONSIBILITIES.

a. Protect the OAR published missed approach when coordinated by Fremont.

b. Aircraft planning the WVI published missed approach shall be coordinated with Fremont prior to approach clearance.

c. Protect the Barry Area when in use by Boulder.

8-61. EXCEPTIONS TO TRANSFER OF CONTROL.

a. Aircraft for SNS Runway 13 approaches are Fremont control only to establish the aircraft on final. Fremont shall not climb/descend without coordination.

b. Aircraft for SNS Runway 31 approaches are Fremont control for climb and turns towards the east.

c. Aircraft handed off to Fremont for WVI approaches are Fremont control for approach clearance unless the aircraft is held or delay vectored for more than 3 minutes.

d. Aircraft on heading 360° are Fremont control for turns only towards the east not to exceed 100°.

e. Laguna does not have control for descent prop and turbo-props below 10,000 feet while in Fremont, Morgan, or Seca's airspace.

8-62. RESERVED.

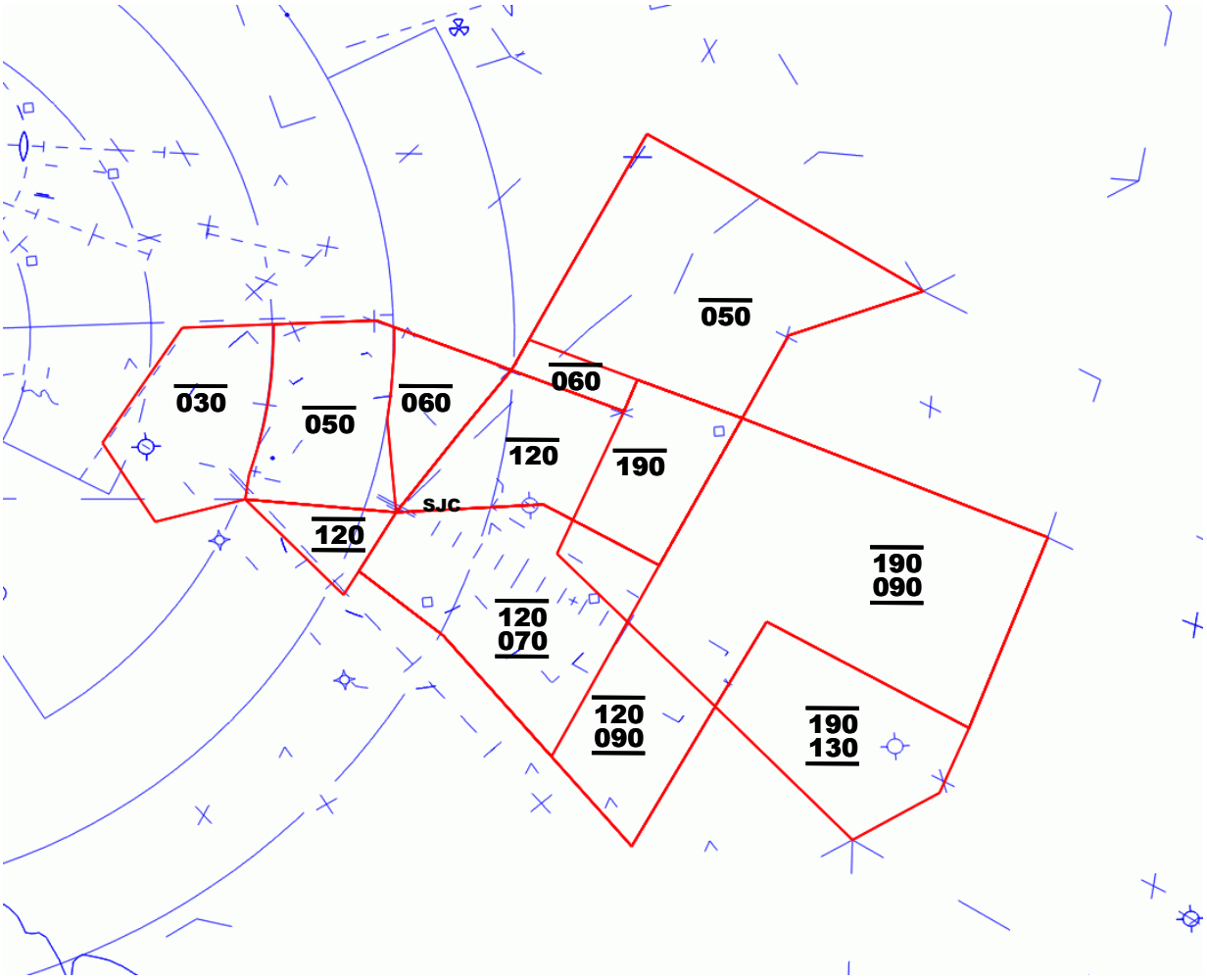
SECTION 13. TOGA – SFOW

8-63. FREQUENCIES.

a. 121.30 MHz.

b. 270.35 MHz.

8-64. AIRSPACE DIAGRAM.



8-65. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
GROVE	V334 or RV ALTAM V244	P, T	5,000	
LICKE	V107	P, T, J	6,000	
LICKE	Modesto and Stockton CX via MOD216R	J	6,000	
LICKE	Monterey CX	J	7,000	RV SNS
MORGAN	San Jose and Southland DP's	T, J	FL190 or filed lower altitude	
MULFORD	Napa, Oakland, and Travis CX (PAO Depts Only)	P, T, J	3,000	via Dumbarton Bridge
MULFORD	Napa, Oakland, and Travis CX	P, T, J	4,000	RV MISON
QUAKE	LOUPE or DANVILLE DP	J	15,000	RT direct SJC
WOODSIDE	VFR SFO Arrivals and Bay Tours	P, T, J	At or below 3,500	Via south and west of the Bayshore Freeway
WOODSIDE	Oceanic Fix	P, T, J	3,000	

8-66. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
GROVE	San Jose CX	P, T	6,000	Remain east of SJC 009° radial
GROVE	VFR SJC Arrivals	P	Cross Embassy Suites at or above 2,500	
GROVE	VFR SJC Arrivals	T, J	At or above 3,500	RV RHV
GROVE	SQL GPS Arrivals	P, T, J	6,000	Remain east of SJC 009° radial
MULFORD	San Jose CX (HWD Depts Only)	P, T	3,000	RV at least 1 mile west of NUQ

MULFORD	San Jose CX (HWD Depts Only)	J	6,000	RV at least 3 miles east of MABRY
WOODSIDE	V334 SUNOL V195 or RV ALTAM V244 (SQL departures for Stockton or Modesto CXs)	P, T	3,000	RV over PAO

8-67. RESPONSIBILITIES.

a. Coordinate with Licke and Hooks for the release of all RHV IFR departures and PAO IFR departures routed via SNS.

b. Coordinate with Mulford prior to release for all aircraft landing in Oakland CX.

c. Coordinate with Mulford prior to release for all jet aircraft landing in Travis CX.

d. Ensure that SJC issues the appropriate frequency when releasing a SJC jet departure destined for the Oakland CX or Travis CX.

e. Coordinate with Mulford prior to release on PAO departures via the Dumbarton Bridge.

f. Coordinate with Woodside prior to release on aircraft departures routed through Woodside's airspace.

g. Ensure that aircraft intercept V334 northbound east of MISON.

h. During SJCW operations, Toga shall assign aircraft on the LOUPE DP to cross the SJC VOR at and maintain 8,000 feet and hand-off to Richmond.

8-68. EXCEPTIONS TO TRANSFER OF CONTROL.

a. Mulford has control for IFR turboprops and jets departing SJC only after passing SJC 1.8 DME and leaving 2,000 feet.

b. Toga does not have control for climb on aircraft received from Woodside.

8-69. RESERVED.

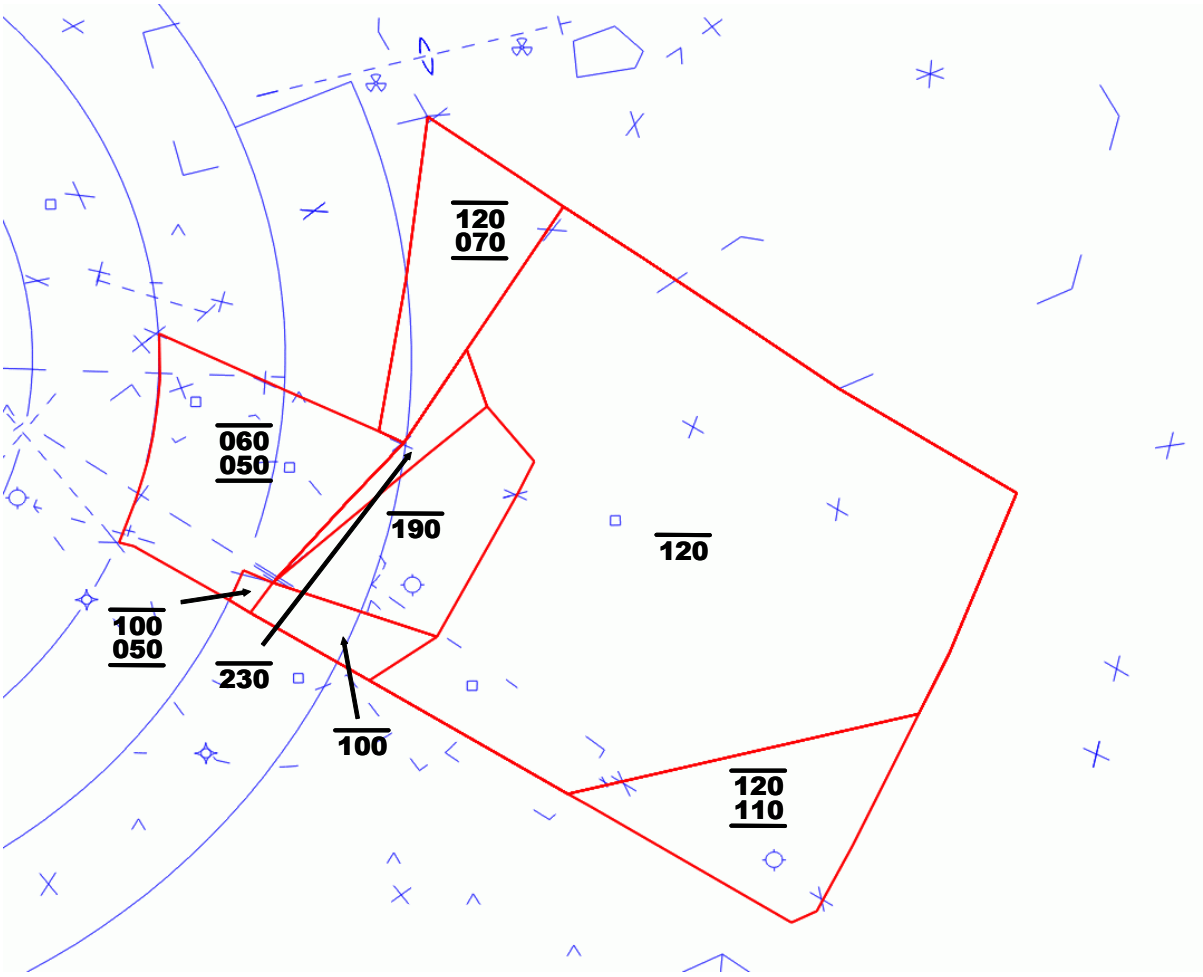
SECTION 14. TOGA – SFOE

8-70. FREQUENCIES.

a. 121.30 MHz.

b. 270.35 MHz.

8-71. AIRSPACE DIAGRAM.



8-72. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
DIABLO	V301	P, T, J	7,000	
DIABLO	V334 or SUNOL DP	P, T	5,000	
LICKE	MRY (MRY Landing RY 10)	P, T, J	7,000	RV MUNSO
LICKE	Monterey CX	P, T, J	7,000	RV SNS
LICKE	Oceanic Fix	P, T, J	6,000	RV BOLDR
MORGAN	Moony and Southland DP's	T, J	Assign FL190 or filed lower altitude after Morgan accepts hand-off	
MORGAN	V485	P, T	7,000	
RICHMOND	ALTAM DP	J	11,000	Speed 250K
SUTRO	SFO	T, J	6,000	RV OSI
SUTRO	OAK	T, J	5,000	RV OSI
TRACY	Modesto and Stockton CX via MOD216R	J	6,000	

8-73. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
CASTLE	PXN STAR or V301	P, T	Cross BORED @ 8,000	
DIABLO	San Jose CX	P, T, J	6,000	RV SJC
DIABLO	V107	P, T	7,000	
HOOKS	V334, V107, V485	P, T	4,000	
LICKE	Sacramento and Mather CX	J	11,000	RV ALTAM / Speed 250K
MORGAN	SJC, RHV	P	6,000	
SUNOL	San Jose CX and SQL GPS via MOD216R	T, J	9,000	

8-74. RESPONSIBILITES.

Protect for traffic inbound on the ECA 215° radial.

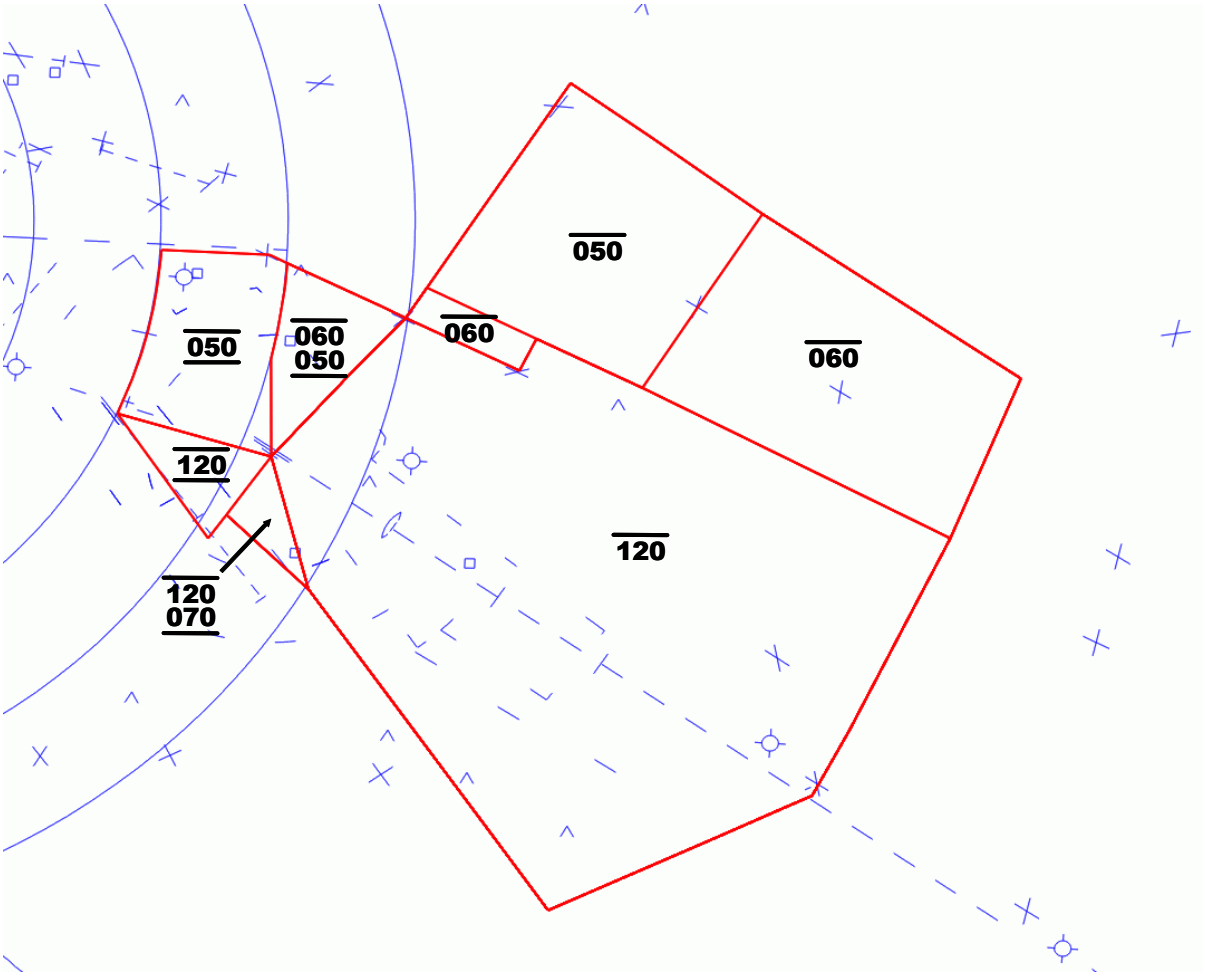
SECTION 15. TOGA – SJCE

8-75. FREQUENCIES.

a. 121.30 MHz.

b. 270.35 MHz.

8-76. AIRSPACE DIAGRAM.



8-77. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
FREMONT	Monterey CX	P, T, J	7,000	RV SNS
GROVE	V334 or RV ALTAM V244 or SUNOL DP	P, T	5,000	
MORGAN	Moony and Southland DP's	T, J	Assign FL190 or filed lower altitude after Morgan accepts hand-off	
MORGAN	V485	P, T	7,000	
QUAKE	DANVILLE DP	J	FL190	RT direct SJC
TRACY	Modesto and Stockton CX via MOD216R	J	6,000	
WOODSIDE	Oceanic Fix	P, T, J	5,000	
HOOKS	Napa CX	P, T, J	4,000	
WOODSIDE	SFO	P, T, J	4,000	
WOODSIDE	VFR SFO Arrivals and Bay Tours	P, T, J	At or below 3,500	Via south and west of the Bayshore Freeway

8-78. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
GROVE	San Jose CX	P, T	6,000	Remain east of SJC 009° radial
GROVE	SQL GPS Arrivals	P, T, J	6,000	Remain east of SJC 009° radial
MORGAN	SJC, RHV	P	6,000	
SUNOL	San Jose CX via MOD216R	T, J	7,000	
HOOKS	V334 SUNOL V195 or ALTAM V244 (SQL departures for Stockton or Modesto CXs)	P, T	4,000	
HOOKS	V334, V107, V485, or RV ALTAM	P, T	4,000	

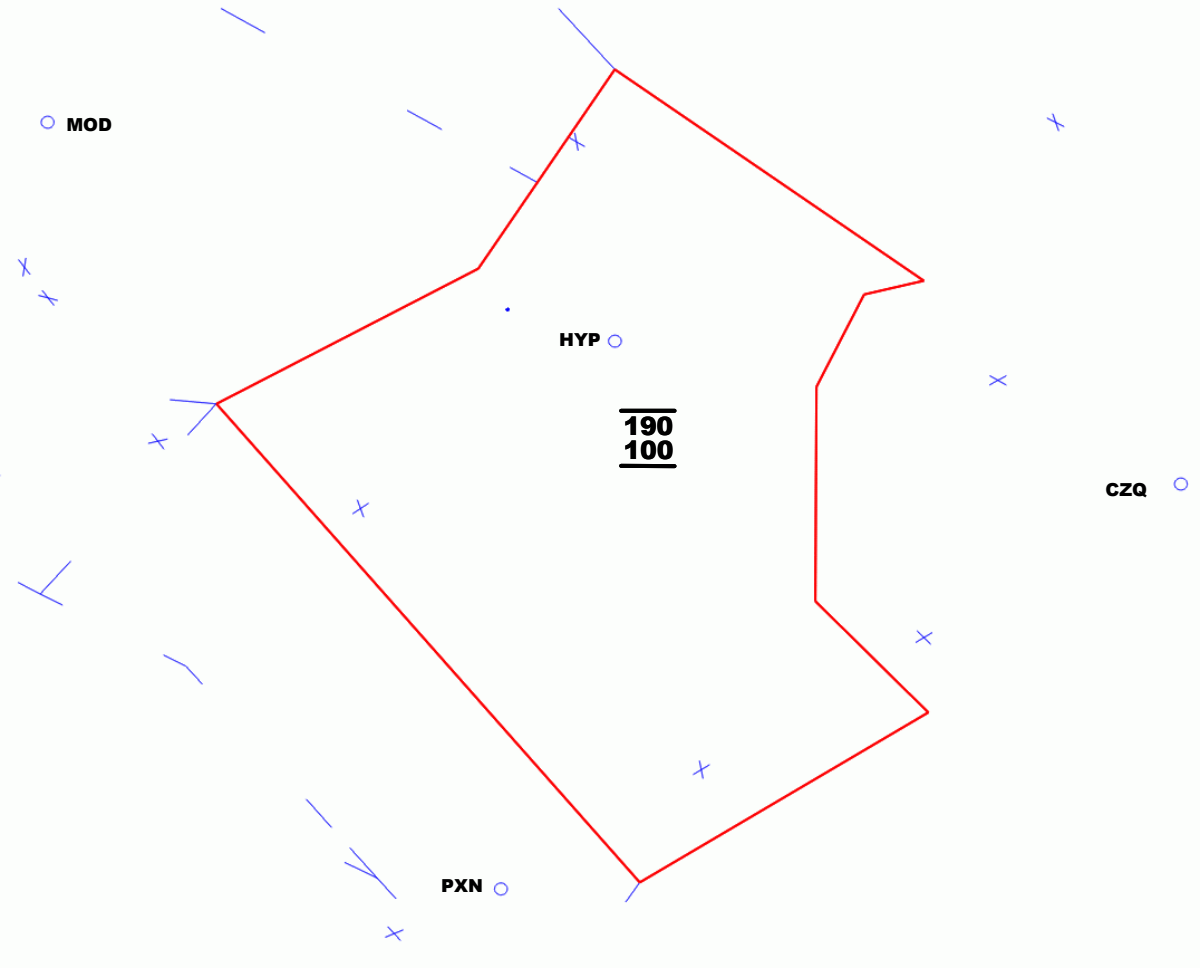
SECTION 16. TURLOCK.

8-79. FREQUENCIES.

a. 126.47 MHz.

b. 317.77 MHz.

8-80. AIRSPACE DIAGRAM.



8-81. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
CASTLE	Modesto CX	P, T, J	10,000	
CEDAR	SFO via MOD	T, J	14,000	SFOW Only
CEDAR	SFO via MOD	J	14,000	SFOE Only
SUNOL	Stockton, Oakland, or Travis CX	P, T, J	12,000 or filed lower altitude (SFOW) 10,000 (SFOE)	
MORGAN	HYP STAR	J	10,000	Cross PAPEE aob 160
	JAWWS STAR	J	10,000	Cross PAPEE aob 110

8-82. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
CEDAR	Direct first fix outside NCT airspace	T, J	FDIO	CEDAR

8-83. RESPONSIBILITIES.

Morgan shall protect the JAWWS / El Nido STARs at or below:

a. 16,000 (SFOW).

b. 11,000 (SFOE or SJCE).

8-84. RESERVED.

CHAPTER 9. AREA B

SECTION 1. AREA B SPECIFIC RESPONSIBILITIES

9-1. POSITION CONSOLIDATION.

When appropriate Area B combines to Boulder.

SECTION 2. AREA B SPECIFIC ARTS ENTRIES

9-2. SECONDARY SCRATCHPAD ENTRIES.

The following entries can be used within Area B:

a. OAK

SCRATCHPAD ENTRY	MEANING	ARTS SHORTCUT
27L	Aircraft requesting Runway 27L (SFOW)	.
AIS	Airport In Sight	/

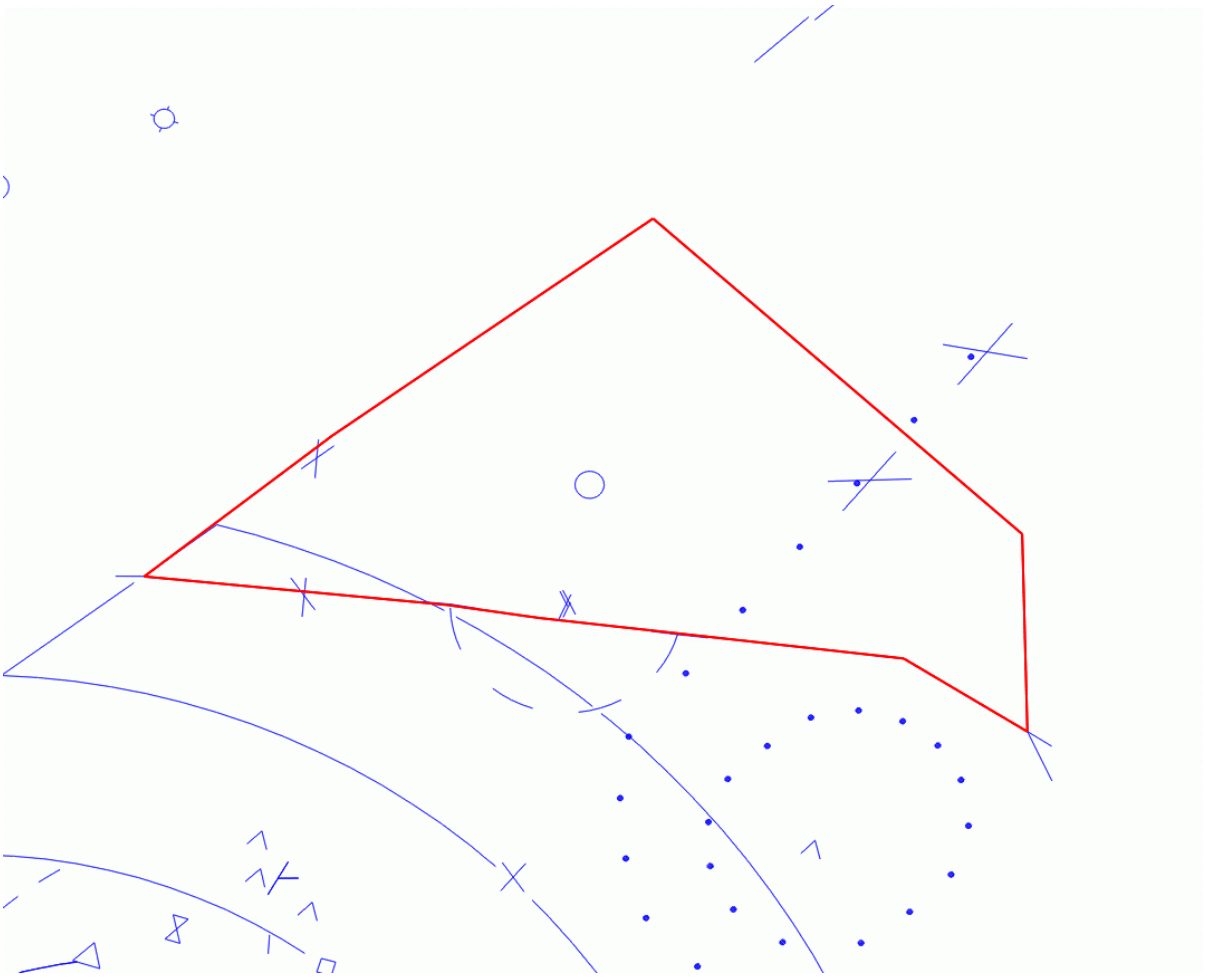
b. SFO

SCRATCHPAD ENTRY	MEANING	ARTS SHORTCUT
AIS	Airport In Sight	/
FIS	Aircraft requesting a FMS Visual Approach and has airport or charted landmark in sight	++
FMS	Aircraft requesting / assigned a FMS Visual Approach	+
LFT	Aircraft assigned the left runway	Δ
NSB	Aircraft requesting a no “side-by” approach	
QBA	Aircraft requesting / assigned the Quiet Bridge Visual Approach	qq
RGT	Aircraft assigned the right runway	.
TTA	Aircraft requesting / assigned the Tipp Toe Visual Approach	tt

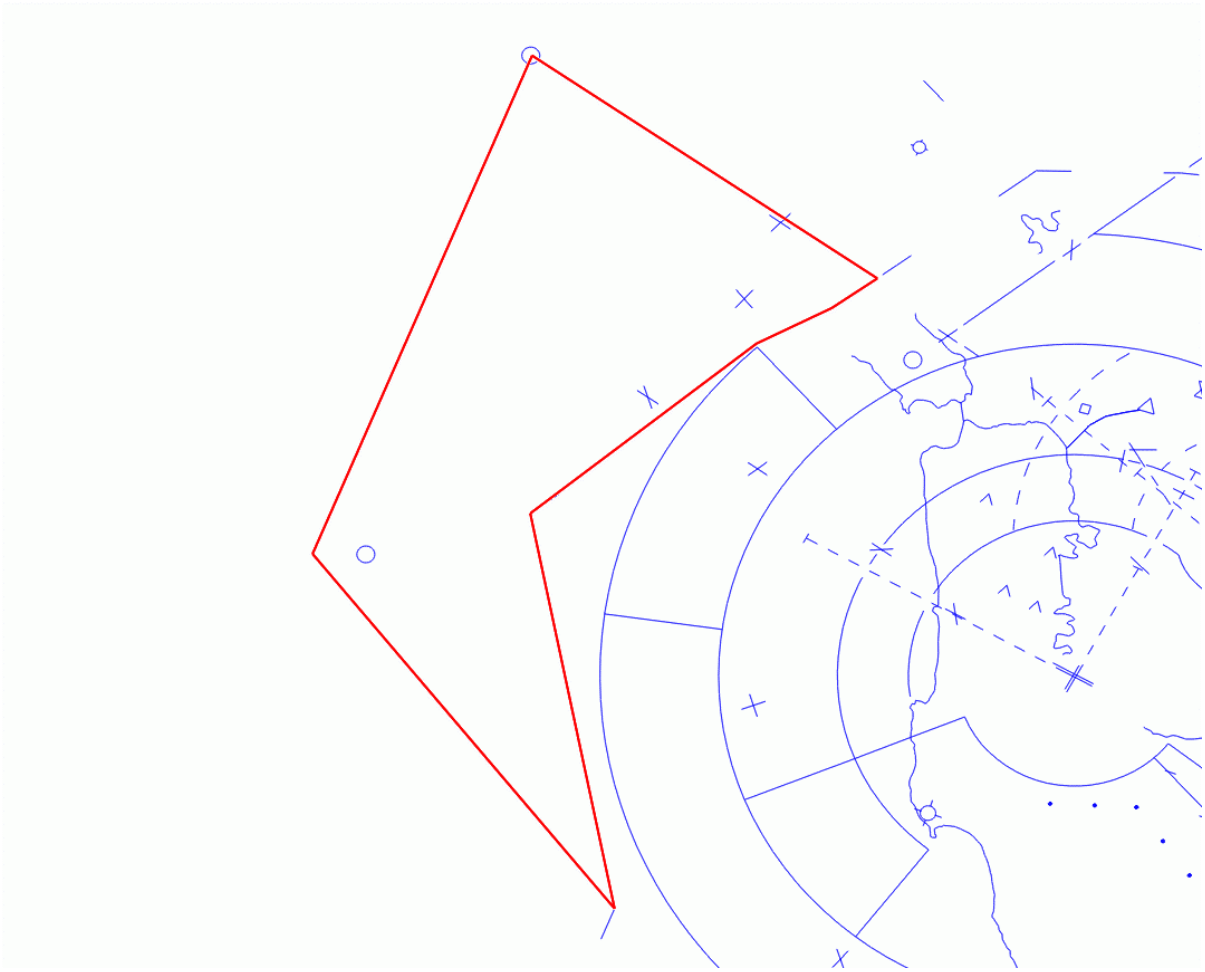
SECTION 3. AREA B SPECIAL OPERATIONS

9-3. SFOE.

a. During SFOE operations, Area B is delegated the PITTS Area from 7,000 to 10,000 feet, by Travis RAPCON.

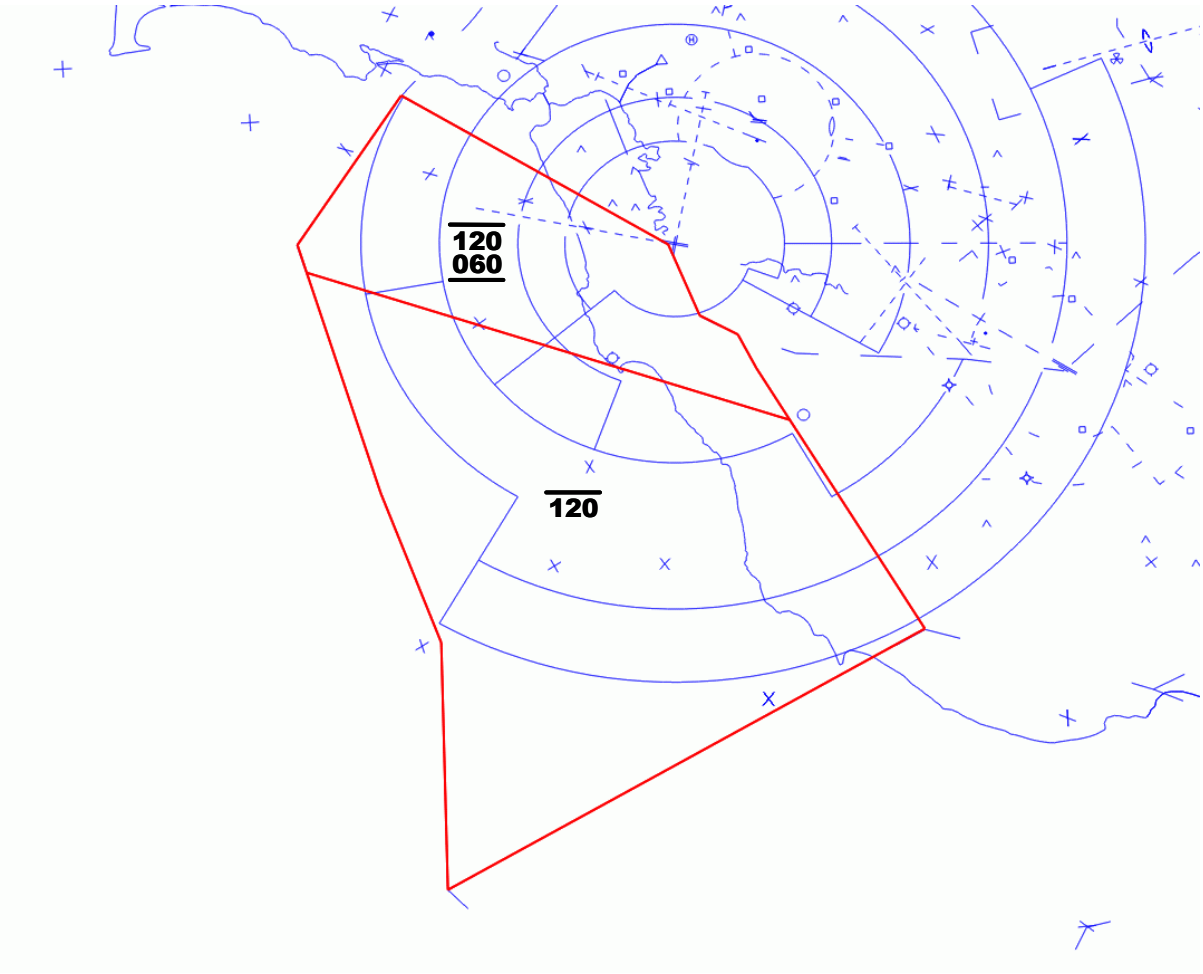


b. When San Francisco is landing Runways 10, NCT may request the Coast Area, 11,000 feet and below, from Oakland Center:

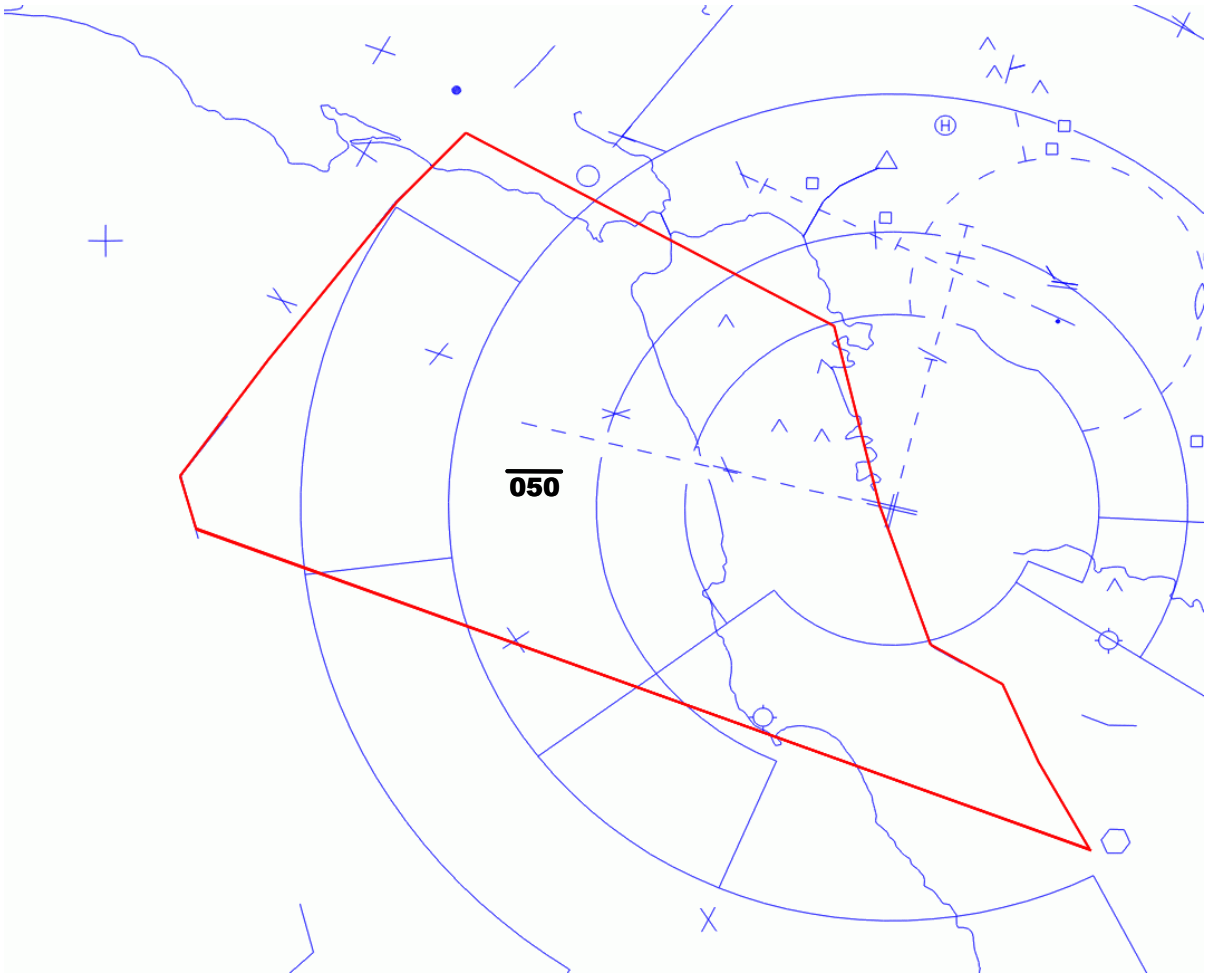


9-4. SFO LANDING RUNWAY 10.

