

Version 1.0 – December 21, 2020

Prepared by:

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



**Las Vegas Metroplex Project  
Written Re-Evaluation and Record of Decision for  
Changes to the Final EA Designs**

**HOOVER SEVEN SID  
RNAV (RNP) Z RWY 19R  
RNAV (GPS) Y RWY 19R  
RNAV (RNP) Z RWY 19L  
GAMES STAR**

**TABLE OF CONTENTS**

<b>1.0</b>	<b>INTRODUCTION.....</b>	<b>1</b>
<b>2.0</b>	<b>DESCRIPTION OF THE DESIGN CHANGES.....</b>	<b>2</b>
2.1	Design Changes to the HOOVER SEVEN SID.....	2
2.2	Design Changes to the RNAV (RNP) Z RWY 19R Approach.....	5
2.3	Design Changes to the RNAV (GPS) Y RWY 19R Approach.....	7
2.4	Design Changes to RNAV (RNP) Z RWY 19L Approach.....	9
2.5	Design Change to the GAMES STAR.....	11
<b>3.0</b>	<b>IMPACT ANALYSIS APPROACH .....</b>	<b>12</b>
<b>4.0</b>	<b>ANALYSIS RESULTS .....</b>	<b>13</b>
4.1	Noise & Compatible Land Use .....	13
4.2	Air Quality.....	13
4.3	Biological Resources – Wildlife (Avian and Bat Species) and Migratory Birds Sub-Categories only.....	13
4.4	Climate .....	13
4.5	Department of Transportation Act, Section 4(f) Resources .....	14
4.6	Historic Architectural, Archeological, and Cultural Resources – Historic Properties and Cultural Resources Sub-Categories only.....	14
4.7	Natural Resources and Energy Supply - Energy Supply sub-category only (aircraft fuel only) .....	14
4.8	Environmental Justice .....	14
4.9	Visual Effects (Visual Resources / Visual Character Sub-Category only) .....	14
4.10	Cumulative Effects .....	15
<b>5.0</b>	<b>FINDINGS.....</b>	<b>16</b>
<b>6.0</b>	<b>DECISION AND ORDER.....</b>	<b>17</b>

**FIGURES**

Figure 1: HOOVER SEVEN SID Final EA Design .....	2
Figure 2: HOOVER SEVEN SID Changed Design of BAVPE and DRK Transitions .....	3
Figure 3: HOOVER SEVEN SID Final EA Design (dashed red) and Changed Design (blue) ....	3
Figure 4: HOOVER SEVEN SID Changed Design of BAVPE and DRK Transitions (blue) and Final EA Design for the RASLR RNAV SID (red).....	4
Figure 5: HOOVER SEVEN SID Changed Design of BAVPE Transition (dashed blue) and segments of J72 and J86 (red).....	4
Figure 6: RNAV (RNP) Z RWY 19R Approach Final EA Design (red) Compared to the Changed Design (blue).....	5
Figure 7: RNAV (RNP) Z RWY 19R Approach Final EA Design (red) and the Changed Design (blue).....	6
Figure 8: RNAV (GPS) Y RWY 19R Final EA Design (red) and the Changed Design (green) ..	7
Figure 9: RNAV (GPS) Y RWY 19R Final EA Design (red) and the Changed Design (green) ..	8
Figure 10: RNAV (GPS) Y RWY 19R Final EA Design (red) and the Changed Design (green), Zoomed In View .....	9
Figure 11: RNAV (RNP) Z RWY 19L Final EA Design (black) and the Changed Design (green) .....	10
Figure 12: RNAV (RNP) Z RWY 19L Final EA Design (black) and the Changed Design (green), Zoomed In View .....	10

**APPENDICES**

- A Noise Screening Report for Changes to the Final EA Design of the Proposed HOOVER SEVEN SID
- B Noise Screening Report for Changes to the Final EA Designs of the Proposed RNAV (RNP) RWY Z 19R Approach and the Proposed RNAV (GPS) RWY Y 19R Approach
- C Noise Screening Report for Changes to the Final EA Design of the Proposed RNAV (RNP) RWY Z 19L Approach

## 1.0 INTRODUCTION

The Federal Aviation Administration (FAA) finalized a Finding of No Significant Impact and Record of Decision (FONSI/ROD) for the Las Vegas Metroplex (LAS Metroplex) Final Environmental Assessment (EA) on July 7, 2020<sup>1</sup>. The designs for five proposed procedures analyzed in the Final EA and approved for implementation in the FONSI/ROD require changes to comply with FAA safety criteria.

Four of the five changes are to the designs of procedures at McCarran International Airport (KLAS): (1) HOOVER SEVEN Standard Instrument Departure (SID), (2) Area Navigation (RNAV) Required Navigation Performance (RNP) Z Runway (RWY) 19R approach, (3) RNAV Global Positioning System (GPS) Y RWY 19R approach, and (4) RNAV (RNP) Z RWY 19L approach. The fifth change is to the design of a procedure at nearby Henderson Executive Airport (KHND), the GAMES Standard Terminal Arrival Route (STAR). The FAA has conducted an analysis to determine whether these changes to the Proposed Action that was analyzed in the Final EA require the Final EA to be supplemented.<sup>2</sup> The FAA's analysis and determination are documented in this Written Re-evaluation and Record of Decision (WR/ROD).<sup>3</sup>

This WR/ROD (including the appendices) utilizes the following terms:

- The term “Final EA Design” refers to the design of the proposed procedures analyzed in the Final EA and approved for implementation in the FONSI/ROD.
- The term “Design Changes” refers to the changes to the Final EA Design described in Section 2.0.
- The term “Final EA No Action Alternative” refers to the No Action alternative as described in the Final EA.

The Design Changes are described in Section 2.0. The FAA does not anticipate that the Design Changes would result in an increase in the volume of air traffic on any of the procedures, when compared to the Final EA Design.

---

<sup>1</sup> Public LAS Metroplex documents are available at [https://www.faa.gov/air\\_traffic/community\\_involvement/las/](https://www.faa.gov/air_traffic/community_involvement/las/).

<sup>2</sup> Under FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, paragraph 9-3, an EA needs to be supplemented if there are “substantial changes to the proposed action that are relevant to environmental concerns.”

