

# **Final Environmental Assessment for the Southern California Metroplex Project**

August 2016

Prepared by:

**United States Department of Transportation  
Federal Aviation Administration**



**Seattle, WA**

## 2 Purpose and Need

Under NEPA, an EA must describe the purpose and need for the Proposed Action. The following sections discuss the need for the Proposed Action and provide specific examples of the problems in the Southern California Metroplex. This discussion is followed by a description of the purpose for the Proposed Action, the criteria that the FAA will use to evaluate the SoCal Metroplex Project alternatives, and the requested federal actions needed to complete the SoCal Metroplex Project.

### 2.1.2 Causal Factors

The inefficiencies and resulting complexities associated with existing SID and STAR procedures are the primary foundation for the problem in the Southern California Metroplex. A problem (or need) is best addressed by examining the circumstances or factors that cause it. Addressing the causal factors behind the problem will help develop a reasonable alternative designed to resolve the problem (i.e., meet the “purpose”).

## 2.4 Description of the Proposed Action

The Proposed Action would implement RNAV SID and STAR procedures with optimized climb and descent profiles, respectively, and RNP approaches, where feasible, in the Southern California Metroplex. Refer to Section 1.2.5 for a description of RNAV, RNP, and optimized climb and descent profiles. This would improve the predictability and segregation of routes, as well as increase flexibility in providing air traffic services. The Proposed Action is described in detail in Chapter 3, *Alternatives*.



Federal Aviation  
Administration

Design and Implementation Team  
Technical Report  
Southern California Metroplex Project  
Proposed Final Design Packages  
Executive Summary

June 3, 2015  
(Updated June 29, 2016)

# **Southern California OAPM Design Package**

## **LAX IRNMN STAR (SYMON)**

### **Implementation Dependencies**

- Dependent upon the submissions of the ROKKR, PCFIC, OHSEA, MOOOS, CTRUS, MLIBU, CRSHR, and HUULL
- Requires modifications to SCT, ZLA, and ZOA facilities internal Standard Operating Procedures and Letters of Agreement
- Requires airspace modifications to;
  - ZLA: 13, 14
  - SCT: LAA (ZUMR, STAR, DNYR), BUR (MORR), DEL (MANR, MALR)
- Controller training
- Automation changes

## **Southern California Metroplex Design Package**

### **LAX RNAV (RNP) AR RWY 24L Approach**

#### **Proposed Design and Implementation Dependencies**

This design is dependent on the following procedures:

#### **STARS:**

- LAX ANJLL STAR
- LAX CRSHR STAR
- LAX HLYWD STAR
- LAX HUULL STAR
- LAX IRNMN STAR
- LAX OLAAA STAR
- LAX SNSST STAR

#### **Additional Design Considerations**

- Validation through a Human-in-the-Loop simulation (HITLS) is not anticipated.
- Validation through industry flight simulation is not anticipated.