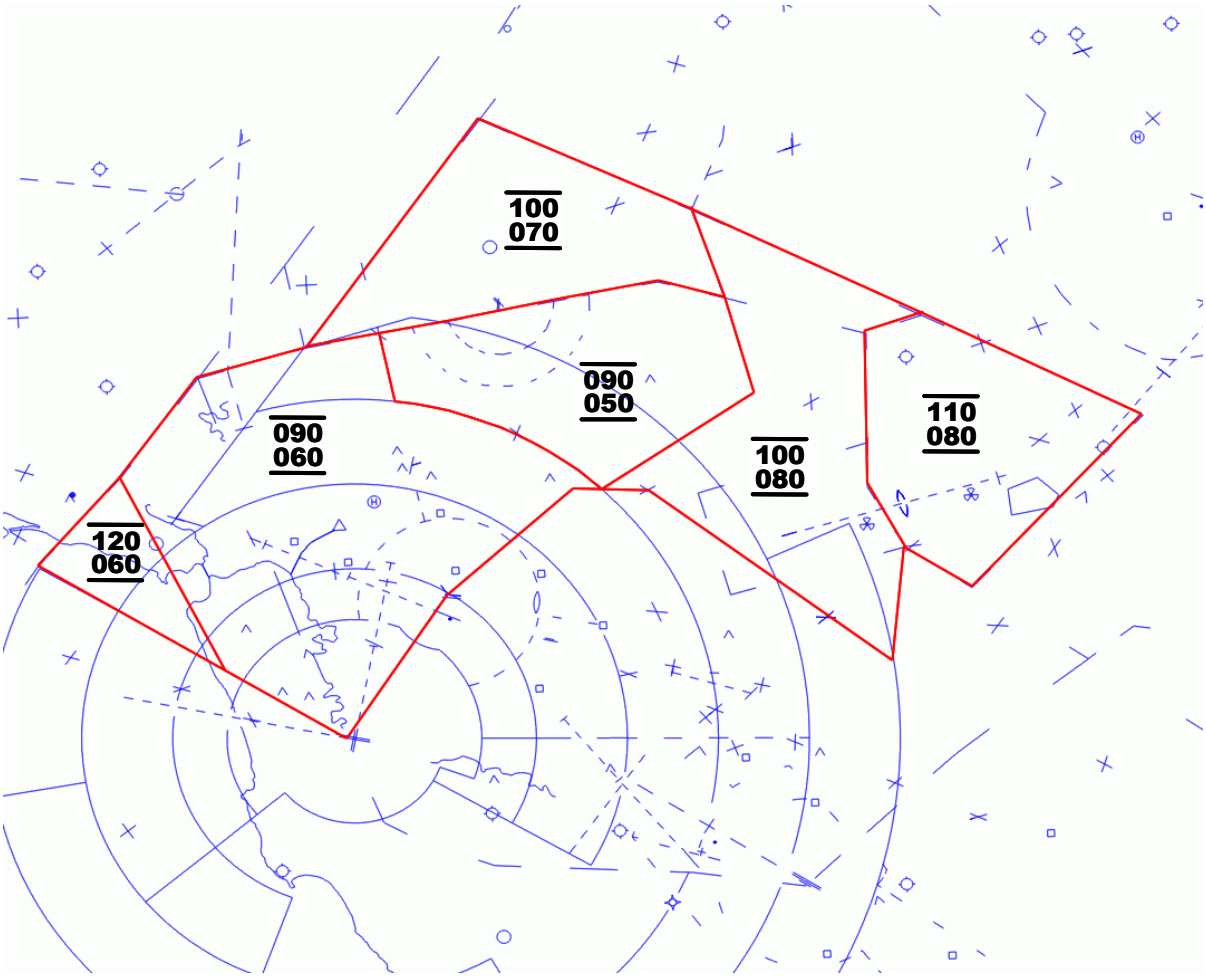
a. Boulder Airspace Map:



b. Woodside Airspace Map:



c. Niles Airspace Map:



9-5. RESERVED.

SECTION 4. BOULDER – SFOW

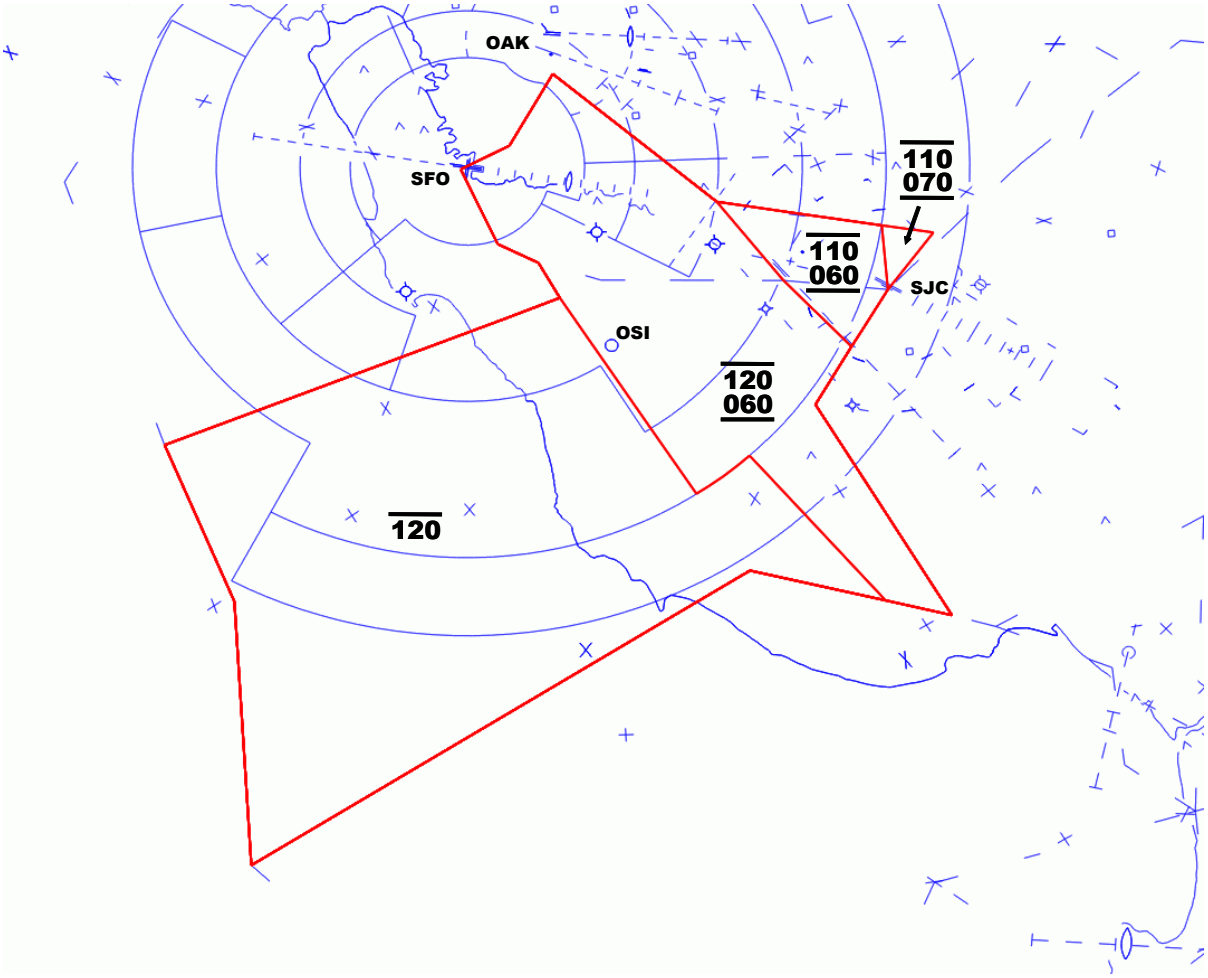
9-6. FREQUENCIES.

a. 133.17 MHz.

b. 133.95 MHz.

c. 317.60 MHz.

9-7. AIRSPACE DIAGRAM.



9-8. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
HOOKS (SFOW) LICKE (SJCE)	San Jose CX	J	7,000	Abeam OSI heading 110° (SFOW) Abeam OSI heading 140° (SJCE)
LAGUNA	V25	P, T, J	9,000	
MULFORD	Oakland CX	T, J	6,000	
SECA	EUGEN / NUEVO DP	P, T	7,000	

9-9. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
SECA	San Francisco CX via V25	P, T	6,000	
SUTRO	MRY CX via direct MUNSO	P, T	7,000	During “Side-bys” only
SUTRO	EUGEN / NUEVO DP	P, T	11,000 or lower filed altitude	

9-10. RESPONSIBILITIES.

a. Protect the PORTE/SKYLINE departure route (PYE135R 40 DME) and PESCA (PYE135R 55 DME) at 9,000 feet and above.

b. Protect the OFFSHORE/COAST route 1½ NM north of the Boulder/Sutro boundary line (PYE155R 35 DME) at 11,000 feet and above.

c. Coordinate “Down the Bay” arrivals with Niles.

d. During in-trail operations to SFO, coordinate arrival sequence with Niles.

e. Coordinate, as necessay, for use of the Barry Area from Seca.

9-11. PRE-ARRANGED COORDINATION.

a. Boulder shall ensure that all aircraft on the Golden Gate Arrival route be at or descending to 11,000 feet while in Sutro’s airspace.

b. PYE-SFO aircraft routed north of SFO on a right downwind for Runways 28, “Down the Bay”, shall be handled as follows:

(1) Boulder shall initiate an automated point-out to Sutro.

(2) Acceptance of an automated point-out constitutes Sutro's approval for Boulder to assign 6,000 feet to the aircraft within SFO Class B Airspace Area A.

9-12. RESERVED.

SECTION 5. BOULDER – SFOE

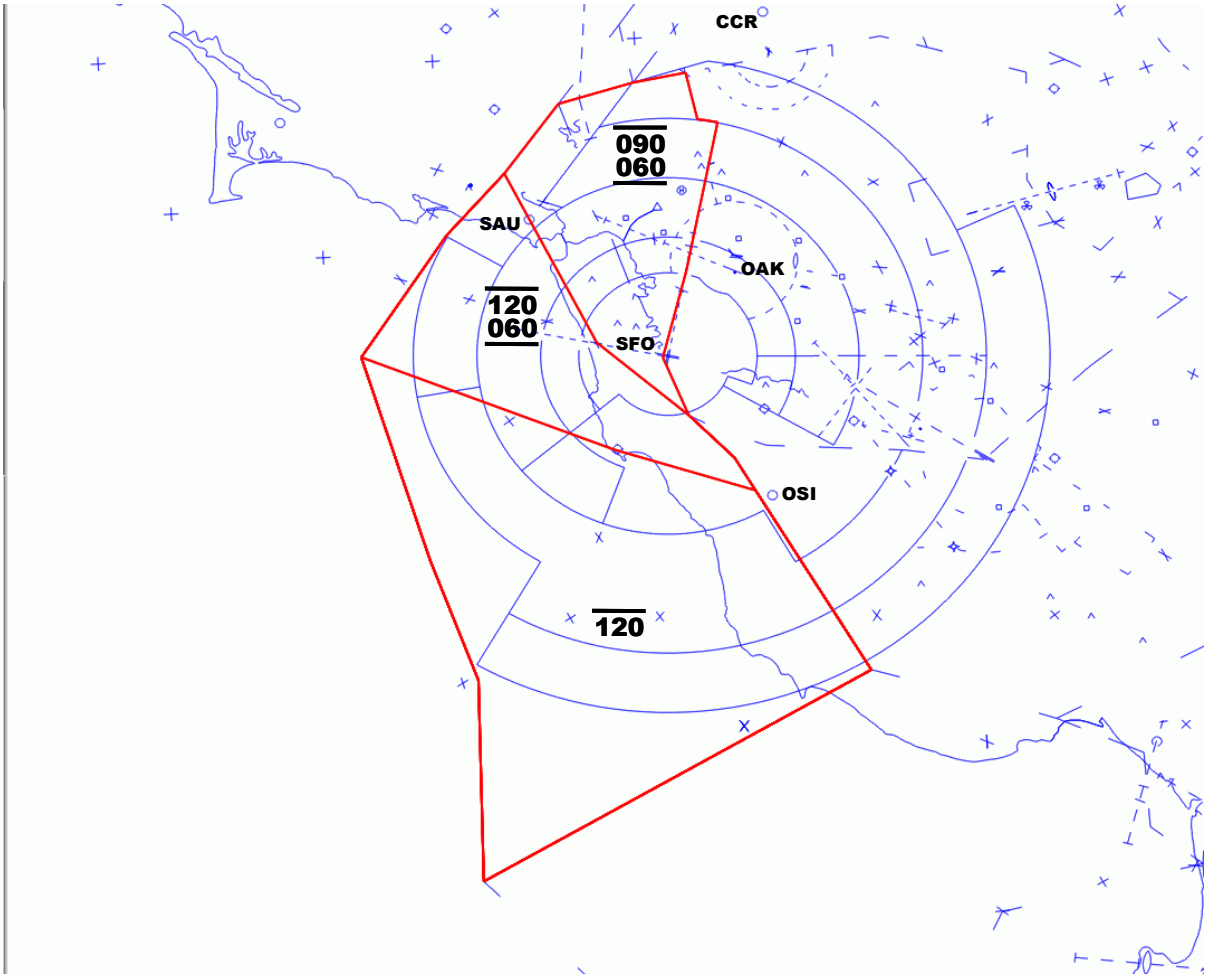
9-13. FREQUENCIES.

a. 133.17 MHz.

b. 133.95 MHz.

c. 317.60 MHz.

9-14. AIRSPACE DIAGRAM.



9-15. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
GROVE	OAK	P, T, J	6,000	RV SAU
QUAKE	Oceanic Fix	J	FL190	
SUTRO	San Jose CX	T, J	7,000	OSI Heading 140°

9-16. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
GROVE	Oceanic Fix	P, T, J	5,000	SFO 28 Depts
LICKE	Oceanic Fix	P, T, J	6,000	RV BOLDR
SECA	HADLY STAR	P, T	7,000	SFO arrivals only
SUTRO	Oceanic Fix	J	12,000	RV OSI
SUTRO	SFO	T, J	6,000	RV OSI

9-17. EXCEPTIONS TO TRANSFER OF CONTROL.

Grove does not have control for turns on OAK arrivals received from Boulder.

SECTION 6. BOULDER - OAKE

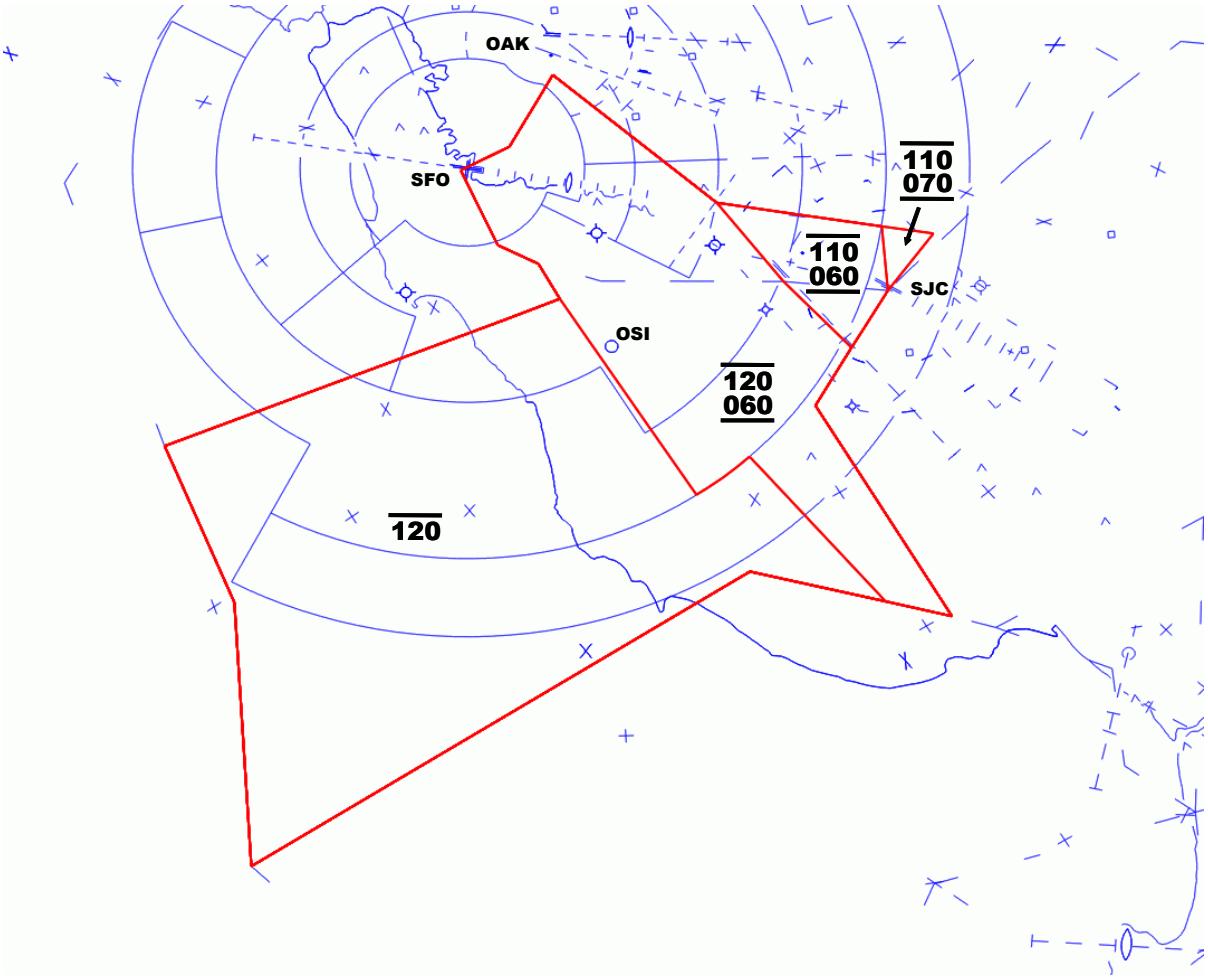
9-18. FREQUENCIES.

a. 133.17 MHz.

b. 133.95 MHz.

c. 317.60 MHz.

9-19. AIRSPACE DIAGRAM.



9-20. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
HOOKS (SFOW) LICKE (SJCE)	San Jose CX	J	7,000	Abeam OSI heading 110° (SFOW) Abeam OSI heading 140° (SJCE)
LAGUNA	V25	P, T	9,000	
SECA	EUGEN / NUEVO DP	P, T	7,000	
SUTRO	OAK	J	8,000	RV SAU
WOODSIDE	San Francisco CX	P, T, J	6,000	

9-21. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
SECA	San Francisco CX via V25	P, T	6,000	
SUTRO	MRY CX via direct MUNSO	P, T	7,000	During “Side-bys” only
SUTRO	EUGEN / NUEVO DP	P, T	11,000 or lower filed altitude	

9-22. RESPONSIBILITIES.

a. Protect the PORTE/SKYLINE departure route (PYE135R 40 DME) and PESCA (PYE135R 55 DME) at 9,000 feet and above.

b. Protect the OFFSHORE/COAST route 1½ NM north of the Boulder/Sutro boundary line (PYE155R 35 DME) at 11,000 feet and above.

c. During in-trail operations to SFO, coordinate arrival sequence with Niles.

d. Do not authorize the “Down-The-Bay” procedure.

9-23. PRE-ARRANGED COORDINATION.

Boulder shall ensure that all aircraft on the Golden Gate Arrival route be at or descending to 11,000 feet while in Sutro’s airspace.

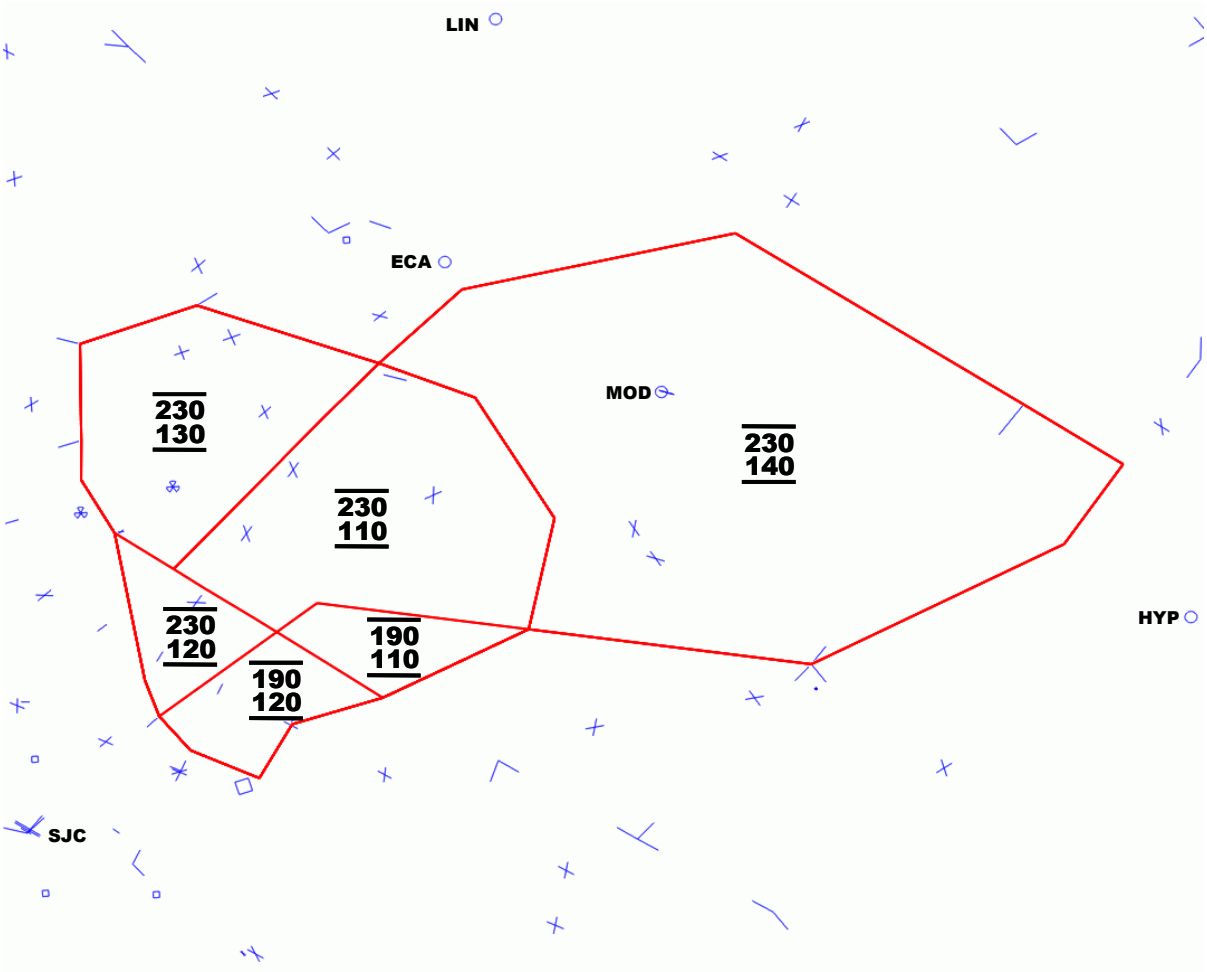
SECTION 7. CEDAR - SFOW

9-24. FREQUENCIES.

a. 128.32 MHz.

b. 254.30 MHz.

9-25. AIRSPACE DIAGRAM.



9-26. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
MORGAN	Direct first fix outside NCT airspace	T, J	FDIO	
QUAKE	Napa CX via MOD OAK SAU	T, J	FL200	
TURLOCK	Direct first fix outside NCT airspace	T, J	FDIO	

9-27. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
FAIRFIELD	CCR and SUU departures via FRA AVE PXN EHF	P, T, J		RV west of the SAC157R
RICHMOND	V244 (Filed above 13,000)	T	FL230 or lower filed altitude	
SUNOL	SFO via MOD	J	15,000	
TURLOCK	SFO via MOD	T, J	14,000	

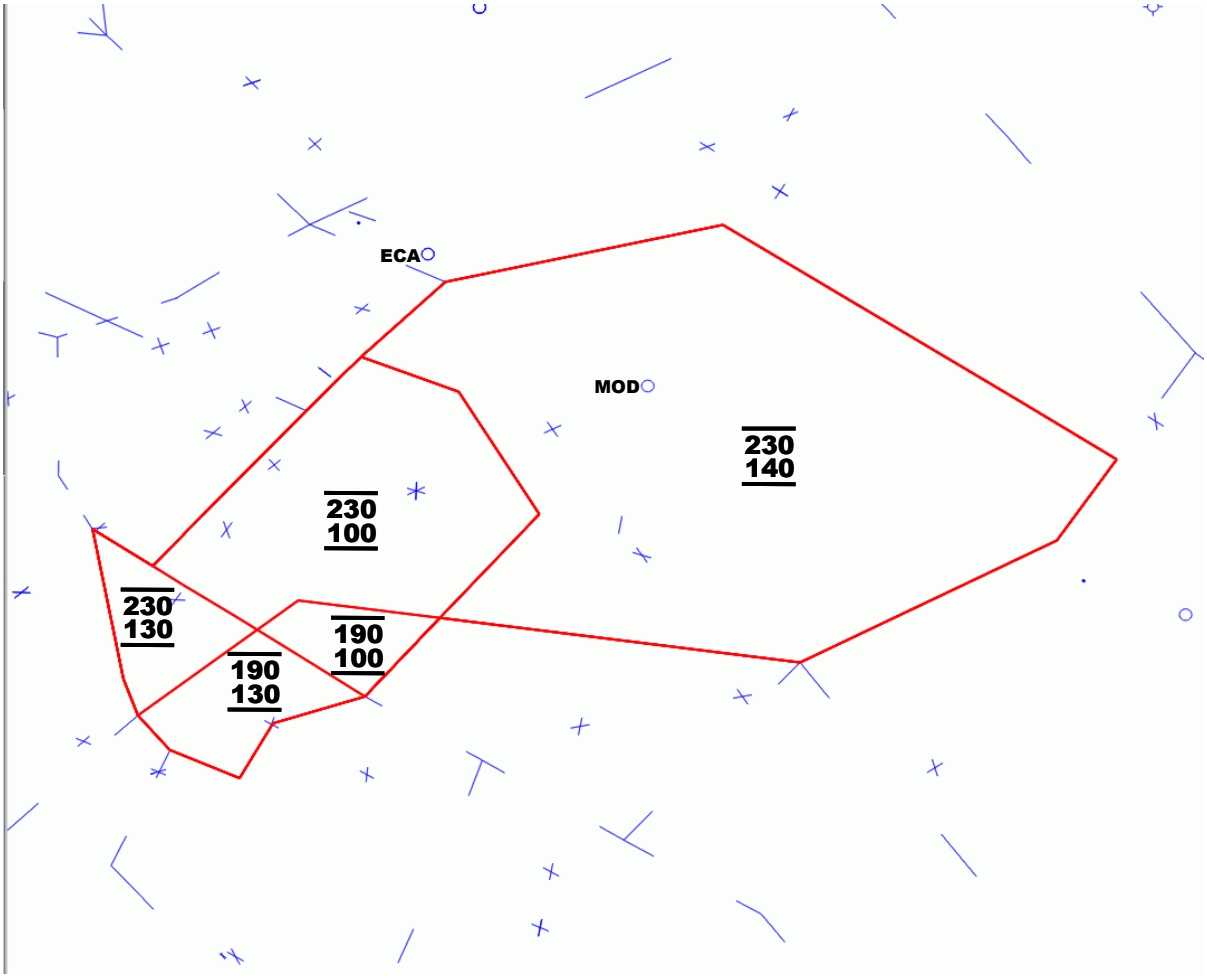
SECTION 8. CEDAR - SFOE

9-28. FREQUENCIES.

a. 128.32 MHz.

b. 254.30 MHz.

9-29. AIRSPACE DIAGRAM.



9-30. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
NILES	SFO	J	10,000	
FAIRFIELD	Napa CX via MOD CCR	J	FL200	

9-31. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
FAIRFIELD	CCR and SUU departures via FRA AVE PXN EHF	P, T, J		RV west of the SAC157R
SUNOL	SFO via MOD	J	15,000	
TURLOCK	SFO via MOD	J	14,000	

9-32. RESPONSIBILITIES.

RESERVED.

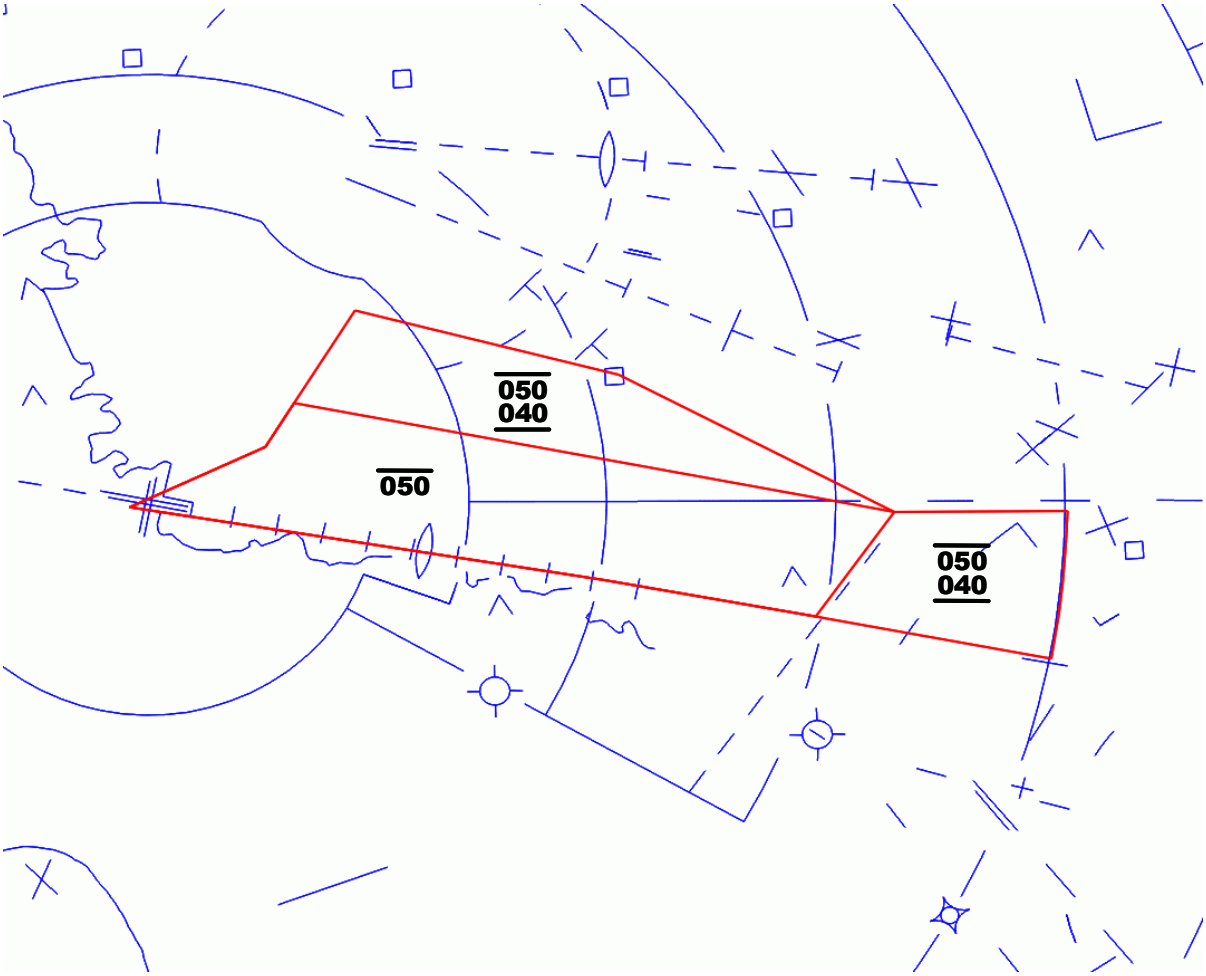
SECTION 9. FOSTER – SFOW

9-33. FREQUENCIES.

a. 120.35 MHz.

b. 251.05 MHz.

9-34. AIRSPACE DIAGRAM.



9-35. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
MULFORD	Oakland CX	J	4,000	RV east of Dumbarton Bridge
MULFORD	SQL Departures (OAK V6 and landing Oakland CX only)	P, T	3,000	RV west of Dumbarton Bridge

9-36. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
BOULDER	SFO	T, J	6,000	
MULFORD	HAF	P, T, J	4,000	RV east of Dumbarton Bridge
MULFORD	SFO	P, T, J	4,000 (IFR) 3,500 (VFR)	3 miles east of OAK towards BRIJJ
MULFORD	SQL	P, T, J	3,000	
NILES	SFO	P, T, J	7,000	

9-37. RESPONSIBILITIES.

During in-trail operations, coordinate with Woodside for the arrival sequence to SFO.

9-38. EXCEPTIONS TO TRANSFER OF CONTROL.

a. Foster does not have control for descent of arrivals in Mulford airspace until south of the OAK Runway 29 localizer.

b. Foster does not have control for descent of arrivals on right traffic for SFO Runways 28 below 6,000 feet until crossing the SFO to OAK line.

