Flight Procedure Tracking Form	Action: FLIGHT CHECK	Task Type: IAP	Date Open: 08/21/2012	Task #: 2011072926923409002	Request #: 20110729269234
Procedure: ILS OR LOC RWY 12 L AMDT 9		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: PJL	Fac. Type: ILS	Specialist: STEVE NELSON			

Procedure Review

MAG VAR p1

	Rec'd	Rel'd	Full Name	Comments
Lead:	09/05/2012	01/11/2013	JILL OLSON	
QA:	01/11/2013	01/11/2013	SCOTT BEARD	
Liaison:	01/11/2013		Spurlin	REPLACEMENT 1/11/13 - MAGVAR

Procedure Comments: ENROUTE **Remark Type:** INFORMATION

MINNEAPOLIS, MN MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (KMSP) ILS OR LOC RWY 12L, AMDT 9 ENROUTE-YES FC: 3.19.13 PUB: 5.2.13

ATTACHED FORMS: ESV REPORTS; 8260-3; 8260-10; 8260-9; 8260-2(S): AASUN-INT, REV 9; ALGIN-INT, REV 11; CCJAY-INT, REV 2; GOPHER (GEP) VTAC, REV 14; HAMML-INT, REV 2; KANAC-INT, ORIG; UBTYA-INT, REV 2; WASHY-INT, REV 6; WHISK-INT, REV 12.

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

ILS or LOC RWY 12L

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

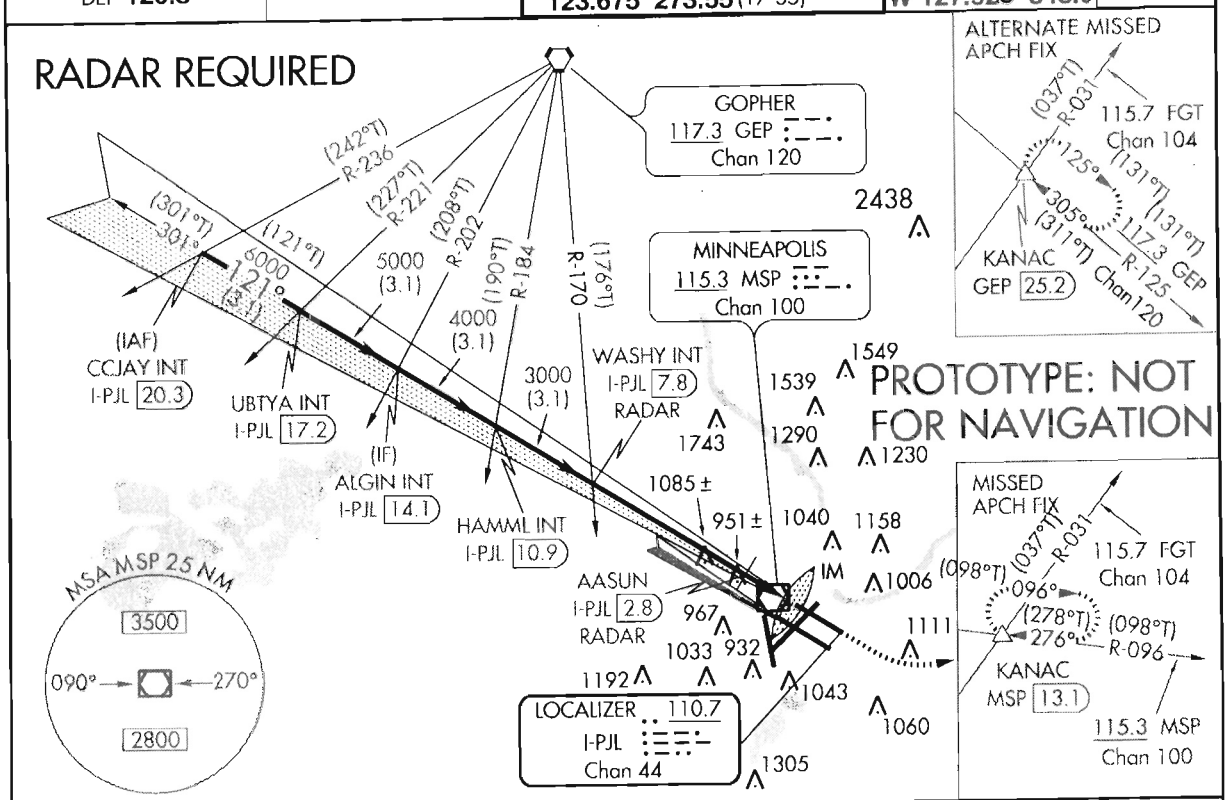
LOC/DME I-PJL	APP CRS	Rwy ldg	7620
110.7	121°	THRE	839
Chan 44		Apt Elev	842

Simultaneous approach authorized with Rwy 12R. For inop ALSF, increase S-ILS 12L Cat E visibility to RVR 4000, S-LOC 12L Cat E visibility to 1¾ mile. AASUN fix minimums: increase S-LOC 12L Cat C/D/E visibility to 1⅛ mile.

