



APPENDIX 5.10-1

**Crawford, Murphy & Tilly. South Airport Cargo Center Aircraft
Noise Assessment. Ontario International Airport (ONT).
October 13, 2022.**



SOUTH AIRPORT CARGO CENTER AIRCRAFT NOISE ASSESSMENT

Ontario International Airport (ONT)

October 13, 2022

Ontario, California

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INTRODUCTION

This report documents the methodologies used, and presents the findings of, an aircraft noise assessment that was performed to evaluate the additional aircraft operations forecast with the proposed South Airport Cargo Center (SACC) project (i.e., the Proposed Project) at Ontario International Airport (ONT). **Figure 1** is an aerial photograph of ONT. As shown, ONT has two parallel east-west runways. Runway 8L-26R, the northern runway, is 12,197 feet in length. Runway 8R-26L, the southern runway, is 10,200 feet in length. In addition to aircraft arrivals and departures on the runways resulting in noise, aircraft engine run-ups are also performed at ONT. Run-ups are routine aircraft engine tests that are performed on an aircraft engine(s) following maintenance. The potential for noise impacts resulting from additional SACC-related runups was also evaluated.

The sound (i.e., noise) levels presented in this report represent Community Noise Equivalent Levels (CNELs) expressed in decibels (dB) on the “A”-weighted scale dB(A). Use of this weighting accounts for the relative loudness of sounds as they are perceived by the human ear. CNELs are single numbers that represent the average sound level over a 24-hour period with a penalty of 5 dB(A) added for each noise event between the hours of 7 p.m. and 10 p.m. and a penalty of 10 dB(A) added to each event between the hours of 10 p.m. and 7 a.m. The CNEL metric is the predominant metric used for noise assessments in the state of California.

METHODOLOGY

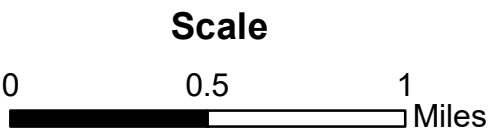
Aircraft noise levels were derived using Version 3d of the Federal Aviation Administration’s (FAA’s) Aviation Environmental Design Tool (AEDT), the current version of the computer model when the analysis was performed. Since then, the FAA released a more updated version of AEDT (Version 3e). A review of the new features of Version 3e indicate that the updated model would not provide aircraft noise results that would differ from those derived using Version 3d.

AEDT uses airport-specific information and aircraft fleet databases. The aircraft fleet database contains more than 3,000 aircraft (airframe and engine combinations). For the evaluation of noise, AEDT contains parameters from the International Civil Aviation Organization’s (ICAO’s) Aircraft Noise and Performance Database and the European Organization for the Safety of Air Navigation’s (EUROCONTROL’s) base of aircraft data. The fleet database also contains noise versus power versus distance acoustic data augmented by a database of spectral characteristics. The noise versus power versus distance data represent the aircraft source noise level for a given operational mode (i.e., arrival, departure) and power setting (runups) at a range of slant distances from an aircraft to account for acoustic propagation through the atmosphere. Arrivals and departures generate different types of aircraft noise. For departures, noise from the engine is typically dominate while airframe noise is typically dominate for arrivals.¹

The airport-specific data used by AEDT include the following:

- Number of aircraft operations by aircraft type – referred to as the aircraft fleet mix.
- Time of day in which the operations occur – for the purpose of deriving CNELs.
- Departure destinations by aircraft type – this information is used to assign “stage lengths” to aircraft departures to account for the lower altitude of departures flying longer distances because the necessary additional fuel adds to the weight of an aircraft.

¹ Aviation Environmental Design Tool (AEDT) Version 3d Technical Manual. U.S. Department of Transportation/Federal Aviation Administration. March 2021.



ONTARIO INTERNATIONAL AIRPORT

Project Location and Existing Land Use

Legend

- Runways
- ONT Property Boundary
- Residential Use
- Public Use 1
- Public Use 2
- Recreational / Open Space
- Commercial Use
- Manufacturing and Production
- Vacant



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DATE: May 2022

FIGURE: 1

- Runway and aircraft track usage – defines to what runway(s) and flight tracks (i.e., paths) aircraft arrivals and departures are assigned.
- Location and frequency of engine runups – performance checks may be performed at thrust settings from idle to full power.

ENVIRONMENTAL SETTING

This section describes the “Baseline Condition” by which the Proposed Project was evaluated. Development of the Baseline Condition, which represents a hybrid 2019/2020 base year, is described in the Ontario International Airport Authority’s (OIAA’s) recently published Draft Supplemental Environmental Impact Report (SEIR) for the rehabilitation of ONT’s Runway 8R-26L.² As documented in the Runway 8R-26L SEIR, the hybrid base year was developed because in 2020 there was a major decrease in passenger enplanements and commercial operations at ONT due to the COVID-19 pandemic. The Baseline Condition contours from the Runway 8R-26L SEIR were also used to represent the Baseline Condition contours for the evaluation of the Proposed Project that is the subject of this report (i.e., the SACC).

Assessments of aircraft noise are performed for annual average daily conditions (i.e., annual operations divided by the number of days in a year). The number of annual and average day operations is provided in **Table 1**. The average day aircraft fleet mix, the number of arrivals and departures by runway and time of day, the number of departures by stage length, the number of arrivals and departures by flight track, and the number of aircraft engine runups are provided in **Attachments A, B, C, D, and E** of this report, respectively. The arrival and departure flight tracks that were modeled in the AEDT are illustrated on **Figure 2**.

Table 1: Aircraft Operations-Baseline Condition

Year	Number of Aircraft Operations	
	Annual	Average Day
2019/2020	106,026	290

Figure 3 illustrates the land uses in the vicinity of ONT overlaid with the Baseline Condition CNEL 65, 70, and 75 dB(A) aircraft noise contours. As shown, the CNEL 65 dB(A) contour extends approximately 2.75 miles east and approximately 0.75 miles west of ONT’s runways. East of the airport, the land uses are primarily commercial and manufacturing/production, land uses that are compatible with aircraft noise. While there are residences west of the airport, aircraft noise has been addressed at most of the housing units by the OIAA’s Quiet Home Program.³

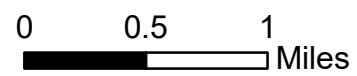
Table 2 provides the estimated number of residences (i.e., housing units) and persons within each of the noise contour levels. Notably, the count of residences does not include a residence for which the OIAA has records that the residence was addressed by the Quiet Home Program but does include residences on parcels for which OIAA has identified the parcel is subject to an aviation easement. It is not known at this time if the residences on these parcels were also addressed in the Quiet Home Program so, to be conservative, the residences are included in the residential and population count. The number of persons within the noise

² Draft Supplemental Environmental Impact Report, Rehabilitation of Runway 8R-26L and Associated Airfield Improvements at Ontario International Airport. Ontario International Airport Authority. April 2022.

³ In Quiet Home Program was created in the early 1990s to improve the quality of life in noise-impacted neighborhoods and to improve community/airport compatibility.



Scale



**ONTARIO INTERNATIONAL AIRPORT
Flight Tracks**

Legend

Flight Tracks

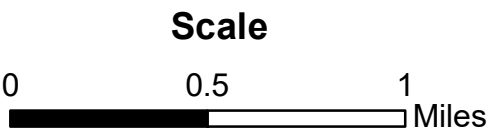
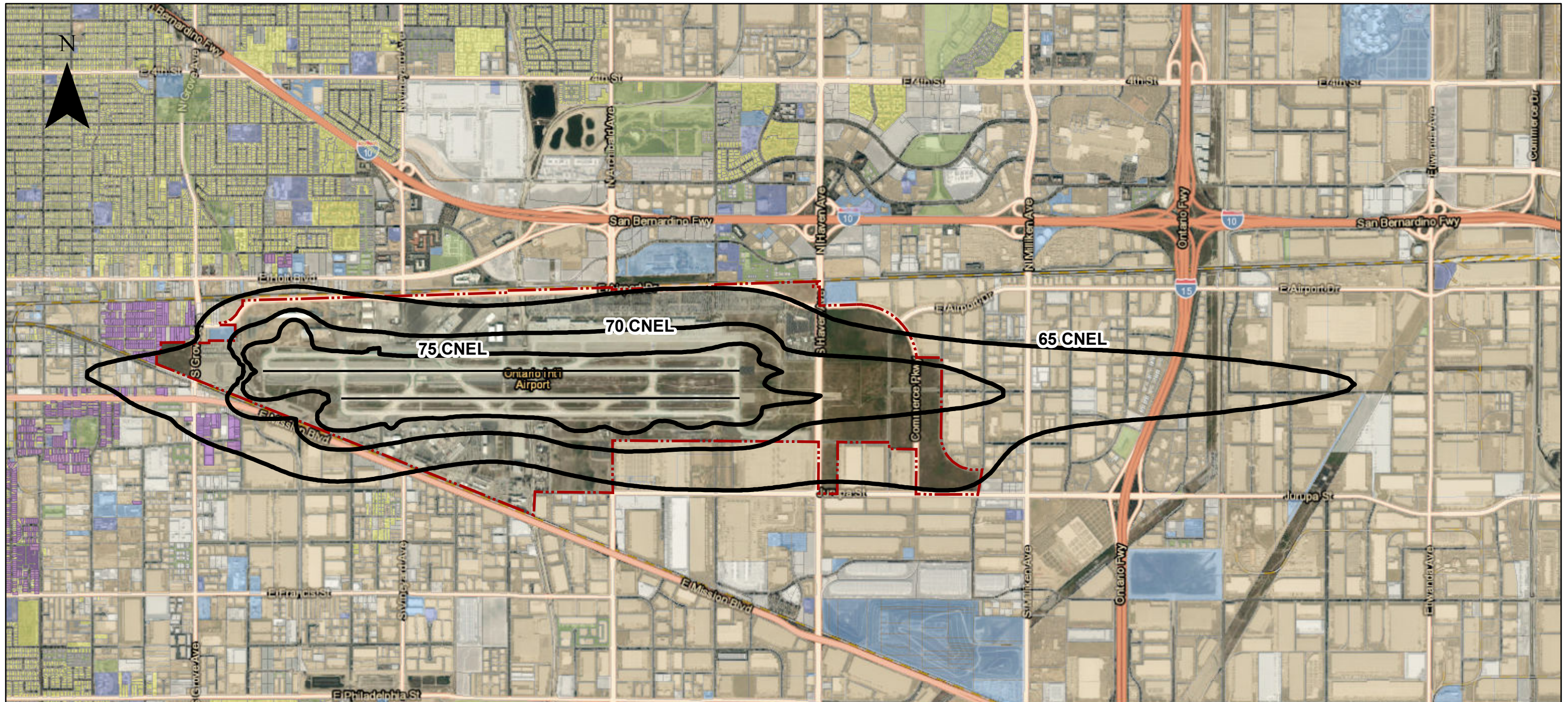
- Arrivals
- Departures
- Runways
- ONT Property Boundary



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FIGURE: 2



ONTARIO INTERNATIONAL AIRPORT

Baseline Condition Noise Contours

Legend

- Runways
- Baseline Condition Noise Contour
- ONT Property Boundary
- Mitigated Property
- Residential Use
- Public Use 1
- Public Use 2
- Recreational / Open Space
- Commercial Use
- Manufacturing and Production
- Vacant



CMT
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FIGURE: 3

Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

contour intervals was estimated using census block data from the U.S. Census Bureau for the year 2010.⁴ As shown, for the Baseline Condition there are 13 residences and an estimated 59 people residing within the CNEL 65-69 dB(A) contour and no residences/people residing within the CNEL 70+ dBA contour. The area within the CNEL 65+ dB(A) contour was also reviewed to determine if there were any schools, libraries, hospitals, or places of worship exposed to significant aircraft noise. No such land uses exist within the area.

Table 2: Housing Units and Population-Baseline Condition

Housing Units/ Population	65-69 CNEL	70-74 CNEL	75+ CNEL	Total
Housing Units	13	0	0	13
Population	59	0	0	59

Source: Draft SEIR, Rehabilitation of Runway 8R-26L and Associated Airfield Improvements, HNTB, April 2022.

Note: When considering parcels for which the OIAA has no record of the residence(s) being addressed through the Quiet Home Program but for which the parcel is subject to an avigation easement, the number of housing units reduces to 12 and the population reduces to 54 (additional information is provided in the Attachment F of this Aircraft Noise Assessment Report).

NOISE MANAGEMENT AND REGULATIONS

There is a long history of efforts to managed aircraft noise resulting from the aircraft operations at ONT. Section 5 of the Rules and Regulations Manual for ONT⁵, a manual published by the OIAA, addresses aircraft noise mitigation operating procedures and restrictions at the airport. As a result of these efforts, and when weather conditions permit, the following voluntary operational and aircraft restrictions are in place at ONT:

- Touch-and-go operations performed by turbojet and turboprop aircraft are prohibited unless special permission is given to do so.
- From 10 p.m. to 7 a.m., when wind and weather conditions permit, aircraft depart to the east and land to the west. During these nighttime hours, this “Contra Flow” minimizes the level of aircraft noise exposure to the area west of ONT.
- From 10 p.m. to 7 a.m., engine run-ups are prohibited.
- Departures not starting at the end of a runway (referred to as intersection departures) are prohibited except for departures from Runway 8L at Taxiway D and from Runway 26R at Taxiway V. This restriction places aircraft at higher altitudes when passing over residences in the vicinity of the airport.
- When possible, helicopter operators are to use noise abatement arrival and departure flight techniques.

The City of Ontario and San Bernardino County, acting as the OIAA, also encourage the airlines operating at ONT to use quieter aircraft, to re-engine aircraft to meet the most restrictive aircraft engine noise standards established by the FAA, and to retire old/noisier aircraft.

⁴ Year 2010 census data was used to be consistent with the methodology used in preparing the noise analysis for the rehabilitation of ONT’s Runway 8R-26L.

⁵ [ONT Rules and Regulations | Ontario International Airport \(flyontario.com\)](https://www.flyontario.com)

State

The California Environmental Quality Act (CEQA) requires the disclosure of environmental impacts related to proposed projects and the prevention of significant, avoidable environmental damage. The process informs decision makers and the public about the potential for any environmental impact.

To the extent not prohibited by federal law, Title 21 (Public Works), Division 2.5, Chapter 6 of the California Code of Regulations is applicable to all aircraft and aircraft engines that produce noise within the state of California. Section 5102 of Title 21 establishes CNEL 65 dB(A), as the Airport Noise Standard for an acceptable level of aircraft noise for persons living in the vicinity of an airport. Title 21 also defines that residences are noncompatible with aircraft noise levels at CNEL 65+ dB(A) unless the following conditions are met:

- An aviation easement for aircraft noise has been acquired by the airport proprietor;
- The dwelling unit was in existence at the same location prior to January 1, 1989 and has adequate acoustic insulation to ensure an interior CNEL of 45 dB or less due to aircraft noise in all habitable rooms. However, acoustic treatment alone does not convert residences having an exterior CNEL of 75 dB or greater due to aircraft noise to a compatible land use if the residence has an exterior normally occupiable private habitable area such as a backyard, patio or balcony;
- The residence is a high-rise apartment or condominium having an interior CNEL of 45 dB or less in all habitable rooms due to aircraft noise, and an air circulation or air conditioning system, as appropriate;
- The airport proprietor has made a genuine effort as determined by the department in accordance with adopted land use compatibility plans and appropriate laws and regulations to acoustically treat residences exposed to an exterior CNEL less than 80 d(A)B (75 dB(A) if the residence has an exterior normally occupiable private habitable area such as a backyard, patio, or balcony) or acquire aviation easements, or both, for the residences involved, but the property owners have refused to take part in the program; or
- The residence is owned by the airport proprietor.

