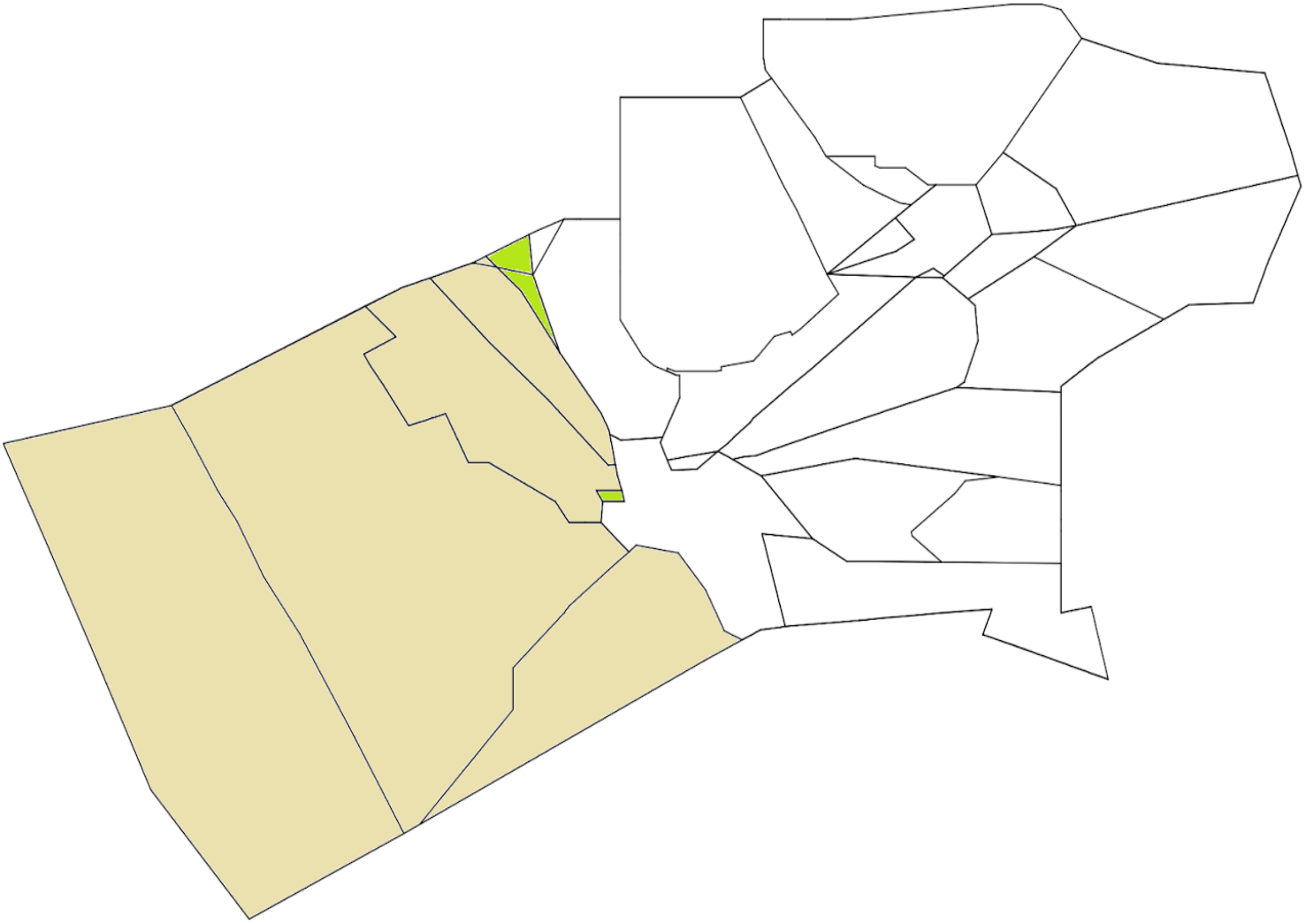
VATSIM LOS ANGELES ARTCC
AREA A STANDARD OPERATING PROCEDURES

June 2024



VATSIM LOS ANGELES ARTCC STANDARD OPERATING PROCEDURES

FOREWORD

This document establishes facility Standard Operating Procedures for Los Angeles Center Area A in the VATSIM Los Angeles ARTCC and is intended for use when this Area is being worked as a single Area or consolidated with adjacent areas. It is also intended for use when working any individual sector within Area A. All controllers shall adhere to these policies and use their best judgment when encountering situations not covered by this SOP.

This document is to be used for simulation purposes only; it is not authorized for or intended for real world use.