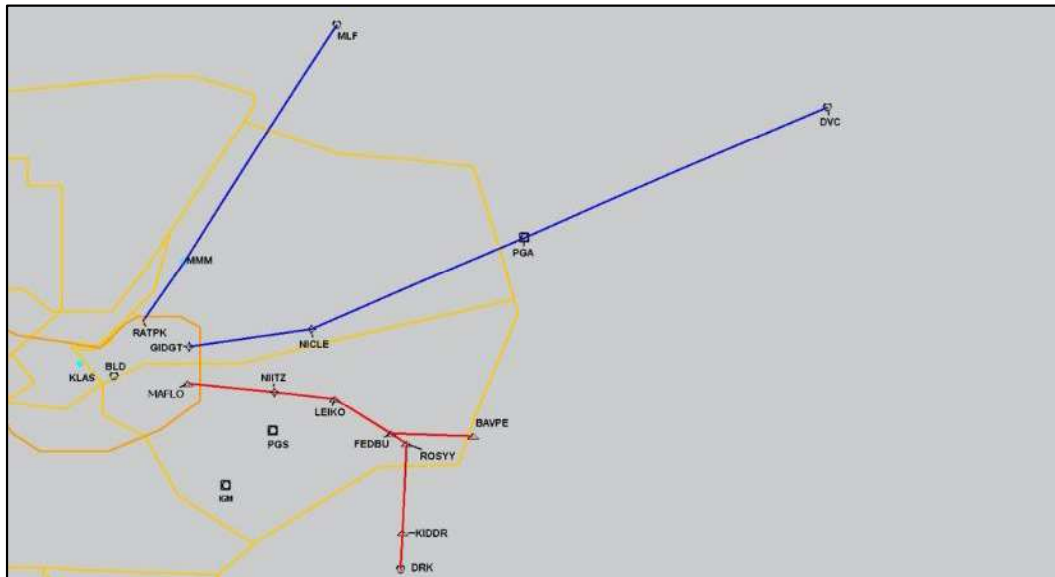
<sup>3</sup> See FAA Order 1050.1F, para. 9-2 (a written re-evaluation is “used to determine whether the contents of a previously prepared environmental document [i.e., a draft or final EA or EIS] remain valid or a new or supplemental environmental document is required”).

## 2.0 DESCRIPTION OF THE DESIGN CHANGES

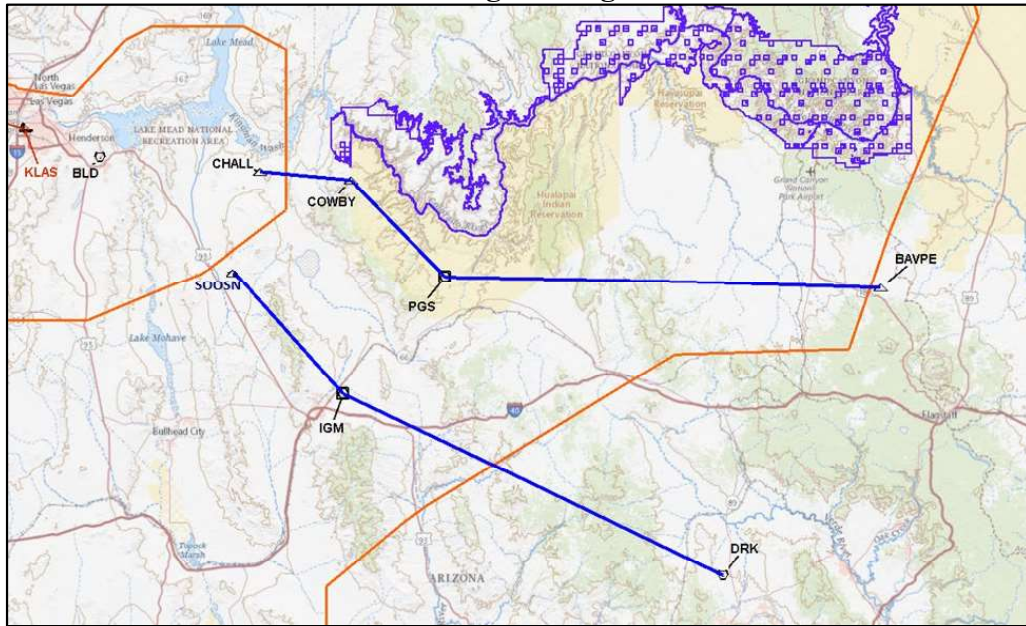
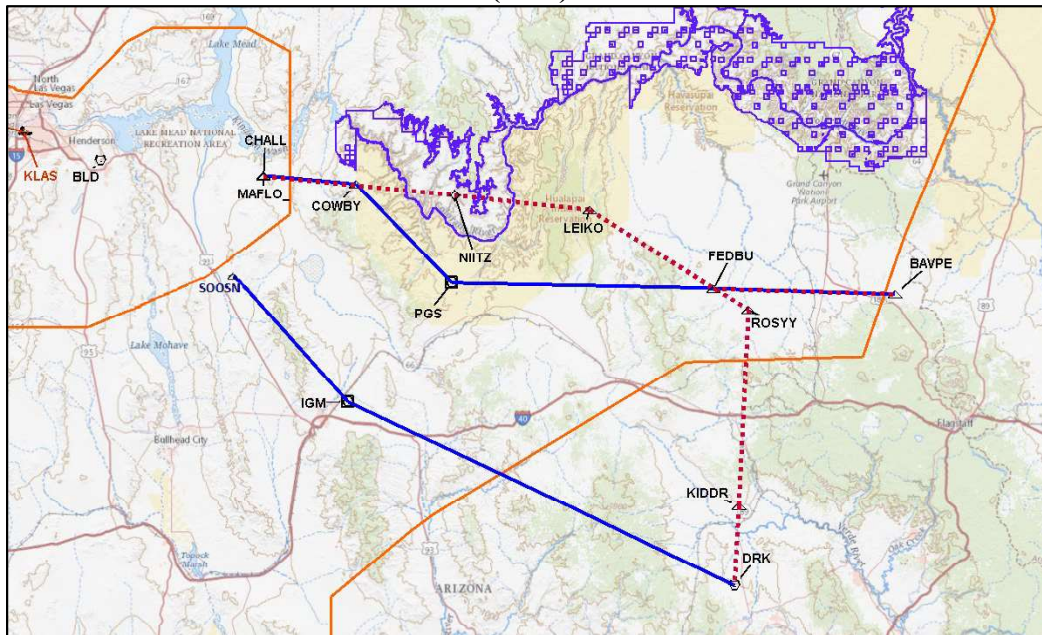
### 2.1 Design Changes to the HOOVER SEVEN SID

During review by FAA Flight Inspection Services, two transitions to the south and east (DRK and BAVPE) of the Final EA Design for the KLAS HOOVER SEVEN SID, a conventional procedure (i.e., defined by ground-based navigational aids), failed flight inspection requirements due to radio reception limitations of the Flagstaff (FLG) Very High Frequency Omni-Directional Range (VOR). The lack of radio reception may be due to distance, terrain, or other factors. The LAS Metroplex Design and Implementation (D&I) Team was advised of this failure on July 23, 2020. Conversely, Flight Inspection found the two transitions to the northeast and east (MLF and DVC) in compliance. The Final EA Design for the KLAS HOOVER SEVEN SID is shown in Figure 1 below. The two transitions that failed flight inspection are depicted in red and the two transitions that passed flight inspection to the east and northeast are shown in blue.