ALSF-2

MISSED APPROACH: Climb to 1300, then climbing left turn to 3000 on MSP VOR/DME R-096 to KANAC INT/MSP 13.1 DME and hold.

ATIS	MINNEAPOLIS APP CON	MINNEAPOLIS TOWER	GND CON	CLNC DEL
ARR 135.35 239.275	119.3 335.5	123.95 273.55 (12L-30R)	N 121.8 348.6	133.2
DEP 120.8		126.7 273.55 (12R-30L, 4-22)	S 121.9 348.6	
		123.675 273.55 (17-35)	W 127.925 348.6	

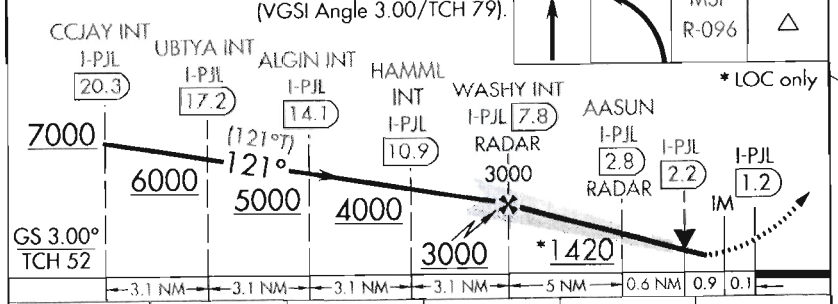


VGSI and ILS glidepath not coincident (VGSI Angle 3.00/TCH 79).

1300	3000	MSP R-096	KANAC

ELEV 842 | D | THRE 839

121° 6.6 NM from FAF



CATEGORY	A	B	C	D	E
S-ILS 12L	1039/18 200 (200-½)				
S-LOC 12L	1420/24 581 (600-½)		1420-1¼ 581 (600-1¼)		
CIRCLING	1420-1 578 (600-1)		1420-1¾ 578 (600-1¾)	1460-2 618 (700-2)	1660-3 818 (900-3)
AASUN FIX MINIMUMS					
S-LOC 12L	1240/24 401 (400-½)		1240/40 401 (400-¾)		
CIRCLING	1360-1 518 (600-1)		1360-1½ 518 (600-1½)	1460-2 618 (700-2)	1660-3 818 (900-3)

HIRL all Rwys
REIL Rwys 17 and 30R
TDZ/CL Rwys 12L, 12R, 30L, and 35

FAF to MAP 6.6 NM					
Knots	60	90	120	150	180
Min:Sec	6:36	4:24	3:18	2:38	2:12

ILS RWY 12L (SA CAT I)
MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

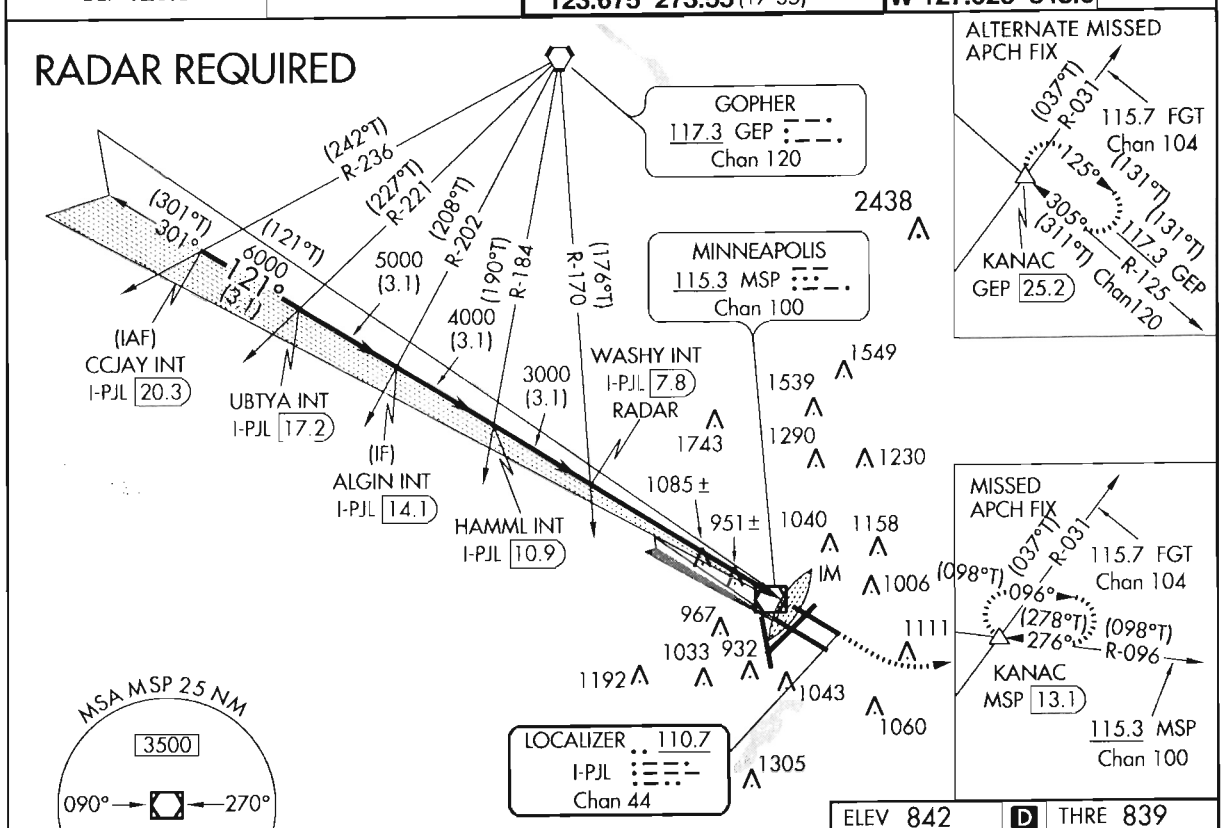
LOC/DME I-PJL	APP CRS	Rwy ldg	7620
110.7	121°	THRE	839
Chan 44		Apt Elev	842