#### **Implementation Dependencies**

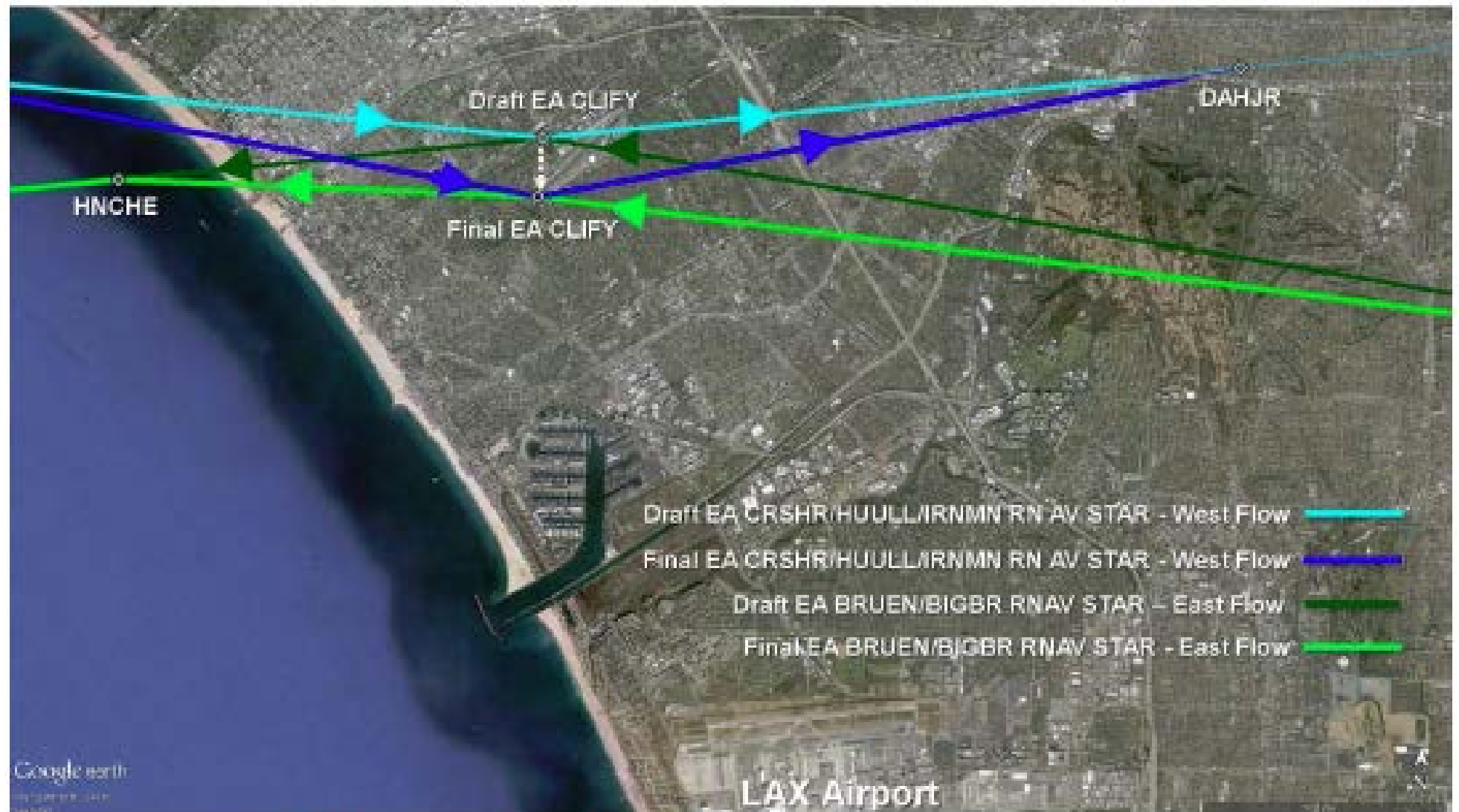
- This procedure requires modifications to SCT and LAXT internal Standard Operating Procedures and Letters of Agreement
- Requires no airspace modifications
- Controller training
- Automation changes

In the main body of the Final EA, page 3-39, this is the only representation of the North Arrival Route.

**It shows STAR CRSHR, HUULL & IRNMN, and it shows these STAR RNAV procedures end at DAHJR.**

**No mention of RNPs or dependency on RNPs.**

Figure 3-2 LAX Arrivals - CLIFY Waypoint Adjustment



Source: SoCal Metroplex D&I Team, June 2016.

Prepared by: ATAC Corporation, June 2016.

Final EA, Appendix A, p A-407, from June 10, 2015 Draft EA briefing. This is the latest briefing slide show contained in the Final EA, Appendix A.

