Air Traffic 101

Burbank Airport (BUR)

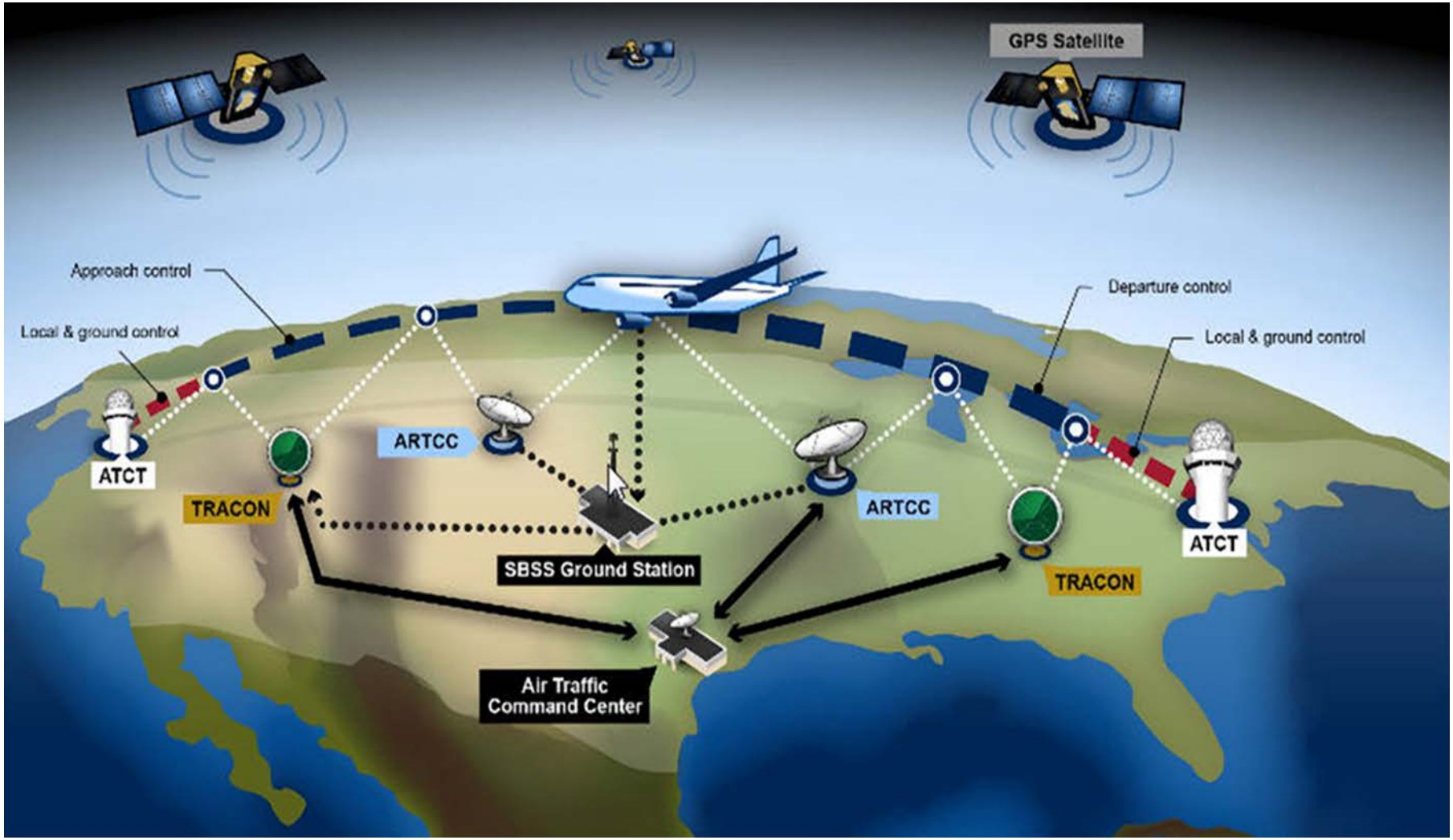
Presented to: San Fernando Valley Task Force