Simultaneous approach authorized with Rwy 12R. Requires specific OPSPEC, MSPEC, or LOA approval and use of HUD to DH.

ALSF-2

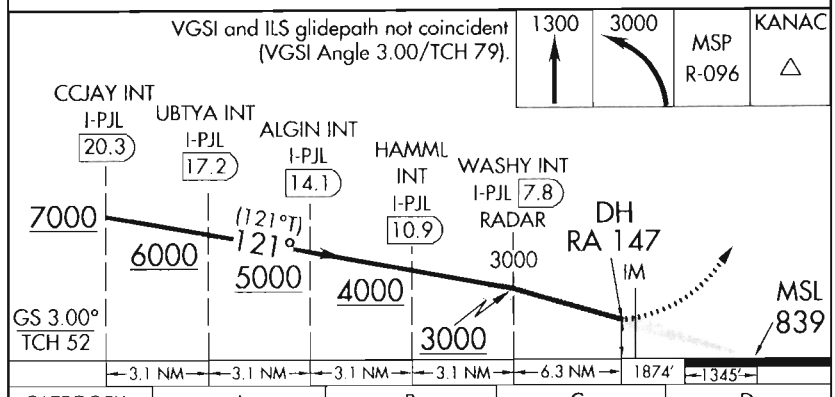
MISSED APPROACH: Climb to 1300, then climbing left turn to 3000 on MSP VOR/DME R-096 to KANAC INT/MSP 13.1 DME and hold.

ATIS	MINNEAPOLIS APP CON	MINNEAPOLIS TOWER	GND CON	CLNC DEL
ARR 135.35 239.275	119.3 335.5	123.95 273.55 (12L-30R)	N 121.8 348.6	133.2
DEP 120.8		126.7 273.55 (12R-30L, 4-22)	S 121.9 348.6	
		123.675 273.55 (17-35)	W 127.925 348.6	



ELEV 842 | D | THRE 839

VGSI and ILS glidepath not coincident (VGSI Angle 3.00/TCH 79).



CATEGORY	A	B	C	D
S-ILS 12L	RA 147/14 150 DA 989			

SA CATEGORY I ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

HIRL all Rwys
REIL Rwys 17 and 30R
TDZ/CL Rwys 12L, 12R, 30L, and 35

LOC/DME I-PJL	APP CRS	Rwy ldg	7620
110.7	121°	THRE	839
Chan 44		Apt Elev	842

ILS RWY 12L (CAT II)