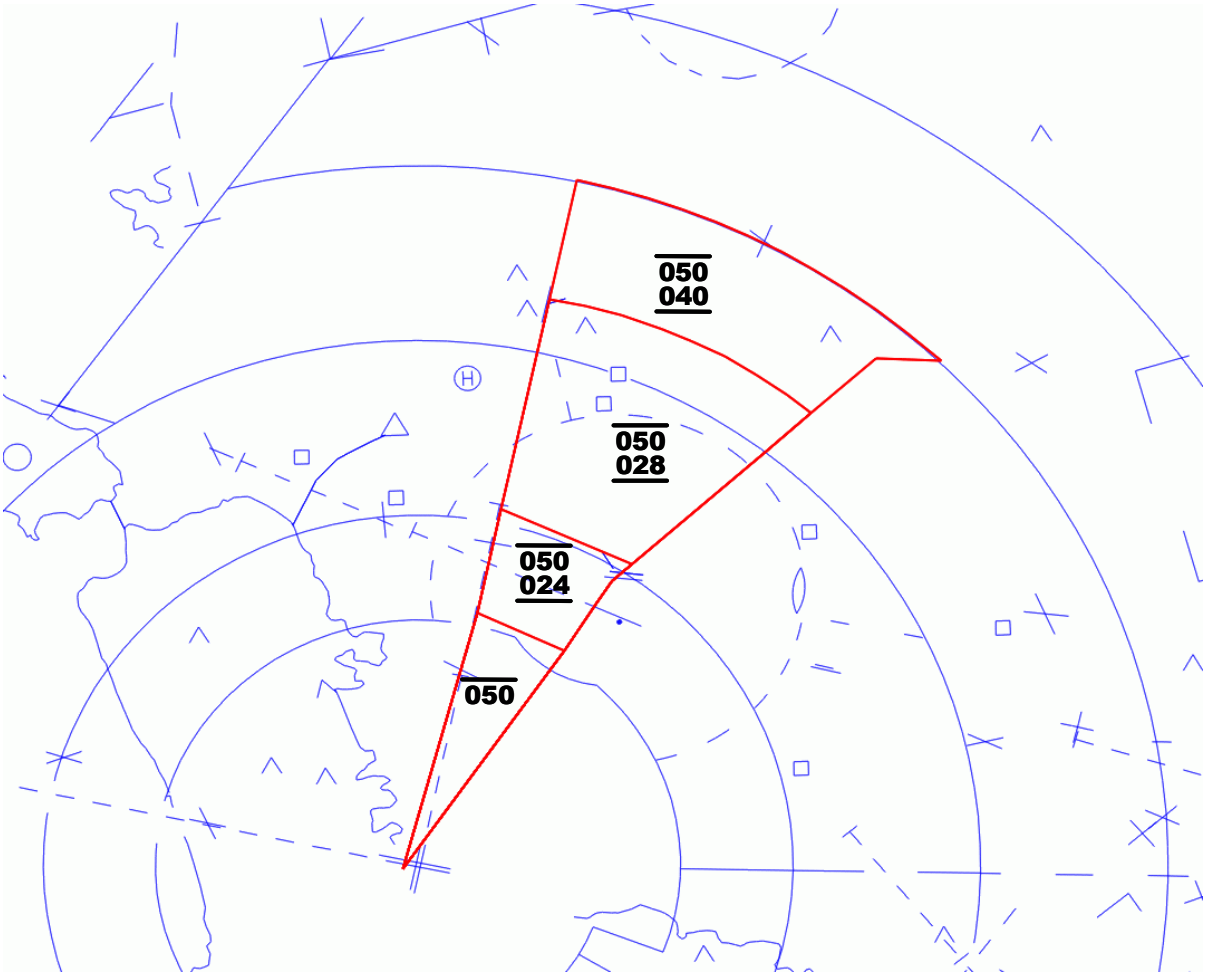
SECTION 10. FOSTER – SFOE

9-39. FREQUENCIES.

a. 120.35 MHz.

b. 251.05 MHz.

9-40. AIRSPACE DIAGRAM.



9-41. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
NILES	SFO	P, T, J	7,000	

9-42. RESPONSIBILITIES.

During in-trail operations, coordinate with Woodside for arrival sequence to SFO.

9-43. EXCEPTIONS TO TRANSFER OF CONTROL.

Foster does not have control for descent of arrivals from Niles below 6,000 feet until within Foster's lateral airspace boundary.

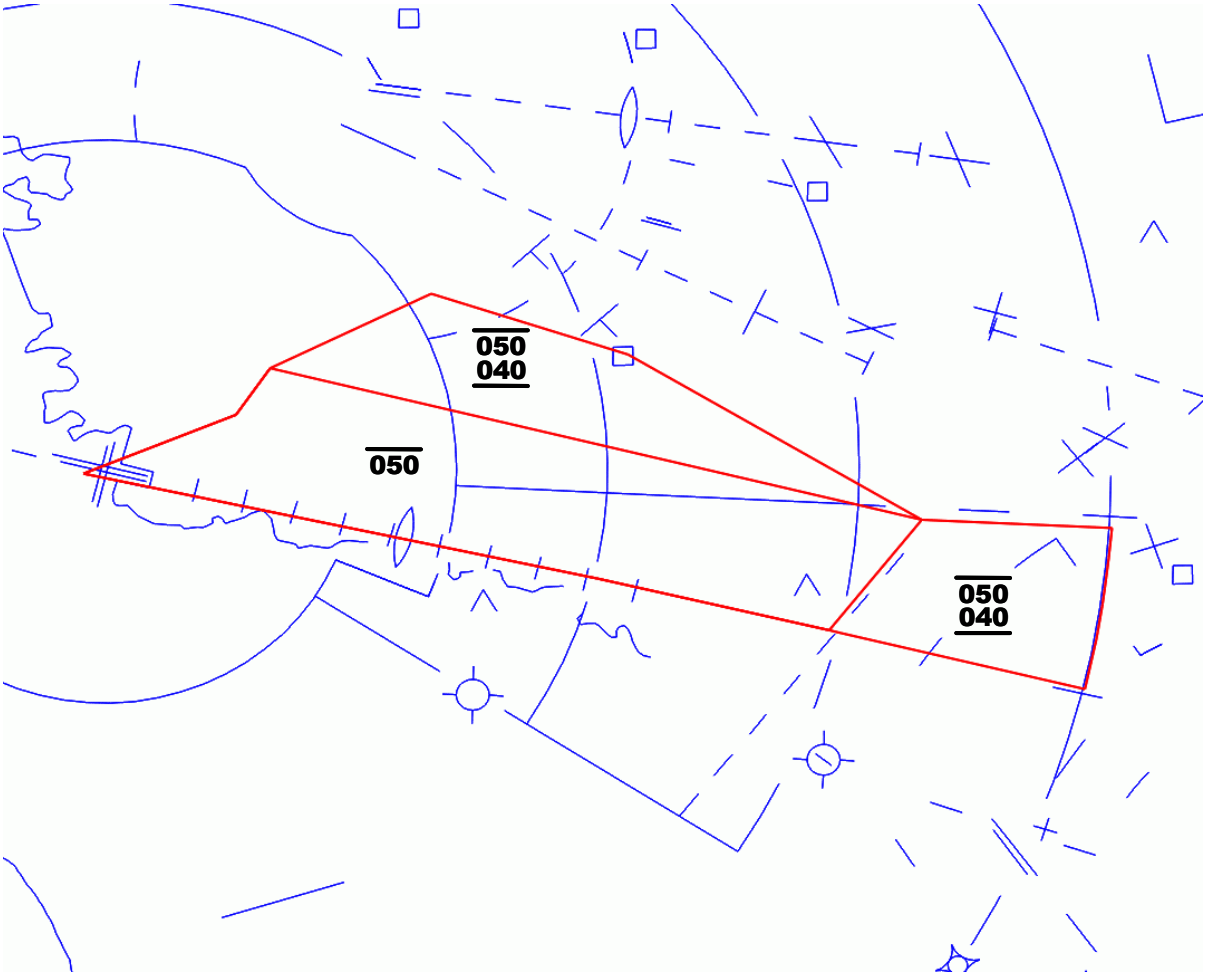
SECTION 11. FOSTER – OAKE

9-44. FREQUENCIES.

a. 120.35 MHz.

b. 251.05 MHz.

9-45. AIRSPACE DIAGRAM.



9-46. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
MULFORD	Oakland CX	J	4,000	RV east of Dumbarton Bridge
MULFORD	SQL Departures	P, T	3,000	RV west of Dumbarton Bridge

9-47. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
GROVE / MULFORD	SFO	P, T, J	4,000 (IFR) 3,500 (VFR)	3 miles east of OAK towards BRIJJ
MULFORD	HAF	P, T, J	4,000	RV east of Dumbarton Bridge
MULFORD	SQL	P, T	3,000	RV west of Dumbarton Bridge
NILES	SFO	P, T, J	7,000	

9-48. RESPONSIBILITIES.

During in-trail operations, coordinate with Woodside for the arrival sequence to SFO.

9-49. EXCEPTIONS TO TRANSFER OF CONTROL.

Foster does not have control for descent of arrivals in Grove's airspace until south of the OAK Runway 29 localizer.

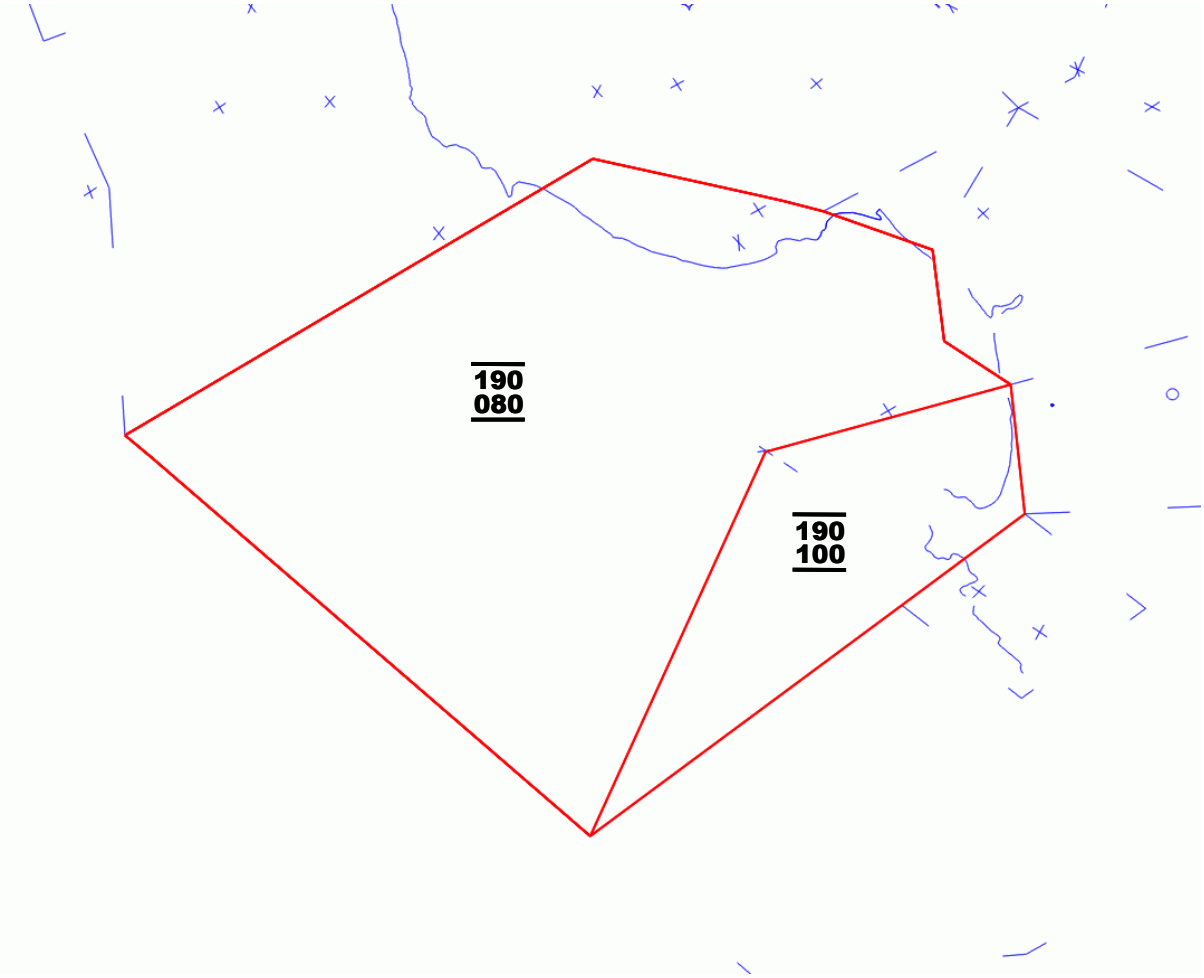
SECTION 12. LAGUNA

9-50. FREQUENCIES.

a. 128.57 MHz.

b. 254.30 MHz.

9-51. AIRSPACE DIAGRAM.



9-52. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
QUAKE	Monterey CX DP's	P, T, J	19,000 or lower filed altitude	
SECA	MRY	P, T, J	8,000	Direct MUNSO
SECA	Monterey CX (all others)	P, T, J	8,000	via SNS

9-53. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
BOULDER	V25	P, T	9,000	
MORGAN	San Francisco CX (SFOW)	P, T	12,000 or lower filed altitude	SANTY OSI
MORGAN	San Francisco CX (SFOE)	P, T	12,000 or lower filed altitude	SHOEY HADLY STAR
QUAKE	EUGEN / NUEVO DP	P, T	19,000 or lower filed altitude	
SECA	Monterey CX DP's	J	7,000	
SECA	San Francisco CX (SFOW)	P, T	12,000 or lower filed altitude	SANTY OSI
SECA	San Francisco CX (SFOE)	P, T	12,000 or lower filed altitude	SHOEY HADLY STAR

9-54. RESPONSIBILITIES.

RESERVED.

9-55. EXCEPTIONS TO TRANSFER OF CONTROL.

Laguna does not have control for descent prop and turbo-props below 10,000 feet while in Fremont, Morgan, or Seca's airspace.

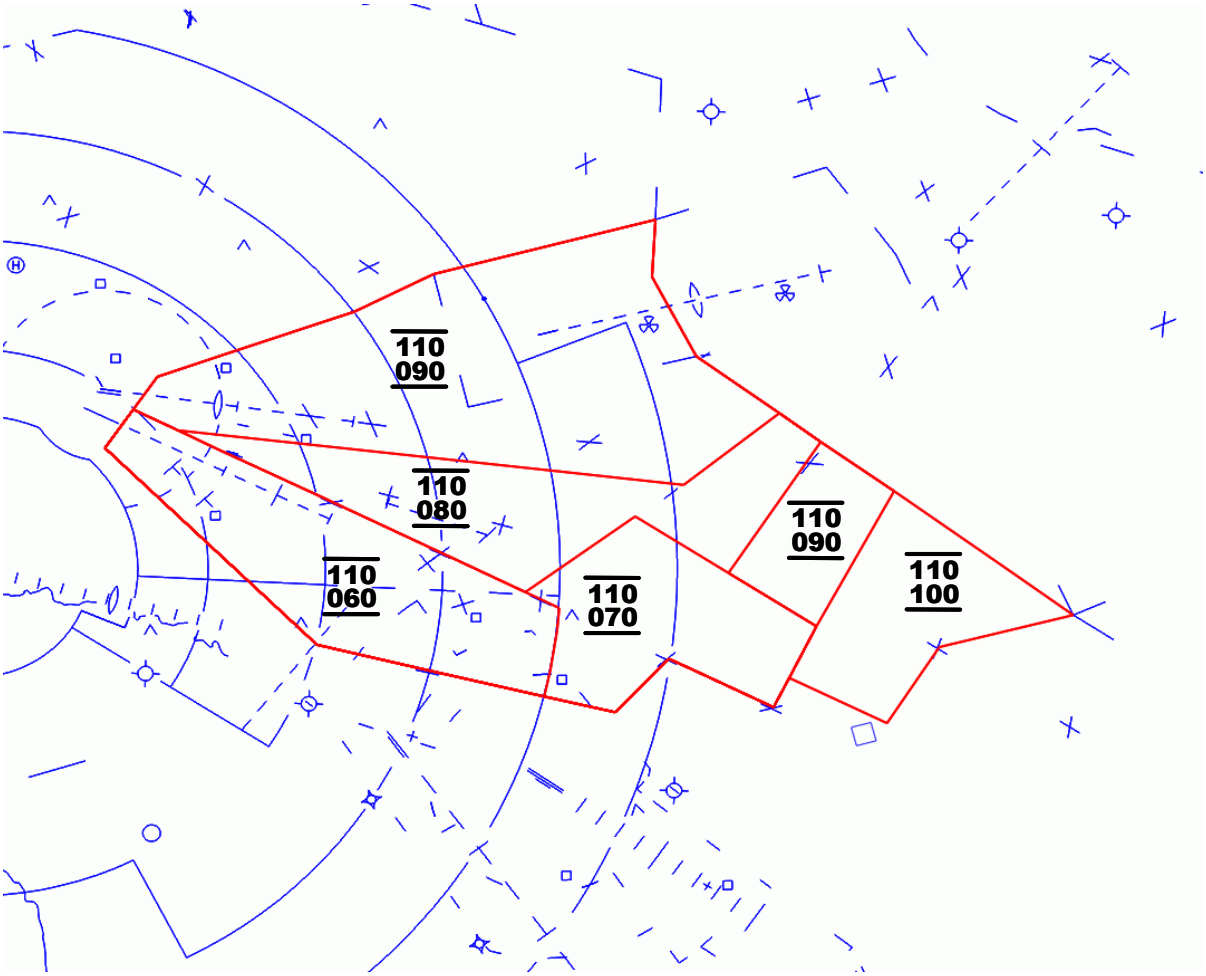
SECTION 13. NILES – SFOW

9-56. FREQUENCIES.

a. 134.50 MHz.

b. 338.20 MHz.

9-57. AIRSPACE DIAGRAM.



9-58. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
FOSTER	SFO	P, T, J	7,000	

9-59. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
SUNOL	SFO via CEDES	T	9,000	

9-60. RESPONSIBILITIES.

During in-trail operations to SFO, coordinate arrival sequence with Boulder.

9-61. EXCEPTIONS TO TRANSFER OF CONTROL.

Niles does not have control for descent in Sunol's airspace without coordination.

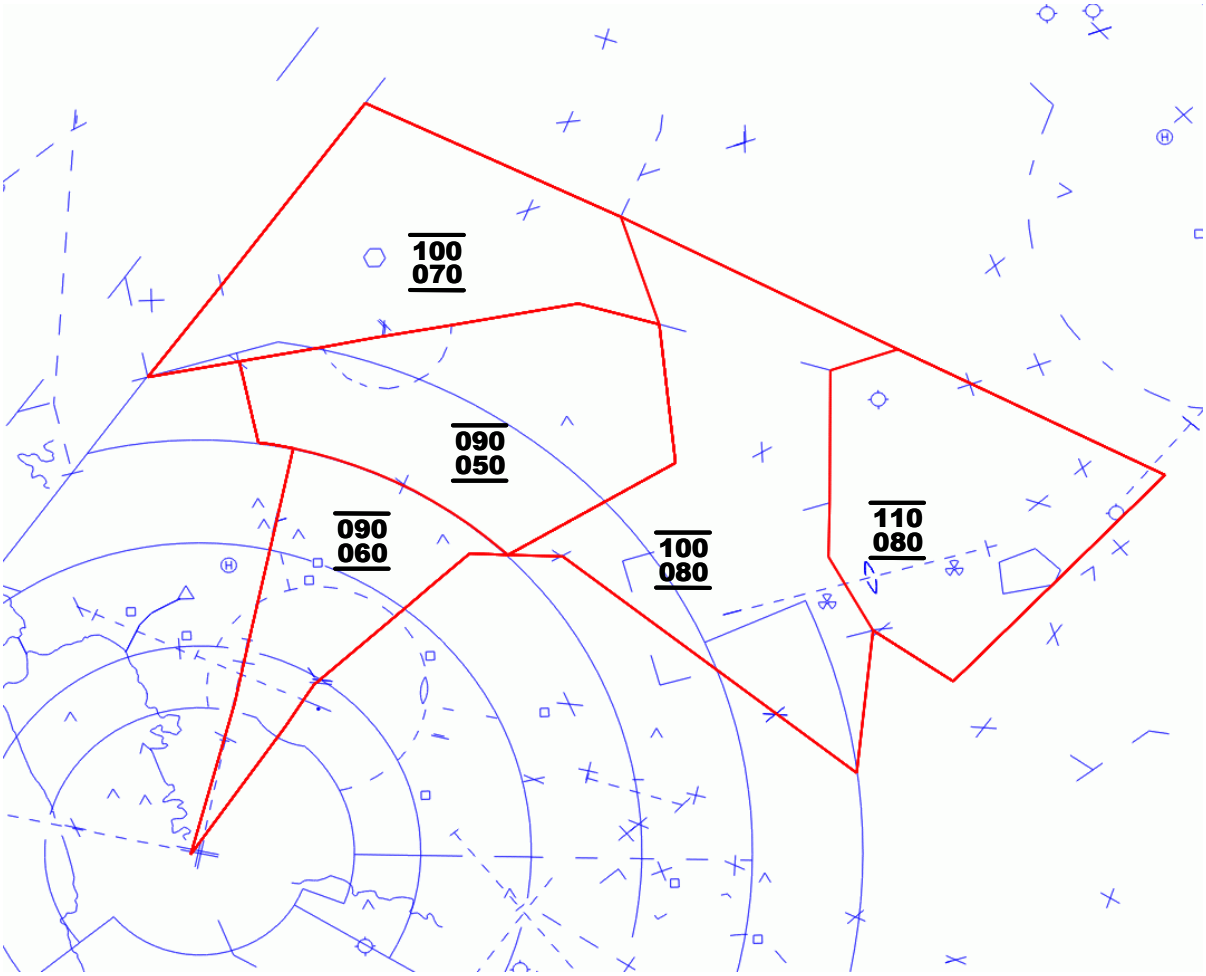
SECTION 14. NILES – SFOE

9-62. FREQUENCIES.

a. 134.50 MHz.

b. 338.20 MHz.

9-63. AIRSPACE DIAGRAM.



9-64. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
GROVE	OAK	J	5,000	
FOSTER	SFO	P, T, J	7,000	

9-65. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
FAIRFIELD	SFO via V6	P, T	8,000	
SUNOL	COMMO or MANTECA STARs	J	Cross LOCKE @ 8,000	

9-66. EXCEPTIONS TO TRANSFER OF CONTROL.

Foster does not have control for descent of arrivals from Niles below 6,000 feet until within Foster's lateral airspace boundary.

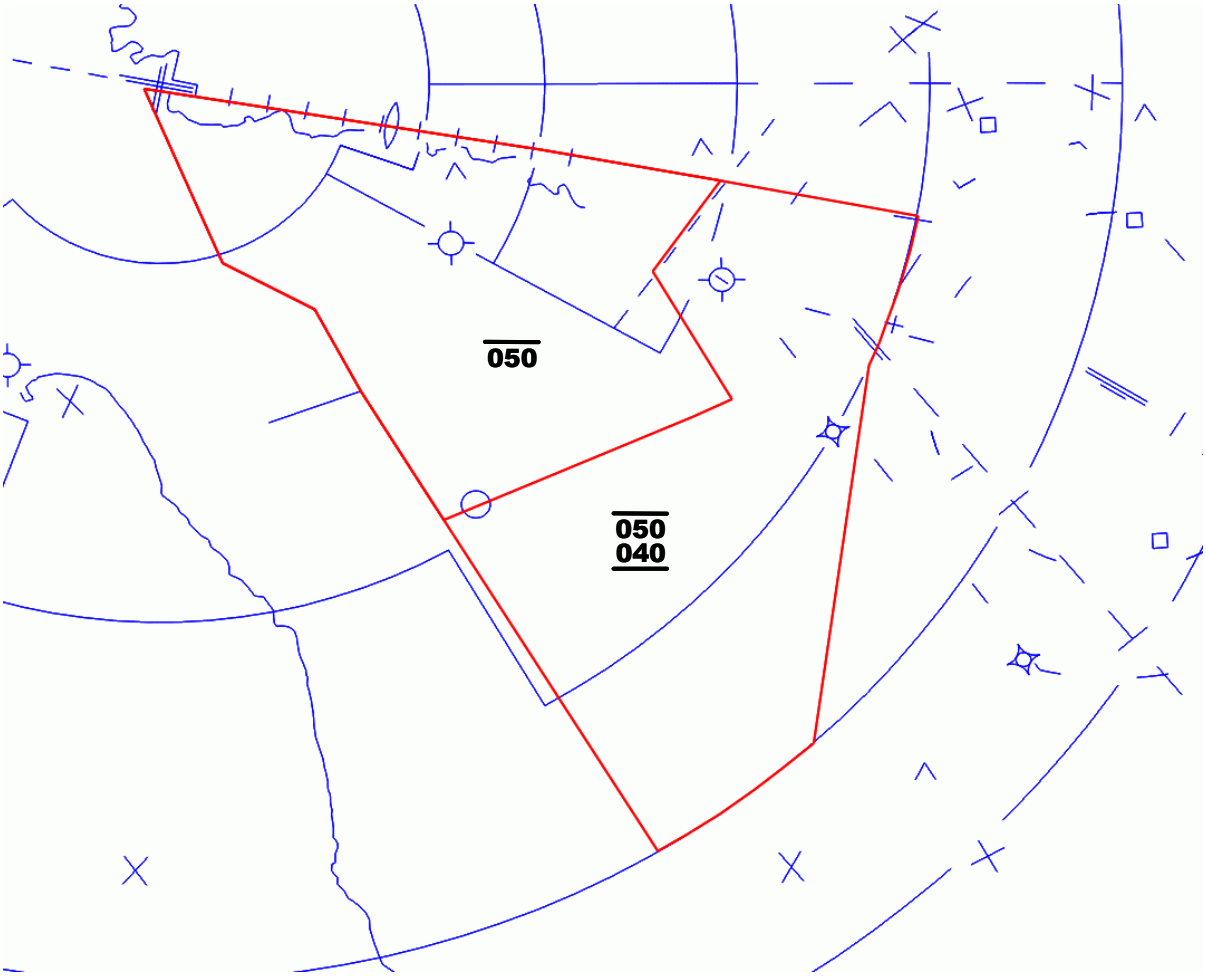
SECTION 15. WOODSIDE - SFOW

9-67. FREQUENCIES.

a. 135.65 MHz.

b. 310.80 MHz.

9-68. AIRSPACE DIAGRAM.



9-69. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
HOOKS (SFOW) LICKE (SJCE)	San Jose CX	P, T, J	5,000	OSI heading 110° (SFOW) OSI heading 140° (SJCE)
HOOKS (SFOW) LICKE (SJCE)	SQL GPS Approach	P, T, J	4,000	RV JEFNY
SUTRO	All Routes	P, T, J	5,000	Heading 280°, at least 3 miles south of SFO
TOGA (SFOW) HOOKS (SJCE)	V334 SUNOL V195 (SQL departures for Stockton or Modesto CXs)	P, T	3,000 (SFOW) 2,000 (SJCE)	RV over PAO

9-70. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
SUTRO	San Jose CX	P	4,000	South of SFO
SUTRO	San Jose CX	T, J	5,000	OSI heading 110° (SFOW) OSI heading 140° (SJCE)
SUTRO	San Francisco CX	P, T	4,000	South of SFO
SUTRO	San Francisco CX	J	5,000	South of SFO
TOGA	VFR SFO Arrivals and Bay Tours	P, T, J	At or below 3,500	Via south and west of the Bayshore Freeway
TOGA	Oceanic Fix	P, T, J	3,000	
TOGA (SJCE)	Oceanic Fix	P, T, J	5,000	
TOGA (SJCE)	SFO	P, T, J	4,000	

9-71. RESPONSIBILITIES.

a. During in-trail operations, sequence arrivals to SFO. During side-by-side operations, sequence arrivals to SFO Runway 28L, and maintain radar separation from arrivals controlled by Foster to Runway 28R until visual separation is applied.

b. Initially control NUQ Woodside departures.

c. Initially control aircraft departing SJC landing SFO, jet aircraft transiting Sutro's airspace or enroute to oceanic fixes.

d. Request release from Mulford for IFR SQL departures routed through Mulford's airspace.

e. Request release from Toga for IFR SQL departures routed through Toga's airspace.

9-72. EXCEPTIONS TO TRANSFER OF CONTROL.

Toga (SFOW) / Hooks (SJCE) does not have control for climb on aircraft received from Woodside.

9-73. RESERVED.

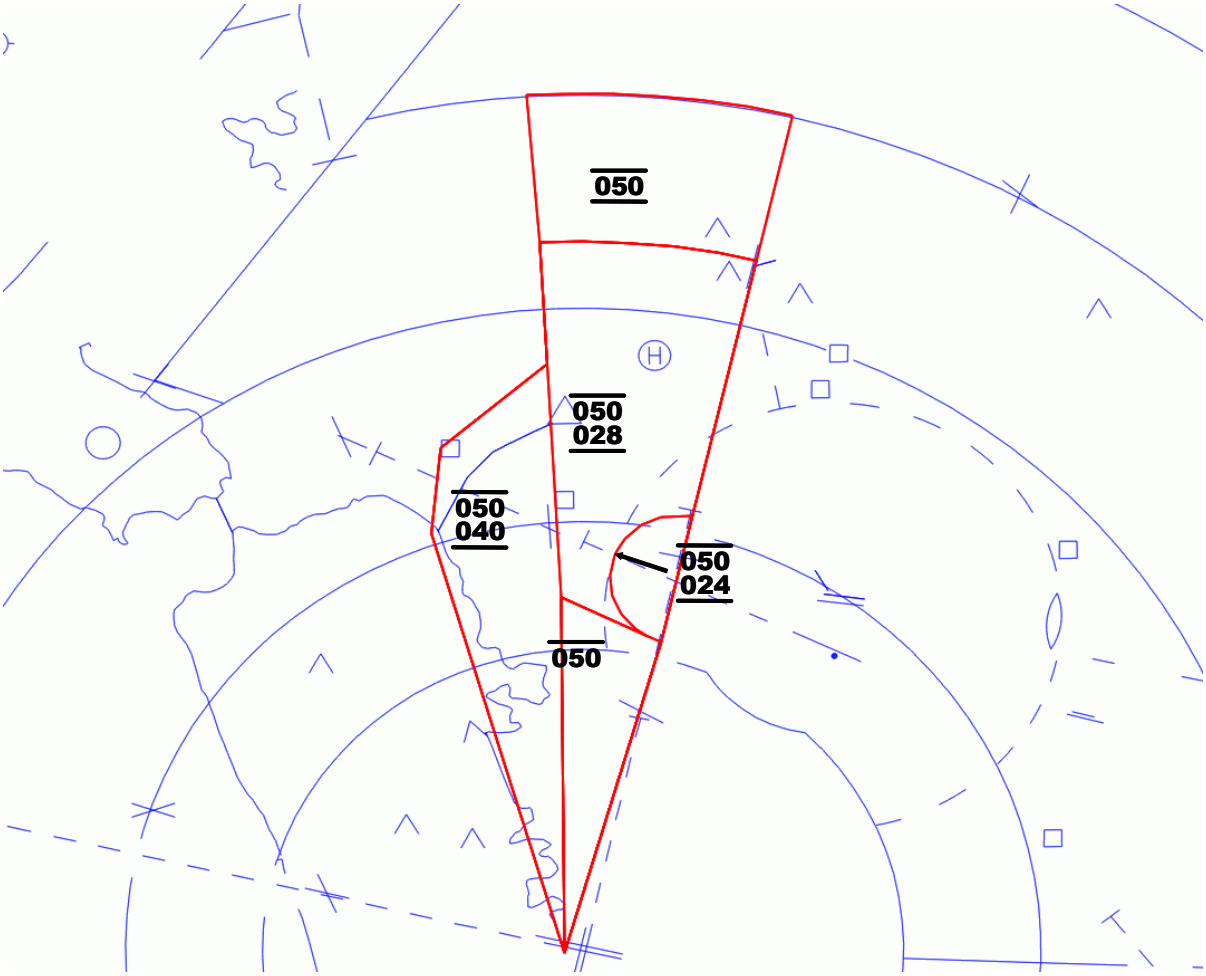
SECTION 16. WOODSIDE – SFOE

9-74. FREQUENCIES.

a. 135.65 MHz.

b. 310.80 MHz.

9-75. AIRSPACE DIAGRAM.



9-76. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
GROVE	SFO	P, T	4,000	RV BERKS

9-77. RESPONSIBILITIES.

During in-trail operations, sequence arrivals to SFO. During side-by-side operations, sequence arrivals to SFO Runway 19R, and maintain radar separation from arrivals controlled by Foster to Runway 19L until visual separation is applied.

9-78. RESERVED.

CHAPTER 10. AREA C

SECTION 1. AREA C SPECIFIC RESPONSIBILITIES

10-1. RESERVED.

SECTION 2. AREA C SPECIFIC ARTS ENTRIES

10-2. SECONDARY SCRATCHPAD ENTRIES.

