AGENDA

SANTA CLARA/SANTA CRUZ COUNTIES
AIRPORT/COMMUNITY ROUNDTABLE

Tenth Regular Meeting of the Roundtable

January 22, 2020
1:00 – 4:00 PM

CITY OF SANTA CLARA, COUNCIL CHAMBERS
1500 Warburton Ave, Santa Clara, CA 95050
Tel. (408) 615-2200 Fax (408) 241-6771 TDD (800) 735-2922

1:00 PM	1.	Welcome/Review of the Meeting Format – *Steve Alverson, Roundtable Facilitator*	Information
1:05 PM	2.	Call to Order and Identification of Members Present – *Chairperson Bernald*	Information
1:10 PM	3.	Work Plan Ad Hoc Committee Report – *Ad Hoc Committee Chair Lisa Matichak* Possible Roundtable actions include the consideration, approval and prioritization of the Work Plan (Attachment A) and consideration of inclusion of the January 8, 2020 Santa Cruz proposal (Attachment B) in the Work Plan. Public Comment	Information/ Action
3:00 PM	4.	Oral Communications/Public Comment - *Speakers are limited to a maximum of two minutes or less depending on the number of speakers. Roundtable members cannot discuss or take action on any matter raised under this agenda item.*	Information
3:20 PM	5.	Member Discussion - Chair's Report	Information
3:40 PM		Public Comment	
3:50 PM	6.	Review of Roundtable Actions Taken – *Steve Alverson, Roundtable Facilitator*	Information
4:00 PM	7.	Adjournment – *Chairperson Bernald*	

Materials to be provided at the meeting:
- Copies of the agenda packet

In compliance with the Americans with Disabilities Act and the Brown Act, those requiring accommodation for this meeting should notify the City's ADA Office 24 hours prior to the meeting at (408) 615-3000, TDD (800) 735-2922.

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memorandum

date	January 22, 2020
to	Roundtable Members and Interested Parties
cc	
from	Steve Alverson, Santa Clara/Santa Cruz Counties Airport/Community Roundtable Facilitator
subject	Review of the Federal Aviation Administration (FAA) Instrument Flight Procedures (IFP) Information Gateway

The FAA's Instrument Flight Procedures Information Gateway ("IFP Gateway") is a website used by the FAA to distribute aircraft instrument flight procedure details ("charts") to the general public.[1] The FAA also uses the IFP Gateway to share its IFP Production Plan, which includes details on IFPs under development or amendment along with development status and tentative publication dates. Environmental Science Associates (ESA) monitors the IFP Gateway for proposed changes to IFPs associated with Norman Y. Mineta San Jose International Airport (SJC), San Francisco International Airport (SFO), and Oakland International Airport (OAK). Changes to IFPs associated with these airports may affect communities in Santa Clara and Santa Cruz counties.

The FAA publishes IFPs according to a specific publication cycle. The most recent publication date is December 5, 2019. The following information provides details on the IFP development process and IFPs under development or amendment:

Stages of IFP Development

Development of IFPs typically follows five stages, described below. Depending on the nature of the IFP development or amendment, not all of these stages may occur.

1.	**FPT (Flight Procedures Team):**	This team reviews potential IFPs for feasibility and coordinates IFP development with relevant FAA lines of business and staff offices.
2.	**DEV:**	Procedure development.
3.	**FC (Flight Check):**	The FAA performs a flight inspection of the procedure.
4.	**PIT (Production Integration Team):**	This team prepares procedure details to support publication.

[1] https://www.faa.gov/air_traffic/flight_info/aeronav/procedures/

5. **CHARTING:** Procedures are made available to the public, typically in graphical, text, and electronic formats.

IFP Development Status Indicators

The following terms are employed by the FAA to identify the status of the IFP during the development process.

At Flight Check:	The procedure is with FAA staff responsible for flight inspection.
Awaiting Publication:	The procedure has been developed and is awaiting an upcoming publication date.
Awaiting Cancellation:	The procedure will be removed from FAA flight procedure databases on an upcoming publication date.
Complete:	Procedure development has finished.
On Hold:	Procedure development has been paused while awaiting further information.
Pending:	Detailed development of the procedure will begin in the future.
Published:	The procedure has been made publicly-available.
Terminated:	Development has terminated for the procedure.
Under Development:	The procedure is being developed by the FAA.

Key Terms

The following acronyms are employed by the FAA to describe the IFP, including some of the navigational equipment necessary to accommodate the IFP.

AMDT:	Amendment
CAT:	Category
DME:	Distance Measuring Equipment
DP:	Departure Procedure
GPS:	Global Positioning System
GLS:	Ground-Based Augmentation System (GBAS) Landing System
IAP:	Instrument Approach Procedure
ILS:	Instrument Landing System
LOC:	Localizer
LDA:	Localizer Type Directional Aid
RNAV:	Area Navigation
RNP:	Required Navigation Performance
RWY:	Runway
SA:	Special Authorization
SID:	Standard Instrument Departure
STAR:	Standard Terminal Arrival Route
TBD:	To Be Determined

IFP Status

The following tables provide status updates on IFP production for procedures serving OAK, SFO, and SJC. Information highlighted in turquoise has been updated since the December 19, 2019 SCSC Roundtable IFP Gateway Review.

Norman Y. Mineta San Jose International Airport				
IFP in Production Plan	**Type of IFP**	**Status**	**Scheduled Publication Date**	**Additional Notes (If Applicable)**
ILS OR LOC RWY 30L, AMDT 26	IAP	Pending	7/16/2020	No further information available at this time.
RNAV (RNP) Z RWY 30L, AMDT 3	IAP	Removed	7/16/2020	This procedure has been removed from the IFP Gateway. No further information available at this time.
RNAV (RNP) Z RWY 30R, AMDT 2	IAP	Removed	7/16/2020	This procedure has been removed from the IFP Gateway. No further information available at this time.
RNAV (RNP) Z RWY 12L, AMDT 2B	IAP	Under Development	12/31/2020	No further information available at this time.
RNAV (RNP) Z RWY 12R, AMDT 3B	IAP	Under Development	12/31/2020	No further information available at this time.
RNAV (RNP) Z RWY 30L, AMDT 2B	IAP	Under Development	12/31/2020	No further information available at this time.

San Francisco International Airport				
IFP in Production Plan	**Type of IFP**	**Status**	**Scheduled/Actual Publication Date**	**Additional Notes (If Applicable)**
SERFR FOUR	RNAV STAR	Published	12/5/2019	This change is of low importance to the Roundtable, as the fix locations, altitude restrictions, and airspeeds remain unchanged from SERFR THREE. Fix name changed from NARWL to FOLET at ATC request due to a similar sounding fix name.
GLS OVERLAY RNAV (GPS) RWY 19L, AMDT 3	GLS IAP	Pending	4/22/2021	No further information available at this time.
GLS OVERLAY RNAV (GPS) RWY 19R, AMDT 2	GLS IAP	Pending	4/22/2021	No further information available at this time.
GLS OVERLAY RNAV (GPS) Z RWY 28R, AMDT, AMDT 6	GLS IAP	Pending	4/22/2021	No further information available at this time.
GLS OVERLAY RNAV (GPS) RWY 28L, AMDT 6	GLS IAP	Pending	4/22/2021	No further information available at this time.
ILS PRM RWY 28L, AMDT 3A	IAP	Awaiting Cancellation	08/12/2021	No further information available at this time.

San Francisco International Airport				
IFP in Production Plan	**Type of IFP**	**Status**	**Scheduled/Actual Publication Date**	**Additional Notes (If Applicable)**
LDA PRM RWY 28R, AMDT 2B	IAP	Awaiting Cancellation	08/12/2021	No further information available at this time.
RNAV (GPS) PRM RWY 28L, AMDT 2	IAP	Awaiting Cancellation	08/12/2021	No further information available at this time.
RNAV (GPS) PRM X RWY 28R, AMDT 1B	IAP	Awaiting Cancellation	08/12/2021	No further information available at this time.
POINT REYES THREE	STAR	Pending	12/31/2020	No further information available at this time.
STINS FOUR	STAR	Pending	12/31/2020	No further information available at this time.

Oakland International Airport				
IFP in Production Plan	**Type of IFP**	**Status**	**Scheduled Publication Date**	**Additional Notes (If Applicable)**
OAKLAND FIVE	SID	Awaiting Publication	1/30/2020	No further information available at this time.
QUAKE ONE	SID	Awaiting Publication	1/30/2020	No further information available at this time.
SUNNE ONE	SID	Awaiting Publication	1/30/2020	Of high importance to the Roundtable due to concerns about a possible increase nighttime overflights.
ILS RWY 12 (SA CAT I), AMDT 8B	IAP	Awaiting Publication	3/26/2020	No further information available at this time.
SILENT TWO	SID	Awaiting Publication	5/21/2020	No further information available at this time.
ILS OR LOC RWY 12, AMDT 9	IAP	Pending	12/31/2020	No further information available at this time. Scheduled/Actual publication date changed from 7/16/2020.
RNAV (GPS) Y RWY 12, AMDT 4	IAP	Pending	12/31/2020	No further information available at this time. Scheduled/Actual publication date changed from 7/16/2020.
AANET TWO	RNAV STAR	Pending	12/31/2020	No further information available at this time. Scheduled/Actual publication date changed from 7/16/2020.
WNDSR THREE	RNAV STAR	Pending	12/31/2020	No further information available at this time. Scheduled/Actual publication date changed from 7/16/2020.

Attachment A

SANTA CRUZ/SANTA CLARA COUNTIES AIRPORT/COMMUNITY ROUNDTABLE

Work Plan

November 19, 2019

Revised December 16, 2019

DRAFT - CLEAN

Introduction

The mission of the Santa Cruz/Santa Clara Counties Airport/Community Roundtable (Roundtable) is to address community noise concerns and make recommendations to the Regional Airports and FAA on noise related issues.

While the Strategic Plan provides the long-term goals of the Roundtable, the Work Plan lays out the initial actions needed to address aircraft noise and environmental issues in affected communities. It is intended to provide and track the action items the Roundtable has identified as necessary to meet the goals of the Strategic Plan [*Strategic Plan - link*] and fulfill its overall mission. Each action listed in the Work Plan identifies a specific issue and areas primarily affected, defines the desired outcome, and indicates the roles and responsibilities of those who will take the actions listed. Priorities are included in the plan but may be updated as needed.

The organization of this Plan aligns with the goals of the Strategic Plan; this may be updated as needed if changes are made to the Strategic Plan. The Work Plan actions will be reviewed by the Roundtable at least once annually for progress, adjustment, and/or deletion from the Work Plan.

In this Work Plan, the term "procedure" is includes the FAA flight procedure as well as the associated vectoring after the procedure has been terminated.

For convenience, the Appendix to the Work Plan lists key actions that have already been conducted by the Roundtable. The actions in the Work Plan are those yet to be completed by the Roundtable to achieve the desired outcome for each action item.

Roundtable Actions

1.0 Follow-up on recommendations and reports from the Select Committee on South Bay Arrivals and the Ad Hoc Committee on South Flow Operations, monitor and respond to FAA actions not related to those committee reports, and propose further actions to reduce aircraft noise and environmental impacts. (GOAL A)

1.1 Advance recommendations by the Select Committee on South Bay Arrivals.

1.1.1 Select Committee on South Bay Arrivals

Using a matrix of Select Committee recommendations, track, review, and comment on FAA responses to the recommendations in the serial updates to the report "FAA Initiative to Address Noise Concerns of Santa Cruz/Santa Clara/San Mateo/San Francisco Counties" to maximize the positive effects of implementing the recommendations.

Areas Primarily Affected: Global

Desired Outcomes:

- The Roundtable and informed community will understand the status of the recommendations.
- Critical items are immediately flagged so the Roundtable can follow up in a timely fashion to understand the item from the FAA and effectively provide input on changes or potential changes to be implemented by FAA.

- Evaluation of the impact of proposed changes through noise modeling using AEDT and other analytical techniques before finalizing the Roundtable's position on the changes.
- Review and provide input on recommended changes during the FAA's procedure development process.
- Assess changes after implementation, identify any unanticipated noise impacts, and work with the FAA to mitigate them as quickly as possible.
- Solutions will reduce the South Bay arrivals impact on affected communities.

Roles and Responsibilities: Roundtable consulting staff and Roundtable members; FAA staff

Status: Active

1.1.2 PIRAT TWO STAR (and all previous PIRAT versions)

Evaluate the effects of the implementation of the PIRAT TWO STAR.

Areas Primarily Affected: East Palo Alto, Los Altos, Los Altos Hills, Menlo Park, Palo Alto, Portola Valley

Desired Outcomes:

- The impacts of PIRAT TWO versus previous oceanic arrivals are to be identified by fall 2019. If applicable, any negative impacts are identified and mitigated within 12 months.
- Improvements to PIRAT TWO provide relief to communities, including at night.

Roles and Responsibilities: Airport Staff (SFO); FAA staff, Roundtable consultant staff (ESA), Technical Working Group

Status: Active

1.1.3 Monitor the FAA's Effort to Transition SERFR STAR back to the Big Sur (BSR) ground track and/or replacement procedure.

The Roundtable will track progress, review proposals, and provide input on the FAA's implementation of recommendations in section 1.2 of the Final Report of Select Committee on South Bay Arrivals.

Areas Primarily Affected: Aptos, Capitola, East Palo Alto, Los Altos, Los Altos Hills, Menlo Park, Palo Alto, Portola Valley, Santa Cruz, Soquel, Summit, Woodside, Santa Clara County, Santa Cruz County

Desired Outcomes:

- The Roundtable reviews and provides input on the FAA's development and implementation of the BSR Overlay procedure and the practices to be associated with its use. The FAA provides the Roundtable a substantive update on the progress of the program at least quarterly.

- The noise and environmental impacts to affected communities and individuals under the Big Sur Overlay are minimized.
- Before the FAA finalizes the procedure for rollout, and while there is still an opportunity to alter it, the noise and environmental impacts to communities under the proposed BSR Overlay are well-understood by the Roundtable. This includes:
    - The FAA Technical Working Group's current work on the procedure and vectoring characteristics (i.e., ground track, flying altitudes, speeds, waypoints.)
    - Understanding the impacts under the path of the procedure and its approaches to the airport as well as areas to be affected by vectoring.
    - Nighttime impacts.
    - Areas along the procedure and vectoring paths where noise increases caused by deployment of surfaces or thrust are expected.
- In advance of developing a new procedure and its associated practices, the FAA informs the Roundtable of the noise abatement options it plans to consider – such as reduced speed and use of technologies such as GBAS – and solicits feedback from the Roundtable.

Roles and Responsibilities: Airport staff (SFO), FAA staff, Roundtable consulting staff (ESA), Technical Working Group

Status: Active

1.1.4 Time-based flow management and its implications

The Roundtable is aware that the FAA is developing time-based flow management (TBFM), a technology intended to improve the predictability of arrivals and reduce the need for vectoring within a Metroplex. The Roundtable would like to understand the noise and environmental implications of this technology for residents of member communities that will be affected.

Areas Primarily Affected: Global

Desired Outcomes

- The Roundtable understands how the introduction of TBFM will affect the spacing and vectoring of flights over member communities and where the flights that will no longer be vectored are to be routed.
- The Roundtable provides the FAA feedback to consider for its rollout of the TBFM program and engages policy makers, if appropriate.

Roles and Responsibilities: Airport staff (SFO, SJC), FAA staff, Technical Working Group, Legislative Committee

Status: Active

1.2 Advance Recommendations by the Ad Hoc Advisory Committee on South Flow Operations.

1.2.1 Ad Hoc Advisory Committee on South Flow Operations

Using a matrix of recommendations made by the Ad Hoc Committee, track, review, and comment on FAA responses to the recommendations from the Ad Hoc Advisory Committee on South Flow Arrivals.

Areas Primarily Affected: Cupertino, East Palo Alto, Fremont, Millbrae, Mountain View, Palo Alto, San Jose, Santa Clara, and Sunnyvale.

Desired Outcomes

- The Roundtable and informed community will understand the status of the recommendations.
- Identify, review, and pursue solutions that reduce the SJC South Flow impact on affected communities.
- Evaluate the impact of proposed changes through noise modeling using AEDT and other analytical techniques before finalizing the Roundtable's position on the changes.
- Review and provide input to recommended changes during the development, testing and simulation, and implementation phases.
- Address any unintended negative impacts and mitigate them within the next 12 months.

Roles and Responsibilities: Airport staff (SJC), FAA staff, Roundtable consultant staff (ESA), Technical Working Group

Status: Active

1.2.2 SJC South flow procedures

The Roundtable will track progress, review proposals, and provide input on the implementation of the recommendations of the Final Report of the Ad Hoc Committee on South Flow Arrivals (to SJC) that pertain to arrival procedures and approaches that have concentrated and shifted traffic since 2012. South flow procedures include RAZRR STAR, SILCN STAR, and the RNP Z RWY 12 R, RNP Z RWY 12 L, ILS or LOC RWY 12R and ILS or LOC RWY 12L approaches.

Areas Primarily Affected: Cupertino, East Palo Alto, Fremont, Millbrae, Mountain View, Palo Alto, San Jose, Santa Clara, Sunnyvale

Desired Outcomes

- The Roundtable provides input to the FAA's development and implementation of new or modified procedures, approaches and/or ATC practices.
- The noise and environmental impacts to affected communities and individuals under the South flow procedures and approaches to SJC are minimized. The measures the FAA is to use for this purpose are agreed with the Roundtable in advance.

*Roles and Responsibilities***:** Airport staff (SJC); FAA staff, Roundtable consultant staff (ESA), Technical Working Group

Status: Active

1.3 Review, analyze, and comment on FAA actions regarding procedures, vectoring, and operations other than those contained in previous committees' recommendations and reports.

The Roundtable will track progress, review proposals, and provide input on additional information and FAA actions that were not in the recommendations and reports from either the Select or Ad Hoc Committees.

1.3.2 Track, coordinate, and take possible action on SFO Roundtable and OAK Noise Forum activities.

Regularly communicate and coordinate with the SFO Roundtable and OAK Noise Forum and review activities for possible action.

Areas Primarily Affected: Global

Desired Outcomes:

- SFO Roundtable proposals and responses to FAA will be evaluated for potential effects on SCSC Roundtable communities. Items that warrant further study or response will be referred to the appropriate committee and/or agendized for Roundtable discussion and action.
- Ensure that actions by SFO Roundtable do not adversely affect SCSC communities.

Roles and responsibilities: TBD

Status: Active

1.3.3 SUNNE ONE (aka OAK 120)

Roundtable member communities are concerned about the possible effects of the implementation of an OAK 120 departure procedure during the daytime and nighttime, which was proposed by the FAA, but neither recommended nor requested by the Select Committee, Ad Hoc Committee, SFO Roundtable, or this Roundtable. SFO 050 and OAK 120 departures are departures that immediately turn right or left after takeoff to fly south over the Bay. Such flights wake up residents in the mid-Peninsula due to low-flying altitudes, ground tracks close to the western shore of the Bay, and high levels of thrust at a time when ambient noise levels are low.

Areas Primarily Affected: East Palo Alto, Foster City, Los Altos, Mountain View, Palo Alto, San Jose, and Sunnyvale.

Desired Outcomes:

- The Roundtable understands the short-term and long-term impacts on residents and consequences SUNNE ONE departures have or will have on SFO arrivals (such departures can be in the path of BDEGA East arrivals and could prevent other SFO arrivals from flying over the full length of the Bay at night.)
- The Roundtable makes recommendations that could include: do not implement, implement with modifications, or postpone implementation until rigorous analysis has been conducted.

Roles and Responsibilities: Technical Working Group

Status: Active

1.3.4 LOUPE FIVE

This is a revised departure procedure from SJC that may impact communities.

Areas Primarily Affected: Milpitas, San Jose, Santa Clara

Desired Outcomes:

- Confirm that this procedure does not adversely affect communities. If so, recommend changes to mitigate the increased noise and environmental effects.

Roles and Responsibilities: Technical Working Group

Status: Active

1.3.5 Non-conforming departures from SJC

Identify departures that adversely impact communities because they do not follow standard departure procedures. For example, at an earlier point in time ANA 171 did not follow the SJC LOUPE FIVE takeoff procedure. It flew directly over Los Altos and Palo Alto below 4,000 feet to remain below SFO arrivals.

Areas Primarily Affected: Los Altos, Palo Alto

Desired Outcomes:

- Identify, evaluate, and pursue solutions that reduce aircraft noise during nighttime hours.
- Collaborate with SFO Roundtable and OAK Noise Forum to address nighttime flight impacts.

Roles and Responsibilities: Airport staff (SFO, SJC), FAA staff, Roundtable consultant staff (ESA), Technical Working Group

Status: Active

1.3.6 et seq will be assigned as new procedures and proposals are identified

2.0 Advocate for legislation and policies to reduce aircraft noise and environmental impacts on Roundtable member communities. (GOAL C)

2.1 Track legislative/regulatory action

The Roundtable will track local, state, and federal legislative/regulatory actions relevant to FAA policies and procedures and aircraft operations at the regional commercial service airports, so the Legislative Committee can recommend the Roundtable take a position on the proposed actions on behalf of our communities.

Areas Primarily Affected: Global

Desired Outcomes:

- The Roundtable members are aware of and able to provide input on proposed actions at the local, state or federal level.
- Items are tracked effectively and reviewed by the Legislation Committee so the Roundtable can take timely action to advocate for/against specific legislation or proposed policies.

Roles and Responsibilities: Congressional staff, Roundtable consultant staff (ESA)

Status: Active

2.2 Propose legislative/regulatory actions.

Propose legislative/regulatory action at the local, state, and federal level (FAA operates under federal rules and regulations approved by Congress) that would reduce aircraft noise and environmental impacts. Such changes are necessary because the current policies and legislation on aircraft noise and environmental impacts, established decades ago, are no longer adequate for a NextGen environment.

Areas Primarily Affected: Global

Desired Outcomes:

- Propose legislation and policy changes including changes on how the FAA defines and calculates aircraft impacts on the ground. For instance, the metrics and thresholds used by the FAA to determine impacts could be changed; concentration of aircraft could be reduced by changing in-trail separation or creating additional flight paths; environmental review processes (especially CATEX) could be more rigorous; actual impacts are assessed against expected impacts, with further changes implemented to mediate any adverse results.

Roles and Responsibilities: Legislative Committee, Congressional Staff

Status: Active

2.3 Understand and recommend changes to FAA's procedure development and environmental review process.

The Roundtable and member communities should understand the procedure development and environmental review processes that the FAA employs, so they can engage in the FAA's process and propose legislative changes to make the process more responsive to community noise and environmental concerns.

Areas Primarily Affected: Global

Desired Outcomes:

- The FAA's procedure development process is documented and understood by Roundtable members and interested community members.
- The Roundtable knows how to and when to provide timely input to provide input to the FAA in the procedure development process, including the FAA environmental review process.

- The Technical Working Group provides information to the Legislative Committee, so they can propose legislative and policy changes to require timely and proactive community participation on procedure development, more rigorous environmental review processes (especially CATEX), and how the FAA defines and calculates aircraft impacts on the ground.

Roles and Responsibilities: FAA staff; Roundtable consultant staff (ESA); Roundtable members from the Legislative Committee and the Technical Working Group

Status: Active

2.4 Evaluate and comment on potential impacts of supersonic aircraft operations.

Areas Primarily Affected: Global

Desired Outcomes:

- The Roundtable is an informed and involved participant in evaluating the potential impacts of supersonic aircraft operations on member communities and provides feedback to prevent/mitigate adverse impacts.

Roles and Responsibilities: TBD

Status: Active

2.5 Evaluate and comment on potential impacts of drone operations.

Areas Primarily Affected: Global

Desired Outcomes:

- The Roundtable is an informed and involved participant in evaluating the potential impacts of drones on member communities and provides feedback to prevent/mitigate adverse impacts.

Roles and Responsibilities: TBD

Status: Active

2.6 Evaluate and comment on technology to reduce aircraft noise and environmental impacts.

2.6.1 Review, analyze, and comment on the Implementation of GBAS/GLS at SFO

Roll-out of the satellite navigation-based ground-based augmentation system (GBAS) and its related landing system (GLS) at SFO may have significant positive and negative impacts on noise in Roundtable member communities.

Areas Primarily Affected: Global

Desired Outcomes:

- The Roundtable will be involved in the review of new GBAS/GLS procedures at SFO and provide feedback to the FAA and SFO so that ground-level noise and environmental impacts are identified early in the process and can be mitigated.

Roles and Responsibilities: TBD

Status: Active

2.6.2 Review, analyze, and comment on Other technologies

As other technologies emerge that have the potential to lessen noise impacts, the Roundtable will be the group for evaluating such technologies and providing feedback to the relevant organizations.

Areas Primarily Affected: TBD

Desired Outcomes:

- Maximum benefits are derived from new technologies to reduce noise and environmental impacts.

Roles and Responsibilities: TBD

Status: Active

2.6.4 et seq will be assigned as new procedures and proposals are identified

3.0 Take actions to increase the effectiveness of the SCSC Roundtable. (GOAL B)

3.1 Invite airport staffs (SFO, SJC) and congressional staffs to actively participate in Roundtable meetings and relevant committee meetings.

Because airport operations and FAA rules and regulations, which are approved by Congress, impact Roundtable member communities, it is critical for airport staff (SFO, SJC) and staffs of Congressional Representatives to attend Roundtable meetings, and relevant committee meetings to be involved in discussions regarding possible solutions to aircraft noise and environmental issues.

Areas Primarily Affected: Global

Desired Outcomes:

- Staffs from SFO, SJC, and Congressional Representatives' Staffs participate in the development of recommendations and solutions.

Roles and Responsibilities: Airport staff (SFO, SJC), Congressional Staffs, Legislative Committee, Roundtable Chair, Roundtable Consulting staff (ESA), Technical Working Group

Status: Active

3.2 Continue to collaborate with other community roundtables and forums to leverage resources and maximize effectiveness.

It would be beneficial for the Roundtable to collaborate with other entities, especially the SFO Airport Community Roundtable and the Oakland International Airport Noise Forum, and to work in a collaborative manner so as to benefit from each other's actions to the greatest extent possible and to avoid taking actions that would shift noise from one Roundtable or Noise Forum's jurisdiction to another.

Areas Primarily Affected: Global

Desired Outcomes:

- Effective collaboration, including the leverage of resources, exists across the three local entities to reduce aircraft-related impacts through coordination of efforts and change requests on identified areas such as procedures, processes, policies, and legislation.
- Collaborate where beneficial with the SFO Community Roundtable and OAK Noise Forum to leverage resources to advocate for new legislation, policies, and processes as well as co-sign letters deemed appropriate for advocacy and comments.
- Identify areas for collaboration that would be most beneficial to pursue between the entities and pursue accordingly.

Roles and Responsibilities: Roundtable Chair; selected Roundtable committee members (TBD) for liaison purposes; and Noise Forum Members

Status: Active

3.3 Solicit airline participation on an as-needed basis.

The SFO Roundtable benefits from the participation of airlines. The SCSC Roundtable seeks similar involvement of airlines, so issues of mutual interest can be addressed through the Roundtable.

Areas Primarily Affected: Global

Desired Outcomes:

- Roundtable recommendations benefit from understanding of airline perspective.
- Airlines better understand the noise and environmental impact of operating decisions on communities.

Roles and Responsibilities: TBD

Status: Active

3.4 Form standing and ad hoc committees to increase effective use of roundtable members and staff.

3.4.1 Establish a Procedures Review Technical Working Group as a standing committee

At the direction of the full Roundtable, the Procedures Review Technical Working Group will thoroughly review specific procedures and vectoring, including technical aspects of the FAA's past and future actions affecting the commercial service airports (SFO, SJC, OAK) that may result or have resulted in positive or negative impacts on member communities. The Roundtable will propose alternative solutions utilizing the Consultant's expertise, and promptly review and respond to changes or announcements that are time critical, including but not limited to, items listed in FAA updates with anticipated implementation dates and changes posted on the IFP Gateway. The Procedures Review Technical Working will be responsible for collecting the data required to complete its work.

Areas Primarily Affected: Northern California Metroplex

Desired Outcomes:

- The Technical Working Group will perform technical analysis on any proposals or actions referred to them. Results will be provided to the Roundtable.

Roles and Responsibilities: Airport staff (topic specific SFO/SJC/OAK), Roundtable consultant staff (ESA); Roundtable committee members; Roundtable/Forum members (topic specific)

Status: Active

3.4.2 Establish a Legislative Committee as a standing committee

The committee will advocate for changes in legislation and policies at the local, state, and federal level (FAA operates under federal rules and regulations approved by Congress) that would reduce aircraft noise and environmental impacts, including how the FAA defines and calculates aircraft impacts on the ground. Such changes are necessary because the current policies and legislation on aircraft impacts, established decades ago, are no longer adequate for a NextGen environment. The committee will also actively review and monitor proposed legislation and policy actions (including new rule making and FAA reauthorization bills) to reduce aircraft impacts on our communities. The focus of the committee will be to address noise impacts and environmental issues generated by the FAA's implementation of NextGen arrival and departure procedures for regional commercial service airports. The committee will inform the Roundtable, review, advise, and advocate for new actions, and establish effective community participation that affects FAA plans and actions.

Areas Primarily Affected: Global

Desired Outcomes:

- Legislative Committee recommends support or opposition to existing or proposed legislation or policies.
- Legislative Committee recommends proposed legislation and policy changes to the Roundtable.

Roles and Responsibilities: Roundtable committee members; Roundtable consultant staff (ESA); Congressional staff

Status: Active

3.5 Collect, compile, review, and use required data.

3.5.1 Pre-NextGen and post-NextGen noise and flight data

The Roundtable needs, at a minimum, pre-NextGen and post-NextGen noise data and flight reports for purposes of comparing pre-NextGen with existing conditions and conditions following any future implementation of new or revised procedures/operations, including vectoring.

Areas Primarily Affected: Global [SFO, SJC, OAK]

Desired Outcomes:

- Roundtable will have an agreed-upon set of baseline data from which to evaluate FAA's new proposals and changes that have been implemented.
- Roundtable will identify any significant data gaps and propose action to fill the gaps.
- Supports the Technical Working Group to understand aircraft impacts.

Roles and Responsibilities: Airport staff (SFO, SJC, OAK), Roundtable consulting staff (ESA), Procedure Review Technical Working Group

Status: Active

3.5.2 Monthly Flight Reports

The Roundtable is interested in viewing monthly reports of all flights that occur at SJC during South flow as well as flights that overfly the Santa Cruz Mountains arriving to SFO. In addition, the Roundtable is interested in obtaining pre-NextGen and on-going flight data from regional commercial airports (SFO, SJC, OAK) that impact our member communities. A summary of SFO flight information is published in the monthly SFO Airport Director's Report, which is available on the SFO website (https://www.flysfo.com/community/noise-abatement/reports-and-resources/airport-directors-report). SJC and OAK do not appear to publish monthly flight information similar to SFO.

Areas Primarily Affected: Global

Desired Outcomes:

- The Roundtable obtains and understands pre-NextGen and current flight information (e.g., actual flight paths, altitudes, speeds, volume, time distribution, and concentration of flights over our communities).
- The Roundtable uses the flight data to prioritize efforts as well as establish baseline noise data.
- The Roundtable uses actual flight data to validate the assumptions made by the FAA in their projected impact of a change on our communities as part of the post-implementation analysis.

Roles and Responsibilities: Airport staff (SFO, SJC, OAK), Roundtable consultant staff (ESA)

Status: Active

3.6 Track and comment on the impacts of airport growth and expansion.

The Roundtable will regularly track SFO's, SJC's, and OAK's growth and expansion plans, and the related public comment deadlines, and provide comments on aircraft noise and other environmental concerns.

Areas Primarily Affected: Global

Desired Outcomes:

- Roundtable notifies members in advance of public comment deadlines for the environmental impact process of an airport expansion plan.
- Roundtable is able to advocate for its member communities through submitting comment letters for the environmental impact process for any specific expansion plans.
- Roundtable requests that airports put in place mechanisms to contain negative impacts on our community members as the airports grow and expand.

Roles and Responsibilities: Airport staff (SFO, SJC, OAK), Roundtable consultant staff (ESA), Roundtable members

Status: Active

3.7 Understand and publicize the noise complaint process

The Roundtable wants to ensure that the noise complaint processes for SFO, SJC, and OAK are readily accessible to affected residents, and complaint reports are available for review. For reference, SFO publishes their reports on the SFO Roundtable website, whereas reports from SJC and OAK do not appear to be available.

Areas Primarily Affected: Global

Desired Outcomes:

- Residents can report noise complaints without having to identify the origin or destination airports.
- Complaint data from all airports are published by SJC and OAK on a regular basis.

Roles and Responsibilities: Airport staff (SFO, SJC, OAK), Roundtable consultant staff (ESA)

Status: Active

3.8 Encourage community participation

Residents of member communities have demonstrated strong interest in the principal goal of the Roundtable and the aim of the Work Plan: to reduce aircraft noise and

environmental impacts. The Roundtable wants to keep the public engaged and informed of its activities.

Areas Primarily Affected: Member communities and others affected by SFO, OAK, and SJC operations

Desired Outcomes:

- Interested residents in member communities, and public officials and their staffs will identify the Roundtable as the primary regional forum for addressing concerns regarding aircraft noise and environmental impacts from aircraft operating to and from regional commercial service airports.
- The general public will have the opportunity to address the Roundtable on matters related to aircraft noise and environmental impacts within the purview of the Roundtable when the public comment periods are open.
- The general public will have timely and ready access to the agendas, plans, decisions, and other actions of the Roundtable as well as materials provided by the FAA to the Roundtable.

Roles and Responsibilities: Roundtable consultant staff (ESA); Roundtable members

Status: Active

3.9 Schedule Roundtable member orientation and training.

The Roundtable benefits from ongoing training deemed critical for Roundtable members to accomplish the work program and be effective. Content areas include: the environmental review process, new technologies and new approaches to addressing aircraft noise and environmental issues. Specific on-boarding training is also needed as new members join the Roundtable.

Areas Primarily Affected: Global

Desired Outcomes:

- Members are sufficiently knowledgeable to contribute effectively to accomplishing the Work Plan and setting future strategies. Such areas of training could include, but not be limited to:
    - FAA procedure development process
    - IFP Gateway
    - Airport Capacity Act 1990 vs Air Capacity/Saturation
    - GBAS/GLS
    - NextGen Advisory Committee
    - New technologies
    - New approaches
    - Ongoing Noise 101
    - Time-based flow management

- Ongoing SFO ATCT
- Ongoing TRACON visit

Roles and Responsibilities: Airport staff (SFO, SJC), FAA staff, Legislative Committee, Roundtable consultant staff (ESA), Technical Working Group

Status: Active

3.10 Maintain website as principal public information source of Roundtable actions.

Maintain the Roundtable website and update with new information as required for the public.

- Maintain existing website
- Include historical information as required
- Upload agendas, agenda packets, and committee meeting information
- Maintain and continue to populate informational section containing links to additional resources
- Maintain list of FAQs
- Maintain a dedicated resource page for FAA Initiative documents and progress/status reports
- Maintain and continue to update news reports
- Maintain and update contact link
- Maintain noise complaint link

Areas Primarily Affected: Global

Desired Outcomes:

- The general public will have opportunity to address the Roundtable on matters related to aircraft noise and environmental impacts within the purview of the Roundtable.
- The general public will have ready access to the agendas, plans, decisions, and other actions of the Roundtable.

Roles and Responsibilities: Roundtable consultant staff (ESA)

Status: Ongoing

Priorities

Top priority actions to organize and initiate the work of the Roundtable have been completed. These include establishing membership, engaging expert consultant, conducting training and

orientation activities, creating the website, and drafting the Strategic Plan and Work Plan. The ad hoc committee recommends the following priorities for future work.

Priority 1: Respond to FAA proposals or actions

When FAA proposes any changes to procedures or operations that may affect noise or have environmental impacts, or responds to other committee/recommendations or reports, the Roundtable will put analysis and response to FAA as the top priority. These will principally be within Work Plan 1.0, but, because FAA actions are unpredictable, response by the Roundtable will always take precedence over other Roundtable Work Plan items.

Priority 2: Establish working committees

In accordance with 3.4, form three committees that can make future work of the Roundtable more efficient: Procedure Review Technical Working Group (standing committee) and Legislative Committee (standing committee). The full Roundtable will set the Procedure Review Technical Working Group priorities according to actions by FAA or from the Work Plan. The full Roundtable will set the Legislative Committee's an annual task list and recommend priorities from the items in 2.0.

Priority 3: Collaborate with others

Because the airspace involved is complex and involves multiple airports and jurisdictions, Work Plan items 3.1, 3.2, 3.3, 3.8 are important for Roundtable success.

Priority 4: Take other administrative actions

Links to noise reporting (3.7) are on the Roundtable website. Additional publicity may be warranted depending on future activity. Training and orientation (3.9) will be done on an as-needed basis.

Appendix

Status of actions taken to avoid an unwieldy Work Plan document.

SANTA CRUZ/SANTA CLARA COUNTIES AIRPORT/COMMUNITY ROUNDTABLE

Work Plan

November 19, 2019

Revised December 16, 2019

DRAFT - REDLINE

Introduction

The mission of the Santa Cruz/Santa Clara Counties Airport/Community Roundtable (Roundtable) is to address community noise concerns and make recommendations to the Regional Airports and FAA on noise related issues.

While the Strategic Plan provides the long-term goals of the Roundtable, the Work Plan lays out the initial actions needed to address aircraft noise and environmental issues in affected communities. It is intended to provide and track the action items the Roundtable has identified as necessary to meet the goals of the Strategic Plan [*Strategic Plan - link*] and fulfill its overall mission. Each action listed in the Work Plan identifies a specific issue and areas primarily affected, defines the desired outcome, and indicates the roles and responsibilities of those who will take the actions listed. Priorities are included in the plan but may be updated as needed.

The organization of this Plan aligns with the goals of the Strategic Plan; this may be updated as needed if changes are made to the Strategic Plan. The Work Plan actions will be reviewed by the Roundtable at least once annually for progress, adjustment, and/or deletion from the Work Plan.

In ~~the~~ this Work Plan, the term "procedure" is ~~defined to~~ includes the FAA ~~technical~~ flight procedure ~~and~~ as well as the associated vectoring after the procedure has been terminated.

For convenience, the Appendix to the Work Plan lists key actions that have already been conducted by the Roundtable. The actions in the Work Plan are those yet to be completed by the Roundtable to achieve the desired outcome for each action item.

Roundtable Actions

1.0 Follow-up on recommendations and reports from the Select Committee on South Bay Arrivals and the Ad Hoc Committee on South Flow Operations, monitor and respond to FAA actions not related to those committee reports, and propose further actions to reduce aircraft noise and environmental impacts. (GOAL A)

1.1 Advance recommendations by the Select Committee on South Bay Arrivals.

1.1.1 Select Committee on South Bay Arrivals

Using a matrix of Select Committee recommendations ~~made by the Select Committee~~, track, review, and comment on FAA responses to the recommendations in the serial updates to the report "FAA Initiative to Address Noise Concerns of Santa Cruz/Santa Clara/San Mateo/San Francisco Counties" to maximize the positive effects of implementing the recommendations.

Areas Primarily Affected: Global

Desired Outcomes:

- The Roundtable and informed community will understand ~~at a glance~~ the status of the recommendations.

- Critical items are immediately flagged ~~right away~~ so the Roundtable can follow up in a timely fashion to understand the item from the FAA and effectively provide input on ~~influence~~ changes or potential changes to be implemented by FAA.
- Evaluation of the impact of proposed changes through ~~FAA~~ noise modeling using AEDT and other analytical techniques before finalizing the Roundtable's position on the changes.
- Review and provide input on~~influence~~ recommended changes during the ~~development, simulation, testing, and implementation phases of the~~ the FAA's procedure development process.
- Assess changes after implementation, ~~address~~ identify any ~~unintended negative~~unanticipated noise impacts, and work with the FAA to mitigate them as quickly as possible~~within the next 12 months~~.
- Solutions will reduce the South Bay arrivals impact on affected communities.

Roles and Responsibilities: Roundtable consulting staff and Roundtable members; FAA staff

Status: Active

1.1.2 PIRAT TWO STAR (and all previous PIRAT versions)

Evaluate the effects of the implementation of the PIRAT TWO STAR.

Areas Primarily Affected: East Palo Alto, Los Altos, Los Altos Hills, Menlo Park, Palo Alto, Portola Valley

Desired Outcomes:

- The impacts of PIRAT TWO versus previous oceanic arrivals are to be identified by fall 2019. If applicable, any negative impacts are identified and mitigated within 12 months.
- Improvements to PIRAT TWO provide relief to communities, including at night.

Roles and Responsibilities: Airport Staff (SFO); FAA staff, Roundtable consultant staff (ESA), Technical Working Group

Status: Active

1.1.~~2~~ 3 Monitor the FAA's Effort to Transition SERFR STAR back to the Big Sur (BSR) ground track and/or replacement procedure.

The Roundtable will track progress, review proposals, and provide input on the FAA's implementation of recommendations in section 1.2 of the Final Report of Select Committee on South Bay Arrivals.

Areas Primarily Affected: Aptos, Capitola, East Palo Alto, Los Altos, Los Altos Hills, Menlo Park, Palo Alto, Portola Valley, Santa Cruz, Soquel, Summit, Woodside, Santa Clara County, Santa Cruz County

Desired Outcomes:

- The Roundtable reviews and ~~influences~~ provides input on the FAA's development and implementation of the BSR Overlay procedure and the practices to be associated with its use. The FAA provides the Roundtable a substantive update on the progress of the program at least quarterly.
- The noise and environmental impacts to affected communities and individuals under the Big Sur Overlay are minimized. ~~The measures the FAA is to use for this purpose are agreed with the Roundtable in advance.~~
- Before the FAA finalizes the procedure for rollout, and while there is still an opportunity to alter it, the noise and environmental impacts to communities under the proposed BSR Overlay are well-understood by the Roundtable. This includes:
  - The FAA Technical Working Group's current work on the procedure and vectoring characteristics (i.e., ground track, flying altitudes, speeds, waypoints.)
  - Understanding the impacts under the path of the procedure and its approaches to the airport as well as areas to be affected by vectoring.
  - ~~Night-time~~Nighttime impacts.
  - Areas along the procedure and vectoring paths where noise increases caused by deployment of surfaces or thrust are expected.
- In advance of developing a new procedure and its associated practices, the FAA informs the Roundtable of the noise abatement options it plans to consider – such as reduced speed and use of technologies such as GBAS – and solicits feedback from the Roundtable.

Roles and Responsibilities: Airport staff (SFO), FAA staff, Roundtable consulting staff (ESA), Technical Working Group

Status: Active

1.1.4 Time-based flow management and its implications

The Roundtable is aware that the FAA is developing time-based flow management (TBFM), a technology intended to improve the predictability of arrivals and reduce the need for vectoring within a Metroplex. The Roundtable would like to understand the noise and environmental implications of this technology for residents of member communities that will be affected.

Areas Primarily Affected: Global

Desired Outcomes

- The Roundtable understands how the introduction of TBFM will affect the spacing and vectoring of flights over member communities and where the flights that will no longer be vectored are to be routed.
- The Roundtable provides the FAA feedback to consider for its rollout of the TBFM program and engages policy makers, if appropriate.

Commented [SA1]: "Influences" is too strong given that FAA has sole responsibility for developing airspace procedures.

Commented [SA2]: The FAA is required to follow National Environmental Policy Act (NEPA) requirements. Therefore, the FAA will not agree to measures proposed by the Roundtable in advance of the NEPA process.

Commented [SA3]: While this is a great desired outcome, the FAA's process doesn't work this way. I am concerned about creating false expectations amongst Roundtable members and community members.

Commented [SA4]: Again, great desired outcome, but the FAA is not likely to work in this manner. I am concerned about creating false expectations amongst Roundtable members and community members.

Roles and Responsibilities: Airport staff (SFO, SJC), FAA staff, Technical Working Group, Legislative Committee

Status: Active

1.2 Advance Recommendations by the Ad Hoc Advisory Committee on South Flow Operations.

1.2.1 Ad Hoc Advisory Committee on South Flow Operations

Using a matrix of recommendations made by the Ad Hoc Committee, track, review, and comment on FAA responses to the recommendations from the Ad Hoc Advisory Committee on South Flow Arrivals.

Areas Primarily Affected: Cupertino, East Palo Alto, Fremont, Millbrae, Mountain View, Palo Alto, San Jose, Santa Clara, and Sunnyvale.