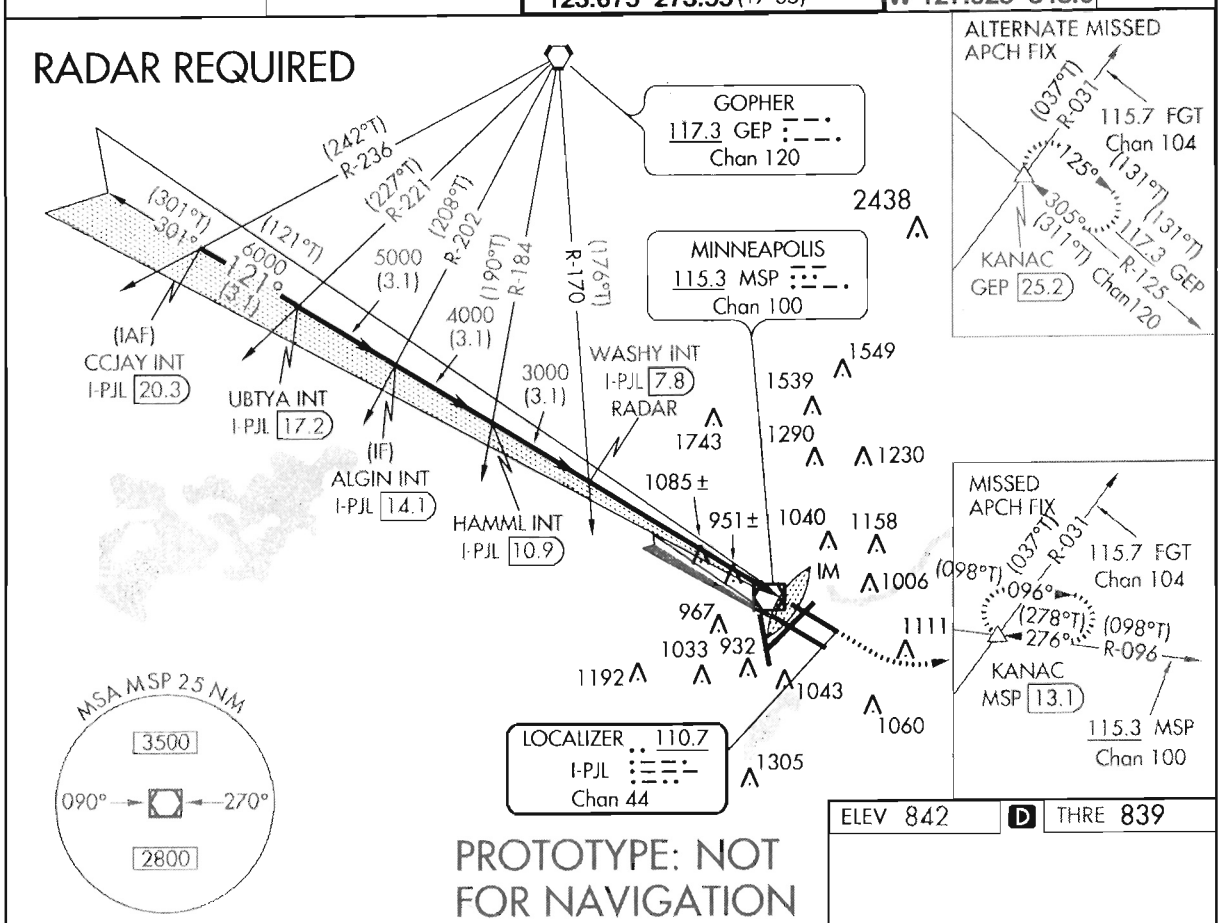
MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

RVR 1000 authorized with specific OPSPEC, MSPEC, or LOA approval and use of autoland or HUD to touchdown. Simultaneous approach authorized with Rwy 12R.

ALSF-2

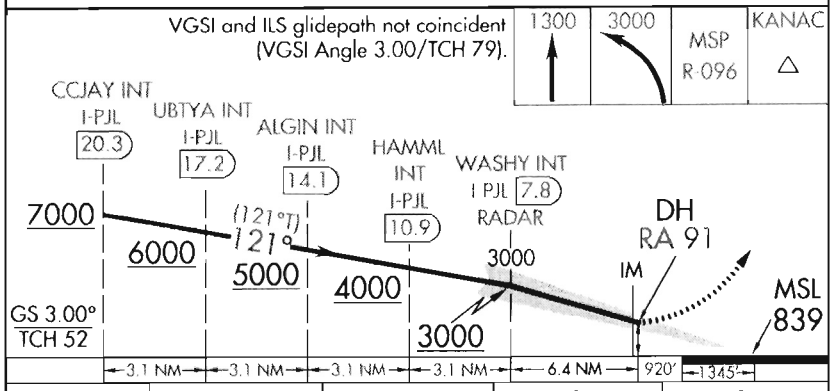
MISSED APPROACH: Climb to 1300, then climbing left turn to 3000 on MSP VOR/DME R-096 to KANAC INT/MSP 13.1 DME and hold.

ATIS	MINNEAPOLIS APP CON	MINNEAPOLIS TOWER	GND CON	CLNC DEL
ARR 135.35 239.275 DEP 120.8	119.3 335.5	123.95 273.55 (12L-30R) 126.7 273.55 (12R-30L, 4-22) 123.675 273.55 (17-35)	N 121.8 348.6 S 121.9 348.6 W 127.925 348.6	133.2



ELEV 842 | D | THRE 839

VGSI and ILS glidepath not coincident (VGSI Angle 3.00/TCH 79).