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Change Notices

Version	Date	Explanation of Changes
1.0	23JUN24	Initial Version

CHAPTER 1. GENERAL
Section 1. Split Information

1-1-1. AREA CONSOLIDATION

When LA Center is combined, controllers shall connect as **Sector 25** using frequency **126.525**. When LA Center is split into two or more positions, sectors should first be split out by Area, then by individual sector. Sectors shall be recombined east to west, then areas east to west.

AREA	COMBINES TO	SECTORS
A	25	25, 26, 28
B	27	27, 38
C	39	37, 39, 40, 60
D	16	16, 34, 54
E	30	30, 31
F	35	35, 53

CHAPTER 2. AREA A SECTOR INFORMATION
Area A Section 1 - General Information

2-1-1. GENERAL
Approval of an automated point out between Area A sectors will allow the sector who initiated the point out to climb the aircraft to, or any altitude under, its requested altitude. The same applies to descents for an aircraft landing at KPRB, or any airport that lies within the lateral confines of NTD or SBA Approach airspaces. Controllers are required to comply with all applicable Letters of Agreement (LOA), and shall additionally reference Section 3 of the Combined Center SOP for crossing and descent information to TRACONS for which no LOA exists.

Area A is responsible for working the Santa Barbara TRACON/ATCT (SBA) and Point Mugu RAPCON (NTD) when they are respectively offline.

2-1-2. SECTORS NORMALLY COMBINED
a. Area A combines on Sector 25.
   i. Sector 26 combines on Sector 25
   ii. Sector 28 combined on Sector 25
b. Normal area configurations:
   i. **Area A -** Sector 25 (25, 26, 28)
   ii. **Area B** - Sector 38 (27, 38)
   iii. **Area C** - Sector 39 (37, 39, 60, 40)
   iv. **Area D** - Sector 16 (16, 34, 54)
   v. **Area E** - Sector 30 (30, 31)
   vi. **Area F** - Sector 35 (35, 53)
   vii. **Combined** - Sector 25 (Areas A, B, C, D, E, F)

Area A Section 2
Sector 25

Vertical Limits - Surface to unlimited except:

SHELF	ALTITUDES
25/30	Surface-FL280

2-2-1. NARRATIVE AND CONFLICT POINTS

Sector 25 is a narrow sector with a traffic flow that is mostly northwest bound departing from KLAX and other Southern California airports. Southeast bound traffic includes aircraft on the PCIFC STAR landing KSNA or KLGB, aircraft on the Offshore Route landing KSAN and Asia traffic landing KLAX. Sector 25 may also occasionally work KSBA or KNTD arrival traffic. Aircraft routed MCKEY LAX could be in conflict with aircraft climbing northwest bound. Sector 25 must always be aware of the flow restrictions to the San Francisco Bay Area airports and do as much as possible to help sequence these aircraft.

Sector 25 is surrounded by ZLA Sectors 26 and 28, Area E Sector 30, and ZOA Sectors 11, 13, 14.

Sector 25 assumes responsibility for both the SBA and NTD TRACONS when either or both are offline.

2-2-2. FREQUENCY INFORMATION

Sector 25 operates on 126.525 and has radio transceivers located in the vicinity of Santa Barbara and San Luis Obispo.

2-2-3. UNIQUE SECTOR EQUIPMENT CONFIGURATION

a. Altimeter Stations: PRB, SBP, VBG, SMX, SBA, BUR, LAX, NTD, OXR, SBA, CMA
b. Selected Codes: 1200, 1202, 1255, 1277, 4000
c. Map: ZLAA or ZLAWEST/ZLAEAST
    i. HIGH SECTORS
    ii. Minimum Range: 100

2-3-4. SECTOR SPECIFIC DIRECTIVES

The following list contains information specific to Sector 25 as it relates to its neighboring sectors. Information is grouped by Area.

a. <u>Area A</u>
    i. **Sector 26**
        1. Sector 26 has control for right turns on all aircraft at or above FL240 from Sector 25.
        2. Sector 25 has control on all aircraft pointed out to Sector 26 for turns back to LAX.
        3. Sector 25 has control for descent to FL250 from Sector 26 on all KSAN arrivals when KSAN is east or 9/27 operations.
    ii. **Sector 28**
        1. When KLAX is West, oceanic arrivals must be routed as follows:
            a. KLAX RNAV aircraft via RYDRR/BAYST/HUULL STAR and, traffic permitting, issued a descend via clearance.
            b. KLAX non-RNAV aircraft and all other oceanic arrivals from the west landing KBUR, KVNY, or KSMO must enter Sector 25's airspace level at FL190, if not issued a descend via clearance.