Desired Outcomes

- The Roundtable and informed community will understand ~~at a glance~~ the status of the recommendations.
- Identify, review, and pursue solutions that reduce the SJC South Flow impact on affected communities.
- Evaluate the impact of proposed changes through ~~FAA~~ noise modeling using AEDT and other analytical techniques before finalizing the Roundtable's position on the changes.
- Review and ~~influence~~ provide input to recommended changes during the development, testing and simulation, and implementation phases.
- Address any unintended negative impacts and mitigate them within the next 12 months.

Roles and Responsibilities: Airport staff (SJC), FAA staff, Roundtable consultant staff (ESA), Technical Working Group

Status: Active

1.2.2 SJC South flow procedures

The Roundtable will track progress, review proposals, and provide input on the implementation of the recommendations of the Final Report of the Ad Hoc Committee on South Flow Arrivals (to SJC) that pertain to arrival procedures and approaches that have concentrated and shifted traffic since 2012. South flow procedures include RAZRR STAR, SILCN STAR, and the RNP Z RWY 12 R, RNP Z RWY 12 L, ILS or LOC RWY 12R and ILS or LOC RWY 12L approaches.

Areas Primarily Affected: Cupertino, East Palo Alto, Fremont, Millbrae, Mountain View, Palo Alto, San Jose, Santa Clara, Sunnyvale

Desired Outcomes

- The Roundtable ~~influences~~ provides input to the FAA's development and implementation of new or modified procedures, approaches and/or ATC practices.

Commented [SA5]: FAA does not provide noise modeling services.

- The noise and environmental impacts to affected communities and individuals under the South flow procedures and approaches to SJC are minimized. The measures the FAA is to use for this purpose are agreed with the Roundtable in advance.

Roles and Responsibilities: Airport staff (SJC); FAA staff, Roundtable consultant staff (ESA), Technical Working Group

Status: Active

1.3 Review, analyze, and comment on FAA actions regarding procedures, vectoring, and operations other than those contained in previous committees' recommendations and reports.

The Roundtable will track progress, review proposals, and provide input on additional information and FAA actions that were not in the recommendations and reports from either the Select or Ad Hoc Committees. ~~This may include responding to FAA updates on changes or items that may have negative or positive impacts on member communities (including updates of the FAA Initiative to Address Noise Concerns of Santa Cruz/Santa Clara/San Mateo/San Francisco Counties), recommendations that were deemed infeasible that could benefit the community, and items that are still having effects on the SCSC region (i.e., BDEGA West).~~

Commented [SA6]: This is covered by Section 1.1 and 1.2 above. Also, the Roundtable's existence is conditioned upon not revisiting the FAA's decisions on the Select and Ad Hoc Committee reports. Therefore, revisiting recommendations that were deemed infeasible would be problematic for the Roundtable.

~~**1.3.1 PIRAT TWO STAR (and all previous PIRAT versions)**~~

~~Evaluate the effects of the implementation of the PIRAT TWO STAR.~~

~~*Areas Primarily Affected:* East Palo Alto, Los Altos, Los Altos Hills, Menlo Park, Palo Alto, Portola Valley~~

~~*Desired Outcomes:*~~

- ~~The impacts of PIRAT TWO versus previous oceanic arrivals are to be identified by Fall 2019. If applicable, any negative impacts are identified and mitigated within 12 months.~~
- ~~Improvements to PIRAT TWO provide relief to communities, including at night.~~

~~Any legislative and policy issues are shared with respective Roundtable committees for follow-up action.~~

