U.S. DEPARTMENT of TRANSPORTATION – FEDERAL AVIATION ADMINISTRATION

GRAPHIC DEPARTURE PROCEDURE (DP)

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DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
GAP	FIVE	GAPP5.GAP	FOUR	09/20/2012	

TYPE: SID

DP ROUTE DESCRIPTION:

TAKEOFF RWY 1L/R: CLIMB ON SFO R-350 (OR AS ASSIGNED) FOR VECTOR TO ASSIGNED ROUTE/FIX. THENCE...
TAKEOFF RWY 10L/R AND 19 L/R: TURN LEFT AND CLIMB ON THE SFO R-090 AND OSI R-028 TO OSI VORTAC; EXPECT VECTOR TO ASSIGNED ROUTE/FIX AFTER OSI VORTAC. THENCE...
TAKEOFF RWY 28L/R: CLIMB ON THE SFO VOR/DME R-281 TO NORMM INT/SFO VOR/DME 12.90 DME; EXPECT VECTOR TO ASSIGNED ROUTE/FIX AFTER NORMM INT. THENCE...

...EXPECT FURTHER CLEARANCE TO FILED ALTITUDE 10 MINUTES AFTER DEPARTURE.

TRANSITION ROUTES (GRAPHIC DEPICTION ONLY):

Transition Name	Transition Computer Codes	From FIX/NAVAID	To FIX/NAVAID	Course	Distance	MEA	MOCA	Crossing Altitudes/Fixes

PROCEDURAL DATA NOTES/TAKEOFF MINIMUMS:

NOTE: RWY 19L: STANDARD WITH MINIMUM CLIMB OF 566 FT PER NM TO 1100 FT. RWY 19R: STANDARD WITH MINIMUM CLIMB OF 541 FT PER NM TO 1100 FT. RWY 28L: STANDARD WITH MINIMUM CLIMB OF 379 FT PER NM TO 2000 FT. RWY 28R: STANDARD WITH MINIMUM CLIMB OF 326 FT PER NM TO 2000 FT. NOTE: RADAR REQUIRED. NOTE: RWYS 19L/R DEPARTURES TURN LEFT DUE TO STEEPLY RISING TERRAIN TO 2000 FT IMMEDIATELY SOUTH OF AIRPORT.

TAKEOFF OBSTACLES NOTES:

NOTE: RWY 1L, SIGN, FENCE BEGINNING 169 FT FROM DER, 226 FT LEFT OF CENTERLINE, UP TO 7 FT AGL/14 FT MSL. OBSTRUCTION LIGHT ON LEVEE AND FENCE BEGINNING 209 FT FROM DER, 2 FT LEFT OF CENTERLINE, UP TO 6 FT AGL/14 FT MSL.

NOTE: RWY 1R, FENCE 3 FT FROM DER, 329 FT LEFT OF CENTERLINE, 7 FT AGL/13 FT MSL. TERRAIN 62 FT FROM DER, 330 FT LEFT OF CENTERLINE, 12 FT MSL. TERRAIN 91 FT FROM DER, 515 FT RIGHT OF CENTERLINE, 14 FT MSL.

NOTE: RWY 10L, SIGN 62 FT FROM DER, 300 FT LEFT OF CENTERLINE, 4 FT AGL/15 FT MSL. BUILDING AND ROD ON BUILDING BEGINNING 257 FT FROM DER, 560 FT LEFT OF CENTERLINE, UP TO 12 FT AGL/24 FT MSL.

NOTE: RWY 19L, FENCE BEGINNING 55 FT FROM DER, 462 FT LEFT OF CENTERLINE, UP TO 6 FT AGL/15 FT MSL. SIGN 4 FT FROM DER, 168 FT RIGHT OF CENTERLINE, 5 FT AGL/12 FT MSL. MULTIPLE POLES BEGINNING 754 FT FROM DER, 47 FT LEFT OF CENTERLINE, UP TO 20 FT AGL/48 FT MSL. MULTIPLE POLES AND A SIGN BEGINNING 873 FT FROM DER, 337 FT RIGHT OF CENTERLINE, UP TO 20 FT AGL/38 FT MSL. MULTIPLE BUILDINGS, TRANSMISSION TOWERS, POLES, TREES, SIGN, ELECTRICAL SYSTEM BEGINNING 1078 FT FROM DER, 12 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/127 FT MSL. MULTIPLE BUILDINGS, TRANSMISSION TOWERS, POLES, TREES, SIGN, ELECTRICAL SYSTEM BEGINNING 194 FT FROM DER, 61 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/128 FT MSL. MULTIPLE BUILDINGS, TREES BEGINNING 4027 FT FROM DER, 152 FT RIGHT OF CENTERLINE UP TO 100 FT AGL/167 FT MSL.

