Approach Feasibility Study - Phase Two

Board of Supervisors | July 8, 2025

Approach Feasibility Overview

Purpose:

In 2023, Cignus Consulting (Cignus) was hired to investigate potential improvements for flight procedure that could reduce noise and increase efficiency.

Why This Matters:

We're responding to community concerns about airplane noise.

Phase I – Overview

Summary of Completed Work:

- Reviewed flight procedure to find ways to improve them
- Identified obstacles that affect safe landings
- Concepts for quieter arrival procedure for Runways 02 and 14
- Evaluated potential takeoff and visual flight procedures for all runways
- Analyzed Runway 32's landing system for upgrades
- Connected with the community through workshops and meetings
- Hosted four neighborhood meetings

Phase I – Community Engagement

Public Workshops

2023 Round 1 – Nov. 1 & 2

- 150 Attendees
- 53 Comments

2024 Round 2 – Oct. 2 & 3

- 200 Attendees
- 347 Comments

Aviation Commission Meetings

- 2021: 7 Meetings
- 2022: 5 Meetings
- 2023: 8 Meetings
- 2024: 8 Meetings
- 2025: 4 Meeting

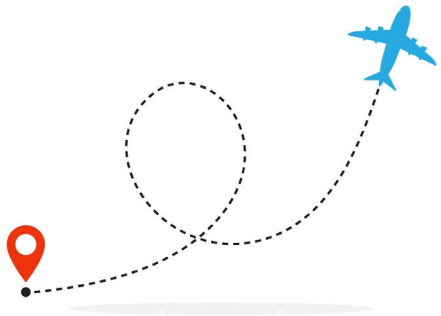
Outreach Methods

- Social Media Posts
- Local News Outlets
- Elected Officials
- Chambers of Commerce
- Email blasts
- Website Portal

Public Workshop October 2024.