2. KSNA/KLGB arrivals:
    a. RNAV aircraft must be routed via the BAUBB/TILLT STAR and, traffic permitting, issued a descend via clearance.
    b. Non-RNAV aircraft must be routed via the SXC transition of the COAST/OFFSH SID then direct SLI, direct destination.
3. KCRQ/KNFG/KOKB arrivals:
    a. RNAV aircraft must be routed via the LEGOZ STAR.
    b. Non-RNAV aircraft, and all aircraft landing KOKB via SXC V208 OCN, direct destination.
4. Sector 25 has control on all aircraft at or below FL250 from Sector 28.
5. Sector 28 has control from for vectors from Sector 25 for aircraft routed via FICKY, FOOTS, DINTY, AUDIA, GALIP, or KL18E. This includes aircraft assigned a heading but routed via the previously mentioned fixes.

b. Area E

i. **General**

1. Aircraft filed into Sector 25 airspace must be cleared on/over the following routes/points (excluding NTD/OXR/CMA arrivals):
    a. Aircraft filed AOA FL240:
        i. RNAV departures: on the SID or direct IKAYE
        ii. Non-RNAV departures:
            1. via ..RZS or ..IKAYE
        iii. All overflights:
            1. via ..RZS or ..IKAYE
    b. Aircraft filed AOB FL230:
        i. via ..WEEZL..RZS
    c. All aircraft landing SBA:
        i. via ..WEEZL..KWANG
2. RNAV aircraft landing KCRQ/KNFG:
    a. Via LEGOZ STAR.
    b. Must be issued a descend via clearance, traffic permitting.
3. Non-RNAV aircraft landing KCRQ/KNFG and all aircraft landing KOKB:
    a. Via BENET SXC.
    b. Cross ten (10) NM northwest of SXC at 15,000

ii. **Sector 30**

1. Aircraft landing SAN, handed off from Sectors 25 or 26 to Sector 30, must be at least five (5) miles in trail, regardless of altitude.
2. Sector 30 has control from Sectors 25 and 26 for aircraft within a 35 NM radius of LAX landing KSAN, KSEE, KMYF, KNZY, KNKX, KSDM, and MMTJ for:
    a. Descent no lower than FL290
    b. Speed adjustments
3. Sector 30 has control from Sector 25 for turns to the east on all aircraft proceeding southbound over SXC AOA FL240.
4. Sector 25 has control from Sector 30 for:

a. Speed adjustments.
b. Turns to remain over or west of IKAYE
c. Climb to requested altitude, or lower, as reflected in the flight plan at handoff.

