

WELCOME

PUBLIC WORKSHOP

Las Vegas Metroplex
(LAS METROPLEX)

DRAFT

ENVIRONMENTAL ASSESSMENT

December 9 – December 13

FEDERAL AVIATION ADMINISTRATION

LAS METROPLEX EA

DRAFT ENVIRONMENTAL ASSESSMENT



LAS METROPLEX OVERVIEW

The FAA is preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act and FAA Order 1050.1F to document the potential environmental effects associated with the optimization of aircraft routes and the supporting airspace management structure serving aircraft operating under instrument flight rules (IFR) while departing from or arriving to the Las Vegas Metroplex area.

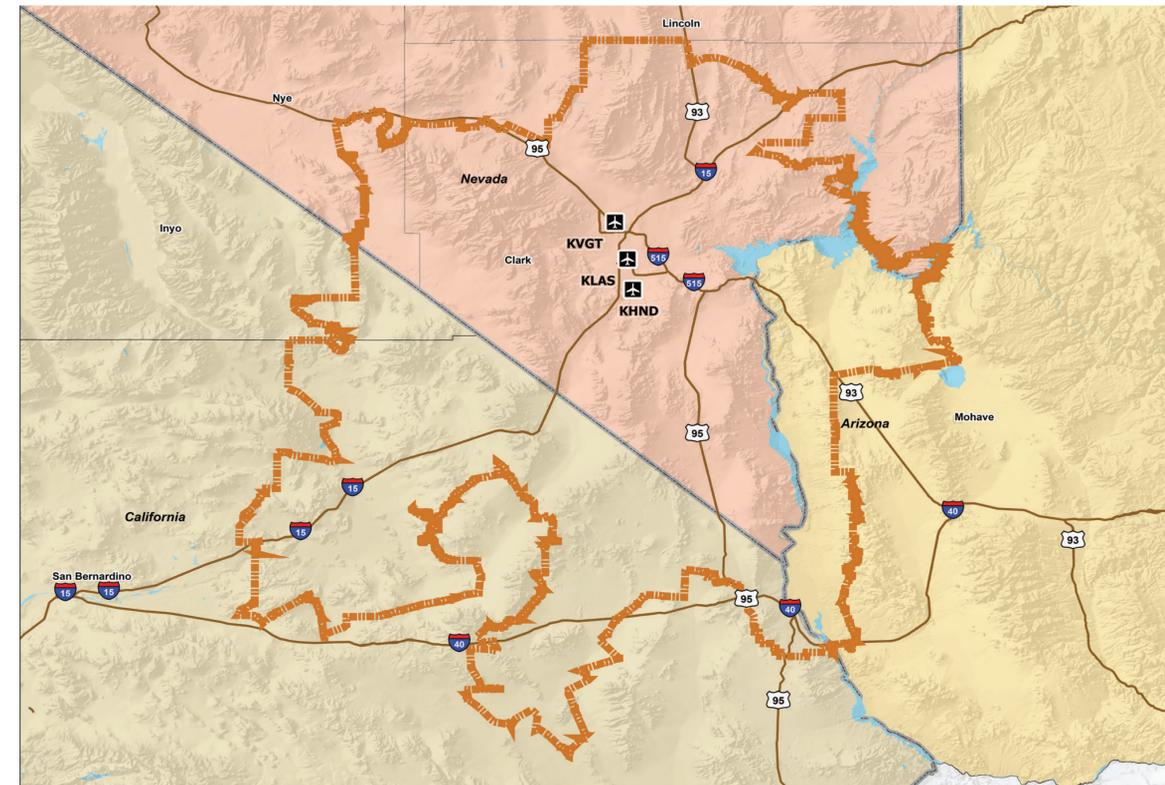
The project is referred to as the **LAS Metroplex Project**.

