



Landrum & Brown
19700 Fairchild Rd.
Suite 230
Irvine, CA 92612



Aircraft Glide Slope Analysis



April 2019

Proposal



Landrum & Brown, Incorporated
19700 Fairchild Rd., Suite 230
Irvine, CA 92612
949-349-0671

April 29, 2019

Antonia Graham
Assistant to the City Manager
Office of the City Manager
City of Huntington Beach
2000 Main Street
Huntington Beach, CA 92648

RE: Glide Slope Analysis Proposal

Landrum & Brown, Incorporated (L&B) is pleased to submit this proposal to assist the City of Huntington Beach with an Aircraft Glide Slope Analysis. This submission provides the information requested at the April 16, 2019 meeting with Christian Valdes (L&B).

Founded in 1949, Landrum & Brown, Incorporated (L&B) is acknowledged as the global leader in Aviation Planning & Development and Environmental Management. We are also recognized globally for industry leadership, innovation, technical excellence, and client responsiveness. Airports around the globe have turned to L&B to lead their efforts for nearly 70 years because we are the premier firm in the aviation consulting industry, and responding to the needs of airport clients is our firm's sole focus.

Our clients have access to L&B's multidisciplinary team with over 200 personnel and 28 offices in 12 countries worldwide. We provide ample technical breadth, depth, and capacity to address every facet of aviation consulting, including addressing noise and environmental issues.

Relative to community outreach and development of aircraft noise abatement procedures, L&B has supported various airports with analyzing and implementing solutions to decrease aircraft noise impacts on communities. For example, L&B supports the O'Hare International Airport noise abatement program and the O'Hare Noise Compatibility Commission where we provide the coordination, analysis, monitoring and reporting on procedures including preferential runway use plans and preferred flight paths.

Locally, our knowledge of the Southern California airspace and relationship with Long Beach Airport staff puts L&B in a great position to assist you with your flight analysis needs. We look forward to providing you with the analysis necessary to quantify the benefits of the proposed Long Beach Airport glide slope change.

Sincerely,

A handwritten signature in blue ink that reads "Rob Adams". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Rob Adams
Officer-in-Charge

cc: Christian Valdes (L&B)



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1. Introduction

Generally, aircraft arrive into airports using a flight path that is on a 3-degree glide slope while applying minimal power to the engines. However, aircraft may fly below that intended path and apply more power to the engines to remain aloft, which generally increases noise and the use of fuel. The City of Huntington Beach proposes that aircraft arriving into Long Beach Airport remain on a 3-degree glide slope, which would maintain aircraft at higher altitudes over Huntington Beach communities, and possibly reduce aircraft noise by perceivable levels. The scope of work below describes the tasks to deliver the aircraft glide slope analysis and noise monitoring.

2. Scope of Work

Task 1 – Project Management

Provide project management and coordination between various stakeholders associated with this project.

Task 2 – Glide Slope Analysis

To perform the glide slope analysis, L&B will gather the necessary flight data to document the existing and proposed altitudes at various points along the flight path of aircraft arriving into Long Beach Airport. These points will be located within the Huntington Beach city boundaries. Then, a comparison will be made between the existing and proposed scenarios to quantify the differences.

Task 3 – Noise Monitoring

L&B will coordinate with Long Beach Airport staff to perform noise monitoring at locations selected by the City of Huntington Beach to measure the noise levels of existing aircraft operations. Once the proposed 3-degree glide slope is implemented, L&B will coordinate additional noise monitoring at the same locations to quantify the changes in aircraft noise. The data collected will include: Date/Time, Lmax, SEL, duration, lateral and slant range distance, altitude at Point of Closest Approach (PCA), and ground speed at two (2) to four (4) monitoring locations.

Task 4 – Report

L&B will prepare a draft report describing the glide slope analysis and noise monitoring. L&B will provide a draft report to the City of Huntington Beach for comments, then finalize the report.

3. Cost Summary

Below is a breakdown of the cost to perform the tasks described in Section 2.

Task Number	Task Name	Cost
1.0	Project Management	\$ 6,340
2.0	Glide Slope Analysis	
2.1	Data Gathering	\$ 4,520
2.2	Existing Scenario	\$ 3,860
2.3	Proposed Scenario	\$ 3,860
2.4	Scenario Comparison	\$ 2,290
3.0	Noise Monitoring	
3.1	Site Selection	\$ 3,680
3.2	Existing Scenario Monitoring	\$ 2,680
3.3	New Glide Slope Monitoring	\$ 2,680
3.4	Monitoring Analysis	\$ 5,360
4.0	Report	
4.1	Draft Report	\$ 7,970
4.2	Final Report	\$ 5,130
Total		\$ 48,370