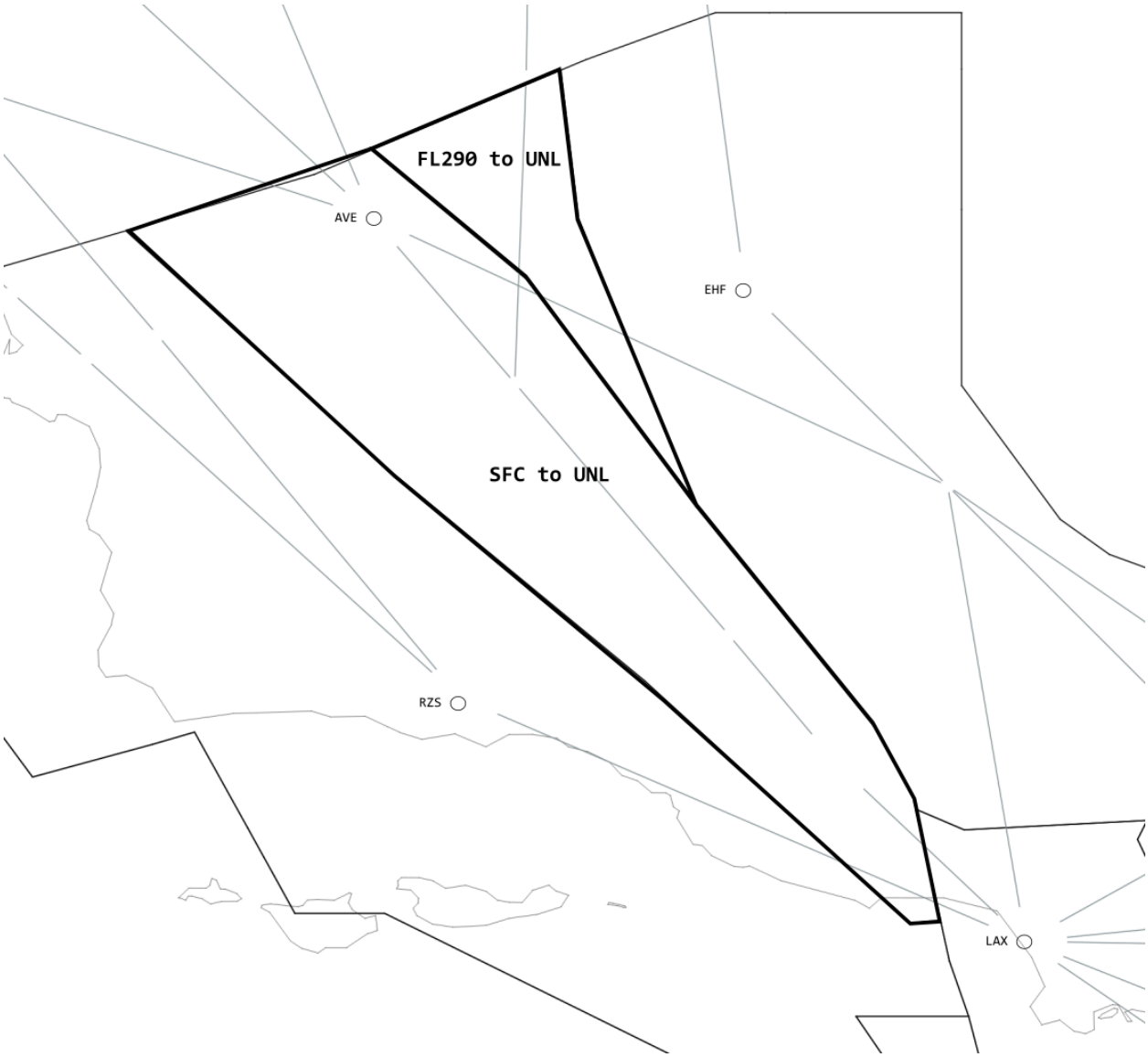
5. Aircraft landing SAN/NZY during east configuration (RWY09 or RWY09/27) must cross LAX at FL250.

2-3-5. SECTOR HANDOFF/POINT OUT PROCEDURES

For flow requirements to ZOA, Sector 26 shall initiate an automated point out to Sector 25 for aircraft landing KSFO and KSJC transiting their airspace. During high traffic volume or when deemed operationally necessary:

a. Sector 25 is the sequencing authority for KSFO and KSJC, and will make the determinations for sequencing requirements.
b. Sector 25 will request a RADAR handoff from Sector 26 when Sector 25 determines control actions are necessary to achieve the required sequencing. Sector 25 will have control for speeds and vectors west, not to exceed heading 240 and/or on course to ZOA. These aircraft must remain over or west of MAKRS intersection.
c. Acceptance of an automated point out by Sector 30 from Sector 25 constitutes approval to climb to filed altitude, or lower.

Area A Section 3
Sector 26



Vertical Limits - Surface to unlimited except:

SHELF	ALTITUDES
26/27	FL290 and above

2-3-1. NARRATIVE AND CONFLICT POINTS

Most of Sector 26's traffic is air carriers. It is the sequencing Sector for KVNY, KBUR, KLAX, KSNA and KLGB. Sector 26 also controls aircraft to KSFO and KSJC.

Sector 26 is a long funnel shaped sector, about 145 NM long and 55 NM wide at the north boundary. Sector 26 receives aircraft from ZOA Sectors 11, 13, 14, and 15. This can mean inverted stacks and/or no miles in trail. Sector 26 controllers should take care of this as soon as possible because the further south the aircraft get the less room you have to work.

2-3-2. FREQUENCY INFORMATION

Sector 26 operates on 135.3 and has transceivers in the vicinity of Lebec and Saddle Peak.