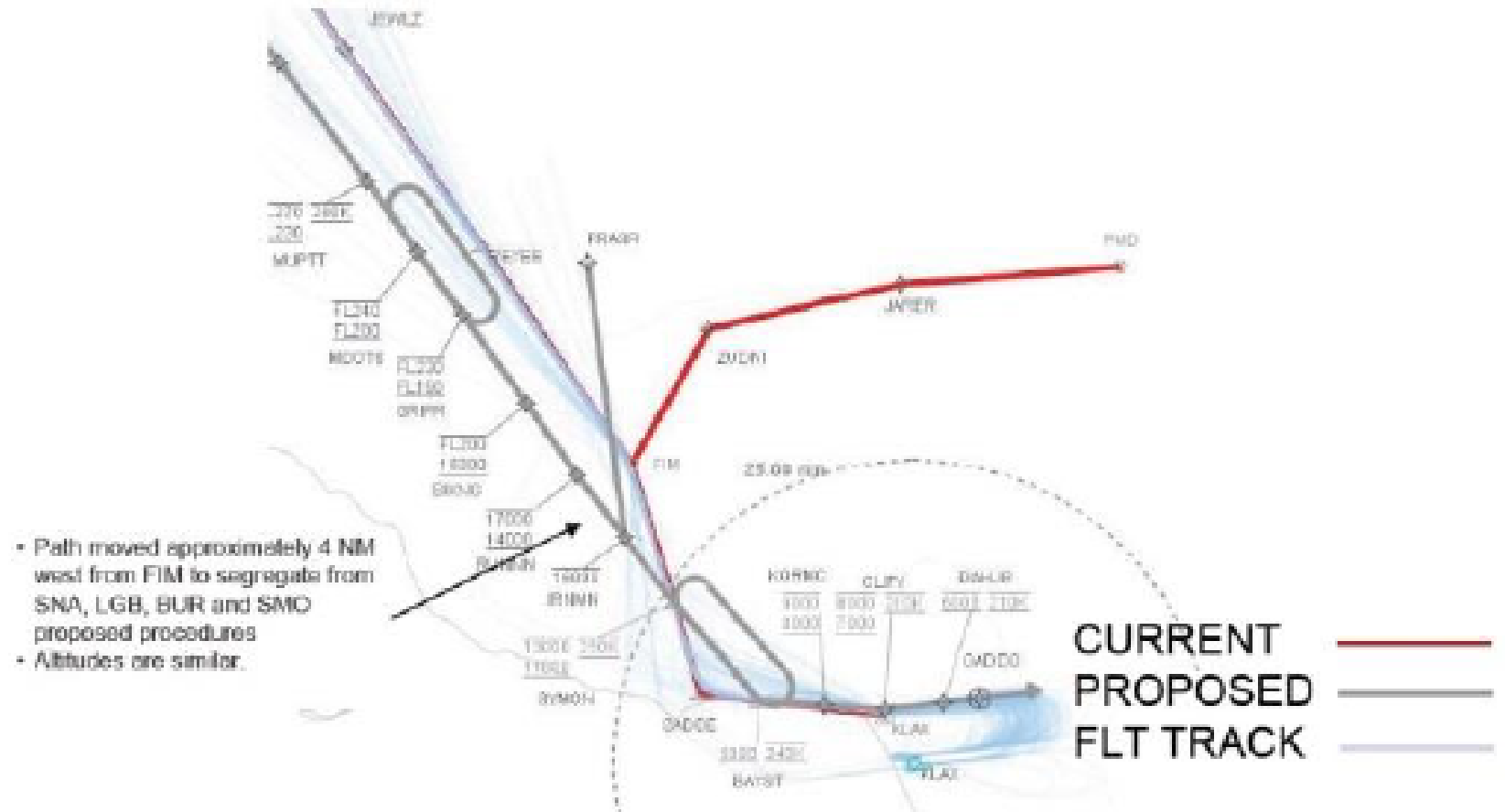
**Note that the chart shows STAR IRNMN with an AT 6000 Min Alt at DAHJR and it shows the procedure carrying on past GADDO.**

Charts for CRSHR (which became RYDRR) and HUULL are similar.

