SAN DIEGO
INTERNATIONAL AIRPORT
LET'S GO.

Airport Noise Advisory Committee

April 17, 2019

Agenda

1. **Welcome and Introductions**
2. **Presentation Items**
   a. **Update on Flight Procedure Analysis**
   b. **Update on Part 150 noise study**
3. **Action Items**
   a. **Approval of February 20, 2019 Meeting Summary**
   b. **Presentation on Airport Development Plan (ADP) and the Draft Environmental Impact Review (EIR)**

      Speakers:

      Angela Shafer-Payne, SDCRAA, Introduction

      Brendan Reed, SDCRAA, Overview of ADP

      Nick Johnson, Johnson Aviation, Forecasts/Capacity

      Mary Ellen Eagan, HMMH, Noise analysis
4. **Public Comment**
5. **Next Meeting: June 19, 2019**
6. **Adjourn**

Update on Flight Procedure Analysis

Steve Smith, Director, Ricondo

San Diego County Regional Airport Authority (SDCRAA)
Flight Procedure Evaluation
Overview to ANAC

San Diego International Airport

April 17, 2019

Evaluation and Analysis of ANAC Recommendations

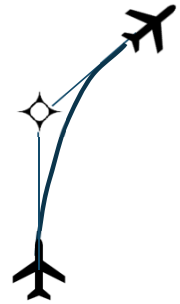
- Evaluate ANAC Subcommittee flight procedure concept designs to address noise in La Jolla, Mission Beach, Pacific Beach, Point Loma, and Ocean Beach.
  - Conduct operational assessments for potential feasibility
  - Procedures that were potentially feasible were modeled for noise
- Separate working group was established in December of 2018 to address noise issues in East County.
- Analysis on existing Airport Authority noise offices practices for identification of and definition of early turn compliance (FAA Noise Dots).
  - Analysis report provided on March 21, 2019

Flight Procedure Evaluation Process

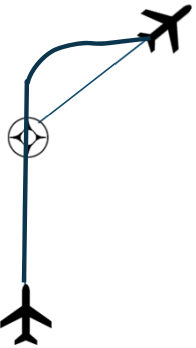
- Three Phases
  - Preliminary Draft
  - Draft
  - Final
- Coordinated with Technical Advisory Committee and Citizen Advisory Committee
  - Conducted 5 meetings to date
  - Provided responses to comments between Preliminary Draft and Draft phases
- Shared information to the public
  - TAC/CAC meetings open for public to observe
  - Shared all presentations with public on the website
- Evaluated 20 different procedure design concepts

DRAFT Deliberative Document – For Discussion Purposes Only

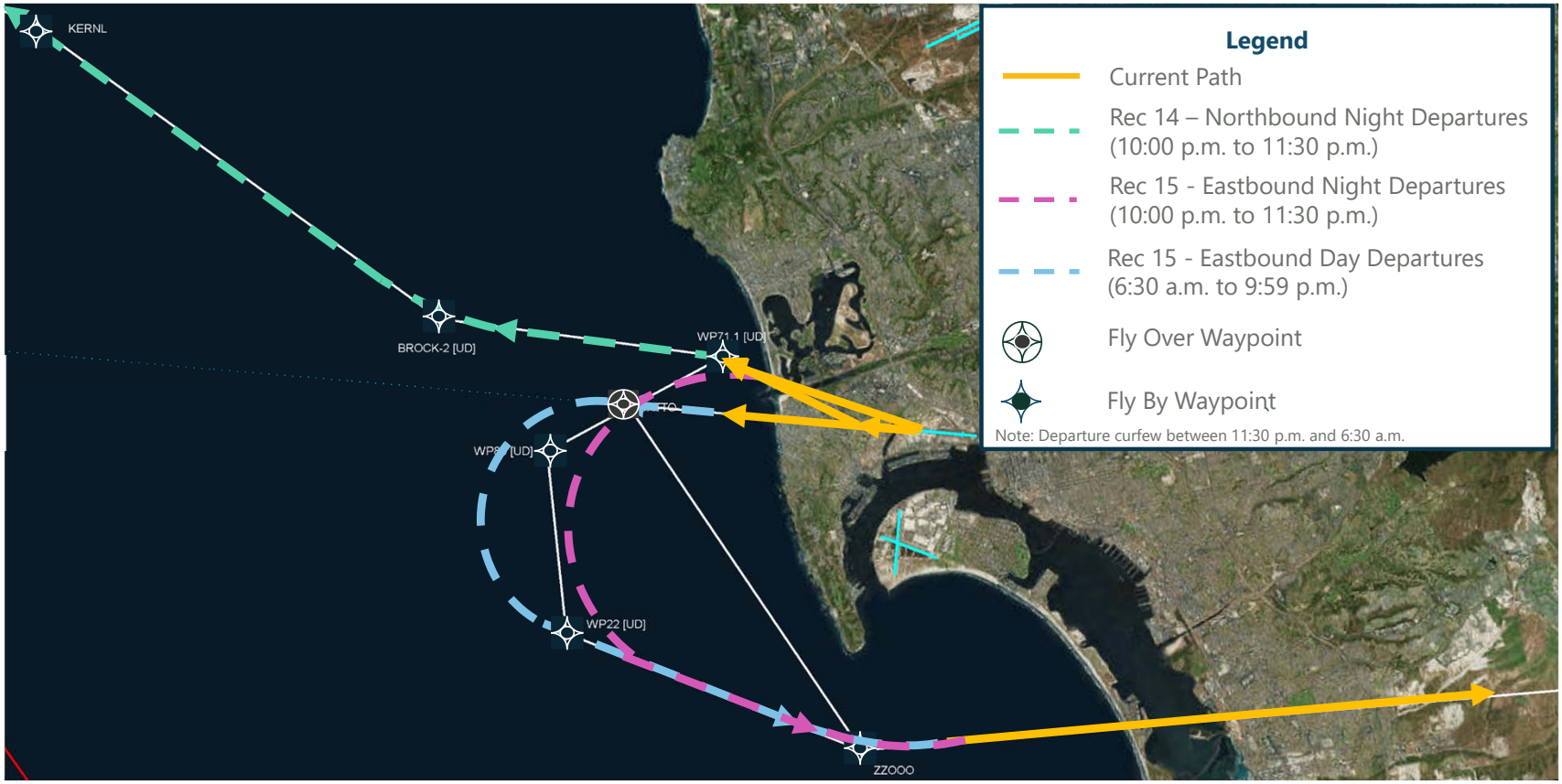
Consultant Team Recommendations



Fly By Waypoint



Fly Over Waypoint



SOURCE: Ricondo & Associates, Inc., April 2019 (procedure design concepts); Federal Aviation Administration, April 2019 (airport runways)

Next Steps

Update on Part 150 Noise Study

Ryk Dunkelberg, Vice President, Mead & Hunt, Inc.