**Figure 1: HOOVER SEVEN SID Final EA Design**



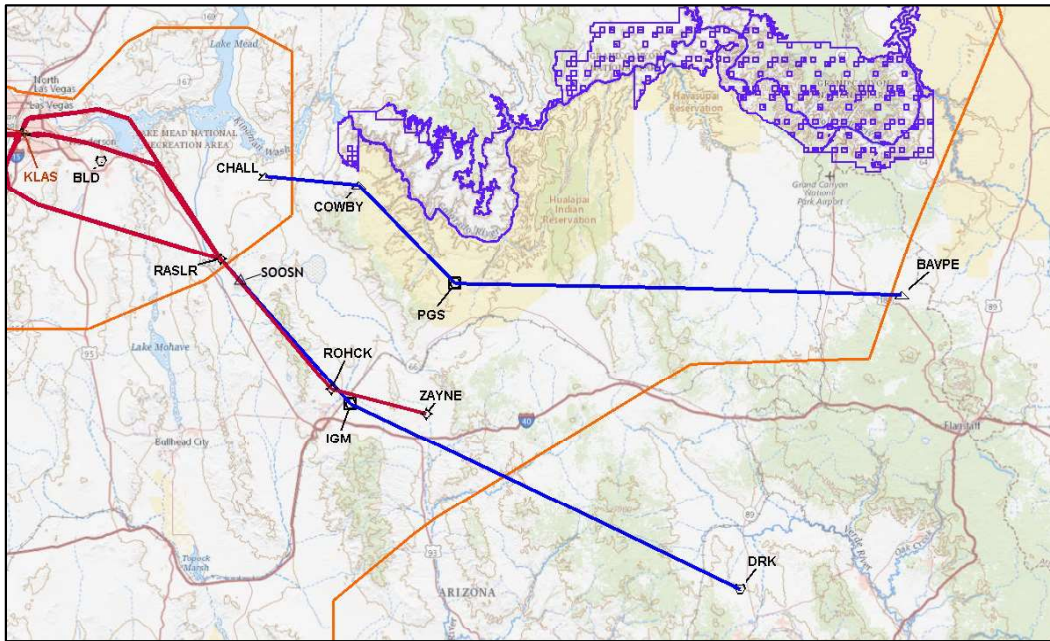
Transitions to the south and east are critical to provide segregated routes for KLAS departure aircraft that do not have RNAV capabilities. The D&I Team developed changes to the design of the transitions to the south and east, utilizing available navigational aids information. The Changed Design would still route aircraft to BAVPE waypoint and Drake (DRK) Very High Frequency Omni-Directional Range Collocated Tactical Air Navigation System (VORTAC), but would utilize the Boulder (BLD) VORTAC, Kingman (IGM) VOR, and Peach Springs (PGS) VORTAC. The Design Changes to the BAVPE and DRK transitions for the HOOVER SEVEN SID are shown in Figure 2 in blue. The pixelated purple area in Figures 2 through 5 below depicts the Grand Canyon National Park derived from data provided by the National Park Service. The Changed Design is still subject to flight inspection, which is planned for January 2021. The Final EA Design and the Changed Design are depicted in Figure 3.

**Figure 2: HOOVER SEVEN SID Changed Design of BAVPE and DRK Transitions****Figure 3: HOOVER SEVEN SID Final EA Design (dashed red) and Changed Design (blue)**

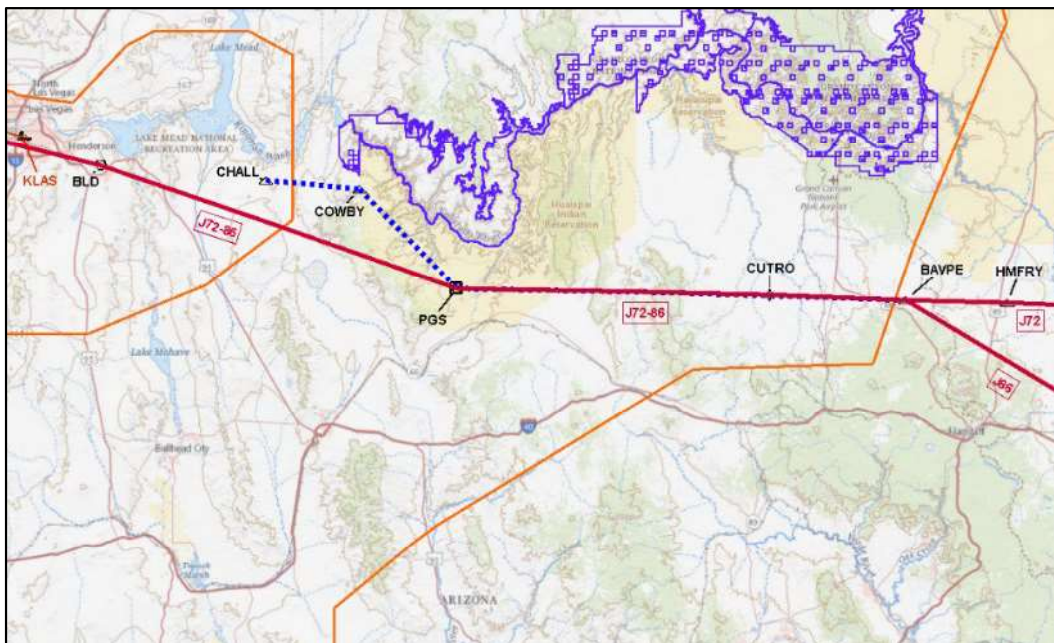
The Changed Design of the HOOVER SEVEN SID DRK transition would route aircraft along a lateral path similar to the proposed RASLR RNAV SID in the Final EA Design, beginning with waypoint SOOSN, which would intercept the IGM VOR, and then along a leg from IGM to the DRK VOR, as depicted in Figure 4. The Changed Design of the HOOVER SEVEN SID BAVPE transition would utilize the existing HOOVER SIX SID PGS transition, and adds a leg from PGS to BAVPE. The PGS to BAVPE portion overlies existing segments of jet routes J72 and J86, as depicted in Figure 5.



**Figure 4: HOOVER SEVEN SID Changed Design of BAVPE and DRK Transitions (blue) and Final EA Design for the RASLR RNAV SID (red)**



**Figure 5: HOOVER SEVEN SID Changed Design of BAVPE Transition (dashed blue) and segments of J72 and J86 (red)**



The changes to the Final EA Design of the HOOVER SEVEN SID would divide aircraft between two new transitions, namely the BAVPE transition and the DRK transition, rather than sending all flights to the previous NIITZ transition over the Grand Canyon National Park. As the NIITZ transition would no longer be utilized, the changed HOOVER SEVEN SID would no