# LAX SYMON1 STAR West Flow (Old)

## LAX-HHR IRNMN1 STAR West Flow (New)

### Close up view



DRAFT



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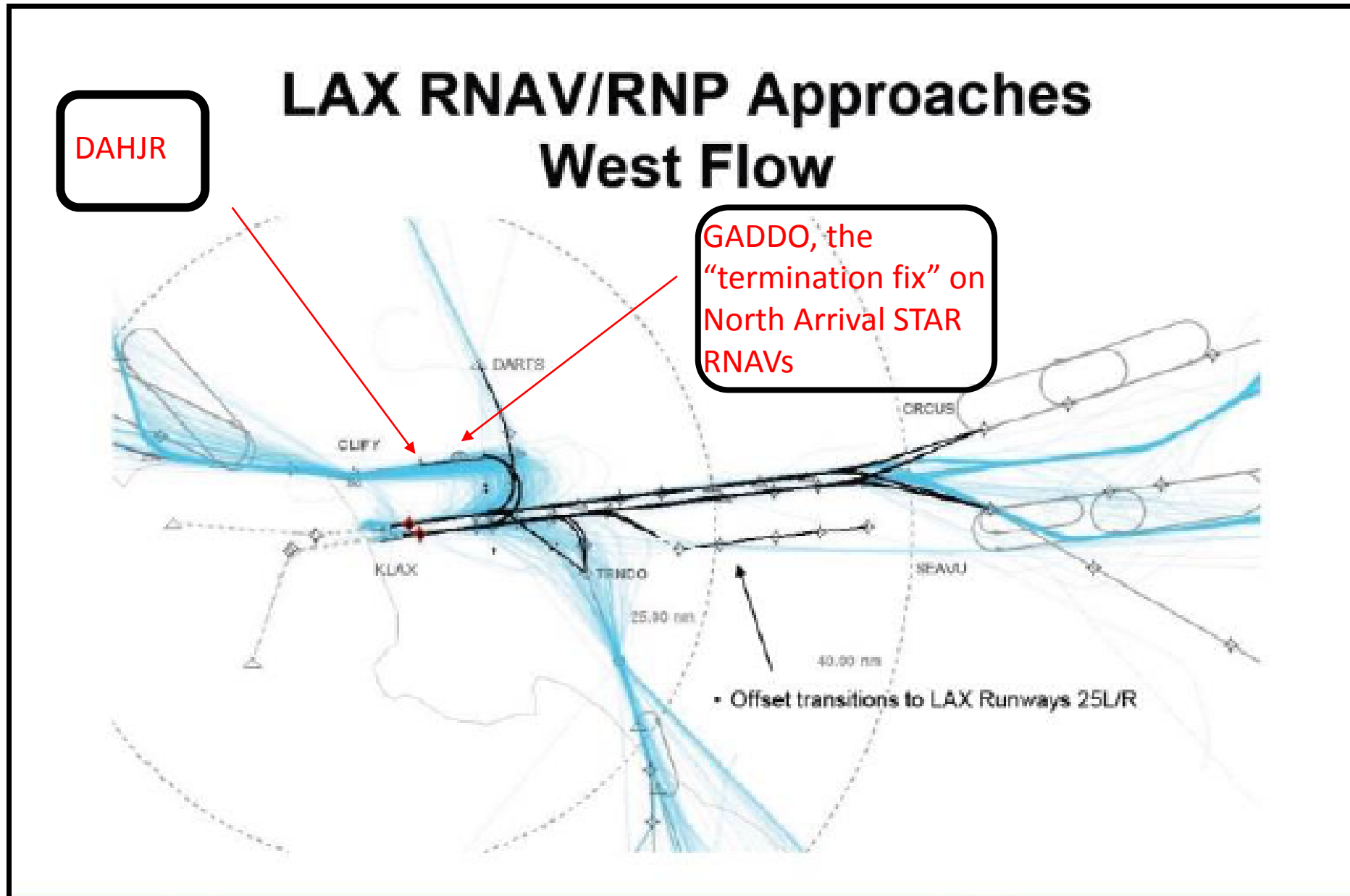


Final EA, Appendix A, p A-407, from June 10, 2015 Draft EA briefing. This is the latest briefing slide show contained in the Final EA, Appendix A.