CATEGORY	A	B	C	D
S-ILS 12L	RA 91/12 100 DA 939			

CATEGORY II ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

HIRL all Rwys
REIL Rwys 17 and 30R
TDZ/CL Rwys 12L, 12R, 30L, and 35

ILS RWY 12L (CAT III)
MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

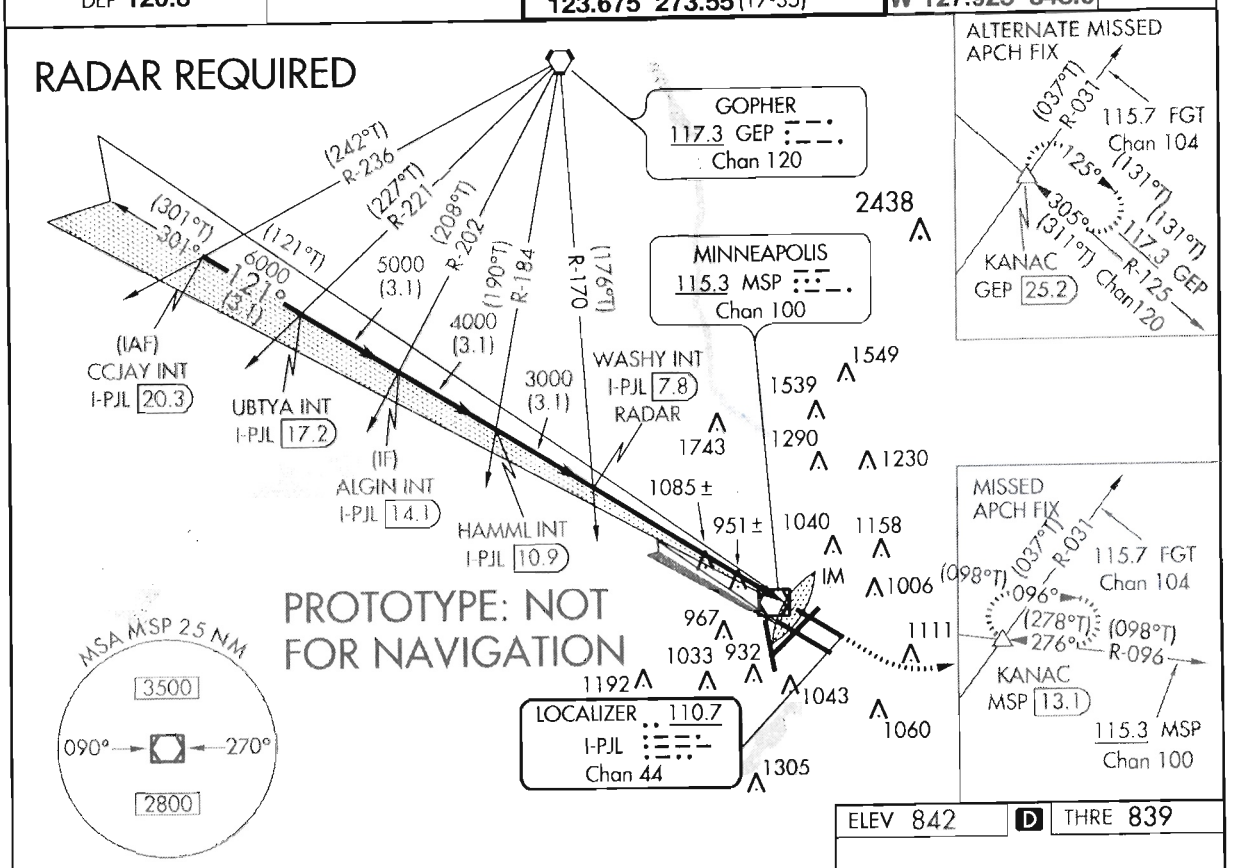
LOC/DME I-PJL	APP CRS	Rwy ldg	7620
110.7	121°	THRE	839
Chan 44		Apt Elev	842

Simultaneous approach authorized with Rwy 12R.

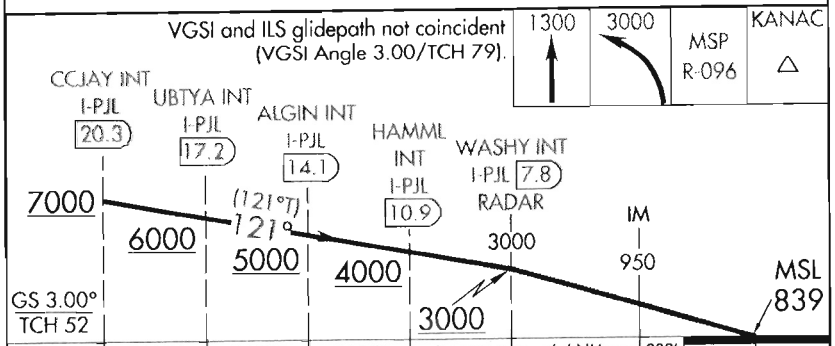
ALSF-2

MISSED APPROACH: Climb to 1300, then climbing left turn to 3000 on MSP VOR/DME R-096 to KANAC INT/MSP 13.1 DME and hold.

