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|---|---------------|--------------------------------|---|---|---------------------------------------|-------------------------------------|
| Flight Procedure Tracking Form | | Action: FLIGHT CHECK | Task Type: CVFP | Date Open: 11/22/2017 | Task #: 2016120928982209001 | Request #: 20161209289822 |
| Procedure: EVAL TIPP TOE VISUAL RWY 28L/R KSFO CVFP 2018 AMDT 2 | | | Airport ID: KSFO | Airport: SAN FRANCISCO INTL | | Reimbursable #: NO |
| City: SAN FRANCISCO | ST: CA | GPS #: | Estimated Chart Date: 03/29/2018 | | FICO #: | |
| Fac ID: N/A | | Fac. Type: | | | Specialist: JOHNNIE BAKER | |
| Procedure Review | | | | | | |
| | Rec'd | Rel'd | Full Name | Comments | | |
| Lead: | 11/22/2017 | 02/02/2018 | JOHNNIE BAKER |  | | |
| QA: | 11/22/2017 | 11/22/2017 | JACOB POWERS | | | |
| Liaison: | 11/22/2017 | 11/22/2017 | MARY MCDONALD | | | |
| Procedure Comments: | | ENROUTE-NON | Remark Type: INFORMATION | | | |
| <p>2/2/2018: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 1/12/2018:</p> <ol style="list-style-type: none"> 1. CHANGED VERTICAL GUIDANCE NAVAID AND ANGLE ON PROCEDURE PAGE FROM I-SFO LOCALIZER (GS 3.00) TO (2.85). 2. COMBINED INFORMATION IN THE SUPPLEMENTARY SECTION INTO ONE NOTE. 3. ADDED CHART I-GWQ LOCALIZER TO THE SUPPLEMENTARY SECTION NOTE. <p>2/7/2018: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 1/12/2018.</p> <ol style="list-style-type: none"> 1. CHANGED FIX NAME FROM SHIRA TO CHERA. <p>CONTACT JACOB POWERS 405.954.8702</p> | | | | | | |

FIPC BASIC FORM

| | | | | | |
|--|---|--|-----------------------|----------------------------|--|
| PROCEDURE: TIP TOE VISUAL RWY 28 L/R | | AIRPORT NAME: SAN FRANCISCO INTL | | AIRPORT ID: KSFO | SPECIAL CONTROL NO: SP-11-167-17 |
| FAC ID: KSFO | | CITY: SAN FRANCISCO | | ST: CA | ORIG CHART DATE: 02/01/2018 |
| DFL TYPE: CVFP | THIRD PARTY: <input type="checkbox"/> YES | EST. TIME ON SITE: 0.5 | REIMB. NUMBER: | PTS TASK ID: | |

PREFLIGHT NOTES

| | | | | | |
|---------------------------------------|--|--|--|--|----------|
| REVIEWER: charles d cunningham | | | | DATE: 01/10/2018 | |
| COMMENTS: | | | | CHECK ONE: | |
| | | | | <input type="checkbox"/> FLT CK REQ <input checked="" type="checkbox"/> NFCR <input type="checkbox"/> REJECT | |
| | | | | | YES NO |
| | | | | CPV COMPLETE? | |

PROCEDURE RESULTS

| | | | | | | |
|---|-------------------------|-------------|--|--|---|--|
| INSPECTION DATE: 01/11/2018 | CREW #: VN346 | N #: | INSTRUMENT PROCEDURE STATUS: <input checked="" type="checkbox"/> SAT <input type="checkbox"/> SAT W/CHANGES <input type="checkbox"/> UNSAT | | ARINC CODING: <input type="checkbox"/> SAT <input type="checkbox"/> SAT/GOLD <input type="checkbox"/> UNSAT | |
| FLIGHT INSPECTOR SIGNATURE: charles d cunningham @ 01/10/2018 22:51 | | | PRINTED NAME: CUNNINGHAM, CHARLES DAVID | | | NOTAM INITIATED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO |

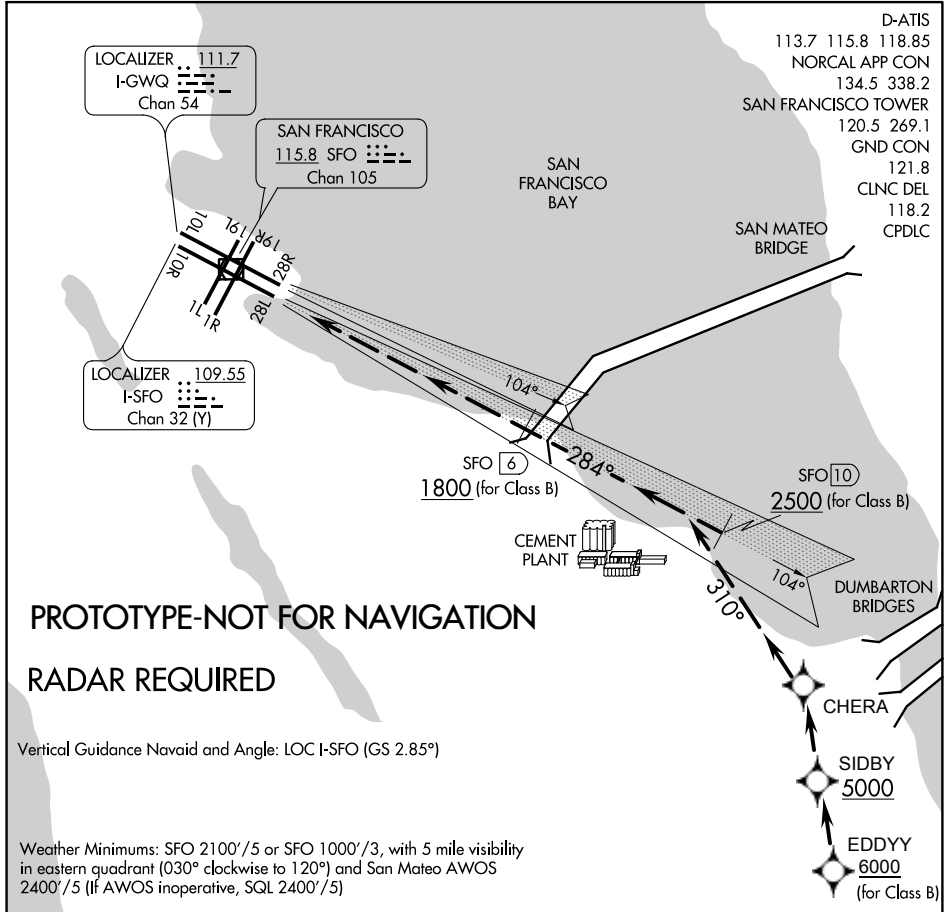
FLIGHT INSPECTOR REMARKS:

IN-FLIGHT OBSTACLE REPORT

| | | | | |
|--------------------------|---------------------------------|-----------------------------|-----------------------------------|-----------------------------------|
| OBSTRUCTION ID #: | COORDINATES OR LOCATION: | GNSS ALTITUDE (MSL): | BAROMETRIC ALTITUDE (MSL): | HEIGHT ABOVE GROUND LEVEL: |
| | | | | |

TIPP TOE VISUAL RWY 28L/R

SAN FRANCISCO INTL (SFO)
SAN FRANCISCO, CALIFORNIA



PROTOTYPE-NOT FOR NAVIGATION

RADAR REQUIRED

In the event of a go-around on Runway 28L turn left heading 260°, or on Runway 28R, heading 280°, climb and maintain 3,000 , or as directed by Air Traffic Control.

NOTE: Closely spaced parallel visual approaches may be in progress to Runway 28L utilizing I-SFO. In the event of a go-around on Runway 28L turn left heading 260°, or on Runway 28R, heading 280°, climb and maintain 3000, or as directed by Air Traffic Control.

TIPP TOE VISUAL RWY 28L/R

SAN FRANCISCO, CALIFORNIA
SAN FRANCISCO INTL (SFO)

TIPP TOE VISUAL RWY 28L/R

AL-375 (FAA)

