

Draft Environmental Impact Report (Draft EIR)

[State Clearinghouse No. 2012091037]

for

Los Angeles International Airport (LAX) West Aircraft Maintenance Area Project

Volume 1

Main Document and Appendix A

**City of Los Angeles
Los Angeles World Airports**

October 2013

Draft Environmental Impact Report (Draft EIR)

[State Clearinghouse No. 2012091037]

for

Los Angeles International Airport (LAX) West Aircraft Maintenance Area Project

Volume 1

Main Document and Appendix A

**City of Los Angeles
Los Angeles World Airports**

October 2013

Table of Contents

1.0	Introduction and Executive Summary	1-1
1.1	Summary of Proposed Project	1-1
1.2	Relationship to the LAX Master Plan and EIR	1-2
1.3	Purpose of this EIR	1-3
1.4	Organization of this EIR	1-3
1.5	Executive Summary of Environmental Impacts	1-7
1.6	Areas of Known Controversy and Issues to be Resolved.....	1-7
2.0	Project Description	2-1
2.1	Introduction	2-1
2.2	Location and Surrounding Uses.....	2-1
2.3	Existing Conditions.....	2-2
2.4	Project Objectives	2-2
2.5	Project Characteristics	2-9
2.5.1	Overview	2-9
2.5.2	Apron Area	2-9
2.5.3	Aircraft Maintenance Hangars	2-10
2.5.4	Ancillary Facilities	2-14
2.6	Relocation and Demolition of Existing On-Site Uses.....	2-15
2.7	Construction Schedule.....	2-16
2.8	Grading	2-17
2.9	Intended Use of this EIR	2-17
2.9.1	Federal Actions	2-18
2.9.2	State Actions	2-18
2.9.3	Local and Regional Actions	2-18
3.0	Overview of Project Setting.....	3-1
3.1	Introduction	3-1
3.1.1	Study Area	3-1
3.1.2	Study Years.....	3-1
3.2	Existing Airport Facilities	3-1
3.4	Land Use Setting.....	3-2
3.5	Environmental Setting	3-3
3.5.1	Air Quality.....	3-3
3.5.2	Greenhouse Gas Emissions	3-3
3.5.3	Hazards and Hazardous Materials.....	3-3
3.5.4	Hydrology and Water Quality	3-4
3.5.5	Noise	3-4
3.5.6	Land Use and Planning.....	3-4
3.5.7	Transportation/Traffic.....	3-4
3.6	Development Setting/Related Projects	3-5
3.6.1	On-Airport Related Projects	3-9
3.6.2	Other Related Projects.....	3-10
4.0	Environmental Impact Analysis	4-1
4.1	Air Quality	4.1-1
4.1.1	Introduction	4.1-1
4.1.2	Methodology.....	4.1-5
4.1.3	Existing Conditions	4.1-19
4.1.4	Thresholds of Significance	4.1-30
4.1.5	Applicable LAX Master Plan Commitments and Mitigation Measures.....	4.1-38
4.1.6	Impact Analysis	4.1-43
4.1.7	Cumulative Impacts	4.1-58
4.1.8	Mitigation Measures	4.1-59

Table of Contents (continued)