The following entries can be used within Area C:

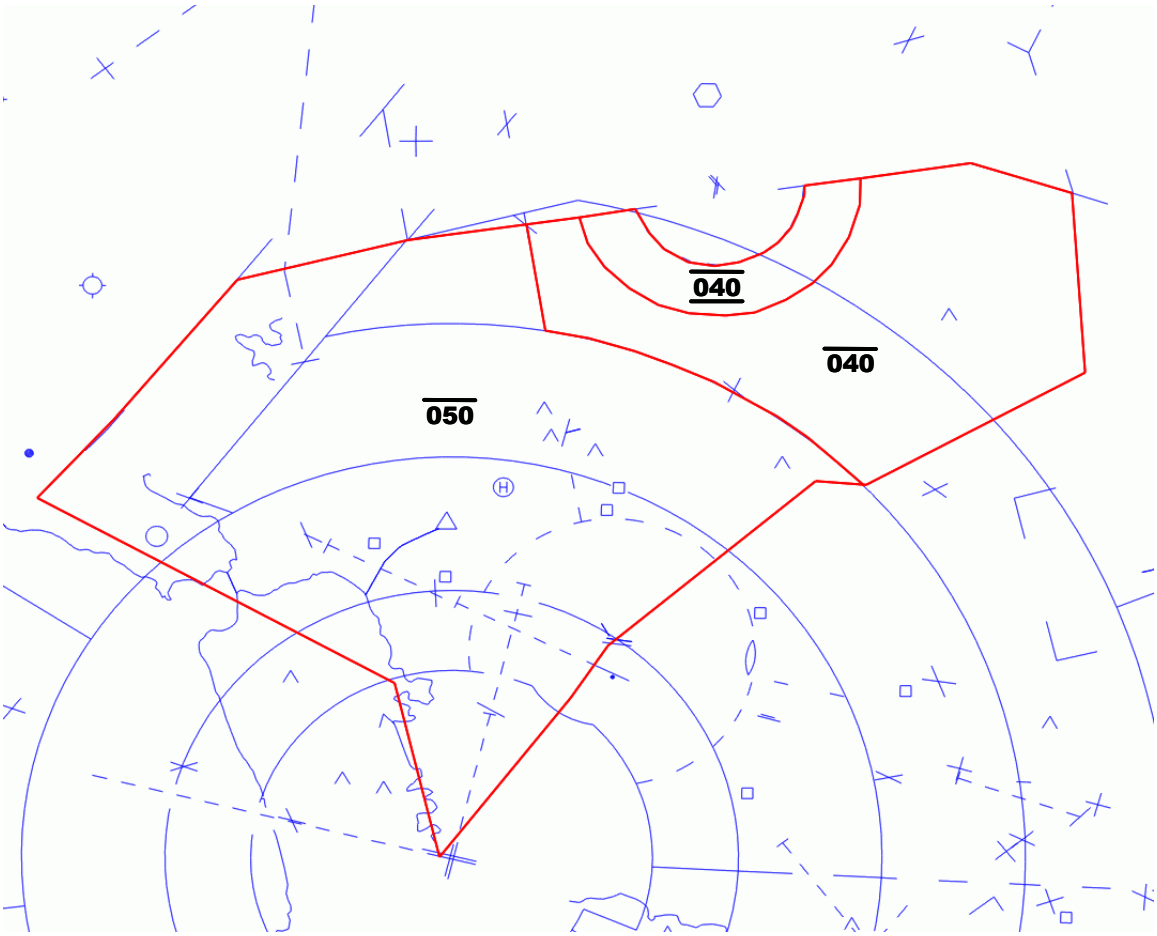
All Airports

SCRATCHPAD ENTRY	MEANING	ARTS SHORTCUT
AIS	Airport In Sight	/
LFT	Aircraft requesting / assigned the left runway	Δ
RGT	Aircraft requesting / assigned the right runway	.
VA	Aircraft assigned a visual approach	+

SECTION 3. AREA C SPECIAL OPERATIONS

10-3. SFO LANDING RUNWAY 10.

a. Grove and Mulford airspace map:



b. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
DIABLO	San Jose CX / HWD	P, T, J	4,000	RV vicinity of Danville Tower

c. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
BOULDER	OAK	T, J	6,000	Via SFO for left traffic
DIABLO	OAK	P	4,000	RV vicinity of Danville Tower
NILES	OAK	T, J	5,000	

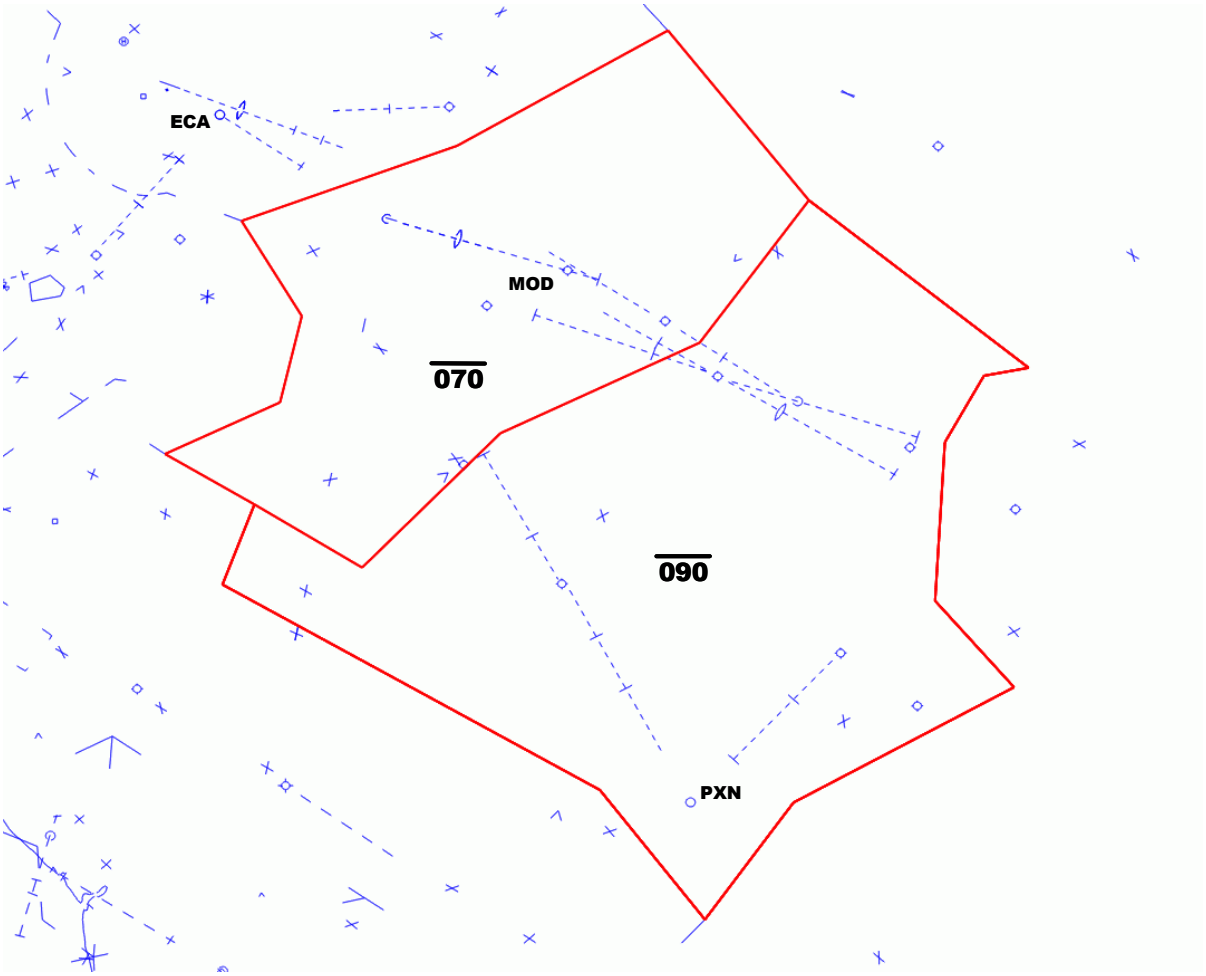
SECTION 4. CASTLE

10-4. FREQUENCIES.

a. 120.95 MHz.

b. 269.45 MHz.

10-5. AIRSPACE DIAGRAM.



10-6. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
MORGAN	V111	P, T, J	6,000	
SUNOL (SFOW)	PXN STAR or V301	P, T	Cross BORED @ 8,000	
TOGA (SFOE)	PXN STAR or V301	P, T	Cross BORED @ 8,000	

10-7. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
MORGAN	V111	P, T J	7,000 9,000	
MORGAN	PXN STAR or V301	P, T	10,000	

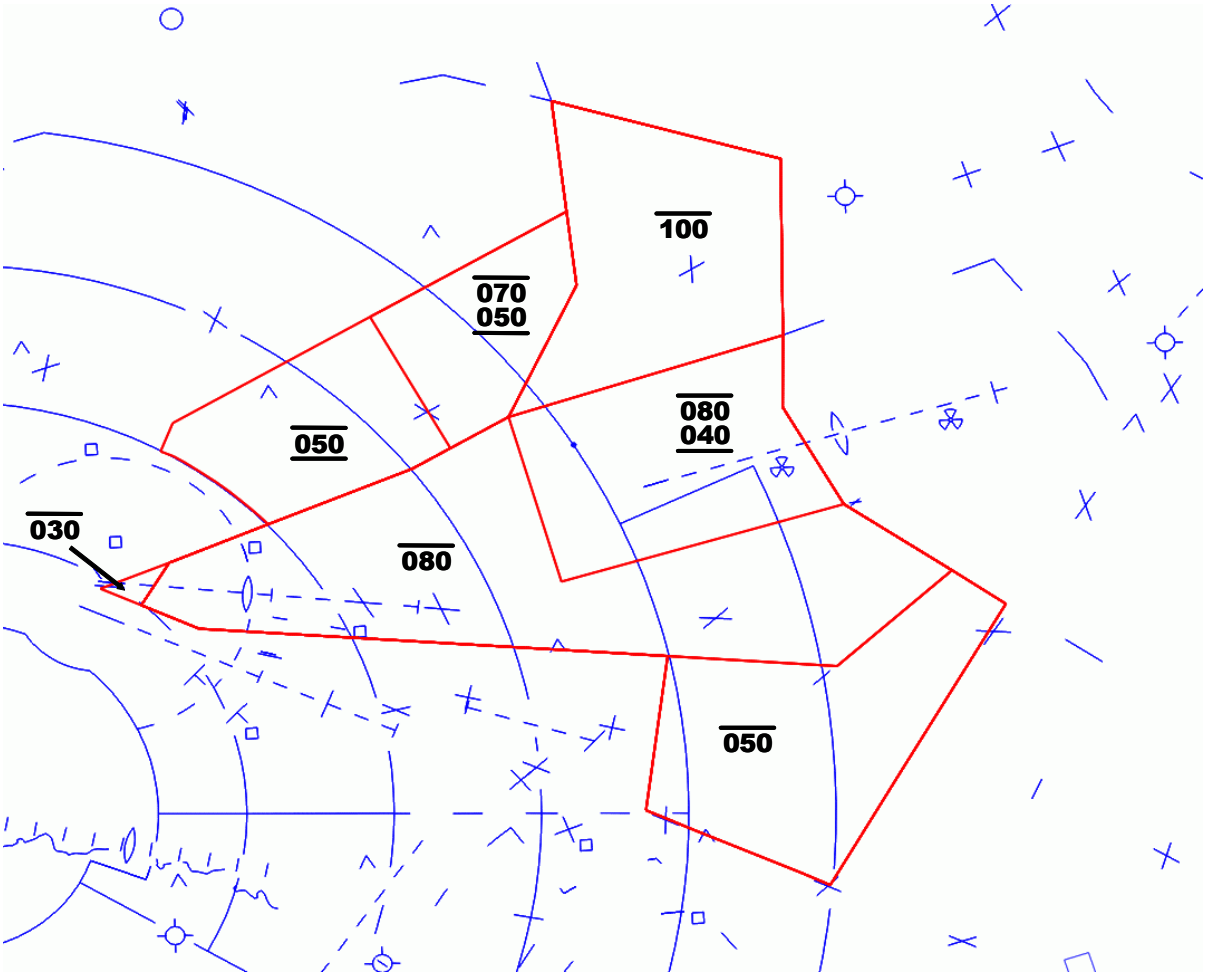
SECTION 5. GROVE – SFOW

10-8. FREQUENCIES.

a. 125.35 MHz.

b. 354.10 MHz.

10-9. AIRSPACE DIAGRAM.



10-10. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
DIABLO	CCR	P, T, J	5,000	Direct
DIABLO	Napa CX	P, T, J	5,000	RV vicinity of Danville Tower
DIABLO	via V6	P, T, J	5,000	RV to join V6 over COLLI
FAIRFIELD	V334 or vector SAC	P, T, J	10,000	
FAIRFIELD	Departures via LIN	T, J	10,000	ALTAM RV 360°
RICHMOND	Northbound, requesting 6,000 or higher	P, T, J	6,000	Heading 360°
SUNOL	V195	P, T, J	7,000	
SUNOL	V244 or vector ECA	P, T, J	9,000	
TOGA	San Jose CX	P, T	6,000	Remain east of SJC 009° radial
TOGA	SQL GPS Arrivals	P, T	6,000	Remain east of SJC 009° radial
TOGA (SFOW)	VFR SJC Arrivals	P	Cross Embassy Suites at or above 2,500	
TOGA (SFOW)	VFR SJC Arrivals	T, J	At or above 3,500	RV RHV
HOOKS (SJCE)	VFR SJC Arrivals	P	Cross Embassy Suites at or above 2,000	
HOOKS (SJCE)	VFR SJC Arrivals	T, J	At or above 2,500	RV Nummi Plant
TRACY	V244 or vector ECA	P T, J	5,000 7,000	
TRACY	V334 or vector SAC	P T, J	5,000 7,000	

10-11. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
DIABLO	Oakland CX	P, T	4,000	
RICHMOND	OAK	T, J	5,000	Landing Runways 27
RICHMOND	V244	P, T	9,000	Aircraft requesting 9,000 to 13,000
TOGA	V334 or RV ALTAM V244	P, T	5,000	
TRACY	V195 or V334 or vector SUNOL	P, T	6,000	

10-12. RESPONSIBILITIES.

a. Protect the SAU-OAK arrivals north of OAK controlled by Mulford and Richmond at 5,000 feet.

b. Protect the SFO arrivals north of OAK controlled by Diablo and Mulford at 4,000 feet.

c. Protect the MADWIN and MARVYN STAR arrivals controlled by Mulford from CATTY to the OAK Runway 29 Localizer, between 7,000 and 8,000 feet.

d. Coordinate arrival sequence with Mulford for OAK Runways 27/29 when staggered approaches are required.

e. Issue Class C arrival instructions for VFR aircraft landing at SJC.

f. Ensure ARTS acquisition for LVK departures.

g. Enter the first fix outside of NCT airspace into the primary scratchpad on all departures routed via ALTAM.

10-13. RESERVED.

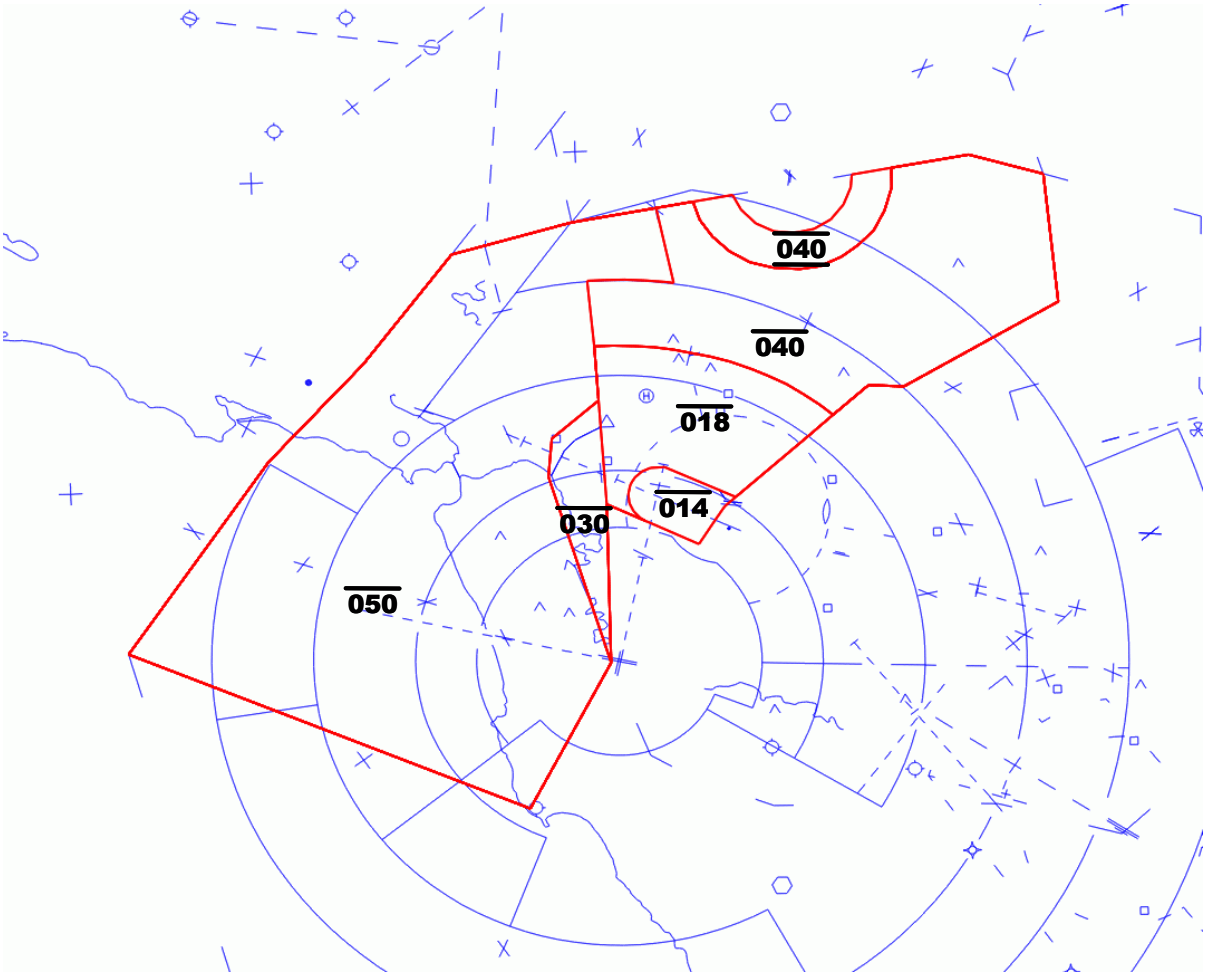
SECTION 6. GROVE - SFOE

10-14. FREQUENCIES.

a. 125.35 MHz.

b. 354.10 MHz.

10-15. AIRSPACE DIAGRAM.



10-16. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
BOULDER	Oceanic Fix	P, T, J	5,000	SFO 28 Depts
DIABLO	HWD	P, T, J	4,000	
RICHMOND	SFO DP (RUNWAY 28)	P, T, J	5,000	SFO 070°
SUTRO	PORTE DP (RUNWAY 28)	J	5,000	RV 100°
SUTRO	SQL or San Jose CX	P, T	4,000	South of SFO
WOODSIDE	SFO	P, T	4,000	RV BERKS

10-17. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
BOULDER	OAK	P, T, J	6,000	RV SAU
DIABLO	OAK	P, T	4,000	
NILES	OAK	J	5,000	Via COMMO STAR
SUTRO	OAK	P, T, J	4,000	
SUTRO	V199 & V27	P, T, J	5,000	

10-18. RESPONSIBILITIES.

Do not vector SFO Runway 28 jet departures prior to crossing the SFO 6 DME except to provide separation from other traffic.

10-19. EXCEPTIONS TO TRANSFER OF CONTROL.

Grove does not have control for turns on OAK arrivals received from Boulder.

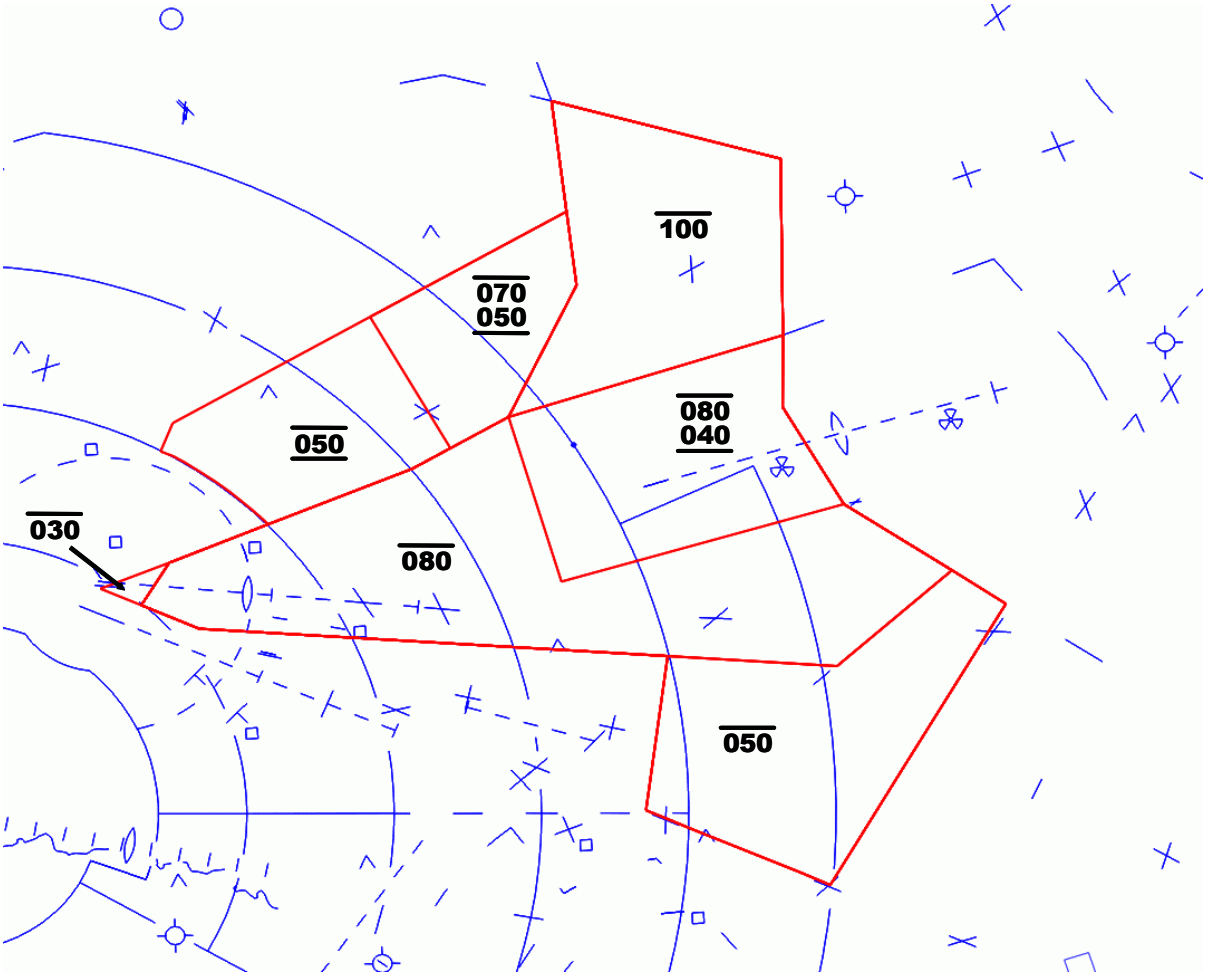
SECTION 7. GROVE – OAKE

10-20. FREQUENCIES.

a. 125.35 MHz.

b. 354.10 MHz.

10-21. AIRSPACE DIAGRAM.



10-22. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
DIABLO	CCR	P, T, J	4,000	Direct
DIABLO	OAK	P, T J	4,000 5,000	North of OAK
DIABLO	Napa CX	P, T, J	4,000	RV vicinity of Danville Tower
DIABLO	via V6	P, T, J	4,000	RV to join V6 over COLLI
RICHMOND	Northbound, requesting 6,000 or higher	P, T, J	6,000	Heading 360°
SUNOL	V244 or vector ECA	P, T, J	9,000	
TOGA (SFOW) LICKE (SJCE)	San Jose CX	P, T	6,000	Remain east of SJC 009° radial
TOGA (SFOW) LICKE (SJCE)	SQL GPS Arrivals	P, T	6,000	Remain east of SJC 009° radial
TOGA	VFR SJC Arrivals	P	Cross Embassy Suites at or above 2,500 (2,000 SJCE)	
TOGA (SFOW)	VFR SJC Arrivals	T, J	At or above 3,500	RV RHV
TOGA (SJCE)	VFR SJC Arrivals	T, J	At or above 2,500	RV Nummi Plant
TRACY	V244 or vector ECA	P T, J	5,000 7,000	
TRACY	V334 or vector SAC	P T, J	5,000 7,000	

10-23. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
DIABLO	HWD	P, T	4,000	
RICHMOND	OAK	T, J	5,000	Landing Runways 27
RICHMOND	V244	P, T	9,000	Aircraft requesting 9,000 to 13,000
TOGA	V334 or RV ALTAM V244	P, T	5,000	
TRACY	V195 or V334 or vector SUNOL	P, T	6,000	

10-24. RESPONSIBILITIES.

a. Issue Class C arrival instructions to VFR aircraft landing at SJC.

b. Ensure ARTS acquisition for LVK departures.

c. During SJCE, coordinate with Hooks prior to releasing OAK departures landing in the San Jose CX.

d. Enter the first fix outside of NCT airspace into the primary scratchpad on all departures routed via ALTAM.

10-25. EXCEPTIONS TO TRANSFER OF CONTROL.

a. Grove does not have control IFR turboprops and jets departing SJC landing OAK until passing SJC 1.8 DME and leaving 2,000 feet.

b. Foster does not have control for descent of arrivals in Mulford airspace until south of the OAK Runway 29 localizer.

10-26. RESERVED.

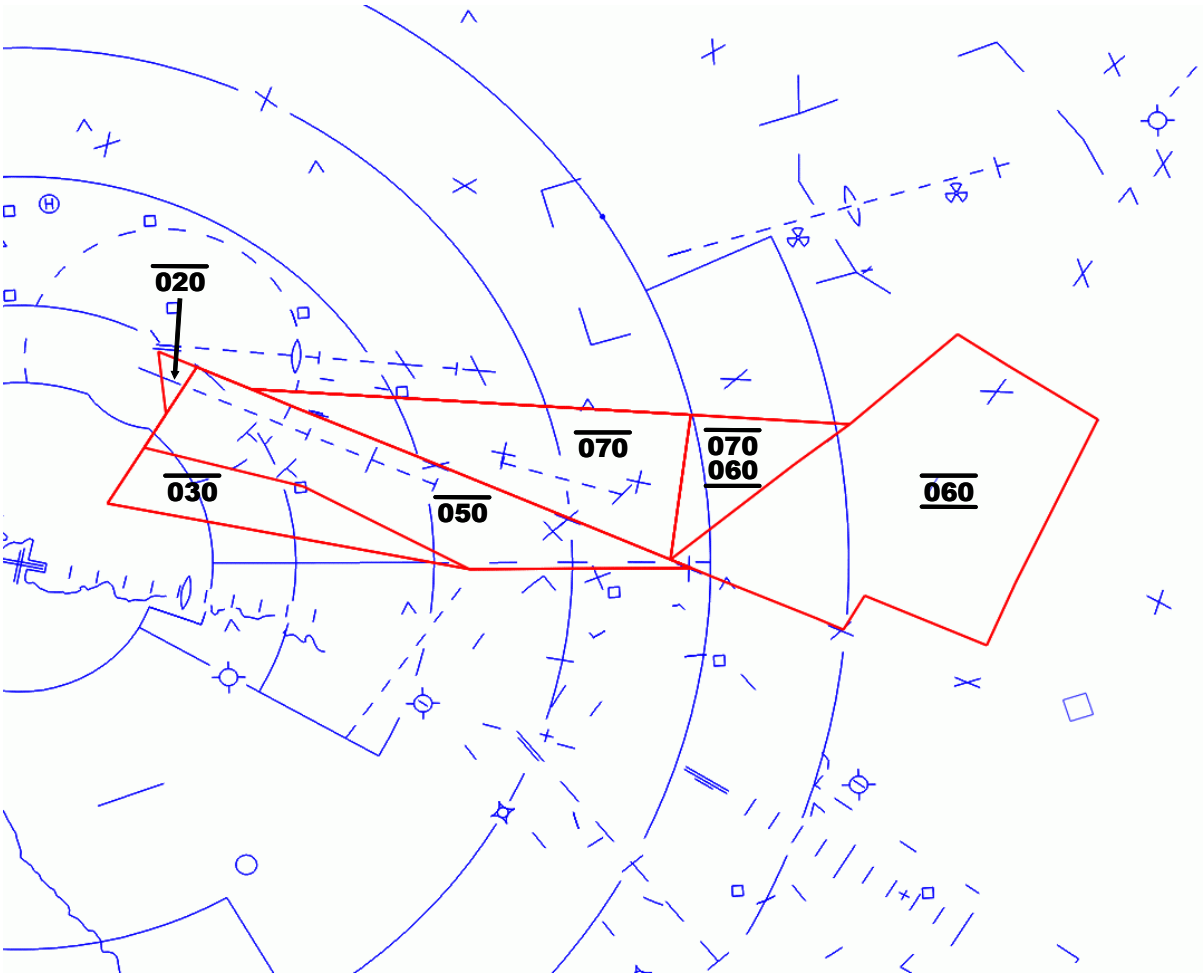
SECTION 8. MULFORD – SFOW

10-27. FREQUENCIES.

a. 124.40 MHz.

b. 351.80 MHz.

10-28. AIRSPACE DIAGRAM.



10-29. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
FOSTER	HAF	P, T, J	4,000	RV east of Dumbarton Bridge
FOSTER	SFO	P, T, J	4,000 (IFR) 3,500 (VFR)	3 miles east of OAK towards BRIJJ
FOSTER	SQL Arrivals	P, T	3,000	
TOGA (SFOW)	San Jose CX (HWD Depts Only)	P, T	3,000	RV at least 1 mile west of NUQ
TOGA (SFOW)	San Jose CX (HWD Depts Only)	J	6,000	RV at least 3 miles east of MABRY
HOOKS (SJCE)	SJC (HWD Depts Only)	P, T, J	2,000	RV to SJC 12R Localizer

10-30. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
BOULDER	Oakland CX	T, J	6,000	
FOSTER	Oakland CX	J	4,000	RV east of Dumbarton Bridge
FOSTER	SQL Departures	P, T	3,000	RV west of Dumbarton Bridge
RICHMOND	OAK Runway 29	T, J	5,000	
TOGA (SFOW) HOOKS (SJCE)	Napa, Oakland, Travis CX (PAO Depts Only)	P, T, J	3,000	via Dumbarton Bridge

TOGA (SFOW) HOOKS (SJCE)	Napa, Oakland, Travis CX	P, T, J	4,000	RV MISON

10-31. RESPONSIBILITIES.

a. Coordinate arrival sequence with Grove for OAK Runways 27/29 when staggered approaches are required.

b. During in-trail operations, coordinate with Niles to establish a sequence for SFO arrivals.

c. Request the release of HWD-OSI departures from Foster.

d. Request the release of HWD departures landing in San Jose CX from Toga (SFOW) / Hooks (SJCE).

10-32. EXCEPTIONS TO TRANSFER OF CONTROL.

Foster does not have control for descent of arrivals in Mulford airspace until south of the OAK Runway 29 localizer.

10-33. RESERVED.

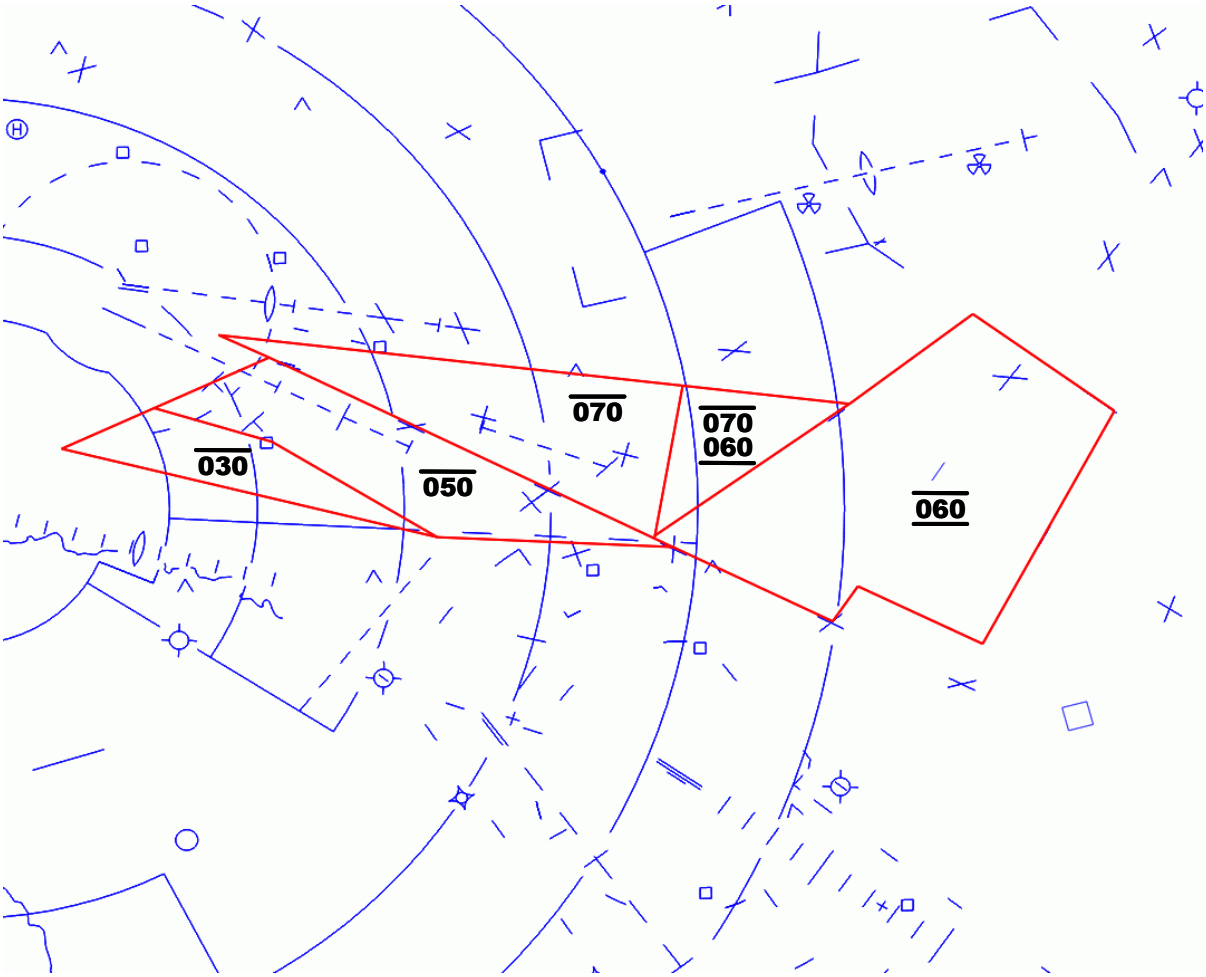
SECTION 9. MULFORD – OAKE

10-34. FREQUENCIES.

a. 124.40 MHz.

b. 351.80 MHz.

10-35. AIRSPACE DIAGRAM.



10-36. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
FOSTER	HAF	P, T, J	4,000	RV east of Dumbarton Bridge
FOSTER	SFO	P, T, J	4,000 (IFR) 3,500 (VFR)	3 miles east of OAK towards BRIJJ
FOSTER	SQL	P, T	3,000	RV west of Dumbarton Bridge
TOGA (SFOW) HOOKS (SJCE)	San Jose CX (HWD Depts Only)	P, T	3,000	RV at least 1 mile west of NUQ
TOGA (SFOW)	San Jose CX (HWD Depts Only)	J	6,000	RV at least 3 miles east of MABRY
HOOKS (SJCE)	SJC (HWD Depts Only)	P, T, J	2,000	RV to SJC 12R Localizer

10-37. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
FOSTER	Oakland CX	J	4,000	RV east of Dumbarton Bridge
FOSTER	SQL Departures	P, T	3,000	RV west of Dumbarton Bridge
RICHMOND	HWD	J	5,000	
TOGA (SFOW) HOOKS (SJCE)	Napa, Oakland, Travis CX (PAO Depts Only)	P, T, J	3,000	via Dumbarton Bridge

TOGA (SFOW) HOOKS (SJCE)	Napa, Oakland, Travis CX	P, T, J	4,000	RV MISON

10-38. RESPONSIBILITIES.

a. Request the release of HWD departures from Richmond.

b. Request the release of HWD-OSI departures from Foster.

c. Inform Richmond when HWD departure is clear.

d. During SJCE, coordinate with Hooks prior to releasing HWD or OAK departures landing in the San Jose CX.

e. During in-trail operations, coordinate with Niles to establish a sequence for SFO arrivals.

f. Point-out to Richmond all HWD arrivals.

g. Call for release any SFO departures heading 050° with Richmond.

10-39. EXCEPTIONS TO TRANSFER OF CONTROL.

Foster does not have control for descent of arrivals in Mulford airspace until south of the OAK Runway 29 localizer.

10-40. RESERVED.

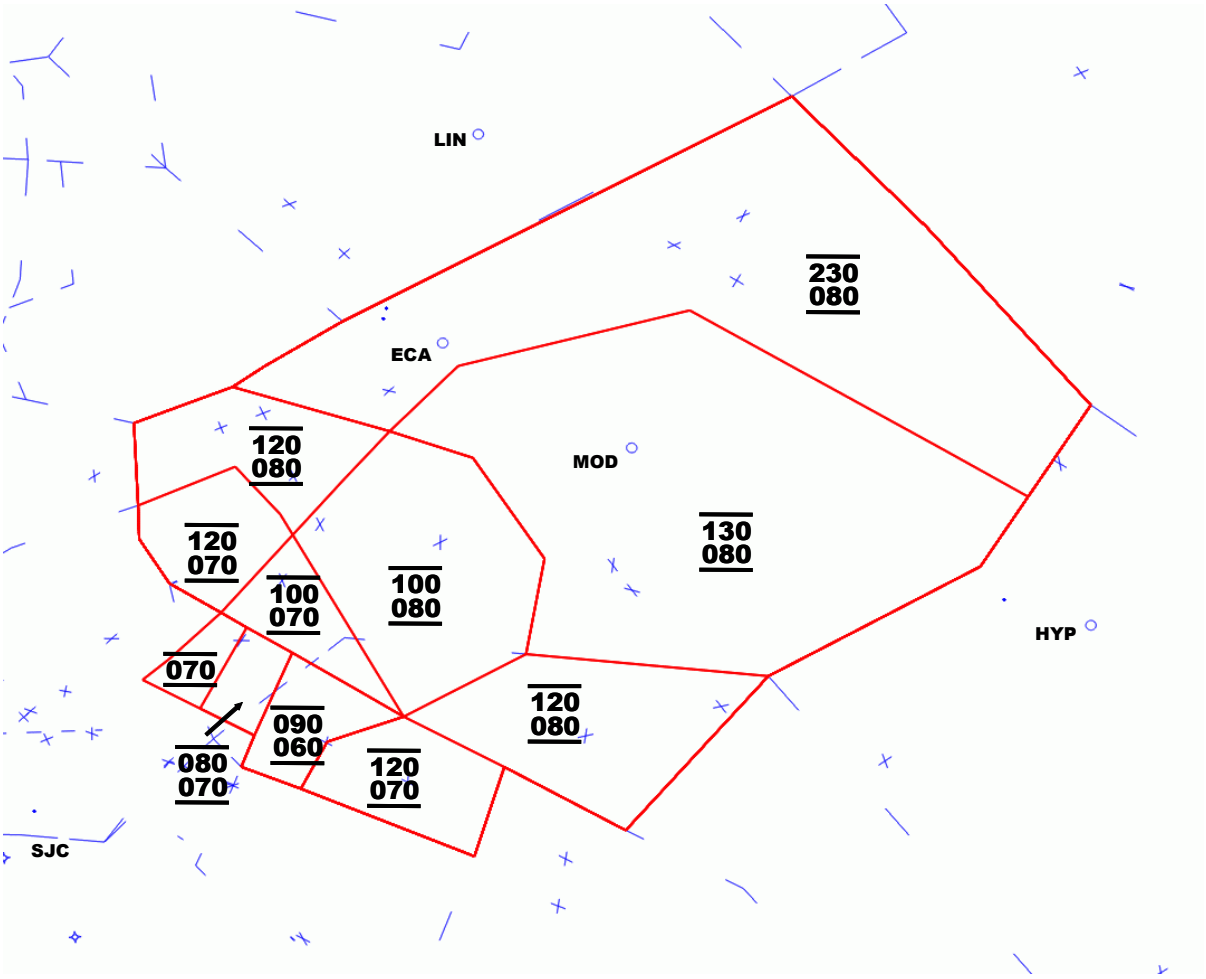
SECTION 10. SUNOL - SFOW

10-41. FREQUENCIES.

a. 124.80 MHz.

b. 263.15 MHz.