By: John Nelson, District Manager for Operations

Date: Wednesday, December 4, 2019

Federal Aviation Administration

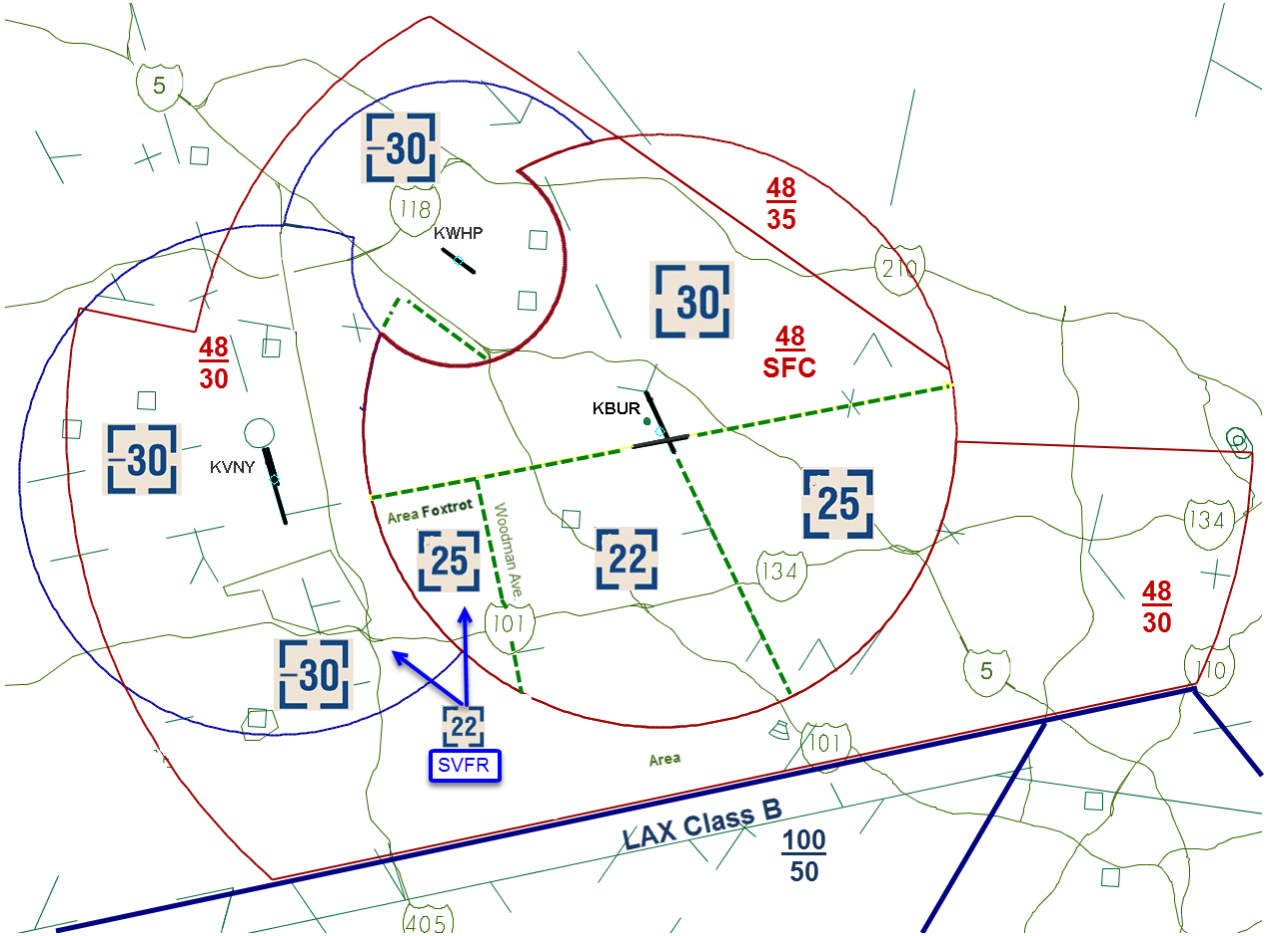
Air Traffic Control - Gate to Gate



Airspace Designations

- CLASS A − Unless otherwise authorized, all persons must operate their aircraft under IFR (ZLA ARTCC).
- CLASS B − Generally up to 10,000’ surrounding the nation’s busiest airports. Aircraft must have a transponder and receive ATC clearance (LAX).
- CLASS C − Generally up to 4000’ surrounding those airports that have a certain number of IFR operations or passenger enplanements. Aircraft must have a transponder and receive ATC clearance (BUR; SNA; ONT).
- CLASS D − Generally up to 2,500’ surrounding other airports that have an operational control tower. Establish 2-Way radio communication (VNY; WHP; EMT).
- CLASS E – Other controller airspace.
- **Airspace can be tailored to fit needs of the area.**

Burbank Tower Airspace



Airport Configuration

- **Runway Selection**
  - Wind – Normally out of the east/southeast at approx. 7 Knots
  - Terrain – High terrain to the north and east
  - Instrument Procedures – Only Runway 8 for arrivals
  - Other Airports – VNY and WHP

- **BUR Configuration**
  - Arrivals to Runway 8
  - Departure from Runway 15

BUR - Runway 33 Departures

- **Uphill and with the wind;**
- **Because of WHP, lacks same airspace protections;**
- **Opposite direction to VNY and WHP traffic flows;**
- **Because of airport layout, most departures must back taxi on the runway;**
- **Significant increase to controller workload.**

Airport/Airspace Capacity

- **FAA Airport Capacity (IFR) – BUR**
  - Fleet Mix, Runway Configuration; Runway Occupancy Time;
  - Hourly Arrive Rate 32 (low visibility) to 36
  - Hourly Departure Rate 32 (low visibility) to 36
- **Airspace Capacity**
  - Airspace Complexity
    - Terrain
    - Volume and Tasks
  - Number of ATC positions open

Airport Traffic Control Tower (ATCT - “Tower”)

- **Prior to departure, the airline/pilot will file a flight plan. Items evaluated to determine which route to fly are:**
  - Fuel
  - Traffic Patterns
  - Weather
  - Required Routes

- **Once the aircrew is ready to depart, they will contact the Tower.**
  - Clearance Delivery
  - Ground Control
  - Local Control