4.2	4.1.9 Level of Significance After Mitigation	4.1-59
	Greenhouse Gas Emissions	4.2-1
	4.2.1 Introduction	4.2-1
	4.2.2 Methodology.....	4.2-3
	4.2.3 Existing Conditions	4.2-8
	4.2.4 Thresholds of Significance.....	4.2-30
	4.2.5 Applicable LAX Master Plan Commitments and Mitigation Measures.....	4.2-31
	4.2.6 Impact Analysis.....	4.2-35
	4.2.7 Cumulative Impacts	4.2-38
	4.2.8 Mitigation Measures.....	4.2-38
	4.2.9 Level of Significance After Mitigation	4.2-39
4.3	Hazards and Hazardous Materials.....	4.3-1
	4.3.1 Introduction	4.3-1
	4.3.2 Methodology.....	4.3-1
	4.3.3 Existing Conditions	4.3-3
	4.3.4 Thresholds of Significance.....	4.3-19
	4.3.5 Applicable LAX Master Plan Commitments and Mitigation Measures.....	4.3-19
	4.3.6 Impact Analysis	4.3-21
	4.3.7 Cumulative Impacts	4.3-27
	4.3.8 Mitigation Measures.....	4.3-28
	4.3.9 Level of Significance After Mitigation	4.3-29
4.4	Hydrology and Water Quality	4.4-1
	4.4.1 Introduction	4.4-1
	4.4.2 Methodology.....	4.4-1
	4.4.3 Existing Conditions	4.4-3
	4.4.4 Thresholds of Significance.....	4.4-18
	4.4.5 Applicable LAX Master Plan Commitments and Mitigation Measures.....	4.4-19
	4.4.6 Impacts Analysis	4.4-21
	4.4.7 Cumulative Impacts	4.4-29
	4.4.8 Mitigation Measures.....	4.4-30
	4.4.9 Level of Significance After Mitigation	4.4-30
4.5	Noise	4.5-1
	4.5.1 Introduction	4.5-1
	4.5.2 Methodology.....	4.5-4
	4.5.3 Existing Conditions	4.5-8
	4.5.4 Thresholds of Significance.....	4.5-19
	4.5.5 Applicable LAX Master Plan Commitments and Mitigation Measures.....	4.5-22
	4.5.6 Impact Analysis	4.5-23
	4.5.7 Cumulative Impacts	4.5-35
	4.5.8 Mitigation Measures.....	4.5-37
	4.5.9 Level of Significance After Mitigation	4.5-37
4.6	Land Use and Planning.....	4.6-1
	4.6.1 Introduction	4.6-1
	4.6.2 Methodology.....	4.6-1
	4.6.3 Existing Conditions	4.6-2
	4.6.4 Thresholds of Significance.....	4.6-4
	4.6.5 Applicable LAX Master Plan Commitments and Mitigation Measures.....	4.6-9
	4.6.6 Impact Analysis	4.6-9
	4.6.7 Cumulative Impacts	4.6-20
	4.6.8 Mitigation Measures	4.6-20
	4.6.9 Level of Significance After Mitigation	4.6-20
4.7	Construction Surface Transportation	4.7-1
	4.7.1 Introduction	4.7-1

4.7.2	Methodology.....	4.7-2
4.7.3	Existing Conditions	4.7-7
4.7.4	Project-Generated Traffic.....	4.7-19
4.7.5	Future Cumulative Traffic.....	4.7-22
4.7.6	Thresholds of Significance.....	4.7-30
4.7.7	Applicable LAX Master Plan Commitments and Mitigation Measures.....	4.7-34
4.7.8	Impact Analysis	4.7-36
4.7.9	Mitigation Measures.....	4.7-42
4.7.10	Level of Significance After Mitigation.....	4.7-42
5.0	Alternatives	5-1
5.1	Purpose and Scope.....	5-1
5.2	Significant Impacts of the Project.....	5-2
5.3	Project Objectives	5-2
5.4.	Alternatives Considered and Rejected.....	5-3
5.4.1.	West Remote Pads/Gates Site	5-3
5.4.2.	Other LAX Sites	5-3
5.5	Alternatives	5-4
5.5.1	No Project-No Development Alternative	5-4
5.5.2	No Project-Existing LAX Master Plan Alternative	5-9
5.5.3	Reduced Project Alternative	5-9
5.5.4	Alternate Site Alternative	5-10
5.6	Evaluation of Project Alternatives	5-17
5.6.1	No Project-No Development Alternative	5-17
5.6.2	No Project-Existing LAX Master Plan Alternative	5-24
5.6.3	Reduced Project Alternative	5-36
5.6.4	Alternate Site Alternative	5-44
5.7	Environmentally Superior Alternative.....	5-54
6.0	Other Environmental Considerations	6-1
6.1	Significant Unavoidable Impacts.....	6-1
6.2	Irreversible Environmental Changes.....	6-2
6.3	Growth Inducing Impacts	6-3
6.3.1	Project Characteristics	6-3
6.3.2	Economic Growth.....	6-3
6.3.3	Removal of an Impediment to Growth	6-3
6.3.4	Development or Encroachment into an Isolated Open Space.....	6-4
6.3.5	Precedent Setting Action	6-4
6.4	Potential Secondary Effects	6-4
6.5	Less Than Significant Effects.....	6-5
7.0	List of Preparers, References, NOP and Scoping Meeting Comments, and List of Acronyms	7-1
7.1	List of Preparers.....	7-1
7.2	List of References	7-3
7.3	NOP and Scoping Meeting Comments	7-11
7.4	List of Acronyms.....	7-12

Appendices

Appendix A - Initial Study, Notice of Preparation (NOP), NOP Comments, Scoping Meeting Materials, and Scoping Meeting Comments