This is the only chart for West Flow RNP approaches.

**Note that the chart seems to show the RNP beginning after GADDO, and certainly no earlier than DAHJR.**

**Note there is no caption and no indication that the Altitude Restrictions in STAR RNAV procedures depend on the aircraft flying the RNP approach.**

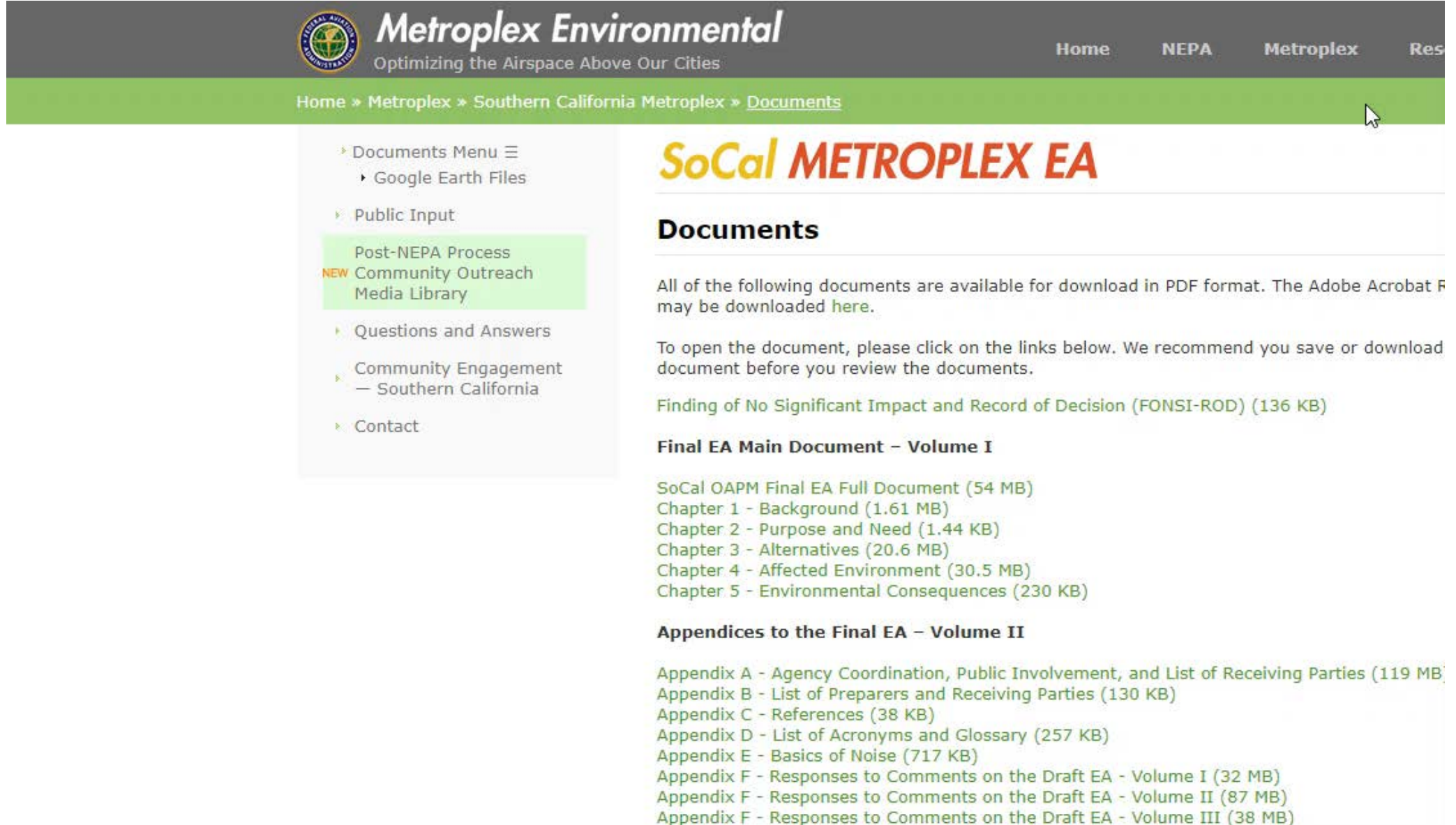


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“FAA has made available a recording of the [“Select Officials and Airports Information Briefing”](#) conducted this week on September 6th and 7<sup>th</sup>,” 2016.