Burbank Tower

Terminal RADAR Approach Control (TRACON)

- **Once the flight is airborne, the tower controller will turn communications and control of the flight over to Southern California TRACON (SCT) controller.**
- **SCT is located in San Diego, and handles flights throughout Southern California up to 23,000 feet.**
- **SCT is the busiest TRACON in the world.**

SCT Traffic Count

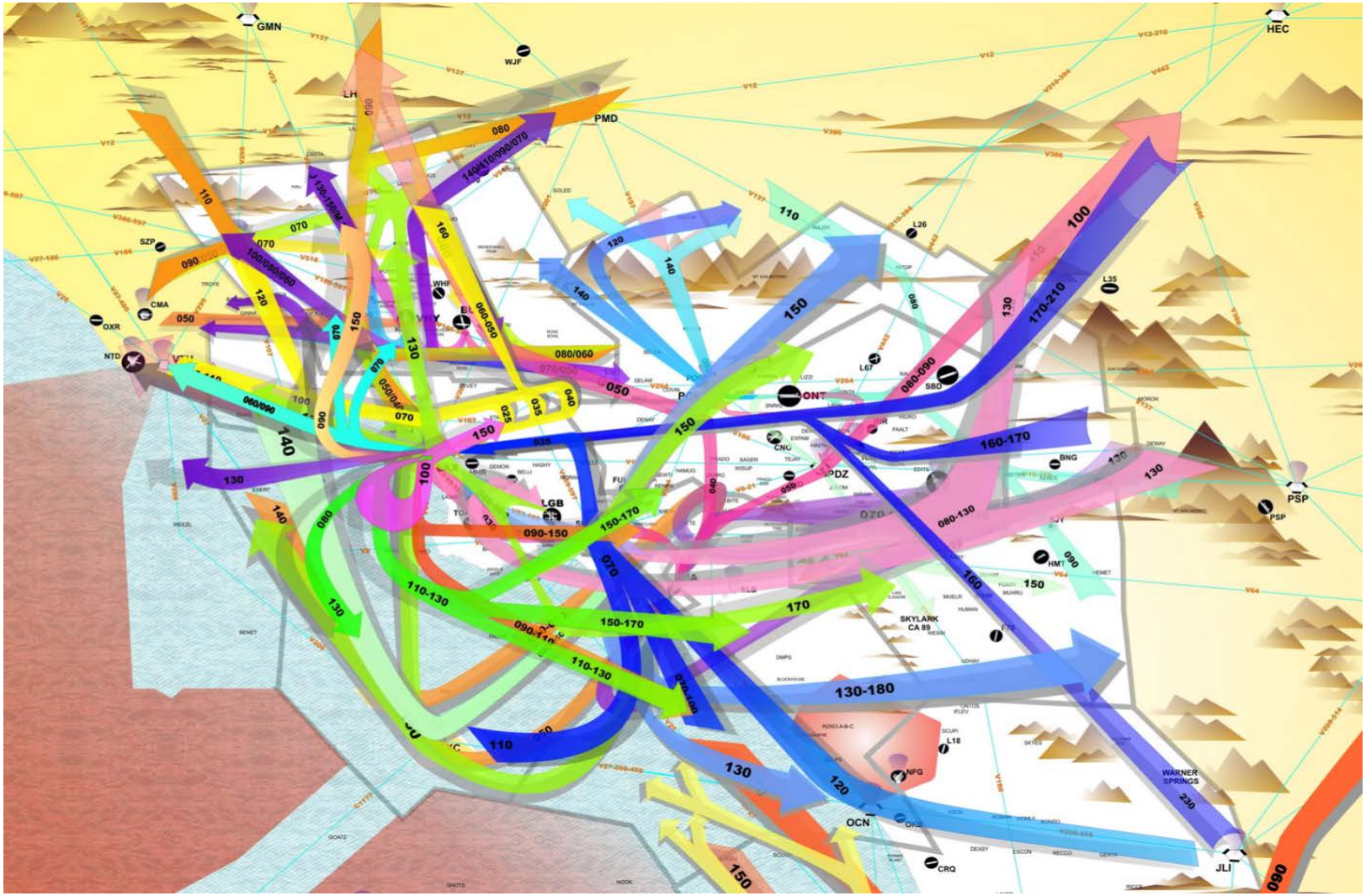