Appendix B - Air Quality, Greenhouse Gas, and Human Health Risk Assessment

- B.1 Construction – Criteria Pollutant and Greenhouse Gas Emissions Calculations
- B.2 Construction – Localized Significance Thresholds (LST) Dispersion Modeling

Table of Contents (continued)

B.3	Construction – Human Health Risk Assessment (HHRA)
B.4	Construction – Cumulative Emissions Analysis
B.5	Operations – Criteria Pollutant and Greenhouse Gas Emissions Calculations and Operational HHRA
Appendix C - Noise Analysis and Worksheets	
C.1	Construction Noise Calculations
C.2	Noise Analysis Results for the Proposed WAMA at LAX
C.3	West Aircraft Maintenance Area – Taxi Noise
Appendix D - Construction Surface Transportation: Study Area Intersection and Construction Vehicle Haul Routes Analysis	

List of Tables

Table 1-1	Summary of Environmental Impacts Related to the Proposed Project.....	1-10
Table 3-1	On-Airport Related Projects	3-6
Table 4.1-1	Toxic Air Contaminants (TAC) of Concern for the Proposed Project	4.1-13
Table 4.1-2	National and California Ambient Air Quality Standards	4.1-21
Table 4.1-3	South Coast Air Basin Attainment Status	4.1-23
Table 4.1-4	Southwest Coastal Los Angeles and South Coastal Los Angeles County Monitoring Station Ambient Air Quality Data	4.1-27
Table 4.1-5	SCAQMD CEQA Thresholds of Significance for Air Pollutant Emissions in the South Coast Air Basin.....	4.1-35
Table 4.1-6	SCAQMD CEQA Thresholds of Significance for Air Pollutant Concentrations in the South Coast Air Basin.....	4.1-37
Table 4.1-7	General Air Quality Control Measures	4.1-38
Table 4.1-8	Construction-Related Control Measures.....	4.1-39
Table 4.1-9	Operations-Related Air Quality Control Measures.....	4.1-42
Table 4.1-10	Estimate Maximum Unmitigated Construction Emissions	4.1-43
Table 4.1-11A	Construction Localized Significance Threshold Analysis (Maximum Daily Emissions).....	4.1-47
Table 4.1-11B	Construction Localized Significance Threshold Analysis (Maximum Annual Emissions).....	4.1-48
Table 4.1-12	Comparison of CalOSHA Permissible Exposure Limits to Maximum Estimated 8-Hour On-Site Air Concentrations	4.1-49
Table 4.1-13	Incremental Cancer Risk and Chronic Non-Cancer Human Health Hazards for Maximally Exposed Individuals from Project Construction	4.1-53
Table 4.1-14	Maximum Incremental Acute Hazard Indices for Project Construction	4.1-55
Table 4.1-15	Unmitigated Proposed Project Operational Emissions(Pounds per Day).....	4.1-57
Table 4.1-16	Cumulative Construction Projects Peak Daily Emissions Estimates	4.1-60
Table 4.2-1	Global Warming Potentials and Atmospheric Lifetimes of Select Greenhouse Gases	4.2-3
Table 4.2-2	City of Los Angeles Green Building Code Tier 1 Requirements for Newly-Constructed Nonresidential Buildings	4.2-15
Table 4.2-3	State of California GHG Emissions	4.2-29
Table 4.2-4	General Air Quality Control Measures	4.2-32
Table 4.2-5	Construction-Related Control Measures	4.2-32
Table 4.2-6	Operations-Related Air Quality Control Measures	4.2-34
Table 4.2-7	Construction Greenhouse Gas Emissions	4.2-35
Table 4.2-8	Annual Greenhouse Gas Emissions	4.2-36
Table 4.4-1	Adopted TMDLs for Santa Monica Bay.....	4.4-8
Table 4.4-2	Future TMDL Completion Schedule for Santa Monica Bay Offshore and Nearshore	4.4-8