Under the following conditions, public/private schools, hospitals/convalescent homes, and places of worship are also considered to be noncompatible with aircraft noise levels at or above CNEL 65 dB(A):

- Schools of standard construction for which an aviation easement for noise has not been acquired by the airport proprietor, or that do not have adequate acoustic performance to ensure an interior CNEL of 45 dB(A) or less in all classrooms due to aircraft noise;
- Hospitals and convalescent homes for which an aviation easement for noise has not been acquired by the airport proprietor, or that do not have adequate acoustic performance to provide an interior CNEL of 45 dB(A) or less due to aircraft noise in all rooms used for patient care; and
- Places of worship for which an aviation easement for noise has not been acquired by the airport proprietor or that do not have adequate acoustic performance to ensure an interior CNEL of 45 dB(A) or less due to aircraft noise.

Assembly Bill 2776 requires any person who intends to sell or lease residential properties in an airport influence area to disclose that fact to the person buying the property.

Federal

Title 14, Part 150 of the Code of Federal Regulations (14 CFR 150) prescribes the procedures, standards, and methodologies to be used by airport proprietors in developing or updating airport Noise Exposure Maps (NEMs) and airport noise compatibility programs (NCPs). The voluntary studies performed for this purpose are referred to as Part 150 studies. In a Part 150 study, uses of land that are normally compatible and noncompatible around airports are identified and measures to reduce or eliminate the number of noncompatible uses are evaluated. The land uses identified above for which state regulations are applicable (i.e., residences, schools, hospitals, convalescent homes, and places of worship) are also identified in 14 CFR 150 as being noncompatible with aircraft noise unless certain conditions are met (e.g., sound insulation to achieve an interior level of 45 dB(A)). In April of 2016, the FAA published a notice in the Federal Register that an NEM prepared for existing conditions at the time of the submittal (2015) and an NEM for future forecast conditions (2020) complied with all the applicable requirements of 14 CFR 150.⁶

An initial Part 150 study was performed for ONT in the late 1980s and study documents were published in 1990. This initial study resulted in both NEMs and an NCP for the airport. As part of the NCP, the Quiet Home Program was established for ONT to reduce the noncompatible land uses that were exposed to significant aircraft noise. Since that time, more than 1,599 eligible residential structures have been sound insulated and 256 noise sensitive properties acquired with the intent for compatible reuses of the acquired properties.

IMPACTS

This section describes the data used to define the aircraft noise-related environment with the SACC, the thresholds of significance that were used to determine if any land uses for which the thresholds are applicable would be impacted by aircraft noise, and the results of the analysis.

Assessment Data

Because the Proposed Project would not open until the fall of 2024, the aircraft noise assessment representing Phase 1 conditions was performed for the year 2025, when the Project would first be operational for an entire year. In 2025, with the Proposed Project it is forecast that there would be 44 daily cargo-related operations occurring six days a week at ONT. By 2029 (Phase 2 buildout), it is forecast that there would be 66 daily cargo-related operations occurring six days a week.

The average day aircraft fleet mix and number of operations, the number of arrivals and departures by runway and time of day, the number of departures by stage length, the number of arrivals and departures by flight track, and the number of runups with the Proposed Project are provided in **Attachments A, B, C, D, and E** of this report, respectively. **Table 3** provides the total number of annual and average day aircraft operations with the Proposed Project for 2025 and 2029. For comparative purposes, the number of Baseline Condition operations is also provided. As shown, when considering the additional number of operations with the Proposed Project, the number of total average day operations is forecast to increase by 70 and 115 operations in 2025 and 2029, respectively, when compared to the Baseline Condition.

⁶ Volume 81 of the Federal Register, Pages 20048-20049, April 6, 2016.

Table 3: Aircraft Operations-Baseline Condition and Proposed Project

Year	Condition	Annual Operations	Average Day	
			Operations	Increase from Baseline Condition
2019/2020	Baseline	106,026	290	--
2025	Proposed Project	131,354	360	70
2029	Proposed Project	147,714	405	115

Thresholds of Significance

A threshold of significance defines the level of effect above which an impact is considered significant and below which the level is less than significant. For noise, CEQA’s Appendix G (an environmental checklist) lists the following applicable questions to be answered in evaluating the potential aviation noise impact of the proposed SACC⁷:

1. *Generation of substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

The City of Ontario is currently receiving comments on The Ontario Plan (TOP) 2050 that outlines the City’s vision for “a sustained, community-wide prosperity which continuously adds value and yields benefit”.⁸ TOP provides land use compatibility standards that are to be used by urban planner to gauge the compatibility of land uses relative to existing and future noise levels. The compatibility guidelines from the TOP 2050 are provided in **Table 4**. Notably, the TOP guidelines are only applicable to new construction of the listed land uses.

Table 4: Ontario Noise Level Exposure and Land Use Compatibility Guidelines

Land Use Categories		Community Noise Equivalent Level (CNEL)			
Category	Uses	Clearly Acceptable ^a	Normally Acceptable ^b	Normally Unacceptable ^c	Clearly Unacceptable ^d
Residential/ Lodging	Single Family/Duplex	<60	60-65	65-70	70-85
	Multifamily	<60	60-65	65-75	75-85
	Mobile Homes	<60	60-65	--	65-85
	Hotel/Motel	<65	65-70	70-80	80-85
Public/ Institutional	Schools/Hospitals	<60	60-65	65-70	70-85
	Churches/Libraries	<60	60-65	65-70	70-85
	Auditoriums/Concert Halls	<55	55-60	60-70	70-85
Commercial	Offices	<65	65-75	75-80	80-85
	Retail	<70	70-75	75-80	80-85
Industrial	Manufacturing	<70	70-75	75-85	--
	Warehousing	<70	70-80	80-85	--

⁷ 2022 California Environmental Quality Act Statute & Guidelines, Association of Environmental Professionals. https://www.califaep.org/docs/2022_CEQA_Statute_and_Guidelines.pdf

⁸ [Ontario Plan » TOP 2050 Update](#)

Land Use Categories		Community Noise Equivalent Level (CNEL)			
Category	Uses	Clearly Acceptable ^a	Normally Acceptable ^b	Normally Unacceptable ^c	Clearly Unacceptable ^d
Recreational/ Open Space	Parks/Playgrounds	<65	65-70	70-75	75-85
	Golf Course/Riding Stables	<65	65-70	70-75	75-85
	Outdoor Spectator Sports	<60	60	65-70	--
	Outdoor Music Shells/Amphitheaters	--	--	60-65	65-85
	Livestock/Wildlife Preserves	<70	--	70-75	75-85
	Crop Agriculture	<55-85		--	--

Source: TOP 2050.

a No special noise insulation required, assuming buildings of normal conventional construction.

b Acoustical reports will be required for major new residential construction. Conventional construction with closed window and fresh air supply systems of air conditions will normally suffice.

c New construction should be discouraged. Noise/aviation easements required for all new construction. If new construction does proceed, a detailed analysis of noise reduction requirements must be made, and necessary noise insulation features included.

d No new construction should be permitted.

2. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The Airport Noise Standard (CNEL 65 dB(A)) established in Title 21 of the California Code of Regulations was used to evaluate this threshold of significance. The results of the analysis are presented in the following section of this report.

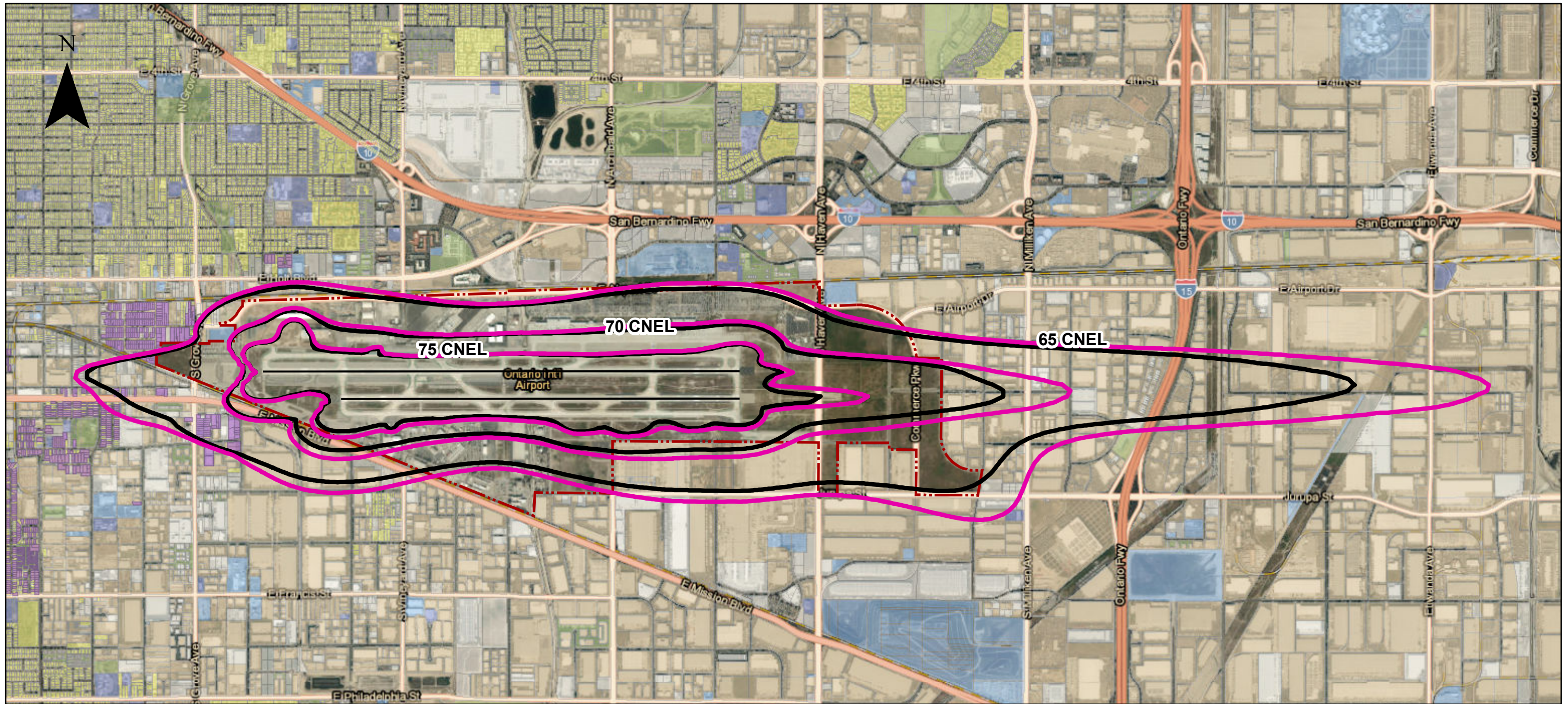
Analysis Results – Proposed Project/Baseline Conditions

As required by CEQA, the analysis results for the Proposed Project were compared to the results for the Baseline Condition and to the thresholds of significance above to indicate whether the Proposed Project would have “no impact”, a “less than significant impact”, a “less than significant impact with mitigation incorporated”, or a “potentially significant impact”.

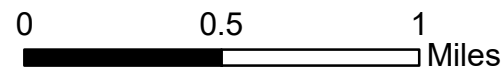
Changes to Ambient Noise Levels/Exposure to Excessive Noise Levels

The land uses within the year 2025 and 2029 aircraft CNEL 65+ dB(A) noise contour with the Proposed Project and the Baseline Condition are depicted on **Figures 4 and 5**. As shown, between the two contour lines (i.e., the area of change in aircraft noise exposure with the Proposed Project), the land uses are primary commercial, manufacturing/production, and mitigated properties (all residences).⁹ There are also a few unmitigated residences located within the western extent of the area in which aircraft noise would increase with the Proposed Project. As also shown, between the two CNEL 70+ dB(A) contour lines, the land uses are commercial, manufacturing/production, or vacant. The area within the CNEL 65+ dB(A) contour for the Proposed Project was also reviewed to determine if there were any schools, libraries, hospitals, or places of worship that would be exposed to significant aircraft noise. No such land uses exist within the Proposed Project CNEL 65+ dB(A) contour.

⁹ The mitigated properties (all residences) were addressed by the OIAA’s Quiet Home Program.



Scale



**ONTARIO INTERNATIONAL AIRPORT
2025 Proposed Project vs. Baseline Condition
Noise Contours**

Legend

- Runways
- 2025 Proposed Project Noise Contour
- Baseline Condition Noise Contour
- ONT Property Boundary
- Mitigated Property
- Residential Use
- Public Use 1
- Public Use 2
- Recreational / Open Space
- Commercial Use
- Manufacturing and Production
- Vacant

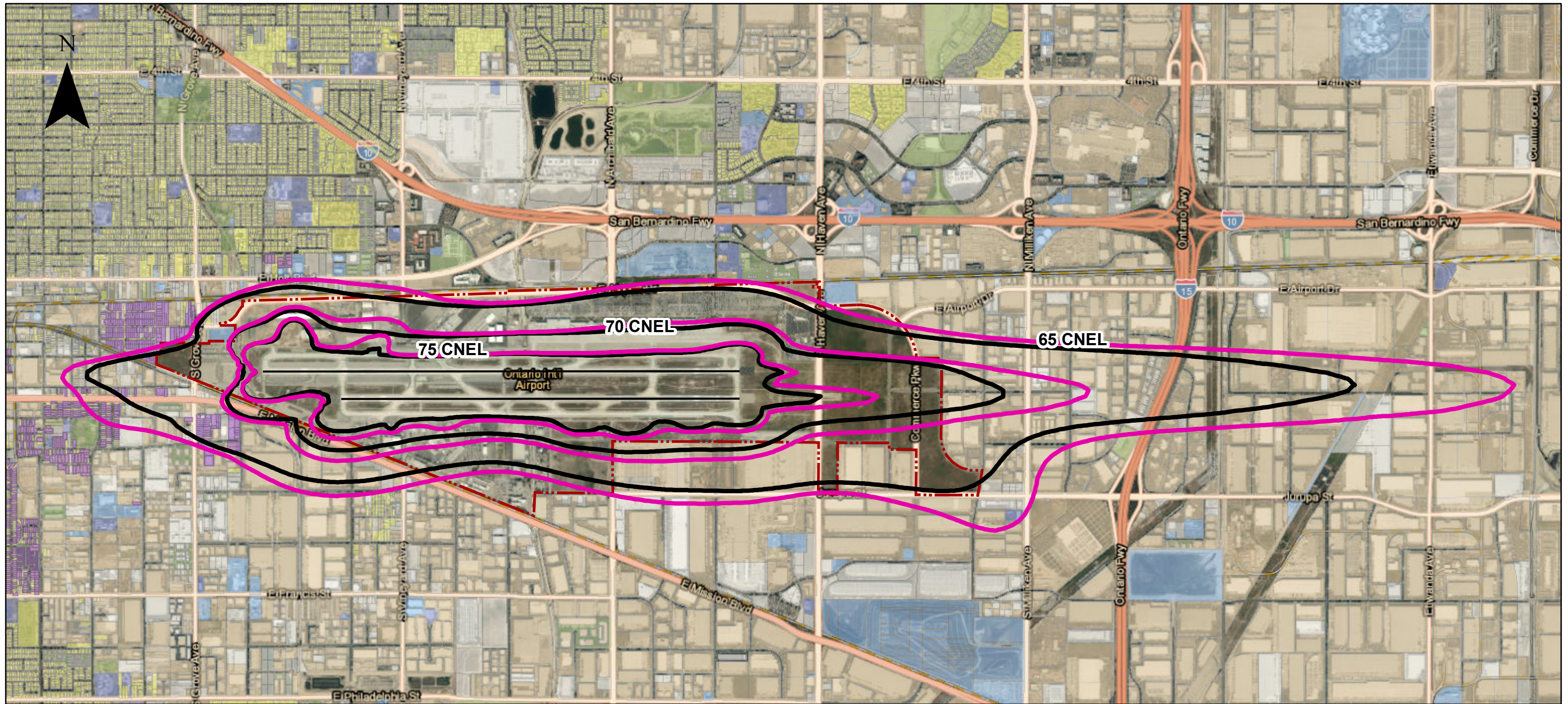


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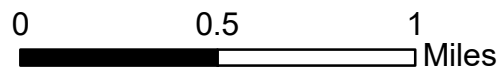
DATE: May 2022

FIGURE: 4

Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



Scale



ONTARIO INTERNATIONAL AIRPORT

2029 Proposed Project vs. Baseline Condition Noise Contours

Legend

- | | | |
|-------------------------------------|---------------------------|------------------------------|
| — Runways | Residential Use | Commercial Use |
| 2029 Proposed Project Noise Contour | Public Use 1 | Manufacturing and Production |
| Baseline Condition Noise Contour | Public Use 2 | Vacant |
| ONT Property Boundary | Recreational / Open Space | |
| Mitigated Property | | |



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FIGURE: 5

Table 5 provides the estimated number of housing units and persons within the CNEL 65-69, 70-74, and 75+ dB(A) contours. In the year 2025 with the Proposed Project, it is estimated that there would be four additional residences for which OIAA has no record of the residences being addressed through the Quiet Home Program and 18 persons within the CNEL 65-69 dB(A) contour and no housing units or persons within the CNEL 70+ dB(A) contour when compared to the Baseline Condition. By the year 2029, it is estimated that there would be 15 additional housing units for which the OIAA has no records of the residences being addressed through the Quiet Home Program and 63 additional persons within the CNEL 65-69 dB(A) contour and no housing units or persons within the CNEL 70+ dB(A) contour. Because the OIAA has no records of any of the identified residences being addressed through the Quiet Home Program, the Proposed Project would result in a “potentially significant impact”.