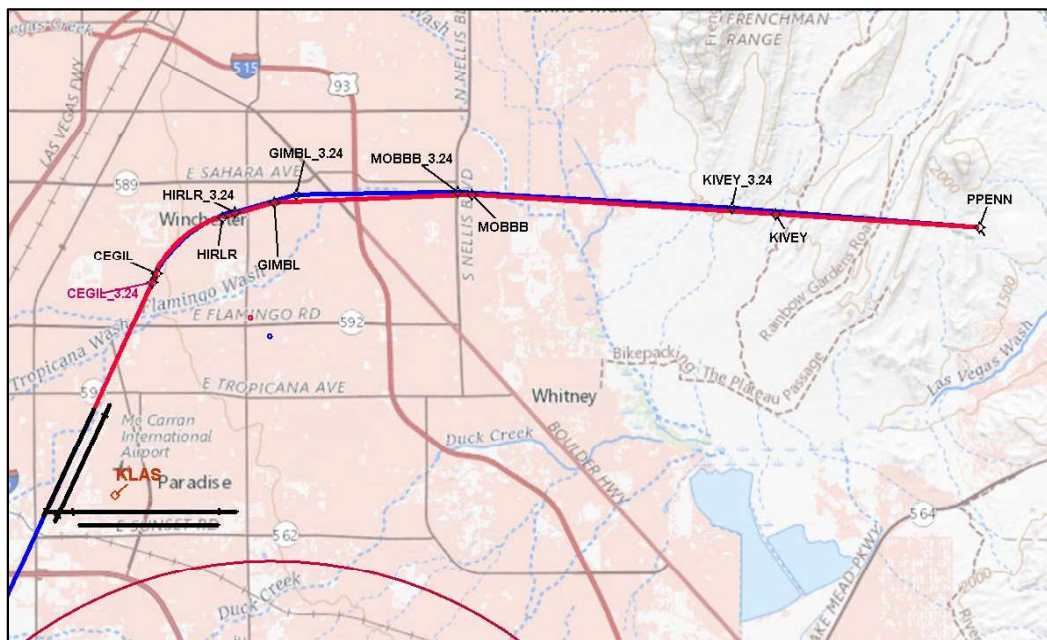
longer be routed over the Grand Canyon National Park. Anticipated altitudes for the changed procedure are listed below in feet (ft) Mean Sea Level (MSL) and approximate (~) ft Above Ground Level (AGL) for the fixes listed below, and based on a climb rate of approximately 1,500 ft per minute, departing RWY 08 for the changed HOOVER SEVEN SID:

- BAVPE Transition
  - CHALL – at or above 17,000 ft MSL (~14,475 ft AGL)
  - COWBY – at or above 21,000 ft MSL (~15,730 ft AGL)
  - PGS – at or above 27,000 ft MSL (~22,350 ft AGL)
  - BAVPE – at or above 33,000 ft MSL (~26,480 ft AGL)
- DRK Transition
  - SOOSN – at or above 17,000 ft MSL (~ 14,315 ft AGL)
  - IGM – at or above 25,000 ft MSL (~21,585 ft AGL)
  - DRK – at or above 33,000 ft MSL (~28,040 ft AGL)

## 2.2 Design Changes to the RNAV (RNP) Z RWY 19R Approach

Following approval of the FONSI/ROD, changes to the Final EA Design for the RNAV (RNP) Z RWY 19R approach procedure were developed to better align the procedure with safety criteria, primarily related to adjustments in the final approach and glide path angle (GPA). Figure 6 presents the Final EA Design for the RNAV (RNP) Z RWY 19R approach procedure and the Changed Design.

**Figure 6: RNAV (RNP) Z RWY 19R Approach Final EA Design (red) Compared to the Changed Design (blue)**



The changes to the RNAV (RNP) Z RWY 19R approach procedure at KLAS are necessary for safety reasons. Specifically, the Final EA Design had a 3.5-degree GPA. The airlines requested that the D&I Team lower the GPA because of erroneous altitude readouts during high ambient

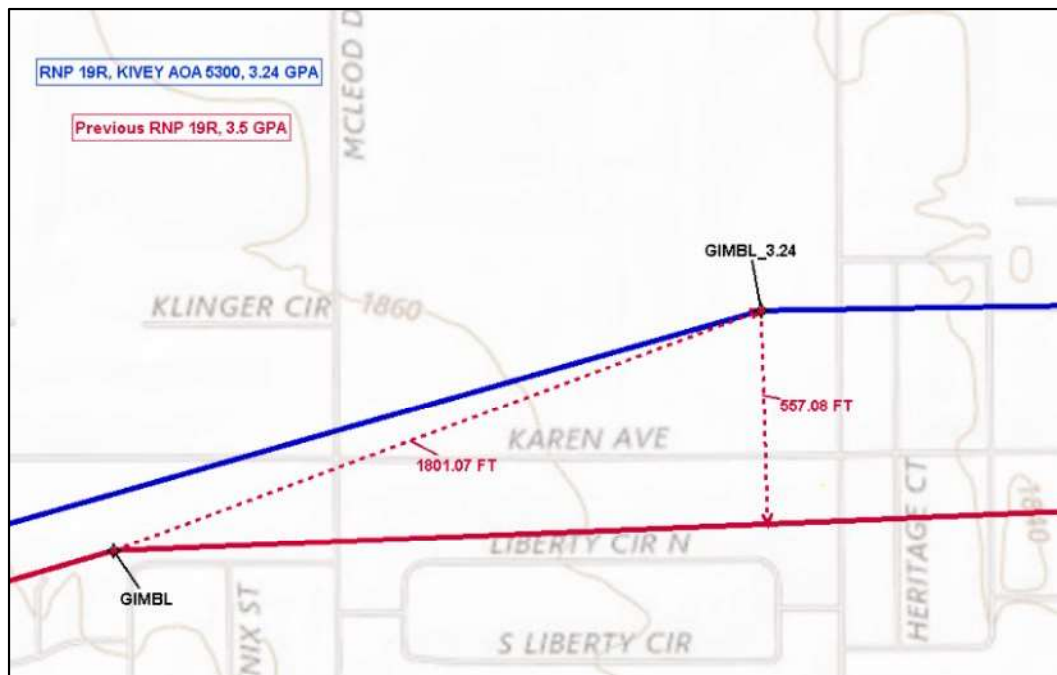


air temperatures (hot weather). During those conditions, the instruments show the aircraft on the glide path; however, the aircraft will actually be above the GPA. The steep descent prevents the aircraft from slowing to a safe landing speed. This can make it difficult for aircraft to slow to a safe landing speed, which can result in an unstable approach and require the flight crew to execute a missed approach/go-around.

The FAA has made changes to the Final EA Design for the RNAV (RNP) Z RWY 19R approach procedure to change the GPA to 3.24 degrees to mitigate the safety concerns raised by the airlines. Changing the GPA for the RNAV (RNP) Z RWY 19R procedure also required changing the GPA for the RNAV (GPS) Y RWY 19R procedure, so the Visual Glide Slope Indicator (VGSI) would be able to assist pilots flying either approach. The changes to the Final EA Design of the RNAV (GPS) Y RWY 19R approach procedure are described separately in Section 2.3.

At the point of the largest lateral change (at the changed GIMBL waypoint), the changed procedure would route aircraft approximately 557 feet north of the Final EA Design. As previously stated, the FAA does not anticipate an increase in the volume of air traffic flying the changed procedure compared to the Final EA Design. In addition, the FAA does not anticipate that the Changed Design would change runway usage compared to the Final EA Design. The area of lateral change is presented in Figure 7.

