

Possible Next Steps for Roundtable Proposed GBAS Procedures (4, 5 & 6)

April 2023

Roundtable-proposed GBAS Procedures

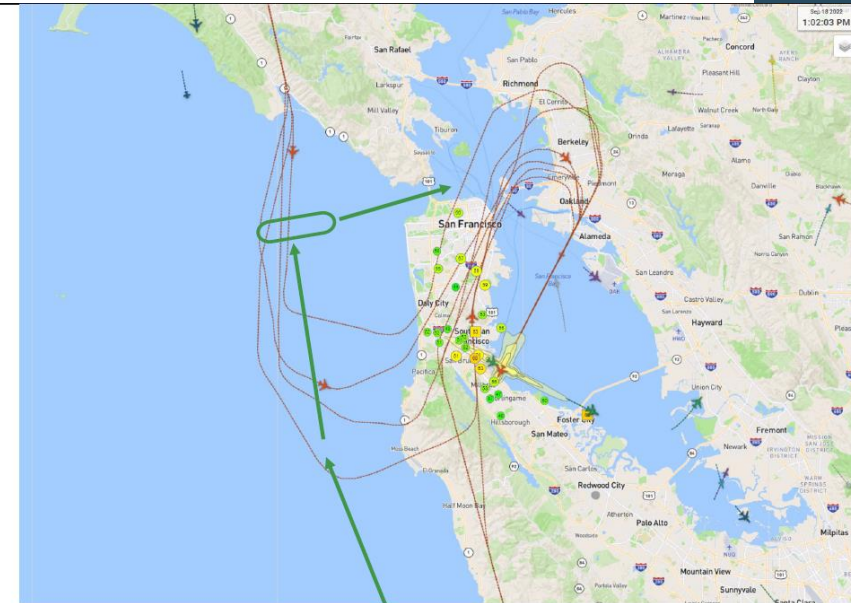
GBAS Team not proceeding with those highlighted in yellow

| Suggested Procedure | Description | GBAS Project Team Feedback | Next Steps |
|---------------------|--|---|--|
| 1 | Down the Bay to RNP-Y | Group 2A | Produce CFPPs in FEB/MAR23 |
| 2 A | RNP-Y / GLS-U Initial Approaches from BDEGA (West) | Group 2B or 3 | Save and review during "Increased Utilization Phase" or during Group 2B/3 outreach |
| 2 B | Slight Modification to RNP-Y / GLS-U | Group 2A | Produce CFPPs in FEB/MAR23 |
| 2 C | RNP-Y / GLS-U Initial Approaches from PIRAT | Group 2B or 3 | Save and review during "Increased Utilization Phase" or during Group 2B/3 outreach |
| 3 A | RNP-Y / GLS-U Initial Approaches from BDEGA (West) | Group 2B or 3 | Save and review during "Increased Utilization Phase" or during Group 2B/3 outreach |
| 3 B | Significant Modification to RNP-Y / GLS-U | Group 2A | Produce CFPPs in FEB/MAR23 |
| 3 C | RNP-Y / GLS-U Initial Approaches from PIRAT | Group 2B or 3 | Save and review during "Increased Utilization Phase" or during Group 2B/3 outreach |
| 4 | Changes to STINS/STLER | Beyond GBAS Project Scope | Pursue via FAA CEO request or revisit following MARS criteria (Group 3) |
| 5 | Changes to Arrivals from the Southeast | Beyond GBAS Project Scope | Pursue via FAA CEO request |
| 6 | Revised 28L/28R Simultaneous approach Design | Non-GBAS Safety issues at other airports in the NAS | Revisit following FAA exploration of simultaneous approach criteria |

Roundtable Proposed GBAS Procedure 4 *Changes to STINS/STLER*

- Roundtable Proposal:
Create a new arrival concept to sequence additional aircraft over the Pacific Ocean prior to arriving on Runways 19L/R
- GBAS Team Response:
 - Beyond the scope of the GBAS project
 - Pursue via FAA CEO or wait on MARS
- Possible Next Steps:
 1. Nothing since outside of GBAS scope
 2. Suggest FAA review concept and determine feasibility outside of SFO GBAS project

Note: May require technology, e.g., MARS (Multiple Airport Route Separation), that does not currently exist to deconflict with OAK arrivals



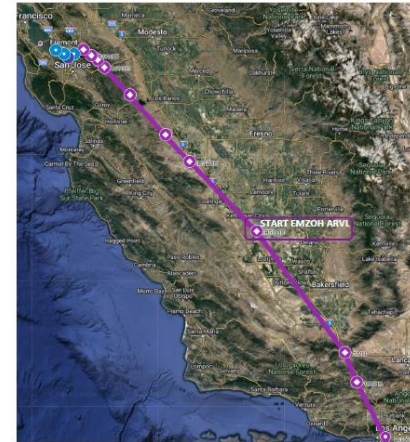
Red lines indicate actual flight tracks over coast and San Francisco on September 18, 2022 from SFO Flight Trak website
Green lines indicate a suggestion only for a possible GBAS procedure largely remaining over water