November 22, 2019

Top 7 TRACONs

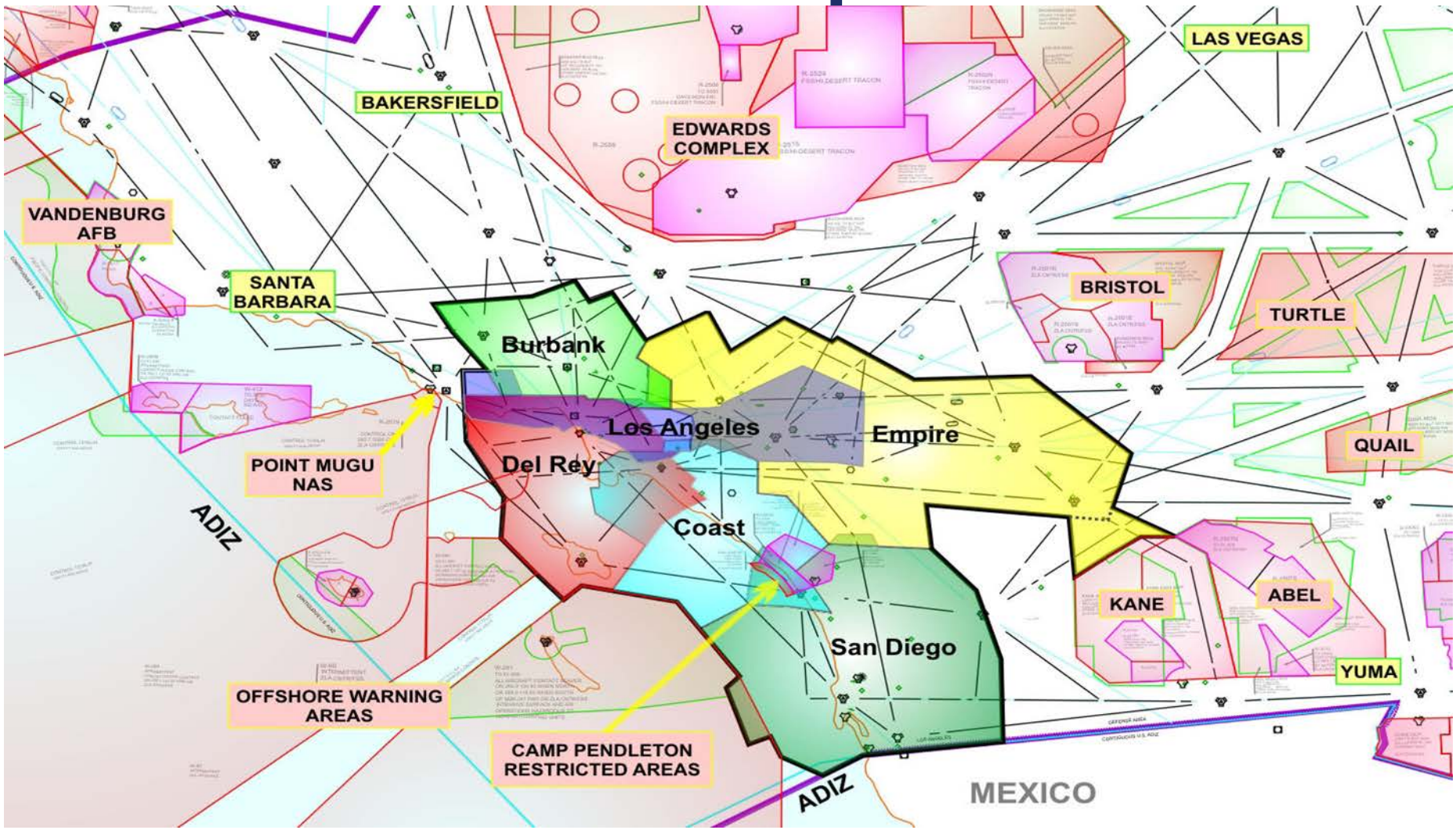
Facility	Operations			Delays		
	Total	% Var from Baseline	OPSNET Total	% of Ops	TMI To	AH
Total	33824	9.42	2	0.01	2	0
SCT	7406	18.21	0	0.00	0	0
NCT	5486	18.13	0	0.00	0	0
N90	5400	(2.6)	1	0.02	1	0
PCT	4031	2.47	0	0.00	0	0
C90	3998	12.21	0	0.00	0	0
A80	3815	11.84	0	0.00	0	0
D10	3688	3.86	1	0.03	1	0

FY2018 – 2,256,970 operations, the most since 2001.