**Figure 7: RNAV (RNP) Z RWY 19R Approach Final EA Design (red) and the Changed Design (blue)**



The FAA compared the Design Change utilizing a 3.24 degree GPA with the Final EA Design utilizing a 3.5 degree GPA, and determined that the Design Change would result in a lateral shift of approximately 557 feet in the segment near GIMBL waypoint. Other waypoints would also shift slightly but with no discernable change in track from the Final EA Design. The anticipated

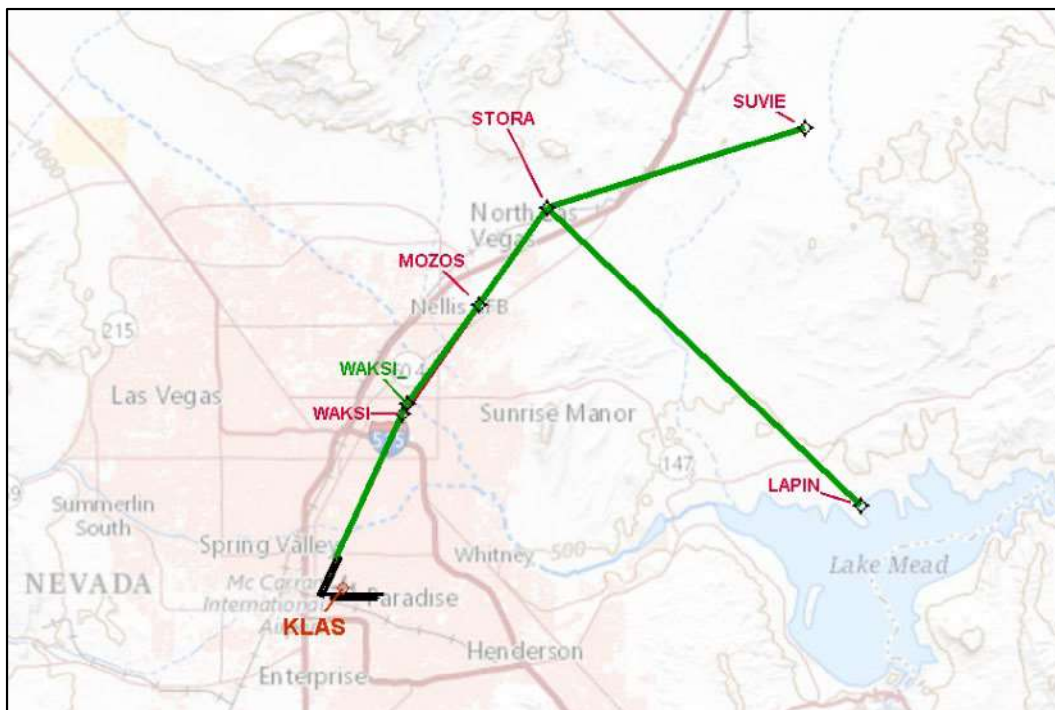
altitude at the changed GIMBL waypoint on the final approach for the Changed Design of the RNAV (RNP) Z RWY 19R procedure would be at or above 3,500 ft MSL (approximately 1,679 ft AGL).

### 2.3 Design Changes to the RNAV (GPS) Y RWY 19R Approach

Following approval of the FONSI/ROD, changes to the Final EA Design for the RNAV (GPS) Y RWY 19R approach procedure were developed to better align the procedures with safety criteria, primarily related to adjustments in the final approach and GPA. The changes to RNAV (GPS) Y RWY 19R are related to the changes to RNAV (RNP) Z RWY 19R as described earlier in Section 2.2. Figure 8 compares the Final EA Design for RNAV (GPS) Y RWY 19R to the Changed Design. The only lateral shift in the procedure path is to the location of WAKSI waypoint.

As mentioned in the Final EA (page 3-29), the proposed RNAV (GPS) Y RWY 19R approach procedure conflicts with Nellis Air Force Base-delegated airspace and operations, and use thereof would disrupt day-to-day military operations. This continues to be the case with the Design Change. Therefore, the FAA anticipates that it would only be used as a contingency based on operational necessity.

**Figure 8: RNAV (GPS) Y RWY 19R Final EA Design (red) and the Changed Design (green)**

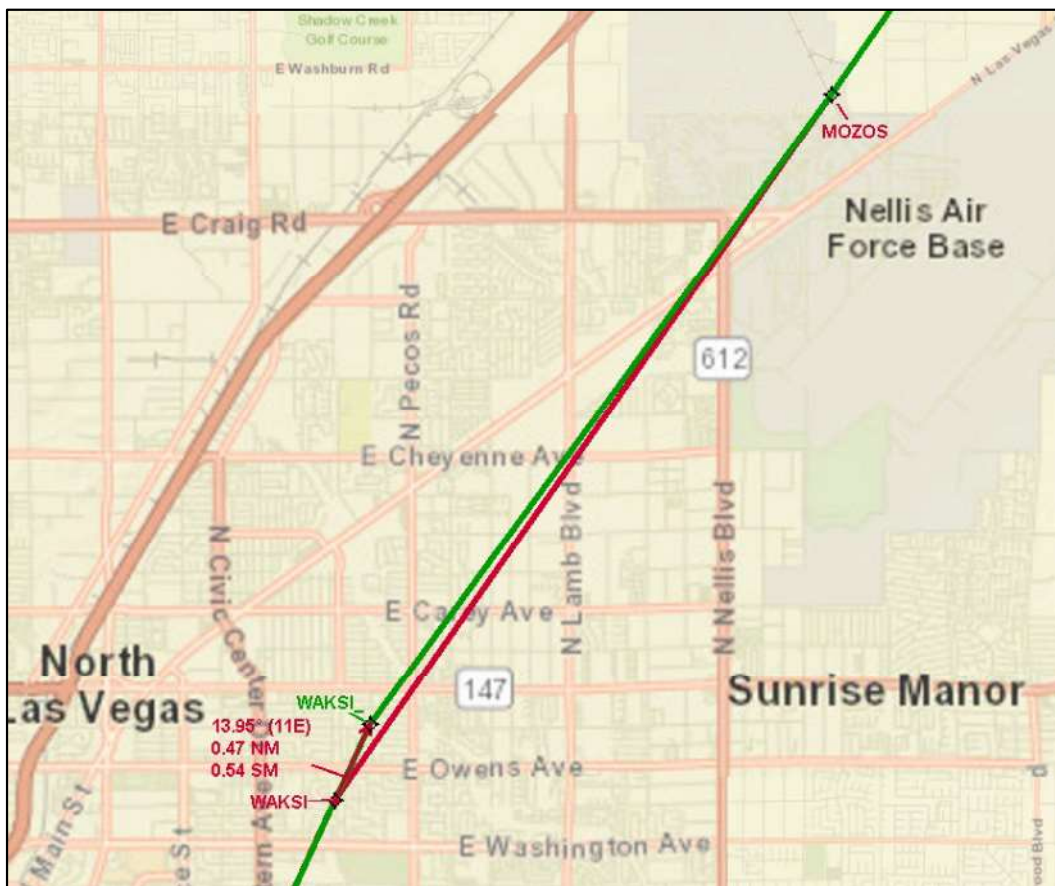


The changes to Final EA Design of the RNAV (GPS) Y RWY 19R approach procedure at KLAS are necessary for safety reasons. Specifically, the D&I Team designed the RNAV (RNP) Z RWY 19R and RNAV (GPS) Y RWY 19R approach procedures with a 3.5-degree GPA. The airlines