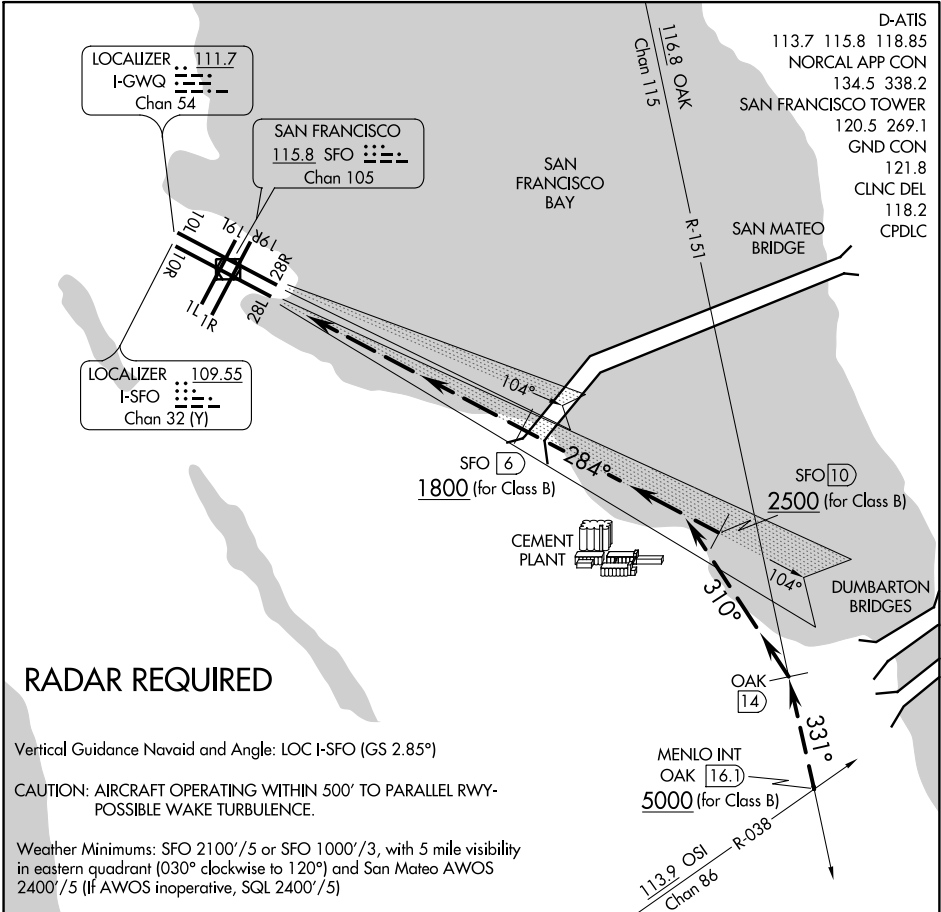
SAN FRANCISCO INTL (SFO)
SAN FRANCISCO, CALIFORNIA

LOCALIZER 111.7
I-GWQ
Chan 34

SAN FRANCISCO
115.8 SFO
Chan 105

LOCALIZER 109.55
I-SFO
Chan 32 (Y)

- D-ATIS 113.7 115.8 118.85
- NORCAL APP CON 134.5 338.2
- SAN FRANCISCO TOWER 120.5 269.1
- GND CON 121.8
- CLNC DEL 118.2
- CPDLC



RADAR REQUIRED

Vertical Guidance Navaid and Angle: LOC I-SFO (GS 2.85°)

CAUTION: AIRCRAFT OPERATING WITHIN 500' TO PARALLEL RWY- POSSIBLE WAKE TURBULENCE.

Weather Minimums: SFO 2100'/5 or SFO 1000'/3, with 5 mile visibility in eastern quadrant (030° clockwise to 120°) and San Mateo AWOS 2400'/5 (If AWOS inoperative, SQL 2400'/5)

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|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|

TIPP TOE VISUAL APPROACH RUNWAY 28L/R

When visual approaches to Runways 28L/R are in progress, arriving aircraft may be vectored into a position for a straight-in visual approach to Runways 28L/R via the I-SFO Localizer.

Aircraft should cross the OAK R-151/16.1 DME (MENLO INT) at or above 5000 and the San Mateo Bridge at or above 1800.

NOTE: Closely spaced parallel visual approaches may be in progress to Runway 28R utilizing the SFO R-095. In the event of a go-around on Runway 28L, turn left heading 265°, or on Runway 28R, turn right heading 310°, climb and maintain 3000, or as directed by Air Traffic Control.