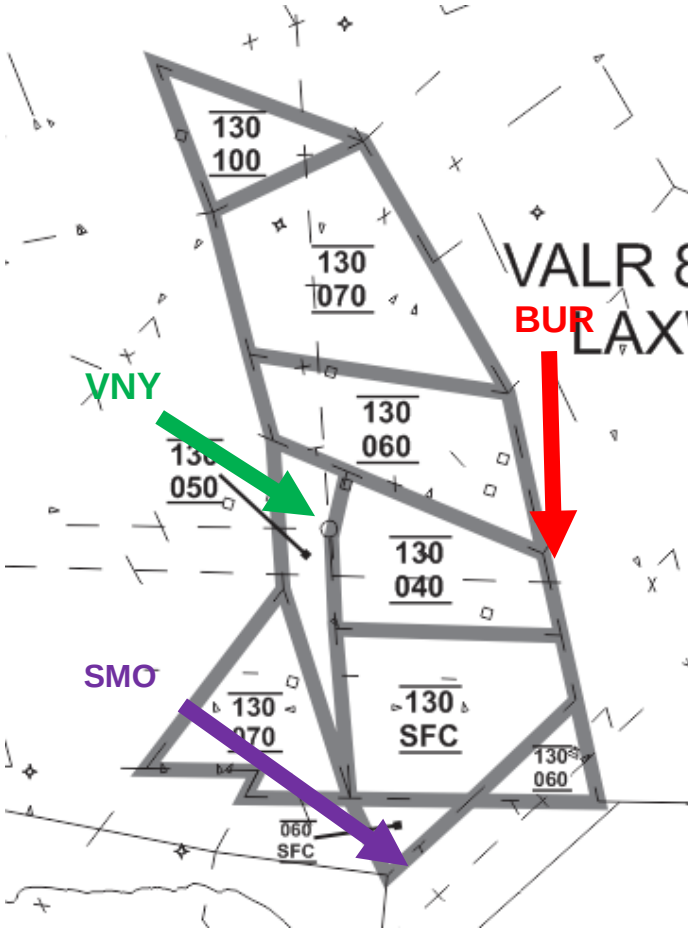
SCT Traffic Flows



SCT Airspace



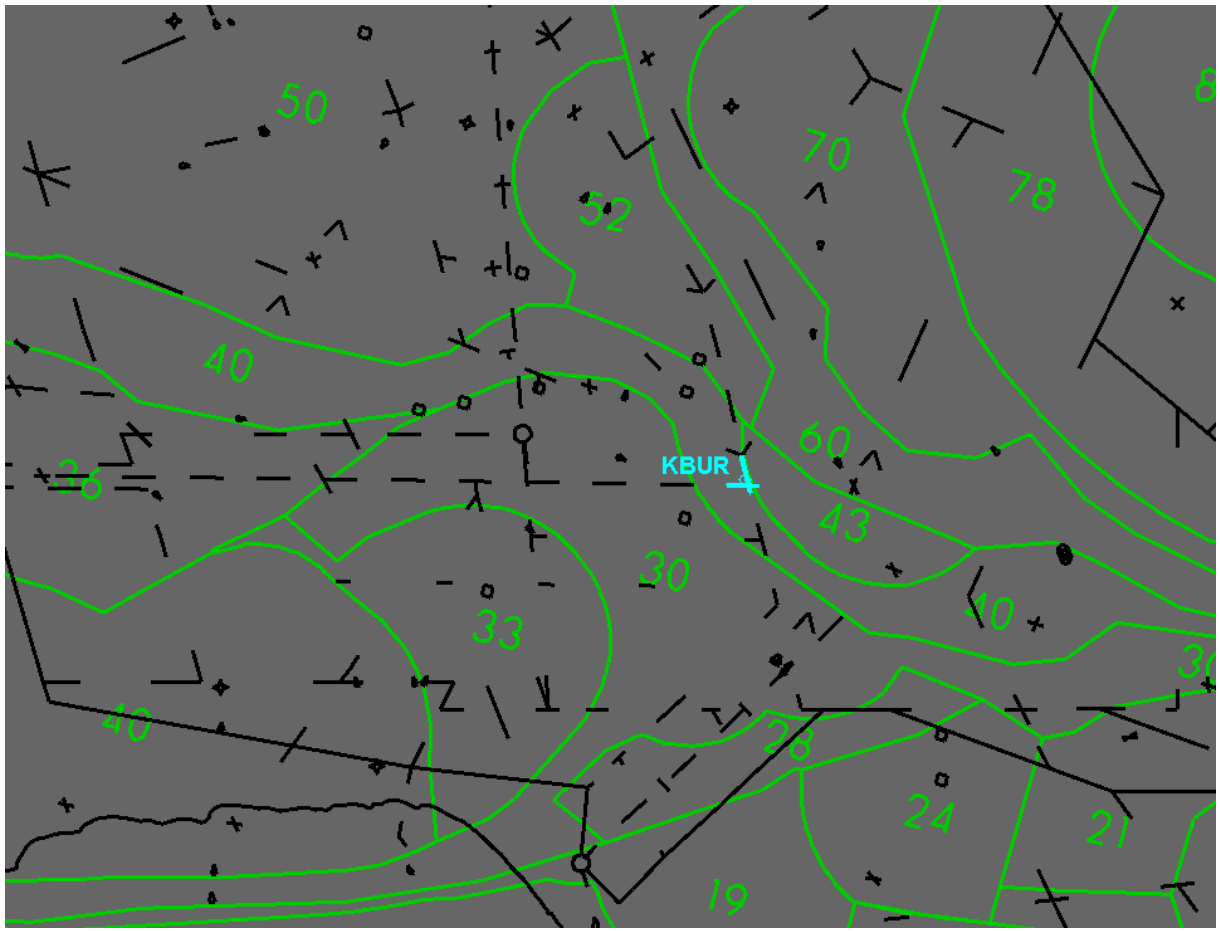
SCT - Valley RADAR Sector



BUR Area has six sectors: Fillmore; Woodland; Moorpark; **Valley**; Glendale; and Pasadena.