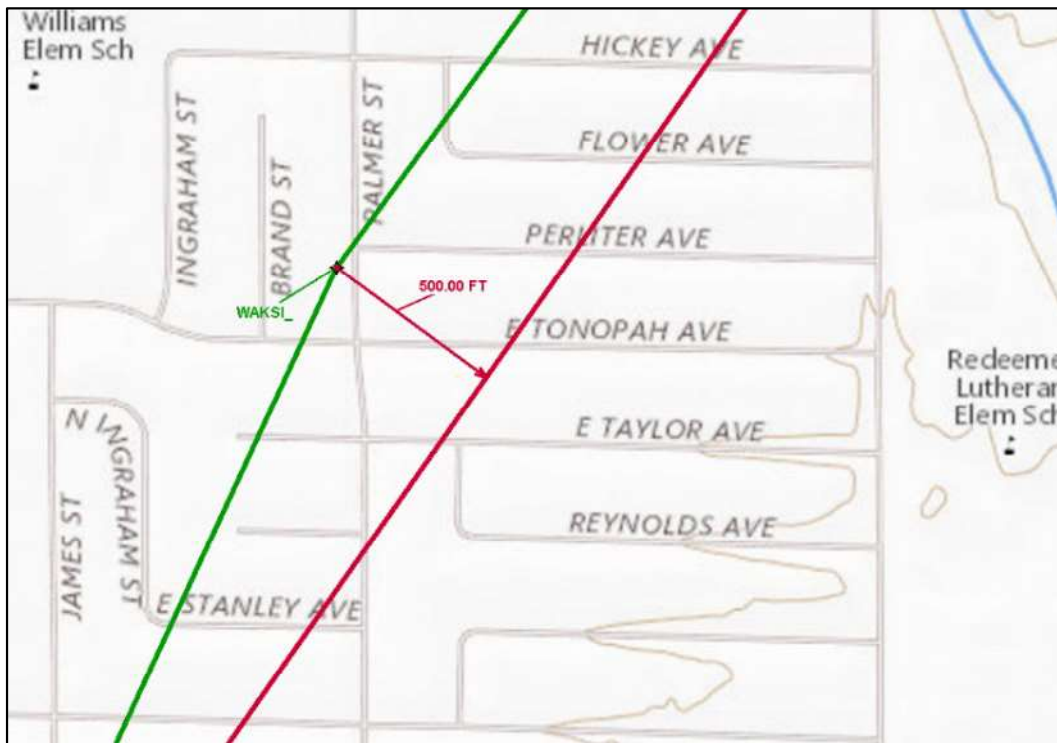
requested that the D&I Team lower the GPA because of erroneous altitude readouts during high ambient air temperatures (hot weather). During those conditions, the instruments show the aircraft on the glide path; however, the aircraft will actually be above the GPA. The steep descent prevents the aircraft from slowing to a safe landing speed. This can make it difficult for aircraft to slow to a safe landing speed, which can result in an unstable approach and require the flight crew to execute a missed approach/go-around.

As described above, the FAA has made changes to the Final EA Design for the RNAV (RNP) Z RWY 19R procedure to change the GPA to 3.24 degrees to mitigate the safety concerns raised by airlines. That change also requires the GPA for the RNAV (GPS) Y RWY 19R approach procedure to change in order for the VGSI to be able to assist pilots flying either approach. At the point of the largest lateral change (at WAKSI waypoint), the Changed Design of the RNAV (GPS) Y RWY 19R approach procedure would route aircraft approximately 500 ft northwest of the Final EA Design. As previously stated, the FAA does not anticipate an increase in the volume of air traffic flying the Changed Design when compared to the Final EA Design. In addition, the Changed Design would not be likely to change runway usage. The area of lateral change is presented in Figure 9, and a zoomed in view is presented in Figure 10.

**Figure 9: RNAV (GPS) Y RWY 19R Final EA Design (red) and the Changed Design (green)**



**Figure 10: RNAV (GPS) Y RWY 19R Final EA Design (red) and the Changed Design (green), Zoomed In View**



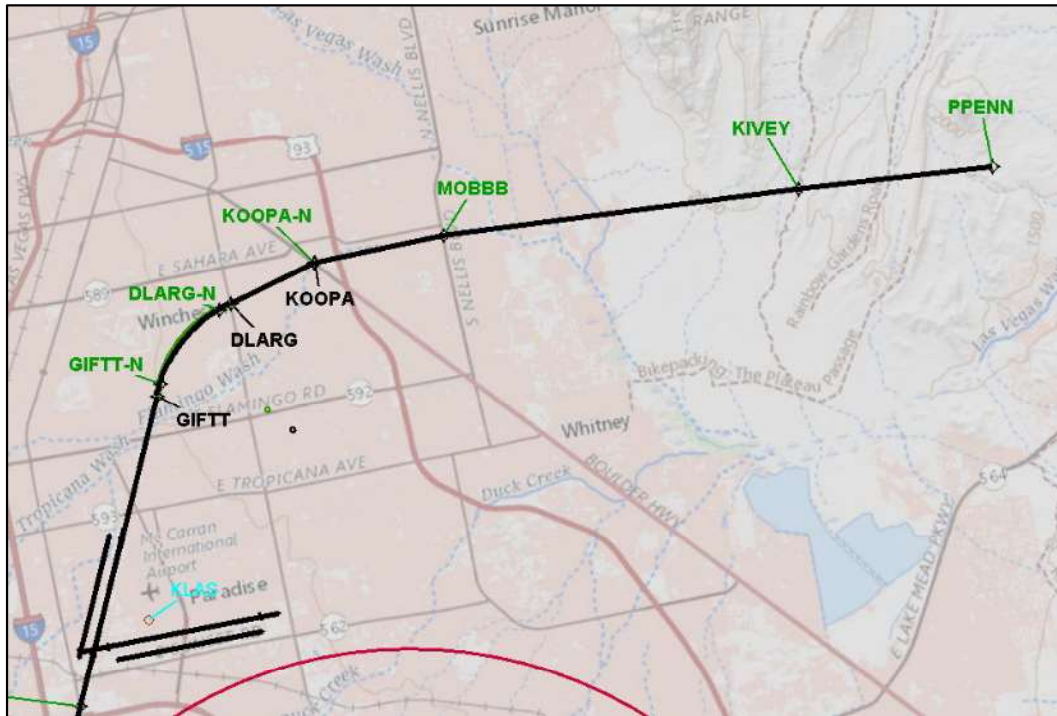
The Changed Design utilizing a GPA of 3.24-degrees was compared with the Final EA Design utilizing a GPA of 3.5-degrees, and the FAA determined that the Changed Design would result in a shift of approximately 500 ft northwest in the segment of the route at the changed WAKSI waypoint. The anticipated altitude at the changed WAKSI waypoint would be at or above 4,525 ft MSL (approximately 2,489 ft AGL), which is the same altitude as the Final EA Design.