Roundtable Proposed GBAS Procedure 5

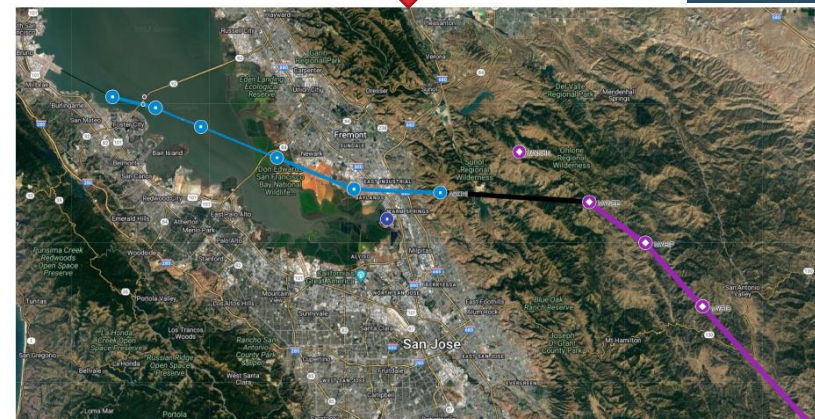
Shared Southeast Arrival Stream OAK/SFO

- Roundtable Proposal:
Move southeast SFO arrivals to share the OAK arrival stream
- GBAS Team Response:
 - Beyond the scope of the GBAS project
 - Pursue via FAA CEO
- Possible Next Steps:
 1. Nothing since outside of GBAS scope
 2. Suggest FAA review concept and determine feasibility outside of SFO GBAS project

Note: *Concept is to allow SFO arrivals to move from the SERFR STAR to the EMZOH STAR and create a link to the existing 28R arrival RNAV or similar concept*



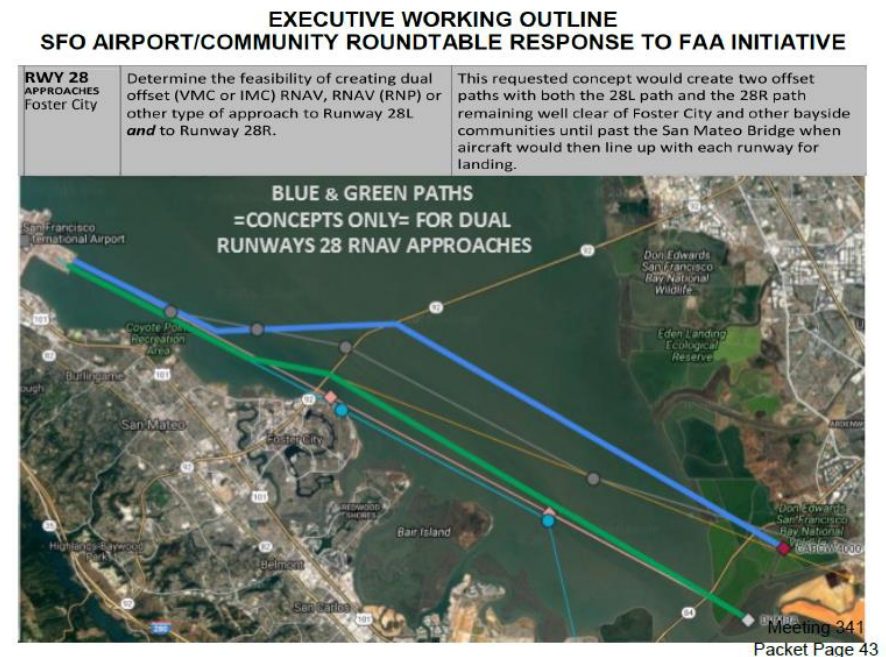
EXAMPLE: LAX to BAY AREA with (OAK) EMZOH Arrival [existing routing]



EXAMPLE: (OAK) EMZOH Arrival to MYNEE Waypoint [existing routing] TO [BLACK] ROUTE [not existing] TO OFFSET ARRIVAL TO 28R (EXAMPLE shown here is the existing RNAV(RNP)Y to SFO)

Roundtable Proposed GBAS Procedure 6 *Dual Offset Approaches to 28L and 28R*

- Roundtable Proposal:
Dual offset approaches to keep arrivals further northeast over the Bay
- GBAS Team Response:
 - Not pursuing due to safety issues
 - Revisit after FAA evaluations of simultaneous approach operations
- Possible Next Steps:
 1. Nothing since safety issues cited
 2. Put on hold until the FAA has completed its ongoing evaluation of simultaneous approach operations and then resubmit to GBAS Team



FAA Process for New Flight Procedures

Reminder...

- FAA works with the Roundtable's Technical Working Group to preliminarily assess feasibility
- SFO/Roundtable places the proposed change on the FAA's IFP Gateway
- FAA adds the proposed procedure into their queue
 - FAA completes a technical (criteria/infrastructure) feasibility assessment.
 - If technically feasible, FAA proceeds to design and operational (ATC/Industry) feasibility.
 - If design is operationally feasible, FAA reviews procedure design with SFO and the Roundtable.
 - If SFO and Roundtable have no objections with the design, FAA completes an environmental feasibility under NEPA.
 - If the design is environmentally feasible, FAA continues to the final development and implementation.

Note: Currently the entire process takes 2 to 3+ years

Discussion

April 2023