The LAS Metroplex Project would improve the efficiency of airspace in the Las Vegas Metroplex by optimizing aircraft arrival and departure procedures at the following Major Study Airport:

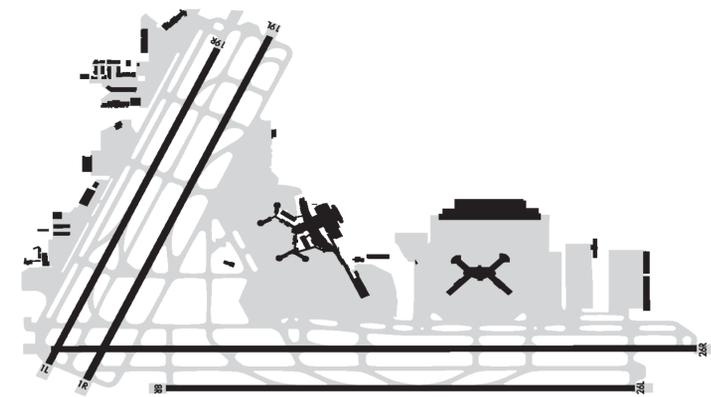
- McCarran International Airport (KLAS)

and also including the following satellite Study Airports:

- Henderson Executive Airport (KHND)
- North Las Vegas Airport (KVG T)



Major Study Airport
Runway Configuration





PURPOSE AND NEED

The purpose of the Proposed Action is to take further advantage of the benefits offered by Performance Based Navigation by improving and implementing satellite based procedures that will help increase the efficiency of the Las Vegas Metroplex airspace.

THE NEED

Current arrival and departure procedures to LAS Metroplex Study Airports are related to inefficient lateral and vertical paths, conflicts with departure traffic, and underutilized en route transitions.

Lack of procedural flexibility limits air traffic controllers' ability to adapt to often changing traffic demands. For example, constraints associated with SUA, delays in other regions, or severe weather along an air traffic route may cause aircraft to enter or exit the en route or terminal area airspace at times and locations other than those previously planned. Controllers require options to manage traffic when faced with these kinds of demands. Additional en route transitions can reduce the need for the vectoring needed to maintain separation between aircraft. Additional transitions can also provide additional options to better balance traffic and controller workload.

The separation between arrival and departure flight routes (e.g., lateral separation between two routes or vertical separation between crossing routes) does not allow for efficient airspace use. This requires that controllers carefully observe aircraft activity along proximate or crossing flight routes and be prepared to provide air traffic services to ensure standard separation is maintained. For example, where arrival and departure flight routes intersect, flight level-offs may be required for either arrivals or departures to ensure adequate vertical separation between aircraft. In some cases, arriving and departing aircraft on nearby flight routes may need to be vectored to ensure safe lateral separation. In other cases, controllers may need to issue point-outs.

Airports with a significant volume of Instrument Flight Rules aircraft need arrival and departure ATC procedures to help achieve optimal airspace efficiency. Arrival and departure ATC procedures establish consistent flight routes, which help maintain a predictable flow of aircraft to and from an airport. Runway transitions are encoded to the procedure so that predictable, defined routes enable pilots and controllers to know ahead of time how, where, and when an aircraft should be operated. This allows for better planning of airspace use and aircraft control within a given volume of airspace. A predictable route may include expected locations (i.e., where), altitudes (i.e., where and how high), and speeds (i.e., how fast and when) at key points. Aircraft performance and/or piloting technique can vary and may be a factor in reducing predictability. Because conventional ATC procedures are less predictable than RNAV ATC procedures, controllers use vectoring and verbal instructions governing speed, runway transitions, and altitude level-offs to ensure standard separation between aircraft.

LAS METROPLEX

Improves upon existing Performance Based Navigation by enhancing and redesigning RNAV procedures that will help improve the efficiency of the LAS Metroplex airspace.

The LAS Metroplex Project would increase the number of available transitions and increase the number of RNAV arrival and departure ATC procedures.

The LAS Metroplex Project would segregate arrival and departure traffic.

The LAS Metroplex Project would increase the number of RNAV ATC procedures with altitude controls intended to optimize descent or climb patterns.

WHAT IS THE LAS METROPLEX?