Table 5: Housing Units and Population-Baseline Condition and Proposed Project

Year	Condition	Housing Units/ Population	65-69 CNEL	70-74 CNEL	75+ CNEL	Total
2019/2020	Baseline	Housing Units ^a	13	0	0	13
		Population ^a	59	0	0	59
2025	Proposed Project	Housing Units ^b	17	0	0	17
		Population ^b	77	0	0	77
	<i>Increase with Proposed Project</i>	Housing Units	+4	0	0	+4
		Population	+18	0	0	+18
2029	Proposed Project	Housing Units ^b	28	0	0	28
		Population ^b	122	0	0	122
	<i>Increase with Proposed Project</i>	Housing Units	+15	0	0	+15
		Population	+63	0	0	+63

^a Source: Draft SEIR, Rehabilitation of Runway 8R-26L and Associated Airfield Improvements, HNTB, April 2022.

^b Source: Crawford, Murphy & Tilly, Inc., May 2022.

Note: When considering parcels for which the OIAA has no record of the residences being addressed through the Quiet Home Program but for which the parcel is subject to an aviation easement, the increase in the number of housing units in 2025 with the Proposed Project reduces to three and the population reduces to 14 and in 2029 the number of housing units reduces to 12 and the population reduces to 51 (additional information is provided in Attachment F of this Aircraft Noise Assessment Report).

Analysis Results – Proposed Project/No Action Alternative

As previously stated, to define the significance of the impact of a proposed project, CEQA regulations require future conditions with a proposed project be compared to existing (i.e., Baseline) conditions. Because such a comparison also includes the potential impact that would occur in the future without a project (i.e., the No Project Alternative), a comparison of the Proposed Project and No Action Alternative was performed. Notably, the growth in passenger activity at ONT, which would occur with or without the Proposed Project that is the subject of this report, would result in increases in aircraft operations and aircraft noise.

The average day aircraft fleet mix and number of operations, the number of arrivals and departures by runway and time of day, the number of departures by stage length, the number of arrivals and departures by flight track, and the number of runups with the No Action Alternative are provided in **Attachments A, B, C, D, and E** of this report, respectively. For comparative purposes, **Table 6** provides the total number of

annual and average day aircraft operations with the Proposed Project and No Action Alternatives. As shown, with the No Action Alternative, the number of average day operations is forecast to increase by 32 and 58 operations in 2025 and 2029, respectively, when compared to the Baseline Condition.

Table 6: Aircraft Operations-Proposed Project and No Action Alternative

Year	Condition	Annual Operations	Average Day	
			Operations	Increase from No Action Alternative
2025	Proposed Project	131,354	360	38
	No Action Alternative	117,624	322	--
2029	Proposed Project	147,714	405	56
	No Action Alternative	127,122	348	--

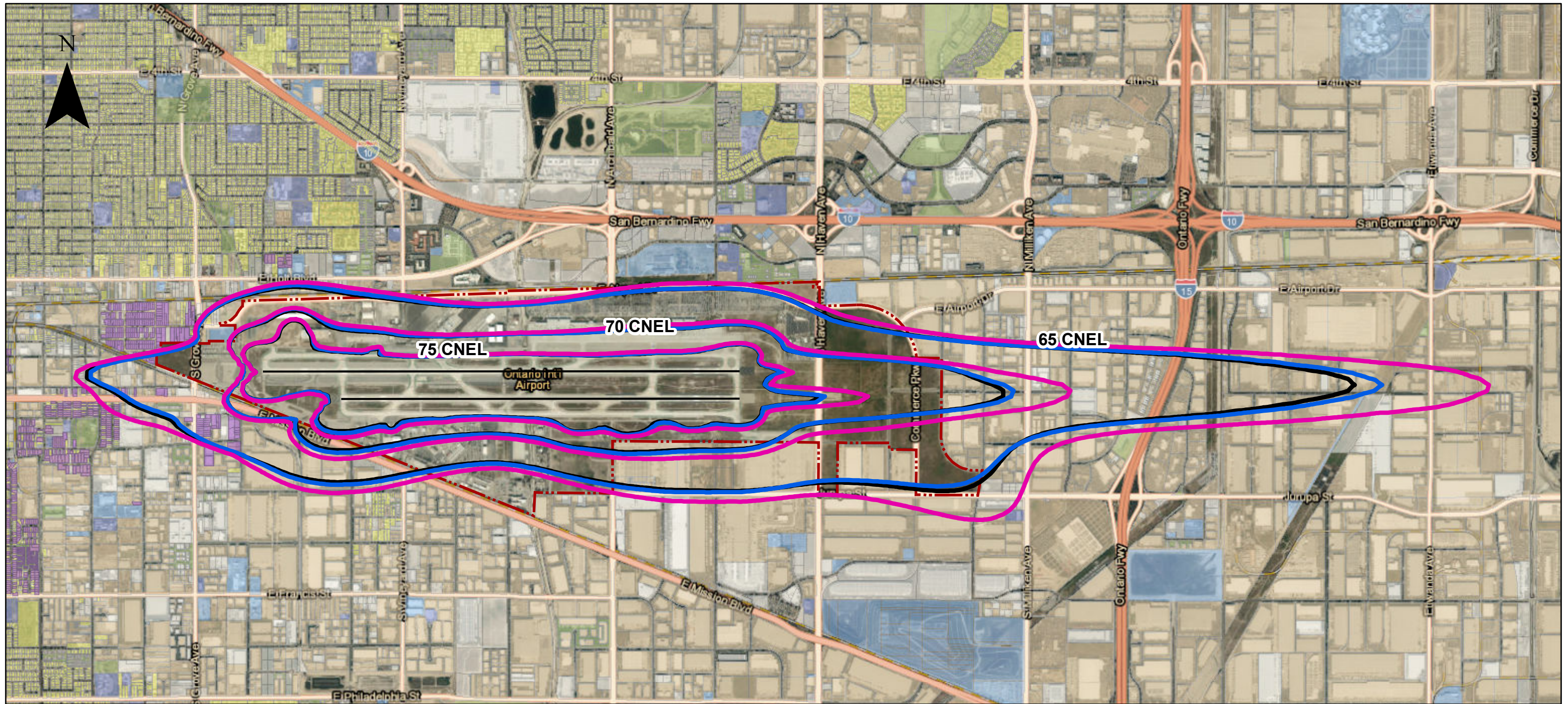
Note: Values reflect rounding.

The land uses within the year 2025 and 2029 aircraft CNEL 65 dB(A) noise contour with the Proposed Project and the No Action Alternative are depicted on **Figures 6 and 7**. As shown, between the two CNEL 65 dB(A) contour lines (i.e., the area of change in aircraft noise exposure with the Proposed Project), the land uses are primary commercial or manufacturing/production and residential. The residences are comprised of mitigated properties¹⁰ and a few unmitigated residences located west of the airport. As also shown, between the two CNEL 70+ dB(A) contour lines, the land uses are commercial, manufacturing/production, or vacant.

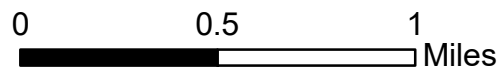
Table 7 provides the estimated number of housing units for which the OIAA has no record of the residences being addressed through the Quiet Home Program and the estimated number of people within each of the noise contour levels. As shown, in the year 2025 with the Proposed Project it is estimated that there would be five additional housing units and 23 persons within the CNEL 65-69 dB(A) contour and no housing units or persons within the CNEL 70+ dB(A) contour. By the year 2029 with the Proposed Project, it is estimated that there would be 15 additional residences for which there are no records of the residences being addressed and 63 additional persons within the CNEL 65-69 dB(A) contour. No housing units or persons are within the CNEL 70+ dB(A) contour.

It is notable that there is a minimal change in the CNEL 65 dB(A) contours when comparing Baseline Conditions to forecast No Action conditions for both the year 2025 and 2029. This minimal change is predicted to occur despite a forecast increase in the number of average day aircraft operations (an increase of 38 daily operations in 2025 and an increase of 56 daily operations in 2029). The minimal change is due in large part to a change in the narrowbody jet fleet forecast to arrive and depart ONT. **Table 8** compares the numbers of some of the older, noisier aircraft types (referred to as Stage III aircraft) that are predicted to reach the end of their service life and would therefore be replaced with newer and quieter aircraft (Stage V aircraft). Overall, by the year 2029 it is forecast that approximately 39 percent of the Stage III narrowbody aircraft would be replaced by Stage 3 narrowbody aircraft.

¹⁰ The mitigated properties (all residences) were addressed by the OIAA’s Quiet Home Program—a program that provided sound insulation to 1,599 dwellings as of 2016.



Scale



ONTARIO INTERNATIONAL AIRPORT

2025 Proposed Project vs. 2025 No Action

Alternative Noise Contours

Legend

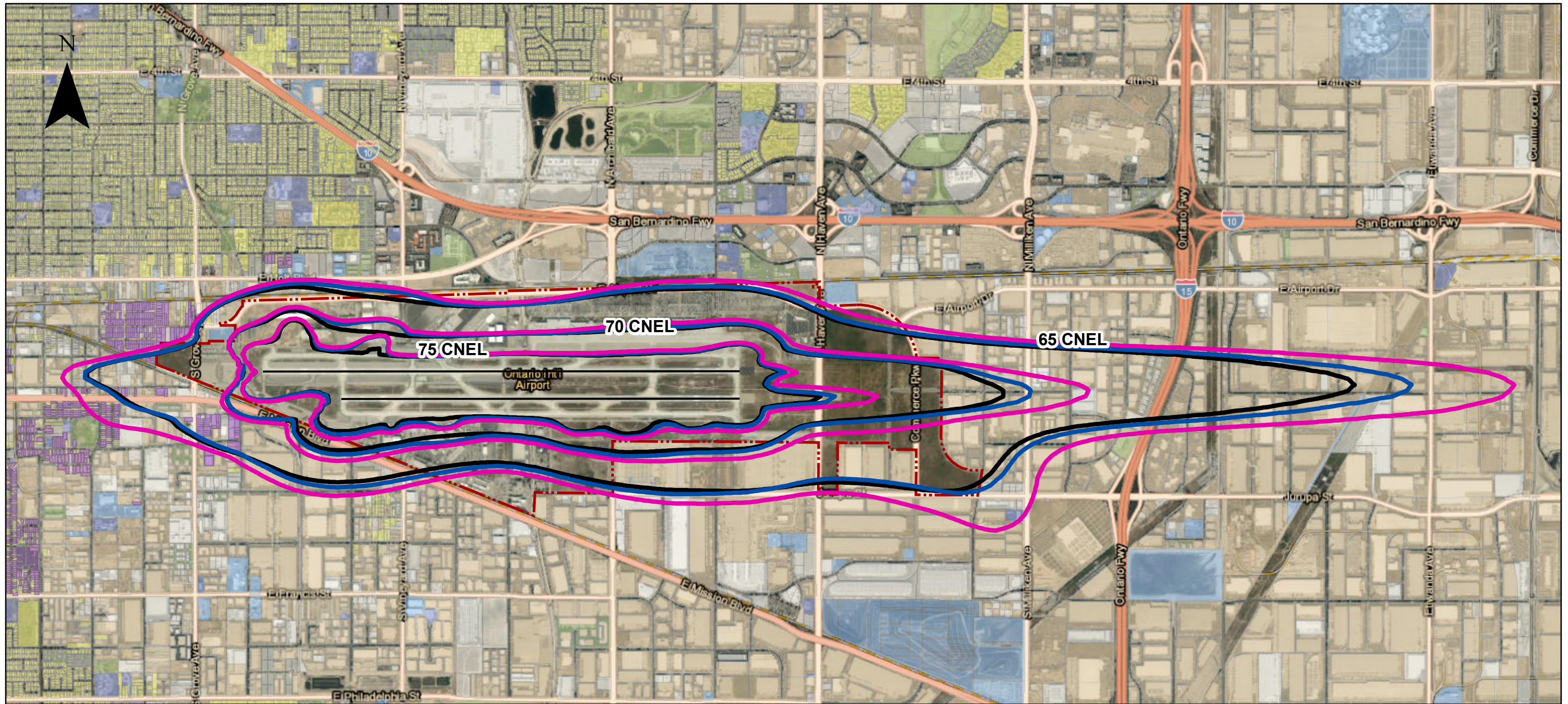
- Runways
- 2025 Proposed Project Noise Contour
- 2025 No Action Noise Contour
- Baseline Condition Noise Contour
- ONT Property Boundary
- Mitigated Property
- Residential Use
- Public Use 1
- Public Use 2
- Recreational / Open Space
- Commercial Use
- Manufacturing and Production
- Vacant



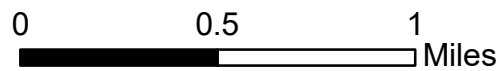
Crawford, Murphy & Tilly | Engineers & Consultants

DATE: May 2022

FIGURE: 6



Scale



ONTARIO INTERNATIONAL AIRPORT

2029 Proposed Project vs. 2029 No Action Alternative Noise Contours

Legend

- Runways
- 2029 Proposed Project Noise Contour
- 2029 No Action Noise Contour
- Baseline Condition Noise Contour
- ONT Property Boundary
- Mitigated Property
- Residential Use
- Public Use 1
- Public Use 2
- Recreational / Open Space
- Commercial Use
- Manufacturing and Production
- Vacant



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DATE: May 2022

FIGURE: 7

Table 7: Housing Units and Population-Proposed Project and No Action Alternative

Year	Condition	Housing Units/ Population	65-69 CNEL	70-74 CNEL	75+ CNEL	Total
2025	No Action	Housing Units ^a	12	0	0	12
		Population ^a	54	0	0	54
	Proposed Project	Housing Units ^b	17	0	0	17
		Population ^b	77	0	0	77
	<i>Increase with Proposed Project</i>	Housing Units	+5	0	0	+5
		Population	+23	0	0	+23
2029	No Action	Housing Units ^a	13	0	0	13
		Population ^a	59	0	0	59
	Proposed Project	Housing Units ^b	28	0	0	28
		Population ^b	122	0	0	122
	<i>Increase with Proposed Project</i>	Housing Units	+15	0	0	+15
		Population	+63	0	0	+63

^a Source: Draft SEIR, Rehabilitation of Runway 8R-26L and Associated Airfield Improvements, HNTB, April 2022.

^b Source: Crawford, Murphy & Tilly, Inc., May 2022.

Note: When considering parcels for which the OIAA has no record of the residences being addressed through the Quiet Home Program but for which the parcel is subject to an aviation easement, the increase in the number of housing units in 2025 with the Proposed Project when compared to the No Action Alternative reduces to three and the population reduces to 14 and in 2029 the number of housing units reduces to 12 and the population reduces to 51 (additional information is provided in Attachment F of this Aircraft Noise Assessment Report).