10-42. AIRSPACE DIAGRAM.



10-43. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
CEDAR	SFO via MOD	J	15,000	
FAIRFIELD	Napa CX via OAKEY Gate	P, T J	8,000 10,000	
KIRKWOOD	Mather and Sacramento CX	P, T, J	14,000 or filed lower altitude	
KIRKWOOD	WRAPS STAR or LIN Direct	J	Cross LIN @ 16,000	
KIRKWOOD	Travis CX via OAKEY STAR, V108, or OAKEY Gate	J	Cross LIN @ 12,000	
LICKE TOGA (SJCE)	San Jose CX via MOD216R	T, J	7,000	
MORGAN	V111	J	10,000	
NILES	SFO via CEDES	T	9,000	

10-44. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
CASTLE	PXN STAR or V301	P, T	Cross BORED @ 8,000	
FAIRFIELD	SFO via SAC157R or RISTI STAR	T	9,000	
GROVE	V195	P, T, J	7,000	
GROVE	V244 or vector ECA	P, T, J	9,000	
KIRKWOOD	MADWIN STAR	J	FL200	
KIRKWOOD	Oakland CX via ECA229R SUNOL	J	13,000 or filed lower altitude	
KIRKWOOD	San Jose CX via ECA183R MOD216R LICKE	T, J	13,000 or filed lower altitude	
KIRKWOOD	SFO via ECA CEDES	T	13,000	
KIRKWOOD	SFO via MOD	J	15,000	
KIRKWOOD	Monterey CX via MOD V111	T, J	13,000 or filed lower altitude	

MORGAN	PXN STAR or V301	J	Cross BORED @ 10,000
TURLOCK	Stockton, Oakland, or Travis CX	P, T, J	12,000 or filed lower altitude (SFOW) 10,000 (SFOE)

10-45. EXCEPTIONS TO TRANSFER OF CONTROL.

Niles does not have control for descent in Sunol's airspace.

10-46. RESERVED.

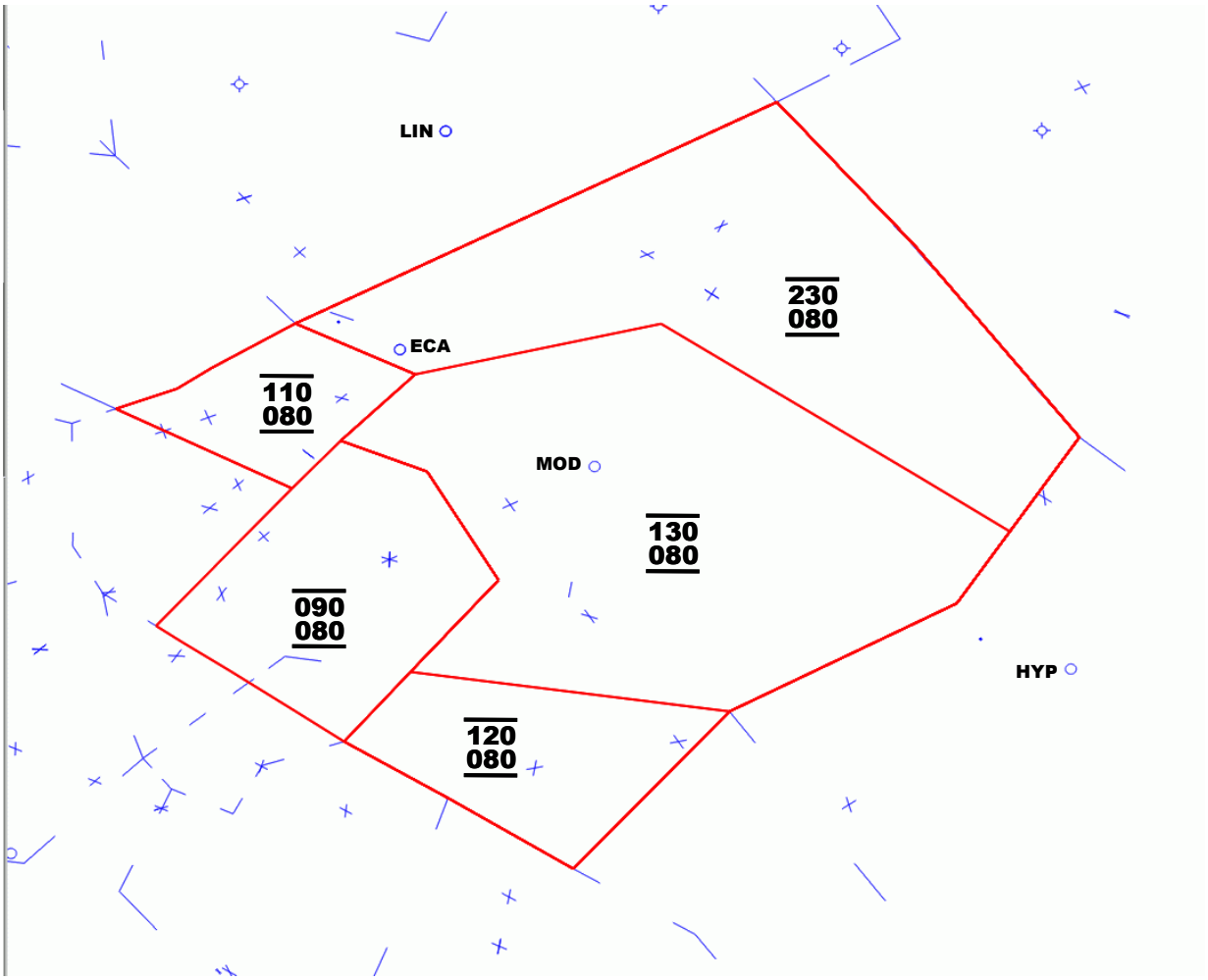
SECTION 11. SUNOL - SFOE

10-47. FREQUENCIES.

a. 124.80 MHz.

b. 263.15 MHz.

10-48. AIRSPACE DIAGRAM.



10-49. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
CEDAR	SFO via MOD	J	15,000	
FAIRFIELD	REJOY or PITTS	P, T	8,000	
KIRKWOOD	Mather and Sacramento CX	P, T, J	14,000 or filed lower altitude	
KIRKWOOD	WRAPS STAR or LIN Direct	J	Cross LIN @ 16,000	
KIRKWOOD	Travis CX via OAKEY STAR, V108, or OAKEY Gate	J	Cross LIN @ 12,000	
MORGAN	V111	J	10,000	
NILES	COMMO or MANTECA STARs	J	Cross LOCKE at 8,000	
TOGA	San Jose CX and SQL GPS via MOD216R	T, J	9,000	

10-50. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
KIRKWOOD	MANTECA STAR	J	FL200	
KIRKWOOD	OAK via ECA229R SGD107R UPEND	J	10,000	
KIRKWOOD	HWD via ECA229R SUNOL	J	10,000 or filed lower altitude	
KIRKWOOD	San Jose CX via ECA183R MOD216R LICKE	T, J	9,000	
KIRKWOOD	Monterey CX via MOD V111	T, J	13,000 or filed lower altitude	
KIRKWOOD	SFO via MOD	J	15,000	
MORGAN	COMMO STAR	J	Cross VOLTA @ 12,000	
TURLOCK	Stockton, Oakland, or Travis CX	P, T, J	10,000 (SFOE)	

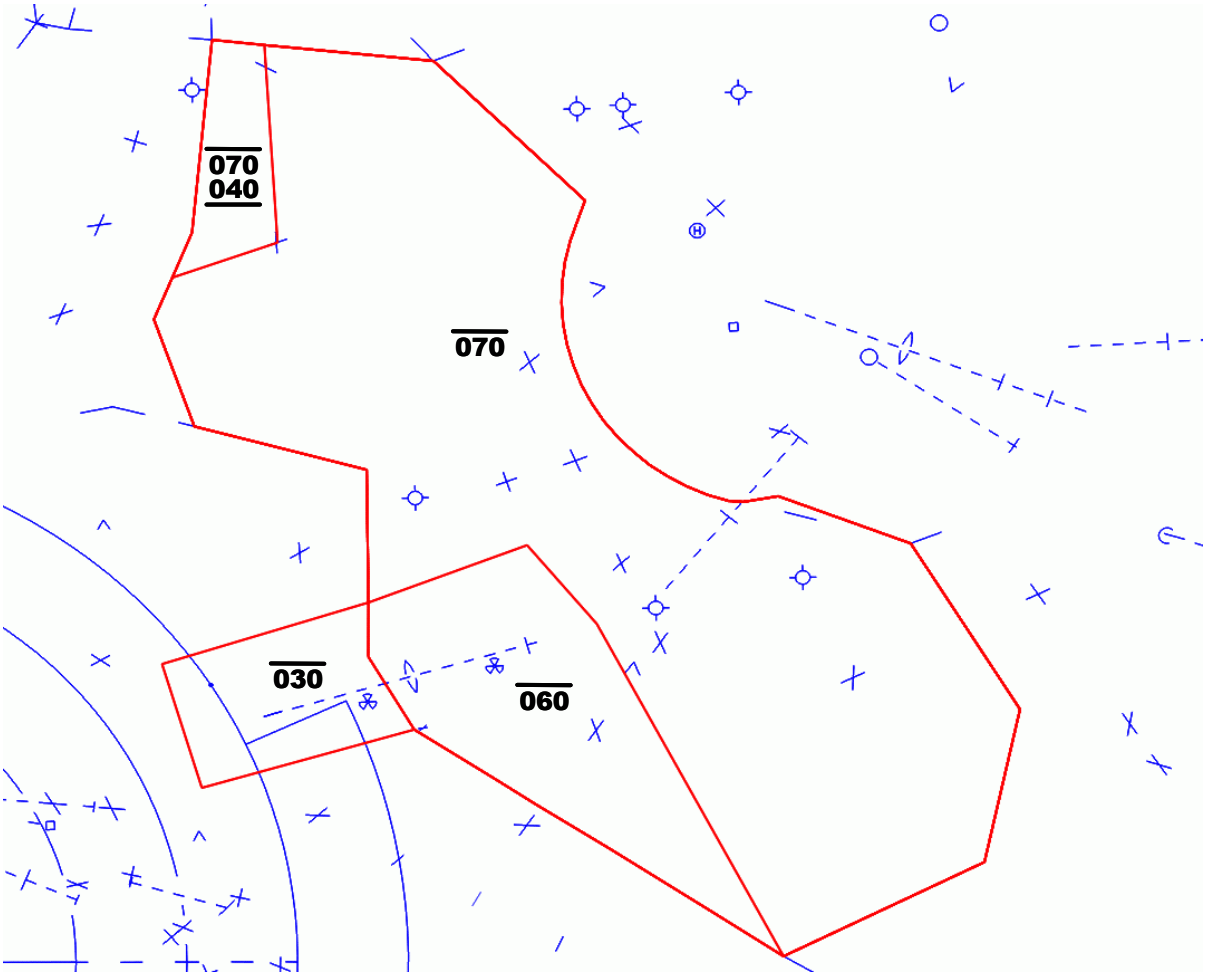
SECTION 12. TRACY - SFOW

10-51. FREQUENCIES.

a. 123.85 MHz.

b. 278.30 MHz.

10-52. AIRSPACE DIAGRAM.



10-53. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
DELTA	SAC and Travis CX	P, T, J	4,000	
DELTA	Sacramento and Mather CX	P, T, J	6,000	
GROVE	V195 or V334 or vector SUNOL	P, T	6,000	
GROVE	San Jose CX via CEDES	P	6,000	

10-54. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
DELTA	Oakland CX via V334 SUNOL	P, T	6,000	
DELTA	San Jose CX and SQL via SAC157R	P	6,000	
DELTA	Stockton and Modesto CX	P T, J	5,000 7,000	
GROVE	V244 or vector ECA	P T, J	5,000 7,000	
GROVE	V334 or vector SAC	P T, J	5,000 7,000	
KIRKWOOD	Modesto and Stockton CX	P, T, J	8,000	
KIRKWOOD	Oakland CX via ECA229R SUNOL	T	8,000	
KIRKWOOD	San Jose CX and OAK	P	8,000	
KIRKWOOD	Travis CX via OAKEY STAR, V108, or OAKEY Gate	P, T, J	8,000	
LICKE (SFOW) TOGA (SJCE)	Modesto and Stockton CX via MOD216R	J	6,000	

10-55. RESPONSIBILITIES.

Protect the LVK Runway 25 Departure Procedure.

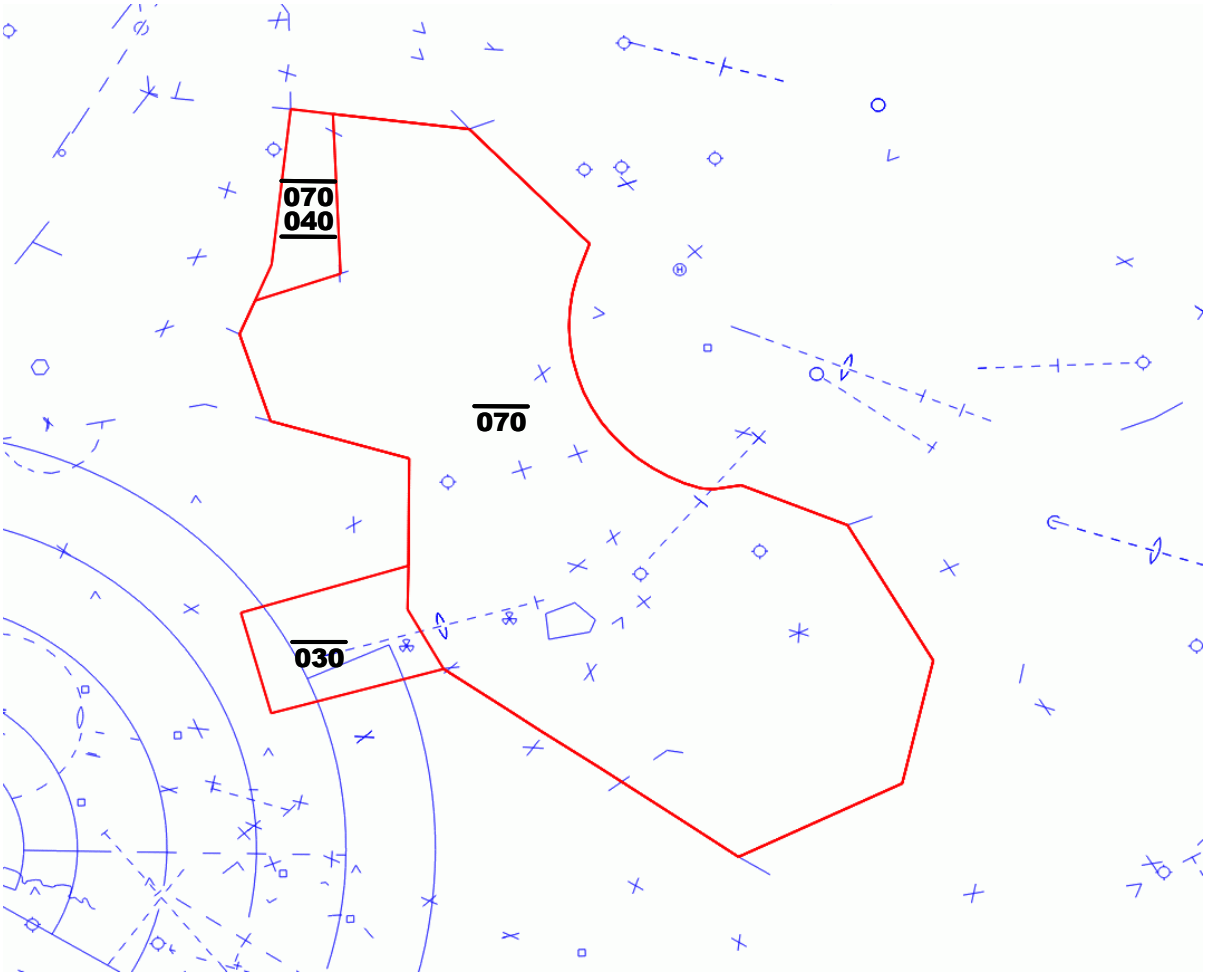
SECTION 13. TRACY - SFOE

10-56. FREQUENCIES.

a. 123.85 MHz.

b. 278.30 MHz.

10-57. AIRSPACE DIAGRAM.



10-58. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
DELTA	SAC and Travis CX	P, T, J	4,000	
DELTA	Sacramento and Mather CX	P, T, J	6,000	
DIABLO	V195 or V334 or vector SUNOL	P, T	6,000	
DIABLO	San Jose CX or SQL GPS via ECA215R	P	6,000	

10-59. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
DELTA	Oakland CX via V334 SUNOL	P, T	6,000	
DELTA	San Jose CX and SQL via SAC157R	P	6,000	
DELTA	Stockton and Modesto CX	P T, J	5,000 7,000	
DIABLO	V195, V244, or vector ECA	P T, J	5,000 7,000	
DIABLO	V334 or vector SAC	P T, J	5,000 7,000	
KIRKWOOD	Modesto and Stockton CX	P, T, J	8,000	
KIRKWOOD	Oakland CX via ECA229R SUNOL	T	8,000	
KIRKWOOD	San Jose CX and OAK	P	8,000	
KIRKWOOD	Travis CX via OAKEY STAR, V108, or OAKEY Gate	P, T, J	8,000	
TOGA	Modesto and Stockton CX via MOD216R	J	6,000	

10-60. RESPONSIBILITIES.

Protect the LVK Runway 25 Departure Procedure.

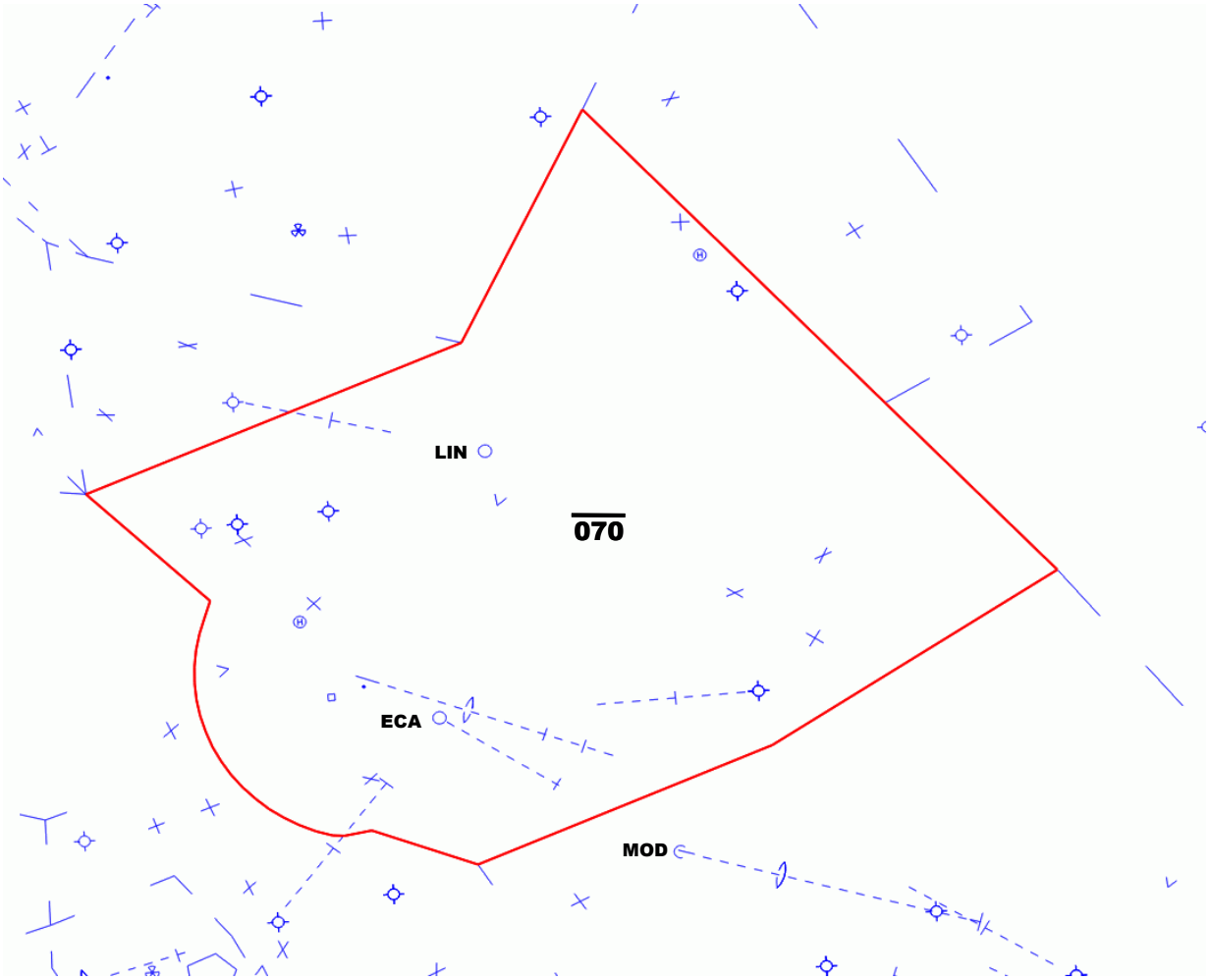
SECTION 14. VALLEY

10-61. FREQUENCIES.

a. 125.10 MHz.

b. 363.20 MHz.

10-62. AIRSPACE DIAGRAM.



10-63. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
DELTA	SAC and Travis CX	P, T, J	4,000	
DELTA	Sacramento and Mather CX	P, T, J	6,000	

10-64. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
DELTA	Stockton and Modesto CX	P T, J	5,000 7,000	
KIRKWOOD	Modesto and Stockton CX	P, T, J	8,000	
KIRKWOOD	Oakland CX via ECA229R SUNOL	T	8,000	
KIRKWOOD	San Jose CX and OAK	P	8,000	
KIRKWOOD	Travis CX via OAKEY STAR, V108, or OAKEY Gate	P, T, J	8,000	

10-65. RESPONSIBILITIES.

a. Point-out all 1O3 arrivals to Delta.

b. Issue approach clearance to O70 on aircraft arriving from the south and point-out to Expo.

10-66. RESERVED.

CHAPTER 11. AREA D

SECTION 1. AREA D SPECIFIC RESPONSIBILITIES

11-1. RESERVED.

SECTION 2. AREA D SPECIFIC ARTS ENTRIES

11-2. SECONDARY SCRATCHPAD ENTRIES.

The following entries can be used within Area D:

a. HWD

SCRATCHPAD ENTRY	MEANING	ARTS SHORTCUT
AIS	Airport In Sight	/
VRA	Aircraft assign/executing the VOR-A Approach	Δ
VRB	Aircraft assign/executing the VOR-B Approach	.

b. OAK

SCRATCHPAD ENTRY	MEANING	ARTS SHORTCUT
27L	Aircraft requesting Runway 27L (SFOW)	.
AIS	Airport In Sight	/
RB	Aircraft entering a right base for Runway 27R	+

SECTION 3. AREA D SPECIAL OPERATIONS

11-3. RESERVED.

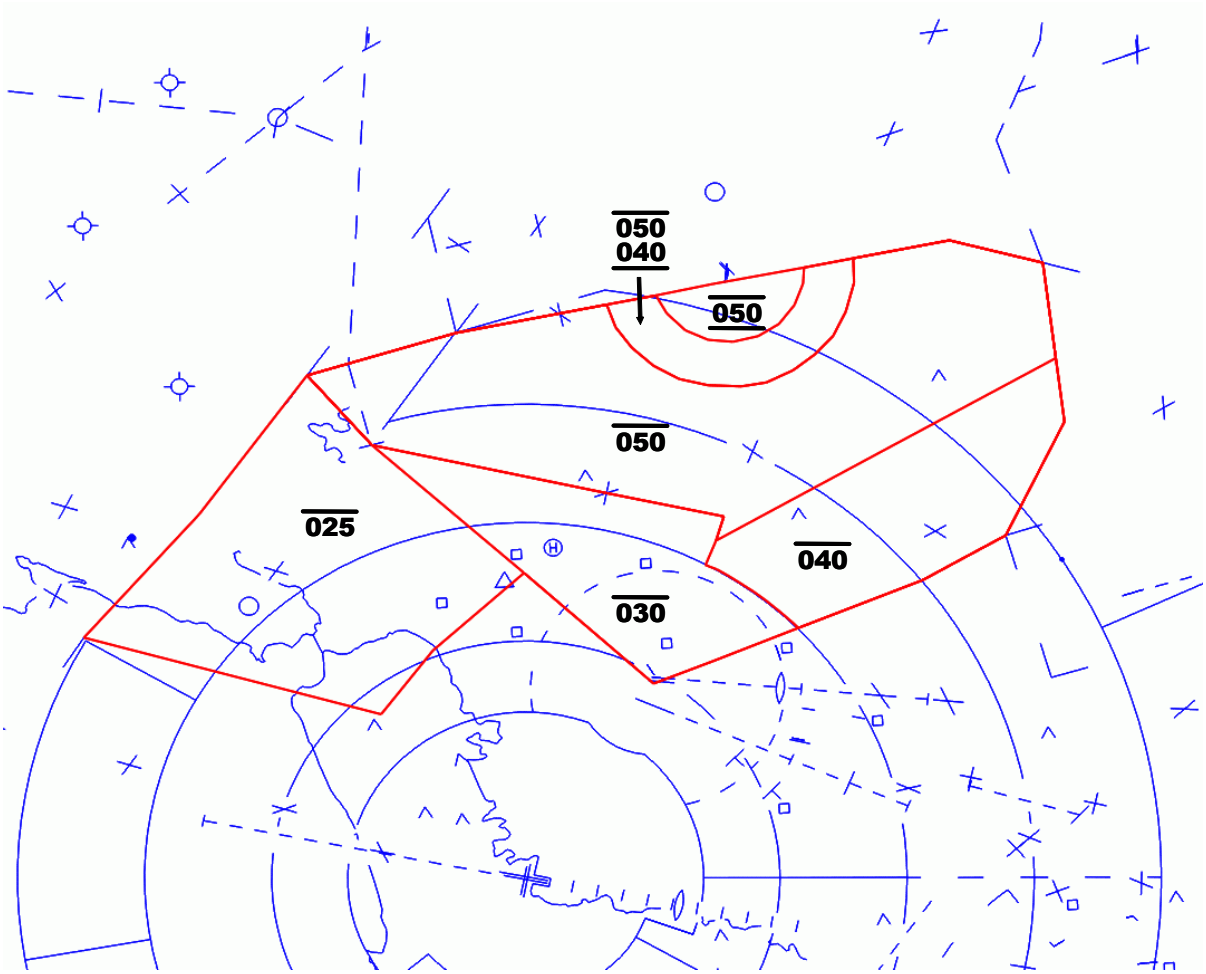
SECTION 4. DIABLO – SFOW

11-4. FREQUENCIES.

a. 127.0 MHz.

b. 298.95 MHz.

11-5. AIRSPACE DIAGRAM.



11-6. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
GROVE	Oakland CX / San Jose CX	P, T	4,000	North of OAK
MULFORD	SFO	P, T, J	4,000 (IFR) 3,500 (VFR)	3 miles east of OAK towards BRIJJ

11-7. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
GROVE	Napa CX	P, T, J	5,000	RV vicinity of Danville Tower
GROVE	via V6	P, T, J	5,000	RV to join V6 over COLLI
GROVE	CCR	P, T, J	5,000	RV Direct

11-8. RESPONSIBILITIES.

Control OAK IFR departures outbound on the OAK313R.

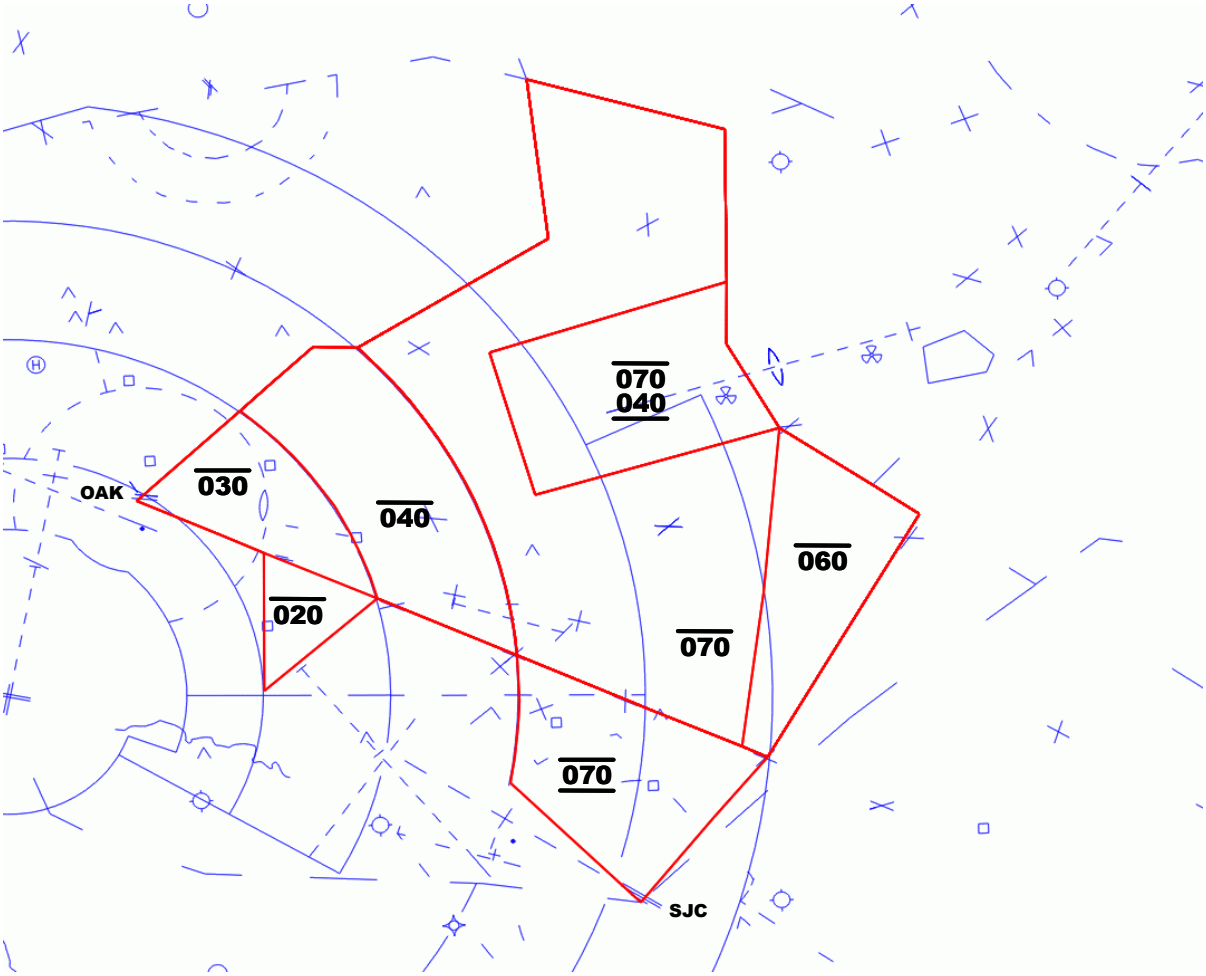
SECTION 5. DIABLO - SFOE

11-9. FREQUENCIES.

a. 127.0 MHz.

b. 298.95 MHz.

11-10. AIRSPACE DIAGRAM.



11-11. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
GROVE	OAK	P, T	4,000	
HOOKS	San Jose CX	P, T, J	4,000	Direct SJC VOR
HOOKS	VFR SJC Arrivals	P	Cross Embassy Suites at or above 2,000	
HOOKS	VFR SJC Arrivals	T, J	At or above 3,500	RV Nummi Plant
TOGA	San Jose CX	P, T, J	6,000	Direct SJC VOR
TOGA	V107	P, T, J	7,000	
TRACY	Napa or Travis CX via V334 OAKEY V108	P, T, J	5,000	
TRACY	V195, V244, or vector ECA	P T, J	5,000 7,000	
TRACY	V334 or vector SAC	P T, J	5,000 7,000	

11-12. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
GROVE	HWD	P, T, J	4,000	
RICHMOND	V244 / V334	P T, J	5,000 7,000	Vector south of and parallel to V244
RICHMOND	V244 / V334	P, T, J	3,000	SQL Departures
TOGA	V301	P, T	7,000	
TOGA	V334 or SUNOL DP	P, T	5,000	
TRACY	V195 or V334 or vector SUNOL	P, T	6,000	
TRACY	San Jose CX or SQL GPS via ECA215R	P	6,000	

11-13. RESPONSIBILITIES.

a. Coordinate with CI-1 for release of HWD departures.

b. Issue Class C arrival instructions for VFR aircraft landing at SJC.

c. Point-out HWD IFR arrivals and departures to Richmond.

d. Point-out HWD IFR arrivals to Hooks.

e. Enter the first fix outside of NCT airspace into the primary scratchpad on all departures routed via ALTAM.

11-14. PRE-ARRANGED COORDINATION.

HWD departures shall be handled as follows:

a. Diablo shall initiate an automated point-out to Richmond.

b. Acceptance of an automated point-out constitutes Richmond's approval for Diablo to climb the departure to 3,000 feet.

11-15. RESERVED.