2-3-3. UNIQUE SECTOR EQUIPMENT CONFIGURATION

a. Altimeter Stations: BUR, LAX, NTD, OXR, SBA
b. Selected Codes: 1200, 1202, 1255, 1277, 4000
c. Map: ZLAA or ZLAWEST/ZLAEAST
    i. HIGH SECTORS
    ii. Minimum Range: 100

2-3-4. SECTOR SPECIFIC DIRECTIVES

The following list contains information specific to Sector 26 as it relates to its neighboring sectors. Information is grouped by Area.

a. <u>Area A</u>
    i. **Sector 25**
        1. Sector 25 is the sequencing authority for aircraft landing KCRQ, KNFG, and KOKB.
        2. RNAV aircraft landing KCRQ/KNFG:
            a. Must be routed via LEGOZ STAR.
            b. Must be issued a descend via clearance, traffic permitting.
        3. Non-RNAV aircraft landing KCRQ/KNFG and all aircraft landing KOKB:
            a. Must be routed via TANDY PAROL SXC
            b. Must be issued cross TANDY at 15,000’.
        4. Sector 26 is the sequencing authority in KLAX *west flow* for BUR Area Complex (KBUR, KVNY, and KSMO) J and M type aircraft.
        5. Sector 25 has sequence authority in KLAX *east flow* as follows:
            a. All aircraft entering the BUR Area Complex at 9,000’.
            b. KLAX arrival aircraft from over ZUUMA.
            c. COAST Complex (KLGB, KSNA, KTOA, and KSLI) J and M types from over TANDY.
        6. Sector 26 has sequence authority as follows:
            a. BUR Area Complex (KLAX west configuration) - P and Q type aircraft.
            b. KLAX - M, P and Q type aircraft.

7. Sector 26 has control for right turns above FL240 for all aircraft on a heading or course between 290 and 010 degrees.
8. Sector 25 has control on all aircraft pointed out to Sector 26 for turns back to LAX.
9. Sector 25 has control from Sector 26 for descent to FL250 on all KSAN arrivals when KSAN is East or RWY09/27 operations.

b. Area B

i. **General**

1. KSBA departures routed into Area B must be cleared no further direct than BOILE.

ii. **Sector 27**

1. Los Angeles Basin departure aircraft routed into Sector 26, not assigned a SID, must be routed via COREZ from Sector 27.
2. Sector 26 has control from Sector 27 on all KLAX, KBUR, KVNY, KLGB, KONT, and KSMO departures from turns to the west.
3. Sector 27 has control from Sector 26 on aircraft within the lateral confines of the Avenal shelf for:
    a. Turns to the east.
    b. Turns no further right than direct JLI.
    c. Speed adjustments.
4. Sector 26 has control from Sector 27 on aircraft west of J65 for:
    a. Turns up to 20 degrees left.
    b. Speed adjustments.
5. Sector 27/38 must ensure aircraft landing KSBP or KSMX, at or above FL240, are routed FIM RZS direct destination. Additional preferential routing may be issued.
6. Sector 27 must assign the following routes to RNAV aircraft departing KLAX, KBUR, KVNY, KONT and KSMO entering Sector 26:
    a. Aircraft landing KSFO must be routed:
        i. RNAV: via MAKRS SERFR and the SERFR STAR.
        ii. Non-RNAV: via MAKRS BSR and the BSR STAR.
    b. Aircraft landing KSJC must be routed:
        i. RNAV: via MAKRS TROXX and the SILCN STAR.
        ii. Non-RNAV: via MAKRS ROBIE and the ROBIE STAR.
    c. Sector 27 must assign the following routes/altitudes to aircraft landing KMRY and entering Sector 26:
        i. Via MAKRS.
        ii. AOB FL320, traffic permitting.
    d. Sector 27 must assign the following routes and altitudes to aircraft landing KSBA and entering Sector 26:
        i. RNAV: via the PITBL STAR to cross PYRIT at FL240
        ii. Non-RNAV: via FIM KWANG KSBA and must cross five (5) NM east of FIM at FL240.
        iii. Sector 27 must point out the data block no later than J50.

iv. Sector 26 is responsible to point out these aircraft to Sector 25.

e. Procedures for KLAX to KOAK during Noise Abatement Configuration:
   i. Sector 27 is the sequencing authority for KOAK jet arrivals.
   ii. Sector 26 must point out all KOAK traffic to Sector 27. Sector 27 must forward sequencing information to Sector 26 to ensure these aircraft are sequenced with all other KOAK jet arrivals.

iii. Area E

1. **Sector 30**
   a. Aircraft landing KSAN, handed off from Sectors 25 or 26 to Sector 30, must be at least five (5) miles in trail, regardless of altitude.
   b. Sector 30 has control for aircraft within 35 NM radius of LAX landing San Diego and Tijuana airports from Sectors 25 and 26 for:
      i. Descent no lower than FL290.
      ii. Speed adjustments.
      iii. Aircraft landing KSAN or KNZY during east (RWY09 or RWY09/27) configuration must cross LAX at FL250.