Commented [SA7]: The PIRAT TWO STAR is not a legislative matter. It's an FAA procedure. This bullet seems out of place here.

- ~~~~

~~*Roles and Responsibilities:* Airport Staff (SFO); FAA staff, Roundtable consultant staff (ESA), Technical Working Group~~

~~*Status:* Active~~

Commented [SA8]: This is a Select Committee item. Moved to the Select Committee section 1.0 above.

1.3.2 Track, coordinate, and take possible action on SFO Roundtable and OAK Noise Forum activities.

Regularly communicate and ~~C~~coordinate~~ommunicate~~ with the SFO Roundtable and OAK Noise Forum and review activities for possible action.

Commented [EW9]: Added to be consistent with the descriptions for other actions.

Areas Primarily Affected: Global

Desired Outcomes:

- SFO Roundtable proposals and responses to FAA will be evaluated for potential effects on SCSC Roundtable communities. Items that warrant further study or response will be referred to the appropriate committee and/or agendized for Roundtable discussion and action.
- Ensure that ~~Actions~~ actions by SFO Roundtable ~~will~~ do not adversely affect SCSC communities.

Roles and responsibilities: TBD

Status: Active

1.3.3 SUNNE ONE (aka ~~SFO 050,~~ OAK 120)

Roundtable member communities are concerned about the possible effects of the implementation of an OAK 120 departure procedure during the daytime and nighttime, which was proposed by the FAA, but neither recommended nor requested by the Select Committee, Ad Hoc Committee, SFO Roundtable, or this Roundtable. SFO 050 and OAK 120 departures are departures that immediately turn right or left after takeoff to fly south over the Bay. Such flights wake up residents in the mid-Peninsula due to low-flying altitudes, ground tracks close to the western shore of the Bay, and high levels of thrust at a time when ambient noise levels are low.

Areas Primarily Affected: East Palo Alto, Foster City, Los Altos, Mountain View, Palo Alto, San Jose, and Sunnyvale.

Desired Outcomes:

- The Roundtable understands the short-term and long-term impacts on residents and consequences ~~that SFO 050 and OAK 120~~SUNNE ONE departures have or will have on SFO arrivals (such departures can be in the path of BDEGA East arrivals and could prevent other SFO arrivals from flying over the full length of the Bay at night.)
- The Roundtable makes recommendations that could include: do not implement, implement with modifications, or postpone implementation until rigorous analysis has been conducted ~~and reviewed by this Roundtable~~.

Roles and Responsibilities: Technical Working Group

Status: Active

1.3.4 LOUPE FIVE

This is a revised departure procedure from SJC that may impact communities.

Areas Primarily Affected: Milpitas, San Jose, Santa Clara

Desired Outcomes:

- Confirm that this procedure does not adversely affect communities. If so, recommend changes to mitigate the increased noise and environmental effects.

Roles and Responsibilities: Technical Working Group

Status: Active

Commented [SA10]: The SFO 050 is not associated in any way with the SUNNE ONE. SUNNE ONE is a conventional OAK departure procedure.

Commented [SA11]: The Roundtable is not a part of the FAA procedure development process. Because the FAA is solely responsible for the safe and efficient use of the national airspace system, it cannot defer airspace decisions and procedure development to the Roundtable. Again, I am concerned about creating false expectations for the Roundtable members and members of the public about the Roundtable's involvement in the FAA's procedure development process.

1.3.5 Non-conforming departures from SJC

Identify ~~Select ANA and other~~ departures that adversely impact communities because they do not follow standard departure procedures. For example, ~~It appears that~~at an earlier point in time ANA 171 ~~does~~ did not follow the SJC LOUPE FIVE take-off procedure. It ~~flies~~ flew directly over Los Altos and Palo Alto below 4,000 feet to remain below SFO arrivals.

Areas Primarily Affected: Los Altos, Palo Alto

Desired Outcomes:

- ~~ANA 171 follows the standard SJC LOUPE departure procedure as all carriers do during the day.~~
- Identify, evaluate, and pursue solutions that reduce aircraft noise during nighttime hours.
- Collaborate with SFO Roundtable and OAK Noise Forum to address nighttime flight impacts.

Roles and Responsibilities: Airport staff (SFO, SJC), FAA staff, Roundtable consultant staff (ESA), Technical Working Group

Status: Active

Commented [SA12]: I understand this is already happening.

1.3.6 et seq will be assigned as new procedures and proposals are identified

2.0 Advocate for legislation and policies to reduce aircraft noise and environmental impacts on Roundtable member communities. (GOAL C)

2.1 Track legislative/regulatory action

The Roundtable ~~has a need to~~will track local, state, and federal legislative/regulatory actions relevant to FAA policies and procedures and aircraft operations at the regional commercial service airports, so the Legislative Committee can recommend the Roundtable take a position on the proposed actions on behalf of our communities.

Areas Primarily Affected: Global

Desired Outcomes:

- The Roundtable members are aware of and able to ~~influence~~ provide input on proposed actions at the local, state or federal level.
- Items are tracked effectively and reviewed by the Legislation Committee so the Roundtable ~~and individual member communities~~ can take timely action to advocate for/against specific legislation or proposed policies.
- ~~Supports the Legislative Committee.~~

Roles and Responsibilities: Congressional staff, Roundtable consultant staff (ESA)

Status: Active

2.2 Propose legislative/regulatory actions.

Propose legislative/regulatory action at the local, state, and federal level (FAA operates under ~~national~~ federal rules and regulations approved by Congress) that would reduce aircraft noise and environmental impacts. Such changes are necessary because the current policies and legislation on aircraft noise and environmental impacts, established decades ago, are no longer adequate for a NextGen environment.

Areas Primarily Affected: Global

Desired Outcomes:

- Propose legislation and policy changes including changes on how the FAA defines and calculates aircraft impacts on the ground. For instance, the metrics and thresholds used by the FAA to determine impacts could be changed; concentration of aircraft could be reduced by changing in-trail separation or creating additional flight paths; environmental review processes (especially CATEX) could be more rigorous; actual impacts are assessed against expected impacts, with further changes implemented to mediate any adverse results.

Roles and Responsibilities: Legislative Committee, Congressional Staff

Status: Active

2.3 Understand and recommend changes to FAA's procedure development and environmental review process.

The Roundtable and member communities ~~need to~~should understand the procedure development and environmental review processes that the FAA employs, so they can engage in the FAA's process and propose legislative changes to make the process more responsive to community noise and environmental concerns.

Areas Primarily Affected: Global

Desired Outcomes:

- The FAA's procedure development process is documented and understood by Roundtable members and interested community members.
- The Roundtable knows how to and when to provide timely input to ~~influence~~ provide input to the FAA in the procedure development process, including the FAA environmental review process.
- The Technical Working Group provides information to the Legislative Committee, so they can propose legislative and policy changes to require timely and proactive community participation on procedure development, more rigorous environmental review processes (especially CATEX), and how the FAA defines and calculates aircraft impacts on the ground.

Roles and Responsibilities: FAA staff; Roundtable consultant staff (ESA); ~~Select~~ Roundtable members from the Legislative Committee and the Technical Working Group

Status: Active

2.4 Evaluate and comment on potential impacts of supersonic aircraft operations.

Areas Primarily Affected: Global

Desired Outcomes:

- The Roundtable is an informed and involved participant in evaluating the potential impacts of supersonic aircraft operations on member communities and provides feedback to prevent/mitigate adverse impacts.

Roles and Responsibilities: TBD

Status: Active

2.5 Evaluate and comment on potential impacts of drone operations.

Areas Primarily Affected: Global

Desired Outcomes:

- The Roundtable is an informed and involved participant in evaluating the potential impacts of drones on member communities and provides feedback to prevent/mitigate adverse impacts.

Roles and Responsibilities: TBD

Status: Active

2.6 Evaluate and comment on technology to reduce aircraft noise and environmental impacts.

~~**2.6.1 Time-based flow management and its implications**~~

~~The Roundtable is aware that the FAA is developing time-based flow management (TBFM), a technology intended to improve the predictability of arrivals and reduce the need for vectoring within a Metroplex. The Roundtable would like to understand the noise and environmental implications of this technology for residents of member communities that will be affected.~~

~~*Areas Primarily Affected:* East Palo Alto, Los Altos, Los Altos Hills, Menlo Park, Mountain View, Palo Alto, Portola Valley, Santa Cruz, Summit, Woodside, Santa Clara County, Santa Cruz County~~

~~*Desired Outcomes*~~

- ~~The Roundtable understands how the introduction of TBFM will affect the spacing and vectoring of flights over member communities and where the flights that will no longer be vectored are to be routed.~~
- ~~The Roundtable provides the FAA feedback to consider for its rollout of the TBFM program and engages policy makers, if appropriate.~~

~~*Roles and Responsibilities:* Airport staff (SFO, SJC), FAA staff, Technical Working Group, Legislative Committee~~

~~*Status:* Active~~

Commented [SA13]: This was a Select Committee recommendation. Moved to Section 1.

2.6.~~2~~1 Review, analyze, and comment on the Implementation of GBAS/GLS at SFO

Roll-out of the satellite navigation-based ground-based augmentation system (GBAS) and its related landing system (GLS) at SFO may have significant positive and negative impacts on noise in Roundtable member communities.

Areas Primarily Affected: Global

Desired Outcomes:

- The Roundtable will be ~~intimately~~ involved in the review ~~and final development~~ of new GBAS/GLS procedures at SFO and provide feedback to the FAA and SFO so that ground-level noise and environmental impacts are identified early in the process and can be mitigated.

Roles and Responsibilities: TBD

Status: Active

2.6.~~3~~2 Review, analyze, and comment on Other technologies

As other technologies emerge that have the potential to lessen noise impacts, the Roundtable will be the ~~referent~~ group for evaluating such technologies and providing feedback to the relevant organizations.

Areas Primarily Affected: TBD

Desired Outcomes:

- Maximum benefits are derived from new technologies to reduce noise and environmental impacts.

Roles and Responsibilities: TBD

Status: Active

2.6.4 et seq will be assigned as new procedures and proposals are identified

3.0 Take actions to increase the effectiveness of the SCSC Roundtable. (GOAL B)

3.1 ~~Ensure that~~Invite airport staffs (SFO, SJC) and congressional staffs to actively participate in Roundtable meetings and relevant committee meetings.

Because airport operations and FAA rules and regulations, which are approved by Congress, impact Roundtable member communities, it is critical for airport staff (SFO, SJC) and staffs of Congressional Representatives to attend Roundtable meetings, and relevant committee meetings to be involved in discussions regarding possible solutions to aircraft noise and environmental issues.

Areas Primarily Affected: Global

Desired Outcomes:

- Staffs from SFO, SJC, and Congressional Representatives' Staffs participate in the development of recommendations and solutions.

Roles and Responsibilities: Airport staff (SFO, SJC), Congressional Staffs, Legislative Committee, Roundtable Chair, Roundtable Consulting staff (ESA), Technical Working Group

Status: Active

3.2 Continue to ~~Collaborate~~ collaborate with other community roundtables and forums to leverage resources and maximize effectiveness.

It would be beneficial for the Roundtable to collaborate with other entities, especially the SFO Airport Community Roundtable and the Oakland International Airport Noise Forum, and to work in a collaborative manner so as to benefit from each other's actions to the greatest extent possible and to avoid taking actions that would shift noise from one Roundtable or Noise Forum's jurisdiction to another.

Areas Primarily Affected: Global

Desired Outcomes:

- Effective collaboration, including the leverage of resources, exists across the three local entities to reduce aircraft-related impacts through coordination of efforts and change requests on identified areas such as procedures, processes, policies, and legislation.
- Collaborate where beneficial with ~~other~~ the SFO Community Roundtable~~s~~ and OAK Noise Forum~~s~~ to leverage resources to advocate for new legislation, policies, and processes as well as co-sign letters deemed appropriate for advocacy and comments.
- Identify areas for collaboration that would be most beneficial to pursue between the entities and pursue accordingly.

Roles and Responsibilities: Roundtable Chair; selected Roundtable committee members (TBD) for liaison purposes; and Noise Forum Members

Status: Active

3.3 Solicit airline participation on an as-needed basis.

The SFO Roundtable benefits from the participation of airlines. The SCSC Roundtable seeks similar involvement of airlines~~, especially those operating at SJC~~, so issues of mutual interest can be addressed through the Roundtable.

Areas Primarily Affected: Global

Desired Outcomes:

- Roundtable recommendations benefit from understanding of airline perspective.

- Airlines better understand the noise and environmental impact of operating decisions on communities.

Roles and Responsibilities: TBD

Status: Active

3.4 Form standing and ad hoc committees to increase effective use of roundtable members and staff.

3.4.1 Establish a Procedures Review Technical Working Group as a standing committee

At the direction of the full Roundtable, ~~The~~ the Procedures Review Technical Working Group will thoroughly review ~~all~~ specific procedures and vectoring, including technical aspects of the FAA's past and future actions affecting the commercial service airports (SFO, SJC, OAK) that may result or have resulted in positive or negative impacts on member communities. The Roundtable will propose alternative solutions utilizing the Consultant's expertise, and promptly review and respond to changes or announcements that are time critical, including but not limited to, items listed in FAA updates with anticipated implementation dates and changes posted on the IFP Gateway. The Procedures Review Technical Working will be responsible for collecting the data required to complete its work.

Areas Primarily Affected: Northern California Metroplex

Desired Outcomes:

- The Technical Working Group will perform technical analysis on any proposals or actions referred to them. Results will be provided ~~back~~ to the Roundtable ~~or may be sent directly to the relevant bodies depending on time sensitivity~~.

Roles and Responsibilities: Airport staff (topic specific SFO/SJC/OAK), Roundtable consultant staff (ESA); Roundtable committee members; Roundtable/Forum members (topic specific)

Status: Active

3.4.2 Establish a Legislative Committee as a standing committee

The committee will advocate for changes in legislation and policies at the local, state, and federal level (FAA operates under ~~national~~ federal rules and regulations approved by Congress) that would reduce aircraft noise and environmental impacts, including how the FAA defines and calculates aircraft impacts on the ground. Such changes are necessary because the current policies and legislation on aircraft impacts, established decades ago, are no longer adequate for a NextGen environment. The committee will also actively review and monitor proposed legislation and policy actions (including new rule making and FAA reauthorization bills) to reduce aircraft impacts on our communities. The focus of the committee will be to address noise impacts and environmental issues generated by the FAA's implementation of NextGen arrival and departure procedures for regional commercial service airports. The committee will inform the Roundtable, review, advise, and advocate for new actions, and establish effective community participation that affects FAA plans and actions.

Areas Primarily Affected: Global

Desired Outcomes:

- Legislative Committee recommends support or opposition to existing or proposed legislation or policies.
- Legislative Committee recommends proposed legislation and policy changes to the Roundtable.

Roles and Responsibilities: Roundtable committee members; Roundtable consultant staff (ESA); Congressional staff

Status: Active

~~**3.4.3 Basic data ad hoc committee**~~

~~The Basic Data Ad Hoc Committee is needed to implement the tasks in 3.5.1 of this Work Plan and to provide data to other committees and the Roundtable for accomplishing other elements of the Work Plan as needed.~~

~~*Areas Primarily Affected:* TBD~~

~~*Desired Outcomes:*~~

- ~~The Basic Data Ad Hoc Committee will compile data as requested by the standing committees and Roundtable.~~

~~*Roles and Responsibilities:* Roundtable members, residents of Santa Clara and Santa Cruz Counties~~

~~*Status:* Active~~

Commented [SA14]: The Procedures Review Technical Working Group will identify and collect its own data.

3.5 Collect, compile, review, and use ~~basic~~ required data.

3.5.1 Pre-NextGen and post-NextGen noise and flight data

The Roundtable needs, at a minimum, pre-NextGen and post-NextGen noise data and flight reports for purposes of comparing pre-NextGen with existing conditions and conditions following any future implementation of new or revised procedures/operations, including vectoring.

Areas Primarily Affected: Global [SFO, SJC, OAK]

Desired Outcomes:

- Roundtable will have an agreed-upon set of baseline data from which to evaluate FAA's new proposals and changes that have been implemented.
- Roundtable will identify any significant data gaps and propose action to fill the gaps.
- Supports the Technical Working Group to understand aircraft impacts.

Roles and Responsibilities: Airport staff (SFO, SJC, OAK), ~~Basic Data Ad Hoc Committee,~~ Roundtable consulting staff (ESA), Procedure Review Technical Working Group

Status: Active

Commented [SA15]: This could be a substantial effort and may have budget implications depending on how much of this effort ESA is asked to handle. What/who is the source of these data? What are "flight reports"? How much data is needed? What area is the data being collected for? How far back in time? What are the data sample periods (e.g., a day, a week, a month, etc.)

3.5.2 Monthly Flight Reports

The Roundtable is interested in viewing monthly reports of all flights that occur at SJC during South flow as well as flights that overfly the Santa Cruz Mountains arriving to SFO. In addition, the Roundtable is interested in obtaining pre-NextGen and on-going flight data from regional commercial airports (SFO, SJC, OAK) that impact our member communities. A summary of SFO flight information is published in the monthly SFO Airport Director's Report, which is available on the SFO website (https://www.flysfo.com/community/noise-abatement/reports-and-resources/airport-directors-report). SJC and OAK do not appear to publish monthly flight information similar to SFO.

Areas Primarily Affected: Global

Desired Outcomes:

- The Roundtable obtains and understands pre-NextGen and current flight information (e.g., actual flight paths, altitudes, speeds, volume, time distribution, and concentration of flights over our communities).
- The Roundtable uses the flight data to prioritize efforts as well as establish baseline noise data.
- The Roundtable uses actual flight data to validate the assumptions made by the FAA in their projected impact of a change on our communities as part of the post-~~mortem~~ implementation analysis.

Roles and Responsibilities: Airport staff (SFO, SJC, OAK), ~~Basic Data Ad Hoc Committee,~~ Roundtable consultant staff (ESA)

Status: Active

Commented [SA16]: Who is the source of these data?

Commented [SA17]: Is the thought to use AEDT and model the noise? If so, that should be spelled that out. Potential budget issues.

3.6 Track and comment on the impacts of airport growth and expansion.

The Roundtable will regularly ~~shall~~ track SFO's, SJC's, and OAK's growth and expansion plans, and the related public comment deadlines, and provide comments on aircraft noise and other environmental concerns.

Areas Primarily Affected: Global

Desired Outcomes:

- Roundtable notifies members in advance of public comment deadlines for the environmental impact process of an airport expansion plan.
- Roundtable is able to advocate for its member communities through submitting comment letters for the environmental impact process for any specific expansion plans.
- Roundtable requests that airports put in place mechanisms to contain negative impacts on our community members as the airports grow and expand.

Roles and Responsibilities: Airport staff (SFO, SJC, OAK), Roundtable consultant staff (ESA), Roundtable members

Status: Active

3.7 Understand and publicize the noise complaint process

The Roundtable wants to ensure that the noise complaint processes for SFO, SJC, and OAK are readily accessible to affected residents, and complaint reports are available for review. For reference, SFO publishes their reports on the SFO Roundtable website, whereas reports from SJC and OAK do not appear to be available.

Areas Primarily Affected: Global

Desired Outcomes:

- Residents can report noise complaints without having to identify the origin or destination airports.
- Complaint data from all airports are published by SJC and OAK on a regular basis.

Roles and Responsibilities: Airport staff (SFO, SJC, OAK), Roundtable consultant staff (ESA)

Status: Active

3.8 Encourage community participation

Residents of member communities have demonstrated strong interest in the principal goal of the Roundtable and the aim of the Work Plan: to reduce aircraft noise and environmental impacts. The Roundtable wants to keep the public engaged and informed of its activities.

Areas Primarily Affected: Member communities and others affected by SFO, OAK, and SJC operations

Desired Outcomes:

- Interested residents in member communities, and public officials and their staffs will identify the Roundtable as the primary regional forum for addressing concerns regarding aircraft noise and environmental impacts from aircraft operating to and from regional commercial service airports.
- The general public will have the opportunity to address the Roundtable on matters related to aircraft noise and environmental impacts within the purview of the Roundtable when the public comment periods are open.
- The general public will have timely and ready access to the agendas, plans, decisions, and other actions of the Roundtable as well as materials provided by the FAA to the Roundtable.

Roles and Responsibilities: Roundtable consultant staff (ESA); Roundtable members

Status: Active

3.9 Schedule Roundtable member orientation and training.

The Roundtable ~~has a need~~ benefits ~~for~~ from ongoing ~~research, and~~ training deemed critical for Roundtable members to accomplish the work program and be effective. Content areas include: the environmental review process, new technologies and new approaches to addressing aircraft noise and environmental issues. Specific on-boarding training is also needed as new members join the Roundtable.

Areas Primarily Affected: Global

Desired Outcomes:

- ~~Members~~ are sufficiently knowledgeable to contribute effectively to accomplishing the Work Plan and setting future strategies.
- ~~Committees to recommend and specify training directly applicable to the Work Plan versus general training and its timing to accomplish the Work Plan.~~ Such areas of training could ~~may~~ include, but not be limited to:
  - FAA procedure development process
  - IFP Gateway
  - Airport Capacity Act 1990 vs Air Capacity/Saturation
  - GBAS/GLS
  - NextGen Advisory Committee
  - New technologies
  - New approaches
  - Ongoing Noise 101
  - Time-based flow management
  - Ongoing SFO ATCT
  - Ongoing TRACON visit

Roles and Responsibilities: Airport staff (SFO, SJC), FAA staff, Legislative Committee, Roundtable consultant staff (ESA), Technical Working Group

Status: Active

3.10 Maintain website as principal public information source of Roundtable actions.

Maintain the Roundtable website and update with new information as required for the public.

- Maintain existing website
- Include historical information as required
- Upload agendas, agenda packets, and committee meeting information
- Maintain and continue to populate informational section containing links to additional resources

- Maintain list of FAQs
- Maintain a dedicated resource page for FAA Initiative documents and progress/status reports
- Maintain and continue to update news reports
- Maintain and update contact link
- Maintain noise complaint link

Areas Primarily Affected: Global

Desired Outcomes:

- The general public will have opportunity to address the Roundtable on matters related to aircraft noise and environmental impacts within the purview of the Roundtable.
- The general public will have ready access to the agendas, plans, decisions, and other actions of the Roundtable.

Roles and Responsibilities: Roundtable consultant staff (ESA)

Status: Ongoing

Priorities

Top priority actions to organize and initiate the work of the Roundtable have been completed. These include establishing membership, engaging expert consultant, conducting training and orientation activities, creating the website, and drafting the Strategic Plan and Work Plan. The ad hoc committee recommends the following priorities for future work.

Priority 1: Respond to FAA proposals or actions

When FAA proposes any changes to procedures or operations that may affect noise or have environmental impacts, or responds to other committee/recommendations or reports, the Roundtable will put analysis and response to FAA as the top priority. These will principally be within Work Plan 1.0, but, because FAA actions are unpredictable, response by the Roundtable will always take precedence over other Roundtable Work Plan items.

Priority 2: Establish working committees

In accordance with 3.4, form three committees that can make future work of the Roundtable more efficient: Procedure Review Technical Working Group (standing committee) and~~,~~ Legislative Committee (standing committee)~~, and Basic Required Data Collection Committee (ad hoc committee)~~. The full Roundtable will set the Procedure Review Technical Working Group ~~will set~~ priorities according to actions by FAA or from the Work Plan. The full Roundtable will set the Legislative Committee's ~~will establish~~ an annual task list and recommend priorities from the items in 2.0. ~~The Basic Required Data Collection Committee will~~

~~establish an annual task list and recommend priorities for data collection and analysis from item 3.5.~~

Priority 3: Collaborate with others

Because the airspace involved is complex and involves multiple airports and jurisdictions, Work Plan items 3.1, 3.2, 3.3, 3.8 are important for Roundtable success.

Priority 4: Take other administrative actions

Links to noise reporting (3.7) are on the Roundtable website. Additional publicity may be warranted depending on future activity. Training and orientation (3.9) will be done on an as-needed basis.

Appendix

Status of actions taken to avoid an unwieldy Work Plan document.

Attachment B

County of Santa Cruz

COUNTY ADMINISTRATIVE OFFICE
701 OCEAN STREET, SUITE 520, SANTA CRUZ, CA 95060-4073
(831) 454-2100 FAX: (831) 454-3420 TDD/TTY: call 711
CARLOS J. PALACIOS, COUNTY ADMINISTRATIVE OFFICER

January 8, 2020

Members, Santa Cruz/Santa Clara Counties Airport/Community Roundtable
P.O. Box 3144
Los Altos, California 94024

Dear Members of the Roundtable,

Santa Cruz County requests that the following FAA routes and issues be included in the Roundtable's Work Plan which is currently under development. These routes are generally departures from SFO or OAK which ascend over Santa Cruz mountain communities that are already impacted by SERFR and BRIXX. In some cases, the FAA has reduced flight altitudes on these routes by moving certain waypoints onshore instead of giving planes more ascent time over the ocean before crossing over land. We have received numerous noise complaints from county residents about these routes since the 2015 implementation of NextGen.

1. WESLA FOUR departure to the CISKO and EBAYE transitions – uses the PORTE waypoint and then ascends over the Santa Cruz Mountains creating noise on the ground.
2. SSTIK FOUR departure to CISKO and EBAYE transitions – also uses PORTE waypoint and then ascends over the Santa Cruz Mountains creating noise on the ground.
3. CNDEL FOUR departure out of Oakland, also uses the same flight paths as WESLA and SSTIK after PORTE Waypoint.

Community members have suggested that these flights could be directed to the existing YYUNG Transition which uses the FFOIL Waypoint over water, thereby keeping the noisier initial ascent to over the ocean rather than over land. We request that this and other solutions be included for investigation in the Roundtable Work Plan.

Thank you,

Carlos J. Palacios
County Administrative Officer

Attachments:
WESLA FOUR DEPARTURE Chart
SSTIK FOUR DEPARTURE Chart
CNDEL FOUR DEPARTURE Chart
Area map showing selected routes and waypoints

D-ATIS
113.7 115.8 118.85
CLNC DEL
118.2
CPDLC
GND CON
121.8
SAN FRANCISCO TOWER
120.5 269.1
NORCAL DEP CON
135.1 307.2

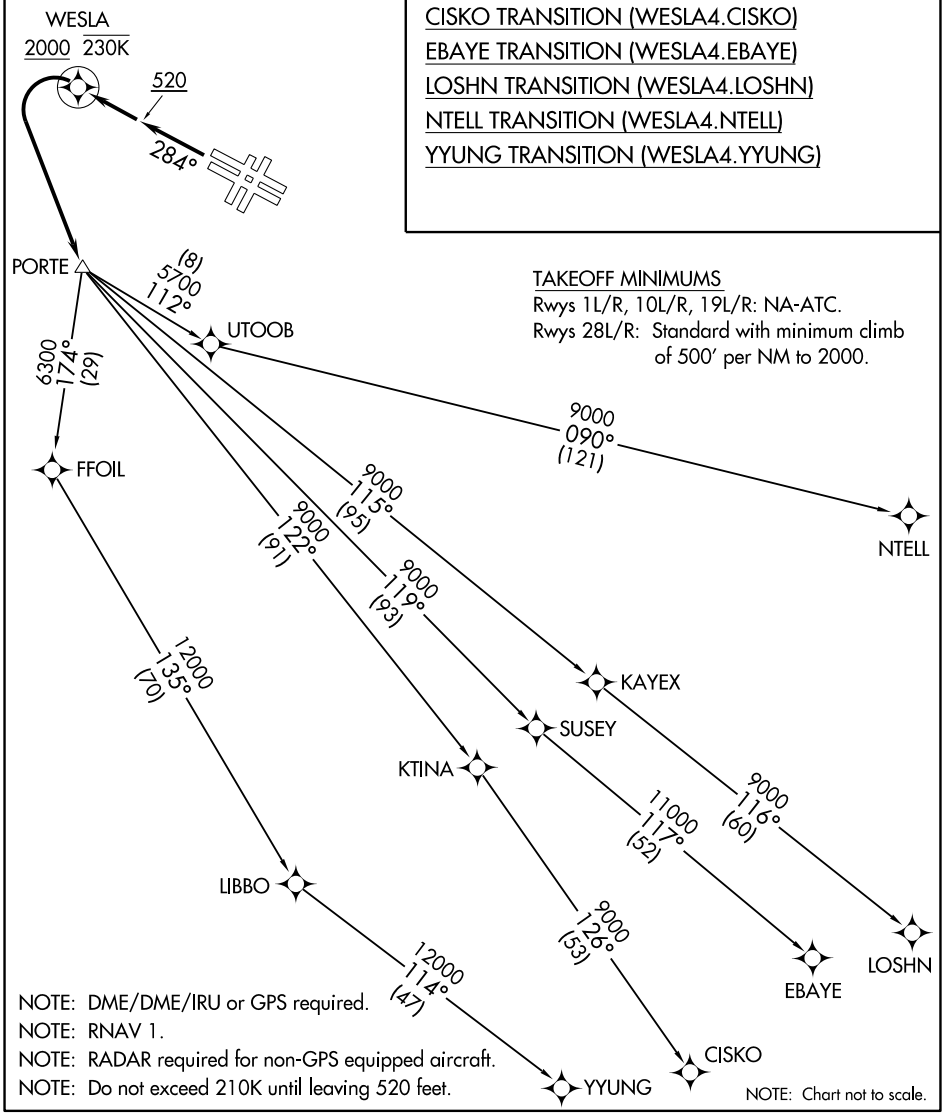
TOP ALTITUDE: 3000

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 28L/R: Climb heading 284° to 520, then direct WESLA at or above 2000 at or below 230K, then left turn direct PORTE, thence . . . .

. . . . on (transition) maintain 3000, expect filed altitude 10 minutes after departure.

CISKO TRANSITION (WESLA4.CISKO)
EBAYE TRANSITION (WESLA4.EBAYE)
LOSHN TRANSITION (WESLA4.LOSHN)
NTELL TRANSITION (WESLA4.NTELL)
YYUNG TRANSITION (WESLA4.YYUNG)



TAKEOFF MINIMUMS
Rwys 1L/R, 10L/R, 19L/R: NA-ATC.
Rwys 28L/R: Standard with minimum climb of 500′ per NM to 2000.

NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.
NOTE: RADAR required for non-GPS equipped aircraft.
NOTE: Do not exceed 210K until leaving 520 feet.

NOTE: Chart not to scale.

SW-2, 02 JAN 2020 to 30 JAN 2020

SW-2, 02 JAN 2020 to 30 JAN 2020

SW-2, 02 JAN 2020 to 30 JAN 2020

D-ATIS
113.7 115.8 118.85
CLNC DEL
118.2
CPDLC
GND CON
121.8
SAN FRANCISCO TOWER
120.5 269.1
NORCAL DEP CON
135.1 307.2

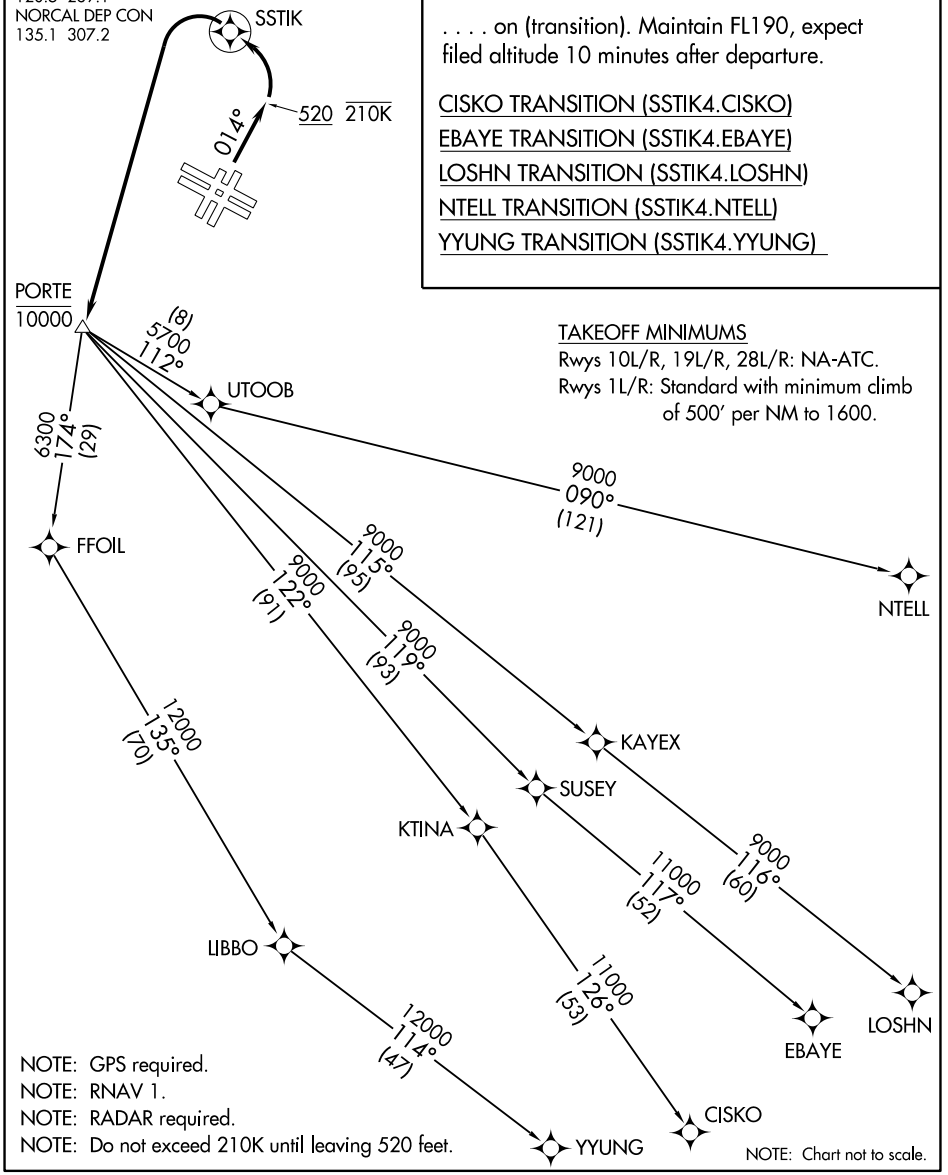
TOP ALTITUDE: FL190

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 1L/R: Climb heading 014° to 520 and at or below 210K, then climbing left turn direct SSTIK, then climbing left turn direct PORTE at or below 10000. Thence. . . .

. . . . on (transition). Maintain FL190, expect filed altitude 10 minutes after departure.

CISKO TRANSITION (SSTIK4.CISKO)
EBAYE TRANSITION (SSTIK4.EBAYE)
LOSHN TRANSITION (SSTIK4.LOSHN)
NTELL TRANSITION (SSTIK4.NTELL)
YYUNG TRANSITION (SSTIK4.YYUNG)



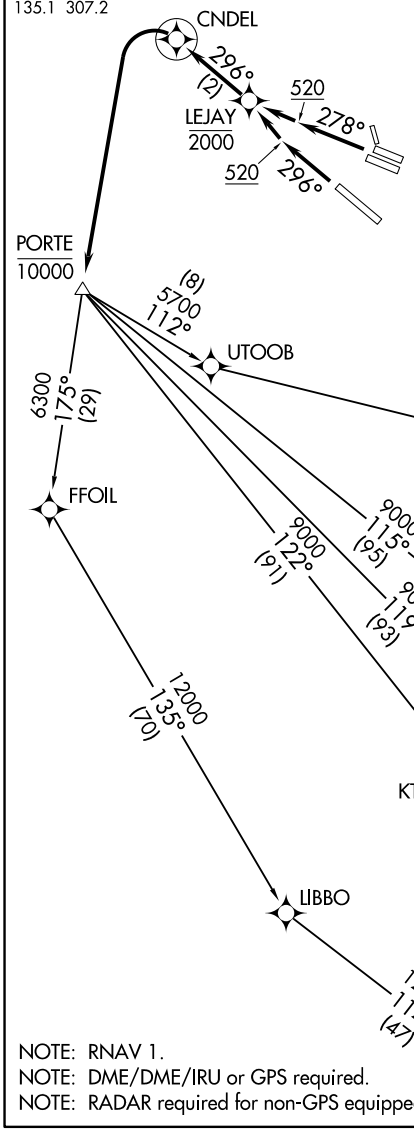
TAKEOFF MINIMUMS
Rwys 10L/R, 19L/R, 28L/R: NA-ATC.
Rwys 1L/R: Standard with minimum climb of 500' per NM to 1600.

NOTE: GPS required.
NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: Do not exceed 210K until leaving 520 feet.

NOTE: Chart not to scale.

D-ATIS 133.775
CLNC DEL
121.1
CPDLC
GND CON
121.9 (Rwys 28L/R)
121.75 (Rwy 30)
OAKLAND TOWER
118.3 291.65 (Rwys 28L/R)
127.2 256.9 (Rwy 30)
NORCAL DEP CON
135.1 307.2

TOP ALTITUDE: 10000



DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 28L, 28R: Climb heading 278° to 520, then direct to cross LEJAY at or below 2000, then on track 296° to CNDEL, then left turn direct to cross PORTE at or below 10000. Thence. . . .

TAKEOFF RUNWAY 30: Climb heading 296° to 520, then direct to cross LEJAY at or below 2000, then on track 296° to CNDEL, then left turn direct to cross PORTE at or below 10000. Thence. . . .

. . . . on (transition). Maintain 10000, expect filed altitude 10 minutes after departure.

CISKO TRANSITION (CNDEL4.CISKO)
EBAYE TRANSITION (CNDEL4.EBAYE)
LOSHN TRANSITION (CNDEL4.LOSHN)
NTELL TRANSITION (CNDEL4.NTELL)
YYUNG TRANSITION (CNDEL4.YYUNG)

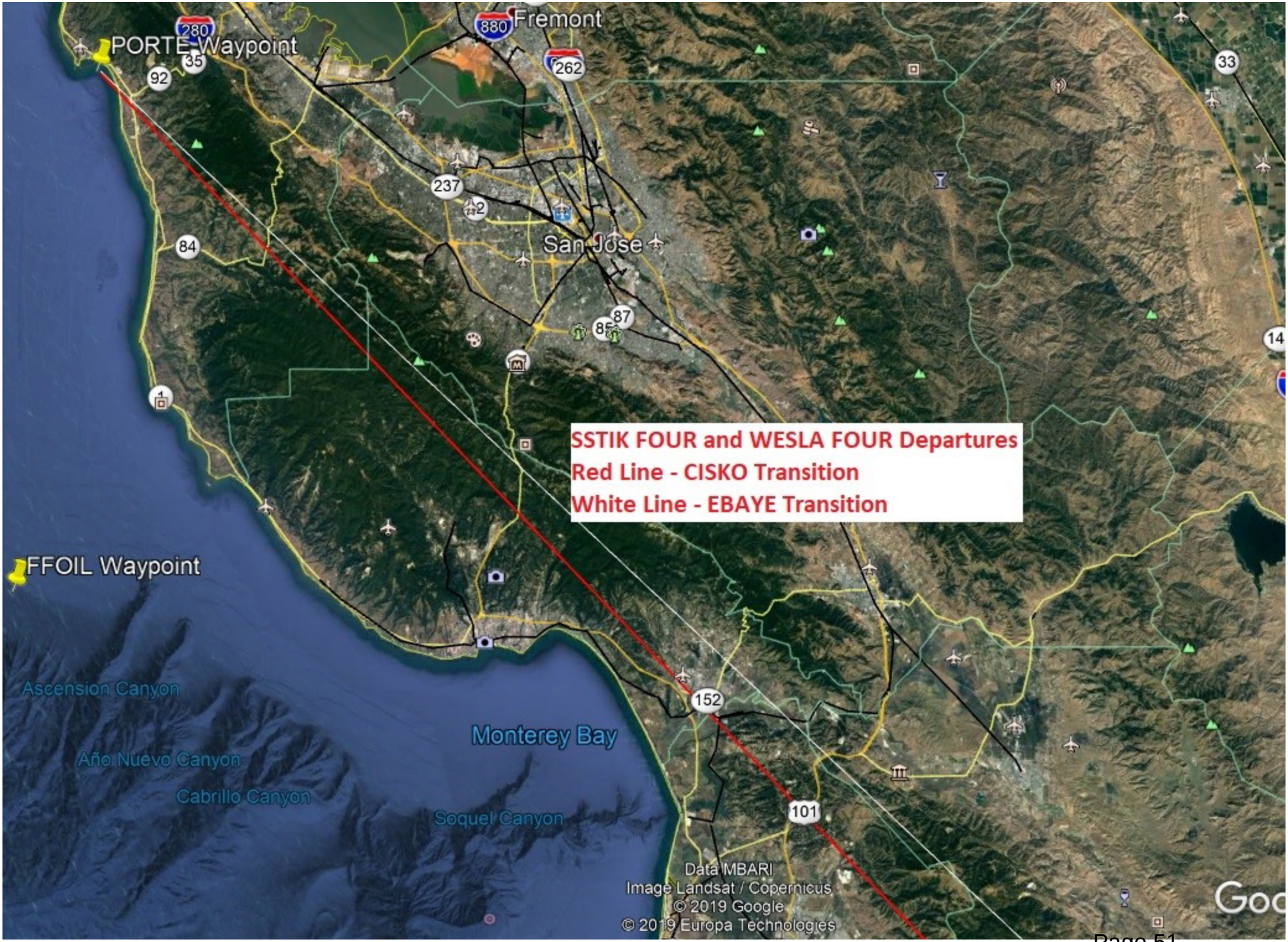
TAKEOFF MINIMUMS
Rwys 10L/R, 12, 15, 33: NA - ATC.
Rwys 28L/R, 30: Standard with minimum climb of 500′ per NM to 520.

NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: RADAR required for non-GPS equipped aircraft.

NOTE: Chart not to scale.

SW-2, 02 JAN 2020 to 30 JAN 2020

SW-2, 02 JAN 2020 to 30 JAN 2020


PORTE Waypoint
Fremont
San Jose
SSTIK FOUR and WESLA FOUR Departures
Red Line - CISKO Transition
White Line - EBAYE Transition
FFOIL Waypoint
Ascension Canyon
Año Nuevo Canyon
Cabrillo Canyon
Monterey Bay
Soquel Canyon
Data MBARI
Image Landsat / Copernicus
© 2019 Google
© 2019 Europa Technologies

SCSC Roundtable Emails Received

December 16, 2019 – January 17, 2020

December 16, 2019

Name

Robert Holbrook

Message

The other SERFR FOUR modification

Mr. Alverson,

At Thursday's meeting, I hope you will interpret the other modification to SERFR FOUR cited in the packet posted at the IFP Gateway, "Added terminus Rwy Data at EDDYY in Additional Flight Data," and explain to us its significance, if any.

Hopefully, this is of no consequence.

Regards,
Robert Holbrook

December 17, 2019

Name

Cheryl Poland

Message

Work Plan Comment

My position on the work plan is that section 1.1.3 should be removed completely (for all the obvious reasons). SERFR/BSR are already covered in section 1.1 above, as part of the SC recommendations. Additionally, under section 1.1.1, the second, third and fourth bullets should be removed as they constitute interference with the SC recommendations. The fifth bullet states "Assess changes after implementation, identify any unanticipated noise impacts, and work with the FAA to mitigate them as quickly as possible." This bullet describes the correct process. Once the new procedure has been implemented, if there are legitimate issues, the RT can take that up with the FAA for a potential future change.

*Forwarded from Chair Mary-Lynne Bernald

December 21, 2019

Name

Robert Holbrook

Message

Technical issue with agenda packet

Steve,

I'm unable to work with the agenda packet for the last meeting. I can read it, but when I try to extract pages from it, (pages 6-12, for example), I get the error, "There was a problem reading this document (15)".

I'd like to save clean and redlined copies of the Strategic Plan and Work Plan to my computer. Also the FOIA results. I'm using Adobe Acrobat XI on Windows 10. I redownloaded the packet and got the same error.

Can you see if you have the same problem on your end and see if you can fix it?

Thanks in advance and happy holidays,

Robert

December 30, 2019

Name

Jennifer Landesmann

Message

Time sensitive: Please appeal for an extension for comments to SJC draft EIR

Dear Palo Alto City Council, SCSC Roundtable, Representative Eshoo's office,

I urge you to please appeal to extend the comment deadline for the SJC draft environmental impact report. You may have seen today's Mercury News article.

Mineta San Jose Airport projects 50 percent passenger growth, proposes expansion

per the article,

"Members of the public can submit comments on the draft environmental impact report to David Keyon in the city's Department of Planning, Building and Code Enforcement at 408-535-7898 or via e-mail at David.Keyon@sanjoseca.gov until Jan. 13, 2020."

If you cannot help extend the deadline or have reasons why you don't think it's necessary or appropriate to ask, I would appreciate any information about why that would be the case.

Thank you,

Jennifer Landesmann
Palo Alto, CA

December 31, 2019

Name

Jennifer Landesmann

Message

San Jose Airport Expansion

Hello Chair Bernald,

Thank you for replying, will my inquiry still go to all roundtable members? If the constraints of the SCSC schedule make it a problem to make this extension appeal am hoping that perhaps individual members can take an interest and ask. I'll also try contacting the county boards.

Jennifer Landesmann
Palo Alto, CA

December 31, 2019

Name

Jennifer Landesmann

Message

San Jose Airport Expansion

Thank you!

Happy New Year!

Jennifer Landesmann
Palo Alto, CA

January 3, 2020

Name

Michelle Flaherty, City of Palo Alto

Message

Time sensitive: Please appeal for an extension for comments to SJC draft EIR

Hi Jennifer.

The City of Palo Alto provided comments to the City of San José back when they were originally scoping their Environmental Impact Report for the Master Plan Update for the Norman Y. Mineta San José International Airport. You can find a copy of our letter dated January 31, 2019, on the airplane nose page of our website.

Happy New Year,

Michelle

January 3, 2020

Name

Jennifer Landesmann

Message

Time sensitive: Please appeal for an extension for comments to SJC draft EIR

Thank you Michelle,

Happy New Year!

Since there wasn't much outreach from SJC to communities about this draft EIR and it seems the topic wasn't further discussed at the SCSC roundtable in much detail (after the City's letter last January) & the next SCSC meeting is after the deadline, we'll do our best to send some additional questions and comments before the 13th.

Jennifer Landesmann
Palo Alto, CA

January 3, 2020

Name

Lydia Kou

Message

SFO Community Roundtable meeting notes from December 4, 2019

SCSC Roundtable Member colleagues,

Here are my notes on the December 4, 2019 SFO-RT meeting that I attended (see below the topics related to the SFO-RT agenda items). I have listed my suggested next steps that should be considered by the SCSC RT because the items are relevant to our member communities:

- Publicize that SFO has a webtracker site that is publically available: post link on the SCSC RT website and I will mention it at the next RT meeting (topic 6).
- Post new legislation (8 pieces of legislature introduced) on the SCSC RT website and keep track of progress through Legislative committee (topic 7).
- Ensure that the SCSC RT is involved in the discussions related to the placement of SFO portable monitors (topic 10).
- Track publication of overdue reports via Congressional Offices (topic 17).

Here are the links to the meeting packet, agenda, and video.
Cheers and Happy New Year!
Lydia

Topic 5. SFO updates (Ivar Satero; timestamp 26:50)

- GBAS:
  - Ivar Satero reiterated that SFO is committed to follow a transparent process that fully engages the community.
  - Contract negotiations with Honeywell (who supplies the GBAS system) are difficult (issue is liability). SFO is joining forces with other airports who face the same problem. SFO is still proceeding with implementing the hard infrastructure part that SFO controls, not Honeywell.
- Traffic:
  - Flat growth in passengers from last year (domestic down 3% but international up 7%). However domestic aircraft are smaller than international aircraft, which means that operations are up.
    - Request by Redwood City to provide breakdown of operations between day and night.
  - Norwegian Air moved operations from OAK to SFO. No need for the airline to request anything from the FAA as they were already approved to fly to OAK. Norwegian Air decides the schedule.
  - SFO does not encourage the use of evening hours.
  - Hong Kong airlines terminated service at SFO due to financial difficulties.
- NIITE-HUSHH departure procedure: SFO continuing to work with the FAA and engaging with airlines to understand environmental impacts of further utilization of the procedure (NIITE HUSHH is not a new design) especially in northern areas (San Francisco and Marin).
- New noise monitoring system (33:30):
  - Relocating one permanent monitor from Site 11 to Burlingame because of land swap that occurred (change was agreed to by Burlingame community)
  - Training staff on new software.

- Shifting noise (45:15): Ivar Satero clarified the SFO position about shifting noise. SFO does not want to shift noise post Metroplex Next Gen. SFO completely understands and empathizes with the shifts that occurred with the Metroplex changes.

Topic 6. SFO Web tracker (Bert Ganoung; 52:00 --short demo) - Available at https://webtrak.emsbk.com/sfo13

- Public comment: Mark Shull mentioned that noise monitors (not required for noise contours) are federally funded via the FAA AIP (Airport Improvement Program) . Bert Ganoung also stated that they have noise data since 1999. Potentially these could be used for data analyses.
- SCSC RT Consideration: Publicize that SFO has a webtracker website that is publically available (post link on the SCSC RT website; mention link at RT meeting).

Topic 7. Legislative update from Speier's office by Kathleen Wentworth and Brian Perkins (1:12:15)

- 8 pieces of legislature introduced (13 sponsors on some bills, 5 sponsors on other bills).
- Next step will be to go through the standard process and request a hearing.
- Public comments: The public asks what the community could do to support these bills; answer was that more representatives should sponsor or support the bill.
- SCSC RT Consideration: Post new legislation on the SCSC RT website and keep track of progress through Legislative committee.

Topic 10. Policy of placement of portable monitors (Elizabeth Lewis. 1:53:30)

- The current 4 portable monitors will be replaced by 8 new portable monitors.
- The SFO RT will form an ad hoc committee to determine policy and procedure (Menlo Park, Hillsborough, Brisbane will be on the committee; maybe some other members). Questions to be addressed include rotation schedule, data, etc.
- Ivar mentioned that Bert should be involved as well and that committee should consider outline communities (e.g. consider locations outside San Francisco and San Mateo counties)
- Public comments:
    - Marie-Jo Fremont asked why the SFO RT is deciding on locations of monitors even though the RT does not own or pay for the monitors.
    - Lydia Kou reiterated the need to include other communities outside San Mateo and San Francisco counties.
- SCSC RT Consideration: Ensure that the SCSC RT is involved in the discussions related to the placement of portable monitors.

Topic 14. PIRAT TWO (2:01:15) -- No news from the RT members.

- Public comments:
    - Rebecca Ward spoke about PIRAT TWO having shifted the noise and the need for Palo Alto to be part of the SFO RT
    - Mark Shull gave a history of Oceanic arrivals where the tracks shifted south over the years. Over time, the heading from Woodside moved from 010 to 040, then to 060 with PIRAT TWO because of various requests to increase altitudes near Woodside.

Topic 16. Formal Collaboration with other Bay Area RTs (Ann Wengert) (2:06:05)

- Challenges in getting things off the ground. Some progress with SCSC RT. No progress with OAK noise forum. Will continue to pursue them to get them to the table. We also need to have congressional support.
- Ann hopes to identify a meeting date by early January.

Topic 17. Aviation News (Justin, Technical Consultant) (2:09:15 see slides)

- New $1.7 M FAA grant awarded to MIT and Boston University School of Public Health to study the Potential Health and Economic Impact of Overflights. Locations include Northern California Metroplex.
- Report on alternatives metrics to DNL is supposed to be submitted by the end of 2019.
- Report on Community Involvement Practices for NextGen Metroplex Projects is late (was due this year). Unclear why it is late.
- Because of their concern about the FAA lack of responsiveness, the Quiet Skies Caucus sent the FAA 45 questions on Nov 5, 2019. and asked for a response within 30 days.
- New helicopter service (Airbus Voom Service) between SFO and 4 other Bay Area airports (includes SJC, OAK, and PAO). SFO - Palo Alto ride about $200 in about 10 min. Bert mentioned that there are now 4 helicopter carriers in the Bay Area. Do not have call signs.
- SCSC RT Consideration: Track publication of overdue reports via Congressional Offices.

Lydia Kou

January 4, 2020

Name

Jennifer Landesmann

Message

Minutes of last meeting

Hi Evan and Steve,

The SCSC Meetings page suggests that Minutes are available for the 12/19 meeting but the link leads to the audio file, not the minutes.

Do you have the Minutes for the 12/19 meeting or an expected date that you will have them? Am looking for a final copy of the language that was voted on for the Strategic plan if you happen to have that as well and a summary of actions taken. Thanks,

Jennifer

January 4, 2020

Name

Mike McClintock

Message

Fwd: OAK Forum Agenda Materials for 1-15-2020 Forum Meeting

Happy New Year to all:

Attached are the agenda materials for the January 15 Forum meeting.
Please note that the attached legislative update applies only to the 8 bills that Peninsula Congresswoman Jackie Speier introduced in the House in November. HMMH will provide a more in-depth presentation on these 8 bills and others at the meeting.

Please contact me if any questions.

Mike McClintock
Forum Facilitator

Attachment Summary

20200104_M_McClintock_Oak Forum Agneda Materials for 1-15-2020 Forum Meeting

Evan Wasserman

From: Mike McClintock <glomike65@aol.com>
Sent: Saturday, January 4, 2020 3:02 PM
To: glomike65@aol.com
Subject: OAK Forum Agenda Materials for 1-15-2020 Forum Meeting
Attachments: 3Q2019_Noise Abatement Report.pdf; DRAFT Forum 2020 Work Plan DRAFT.pdf; Draft Minutes 10-16-19 Forum Mtg.pdf; FAA Ltr 12-04-2019.pdf; Forum 1-15-2020 Agenda.pdf; Legislative Update Congresswoman Jackie Speier 2019 - FAA & Airport noise.pdf; OAK Forum 2020 Membership Roster.pdf

Categories: Yellow Category

Happy New Year to all:

Attached are the agenda materials for the January 15 Forum meeting.
Please note that the attached legislative update applies only to the 8 bills that Peninsula Congresswoman Jackie Speier introduced in the House in November. HMMH will provide a more in-depth presentation on these 8 bills and others at the meeting.

Please contact me if any questions.

Mike McClintock
Forum Facilitator
415-203-9097

All attachments are provided on the SCSC Roundtable website at the following address
https://scscroundtable.org/oak-noise-forum/

January 8, 2020

Name

Carlos Palacios via Nancy Weitzel

Message

From: Nancy Weitzel Letter to the FAA Roundtable Members from County of Santa Cruz. Thank you.

To: Mary-Lynne Bernald, Chairperson
Andi Jordan, Cities Association of Santa Clara County
Evan Wasserman, ESA
Steve Alverson, ESA

Please see letter, with attachments, from Mr. Carlos J. Palacios, CAO, County of Santa Cruz.

Please kindly send a quick reply to confirm that you have received these documents.

Thank you,
Nancy Weitzel
Executive Secretary to CAO
County of Santa Cruz

Attachment Summary

2020 08 01_FAA Roundtable Letter_Work Plan Request_Full

County of Santa Cruz

COUNTY ADMINISTRATIVE OFFICE
701 OCEAN STREET, SUITE 520, SANTA CRUZ, CA 95060-4073
(831) 454-2100 FAX: (831) 454-3420 TDD/TTY: call 711
CARLOS J. PALACIOS, COUNTY ADMINISTRATIVE OFFICER

January 8, 2020

Members, Santa Cruz/Santa Clara Counties Airport/Community Roundtable
P.O. Box 3144
Los Altos, California 94024

Dear Members of the Roundtable,

Santa Cruz County requests that the following FAA routes and issues be included in the Roundtable's Work Plan which is currently under development. These routes are generally departures from SFO or OAK which ascend over Santa Cruz mountain communities that are already impacted by SERFR and BRIXX. In some cases, the FAA has reduced flight altitudes on these routes by moving certain waypoints onshore instead of giving planes more ascent time over the ocean before crossing over land. We have received numerous noise complaints from county residents about these routes since the 2015 implementation of NextGen.

1. WESLA FOUR departure to the CISKO and EBAYE transitions – uses the PORTE waypoint and then ascends over the Santa Cruz Mountains creating noise on the ground.
2. SSTIK FOUR departure to CISKO and EBAYE transitions – also uses PORTE waypoint and then ascends over the Santa Cruz Mountains creating noise on the ground.
3. CNDEL FOUR departure out of Oakland, also uses the same flight paths as WESLA and SSTIK after PORTE Waypoint.

Community members have suggested that these flights could be directed to the existing YYUNG Transition which uses the FFOIL Waypoint over water, thereby keeping the noisier initial ascent to over the ocean rather than over land. We request that this and other solutions be included for investigation in the Roundtable Work Plan.

Thank you,

Carlos J. Palacios
County Administrative Officer

Attachments:
WESLA FOUR DEPARTURE Chart
SSTIK FOUR DEPARTURE Chart
CNDEL FOUR DEPARTURE Chart
Area map showing selected routes and waypoints

D-ATIS
113.7 115.8 118.85
CLNC DEL
118.2
CPDLC
GND CON
121.8
SAN FRANCISCO TOWER
120.5 269.1
NORCAL DEP CON
135.1 307.2

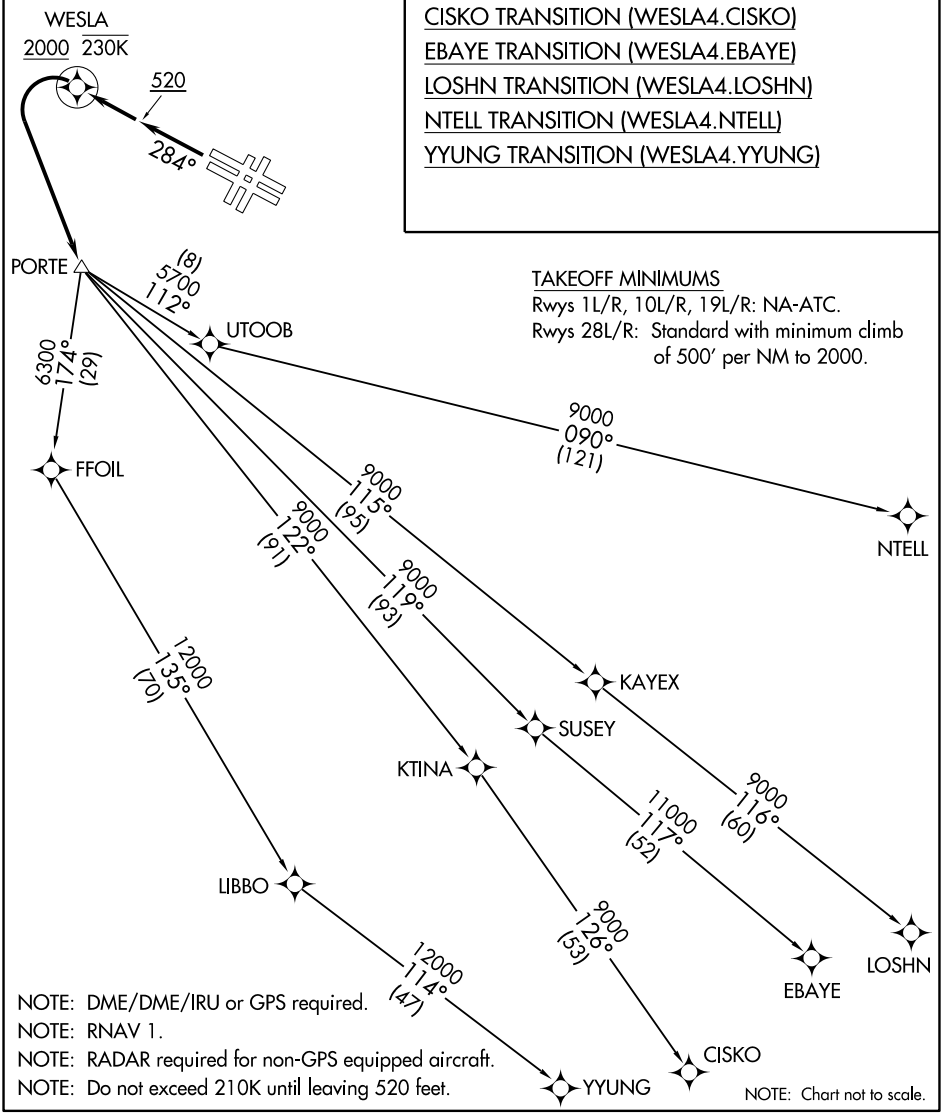
TOP ALTITUDE: 3000

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 28L/R: Climb heading 284° to 520, then direct WESLA at or above 2000 at or below 230K, then left turn direct PORTE, thence . . . .

. . . . on (transition) maintain 3000, expect filed altitude 10 minutes after departure.

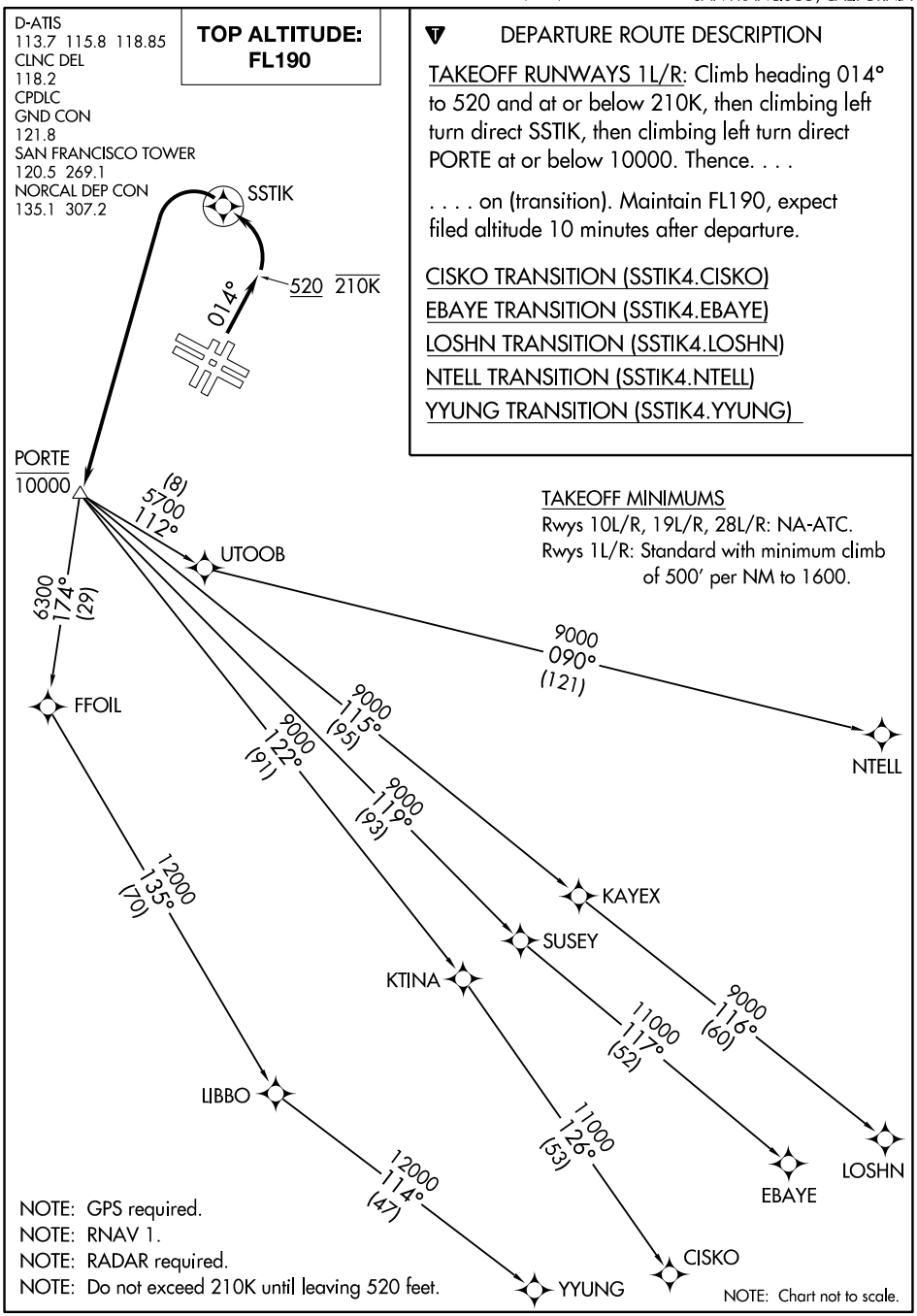
CISKO TRANSITION (WESLA4.CISKO)
EBAYE TRANSITION (WESLA4.EBAYE)
LOSHN TRANSITION (WESLA4.LOSHN)
NTELL TRANSITION (WESLA4.NTELL)
YYUNG TRANSITION (WESLA4.YYUNG)



TAKEOFF MINIMUMS
Rwys 1L/R, 10L/R, 19L/R: NA-ATC.
Rwys 28L/R: Standard with minimum climb of 500′ per NM to 2000.

NOTE: DME/DME/IRU or GPS required.
NOTE: RNAV 1.
NOTE: RADAR required for non-GPS equipped aircraft.
NOTE: Do not exceed 210K until leaving 520 feet.

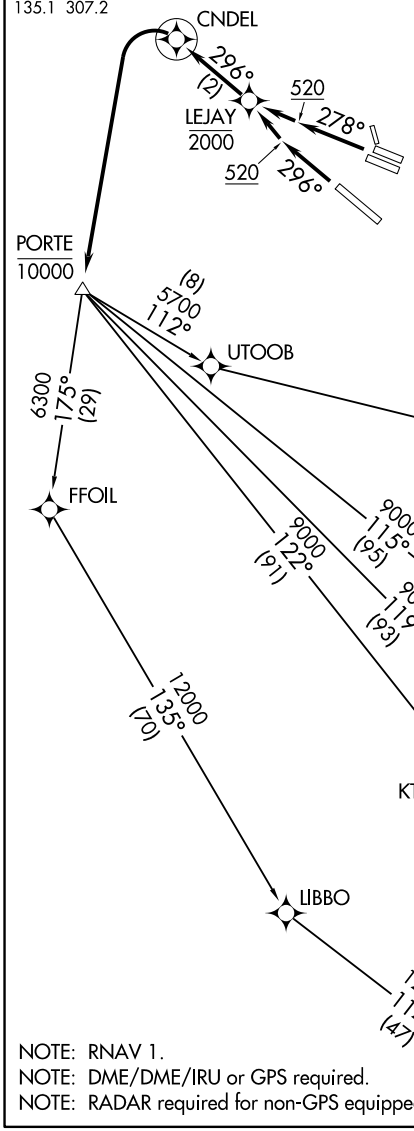
NOTE: Chart not to scale.



SW-2, 02 JAN 2020 to 30 JAN 2020

D-ATIS 133.775
CLNC DEL
121.1
CPDLC
GND CON
121.9 (Rwys 28L/R)
121.75 (Rwy 30)
OAKLAND TOWER
118.3 291.65 (Rwys 28L/R)
127.2 256.9 (Rwy 30)
NORCAL DEP CON
135.1 307.2

TOP ALTITUDE: 10000



DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 28L, 28R: Climb heading 278° to 520, then direct to cross LEJAY at or below 2000, then on track 296° to CNDEL, then left turn direct to cross PORTE at or below 10000. Thence. . . .

TAKEOFF RUNWAY 30: Climb heading 296° to 520, then direct to cross LEJAY at or below 2000, then on track 296° to CNDEL, then left turn direct to cross PORTE at or below 10000. Thence. . . .

. . . . on (transition). Maintain 10000, expect filed altitude 10 minutes after departure.

CISKO TRANSITION (CNDEL4.CISKO)
EBAYE TRANSITION (CNDEL4.EBAYE)