The screenshot shows the Metroplex Environmental website. The header includes the FAA logo and the text "Metroplex Environmental Optimizing the Airspace Above Our Cities". Navigation links for Home, NEPA, Metroplex, and Res are visible. A breadcrumb trail reads "Home » Metroplex » Southern California Metroplex » Documents". A sidebar menu on the left lists various sections, with "NEW Community Outreach Media Library" highlighted in green. The main content area features the title "SoCal METROPLEX EA" and a "Documents" section. It states that all documents are available for download in PDF format. A list of documents is provided, including a Finding of No Significant Impact and Record of Decision (FONSI-ROD) and a Final EA Main Document - Volume I with its chapters. Below that, Appendices to the Final EA - Volume II are listed.

**Metroplex Environmental**  
Optimizing the Airspace Above Our Cities

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Home » Metroplex » Southern California Metroplex » Documents

- Documents Menu ☰
  - Google Earth Files
- Public Input
  - Post-NEPA Process
  - NEW** Community Outreach Media Library
- Questions and Answers
- Community Engagement – Southern California
- Contact

## SoCal METROPLEX EA

### Documents

All of the following documents are available for download in PDF format. The Adobe Acrobat Reader can be downloaded [here](#).

To open the document, please click on the links below. We recommend you save or download document before you review the documents.

[Finding of No Significant Impact and Record of Decision \(FONSI-ROD\) \(136 KB\)](#)

#### Final EA Main Document – Volume I

- [SoCal OAPM Final EA Full Document \(54 MB\)](#)
- [Chapter 1 - Background \(1.61 MB\)](#)
- [Chapter 2 - Purpose and Need \(1.44 KB\)](#)
- [Chapter 3 - Alternatives \(20.6 MB\)](#)
- [Chapter 4 - Affected Environment \(30.5 MB\)](#)
- [Chapter 5 - Environmental Consequences \(230 KB\)](#)

#### Appendices to the Final EA – Volume II

- [Appendix A - Agency Coordination, Public Involvement, and List of Receiving Parties \(119 MB\)](#)
- [Appendix B - List of Preparers and Receiving Parties \(130 KB\)](#)
- [Appendix C - References \(38 KB\)](#)
- [Appendix D - List of Acronyms and Glossary \(257 KB\)](#)
- [Appendix E - Basics of Noise \(717 KB\)](#)
- [Appendix F - Responses to Comments on the Draft EA - Volume I \(32 MB\)](#)
- [Appendix F - Responses to Comments on the Draft EA - Volume II \(87 MB\)](#)
- [Appendix F - Responses to Comments on the Draft EA - Volume III \(38 MB\)](#)

FAA ["Select Officials and Airports Information Briefing"](#) conducted September 6th and 7th, 2016

### Proposed LAX West Flow STARs



CLIFY  
7000 through  
8000

DAHJR  
At 6000

Culver City

LAX

Publication Date: April 27, 2017

- The Metroplex Design Team developed STARs for LAX arrivals landing on west bound runways
- The current procedure routes aircraft over the SMO ground based navigational aid
- After the Metroplex Team considered community input, CLIFY waypoint (vertical restriction of 7000 through 8000) was repositioned to a point within 120 feet of the SMO ground based navigational aid to remain within historical tracks descending to 7000 feet
- The DAHJR waypoint has a vertical restriction of 6000 feet which will cause arrivals to remain at higher altitudes than current state until east of Culver City
- The Metroplex Design Team reviewed vertical restrictions on the STARs and determined no other changes to the proposed procedure were feasible