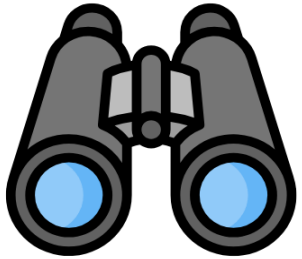
Phase I – Outcomes

Identified Potential Improvements



3 Arrival procedures

2 Departure procedures



Visual Flight Rules (VFR) Procedures

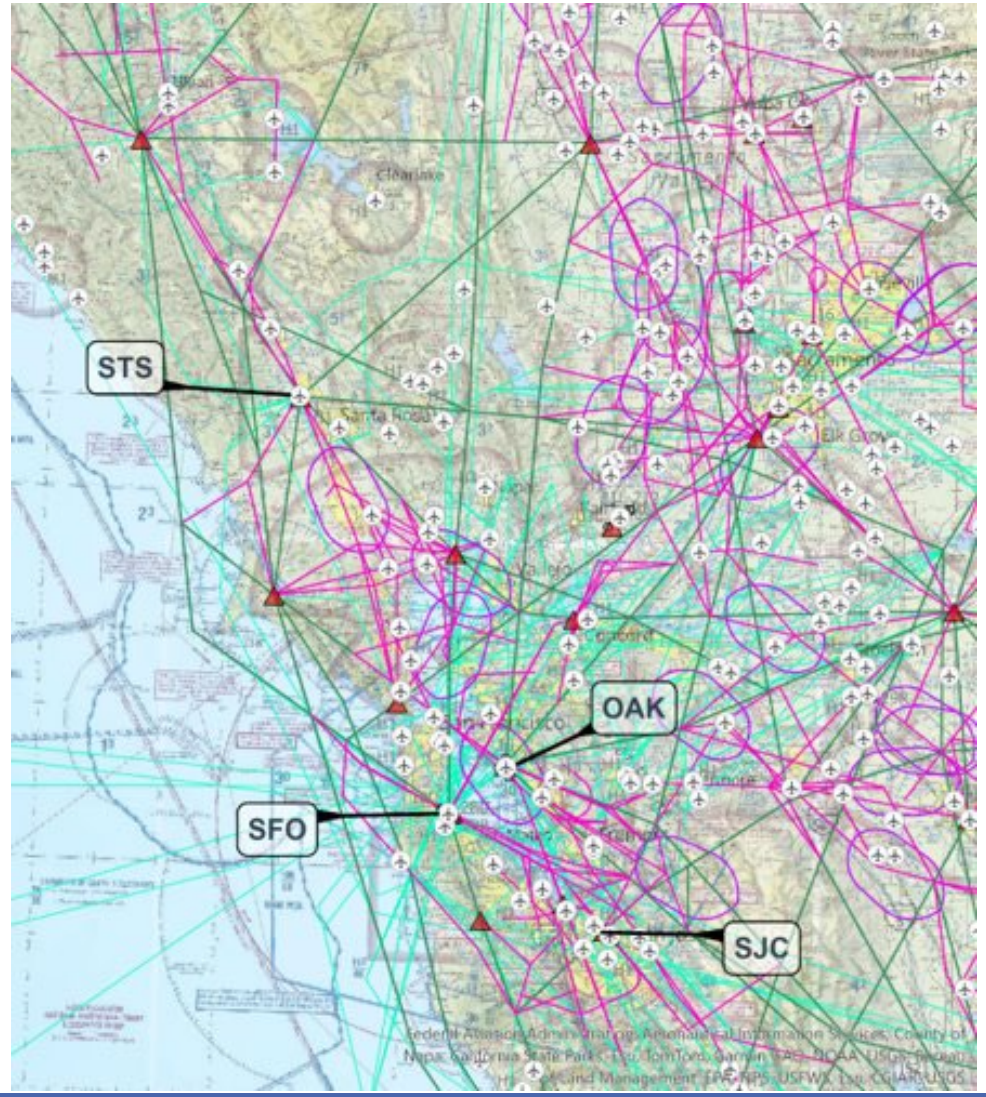
The need for a Fly Quiet Program

Phase II – Overview

Summary of Work:

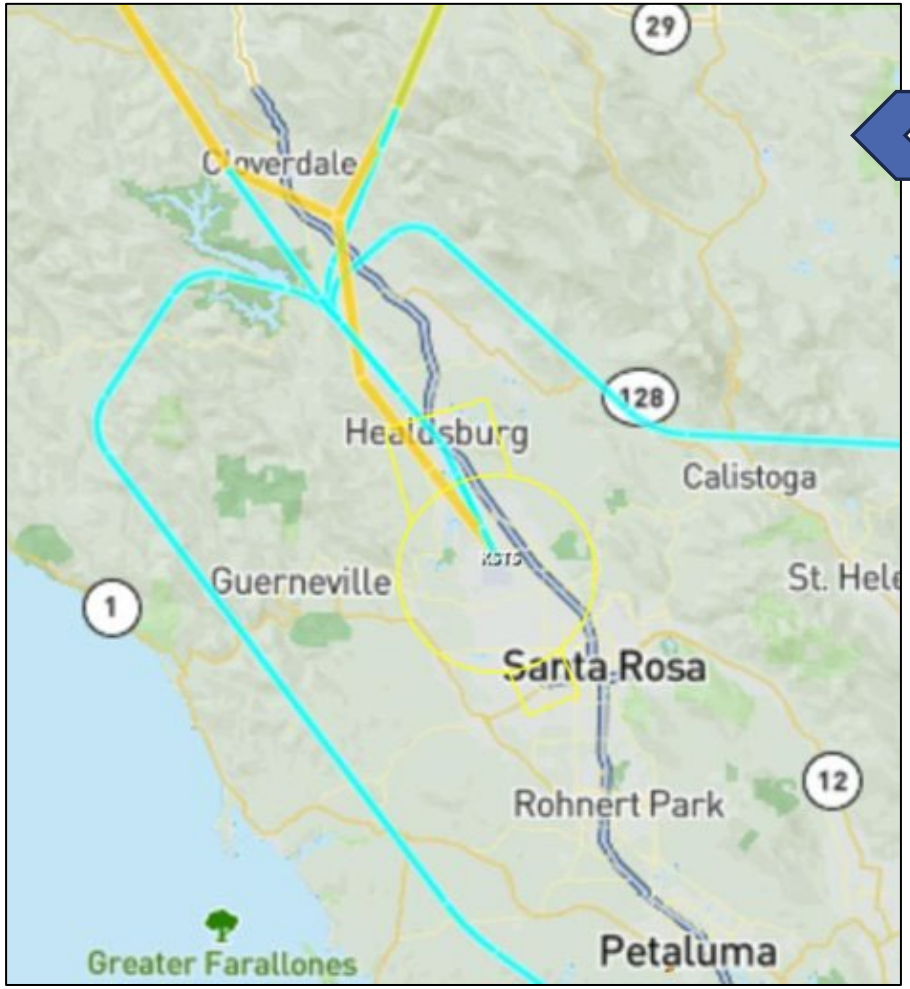
- Redesign and finalize flight procedures
- Submit flight procedures to the Federal Aviation Administration (FAA)
- Perform high-level noise assessments
- Study feasibility of upgrading Instrument Landing System (ILS)
- Create a voluntary Fly Quiet Program
- Conduct additional community workshops
- Support FAA review and revisions
- Prepare airport and stakeholders for implementation