Table 8: Aircraft Fleet Mix Changes

Aircraft Type	Stage	2021 Baseline Condition Average Daily Operations	2025		2029	
			Average Daily Operations	Increase/ Decrease from Baseline	Average Daily Operations	Increase/ Decrease from 2025 No Action
Airbus A321	III	1	1	0	2	1
Airbus A321neo	V	0	8	+8	21	12
Boeing 737-700	III	58	52	-6	34	-18
Boeing 737-7 MAX	V	0	0	0	21	21
Boeing 737-800	III	31	22	-9	19	-3
Boeing 737-8 MAX	V	0	22	+22	25	2
Boeing 737-900	III	7	4	-3	4	0
Boeing 737-9 MAX	V	0	2	+2	4	2

CUMULATIVE IMPACTS

As previously stated, the OIAA recently published a Draft SEIR for the rehabilitation of ONT’s Runway 8R-26L and associated airfield improvements. These improvements are proposed so that the airfield meets current FAA standards, safety is improved, and the efficiency of the airfield is enhanced. To implement the improvements, temporary runway closures would be required and the only change in the use of the airfield would result from suspension of voluntary restrictions on the use of Contra Flow operations during nighttime hours (10 p.m. to 7 a.m.). Because these voluntary restrictions would not be available when operating only one runway, the Runway 8R-26L Draft SEIR forecasts that there would be a temporary increase in noise exposure to the west of ONT during nighttime hours.

The Runway 8R-26L runway rehabilitation/reconstruction project is scheduled to begin in 2023 and end in 2025, one of the same years for which the SACC was evaluated. To evaluate the impact due to the overlap of the Proposed Project that is the subject of this report and the Runway 8R-26L runway rehabilitation/reconstruction project, a cumulative aircraft noise analysis was performed. As required by CEQA, the cumulative 2025 condition was compared to the Baseline Condition (**Figure 8**).

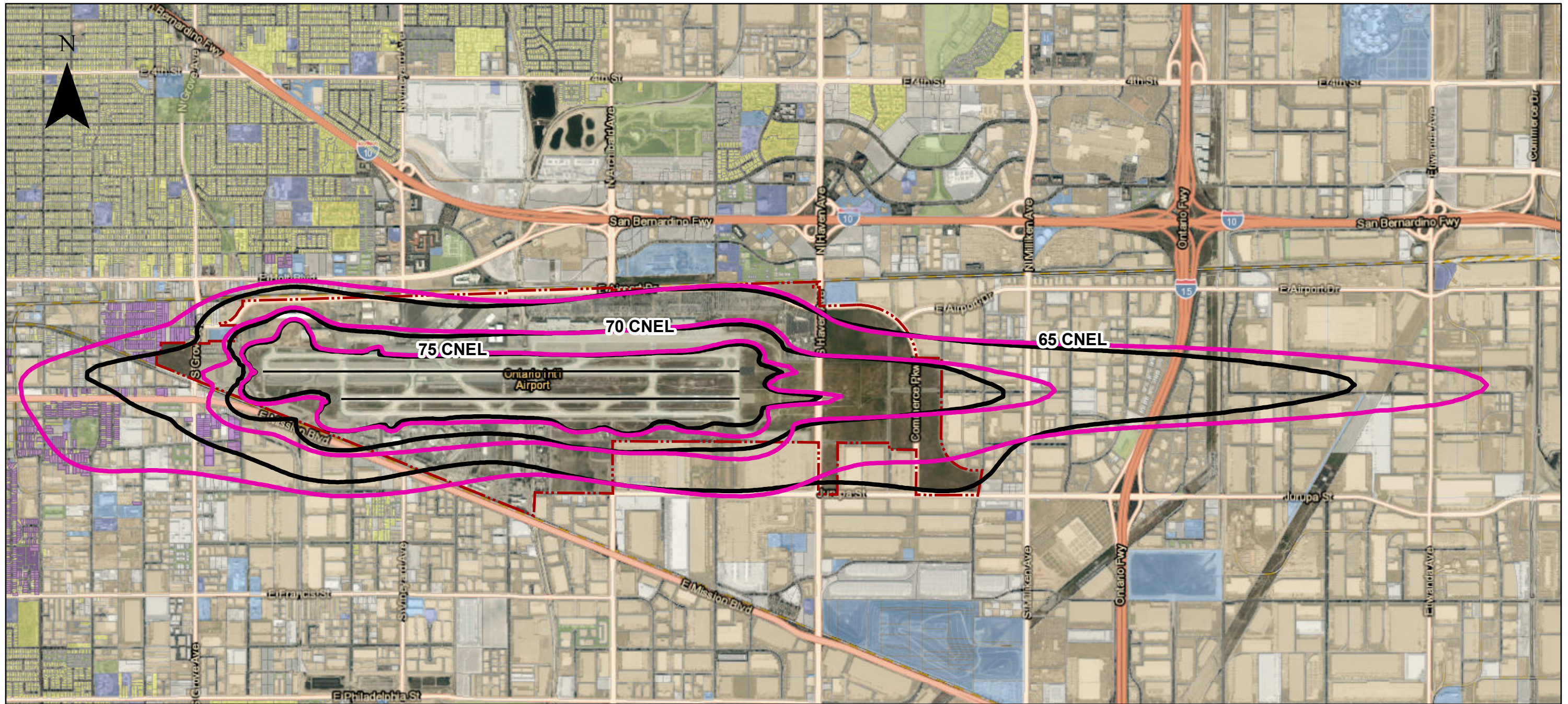
Table 9 provides the estimated number of unmitigated housing units and people within each of the noise contour levels for the Baseline Condition and the Cumulative Projects for the year 2025. As shown, with the Cumulative Projects, it is estimated that there would be 219 additional unmitigated housing units and 991 persons within the CNEL 65-69 dB(A) contour and no housing units or persons within the CNEL 70+ dB(A) contour when compared to the Baseline Condition. Based on these results, in the year 2025 the Cumulative Projects would result in a temporary “potentially significant impact” unless the residences are eligible to be, and are, sound insulated.

Table 9: Housing Units and Population-Cumulative Projects

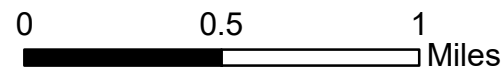
Year	Condition	Housing Units/ Population	65-69 CNEL	70-74 CNEL	75+ CNEL	Total
2019/2020	Baseline	Housing Units ^a	13	0	0	13
		Population ^a	59	0	0	59
2025	Cumulative Projects	Housing Units ^b	232	0	0	232
		Population ^b	1,050	0	0	1,050
	<i>Increase with Cumulative Projects</i>	Housing Units	+219	0	0	+219
		Population	+991	0	0	+991

^a Source: Draft SEIR, Rehabilitation of Runway 8R-26L and Associated Airfield Improvements, HNTB, April 2022.

^b Source: Crawford, Murphy & Tilly, Inc., May 2022.



Scale



**ONTARIO INTERNATIONAL AIRPORT
2025 Proposed Project - Cumulative Impact and
Baseline Condition Noise Contours**

Legend

- Runways
- 2025 Proposed Project - Cumulative Impact Noise Contour
- Baseline Condition Noise Contour
- ONT Property Boundary
- Mitigated Property
- Residential Use
- Public Use 1
- Public Use 2
- Recreational / Open Space
- Commercial Use
- Manufacturing and Production
- Vacant



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DATE: May 2022

FIGURE: 8

Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

ATTACHMENT A

AIRCRAFT FLEET MIX DATA

Airframe	Engine	Number of Average Day Operations					
		Baseline Condition	2025			2029	
			Proposed Project	No Action	Cumulative	Proposed Project	No Action
Aerospatiale SA-341G/342 Gazelle	PT6A27	0.0240280	0.0604951	0.0604951	0.0604952	0.1068416	0.1068416
Aerospatiale SA-350D Astar (AS-350)	TPE3	0.8170020	0.8152502	0.8152500	0.8152502	0.7608479	0.7608479
Agusta A-109	250B17	0.0720910	0.0845902	0.0845902	0.0845902	0.0953835	0.0953835
Airbus A300B4-600 Series	1GE020	0.0023400	0.0019140	0.0019140	0.0019130	0.0019760	0.0019760
Airbus A300B4-600 Series	1PW048	0.0257590	0.0210941	0.0210941	0.0210851	0.0217270	0.0217270
Airbus A300F4-600 Series	1PW048	13.6621827	14.9153776	14.9153750	14.9153460	16.4628364	16.4628364
Airbus A300F4-600 Series	2GE036	0.9603221	0.7945174	0.7945172	0.7945340	0.8120093	0.8120093
Airbus A300F4-600 Series	3GE056	0.4132740	0.3383900	0.3383899	0.3384049	0.3486437	0.3486437
Airbus A310-200 Series Freighter	1GE013	0.2107450	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Airbus A310-200 Series Freighter	1PW027	0.1053690	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Airbus A310-300 Series	1GE021	0.0526860	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Airbus A310-300 Series	1PW044	0.1580610	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Airbus A310-300 Series	1PW047	0.3161260	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Airbus A319-100 Series	01P08CM108	0.6142631	0.7127741	0.7127740	0.7127659	0.9854846	0.9854846
Airbus A319-100 Series	3CM022	1.0749782	1.2473397	1.2473395	1.2473533	1.7245497	1.7245497
Airbus A319-100 Series	3IA006	1.3215263	0.8432085	0.8432084	0.8432151	0.8584419	0.8584419
Airbus A319-100 Series	6CM044	0.7678411	0.8909587	0.8909585	0.8909623	1.2318570	1.2318570
Airbus A319-100 Series	7CM050	0.3956240	0.9344499	0.9344499	0.9344551	1.0627854	1.0627854
Airbus A320-200 Series	01P08CM105	1.2446155	0.2696059	0.2696059	0.2695967	0.1487949	0.1487949
Airbus A320-200 Series	01P10IA021	2.2361549	1.9865522	1.9865519	1.9865348	1.8283134	1.8283134
Airbus A320-200 Series	01P10IA022	0.0979740	0.0853423	0.0853423	0.0853352	0.0788893	0.0788893
Airbus A320-200 Series	1IA003	1.6068111	1.7494008	1.7494005	1.7493925	1.5447451	1.5447451
Airbus A320-200 Series	2CM014	0.8925184	0.1887137	0.1887136	0.1887325	0.1041548	0.1041548
Airbus A320-200 Series	2CM018	3.4353404	2.7665635	2.7665630	2.7665680	1.9992245	1.9992245
Airbus A320-200 Series	3CM026	0.0016100	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Airbus A320-NEO	01P20CM128	2.4801990	3.8875586	3.8875580	3.8875439	2.0101462	2.0101462
Airbus A321-100 Series	1IA005	1.1249894	0.7370893	0.7370892	0.7370978	0.1392000	0.1392000
Airbus A321-200 Series	01P08CM104	0.0405820	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Airbus A321-200 Series	3CM025	0.0481050	0.0247941	0.0247941	0.0247881	1.2124794	1.2124794

Airframe	Engine	Number of Average Day Operations					
		Baseline Condition	2025			2029	
			Proposed Project	No Action	Cumulative	Proposed Project	No Action
Airbus A321-200 Series	3IA008	0.1217280	0.2498727	0.2498727	0.2498716	0.4053209	0.4053209
Airbus A321-200 Series	4CM038	0.0949090	0.0619962	0.0619962	0.0619982	0.0114050	0.0114050
Airbus A321-NEO	01P08CM103	0.0000000	0.0000000	0.0000000	0.0000000	0.5973137	0.5973137
Airbus A321-NEO	01P18PW157	0.0000000	1.9340295	1.9340290	1.9340315	3.6068245	3.6068245
Airbus A321-NEO	01P20CM132	0.0152120	6.2071080	6.2071066	6.2070996	16.3127706	16.3127706
Airbus A330-900N Series (Neo)	01P19RR119	0.0000000	0.0552172	0.0552172	0.0552191	0.0000000	0.0000000
Airbus A350-900 series	01P18RR124	1.5013056	0.9807176	0.9807175	0.9807242	2.2063598	2.2063598
ATR 42-300	PW120	0.7165498	0.7822739	0.7822737	0.7822691	0.8634313	0.8634313
ATR 42-320	PW121	0.3582769	0.3911379	0.3911378	0.3911540	0.4317257	0.4317257
ATR 42-500	PW127	0.1194270	0.1303793	0.1303793	0.1303903	0.1439078	0.1439078
ATR 42-500	PW127E	0.2388499	0.2607656	0.2607656	0.2607657	0.2878148	0.2878148
Beechcraft T-6 Texan 2 (FAS)	PT6A64	0.0061390	0.0064200	0.0064200	0.0064190	0.0064192	0.0064192
Bell 407 / Rolls-Royce 250-C47B	250B17	0.2042510	0.3093748	0.3093747	0.3093748	0.2923946	0.2923946
Bell 429	TPE1	0.0184200	0.0192640	0.0192640	0.0192641	0.0192581	0.0192581
Bell UH-1 Iroquois	T400	0.0061450	0.0064210	0.0064210	0.0064210	0.0064194	0.0064194
Boeing 707-300 Series	TF3310	0.0368360	0.0385151	0.0385151	0.0385161	0.0385161	0.0385161
Boeing 717-200 Series	4BR002	0.1470880	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boeing 727-200 Series	1PW004	0.2236929	0.2358596	0.2358595	0.2358566	0.2277130	0.2277130
Boeing 737-300 Series	1CM007	0.0304360	0.0331311	0.0331311	0.0331321	0.0277011	0.0277011
Boeing 737-300 Series Freighter	1CM005	0.1798400	0.1963255	0.1963255	0.1963325	0.2166883	0.2166883
Boeing 737-300 Series Freighter	1CM007	0.7137439	0.7792030	0.7792028	0.7792060	0.8600080	0.8600080
Boeing 737-400 Series	1CM007	0.0760780	0.0828322	0.0828322	0.0828312	0.0692526	0.0692526
Boeing 737-400 Series Freighter	1CM004	0.0000000	6.8383748	0.0000000	6.8383763	10.2575342	0.0000000
Boeing 737-400 Series Freighter	1CM007	0.0056200	0.0061350	0.0061350	0.0061340	0.0067721	0.0067721
Boeing 737-7	01P20CM134	0.0000000	0.0000000	0.0000000	0.0000000	21.0498068	21.0498068
Boeing 737-700 Freighter	01P11CM114	0.8650160	0.7788483	0.7788481	0.7788541	0.5114339	0.5114339
Boeing 737-700 Freighter	3CM032	0.0056210	0.0061370	0.0061370	0.0061360	0.0000000	0.0000000
Boeing 737-700 Series	3CM030	36.6730363	33.0794546	33.0794469	33.0794433	21.7617764	21.7617764
Boeing 737-700 Series	3CM031	3.4602880	3.1154210	3.1154203	3.1154203	2.0457509	2.0457509