FAA NextGEN

15:46 / 1:12:57

## Metroplex: An Update on Southern California Airspace Modernization

Unlisted

1,290 views

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Federal Aviation Administration

Published on Sep 9, 2016

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**Something changed between September 2016 and January 2017.**

**On January 18, 2017, in a new webinar, the same FAA Staff who were part of the September 2016 briefings gave a new briefing in which, for the first time, the FAA stated that the Min Alt at DAHJR would only apply to aircraft on the RNP approach, and that aircraft would descend onto visual or instrument approaches from CLIFFY.**

**This was completely different from all representations made during the Environmental Assessment and in the September 2016 briefings.**

**What changed?**

**The “Design and Implementation Team Technical Report” said the implementation of the STAR RNAVs would be dependent on new TRACON SOPs. Was that part of what happened?**

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## Wayne Airport



[New Arrival Procedures into LAX](#)



[San Diego ZZ000 Standard Instrument Departure](#)

### Past Sessions

Video briefing on the progress of the Southern California Metroplex project and the implementation of NextGen technology. These presentations were presented to local officials and community members in January 2017.



[Southern California Metroplex Webinar – SNA, LGB | January 19, 2017](#)



[Southern California Metroplex Webinar – SAN, PSP, ONT | January 19, 2017](#)



[Southern California Metroplex Webinar – LAX, SMO | January 18, 2017](#)



[Southern California Metroplex Webinar – LAX, BUR, SBA, VNY | January 18, 2017](#)



[Update on Southern California Airspace Modernization | Sept 2016](#)

### New Procedures

- [New Procedures Burbank Van Nuys Feb. 2017 \(PDF\)](#)
- [New Procedures Santa Monica region Feb. 2017 \(PDF\)](#)

Southern California Metroplex

**LAX** Los Angeles International Airport

**STAR (Arrival)**  
 LAX RYDRR ONE RNAV STAR  
 (Name Change from CESH ONE)  
 LAX HUULL ONE RNAV STAR  
 LAX IRNMN ONE RNAV STAR

- RYDRR, HUULL, and IRNMN all follow the same lateral path after BAYST and will tie into the new RNAV/RNP approach for LAX
- KORMC moved further offshore based on community input
- CLIFY (co-located with SMO) altitude allows aircraft to be up to 1,000 feet higher than the current procedure
- Current ILS approach procedure allows aircraft to descend immediately after passing SMO; for aircraft flying the RNAV/RNP approach, the altitude restriction at DAHIR provides a minimum altitude of 6,000 feet until approximately 5 miles east of SMO
- ILS approach still available for non-RNP equipped aircraft; when requested, visual approaches will continue to be assigned when traffic conditions allow

22:10 / 43:55

FAA GEN

www.flightdeck.com

## Southern California Metroplex Webinar - LAX, SMO

294 views

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Federal Aviation Administration

Published on Jan 25, 2017

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**Despite the new plan briefed in the January 18, 2017 webinar that linked the Min Alt at DAHJR to the RNP approach, the FAA continued to release other informational videos in January 2017 that continued to say that all flights would be restricted by the Min Alt at DAHJR and that only after DAHJR would aircraft leave the STAR RNAVs and go on to the RNP or Visual or Instrument Approaches.**



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# Community Involvement — Southern California