Procedure Design Approach



The Northern California Airspace Network

Runway 14 – Conceptual Procedure



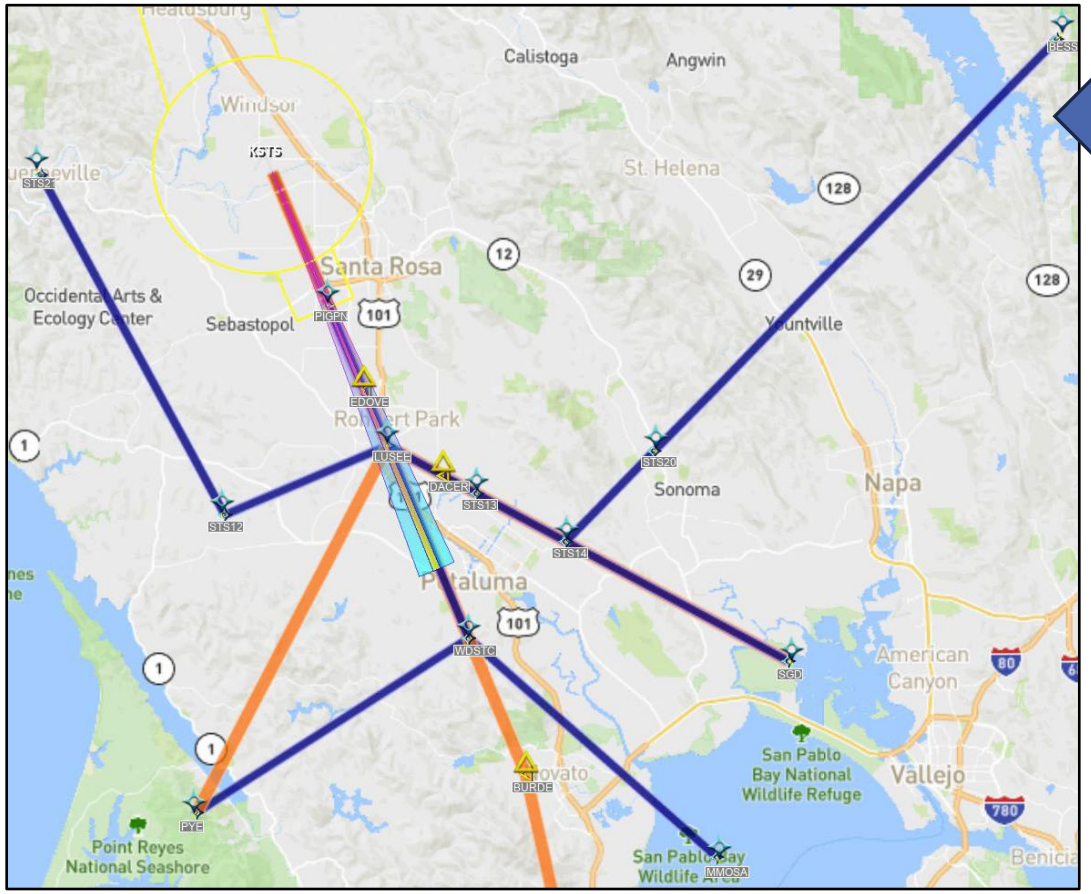
Conceptual Procedure Overlaid on Existing Procedure (Zoomed in)