LOSHN TRANSITION (CNDEL4.LOSHN)
NTELL TRANSITION (CNDEL4.NTELL)
YYUNG TRANSITION (CNDEL4.YYUNG)

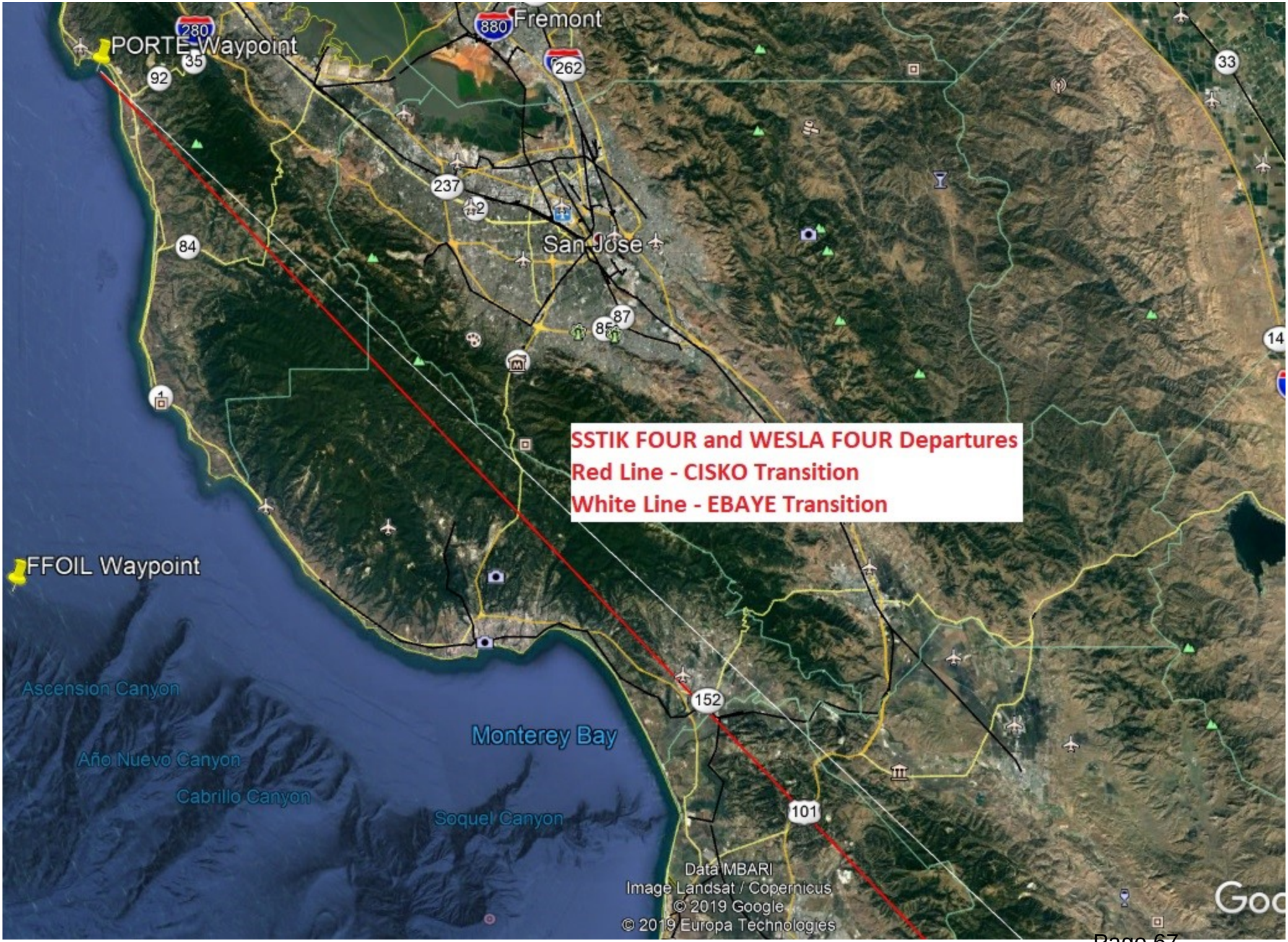
TAKEOFF MINIMUMS
Rwys 10L/R, 12, 15, 33: NA - ATC.
Rwys 28L/R, 30: Standard with minimum climb of 500′ per NM to 520.

NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: RADAR required for non-GPS equipped aircraft.

NOTE: Chart not to scale.

SW-2, 02 JAN 2020 to 30 JAN 2020

SW-2, 02 JAN 2020 to 30 JAN 2020


PORTE Waypoint
Fremont
San Jose
SSTIK FOUR and WESLA FOUR Departures
Red Line - CISKO Transition
White Line - EBAYE Transition
FFOIL Waypoint
Ascension Canyon
Monterey Bay
Año Nuevo Canyon
Cabrillo Canyon
Soquel Canyon
Data MBARI
Image Landsat / Copernicus
© 2019 Google
© 2019 Europa Technologies

January 8, 2020

Name

Rosmarie Herschbach

Message

Jan_8_2020_Herschbach_Letter

Dear Round Table:

First of all, I want to thank you for all you do for the people impacted by jet noise. I have been suffering from jet noise, ever since the Next generation law was passed on March 15, 2015. It is really bad now, mainly at night, whereby thousands of jet airplanes fly over my property, neighbors and surrounding area. I get flights from San Francisco, San Jose and Oakland airports. Jets fly night and day, and do not let me sleep. I have no peace and quiet moments. It is really driving me crazy.

I live at [redacted]. I live at this place since the year 1979. It was quiet and pleasant then. I live up the hill where the jet noise is louder. Monterey County. I have gone to many meetings, written many E mails, and letters to Jimmy Panetta, Dianne Feinstein and others, to no avail. Instead of the noise getting better, it is much worse. I am really getting sick and stressed out with the awful noise and the lack of sleep.

I would like you to be so kind and help me with the following: I would like the jets, to fly back the old and safe routes over Granite Rock etc. in San Benito County. Go back to the Big Sur Route, and get rid of the new routes the FAA made like SURFER and BRIXX. And, of course, don't fly over my property, neighbors at [redacted]. or surrounding areas. I hope that will solve the problem.
Thank you in advance for being so kind and help me with this awful jet noise problem, I am,

Sincerely,

Rosmarie Herschbach

Attachment Summary

20200108_R_Herschbach_Jan_8_2020_Herschbach_Letter

SC Roundtable
PO Box 3144
Los Altos, CA 94024-0144

January 8, 2020

Dear Round Table:

First of all, I want to thank you for all you do for the people impacted by jet noise.
I have been suffering from jet noise, ever since the Next generation law was passed on March 15, 2015. It is really bad now, mainly at night, whereby thousands of jet airplanes fly over my property, neighbors and surrounding area. I get flights from San Francisco, San Jose and Oakland airports. Jets fly night and day, and do not let me sleep. I have no peace and quiet moments. It is really driving me crazy.

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Thank you in advance for being so kind and help me with this awful jet noise problem, I am,

Sincerely,
Rosmarie Herschbach
Rosmarie Herschbach
[redacted]

January 10, 2020

Name

Mary-Lynne Bernald

Message

Legislation Representative Eshoo introduced and Cosponsored this week

FYI. The information contained below came from Rep Eshoo's weekly newsletter. I felt it was worthy of sharing.

Mary-Lynne
Legislation Anna Introduced and Cosponsored this Week

Cleaner, Quieter Airplanes Act

Aviation currently accounts for approximately three percent of the nation's total greenhouse gas emissions, and the emission rates are expected to triple by 2050. The Cleaner, Quieter Airplanes Act bolsters NASA's efforts to reduce emissions from aviation, while also reducing the impact of airplane noise. Specifically, this bill:

- Establishes a goal of commercial airplanes emitting 50 percent less greenhouse gas and 50 percent less noise compared to 2019 levels by 2030 for regional planes and 2040 for larger, single-aisle planes;
- Authorizes NASA to accelerate its work on electrified propulsion systems to achieve noise and emissions reductions;
- Challenges NASA to work with industry partners to carry out flight tests by 2025 and to bring new airplanes into service between 2030 and 2040; and
- Requires NASA to provide guidance on new technologies to help the FAA's work to ensure the safe and effective deployment of these technologies.

January 13, 2020

Name

Lydia Kou

Message

Request to put BSR Overlay on agenda of Jan 22 SCSC RT meeting

Dear Mary-Lynne,

Happy new year! I hope that you enjoyed the holiday season.

I have a simple question for you: will the FAA present something on the BSR Overlay topic at our Jan 22nd meeting? It would be great if they do.

However, if they don't, I would like to request to have the BSR Overlay on the Jan 22nd agenda to allow the Roundtable to have a brief discussion on the topic (10 or 15 min), including possible actions we may want to take.

Roundtable Members from Los Altos, Los Altos Hills, and Mountain View are cc'ed, these communities will be directly affected by the proposed BSR Overlay.

Cheers,

Lydia Kou - Council Member

January 14, 2020

Name

Evan Wasserman

Message

Invitation to 2020 UC Davis Aviation Noise & Emissions Symposium

Dear SCSC Roundtable Members and Alternates,

We are passing along the attached invitation and message from Anne Kohut below at her request.

Dear Airport Noise Report and Aviation Emissions Report Subscribers:

I am helping promote the upcoming 2020 UC Davis Aviation Noise & Emissions Symposium, which will be held on March 1-3, 2020, in San Diego.

For those who have attended the symposium in the past and plan to do so this year, I look forward to seeing you in warm and sunny San Diego.

For those who have not yet attended the symposium, I hope the attached invitation encourages you to do so.

This year's program is especially relevant to addressing current issues facing aviation noise and emissions professionals. The Planning Committee has assembled some of the world's leading experts on matters of importance to you.

Please feel free to distribute the invitation to your contacts who might be interested in attending.

Best regards.

Anne Kohut
Publisher, ANR/AER
Member of Symposium Planning Committee

Regards,

SCSC Roundtable Staff

Attachment Summary

20200114_E_Wasserman_invitation to industry

UNIVERSITY OF CALIFORNIA, DAVIS

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ONE SHIELDS AVENUE
DAVIS, CALIFORNIA 95616
http://aqrc.ucdavis.edu

Dear Aviation Noise and Emissions Professional:

It is my great pleasure to invite you to attend the 33rd annual Aviation Noise & Emissions Symposium, which will be held on March 1-3, 2020, in San Diego.

The symposium, which is sponsored by the University of California at Davis, is the premiere event nationally and internationally for bringing together the broad range of stakeholders tackling difficult aviation noise and emissions issues, especially as satellite-based navigation has changed how and where planes fly.

Symposium attendees include aviation industry officials, consultants, attorneys, researchers, elected officials, government officials, representatives of airport-community roundtables, and grassroots community groups.

This year's Planning Committee has assembled a stellar panel of speakers from the U.S., Canada, and Europe who are among the world's leading experts on the health effects of aircraft noise and emissions exposure and on efforts the aviation industry is making to address them.

Symposium sessions that will be of special interest to aviation noise and emissions professionals will:

• Define successful practices airports can use to improve community engagement on noise and emissions issues. Provide insights from around the world on what works, what may not work, and how they can be more effective in community outreach and engagement;

• Address how air traffic management concepts and new aircraft navigation technologies are being leveraged to lessen aircraft noise and emissions impacts on the communities surrounding airports;

• Detail aircraft operator strategies for reducing noise and emissions impacts and general aviation noise mitigation initiatives;

• Discuss environmental impacts expected from emerging airspace entrants, including new supersonic aircraft and eVTOL aircraft.

The full two-day program, with information on speakers, can be found at the symposium website: https://anesymposium.aqrc.ucdavis.edu/

The Aviation Noise & Emissions Symposium in unique and especially valuable in providing attendees with an opportunity to expand their interaction with the broad range of stakeholders who attend. We believe that important progress in addressing aircraft noise and emissions impacts can be gained through such networking.

Please feel free to contact me regarding any questions you have about the symposium.

I look forward to seeing you in San Diego.

With warmest regards,

Sandra Hall
Manager
UC Davis Air Quality Research Center
Conference and Outreach Program
(sehall@ucdavis.edu)

January 16, 2020

Name

Lydia Kou

Message

Fwd: Request to put BSR Overlay on agenda of Jan 22 SCSC RT meeting

Dear Mary-Lynne,

Thank you for the prompt response to my email. Yes, the days are speeding by and that's what causes my anxiety when questions are not responded to.

Can you please let me know if the BSR Overlay questions listed in the email sent by Marie-Jo Fremont to the Roundtable (see page 117 of the Dec 19, 2019 meeting packet) have been sent to the FAA? If not, then I would like to request a few minutes on the Jan 22 agenda to confirm that we will send them in time to meet the 30-day deadline and ensure that the FAA presentation on Feb 26 will address these questions.

In addition, what is the status on the PIRAT TWO questions that I provided months ago as a follow up to the questions the FAA was unable to answer in their presentation to the Roundtable? Have they been sent to the FAA and when, and will they be addressed as well in the Feb 26 meeting? I believe per Sky's comments at the December meeting that the FAA is planning to respond to the SUNNE 120 questions.

Additionally, at the December meeting Steve displayed the current version of a new document listing actions items and status.Hopefully this will be posted in the January meeting packet or on the website so in the future we will know if questions have been sent to the FAA, etc.

There's a lot of anxiety and frustration from Palo Alto residents due to the lack of information and slow reaction to FAA proposals/actions that has and will negatively impact residents.

Kind regards,

- Lydia Kou - Council Member

January 16, 2020

Name

Jennifer Landesmann

Message

Minutes of last meeting

Hi Steve,

Thank you for the reply, and I now see the 12/19 minutes.

It is concerning that the SCSC has not responded to questions about misinformation and misleading items on the strategic plan and hastily voted before doing so. The SCSC needs to please make sure the public record reflects facts (make corrections) and at the minimum the Minutes should reflect public objections about the plan's misinformation.

The errors and omissions on the SCSC Strategic Plan posted January 6, 2020 raise several questions - most problematic is if the errors and omissions are really saying that the SCSC may not be guided by a regional view. Below I provide references to how **the SCSC does not acknowledge interdependency of airspace actions or Metroplex capacity issues;** yet gives valuable space to a fictitious claim about FAA noise policy. The "background" in the SCSC plan does not do right for the hundreds of people who brought the issue to the public agenda.I mentioned at the 12/19 meeting that I would share documents and references to help correct and clarify some items. FAA's report about altitudes changes at Menlo, and the multi-city citizen letter for Rep Eshoo about noise baselines are below.

In order of appearance in the strategic plan: **my suggested clarifications/corrections in BLUE** and references highlighted.

"In 2007 **(should be 2006 see** Oceanic Tailored Arrivals SFO 2006 PRESS RELEASE.**)**, the Federal Aviation Administration (FAA) began modernizing the nation's air transportation system through implementation of the Next Generation Aircraft Transportation System (NextGen). **NextGen is not one technology, product, or goal. The NextGen portfolio encompasses the planning and implementation of innovative new technologies and airspace procedures (see** FAA description of what Nextgen is and is not**)**. As part of NextGen, the FAA implemented the Northern California Optimization of Airspace and Procedures in the Metroplex (NorCal OAPM or Metroplex) project. **In 2006 FAA introduced one of the first Nextgen procedures, Oceanic Tailored Arrivals (reference is the above SFO 2016 press release).** Beginning in 2015, the NorCal Metroplex Project introduced new aircraft arrival and departure procedures serving San Francisco International Airport (SFO), Oakland International Airport (OAK), Norman Y. Mineta San Jose International Airport (SJC), and Sacramento International Airport (SMF)." **Metroplex are** metropolitan areas with multiple airports and complex air traffic flows."(see definition https://www.faa.gov/nextgen/snapshots/metroplexes/). Several of the new procedures utilize area navigation (RNAV) technology, which relies on GPS technology and flight management systems.

Why do these clarifications matter? Regional officials and the public need accurate context and solid understanding of what Nextgen and Metroplex are (or are not) - with relevancy of these to local issues. It matters that Oceanic Tailored Arrivals (converted to PIRAT) began when Nextgen began in 2006 and it's inaccurate and misleading to skip to 2015 to suggest that is when NextGen began in the Bay Area.

These navigation tools allow for reduced separation between aircraft in flight, which serves to increase airport capacity (**see how Adm Michael Huerta describes this** but also lead to more aircraft being directed to use these procedures which results in transfer of traffic from other areas and new traffic to be concentrated in these procedures, plus there is associated vectoring. Furthermore, these changes have also resulted in lower altitudes. Consequently, people living in communities beneath these new procedure corridors, and associated vectored flight paths, are experiencing a substantial increase in aircraft noise. **SCSC members are *newly* affected communities** which did not have any complaints before and are not in the vicinity of where the largest Metroplex airports evaluate or consider noise. The Roundtable recognizes that FAA's Noise Policies (see Noise Policies FAA reference) are embodied entirely in FAA Order 1050. FAA's Noise policy is applicable to everyone (operators, airports, communities) - **there is no distinction in FAA's Noise policies**

for making changes to flight paths to alleviate noise, vs to accommodate capacity increases *or* for safety reasons. It's ONE policy. FAA has been asking for greater community input to make decisions about moving flight paths in order to alleviate noise. The Roundtable further notes that implementation of some NextGen procedures did both move traffic and concentrate noise (NOISE WAS NOT CONCENTRATED BEFORE). The Roundtable does not consider reverting to pre-NextGen traffic distribution contrary to FAA's current policy.

Why do these changes matter? Naming an FAA Policy which does not exist is a serious breach of SCSC's principle of being a source of information, and communication. Even the SFO roundtable does not claim that no noise shifting is an FAA policy. The SFO RT has in their MOU no noise shifting as *their own understanding* (that they came up with) which required every City's Council to vote on and not just their roundtable rep. When Nextgen erupted, community leaders from Los Altos, Los Altos Hills, Woodside, Portola Valley, Palo Alto and Menlo Park met to respond to Representative Eshoo who asked us for a consensus letter to state what the FAA could do to implement change (see letter Mid Peninsula citizens Consensus letter for Representative Anna Eshoo). It was not an acceptable solution to have noise dumped on any one community (with the no noise shifting- NIMBY keep all the noise elsewhere SFO RT concept), citizens identified that protecting communities relies on noise baselines analysis. This was also an acknowledgment of the regional nature of noise.

Important to note BTW is how airport capacity increases (which adds to the region's noise) are not just specific flight path but also airport actions such as "Closely-Spaced Parallel Runways (CSPR)" (reference 2013 see article about "New Landing procedure at SFO"). The 2013 article further mentions that "In 2005, SFO launched a Simultaneous Offset Instrument Approach (SOIA), with a similar objective to improve runway utilization during bad weather."All of these procedures matter and require context also for GBAS transparency ahead.

In response to complaints from communities in the South Bay and Santa Cruz areas, Congressional Representatives Anna Eshoo, Jackie Speier, and former Congressional Representative Sam Farr, in coordination with the Cities Association of Santa Clara County, convened the Select Committee on South Bay Arrivals (Select Committee) in May 2016 to address noise complaints arising from aircraft arrival procedures serving SFO and SJC. The Select Committee issued its final report in November 2016, **(please include the link to the final Select Committee Report and the Chair's Transmittal letter in the Background)**

Last but not least, this phrase in Principle 3 is very troubling

"...while recognizing the autonomy of local governments and of commercial service airports (SFO, SJC, OAK) to make decisions within their respective jurisdictions."

Metroplex airspace actions are not autonomous decisions and this statement obfuscates this reality.

***If t*he SCSC is going to be "a focal point of information"** (Guiding Principle 1) then information in SCSC documents should be factual and *avoid misleading comments*; if the committee is going to make *"recommendations regarding policies*" (Guiding Principle 2) SCSC should know well what policies and laws govern this issue first. Most important, if the SCSC is going to "*communicate*" with local governments in noise sensitive areas and all stakeholders (Guiding Principle 3), it should understand the history of this issue really well and be transparent.

Given community trust issues with NextGen, the SCSC's guiding document should have a high standard. It is also important for officials to understand and end the mythology about noise in Palo Alto. Noise was not "always" an issue as the Chair suggested and it did not change because of the Asiana crash. What caused noise for Palo Alto? It was part of Nextgen's initial design that focused on accommodating more traffic in the Metroplex and did not consider people on the ground. FAA explained in 2017 in Appendix D page 106 of Phase Two Update (page 106) "*During the design phase of the SERFR arrival, the major airline carriers were present in order to ensure that the SERFR would be safe for their aircraft. During those discussions it was determined that in order to accommodate the majority of aircraft into SFO*, the descent gradient into RWY 28 would need to be between 2.72 o – 2.85 o." This explanation was also shared in testimony at the Select Committee. **Prior to Nextgen, when there were LESS aircraft flying over Menlo,** average altitudes were well above 5000 feet.

To use MENLO as the Metroplex/SFO workhorse at 1000 feet lower was airline thoughtlessness and very poor design to not think or consider what these actions meant to people on the ground. BTW to accommodate *the majority of planes to SFO, it is not necessary to go over one single waypoint, designs* can still be corrected.

Steve - since you have expert knowledge, I hope you will carefully consider the above references for correcting errors and omissions and if you disagree with any of these suggestions, please let me know and why.

We really need a body that can help develop solutions for communities with real facts and data, and we cannot afford a body that will at best be aimless by not working regionally; or at worse for SCSC documents and discussions to be a propaganda machine for airports, industry, with no intention to propose measurable relief to affected communities. While the proof is in actions, guiding documents matter.

Attachment Summary

20200116_J_Landesmann_Attach_2016-0303 Mid-peninsula responds to Eshoo-Farr-6 signed

20200116_J_Landesmann_Attach_PHASE 2 NCI-Phase-2-Report-Final-Report-ver-18a-FINAL-DRAFT-2

March 3, 2016

The Honorable Anna G. Eshoo (CA-18)
698 Emerson Street
Palo Alto, CA 94301

The Honorable Sam Farr (CA-20)
100 West Alisal Street
Salinas, CA 93901

Dear Representative Eshoo and Representative Farr,

Thank you for your letter of January 25, 2016 asking us for one letter, for the record, to state what the FAA can do to implement change. This letter captures our consensus and is signed by members of six community groups representing Los Altos, Los Altos Hills, Menlo Park, Palo Alto, Portola Valley, and Woodside. We are grateful for the time and resources you have devoted to advocating on our behalf to resolve the issue of aircraft noise pollution. We know that negotiations with the FAA have not been simple and we thank you for your continued commitment.

We recognize that the Bay Area has a complex airspace, and that discrete, non-systematic route and/or procedure changes designed to benefit one area may create unintended negative consequences for other communities. We have reached a consensus that there must be a regional solution to the Bay Area noise problem. We agree that there are four key principles that must guide any solutions:

First, noise, as experienced by citizens on the ground, must be made an FAA priority. We accept that safety for passengers and citizens on the ground must be the highest priority. However, noise pollution comes at great cost to those on the ground and communities cannot be asked to accept unlimited volumes of waste noise generated by the airline industry. We insist that aircraft noise pollution limits be prioritized ahead of airline operational efficiency, just as air pollution limits have been prioritized above the operational efficiencies of the automotive and energy industries.

Second, the FAA must adopt supplemental metrics for aircraft noise pollution that characterize the true impact of noise on people on the ground. The current metrics (e.g. FAA Order 1050.1F), that did not predict any "significant" increase in noise on the ground with the introduction of NextGen, clearly do not represent an accurate model of the impacts of aircraft noise, as evidenced by the 2000+% increase in noise complaints since the introduction of NextGen. But the FAA initiative document published on November 19, 2015 (FAA Initiative to Address Noise Concerns of Santa Cruz/Santa Clara/San Mateo and San Francisco Counties) insists that the FAA will continue to evaluate the impact of air traffic management proposals using the outdated and discredited DNL noise metric. New, supplemental noise metrics and models are a prerequisite for anticipating the true impact of noise *as experienced by people on the ground* of any proposed air traffic management modifications.

Third, the goal of mitigation efforts should be to ensure that absolute levels of aircraft noise and the frequency of noise disturbances in every Bay Area Metroplex home are reduced to or below an agreed upon historical baseline. We propose that 2006 should be used as the baseline. While most NextGen changes did not start to impact Bay Area communities until early 2015, earlier changes to traffic management practices in the Metroplex started impacting some Bay Area communities well before that time. Given improvements in aircraft and navigation systems, it should be possible to reduce aircraft noise to *below* 2006 levels. Accurate flight track data exist back to 2006 for noise modelling purposes. We note that flight operations at SFO did not increase between 1998 (432,046 flights) and 2014 (431,633 flights) per SFO Air Traffic Statistics records.

Fourth, the FAA must demonstrate by objective evidence that any noise reduction mitigations are effective. Independent noise monitoring stations should be installed throughout the affected region and data should be made public for analysis. This is the only way to objectively measure progress.

We request that the FAA engage us early on in a thoughtful, constructive process that is committed to finding solutions that will reduce aircraft noise for *all* citizens in the Bay Area Metroplex. Some of the cities that have signed below have already engaged air traffic management technical experts to conduct analyses and identify opportunities to improve the current situation. We offer these resources to help develop and review recommendations and modifications that come out of the FAA (e.g. through the Initiative of November 19, 2015).

Studies that evaluate proposed modifications must be reviewed in an open and transparent process before implementation, using accurate/realistic aircraft noise models.

We recognize that other communities in our nation are experiencing similar distress due to increased aircraft noise pollution. We hope we can help you create a model process and solution that can be implemented across the country.

With much gratitude for your continued support,

Pilar Parducci
Los Altos, California
Sky Posse, Los Altos

Charlene Mercadante
Los Altos Hills, California
Quiet Skies, Los Altos Hills

Margaret Spak
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Californians for Quiet Skies

Frank Rothschild
Woodside, California

cc: Mr. Glen Martin, Western Regional Administrator, FAA
Mr. Cliff Lentz, Chairperson, SFO Roundtable
Mr. John Martin, San Francisco International Airport Director
City governments of Los Altos, Menlo Park, and Palo Alto
Town governments of Los Altos Hills, Portola Valley, and Woodside

Federal Aviation Administration

FAA Initiative to Address Noise Concerns of Santa Cruz/Santa Clara/San Mateo/San Francisco Counties

UPDATE ON PHASE TWO

Compiled at the Requests
of Representatives Farr (Panetta),
Eshoo and Speier

November 2017

EXECUTIVE SUMMARY

In November 2015, the FAA released the "FAA Initiative to Address Noise Concerns in Santa Cruz/Santa Clara/San Mateo/San Francisco Counties" report, which was compiled at the requests of U.S. Representatives Eshoo, Speier and Farr. The purpose of the three-phased initiative was to summarize and establish a framework for responding to dozens of specific recommendations submitted by the three members' constituencies. The recommendations pertained to longstanding aircraft noise concerns, as well as to concerns related to the FAA's implementation of new optimized routes beginning in November 2014 and concluding in April 2015.

During the first phase of the Initiative, the FAA conducted its detailed analysis and preliminary feasibility study of all the recommendations summarized and included in the November 2015 Initiative. The FAA released its Phase One Report in May 2016.

During the spring of 2016 and to facilitate community involvement within their respective districts, the Congressional delegation designated a total of 12 representatives—locally-elected officials from Santa Cruz, Santa Clara, San Mateo and San Francisco Counties – to serve on the Select Committee. The Select Committee's role was to review the FAA's Phase One Report, gather public input within their represented areas about measures to address noise concerns, and make recommendations that reflect public input. The Select Committee diligently worked to identify which of the initially feasible recommendations, including amendments and/or new procedures, could be included within the second phase of the Initiative. The San Francisco Airport Community Roundtable provided guidance and assistance to the Select Committee's efforts as well.

The Select Committee held a total of 10 public meetings, and the SFO Roundtable concurrently discussed the Initiative during its own regularly scheduled meetings. In November 2016, the Congressional delegation provided the FAA with 104 recommendations from these two bodies.

In July 2017 the FAA issued an interim report on its efforts to evaluate 104 recommendations from these two bodies. At that time, the agency was still considering how to address more than 50 percent of them. The agency has now determined how it will proceed on the full set of recommendations. This November 2017 update details a total of 203 items, which consists of the original 104 recommendations and each of their sub-recommendations. Of these, 101 have already been addressed, 25 will be addressed in the future, and 77 were not endorsed. Each of these is explained in this report and its appendices.

This report does not represent the end of our work. The FAA continues to commit to work collaboratively with communities and local members of Congress to address a wide range of noise concerns.

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BACKGROUND

Status of the Initiative

In November 2015, the "FAA Initiative to Address Noise Concerns in Santa Cruz/Santa Clara/San Mateo/San Francisco Counties" was released. The Initiative includes multiple recommendations to the published procedures serving the Northern California (NorCal) Airspace, as well as detailing the phases in which these recommendations will be considered by the FAA. These recommendations came from multiples meetings and correspondence with congressional offices and local community representatives of Santa Cruz, Santa Clara, San Mateo and San Francisco Counties.

The "FAA Initiative to Address Noise Concerns in Santa Cruz/Santa Clara/San Mateo/San Francisco Counties" outlined a three phase approach to review and respond to the community proposals. These three phases are collectively known as the NorCal Initiative:

- Phase One: The FAA will conduct a detailed analysis and a preliminary feasibility study focusing on flight procedures criteria and overall fly-ability of the new Performance Based Navigation (PBN) procedures and potential procedural modifications. This phase includes coordination with the local stakeholders.
- Phase Two: The FAA will consider any amendments and/or new procedures that are determined to be initially feasible, flyable, and operationally acceptable from a safety point of view. As part of this effort, FAA will conduct the formal environmental and safety reviews, coordinate and seek feedback from existing and/or new community roundtables, members of affected industry, and the National Air Traffic Controllers Association (NATCA) before moving forward with the formal amendment process.
- Phase Three: The FAA will implement procedures; conduct any required airspace changes and additional negotiated actions, as needed

In April 2016, in advance of the release of the Phase One detailed analysis and a preliminary feasibility study report, U.S. Representatives Anna G. Eshoo (CA-18), Sam Farr (CA-20) and Jackie Speier (CA-14) formed a Select Committee on South Bay Arrivals ("Select Committee"). The Select Committee was comprised of 12 local elected officials representing Santa Cruz, Santa Clara, San Mateo and San Francisco Counties. Together with the San Francisco (SFO) Airport/Community Roundtable ("SFO Roundtable"), the role of the Select Committee and SFO Roundtable was to lead the public coordination aspect of Phase One. Specifically, the Select Committee was tasked with accepting public input and reviewing FAA proposals with a focus on arrival issues that primarily impact the South Bay Region while the SFO Roundtable was tasked with accepting public input and reviewing FAA proposals with a focus on SFO departures as well as arrivals that primarily impact the SFO Roundtable geographical area.

In May 2016, the FAA released the NorCal Initiative Phase One report. Following the release of this report, the Select Committee started a series of public meetings; the first three had the sole purpose of collecting public comment. The remaining seven meetings, spanning May – November 2016, provided a venue in which the Select Committee could ask specific questions of

the FAA in order to facilitate the formation of their recommendations. Throughout this same time period, the SFO Roundtable had their regular meetings, which included discussion on the NorCal Initiative.

In November 2016, the SFO Roundtable and the Select Committee respectively released reports, detailing their recommendations on the NorCal initiative. These recommendations included items in the NorCal Initiative Phase One report, as well as items not included in the report.

This NorCal Initiative Phase Two report provides information on the feasibility and status on each of the recommendations put forward by the SFO Roundtable and Select Committee. The intent of this document is to categorize each recommendation as "Addressed Concerns", "Feasible And Could Be Implemented In The Short Term", "Feasible And Could Be Implemented In The Long Term" or "Not Endorsed". This report is a living document, such that it will be updated as recommendations which start out in a particular category are moved into a different category, as appropriate. The Appendices released with this updated Phase Two Report have been organized consistent with the recommendations of the Select Committee (Attachment A) and of the SFO Roundtable (Attachments B, C and D)

National Environmental Policy Act

In addition to its mandate to ensure the safe and efficient use of the NAS, the FAA complies with the requirements of the National Environmental Policy Act ("NEPA"). Although not specifically detailed within the NorCal Initiative, the FAA's processes and standards for evaluating noise impacts associated with potential amendments to currently published procedures—consistent with FAA Order 1050.1F (effective July 16, 2015)—will be followed before implementing any airspace or procedural changes. Finally, this document does not constitute either a final decision of the FAA or a re-opening of the FAA's August 6, 2014 final decision for the NorCal Optimization of Airspace and Procedures in the Metroplex (OAPM).

INTRODUCTION

Timelines

This report includes implementation timelines for the recommendations presented in the SFO Roundtable and the Select Committee Reports. These timelines incorporate a number of established Federal processes and sub-processes. To best understand why the FAA determined the presented implementation timelines, some background to these processes is necessary. This section provides that background.

1. Rule Making:

Federal Agencies may issue regulations within their authority through the rule-making process. This process is generally made up of the Agency taking some preliminary steps before issuing a proposed rule. This proposed rule must be published in the Federal Register to notify the public and give them an opportunity to submit comments. The Agency may also hold public hearings where people can make statements and submit comments. The Agency takes all comments into consideration prior to issuing the final rule.

a) Class B Modifications: All Class B boundaries, including SFO Class B, are provided in FAA Order 7400.11A. FAA Order 7400.11A is included by reference in 14 Code of Federal Regulations (CFR) §71.41, and as such making amendments to Class B airspace is a rule making action.

   The steps in the Class B rulemaking process are as follows:

   - An Air Traffic facility study ("Staff Study") provides the details of Class B modification proposal as well as the justification of the need for the Class B amendments.
   - The Staff Study is sent to FAA headquarters (HQ) for review and authorization for the formation of a committee ("Ad-Hoc committee") for review and to provide recommendations. This Ad-Hoc committee represents a cross section of airspace users and aviation organization that would be affected by the proposed airspace change. The FAA participation on the committee is limited to the role of technical advisor or subject matter expert only. The FAA is not a voting member of the group.
   - The Ad-Hoc committee reviews the proposal and provides comments.
     Timeline: 180 days
   - The FAA reviews the comments provided by the Ad-Hoc committee and makes adjustments, as necessary.
     Timeline: 60 days.

- The FAA conducts informal airspace meetings to present the proposed modifications and to facilitate public comment.
  Timeline: 245 days.
- The FAA reviews comments and makes adjustments to the proposed Class B modifications, as necessary.
  Timeline: 120 days.
- The Draft Class B modification is prepared as a Notice of Proposed Rulemaking (NPRM) for publication in the Federal Register
  Timeline: 30 days
- The NPRM is published in the Federal Register for public comment
  Timeline: 60 days
- The FAA reviews comments and makes adjustments to the proposed Class B modifications, as necessary.
  Timeline: 120 days.
- The final rule is published in the Federal Register with an effective data based on the VFR sectional Charting Cycle.
  Timeline: 302 days.

Total time, not including the development of the Staff Study: ~3 years.

2. Non-Rule Making:

Non-rule making processes do not result in the amendment to any CFR or amend any other document which is included by reference in a CFR.

a. Air Traffic Facility Actions: These actions provide specific directions for the local air traffic control facility. These actions could be a change to a facility's Standard Operating Procedures (SOP), to Letter of Agreements (LOA) between facilities are part of regular Air Traffic Controllers training to increase awareness of certain issues

The steps are as follows:

- Initial proposal: The Air Traffic Facility proposes an amendment to their SOP, to an LOA with another Air Traffic Facility or training requirements. This initial proposal is vetted within the Air Traffic Facility.
  Timelines: few weeks for training proposal
  1 – 8 months for an SOP change
  1 – 18 months for an LOA change.
- The LOA is sent for review and approval
  Timelines: few weeks

Total time: a few weeks – more than 1 year.

b. Creation/Amendment of an instrument flight rules procedure: Amending or creating a new instrument flight rule procedure is an example of a non-rule making process. Given the variables involved with each of the following steps, the timelines provided are only intended on capturing the average time taken for each step. Since release of the November 2015 NorCal Initiative, the FAA has undertaken enhanced community outreach efforts. Although not specifically referenced within the following section and even if there is no legal requirement to do so, the FAA remains willing to address community noise concerns. As a result, the FAA undertakes its community outreach efforts and considers potential adjustments to address community noise concerns while remaining mindful that all arrival and departure procedures within the Northern California airspace are interconnected, interdependent and designed to improve safety and efficiency within the National Airspace System (NAS). To the extent the FAA determines a new requested procedure is initially feasible, flyable, and operationally acceptable from a safety point of view, then the FAA will conduct its formal environmental and safety reviews for this new federal action.

The steps in the instrument flight rules procedure processes are as follows:

- Initial Feasibility/Analysis of the procedure. The proponent of the procedure does initial research into the details and justifications for the new/amended procedure. This stage is completed once the proponent places the request and the associated justification into the IFP Information Gateway.
  Timeline: 45 days

- FAA Order 7100.41A: Performance Based Navigation (PBN) processing: This is the required process for all new and amended PBN procedures and/or routes, Area Navigation (RNAV)/Required Navigation Performance (RNP) Standard Instrument Departures (SIDs), RNAV Standard Terminal Arrivals (STARs) and RNAV routes. The FAA Order 7100.41A breaks down the design and implementation process into 5 stages:
  - Preliminary Activities: This includes the conduction of baseline analysis to identify expected benefits and develop conceptual procedures and/or routes for the proposed project.
  - Design Activities: This includes the creation of a working group in order to design a procedure/route that meets the project goals and objectives. An environmental review is included in this stage.
  - Development and Operational Preparation: The intent of this stage is to complete all pre-operational items necessary to implement the procedures and/or routes. This phase includes training, issuing notifications, automation, updating radar video maps, and processing documents. This phase ends when procedures and/or routes are submitted for publication.
  - Implementation: The purpose of the implementation phase is to implement the procedures and/or routes as designed. This phase starts with confirmation by the Full Working Group ("FWG") that all required pre-implementation

activities have been completed and ends when the procedures and/or routes are published and implemented.
    - Post-Implementation Monitoring and Evaluation: The purpose of the post-implementation monitoring and evaluation phase is to ensure that the new or amended procedures and/or routes perform as expected and meet the mission statement finalized during the design activities phase. Post implementation activities include collecting and analyzing data to ensure that safe and beneficial procedures and/or routes have been developed.

  Timeline: > 1 year.

- Regional Airspace and Procedure Team (RAPT) review: If approved, the RAPT assigns a priority for the project and a proposed chart date. Due to existing charting requirements, as well as the demand for NextGen procedures, there are currently projected charting dates scheduled through 2024.
  Timeline: 30 days.

- Development of proposed chart: This is the actual preparation of the proposed chart/s.
  Timeline: 45 days

- Quality Control Review:
  Timeline: Variable

- Project is coded for Flight Management Systems:
  Timeline: 10 days

- Flight Inspection:
  Timeline: 50 days

- Flight Standards Review: this is only required for some procedural development projects.
  Timeline: 21 days.

- Proposed Procedure/s are sent for publication and distribution:
  Timeline: 38 to 60 days.

Total time: >1.5 years.

Organization of the Response

The response tables provide the current status and associated timeline for implementation, if applicable, to all of the recommendations presented in the Select Committee and SFO Roundtable reports, as well as references to where the recommendations may be found. Details on the implementation processes are found within the Introduction section of this document.

The Select Committee and SFO Roundtable reports provided recommendations identified in the NorCal Initiative Phase One report, recommendations identified during the ensuing communications between the FAA and the Select Committee/SFO Roundtable, and recommendations that were not discussed. The Response Tables follow the order of the Select Committee and SFO Roundtable reports, with a total of 203 individual recommendations. However, many of these recommendations contain multiple sub-recommendations themselves. This report responds to each sub-recommendation individually for traceability.

In addition to the categories mentioned above, two more categories exist in the Phase Two report to capture all of the recommendations. They are:

i. Not endorsed by the Select Committee: At this point in time, the only non-feasible recommendations were those which were not endorsed by the Select Committee. These were placed in their own category.
ii. Not under the FAA's jurisdiction: This category was added to capture those recommendations which are outside of the FAA's jurisdiction and whose feasibility cannot be determined.

To make this document more navigable, instead of grouping individual recommendations by category, individual recommendations are listed in the same order that they are listed in the Select Committee and SFO Roundtable reports.

RESPONSE TABLES

1. Select Committee Recommendations

Recommendation		1. Amend the SFO Class B airspace to fully contain the SERFR procedure, or any supplement or replacement.
Process / Status		Feasible And Could Be Implemented In The Short Term. See Appendix B.
Recommendation Report Reference	Select Committee	1.1

Recommendation		2. Arrivals into SFO from the south use the BSR ground track for a new NextGen procedure.
Process / Status		Feasible And Could Be Implemented In The Long Term. See Appendix C.
Recommendation Report Reference	Select Committee	1.2 R1

Recommendation		3. The new NextGen procedure for arrivals into SFO from the south be implemented as soon as feasible and include the listed criteria.
Process / Status		Feasible And Could Be Implemented In The Long Term. See Appendix C.
Recommendation Report Reference	Select Committee	1.2 R2

Recommendation		4. Within three months of completing the new procedure, the FAA will meet with the Ad-Hoc Subcommittee to review whether the new procedure has resulted in an equivalent or less DNL noise exposure along its entire route when compared to 2014 noise modeling of the BSR procedure.
Process / Status		Feasible And Could Be Implemented In The Long Term. See Appendix C.
Recommendation Report Reference	Select Committee	1.2 R3

Recommendation		5. The FAA search for and develop a new flight procedure for arrivals into SFO from the south that includes the listed criteria.
Process / Status		Feasible And Could Be Implemented In The Long Term. See Appendix C.
Recommendation Report Reference	Select Committee	1.2 R4

Recommendation		6. NIGHTTIME: Increase the percentage of eastbound NIITE flights that remain on the path until reaching the waypoint, thereby reducing early turns which cross land at lower, noisier altitudes.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Select Committee	1.3

Recommendation		7. NIGHTTIME: Nighttime SSTIK departures use the NIITE procedure up to the NIITE waypoint, which is in the Bay north of the Bay Bridge, then the aircraft would head west out over the Golden Gate Bridge.
Process / Status		Feasible And Could Be Implemented In The Long Term. See Appendix C.
Recommendation Report Reference	Select Committee	1.4

Recommendation		8. Increase the percentage of CNDEL departures that stay on the procedure longer and do not turn prior to the CNDEL waypoint.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Select Committee	1.5

Recommendation		9. Use new, more effective, time-based flow management tools currently in development to allow for better sequencing (i.e., spacing) of aircraft to reduce the percentage of aircraft that are vectored or held prior to the final approach path to SFO.
Process / Status		Feasible And Could Be Implemented In The Long Term. See Appendix C.
Recommendation Report Reference	Select Committee	1.6

Recommendation		10. Airbus family aircraft arriving or departing SFO undergo the retrofit at the earliest possible opportunity.
Process / Status		Not FAA's Action.
Recommendation Report Reference	Select Committee	2.1

Recommendation		11. Aircraft flying on the BDEGA procedure utilize the so-called East leg (over the San Francisco Bay) as much as possible. The FAA assess the potential of formalizing this procedure so that it is more likely to be used.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Select Committee	2.2 R1

Recommendation		12. All aircraft flying on the BDEGA procedure during nighttime hours, when air traffic flows are reduced, use the East leg, unless safety considerations prohibit such a flight path.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Select Committee	2.2 R2

Recommendation		13. Per the current noise abatement procedure, aircraft comply with the obligation to cross the Woodside VOR at 8,000 feet mean sea level, traffic permitting. The Committee further recommends that this altitude restriction, to the greatest extent possible and traffic permitting, also be applicable to all vectored flights that are in the vicinity of the Woodside VOR.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Select Committee	2.3 R1

Recommendation		14. Revise the Woodside VOR Ocean Tailored Arrival to honor the existing noise abatement procedure to cross the Woodside VOR at 8,000 feet.
Process / Status		Feasible And Could Be Implemented In The Long Term. See Appendix C.
Recommendation Report Reference	Select Committee	2.3 R2

Recommendation		15. Recommend further restrictions to prohibit any overnight crossings at the Woodside VOR below 8,000 feet.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Select Committee	2.3 R3

Recommendation		16. NIGHTTIME: All efforts be made to reduce in-flight aircraft noise over populated areas during "nighttime" hours when residents need a reprieve from aircraft noise so that they can sleep.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Select Committee	2.4 R1

Recommendation		17. NIGHTTIME: Air traffic control make every effort to direct arrivals into a single stream to Runway 28R to reduce the noise exposure on the bayside communities of Redwood City and Foster City.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Select Committee	2.4 R2

Recommendation		18. The FAA, SFO, and industry users continue their efforts to establish new additional overnight noise abatement procedures within the next six months. This work should be done in consultation with other relevant stakeholders.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Select Committee	2.4 R3

Recommendation		19. Altitude of flights over the MENLO waypoint be 5,000 feet or higher.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Select Committee	2.5 R1

Recommendation		20. The FAA design a new procedure for arrivals into SFO from the south using the MENLO waypoint. The recommended procedure would cross the EDDYY waypoint (or equivalent) above 6,000 feet, continue at idle power to cross the MENLO waypoint at or above 5,000 feet, and maintain idle power until the HEMAN waypoint (or other ILS 28L interception point). Such a procedure should also be designed to avoid the use of drag devices such as speed brakes.
Process / Status		Feasible And Could Be Implemented In The Short Term. See Appendix B.
Recommendation Report Reference	Select Committee	2.5 R2

Recommendation		21. All air traffic in the vicinity of the MENLO waypoint (including vectored traffic from other procedures) be kept at altitudes of 5,000 feet or higher, even if not crossing directly over the MENLO waypoint.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Select Committee	2.5 R3

Recommendation		22. The FAA should review whether the angle of the 28L glide slope can be increased in order to increase the altitude at the HEMAN waypoint, or equivalent.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Select Committee	2.5 R4