ATIS	MINNEAPOLIS APP CON	MINNEAPOLIS TOWER	GND CON	CLNC DEL
ARR 135.35 239.275 DEP 120.8	119.3 335.5	123.95 273.55 (12L-30R) 126.7 273.55 (12R-30L, 4-22) 123.675 273.55 (17-35)	N 121.8 348.6 S 121.9 348.6 W 127.925 348.6	133.2



ELEV 842 | D | THRE 839



CATEGORY	A	B	C	D
S-ILS 12L		CAT IIIa	RVR 07	
S-ILS 12L		CAT IIIb	RVR 06	
S-ILS 12L		CAT IIIc	NA	

CATEGORY III ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

HIRL all Rwys
REIL Rwys 17 and 30R
TDZ/CL Rwys 12L, 12R, 30L, and 35

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish			
Facility Data					
Chart Name : FLIP	City : MINNEAPOLIS	Ident : PJL	State : MN		
Type/Class : DME	Frequency : M1005	Reference No.: 12123160			
Expanded Service Volume Data: (Requesting Officer)					
ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 981727-003	300	0	18	50	70
Requirement: FIX UBTYA					
Signature: NELSON STEVEN	Routing Symbol: AJV-353				Date: 12/05/2012
Expanded Service Volume Data: (FMO)					
ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 981727-003	300	0	18	50	70	APPROVE
Requirement/Remarks: FIX UBTYAAPPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.						
Signature: NASSR NASHAAT	Routing Symbol:			Date: 12/05/2012	
Expanded Service Volume Data: (Super FMO)					
ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 981727-003	300	0	18	50	70	APPROVE
Requirement/Remarks: FIX UBTYAAPPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.						
Signature: Hughes Dennis	Routing Symbol:			Date: 12/05/2012	
Expanded Service Volume Data: (FIFO)					
ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 981727-003	300	0				
Requirement/Remarks:						
Signature:	Routing Symbol:			Date:	

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : FLIP	City : MINNEAPOLIS	Ident : PJL	State : MN
Type/Class : LOC	Frequency : M110.7	Reference No.: 12123180	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 861459-007	300	0	18	50	70

Requirement: FIX UBTYA

Signature: NELSON STEVEN	Routing Symbol: AJV-353	Date: 12/05/2012

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 861459-007	300	0	18	50	70	APPROVE

Requirement/Remarks: FIX UBTYAAPPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: NASSR NASHAAT	Routing Symbol:	Date: 12/05/2012

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 861459-007	300	0	18	50	70	APPROVE

Requirement/Remarks: FIX UBTYAAPPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: Hughes Dennis	Routing Symbol:	Date: 12/05/2012

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 861459-007	300	0				

Requirement/Remarks:

Signature:	Routing Symbol:	Date:

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : FLIP	City : MINNEAPOLIS	Ident : PJL	State : MN
Type/Class : GS	Frequency : M330.2	Reference No.: 12123200	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 861460-013	300	0	18	50	70

Requirement: FIX UBTYA

Signature: NELSON STEVEN	Routing Symbol: AJV-353	Date: 12/05/2012

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 861460-013	300	0	18	50	70	APPROVE

Requirement/Remarks: FIX UBTYAAPPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: NASSR NASHAAT	Routing Symbol:	Date: 12/05/2012

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 861460-013	300	0	18	50	70	APPROVE

Requirement/Remarks: FIX UBTYAAPPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: Hughes Dennis	Routing Symbol:	Date: 12/05/2012

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 861460-013	300	0				

Requirement/Remarks:

Signature:	Routing Symbol:	Date:

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : FLIP	City : MINNEAPOLIS	Ident : PJL	State : MN
Type/Class : GS	Frequency : M330.2	Reference No.: 12123201	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 861460-014	300	0	21	50	80

Requirement: FIX CCJAY

Signature: NELSON STEVEN	Routing Symbol: AJV-353	Date: 12/05/2012

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 861460-014	300	0	21	50	80	APPROVE

Requirement/Remarks: FIX CCJAYAPPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: NASSR NASHAAT	Routing Symbol:	Date: 12/05/2012

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 861460-014	300	0	21	50	80	APPROVE

Requirement/Remarks: FIX CCJAYAPPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: Hughes Dennis	Routing Symbol:	Date: 12/05/2012

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 861460-014	300	0				

Requirement/Remarks:

Signature:	Routing Symbol:	Date:

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : FLIP	City : MINNEAPOLIS	Ident : PJL	State : MN
Type/Class : LOC	Frequency : M110.7	Reference No.: 12123220	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 861459-008	300	0	21	50	80

Requirement: FIX CCJAY

Signature: NELSON STEVEN	Routing Symbol: AJV-353	Date: 12/05/2012

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 861459-008	300	0	21	50	80	APPROVE

Requirement/Remarks: FIX CCJAYAPPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: NASSR NASHAAT	Routing Symbol:	Date: 12/05/2012

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 861459-008	300	0	21	50	80	APPROVE