Airframe	Engine	Number of Average Day Operations					
		Baseline Condition	2025			2029	
			Proposed Project	No Action	Cumulative	Proposed Project	No Action
Boeing 737-700 Series	3CM032	13.9867112	12.5938244	12.5938215	12.5938216	8.2682322	8.2682322
Boeing 737-700 Series	8CM064	3.7484100	3.3750388	3.3750380	3.3750230	2.2162180	2.2162180
Boeing 737-8	01P20CM136	0.0202920	11.0220750	11.0220720	11.0220803	9.7330367	9.7330367
Boeing 737-8	01P20CM137	0.2738820	11.2958298	11.2958274	11.2958484	14.9237335	14.9237335
Boeing 737-800 Series	01P11CM122	9.1666242	9.9812653	9.9812632	9.9812686	11.0177037	11.0177037
Boeing 737-800 Series	3CM032	5.7299860	2.4082431	2.4082426	2.4082553	1.2496754	1.2496754
Boeing 737-800 Series	3CM034	11.6783094	6.5643144	6.5643132	6.5642857	4.1116576	4.1116576
Boeing 737-800 Series	8CM051	0.7427431	0.8108664	0.8108663	0.8108801	0.8970680	0.8970680
Boeing 737-800 Series	8CM064	2.4493108	0.6666587	0.6666586	0.6666747	0.0000000	0.0000000
Boeing 737-800 Series	8CM065	0.4712290	0.4864514	0.4864513	0.4864383	0.4828769	0.4828769
Boeing 737-800 with winglets	3CM032	0.0505320	0.0549982	0.0549981	0.0550011	0.0607224	0.0607224
Boeing 737-800 with winglets	3CM034	0.5554550	0.6079917	0.6079916	0.6079875	0.6710814	0.6710814
Boeing 737-800 with winglets	8CM051	0.2092230	0.2287106	0.2287106	0.2287206	0.2524601	0.2524601
Boeing 737-800 with winglets	8CM066	0.0088130	0.0096430	0.0096430	0.0096410	0.0106522	0.0106522
Boeing 737-9	01P20CM137	0.0000000	0.7178772	0.7178771	0.7178718	1.8126631	1.8126631
Boeing 737-9	01P20CM140	0.0000000	1.0988944	1.0988941	1.0988900	2.2466027	2.2466027
Boeing 737-900 Series	8CM051	0.3922351	0.4270552	0.4270552	0.4270531	0.3535129	0.3535129
Boeing 737-900 Series	8CM065	1.1016600	0.7206330	0.7206329	0.7206449	0.6613292	0.6613292
Boeing 737-900-ER	01P11CM122	5.5766821	2.8094117	2.8094111	2.8094033	2.5655477	2.5655477
Boeing 737-900-ER with winglets	01P11CM123	0.0301930	0.0395291	0.0395291	0.0395261	0.0406855	0.0406855
Boeing 747-200 Series	JT9D70	0.0393400	0.0429511	0.0429511	0.0429511	0.0474000	0.0474000
Boeing 747-400 Series	1GE024	0.0760910	0.0828363	0.0828362	0.0828322	0.0692510	0.0692510
Boeing 747-400 Series Freighter	01P03GE187	0.0094460	0.0103190	0.0103190	0.0103170	0.0113899	0.0113899
Boeing 747-400 Series Freighter	12PW102	0.0299670	0.0327231	0.0327231	0.0327181	0.0361183	0.0361183
Boeing 747-400 Series Freighter	1GE024	1.6902555	1.8452886	1.8452883	1.8452896	2.0366973	2.0366973
Boeing 747-400 Series Freighter	1PW041	0.1417710	0.1547845	0.1547844	0.1547764	0.1708346	0.1708346
Boeing 747-8	11GE139	0.0050760	0.0055220	0.0055220	0.0055160	0.0000000	0.0000000
Boeing 747-8	8GENX1	0.0000000	0.0000000	0.0000000	0.0000000	0.0046168	0.0046168
Boeing 747-8F	11GE139	0.0000000	3.4191846	0.0000000	3.4191879	0.0000000	0.0000000

Airframe	Engine	Number of Average Day Operations					
		Baseline Condition	2025			2029	
			Proposed Project	No Action	Cumulative	Proposed Project	No Action
Boeing 747-8F	8GENX1	2.1917849	2.3928424	2.3928421	2.3928450	9.4794180	2.6410618
Boeing 757-200 Series	3RR034	0.0050760	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boeing 757-200 Series	4PW072	0.0361920	0.0393961	0.0393961	0.0393971	0.0000000	0.0000000
Boeing 757-200 Series	4PW073	0.2799320	0.3047610	0.3047609	0.3047668	0.2539249	0.2539249
Boeing 757-200 Series	5RR038	0.0034210	0.0037180	0.0037180	0.0037140	0.0000000	0.0000000
Boeing 757-200 Series Freighter	3RR028	5.7101857	6.2339838	6.2339826	6.2339894	6.8807670	6.8807670
Boeing 757-200 Series Freighter	4PW072	0.4084221	0.4458776	0.4458775	0.4459012	0.4921802	0.4921802
Boeing 757-200 Series Freighter	4PW073	4.7388024	5.1734983	5.1734973	5.1735036	5.7100846	5.7100846
Boeing 757-200 Series Freighter	5RR039	0.0228290	0.0249201	0.0249201	0.0249181	0.0275242	0.0275242
Boeing 767-200 ER	1RR011	0.0760790	0.0828343	0.0828343	0.0828352	0.0692613	0.0692613
Boeing 767-200 Series Freighter	1GE010	3.2571128	8.6846677	3.5558833	8.6846719	12.4727908	3.9248456
Boeing 767-200 Series Freighter	1GE012	1.9841669	2.1661691	2.1661687	2.1661616	2.3909278	2.3909278
Boeing 767-200 Series Freighter	1PW026	0.8844959	0.9656287	0.9656285	0.9656336	1.0658277	1.0658277
Boeing 767-300 ER Freighter	12PW102	2.5446335	2.7780574	2.7780570	2.7780661	3.0663062	3.0663062
Boeing 767-300 ER Freighter	1GE030	28.1925593	38.9967983	38.9967922	38.9967797	43.3422132	43.3422132
Boeing 767-300 ER Freighter	2GE054	1.0325262	6.2560164	1.1272353	6.2560382	9.7921552	1.2442100
Boeing 767-300 Series	1GE012	0.0365330	0.0398871	0.0398871	0.0398771	0.0440183	0.0440183
Boeing 767-300 Series	1GE020	0.0169020	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boeing 767-300 Series	1GE029	0.2557180	0.2791698	0.2791697	0.2791698	0.3081406	0.3081406
Boeing 767-300 Series	1PW043	0.0338150	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boeing 767-300 Series	1RR011	0.2191630	0.2383457	0.2383456	0.2383476	0.2003282	0.2003282
Boeing 777 Freighter	01P21GE216	0.7305952	14.3415991	2.3744372	14.3415887	19.7163263	2.6204359
Boeing 777-200-LR	01P21GE216	0.0050730	0.0055190	0.0055190	0.0055230	0.0046168	0.0046168
Boeing 777-300 ER	01P21GE217	0.3347491	1.0182727	1.0182726	1.0182723	0.0000000	0.0000000
Boeing 787-8 Dreamliner	9GENX3	0.0000000	0.6158688	0.6158687	0.6158647	0.7171959	0.7171959
Boeing C-17A	PW2041	0.0061420	0.0064240	0.0064240	0.0064170	0.0064193	0.0064193
Boeing DC-10-10 Series	3GE076	0.0245610	0.0256791	0.0256791	0.0256771	0.0256773	0.0256773
Boeing F/A-18 Hornet	F4044	0.0061420	0.0064240	0.0064240	0.0064170	0.0064189	0.0064189
Boeing F-15E Strike Eagle	F1229A	0.0184210	0.0192600	0.0192600	0.0192611	0.0192525	0.0192525

Airframe	Engine	Number of Average Day Operations					
		Baseline Condition	2025			2029	
			Proposed Project	No Action	Cumulative	Proposed Project	No Action
Boeing KC-135 Stratotanker	J57P22	0.0061420	0.0064240	0.0064240	0.0064170	0.0064195	0.0064195
Boeing MD-10-1 Freighter	1GE001	2.0825280	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boeing MD-10-30	1GE007	0.2687131	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boeing MD-10-30	3GE074	0.5374203	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boeing MD-11	1GE031	0.0000000	0.0000000	0.0000000	0.0000000	1.8447068	1.8447068
Boeing MD-11	1PW052	0.1929831	0.1579966	0.1579965	0.1579924	0.1627841	0.1627841
Boeing MD-11	2GE049	2.1871758	1.7908484	1.7908481	1.7908567	0.0000000	0.0000000
Boeing MD-11	CF680C	0.0872850	0.0947762	0.0947762	0.0947642	0.0802888	0.0802888
Boeing MD-11 Freighter	12PW101	0.0643060	0.0526462	0.0526462	0.0526581	0.0542799	0.0542799
Boeing MD-11 Freighter	12PW102	4.0689145	2.8127694	2.8127690	2.8127591	3.0501510	3.0501510
Boeing MD-11 Freighter	1GE031	4.4413295	3.1820601	3.1820596	3.1820610	3.4968964	3.4968964
Boeing MD-11 Freighter	1PW052	3.1682932	2.0753467	2.0753465	2.0753642	2.2904591	2.2904591
Bombardier Challenger 300	6AL006	1.8790377	2.9962766	2.9962759	2.9962688	3.5611719	3.5611719
Bombardier Challenger 600	01P05GE189	1.5410908	1.5078900	1.5078896	1.5078950	1.3435348	1.3435348
Bombardier CRJ-200	1GE035	6.9644012	4.5928888	4.5928877	4.5928755	0.2152804	0.2152804
Bombardier CRJ-700	01P05GE189	0.7230028	0.9810934	0.9810931	0.9810926	0.4210718	0.4210718
Bombardier CRJ-700	01P08GE191	0.0073810	0.0110570	0.0110570	0.0110610	0.0017649	0.0017649
Bombardier CRJ-700	01P08GE192	0.4207419	0.6302526	0.6302524	0.6302487	0.1005993	0.1005993
Bombardier CRJ-900	01P08GE190	5.4836035	5.1934690	5.1934677	5.1934852	3.3556439	3.3556439
Bombardier CRJ-900	01P08GE191	0.2883050	0.3627479	0.3627479	0.3627440	0.2297732	0.2297732
Bombardier CS100	01P20PW183	0.0000000	0.2181227	0.2181227	0.2181265	0.3474180	0.3474180
Bombardier Global 5000	01P04BR013	0.1430990	0.1847675	0.1847675	0.1847685	0.2010654	0.2010654
Bombardier Global Express	4BR002	0.1519060	0.1951765	0.1951764	0.1951745	0.1966791	0.1966791
Bombardier Learjet 35	1AS001	0.1684740	0.1820715	0.1820715	0.1820675	0.2009119	0.2009119
Bombardier Learjet 45	1AS001	0.4085000	0.6233317	0.6233315	0.6233357	0.6273478	0.6273478
Bombardier Learjet 60	TFE731	0.5708339	0.4637911	0.4637910	0.4637902	0.3475144	0.3475144
Cessna 150 Series	O200	0.6728241	0.6708011	0.6708009	0.6708038	0.6251587	0.6251587
Cessna 172 Skyhawk	IO360	5.0405736	5.9582660	5.9582646	5.9582564	5.6197196	5.6197196
Cessna 182	IO360	0.5406600	0.6393688	0.6393686	0.6393647	0.6029676	0.6029676

Airframe	Engine	Number of Average Day Operations					
		Baseline Condition	2025			2029	
			Proposed Project	No Action	Cumulative	Proposed Project	No Action
Cessna 206	TIO540	1.0394089	1.1502151	1.1502148	1.1502131	1.1489378	1.1489378
Cessna 208 Caravan	P6114A	13.5722330	14.8377505	14.8377472	14.8377347	16.2799948	16.2799948
Cessna 210 Centurion	TIO540	0.7449148	0.7443478	0.7443476	0.7443500	0.6338355	0.6338355
Cessna 425 Conquest I	PT6A60	0.1802220	0.2069755	0.2069755	0.2069686	0.2394736	0.2394736
Cessna 525 CitationJet	1PW035	2.0665385	3.0225074	3.0225066	3.0225041	2.9834720	2.9834720
Cessna 525C CitationJet	PW615F	0.5767019	1.1052318	1.1052315	1.1052289	1.4953271	1.4953271
Cessna 550 Citation II	1PW036	0.7449149	0.8900444	0.8900441	0.8900444	0.9687501	0.9687501
Cessna 560 Citation Excel	PW530	1.5666967	2.3039540	2.3039534	2.3039502	2.3202508	2.3202508
Cessna 560 Citation V	1PW037	0.5887169	0.7034637	0.7034636	0.7034679	0.6049336	0.6049336
Cessna 680 Citation Sovereign	14PW103	0.3916649	0.5948234	0.5948233	0.5948306	0.6615763	0.6615763
Cessna 680-A Citation Latitude	7PW078	0.1203960	0.1437494	0.1437493	0.1437454	0.1966245	0.1966245
Cessna 750 Citation X	6AL022	0.0000000	0.0000000	0.0000000	0.0000000	1.6094796	1.6094796
Cessna 750 Citation X	8AL025	1.1712828	1.6683994	1.6683989	1.6683976	0.0000000	0.0000000
Cessna Aircraft Company 180F	IO360	0.6487931	0.6066587	0.6066586	0.6066696	0.4889647	0.4889647
Cirrus SR20	IO360	0.1561900	0.2220416	0.2220416	0.2220396	0.2921166	0.2921166
Cirrus SR22	TIO540	0.6848418	1.0119775	1.0119772	1.0119767	1.3628565	1.3628565
Dassault Falcon 200	CF700D	0.3964849	0.4712151	0.4712150	0.4712103	0.4866940	0.4866940
Dassault Falcon 2000	14PW103	0.6418549	0.8894353	0.8894351	0.8894404	0.8159774	0.8159774
Dassault Falcon 50	1AS002	1.3696818	1.4847848	1.4847845	1.4847810	1.6533764	1.6533764
Dassault Falcon 900	1AS002	1.0332688	1.1603179	1.1603176	1.1603141	0.9906287	0.9906287
Diamond DA40	IO360	0.2282781	0.3286631	0.3286631	0.3286699	0.4445962	0.4445962
Embraer 500	PW610F	0.2402940	0.2474387	0.2474386	0.2474397	0.1890614	0.1890614
Embraer 505	PW530	0.4746849	0.7229239	0.7229237	0.7229230	0.8587568	0.8587568
Embraer EMB120 Brasilia	PW118	1.3375496	1.4602425	1.4602421	1.4602449	1.6117515	1.6117515
Embraer ERJ145	6AL008	0.2042499	2.0606639	2.0606633	2.0606635	2.3611958	2.3611958
Embraer ERJ170	01P08GE198	0.0120140	0.0145561	0.0145561	0.0145540	0.0134985	0.0134985
Embraer ERJ175	01P08GE197	4.5850639	4.4943620	4.4943610	4.4943497	4.1771675	4.1771675
Embraer ERJ175-LR	01P08GE197	3.0984837	1.9913675	1.9913671	1.9913705	6.7928038	6.7928038
Embraer ERJ190	XCF10E	0.2523120	0.4468652	0.4468651	0.4468702	0.5348645	0.5348645