#### **2.4 Design Changes to RNAV (RNP) Z RWY 19L Approach**

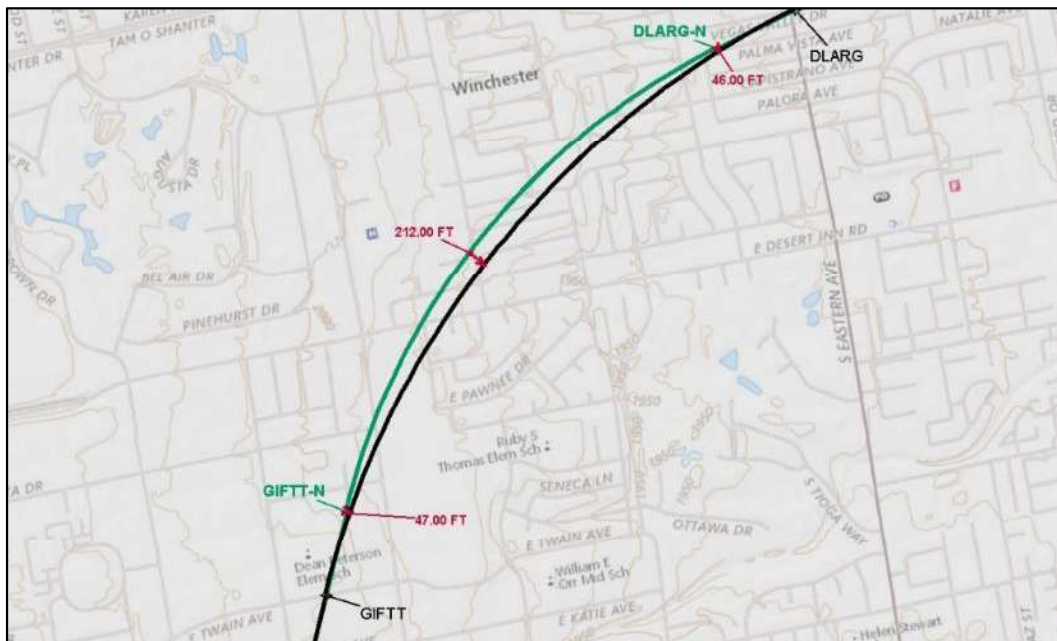
The changes to the Final EA Design for the RNAV (RNP) Z RWY 19L approach procedure are necessary for the procedure to conform to FAA safety criteria. On September 16, 2020, during an FAA evaluation and after the FONSI/ROD, the Final EA Design for RNAV (RNP) Z RWY 19L was determined to have insufficient spacing between the final rollout point and the decision altitude (DA) along the final approach. Therefore, to correct the proposed procedure and conform to approach criteria, the Design Changes would shift GIFTT waypoint north along the Final EA Design track, which would necessitate another shift in the next waypoint (DLARG waypoint) to the southwest along the Final EA Design track. The Changed Design results in a slightly longer final approach, which increases safety by giving pilots more distance before they reach the altitude at which they must determine whether they are safely lined up and configured to land. Figure 11 compares the Final EA Design for RNAV (RNP) Z RWY 19L to the Changed Design. The changes to the locations of the GIFTT and DLARG waypoints would result in a lateral shift of the procedure arc between the two waypoints as depicted in Figure 11. Figure 12 presents a zoomed in view of the area of lateral route change.



**Figure 11: RNAV (RNP) Z RWY 19L Final EA Design (black) and the Changed Design (green)**



**Figure 12: RNAV (RNP) Z RWY 19L Final EA Design (black) and the Changed Design (green), Zoomed In View**



There would be no discernable change in altitude, and the maximum lateral shift in track would be approximately 212 ft northwest from the Final EA Design. As previously stated, the FAA

does not anticipate an increase in the volume of air traffic flying the Changed Design when compared to the Final EA Design. In addition, the Changed Design would not be likely to change runway usage when compared to the Final EA Design.

Anticipated altitudes are listed in ft MSL and approximate (~) ft AGL for the waypoints listed below on the final approach of the changed RNAV (RNP) Z RWY 19L approach procedure:

- GFTT – at or above 2,748 ft MSL (~809 ft AGL)
- DLARG – at or above 3,107 ft MSL (~1,240 ft AGL)
- Altitude at greatest change in lateral distance of 212 ft – at or above 2,928 ft MSL (~1,009 ft AGL)

## **2.5 Design Change to the GAMES STAR**

The change to the Final EA Design of the KHND GAMES STAR is necessary to conform the termination altitude of the procedure to the updated Minimum Vectoring Altitude (MVA) along the route. The MVA is the minimum altitude at which controllers can turn aircraft safely for terrain and obstacle clearance. One of the MVA sections in the regional airspace was recently changed from 8,100 ft MSL to 8,300 ft MSL. The D&I Team was advised of the section's MVA change on December 2, 2020, during an FAA evaluation and after the FONSI/ROD. The purpose of the design change would be to conform the GAMES STAR MVA to the updated MVA for the nearby airspace section, thereby optimizing air traffic control workload and improving traffic flow efficiency.

There would be no lateral change to the procedure track from the Final EA Design, and the only change would be an increase in altitude at PIGOW waypoint from 8,100 ft MSL to 8,300 ft MSL. The FAA does not anticipate an increase in the volume of air traffic on the proposed GAMES STAR in connection with the Design Change when compared to the Final EA Design, and the Changed Design would not likely change runway usage compared to the Final EA Design.

### 3.0 IMPACT ANALYSIS APPROACH

The FAA has analyzed the potential environmental effects from the Design Changes, consistent with FAA Order 1050.1F, Paragraph 9-2.c.(1) to determine whether the changes to the Final EA Design would be “substantial” and “relevant to environmental concerns,” i.e., “paint[] a dramatically different picture of impacts compared to the description of impacts in the [Final] EA” (*id.*, Paragraph 9-3). This re-evaluation analyzes the same environmental impact categories analyzed in the Final EA:

- Noise and Noise Compatible Land Use
- Air Quality
- Biological Resources – Wildlife (Avian and Bat Species) and Migratory Birds Sub-Categories only
- Climate
- Department of Transportation Act, Section 4(f) Resources
- Historic Architectural, Archeological, and Cultural Resources – Historic Properties and Cultural Resources Sub-Categories only
- Natural Resources and Energy Supply - Energy Supply Sub-Category only (Aircraft Fuel only)
- Socioeconomic Impacts, Environmental Justice, and Children’s Environmental Health and Safety Risks – Environmental Justice Sub-Category only
- Visual Effects – Visual Resources/Visual Character Sub-Category only

## **4.0 ANALYSIS RESULTS**

### **4.1 Noise & Compatible Land Use**

The FAA conducted aircraft noise screening of the Design Changes, using FAA-approved screening tools.<sup>4</sup> The noise screening analysis performed for the Design Changes for the HOOVER SEVEN SID is presented in Appendix A. The noise screening analysis performed for the Design Changes for the RNAV (RNP) Z RWY 19R and RNAV (GPS) RWY 19R approach procedures is presented in Appendix B. The noise screening analysis performed for the Design Changes for the RNAV (RNP) Z RWY 19L approach procedure is presented in Appendix C. As the Design Change for the GAMES STAR would be an altitude increase only, no noise screening is necessary.