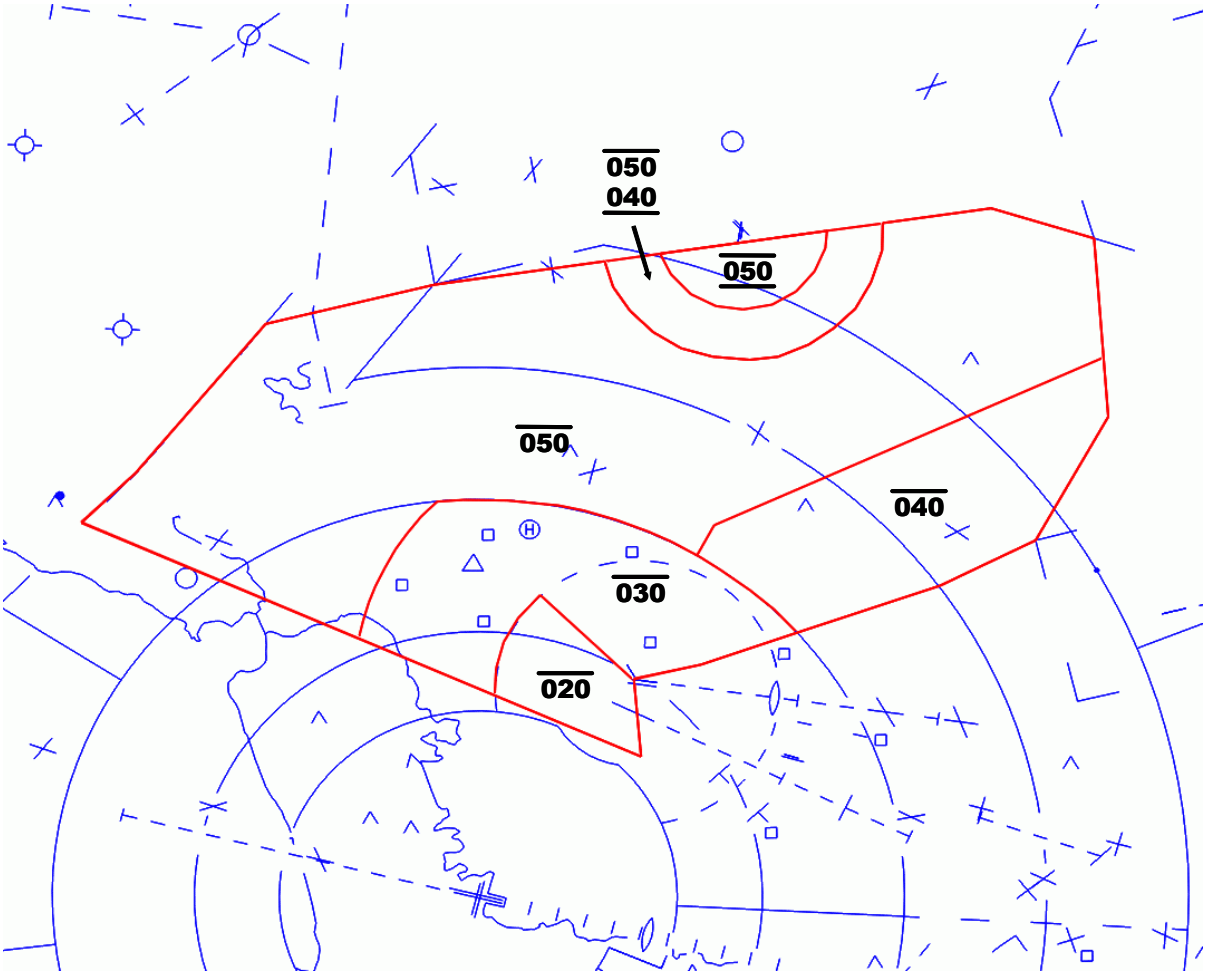
SECTION 6. DIABLO - OAKE

11-16. FREQUENCIES.

a. 127.0 MHz.

b. 298.95 MHz.

11-17. AIRSPACE DIAGRAM.



11-18. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
GROVE	HWD	P, T	4,000	North of OAK
MULFORD	SFO	P, T, J	4,000 (IFR) 3,500 (VFR)	3 miles east of OAK towards BRIJJ

11-19. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
GROVE	OAK	P, T J	4,000 5,000	North of OAK
GROVE	Napa CX	P, T, J	4,000	RV vicinity of Danville Tower
GROVE	via V6	P, T, J	4,000	RV to join V6 over COLLI
GROVE	CCR	P, T, J	4,000	RV Direct
SUTRO	OAK	J	6,000	RV SAU

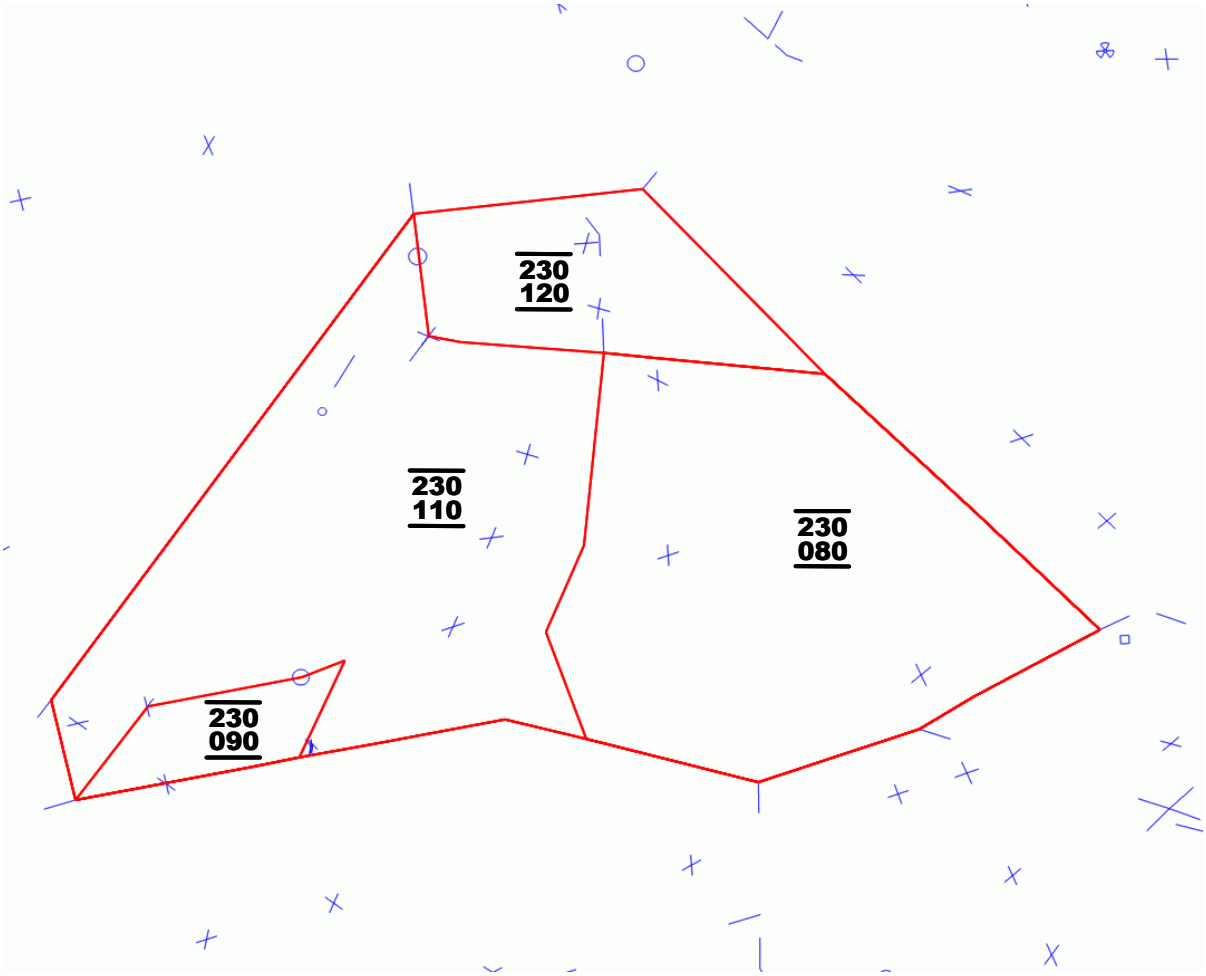
SECTION 7. FAIRFIELD - SFOW

11-20. FREQUENCIES.

a. 126.32 MHz.

b. 339.80 MHz.

11-21. AIRSPACE DIAGRAM.



11-22. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
CEDAR	CCR and SUU departures via FRA AVE PXN EHF	P, T, J		RV west of the SAC157R
SUNOL	SFO via SAC157R or RISTI STAR	T	9,000	

11-23. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
DELTA	SFO via SAC157R or RISTI STAR	T	9,000	
GROVE	V334 or vector SAC	P, T, J	10,000	
GROVE	Departures via LIN	T, J	10,000	ALTAM RV 360°
KIRKWOOD	Napa CX	J	16,000	
RICHMOND	Oakland and San Francisco CX DP's	T J	11,000 15,000	
SUNOL	Napa CX via OAKEY Gate	P, T J	8,000 10,000	

11-24. RESPONSIBILITIES.

a. When Fairfield is utilizing the OAK Sensor, hand-off departures routed over LIN or SAC to Kirkwood in lieu of a point-out. Communications shall be retained by Fairfield and then transferred to ZOA upon completion of the hand-off to ZOA.

b. Enter the first fix outside of NCT airspace into the primary scratchpad on all CCR and SUU departures.

c. Point-out to Richmond any aircraft southeast-bound that will be handed off to Cedar.

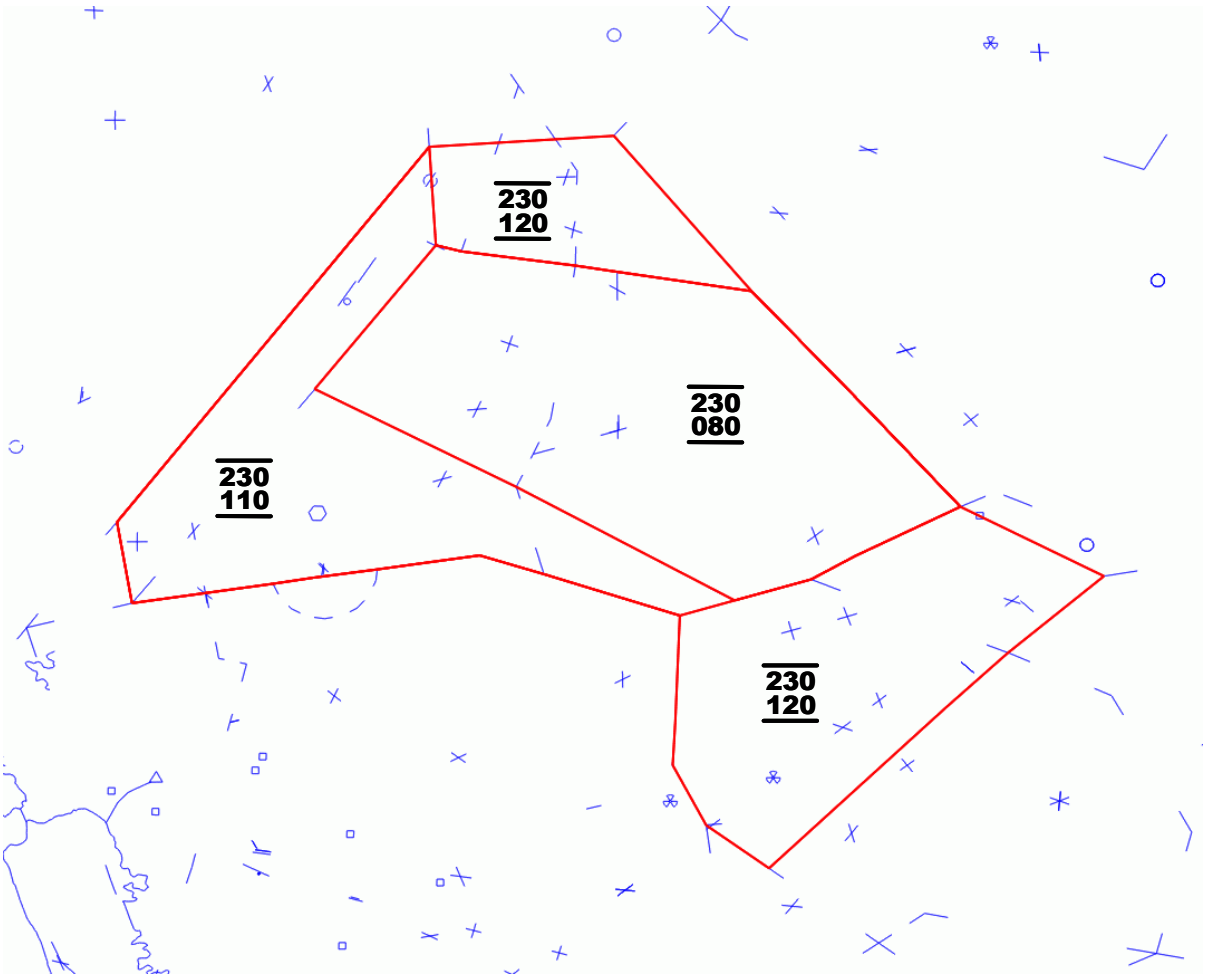
SECTION 8. FAIRFIELD - SFOE

11-25. FREQUENCIES.

a. 126.32 MHz.

b. 339.80 MHz.

11-26. AIRSPACE DIAGRAM.



11-27. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
CEDAR	CCR and SUU departures via FRA AVE PXN EHF	P, T, J		RV west of the SAC157R
NILES	SFO via V6	P, T	8,000	

11-28. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
CEDAR	Napa CX via MOD CCR	J	FL200	
DELTA	SFO via V6	P, T	8,000	
KIRKWOOD	Napa CX via OAKEY GATE	P, T J	8,000 10,000	
RICHMOND	Oakland and San Francisco CX DP's	T J	11,000 15,000	
SUNOL	REJOY or PITTS	P, T	8,000	

11-29. RESPONSIBILITIES.

a. When Fairfield is utilizing the OAK Sensor, hand-off departures routed over LIN or SAC to Kirkwood in lieu of a point-out. Communications shall be retained by Fairfield and then transferred to ZOA upon completion of the hand-off to ZOA.

b. Enter the first fix outside of NCT airspace into the primary scratchpad on all CCR and SUU departures.

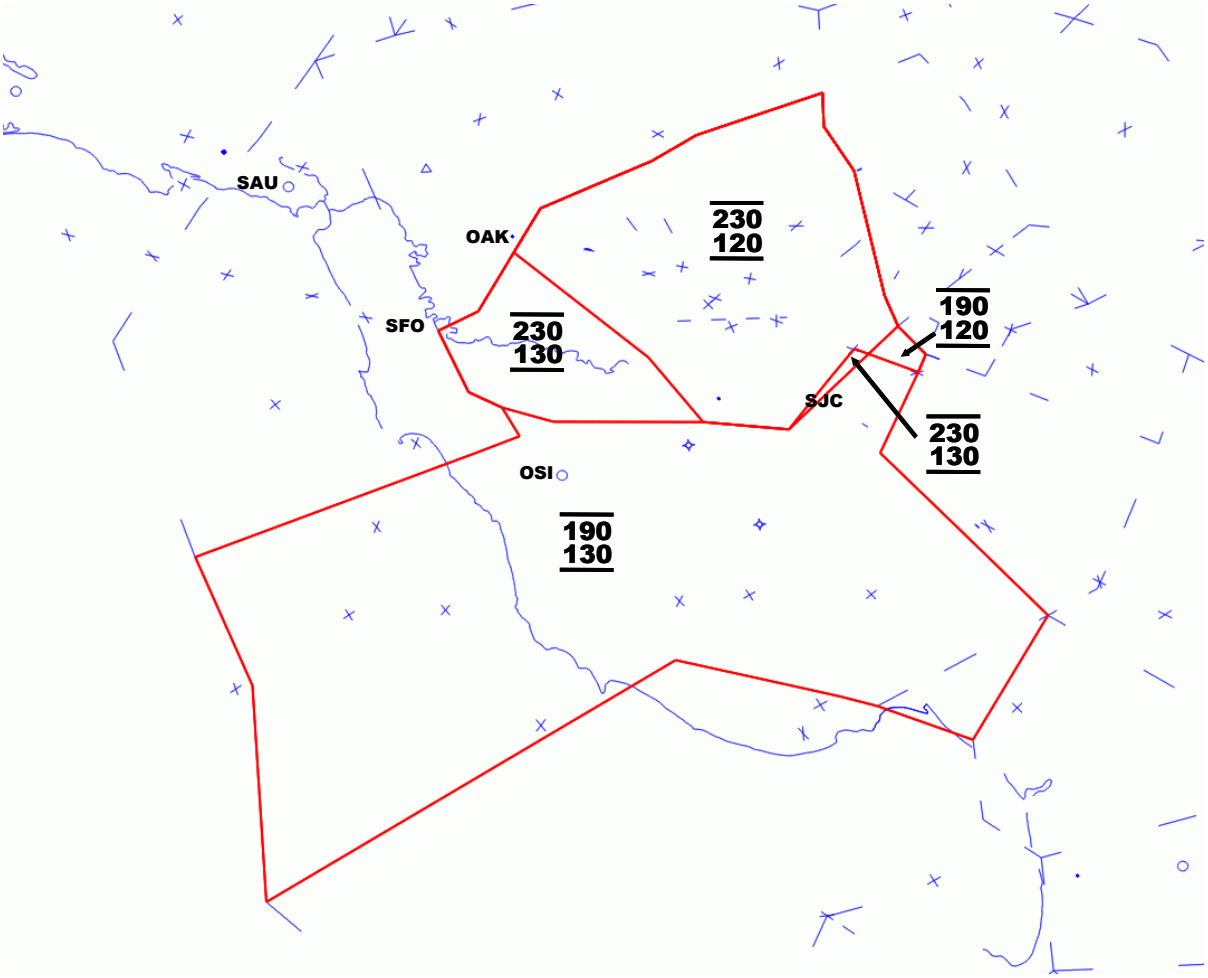
SECTION 9. QUAKE - SFOW

11-30. FREQUENCIES.

a. 127.97 MHz.

b. 285.47 MHz.

11-31. AIRSPACE DIAGRAM.



11-32. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
LAGUNA	EUGEN / NUEVO DP	P, T	19,000 or lower filed altitude	
RICHMOND	Napa CX via OAK	T, J	16,000	
SUTRO	Napa CX via V27	T, J	16,000	

11-33. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
CEDAR	Napa CX via MOD OAK SAU	T, J	FL200	
LAGUNA	Monterey CX DP's	P, T, J	19,000 or lower filed altitude	
MORGAN	Mather and Sacramento CX	J	13,000	RV SJC VOR
SUTRO	PORTE / SKYLINE / OFFSHORE / COAST DP's	J	15,000	
SUTRO	EUGEN / NUEVO DP's	T	13,000	
TOGA	LOUPE / DANVILLE DP's	J	15,000	RT direct SJC

11-34. RESPONSIBILITIES.

a. Quake will protect the BSR STAR 14,000 feet and below.

b. Point-out to Toga aircraft that are en-route to CZQ climbing to FL190.

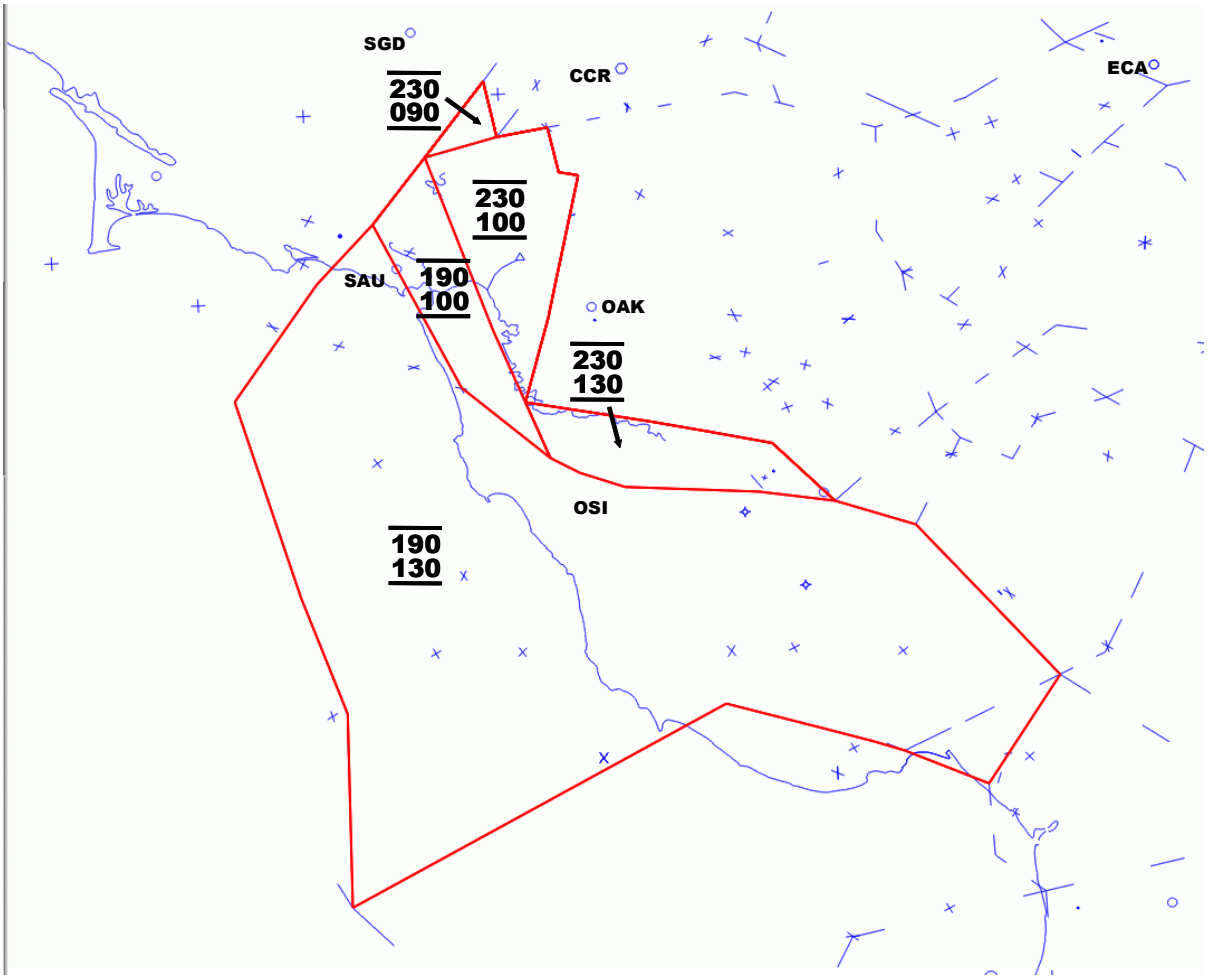
SECTION 10. QUAKE - SFOE

11-35. FREQUENCIES.

a. 127.97 MHz.

b. 285.47 MHz.

11-36. AIRSPACE DIAGRAM.



11-37. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
SUTRO	LUVEE DP	T	10,000	Heading 340°
SUTRO	MOLEN DP	J	12,000	Heading 340°
SUTRO	PORTE / SKYLINE DP’s	J	15,000	

11-38. RESPONSIBILITIES.

Quake is responsible for retaining the data-block on Napa CX arrivals after handing-off to Richmond.

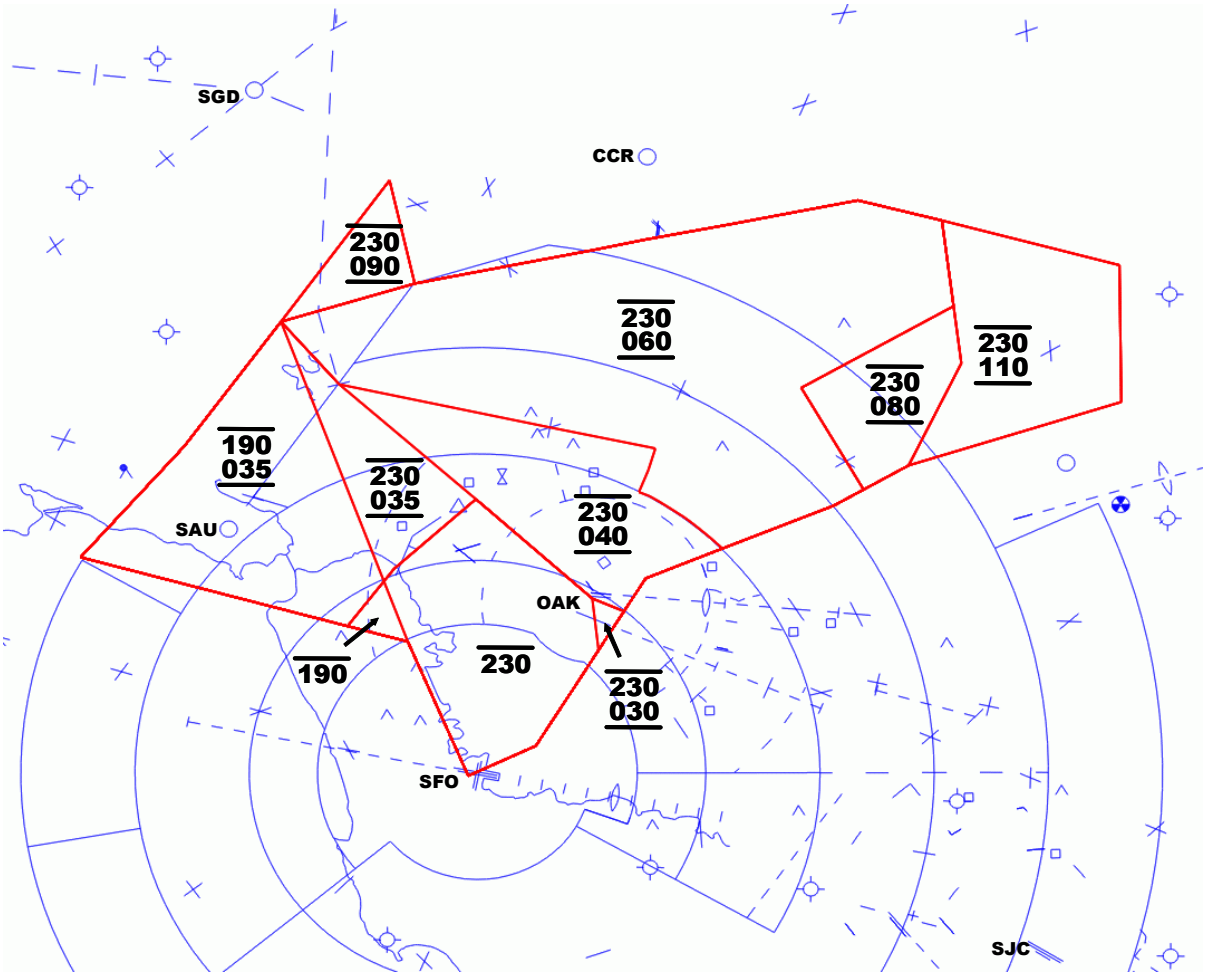
SECTION 11. RICHMOND – SFOW

11-39. FREQUENCIES.

a. 120.9 MHz.

b. 323.20 MHz.

11-40. AIRSPACE DIAGRAM.



11-41. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
CEDAR	V244 (Filed above 13,000)	T	FL230 or lower filed altitude	
FAIRFIELD	Oakland and San Francisco CX DP's	T J	11,000 15,000	
GROVE	V244	P, T	9,000	Aircraft requesting 9,000 to 13,000
MULFORD	OAK Runway 29	T, J	5,000	Remain north of OAK-SAU line

11-42. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
GROVE	Northbound, requesting 6,000 or higher	P, T, J	6,000	Heading 360°
QUAKE	Napa CX via OAK	T, J	16,000	

11-43. RESPONSIBILITIES.

a. Protect the OAK 313R departure route 3,000 feet and below.

b. Protect aircraft on right traffic for SFO Runways 28, "Down the Bay", descending to 6,000 feet.

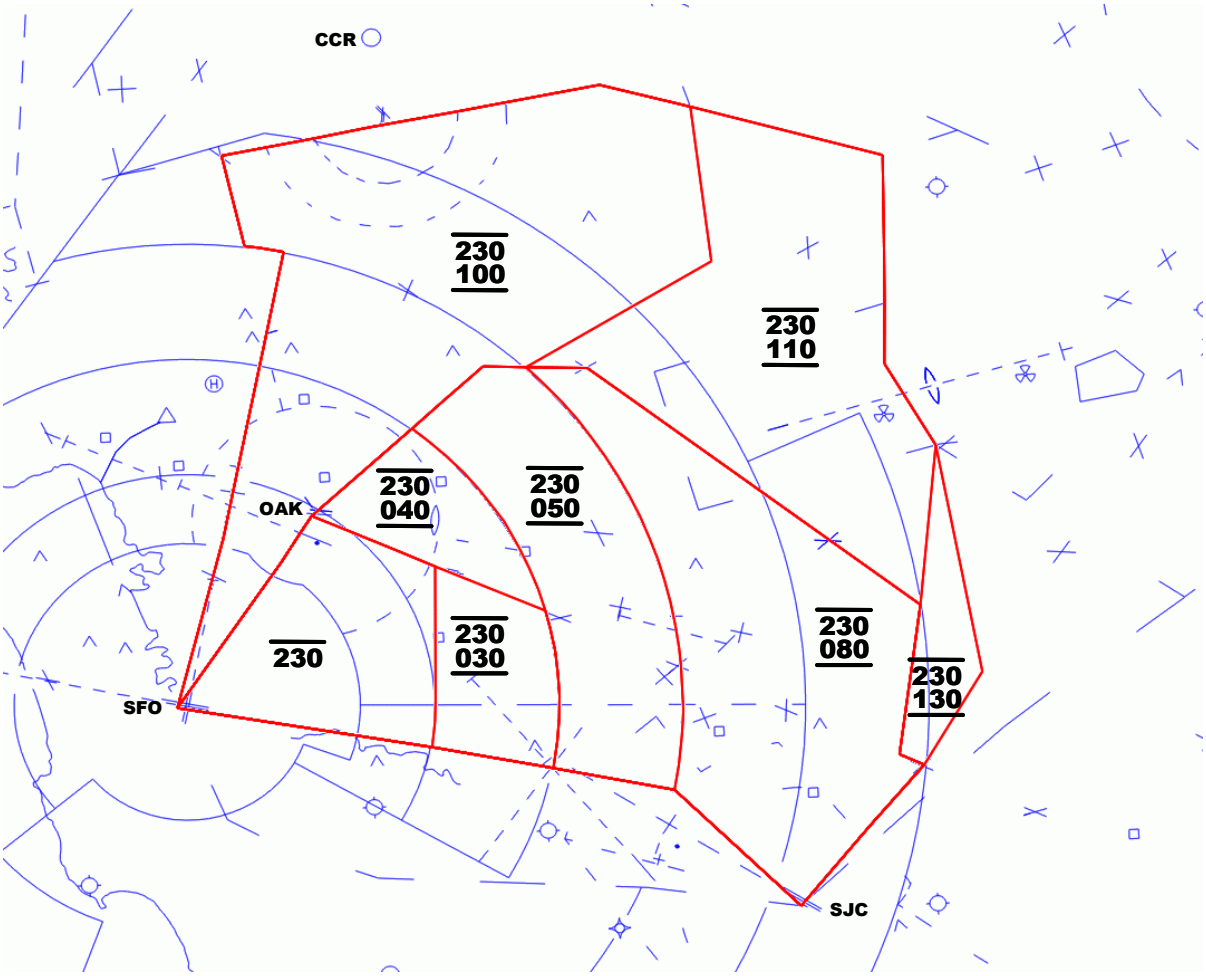
SECTION 12. RICHMOND – SFOE

11-44. FREQUENCIES.

a. 120.9 MHz.

b. 323.20 MHz.

11-45. AIRSPACE DIAGRAM.



11-46. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
DIABLO	V244 / V334	P T, J	5,000 7,000	Vector south of and parallel to V244
DIABLO	V244 / V334	P, T, J	3,000	SQL Departures
FAIRFIELD	Oakland and San Francisco CX DP's	T J	11,000 15,000	

11-47. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
GROVE	SFO DP (RUNWAY 28)	P, T, J	5,000	SFO 070°
TOGA	ALTAM DP	J	11,000	Speed 250K

11-48. RESPONSIBILITIES.

During SJCE operations, Toga shall assign aircraft on the LOUPE DP to cross the SJC VOR at and maintain 8,000 feet and hand-off to Richmond.

11-49. PRE-ARRANGED COORDINATION.

HWD departures shall be handled as follows:

a. Diablo shall initiate an automated point-out to Richmond.

b. Acceptance of an automated point-out constitutes Richmond's approval for Diablo to climb the departure to 3,000 feet.

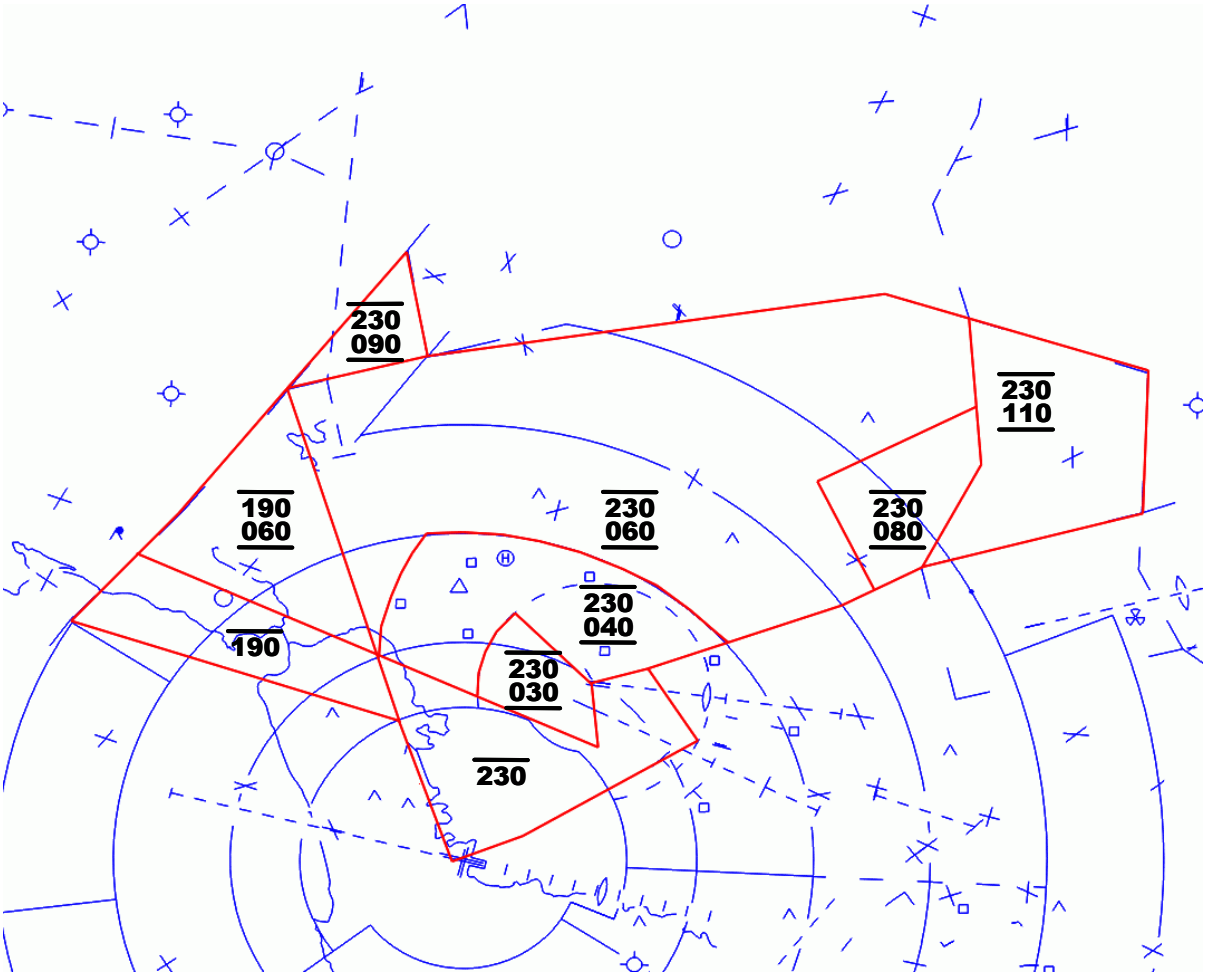
SECTION 13. RICHMOND – OAKE

11-50. FREQUENCIES.

a. 120.9 MHz.

b. 323.20 MHz.

11-51. AIRSPACE DIAGRAM.



11-52. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
CEDAR	V244 (Filed above 13,000)	T	FL230 or lower filed altitude	
FAIRFIELD	Oakland and San Francisco CX DP's	T J	11,000 15,000	
GROVE	V244	P, T	9,000	Aircraft requesting 9,000 to 13,000
MULFORD	HWD	J	5,000	

11-53. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
GROVE	Northbound, requesting 6,000 or higher	P, T, J	6,000	Heading 360°
QUAKE	Napa CX via OAK	T, J	16,000	

11-54. RESPONSIBILITIES.

Upon release of HWD Runway 28 departures, Richmond shall protect at or below 2,000 feet for that departure.