Recommendation		23. Assess the feasibility of establishing different points of entry, over compatible land use and at high altitudes, to the final approach into SFO on the SERFR arrival (or any replacement), such as a different waypoint east or north of MENLO, or using FAITH, ROKME or DUMBA. May involve modifying SJC Class C airspace.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Select Committee	2.5 R5

Recommendation		24. The FAA decrease the size of the altitude windows on the SERFR procedure or path so that aircraft crossing EPICK do so at a higher altitude.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Select Committee	2.6 R1

Recommendation		25. The arrival procedure for SERFR, or any subsequent route in this sub-region, be designed, if possible, to allow aircraft to reduce speed early, while over the Monterey Bay.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Select Committee	2.6 R2

Recommendation		26. The FAA determine the feasibility of increasing the glide slopes of SFO Runways 28R and 28L to the maximum extent consistent with safety and the Committee's goal of noise mitigation.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Select Committee	2.7

Recommendation		27. To the greatest extent possible, while still ensuring the safety of the aircraft, that the altitude be increased for all flight procedures/paths into and out of SFO.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Select Committee	2.8

Recommendation		28. The FAA identify locations that have the most compatible land uses for vectoring, such as over the Pacific Ocean or San Francisco Bay, and vector the SFO arriving air traffic in those locations to reduce noise exposure experienced on the ground.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Select Committee	2.9 R1

Recommendation		29. The FAA raise vectoring altitudes to maximum feasible altitudes over the Mid-Peninsula, with a focus on higher altitudes in the vicinity of the MENLO waypoint.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Select Committee	2.9 R2

Recommendation		30. All feasible measures be taken to reduce the noise exposure to bayside communities, including Foster City and Redwood City, by directing air traffic to Runway 28R whenever possible.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Select Committee	2.10

Recommendation		31. Following implementation of changes to the current arrival route for aircraft from southern destinations, the FAA shall consider a new BRIXX procedure that maintains the highest possible altitude at the point where it (BRIXX) intersects the new arrival route from the south. The FAA shall review any proposed new BRIXX procedure with any successor committee.
Process / Status		Feasible And Could Be Implemented In The Long Term. See Appendix C.
Recommendation Report Reference	Select Committee	2.11

Recommendation		32. The NRRLI waypoint be moved to where the SERFR procedure/path intersects the coastline near the City of Seaside along the Monterey Bay.
Process / Status		Not Endorsed by Select Committee.
Recommendation Report Reference	Select Committee	2.12

Recommendation		33. The SJC "Reverse Flow" approach could instead arrive from the east of SJC, using a "Normal Flow" departure procedure that is not used during "Reverse Flow" conditions.
Process / Status		Not Endorsed by Select Committee.
Recommendation Report Reference	Select Committee	2.13

Recommendation		34. Aircraft from the southwest be removed from the SERFR arrival procedure, and instead use an eastern approach into SFO, using either the DYAMD arrival or a new procedure crossing the FAITH waypoint.
Process / Status		Not Endorsed by Select Committee.
Recommendation Report Reference	Select Committee	2.14

Recommendation		35. Arriving OCEANIC aircraft could be "fanned-in" into the area of the Woodside VOR, using that point and other new waypoints to achieve dispersion of the arriving aircraft.
Process / Status		Not Endorsed by Select Committee.
Recommendation Report Reference	Select Committee	2.15

Recommendation		36. The herringbone approach could be applied to the SERFR arrival procedure, which approaches SFO from the south over the Santa Cruz Mountains.
Process / Status		Not Endorsed by Select Committee.
Recommendation Report Reference	Select Committee	2.16

Recommendation		37. Simply return conditions, including aircraft procedures, altitudes, and concentration, to "how they were before NextGen."
Process / Status		Not Endorsed by Select Committee.
Recommendation Report Reference	Select Committee	2.17

Recommendation		38. Need for an Ad-Hoc Subcommittee to continue work on the issues identified.
Process / Status		Not FAA's Action.
Recommendation Report Reference	Select Committee	3.1 R1

Recommendation		39. A permanent entity be established to address issues of aircraft noise in the three county area on an ongoing basis, and to provide a forum for community input.
Process / Status		Not FAA's Action.
Recommendation Report Reference	Select Committee	3.1 R2

Recommendation		40. The FAA review the SUA in our area with an eye towards better balancing special use restrictions and civilian aviation needs, particularly in the congested San Francisco Bay Area airspace.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Select Committee	3.2

Recommendation		41. The U.S. Congress require the FAA to adopt supplemental metrics for aircraft noise that characterize the true impact experienced by people on the ground.
Process / Status		Not FAA's Action.
Recommendation Report Reference	Select Committee	3.3

Recommendation		42. Any successor committee consider capacity issues as identified.
Process / Status		Not FAA's Action.
Recommendation Report Reference	Select Committee	3.4

Recommendation		43. Any successor committee consider aircraft speed and its impact on noise as identified.
Process / Status		Not FAA's Action.
Recommendation Report Reference	Select Committee	3.5

Recommendation		44. The FAA be charged with the responsibility for identifying and proposing solutions to mitigate noise concerns, and that community groups and elected officials be consulted for review and comment, and to offer additional suggestions.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Select Committee	4.1

Recommendation		45. The FAA and/or SFO monitor and document noise exposure of any feasible solutions before and after FAA implementation to ensure impacts are verified, and to determine whether results are of a discernible benefit.
Process / Status		Not FAA's Action.
Recommendation Report Reference	Select Committee	4.2 R1

Recommendation		46. The implementation of a set of regional noise monitoring stations that will adequately monitor aircraft noise levels at carefully selected points in the San Francisco Bay Area and the three Congressional Districts represented on the Select Committee.
Process / Status		Not FAA's Action.
Recommendation Report Reference	Select Committee	4.2 R2

Recommendation		47. Recommends careful documentation and ongoing compliance monitoring for any set of solutions accepted and implemented by the FAA. The Committee recommends that the Members of Congress ensure that the FAA takes the appropriate steps to measure and guarantee ongoing compliance.
Process / Status		Not FAA's Action.
Recommendation Report Reference	Select Committee	4.3

2. SFO Roundtable Recommendations – Attachment B

Recommendation		1. Return to historical use of the BDEGA East downwind prior to May 2010.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	B 1

Recommendation		2. Explain the limitations of using the BDEGA East downwind. Create an RNP arrival procedure down the bay, creating a curved arrival path over the bay.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	B 2

Recommendation		3. Reinstate the FNISH transition in order to facilitate use of the BDEGA East downwind, and create a "connection" between FNISH waypoint and a turn on to 28R for the FMS Bridge Visual, Quiet Bridge Visual or similar approach to 28R.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	B 3

Recommendation		4. The FAA provide data on Golden Gate/BDEGA lateral track locations pre-NextGen and post-NextGen and if new procedures can use headings, not tracks, in procedure design.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	B 4

Recommendation		5. Determine if the BDEGA West downwind can be flown at a higher altitude or over compatible land uses.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	B 5

Recommendation		6. The FAA study whether an increase in in-trail spacing on the BDEGA arrival will result in the decrease in vectoring over the Peninsula.
Process / Status		Feasible And Could Be Implemented In The Short Term. See Appendix B.
Recommendation Report Reference	Roundtable	B 6

Recommendation		7. NIGHTTIME: Every effort should be made for all arrivals from the north to be assigned the historical BDEGA East Downwind.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	B 7

Recommendation		8. The FAA increase the in-trail spacing of aircraft on the SERFR arrival, flying the procedure as charted, which will decrease the need for vectoring. Increase the altitude of the arrivals on the assigned routes as well as the vector traffic.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	B 8

Recommendation		9. NIGHTTIME: Determine if arrivals from the south (such as on the SERFR/BSR) could instead file a route which would terminate to the east of the Bay for an approach to Runway 28R.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	B 9

Recommendation		10. NIGHTTIME: Whenever aircraft fly over residential areas, the RT requests that every effort be made to keep aircraft at a higher altitude than typical daytime altitudes. Consider using extra flight distance over the Bay to 28R to dissipate extra altitude (BDEGA and Oceanic to East Downwind). BDEGA arrivals assigned East downwind. Oceanic arrivals to East downwind. SERFR/BSR arrivals to east of the Bay.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	B 10

Recommendation		11. The FAA increase the in-trail spacing of aircraft on the DYAMD arrival to allow additional opportunities for aircraft to use the BDEGA East arrival, Down the Bay.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	B 11

Recommendation		12. Whenever there is a single stream operation to only one runway, aircraft should approach and land only on Runway 28R.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	B 12

Recommendation		13. When landing single stream to 28R or landing both 28L/28R in VMC, aircraft landing 28R should be assigned noise "friendlier" approaches such as FMS Bridge Visual 28R, Quiet Bridge Visual, or RNAV (RNP) Y 28R.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	B 13

Recommendation		14. NIGHTTIME: ATC should make every effort to coordinate traffic arrivals to **create a single stream of traffic** to land only on Runway 28R.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	B 14

Recommendation		15. Determine the feasibility of creating dual offset (VMC or IMC) RNAV, RNAV (RNP) or other type of approach to Runway 28L **and** to Runway 28R.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	B 15

Recommendation		16. In VMC, aircraft should cross the vicinity around the MENLO waypoint and at or above 5,000 feet MSL. Aircraft within the **vicinity** of MENLO should use the 5,000' altitude when able.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	B 16

Recommendation		17. Create a Visual Approach for Runway 28L with a MENLO crossing altitude at or above 5,000' MSL.
Process / Status		Feasible And Could Be Implemented In The Long Term. See Appendix C.
Recommendation Report Reference	Roundtable	B 17

Recommendation		18. The NIITE procedure should be flown **as charted** including flying over the NIITE flyover waypoint as specified in the departure procedure.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	B 18

Recommendation		19. NIGHTTIME: Create a south transition (GOBBS and south) for the NIITE/HUSSH that keeps traffic over the Bay and ocean until a high altitude is attained.
Process / Status		Feasible And Could Be Implemented In The Long Term. See Appendix C.
Recommendation Report Reference	Roundtable	B 19

Recommendation		20. NIGHTTIME: While awaiting the development of a NIITE/HUSSH SOUTH transitions, NCT is requested to use the NIITE DP track to GOBBS and then vectors from GOBBS southbound (keeping offshore) at least until PORTE or further south.
Process / Status		Feasible And Could Be Implemented In The Long Term. See Appendix C.
Recommendation Report Reference	Roundtable	B 20

Recommendation		21. NIGHTTIME: Determine if Runway 10 take-offs can be authorized to use the NIITE. If not, create a departure to allow Runway 10 take-offs to make a left turn up the Bay to NIITE waypoint.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	B 21

Recommendation		22. NIGHTTIME: Determine if aircraft can file for SFO QUIET Departure or the OAK SILENT Departure and then be vectored in accordance with NCT SOPs out to GOBBS and then southbound.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	B 22

Recommendation		23. NIGHTTIME: While awaiting authorization for Runway 10 departures to use the NIITE DP, the RT requests that aircraft be vectored to mirror the NIITE DP.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	B 23

Recommendation		24. NIGHTTIME: Without increasing Runway 01 departures, the RT supports the use the 050° heading from SFO Runways 01; and A comparable OAK Rwy 30 heading down the Bay at night.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	B 24

Recommendation		25. NIGHTTIME: Is there any ability to eliminate or raise the 3,000' altitude limit on straight-out departures?
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	B 25

Recommendation		26. NIGHTTIME: Use of SFO's long-standing preferential runways for departure: Runways 10 then Runways 28 (TRUKN or NIITE) and then Runways 01. The TRUKN is similar to the legacy Shoreline departure up the Bay. When aircraft use the SAHEY departure, aircraft should fly the procedure as charted and not vector over populated areas.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	B 26

Recommendation		27. NIGHTTIME: Using the decommissioned DUMBARTON EIGHT procedure, create either an RNAV overlay of this procedure or create a new procedure with the same fixes used as waypoints for Runway 10L/R.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	B 27

Recommendation		28. Determine if the existence of a VFR flyway or other conflicting airspace use off the coastline in the vicinity of the extended Runways 28 centerline, leads to Runway 28 straight-out departures being required to level off at 3000'.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	B 28

Recommendation		29. Use Bay and Pacific Ocean for overflights as much as possible. From CNDEL, direct aircraft to GOBBS and south.
Process / Status		Feasible And Could Be Implemented In The Long Term. See Appendix C.
Recommendation Report Reference	Roundtable	B 29

Recommendation		30. The CNDEL procedure should be flown **as charted** including flying over the CNDEL flyover waypoint and flying to the PORTE fly-by waypoint as specified in the departure procedure. If vectoring over the Bay and Ocean, use NIITE and GOBBS for aircraft routing.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	B 30

Recommendation		31. Determine if a revised southbound transition (with additional waypoints) for the CNDEL procedure could "contain" the flight paths further west (GOBBS and south) to allow expanded clear space for possible modification of the SSTIK departure.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	B 31

Recommendation		32. Determine if a southbound transition for CNDEL could effectively use flight over bodies of water to gain altitude before flying over populated areas.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	B 32

Recommendation		33. NIGHTTIME: For OAK southbound aircraft, until the NIITE southbound transition has been finalized, use of the NIITE/HUSSH DP or vectors to replicate the NIITE/HUSSH DP with a vector from GOBBS to the south to remain offshore. For OAK southbound aircraft, a left turn down the Bay is supported.
Process / Status		Feasible And Could Be Implemented In The Long Term. See Appendix C.
Recommendation Report Reference	Roundtable	B 33

Recommendation		34. Use Bay and Pacific Ocean for overflights as much as possible. From SSTIK, direct aircraft to GOBBS and south.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	B 34

Recommendation		35. Create an RNAV overlay of the OFFSHORE ONE procedure to guide aircraft higher over the Bay before turning to a waypoint located in the ocean.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	B 35

Recommendation		36. Use the OFFSHORE ONE procedure for aircraft departures. Higher altitude over water is preferred.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	B 36

Recommendation		37. SSTIK: Avoid non-safety vectoring prior to SEPDY waypoint. Avoid vectors down the Peninsula to waypoints beyond PORTE.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	B 37

Recommendation		38. Move SSTIK N + E as much as feasible to allow maximum altitude gain before turning to fly over land using the historic SEPDY waypoint as a guide. Create an additional waypoint over the ocean to guide aircraft over water to PORTE such as the legacy WAMMY waypoint associated with the OFFSHORE procedure. Determine if the minimum altitude required at SSTIK can be raised before a left turn (vicinity of SSTIK). Determine if a reduced airspeed (~220kts) can be required until after established in the left turn from SSTIK so aircraft climb at a higher angle of climb approaching land.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	B 38

Recommendation		39. The RT requests that the FAA determine if any aircraft were assigned or re-assigned-- via preferential runway or otherwise– from one departure or arrival to a different departure or arrival.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	B 39

Recommendation		40. SFO allocate funds or work with the FAA to obtain grant money to commission an updated Technical Study of the backblast noise from takeoffs at SFO.
Process / Status		Not FAA's Action.
Recommendation Report Reference	Roundtable	B 40

Recommendation		41. The FAA determine if upgraded radar display equipment or notations on the map using symbols would be helpful to TRACON controllers to increase the use of less impactful areas if vectoring is required for safety for departing and arriving flights.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	B 41

Recommendation		42. The SFO Airport and the SFO RT will support the FAA in their efforts. The RT will provide data regarding land use and terrain height for areas throughout the RT region to assist NCT in using less sensitive noise areas for vectoring. SFO and RT will work with airline representatives to encourage use of "noise-friendlier" options for flight planning and operations. The RT will provide community input to the FAA and will make recommendations to the FAA based on community consensus for changes.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	B 41

3. SFO Roundtable Recommendations – Attachment C

Recommendation		1. For daytime BDEGA and other arrivals from the north, use all available opportunities to assign arrivals from the north to an east downwind "down the Bay."
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	C Woodside ST 1

Recommendation		2. Increase the in-trail spacing of aircraft on the SERFR arrival, flying the procedure as charted, which will decrease the need for vectoring. Increase the altitude of the arrivals on the assigned routes as well as the vector traffic.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	C Woodside ST 2

Recommendation		3. NIGHTTIME: Every effort should be made to use the Bay for 100% of the arrivals from the north and west, use the east downwind or the "down the Bay" procedure.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	C Woodside ST 3

Recommendation		4. Reinstatement of BDEGA FINSH transition in order to facilitate increased use of the east downwind ("down the Bay") to Runway 28R.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	C Woodside LT 1

Recommendation		5. Increase in-trail spacing on the SERFR Arrival, on the DYAMD Arrival (to allow an increase in the BDEGA East Downwind). Determine if an increase in the BDEGA in-trail spacing would decrease vectoring.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	C Woodside LT 2

Recommendation		6. Avoid flight over noise-sensitive land uses as much as feasible, even if it means a few additional track miles.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	C Woodside COL 1

Recommendation		7. Airlines file oceanic flight plans that follow the path of BDEGA arrival for an FAA assigned east downwind for Runway 28R (down the Bay procedure) instead of flying over the peninsula.
Process / Status		Addressed Concern. See Appendix D.
Recommendation Report Reference	Roundtable	C Woodside COL 2

Recommendation		8. Airlines file routes from the south to a point east of the Bay in order to use a noise-friendlier approach to Runway 28R.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	C Woodside COL 3

Recommendation		9. NCT update its SOP to reflect using a "down the Bay" procedure is preferred during nighttime hours.
Process / Status		Feasible And Could Be Implemented In The Short Term. See Appendix B.
Recommendation Report Reference	Roundtable	C Woodside COL 4

Recommendation		10. Determine if the BDEGA transition to FINSH can be reinstated. If so, determine a timeline for this revised procedure to be included for publication.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	C Woodside RSCH 1

Recommendation		11. Compare the previous Golden Gate arrival with the current BDEGA arrival to determine what changes have been made in actual flight tracks with regard to location of lateral paths, narrowing of path and concentration of aircraft.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	C Woodside RSCH 2

Recommendation		12. Research reasons for the continued increased use of the BDEGA west leg from May 2010 – present.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	C Woodside RSCH 3

Recommendation		13. Whenever there are arrivals to both Runway 28L and 28R, and VMC conditions allow, aircraft for Runway 28R should be assigned to fly the FMS Bridge Visual Runway 28R or RNAV (RNP) Runway 28R (as capable), Quiet Bridge Visual or other noise friendlier approach to land on Runway 28R.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	C Visual ST 1

Recommendation		14. Regardless of the time of day, and when conditions and traffic allow, whenever there is a single stream operation to only one runway, aircraft should arrive only on Runway 28R and should be assigned to fly the FMS Bridge Visual 28R or RNAV (RNP) Rwy 28R (as capable), Quiet Bridge Visual or other "noise friendlier" approach to land on Runway 28R.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	C Visual ST 2

Recommendation		15. NIGHTTIME: Make every effort to coordinate traffic arrivals to create a single stream of traffic to land only on Runway 28R.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	C Visual ST 3

Recommendation		16. Research the feasibility of creating dual offset RNAV, RNAV (RNP) or other type of approach to Runway 28L and to Runway 28R which would create two offset paths closer to the middle of the Bay with both Runway 28L path and 28R path remaining well clear of Foster City and other bayside communities until past the San Mateo Bridge when aircraft would then line up with each runway for landing.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	C Visual LT 1

Recommendation		17. The SFO Roundtable will work with NCT management to illustrate the importance of the use of Runway 28R instead of Runway 28L during periods of single stream operations and the critical nature of nighttime operations which might require managing arrival traffic to create a single stream of traffic to 28R.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	C Visual COL 1

Recommendation		18. The SFO Roundtable will provide information and community input to the FAA regarding the process of creating, if feasible, of dual satellite-based Runway 28L and 28R offset approaches closer to the middle of the Bay.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	C Visual COL 2

Recommendation		19. NIGHTTIME: While undergoing the formal process of amending the NIITE departure to add a transition for southbound aircraft past GOBBS and adopting GOBBS for use, the Roundtable requests that NCT work with the SFO RT to determine if an interim informal procedure based on TRACON vectors might be feasible to approximate the NIITE departure which would be heading up the Bay to NIITE, then west to GOBBS, then south-south-east to the PORTE or WAMMY waypoint, remaining clear of the shore.
Process / Status		Feasible And Could Be Implemented In The Long Term. See Appendix C.
Recommendation Report Reference	Roundtable	C NIITE ST 1

Recommendation		20. Keep aircraft on the NIITE procedure as much as possible to reduce vectoring.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	C NIITE ST 2

Recommendation		21. NCT use its longstanding noise abatement procedure to vector Runway 10 L/R departing aircraft up the Bay (approximate heading of 330°), then vector as needed for routes of flight such as from NIITE to GOBBS (if the destination is to the west or south), in accordance with its SOP.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	C NIITE ST 3

Recommendation		22. While not increasing the actual number of aircraft using Runway 01 L/R, for those aircraft using Runways 1L/1R, continue to use the 050° heading option for southbound flights at night instead of the SSTIK procedure for south-bound departures.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	C NIITE ST 4

Recommendation		23. The SFO RT formally requests that the FAA add a transition to the NIITE departure for southbound aircraft. Once implemented, the 050° down the Bay option is still preferred.
Process / Status		Feasible And Could Be Implemented In The Long Term. See Appendix C.
Recommendation Report Reference	Roundtable	C NIITE LT 1

Recommendation		24. The NIITE departure and all transitions be amended to include authorization for its safe use by aircraft taking off from Runway 10 L/R.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	C NIITE LT 2

Recommendation		25. The SFO Roundtable will provide input regarding the new southbound transition and will elicit community input and response to the design of the new NIITE southbound transition and Runway 10 L/R NIITE authorization.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	C NIITE COL 1

Recommendation		26. NIGHTTIME: Use the 050° heading at night to the maximum extent feasible for aircraft departures to southern destinations instead of the SSTIK departure procedure.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	C 050° ST 1

Recommendation		27. The use of a comparable heading down the Bay for southbound flights taking off from OAK.
Process / Status		Feasible And Could Be Implemented In The Long Term. See Appendix C.
Recommendation Report Reference	Roundtable	C 050° ST 2

Recommendation		28. NIGHTTIME: Continue flying the 050 heading when able during nighttime hours.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	C 050° LT 1

Recommendation		29. NCT use a longstanding TRACON procedure for aircraft taking off on Runway 10 L/R by vectoring them north up the Bay (using an approximate 330°heading) and then, if westbound, vectoring them to the Pacific Ocean.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	C ODO ST 1

Recommendation		30. Maintain the existing SFO ANAO nighttime preferential runway use in place, including Runway 10 L/R as the preferred nighttime runway for takeoffs; aircraft using the SAHEY departure should not be vectored and stay over the bay.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	C ODO ST 2

Recommendation		31. SFO Airport Director work with the Roundtable to coordinate outreach efforts to educate dispatchers and pilots on the importance of considering the use of a Runway 10 L/R ODO departure to the impacted communities.
Process / Status		Not FAA's Action.
Recommendation Report Reference	Roundtable	C ODO ST 3

Recommendation		32. When Runway 28 L/R must be used for nighttime departures, the SFO Roundtable requests use of the GAP SEVEN departure that does not have a top altitude restriction.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	C ODO ST 4

Recommendation		33. Determined if any VFR flyway results in Runway 28 straight-out departures being assigned a 3,000' altitude restriction.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	C ODO LT 1

Recommendation		34. Create a procedure that includes the ability of aircraft to depart Runway 10 L/R on a heading that isn't in the direct path of aircraft arriving on Runway 28, such as making an immediate left turn after takeoff or flying to the east of the Runway 28 arrival path to provide lateral separation; for vertical separation, use altitude restrictions for the departing aircraft.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	C ODO LT 2

Recommendation		35. Create a Runway 10L/R RNAV departure that mirrors the decommissioned DUMBARTON EIGHT procedure, keeping aircraft over the bay to gain altitude before turning.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	C ODO LT 3

Recommendation		36. The SFO Roundtable will provide information to the FAA to assist in a review of options for aircraft to use Runway 10 L/R that does not use the same flight path as a Runway 28 L/R arrival.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	C ODO COL 1

Recommendation		37. Consistently use the effective noise abatement procedures such as the long-standing TRACON nighttime noise abatement procedure for aircraft taking off from Runway 10, to fly an approximate 330° heading up the Bay and thence out the Golden Gate.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	C ODO COL 2

Recommendation		38. The Roundtable will work with the FAA to re-design the SAHEY departure to mirror historic flight tracks that keep aircraft over the bay.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	C ODO COL 3

Recommendation		39. NIGHTTIME: While awaiting the publication of this NIITE/HUSSH southbound transition, it is requested that aircraft be vectored in according with long-standing NCT procedures (SFO 330° heading up the Bay) and (SFO and OAK) out to the ocean and southbound over the Pacific Ocean. Also use the 050° heading for southbound departures.
Process / Status		Feasible And Could Be Implemented In The Long Term. See Appendix C.
Recommendation Report Reference	Roundtable	C Nighttime ST 1

Recommendation		40. NIGHTTIME: While awaiting authorization to use NIITE departure from Runways 10, (or in the failure to obtain such authorization), the RT requests that aircraft be vectored to mirror the NIITE DP.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	C Nighttime ST 2

Recommendation		41. NIGHTTIME: While awaiting the publication of this NIITE/HUSSH southbound transition, determine if aircraft can file for SFO QUIET SEVEN departure or the OAK SILENT departure and then be vectored in accordance with NCT SOPs out to GOBBS waypoint and then southbound.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	C Nighttime ST 3

Recommendation		42. NIGHTTIME: The RT supports the use the 050° heading from SFO, and A comparable OAK Rwy 30 heading down the Bay. Runway 01 departures should not be increased; rather, use a 050 heading in lieu of flying a procedure over the peninsula for aircraft with southern departures.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	C Nighttime ST 4

Recommendation		43. NIGHTTIME: Determine if there is any ability to eliminate the 3,000' MSL altitude restriction on straight-out departures.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	C Nighttime ST 5

Recommendation		44. NIGHTTIME: All nighttime approaches be managed into a "single stream" of airplanes, that (wind/weather permitting) this single stream of planes only uses noise abatement approaches such as the Runway 28R FMS Bridge Visual, the Runway 28R Quiet Bridge, or the RNAV (RNP) 28R and that this single stream of planes landing only on Runway 28R. If conditions require an ILS approach, it is requested that only Runway 28R be used.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	C Nighttime ST 6

Recommendation		45. NIGHTTIME: BDEGA and other arrivals from the north be assigned only to the BDEGA East downwind (or similar) for a "noise-friendlier" approach to only 28R.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	C Nighttime ST 7

Recommendation		46. NIGHTTIME: when feasible, during nighttime hours and VMC conditions -- *if any flights fly over sensitive areas* -- every effort be made which would allow aircraft to **remain higher than typical** and are vectored so as to approach single stream using noise-friendlier approaches to land on Runway 28R. If an arrival ***must*** be made over Woodside (Oceanic) or the Peninsula (BDEGA) or from the south (SERFR), every effort should be made to keep aircraft higher than typical.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	C Nighttime ST 8

Recommendation		47. The SFO Roundtable supports an immediate start to designing the southbound transition for SFO and OAK flights on the NIITE departure. This NIITE departure/southbound transition procedure will replace the SSTIK and CNDEL departures during the nighttime hours.
Process / Status		Feasible And Could Be Implemented In The Long Term. See Appendix C.
Recommendation Report Reference	Roundtable	C Nighttime LT 1

Recommendation		48. Determine if Runway 10 take-offs can be authorized to use the NIITE. If not, create a departure to allow Runway 10 take-offs to make a left turn up the Bay to NIITE waypoint.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	C Nighttime LT 2

Recommendation		49. Reinstate the FINSH transition to the BDEGA arrival in order to facilitate increased use of the BDEGA East downwind ("down the Bay") to Runway 28R or the establishment of a similar east downwind transition if there are technical concerns with the original design.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	C Nighttime LT 3

Recommendation		50. The SFO RT will work with airline representatives and the FAA to request that all oceanic nighttime arrivals from the north file for and fly an approach which utilizes the Bay (such as the BDEGA East downwind) and substantially avoids flight over non-compatible land uses.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	C Nighttime LT 4

Recommendation		51. The SFO RT will work with airline representatives and the FAA to request that all nighttime arrivals from the south (SERFR) file for a routing and Arrival that would terminate east of the Bay for connection to an approach to SFO Runway 28R.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	C Nighttime LT 5

Recommendation		52. NIGHTIME: The SFO Roundtable will work with airline representatives to encourage them to file for SFO arrivals that avoid flight over sensitive areas. If inbound aircraft choose to file for BDEGA, it is requested that only the BDEGA East downwind be assigned to them.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	C Nighttime LT 6

Recommendation		53. The SFO Roundtable will provide any required community data as well as community input to the FAA to support all efforts to improve noise impacts during the important night time hours.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	C Nighttime COL 1

Recommendation		54. In the existing procedure, fly the planes on the charted CNDEL departure as published so that they fly over the CNDEL flyover waypoint THEN over the PORTE waypoint as charted.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	C CNDEL ST 1

Recommendation		55. Use the Bay and Pacific Ocean for overflight as much as possible. From the CNDEL waypoint, direct aircraft to a waypoint in the Pacific Ocean – potentially to the GOBBS waypoint in the ocean then to the WAMMY waypoint.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	C CNDEL ST 2

Recommendation		56. NIGHTTIME: Use the GOBBS waypoint during nighttime hours to reduce overflights of the Peninsula - (HUSSH departure).
Process / Status		Feasible And Could Be Implemented In The Long Term. See Appendix C.
Recommendation Report Reference	Roundtable	C CNDEL ST 3

Recommendation		57. In the existing procedure, avoid vectoring aircraft for non-safety reasons prior to the CNDEL waypoint.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	C CNDEL ST 4

Recommendation		58. Assignment of southbound vectors be delayed until the aircraft has reached the ocean and PORTE waypoint to reduce aircraft flying over San Francisco and down the Peninsula.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	C CNDEL ST 5

Recommendation		59. Determine if the actual flight tracks of aircraft after CNDEL waypoint could be "contained" to a more limited area such as west of the eastern shore of the Bay (perhaps by an additional waypoint) that would decrease potential conflicts with the SSTIK departure airspace to enable the SSTIK departure to be flown as published.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	C CNDEL LT 1

Recommendation		60. Determine if a southbound transition for the CNDEL procedure could effectively use flight over bodies of water to enable aircraft to gain altitude before flying over noise-sensitive land uses without interfering with a possible expanded SSTIK departure path or shifting noise to other communities.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	C CNDEL LT 2

Recommendation		61. Utilizing the OAK HUSSH departure procedure during daytime hours should help avoid conflicts with SFO SSTIK, reduce the need for vectoring, increase the separation between these flight paths, and increase safety. From CNDEL, direct aircraft to GOBBS and south.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	C CNDEL LT 3

Recommendation		62. The Roundtable is available to provide community input to the FAA with the use of modeling or other tools to determine the effects of other noise friendlier departure paths for flights using the OAK CNDEL departure, especially for CNDEL southbound flights. Such options might include (but are not limited to) flight over the waters of the Bay to the Pacific Ocean or flight over the Bay to SFO and then over the Peninsula (primarily Millbrae and Burlingame) to PORTE or flight down the Bay as far south as feasible, or other options that may become known.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	C CNDEL COL 1

Recommendation		63. Avoid issuing any non-safety vectors to aircraft for as long as feasible and no earlier than when an aircraft is actually over the SEPDY flyover waypoint. After reaching the designated waypoint or intersection, continued flight up the Bay (to attain higher altitude) is desirable. When a left turn is to be made, a relatively wide dispersal of flight paths to the ocean is preferred.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	C SSTIK ST 1

Recommendation		64. Flights should be directed to fly as high as possible over the SEPDY waypoint (over the bay), allowing them to be higher in altitude before turning over land, with a steady altitude increasing as they make their way to the ocean.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	C SSTIK ST 2

Recommendation		65. Avoid vectoring aircraft down the Peninsula direct to waypoints beyond PORTE. Aircraft should fly over the PORTE waypoint on the published procedure.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	C SSTIK ST 3

Recommendation		66. In the existing SSTIK procedure, use the Bay and ocean for overflight as much as possible.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	C SSTIK ST 4

Recommendation		67. In the existing SSTIK procedure, utilize existing areas of compatible land use for overflight.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	C SSTIK ST 5

Recommendation		68. For aircraft with destinations in Southern California use the OFFSHORE ONE departure.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	C SSTIK ST 6

Recommendation		69. For aircraft with southeast destinations use the TRUKN departure with a transition at TIPRE or SYRAH.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	C SSTIK ST 7

Recommendation		70. Determine the feasibility of depicting the SEPDY waypoint on the scopes in an effort for aircraft to stay over the Bay as long as possible. This would allow aircraft additional time to climb over the Bay before turning.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	C SSTIK ST 8

Recommendation		71. Determine if a reduced climb airspeed can be assigned until reaching 3,000' MSL or other higher altitude; a slower airspeed will allow the aircraft to climb to a higher altitude in a shorter distance before overflying noise-sensitive land uses. Determine if the minimum required altitude for ATC to initiate a left turn can be raised.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	C SSTIK LT 1

Recommendation		72. Move the SSTIK waypoint north and east as much as feasible to allow maximum altitude gain before turning west to fly over land, using the legacy SEPDY waypoint as a guide. Remain over the Pacific Ocean until attaining a high altitude.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	C SSTIK LT 2

Recommendation		73. Create an OFFSHORE RNAV overlay.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	C SSTIK LT 3

Recommendation		74. Create a SSTIK transition to GOBBS. Similar to the NIITE procedure, aircraft would depart on the SSTIK procedure flying up the Bay instead of over the peninsula to approximately the GOBBS intersection, then onto a waypoint in the ocean such as WAMMY. This could be used for aircraft with southerly destinations in California.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	C SSTIK LT 4

Recommendation		75. The SFO Roundtable will provide community input to the FAA to find an appropriate location for moving the SSTIK waypoint east and north of its current location, again using SEPDY as a guide, so planes can fly over the Bay for a longer period of time, and thus increase altitude before heading west and flying over residential areas.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	C SSTIK COL 1

Recommendation		76. The FAA provide modeling, noise monitoring, and/or other tools to determine the effects of different waypoint options.
Process / Status		Not FAA's Action.
Recommendation Report Reference	Roundtable	C SSTIK COL 2

Recommendation		77. Allow planes to fly the charted procedures and to reduce vectoring and when safety is not an issue as well as to use higher altitudes when flying over noise-sensitive land uses and the use of non-residential areas where feasible.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	C SSTIK COL 3

Recommendation		78. The SFO Roundtable will work with the SFO noise office and TRACON to research use of the legacy LINDEN VORTAC transition to determine why it has not been used within the last few years and determine which city pairs can utilize this corridor via TIPRE or SYRAH.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	C SSTIK COL 4

Recommendation		79. Determine any conflicting airspace issues which would not be available for the location of a new SSTIK waypoint.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	C SSTIK RSCH 1

4. SFO Roundtable Recommendations – Attachment D

Recommendation		1. The SFO Aircraft Noise Abatement (ANAO) Office and Northern California TRACON have an agreement that states when able, aircraft will cross the MENLO intersection during visual conditions at 5,000' AGL and 4,000' AGL during instrument conditions. The Roundtable requests this agreement stays in place and aircraft cross MENLO at or close to 5,000' AGL during visual conditions. The Roundtable also recommends the creation of an RNAV visual approach to mirror the TIPP TOE Visual approach for 28L which would specify crossing MENLO at 5,000-feet.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 1.a.i.(a)

Recommendation		2. SSTIK to be flown to the SEPDY waypoint and vectored for safety purposes only, prior to the waypoint. While awaiting the development of an OFFSHORE ONE RNAV overlay, NCT is requested to use the OFFSHORE departure procedure for flights to Southern California. Planes should be directed to fly as high as possible over the SEPDY waypoint (over the Bay), allowing them to be higher in altitude before turning over land, with a steady altitude increase and relatively wide dispersal of flight paths as they make their way to the ocean. The Roundtable requests the FAA to research other possible flight alternatives utilizing the Bay and Pacific Ocean.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 1.a.ii. Resp 1

Recommendation		3. The WESLA procedure should be flown as charted and allow aircraft to climb unrestricted when there are no other air traffic conflicts.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 1.a.ii. Resp 2

Recommendation		4. CNDLE to be flown as charted and vectored for safety purposes only, not for efficiency. The Roundtable would request the FAA to research other possible lateral path options for the CNDEL southbound departures.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 1.a.ii. Resp 3

Recommendation		5. Fly over the Bay until the SSTIK waypoint, by moving SSTIK N + E as much as feasible to allow maximum altitude gain before turning to fly over land using the historic SEPDY waypoint as a guide. Preferably, the SSTIK should be flown to GOBBS, then to WAMMY, before flying to PORTE, so that planes are flying over water, rather than people's homes.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	D 1.b.i. Bullet 1

Recommendation		6. Fly the SSTIK procedure as charted to PORTE waypoint instead of clearing aircraft to subsequent waypoints downstream from SSTIK, bypassing PORTE. Create an additional waypoint over the ocean to guide aircraft over the water to PORTE, such as the legacy WAMMY waypoint associated with the OFFSHORE procedure.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 1.b.i. Bullet 2

Recommendation		7. Fly the CNDEL to the CNDEL waypoint as charted, so as to create less interference with SSTIK. The CNDEL should be flown to GOBBS, then to WAMMY, before flying to PORTE.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 1.b.i. Bullet 3

Recommendation		8. SSTIK: That southerly vectors not be issued to an aircraft until an aircraft is actually *over* SEPDY (avoid anticipatory turns approaching SPEDY). Once past SEPDY, a relatively wide dispersal of flight paths to the ocean is preferred.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 1.b.ii. Resp 2.a.

Recommendation		9. SSTIK: That the Bay, and waypoints such as GOBBS and WAMMY in the ocean be used for overflight as much as possible.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	D 1.b.ii. Resp 2.b.

Recommendation		10. SSTIK: That existing areas of non-residential land be used for overflight.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 1.b.ii. Resp 2.c.

Recommendation		11. SSTIK: That assigning a southbound heading toward PORTE should be delayed as long as feasible **including flying to the ocean before turning south.**
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 1.b.ii. Resp 2.d.

Recommendation		12. SSTIK: That vectoring aircraft down the Peninsula direct to **PORTE and to** waypoints beyond PORTE should be avoided.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 1.b.ii. Resp 2.e.

Recommendation		13. Move SSTIK north and east as much as feasible to allow maximum altitude gain before turning to fly over land using the historic SEPDY waypoint as a guide. The Roundtable would ultimately prefer a SSTIK procedure that utilizes the entire Bay out to GOBBS, then to WAMMY and then to PORTE.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	D 1.b.ii. Resp 2.

Recommendation		14. CNDEL procedure should be flown as charted and reduce the amount of aircraft vectored. CNDEL departures be allowed to fly the procedure to PORTE intersection unless safety (not efficiency) requires vectoring earlier.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 1.b.ii. Resp 3.

Recommendation		15. The FAA to use this as a baseline to compare conditions in the future when reporting back to this body regarding decreasing vector traffic. The FAA research various options as alternate lateral paths for CNDEL southbound departures.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 1.b.ii. Resp 4.

Recommendation		16. Utilizing the HUSSH departure procedure during daytime hours should help avoid conflicts with SSTIK, reduce the need for vectoring, increase separation between these flight paths, and increase safety. The Roundtable would ultimately prefer a CNDEL procedure that utilizes the entire bay out to GOBBS, then to WAMMY and then to PORTE.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	D 1.b.ii.

Recommendation		17. Work with SFO Noise Abatement Office on a pilot outreach program to encourage aircraft to stay over water while on approach after receiving their cleared to land instructions.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 1.b.iii. Resp a.

Recommendation		18. Increase controller awareness on keeping aircraft over water as much as possible, especially during late night hours and when aircraft are operating in single-stream and using RWY 28R. Assurances from the FAA, to the maximum extent possible, not turn aircraft over affected communities prior to nine miles from the SFO VOR (9 DME) final from the airport, consistent with the NCT informal noise abatement agreement.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 1.b.iii. Resp b.

Recommendation		19. Determine the feasibility of creating an RNAV (RNP) dual offset approach to Runway 28R and 28L.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	D 1.b.iii. Resp c.

Recommendation		20. Work with SFO Noise Abatement Office on a pilot outreach program to encourage aircraft to stay over water while on approach after receiving their cleared to land instructions.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 1.b.iv. Resp a.

Recommendation		21. Increase controller awareness on keeping aircraft over water as much as possible, especially during late night hours and when aircraft are operating in single-stream and using RWY 28R.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 1.b.iv. Resp b.

Recommendation		22. Work with SFO Noise Abatement Office on a pilot outreach program to encourage aircraft to stay over water while on approach after receiving "cleared to land" instructions.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 1.b.v. Resp a.

Recommendation		23. Educate controllers on keeping aircraft over water as much as possible, especially during late night hours and when aircraft are operating in single-stream.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 1.b.v. Resp b.

Recommendation		24. The Roundtable requests to work with the FAA to determine where aircraft can be vectored with the least noise impact and identify locations that have the most compatible land uses for vectoring purposes.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 1.f.ii.