Airframe	Engine	Number of Average Day Operations					
		Baseline Condition	2025			2029	
			Proposed Project	No Action	Cumulative	Proposed Project	No Action
Embraer Legacy 500 (EMB-550)	01P14HN015	0.2795460	0.3459310	0.3459309	0.3459319	0.3815819	0.3815819
Eurocopter EC-130	TPE3	0.0600700	0.0944613	0.0944613	0.0944612	0.0973870	0.0973870
Express 2000 (FAS)	TIO540	0.0061400	0.0064200	0.0064200	0.0064180	0.0064200	0.0064200
Fairchild SA-227-AC Metro III	PW125B	0.4225329	0.4607252	0.4607251	0.4607263	0.5072152	0.5072152
GippsAero GA8 Airvan (FAS)	TIO540	0.0061390	0.0064200	0.0064200	0.0064190	0.0064192	0.0064192
Gulfstream G200	7PW077	0.1214770	0.1115883	0.1115882	0.1115813	0.0903308	0.0903308
Gulfstream G280	01P11HN012	0.1922339	0.4061140	0.4061139	0.4061111	0.6388297	0.6388297
Gulfstream G300	1RR019	0.0368360	0.0385181	0.0385181	0.0385141	0.0385162	0.0385162
Gulfstream G400	11RR048	0.6317020	0.7318230	0.7318228	0.7318299	0.6372356	0.6372356
Gulfstream G-5 Gulfstream 5 / G-5SP Gulfstream G500	3BR001	0.5174250	0.8597934	0.8597932	0.8597943	0.9641451	0.9641451
Hawker HS-125 Series 700	1AS002	0.7270219	0.7193559	0.7193557	0.7193539	0.8048545	0.8048545
Hughes OH-6 Cayuse	T63A5A	0.0480630	0.0481301	0.0481301	0.0481301	0.0449717	0.0449717
Lockheed C-130 Hercules	T56-1	0.0061390	0.0064200	0.0064200	0.0064190	0.0064194	0.0064194
Lockheed C-130 Hercules ANP:C130AD	T56A15	0.0061390	0.0064200	0.0064200	0.0064190	0.0064192	0.0064192
Lockheed P-3 Orion	TF3440	0.0061400	0.0064180	0.0064180	0.0064160	0.0064194	0.0064194
McDonnell Douglas F-4 Phantom II	J7910	0.0061420	0.0064240	0.0064240	0.0064170	0.0064192	0.0064192
Mooney M20-K	TSIO36	0.2523120	0.2453497	0.2453496	0.2453497	0.2048190	0.2048190
Pilatus PC-12	PT67B	0.6968509	1.0499527	1.0499524	1.0499538	0.9723852	0.9723852
Piper PA-24 Comanche	TIO540	0.3243919	0.2973737	0.2973737	0.2973738	0.2330581	0.2330581
Piper PA-28 Cherokee Series	O320	0.9857352	0.8677767	0.8677766	0.8677753	0.8421906	0.8421906
Piper PA-31 Navajo	TIO540	1.3993630	1.5277423	1.5277420	1.5277351	1.6862537	1.6862537
Piper PA-32 Cherokee Six	TIO540	0.0061400	0.0064200	0.0064200	0.0064200	0.0064194	0.0064194
Piper PA44 (FAS)	IO320	0.1922371	0.2207690	0.2207690	0.2207666	0.2134513	0.2134513
Piper PA46-TP Meridian	PT6A42	0.2042520	0.3550409	0.3550408	0.3550399	0.5141116	0.5141116
Raytheon Beech 1900-C	PT67B	1.2195307	1.3314012	1.3314008	1.3314015	1.4695558	1.4695558
Raytheon Beech 1900-D	PT67D	0.0000000	5.1287815	0.0000000	5.1287750	5.1287671	0.0000000
Raytheon Beech 99	PT6A28	5.5316020	6.0442717	6.0442704	6.0442703	6.6699216	6.6699216
Raytheon Beech Bonanza 36	TIO540	0.1802160	0.1652065	0.1652064	0.1652094	0.1294782	0.1294782
Raytheon Beechjet 400	1PW035	0.2896969	0.2306876	0.2306875	0.2306936	0.2598402	0.2598402

Airframe	Engine	Number of Average Day Operations					
		Baseline Condition	2025			2029	
			Proposed Project	No Action	Cumulative	Proposed Project	No Action
Raytheon C-12 Huron	PT6A42	0.6608099	0.6758407	0.6758405	0.6758458	0.7321157	0.7321157
Raytheon King Air 100	PT6A28	0.3484260	0.4561883	0.4561882	0.4561852	0.5224791	0.5224791
Raytheon Premier I	1PW035	1.4057308	1.4475298	1.4475294	1.4475349	1.1059998	1.1059998
Raytheon Super King Air 300	P660AG	1.0036228	1.3292414	1.3292410	1.3292346	1.1604487	1.1604487
Robinson R22	IO320	0.4805920	0.6971650	0.6971648	0.6971648	0.8551170	0.8551170
Robinson R22	O320	0.3604461	0.3685113	0.3685112	0.3685110	0.3061808	0.3061808
Robinson R44 Raven / Lycoming O-540-F1B5	TIO540	0.0480630	0.0695372	0.0695372	0.0695372	0.0594631	0.0594631
Rockwell Twin Commander 690	TP10GT	0.1964599	0.2054205	0.2054204	0.2054195	0.2054195	0.2054195
Sikorsky S-76 Spirit	T70070	0.0240280	0.0245731	0.0245731	0.0245731	0.0205028	0.0205028
Sikorsky SH-60 Sea Hawk	T70041	0.0798110	0.0834552	0.0834552	0.0834552	0.0834516	0.0834516
T-38 Talon	J855HA	0.0184210	0.0192600	0.0192600	0.0192611	0.0192541	0.0192541
Total		290.4816444	359.8714085	322.2602739	359.8713535	404.6920352	348.2755969

ATTACHMENT B

RUNWAY USE

Condition	Arrival/Departure	Runway	Day	Evening	Night	Total
Baseline	Arrival	08L	4.041913	1.379967	2.111703	7.533582
		08R	1.749801	0.246002	0.324909	2.320712
		26L	38.128773	11.007680	13.675908	62.812361
		26R	42.557618	15.266555	13.628483	71.452655
		H01	0.836360	0.118952	0.166200	1.121512
		Total	87.314465	28.019155	29.907202	145.240822
	Departure	08L	3.171658	0.666193	15.496581	19.334432
		08R	2.574001	0.542820	16.208813	19.325634
		26L	29.071137	7.019742	5.919171	42.010050
		26R	47.161100	9.912848	6.375259	63.449207
		H01	0.772898	0.144179	0.204421	1.121498
Total		82.750794	18.285783	44.204245	145.240822	
2025 Proposed Project	Arrival	08L	4.391289	1.439939	2.125440	7.956669
		08R	2.424168	0.424825	0.360358	3.209351
		26L	50.055183	15.197542	24.887115	90.139841
		26R	47.387727	15.670914	14.230583	77.289224
		H01	1.002034	0.130512	0.208073	1.340619
		Total	105.260402	32.863733	41.811570	179.935704
	Departure	08L	3.365723	0.853089	15.659766	19.878578
		08R	3.282562	0.635763	26.234902	30.153227
		26L	39.628987	8.301803	8.979757	56.910547
		26R	54.621006	10.211610	6.820127	71.652744
		H01	0.927222	0.162373	0.251014	1.340609
Total		101.825500	20.164638	57.945566	179.935704	

2025 No Action	Arrival	08L	4.391288	1.439939	2.125440	7.956667
		08R	2.027541	0.276091	0.360358	2.663989
		26L	43.635527	12.792936	15.484347	71.912810
		26R	47.365614	15.659858	14.230581	77.256052
		H01	1.002034	0.130512	0.208073	1.340619
		Total	98.422003	30.299335	32.408799	161.130137
	Departure	08L	3.365722	0.853089	15.659767	19.878578
		08R	2.885934	0.586183	17.686925	21.159042

Condition	Arrival/Departure	Runway	Day	Evening	Night	Total
		26L	33.187231	7.496582	6.415364	47.099176
		26R	54.620994	10.211610	6.820128	71.652731
		H01	0.927222	0.162373	0.251014	1.340609
		Total	94.987103	19.309836	46.833198	161.130137

2025 Cumulative	Arrival	08L	2.958212	0.988701	1.467077	5.413989
		08R	3.537049	0.890124	0.988385	5.415558
		26L	63.581119	19.289511	21.666217	104.536847
		26R	34.181971	11.564880	17.481812	63.228663
		H01	1.002034	0.130512	0.208072	1.340619
		Total	105.260386	32.863728	41.811563	179.935677
	Departure	08L	2.359927	0.547203	14.389723	17.296853
		08R	3.956563	0.804671	10.317387	15.078621
		26L	56.277795	11.888401	23.151575	91.317771
		26R	38.303977	6.761987	9.835859	54.901823
		H01	0.927223	0.162373	0.251014	1.340609
Total		101.825485	20.164635	57.945557	179.935677	

2029 Proposed Project	Arrival	08L	4.494293	1.521381	2.188280	8.203955
		08R	3.174032	0.436085	0.381385	3.991501
		26L	65.537753	16.272331	25.361127	107.171210
		26R	50.820395	15.689780	15.093882	81.604057
		H01	1.030686	0.128281	0.215143	1.374110
		Total	125.057159	34.047858	43.239816	202.344833
	Departure	08L	3.655024	0.915540	16.981010	21.551575
		08R	3.995656	0.790669	28.056145	32.842470
		26L	48.765796	10.597937	9.334454	68.698188
		26R	58.373959	12.831287	6.675614	77.880860
		H01	0.961340	0.155713	0.257056	1.374110
Total		115.751776	25.291146	61.304280	202.347202	
2029 No Action	Arrival	08L	4.494293	1.521381	2.188280	8.203955
		08R	2.182470	0.287351	0.381385	2.851205
		26L	49.433424	13.856682	16.813181	80.103287
		26R	50.820395	15.689780	15.093882	81.604057
		H01	1.030686	0.128281	0.215143	1.374110
		Total	107.961269	31.483475	34.691871	174.136614

Condition	Arrival/Departure	Runway	Day	Evening	Night	Total
	Departure	08L	3.655024	0.915540	16.981010	21.551575
		08R	3.152829	0.641935	19.359465	23.154229
		26L	35.077117	8.182288	6.918805	50.178210
		26R	58.373959	12.831287	6.675614	77.880860
		H01	0.961340	0.155713	0.257056	1.374110
		Total	101.220269	22.726763	50.191951	174.138983

ATTACHMENT C
STAGE LENGTH

Stage Length (Number of Departures)

Condition	Stage Length									
	1	2	3	4	5	6	7	8	9	Total
Baseline	78.659944	17.309181	22.389250	25.863255	0.016861	0.000000	0.084302	0.918029	0.000000	145.240822
2025 Proposed Project	89.955129	21.252444	28.546485	33.635101	0.873100	0.000000	1.254760	3.563889	0.854796	179.935704
2025 No Action	85.681127	17.833251	26.836888	29.361110	0.018302	0.000000	0.399963	0.999495	0.000000	161.130137
2025 Cumulative	89.955125	21.252398	28.546542	33.635064	0.873099	0.000000	1.254757	3.563893	0.854798	179.935677
2029 Proposed Project	97.692570	27.827362	28.796336	35.910141	2.009463	4.273973	1.314976	3.667587	0.854795	202.347202
2029 No Action	93.418597	19.279417	27.086747	31.636168	1.154668	0.000000	0.460182	1.103204	0.000000	174.138983

ATTACHMENT D
FLIGHT TRACK USE

Track	Number of Average Day Operations					
	Baseline	2025			2029	
		Proposed Project	No Action	Cumulative	Proposed Project	No Action
A08CJN1	0.852759	0.936703	0.936703	0.752558	1.029391	1.029391
A08LCJE1	0.650793	0.714859	0.714859	0.574317	0.785588	0.785588
A08LCJN2	0.336620	0.369752	0.369752	0.297063	0.406339	0.406339
A08LCJN3	0.426383	0.468353	0.468353	0.376278	0.514695	0.514695
A08LCJN4	0.134643	0.147894	0.147894	0.118825	0.162535	0.162535
A08LCJS1	0.179528	0.197206	0.197205	0.158434	0.216714	0.216714
A08LCPN1	0.074571	0.082305	0.082305	0.082335	0.090446	0.090446
A08LCPW1	0.248578	0.274346	0.274346	0.274447	0.301487	0.301487
A08LGJW1	0.295021	0.394491	0.394491	0.230120	0.409490	0.409490
A08LGPW1	0.079597	0.099143	0.099143	0.057833	0.102355	0.102355
A08LPJE1	1.261560	1.266463	1.266463	0.738767	1.240753	1.240753
A08LPJN1	0.491790	0.493698	0.493698	0.287995	0.483684	0.483684
A08LPJN2	0.042765	0.042932	0.042932	0.025039	0.042059	0.042059
A08LPJN3	0.085535	0.085858	0.085858	0.050088	0.084119	0.084119
A08LPJN4	0.235202	0.236120	0.236120	0.137737	0.231327	0.231327
A08LPJN6	0.277975	0.279045	0.279045	0.162775	0.273386	0.273386
A08LPJN7	1.026350	1.030350	1.030349	0.601031	1.009426	1.009426
A08LPJN8	0.748379	0.751293	0.751293	0.438258	0.736040	0.736040
A08LPJS1	0.085535	0.085858	0.085858	0.050088	0.084119	0.084119
A08RCJE1	0.138423	0.259528	0.160369	0.391729	0.423754	0.175859
A08RCJN1	0.174317	0.326815	0.201950	0.493284	0.533620	0.221460
A08RCJN2	0.041012	0.076894	0.047516	0.116062	0.125569	0.052125
A08RCJN3	0.051269	0.096123	0.059397	0.145079	0.156964	0.065149
A08RCJN4	0.071775	0.134574	0.083158	0.203123	0.219733	0.091193
A08RCJN5	0.025635	0.048059	0.029697	0.072546	0.078489	0.032585
A08RCJN7	0.030763	0.057674	0.035640	0.087050	0.094187	0.039103
A08RCJS1	0.082187	0.121017	0.091818	0.129314	0.152001	0.100770
A08RCPN1	0.092522	0.123859	0.102093	0.106913	0.133772	0.112006
A08RCPS2	0.061681	0.082573	0.068062	0.071277	0.089217	0.074706
A08RCPW1	0.015423	0.020643	0.017016	0.017818	0.022298	0.018671
A08RCPW2	0.092522	0.123859	0.102093	0.106913	0.133774	0.112008
A08RCPW3	0.107948	0.144505	0.119111	0.124730	0.156153	0.130759
A08RCPW4	0.154208	0.206430	0.170154	0.178188	0.222975	0.186699
A08RCPW5	0.046264	0.061929	0.051046	0.053454	0.066938	0.056055
A08RGJE2	0.182363	0.244588	0.244587	0.284698	0.256054	0.256054
A08RGJE3	0.121573	0.163060	0.163060	0.189803	0.170814	0.170814
A08RGJN1	0.121573	0.163060	0.163060	0.189803	0.170802	0.170802
A08RGPN5	0.257562	0.304539	0.304539	0.393912	0.303904	0.303904

Track	Number of Average Day Operations					
	Baseline	2025			2029	
		Proposed Project	No Action	Cumulative	Proposed Project	No Action
A08RPJE1	0.144292	0.143625	0.143625	0.658016	0.153491	0.153491
A08RPJE3	0.087831	0.087427	0.087427	0.400535	0.093460	0.093460
A08RPJN1	0.025093	0.024980	0.024980	0.114431	0.026691	0.026691
A08RPJN2	0.056465	0.056201	0.056201	0.257487	0.060063	0.060063
A08RPJN3	0.112919	0.112406	0.112406	0.514959	0.120083	0.120083
A08RPJN4	0.025093	0.024980	0.024980	0.114431	0.026696	0.026696
A26LCJE1	9.514280	15.452102	10.413797	12.234504	19.361517	11.522461
A26LCJE2	0.130329	0.211672	0.142656	0.167591	0.265236	0.157861
A26LCJE3	0.204804	0.332625	0.224169	0.263364	0.416791	0.248046
A26LCJE4	0.260664	0.423350	0.285314	0.335189	0.530470	0.315700
A26LCJE5	1.619848	0.000000	0.000000	0.000000	0.000000	0.000000
A26LCJN1	0.074475	0.120960	0.081521	0.095766	0.151568	0.090202
A26LCJN2	0.018610	0.834901	0.619082	0.865789	1.027904	0.692116
A26LCJN3	4.580252	0.000000	0.000000	0.000000	0.000000	0.000000
A26LCJN4	0.297900	13.358229	9.905146	13.852625	16.444365	11.071744
A26LCJN5	4.300977	0.000000	0.000000	0.000000	0.000000	0.000000
A26LCJN6	0.055852	2.504665	1.857213	2.597368	3.083407	2.076053
A26LCJN7	5.213308	8.466900	5.706187	6.703837	10.609615	6.314263
A26LCJN8	0.558565	0.907165	0.611374	0.718269	1.136744	0.676522
A26LCJN9	0.893713	1.451470	0.978205	1.149230	1.818766	1.082421
A26LCJS1	0.353760	0.574539	0.387206	0.454897	0.719910	0.428447
A26LCJS2	0.856467	1.390996	0.937451	1.101347	1.742965	1.037305
A26LCJS3	0.390994	0.635011	0.427959	0.502784	0.795692	0.473547
A26LCJW1	0.204804	0.332625	0.224169	0.263364	0.416800	0.248055
A26LCJW3	0.390994	0.635011	0.427959	0.502784	0.795654	0.473509
A26LCPE3	0.358400	0.483566	0.388266	0.433838	0.526853	0.430227
A26LCPE4	0.280488	0.378442	0.303859	0.339523	0.412320	0.336700
A26LCPN1	0.498644	0.672785	0.540194	0.603597	0.733013	0.598577
A26LCPN2	0.358400	0.483566	0.388266	0.433838	0.526853	0.430227
A26LCPN3	0.171408	0.231270	0.185690	0.207488	0.251974	0.205761
A26LCPN4	0.109077	0.147171	0.118167	0.132037	0.160346	0.130939
A26LCPN5	0.311651	0.420492	0.337623	0.377252	0.458133	0.374111
A26LCPN6	0.296073	0.399468	0.320742	0.358389	0.435227	0.355405
A26LCPN7	0.109077	0.147171	0.118167	0.132037	0.160346	0.130939
A26LCPS1	0.483064	0.651762	0.523314	0.584736	0.710107	0.579872
A26LCPS2	0.420732	0.567664	0.455790	0.509289	0.618480	0.505050
A26LCPS3	0.264907	0.357416	0.286977	0.320664	0.389413	0.317994
A26LCPS4	0.031166	0.042049	0.033762	0.037726	0.045813	0.037411