14 CFR PART 150 UPDATE

ANAC MEETING

APR.17.2019

Mead & Hunt

SAN DIEGO INTERNATIONAL AIRPORT

What is a CFR Part 150 Study?

- **A voluntary Study to identify aircraft noise and land use compatibility: *Both existing and future conditions.***
- **The Study identifies and evaluates two components: *Aircraft noise and land use/population.***
- **The Study consists of two distinct, but complementary portions: *Noise Exposure Maps and a Noise Compatibility Program.***
- **The Study generally has a five-year planning horizon.**

14 CFR
PART 150
UPDATE

What is a CFR Part 150 Study? (CONTINUED)

- **The *Noise Exposure Maps (NEMs)* are accepted by the Federal Aviation Administration.**
- **The *Noise Compatibility Program (NCP)* measures are either approved or disapproved by the FAA. Approved measures contained in the Noise Compatibility Program are eligible for Federal funding.**
- **Anticipating a 18 month Study process.**

14 CFR
PART 150
UPDATE

Why Update Study?

- **Respond to ANAC Recommendations, specifically those that may impact the 65 CNEL contour.**
- **Changes Over Time**
  - Change in Aircraft Fleet Mix
  - Aircraft Noise Levels Reduced
  - Change in Aircraft Activity Levels
  - Updated Noise Model

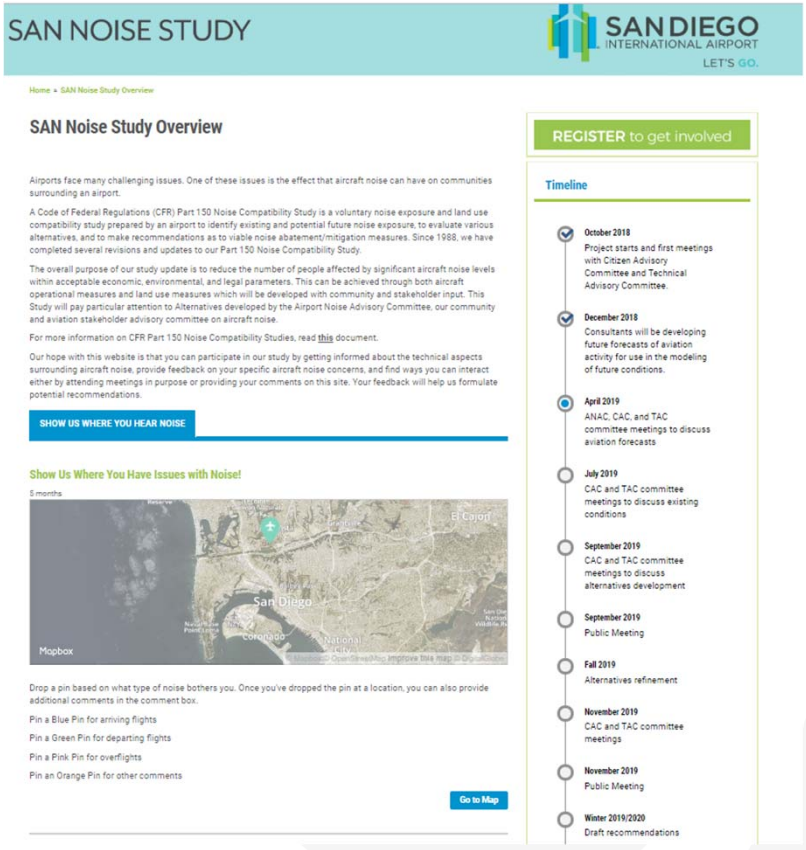
14 CFR
PART 150
UPDATE

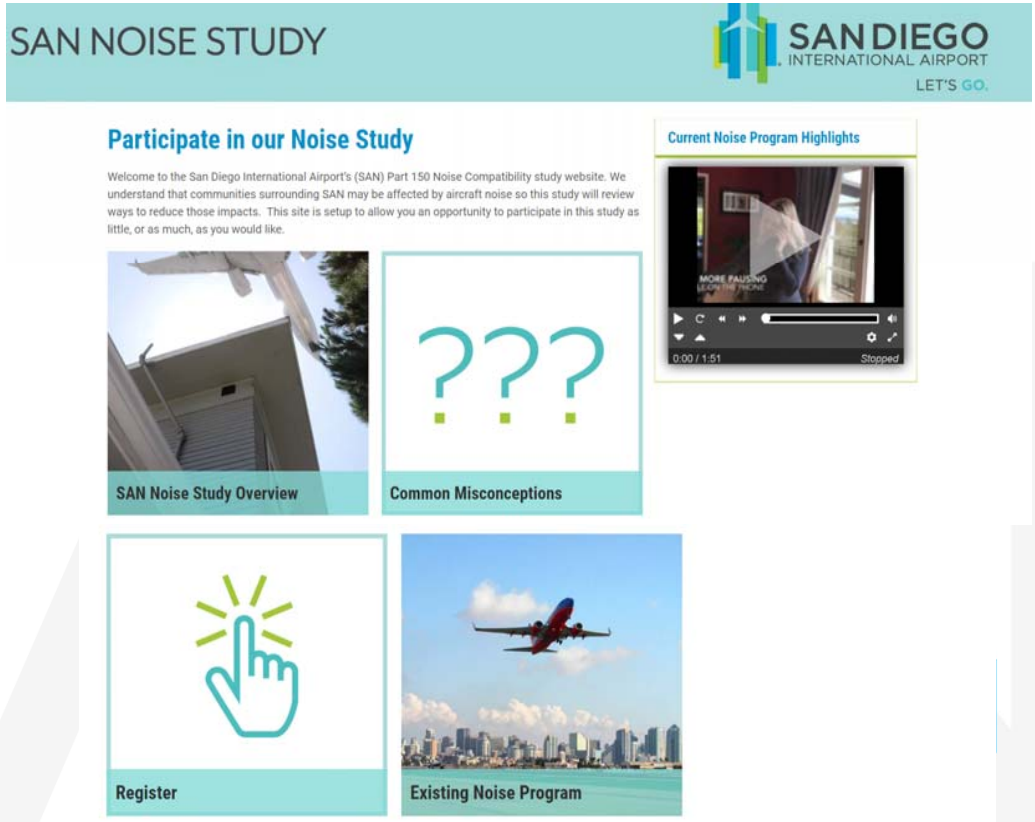
Study Parameters

- Do Not Shift Noise to new non-compatible areas
- Do Not impact safety
- Do Not impact capacity
- Do Not Modify or Change Existing Curfew
- Do Not Evaluate Alternatives that Would Trigger Part 161
- Try to Reduce the Number of People Affected by Noise

14 CFR
PART 150
UPDATE

Web Site: www.SANnoisestudy.com





Mead & Hunt

Next Steps

14 CFR PART 150 UPDATE

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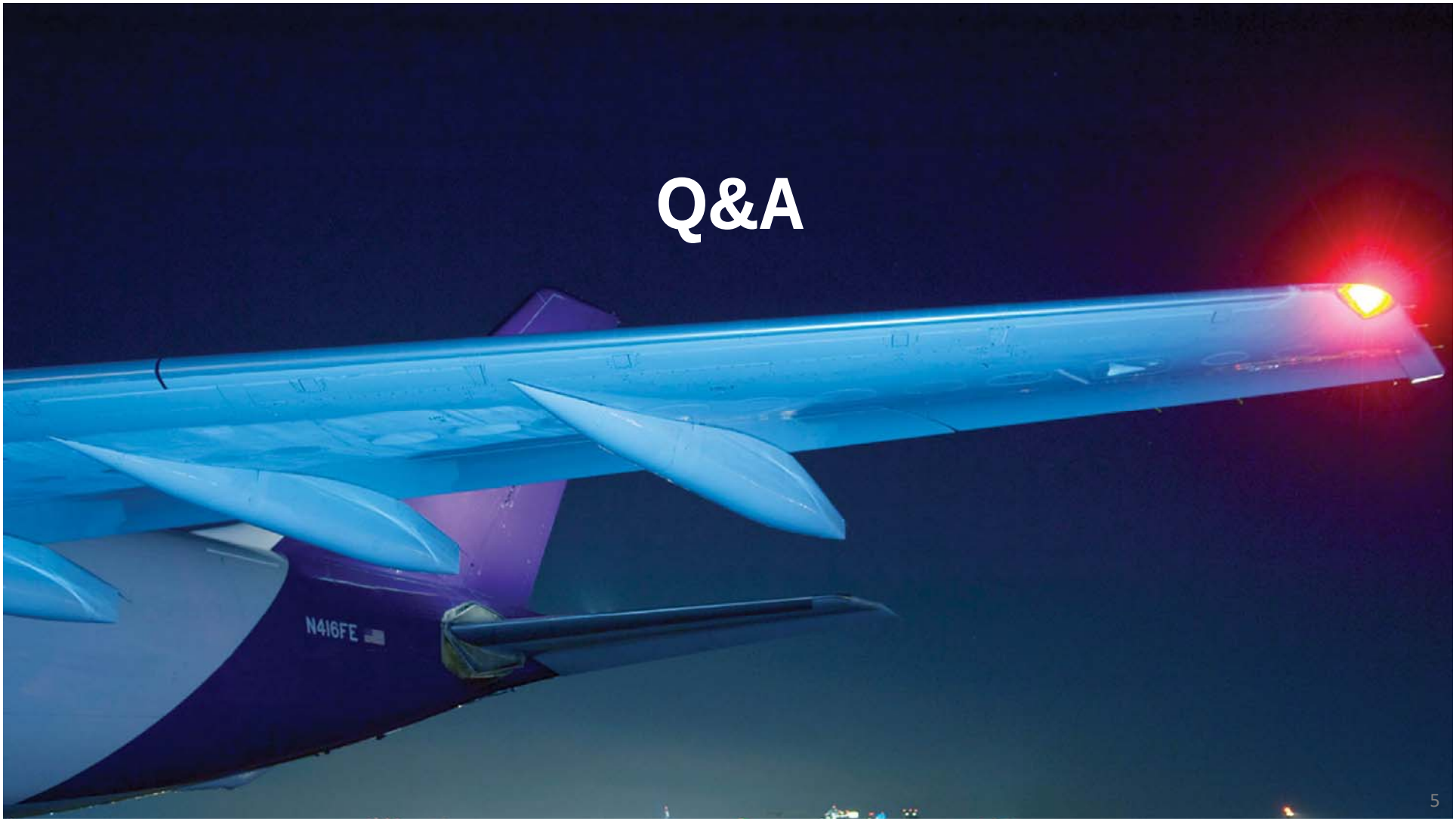

Q&A

Introduction – Angela Shafer-Payne

- Aging T1 does not provide an adequate level of passenger services (restrooms, concessions, waiting areas, etc.)
- Single runway is SDIA's limiting factor in the number of hourly operations
- Customer demand will continue with or without a new terminal
- Airport Noise and Capacity Act 1990
  - Curfew
  - Number of Flights
  - Types of Aircraft

Airport Development Plan (ADP) Overview

Brendan Reed, SDCRAA
Director, Planning & Environmental Affairs

SAN DIEGO COUNTY REGIONAL AIRPORT AUTHORITY

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Airport Development Plan

APRIL 2019

Brendan Reed
Director, Planning & Environmental Affairs

Project Context

One of Top 30 US Airports

Critical Economic Contribution

Growing Air Travel Demand

Inefficient Terminal 1

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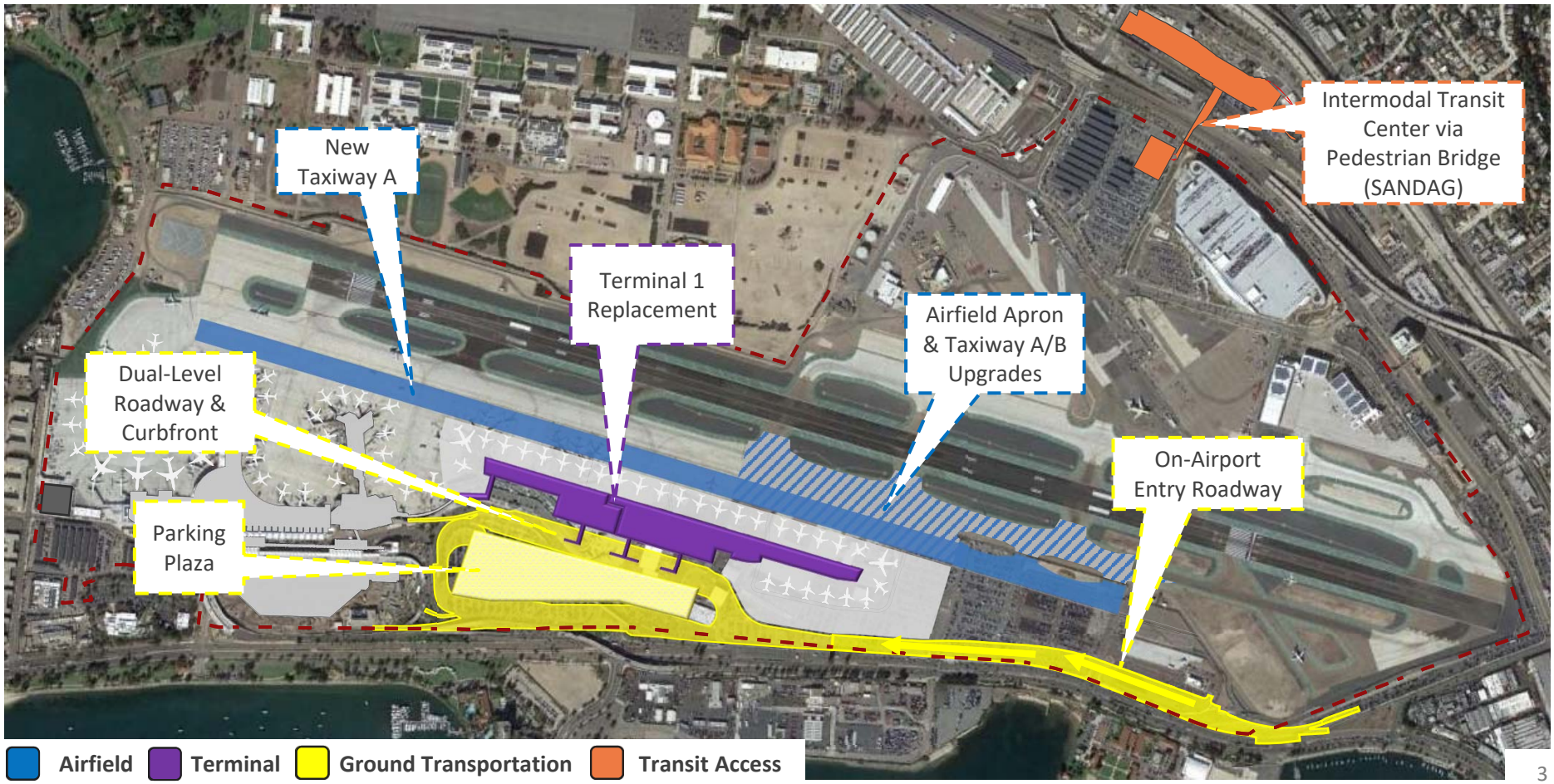
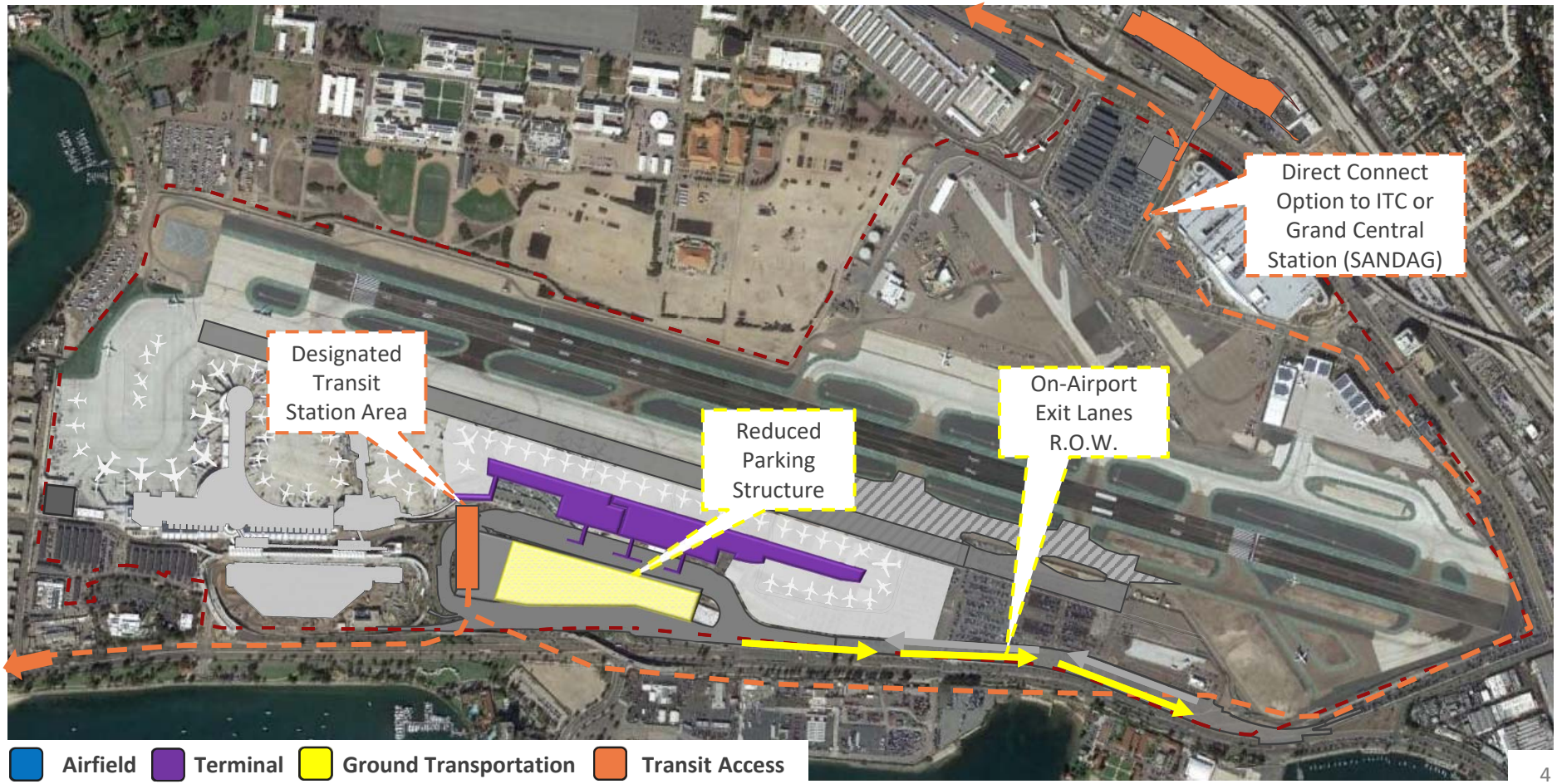
Original ADP Proposal