2-3-5. SECTOR HANDOFF/POINT OUT PROCEDURES

For flow requirements to ZOA, Sector 26 shall initiate a point out on aircraft landing KSFO and KSJC transiting their airspace to Sector 25. During high traffic volume or when deemed operationally necessary:

a. Sector 25 is the sequencing authority for KSFO and KSJC and will make the determinations for sequencing requirements.
b. Sector 25 will request a RADAR handoff from Sector 26 when Sector 25 determines control actions are necessary to achieve the required sequencing. Sector 25 will have control for speeds and vectors west, not to exceed heading 240 and/or on course to ZOA. These aircraft must remain over or west of MAKRS intersection.
c. Sector 26 and Sector 27 automated point out procedures:
   i. Aircraft landing KSBA:
      1. Sector 27 must point out the data block to Sector 26 no later than J50.
      2. Sector 27 may initiate the point out to Sector 26 with the data block reflecting the currently assigned altitude, and subsequently change the assigned altitude, without verbal coordination, until the aircraft is assigned FL240.
   ii. For aircraft landing in Area A's airspace, Sector 26 is responsible for subsequent point outs on aircraft from Sector 27.

Area A Section 4
Sector 28

Vertical Limits - Surface to unlimited except:

SHELF	ALTITUDES
ZOA Oceanic	FL240 and above

2-4-1. NARRATIVE AND CONFLICT POINTS

Sector 28 is Los Angeles Center's westernmost sector, lying entirely over the Pacific Ocean. Operations here differ from other sectors in that Sector 28 is concerned with transitioning aircraft between domestic radar control and the oceanic, non-radar environment. The sector is surrounded by ZLA Sectors 25 and 30, ZOA Sector 14 and ZOA Oceanic Sectors 03 and 04.

The controller coordinates closely with the Oakland Center oceanic sector controllers ensuring non-radar separation standards are maintained between aircraft transiting from the mainland to and from Hawaii, and various destinations in the South Pacific via the established oceanic tracks and random routes under their jurisdiction

2-4-2. FREQUENCY INFORMATION

Sector 28 operates on 132.15 and has radio transceivers in the vicinity of Santa Barbara.

2-4-3. UNIQUE SECTOR EQUIPMENT CONFIGURATION

a. Altimeter Stations: LAX
b. Selected Codes: 1200, 1202, 1255, 1277, 4000
c. Map: ZLAA or ZLAWEST/ZLAEAST
    i. HIGH SECTORS
    ii. Minimum Range: 200

2-4-4. SECTOR SPECIFIC DIRECTIVES

The following list contains information specific to Sector 28 as it relates to its neighboring sectors. Information is grouped by Area.

a. <u>Area A</u>
    i. **Sector 25**
        1. When KLAX is West, oceanic arrivals must be routed as follows:
            a. KLAX RNAV aircraft via RYDRR/BAYST/HUULL STAR and traffic permitting, issued a descend via clearance.
            b. KLAX non-RNAV aircraft and all other oceanic arrivals from the west landing KBUR, KVNY, or KSMO must enter Sector 25's airspace level at FL190, if not issued a descend via clearance.
        2. KSNA/KLGB arrivals:
            a. RNAV aircraft must be routed via the BAUBB/TILLT STAR and, traffic permitting, issued a descend via clearance.
            b. Non-RNAV aircraft must be routed via the SXC transition of the COAST/OFFSH SID then direct SLI, direct, destination.
        3. KCRQ/KNFG/KOKB arrivals:
            a. RNAV aircraft must be routed via the LEGOZ STAR.
            b. Non-RNAV aircraft, and all aircraft landing KOKB via SXC V208 OCN, direct destination.
        4. Sector 25 has control on all aircraft at or below FL250 from Sector 28.

5. Sector 28 has control from for vectors from Sector 25 for aircraft routed via FICKY, FOOTS, DINTY, AUDIA, GALIP, or KL18E. This includes aircraft assigned a heading but routed via the previously mentioned fixes.

b. Area B
   i. **General**
      1. Oceanic flights-any route change of oceanic flights must be approved in advance with Sector 28 from Area B.