TIPP TOE VISUAL RWY 28L/R

Amdt 1 22AUG13

37 OLD °23'W

SAN FRANCISCO, CALIFORNIA
SAN FRANCISCO INTL (SFO)

SW-2, 20 JUL 2017 to 17 AUG 2017

SW-2, 20 JUL 2017 to 17 AUG 2017

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
CATEGORICAL EXCLUSION DECLARATION**

San Francisco International Airport

**SERFR THREE (RNAV)
ILS or LOC RWY 28L
ILS or LOC RWY 28R
ILS RWY 28R (SA CAT I)
ILS RWY 28R (CAT II-III)
RNAV (RNP) Y RWY 28R
RNAV (GPS) RWY 28L
RNAV (GPS) Z RWY 28R
QUIET BRIDGE VISUAL RWY 28L/R
TIPP TOE VISUAL RWY 28L/R**

Description of Action:

The FAA is proposing to amend multiple procedures (1) the SERFR Standard Terminal Arrival (STAR), (2) seven approach procedures, and (3) two Charted Visual Flight Procedures (CVFPs) for Runways 28L/R for the San Francisco International Airport (KSFO) in San Francisco, California.

The current KSFO Class B Airspace (CBA) was originally designed in the mid-1990's. Since then, Instrument Flight Procedures have been amended over time due to updates in charting criteria and operational needs. Excursions from Class B Airspace while arriving to KSFO have been reported in the AJS Class B Safety Reports. Excursion data was compiled from the Performance Data Analysis and Reporting System (PDARS) on a daily basis for the year 2016 and for January through June in 2017. As an example, a total of 97 arrival excursions were reported for July 15, 2016.

Depending on aircraft type and wind speed, arrivals have entered-exited-entered the CBA while complying with the STAR restrictions on portions of the SERFR STAR southeast of the EDDYY waypoint. Air traffic control has to interrupt the vertical navigation on every SERFR STAR clearance to preclude CBA exits. This results in frequency congestion and an increase in workload for both the flight crew and controller.

The addition of the waypoint NARWL between EPICK and EDDYY with an altitude restriction of "At or Above 8,000" feet mean sea level (msl) is necessary to contain arrivals within the CBA once they enter the CBA. The altitude restriction will prevent descent below the 8,000 feet mean sea level floor of the Class B Airspace.

The approach procedures and CVFPs to RWY 28L/R will be amended so that they will connect to the SERFR STAR allowing for a continuous descent profile from the en route structure to KSFO. The waypoint SIDBY has been defined to connect the three Intermediate fixes CEPIN, HEMAN, and GUTTS to the SERFR and to keep air traffic within Class B Airspace.

Proposed procedure specific amendments are described below.

SERFR STAR:

- Add a new waypoint, NARWL, between EPICK and EDDYY with a crossing restriction of “At or Above 8,000” feet msl.
- Move EDDYY 3.04 nautical miles (NM) north: EDDYY (New).
- Vertical profile of the procedure will not be changed.

Instrument Approach Procedures:

1. **ILS or LOC RWY 28L and RNAV (GPS) RWY 28L:**
 - a. Remove the segment from the initial approach fix (IAF) MENLO to the IF HEMAN from the procedure.
 - b. Add new initial segment for connectivity to SERFR.
 - c. Add new IAF EDDYY (New).
 - d. Add new waypoint, SIDBY, north of EDDYY (New).
 - e. New segment EDDYY (new) – SIDBY connects to the intermediate fix (IF) HEMAN.
2. **(1) ILS or LOC RWY 28R; (2) ILS RWY 28R (SA CAT I); (3) ILS RWY 28R (CAT II – III); and (4) RNAV (GPS) Z RWY 28R:**
 - a. Remove the segment from the IAF MENLO to the IF CEPIN from the procedure.
 - b. Add new initial segment for connectivity to SERFR.
 - c. Add new IAF EDDYY (New).
 - d. Add new waypoint, SIDBY, north of EDDYY (New).
 - e. New segment EDDYY (new) – SIDBY connects to the intermediate fix (IF) CEPIN.
3. **ILS or LOC RWY 28L and RNAV (GPS) RWY 28L:**
 - a. Remove the segment from the initial approach fix (IAF) MENLO to the IF HEMAN from the procedure.
 - b. Add new initial segment for connectivity to SERFR.
 - c. Add new IAF EDDYY (New).
 - d. Add new waypoint, SIDBY, north of EDDYY (New).
 - e. New segment EDDYY (new) – SIDBY connects to the intermediate fix (IF) HEMAN.
4. **RNAV (RNP) Y RWY 28R:**
 - a. Remove the segment from the initial approach fix (IAF) MENLO to the IF GUTTS from the procedure.
 - b. Add new initial segment for connectivity to SERFR.
 - c. Add new IAF EDDYY (New).
 - d. Add new waypoint, SIDBY, north of EDDYY (New).
 - e. New segment EDDYY (new) – SIDBY connects to the intermediate fix (IF) GUTTS.