Based on the noise screening conducted, the changes to the Final EA Design do not have the potential for “reportable” or “significant” noise increases. See the appendices for further information.

### **4.2 Air Quality**

As stated above, the FAA does not anticipate that the Design Changes would result in an increase in air traffic flying any of the procedures, compared to the Final EA Design. As a result, the Design Changes would not measurably alter the findings of the Final EA regarding potential air quality effects.

### **4.3 Biological Resources – Wildlife (Avian and Bat Species) and Migratory Birds Sub-Categories only**

The anticipated number of aircraft operations under the Design Changes would be the same as those analyzed in the Final EA. The Design Changes for the proposed HOOVER SEVEN SID occur above 3,000 feet AGL and would not result in reduced flying altitudes. Likewise, the Design Changes to the RNAV approach procedures—RNAV (RNP) Z RWY 19R, RNAV (GPS) Y RWY 19R, and RNAV (RNP) Z RWY 19L—would be minor lateral shifts to the Final EA Design. In addition, the Design Change for the GAMES STAR would be an altitude increase only. There is no evidence to suggest that these minor changes to the Final EA Designs would measurably alter the findings in the Final EA regarding avian or bat species.

### **4.4 Climate**

The FAA does not anticipate that the Design Changes would result in an increase in air traffic flying any of the proposed procedures when compared to the Final EA Design. As a result, the Design Changes would not measurably alter the FAA’s calculations for greenhouse gas emissions in the Final EA.

---

<sup>4</sup> The FAA used the following FAA approved noise screening tools: (1) *Guidance for Noise Screening of Air Traffic Actions* (December 2012) and (2) the Terminal Area Routing Generation, Evaluation and Traffic Simulation (TARGETS) Aviation Environmental Design Tool (AEDT) Environmental Plug in. See *1050.1F Desk Reference*, Version 2, section 11.1.3 (February 2020).



#### **4.5 Department of Transportation Act, Section 4(f) Resources**

As with the Final EA Design, the nature of the Design Changes (flight procedures only) would not involve the physical use of Section 4(f) resources. Based on the noise screening, the changes to the Final EA Design do not have the potential for “reportable” or “significant” noise increases, and the FAA does not anticipate that the Design Changes would result in an increase in air traffic flying the procedures when compared to the Final EA Design. Given the location of the Design Changes to the approach procedures—RNAV (RNP) Z RWY 19R, RNAV (GPS) Y RWY 19R, and RNAV (RNP) Z RWY 19L—and the altitude of the Design Changes to the HOOVER SEVEN SID and GAMES STAR, the Design Changes, like the Final EA Design, would not be expected to substantially impair the view or setting of Section 4(f) resources.

#### **4.6 Historic Architectural, Archeological, and Cultural Resources – Historic Properties and Cultural Resources Sub-Categories only**

The Design Changes would not introduce any new visual, atmospheric, or audible elements. Based on the noise screening, the changes to the Final EA Design do not have the potential for “reportable” or “significant” noise increases. The FAA does not anticipate that the Design Changes would result in an increase in air traffic flying the procedures when compared to the Final EA Design. Therefore, the Design Changes would not change the Area of Potential Effects described in the Final EA and the FAA’s finding of “no adverse effect” on historic properties under Section 106 of the National Historic Preservation Act (NHPA) remains valid.

#### **4.7 Natural Resources and Energy Supply - Energy Supply sub-category only (aircraft fuel only)**

The FAA does not anticipate an increase in air traffic flying the changed procedures as a result of the Design Changes. Therefore, the Design Changes would not measurably alter the amount of fuel burned when compared to the Final EA Design.

#### **4.8 Environmental Justice**

Based on the noise screening, the changes to the Final EA Design do not have the potential for “reportable” or “significant” noise increases, and the FAA does not anticipate that the Design Changes would result in any increase in air traffic flying the procedures when compared to the Final EA Design. Therefore, the Design Changes would not have the potential to lead to a disproportionately high and adverse impact to an environmental justice population as described in the Final EA.

#### **4.9 Visual Effects (Visual Resources / Visual Character Sub-Category only)**

The Design Changes would not result in visual impacts beyond those previously disclosed in the Final EA. As with the Final EA Design, implementation of the Design Changes would not be expected to have significant visual impacts. There would be no increase in the number of aircraft operations at the study airports when compared with the Final EA No Action Alternative. The

changes in aircraft traffic patterns under the Design Changes would not affect the nature of the visual character of the area, contrast with the visual resources and/or visual character of the area, or block or obstruct the views of visual resources.

#### **4.10 Cumulative Effects**

Research conducted for the Final EA did not reveal any present or reasonably foreseeable actions with the potential for direct or indirect effects on aircraft flight patterns within the General Study Area. Therefore, as was the case with the Final EA Design, no cumulative impacts would be anticipated for the Design Changes when compared to the Final EA No Action Alternative for either 2020 or 2025.

## **5.0 FINDINGS**

Based on the analysis described in this document and its appendices: (1) the Design Changes are not a substantial change in the FAA's proposed action, as analyzed in the Final EA and approved in the FONSI/ROD, that is relevant to environmental concerns; and (2) the data and analyses contained in the Final EA and FONSI/ROD are still substantially valid and there are no significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts. Therefore, in accordance with FAA Order 1050.1F, paragraph 9-2.c and 9-3, a new or supplemental EA is not required.

## 6.0 DECISION AND ORDER

I have carefully and thoroughly considered the facts contained in the Final EA, the FONSI/ROD, and this WR/ROD. Based on that information, I have decided not to prepare a supplement to the Final EA for the Design Changes. I find that the Design Changes are consistent with existing national environmental policies and objectives as set forth in Section 101(a) of National Environmental Policy Act. Accordingly, pursuant to the authority delegated to me by the Administrator of the FAA, I approve the Design Changes as described in Section 2.0 and direct that actions be taken that will enable their implementation.

**KELLY E  
BROWN** Digitally signed by  
KELLY E  
BROWN  
Date: 2020.12.22  
13:16:13 -05'00'

Approved: \_\_\_\_\_

Kelly E. Brown,  
Deputy Vice President (A), Mission Support Services  
Air Traffic Organization  
Federal Aviation Administration

\_\_\_\_\_  
Date

## RIGHT OF APPEAL

**This WR/ROD constitutes a final order of the FAA Administrator and is subject to exclusive judicial review under 49 U.S.C. § 46110 by the U.S. Circuit Court of Appeals for the District of Columbia or the U.S. Circuit Court of Appeals for the circuit in which the person contesting the decision resides or has its principal place of business. Any party having substantial interest in this order may apply for review of the decision by filing a petition for review in the appropriate U.S. Court of Appeals no later than 60 days after the order is issued in accordance with the provisions of 49 U.S.C. § 46110. Any party seeking to stay implementation of this order must file an application with the FAA prior to seeking judicial relief as provided in Rule 18(a) of the Federal Rules of Appellate Procedure.**