LEGEND

- **Proposed procedure**
- **Existing Procedure**

- New approach enables arriving aircraft to be in a continuous state of descent with low or idle power settings
- RWY 14 with a slightly steeper descent angle to mitigate overflight of residential communities
- Final approach is offset from the runway centerline

Runway 32 – Conceptual Procedure



Conceptual Procedure Overlaid on Existing Procedure

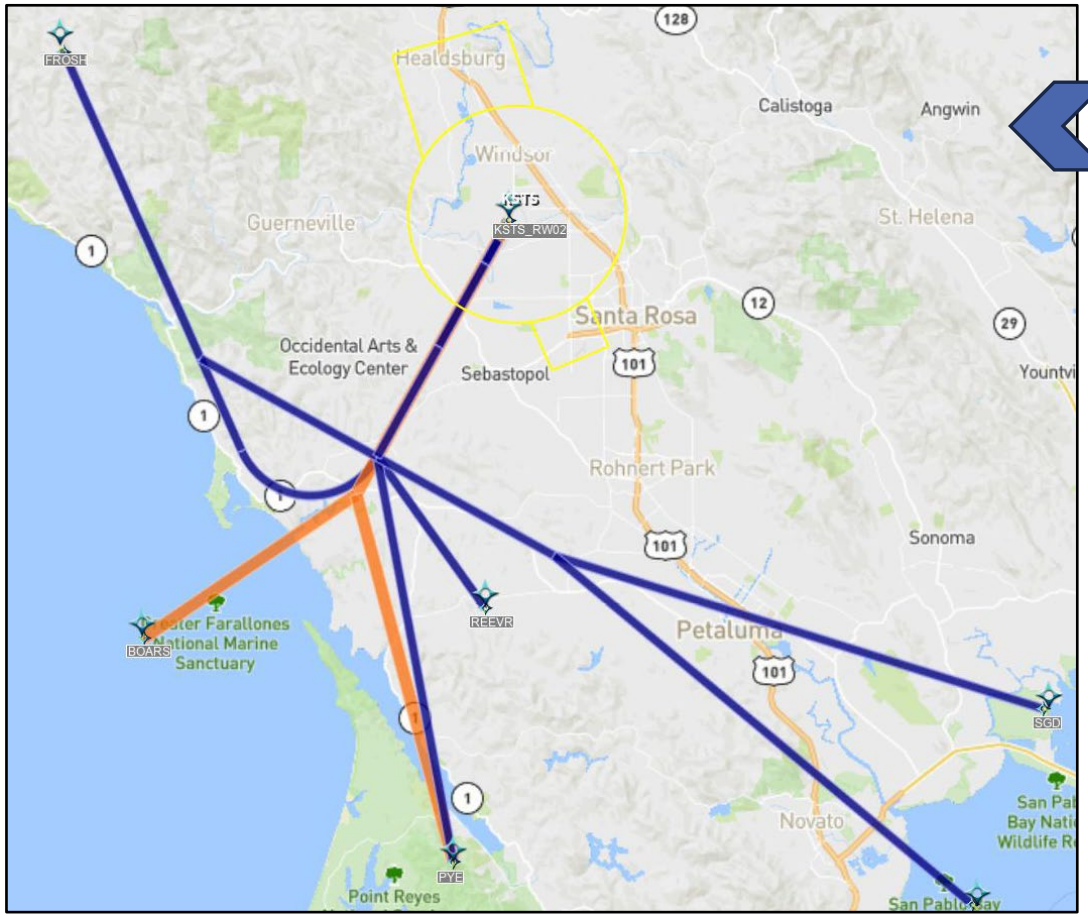
LEGEND

Proposed procedure

Existing Procedure

- Reduce flights over residential areas
- More consistent flight procedure to better manage noise levels
- Reduced noise footprint
- Reduction in green house gas emissions

Runway 02 – Conceptual Procedure



Conceptual Procedure Overlaid on Existing Procedure

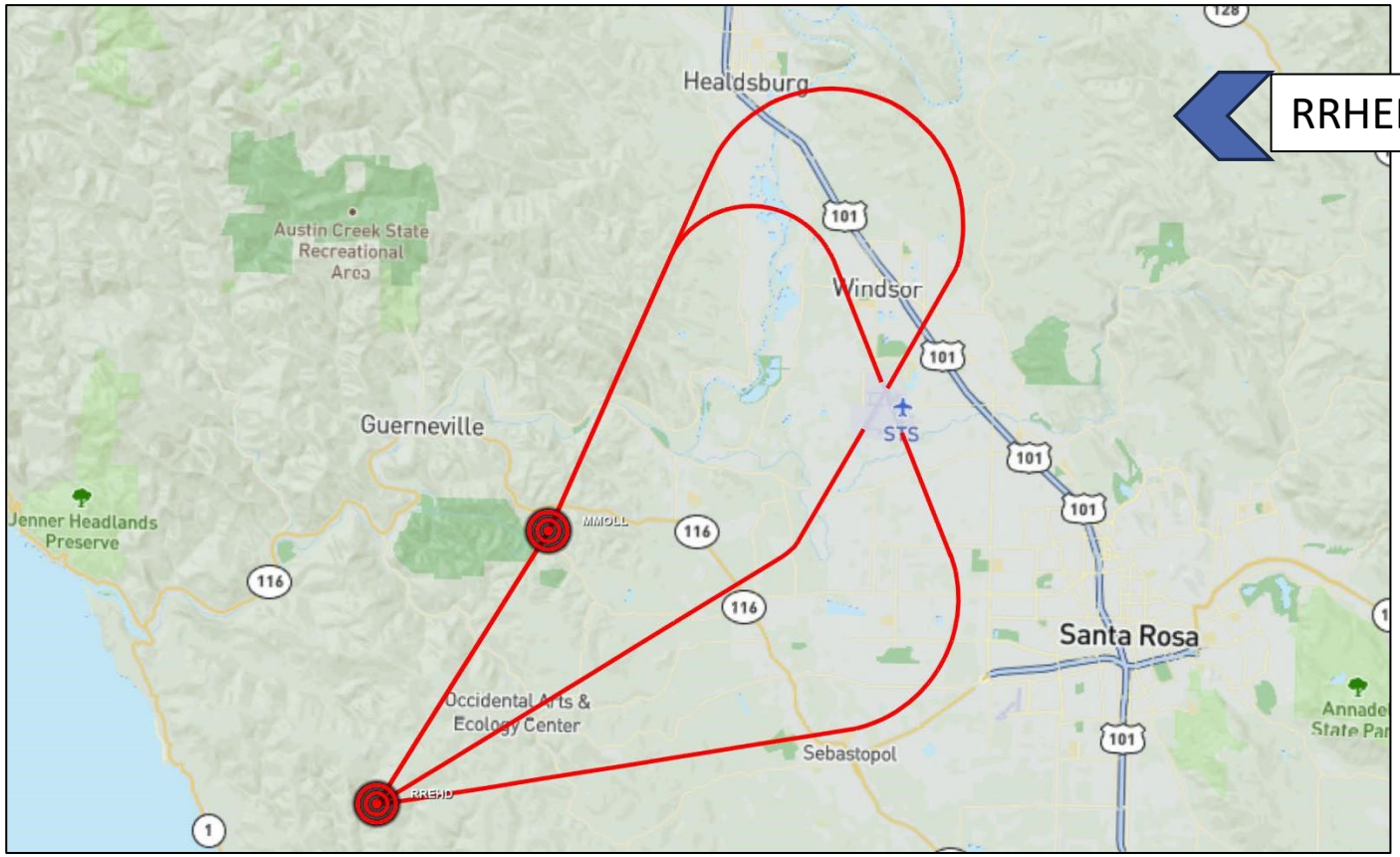
LEGEND

Proposed procedure

Existing Procedure

- Reduce flights over residential areas
- More consistent flight procedure to better manage noise levels
- Reduced noise footprint over Sebastopol
- Reduction in greenhouse gas emissions