Table 4.4-3	Existing Peak Stormwater Runoff Flows.....	4.4-16
Table 4.4-4	Peak Stormwater Runoff Flows Under the Proposed Project.....	4.4-24
Table 4.5-1	Common Sounds On The A-Weighted Decibel Scale	4.5-2
Table 4.5-2	City of Los Angeles Presumed Ambient Noise Levels.....	4.5-10
Table 4.5-3	City of Los Angeles Land Use Compatibility for Community Noise	4.5-11
Table 4.5-4	Representative Noise-Sensitive Receptor Locations.....	4.5-13
Table 4.5-5	Existing Conditions – Run-up Activity	4.5-17
Table 4.5-6	Existing Conditions Aircraft Run-up CNEL by Location.....	4.5-18
Table 4.5-7	Noise Levels for Existing Conditions Run-ups by Aircraft and Location dBA, L_{max}	4.5-20
Table 4.5-8	Estimate of Construction Noise Levels (Leq) at Off-Site Sensitive Receiver Locations in the City of El Segundo	4.5-24
Table 4.5-9	Proposed Future Conditions Run-up Activity at the proposed Project	4.5-29
Table 4.5-10	Comparison of Aircraft Run-up CNELs for Existing Conditions and Proposed Future Conditions with the Proposed Project by Location	4.5-30
Table 4.5-11	Noise Levels for Proposed Future Conditions Run-ups at the proposed Project by Aircraft dBA, L_{max}	4.5-32
Table 4.6-1	Comparison of the Proposed Project to Applicable LAX Plan Goals, Policies, and Programs.....	4.6-16
Table 4.7-1	Study Area Intersections.....	4.7-12
Table 4.7-2	Level of Service Thresholds and Definitions for Signalized Intersections	4.7-16
Table 4.7-3	Baseline Intersection Analysis Results	4.7-17
Table 4.7-4	Project Peak (August 2014) – Proposed Project-Related Construction Traffic PCEs	4.7-21
Table 4.7-5	Regional Population Distribution.....	4.7-22
Table 4.7-6	Construction Projects Concurrent with the Proposed Project Construction Period....	4.7-26
Table 4.7-7	AM and PM Construction Peak Hour Traffic PCEs at Overall Cumulative Peak by Project	4.7-29
Table 4.7-8	Proposed Project - Level of Service Analysis Results - Impact Comparison 1 Baseline Plus Project Compared to Baseline	4.7-37
Table 4.7-9	Proposed Project - Level of Service Analysis Results - Impact Comparison 2 Cumulative Traffic (March 2018).....	4.7-39
Table 5-1	Comparison of Impacts Associated with the Alternatives and Impacts of the Proposed Project.....	5-57

List of Figures

Figure 2-1	Regional Map	2-3
Figure 2-2	Aerial Photograph of Project Site	2-5
Figure 2-3	Aerial View of Airport and Surrounding Land Uses	2-7
Figure 2-4	Conceptual Site Plan	2-11
Figure 3-1	Development Projects At/Adjacent to LAX	3-7
Figure 4.1-1	Total Cancer Risk for Los Angeles International Airport Area	4.1-31
Figure 4.1-2	Closest Sensitive Receptor Locations	4.1-33
Figure 4.1-3	Peak Impact Receptor Locations	4.1-51
Figure 4.3-1	Location of Existing Soils Stockpiles.....	4.3-11
Figure 4.3-2	Location and Extent of Free-Phase Jet Fuel Plume	4.3-15
Figure 4.3-3	Existing Groundwater Recovery and Monitoring Wells.....	4.3-17
Figure 4.4-1	Drainage Sub-basins.....	4.4-11
Figure 4.4-2	Existing Drainage Facilities	4.4-13
Figure 4.5-1	Existing Run-up Locations	4.5-15
Figure 4.5-2	Proposed Future Run-up Locations	4.5-27

Table of Contents (continued)

Figure 4.6-1	LAX Plan Areas.....	4.6-5
Figure 4.6-2	LAX Specific Plan Sub-Areas	4.6-7
Figure 4.6-3	Summary of Refinements to LAX Master Plan	4.6-11
Figure 4.7-1	Construction Traffic Analysis Study Area.....	4.7-9
Figure 4.7-2	Construction Traffic Study Analysis Area Intersections	4.7-13
Figure 4.7-3	Proposed Project Construction Vehicle Routes and Trip Distribution	4.7-23
Figure 4.7-4	Estimated Employee Hours for Proposed Project and Other Concurrent Construction Projects.....	4.7-27
Figure 4.7-5	Employee Parking and Staging Locations for Proposed Project and Other Projects at Construction Peak.....	4.7-31
Figure 5-1	Locations of Alternatives Evaluated in EIR.....	5-5
Figure 5-2	No Project-No Development Alternative	5-7
Figure 5-3	No Project-Existing LAX Master Plan Alternative	5-11
Figure 5-4	Reduced Project Alternative	5-13
Figure 5-5	Alternate Site Alternative	5-15