Recommendation		25. Request a timeline from the FAA for implementation of this procedure (NIITE, GOBBS, WAMMY, PORTE), factoring in requirements to run the procedure through the FAA Order JO 7100.41A process.
Process / Status		Feasible And Could Be Implemented In The Long Term. See Appendix C.
Recommendation Report Reference	Roundtable	D 1.f.iii.

Recommendation		26. Oakland Center and NCT to encourage use of the RNAV (RNP) Y procedure to Runway 28R or the FMS Visual 28R to keep aircraft over the water for as long as possible.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 1.f.iv.

Recommendation		27. Educate controllers on keeping aircraft over water as long as possible on approach, especially during single-stream operations.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 1.f.iv. a Resp.

Recommendation		28. Work with the SFO ANAO to educate pilots on the ability to request the RNP to Runway 28R or the FMS Visual 28R, given the properly equipped aircraft and flight crew.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 1.f.iv. Resp b.

Recommendation		29. Determine the ability of more aircraft to utilize the Bay for arrivals from points north instead of the peninsula. This is especially important during nighttime hours, where 100% of arrivals using the Bay is desired.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 2.a.i. Resp a.

Recommendation		30. The BDEGA TWO procedure include the waypoints for a down the Bay procedure, as done in BDEGA ONE.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	D 2.a.i. Resp b.

Recommendation		31. Determine altitudes to turn aircraft for vector purposes that minimizes noise.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	D 2.a.i. Resp c.

Recommendation		32. We are encouraged by the use of the NIITE procedure with a goal of 100% use from midnight to 6am and infrequent use during other nighttime hours.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 2.a.ii.(a) Resp 1.

Recommendation		33. We continue to encourage the use of HUSSH and reduce vectors off of the HUSSH departure for the same reasons as the NIITE.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 2.a.ii.(a) Resp 2.

Recommendation		34. When weather conditions dictate the use of these runways (10L/R & 19L/R), we encourage the use of FOGGG as published and not vector off the procedure.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	D 2.a.ii.(a) Resp 3.

Recommendation		35. Remove GNNRR TWO in references to flying aircraft over less noise-sensitive areas and the associated inclusion in procedures used over less noise-sensitive areas that total 88%.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 2.a.ii.(a) Resp 4.a.

Recommendation		36. When available, use the GAP SEVEN departure to avoid any top altitude restrictions for aircraft departing Runway 28L/R out the gap.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 2.a.ii.(a) Resp 4.b.

Recommendation		37. Aircraft use compatible land uses (such as the Bay, Pacific Ocean, and non-residential areas) for as long as possible before turning. For the SSTIK procedure, this would be using the Bay to gain altitude before turning over populated areas.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 2.a.ii.(b) Req a.

Recommendation		38. Define the airspace limitations to the north and east for placement of a waypoint to replace SSTIK. Present these limitations to the Roundtable in graphic and memo formats.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	D 2.a.ii.(b) Req b.

Recommendation		39. Define the airspace limitations over the Golden Gate and the ocean to the west of the peninsula for placement of a waypoint to replace or augment PORTE. Present these limitations to the Roundtable in graphic and memo formats.
Process / Status		Feasible And Could Be Implemented In The Long Term. See Appendix C.
Recommendation Report Reference	Roundtable	D 2.a.ii.(b) Req c.

Recommendation		40. Aircraft remain on the WESLA procedure, as charted.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 2.a.ii.(b) Req 2.

Recommendation		41. The FAA to use *FAA Initiative Phase 1, Appendix B* as a baseline to compare improvements in decreasing vector traffic.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 2.a.ii.(b) Req 3.

Recommendation		42. When aircraft use the SAHEY THREE departure from Runway 10L/R, that aircraft are not vectored and fly the procedure as charted.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 2.e.i. Req a.

Recommendation		43. Create an RNAV overlay, or create a new procedure, based on the decommissioned DUMBARTON EIGHT procedure for aircraft departures from Runway 10L/R to keep aircraft over the Bay.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	D 2.e.i. Req b.

Recommendation		44. For departures using RWY 01L/R for departures during nighttime hours, the Roundtable requests aircraft with southern destinations use the 050 departure heading as much as possible to avoid overflights of the peninsula. The RT is not advocating for Runway 01L/R to be used more during nighttime hours.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 2.e.ii.

Recommendation		45. Maximum use of SFO's preferred nighttime preferential runway procedures, including using the TRUKN (up the Bay) and NIITE as replacements for the SHORELINE and QUIET departures.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 2.e.iii. Req 1.

Recommendation		46. Create a RWY 10R procedure for aircraft to depart RWY 10R, then turn up the Bay to join the NIITE.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	D 2.e.iii. Req 2.

Recommendation		47. When conditions permit and aircraft use the TRUKN departure off RWY 28L/R, the Roundtable requests the FAA conduct controller outreach to educate them about aircraft staying east of Highway 101.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 2.e.iv.

Recommendation		48. Aircraft climb unrestricted on the GNNRR procedure. Aircraft depart without a top altitude restriction when flying "out the gap" on Runway 28L/R and consider the use of the GAP 7 departure that has no top altitude restriction instead of the GNNRR.
Process / Status		Not Endorsed By The FAA. See Appendix D.
Recommendation Report Reference	Roundtable	D 2.f.iv.

Recommendation		49. The SSTIK procedure should be flown as charted, especially flying to the PORTE waypoint instead of down the peninsula to points south of PORTE.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 2.f.vi.

Recommendation		50. NIGHTTIME: The nighttime preferential runway program remains unchanged, and primarily use Runways 10 L/R for takeoff because they offer routing over the Bay. Don't vector aircraft on the SAHEY THREE departure.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 3.a.i. 1.

Recommendation		51. NIGHTTIME: The nighttime preferential runway program remains unchanged, and the second preference is depart Runways 28 L/R and the SHORELINE, QUIET or TRUKN procedures.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 3.a.i. 2.

Recommendation		52. NIGHTTIME: The nighttime preferential runway program remains unchanged, and the third preference is depart Runways 01 L/R.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 3.a.i. 3.

Recommendation		53. Work with SFO Roundtable on future changes.
Process / Status		Addressed Concern. See Appendix A.
Recommendation Report Reference	Roundtable	D 3.b.ii.

APPENDICES

APPENDIX A: Addressed Concerns

1.6 NIGHTTIME: Increase the percentage of eastbound NIITE flights that remain on the path until reaching the waypoint, thereby reducing early turns which cross land at lower, noisier altitudes.

The requirement for aircraft to remain on the NIITE / HUSSH departure procedures as much as operationally feasible was added to NCT's SOP in February 2017. An analysis of May 2017 traffic data revealed that 99% of NIITE aircraft and 70% of HUSSH aircraft passed within 1 NM of NIITE Waypoint. July 2015 showed 71% NIITE and 68% HUSSH compliance. NCT will continue to reinforce the use of this procedure to personnel through training and briefings.

It is important to note how the spike in compliance with the NIITE / HUSSH procedures was achieved, and the associated effects. Prior to the update to NCT's SOP in February 2017, aircraft were allowed to depart both the SFO and OAK airports with little restriction, allowing for a high departure rate and minimal delays. What this created, however, was aircraft from two airports being fed into a single departure corridor. As explained in Appendix A, 2.30, it is safer and more efficient to vector aircraft to maintain the minimum required separation than it is to 'step-up' aircraft, which led to aircraft being vectored off the NIITE / HUSSH procedures prior to the NIITE waypoint.

After the update to the NCT SOP in February 2017, there has been a tradeoff. The capacity limitations of the departure corridor (which contains both the NIITE and HUSSH departure procedures) remains unchanged. Therefore, in order for aircraft on the NIITE/HUSSH procedures to remain on their respective procedure until the NIITE waypoint *while also* maintaining the required minimum separation between aircraft, ATC must delay aircraft on the ground prior to departure. Analysis of ground delays, during noise abatement hours, for SFO and OAK for June 2017 showed 103 reportable delays, while ground delays for SFO and OAK in June 2016 showed 1 reportable delay. Note: reportable delays are delays of 15 minutes or more.

1.8 Increase the percentage of CNDEL departures that stay on the procedure longer and do not turn prior to the CNDEL waypoint.

The FAA concurs with the recommendation that aircraft fly the CNDEL procedure as published to the extent operationally feasible. Vectoring aircraft is a necessary component to maintaining separation requirements for safety considerations. For a detailed explanation of using vectors

1.11 Aircraft flying on the BDEGA procedure utilize the so-called East leg (over the San Francisco Bay) as much as possible.

The FAA concurs with the recommendation to utilize the BDEGA "East Leg" to the extent operationally feasible; however, a return to "pre-May 2010 levels" is unlikely without a decrease in operations. The BDEGA East Leg shares a final for SFO's Runway 28R with the DYAMD arrival, which contains the greatest share of SFO's arrivals. DYAMD arrival aircraft are constrained by SJC airspace to the South and OAK airspace to the North, which inhibits ATC's ability to vector these aircraft. Additionally, the density of aircraft on the DYAMD arrival is such that vectoring of aircraft creates a ripple effect, jeopardizing safety and resulting in delays.

Because of this, aircraft flying the BDEGA arrival will only be assigned the East Leg when enough space exists between arrivals on the DYAMD to allow for it. As SFO and DYAMD traffic counts increase, opportunities to utilize the BDEGA East Leg will be affected. It is important to understand that increases in volume and the times of day that they fly is a result of Air Carrier scheduling. The FAA's role is to safely manage these aircraft from the time they push back from their departure airport jet way to the time that they reach their arrival airport jet way.

This recommendation conflicts with the Recommendation that Runway 01 nighttime departures be issued the 050° and down the Bay as much as possible (Appendix A, 2.24). The conflict results from departure aircraft climbing out while flying down the Bay, while BDEGA East Downwind aircraft would be descending in the same corridor. As a result, when aircraft are departing on the 050° and down the Bay, BDEGA aircraft will be routed to the West Downwind.

Additionally, this recommendation conflicts with the Recommendation that southerly arrivals be routed to an 'east of the Bay' approach, such as via the DYAMD arrival or FAITH waypoint (Appendix D, 1.23).

The FAA assess the potential of formalizing this procedure so that it is more likely to be used.

Please refer to Appendix C, 3.9, as these share similar recommendations.

1.12 All aircraft flying on the BDEGA procedure during nighttime hours, when air traffic flows are reduced, use the East leg, unless safety considerations prohibit such a flight path.

Please refer to Appendix A, 1.11, as these share similar recommendations.

1.13 Per the current noise abatement procedure, aircraft comply with the obligation to cross the Woodside VOR at 8,000 feet mean sea level, traffic permitting.

The FAA, to the extent feasible and for applicable aircraft, complies with directives that require that aircraft cross the Woodside VOR (OSI) at or above 8,000 feet MSL. This requirement does not apply to aircraft on the Ocean Tailored Arrival (OTA), nor does it apply to aircraft that are being vectored in the vicinity of OSI (BDEGA and SERFR Arrivals). As noted in the Select Committee's recommendation, aircraft authorized to fly the OTA may cross OSI at or above 6,000 feet MSL.

This altitude restriction, to the greatest extent possible and traffic permitting, also be applicable to all vectored flights that are in the vicinity of the Woodside VOR.

Aircraft vectoring is a tactical decision used by ATC to establish and maintain the sequence of aircraft to the airport. Due to safety considerations, the FAA cannot support a restriction on when ATC may or may not use a vital component of its sequencing tools.

1.16 NIGHTTIME: All efforts be made to reduce in-flight aircraft noise over populated areas during "nighttime" hours when residents need a reprieve from aircraft noise so that they can sleep.

The FAA has made a request to the SFO Airport to update the Fly Quiet program.

1.17 NIGHTTIME: Air traffic control make every effort to direct arrivals into a single stream to Runway 28R to reduce the noise exposure on the bayside communities of Redwood City and Foster City.

The FAA concurs with this recommendation to the extent operationally feasible. SFO's Runway 28R is listed within NCT's SOP as the preferred arrival runway. NCT will continue to reinforce the use of this procedure to personnel through training and briefings.

1.18 The FAA, SFO, and industry users continue their efforts to establish new additional overnight noise abatement procedures within the next six months. This work should be done in consultation with other relevant stakeholders.

The FAA has made a request to the SFO Airport to update the Fly Quiet program.

1.28 The FAA identify locations that have the most compatible land uses for vectoring, such as over the Pacific Ocean or San Francisco Bay, and vector the SFO arriving air traffic in those locations to reduce noise exposure experienced on the ground.

While safety remains the FAA's highest priority, the agency attempts to address noise impacts by designing procedures over water and industrial areas when safety and efficiency permit. To the extent your vectoring request seeks to solve a noise issue in one area, doing so may simply shift the noise concern from one location to another. The FAA's Northern California Optimization of Airspace & Procedures in the Metroplex August 7, 2014 Final Environmental Assessment, Finding of No Significant Impact and Record of Decision (NorCal OAPM Final EA/FONSI/ROD) was the result of the FAA's thorough noise analysis of the Northern California Metroplex' General Study Area which included 11 entire counties and portions of 12 counties. The Northern California Metroplex' noise analysis included an assessment of aircraft noise associated with Northern California Metroplex procedures, vectoring and compatible land use. Although the FAA continues to seek to reduce vectoring by improved Traffic Management Tools and work towards accomplishing vectors at a higher altitude, aircraft continue to require vectoring consistent with the FAA's August 7, 2014 noise analysis and completion of the Northern California Metroplex.

1.30 All feasible measures be taken to reduce the noise exposure to bayside communities, including Foster City and Redwood City, by directing air traffic to Runway 28R whenever possible.

Please refer to Appendix A, 1.17, as these share similar recommendations.

1.40 The FAA review the SUA in our area with an eye towards better balancing special use restrictions and civilian aviation needs, particularly in the congested San Francisco Bay Area airspace.

The FAA, along with the United States military, have defined Restricted / Special Use airspace to ensure that the military can meet its mission requirements, while at the same time limiting the impact on civilian air travel. The Select Committee may submit airspace modifications, which will be evaluated by the FAA and the United States military.

1.44 The FAA be charged with the responsibility for identifying and proposing solutions to mitigate noise concerns, and that community groups and elected officials be consulted for review and comment, and to offer additional suggestions.

The Northern California Metroplex project included a noise analysis and an overall assessment of aircraft noise associated with NCTs procedures, as well as vectoring and compatible land use. During the project, the FAA engaged the public and solicited comments during the environmental review.

The FAA has the technical expertise to design safe flight paths that are within criteria, as applicable, and does not expect the public to provide expertise in this manner. If a community requests that an FAA procedure be changed/moved, it is incumbent upon that party to present a suitable alternative for consideration through the FAA Instrument Flight Procedures Gateway online at https://www.faa.gov/air_traffic/flight_info/aeronav/procedures/.

2.1 Return to historical use of the BDEGA East downwind prior to May 2010.

Please refer to Appendix A, 1.11 for more information regarding opportunities for BDEGA aircraft to be assigned the East downwind.

2.4 The FAA provide data on Golden Gate/BDEGA lateral track locations pre-NextGen and post-NextGen and if new procedures can use headings, not tracks, in procedure design.

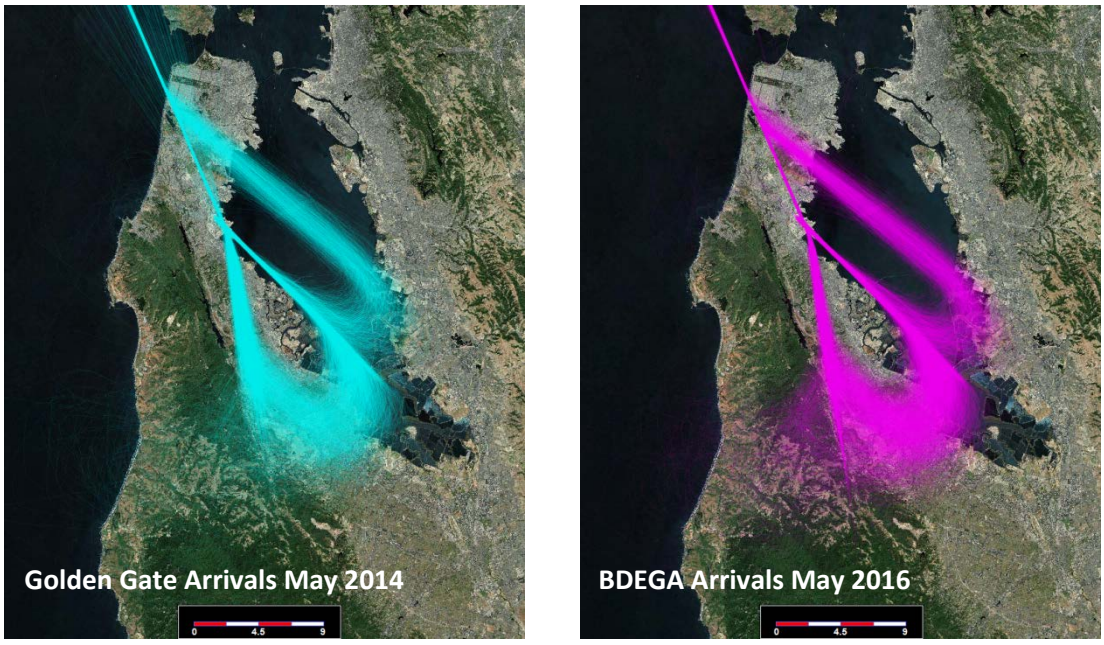


Figure A1: Comparison of Golden Gate arrivals (May 2014) and BDEGA arrivals (May 2016)

The FAA reviewed the identified arrivals: the Golden Gate and BDEGA arrivals. The Golden Gate arrival states, "…via SFO R-303 to SFO VOR/DME. Expect RADAR vectors to final approach course." Aircraft that flew this arrival navigated to the SFO VOR/DME via the SFO 303° radial, which is a conventional, or non-precision, method of navigation. Upon reaching the SFO VOR/DME, aircraft on the Golden Gate arrival were typically instructed to fly a 140° heading. Note, the Golden Gate arrival does not stipulate a 140° heading.

The BDEGA arrival states, "... track 126° to BRIXX, then on track 140°. Expect RADAR vectors to final approach course." For clarification, BRIXX is a waypoint near the SFO VOR/DME. Aircraft are instructed to "track 140°" after BRIXX. This is also a heading.

The difference between flying a heading (fly or track 140°) as opposed to proceeding to a point or navigational aid (track 126° to BRIXX) is that the latter must account for wind to arrive at the assigned point. Flying or tracking a heading are synonymous, and does not account for wind.

Therefore, aircraft that historically flew the Golden Gate arrival and that currently fly the BDEGA arrival essentially perform the same maneuver after crossing SFO/DME / BRIXX. Figure A1 (above), a review of one month of Golden Gate arrival aircraft (Teal) and one month of BDEGA arrival aircraft (Pink), supports this conclusion.

Note - Aircraft navigating via the conventional Golden Gate arrival are following a non-precision procedure, which accounts for the slightly more dispersed tracks after the SFO VOR/DME.

2.7 NIGHTTIME: Every effort should be made for all arrivals from the north to be assigned the historical BDEGA East Downwind.

Please refer to Appendix A, 1.11 for more information regarding opportunities for BDEGA aircraft to be assigned the East downwind.

2.12 Whenever there is a single stream operation to only one runway, aircraft should approach and land only on Runway 28R.

Please refer to Appendix A, 1.17 as these share similar recommendations.

2.13 When landing single stream to 28R or landing both 28L/28R in VMC, aircraft landing 28R should be assigned noise "friendlier" approaches such as FMS Bridge Visual 28R, Quiet Bridge Visual, or RNAV (RNP) Y 28R.

Please refer to Appendix A, 1.17, as these share similar recommendations. When weather conditions and equipment/crew capabilities allow, the recommended approaches are used to the extent feasible.

2.14 NIGHTTIME: ATC should make every effort to coordinate traffic arrivals to create a single stream of traffic to land only on Runway 28R.

Please refer to Appendix A, 1.17 as these share similar recommendations.

2.18 The NIITE procedure should be flown as charted including flying over the NIITE flyover waypoint as specified in the departure procedure.

Please refer to Appendix A, 1.6, as these share similar recommendations.

2.24 NIGHTTIME: Without increasing Runway 01 departures, the RT supports the use the 050° heading from SFO Runways 01.

The FAA concurs with this recommendation to the extent operationally feasible. The use of 050° for Runway 01 departures is contained within NCT's SOP, and NCT will continue to reinforce the use of this procedure to personnel through training and briefings. Use of this procedure is highly dependent on operational activity in the airspace at the time.

This recommendation conflicts with the recommendation to increase the use of BDEGA East downwind arrivals. Please refer to Appendix A, 1.11 for more information.

A comparable OAK Rwy 30 heading down the Bay at night.

Please refer to Appendix C, 3.27 for more information regarding OAK departures down the Bay, as these share similar recommendations.

2.26 NIGHTTIME: Use of SFO's long-standing preferential runways for departure: Runways 10 then Runways 28 (TRUKN or NIITE) and then Runways 01. The TRUKN is similar to the legacy Shoreline departure up the Bay.

The FAA researched and addressed a similar question in its NorCal Initiative Phase One Report, 2.e.i. and Appendix A. While RWY 10 remains the preferred departure runway, Opposite Direction Operations (ODO) makes the use of RWY 10 for departures and RWY 28 for arrivals highly restrictive, particularly at night. Runway 28 L/R remains the second preferred departure runway, followed by Runway 01 L/R. Filed routings are dependent upon aircraft destination, as well as airport configuration. The FAA will continue to be an active participant in Round Table meetings, providing subject matter expertise in seeking solutions. In addition, the FAA has made a request to the SFO Airport to update the Fly Quiet program. Please refer to Appendix D, 2.27 for more information regarding ODO.

When aircraft use the SAHEY departure, aircraft should fly the procedure as charted and not vector over populated areas.

Please refer to Appendix A, 4.42 for information regarding the SAHEY procedure, as these share similar recommendations.

2.28 Determine if the existence of a VFR flyway or other conflicting airspace use off the coastline in the vicinity of the extended Runways 28 centerline, leads to Runway 28 straight-out departures being required to level off at 3000'.

There are VFR flyways in the vicinity of SFO, however the altitudes are below 2,100 feet and therefore would not cause Runway 28 straight out departures to level at 3,000 feet. Aircraft on the GNNRR and WESLA departures may be required to level off at 3,000 feet for safety due to aircraft that depart Runway 01 climbing above these aircraft.

Please refer to Appendix D, 2.25, as these share similar recommendations.

2.30 The CNDEL procedure should be flown as charted including flying over the CNDEL flyover waypoint and flying to the PORTE fly-by waypoint as specified in the departure procedure.

The SSTIK and CNDEL RNAV SIDs are a unique set of departures in that they serve two busy airports in close proximity: SFO and OAK respectively. Aircraft routes have separation criteria, per FAA regulations, that require aircraft to either be separated laterally or vertically. Lateral separation is the preferred method, as both aircraft can simply be instructed to climb to an assigned altitude. Vertical separation is much more complicated from a safety perspective as it requires more controller instructions. Higher aircraft can be instructed to climb to an assigned altitude, lower aircraft must be 'stepped-up' (leveled at an altitude) to ensure that the lower aircraft does not out-climb and violate the vertical separation requirements with the preceding aircraft. Being stepped-up complicates the matter even further for each subsequent aircraft, requiring them to be stepped-up as well, and so on. Additionally, the fluctuations in an aircraft's power and equipment settings while being stepped-up has the potential for a greater noise impact than that of an aircraft in an unrestricted climb.

Another factor to consider is frequency congestion. Frequency congestion is a term used in ATC to describe the limitations of voice communications on an assigned frequency. A single controller must issue individual control instructions to multiple aircraft in a limited amount of time, while allowing time for that aircraft to respond that they received the instruction (termed a 'readback'). If an aircraft would like to put in a request with ATC, they must wait for a gap in broadcasts. More than one broadcast at the same time (controller/pilot or pilot/pilot) is referred to as 'stepping' on each other, the result typically being incomprehensibly jumbled words. The instruction and/or 'readback' must then be re-broadcast. A high number of instructions that must be issued in a short amount of time and their associated 'readbacks', impeded by pilot requests and/or aircraft stepping on each other results in frequency congestion. 'Stepping-up' multiple aircraft on a procedure, such as the SSTIK and CNDEL SIDs, presents greater opportunities for frequency congestion.

If lateral separation is removed as an option, the only method to alleviate vertical separation is to restrict the rate of departures from the airport(s). This course of action creates delays at the airport(s) that has an overall negative effect on the airport's operations; including gate scheduling, holding aircraft on the ground, etc. These effects are tangible, as discussed in Appendix A, 1.6, and those delays are occurring during the time period when SFO and OAK have their *lowest* volume of traffic.

When departures from SFO and OAK allow for aircraft to fly the SSTIK and/or CNDEL procedures as published, to the extent feasible those are aircraft are instructed to do so. However, when lateral or vertical separation cannot be maintained, oftentimes the safest (with regards to frequency congestion) and most efficient (with regards to airport delays) way to control these aircraft is to use lateral separation - achieved by vectoring the aircraft to maintain lateral separation.

If vectoring over the Bay and Ocean, use NIITE and GOBBS for aircraft routing.

Please refer to Appendix C, 3.23 for more information regarding the recommendation to route aircraft via SSTIK / CNDEL to the Pacific Ocean and the GOBBS waypoint.

2.37 SSTIK: Avoid non-safety vectoring prior to SEPDY waypoint.

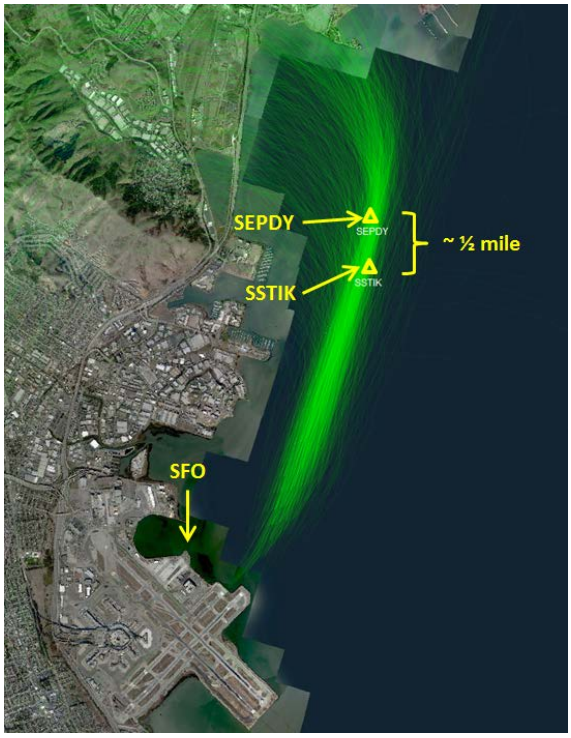


Figure A2: SEPDY Reporting Point relative to SSTIK waypoint.

SEPDY is a reporting point from the conventional PORTE and OFFSHORE departure procedures. The SSTIK RNAV departure, which serves as PORTE and OFFSHORE's replacement for nearly all southbound aircraft, does not include the SEPDY reporting point. While not a part of the SSTIK departure procedure, the point in space that is SEPDY already sees the majority of SSTIK departures passing through it, as illustrated above in Figure A2.

Aircraft are allowed to climb unrestricted when the procedure allows for it and there is no conflicting traffic. Aircraft that fly this procedure, as with other procedures, use the aircraft's FMS to follow the procedure's requirements, while also safely accounting for the individual aircraft characteristics, e.g. heavier aircraft typically are slower to climb and take longer to turn than lighter aircraft – the FMS accounts for this.

Avoid vectors down the Peninsula to waypoints beyond PORTE.

Please refer to Appendix A, 2.30 for more information regarding why aircraft are vectored prior to PORTE, as these share similar recommendations.

2.42 The SFO Airport and the SFO RT will support the FAA in their efforts. The RT will provide data regarding land use and terrain height for areas throughout the RT region to assist NCT in using less sensitive noise areas for vectoring. SFO and RT will work with airline representatives to encourage use of "noise-friendlier" options for flight planning and operations. The RT will provide community input to the FAA and will make recommendations to the FAA based on community consensus for changes.

NCT will continue to be an active participant in Roundtable meetings, providing subject matter expertise in seeking solutions.

3.1 For daytime BDEGA and other arrivals from the north, use all available opportunities to assign arrivals from the north to an east downwind "down the Bay."

Please refer to Appendix A, 1.11 for more information regarding opportunities for BDEGA aircraft to be assigned the East downwind.

3.3 NIGHTTIME: Every effort should be made to use the Bay for 100% of the arrivals from the north and west, use the east downwind or the "down the Bay" procedure.

Please refer to Appendix A, 1.11 for more information regarding opportunities for BDEGA aircraft to be assigned the East downwind.

Please refer to Appendix D, 2.10 for information regarding arrivals from the West (Oceanic), as these share similar recommendations.

3.6 Avoid flight over noise-sensitive land uses as much as feasible, even if it means a few additional track miles.

Please refer to Appendix A, 1.28, as these share similar recommendations.

3.11 Compare the previous Golden Gate arrival with the current BDEGA arrival to determine what changes have been made in actual flight tracks with regard to location of lateral paths, narrowing of path and concentration of aircraft.

Please refer to Appendix A, 2.4, as these share similar recommendations.

3.12 Research reasons for the continued increased use of the BDEGA west leg from May 2010 – present.

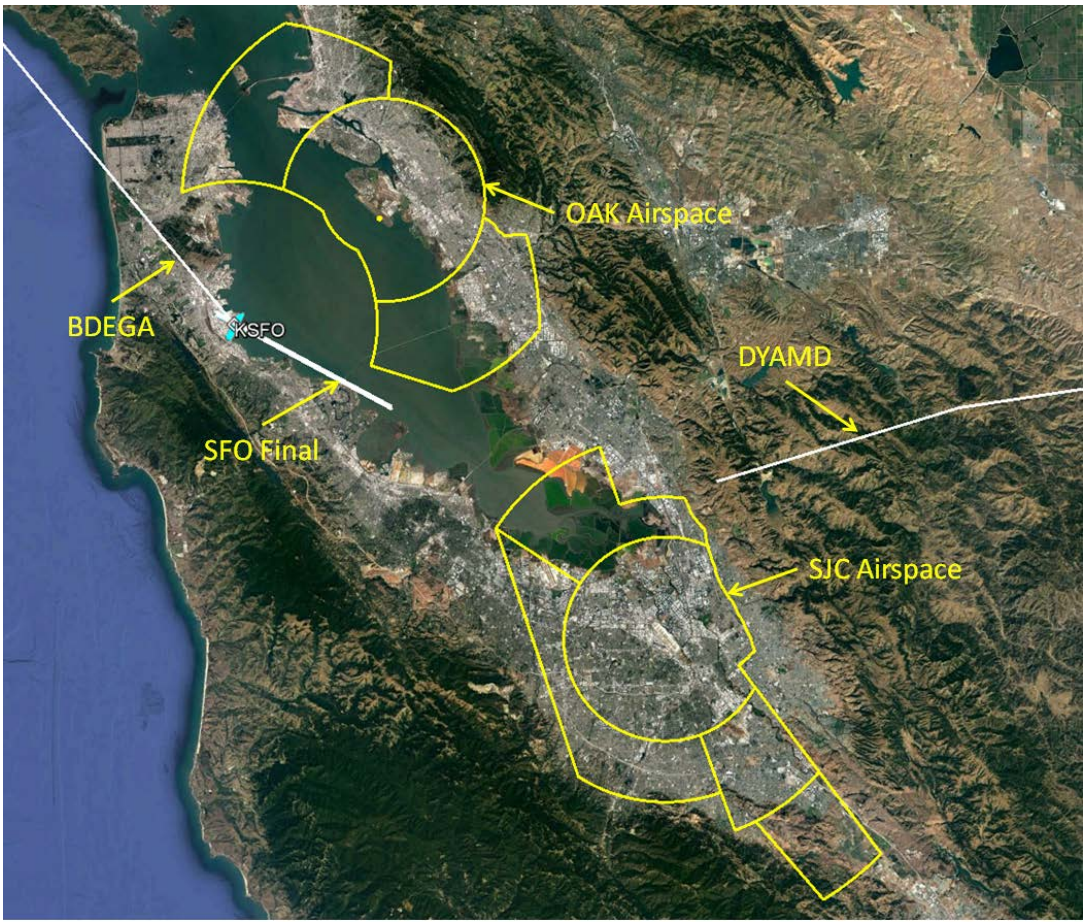


Figure A3: BDEGA / DYAMD / Bay Area Airspace

SFO operations have increased 4% from 2014 to 2016, with an 18% and 4% increase in the BDEGA and DYAMD arrivals, respectively. It is important to understand that this increase in volume and the times of day that they fly is a result of Air Carrier scheduling. The FAA's role is to safely manage these aircraft from the time they push back from their departure airport jet way to the time that they reach their arrival airport jet way.

As noted in Figure A3 and in previous meetings with the Select Committee and SFO Roundtable, the ability to route a BDEGA arrival to the East downwind is dependent on the density of aircraft on the DYAMD arrival and the volume of traffic landing at OAK. Straight-in aircraft, as aircraft on the DYAMD arrival are to SFO, largely have priority over aircraft on the downwind. The reason for this is DYAMD aircraft are constrained by surrounding airspace to the North and South (OAK and SJC, respectively), and vectoring aircraft on the straight-in affects every trailing aircraft in the line – increasing the controller's workload significantly. The same is true, to a smaller degree, of aircraft on the East downwind. This leg also has the constraint of OAK airspace to the North and the SFO Final to the south, leaving very little room to maneuver aircraft for a sequence. Because of these two limiting factors, aircraft on the BDEGA can only be routed

to the East downwind when a suitable space is present on the DYAMD arrival that will allow for minimal maneuvering of the BDEGA aircraft. If there is no gap present, the BDEGA aircraft must be routed to the West downwind. When traffic levels allow, a single stream to SFO Runway 28R is implemented, to include vectoring BDEGA arrivals to the East Downwind.

3.13 Whenever there are arrivals to both Runway 28L and 28R, and VMC conditions allow, aircraft for Runway 28R should be assigned to fly the FMS Bridge Visual Runway 28R or RNAV (RNP) Runway 28R (as capable), Quiet Bridge Visual or other noise friendlier approach to land on Runway 28R.

Please refer to Appendix A, 2.13, as these share similar recommendations.

3.14 Regardless of the time of day, and when conditions and traffic allow, whenever there is a single stream operation to only one runway, aircraft should arrive only on Runway 28R and should be assigned to fly the FMS Bridge Visual 28R or RNAV (RNP) Rwy 28R (as capable), Quiet Bridge Visual or other "noise friendlier" approach to land on Runway 28R.

Please refer to Appendix A, 1.17 and 2.13, as these share similar recommendations.

3.15 NIGHTTIME: Make every effort to coordinate traffic arrivals to create a single stream of traffic to land only on Runway 28R.

Please refer to Appendix A, 1.17, as these share similar recommendations.

3.17 The SFO Roundtable will work with NCT management to illustrate the importance of the use of Runway 28R instead of Runway 28L during periods of single stream operations and the critical nature of nighttime operations which might require managing arrival traffic to create a single stream of traffic to 28R.

NCT will continue to be an active participant in Roundtable meetings, providing subject matter expertise in seeking solutions.

Please refer to Appendix A, 1.17 for more information regarding single stream operations to Runway 28R.

3.18 The SFO Roundtable will provide information and community input to the FAA regarding the process of creating, if feasible, of dual satellite-based Runway 28L and 28R offset approaches closer to the middle of the Bay.

NCT will continue to be an active participant in Roundtable meetings, providing subject matter expertise in seeking solutions.

The FAA has no plans for creating a dual satellite-based Runway 28L and 28R offset approach. Please refer to Appendix D, 2.15 for more information.

3.20 Keep aircraft on the NIITE procedure as much as possible to reduce vectoring.

Please refer to Appendix A, 1.6, as these share similar recommendations.

3.22 While not increasing the actual number of aircraft using Runway 01 L/R, for those aircraft using Runways 1L/1R, continue to use the 050° heading option for southbound flights at night instead of the SSTIK procedure for south-bound departures.

Please refer to Appendix A, 2.24, as these share similar recommendations.

3.25 The SFO Roundtable will provide input regarding the new southbound transition and will elicit community input and response to the design of the new NIITE southbound transition and Runway 10 L/R NIITE authorization.

NCT will continue to be an active participant in Roundtable meetings, providing subject matter expertise in seeking solutions.

Please refer to Appendix C, 3.23 for more information regarding a NIITE southbound transition.

The FAA has no plans for a Runway 10 L/R NIITE authorization. Please refer to Appendix D, 2.21 for more information.

3.26 NIGHTTIME: Use the 050° heading at night to the maximum extent feasible for aircraft departures to southern destinations instead of the SSTIK departure procedure.

Please refer to Appendix A, 2.24, as these share similar recommendations.

3.28 NIGHTTIME: Continue flying the 050 heading when able during nighttime hours.

Please refer to Appendix A, 2.24, as these share similar recommendations.

3.30 Maintain the existing SFO ANAO nighttime preferential runway use in place, including Runway 10 L/R as the preferred nighttime runway for takeoffs.

Please refer to Attachment A, 2.26, as these share similar recommendations.

Aircraft using the SAHEY departure should not be vectored and stay over the bay.

Please refer to Appendix A, 4.42, as these share similar recommendations.

3.32 When Runway 28 L/R must be used for nighttime departures, the SFO Roundtable requests use of the GAP SEVEN departure that does not have a top altitude restriction.

The GAP SEVEN departure, which does not have a published 3,000 foot altitude restriction, is a non-RNAV departure procedure and is used as much as possible. However, when traffic dictates, these aircraft must be stopped at 3,000 feet as well.

Please refer to Appendix D, 2.25, as these share similar recommendations.

3.33 Determined if any VFR flyway results in Runway 28 straight-out departures being assigned a 3,000' altitude restriction.

Please refer to Appendix A, 2.28, as these share similar recommendations.

3.36 The SFO Roundtable will provide information to the FAA to assist in a review of options for aircraft to use Runway 10 L/R that does not use the same flight path as a Runway 28 L/R arrival.

NCT will continue to be an active participant in Roundtable meetings, providing subject matter expertise in seeking solutions. However, Opposite Direction Operations (ODO) criteria are highly restrictive due to its inherent safety risks.

The FAA has no plans, and is restricted from creating, procedures that involve Opposite Direction Operations. Please refer to Appendix D, 2.27 for more information.

3.38 The Roundtable will work with the FAA to re-design the SAHEY departure to mirror historic flight tracks that keep aircraft over the bay.

NCT will continue to be an active participant in Roundtable meetings, providing subject matter expertise in seeking solutions. However, Opposite Direction Operations (ODO) criteria are highly restrictive due to its inherent safety risks.

The FAA has no plans, and is restricted from creating, procedures that involve Opposite Direction Operations. Please refer to Appendix D, 2.27 for more information.

3.42 NIGHTTIME: The RT supports the use the 050° heading from SFO.

Please refer to Appendix A, 2.24, as these share similar recommendations.

Comparable OAK Rwy 30 heading down the Bay.

Please refer to Appendix C, 3.27 for more information regarding OAK departures down the Bay, as these share similar recommendations.

Runway 01 departures should not be increased; rather, use a 050 heading in lieu of flying a procedure over the peninsula for aircraft with southern departures.

Please refer to Appendix A, 2.24, as these share similar recommendations.

3.44 NIGHTTIME: All nighttime approaches be managed into a "single stream" of airplanes, that (wind/weather permitting) this single stream of planes only uses noise abatement approaches such as the Runway 28R FMS Bridge Visual, the Runway 28R Quiet Bridge, or the RNAV (RNP) 28R and that this single stream of planes landing only on Runway 28R. If conditions require an ILS approach, it is requested that only Runway 28R be used.

Please refer to Appendix A, 1.17 and 2.13, as these share similar recommendations.

3.45 NIGHTTIME: BDEGA and other arrivals from the north be assigned only to the BDEGA East downwind (or similar) for a "noise-friendlier" approach to only 28R.

Please refer to Appendix A, 1.11, as these share similar recommendations.

3.50 The SFO RT will work with airline representatives and the FAA to request that all oceanic nighttime arrivals from the north file for and fly an approach which utilizes the Bay (such as the BDEGA East downwind) and substantially avoids flight over non-compatible land uses.

The FAA understands this recommendation to mean Oceanic arrivals from the North would essentially be BDEGA arrivals. Please refer to Appendix A, 1.11, as these share similar recommendations.

3.52 NIGHTIME: The SFO Roundtable will work with airline representatives to encourage them to file for SFO arrivals that avoid flight over sensitive areas. If inbound aircraft choose to file for BDEGA, it is requested that only the BDEGA East downwind be assigned to them.

Please refer to Appendix A, 1.11, as these share similar recommendations.

3.53 The SFO Roundtable will provide any required community data as well as community input to the FAA to support all efforts to improve noise impacts during the important night time hours.

NCT will continue to be an active participant in Roundtable meetings, providing subject matter expertise in seeking solutions.

3.54 In the existing procedure, fly the planes on the charted CNDEL departure as published so that they fly over the CNDEL flyover waypoint THEN over the PORTE waypoint as charted.

Please refer to Appendix A, 1.8, as these share similar recommendations.

Please refer to Appendix A, 2.30 for a detailed explanation of using vectors for climbing aircraft.

3.57 In the existing procedure, avoid vectoring aircraft for non-safety reasons prior to the CNDEL waypoint.

Please refer to Appendix A, 1.8, as these share similar recommendations.

Please refer to Appendix A, 2.30 for a detailed explanation of using vectors for climbing aircraft.

3.58 Assignment of southbound vectors be delayed until the aircraft has reached the ocean and PORTE waypoint to reduce aircraft flying over San Francisco and down the Peninsula.

Please refer to Appendix A, 1.8, as these share similar recommendations.

Please refer to Appendix A, 2.30 for a detailed explanation of using vectors for climbing aircraft.

3.62 The Roundtable is available to provide community input to the FAA with the use of modeling or other tools to determine the effects of other noise friendlier departure paths for flights using the OAK CNDEL departure, especially for CNDEL southbound flights. Such options might include (but are not limited to) flight over the waters of the Bay to the Pacific Ocean or flight over the Bay to SFO and then over the Peninsula (primarily Millbrae and Burlingame) to PORTE or flight down the Bay as far south as feasible, or other options that may become known.

NCT will continue to be an active participant in Roundtable meetings, providing subject matter expertise in seeking solutions.

The FAA does not support **CNDEL flights being routed up the Bay to the Pacific Ocean** (GOBBS and south). Please refer to Appendix D, 2.31 for more information.

Flight over the Bay to SFO and then over the Peninsula to PORTE is essentially how CNDEL is flown today.

For more information on **flight down the bay as far south as feasible**, please refer to Appendix C, 3.27.

3.63 Avoid issuing any non-safety vectors to aircraft for as long as feasible and no earlier than when an aircraft is actually over the SEPDY flyover waypoint. After reaching the designated waypoint or intersection, continued flight up the Bay (to attain higher altitude) is desirable. When a left turn is to be made, a relatively wide dispersal of flight paths to the ocean is preferred.

In accordance with the NorCal Phase One Report, 2.a.ii, 99% of aircraft flying the STTIK departures in October 2016 are within 1NM of the SSTIK waypoint, as per the procedure. Aircraft that fly this procedure, as with other procedures, use the aircraft's FMS to follow the procedure's requirements, while also safely accounting for the individual aircraft characteristics, e.g. heavier aircraft typically are slower to climb and take longer to turn than lighter aircraft – the FMS accounts for this. NCT will continue to reinforce not intervening with aircraft until after the SSTIK waypoint to personnel through training and briefings.

Please refer to Appendix A, 2.37, as these share similar recommendations.

Please refer to Appendix A, 2.30 for a detailed explanation of using vectors for climbing aircraft.

It should be noted that, for criteria, an IFP Gateway entry has been made to move the SSTIK waypoint 0.44 NM East-Southeast from its present position. For a more detailed explanation, please refer to Appendix D, 2.38.

3.64 Flights should be directed to fly as high as possible over the SEPDY waypoint (over the bay), allowing them to be higher in altitude before turning over land, with a steady altitude increasing as they make their way to the ocean.

Please refer to Appendix A, 2.37 and 3.63, as these share similar recommendations.

Please refer to Appendix A, 2.30 for a detailed explanation of using vectors for climbing aircraft.

It should be noted that, for criteria, an IFP Gateway entry has been made to move the SSTIK waypoint 0.44 NM East-Southeast from its present position. For a more detailed explanation, please refer to Appendix D, 2.38.

3.65 Avoid vectoring aircraft down the Peninsula direct to waypoints beyond PORTE. Aircraft should fly over the PORTE waypoint on the published procedure.

Please refer to Appendix A, 1.8, as CNDEL to PORTE and SSTIK to PORTE are similar recommendations.

Please refer to Appendix A, 2.30 for a detailed explanation of using vectors for climbing aircraft.

3.66 In the existing SSTIK procedure, use the Bay and ocean for overflight as much as possible.

Under the existing SSTIK procedure, aircraft that fly the procedure as published do overfly water as much as possible.

Please refer to Appendix A, 3.63, as these share similar recommendations.

Please refer to Appendix A, 1.28 for information regarding compatible land use.

3.67 In the existing SSTIK procedure, utilize existing areas of compatible land use for overflight.

Under the existing SSTIK procedure, aircraft that fly the procedure as published do overfly compatible land use as much as possible.

Please refer to Appendix A, 3.63, as these share similar recommendations.

Please refer to Appendix A, 1.28 for information regarding compatible land use.

3.75 The SFO Roundtable will provide community input to the FAA to find an appropriate location for moving the SSTIK waypoint east and north of its current location, again using SEPDY as a guide, so planes can fly over the Bay for a longer period of time, and thus increase altitude before heading west and flying over residential areas.

NCT will continue to be an active participant in Roundtable meetings, providing subject matter expertise in seeking solutions.

Please refer to Appendix D, 2.38, as these share similar recommendations.

3.77 Allow planes to fly the charted procedures and to reduce vectoring and when safety is not an issue as well as to use higher altitudes when flying over noise-sensitive land uses and the use of non-residential areas where feasible.

Please refer to Appendix A, 2.37 and 3.63, as these share similar recommendations.

Please refer to Appendix A, 1.8, as CNDEL to PORTE and SSTIK to PORTE are similar recommendations.

Please refer to Appendix A, 2.30 for a detailed explanation of using vectors for climbing aircraft.

Please refer to Appendix A, 1.28 for information regarding compatible land use.

4.1 The SFO Aircraft Noise Abatement (ANAO) Office and Northern California TRACON have an agreement that states when able, aircraft will cross the MENLO intersection during visual conditions at 5,000' AGL and 4,000' AGL during instrument conditions. The Roundtable requests this agreement stays in place and aircraft cross MENLO at or close to 5,000' AGL during visual conditions.

The FAA agrees with this recommendation to the extent feasible. However, it should be noted that there is no such agreement as stated that references altitudes as Above Ground Level (AGL). The FAA, for clarity and consistency, typically references altitudes in Mean Sea Level (MSL) in orders, agreements and procedures. The FAA is in ongoing discussions with the SFO Airport to update the Fly Quiet program.

For more information, please refer to Appendix E.

The Roundtable also recommends the creation of an RNAV visual approach to mirror the TIPP TOE Visual approach for 28L which would specify crossing MENLO at 5,000-feet.

Please refer to Appendix C, 2.17, as these share similar recommendations.

4.2 SSTIK to be flown to the SEPDY waypoint and vectored for safety purposes only, prior to the waypoint.

Please refer to Appendix A, 2.37 and 3.63, as these share similar recommendations.

It should be noted that, for criteria, an IFP Gateway entry has been made to move the SSTIK waypoint 0.44 NM East-Southeast from its present position. For a more detailed explanation, please refer to Appendix D, 2.38.

While awaiting the development of an OFFSHORE ONE RNAV overlay, NCT is requested to use the OFFSHORE departure procedure for flights to Southern California.

Please refer to Appendix D, 2.35 and 2.36, as these share similar recommendations.

Planes should be directed to fly as high as possible over the SEPDY waypoint (over the Bay), allowing them to be higher in altitude before turning over land, with a steady altitude increase and relatively wide dispersal of flight paths as they make their way to the ocean.

Please refer to Appendix A, 2.37 and 3.63, as these share similar recommendations.

Please refer to Appendix A, 2.30 for a detailed explanation of using vectors for climbing aircraft.

It should be noted that, for criteria, an IFP Gateway entry has been made to move the SSTIK waypoint 0.44 NM East-Southeast from its present position. For a more detailed explanation, please refer to Appendix D, 2.38.

The Roundtable requests the FAA to research other possible flight alternatives utilizing the Bay and Pacific Ocean.

As noted in Appendix D, 2.35, the YYUNG transition on the SSTIK departure has recently been modified so it no longer conflicts with military airspace over the Pacific Ocean. When this change is published, NCT will evaluate increasing the use of the transition.

4.3 The WESLA procedure should be flown as charted and allow aircraft to climb unrestricted when there are no other air traffic conflicts.

The FAA concurs with the recommendation that aircraft fly the WESLA procedure as charted to the extent operationally feasible. However, this recommendation incorrectly suggests that the WESLA departure allows aircraft to climb unrestricted as published, when in actuality the WESLA departure requires aircraft to maintain 3,000. Please refer to Appendix D, 2.25 for more information regarding eliminating or raising the 3,000' altitude limit.

4.4 CNDEL to be flown as charted and vectored for safety purposes only, not for efficiency.

Please refer to Appendix A, 1.8, as these share similar recommendations.

Please refer to Appendix A, 2.30 for a detailed explanation of using vectors for climbing aircraft.

Research other possible lateral path options for CNDEL southbound departures.

The Select Committee and the SFO Roundtable have made two recommendations for use of the available water. The first is for OAK departures to turn left and proceed down the Bay. Please refer to Appendix C, 3.27 for more information. The second recommendation regards OAK departures turn right and proceed up the Bay, over the Golden Gate Bridge to GOBBS, then proceed south over the ocean. Please refer to Appendix D, 2.31 for more information. As these recommendations make full use of the available bodies of water, the FAA has no further recommendations.

4.6 Fly the SSTIK procedure as charted to PORTE waypoint instead of clearing aircraft to subsequent waypoints downstream from SSTIK, bypassing PORTE.

Please refer to Appendix A, 2.37 and 3.63, as these share similar recommendations.

Please refer to Appendix A, 1.8, as CNDEL to PORTE and SSTIK to PORTE are similar recommendations.