NOTE: RWY 19R, MULTIPLE POLES, TREES, ELECTRICAL SYSTEM BEGINNING 898 FT FROM DER, 82 FT RIGHT OF CENTERLINE, UP TO 40 FT AGL/60 FT MSL. MULTIPLE TRANSMISSION TOWERS, TREES BEGINNING 1638 FT FROM DER, 7 FT LEFT OF CENTERLINE, UP TO 80 FT AGL/96 FT MSL. MULTIPLE TRANSMISSION TOWERS, TREES BEGINNING 1851 FT FROM DER, 16 FT RIGHT OF CENTERLINE, UP TO 80 FT AGL/85 FT MSL.

QUALITY CHECKED 1

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NOTE: RWY 28L, SIGN 19 FT FROM DER, 500 FT RIGHT OF CENTERLINE, 5 FT AGL/9 FT MSL. OBSTRUCTION LIGHTS ON DME BEGINNING 277 FT FROM DER, 162 FT LEFT OF CENTERLINE, UP TO 16 FT AGL/26 FT MSL. OBSTRUCTION LIGHT ON LOCALIZER BEGINNING ON CENTERLINE UP TO 10 FT AGL/17 FT MSL. MULTIPLE POLES, ELECTRICAL SYSTEM BEGINNING 824 FT FROM DER, 300 FT LEFT OF CENTERLINE, UP TO 40 FT AGL/56 FT MSL. MULTIPLE BUILDINGS, TRANSMISSION TOWERS, TANK AND POLE BEGINNING 1305 FT FROM DER, 370 FT LEFT OF CENTERLINE, UP TO 95 FT AGL/103 FT MSL.

NOTE: RWY 28R, MULTIPLE SIGNS BEGINNING 23 FT FROM DER, 140 FT RIGHT OF CENTERLINE, UP TO 5 FT AGL/10 FT MSL. TERRAIN BEGINNING 58 FT FROM DER, 146 FT RIGHT OF CENTERLINE, UP TO 10 FT MSL. SIGN, 63 FT FROM DER, 250 FT LEFT OF CENTERLINE 5 FT AGL/8 FT MSL. TERRAIN BEGINNING 130 FT FROM DER, 235 FT LEFT OF CENTERLINE UP TO 10 FT MSL. ANTENNA ON BUILDING, OBSTRUCTION LIGHT ON DME, TREE, BEGINNING 556 FT FROM DER, 268 FT RIGHT OF CENTERLINE, UP TO 35 FT AGL/43 FT MSL. MULTIPLE POLES BEGINNING 918 FT FROM DER, 598 FT LEFT OF CENTERLINE, UP TO 22 FT AGL/35 FT MSL. MULTIPLE BUILDINGS, TREES BEGINNING 1467 FT FROM DER, 683 FT RIGHT OF CENTERLINE, UP TO 60 FT AGL/68 FT MSL. MULTIPLE BUILDINGS, TRANSMISSION TOWERS, TREES AND ELECTRICAL SYSTEM BEGINNING 1826 FT FROM DER, 123 FT LEFT OF CENTERLINE, UP TO 95 FT AGL/103 FT MSL.

CONTROLLING OBSTACLES:

RWY 19L/R: 719 FT MSL AAO 373502.00N/1222400.00W; RWY 28R: 874 FT MSL AAO 373908.90N/1222745.75W; RWY 28L: 924 FT MSL AAO 373815.69N/1222749.98W.

LOST COMMUNICATIONS PROCEDURES:

ADDITIONAL FLIGHT DATA:

AIRPORTS SERVED:

SAN FRANCISCO INTL — SAN FRANCISCO, CA

COMMUNICATIONS:

ATIS, GND CON, SAN FRANCISCO TOWER, NORCAL DEP CON.

FIXES AND/OR NAVAIDS:

CHART: ENI VORTAC, OAK VORTAC, OSI VORTAC, SAU VORTAC, SGD VORTAC, NORMM, BARTN, ALCOA, BEBOP WAYPOINT.

REMARKS:

CHART: 234 TRACK FROM ALCOA R-463, AND 235 TRACK FROM BEBOP R-464.

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DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
GAP	FIVE	GAPP5.GAP	FOUR	09/20/2012	

FLIGHT INSPECTED BY:

REQUIRED EFFECTIVE DATE:
ROUTINE

DEVELOPED BY:
ROY CURRE AJV-354 09/04/2012

APPROVED BY:
DEZ SILAGYI AJV-354

COORDINATED WITH:
ATA, ALPA, APA, AOPA, NBAA, KSFO ATCT, NORCAL APP CON, ZOA, WESTERN FPT.