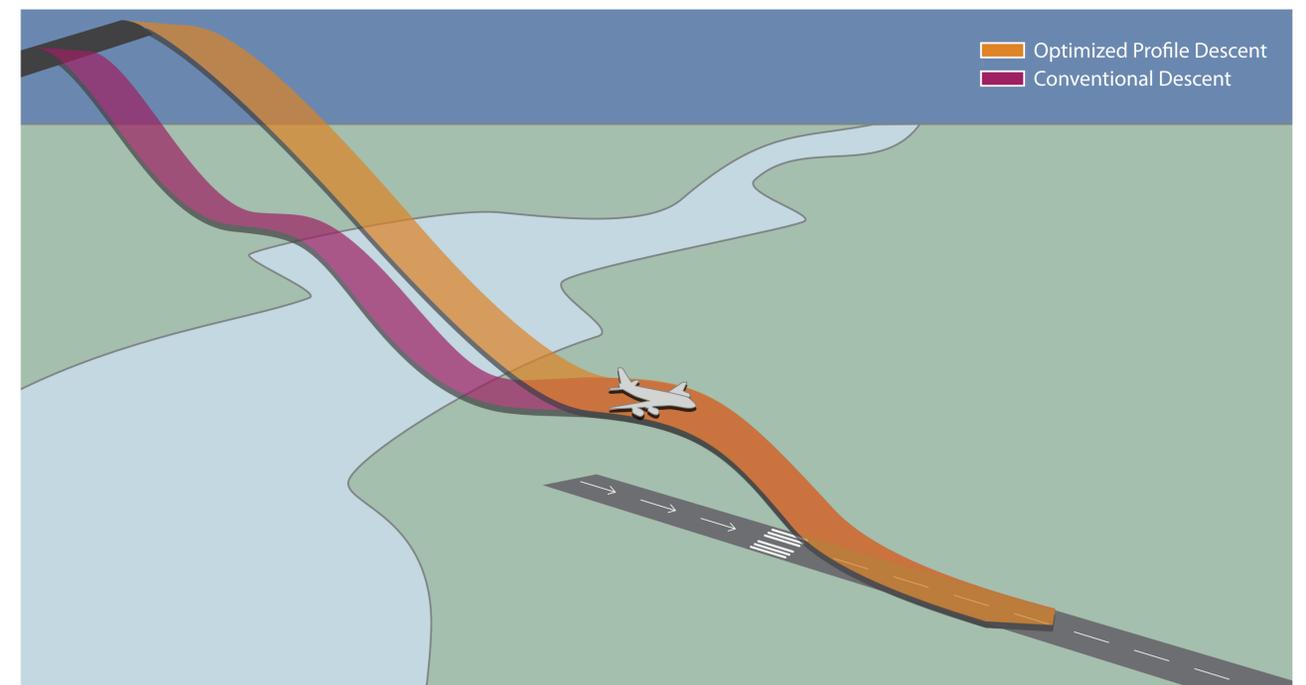
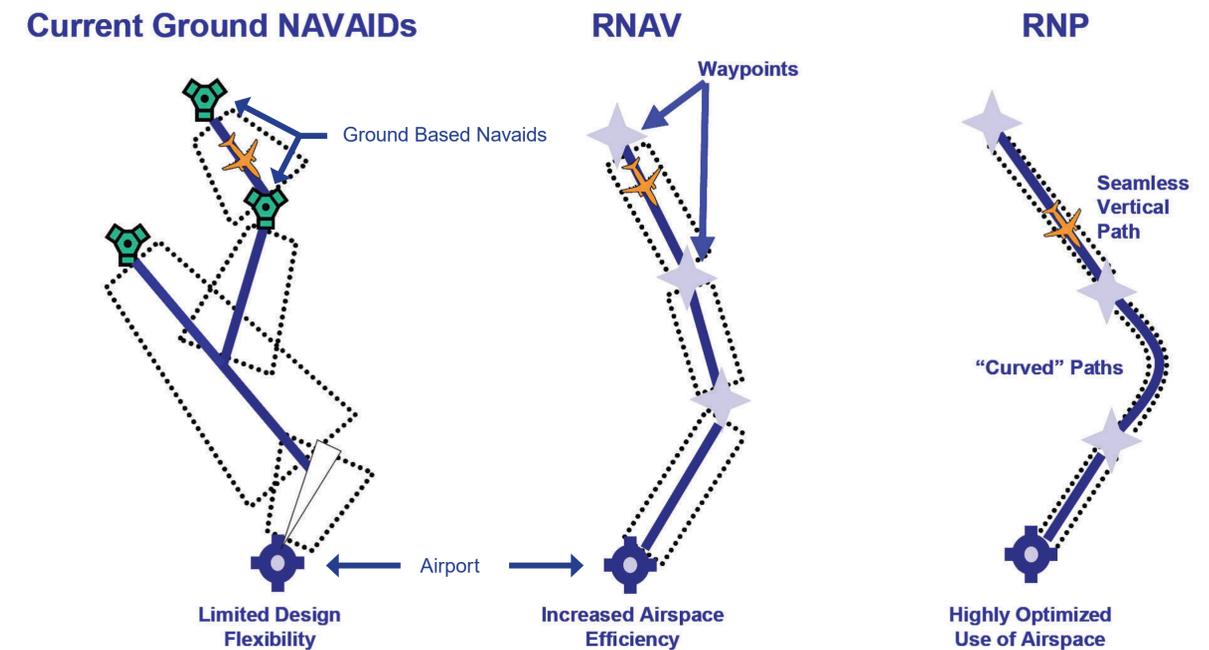
The FAA proposes to implement arrival and departure instrument procedures that use Performance-Based Navigation, such as Area Navigation (RNAV) and Required Navigation Performance (RNP)