Please refer to Appendix A, 2.30 for a detailed explanation of using vectors for climbing aircraft.

Create an additional waypoint over the ocean to guide aircraft over the water to PORTE, such as the legacy WAMMY waypoint associated with the OFFSHORE procedure.

Please refer to Appendix D, 2.34, as these share similar recommendations.

4.7 Fly the CNDEL to the CNDEL waypoint as charted, so as to create less interference with SSTIK.

Please refer to Appendix A, 1.8, as these share similar recommendations.

Please refer to Appendix A, 2.30 for a detailed explanation of using vectors for climbing aircraft.

The CNDEL should be flown to GOBBS, then to WAMMY, before flying to PORTE.

Please refer to Appendix D, 2.31, as these share similar recommendations.

4.8 SSTIK: That southerly vectors not be issued to an aircraft until an aircraft is actually *over* SEPDY (avoid anticipatory turns approaching SPEDY). Once past SEPDY, a relatively wide dispersal of flight paths to the ocean is preferred.

Please refer to Appendix A, 2.37 and 3.63, as these share similar recommendations.

Please refer to Appendix A, 2.30 for a detailed explanation of using vectors for climbing aircraft.

4.10 SSTIK: That existing areas of non-residential land be used for overflight.

Please refer to Appendix A, 1.28 for more information regarding compatible land use.

4.11 SSTIK: That assigning a southbound heading toward PORTE should be delayed as long as feasible including flying to the ocean before turning south.

The FAA will continue to instruct aircraft to fly the SSTIK procedure as charted to the extent operationally feasible.

Please refer to Appendix A, 2.30 for a detailed explanation of using vectors for climbing aircraft.

Please refer to Appendix D, 2.34 for more information regarding aircraft flying to the ocean.

4.12 SSTIK: That vectoring aircraft down the Peninsula direct to PORTE and to waypoints beyond PORTE should be avoided.

Please refer to Appendix A, 2.37 and 3.63, as these share similar recommendations.

Please refer to Appendix A, 1.8, as CNDEL to PORTE and SSTIK to PORTE are similar recommendations.

Please refer to Appendix A, 2.30 for a detailed explanation of using vectors for climbing aircraft.

4.14 CNDEL procedure should be flown as charted and reduce the amount of aircraft vectored.

Please refer to Appendix A, 1.8, as these share similar recommendations.

Please refer to Appendix A, 2.30 for a detailed explanation of using vectors for climbing aircraft.

CNDEL departures be allowed to fly the procedure to PORTE intersection unless safety (not efficiency) requires vectoring earlier.

Please refer to Appendix A, 1.8, as these share similar recommendations.

Please refer to Appendix A, 2.30 for a detailed explanation of using vectors for climbing aircraft.

4.15 The FAA to use this as a baseline to compare conditions in the future when reporting back to this body regarding decreasing vector traffic.

The FAA concurs with this recommendation.

The FAA research various options as alternate lateral paths for CNDEL southbound departures.

The Select Committee and the SFO Roundtable have made two recommendations for use of the available water. The first is for OAK departures to turn left and proceed down the Bay. Please refer to Appendix C, 3.27 for more information. The second recommendation regards OAK departures turn right and proceed up the Bay, over the Golden Gate Bridge to GOBBS, then proceed south over the ocean. Please refer to Appendix D, 2.31 for more information. As these recommendations make full use of the available bodies of water, the FAA has no further recommendations.

4.17 Work with SFO Noise Abatement Office on a pilot outreach program to encourage aircraft to stay over water while on approach after receiving their cleared to land instructions.

Please refer to Appendix A, 2.13, as this recommendation is similar to recommendations for use of noise-friendly approaches.

4.18 Increase controller awareness on keeping aircraft over water as much as possible, especially during late night hours and when aircraft are operating in single-stream and using RWY 28R.

Please refer to Appendix A, 2.13, as this recommendation is similar to recommendations for use of noise-friendly approaches.

Assurances from the FAA, to the maximum extent possible, not turn aircraft over affected communities prior to nine miles from the SFO VOR (9 DME) final from the airport, consistent with the NCT informal noise abatement agreement.

NCT's SOP prohibits jet aircraft executing visual approaches to be turned to join the final closer than nine miles from the runway. NCT will continue to reinforce the use of this procedure to personnel through training and briefings.

4.20 Work with SFO Noise Abatement Office on a pilot outreach program to encourage aircraft to stay over water while on approach after receiving their cleared to land instructions.

Please refer to Appendix A, 2.13, as this recommendation is similar to recommendations for use of noise-friendly approaches.

4.21 Increase controller awareness on keeping aircraft over water as much as possible, especially during late night hours and when aircraft are operating in single-stream and using RWY 28R.

Please refer to Appendix A, 2.13, as this recommendation is similar to recommendations for use of noise-friendly approaches.

4.22 Work with SFO Noise Abatement Office on a pilot outreach program to encourage aircraft to stay over water while on approach after receiving "cleared to land" instructions.

Please refer to Appendix A, 2.13, as this recommendation is similar to recommendations for use of noise-friendly approaches.

4.23 Educate controllers on keeping aircraft over water as much as possible, especially during late night hours and when aircraft are operating in single-stream.

Please refer to Appendix A, 2.13, as this recommendation is similar to recommendations for use of noise-friendly approaches.

4.24 The Roundtable requests to work with the FAA to determine where aircraft can be vectored with the least noise impact and identify locations that have the most compatible land uses for vectoring purposes.

NCT will continue to be an active participant in Roundtable meetings, providing subject matter expertise in seeking solutions.

Due to safety considerations, the FAA does not support a restriction on when ATC may or may not vector aircraft. Please refer to Appendix D, 4.31 for more information.

4.26 Oakland Center and NCT to encourage use of the RNAV (RNP) Y procedure to Runway 28R or the FMS Visual 28R to keep aircraft over the water for as long as possible.

Please refer to Appendix A, 1.17 and 2.13, as these share similar recommendations.

4.27 Educate controllers on keeping aircraft over water as long as possible on approach, especially during single-stream operations.

Please refer to Appendix A, 2.13, as this recommendation is similar to recommendations for use of noise-friendly approaches.

4.28 Work with the SFO ANAO to educate pilots on the ability to request the RNP to Runway 28R or the FMS Visual 28R, given the properly equipped aircraft and flight crew.

Please refer to Appendix A, 1.17 and 2.13, as these share similar recommendations.

4.29 Determine the ability of more aircraft to utilize the Bay for arrivals from points north instead of the peninsula. This is especially important during nighttime hours, where 100% of arrivals using the Bay is desired.

Please refer to Appendix A, 1.11 for more information regarding opportunities for BDEGA aircraft to be assigned the East downwind.

4.32 We are encouraged by the use of the NIITE procedure with a goal of 100% use from midnight to 6am and infrequent use during other nighttime hours.

Please refer to Appendix A, 1.6, as these share similar recommendations.

4.33 We continue to encourage the use of HUSSH and reduce vectors off of the HUSSH departure for the same reasons as the NIITE.

Please refer to Appendix A, 1.6, as these share similar recommendations.

4.35 Remove GNNRR TWO in references to flying aircraft over less noise-sensitive areas and the associated inclusion in procedures used over less noise-sensitive areas that total 88%.

The GNNRR departure is not listed as a noise abatement procedure in any of the FAA's orders or agreements. The NorCal Phase One Report, a.ii.(a) does list the GNNRR procedure as being used during nighttime hours. During these times, the GNNRR departure is primarily used by heavy aircraft that require the use of the long runways (Runway 28 L/R) and this procedure for safety considerations.

4.36 When available, use the GAP SEVEN departure to avoid any top altitude restrictions for aircraft departing Runway 28L/R out the gap.

Please refer to Appendix A, 3.32, as these share similar recommendations.

4.37 Aircraft use compatible land uses (such as the Bay, Pacific Ocean, and non-residential areas) for as long as possible before turning. For the SSTIK procedure, this would be using the Bay to gain altitude before turning over populated areas.

Please refer to Appendix A, 2.37 and 3.63, as these share similar recommendations.

Please refer to Appendix A, 1.8, as CNDEL to PORTE and SSTIK to PORTE are similar recommendations.

Please refer to Appendix A, 1.28 for information regarding compatible land use.

4.40 Aircraft remain on the WESLA procedure, as charted.

The FAA agrees with this recommendation to the extent feasible. Note: The GNNRR and WESLA contain a 3,000-foot altitude restriction for Runway 28 departures that is required for safety. This altitude restriction provides the required minimum vertical separation with Runway 01 departures that turn over the top of the Runway 28 departures. This restriction can be waived by ATC if there are no traffic conflicts.

4.41 The FAA to use *FAA Initiative Phase 1, Appendix B* as a baseline to compare improvements in decreasing vector traffic.

The FAA concurs with this recommendation.

4.42 When aircraft use the SAHEY THREE departure from Runway 10L/R, that aircraft are not vectored and fly the procedure as charted.

The FAA analyzed historic tracks for aircraft that filed the SAHEY procedure and found that 93% of those aircraft pass within 1 NM of the SAHEY waypoint. The FAA concurs with the recommendation that aircraft fly the SAHEY procedure as published to the extent operationally feasible. NCT will continue to reinforce the use of this procedure to personnel through training and briefings.

4.44 For departures using RWY 01L/R for departures during nighttime hours, the Roundtable requests aircraft with southern destinations use the 050 departure heading as much as possible to avoid overflights of the peninsula. The RT is not advocating for Runway 01L/R to be used more during nighttime hours.

Please refer to Appendix A, 2.24, as these share similar recommendations.

4.45 Maximum use of SFO's preferred nighttime preferential runway procedures, including using the TRUKN (up the Bay) and NIITE as replacements for the SHORELINE and QUIET departures.

The FAA concurs with this recommendation to the extent operationally feasible. Noise Abatement Procedure beginning and ending times are coordinated 'real-time' between NCT and ZOA every night, based upon airport arrival and departure demand.

4.47 When conditions permit and aircraft use the TRUKN departure off RWY 28L/R, the Roundtable requests the FAA conduct controller outreach to educate them about aircraft staying east of Highway 101.

The TRUKN departure was designed so that most aircraft that depart SFO's Runway 28 would be able to make the right turn while remaining East of highway 101. Aircraft that fly this procedure, as with other procedures, use the aircraft's FMS to follow the procedure's requirements, while also safely accounting for the individual aircraft characteristics, e.g. heavier aircraft typically are slower to climb and take longer to turn than lighter aircraft – the FMS accounts for this. This phase of flight is typically done with no communication with ATC. NCT will continue to reinforce the use of this procedure to personnel through training and briefings. A similar recommendation can be found in the FAA's NorCal Initiative Phase One Report, 2.e.iv.

4.49 The SSTIK procedure should be flown as charted, especially flying to the PORTE waypoint instead of down the peninsula to points south of PORTE.

Please refer to Appendix A, 2.37 and 3.63, as these share similar recommendations.

Please refer to Appendix A, 1.8, as CNDEL to PORTE and SSTIK to PORTE are similar recommendations.

Please refer to Appendix A, 2.30 for a detailed explanation of using vectors for climbing aircraft.

4.50 NIGHTTIME: The nighttime preferential runway program remains unchanged, and primarily use Runways 10 L/R for takeoff because they offer routing over the Bay.

Please refer to Attachment A, 2.26, as these share similar recommendations.

Don't vector aircraft on the SAHEY THREE departure.

Please refer to Appendix A, 4.42 for information regarding the SAHEY procedure, as these share similar recommendations.

4.51 NIGHTTIME: The nighttime preferential runway program remains unchanged, and the second preference is depart Runways 28 L/R and the SHORELINE, QUIET or TRUKN procedures.

Please refer to Attachment A, 2.26, as these share similar recommendations.

4.52 NIGHTTIME: The nighttime preferential runway program remains unchanged, and the third preference is depart Runways 01 L/R.

Please refer to Attachment A, 2.26, as these share similar recommendations.

4.53 Work with SFO Roundtable on future changes.

NCT will continue to be an active participant in Roundtable meetings, providing subject matter expertise in seeking solutions.

APPENDIX B: Feasible And Could Be Implemented In The Short Term **(Less Than 2 Years)**

Appendix B

1.1 Amend the SFO Class B airspace to fully contain the SERFR procedure, or any supplement or replacement.

Modification of the San Francisco Class B was initiated in January 2015. The Northern California TRACON studied the current airspace for safety and efficiency concerns. The Western Service Center and FAA HQ Airspace Policy Group evaluated the proposal and approved a review by Aviation Industry experts. The Ad-Hoc committee met, and their recommendations were incorporated into the proposal. The proposal was presented at three informal airspace meetings held in February 2017. The comments received from the public were either incorporated into the proposed design or an explanation was provided to FAA HQ as to why incorporation was not possible. FAA Legal Counsel and the FAA Office of Economic Policy are currently reviewing the proposal for legal and economic feasibility. Once the analysis is completed the proposal will be published in the Federal Register for public consideration and comment. The modified Class B airspace is scheduled to be published in August 2018.

1.20 The FAA design a new procedure for arrivals into SFO from the south using the MENLO waypoint. The recommended procedure would cross the EDDYY waypoint (or equivalent) above 6,000 feet, continue at idle power to cross the MENLO waypoint at or above 5,000 feet, and maintain idle power until the HEMAN waypoint (or other ILS 28L interception point). Such a procedure should also be designed to avoid the use of drag devices such as speed brakes.

Due to a safety issue, the SERFR procedure is in the process of being amended. MENLO, and its crossing restriction of 4,000 feet, is being removed. It's being replaced by the Initial Approach Fix (IAF) SIDBY, which will in the same vicinity of MENLO, however it will have a crossing restriction of at or above 4,000 feet. SERFR will now terminate at EDDYY, with a crossing restriction at EDDYY of 6,000 feet. Once published, aircraft that fly the SERFR procedure will proceed to EDDYY (crossing at 6,000 feet), then to SIDBY (at or above 4,000'), followed by the IF fix (HEMAN, for example). For more information, please refer to Appendix E.

2.6 The FAA study whether an increase in in-trail spacing on the BDEGA arrival will result in the decrease in vectoring over the Peninsula.

The FAA is continuously working to improve aircraft setup and sequencing between facilities. The BDEGA Arrival has the lightest traffic load (24% of SFO arrivals), as compared to the SERFR Arrival (29% of SFO arrivals) and DYAMD Arrival (39% of SFO arrivals), and as such is a candidate for this type of action.

Please refer to Appendix A, 1.11 for more information regarding opportunities for BDEGA aircraft to be assigned the East downwind.

3.9 NCT update its SOP to reflect using a "down the Bay" procedure is preferred during nighttime hours.

NCT is working to update SOP to accommodate this request as much as operationally feasible from the beginning of Noise Abatement Procedure hours until 6 am. NCT currently routes BDEGA arrivals to the East downwind to the extent operationally feasible, and SFO's Runway 28R is listed within NCT's SOP as the preferred arrival runway. NCT will continue to reinforce the use of this procedure to personnel through training and briefings.

APPENDIX C: Feasible And Could Be Implemented In The Long Term **(More Than 2 Years)**

1.2 Arrivals into SFO from the south use the BSR ground track for a new NextGen procedure.

The FAA is currently following its non-rule making process outlined in the Updated NorCal Phase Two Report (See "b. Creation/Amendment of an instrument flight rule procedure")

1.3 The new NextGen procedure for arrivals into SFO from the south be implemented as soon as feasible and include the listed criteria.

In the NorCal Phase One Report, 1. f., the recommendation to revert back to the BSR ground track was deemed feasible by the FAA. The Select Committee voted 8 to 4 in favor of the recommendation to create an RNAV procedure overlaying the BSR ground track. In addition, the Select Committee provided nine sub-recommendations for the design of the new procedure. Although these sub-recommendations will be considered during the FAA's procedure design process, all Select Committee sub-recommendations are subject to the FAA's design criteria and safety/operational requirements.

Please refer to Appendix C, 1.2, as these share similar recommendations.

1.4 Within three months of completing the new procedure, the FAA will meet with the Ad-Hoc Subcommittee to review whether the new procedure has resulted in an equivalent or less DNL noise exposure along its entire route when compared to 2014 noise modeling of the BSR procedure.

This recommendation is dependent upon the outcome of the BSR RNAV Overlay. Please refer to Appendix C, 1.2, as these share similar recommendations. The FAA will continue to be an active participant in Round Table and/or Ad-Hoc Subcommittee meetings, providing subject matter expertise in seeking solutions.

1.5 The FAA search for and develop a new flight procedure for arrivals into SFO from the south that includes the listed criteria.

Please refer to Appendix C, 1.2, as these share similar recommendations.

1.7 NIGHTTIME: Nighttime SSTIK departures use the NIITE procedure up to the NIITE waypoint, which is in the Bay north of the Bay Bridge, then the aircraft would head west out over the Golden Gate Bridge.

Please refer Appendix C, 3.23, as these share similar recommendations.

1.9 Use new, more effective, time-based flow management tools currently in development to allow for better sequencing (i.e., spacing) of aircraft to reduce the percentage of aircraft that are vectored or held prior to the final approach path to SFO.

The FAA is continuously finding better and more efficient ways to manage the NAS. Through technology and innovation, programs are being developed to adjust capacity/demand imbalances at select airports, departure fixes, arrival fixes and en route points across the NAS. As newer technology and more effective programs become available, the FAA is committed to incorporate needed improvements into the NAS to reduce impacts to local communities.

1.14 Revise the Woodside VOR Ocean Tailored Arrival to honor the existing noise abatement procedure to cross the Woodside VOR at 8,000 feet.

The FAA is in the process of creating an overlay of the OTA. The new procedure will be an OPD called the PIRATE STAR which will replace the OTA. To track the development of this new procedure, visit the FAA Instrument Flight Procedures Gateway online at https://www.faa.gov/air_traffic/flight_info/aeronav/procedures/.

1.31 Following implementation of changes to the current arrival route for aircraft from southern destinations, the FAA shall consider a new BRIXX procedure that maintains the highest possible altitude at the point where it (BRIXX) intersects the new arrival route from the south. The FAA shall review any proposed new BRIXX procedure with any successor committee.

This recommendation is dependent upon the outcome of the BSR RNAV Overlay. Please refer to Appendix C, 1.2, as these share similar recommendations.

2.17 Create a Visual Approach for Runway 28L with a MENLO crossing altitude at or above 5,000' MSL.

NCT supports the development of an RNAV visual approach to SFO's Runway 28L. Due to safety considerations and current criteria, development of this type of procedure is on hold. The FAA is currently evaluating methods for overcoming these concerns.

For more information, please refer to Appendix E.

2.19 NIGHTTIME: Create a south transition (GOBBS and south) for the NIITE/HUSSH that keeps traffic over the Bay and ocean until a high altitude is attained.

Please refer Appendix C, 3.23, as these share similar recommendations.

2.20 NIGHTTIME: While awaiting the development of a NIITE/HUSSH SOUTH transitions, NCT is requested to use the NIITE DP track to GOBBS and then vectors from GOBBS southbound (keeping offshore) at least until PORTE or further south.

Please refer Appendix C, 3.23, as these share similar recommendations.

2.29 Use Bay and Pacific Ocean for overflights as much as possible. From CNDEL, direct aircraft to GOBBS and south.

Please refer Appendix C, 3.23, as these share similar recommendations.

2.33 NIGHTTIME: For OAK southbound aircraft, until the NIITE southbound transition has been finalized, use of the NIITE/HUSSH DP or vectors to replicate the NIITE/HUSSH DP with a vector from GOBBS to the south to remain offshore.

Please refer Appendix C, 3.23, as these share similar recommendations.

For OAK southbound aircraft, a left turn down the Bay is supported.

Please refer to Appendix C, 3.27 for more information regarding OAK departures down the Bay, as these share similar recommendations.

3.19 NIGHTTIME: While undergoing the formal process of amending the NIITE departure to add a transition for southbound aircraft past GOBBS and adopting GOBBS for use, the Roundtable requests that NCT work with the SFO RT to determine if an interim informal procedure based on TRACON vectors might be feasible to approximate the NIITE departure which would be heading up the Bay to NIITE, then west to GOBBS, then south-south-east to the PORTE or WAMMY waypoint, remaining clear of the shore.

Please refer to Appendix C, 3.23, as these share similar recommendations.

3.23 The SFO RT formally requests that the FAA add a transition to the NIITE departure for southbound aircraft.

As noted in this recommendation, the NorCal Phase One Report, 2.f.i determined that a south transition for the NIITE departure procedure for southbound destinations was feasible. However, as explained on numerous occasions, the following issues remain: **Congestion, Noise Shifting** and **Flying Distance.**

> **Congestion.** This recommendation is asking for nighttime southbound aircraft that normally get routed via SSTIK / CNDEL to instead be routed via the NIITE procedure to NIITE, GOBBS, then PORTE and south (or some similar version thereof). As the system stands now, SFO can clear SSTIK and NIITE aircraft for takeoff *simultaneously* because, simply put, their courses immediately diverge after takeoff (SSTIK departures turn left and south, NIITE departures continue north). Routing SSTIK departures north via NIITE/GOBBS will eliminate the ability to depart two aircraft simultaneously because there would be no divergence after takeoff (both aircraft would continue north). Instead of launching two aircraft at the same time, only one aircraft would be allowed to depart. Additionally, because these aircraft would all be departing on the same procedure, the Tower would be required to delay subsequent departures until the required 5 mile in-trail separation was established.
>
> This would have a significant impact to delays at both SFO and OAK airports. It would be similar to merging three lanes of highway traffic to one (SSTIK/NIITE/CNDEL to

NIITE). Greatly increasing the volume of aircraft from these three available departures to the only departure corridor (NIITE), without the ability to vector aircraft off the corridor early (except for safety), will have the effect of backing up traffic on the ground awaiting departure at both SFO and OAK airports. This will likely affect the times that the Noise Abatement Procedures would be effective as well.

Noise Shifting. While routing SSTIK departures north to NIITE/GOBBS and south will likely reduce noise for some communities on the peninsula, it will likely shift that noise to communities near the Bay and Golden Gate Bridge. Please refer to the FAA's comment in response to 1.28

Flying Distance. Routing SSTIK and CNDEL aircraft north to NITTE/GOBBS and south will add approximately 32 flying miles compared to the SSTIK departure, and approximately 20 flying miles compared to the CNDEL departure.

As noted previously by the FAA, while this recommendation is feasible, the FAA will not move forward on this recommendation until issues of **Congestion, Noise Shifting** and **Flying Distance** have been addressed with the airline stakeholders and the affected communities by the Select Committee and/or SFO Roundtable.

Once implemented, the 050° down the Bay option is still preferred.

Please refer to Appendix A, 2.24, as these share similar recommendations.

3.27 The use of a comparable heading down the Bay for southbound flights taking off from OAK.

OAK Southbound / Eastbound departures are currently vectored down the bay, traffic permitting, during noise sensitive hours. An IFP Gateway entry had been made to create a charted departure procedure.

This recommendation conflicts with the multiple recommendations for SFO runway 10 L/R departures to fly up the Bay (see Appendix D, 2.21). These recommendations would put aircraft flying in opposite directions while being the similar stages of climb-out.

3.39 NIGHTTIME: While awaiting the publication of this NIITE/HUSSH southbound transition, it is requested that aircraft be vectored in according with long-standing NCT procedures (SFO 330° heading up the Bay) and (SFO and OAK) out to the ocean and southbound over the Pacific Ocean.

Please refer to Appendix C, 3.23, as these share similar recommendations.

Use the 050° heading for southbound departures.

Please refer to Appendix A, 2.24, as these share similar recommendations.

3.47 The SFO Roundtable supports an immediate start to designing the southbound transition for SFO and OAK flights on the NIITE departure. This NIITE departure/southbound transition procedure will replace the SSTIK and CNDEL departures during the nighttime hours.

Please refer Appendix C, 3.23, as these share similar recommendations.

3.56 NIGHTTIME: Use the GOBBS waypoint during nighttime hours to reduce overflights of the Peninsula - (HUSSH departure).

Please refer Appendix C, 3.23, as these share similar recommendations.

4.25 Request a timeline from the FAA for implementation of this procedure (NIITE, GOBBS, WAMMY, PORTE), factoring in requirements to run the procedure through the FAA Order JO 7100.41A process.

Please refer Appendix C, 3.23, as these share similar recommendations.

4.39 Define the airspace limitations over the Golden Gate and the ocean to the west of the peninsula for placement of a waypoint to replace or augment PORTE. Present these limitations to the Roundtable in graphic and memo formats.

The Northern California Metroplex project included a noise analysis and an overall assessment of aircraft noise associated with NCTs procedures, as well as vectoring and compatible land use. During the project, the FAA engaged the public and solicited comments during the environmental review.

The FAA has the technical expertise to design safe flight paths that are within criteria, as applicable, and does not expect the public to provide expertise in this manner. If a community requests that an FAA procedure be changed/moved, it is incumbent upon that party to present a suitable alternative for consideration through the FAA Instrument Flight Procedures Gateway online at https://www.faa.gov/air_traffic/flight_info/aeronav/procedures/.

NCT will continue to be an active participant in Roundtable meetings, providing subject matter expertise in seeking solutions.

Please refer to Appendix C, 3.23 for more information regarding creating a transition that extends south from GOBBS.

APPENDIX D: Recommendations Not Endorsed by the FAA

1.15 Recommend further restrictions to prohibit any overnight crossings at the Woodside VOR below 8,000 feet.

Aircraft vectoring is a tactical decision used by ATC to establish and maintain the sequence of aircraft to the airport. Due to safety considerations, the FAA cannot support a restriction on when ATC may or may not use a vital component of its sequencing tools.

Please refer to Appendix C, 1.14 for more information about the OTA overlay, PIRATE STAR procedure.

1.19 Altitude of flights over the MENLO waypoint be 5,000 feet or higher.

During the design phase of the SERFR arrival, the major airline carriers were present in order to ensure that the SERFR would be safe for their aircraft. During those discussions it was determined that in order to accommodate the majority of aircraft into SFO, the descent gradient into RWY 28 would need to be between 2.72 º – 2.85 º. With the altitude restriction of MENLO at 4,000 feet, the descent gradient to RWY 28L is 2.85 º. The published altitude at MENLO cannot be any higher without jeopardizing the safe operation of each aircraft. This optimum descent gradient does not change in VMC or in IMC. The higher an aircraft flies while in the vicinity of MENLO, the farther away from the SFO airport the aircraft must travel in order to descend to the appropriate altitude for approach. The FAA researched and addressed a similar question in its NorCal Phase One Report, 1.a.i. and Appendix D.

For more information, please refer to Appendix E.

1.21 All air traffic in the vicinity of the MENLO waypoint (including vectored traffic from other procedures) be kept at altitudes of 5,000 feet or higher, even if not crossing directly over the MENLO waypoint.

The average altitude of vectored traffic in the vicinity of MENLO waypoint is approximately 4,600 feet MSL. Aircraft that fly in the vicinity of MENLO with the intention of landing on Runways 28L or 28R at SFO are subject to the same descent requirements of those that cross MENLO on an arrival. Those requirements are detailed in the FAA's NorCal Phase One Report, 1.a.i. and Appendix D. For safety considerations, and to fly a stabilized approach, aircraft must be descended in order to intercept (join) the Final Approach Course (FAC) at or below the glideslope (See Figure D1).

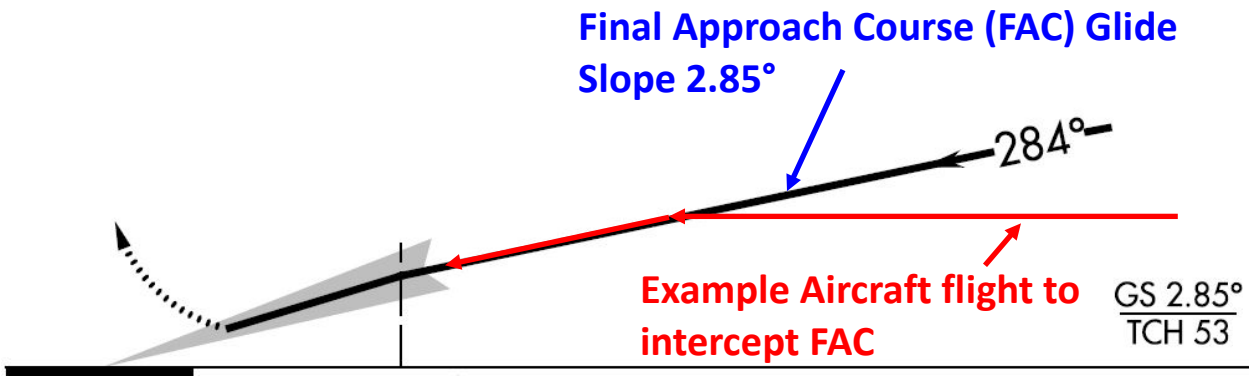


Figure D1: Intercept FAC below the glideslope

The higher an aircraft flies while in the vicinity of MENLO, the farther away from the SFO airport the aircraft must travel in order to descend to the appropriate altitude for approach. The available airspace does not allow for this, however, as the airspace to the East and Southeast of MENLO is primarily responsible for aircraft landing and departing the San Jose airport (SJC). These airspace restrictions are illustrated in Figure D2.

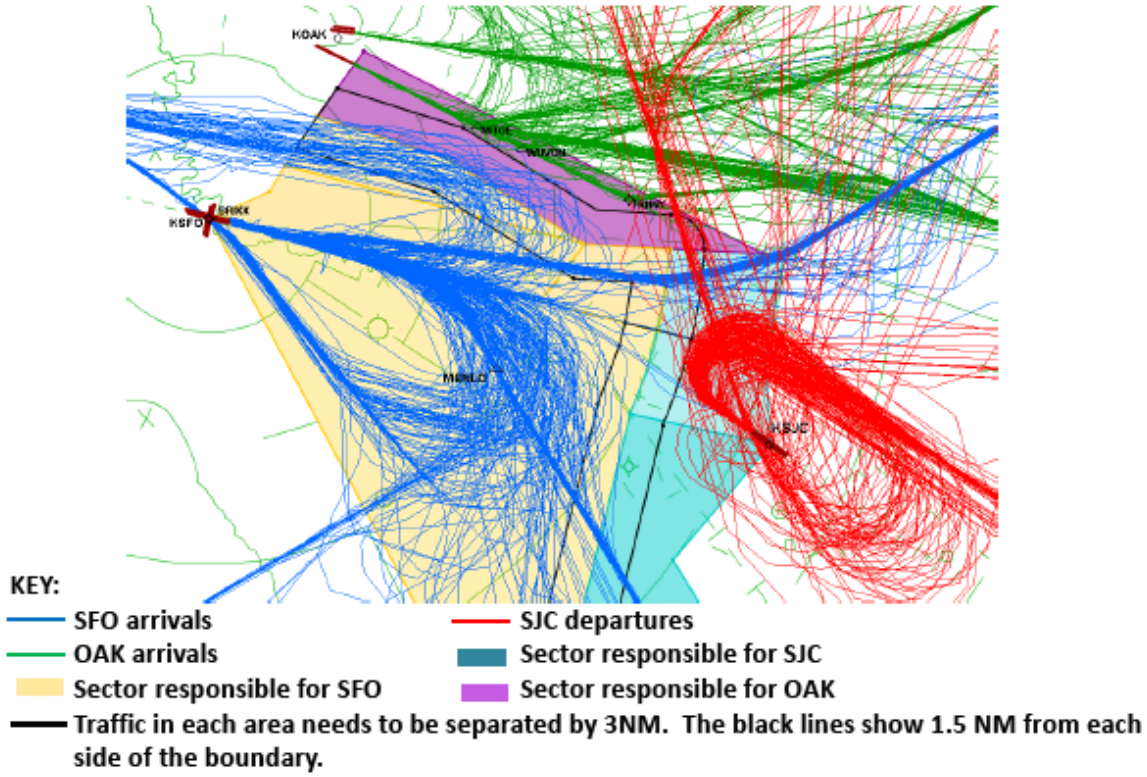


Figure D2: Airspace and tracks in the San Francisco Bay Area

For more information, please refer to Appendix E.

1.22 The FAA should review whether the angle of the 28L glide slope can be increased in order to increase the altitude at the HEMAN waypoint, or equivalent.

Please refer to Appendix D, 1.19, as these share similar recommendations.

1.23 Assess the feasibility of establishing different points of entry, over compatible land use and at high altitudes, to the final approach into SFO on the SERFR arrival (or any replacement), such as a different waypoint east or north of MENLO, or using FAITH, ROKME or DUMBA.

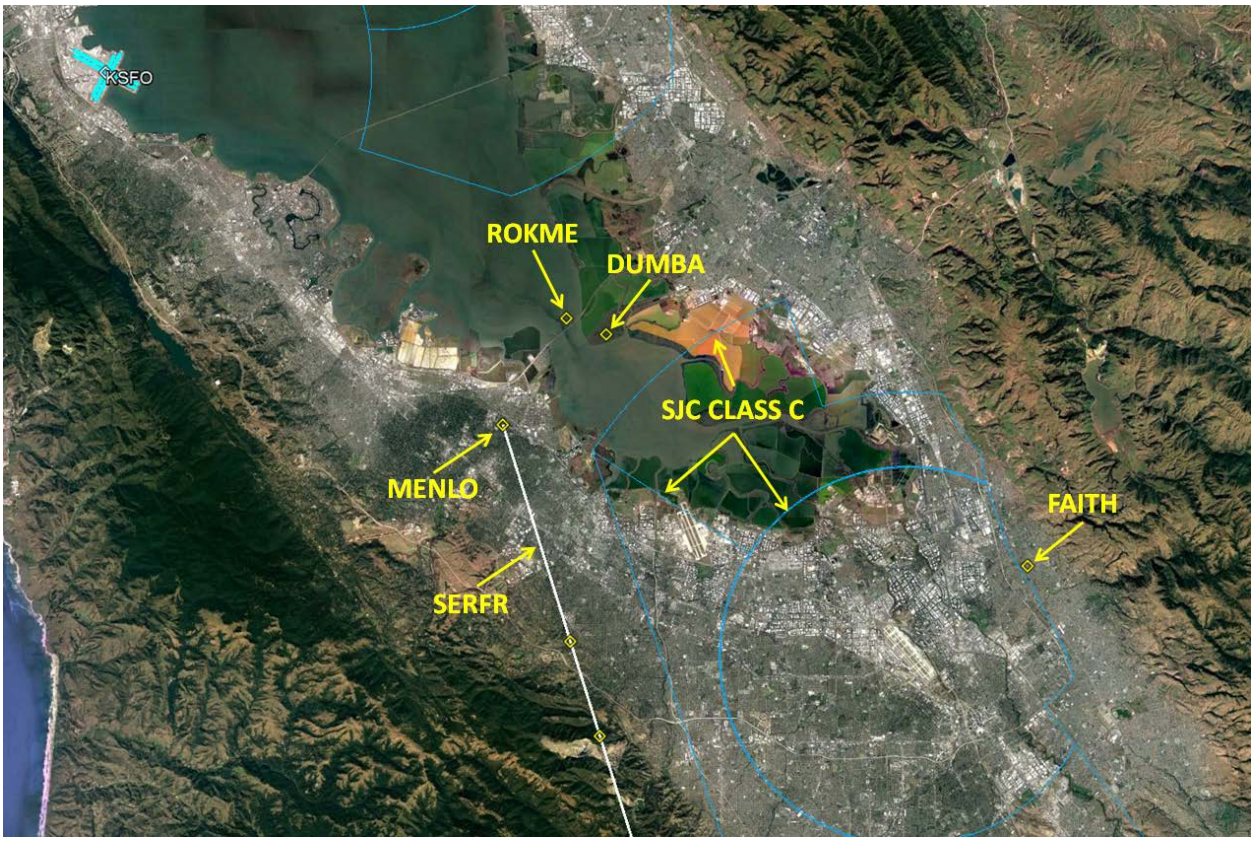


Figure D3: Airspace Limitations

Using a different waypoint east or north of MENLO, or ROKME or DUMBA.

As identified in previous meetings with the Select Committee and SFO Roundtable, the Bay Area airspace is very complicated due to the presence of three major airports in close proximity to each other. As illustrated above in Figure D3, SJC airspace lies two miles to the east of the SERFR arrival. Without coordination with the SJC controller, NCT must keep their aircraft at a minimum of 1.5 miles away from SJC's airspace. Directing aircraft to ROKME, DUMBA or points east or north, will encroach upon SJC's airspace, which the FAA cannot endorse. The FAA cannot endorse modifying SJC's Class C airspace, as that would limit SJC's ability to safely manage aircraft. For more information, please refer to Appendix E.

Using FAITH waypoint, or a new arrival that terminates east of the bay.

This recommendation conflicts with the Recommendation to increase the use of BDEGA East downwind arrivals. Routing aircraft arriving from the south to an arrival from the east would add more aircraft to an already saturated arrival stream, thereby reducing the available gaps for BDEGA arrivals to be routed to the East downwind. For more information, please refer to Appendix A 1.11 and 3.12.

Shifting traffic that historically arrives from the South to a route that terminates east of the Bay (FAITH/DYAMD) would impact routes that currently arrive from the east and north, as well as shift aircraft noise. Please refer to the FAA's comment in response to 1.28

1.24 The FAA decrease the size of the altitude windows on the SERFR procedure or path so that aircraft crossing EPICK do so at a higher altitude.

The SERFR arrival is an Optimized Profile Descent (OPD) arrival, meaning it was designed to reduce leveling off that is commonly seen during a conventional arrival. The SERFR arrival, as with all OPDs, contains narrowing sets of altitude restrictions as it progresses to the end point (MENLO) that were designed to create a smooth, stable transition from the arrival to the approach. Raising the altitudes on the arrival would jeopardize an aircraft's ability to fly a stabilized arrival / approach. Additionally, the SERFR arrival is procedurally separated from SFO / OAK departure traffic (SSTIK / CNDEL), passing below these departures. Raising the altitudes of the SERFR arrival will negatively affect the SSTIK and CNDEL departures. This is illustrated in Figure D4 (looking east @ 20° angle), where the green tracks are aircraft flying the SERFR arrival, and the pink tracks are aircraft flying the SSTIK / CNDEL departures.

For more information about the SERFR STAR Amendment, please refer to Appendix E.

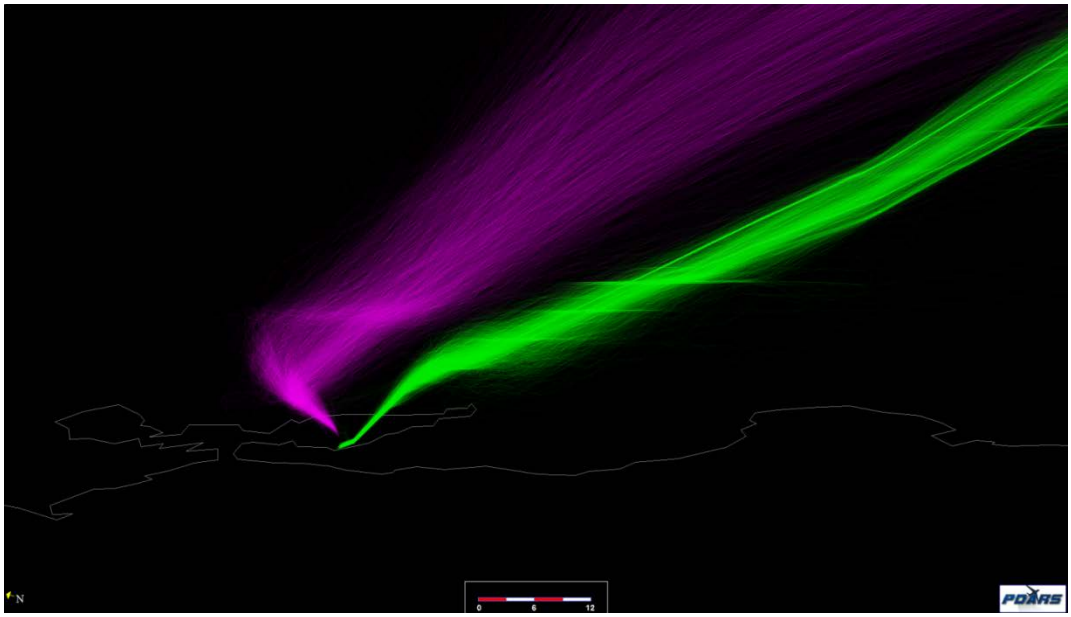


Figure D4: SSTIK / CNDEL Departures (Pink) and SERFR Arrivals (Green)

1.25 The arrival procedure for SERFR, or any subsequent route in this sub-region, be designed, if possible, to allow aircraft to reduce speed early, while over the Monterey Bay.

Speed control and vectoring are tactical decisions used by ATC to establish and maintain the sequence of aircraft to the airport. The FAA cannot support restricting when ATC may or may not use a vital component of its sequencing tools.

1.26 The FAA determine the feasibility of increasing the glide slopes of SFO Runways 28R and 28L to the maximum extent consistent with safety and the Committee's goal of noise mitigation.

Please refer to Appendix D, 1.19, as these share similar recommendations.

1.27 To the greatest extent possible, while still ensuring the safety of the aircraft, that the altitude be increased for all flight procedures/paths into and out of SFO.

Please refer to Appendix D, 1.19 and 1.21, as these share similar recommendations.

1.29 The FAA raise vectoring altitudes to maximum feasible altitudes over the Mid-Peninsula, with a focus on higher altitudes in the vicinity of the MENLO waypoint.

Please refer to Appendix D, 1.19 and 1.21, as these share similar recommendations

For more information, please refer to Appendix E.

2.2 Explain the limitations of using the BDEGA East downwind.

Please refer to Appendix A, 1.11 for information on BDEGA East downwind limitations, as these share similar recommendations.

Create an RNP arrival procedure down the bay, creating a curved arrival path over the bay.

Please refer to Appendix D, 2.3 for information on an RNP arrival procedure, as these share similar recommendations.

2.3 Reinstate the FINSH transition in order to facilitate use of the BDEGA East downwind, and create a "connection" between FINSH waypoint and a turn on to 28R for the FMS Bridge Visual, Quiet Bridge Visual or similar approach to 28R.

The Runway 28R and 28L transition (that contained the FINSH waypoint) was removed due to safety concerns. The issue stemmed from the necessity of pilots to program a transition into their FMS when issued the Standard Terminal Arrival (STAR) descent by the Center controller. However, this happens well before the TRACON controller advises the aircraft what runway and associated transition to expect – which is determined by traffic demands and sequencing needs as the aircraft gets closer to the airport. This led to a number of pilots arbitrarily selecting a transition, resulting in aircraft not flying as controllers expected, frequency congestion and confusion during their approach and landing - a critical phase of flight. The FAA does not support the reinstatement of separate runway transitions to SFO's Runway 28R and 28L.

2.5 Determine if the BDEGA West downwind can be flown at a higher altitude or over compatible land uses.

Please refer to Appendix D, 1.21 for more information regarding aircraft flying at higher altitudes, as these share similar recommendations.

Please refer to Appendix A, 1.28 for more information regarding compatible land use, as these share similar recommendations.

2.8 The FAA increase the in-trail spacing of aircraft on the SERFR arrival, flying the procedure as charted, which will decrease the need for vectoring.

The SERFR and DYAMD arrivals contain 68% of SFO's arrival traffic. The SERFR arrival typically contains aircraft arriving from points to the South and Southeast, such as LAX, SAN, PHX and MMMX (Mexico City). The DYAMD arrival typically contains aircraft from points to the East, such as DEN, ATL, BOS, EWR, JFK, LAS and ORD. These aircraft are directed to their respective arrival because it's the shortest and most efficient route. The FAA is continuously working to improve aircraft setup and sequencing between facilities.

Increase the altitude of the arrivals on the assigned routes as well as the vector traffic.

Please refer to Appendix D, 1.21 for information regarding increasing altitudes, as these share similar recommendations.

2.9 NIGHTTIME: Determine if arrivals from the south (such as on the SERFR/BSR) could instead file a route which would terminate to the east of the Bay for an approach to Runway 28R.

Please refer to Appendix D, 1.23 for information regarding a route that would terminate east of the Bay, as these share similar recommendations.

2.10 NIGHTTIME: Whenever aircraft fly over residential areas, the RT requests that every effort be made to keep aircraft at a higher altitude than typical daytime altitudes.

Please refer to Appendix D, 1.21 for information regarding increasing altitudes, as these share similar recommendations.

Consider using extra flight distance over the Bay to 28R to dissipate extra altitude (BDEGA and Oceanic to East Downwind).

Regarding extra flight distance down the Bay, complications with using extra flight distance for aircraft flying down the Bay to descend include OAK airspace to the North, the Runway 28R final to the South, and OAK final aircraft / DYAMD arrival aircraft to the East. Please refer to Appendix D, 1.19 and 1.21 for information regarding increasing altitudes, as these share similar recommendations, and the principles (regarding airspace constraints) can be applied here.

BDEGA arrivals assigned East downwind.

Please refer to Appendix A, 1.11 for information regarding BDEGA arrivals to the East downwind, as these share similar recommendations.

Oceanic arrivals to East downwind.

Procedurally changing an aircraft's downwind (West downwind to East) will result in a shift of aircraft noise. Also, please see the FAA's comment in response to 1.28

SERFR/BSR arrivals to east of the Bay.

Please refer to Appendix D, 1.23 for information regarding SERFR/BSR arrivals to east of the Bay, as these share similar recommendations.

2.11 The FAA increase the in-trail spacing of aircraft on the DYAMD arrival to allow additional opportunities for aircraft to use the BDEGA East arrival, Down the Bay.

Please refer to Appendix D, 2.8, as these share similar recommendations. Additionally, this recommendation conflicts with the Recommendation to route aircraft from the south to an arrival east of the bay (Appendix D, 1.23), which would *increase* the number of aircraft arriving from the east.

2.15 Determine the feasibility of creating dual offset (VMC or IMC) RNAV, RNAV (RNP) or other type of approach to Runway 28L and to Runway 28R.

Part of the procedure development process is to ascertain how a proposed procedure could be separated from all surrounding procedures. Such separation is required in order for the procedure to be published. This allows ATC to place an aircraft on the published procedure with the certainty that it is automatically separated from all other aircraft on other published procedures. The FAA researched publishing an offset approach to RWY 28L in its NorCal Phase One Report, 1.b.iii. and Appendix C. While this request was for a single offset approach to only Runway 28L, in actuality it was also evaluated against the existing offset approach to Runway 28R (an offset approach to Runway 28L would not operate in a vacuum). This research determined that an offset approach to Runway 28L would not have the required separation standards with the Runway 28R offset approach, making it untenable. Because this research included both the offset approaches to Runway 28L and 28R, the FAA considers this recommendation as redundant.

2.16 In VMC, aircraft should cross the vicinity around the MENLO waypoint and at or above 5,000 feet MSL. Aircraft within the vicinity of MENLO should use the 5,000' altitude when able.

Please refer to Appendix D, 1.19 and 1.21 for information regarding increasing altitudes, as these share similar recommendations.

For more information, please refer to Appendix E.

2.21 NIGHTTIME: Determine if Runway 10 take-offs can be authorized to use the NIITE. If not, create a departure to allow Runway 10 take-offs to make a left turn up the Bay to NIITE waypoint.

The NIITE departure procedure once contained a transition for both SFO Runways 01 and 10, but the Runway 10 transition was removed due to safety concerns. The issue stemmed from some pilots not correcting their FMS when their departure runway changed, resulting in the aircraft turning in the wrong direction on climb-out. The FAA does not support the reinstatement of a Runway 10 transition to the NIITE departure procedure.

2.22 NIGHTTIME: Determine if aircraft can file for SFO QUIET Departure or the OAK SILENT Departure and then be vectored in accordance with NCT SOPs out to GOBBS and then southbound.

The SFO QUIET Departure is no longer a published procedure.

Please refer to Appendix C, 3.23 for more information regarding the recommendation to route aircraft via the Pacific Ocean and the GOBBS waypoint.

2.23 NIGHTTIME: While awaiting authorization for Runway 10 departures to use the NIITE DP, the RT requests that aircraft be vectored to mirror the NIITE DP.

Please refer to Appendix D, 2.21, as these share similar recommendations. This reference applies to vectored aircraft as well, as ODO applies to all aircraft in an opposite direction configuration.

Please refer to Appendix D, 2.27 for more information regarding Opposite Direction Operations, as these share similar recommendations.

2.25 NIGHTTIME: Is there any ability to eliminate or raise the 3,000' altitude limit on straight-out departures?

The FAA cannot agree with this recommendation as the GNNRR and WESLA contain a 3,000 foot altitude restriction for Runway 28 departures that may be required for safety. This altitude restriction provides the required minimum vertical separation with Runway 01 departures that turn over the top of the Runway 28 departures. This restriction can be waived by ATC if there are no traffic conflicts.

The GAP SEVEN departure, which does not have a published 3,000 foot altitude restriction, is a non-RNAV departure procedure and is used as much as possible. However, when traffic dictates, these aircraft must be stopped at 3,000 feet.

2.27 NIGHTTIME: Using the decommissioned DUMBARTON EIGHT procedure, create either an RNAV overlay of this procedure or create a new procedure with the same fixes used as waypoints for Runway 10L/R.

The FAA does not support creating a departure procedure off Runways 10 L/R for nighttime operations. This would be counter to current FAA criteria for Opposite Direction Operations (ODO). Creating a procedure that contradicts this program is simply not permissible under ODO criteria. ODO at a busy airport, such as SFO, is rarely used due to ODO's inherent safety concerns and its necessary inefficiencies.

2.31 Determine if a revised southbound transition (with additional waypoints) for the CNDEL procedure could "contain" the flight paths further west (GOBBS and south) to allow expanded clear space for possible modification of the SSTIK departure.

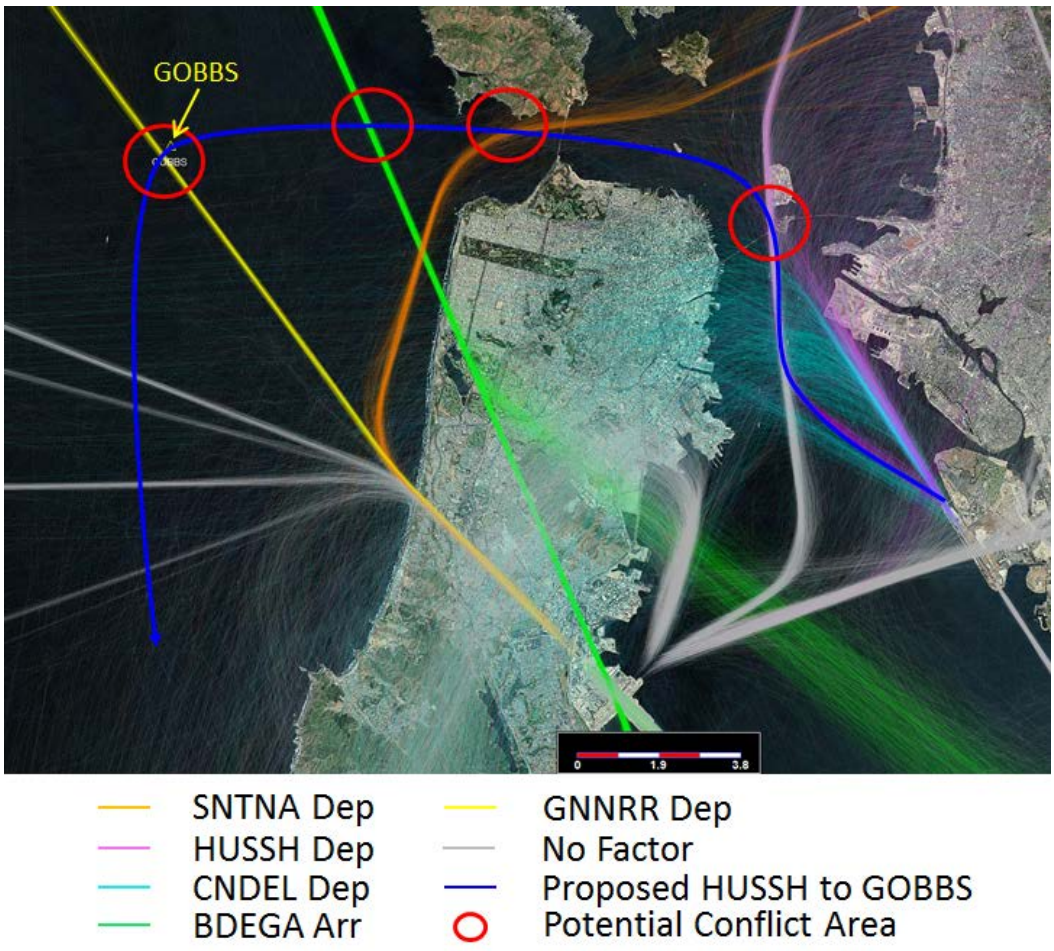


Figure D5: Graphical Depiction of Routes

In the above image (Figure D5), the teal tracks represent current CNDEL departures, while the pink tracks represent current HUSSH departures. The blue line approximates the FAA's understanding of the Roundtable's recommendation – that the CNDEL departures (teal), a day and nighttime departure procedure, be routed on a track approximating the blue line to GOBBS, then South. CNDEL, as it is published today, is designed to be laterally separated from SSTIK

departures while at the same time passing underneath BDEGA arrivals from the North. The Roundtable recommendation of rerouting CNDEL departures to a HUSSH departure with a transition to GOBBS (blue line) would put those aircraft in conflict (denoted by red circles) with multiple streams of traffic: SNTNA departures that are climbing out in the opposite direction, BDEGA arrivals, and GNNRR departures climbing out to the Northwest. Additionally, when faced with the prospect of having to fly Northwest-bound to GOBBS before turning in the direction of their destination (South / Southeast), OAK departures will likely file routes that will turn East over Oakland and its suburbs, shifting noise to those communities. The FAA does not support this recommendation.

Please refer to Appendix C, 3.23 for more information regarding shifting aircraft noise to communities near the Bay and Golden Gate Bridge, as well as increased flying distance.

2.32 Determine if a southbound transition for CNDEL could effectively use flight over bodies of water to gain altitude before flying over populated areas.

Please refer to Appendix D, 2.31, as these share similar recommendations.

2.34 Use Bay and Pacific Ocean for overflights as much as possible. From SSTIK, direct aircraft to GOBBS and south.

This request seems to have two possibilities: From SSTIK, direct aircraft west across the peninsula (similar to GNNRR) to the ocean, and then south; or from SSTIK, direct aircraft up the Bay, over the Golden Gate Bridge to GOBBS, then south.

From SSTIK, direct aircraft west across the peninsula (similar to GNNRR) to the ocean, and then south.

The current SSTIK and CNDEL departures are dependent on each other – making a change to one affects the other procedure (see Appendix A, 2.30). Routing SSTIK aircraft to the west, across the peninsula to the ocean and south would likely necessitate CNDEL departures to be routed up the Bay, over the Golden Gate Bridge to GOBBS, and south. This recommendation would introduce operational strain to an already complex radar environment. Please refer to Appendix D, 2.31, as these share similar recommendations.

From SSTIK, direct aircraft up the Bay, over the Golden Gate Bridge to GOBBS, then south.

Please refer Appendix D, 3.74, as these share similar recommendations.

2.35 Create an RNAV overlay of the OFFSHORE ONE procedure to guide aircraft higher over the Bay before turning to a waypoint located in the ocean.

The OFFSHORE departure procedure is a conventional procedure. It has been replaced by the YYUNG transition on the SSTIK and WESLA departure procedures, both of which are RNAV procedures. However, it has never been activated due its close proximity to military airspace. These procedures have since been corrected and are awaiting publication. There are no plans to develop any additional OFFSHORE RNAV overlays of the existing conventional procedure.

2.36 Use the OFFSHORE ONE procedure for aircraft departures. Higher altitude over water is preferred.

Please refer to Appendix D, 2.35, as these share similar recommendations. The Department of Transportation and the FAA Administrator have prioritized the creation of Next Generation Air Transportation System (NextGen). One of the stated goals of this activity is to develop and implement satellite-based arrival/departure procedures. Increasing the use of conventional procedures would be counterproductive to the Agency's vision and is not supported.

2.38 Move SSTIK N + E as much as feasible to allow maximum altitude gain before turning to fly over land using the historic SEPDY waypoint as a guide.

Due to a change in criteria, the SSTIK waypoint is in the process of being moved 0.44 NM to the East-Southeast of its present position. The FAA does not support moving SSTIK north due to the close proximity to OAK procedures.

Create an additional waypoint over the ocean to guide aircraft over water to PORTE such as the legacy WAMMY waypoint associated with the OFFSHORE procedure.

Please refer to Appendix D, 2.34, as these share similar recommendations.

Determine if the minimum altitude required at SSTIK can be raised before a left turn (vicinity of SSTIK).

Please refer to Appendix A, 2.37, as these share similar recommendations.

Determine if a reduced airspeed (~220kts) can be required until after established in the left turn from SSTIK so aircraft climb at a higher angle of climb approaching land.

Please refer to Appendix D, 3.71, as these share similar recommendations.

2.39 The RT requests that the FAA determine if any aircraft were assigned or re-assigned-- via preferential runway or otherwise– from one departure or arrival to a different departure or arrival.