RRHED – Current Departure



RRHED Departure

LEGEND

Existing Procedure

Current Guidance:

- Aircraft turns at 629 feet, turn point varies by climb rate and wind conditions

Proposed Modifications:

- Set fixed turn point
- Define path to turn point

Expected Outcomes:

- Better noise management

Develop a Fly Quiet Program

Encourages compliance for airlines and operators to follow noise friendly operations

JAC Fly Quiet Score — 2024-Q1

OPERATOR				FLY QUIET ELEMENTS				BONUSES		OVERALL
Call Sign / N-Number	Owner / Operator	Total Ops	Primary Aircraft Type	Quiet Fleet Score (25 Points)	Follow Procedures Score (25 points)	Quieter Events Score (25 Points)	Voluntary Curfew Score (25 Points)	Quiet Fleet Bonus (5 pts)	Fly Procedure Bonus (5 pts)	Total Fly Quiet Score
XOJ	XOJet	10	C750	25.0	25.0	25.0	25.0	5.0	0	105.0
DRL	Omini Air Transport	8	LJ75	24.4	25.0	25.0	25.0	1.3	0	100.7
WSN	Advanced Air	6	CL30	24.2	25.0	25.0	25.0	0.0	0	99.2
WDY	Phoenix Airline Services	8	GA6C	23.5	25.0	25.0	25.0	0.0	0	98.5
VJT	Vistajet	10	GLEX	21.8	25.0	22.5	25.0	0.0	0	94.3
DLX	Dreamline Aviation	8	LJ40	22.4	25.0	19.1	25.0	0.0	0	91.5
BLK	Aero Black (USAC Airways)	10	E35L	22.9	18.3	25.0	25.0	0.0	0	91.2
CBC	CLYDE COMPANIES INC	10	C25A	24.2	23.3	17.1	25.0	0.0	0	89.7
ARG	Aerolineas Argentinas	8	C680	21.9	22.9	15.0	25.0	2.5	0	87.3
OPT	Flight Options	6	BE40	15.4	25.0	21.7	25.0	0.0	0	87.1
IJA	International Jet Aviation	6	LJ60	22.5	19.4	16.7	25.0	3.3	0	86.9
GHA	Ghana Airways	6	GLF6	24.3	20.8	16.7	25.0	0.0	0	86.8
OKC	Private Jets	9	E35L	21.5	25.0	13.9	25.0	0.0	0	85.3
SLH	Silverhawk Aviation	8	C560	18.3	25.0	12.5	25.0	0.0	0	80.7
PRE	Precision Airlines	8	GALX	23.3	18.1	14.3	25.0	0.0	0	80.6
KPO	NXT Jet	9	GLF4	21.9	25.0	8.3	25.0	0.0	0	80.2
WWI	Worldwide Jet Charter	7	CL60	22.8	8.3	25.0	22.0	0.0	0	78.1
RGY	Regency Airlines	8	BE40	15.4	25.0	12.5	22.0	0.0	0	74.9

Fly Quiet Scorecard – 2024 Q1
Jackson Hole Airport, Jackson, WY

Cignus Deliverables:

- STS voluntary noise abatement guidance
- Fly quiet program sample report
- Airline scorecard and ranking system

Benefits:

- Enhanced engagement and transparency
- Promotion of quieter aircraft and flight practices
- Data-driven noise management
- Voluntary participation with emphasis on safety

Phase II – Recommended Action

Approve and authorize the Director of Sonoma County Public Infrastructure to execute an agreement with Cignus Consulting, LLC, for Phase II of the Airport Approach Feasibility Study in an amount not to exceed $275,000

Thank You