ADP Project Refinements



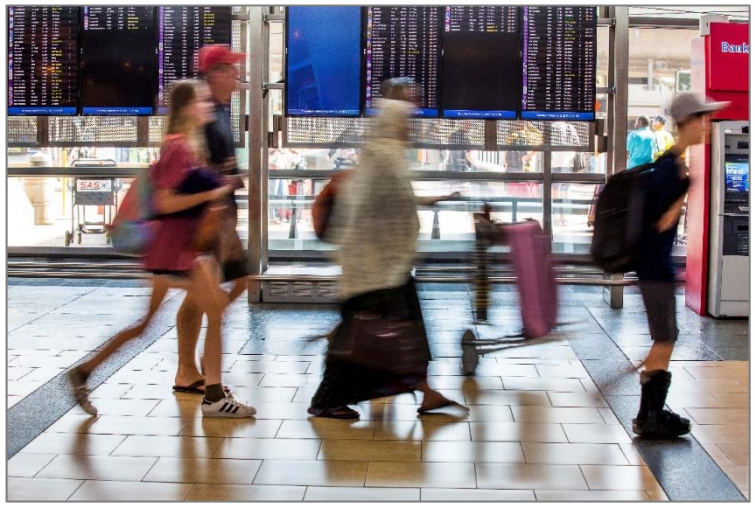
Next Steps

Finalize New Aviation Forecast
2018 Baseline

Re-Run Noise Analyses
Using New Aviation Forecasts

Recirculation of Draft EIR
Comment Period

Board Certification
of Final EIR



SAN DIEGO COUNTY REGIONAL AIRPORT AUTHORITY

Forecasts and Capacity

Nick Johnson, President, Johnson Aviation

AIRPORT NOISE ADVISORY COMMITTEE

SAN Airport Development Plan – Forecast Update

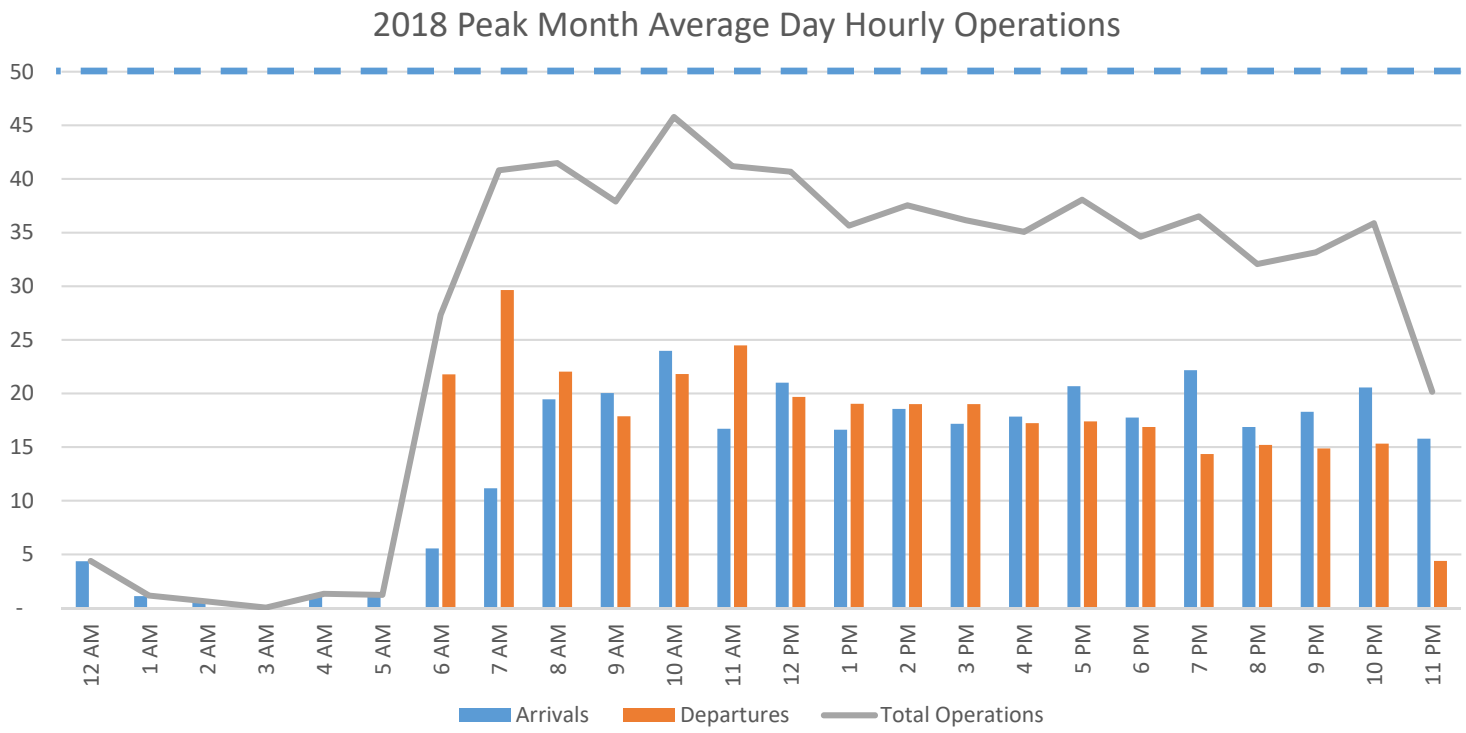
San Diego, CA

Nick Johnson

Johnson Aviation Consulting

SDIA Single Runway Constrains Operations

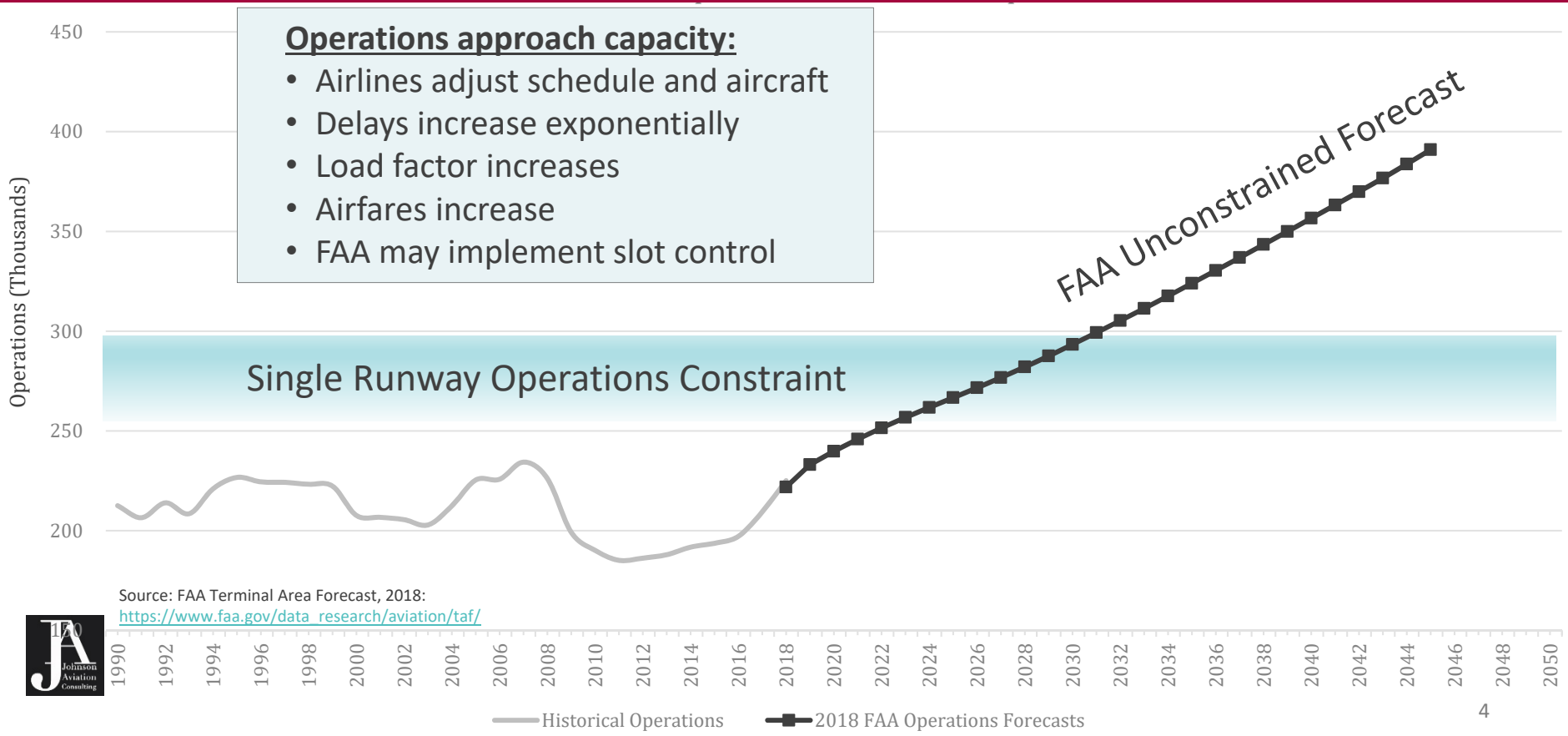
Hourly Operations Nearing Runway Capacity



Operations - Demand Versus Capacity

Operations approach capacity:

- Airlines adjust schedule and aircraft
- Delays increase exponentially
- Load factor increases
- Airfares increase
- FAA may implement slot control



Source: FAA Terminal Area Forecast, 2018:
https://www.faa.gov/data_research/aviation/taf/

Next Steps

- Submitted draft forecasts to FAA for review and approval

- SIMMOD modeling (what is it and why is it necessary for Noise)

- Use modeling results to develop noise contours

Noise Analysis for EIR

Mary Ellen Eagan, President, HMMH

ADP EIR – Noise Analysis Process

Presentation to SDIA ANAC

Mary Ellen Eagan

April 17, 2019

Topics

- Noise metrics
- NEPA and CEQA noise impact thresholds
- Noise Analysis Process

Noise Metrics

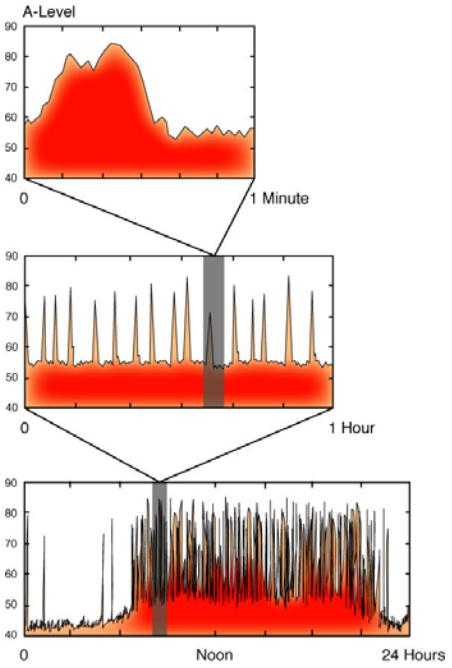
Single Event Noise Equivalent Level, SENEL

A way to describe the "noisiness" of a complete noise event

- Accounts for sound amplitude (A-weighted sound level)
- Accounts for noise event duration

Community Noise Equivalent Level (CNEL)

- A way to describe the noise dose for a 24-hour period
- Accounts for noise event "noisiness" (SENEL)
- Accounts for number of noise events
- Provides an additional weighting factor for evening and night operations