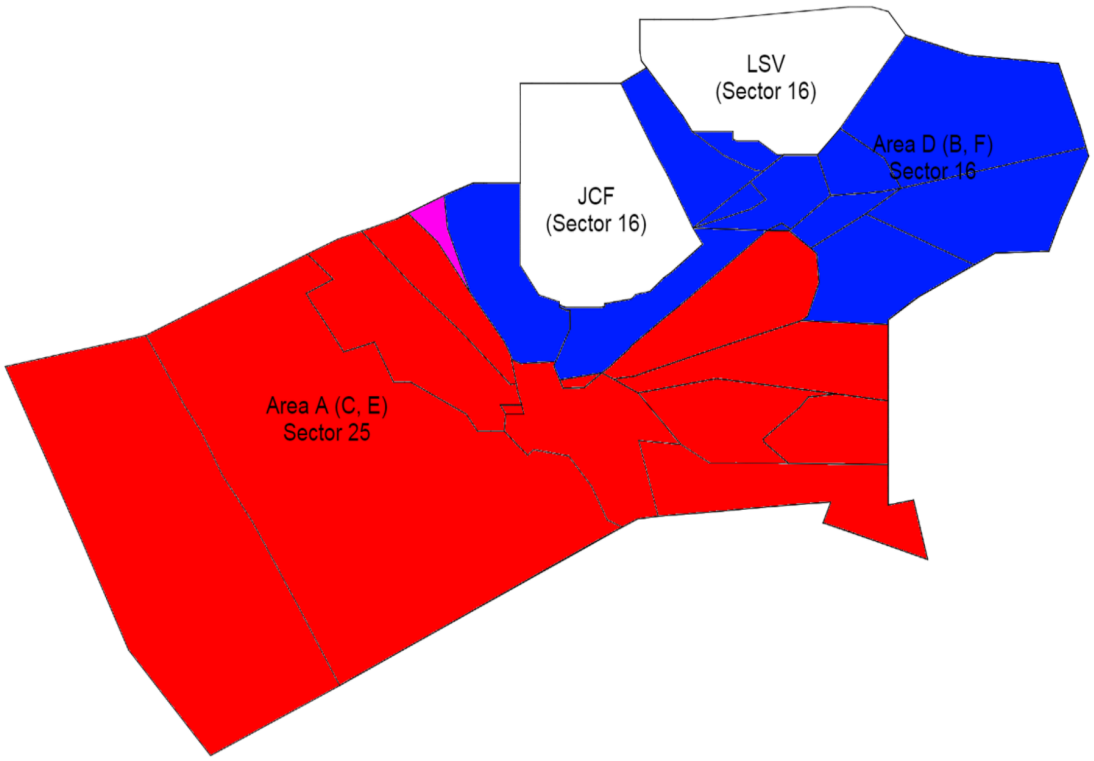
c. Area E
   i. **Sector 30**
      1. Aircraft landing KRIV must cross SXC at FL270.
      2. Sector 28 must clear aircraft landing San Diego Area (KSAN, KNZY, KNKX, KMYF, KSEE, KSDM) direct SXC and:
         a. During KSAN West (normal) configuration, cross SXC at FL270.
         b. During KSAN East (RWY09 or RWY09/27) configuration, cross SXC at FL250.
         c. Sector 30 has control 20 NM west of SXC from Sector 28 for:
            i. Speed adjustments.
            ii. Descent.

APPENDIX A. STANDARD SECTOR COMBINATIONS

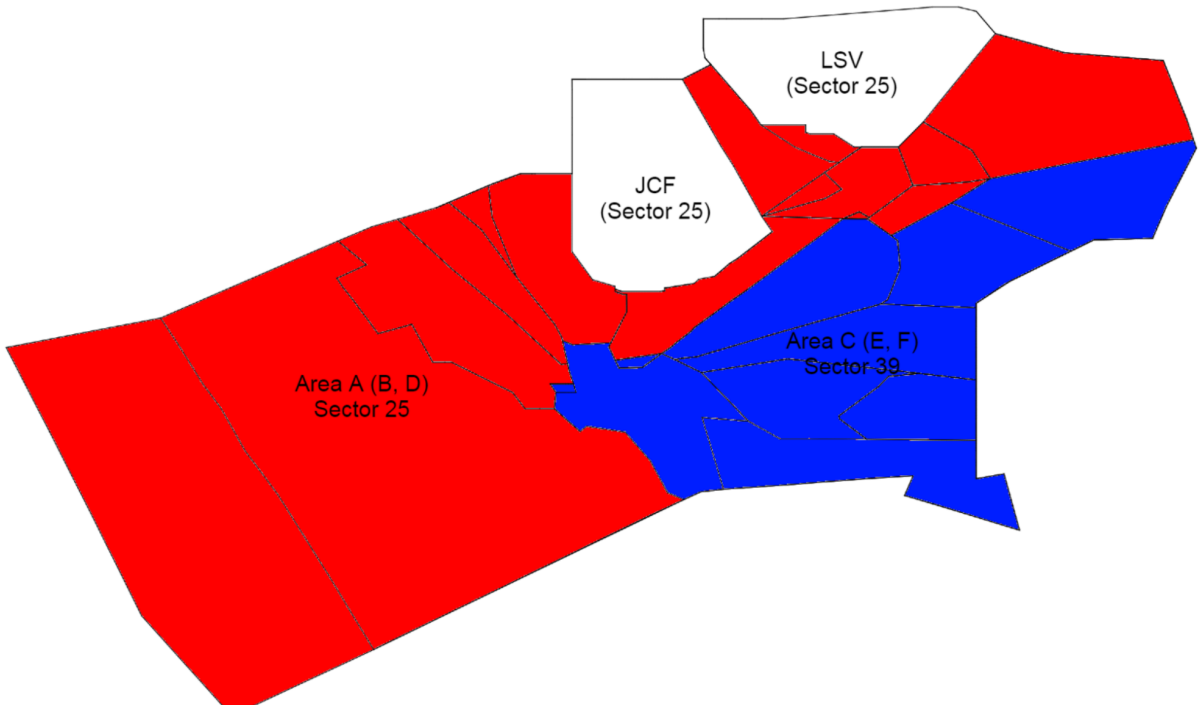
The following airspace configurations shall be implemented and advertised to neighboring facilities unless not operationally advantageous. In the event a configuration is not operationally advantageous, controllers may adopt a nonstandard split and shall make their best effort to communicate the nonstandard split to neighboring facilities. This includes, but is not limited to ATC chat messages, controller remarks, and Discord announcements.