- **BUR Runway 15 Departures**
- **VNY Runway 16 Southeast Bound Departures**
  - **60% of VNY Departures**
- **Initial Sequencing Sector for BUR and VNY Arrivals from the North**
- **SMO Arrivals**
- **Eastbound IFR Overflights up to 13,000 feet**
- **Westbound IFR Overflights up to 13,000 feet**
- **All VFR traffic in Class C Airspace**

Minimum Vectoring Altitude (MVA)



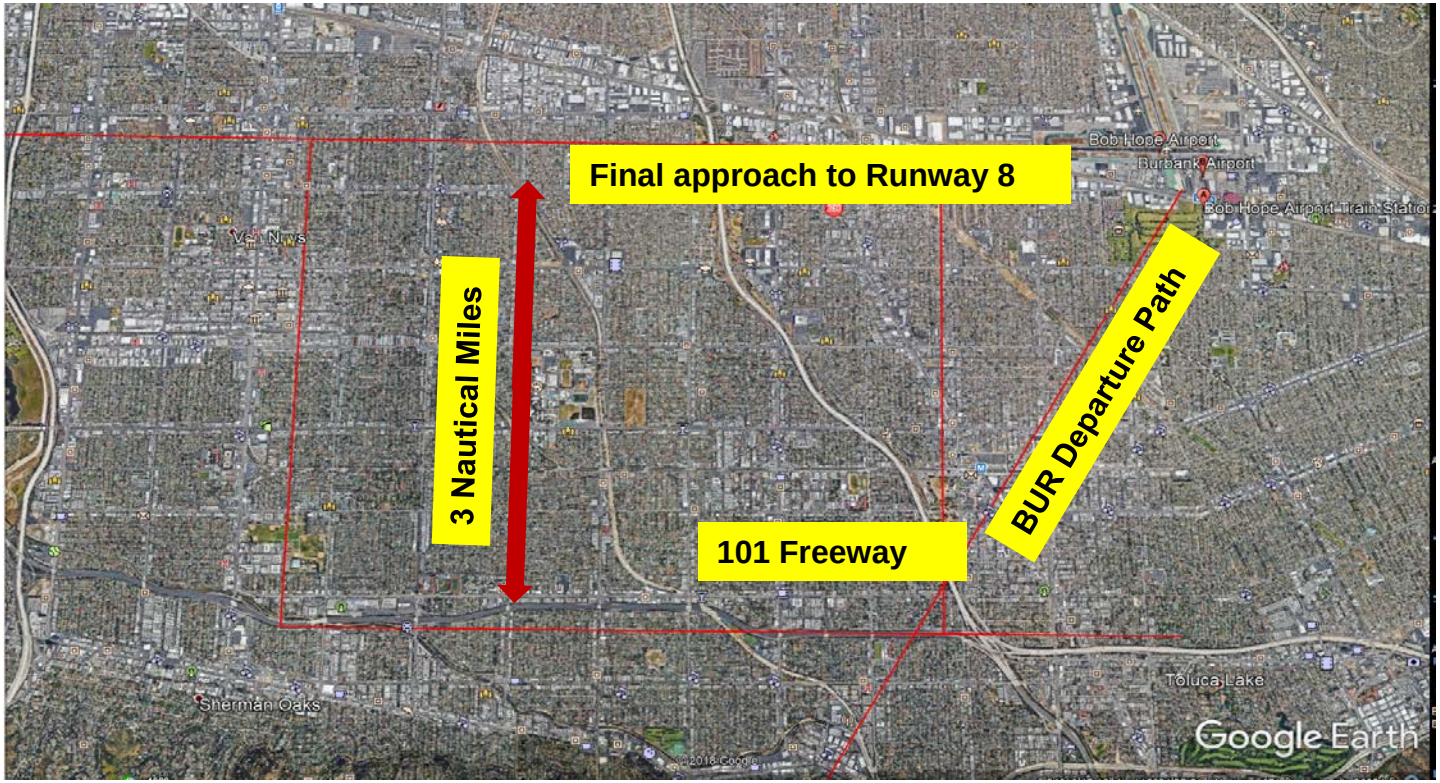
Burbank Airport field elevation – 778 ft. above sea level.

Aircraft turn to a heading of 210 immediately after departure.

Generally, departures must be above the MVA before being vectored.