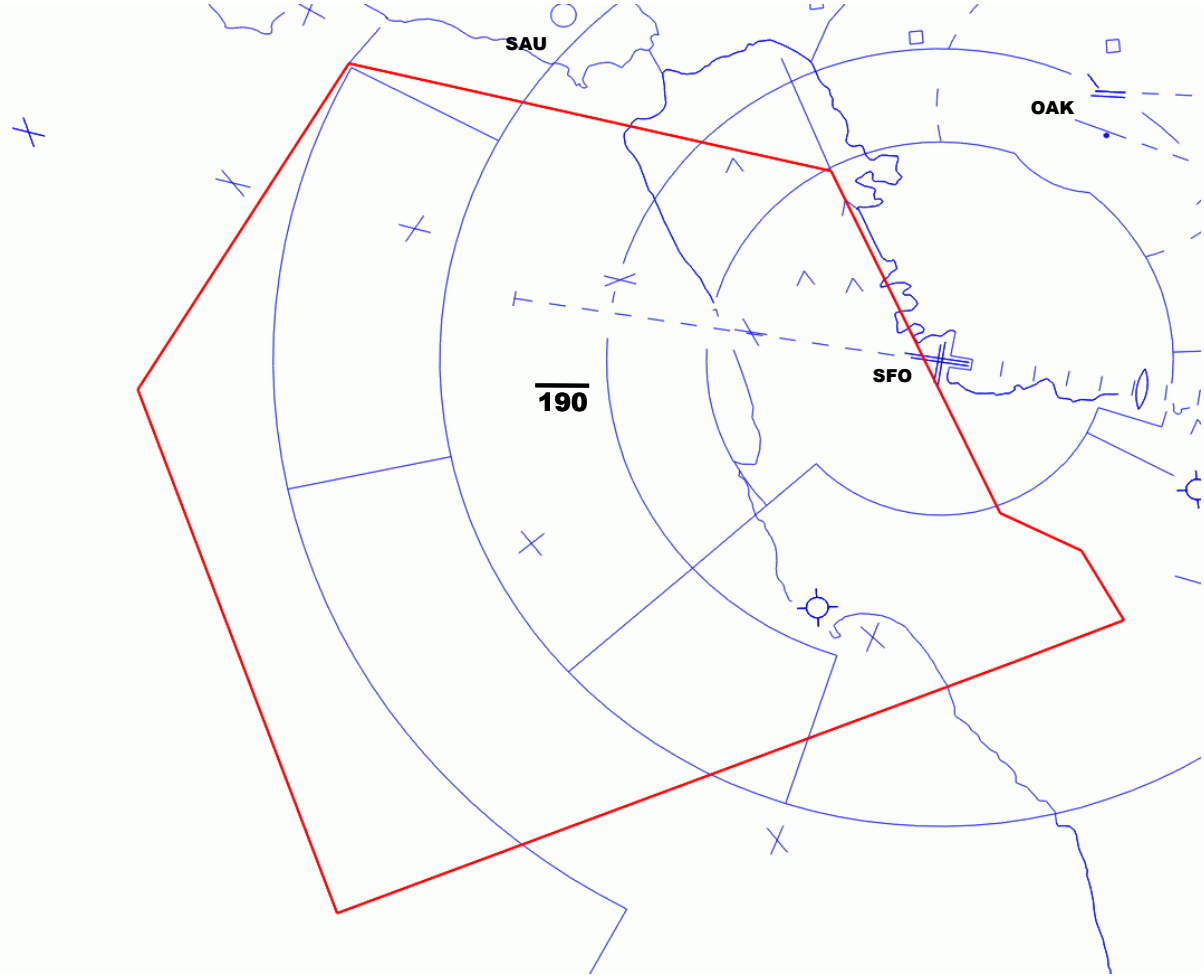
SECTION 14. SUTRO - SFOW

11-55. FREQUENCIES.

a. 135.10 MHz.

b. 307.20 MHz.

11-56. AIRSPACE DIAGRAM.



11-57. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
BOULDER	MRY CX via direct MUNSO	P, T	7,000	During "Side-bys" only
QUAKE	PORTE / SKYLINE / OFFSHORE / COAST DP's	J	15,000	
QUAKE	EUGEN / NUEVO DP's	T	13,000	
WOODSIDE	San Francisco CX	P, T	4,000	South of SFO
WOODSIDE	SFO	J	5,000	South of SFO
WOODSIDE	San Jose CX	P	4,000	South of SFO
WOODSIDE	San Jose CX	T, J	5,000	OSI heading 110° (SFOW) OSI heading 140° (SJCE)

11-58. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
QUAKE	Napa CX via V27	T, J	16,000	
WOODSIDE	All Routes	P, T, J	5,000	Heading 280°, at least 3 miles south of SFO

11-59. RESPONSIBILITIES.

RESERVED.

11-60. PRE-ARRANGED COORDINATION.

a. Boulder shall ensure that all aircraft on the Golden Gate Arrival route be at or descending to 11,000 feet while in Sutro's airspace.

b. PYE-SFO aircraft routed north of SFO on a right downwind for Runways 28, "Down the Bay", shall be handled as follows:

(1) Boulder shall initiate an automated point-out to Sutro.

(2) Acceptance of an automated point-out constitutes Sutro's approval for Boulder to assign 6,000 feet to the aircraft within SFO Class B Airspace Area A.

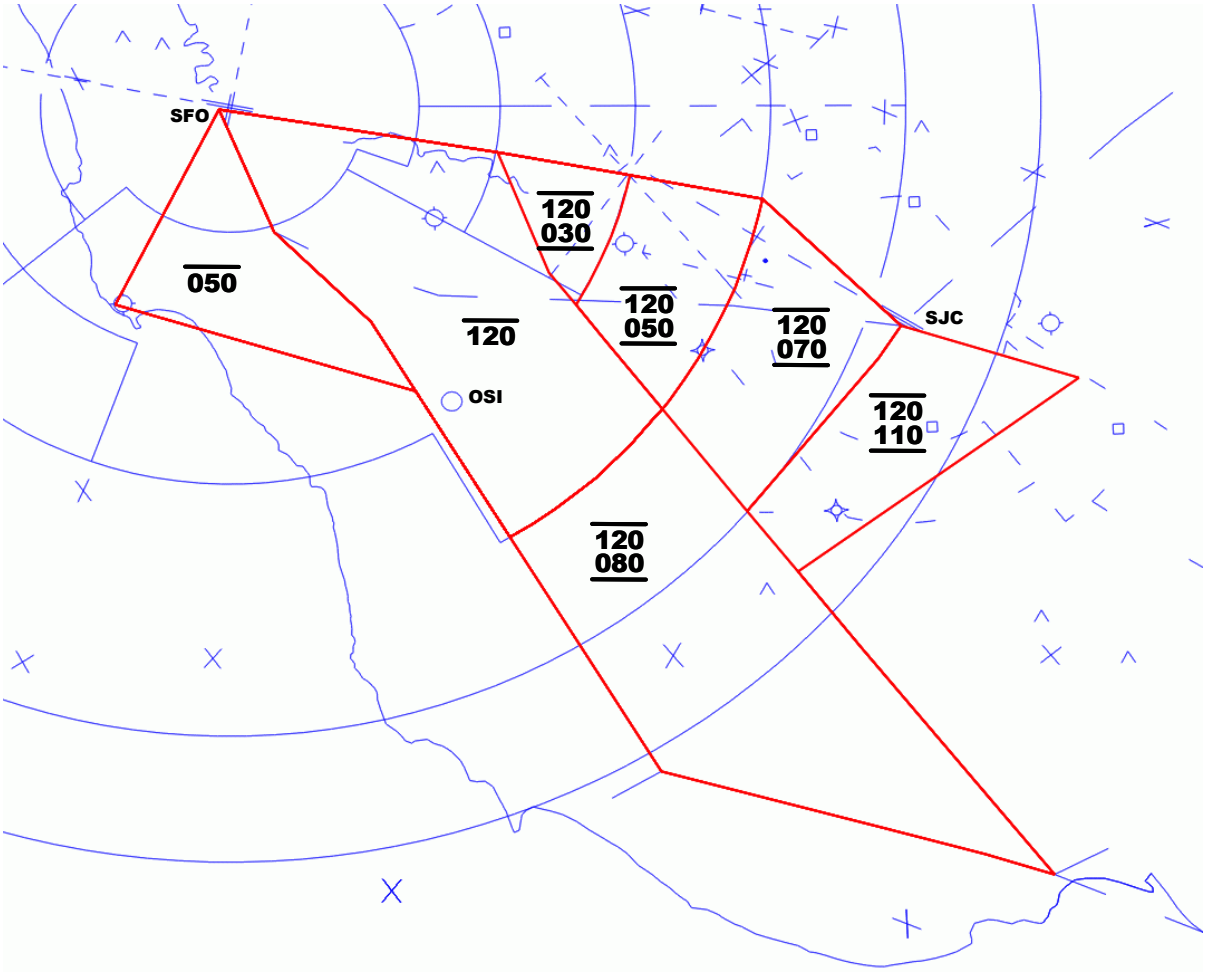
SECTION 15. SUTRO – SFOE

11-61. FREQUENCIES.

a. 135.10 MHz.

b. 307.20 MHz.

11-62. AIRSPACE DIAGRAM.



11-63. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
BOULDER	Oceanic Fix	J	12,000	RV OSI
BOULDER	SFO	T, J	6,000	RV OSI
GROVE	OAK	P, T, J	4,000	
GROVE	V199 & V27	P, T, J	5,000	
LICKE	SQL GPS Approach	P, T, J	4,000	Direct JEFNY
LICKE	San Jose CX	J	7,000	OSI heading 140°
LICKE	V25	P, T	6,000	Filed 7,000 or below
QUAKE	LUVEE DP	T	10,000	Heading 340°
QUAKE	MOLEN DP	J	12,000	Heading 340°
QUAKE	PORTE / SKYLINE DP's	J	15,000	

11-64. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
BOULDER	San Jose CX	T, J	7,000	OSI Heading 140°
GROVE	PORTE DP (RUNWAY 28)	J	5,000	100°
GROVE	SQL or San Jose CX	P, T	4,000	South of SFO
HOOKS	Napa and Oakland CX (PAO depts. Only)	P, T, J	3,000	RV 280° south of PAO
TOGA	OAK	T, J	5,000	RV OSI
TOGA	SFO	T, J	6,000	

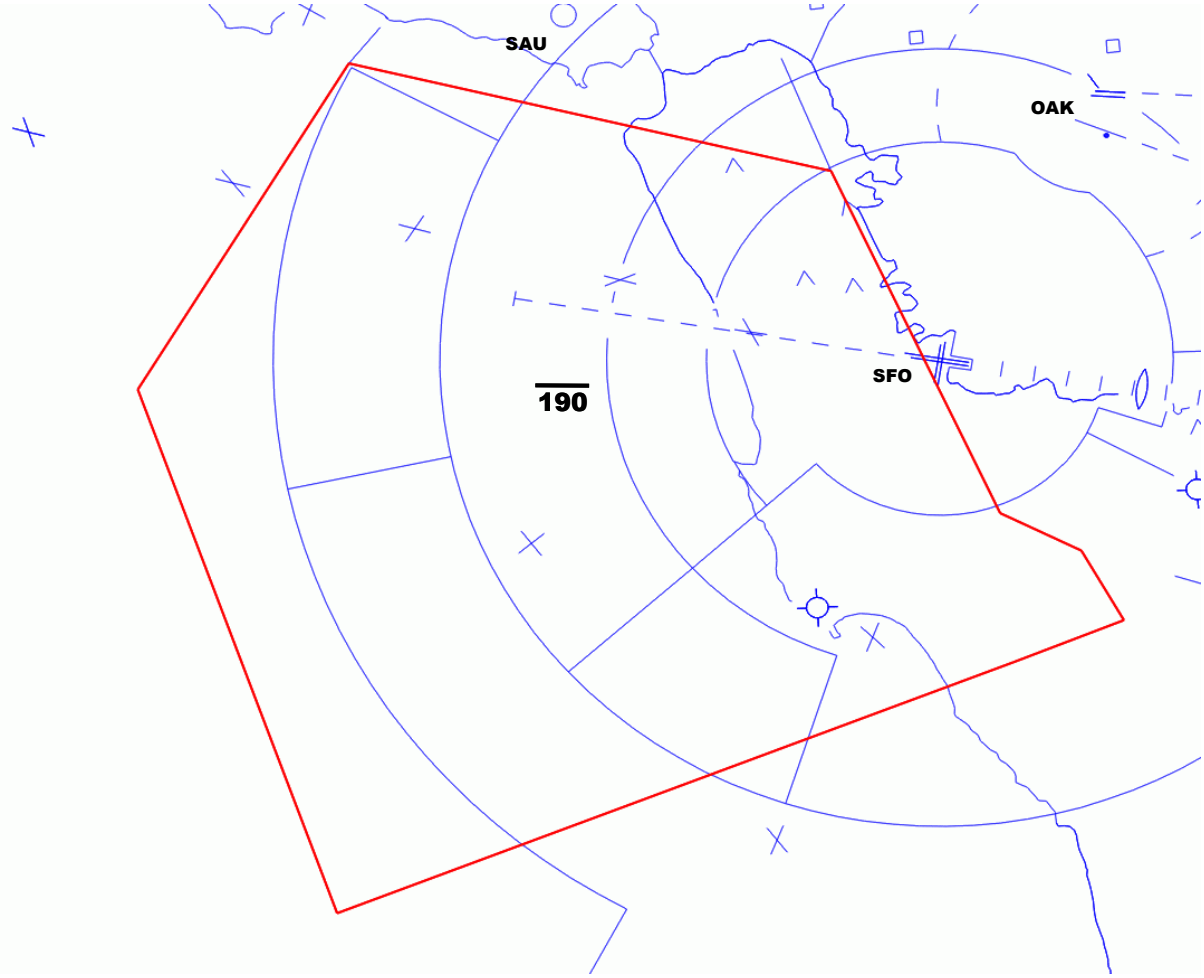
SECTION 16. SUTRO – OAKE

11-65. FREQUENCIES.

a. 135.10 MHz.

b. 307.20 MHz.

11-66. AIRSPACE DIAGRAM.



11-67. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
BOULDER	MRY CX via direct MUNSO	P, T	7,000	During “Side-bys” only
DIABLO	OAK	J	6,000	RV SAU
QUAKE	PORTE / SKYLINE / OFFSHORE / COAST DP’s	J	15,000	
QUAKE	EUGEN / NUEVO DP’s	T	13,000	
WOODSIDE	San Francisco CX	P, T	4,000	South of SFO
WOODSIDE	SFO	J	5,000	South of SFO
WOODSIDE	San Jose CX	P	4,000	South of SFO
WOODSIDE	San Jose CX	T, J	5,000	OSI heading 110° (SFOW) OSI heading 140° (SJCE)

11-68. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
BOULDER	OAK	J	8,000	RV SAU
QUAKE	Napa CX via V27	T, J	16,000	
WOODSIDE	All Routes	P, T, J	5,000	Heading 280°, at least 3 miles south of SFO

11-69. RESPONSIBILITIES.

a. During in-trail operations, coordinate with Boulder to establish a sequence for SFO arrivals.

b. Point-out all SFO or OAK departures landing in the San Jose CX via OSI at 5,000 feet to Boulder.

11-70. PRE-ARRANGED COORDINATION.

Sutro shall protect the Golden Gate arrival route, controlled by Boulder, at or above 11,000 feet.

SECTION 17. CI-1

11-71. RESPONSIBILITIES.

a. CI-1 will be staffed prior to opening Richmond and is responsible for effecting departure releases and coordination as necessary for both Sutro and Richmond.

b. CI-1 shall ensure that necessary coordination has been accomplished, before the aircraft is airborne, with the controller whose area of jurisdiction is affected.

c. During SFOW / OAKE:

(1) During in-trail operations, coordinate with Boulder to establish a sequence for SFO arrivals controlled by Sutro.

(2) Point-out all Runway 28 “straight-out” departures that are controlled by Richmond to Sutro.

(3) Point-out “Down the Bay” arrivals to Richmond.

(4) Point-out Rebas DP’s that are controlled by Richmond to Sutro.

(5) Point-out all SFO or OAK departures landing in the San Jose CX via OSI at 5,000 feet to Boulder.

d. During SFOE:

(1) Coordinate with Hooks prior to releasing a SQL Runway 12 departure.

(2) Coordinate with Hooks prior to releasing a SFO/OAK departure landing in the San Jose CX.

CHAPTER 12. AREA E

SECTION 1. AREA E SPECIFIC RESPONSIBILITIES

The first Area E Sector controlling an aircraft shall ensure proper route assignment.

SECTION 2. AREA E SPECIFIC ARTS ENTRIES

12-1. LOCAL AIRCRAFT CALLSIGN CONTRACTIONS.

SPARTAN	SPTN
ROPER	RPR
PYNUN	PYN
AIR ATTACK	ATK
NEWSFLIGHT	NWS
LIFE FLIGHT	LF

12-2. SECONDARY SCRATCHPAD ENTRIES.

a. The following entries can be used within Area E:

ENTRY	MEANING	REMARKS
A	NDB Approach	
AIS	Airport In Sight	May be used in lieu of VA
COR	CORLY	Direct to
CT	Contact Approach	
EXE	EXECC	Direct to
G	GPS Approach	
HAL	HALOW	Direct to
HK	Highkey Maneuver	
I	ILS Approach	
MTR	METRE	Direct to
OH	Overhead Approach	
P	PAR Approach	
S	ASR Approach	
T	TACAN Approach	

TAB	Terminate At Boundary	
V	VOR Approach	

b. The following information regarding the type of operation that may follow the approach may also be included in the second scratchpad:

ENTRY	MEANING
C	Circling Approach
D	Departure
F	Full Stop
O	Option
Z	Closed Traffic With Tower

c. The following ARTS shortcuts are specific to the airport listed in the primary ARTS scratchpad:

(1) BAB

SHORTCUT	SCRATCHPAD ENTRY
.	IO
+	IF
Hh	OHZ
Pp	PO
Ss	SO
Tt	TO

(2) LHM, MHR, MYV, SAC

SHORTCUT	SCRATCHPAD ENTRY
Δ	VO
.	IO
+	IF

(3) MCC

SHORTCUT	SCRATCHPAD ENTRY

Δ	VO
.	IO
+	IF
tt	TO

(4) SMF

SHORTCUT	SCRATCHPAD ENTRY
/	16L (Southwind) 34R (Northwind)
.	IO
+	IF

d. The following entries may be used to indicate what route an aircraft will exit Area E airspace:

ENTRY	ROUTE
334	V334
V6	V6
V23	V23
494	V494
392	V392
V15	V150
332	V332
338	V338
585	V585

e. Use secondary scratchpad entry "H" followed by a two-digit number to indicate an assigned heading (e.g., H13 = 130 degrees) with the following limitations:

(1) Use secondary scratchpad entry “ZOA” to indicate a Center assigned heading.

(2) Heading information shall not be displayed if aircraft are instructed to join or intercept the assigned route depicted in the datablock.

SECTION 3. SPECIAL OPERATIONS

12-3. JETTISONING EXTERNAL STORES.

a. Upon receiving a request for the use of and/or a vector to a tip tank/external stores drop area, the specialist shall:

(1) Coordinate with BAB.

(2) Clear the BAB Class C Surface Area of known traffic.

(3) Provide a vector to the airport and advise the aircraft to contact the tower as soon as practical after the airport has been sighted.

b. Beale AFB Jettison Area:

(1) The area is defined as west of and adjacent to the south end of the overrun of Runway 15.

(2) The aircraft will maintain 2,000' MSL, clear of inhabited areas within 5 miles of Beale AFB until cleared by the ATCT for the approach and tank release.

(3) After receiving ATCT clearance, the aircraft will be flown to the right side of Runway 15 at 613' MSL minimum. The pilot will release the tanks so that they impact in the grass area west of the end of the runway. Tank release will only be made when the aircraft is heading to the southeast (144 degrees).

12-4. BAILOUT PROCEDURES.

Upon receiving a request for assistance for a controlled egress, controllers shall:

a. Advise the pilot that the aircraft should be abandoned while outbound on the BAB 065° radial starting at 5 DME. Recommended bailout altitude is 5,000 feet.

b. Mark the point where the pilot advises leaving the aircraft and the point the target is last seen on the ACD.

12-5. PHASED ARRAY WARNING SYSTEM (PAVEPAWS).

The PavePaws radar site is located on the BAB074R and 5.3 DME. Avoid having aircraft over fly this area due to the potential of accidental firing of any type of explosive devices that pass through the radar's beam at or below 2,100’ MSL within a ½ nautical mile radius.

12-6. RESERVED.

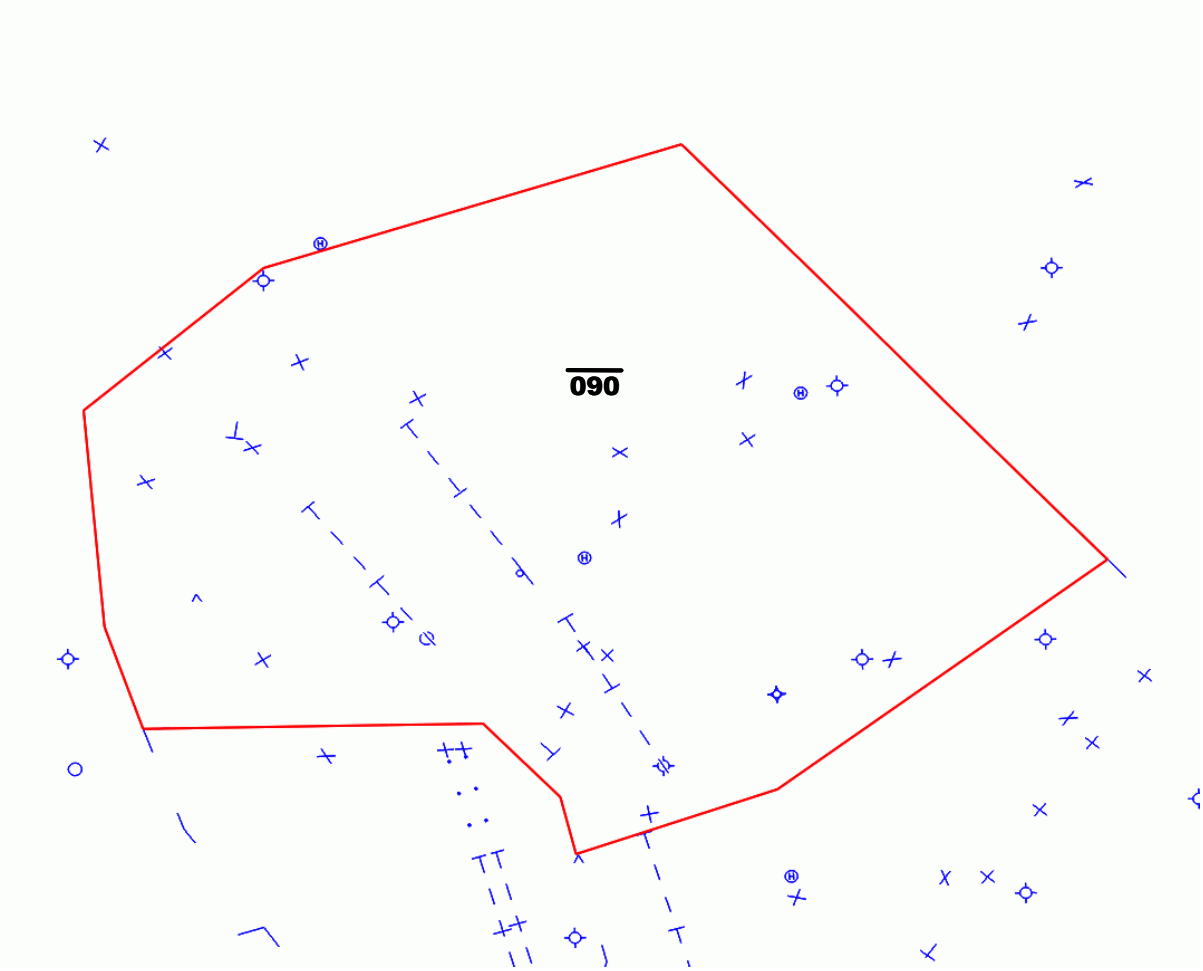
SECTION 4. BUTTES – SMFS

12-7. FREQUENCIES.

a. 125.4 MHz.

b. 259.1 MHz.

12-8. AIRSPACE DIAGRAM.



12-9. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
ELKHORN	SAC	P, T, J	5,000	RV SAC
ELKHORN	SMF	P, T, J	5,000	STAR or RV ILS
EXPO	MCC	P, T, J	3,000	RV ILS
EXPO	MHR	P, T, J	4,000	RV O61
EXPO	SAC	P, T, J	5,000	RV SAC

12-10. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
ELKHORN	BAB / LHM	P, T, J	4,000	RV HALOW
ELKHORN	MYV	P, T, J	3,000	RV HALOW
EXPO	BAB / MYV / LHM	P, T, J	4,000	RV AMMES
PARADISE	SMF	P, T, J	10,000	STAR or RV ILS

12-11. RESPONSIBILITIES.

Obtain a release from Paradise for PYNUN Departure Procedure.

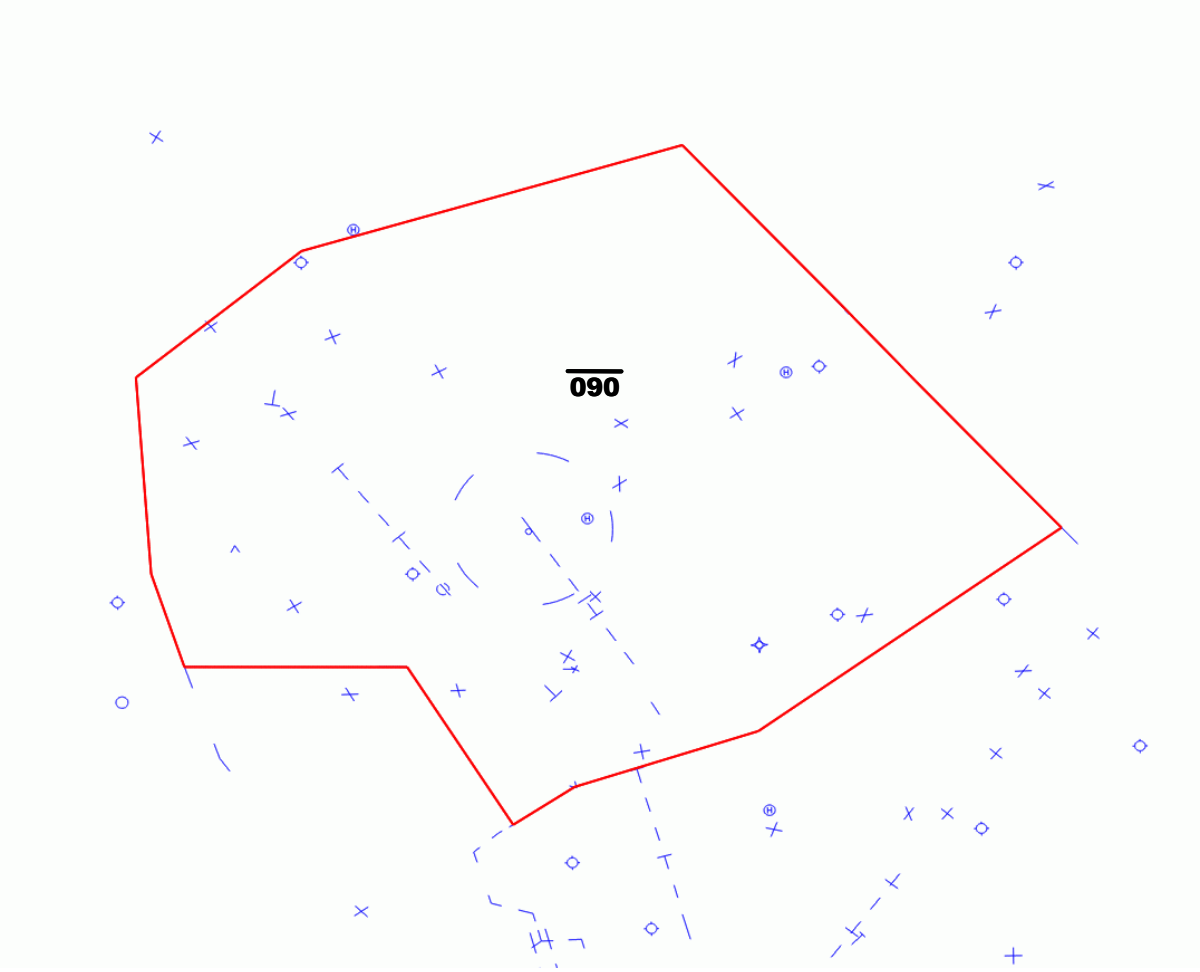
SECTION 5. BUTTES – SMFN

12-12. FREQUENCIES.

a. 125.4 MHz.

b. 259.1 MHz.

12-13. AIRSPACE DIAGRAM.



12-14. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
ELKHORN	SAC	P, T, J	5,000	RV SAC
ELKHORN	SMF	P, T, J	5,000	STAR or RV ELKOE
EXPO	MCC / MHR	P, T, J	4,000	RV O61
EXPO	SAC	P, T, J	5,000	RV SAC

12-15. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
ELKHORN	BAB / LHM	P, T, J	4,000	RV HALOW
ELKHORN	MYV	P, T, J	3,000	RV HALOW
EXPO	BAB / MYV / LHM	P, T, J	4,000	RV AMMES
PARADISE	SMF	P, T, J	10,000	STAR or RV ILS

12-16. RESPONSIBILITIES.

Obtain a release from Paradise for PYNUN Departure Procedure.

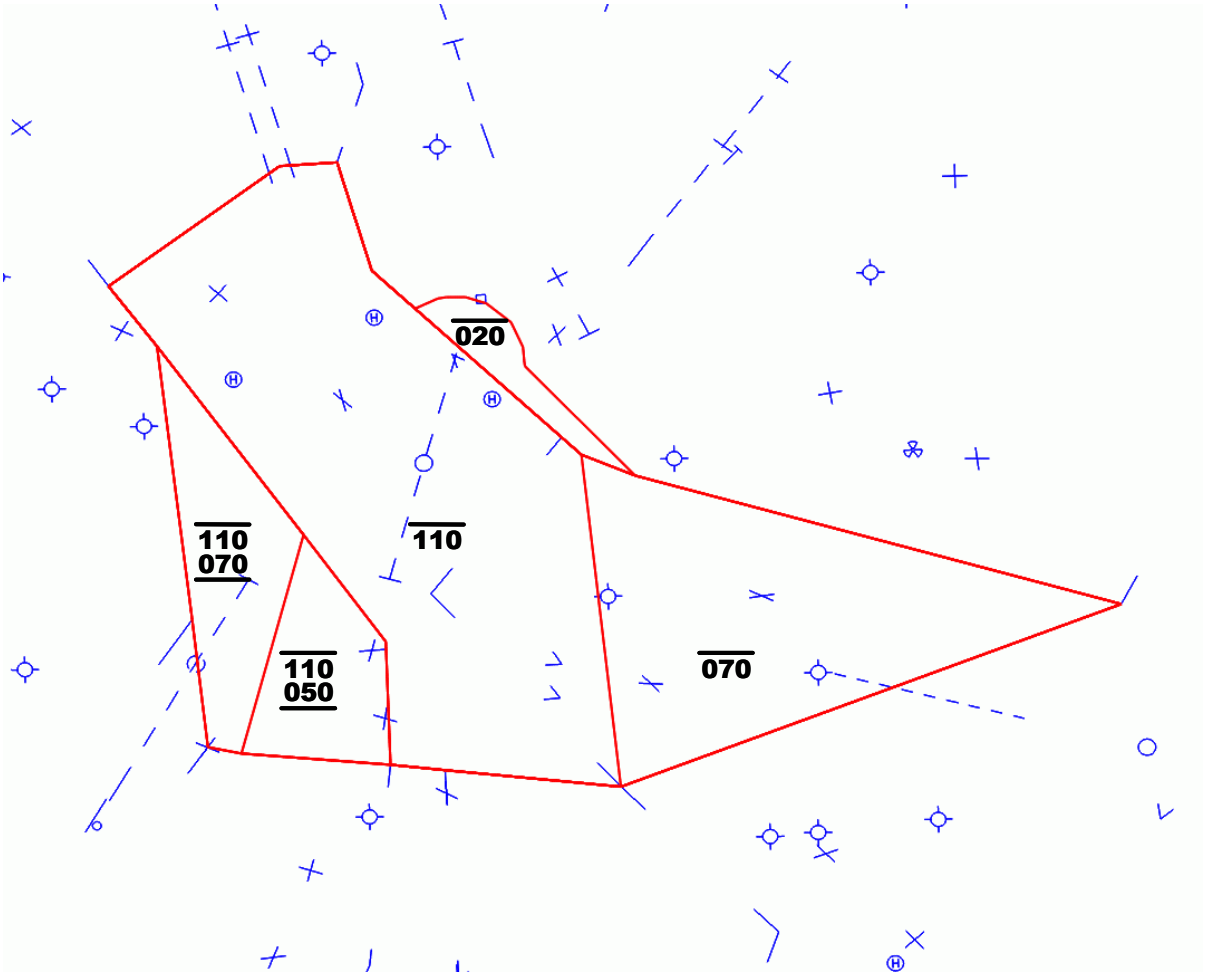
SECTION 6. DELTA

12-17. FREQUENCIES.

a. 125.25 MHz.

b. 257.9 MHz.

12-18. AIRSPACE DIAGRAM.



12-19. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
ELKHORN	SMF (SMFS Only)	P, T, J	4,000	STAR or RV ELKOE
EXPO	MCC / MHR	P, T, J	5,000	RV O61
FAIRFIELD	SFO via SAC157R or RISTI STAR	P, T	9,000	SFOW Only
FAIRFIELD	SFO via V6	P, T	8,000	SFOE Only
KIRKWOOD	Southeast bound departures	P, T, J	7,000	Control for climb
TRACY	Oakland CX via V334 SUNOL	P, T	6,000	
TRACY	San Jose CX and SQL via SAC157R	P	6,000	
TRACY / VALLEY	Stockton and Modesto CX	P T, J	5,000 7,000	

12-20. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
ELKHORN	SAC / O88	P, T, J	3,000	RV ELKOE
ELKHORN	SMF (SMFN Only)	P, T, J	3,000	RV ELKOE
EXPO	Travis CX (MCC or MHR Departures Only)	P, T, J	5,000	RV 160°
EXPO	MCC or MHR South-Bound departures requesting 7,000 or lower, or West-Bound Departures	P, T, J	6,000 or lower filed altitude	RV 160°
EXPO	SAC	P, T, J	3,000	RV SAC VOR
EXPO	Sacramento CX (SMFN Only)	P, T, J	3,000	RV SAC VOR
EXPO	Travis CX	P, T, J	8,000	RV SAC VOR

KIRKWOOD	WRAPS STAR	P, T, J	8,000 (SMFN) 10,000 (SMFS)	
PARADISE	Oakland or San Francisco CX	P, T	10,000	RV SAC VOR
PARADISE	San Jose CX	P	10,000	RV SAC VOR
TRACY / VALLEY	SAC and Travis CX	P, T, J	4,000	
TRACY / VALLEY	Sacramento and Mather CX	P, T, J	6,000	

12-21. RESPONSIBILITIES.

a. Protect SMF departures at or below 2,000 feet controlled by Elkhorn.

b. Protect SMF departures controlled by Expo heading 120°.

c. Protect SAC departures at or below 2,000 feet controlled by Expo flying a heading of either 090° or 340°.

12-22. EXCEPTIONS TO TRANSFER OF CONTROL.

Delta has control of all aircraft received from Expo.

12-23. RESERVED.