RNAV is a method of air navigation that permits aircraft to operate on any desired course within a network of ground- and/or satellite-based navigational aids (NAVAIDs)

RNP is a type of RNAV that includes a required on-board performance monitoring and alerting specification.

“ The LAS Metroplex Project would improve the efficiency of airspace in the Las Vegas Metroplex by optimizing aircraft arrival and departure routes to and from the Study Airports ”

The Proposed Action Alternative does not require any ground disturbance or increase the number of aircraft operations within the Las Vegas Metroplex airspace.



NEED FOR PROJECT – EXAMPLES

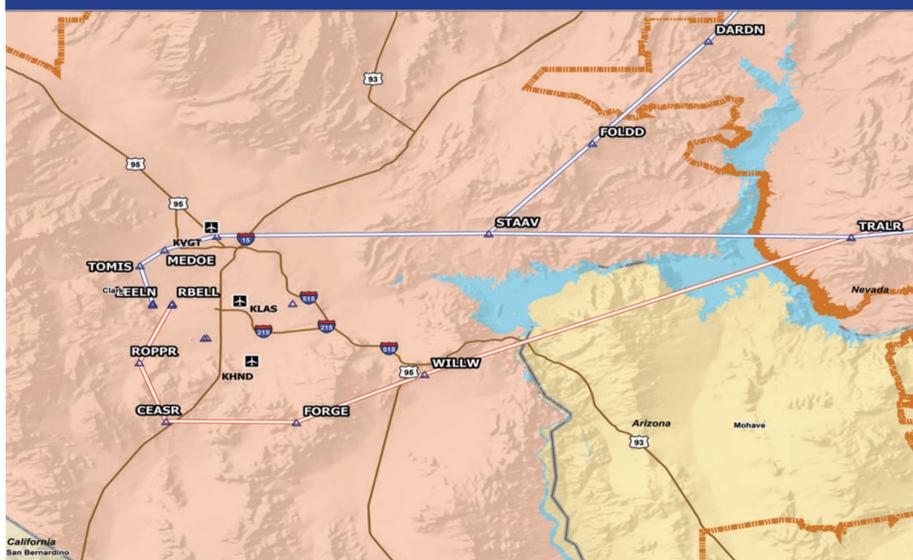
Example of Lack of Flexibility Existing TYSSN STAR



The TYSSN Standard Terminal Arrival (STAR) has four en route transitions (including one that starts at ZATES) that require multiple Los Angeles Center (ZLA) controllers to sequence four separate arrival flows over the KADDY waypoint which also serves as the entry point into Las Vegas Terminal Radar Approach Control 's (L30) airspace.

A sharp turn at KADDY creates reduced spacing between aircraft along the boundary between L30 and ZLA, requiring L30 controllers to vector aircraft off the procedure to maintain adequate in-trail spacing between aircraft.