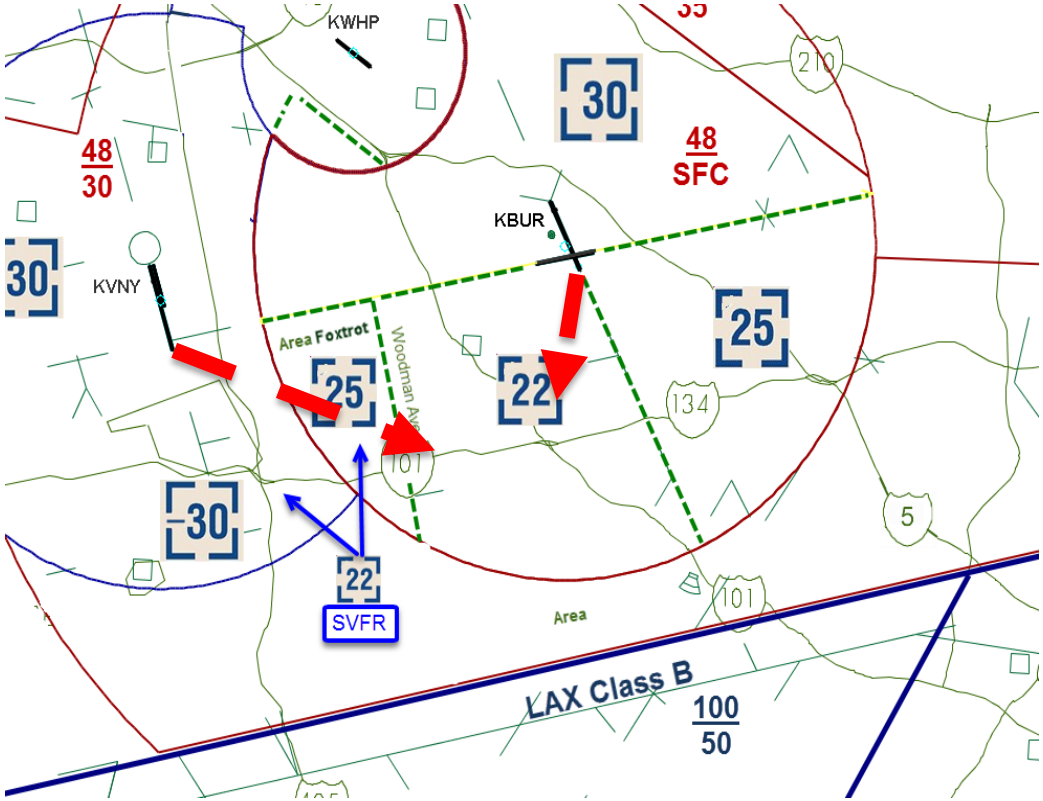
Generally these altitudes are 1000 feet above the terrain.

Air Traffic Separation Requirements



- The vast majority of BUR Runway 15 departures must, for safety reasons, fly south of the 101 Freeway before turning west. This has been the case for decades.
- FAA rules require aircraft to be at least three nautical miles apart in the airspace around airports.
- The final approach from the west to BUR Runway 8 is three miles north of the 101 Freeway.
- Therefore, departing aircraft generally must fly south of the 101 Freeway before turning west to remain at least 3 miles away from the BUR Runway 8 arrivals.

BUR vs VNY - Departures



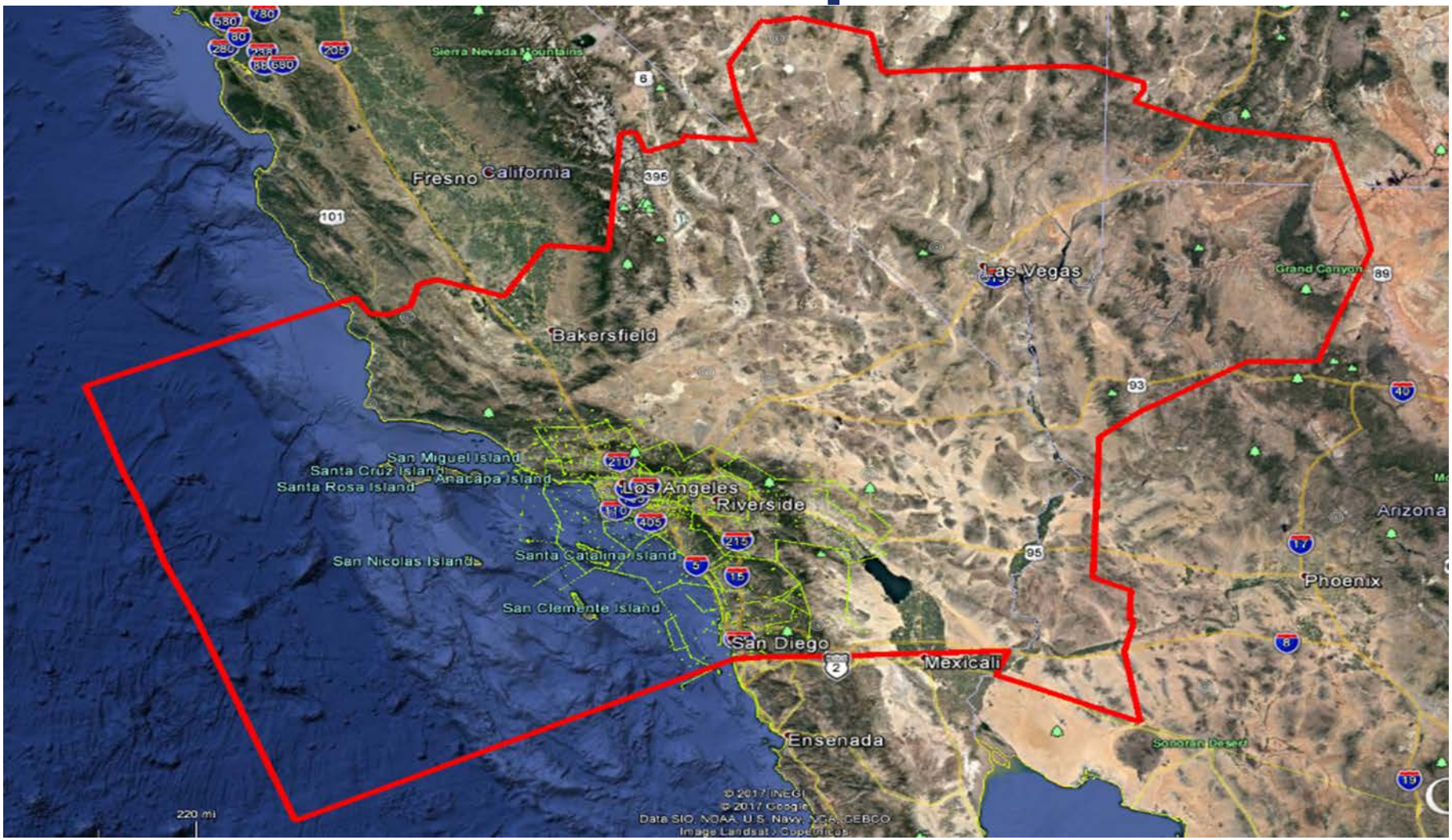
Generally, BUR Runway 15 departures and VNY Runway 16 departures cannot operate simultaneously , they must be staggered.