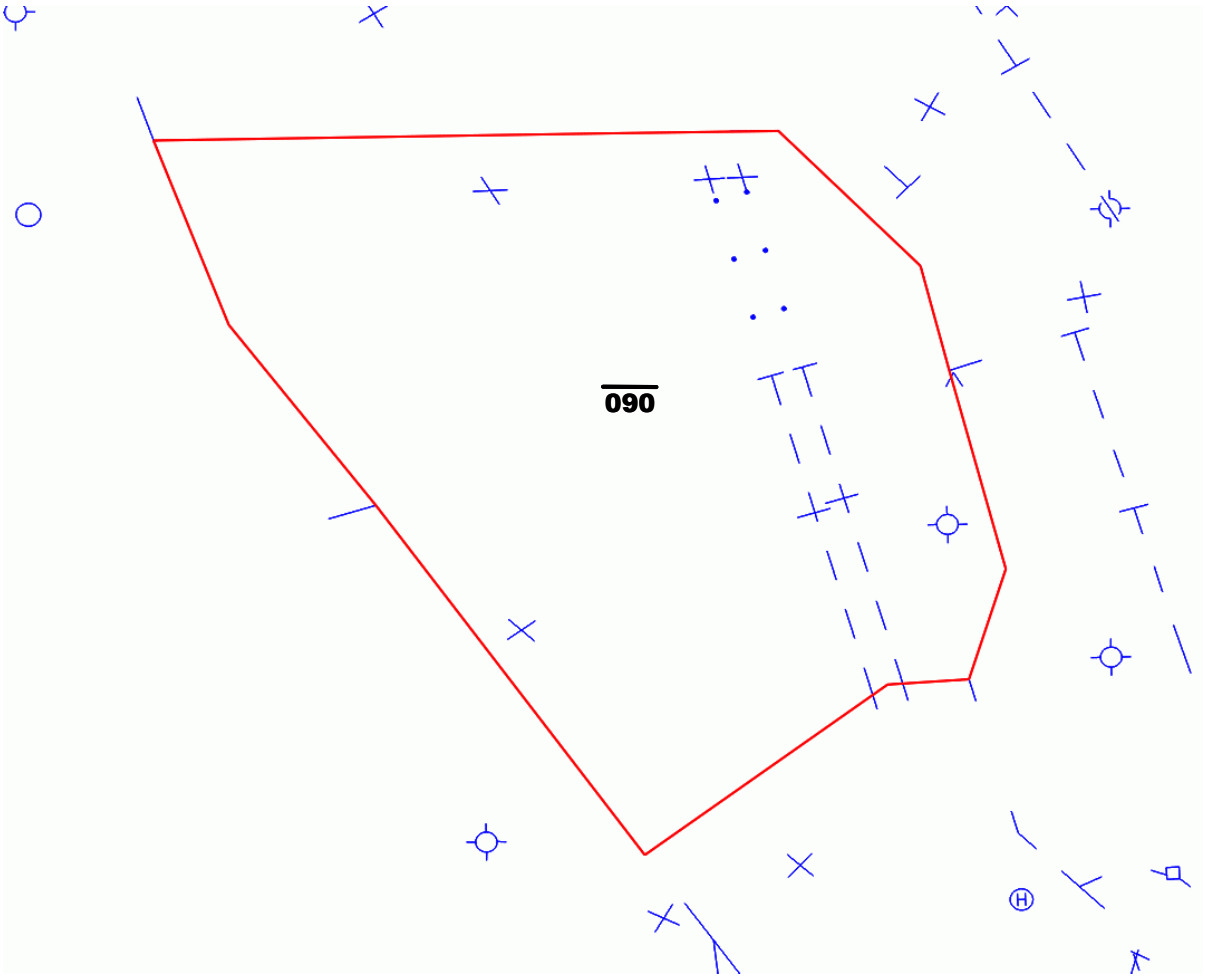
SECTION 7. ELKHORN - SMFS

12-24. FREQUENCIES.

a. 134.8 MHz.

b. 270.25 MHz.

12-25. AIRSPACE DIAGRAM.



12-26. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
BUTTES	BAB / LHM	P, T, J	4,000	RV HALOW
BUTTES	MYV	P, T, J	3,000	RV HALOW
DELTA	SAC	P, T, J	3,000	RV ELKOE
EXPO	MCC	P, T, J	3,000	RV ILS
EXPO	MHR	P, T, J	5,000	RV O61

12-27. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
BUTTES	SAC	P, T, J	5,000	RV SAC
BUTTES	SMF	P, T, J	5,000	STAR or RV ILS
DELTA	SMF	P, T, J	4,000	RV ELKOE
EXPO	SMF	P, T, J	3,000	RV ILS
PARADISE	SUU	J	10,000	

12-28. RESPONSIBILITIES.

a. Do not climb SMF departures heading 300° or on the METRO DP above 2,000 feet until clear of Delta.

b. Protect SMF departures controlled by Delta heading 165°.

c. Protect SMF departures controlled by Expo heading 120°.

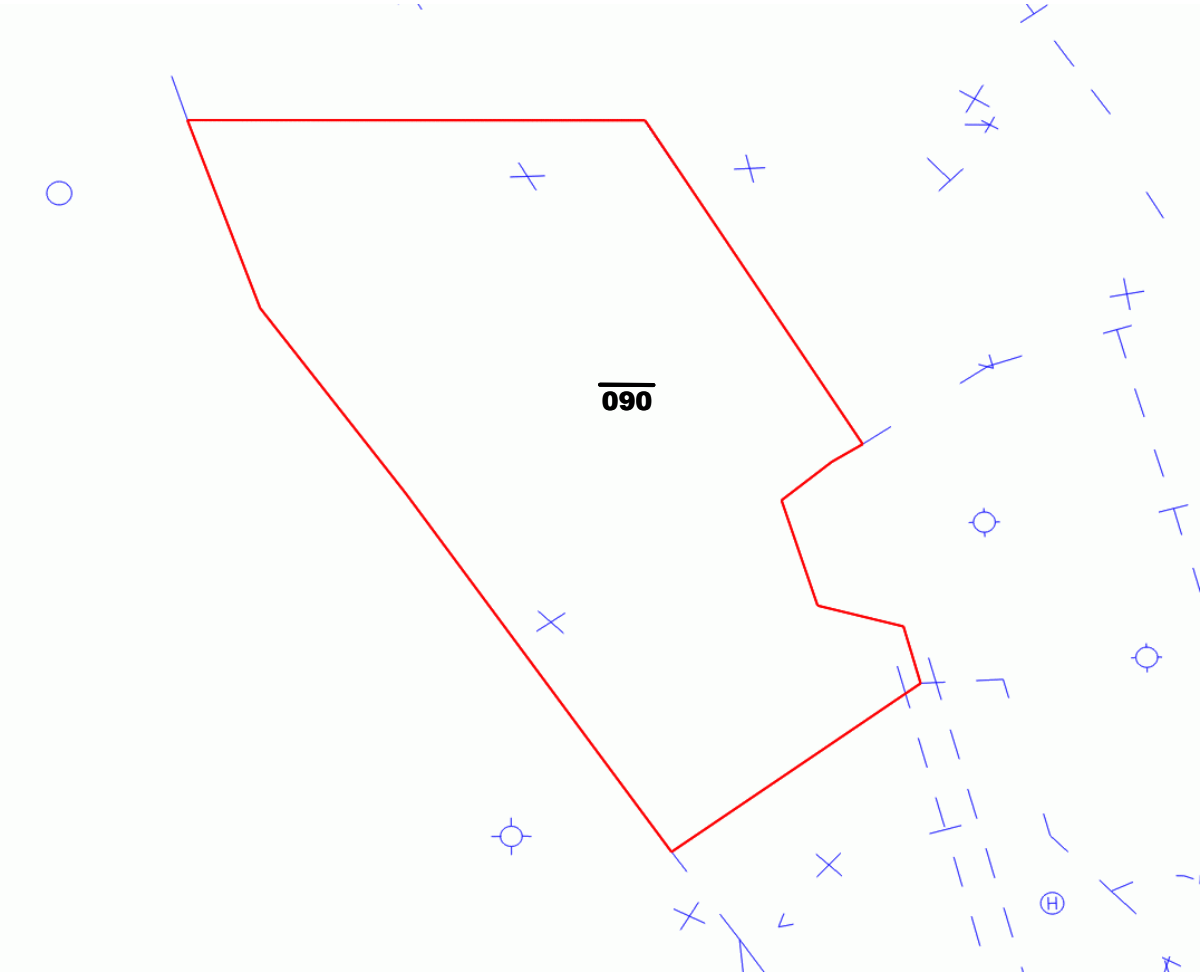
SECTION 8. ELKHORN – SMFN

12-29. FREQUENCIES.

a. 134.8 MHz.

b. 270.25 MHz.

12-30. AIRSPACE DIAGRAM.



12-31. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
BUTTES	BAB / LHM	P, T, J	4,000	RV HALOW
BUTTES	MYV	P, T, J	3,000	RV HALOW
DELTA	Sacramento CX	P, T, J	3,000	RV ELKOE
EXPO	MCC / MHR	P, T, J	5,000	RV O61

12-32. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
BUTTES	SMF	P, T, J	5,000	STAR or RV ELKOE
ELKHORN	SAC	P, T, J	5,000	RV SAC
PARADISE	SUU	J	10,000	

12-33. RESPONSIBILITIES.

Protect SMF departures at or below 2,000 feet controlled by Delta heading 210°.

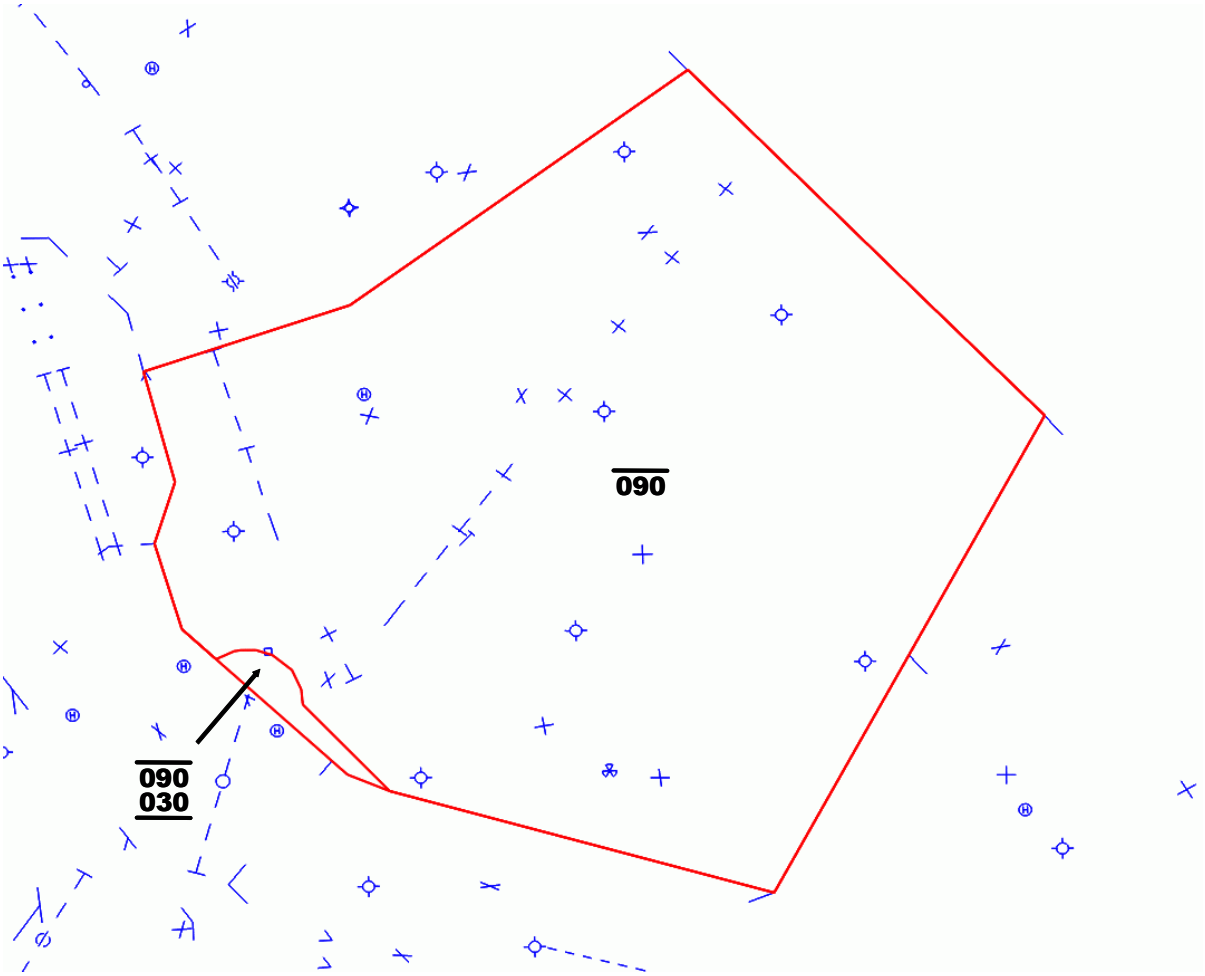
SECTION 9. EXPO – SMFS

12-34. FREQUENCIES.

a. 127.4 MHz.

b. 317.5 MHz.

12-35. AIRSPACE DIAGRAM.



12-36. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
BUTTES	BAB / LHM / MYV	P, T, J	4,000	RV AMMES
DELTA	SAC	P, T, J	3,000	RV SAC VOR
DELTA	Travis CX (MCC or MHR Departures Only)	P, T, J	5,000	RV 160°
DELTA	MCC or MHR South-Bound departures requesting 7,000 or lower, or West-Bound Departures	P, T, J	6,000 or lower filed altitude	RV 160°
DELTA	Travis CX	P, T, J	8,000	RV SAC VOR
ELKHORN	SMF	P, T, J	3,000	RV ILS
KIRKWOOD	MCC / MHR / SAC Departures	P, T, J	9,000	RV FROGO
PARADISE	DUDES DP or SAC058R	T, J	9,000	RV SAC058R

12-37. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
BUTTES	MCC	P, T, J	3,000	RV ILS
BUTTES	MHR	P, T, J	4,000	RV O61
BUTTES	SAC	P, T, J	5,000	RV SAC
DELTA	MCC / MHR	P, T, J	5,000	RV O61
ELKHORN	MCC	P, T, J	3,000	RV ILS
ELKHORN	MHR	P, T, J	5,000	RV O61
KIRKWOOD	MCC / MHR	P, T, J	10,000	RV O61
PARADISE	Travis CX	P, T, J	10,000	RV SAC VOR

12-38. RESPONSIBILITIES.

a. Protect SMF departures controlled by Elkhorn heading 010°.

b. Protect SMF departures controlled by Delta heading 165°.

c. Issue approach clearance to O70 on aircraft arriving from the north and point-out to Valley.

12-39. EXCEPTIONS TO TRANSFER OF CONTROL.

Delta has control of all aircraft received from Expo.

12-40. RESERVED.

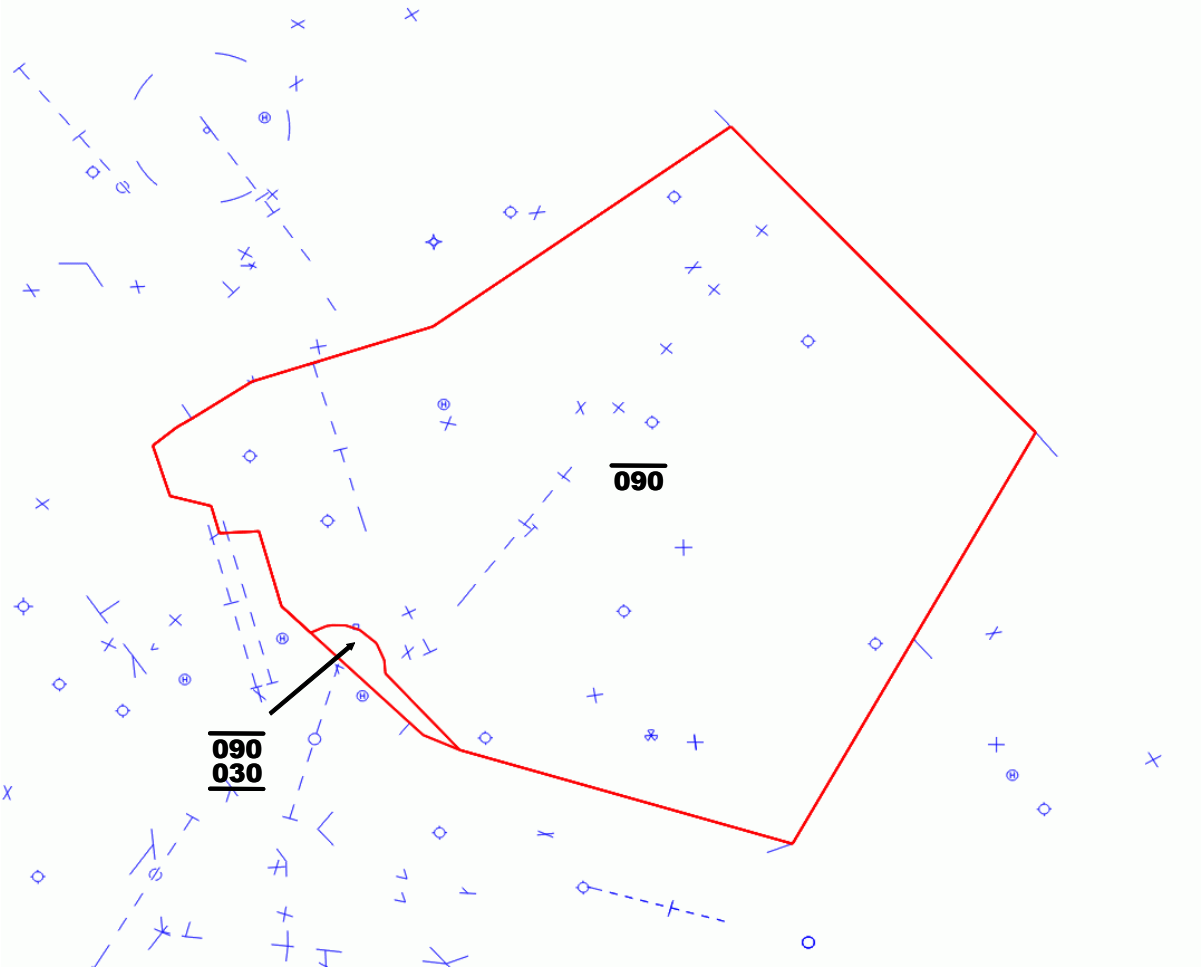
SECTION 10. EXPO – SMFN

12-41. FREQUENCIES.

a. 127.4 MHz.

b. 317.5 MHz.

12-42. AIRSPACE DIAGRAM.



12-43. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
BUTTES	BAB / LHM / MYV	P, T, J	4,000	RV AMMES
DELTA	SAC	P, T, J	3,000	RV SAC VOR
DELTA	SMF	P, T, J	3,000	RV SAC VOR
DELTA	Travis CX (MCC or MHR Only)	P, T, J	5,000	RV 160°
DELTA	MCC or MHR South-Bound departures requesting 7,000 or lower, or West-Bound Departures	P, T, J	6,000 or lower filed altitude	RV 160°
DELTA	Travis CX	P, T, J	8,000	RV SAC VOR
KIRKWOOD	MCC / MHR / SAC Departures	P, T, J	9,000	RV FROGO
PARADISE	DUDES DP or SAC058R	T, J	9,000	RV SAC058R

12-44. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
BUTTES	MCC / MHR	P, T, J	4,000	RV O61
BUTTES	SAC	P, T, J	5,000	RV SAC
ELKHORN	MCC / MHR	P, T, J	5,000	RV O61
KIRKWOOD	MCC / MHR	P, T, J	10,000	RV O61
DELTA	MCC / MHR	P, T, J	5,000	RV O61
PARADISE	Travis CX	P, T, J	10,000	RV SAC VOR

12-45. RESPONSIBILITIES.

a. Protect SMF departures controlled by Elkhorn heading 300° to 340° or on the METRO DP.

b. Protect SMF departures at or below 2,000 feet controlled by Delta heading 210°.

c. Issue approach clearance to O70 on aircraft arriving from the north and point-out to Valley.

12-46. EXCEPTIONS TO TRANSFER OF CONTROL.

Delta has control of all aircraft received from Expo.

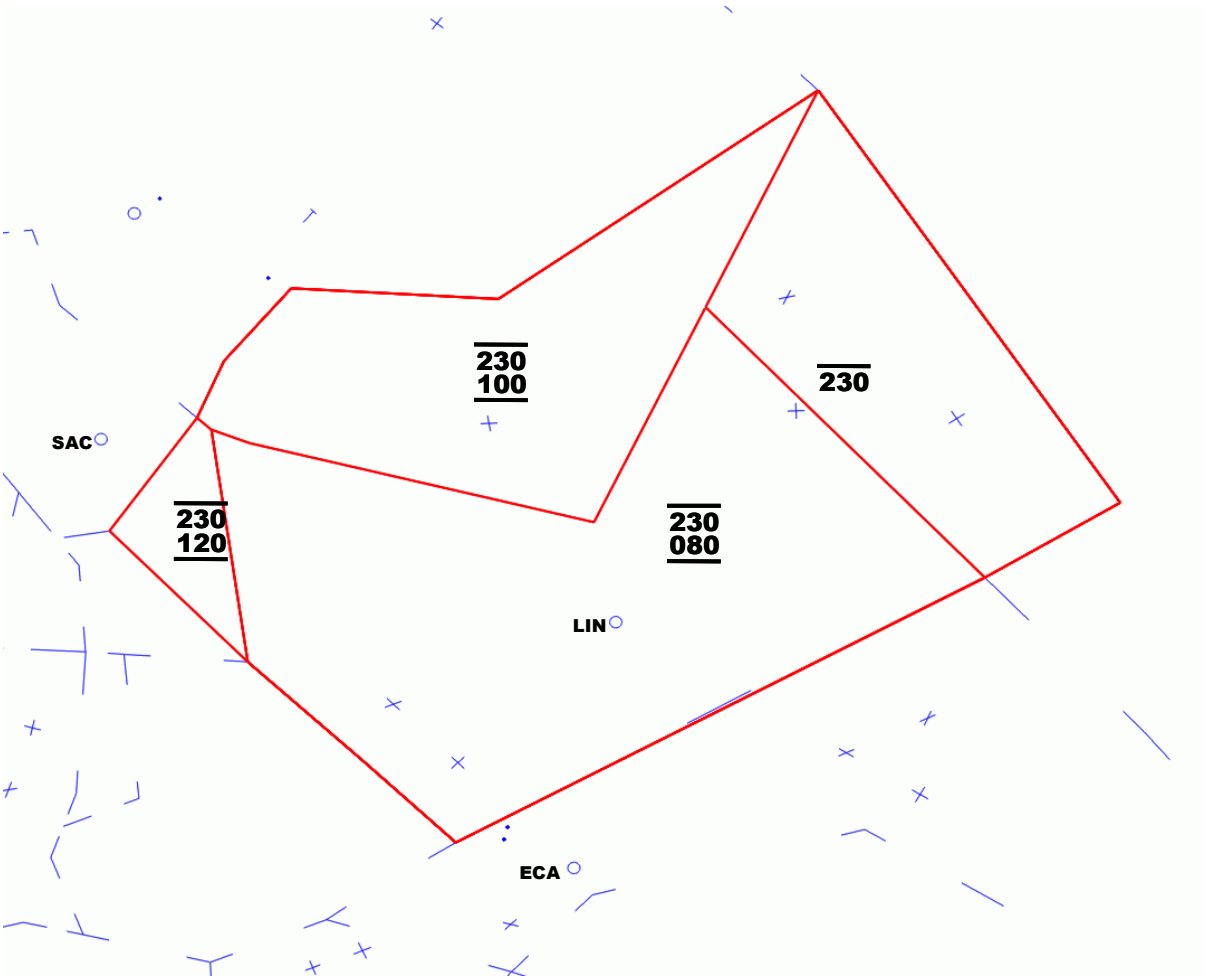
SECTION 11. KIRKWOOD

12-47. FREQUENCIES.

a. 123.70 MHz.

b. 338.25 MHz.

12-48. AIRSPACE DIAGRAM.



12-49. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
DELTA	WRAPS STAR	P, T, J	8,000 (SMFN) 10,000 (SMFS)	
EXPO	MCC / MHR	P, T, J	10,000	RV O61
FAIRFIELD	Napa CX	J	16,000	
FAIRFIELD	Napa CX via OAKEY GATE	P, T J	8,000 10,000	SFOE Only
SUNOL	MADWIN or MANTECA STAR	J	FL200	
SUNOL	Oakland CX via ECA229R SUNOL	J	13,000 or filed lower altitude	SFOW Only
SUNOL	OAK via ECA229R SGD107R UPEND	J	10,000	SFOE Only
SUNOL	HWD via ECA229R SUNOL	J	10,000	SFOE Only
SUNOL	San Jose CX via ECA183R MOD216R LICKE	T, J	13,000 or filed lower altitude	SFOW Only
SUNOL	San Jose CX via ECA183R MOD216R LICKE	T, J	9,000	SFOE Only
SUNOL	Monterey CX via MOD V111	T, J	13,000 or filed lower altitude	
SUNOL	SFO via ECA CEDES	T	13,000	(SFOW Only)
SUNOL	SFO via MOD	J	15,000	
TRACY / VALLEY	Modesto and Stockton CX	P, T, J	8,000	
TRACY / VALLEY	Oakland CX via ECA229R SUNOL	T	8,000	
TRACY / VALLEY	San Jose CX and OAK	P	8,000	

TRACY / VALLEY	Travis CX via OAKEY STAR, V108, or OAKEY Gate	P, T, J	8,000	

12-50. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
DELTA	Southeast bound departures	P, T, J	7,000	Control for climb
EXPO	MCC / MHR / SAC Departures	P, T, J	9,000	RV FROGO
PARADISE	Oakland CX via ECA229R SUNOL	T	12,000	
PARADISE	HWD via ECA229R SUNOL	J	12,000	SFOE Only
PARADISE	San Jose CX and OAK	P	12,000	
PARADISE	Modesto and Stockton CX	P, T, J	12,000 or filed lower altitude	
PARADISE	FROGO	T, J	17,000	SMFN Only
SUNOL	Mather and Sacramento CX	P, T, J	14,000 or filed lower altitude	
SUNOL	WRAPS STAR or LIN Direct	J	Cross LIN @ 16,000	
SUNOL	Travis CX via OAKEY STAR, V108, or OAKEY Gate	J	Cross LIN @ 12,000	

12-51. RESPONSIBILITIES.

a. Kirkwood shall protect Bay Area DP's routed over LIN and SAC.

b. When Fairfield is utilizing the OAK Sensor, Fairfield shall hand-off departures routed over LIN or SAC to Kirkwood in lieu of a point-out. Communications shall be retained by Fairfield and then transferred to ZOA upon completion of the hand-off to ZOA by Kirkwood.

12-52. EXCEPTIONS TO TRANSFER OF CONTROL.

Kirkwood has control for climb on FROGO departures in Paradise's airspace (SMFN Only).

12-53. RESERVED.

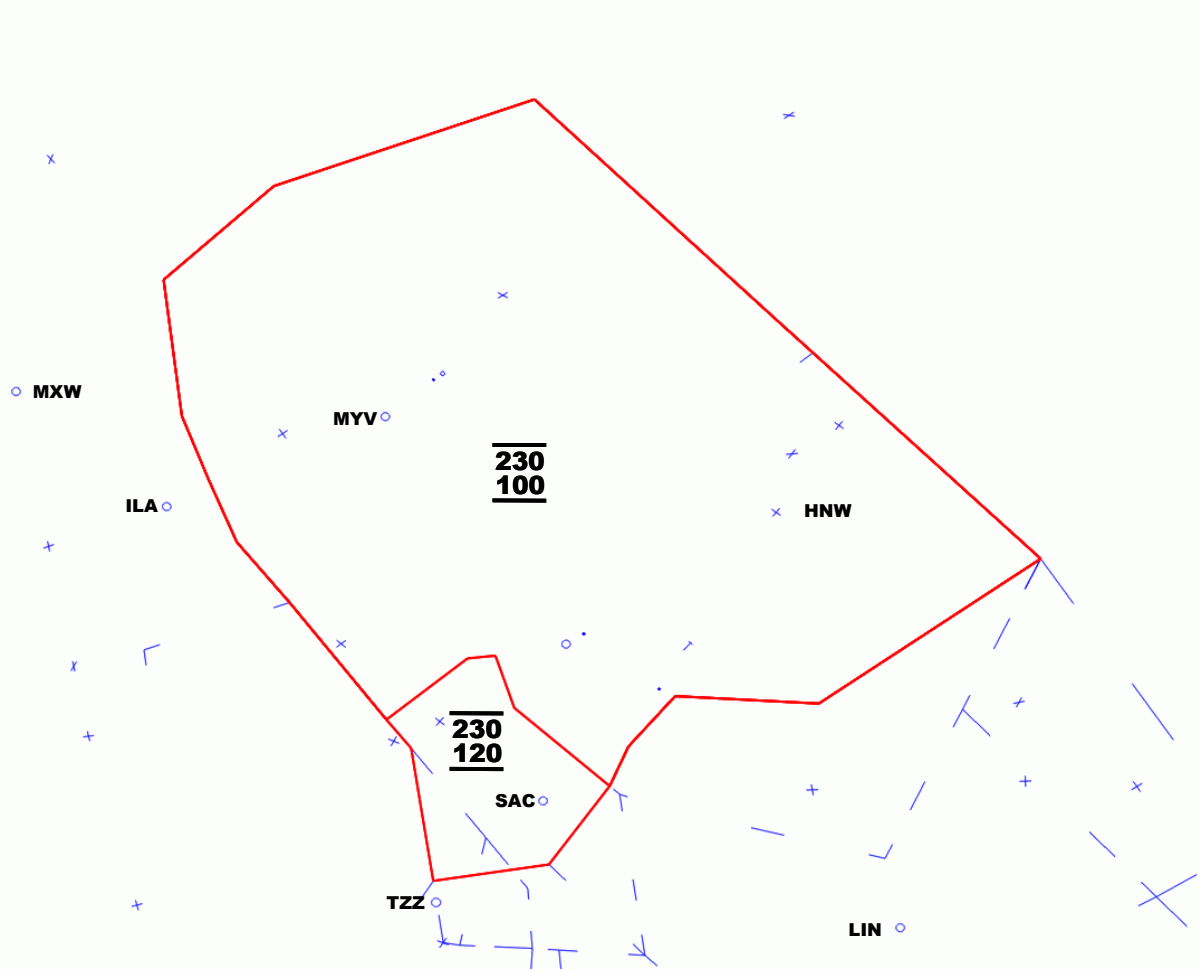
SECTION 12. PARADISE

12-54. FREQUENCIES.

a. 120.45 MHz.

b. 353.70 MHz.

12-55. AIRSPACE DIAGRAM.



12-56. EXIT ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
BUTTES	SMF	P, T, J	10,000	STAR or RV ILS
DELTA	Oakland or San Francisco CX	P, T	10,000	RV SAC VOR
DELTA	San Jose CX	P	10,000	RV SAC VOR
ELKHORN	SUU	J	10,000	
EXPO	Travis CX	P, T, J	10,000	RV SAC
KIRKWOOD	Oakland CX via ECA229R SUNOL	T	12,000	
KIRKWOOD	HWD via ECA229R SUNOL	J	12,000	SFOE Only
KIRKWOOD	Modesto and Stockton CX	P, T, J	12,000 or filed lower altitude	
KIRKWOOD	San Jose CX and OAK	P	12,000	
KIRKWOOD	FROGO	T, J	17,000	SMFN Only

12-57. ENTRY ROUTES.

SECTOR	DEST / ROUTE	ACFT	ALT	HDG / INFO
EXPO	DUDES DP or SAC058R	T, J	9,000	RV SAC058R

12-58. RESPONSIBILITIES.

Paradise shall protect Bay Area DP’s routed over SAC.

12-59. EXCEPTIONS TO TRANSFER OF CONTROL.

Kirkwood has control for climb on FROGO departures in Paradise’s airspace (SMFN Only).

12-60. RESERVED.

CHAPTER 13. TRAFFIC MANAGEMENT UNIT

SECTION 1. TRAFFIC MANAGEMENT OFFICER

13-1. RESPONSIBILITIES.

The Traffic Management Officer shall:

a. Plan and direct facility traffic management initiatives to promote efficient use of the NAS.

b. Be administratively responsible for the Traffic Management Unit and serve as the facility focal point on matters that pertain to traffic management.

c. Be accountable for all Traffic Management programs and initiatives, traffic analysis, evaluation of national and regional Traffic Management programs impacting NCT.

d. Serve as the point of contact for the users, WSTA, ATCSCC, and adjacent facilities.

SECTION 2. SUPERVISORY TRAFFIC MANAGEMENT COORDINATOR

13-2. RESPONSIBILITIES.

The Supervisory Traffic Management Coordinator shall:

a. Provide first line supervision to Traffic Management Coordinators (TMCs).

b. Serve as the focal point for Flight Check operations, TFRs, NOTAMS, Fly-Bys, and varied special events. Place coordination into TMU special events file.

c. Advise the OM and appropriate OS/CIC when an arrival flow rate indicates a level that requires additional resources.

d. Collect and disseminate, as soon as practical, delay and other pertinent information to the ATCSCC through ZOA TMU via landline including:

(1) Start and stop times of ground stops at NCT internal airports.

(2) Changes in the arrival rate.

(3) Equipment limitations, weather changes or special operations that may impact traffic.

e. Provide front line supervision, oversight, on-the-spot corrections, and management of the day to day, shift to shift TMU operation. Assigns, directs, and assists TMC’s in the performance of their duties.

f. Review the TMU log including TMU shift summary, OPSNET, and other reporting requirements. Verify accuracy of daily reports. Close out all logs and reporting requirements, route through appropriate distribution protocols, and prepare

next day's business forms. Include in the distribution the TMU log, traffic count, and SOIA/PRM non-participants sheet.

g. Assist and coordinate with adjacent facilities as necessary to ensure OPSNET traffic and delay data is correctly entered into the OPSNET database.

h. When necessary, monitor and interact with ATCTs, to determine delay status, lend assistance, determine trends of traffic and/or weather.

i. Prepare the NCT TMU worksheet and attend the morning and afternoon operational briefings.

j. Attend the SPT TELCONs as required.

k. Prepare the NCT TMU worksheet and any other required information to conduct the WSTA/ATCSCC Traffic Management TELCONS.

l. Perform the watch checklist during each shift.

m. Minimize control room distractions.

13-3. TRAFFIC MANAGEMENT COORDINATOR-IN-CHARGE.

The TM-CIC performs the full range of responsibilities associated with Watch Supervision. The TM-CIC limitations to performance of supervisory duties are as specified in FAA Order 7210.3, Facility Operation and Administration.

SECTION 3. TRAFFIC MANAGEMENT COORDINATORS

13-4. RESPONSIBILITIES.

a. Balance the arrival flow and the tower en route flow by coordinating with the appropriate ARTCC TMU and/or adjoining terminal facility(s) to ensure that demand does not exceed current capabilities.

b. Through coordination with the tower and the appropriate NCT area, establish AAR's for NCT airports.

c. Coordinate with the appropriate NCT area(s) to determine if SOIA/PRM operations are viable. Brief the STMC/TMCIC of the determination.

d. Keep the OM, STMC, affected OS/CIC, and other TMC's informed on all TMI's and aircraft arrival/departure delay information and trends.

e. Participate in airport configuration changes at the direction of the STMC and area OS/CIC.

f. Display and update TM initiatives, outages, TFRs, applicable NOTAMs, SIGMETs, PIREPs, AIRMETs, CWAs, SUAs and all other TM related information in the appropriate ACE-IDS area.

SECTION 4. TMU POSITIONS OF OPERATION.

13-5. TMC-1.

a. Provide TMC services for San Francisco arrivals.

b. Perform the Monitor Alert function. Monitor arrival sectors and fix-balances, holds, spaces or restricts traffic so that no SFO arrival sector becomes over saturated.

c. Monitors and evaluates operations to and from satellite airports that could adversely impact arrival sectors.

d. Serves as the focal point for runway changes at San Francisco Airport.

13-6. TMC-2.

a. Provide TMC services for:

(1) San Francisco, Oakland and San Jose departures.

(2) Sacramento arrivals and departures.

(3) Monitors and evaluates operations to and from satellite airports that could adversely impact arrival sectors.

b. Serve as the Weather Coordinator.

(1) The “Weather Coordinator” is the focal point of contact for all weather related duties and functions. Obtain and report weather information from the AWOS, SIGMETs, CWAs, PIREPs, CWU and the NWS.

(2) Coordination between the TMU and the local NWS or CWSU shall be completed as soon as practical at the beginning of each shift, and, as necessary throughout the course of the shift.

(3) Coordinate with the area OS to solicit and report bases/tops reports.

(4) Pass base and top reports/PIREPs to OAK AIFSS/Rancho AFSS and the OM.

13-7. TMC-3.

a. Provide TMC services for:

(1) Oakland arrivals.

(2) San Jose arrivals.

(3) Monterey arrivals and departures.

(4) Monitors and evaluates operations to and from satellite airports that could adversely impact arrival sectors.