Requirement/Remarks: FIX CCJAYAPPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: Hughes Dennis	Routing Symbol:	Date: 12/05/2012

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 861459-008	300	0				

Requirement/Remarks:

Signature:	Routing Symbol:	Date:

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : FLIP	City : MINNEAPOLIS	Ident : PJL	State : MN
Type/Class : DME	Frequency : M1005	Reference No.: 12111761	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 981727-002	300	0	15	50	60

Requirement: ALGIN FIX KMSP RW12L

Signature: NELSON STEVEN	Routing Symbol: AJV-353	Date: 11/14/2012

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 981727-002	300	0	15	50	60	APPROVE

Requirement/Remarks: ALGIN FIX KMSP RW12LAPPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: NASSR NASHAAT	Routing Symbol:	Date: 11/15/2012

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 981727-002	300	0	15	50	60	APPROVE

Requirement/Remarks: ALGIN FIX KMSP RW12LAPPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: Hughes Dennis	Routing Symbol:	Date: 11/15/2012

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 981727-002	300	0				

Requirement/Remarks:

Signature:	Routing Symbol:	Date:

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : FLIP	City : MINNEAPOLIS	Ident : PJL	State : MN
Type/Class : LOC	Frequency : M110.7	Reference No.: 12111740	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 861459-006	300	0	15	50	60

Requirement: ALGIN FIX KMSP RW12L

Signature: NELSON STEVEN	Routing Symbol: AJV-353	Date: 11/14/2012

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 861459-006	300	0	15	50	60	APPROVE

Requirement/Remarks: ALGIN FIX KMSP RW12LAPPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: NASSR NASHAAT	Routing Symbol:	Date: 11/15/2012

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 861459-006	300	0	15	50	60	APPROVE

Requirement/Remarks: ALGIN FIX KMSP RW12LAPPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: Hughes Dennis	Routing Symbol:	Date: 11/15/2012

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 861459-006	300	0				

Requirement/Remarks:

Signature:	Routing Symbol:	Date:

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : FLIP	City : MINNEAPOLIS	Ident : PJL	State : MN
Type/Class : GS	Frequency : M330.2	Reference No.: 12109543	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 861460-011	300	0	15	50	60

Requirement: ALGIN FIX KMSP RW12L

Signature: NELSON STEVEN	Routing Symbol: AJV-353	Date: 10/24/2012

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 861460-011	300	0	15	50	60	APPROVE

Requirement/Remarks: ALGIN FIX KMSP RW12LAPPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: Hughes Dennis	Routing Symbol:	Date: 10/25/2012

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 861460-011	300	0	15	50	60	APPROVE

Requirement/Remarks: ALGIN FIX KMSP RW12LAPPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: Hughes Dennis	Routing Symbol:	Date: 10/25/2012

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 861460-011	300	0				

Requirement/Remarks:

Signature:	Routing Symbol:	Date:

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : FLIP	City : MINNEAPOLIS	Ident : PJL	State : MN
Type/Class : GS	Frequency : M330.2	Reference No.: 12109544	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 861460-012	300	0	11	40	50

Requirement: HAMML FIX KMSP RW12L

Signature: NELSON STEVEN	Routing Symbol: AJV-353	Date: 10/24/2012

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 861460-012	300	0	11	40	50	APPROVE

Requirement/Remarks: HAMML FIX KMSP RW12LAPPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: Hughes Dennis	Routing Symbol:	Date: 10/25/2012

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 861460-012	300	0	11	40	50	APPROVE

Requirement/Remarks: HAMML FIX KMSP RW12LAPPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: Hughes Dennis	Routing Symbol:	Date: 10/25/2012

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 861460-012	300	0				

Requirement/Remarks:

Signature:	Routing Symbol:	Date:

US DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

ILS - STANDARD
INSTRUMENT APPROACH PROCEDURE
TITLE 14 CFR PART 97.29

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

TERMINAL ROUTES

FROM	TO	COURSE AND DISTANCE	ALTITUDE
CCJAY INT/20.33 DME (IAF)	UBTYA INT/17.19 DME	121.33 / 3.14 (I-PJL)	6000
UBTYA INT/17.19 DME	ALGIN INT/14.05 DME	121.33 / 3.14 (I-PJL)	5000
ALGIN INT/14.05 DME (IF)	HAMML INT/10.91 DME	121.33 / 3.14 (I-PJL)	4000
HAMML INT/10.91 DME	WASHY INT/7.77 DME/RADAR	121.33 / 3.14 (I-PJL)	3000

MISSED APPROACH

ILS: DA
LOC: 6.62 MILES AFTER WASHY INT/7.77 DME/RADAR OR AT 1.15 DME FIX

CLIMB TO 1300, THEN CLIMBING LEFT TURN TO 3000 ON MSP VOR/DME R-096 TO KANAC INT/MSP 13.13 DME AND HOLD, OR AS DIRECTED BY ATC.