When center splits are in use, controllers shall, to the best of their ability, use the defined combined area's sector as their primary position. When consolidating positions after any positions are split off, controllers shall consolidate individual sectors into their respective areas in accordance with that area's SOP. Areas and standard splits shall be consolidated East to West to the extent possible, with all positions eventually consolidating on Area A.

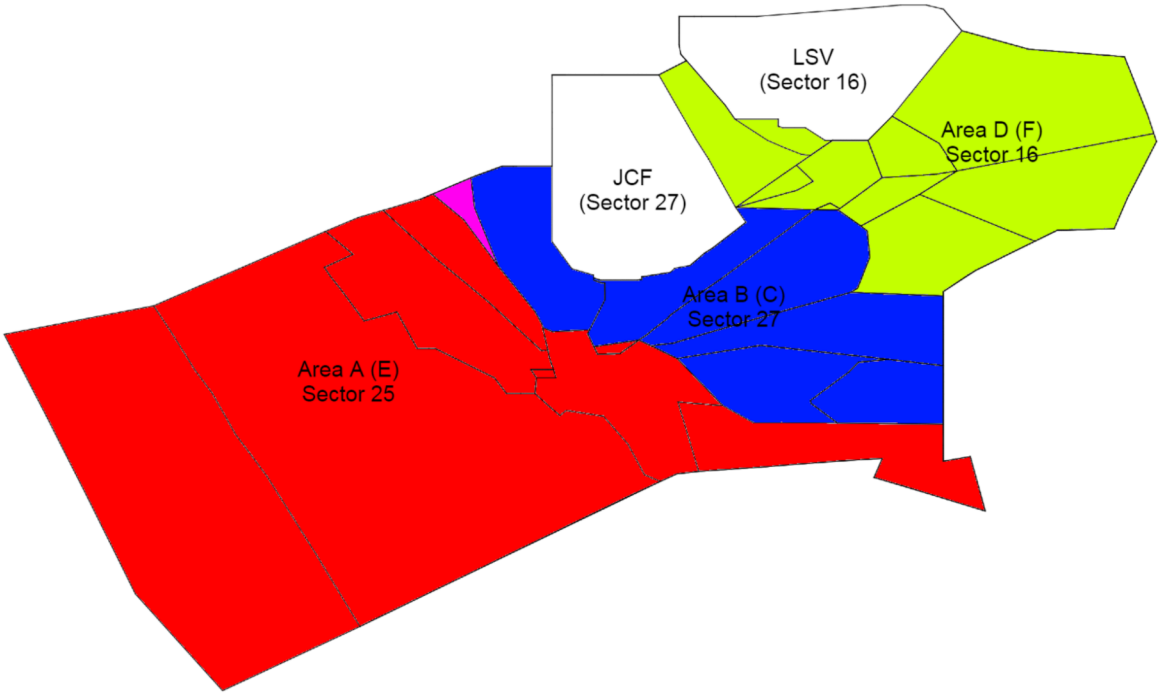
Desert Split



Canyon Split



J65 Split



Gambler Split