Chartered Visual Flight Procedures:

1. **QUIET BRIDGE VISUAL RWY 28L/R:**
 - a. Remove the segment from MENLO to the SAN FRANCISCO VOR/DME (SFO) R-095 10DME.
 - b. Add new initial segment from EDDYY (New) for connectivity to SERFR. CVFP will start at EDDYY (new).
 - c. Add new waypoint, SIDBY, north of EDDYY (New).
 - d. Add new segment from EDDYY (new) to SIDBY with an altitude restriction of “At or Above 5000” feet MSL to SFO 095R 10 DME via OAKLAND VOR/DME (OAK) 150R.

2. TIPP TOE VISUAL RWY 28L/R:

- a. Remove the segment from MENLO to the OAKLAND VOR/DME (OAK) R-151 14DME.
- b. Add new initial segment from EDDYY (New) for connectivity to SERFR.
- c. Add new waypoint, SIDBY, north of EDDYY (New).
- d. Add new waypoint, SHIRA, north of EDDYY (New). Approximately 6,076 feet east of the OAK 151R14DME where TIPP TOE currently bends.
- e. Add new segment from EDDYY (new) to SIDBY with an altitude restriction of “At or Above 5000” feet MSL to SHIRA then via a 310 heading to localizer.

The MITRE Guidance noise screening Lateral Movement Test (LAT Test) was used to determine the potential for noise impacts related to (1) the proposed amendment to replace the IAF MENLO with the IAF EDDYY (New); and (2) add a new waypoint SHIRA located east of the current bend in the TIPP TOE CVFP. The LAT Test is applied to determine if the lateral movement of a route resulting from adding, removing, or changing the location of a fix is enough to cause a change in Day/Night Average Sound Level (DNL) exceeding the noise screening thresholds.

The results of the LAT noise screening results indicated that potential noise impacts are not expected due to the lateral movement resulting from (1) the replacement of the IAF MENLO with IAF EDDYY (new) and (2) the addition of the waypoint SHIRA which moves the route approximately 6, 076 feet east; therefore, further noise screening is not required.

Declaration of Exclusion:

The FAA has reviewed the above referenced proposed action and it has been determined, by the undersigned, to be categorically excluded from further environmental documentation according to FAA Order 1050.1F, “Environmental Impacts: Policies and Procedures.” The implementation of this action will not result in any extraordinary circumstances in accordance with FAA Order 1050.1F.


Basis for this Determination:

The Initial Environmental Review was processed and reviewed by the Western Service Center. This review was conducted in accordance with policies and procedures in Department of Transportation Order 5610.1C, “Procedures for Considering Environmental Impacts” and FAA Order 1050.1F.

The proposed procedure meets the following categorical exclusion contained in FAA Order 1050.1F:

5-6.5.i. Establishment of new or revised air traffic control procedures conducted at 3,000 feet or more above ground level (AGL); procedures conducted below 3,000 feet AGL that do not cause traffic to be routinely routed over noise sensitive areas; modifications to currently approved procedures conducted below 3,000 feet AGL that do not significantly increase noise over noise sensitive areas; and increases in minimum altitudes and landing minima.

Facility Manager Review/Concurrence

Signature:  _____ Date: 7/25/17
Name: Donald H. Kirby
Air Traffic Manager
Northern California Terminal Radar Control Facility, NCT

Concurrence by:

Western Service Area Environmental Specialist

Signature:  _____ Date: 7/26/17
Name: Marina Landis
Environmental Protection Specialist, Operations Support Group
Western Service Area, AJV-W22

Approval by:

Western Service Area Director or Designee Approval

Signature:  _____ Date: 7/27/17
Name: Kim A. Stover
Director, Air Traffic Operations, North/Acting South,
Western Service Area, AJTW