National Environmental Policy Act (NEPA) Noise Considerations

- Governs “federal actions” with possible environmental impacts
- FAA Order 1050.1F, “Policies and Procedures for Considering Environmental Impacts”
- FAA Order 5050.4B, “Airport Environmental Handbook”
- Thresholds defining significant change in noise exposure were identified by the Federal Interagency Committee on Noise (“FICON”), 1992
  - 1.5 dB increase in CNEL within 65 dB CNEL
- Order 1050.1F “Desk Reference” provides detailed guidance

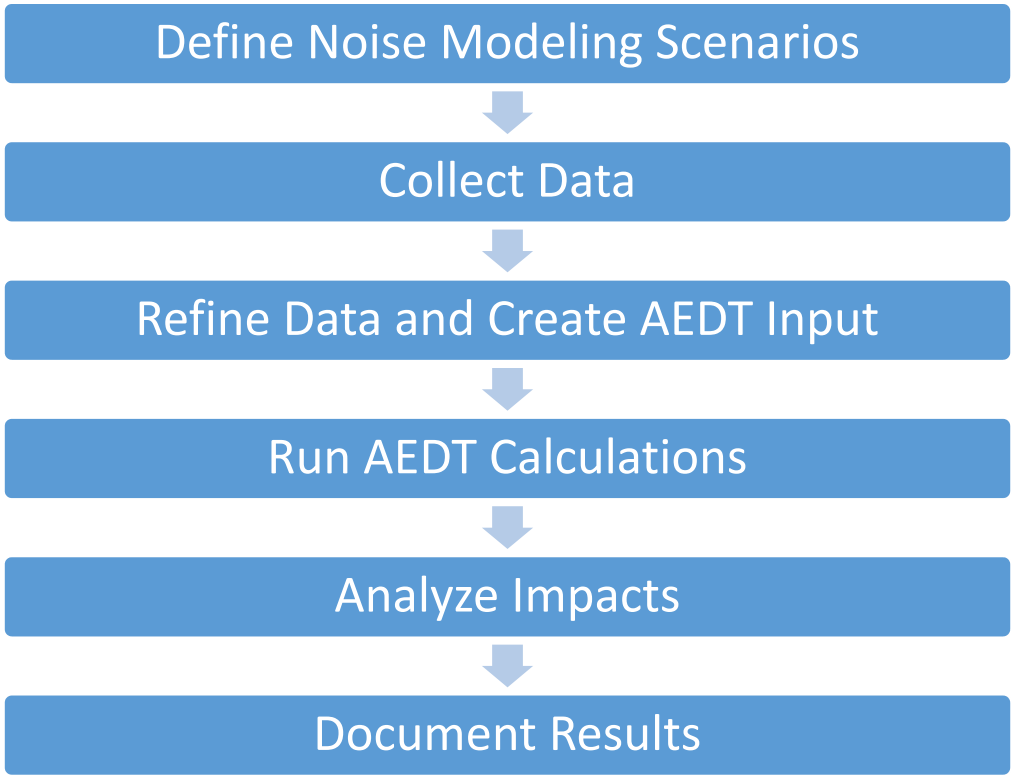
California Environmental Quality Act (CEQA); Enacted in 1970

- Modeled after NEPA
- Purposes:
  - Prevent significant, avoidable damage to the environment
  - Foster informed public decision making
  - Ensure transparency in governmental decision making process
  - Encourage public participation
- Significance:
  - Significant effect on the environment": a substantial or potentially substantial adverse change in the physical conditions of the area
  - Significance determination based on substantial evidence - scientific and factual data
  - Significance "normally" measured against existing baseline conditions

Analyze Significant Impacts

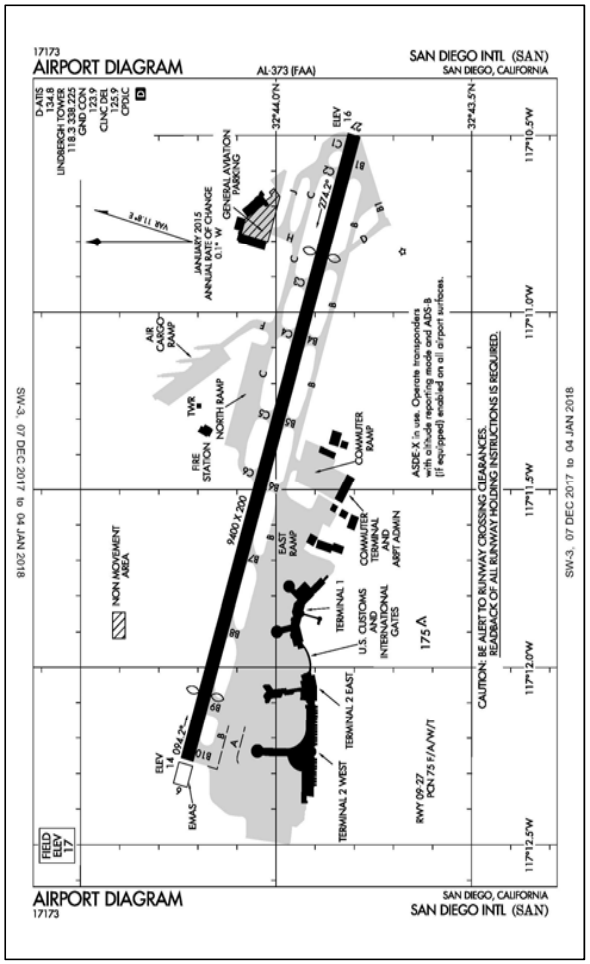
Significant Impacts under NEPA	Significant Impact Under CEQA
	Within 65 CNEL as compared to baseline year, for most noise-sensitive land uses
1.5 dB or more increase in 65 CNEL, for noise sensitive land uses as compared with the No Action Alternative for the same timeframe.	1.5 dB or more increase in 65 CNEL, for noise sensitive land uses, as compared with baseline
	3.0 dB or more increase between 60 and 65 CNEL, for noise-sensitive noise levels, as compared with baseline
	A substantial increase in the amount of time that aircraft-induced noise would affect classroom learning, as compared with baseline
	A substantial increase in the number of nighttime flight operations that produce exterior noise levels sufficient to awaken an increasing proportion of the population, as compared with the baseline.

Aviation Environmental Design Tool (AEDT) NEPA/CEQA Noise Analysis Steps



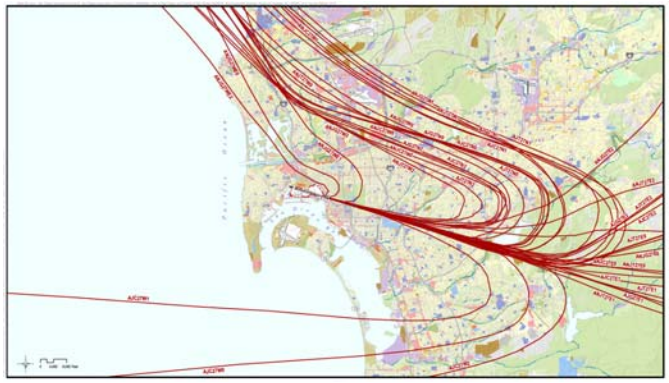
Collect Data

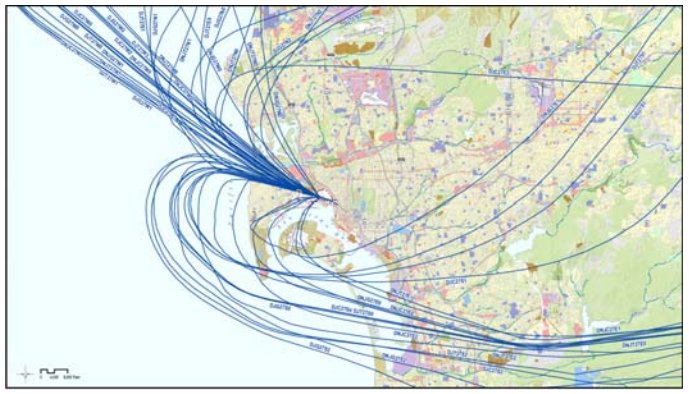
- Physical description of the airport layout
- Aircraft operations
- Aircraft noise and performance characteristics
- Runway utilization
- Flight track geometry and use
- Meteorological conditions
- Terrain data

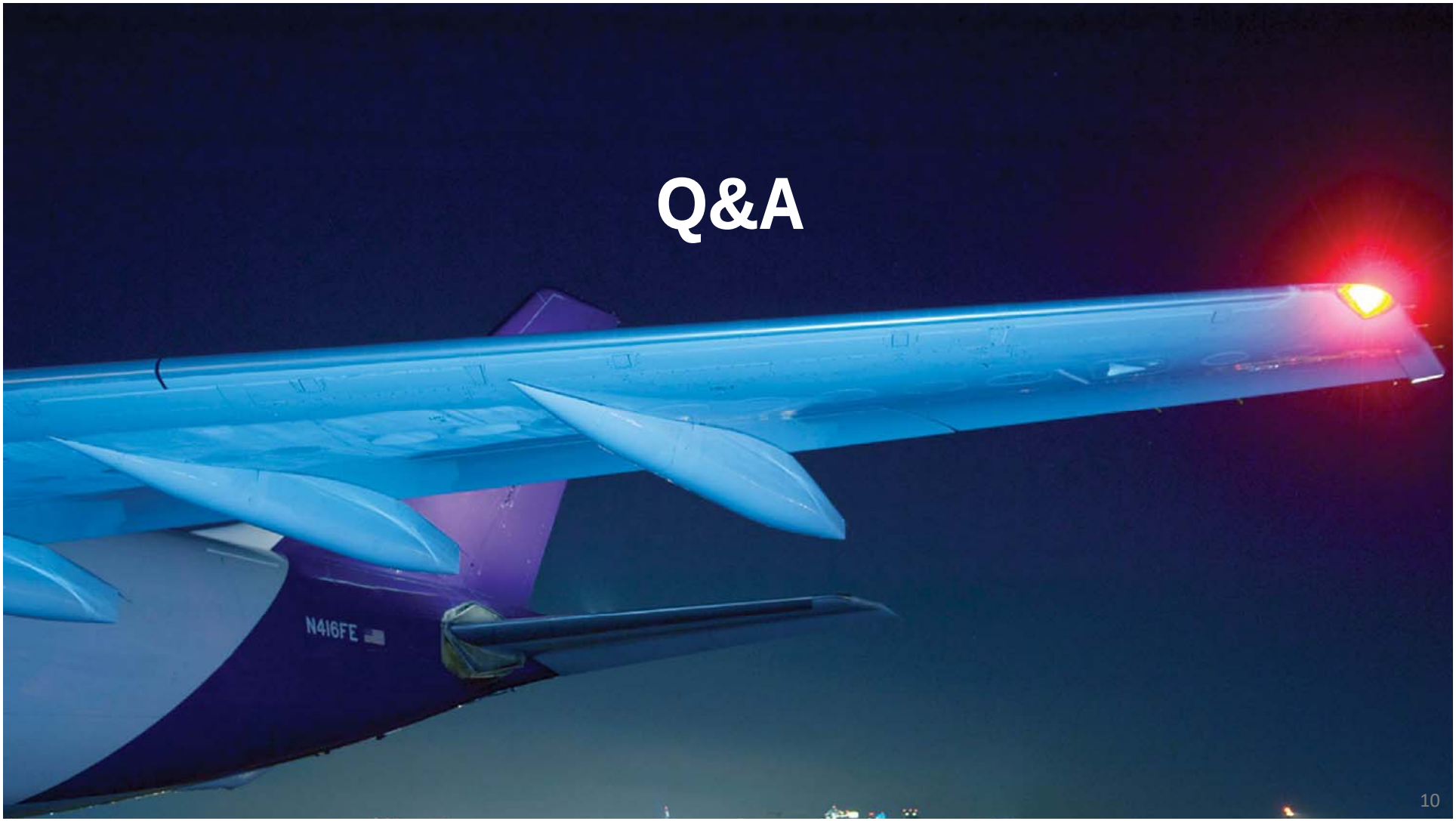


Refine Data and Create AEDT Input

- Create Representative Flight Tracks
- Create Average Annual Day
  - Operations
  - Runway Use
  - Flight Track Use
- Adjust to official FAA tower count or approved forecast to model accurate annual average day






Q&A
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Public Comment