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Air Traffic Modernization



New Departure Procedures at John Wayne Airport



Improving Arrivals into LAX



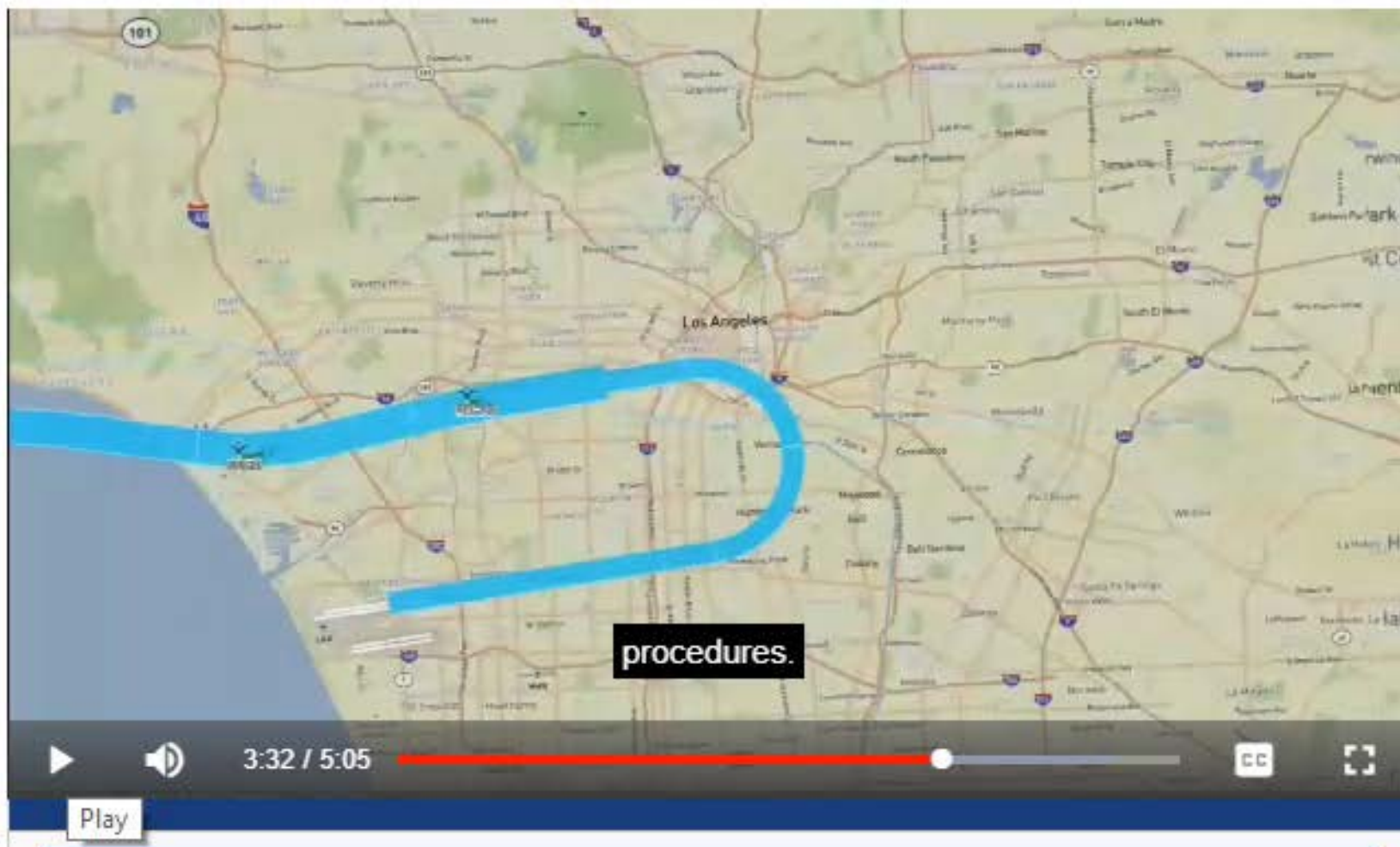
New Arrival Procedures into LAX



San Diego ZZ000 Standard Instrument Departure



# FAA TV: Improving Arrivals into LAX



## Now Playing

Published on: January 25, 2017

This video shows how arrival paths are being optimized for aircraft landing at Los Angeles International Airport (LAX).

**Category:** NextGen

### Tags:

Community Involvement, Metroplex, NextGen, Performance Based Navigation, Procedure Updates

[Download Video](#) (MP4, 50.2 MB)