Air Route Traffic Control Center (ARTCC – “Center”)

- **When the flight climbs out of the vertical limits of SCT’s airspace, communications transfer to Los Angeles Center (ZLA) located in Palmdale, California.**

- **During all stages of flight, controllers will ensure the flight is clear of any other aircraft and known bad weather.**

ZLA Airspace



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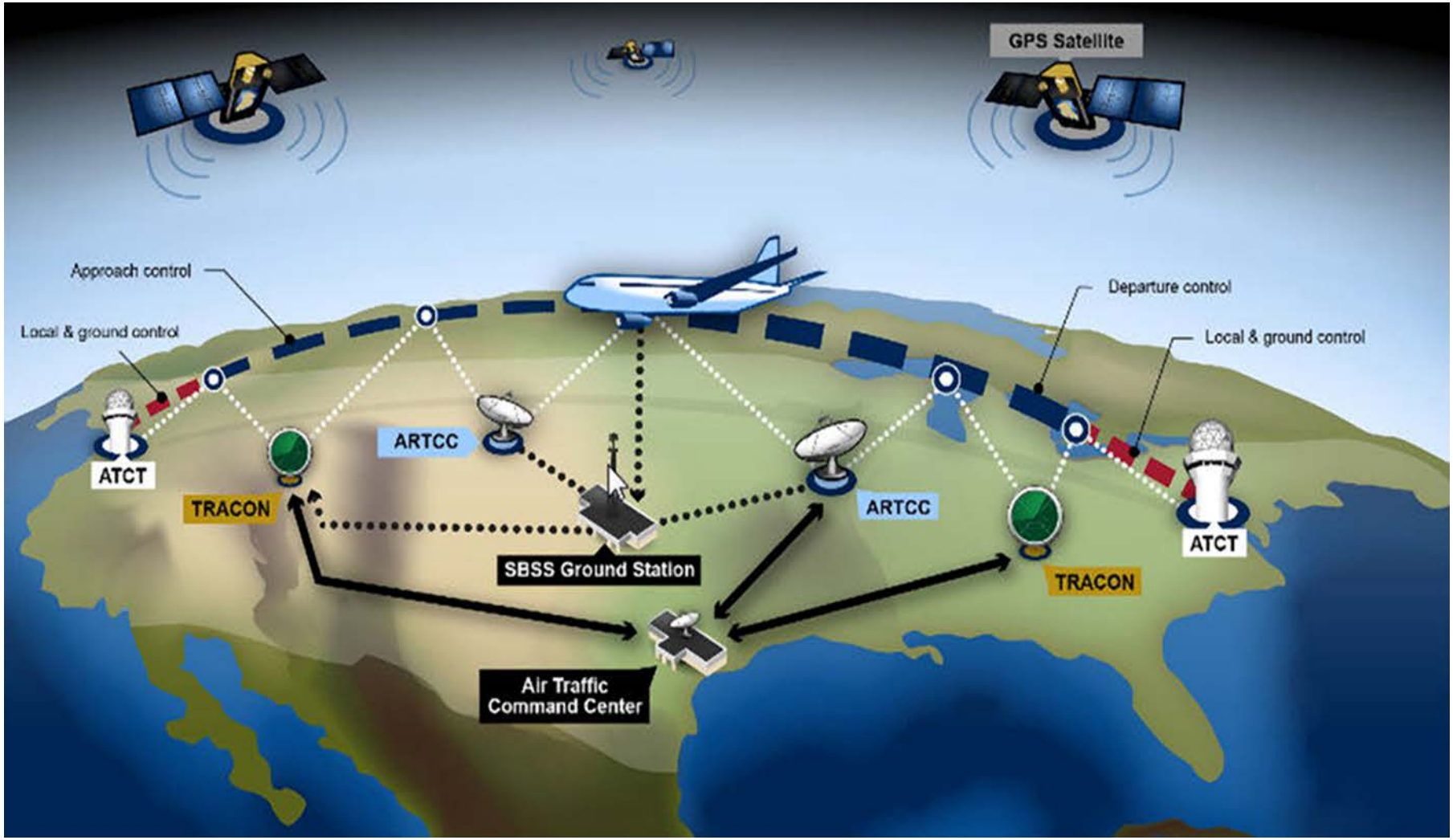

Questions?