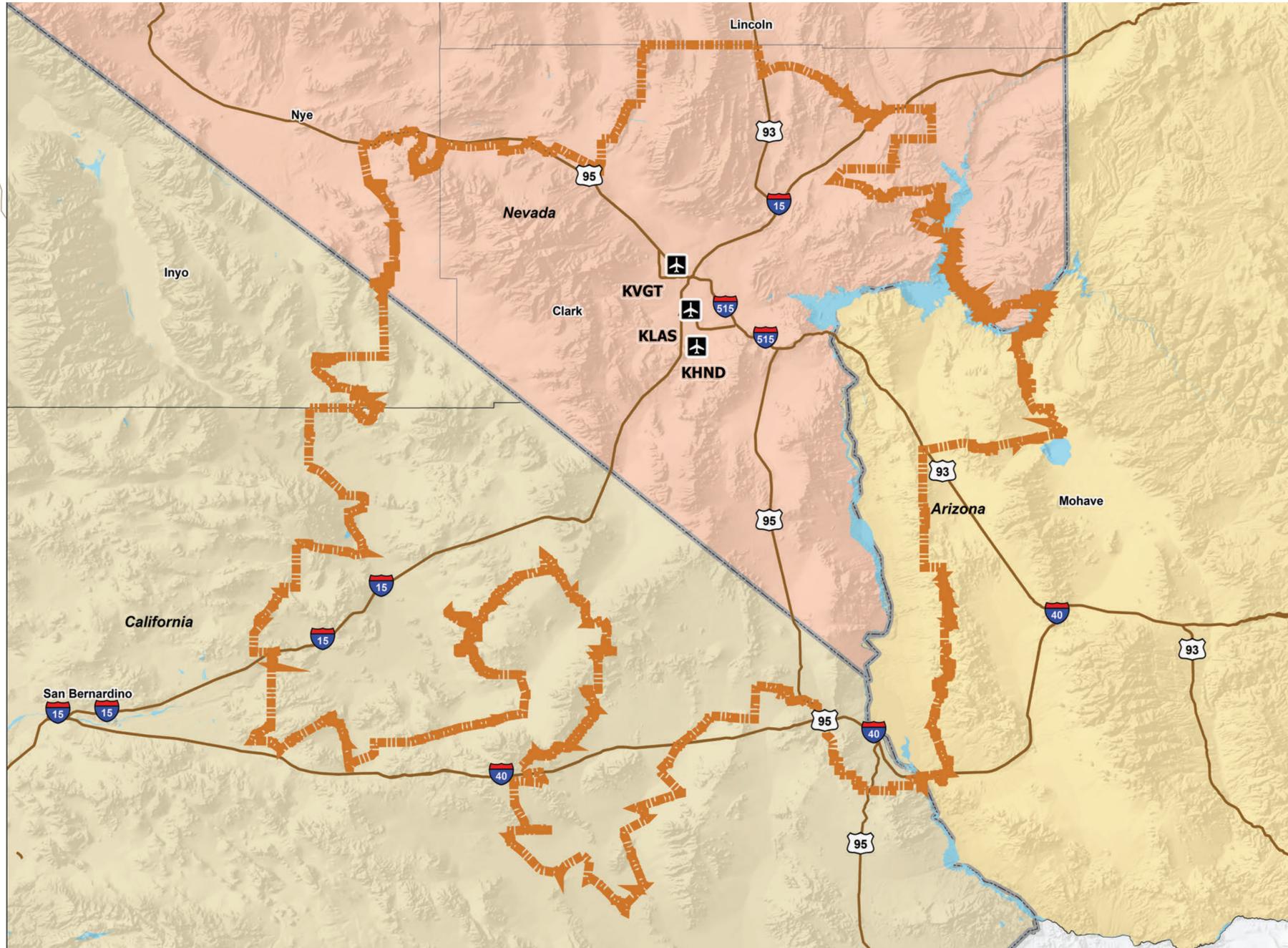
Example of Lack of Predictability Existing STAAV and TRALR SIDs



Departures assigned to the same exit point must be merged into a single flow within L30 airspace before moving into en route airspace at the assigned exit point. Merging departing aircraft into departure flows can lead to delays.

The STAAV and TRALR Standard Instrument Departures (SID) conflict, as both require aircraft to fly over the TRALR waypoint. This requires L30 controllers to vector departing aircraft to maintain adequate lateral separation while sequencing aircraft to the TRALR waypoint.

GENERAL STUDY AREA



THE GENERAL STUDY AREA captures all flight paths identified for both the Proposed Action and the No Action up to the point at which 95 percent of departing aircraft are at or above 10,000 feet above ground level (AGL) and 95 percent of arriving aircraft are at or above 7,000 feet AGL.