CHANGES:

1. AMENDED DP COMPUTER CODE. CHANGED FROM: GAP4.GAP; TO: GAPP5.GAP

REASONS:

1. INCORRECT COMPUTER CODE ON GAP FOUR AMENDMENT.

DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
GAP	FIVE	GAPP5.GAP	FOUR	09/20/2012	

ARINC PACKET - 424-18 - SID

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                 1         2         3         4         5         6         7         8         9         0         1         2         3
NAVAID  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAD        ENI   K2011230VTHA N39031158W123162758    N39031158W123162758E0160028852     NARMENDOCINO
        SUSAD        OAK   K2011680VTHA N37433332W122132491    N37433332W122132491E0170000132     NAROAKLAND
        SUSAD        OSI   K2011390VTLW N37233300W122165268    N37233362W122165458E0170022701     NARWOODSIDE
        SUSAD        SAU   K2011620VTLW N37511924W122312191    N37511924W122312191E0170010401     NARSAUSALITO
        SUSAD        SFO   K2011580VDLA N37371014W122222602    N37371014W122222602E0170000071     NARSAN FRANCISCO
        SUSAD        SGD   K2011210VTLW N38104570W122222335    N38104570W122222335E0170000061     NARSCAGGS ISLAND

                 1         2         3         4         5         6         7         8         9         0         1         2         3
WP      123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAEAENRT   ALCOA K20    C   H N37495971W125500429                      E0145     NAR           ALCOA
        SUSAEAENRT   BARTN K20    R     N37325437W122050197                      E0139     NAR           BARTN
        SUSAEAENRT   BEBOP K20    C   H N36595980W125000418                      E0142     NAR           BEBOP
        SUSAEAENRT   NORMM K20    C     N37431275W122364742                      E0141     NAR           NORMM

                 1         2         3         4         5         6         7         8         9         0         1         2         3
AIRPORT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KSFOK2ASFO     0     118YHN37370878W122223085E017000013         1800018000C    MNAR    SAN FRANCISCO INTL

                 1         2         3         4         5         6         7         8         9         0         1         2         3
SEGMENT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KSFOK2DGAPP5 TRW01B 010         0        CA                    0108        + 00413     18000
        SUSAP KSFOK2DGAPP5 TRW01B 020SFO  K2D 0VE      FM SFO K2      000000003500    D
        SUSAP KSFOK2DGAPP5 TRW10B 010BARTNK2EA0E       CF SFO K2      0900014509000150D               18000
        SUSAP KSFOK2DGAPP5 TRW10B 020OSI  K2D 0VY  R   TFY                   2080
        SUSAP KSFOK2DGAPP5 TRW10B 030OSI  K2D 0VE      FM OSI K2      000000002080    D
        SUSAP KSFOK2DGAPP5 TRW19B 010         0        CA                    1908        + 00413     18000
        SUSAP KSFOK2DGAPP5 TRW19B 020BARTNK2EA0E   L   CFYSFO K2      0900014509000150D
        SUSAP KSFOK2DGAPP5 TRW19B 030OSI  K2D 0VY  R   TFY                   2080
        SUSAP KSFOK2DGAPP5 TRW19B 040OSI  K2D 0VE      FM OSI K2      000000002080    D
        SUSAP KSFOK2DGAPP5 TRW28B 010NORMMK2EA0EY      CF SFO K2      2810012928100130D               18000
        SUSAP KSFOK2DGAPP5 TRW28B 020NORMMK2EA0EE      FM SFO K2      281001292810    D
        SUSAP KSFOK2DGAPP5 VALCOA 010KSFO K2PA0A       IF                                             18000
        SUSAP KSFOK2DGAPP5 VALCOA 020ALCOAK2EA0EE      DF
        SUSAP KSFOK2DGAPP5 VBEBOP 010KSFO K2PA0A       IF                                             18000
        SUSAP KSFOK2DGAPP5 VBEBOP 020BEBOPK2EA0EE      DF
        SUSAP KSFOK2DGAPP5 VENI   010KSFO K2PA0A       IF                                             18000
        SUSAP KSFOK2DGAPP5 VENI   020ENI  K2D 0VE      DF
        SUSAP KSFOK2DGAPP5 VOAK   010KSFO K2PA0A       IF                                             18000
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DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
GAP	FIVE	GAPP5.GAP	FOUR	09/20/2012	