Track	Number of Average Day Operations					
	Baseline	2025			2029	
		Proposed Project	No Action	Cumulative	Proposed Project	No Action
A26LCPW1	0.046748	0.063070	0.050640	0.056588	0.068720	0.056117
A26LCPW2	0.934958	1.261478	1.012868	1.131752	1.374400	1.122332
A26LCPW3	1.308942	1.766064	1.418011	1.584449	1.924160	1.571265
A26LCPW4	1.511518	2.039382	1.637463	1.829663	2.221948	1.814438
A26LCPW5	0.093496	0.126148	0.101287	0.113175	0.137440	0.112233
A26LCPW7	1.371272	1.850162	1.485535	1.659899	2.015788	1.646088
A26LGJE1	2.271510	2.971063	2.971062	3.229491	3.060302	3.060302
A26LGJE2	0.073281	0.095838	0.095838	0.104172	0.098719	0.098719
A26LGJN1	1.209037	0.000000	0.000000	0.000000	0.000000	0.000000
A26LGJN2	0.622839	0.000000	0.000000	0.000000	0.000000	0.000000
A26LGJN3	0.073281	0.095838	0.095838	0.104172	0.098719	0.098719
A26LGJS1	0.732746	0.958406	0.958406	1.041772	0.987194	0.987194
A26LGJS2	0.512921	0.670877	0.670876	0.729240	0.691036	0.691036
A26LGJW1	0.329729	0.431290	0.431290	0.468797	0.444237	0.444237
A26LGJW2	0.622839	0.814641	0.814641	0.885507	0.839115	0.839115
A26LGJW3	1.721952	2.252256	2.252255	2.448159	2.319906	2.319906
A26LGPE2	0.448335	0.518998	0.518998	0.590649	0.513900	0.513900
A26LGPE3	1.434666	1.660781	1.660780	1.890077	1.644479	1.644479
A26LGPE4	0.986331	1.141789	1.141788	1.299427	1.130580	1.130580
A26LGPS2	0.717340	0.830391	0.830391	0.945040	0.822240	0.822240
A26LGPW1	1.524337	1.764579	1.764578	2.008212	1.747259	1.747259
A26LGPW2	0.269004	0.311401	0.311401	0.354392	0.308340	0.308340
A26LPJE2	0.155467	0.187828	0.187828	0.546771	0.238682	0.238682
A26LPJE3	3.541139	4.278250	4.278249	12.454228	5.436183	5.436183
A26LPJN1	0.190008	0.229570	0.229569	0.668277	0.291672	0.291672
A26LPJN2	0.155467	0.187828	0.187828	0.546771	0.238672	0.238672
A26LPJN3	0.380019	0.459128	0.459128	1.336552	0.583389	0.583389
A26LPJN4	1.882851	0.000000	0.000000	0.000000	0.000000	0.000000
A26LPJN5	0.069096	0.083475	0.083475	0.243010	0.106081	0.106081
A26LPJN6	0.120918	5.778637	4.336932	6.318194	7.114909	4.871786
A26LPJN7	0.587313	0.709552	0.709551	2.065586	0.901637	0.901637
A26LPJN8	1.951940	2.358256	2.358255	6.865020	2.996820	2.996820
A26LPJS1	0.086368	0.104346	0.104346	0.303763	0.132595	0.132595
A26LPJS2	0.224565	0.271306	0.271306	0.789779	0.344748	0.344748
A26LPJS3	0.224565	0.271306	0.271306	0.789779	0.344746	0.344746
A26LPJS4	0.120918	0.146083	0.146083	0.425268	0.185592	0.185592
A26LPJW2	0.224565	0.271306	0.271306	0.789779	0.344789	0.344789
A26LPJW3	0.466404	0.563476	0.563476	1.640314	0.715929	0.715929

Track	Number of Average Day Operations					
	Baseline	2025			2029	
		Proposed Project	No Action	Cumulative	Proposed Project	No Action
A26PJE4	0.497615	0.000000	0.000000	0.000000	0.000000	0.000000
A26RCJE1	2.355999	2.545245	2.545244	4.512568	2.795292	2.795292
A26RCJN1	1.785598	0.000000	0.000000	0.000000	0.000000	0.000000
A26RCJN2	0.124000	0.984553	0.984553	1.069000	1.053262	1.053262
A26RCJN3	0.446407	0.000000	0.000000	0.000000	0.000000	0.000000
A26RCJN4	1.091201	0.000000	0.000000	0.000000	0.000000	0.000000
A26RCJN6	0.297601	2.362903	2.362902	2.565590	2.527829	2.527829
A26RCJN7	1.686402	0.000000	0.000000	0.000000	0.000000	0.000000
A26RCJS1	0.768802	0.830557	0.830557	1.472521	0.912148	0.912148
A26RCJS3	0.049600	0.053586	0.053586	0.095003	0.058848	0.058848
A26RCJW1	2.108002	2.277326	2.277325	4.037557	2.501050	2.501050
A26RCJW2	0.793604	0.857349	0.857349	1.520024	0.941572	0.941572
A26RCJW3	0.297601	0.321507	0.321507	0.570014	0.353089	0.353089
A26RCJW4	0.148803	0.160756	0.160756	0.285006	0.176545	0.176545
A26RCJW5	0.198402	0.214338	0.214338	0.380004	0.235393	0.235393
A26RCPE1	0.123639	0.138595	0.138595	0.215051	0.150950	0.150950
A26RCPN1	0.164852	0.184795	0.184795	0.286734	0.201267	0.201267
A26RCPN2	0.164852	0.184795	0.184795	0.286734	0.201267	0.201267
A26RCPN3	0.082427	0.092397	0.092397	0.143368	0.100633	0.100633
A26RCPN4	0.206065	0.230993	0.230993	0.358417	0.251583	0.251583
A26RCPN5	0.144245	0.161695	0.161695	0.250893	0.176108	0.176108
A26RCPN6	0.082427	0.092397	0.092397	0.143368	0.100633	0.100633
A26RCPN7	0.103541	0.130297	0.113723	0.147134	0.125139	0.125139
A26RCPN8	0.082427	0.092397	0.092397	0.143368	0.100633	0.100633
A26RCPS1	0.123639	0.138595	0.138595	0.215051	0.150950	0.150950
A26RCPS2	0.123639	0.138595	0.138595	0.215051	0.150950	0.150950
A26RCPW1	0.123639	0.138595	0.138595	0.215051	0.150950	0.150950
A26RCPW2	0.227181	0.268896	0.252321	0.362185	0.276089	0.276089
A26RCPW3	0.329706	0.369590	0.369590	0.573470	0.402533	0.402533
A26RCPW4	0.267883	0.300292	0.300292	0.465944	0.327058	0.327058
A26RGJE1	0.455577	0.618292	0.618292	0.360670	0.638901	0.638901
A26RGJN1	0.394839	0.535851	0.535851	0.312582	0.553714	0.553714
A26RGJN2	0.273344	0.000000	0.000000	0.000000	0.000000	0.000000
A26RGJS1	0.242977	0.329758	0.329758	0.192355	0.340747	0.340747
A26RGJW3	0.151860	0.206100	0.206100	0.120223	0.212967	0.212967
A26RGPE1	0.186996	0.217309	0.217308	0.184344	0.212355	0.212355
A26RGPE2	1.022020	1.191849	1.191848	0.695242	1.150533	1.150533
A26RGPN1	0.146003	0.170265	0.170265	0.099321	0.164362	0.164362

Track	Number of Average Day Operations					
	Baseline	2025			2029	
		Proposed Project	No Action	Cumulative	Proposed Project	No Action
A26RGPS1	0.194673	0.227021	0.227020	0.132427	0.219149	0.219149
A26RGPW1	0.243335	0.283774	0.283774	0.165533	0.273936	0.273936
A26RGPW2	0.194673	0.227021	0.227020	0.132427	0.219149	0.219149
A26RPJE1	0.116119	0.124092	0.124092	0.072386	0.130246	0.130246
A26RPJE2	0.099526	0.106363	0.106363	0.062049	0.111639	0.111639
A26RPJE3	1.492845	0.000000	0.000000	0.000000	0.000000	0.000000
A26RPJE4	0.082936	0.088638	0.088638	0.051704	0.093033	0.093033
A26RPJE5	0.082936	0.939227	0.939227	0.883202	0.999174	0.999174
A26RPJE6	0.862538	0.000000	0.000000	0.000000	0.000000	0.000000
A26RPJE7	1.111344	12.585601	12.585597	11.834896	13.388936	13.388936
A26RPJE8	6.767605	0.000000	0.000000	0.000000	0.000000	0.000000
A26RPJE9	0.580559	0.620479	0.620479	0.361952	0.651230	0.651230
A26RPJN1	1.111344	1.187786	1.187786	0.692867	1.246640	1.246640
A26RPJN2	1.509440	1.613264	1.613263	0.941061	1.693197	1.693197
A26RPJN3	0.232225	0.248189	0.248189	0.144776	0.260492	0.260492
A26RPJN4	1.045006	1.116863	1.116862	0.651502	1.172213	1.172213
A26RPJN5	0.082936	0.088638	0.088638	0.051704	0.093033	0.093033
A26RPJN8	0.248818	0.000000	0.000000	0.000000	0.000000	0.000000
A26RPJN9	0.116119	1.314914	1.314914	1.236480	1.398844	1.398844
A26RPJS1	18.245983	19.500918	19.500912	11.375538	20.467217	20.467217
A26RPJW1	0.696667	0.744580	0.744580	0.434340	0.781476	0.781476
A26RPJW2	13.916707	14.873879	14.873874	8.676430	15.610905	15.610905
A26RPJW3	4.544911	4.857506	4.857504	2.833545	5.098198	5.098198
AHELOE1	0.140189	0.167577	0.167577	0.167577	0.171764	0.171764
AHELOE2	0.140189	0.167577	0.167577	0.167577	0.171764	0.171764
AHELOS1	0.140189	0.167577	0.167577	0.167577	0.171764	0.171764
AHELOS2	0.140189	0.167577	0.167577	0.167577	0.171764	0.171764
AHELOW1	0.140189	0.167577	0.167577	0.167577	0.171764	0.171764
AHELOW2	0.140189	0.167577	0.167577	0.167577	0.171764	0.171764
AHELOW3	0.140189	0.167577	0.167577	0.167577	0.171764	0.171764
AHELOW4	0.140189	0.167577	0.167577	0.167577	0.171764	0.171764
D08LCJE1	0.849891	0.901455	0.901455	1.504053	1.015358	1.015358
D08LCJN1	0.249964	0.265136	0.265136	0.442367	0.298635	0.298635
D08LCJN2	0.149979	0.159076	0.159076	0.265418	0.179181	0.179181
D08LCJN3	0.699906	0.742363	0.742364	1.238640	0.836177	0.836177
D08LCJN4	0.199972	0.212104	0.212104	0.353896	0.238908	0.238908
D08LCJS1	1.749789	1.855938	1.855938	3.096591	2.090442	2.090442
D08LCJS2	0.849891	0.901455	0.901455	1.504053	1.015358	1.015358

Track	Number of Average Day Operations					
	Baseline	2025			2029	
		Proposed Project	No Action	Cumulative	Proposed Project	No Action
D08LCJW1	0.149979	0.159076	0.159076	0.265418	0.179181	0.179181
D08LCPN1	0.028490	0.029725	0.029725	0.025084	0.034213	0.034213
D08LCPW1	0.085472	0.089170	0.089170	0.075255	0.102640	0.102640
D08LCPW2	0.113963	0.118888	0.118888	0.100340	0.136853	0.136853
D08LGJ1	0.155096	0.182467	0.182467	0.106434	0.182828	0.182828
D08LGP1	0.024731	0.024714	0.024714	0.014414	0.022951	0.022951
D08LPJN1	0.065708	0.066684	0.066684	0.038894	0.071283	0.071283
D08LPJN2	0.427059	0.433448	0.433448	0.252839	0.463337	0.463337
D08LPJN3	0.821279	0.833548	0.833548	0.486236	0.891033	0.891033
D08LPJN4	1.149778	1.166968	1.166968	0.680734	1.247447	1.247447
D08LPJS1	0.492764	0.500126	0.500126	0.291743	0.534620	0.534620
D08LPJS2	0.525605	0.533465	0.533465	0.311182	0.570261	0.570261
D08LPJS3	4.927617	5.001301	5.001301	2.917418	5.346201	5.346201
D08LPJW1	2.430969	2.467301	2.467301	1.439260	2.637459	2.637459
D08LPJW2	2.660923	2.700705	2.700705	1.575403	2.886948	2.886948
D08LPJW4	0.525605	0.533465	0.533465	0.311182	0.570261	0.570261
D08RCJE1	0.345389	0.579433	0.381028	0.235887	0.635870	0.422154
D08RCJE2	5.794852	9.721634	6.392903	3.957713	10.667115	7.081510
D08RCJE3	1.036166	1.738301	1.143099	0.707669	1.907327	1.266195
D08RCJE5	0.537267	0.901332	0.592712	0.366943	0.988905	0.656471
D08RCJN1	0.460526	0.772578	0.508045	0.314514	0.847609	0.562664
D08RCJN2	0.537267	0.901332	0.592712	0.366943	0.988853	0.656418
D08RCJN3	0.882659	1.480787	0.973760	0.602835	1.624533	1.078381
D08RCJN4	0.383765	0.643820	0.423374	0.262099	0.706430	0.468974
D08RCJN5	0.345389	0.579433	0.381028	0.235887	0.635763	0.422047
D08RCJS1	0.460526	0.772578	0.508045	0.314514	0.847666	0.562720
D08RCJS2	0.422136	0.708198	0.465707	0.288321	0.777110	0.515905
D08RCJW1	0.729153	1.223252	0.804401	0.497991	1.342209	0.891038
D08RCJW2	2.647978	4.442346	2.921268	1.808495	4.873868	3.235413
D08RCJW3	1.074549	1.802670	1.185427	0.733879	1.977498	1.312626
D08RCPN1	0.096899	0.103376	0.103376	0.086888	0.116318	0.116318
D08RCPS1	0.048450	0.051689	0.051689	0.043445	0.058159	0.058159
D08RCPS2	0.113051	0.120606	0.120606	0.101371	0.135673	0.135673
D08RCPW1	0.161501	0.172296	0.172296	0.144814	0.193865	0.193865
D08RCPW2	0.193800	0.206755	0.206755	0.173779	0.232628	0.232628
D08RCPW3	0.096899	0.103376	0.103376	0.086888	0.116339	0.116339
D08RCPW4	0.129203	0.137835	0.137835	0.115850	0.155066	0.155066
D08RCPW5	0.032299	0.034459	0.034459	0.028962	0.038741	0.038741