The lateral boundary of the General Study Area is based on where aircraft cross U.S. Census block boundaries at the 10,000/7,000 feet AGL thresholds.

- NOTES:**
- KLAS** McCarran International Airport
 - KHND** Henderson Executive Airport
 - KVG T** North Las Vegas Airport





ALTERNATIVES

The Proposed Action Alternative and No Action represent “packages” of several different procedures

Several different groups of procedures were considered and evaluated in combination with one another to determine whether they may meet the Project’s Purpose and Need

The FAA considered multiple versions of each air traffic procedure before reaching a final design

Several versions were not carried forward because they failed to meet the objectives established to meet the Purpose of the Project

LAS METROPLEX

- Increases the number of RNAV procedures with altitude controls intended to optimize descent or climb patterns
- Increases number of independent RNAV technology-based ATC procedures
- Improves Study Airport traffic flow
- Increases the number of entry and exit points into and out of terminal and enroute airspace
- Increases the number of en route transitions
- Increases the number of runway transitions

Addresses the Project’s Purpose & Need

CARRIED FORWARD AS THE PROPOSED ACTION ALTERNATIVE

MAINTAIN EXISTING AIRCRAFT PROCEDURES (DO NOTHING)

CARRIED FORWARD AS THE NO ACTION



POTENTIAL ENVIRONMENTAL EFFECTS

ENVIRONMENTAL IMPACT CATEGORIES EVALUATED IN THE DRAFT EA

In accordance with FAA environmental policy and procedures, the Draft EA considers POTENTIAL IMPACTS of the Proposed Action Alternative in the following CATEGORIES

- ▶ Noise
- ▶ Compatible Land Use
- ▶ Department of Transportation Act: Section 4(f) Resources
- ▶ Historic and Cultural Resources
- ▶ Energy Supply (aircraft fuel)
- ▶ Climate
- ▶ Wildlife (bird strike)
- ▶ Environmental Justice
- ▶ Air Quality
- ▶ Visual Impacts

CATEGORIES

NOT AFFECTED

No potential for effects associated with implementation of the Proposed Action Alternative :

- ▶ Coastal Resources
- ▶ Construction Impacts
- ▶ Farmlands
- ▶ Fish and Plants
- ▶ Floodplains
- ▶ Hazardous Materials, Pollution Prevention, and Solid Waste
- ▶ Archeological and Architectural Resources
- ▶ Light Emissions
- ▶ Natural Resources
- ▶ Secondary (Induced) Impacts
- ▶ Socioeconomic Impacts and Children’s Environmental Health and Safety Risks
- ▶ Water Quality
- ▶ Wetlands
- ▶ Wild and Scenic Rivers

ANALYSIS

RESULTS: NO NOISE INCREASES BEYOND FAA THRESHOLDS OF SIGNIFICANCE. ONE AREA OF REPORTABLE NOISE IN AN UNINHABITED AREA. THREE AREAS OF REPORTABLE NOISE DECREASES.

NEXT STEPS

PUBLIC COMMENTS

The FAA encourages all interested parties to review the Draft EA and provide written comments concerning the scope and content of the Draft EA during the public comment period. Written comments will be accepted by the FAA until **January 21st, 2020**.

THE PUBLIC IS INVITED TO COMMENT*

Complete and submit a written comment form during today's Public Workshop.

PROVIDE WRITTEN COMMENTS TO THE FAA BY MAIL OR ONLINE SUBMITTAL BY **January 21st, 2020**

COMMENTS CAN BE FILED ONLINE AT:

https://www.faa.gov/air_traffic/community_involvement/las/

COMMENTS CAN BE SUBMITTED BY REGULAR MAIL TO:

Las Vegas Metroplex Draft EA

Federal Aviation Administration

Western Service Center - Operations Support Group

2200 s. 216th St

Des Moines, WA 98198-6547

THE FAA WILL CONSIDER ALL SUBSTANTIVE COMMENTS AND DEVELOP A FINAL EA

* Please be aware that your name, address, phone number, e-mail address, or other personal identifying information in your comment may be made publicly available at any time. You may include in your comment a request to withhold your personal identifying information, however we cannot guarantee that we will be able to do so.