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SUSAP KSFOK2DGAPP5 VOAK   020OAK  K2D 0VE      DF
SUSAP KSFOK2DGAPP5 VOSI   010KSFO K2PA0A       IF                                    18000
SUSAP KSFOK2DGAPP5 VOSI   020OSI  K2D 0VE      DF
SUSAP KSFOK2DGAPP5 VSAU   010KSFO K2PA0A       IF                                    18000
SUSAP KSFOK2DGAPP5 VSAU   020SAU  K2D 0VE      DF
SUSAP KSFOK2DGAPP5 VSGD   010KSFO K2PA0A       IF                                    18000
SUSAP KSFOK2DGAPP5 VSGD   020SGD  K2D 0VE      DF
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                1         2         3         4         5         6         7         8         9         0         1         2         3
RUNWAY  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KSFOK2GRW01L   0075000108 N37363665W122225309+0000    -0029400010049050200D
        SUSAP KSFOK2GRW01R   0086460108 N37362672W122224914+0000    -0029100011024550200D
        SUSAP KSFOK2GRW10L   0118701008 N37374346W122233621+0100    -0030900006000055200R
        SUSAP KSFOK2GRW10R   0113811008 N37373464W122233518+0000    -0030400007000060200R
        SUSAP KSFOK2GRW19L   0086461908 N37374018W122220044+0000    -0029600010000060200IISIA1
        SUSAP KSFOK2GRW19R   0075001908 N37373795W122221245+0000    -0030000009000047200R
        SUSAP KSFOK2GRW28L   0113812808 N37364216W122213006+0000    -0028700013000057200IISFO1
        SUSAP KSFOK2GRW28R   0118702808 N37364872W122212571-0100    -0028700013000055200IIGWQ3    IFNPL
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DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
GAP	FIVE	GAPP5.GAP	FOUR	09/20/2012	

ARINC SUMMARY - 424-18 - SID

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	RW01B		010		CA		FB		010.8()		AA 00413	
	RW01B	SFO	020		FM		FB		350.0()			
	RW10B	BARTN	010		CF		FB		090.0()	015.0		
	RW10B	OSI	020		TF	R	FO		208.0()			
	RW10B	OSI	030		FM		FB		208.0()			
	RW19B		010		CA		FB		190.8()		AA 00413	
	RW19B	BARTN	020		CF	L	FB		090.0()	015.0		
	RW19B	OSI	030		TF	R	FO		208.0()			
	RW19B	OSI	040		FM		FB		208.0()			
	RW28B	NORMM	010		CF		FO		281.0()	013.0		
	RW28B	NORMM	020		FM		FB		281.0()			
	ALCOA	KSFO	010		IF		FB					
	ALCOA	ALCOA	020		DF		FB					
	BEBOP	KSFO	010		IF		FB					
	BEBOP	BEBOP	020		DF		FB					
	ENI	KSFO	010		IF		FB					
	ENI	ENI	020		DF		FB					
	OAK	KSFO	010		IF		FB					
	OAK	OAK	020		DF		FB					
	OSI	KSFO	010		IF		FB					
	OSI	OSI	020		DF		FB					
	SAU	KSFO	010		IF		FB					
	SAU	SAU	020		DF		FB					
	SGD	KSFO	010		IF		FB					
	SGD	SGD	020		DF		FB					

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	ENI	N390311.58	W1231627.58	N3903.193	W12316.460
	OAK	N374333.32	W1221324.91	N3743.555	W12213.415
	OSI	N372333.00	W1221652.68	N3723.550	W12216.878
	SAU	N375119.24	W1223121.91	N3751.321	W12231.365
	SFO	N373710.14	W1222226.02	N3737.169	W12222.434
	SGD	N381045.70	W1222223.35	N3810.762	W12222.389
	ALCOA	N374959.71	W1255004.29	N3749.995	W12550.072
	BARTN	N373254.37	W1220501.97	N3732.906	W12205.033
	BEBOP	N365959.80	W1250004.18	N3659.997	W12500.070
	NORMM	N374312.75	W1223647.42	N3743.213	W12236.790
	RW01L	N373636.65	W1222253.09	N3736.611	W12222.885
	RW01R	N373626.72	W1222249.14	N3736.445	W12222.819
	RW10L	N373743.46	W1222336.21	N3737.724	W12223.604
	RW10R	N373734.64	W1222335.18	N3737.577	W12223.586

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RW19L	N373740.18	W1222200.44	N3737.670	W12222.007
RW19R	N373737.95	W1222212.45	N3737.633	W12222.208
RW28L	N373642.16	W1222130.06	N3736.703	W12221.501
RW28R	N373648.72	W1222125.71	N3736.812	W12221.429

RUNWAY DATA

RWY	THRESHOLD ELEVATION	TCH
RW01L	00010	50
RW01R	00011	50
RW10L	00006	55
RW10R	00007	60
RW19L	00010	60
RW19R	00009	47
RW28L	00013	57
RW28R	00013	55