Track	Number of Average Day Operations					
	Baseline	2025			2029	
		Proposed Project	No Action	Cumulative	Proposed Project	No Action
D08RGJE1	0.326336	0.442191	0.442191	0.377210	0.470107	0.470107
D08RGJN1	0.522133	0.707515	0.707515	0.603540	0.751995	0.751995
D08RGPS1	0.307449	0.356023	0.356023	0.402261	0.353673	0.353673
D08RPJE1	0.606569	0.536084	0.536084	0.821072	0.517470	0.517470
D08RPJN1	0.089859	0.079419	0.079419	0.121649	0.076674	0.076674
D08RPJN2	0.179723	0.158838	0.158838	0.243266	0.153352	0.153352
D08RPJW1	0.336983	0.297821	0.297821	0.456146	0.287504	0.287504
D08RPJW2	0.426855	0.377249	0.377249	0.577790	0.364151	0.364151
D26LCJE1	0.968409	1.527479	1.046607	1.934085	2.224468	1.155870
D26LCJE2	6.983454	11.015072	7.547361	13.947188	16.040889	8.334878
D26LCJE3	0.204592	0.322701	0.221109	0.408606	0.469973	0.244214
D26LCJE4	0.177303	0.279672	0.191625	0.354132	0.407303	0.211643
D26LCJN1	0.477393	0.752985	0.515933	0.953427	1.096616	0.569837
D26LCJN2	0.095483	0.150600	0.103187	0.190691	0.219320	0.113960
D26LCJN3	0.491026	0.774495	0.530673	0.980667	1.127865	0.586041
D26LCJN4	0.463740	0.731471	0.501194	0.926188	1.065250	0.553525
D26LCJN5	0.327335	0.516334	0.353784	0.653782	0.751867	0.390648
D26LCJN6	0.231881	0.365718	0.250581	0.463091	0.532604	0.276745
D26LCJS1	0.109103	0.172107	0.117924	0.217937	0.250642	0.130237
D26LCJS2	0.300074	0.473302	0.324297	0.599295	0.689264	0.358145
D26LCJS3	0.300074	0.473302	0.324297	0.599295	0.689267	0.358148
D26LCJS4	0.163676	0.258156	0.176884	0.326892	0.375964	0.195359
D26LCJW1	0.804730	1.269313	0.869712	1.607191	1.848567	0.960569
D26LCJW2	0.518305	0.817522	0.560155	1.035148	1.190593	0.618669
D26LCJW3	1.527630	2.409543	1.650983	3.050945	3.508904	1.823218
D26LCJW4	0.450096	0.709950	0.486443	0.898938	1.033874	0.537195
D26LCPE2	0.064477	0.089949	0.069717	0.082798	0.096383	0.077325
D26LCPE4	0.177309	0.247363	0.191725	0.227701	0.265054	0.212643
D26LCPN1	0.402977	0.562184	0.435734	0.517500	0.602394	0.483279
D26LCPN2	0.741478	1.034416	0.801749	0.952202	1.108405	0.889234
D26LCPN3	0.483575	0.674622	0.522882	0.621002	0.722873	0.579935
D26LCPN4	0.419095	0.584671	0.453163	0.538200	0.626489	0.502610
D26LCPN5	0.209548	0.292334	0.226581	0.269101	0.313244	0.251305
D26LCPN6	0.274023	0.382283	0.296298	0.351902	0.409627	0.328630
D26LCPN7	0.322384	0.449747	0.348588	0.414001	0.481915	0.386623
D26LCPS1	0.660880	0.921980	0.714603	0.848701	0.987926	0.792578
D26LCPS2	0.322384	0.449747	0.348588	0.414001	0.481915	0.386623
D26LCPS4	0.596404	0.832032	0.644888	0.765902	0.891543	0.715253

Track	Number of Average Day Operations					
	Baseline	2025			2029	
		Proposed Project	No Action	Cumulative	Proposed Project	No Action
D26LCPW1	0.016120	0.022490	0.017432	0.020700	0.024096	0.019331
D26LCPW2	1.595791	2.226249	1.725509	2.049304	2.385481	1.913785
D26LCPW3	0.886549	1.236802	0.958613	1.138500	1.325267	1.063214
D26LCPW4	0.531931	0.742083	0.575170	0.683101	0.795161	0.637928
D26LCPW5	0.467453	0.652136	0.505454	0.600300	0.698777	0.560604
D26LGJN1	0.454299	0.594896	0.594896	0.695630	0.617966	0.617966
D26LGJN2	0.378578	0.495748	0.495748	0.579699	0.514971	0.514971
D26LGJN3	0.151432	0.198300	0.198300	0.231876	0.205989	0.205989
D26LGJN4	0.265007	0.347030	0.347030	0.405782	0.360480	0.360480
D26LGJS1	0.681441	0.892353	0.892352	1.043445	0.926948	0.926948
D26LGJS2	0.302871	0.396603	0.396603	0.463753	0.411977	0.411977
D26LGJS3	1.930755	2.528326	2.528326	2.956443	2.626354	2.626354
D26LGJS4	0.681441	0.892353	0.892352	1.043445	0.926948	0.926948
D26LGJW1	0.795020	1.041079	1.041079	1.217353	1.081440	1.081440
D26LGJW2	1.400742	1.834277	1.834277	2.144870	1.905394	1.905394
D26LGPE1	0.499436	0.572610	0.572610	0.679751	0.570831	0.570831
D26LGPN1	0.499436	0.572610	0.572610	0.679751	0.570831	0.570831
D26LGPN2	0.499436	0.572610	0.572610	0.679751	0.570831	0.570831
D26LGPS1	1.498321	1.717825	1.717825	2.039247	1.712494	1.712494
D26LGPS2	0.388449	0.445361	0.445360	0.528694	0.443980	0.443980
D26LGPW1	0.443948	0.508989	0.508989	0.604225	0.507406	0.507406
D26LGPW2	0.110985	0.127246	0.127246	0.151051	0.126851	0.126851
D26LGPW4	0.277469	0.318115	0.318115	0.377635	0.317128	0.317128
D26LGPW5	0.610431	0.699855	0.699855	0.830806	0.697683	0.697683
D26LGPW6	0.277469	0.318115	0.318115	0.377635	0.317128	0.317128
D26LPJE1	2.987960	3.122296	3.122295	14.292422	3.176800	3.176800
D26LPJE2	0.160069	0.167271	0.167270	0.765670	0.170190	0.170190
D26LPJN1	0.293461	0.306649	0.306649	1.403729	0.312011	0.312011
D26LPJN2	0.453532	0.473916	0.473916	2.169388	0.482190	0.482190
D26LPJN4	0.160069	0.167271	0.167270	0.765670	0.170191	0.170191
D26LPJS2	0.240106	0.250892	0.250892	1.148496	0.255282	0.255282
D26LPJW1	1.173834	1.226617	1.226617	5.614884	1.248046	1.248046
D26LPJW2	1.627367	1.700525	1.700525	7.784257	1.730068	1.730068
D26RCJE1	1.011908	1.118077	1.118077	1.719085	1.214599	1.214599
D26RCJE2	4.680035	5.171129	5.171128	7.950777	5.617521	5.617521
D26RCJE3	0.885403	0.978318	0.978317	1.504211	1.062774	1.062774
D26RCJN1	1.054068	1.164673	1.164673	1.790712	1.265207	1.265207
D26RCJN2	0.168647	0.186339	0.186339	0.286511	0.202433	0.202433

Track	Number of Average Day Operations					
	Baseline	2025			2029	
		Proposed Project	No Action	Cumulative	Proposed Project	No Action
D26RCJN3	1.032985	1.141378	1.141378	1.754888	1.239903	1.239903
D26RCJN4	0.716770	0.791984	0.791984	1.217684	0.860341	0.860341
D26RCJW1	0.274055	0.302804	0.302804	0.465575	0.328954	0.328954
D26RCJW2	0.231887	0.256226	0.256226	0.393960	0.278346	0.278346
D26RCPE1	0.137618	0.155671	0.155671	0.205861	0.168219	0.168219
D26RCPN1	0.154822	0.175130	0.175130	0.231596	0.189247	0.189247
D26RCPN2	0.275237	0.311343	0.311343	0.411723	0.336439	0.336439
D26RCPN3	0.275237	0.311343	0.311343	0.411723	0.336439	0.336439
D26RCPN4	0.361247	0.408635	0.408635	0.540387	0.441576	0.441576
D26RCPN5	0.172025	0.194591	0.194591	0.257327	0.210274	0.210274
D26RCPN6	0.137618	0.155671	0.155671	0.205861	0.168219	0.168219
D26RCPN7	0.206426	0.233506	0.233506	0.308791	0.252329	0.252329
D26RCPS1	0.137618	0.155671	0.155671	0.205861	0.168219	0.168219
D26RCPS2	0.137618	0.155671	0.155671	0.205861	0.168219	0.168219
D26RCPW1	0.516070	0.583767	0.583767	0.771982	0.630823	0.630823
D26RCPW2	0.034404	0.038917	0.038917	0.051467	0.042055	0.042055
D26RCPW3	0.447259	0.505930	0.505930	0.669050	0.546713	0.546713
D26RGJE1	0.788033	1.053086	1.053086	0.614306	1.053580	1.053580
D26RGJE3	0.039403	0.052658	0.052658	0.030714	0.052679	0.052679
D26RGJN1	0.275817	0.368581	0.368581	0.215008	0.368753	0.368753
D26RGJN2	0.275817	0.368581	0.368581	0.215008	0.368753	0.368753
D26RGJW1	0.354614	0.473894	0.473894	0.276434	0.474111	0.474111
D26RGJW3	0.630427	0.842472	0.842472	0.491444	0.842864	0.842864
D26RGPE2	1.000278	1.197688	1.197688	0.698650	1.147333	1.147333
D26RGPN1	0.200057	0.239539	0.239539	0.139730	0.229467	0.229467
D26RGPN2	0.266739	0.319385	0.319385	0.186311	0.305956	0.305956
D26RGPW1	0.666853	0.798460	0.798460	0.465765	0.764889	0.764889
D26RGPW2	0.133369	0.159693	0.159693	0.093152	0.152978	0.152978
D26RPJE1	0.174809	0.195863	0.195863	0.114248	0.215381	0.215381
D26RPJE2	0.222484	0.249289	0.249289	0.145420	0.274121	0.274121
D26RPJE3	0.286056	0.320513	0.320513	0.186953	0.352442	0.352442
D26RPJE4	6.928896	7.763517	7.763515	4.528717	8.536917	8.536917
D26RPJE5	7.739389	8.671644	8.671642	5.058447	9.535501	9.535501
D26RPJN1	0.492642	0.551996	0.551996	0.321989	0.606983	0.606983
D26RPJN2	1.557417	1.745011	1.745011	1.017926	1.918848	1.918848
D26RPJN3	2.050063	2.296998	2.296997	1.339916	2.525831	2.525831
D26RPJN4	3.400884	3.810540	3.810539	2.222806	4.190138	4.190138
D26RPJN5	0.397295	0.445142	0.445142	0.259663	0.489502	0.489502

Track	Number of Average Day Operations					
	Baseline	2025			2029	
		Proposed Project	No Action	Cumulative	Proposed Project	No Action
D26RPJS2	0.667460	0.747866	0.747866	0.436256	0.822364	0.822364
D26RPJW1	11.680583	13.087581	13.087578	7.634427	14.391362	14.391362
D26RPJW2	9.439831	10.576901	10.576899	6.169856	11.630570	11.630570
D26RPJW3	0.715139	0.801273	0.801273	0.467419	0.881104	0.881104
D26RPJW4	0.015893	0.017799	0.017799	0.010367	0.019580	0.019580
DHELON1	0.160214	0.191516	0.191516	0.191516	0.196301	0.196301
DHELON2	0.160214	0.191516	0.191516	0.191516	0.196301	0.196301
DHELOS1	0.160214	0.191516	0.191516	0.191516	0.196301	0.196301
DHELOS2	0.160214	0.191516	0.191516	0.191516	0.196301	0.196301
DHELOW1	0.160214	0.191516	0.191516	0.191516	0.196301	0.196301
DHELOW2	0.160214	0.191516	0.191516	0.191516	0.196301	0.196301
DHELOW3	0.160214	0.191516	0.191516	0.191516	0.196301	0.196301
Total	290.481644	359.871408	322.260274	359.871353	404.692035	348.275597

ATTACHMENT E

RUNUPS

Airframe	Engine	Number of Average Day Runups					
		Baseline	2025			2029	
			Proposed Project	No Action	Cumulative	Proposed Project	No Action
Dassault Falcon 900	1AS002	0.006366	0.007245	0.007245	0.007245	0.006451	0.006451
Boeing 767-300 ER Freighter	01P02GE188	0.124113	0.166597	0.166597	0.166597	0.000000	0.000000
Boeing 737-700 Series	3CM032	0.005949	0.005353	0.005353	0.005353	0.003247	0.003247
Boeing 737-800 Series	3CM034	0.001487	0.001004	0.001004	0.001004	0.000803	0.000803
Boeing 747-400 Series Freighter	1GE024	0.002975	0.003241	0.003241	0.003241	0.003270	0.003270
Boeing 757-200 Series	4PW073	0.001346	0.001467	0.001467	0.001467	0.027935	0.027935
Boeing 757-200 Series	4PW072	0.023905	0.026056	0.026056	0.026056	0.000000	0.000000
Boeing 757-200 Series Freighter	3RR028	0.024721	0.026926	0.026926	0.026926	0.027605	0.027605
Airbus A300B4-600 Series	1PW048	0.004449	0.004738	0.004738	0.004738	0.004814	0.004814
Airbus A320-200 Series	2CM018	0.002733	0.001228	0.001228	0.001228	0.000690	0.000690
Airbus A320-200 Series	1IA003	0.002981	0.002593	0.002593	0.002593	0.002143	0.002143
Cessna 750 Citation X	8AL025	0.007561	0.010775	0.010775	0.010775	0.009055	0.009055
Boeing MD-11 Freighter	2GE049	0.017633	0.013442	0.013442	0.013442	0.000000	0.000000
Boeing MD-11 Freighter	1PW052	0.034050	0.023131	0.023131	0.023131	0.023418	0.023418
Boeing 767-300 ER Freighter	1GE030	0.000000	0.000000	0.000000	0.000000	0.173606	0.173606
Boeing 727-200 Series	1PW004	0.000000	0.000000	0.000000	0.000000	0.016734	0.016734
Dassault Falcon 200	CF700D	0.000000	0.000000	0.000000	0.000000	0.001071	0.001071
Boeing MD-11 Freighter	1GE031	0.000000	0.000000	0.000000	0.000000	0.013339	0.013339
Total		0.260269	0.293796	0.293796	0.293796	0.314181	0.314181

RESIDENCES WITHIN CNEL 65+ dB(A) CONTOURS

Address of Housing Unit ^a	Easement Identified	Population				
		Baseline	2025		2029	
			No Action	Proposed Project	No Action	Proposed Project
1004 E California St		5	5	5	5	5
1003 S Greenwood Ave						4
1004 E California St						
1024 S Grove Ave		6	6	6	6	6
11248 S Turner Ave		2	2	2	2	2
1221 E Airport Dr		10	10	10	10	10
1227 E Airport Dr		10	10	10	10	10
1229 E Airport Dr		10	10	20	10	10
1231 E Airport Dr		5	5	10	5	10
1233 E Airport Dr				5		10
1235 E Airport Dr						5
811 S Greenwood Ave	Yes	5		5	5	5
835 S Greenwood Ave	Yes			4		4
902 S Bon View Ave						4
902 S Greenwood Ave				4		4
902 S Hope Ave	Yes					5
903 S Hope Ave	Yes					4
909 S Hope Ave						4
910 S Bon View Ave						4
920 S Greenwood Ave						4
927 S Bon View Ave						4
928 S Bon View Ave						4
954 Peach St		7	7	7	7	7

^a The housing units at 1221, 1227, 1229, 1231, 1233 and 1235 E. Airport Dr and the housing units at 1024 S. Grove are duplexes. Either one or both residences within each duplex was counted depending on the location of the CNEL 65+ dB(A) contour.