The FAA does not track when an aircraft's arrival procedure or departure procedure is changed. These types of changes are typically undertaken for safety related reasons.

2.41 The FAA determine if upgraded radar display equipment or notations on the map using symbols would be helpful to TRACON controllers to increase the use of less impactful areas if vectoring is required for safety for departing and arriving flights.

NCT is equipped with the latest RADAR equipment available to FAA TRACONs, to include STARS, FUSION and ADS-B.

Adding notations and / or symbols to RADAR maps is not a step that is taken lightly in the FAA. Every effort is made by the FAA to reduce RADAR map clutter for safety.

3.2 Increase the in-trail spacing of aircraft on the SERFR arrival, flying the procedure as charted, which will decrease the need for vectoring.

Please refer to Appendix D, 2.8, as these share similar recommendations.

Increase the altitude of the arrivals on the assigned routes as well as the vector traffic.

Please refer to Appendix D, 1.19 and 1.21 for information regarding increasing altitudes, as these share similar recommendations.

3.4 Reinstatement of BDEGA FINSH transition in order to facilitate increased use of the east downwind ("down the Bay") to Runway 28R.

Please refer to Appendix D, 2.3, as these share similar recommendations.

3.5 Increase in-trail spacing on the SERFR Arrival, on the DYAMD Arrival (to allow an increase in the BDEGA East Downwind).

Please refer to Appendix D, 2.8, as these share similar recommendations.

Determine if an increase in the BDEGA in-trail spacing would decrease vectoring.

Please refer to Appendix A, 2.6, as these share similar recommendations.

3.7 Airlines file oceanic flight plans that follow the path of BDEGA arrival for an FAA assigned east downwind for Runway 28R (down the Bay procedure) instead of flying over the peninsula.

The FAA understands this to mean Oceanic arrivals from the West would be routed North to join the BDEGA arrival in the vicinity of SFO for an immediate transition to the East downwind. Please refer to Appendix D, 2.10, as these share similar recommendations.

3.8 Airlines file routes from the south to a point east of the Bay in order to use a noise-friendlier approach to Runway 28R.

Please refer to Appendix D, 1.23, as these share similar recommendations.

3.10 Determine if the BDEGA transition to FINSH can be reinstated. If so, determine a timeline for this revised procedure to be included for publication.

Please refer to Appendix D, 2.3, as these share similar recommendations.

3.16 Research the feasibility of creating dual offset RNAV, RNAV (RNP) or other type of approach to Runway 28L and to Runway 28R which would create two offset paths closer to the middle of the Bay with both Runway 28L path and 28R path remaining well clear of Foster City and other bayside communities until past the San Mateo Bridge when aircraft would then line up with each runway for landing.

Please refer to Appendix D, 2.15, as these share similar recommendations.

3.21 NCT use its longstanding noise abatement procedure to vector Runway 10 L/R departing aircraft up the Bay (approximate heading of 330°), then vector as needed for routes of flight such as from NIITE to GOBBS (if the destination is to the west or south), in accordance with its SOP.

Please refer to Appendix D, 2.21, as these share similar recommendations. This reference applies to vectored aircraft as well, as ODO applies to all aircraft in an opposite direction configuration.

Please refer to Appendix C, 3.23 for more information regarding the recommendation to route aircraft to the Pacific Ocean and the GOBBS waypoint.

3.24 The NIITE departure and all transitions be amended to include authorization for its safe use by aircraft taking off from Runway 10 L/R.

Please refer to Appendix D, 2.21, as these share similar recommendations.

3.29 NCT use a longstanding TRACON procedure for aircraft taking off on Runway 10 L/R by vectoring them north up the Bay (using an approximate 330°heading) and then, if westbound, vectoring them to the Pacific Ocean.

Please refer to Appendix D, 2.21, as these share similar recommendations. This reference applies to vectored aircraft as well, as ODO applies to all aircraft in an opposite direction configuration.

Please refer to Appendix C, 3.23 for more information regarding the recommendation to route aircraft to the Pacific Ocean and the GOBBS waypoint.

3.34 Create a procedure that includes the ability of aircraft to depart Runway 10 L/R on a heading that isn't in the direct path of aircraft arriving on Runway 28, such as making an immediate left turn after takeoff or flying to the east of the Runway 28 arrival path to provide lateral separation; for vertical separation, use altitude restrictions for the departing aircraft.

Please refer to Appendix D, 2.27, as these share similar recommendations.

3.35 Create a Runway 10L/R RNAV departure that mirrors the decommissioned DUMBARTON EIGHT procedure, keeping aircraft over the bay to gain altitude before turning.

Please refer to Appendix D, 2.27, as these share similar recommendations.

3.37 Consistently use the effective noise abatement procedures such as the long-standing TRACON nighttime noise abatement procedure for aircraft taking off from Runway 10, to fly an approximate 330° heading up the Bay and thence out the Golden Gate.

Please refer to Appendix D, 2.21, as these share similar recommendations. This reference applies to vectored aircraft as well, as ODO applies to all aircraft in an opposite direction configuration.

Please refer to Appendix C, 3.23 for more information regarding the recommendation to route aircraft to the Pacific Ocean and the GOBBS waypoint.

3.40 NIGHTTIME: While awaiting authorization to use NIITE departure from Runways 10, (or in the failure to obtain such authorization), the RT requests that aircraft be vectored to mirror the NIITE DP.

Please refer to Appendix D, 2.21, as these share similar recommendations. This reference applies to vectored aircraft as well, as ODO applies to all aircraft in an opposite direction configuration.

Please refer to Appendix C, 3.23 for more information regarding the recommendation to route aircraft to the Pacific Ocean and the GOBBS waypoint.

3.41 NIGHTTIME: While awaiting the publication of this NIITE/HUSSH southbound transition, determine if aircraft can file for SFO QUIET SEVEN departure or the OAK SILENT departure and then be vectored in accordance with NCT SOPs out to GOBBS waypoint and then southbound.

The SFO QUIET Departure is no longer a published procedure.

Please refer to Appendix C, 3.23 for more information regarding the recommendation to route aircraft via the Pacific Ocean and the GOBBS waypoint.

3.43 NIGHTTIME: Determine if there is any ability to eliminate the 3,000' MSL altitude restriction on straight-out departures.

Please refer to Appendix D, 2.25, as these share similar recommendations.

3.46 NIGHTTIME: when feasible, during nighttime hours and VMC conditions -- *if any flights fly over sensitive areas* -- every effort be made which would allow aircraft to remain higher than typical and are vectored so as to approach single stream using noise-friendlier approaches to land on Runway 28R.

Please refer to Appendix D, 1.19 and 1.21 for information regarding increasing altitudes, as these share similar recommendations.

Please refer to Appendix A, 1.17 and 2.13, as these share similar recommendations.

If an arrival *must* be made over Woodside (Oceanic) or the Peninsula (BDEGA) or from the south (SERFR), every effort should be made to keep aircraft higher than typical.

Please refer to Appendix D, 1.19 and 1.21 for information regarding increasing altitudes, as these share similar recommendations.

3.48 Determine if Runway 10 take-offs can be authorized to use the NIITE. If not, create a departure to allow Runway 10 take-offs to make a left turn up the Bay to NIITE waypoint.

Please refer to Appendix D, 2.21 and 2.27, as these share similar recommendations.

3.49 Reinstate the FINSH transition to the BDEGA arrival in order to facilitate increased use of the BDEGA East downwind ("down the Bay") to Runway 28R or the establishment of a similar east downwind transition if there are technical concerns with the original design.

Please refer to Appendix D, 2.3, as these share similar recommendations.

3.51 The SFO RT will work with airline representatives and the FAA to request that all nighttime arrivals from the south (SERFR) file for a routing and Arrival that would terminate east of the Bay for connection to an approach to SFO Runway 28R.

Please refer to Appendix D, 1.23, as these share similar recommendations.

3.55 Use the Bay and Pacific Ocean for overflight as much as possible. From the CNDEL waypoint, direct aircraft to a waypoint in the Pacific Ocean – potentially to the GOBBS waypoint in the ocean then to the WAMMY waypoint.

Please refer to Appendix D, 2.31, as these share similar recommendations.

3.59 Determine if the actual flight tracks of aircraft after CNDEL waypoint could be "contained" to a more limited area such as west of the eastern shore of the Bay (perhaps by an additional waypoint) that would decrease potential conflicts with the SSTIK departure airspace to enable the SSTIK departure to be flown as published.

Please refer to Appendix D, 2.31, as these share similar recommendations.

3.60 Determine if a southbound transition for the CNDEL procedure could effectively use flight over bodies of water to enable aircraft to gain altitude before flying over noise-sensitive land uses without interfering with a possible expanded SSTIK departure path or shifting noise to other communities.

Please refer to Appendix D, 2.31, as these share similar recommendations.

3.61 Utilizing the OAK HUSSH departure procedure during daytime hours should help avoid conflicts with SFO SSTIK, reduce the need for vectoring, increase the separation between these flight paths, and increase safety. From CNDEL, direct aircraft to GOBBS and south.

Please refer to Appendix D, 2.31, as these share similar recommendations.

3.68 For aircraft with destinations in Southern California use the OFFSHORE ONE departure.

Please refer to Appendix D, 2.36, as these share similar recommendations.

3.69 For aircraft with southeast destinations use the TRUKN departure with a transition at TIPRE or SYRAH.

Capacity of a departure procedure is finite. Capacity cannot be added as you would by adding a lane to a freeway. This recommendation would combine aircraft currently assigned two departure procedures (SSTIK and TRUKN) to one departure procedure (TRUKN). Aircraft departing to the southeast would be restricted to a single departure that conflicts with the prevalent recommendations for wider dispersal of traffic made throughout both the Select Committees and SFO Roundtable's documents.

Additionally, changing an aircraft's departure direction (left turn to a right turn) will result in a shift of aircraft noise. Please see the FAA's comment in response to 1.28

This is consistent with the legacy procedure of using the SFO departure procedure where aircraft were vectored eastbound to the LINDEN VORTAC, a ground-based navigational aid.

The Department of Transportation and the FAA Administrator have prioritized the creation of Next Generation Air Transportation System (NextGen). One of the stated goals of this activity is to develop and implement satellite-based arrival/departure procedures. Increasing the use of conventional procedures would be counterproductive to the Agency's vision and is not supported.

3.70 Determine the feasibility of depicting the SEPDY waypoint on the scopes in an effort for aircraft to stay over the Bay as long as possible. This would allow aircraft additional time to climb over the Bay before turning.

SEPDY is a reporting point from the conventional PORTE and OFFSHORE departure procedures, which are rarely used. The SSTIK RNAV departure, which serves as PORTE and OFFSHORE's replacement for nearly all southbound aircraft, does not include the SEPDY reporting point.

Aircraft that file to fly a published departure enter that departure into their FMS once cleared for it, which happens when the aircraft is still on the ground. Under optimal conditions, once airborne the aircraft flies the departure procedure with little to no ATC intervention. Depicting SEPDY on the controller's scope would not change this. Aircraft that fly the SSTIK departure would still turn, without ATC instruction, at the SSTIK waypoint as published in the procedure. Adding notations and / or symbols to RADAR maps is not a step that is taken lightly in the FAA. Every effort is made by the FAA to reduce RADAR map clutter.

3.71 Determine if a reduced climb airspeed can be assigned until reaching 3,000' MSL or other higher altitude; a slower airspeed will allow the aircraft to climb to a higher altitude in a shorter distance before overflying noise-sensitive land uses.

Aircraft that fly the SSTIK procedure, as with other procedures, use the aircraft's FMS to follow the procedure's requirements, while also safely accounting for the individual aircraft characteristics, e.g. heavier aircraft typically are slower to climb and take longer to turn than lighter aircraft – the FMS accounts for this.

Determine if the minimum required altitude for ATC to initiate a left turn can be raised.

Per FAA criteria, the SSTIK contains a minimum altitude of 520' before a left turn can be initiated toward the SSTIK waypoint.

3.72 Move the SSTIK waypoint north and east as much as feasible to allow maximum altitude gain before turning west to fly over land, using the legacy SEPDY waypoint as a guide. Remain over the Pacific Ocean until attaining a high altitude.

Please refer to Appendix D, 2.38, as these share similar recommendations.

3.73 Create an OFFSHORE RNAV overlay.

Please refer to Appendix D, 2.35, as these share similar recommendations.

3.74 Create a SSTIK transition to GOBBS. Similar to the NIITE procedure, aircraft would depart on the SSTIK procedure flying up the Bay instead of over the peninsula to approximately the GOBBS intersection, then onto a waypoint in the ocean such as WAMMY. This could be used for aircraft with southerly destinations in California.

This recommendation is similar to Appendix C, 3.23, with notable exceptions. This recommendation is for flights during the daytime, as well as nighttime. The recommendation in Appendix C, 3.23 is only tenable because of the significant reduction in traffic during nighttime hours. The increased traffic during daytime operations would magnify the **Congestion** issue to an unsustainable level. The **Noise Shifting** and **Flying Distance** issues also remain concerns.

3.78 The SFO Roundtable will work with the SFO noise office and TRACON to research use of the legacy LINDEN VORTAC transition to determine why it has not been used within the last few years and determine which city pairs can utilize this corridor via TIPRE or SYRAH.

Please refer to Appendix D, 3.69, as these share similar recommendations.

3.79 Determine any conflicting airspace issues which would not be available for the location of a new SSTIK waypoint.

Please refer to Appendix D, 2.38, as these share similar recommendations.

4.5 Fly over the Bay until the SSTIK waypoint, by moving SSTIK N + E as much as feasible to allow maximum altitude gain before turning to fly over land using the historic SEPDY waypoint as a guide.

Please refer to Appendix D, 2.38, as these share similar recommendations.

Preferably, the SSTIK should be flown to GOBBS, then to WAMMY, before flying to PORTE, so that planes are flying over water, rather than people's homes.

Please refer Appendix D, 3.74, as these share similar recommendations.

4.9 SSTIK: That the Bay, and waypoints such as GOBBS and WAMMY in the ocean be used for overflight as much as possible.

Please refer Appendix D, 3.74, as these share similar recommendations.

4.13 Move SSTIK north and east as much as feasible to allow maximum altitude gain before turning to fly over land using the historic SEPDY waypoint as a guide.

Please refer to Appendix D, 2.38, as these share similar recommendations.

The Roundtable would ultimately prefer a SSTIK procedure that utilizes the entire Bay out to GOBBS, then to WAMMY and then to PORTE.

Please refer Appendix D, 3.74, as these share similar recommendations.

4.16 Utilizing the HUSSH departure procedure during daytime hours should help avoid conflicts with SSTIK, reduce the need for vectoring, increase separation between these flight paths, and increase safety. The Roundtable would ultimately prefer a CNDEL procedure that utilizes the entire bay out to GOBBS, then to WAMMY and then to PORTE.

Please refer to Appendix D, 2.31, as these share similar recommendations.

4.19 Determine the feasibility of creating an RNAV (RNP) dual offset approach to Runway 28R and 28L.

Please refer to Appendix D, 2.15, as these share similar recommendations.

4.30 The BDEGA TWO procedure include the waypoints for a down the Bay procedure, as done in BDEGA ONE.

Please refer to Appendix D, 2.3, as these share similar recommendations.

4.31 Determine altitudes to turn aircraft for vector purposes that minimizes noise.

Aircraft vectoring is a tactical decision used by ATC to establish and maintain the sequence of aircraft to the airport. Due to safety considerations, the FAA cannot support a restriction on when ATC may or may not use a vital component of its sequencing tools.

4.34 When weather conditions dictate the use of these runways (10L/R & 19L/R), we encourage the use of FOGGG as published and not vector off the procedure.

The FOGGG departure procedure has a high climb gradient, requiring aircraft to cross the FOGGG waypoint at 4,000 feet MSL. Because the Oakland arrival passes underneath this at 3,000 feet MSL, there is no room for error (minimum vertical separation between aircraft is 1,000 feet). Many aircraft have been unable to meet this requirement, primarily due to aircraft performance limitations (weight, weather, etc). Because aircraft have difficulty meeting the minimum safety requirements for separation, this has led to the FOGGG departure being unused.

4.38 Define the airspace limitations to the north and east for placement of a waypoint to replace SSTIK. Present these limitations to the Roundtable in graphic and memo formats.

Please refer to Appendix D, 2.38, as these share similar recommendations.

4.43 Create an RNAV overlay, or create a new procedure, based on the decommissioned DUMBARTON EIGHT procedure for aircraft departures from Runway 10L/R to keep aircraft over the Bay.

Please refer to Appendix D, 2.27, as these share similar recommendations.

4.46 Create a RWY 10R procedure for aircraft to depart RWY 10R, then turn up the Bay to join the NIITE.

Please refer to Appendix D, 2.21 and 2.27, as these share similar recommendations

4.48 Allow aircraft to climb unrestricted on the GNNRR procedure.

Please refer to Appendix D, 2.25, as these share similar recommendations.

Aircraft depart without a top altitude restriction when flying "out the gap" on Runway 28L/R and consider the use of the GAP 7 departure that has no top altitude restriction instead of the GNNRR.

Please refer to Appendix D, 2.25, as these share similar recommendations.

APPENDIX E: SERFR STAR Amendment

SERFR STAR Amendment

The SERFR STAR and the 11 Instrument Approach Procedures that tie into the SERFR STAR are scheduled to be amended on February 1, 2018. The SERFR1 is not fully contained in the San Francisco International Airport (SFO) Class Bravo airspace. The changes being made do not capture any of the Select Committee / SF Roundtable recommendations, rather they are a result of design work to address safety and operation concerns regarding the Class Bravo containment of the current SERFR STAR. Controllers at Northern California TRACON have had to stop the descent on every SERFR arrival since its implementation on March 5, 2015 to keep the aircraft within the SFO Class Bravo airspace. Even though the SFO Class Bravo is being re-designed to contain the SERFR arrival, the FAA determined that the SERFR STAR introduced unacceptable risk into the NAS and issued a Corrective Action Report mandating that the STAR be amended. To contain the STAR within the existing Class Bravo airspace and to comply with procedural design criteria, the STAR will end at EDDYY, a point approximately 6NM southeast of MENLO at 6,000 ft. The instrument approach procedures that tie into the SERFR star will also be amended to maintain connectivity, removing MENLO from all procedures. The Instrument Approach Procedures (IAPs) will all begin at EDDYY (6nm SE of MENLO) and will proceed from there direct to SIDBY (replaces MENLO, with a crossing restriction of at or above 4,000 feet) and then their respective Initial Fix (IF). These changes are due to updated procedural design criteria. For example, the ILS RWY 28R today goes from MENLO to CEPIN. On February 1, 2018 it will go from EDDYY to SIDBY, then to CEPIN, resulting in shifting the flight track approximately .25nm east of MENLO. The changes being implemented in February 2018 to the SERFR and the associated IAPs, do not preclude nor will they interfere with any additional changes that are being considered as a result of the Select Committee's recommendations. Nor does the SERFR STAR amendment affect the timeline or design of the proposed replacement optimized, idle-power descent arrival procedure into SFO. (The Select Committee recommendations have generally referred to a 'replacement optimized STAR over the BSR flight track or an "optimized BIG SUR procedure."').

SCSC Roundtable Staff Email Responses[1]

December 16, 2019 – January 17, 2020

[1] All incoming emails receive the following response, "Thank you for contacting the SCSC Roundtable. Please be assured that your communication will be reviewed by the appropriate person. Citizen/resident communications will be distributed to SCSC Roundtable Members." The responses on the following pages reflect the more detailed responses that have been provided when appropriate.

SCSC Roundtable Staff Email Responses – December 16, 2019 – January 17, 2020

December 30, 2019

Name

Robert Holbrook

Message

Technical issue with agenda packet

Robert,

We have no problem on our end extracting pages from the agenda packet and are unable to recreate the situation you describe. We are also able to extract pages by using the “Print to PDF” choice on our print menu. Perhaps that will work for you.

Regards,

Steve

December 31, 2019

Name

Jennifer Landesmann

Message

San Jose Airport Expansion

Dear Jennifer,

Regarding your request that the SCSC Roundtable "appeal to extend the comment deadline for the SJC draft environmental impact report," I must advise you that the Roundtable has not discussed the SJC EIR in detail, has not taken a formal position on the proposed projects in the EIR, and will not meet again until after the comment period closes on January 13, 2020. At its December meeting, the Roundtable agreed to hold a meeting on January 22, 2020 to discuss and consider approving the Work Plan. Therefore, unless it were to hold a special meeting prior to and in addition to the January 22nd meeting, there would not be an opportunity for the Roundtable to meet, discuss the EIR, and take a position on the SJC EIR prior to the comment period deadline. The Roundtable is not in a position to do so.
Regards,

Mary-Lynne Bernald
Chair
Santa Clara/Santa Cruz Counties Airport/Community Roundtable

December 31, 2019

Name

Jennifer Landesmann

Message

San Jose Airport Expansion

Jennifer, each member of the Roundtable may respond as an *individual*, not speaking on behalf of or representing the Roundtable.

If you wish to contact an RT Member, the best way is to email them individually. I cannot be sure, especially this time of year that RT members will be checking the SCSC RT website for updates.

Also, while you should continue to write all correspondence to the SCSC email address, as you did, if you wish to be sure that I receive your email in a timely manner, you should include my mlbernald@saratoga.ca.us address in your cc.

Happy New Year!

Mary-Lynne

January 6, 2020

Name

Jennifer Landesmann

Message

Minutes of last meeting

Jennifer,

Thanks for your inquiry regarding the December 12, 2019 meeting recap and Strategic Plan. We are awaiting Chair Bernald's review/approval of the meeting recap prior to posting. The redline and clean version of the Strategic Plan have been posted to the Document Library on the SCSC Roundtable website.

Regards,

Steve

January 8, 2020

Name

Carlos Palacios via Nancy Weitzel

Message

From: Nancy Weitzel Letter to the FAA Roundtable Members from County of Santa Cruz. Thank you.

Dear Nancy,

Thank you for sending these documents to our attention.

I very much appreciate Santa Cruz County's involvement in developing our SCSC Roundtable Work Plan

Regards!

Mary-Lynne

January 13, 2020

Name

Lydia Kou

Message

Re: Request to put BSR Overlay on agenda of Jan 22 SCSC RT meeting

Happy New Year to you, too! It seems the days are already speeding by.

In response to your question:

First, I remind you of Sky's December's feedback regarding the implementation of the BSR overlay: he announced the expectation that the FAA will give us an update at our February meeting. Prior to that time, the FAA will not be willing to discuss the matter. FAA Technical advisors will not be attending our January meeting. Favi is not in a position to respond. And even if there were information to share, the FAA is holding us to their strict mandate that the RT give them 30 days notice for questions.

Second, the focus of this meeting is to wrap up the Work Plan so that we can move forward with the items the RT Body chooses as their priorities.

I appreciate your concerns. However, for the reasons stated above, the BSR overlay will not be placed as a separate item for discussion on the January meeting. The topic will definitely appear on the February agenda when we can expect the FAA presence, input, and discussion.

Again, thank you all for the amount of time and thought you have put into the Work Plan. It is appreciated!

Mary-Lynne

January 17, 2020

Name

Lydia Kou

Message

Re: Request to put BSR Overlay on agenda of Jan 22 SCSC RT meeting

Dear Lydia,

Currently, my focus is on next week's meeting and completing the Work Plan and the prioritization by the Roundtable Members.

A letter has been sent to the FAA requesting responses on all actions taken by the Roundtable. At this point, the February agenda is influx. We look forward to the FAA's response to our inquiries.

I did forward your last two emails to Steve so that they are now on the record and can be inputted in the tracking document you mentioned. Please aid this process by sending your requests, not only to me, but also to the scscroundtable@gmail.com. This way we can be sure to make the letters part of the agenda packets.

Sincerely,

Mary-Lynne

January 17, 2020

Name

Jennifer Landesmann

Message

RE: Minutes of last meeting

Jennifer,

Thank you for your January 16, 2020 email regarding the SCSC Roundtable-approved Strategic Plan that was posted to the Roundtable website on January 6, 2020.

In your email, you identify what you feel are "errors and omissions" in the Strategic Plan and offer suggested clarifications that could be used by me to correct those errors and omissions. Unfortunately, I do not have the ability to unilaterally change a document approved by the Roundtable. Should one or more of the Roundtable members wish to revise the Strategic Plan, they can request that the Strategic Plan be placed on a future agenda.

You also suggested that the December 19, 2019 meeting recap be changed to reflect the public's objections about the Strategic Plan's "misinformation." Because the Roundtable meetings are recorded, the meeting recaps are intended to be brief summaries of the actions taken at the meetings. Anyone wishing to hear the opinions expressed by the Roundtable members, members of the public, or Roundtable staff may listen to their exact words.

Please note that your email will be included in the January 22, 2020 meeting agenda packet for review and consideration by the Roundtable members.

Regards,

Steve

January 17, 2020

Name

Raquel Girvin, FAA

Message

FAA's Participation in the February 26, 2019 SCSC Roundtable Meeting

Dear Regional Administrator Girvin,

Happy New Year! I hope that 2020 is off to a good start for you and your team.

I am writing to you at the direction of the SCSC Roundtable Chairperson, Mary-Lynne Bernald. She would like to share with you via this email the Roundtable's expectations for the FAA's participation in the February 26, 2020 SCSC Roundtable meeting.

Through no fault of the FAA, it has been several months since FAA has provided a detailed technical update on several of the flight procedures and responses to outstanding questions that are of interest/concern to Roundtable members including, but not limited to, the BSR Overlay, the LOUPE FIVE SID, and the SUNNE ONE conventional SID. The Roundtable has been focused on adopting a Strategic Plan and Work Plan, which has consumed nearly all of the available time of the past couple of meetings. However, the Strategic Plan has been adopted and we are hopeful that the Work Plan will be adopted at the January 22, 2020 Roundtable meeting. Therefore, it is time to provide the FAA with the opportunity address a number of outstanding issues at the February 26, 2020 meeting.

To that end, at the December 19, 2019 SCSC Roundtable meeting, FAA Community Engagement Officer Sky Laron indicated that he expected the FAA would likely be in a position to report out on several of these outstanding matters at the February 26, 2020 meeting. He noted that the next edition of the FAA Initiative to Address Noise Concerns of Santa Cruz/Santa Clara/San Mateo Counties (Further Update on Phase Two) would likely be distributed prior to February 26, 2020. Chairperson Bernald requested that the FAA provide a briefing on its update to the Initiative report, which should also include a detailed update on the FAA's progress to date on the BSR overlay.

Mr. Laron also noted that the FAA was in receipt of the SCSC Roundtable's December 13, 2019 letter with questions regarding the new SUNNE ONE conventional departure procedure and that the FAA would be reviewing the Roundtable's questions. He suggested that the FAA could likely provide a response in the form of a presentation at the February 26, 2020 SCSC Roundtable meeting. The Roundtable would appreciate seeing the FAA's presentation/responses to the Roundtable's SUNNE ONE questions at the February 26th meeting.

It has been some time since the FAA has briefed the Roundtable on the status of the LOUPE FIVE SID. The LOUPE FIVE procedure had issues when first implemented. It would be helpful to know if those issues have been resolved and, if so, what were the resolutions and what are the effects of those solutions on the aircraft noise exposure as heard on the ground by Roundtable member communities.

Please note that this email requesting the FAA's attendance and presentations at the February 26, 2020 meeting in being sent to you more than 30 days in advance of the meeting.

Finally, we would welcome a conference call with the appropriate members of your team in order to ensure that we allocate sufficient time on the February agenda for all of the FAA's presentations. Feel free to have your staff work through me to find a mutually agreeable date and time for that call.

We appreciate the FAA's attention to addressing the SCSC Roundtable's concerns and look forward to hearing from members of your team at the February 26, 2020 Roundtable meeting.

Regards,

Steven R. Alverson, Senior Vice President, ESA | Environmental Science Associates

January 17, 2020

Name

Raquel Girvin, FAA

Message

SCSC Roundtable Requests Regarding the PIRAT STAR

Dear Administrator Girvin,

At the direction of the SCSC Roundtable Chairperson Mary-Lynne Bernald, I am transmitting to you via email a letter from the SCSC Roundtable seeking FAA's response to three separate requests related to the development, implementation, and use of the PIRAT STAR. The requests were in response to a presentation made by Adam Vetter at the August 28, 2019 SCSC Roundtable meeting as well as ongoing, long-term community member questions regarding the PIRAT STAR.

The SCSC Roundtable would appreciate a response from the FAA by the February 26, 2020 Roundtable meeting, which is 41 days from today.

The SCSC Roundtable appreciates the FAA's ongoing support and looks forward to its response to these requests.

Regards,

Steve

Steven R. Alverson
Senior Vice President
ESA | Environmental Science Associates

Attachment Summary

20200117_S_Alverson_SCSC Roundtable Requests Regarding PIRAT STAR

SANTA CLARA/SANTA CRUZ COUNTIES
AIRPORT/COMMUNITY ROUNDTABLE
PO Box 3144
Los Altos, CA 94024

January 17, 2020

Ms. Raquel Girvin
Regional Administrator, AWP-1
FAA Western-Pacific Region
777 South Aviation Boulevard, Suite 150
El Segundo, CA 90245

Subject: SCSC Roundtable Requests Regarding the PIRAT STAR

Dear Administrator Girvin,

The SCSC Roundtable is submitting the following three requests regarding the PIRAT Standard Terminal Arrival Route (PIRAT STAR) for the FAA's review and response:

1. The SCSC Roundtable accepts Adam Vetter's August 28, 2019 offer to have the FAA perform an in-depth analysis of PIRAT STAR usage. A preliminary analysis of SFO PIRAT STAR arrivals indicates that usage may have increased by almost 20 percent for the months of May and June in 2019 versus May and June of 2018 even though the total SFO arrivals during those same periods did not increase. The Roundtable requests an historical review of the number of Oceanic Arrivals to determine whether they have increased since the PIRAT STAR was implemented. The Roundtable requests that the FAA model the noise exposure on the ground for Oceanic Arrivals for the land area located between the Pacific coastline and the western shoreline of the San Francisco Bay from 2013 to 2019 (see Appendix A for specifics on the requested analysis).
2. To understand whether the original expectations about the PIRAT STAR's noise exposure described in the CATEX for the PIRAT STAR match reality, the SCSC Roundtable requests that the FAA validate the assumptions made in the PIRAT STAR CATEX. (See Appendix B for important context information about Oceanic Arrivals before/after PIRAT and specific questions that the Roundtable would like the FAA to address). This question can leverage the data obtained from the analysis in item 1 above.
3. Given that the PIRAT STAR CATEX information received by Palo Alto through its FOIA request and other FAA communications on the PIRAT STAR are at times inconsistent, the Roundtable requests that the FAA provide a history of the PIRAT STAR development since 2013 as well as describe in simple terms the differences between a previous PIRAT STAR version that may have existed before the current PIRAT STAR. (See Appendix C for specifics questions that should be addressed and important context information about a previous PIRAT STAR procedure).

On behalf of the SCSC Roundtable, thank you for your attention to these requests. We look forward to your response in the near future.

Sincerely,

Mary-Lynne Bernald

Mary-Lynne Bernald
Chairperson, SCSC Roundtable

APPENDICES

Appendix A: Analysis of Historical Noise Exposure on the Ground for SFO and OAK Oceanic Arrivals between the Pacific Coastline and Western Shoreline of the San Francisco Bay

- Scope: SFO Oceanic arrivals and OAK Oceanic Arrivals from the Pacific Ocean coastline all the way to each ILS landing system.
- Time period:
    - Same 4-month period of May through August (this 4-month period should be sufficient for comparisons purposes; April should not be used because PIRAT was officially implemented on April 25, 2019; September should not be used because of runway closures at SFO).
    - Seven years (2013, 2014, 2015, 2016, 2017, 2018, 2019) to capture pre-NextGen and post-NextGen changes, including procedure and vectoring changes.
- Tools: Noise modeling should be done using the latest version of AEDT and noise exposure should be calculated using the CNEL metric, which is recognized by the FAA.
- Data input:
    - Use actual flight data.
    - Document any assumptions made for data input.
- Data output/Report details:
    - Summary tables and graphs should be provided to allow readers to compare yearly data from 2013 to 2019 for the same four-month period.
    - Detailed data that are used to create summaries or requested in this document should be provided in an Excel or CSV format.
    - For the same time period of each year, please provide the following information:
        - Total number of arrivals for each airport (SFO, OAK)
        - Total number of Oceanic arrivals for each airport (SFO, OAK)
        - Number of Oceanic arrivals broken down by destination airport (SFO and OAK) that flew within:
            - 1 mile and 3 miles of the Woodside VOR or ARGGG
            - 1 mile, 3 miles, and 5 miles of either MENLO or SIDBY

          Notes:

            - Data should be summarized for each scenario (e.g., a combination of destination airport and a distance from a specific waypoint)
            - Different distances are used for the two locations because flights are on a procedure up to the Woodside VOR/ARGGG but vectored to MENLO/SIDBY after that.
            - Distances represent on-the-ground projections between waypoints and aircraft.
            - The shortest distance between waypoints and aircraft should be used to capture a flight.
    - Detailed data of Oceanic arrivals near 2 locations
        - Location A: within 1 mile and 3 miles of the Woodside VOR (2018 data and before) and ARGGG (2019 data)
        - Location B: within 1 mile, 3 miles, and 5 miles of MENLO and SIDBY once SIDBY started to be used for Oceanic arrivals

For each Oceanic Arrivals scenario (e.g., waypoint location and distance from waypoint), provide the following data:

- Date and time stamp
- Flight number
- Aircraft type
- Origin airport
- Destination airport (SFO or OAK)
- Altitude at time stamp
- Distance from waypoint at time stamp
- Speed at time stamp

- Number of Oceanic arrivals broken down by:
  - Daytime, evening, and nighttime (Evening is 7 pm – 10 pm and nighttime is 10pm to 7am)
  - Heavy Jets, Large Jets, Small Jets, Turbo Props
  - Destination airport (SFO and OAK)
  - Heading (range, average, and median) used after Woodside VOR or ARGGG for each destination airport
  - Descent angle (range, average and median) used between Woodside VOR or ARGGG and MENLO or SIDBY
  - Procedure used --specify name and end point (3 procedures/end points combinations: Pacific 2 Tailored Arrivals/Woodside VOR, non-Pacific 2 Arrivals/Woodside VOR, and PIRAT/ARGGG)
- Altitudes (range, average, and median) within 1 mile or 3 miles of the procedure end waypoint (Woodside VOR or ARGGG)
- Altitudes (range, average, and median) within 1 mile, 3 miles, and 5 miles of MENLO or SIDBY
- On a Google street map, show actual ground tracks between the Woodside VOR or ARGGG and the ILS system, use different colors to show the flights altitude bands in 1,000 ft increments (<3,000 ft, 3000 to 3999 ft, etc.), and identify the median ground track line
- Horizontal and vertical distribution of ground tracks in the vicinity of the Woodside VOR or ARGGG:
  - Using a 3-mile line centered between ARGGG and the Woodside VOR, display separately for SFO and OAK as well as cumulatively (SFO+OAK) the:

Number of actual flights
Lateral and vertical distribution of actual flights
Range, average, and median altitudes
Range, average, and median speeds

  - Maintain the same scale for the axes across all time periods and provide sufficient granularity in the display for readers to be able to identify potential changes over time. Use tables and graphs to display the data.
- Horizontal and vertical distribution of ground tracks in the vicinity of MENLO or SIDBY:
  - Using a 5-mile line centered between MENLO and SIDBY (a wider radius is suggested to capture potential vectoring dispersion), display separately for SFO and OAK as well as cumulatively (SFO+OAK) the:

Number of actual flights
Lateral and vertical distribution of actual flights
Range, average, and median altitudes
Range, average, and median speeds

  - Maintain the same scale for the axes across all time periods and provide sufficient granularity in the display for readers to be able to identify potential changes over time. Use tables and graphs to display the data.

- Total number of flights broken down by arrival route (SFO SERFR, SFO Bodega West, SFO Oceanic, OAK Oceanic, SJC South Flow) that flew within the following distances of MENLO or SIDBY:
  - Within 0.5 mile radius
  - Within 1.0 mile radius
  - Within 1.5 mile radius
  - Within 2.0 mile radius
  - Within 2.5 mile radius
  - Within 3.0 mile radius
  - Within 5.0 mile radius

    For each of the 7 distance groups listed above, specify the altitudes (range, average, and median) and speeds (range, average, and median)

Appendix B: Oceanic Arrivals Before and After Implementation of the PIRAT STAR

Using actual flight data for the months of May through August for both 2018 and 2019, the SCSC Roundtable requests that the FAA:

1. Compare actual number vs assumed number of Oceanic Arrivals in total and broken down between Pacific 2 Tailored Arrivals, non-Pacific 2 Tailored Arrivals, and PIRAT:
   a. For each airport (SFO and OAK)
   b. Within a 3-mile radius of the Woodside VOR or ARGGG
   c. Within a 5-mile radius of MENLO or SIDBY
2. Compare actual fleet mix vs assumed fleet mix of Oceanic arrivals.
3. Compare actual time distribution vs assumed time distribution of Oceanic arrivals.
4. Using AEDT, display the CNEL contours for 3 different Oceanic arrivals procedures in 3 different areas
   a. Procedures are:
      1. Pacific 2 Tailored Arrival, which is optimized for each aircraft for a low noise descent profile all the way to the runway and existed before PIRAT
      2. Non-Pacific 2 Tailored Arrival, which existed before PIRAT
      3. PIRAT arrival, which is not optimized for each aircraft, ends miles away from the runway, and is vectored to final approach

   b. Three suggested areas between the Pacific Ocean and the ILS system: around Woodside VOR/ARGGG, around MENLO/SIDBY, plus around one additional location between ARGGG and SIDBY.
   c. Noise contours for at least 2 different types of jets: heavy jets and large jets.
   d. References for data sources (actual data or assumptions) and documented assumptions.
   e. Small area (maximum 5-mile radius) near each waypoint with CNEL contours displayed in 3-dB increments or less for readers to be able to observe any potential differences.
5. Using actual flight data for 2018 and 2019, display the different CNEL noise exposure contours in 3-dB increments in 2 locations (one near Woodside VOR/ARGGG and the other near MENLO/SIDBY) for the:
   a. Pacific 2 Tailored Arrivals (2018) --specify number of flights
   b. Non-Pacific 2 Tailored Arrivals (2018) - specify number of flights
   c. PIRAT (2019) - specify number of flights

   and articulate any potential differences. Same guidelines as in item 4 above.

6. Articulate the benefits that have been realized through the implementation of PIRAT (benefits statements must be supported by data), and in particular the incremental benefits gained from the prior procedures (Pacific 2 TA and non-Pacific 2 TA).
6. Explain how the altitude increase that occurred at ARGGG does not increase the noise exposure of PIRAT arrivals over the residential areas between ARGGG and the final approaches to SFO or OAK, which did not change. Describe in particular the changes in the flying altitudes and descent angles of aircraft between ARGGG and final approaches that may have occurred given the minimum 8,000 ft altitude at ARGGG.
6. Identify who decided to combine the Tailored Arrival procedure with the ATC vectoring instruction as described in the FAA written answer to the Roundtable question 5 from May 2019 and list all stakeholders who were consulted on the proposal prior to the decision.
6. Identify the stakeholders and elected officials who were involved in the current PIRAT design discussions as well as the timeframe of such discussions.
6. Document when and how SFO and the City and County of San Francisco expressed their support of the current PIRAT procedure.

Context information

The FAA document called “2018-06-11 KSFO.IER.ARCHI.20180517 (SIGNED)_MLsign”, signed on May 18, 2018 and obtained through a FOIA request by the City of Palo Alto, provides some information on the environmental review conducted by the FAA for PIRAT and describes some assumptions used in the CATEX analysis. In this document, the FAA stated that:

- They did not expect the number of operations, aircraft mix and airlines schedules to change. Based on 2017 Track Data (table 6 on page 15), the FAA expected the following traffic:
    - Annual PIRAT traffic: 15,747 planes per year
    - Fleet mix: 64% Heavy Jets vs. 36% Large Jets (very few small jets or turboprops)
    - Time distribution: 31% during night time (10 pm - 7 am) and 69% during the day

  Note however that, in their February 22, 2019 letter to Palo Alto Mayor Filseth, the FAA stated that they “anticipate more aircraft will likely use the PIRAT STAR than the Pacific 2 TA”, which makes sense given that one or two carriers used Tailored Arrivals, but “defers to SFO and OAK to address the potential increase in oceanic arrivals.” This last statement is puzzling given that the FAA assumed no increase in Oceanic arrivals in the CATEX analysis (see above) and that airports do not have the ability to limit the number of carriers or flights (as long as airports have capacity they must accept new flights).

- “[Pacific 2] Tailored Arrivals (TA) is a comprehensive method of planning, communicating, and flying highly-efficient arrival trajectories from cruise altitude to the runway threshold. TA trajectories are optimized for each aircraft to permit a fuel-efficient, low noise descent profile that will provide separation assistance while complying with arrival sequencing requirements and other airspace requirements.” (page 4, footnote #2).
- PIRAT “will convert the Pacific 2 TA to a public-use RNAV STAR that expands benefits of the TA currently only available to selected carriers to all users of KSFO” (see page 12).
- PIRAT was requested by ATC (see paragraph B page 22) because ATC found issuing Tailored Arrivals cumbersome; however, the FAA added on paragraph C page 22 that PIRAT was a community request even though the FAA acknowledged on page 50 paragraph 4 that the proposed changes were not based on the Select Committee or SFO Roundtable recommendations, but designed to address safety and operations concerns.
- The airport proprietor was supportive of PIRAT (page 50).

Appendix C: History of PIRAT STAR before the 2016 Select Committee Recommendations

The SCSC Roundtable requests that the FAA:

1. Explain what was the NorCal Metroplex PIRAT STAR project (as described under Context information below), which existed before 2015 and obviously before the Select Committee was formed, and in particular, how the project related to Pacific 2 Tailored Arrivals.
2. Explain what environmental issues were associated with the NorCal Metroplex PIRAT STAR project.
3. Explain who was consulted and when on the NorCal Metroplex PIRAT STAR project.
4. Explain why the NorCal Metroplex PIRAT STAR was abandoned.
5. Compare and contrast the NorCal Metroplex PIRAT STAR and the current PIRAT STAR. Comparisons should include, but not be limited to ground tracks, altitudes, waypoints, headings, descent angles, etc. for the flight paths of Oceanic arrivals between the Pacific Ocean coastline and the western shoreline of the San Francisco Bay for both SFO and OAK.

Context information

There seems to be inconsistent information from the FAA about the development of the PIRAT STAR.

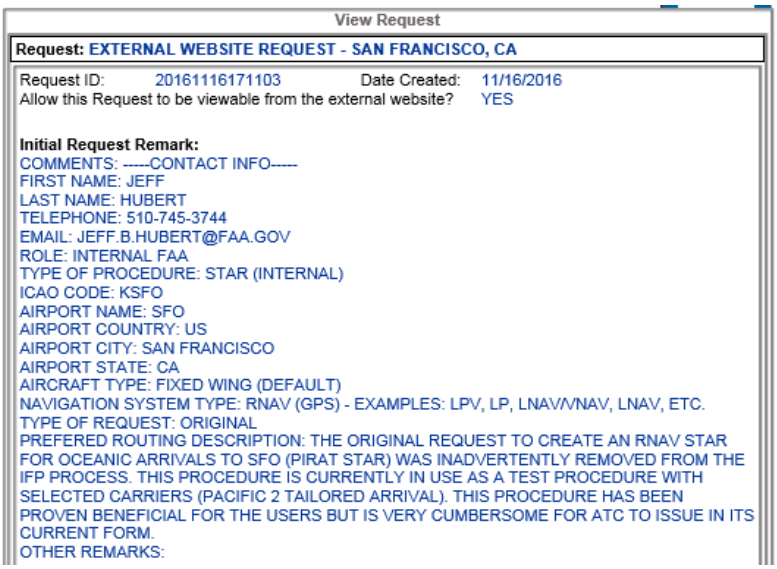
- FAA records, obtained through the City of Palo FOIA request, indicate that there was a different PIRAT STAR (which was referred to in a January 2015 email) that was part of the Norcal Metroplex project, but had environmental issues (see document titled “RE_ PIRAT STAR_SFO.pdf” and screenshots below extracted from pages 2 and 3 of the document). This FAA information is aligned with the SFO Noise Office saying that they did not support a PIRAT procedure that was proposed around 2014 because of noise concerns.

> The short answer is this is not the same project as had environmental issues back in 2015 and is proceeding as a new project request. Pub date is TBD.

> To make sure we aren’t comparing apples and oranges, we are not resurrecting the NorCal Metroplex PIRAT STAR project. On 11/16/2016 Oakland Center put in a IFP Gateway request to convert the (currently in use) Pacific 2 Tailored Arrival to a RNAV STAR. See the following cut and paste from the Baseline Analysis Report. While we were at NorCal TRACON late last year the ATM asked us to expedite the STAR since it was a priority for the facility. As such, Josh and I got it on the agenda for our meeting down there in March. Yes … it will be called the PIRAT STAR. No … it’s not the same project as referred to in the January 2015 email. It is a stand-alone-single-site project under the 7100.41 and we are following the process from square one. Once we have final design agreement the project will be submitted for environmental review. We won’t continue with development/publication if we don’t complete the required environmental review and have the appropriate documentation.

- On November 16, 2016, an FAA employee requested to put the PIRAT STAR back in the IFP process because it had been removed by mistake from the IFP process (see document titled “KSFO New STAR 8457 Gateway (1).pdf” and screenshot below of the

document). Note that the Select Committee issued their report and recommendations, which do not mention any STAR procedure for Oceanic Arrivals, one day later on November 17, 2016.



View Request

Request: EXTERNAL WEBSITE REQUEST - SAN FRANCISCO, CA

Request ID: 20161116171103 Date Created: 11/16/2016
Allow this Request to be viewable from the external website? YES

Initial Request Remark:
COMMENTS: -----CONTACT INFO-----
FIRST NAME: JEFF
LAST NAME: HUBERT
TELEPHONE: 510-745-3744
EMAIL: JEFF.B.HUBERT@FAA.GOV
ROLE: INTERNAL FAA
TYPE OF PROCEDURE: STAR (INTERNAL)
ICAO CODE: KSFO
AIRPORT NAME: SFO
AIRPORT COUNTRY: US
AIRPORT CITY: SAN FRANCISCO
AIRPORT STATE: CA
AIRCRAFT TYPE: FIXED WING (DEFAULT)
NAVIGATION SYSTEM TYPE: RNAV (GPS) - EXAMPLES: LPV, LP, LNAV/VNAV, LNAV, ETC.
TYPE OF REQUEST: ORIGINAL
PREFERED ROUTING DESCRIPTION: THE ORIGINAL REQUEST TO CREATE AN RNAV STAR FOR OCEANIC ARRIVALS TO SFO (PIRAT STAR) WAS INADVERTENTLY REMOVED FROM THE IFP PROCESS. THIS PROCEDURE IS CURRENTLY IN USE AS A TEST PROCEDURE WITH SELECTED CARRIERS (PACIFIC 2 TAILORED ARRIVAL). THIS PROCEDURE HAS BEEN PROVEN BENEFICIAL FOR THE USERS BUT IS VERY CUMBERSOME FOR ATC TO ISSUE IN ITS CURRENT FORM.
OTHER REMARKS: