

Flight Procedure Tracking Form		Action: FLIGHT CHECK	Task Type: SID	Date Open: 09/12/2012	Task #: 2011072926923415012	Request #: 20110729269234
Procedure: SID SMERF (RNAV) FIVE MINNEAPOLIS MN KMSP			Airport ID: KMSP	Airport: MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN		Reimbursable #:
City: MINNEAPOLIS		ST: MN	GPS #:	Estimated Chart Date: 05/02/2013		FICO #:
Fac ID:	Fac. Type: <i>ProcT</i>		Specialist: BRIAN BICKETT			

Procedure Review

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	Rec'd	Rel'd	Full Name	Comments
Lead:	09/12/2012	02/11/2013	JILL OLSON	
QA:	02/11/2013	02/11/2013	SCOTT BEARD	
Liaison:	02/11/2013		<i>Spurline</i>	REQUEST POSSIBLE TABLE TOP REVIEW

Procedure Comments: ENROUTE **Remark Type:** INFORMATION *Acg 12 of 15*

MINNEAPOLIS, MN MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (KMSP) SMERF FIVE (SID) ENROUTE-YES FC: 3.5.13 PUB: 5.2.13

ATTACHED FORM: 8260-15B; 8260-15C.

CONTACT: JILL OLSON/STEVE BARNETT -AVJ-353 LEADS, 405.954.4014 / 405.954.9307.

**U.S. DEPARTMENT of TRANSPORTATION – FEDERAL AVIATION ADMINISTRATION
GRAPHIC DEPARTURE PROCEDURE (DP)**

Bearings, headings, courses, tracks, and radials are magnetic. Elevation and altitudes are in feet MSL. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statute miles or feet RVR unless otherwise indicated. Graphic depictions attached.

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
SMERF	FIVE	SMERF5.SMERF	FOUR	12/15/2011	

TYPE: RNAV SID

DP ROUTE DESCRIPTION:

TAKEOFF RWY 22, 35: CLIMB ON ASSIGNED HEADING FOR RADAR VECTORS THENCE ...

TAKEOFF RWY 12L/12R: FOR ASSIGNED HEADINGS FROM 060 CW TO 100, CROSS MSP VOR/DME 7.00 DME ARC AT OR ABOVE 3500, MAINTAIN ASSIGNED ALTITUDE. IF UNABLE TO COMPLY, ADVISE ATC AS SOON AS POSSIBLE PRIOR TO DEPARTURE THENCE ...

TAKEOFF RWY 17: FOR ASSIGNED HEADINGS FROM 230 CW TO 285, CROSS MSP VOR/DME 7.00 DME ARC AT OR ABOVE 3500, MAINTAIN ASSIGNED ALTITUDE. IF UNABLE TO COMPLY, ADVISE ATC AS SOON AS POSSIBLE PRIOR TO DEPARTURE THENCE ...

TAKEOFF RWY 30 L/R: FOR ASSIGNED HEADINGS FROM 220 CW TO 360, CROSS MSP VOR/DME 7.00 DME ARC AT OR ABOVE 3500, MAINTAIN ASSIGNED ALTITUDE. IF UNABLE TO COMPLY, ADVISE ATC AS SOON AS POSSIBLE PRIOR TO DEPARTURE THENCE ...

TAKEOFF RWY 4: CLIMB HEADING 045.00 TO 2100 THENCE ...

... EXPECT RADAR VECTORS TO ZOGAP, THEN ON TRACK 289.11 TO PAGOZ AND ON TRACK 288.80 TO SMERF, TURBOJET AIRCRAFT MAINTAIN 7000 OR LOWER ASSIGNED ALTITUDE, ALL OTHER AIRCRAFT MAINTAIN 5000 OR LOWER ASSIGNED ALTITUDE. EXPECT FILED ALTITUDE/FLIGHT LEVEL 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: DME/DME/IRU OR GPS REQUIRED.

NOTE: RNAV 1.

NOTE: RADAR REQUIRED.

NOTE: FOR NON GPS EQUIPPED AIRCRAFT, FCM, DWN, BRD, AXN, ABR, ATY DME's MUST BE OPERATIONAL.

DEPARTURE CROSSING RESTRICTIONS: RWY 12 L/R REQUIRES AN ATC CLIMB GRADIENT OF 546 FT PER NM TO 3500. RWY 17 REQUIRES AN ATC CLIMB GRADIENT OF 465 FT PER NM TO 3500. RWY 30 L/R REQUIRES AN ATC CLIMB GRADIENT OF 380 FT PER NM TO 3500. CROSS PAGOZ AT OR ABOVE 5000.

TAKEOFF MINIMUMS:

RWY 4, 12R, 17, 30L, 30R, STANDARD.

RWY 12L, 300-1 1/2 OR STANDARD WITH MINIMUM CLIMB OF 207 FT PER NM TO 1100, OR ALTERNATIVELY, WITH STANDARD TAKEOFF MINIMUMS AND A NORMAL 200 FT PER NM CLIMB GRADIENT, TAKEOFF MUST OCCUR NO LATER THAN 1300 FT PRIOR TO DER

RWY 35, STANDARD WITH MINIMUM CLIMB OF 219 FT PER NM TO 2100.



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DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
SMERF	FIVE	SMERF5.SMERF	FOUR	12/15/2011	

TAKEOFF OBSTACLES NOTES:

NOTE: RWY 4, TREES BEGINNING 800 FT FROM DER, 301 FT LEFT OF CENTERLINE, UP TO 75 FT AGL/925 FT MSL. ROD ON BUILDING 2528 FT FROM DER, 1174 FT LEFT OF CENTERLINE, 78 FT AGL/922 FT MSL. FENCE BEGINNING 13 FT FROM DER, 486 FT LEFT OF CENTERLINE, UP TO 6 FT AGL/860 FT MSL. STACK 4535 FT FROM DER, 480 FT LEFT OF CENTERLINE, 139 FT AGL/949 FT MSL.

NOTE: RWY 12L, TREE 1.1 NM FROM DER, 1691 FT LEFT OF CENTERLINE, 92 FT AGL/991 FT MSL. LT POLE AND CAMERA ON WALL BEGINNING 398 FT FROM DER, 561 FT RIGHT OF CENTERLINE, UP TO 23 FT AGL/832 FT MSL.

NOTE: RWY 12R, TREE 1479 FT FROM DER, 561 FT LEFT OF CENTERLINE, 86 FT AGL/855 FT MSL. OL ON POLE 1002 FT FROM DER, 753 FT LEFT OF CENTERLINE, 53 FT AGL/852 FT MSL.

NOTE: RWY 17, POLE 409 FT FROM DER, 530 FT RIGHT OF CENTERLINE, 29 FT AGL/866 FT MSL. BUILDING 2619 FT FROM DER, 881 FT LEFT OF CENTERLINE, 97 FT AGL/918 FT MSL. BUILDING 1956 FT FROM DER, 904 FT LEFT OF CENTERLINE, 61 FT AGL/866 FT MSL. TREE 2619 FT FROM DER, ON CENTERLINE, 79 FT AGL/900 FT MSL.

NOTE: RWY 22, TREES BEGINNING 2659 FT FROM DER, 867 FT RIGHT OF CENTERLINE, 94 FT AGL/934 FT MSL.

NOTE: RWY 30L, ANTENNA ON TOWER 3555 FT FROM DER, 1334 FT LEFT OF CENTERLINE, 116 FT AGL/935 FT MSL.

NOTE: RWY 30R, BILLBOARD SIGN 1463 FT FROM DER, 848 FT RIGHT OF CENTERLINE, 31 FT AGL/880 FT MSL.

NOTE: RWY 35, TREES BEGINNING 2553 FT FROM DER, 770 FT RIGHT OF CENTERLINE, 100 FT AGL/919 FT MSL. TREES BEGINNING 1989 FT FROM DER, 194 FT LEFT OF CENTERLINE, UP TO 87 FT AGL/906 FT MSL. BUILDINGS BEGINNING 5.4 NM FROM DER, 1781 FT LEFT OF CENTERLINE, UP TO 889 FT AGL/1743 FT MSL.

PILOT NAVIGATION AREA

10 NM ARC CENTERED ON ZOGAP (IF) CW
FROM: POINT A (BEARING 244 DEGREES TO ZOGAP)
TO: POINT B (BEARING 334 DEGREES TO ZOGAP)
MINIMUM ALTITUDE 2900

CONTROLLING OBSTACLES:

RWY 12L: 991 FT MSL TREE 445233.26N/0931008.66W
RWY 35: 1743 FT MSL BLDG 445834.00N/0931621.00W

LOST COMMUNICATIONS PROCEDURES:

ADDITIONAL FLIGHT DATA:

REFERENCE MAG VAR: KMSF 0E EPOCH YR: 2015
DME/DME/IRU ASSESSMENT: SAT (RNP 2.0)

AIRPORTS SERVED:

MINNEAPOLIS-ST PAUL INTERNATIONAL/WOLD CHAMBERLAIN

MINNEAPOLIS, MN.

COMMUNICATIONS:

ATIS, CLEARANCE DELIVERY, DEPARTURE CONTROL SOUTH OR EAST, DEPARTURE CONTROL NORTH OR WEST, ZMP, ATCT.

QUALITY
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CHECKED

DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
SMERF	FIVE	SMERF5.SMERF	FOUR	12/15/2011	

FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
ZOGAP	450517.00N/0935233.00W	Y		IF					
PAGOZ	451117.56N/0941715.85W	Y	FB	TF	289.11	18.50	AT/ABOVE 5000		
SMERF	455515.82N/0973408.26W	Y	FB	TF	288.80	145.15			



DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
SMERF RNAV	FIVE	SMERF5.SMERF	FOUR	12/15/2011	

ARINC SUMMARY - 424-18 - SID

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	ALL	ZOGAP	010		IF		FB					
	ALL	PAGOZ	020		TF		FB	1.0			AA 05000	
	ALL	SMERF	030		TF		FB	1.0				

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	PAGOZ	N451117.56	W0941715.85	N4511.293	W09417.264
	SMERF	N455515.82	W0973408.26	N4555.264	W09734.138
	ZOGAP	N450517.00	W0935233.00	N4505.283	W09352.550
	RW04	N445230.98	W0931402.73	N4452.516	W09314.046
	RW12L	N445334.63	W0931315.57	N4453.577	W09313.260
	RW12R	N445316.04	W0931402.87	N4453.267	W09314.048
	RW17	N445315.91	W0931432.11	N4453.265	W09314.535
	RW22	N445330.01	W0931239.67	N4453.500	W09312.661
	RW30L	N445224.68	W0931204.27	N4452.411	W09312.071
	RW30R	N445253.54	W0931140.67	N4452.892	W09311.678
	RW35	N445158.24	W0931411.92	N4451.971	W09314.199

RUNWAY DATA	RWY	THRESHOLD ELEVATION	TCH
	RW04	00832	55
	RW12L	00839	52
	RW12R	00842	56
	RW17	00840	60
	RW22	00828	55
	RW30L	00814	58
	RW30R	00820	55
	RW35	00833	53

QUALITY
1
CHECKED