ALTERNATE MA: CLIMB TO 1300, THEN CLIMBING LEFT TURN TO 3000 ON HEADING 080 AND GEP VORTAC R-125 TO KANAC INT/GEP 25.16 DME AND HOLD.

ADDITIONAL FLIGHT DATA:
HOLD E, RT, 275.59 INBOUND.
CHART IN PLANVIEW: ALTERNATE MA HOLDING, HOLD SE KANAC INT/GEP 25.16 DME, RT, 305.47 INBOUND.
CHART FAS OBST: 951 TREE 445416N/0931534W
CHART VDP AT 2.16 DME*;
DISTANCE VDP TO THLD 1.01 MILES.
*LOC ONLY.
CHART LOC RWY 12R.

1. PT ____ SIDE OF COURSE ____ OUTBOUND ____ FT WITHIN ____ MILES OF ____ (IAF)
2. PROFILE STARTS AT CCJAY
3. FAC: 121.33 FAF: WASHY INT/7.77 DME/RADAR DIST FAF TO MAP: 6.62 THLD: 6.62
4. MIN. ALT: CCJAY 7000, UBTYA 6000, ALGIN 5000, HAMML 4000, WASHY 3000, AASUN/2.81 DME/RADAR 1420*
5. DIST TO THLD FROM OM: - MM: - IM: 902 150 HAT: 1874 100 HAT: 920 GS ANT: 1345
6. MIN GS INCPT: 3000 GS ALT AT: WASHY 3000 OM: - MM: - IM: 950
7. GS ANGLE: 3.00 TCH: 52.2
8. MSA FROM: MSP VOR/DME 090-270 2800, 270-090 3500

MAG VAR: 0E EPOCH YEAR: 2015

MINIMUMS

TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT ALTERNATE: N A ILS: STANDARD # LOC: STANDARD @

CATEGORY =====>	A			B			C			D			E		
	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA
S-ILS 12L	1039	1800	200	1039	1800	200	1039	1800	200	1039	1800	200	1039	1800	200
S-LOC 12L	1420	2400	581	1420	2400	581	1420	1 1/4	581	1420	1 1/4	581	1420	1 1/4	581
CIRCLING	1420	1	578	1420	1	578	1420	1 3/4	578	1460	2	618	1660	3	818
AASUN FIX MINIMUMS															
S-LOC 12L	1240	2400	401	1240	2400	401	1240	4000	401	1240	4000	401	1240	4000	401
CIRCLING	1360	1	518	1360	1	518	1360	1 1/2	518	1460	2	618	1660	3	818

NOTES:
SA CATEGORY I ILS SPECIAL AIRCREW AND AIRCRAFT CERTIFICATION REQUIRED S-ILS 12L: CAT A, B, C, D, RA 147, RVR 1400, HATh 150, DA 989 MSL.
CATEGORY II ILS SPECIAL AIRCREW AND AIRCRAFT CERTIFICATION REQUIRED S-ILS 12L: CAT A, B, C, D, RA 91, RVR 1200, HATh 100, DA 939 MSL.
(SEE FORM 8260-10)

CAT D 700-2, CAT E 900-3
@ CAT E 900-3

QUALITY CHECKED

CITY AND STATE	ELEVATION: 842 THRE: 839	FACILITY IDENTIFIER:	PROCEDURE NO./AMDT NO./EFFECTIVE DATE:	SUP:
MINNEAPOLIS, MN	AIRPORT NAME: MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN	I-PJL	ILS OR LOC RWY 12L, AMDT 9 ILS RWY 12L (SA CAT I) ILS RWY 12L (CAT II) , ILS RWY 12L (CAT III)	AMDT: 8 DATED 02/11/2010

ALL AFFECTED PROCEDURES REVIEWED?	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE
[X] YES [ ] NO		**ROUTINE**

COORDINATED WITH:

ATA	AAT	ALPA	APA	AOPA	NBAA	OTHER (specify)
[X]	[ ]	[X]	[X]	[X]	[X]	[X] **ZMP, MSP APP CON, MSP ATCT, AMGR**

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME: **STEVE NELSON**	FIFO **AJV-353**	DATE: **10/24/2012**
APPROVED BY		
NAME: **LARRY H STROUT**	FIFO **AJV-353**	DATE:

CHANGES:

1. CHANGED FAC FROM 120.33 TO 121.33.
2. CHANGED PRIMARY MISSED APPROACH TO CLIMB TO 1300, THEN CLIMBING LEFT TURN TO 3000 ON MSP VOR/DME R-096 TO KANAC INT/MSP 13.13 DME AND HOLD.
3. CHANGED ALTERNATE MISSED APPROACH TO CLIMB TO 1300, THEN CLIMBING LEFT TURN TO 3000 ON HEADING 080 AND GEP VORTAC R-125 TO KANAC INT/GEP 25.16 DME AND HOLD.
4. CHANGED DME WASHY FROM 7.65 TO 7.77, HAMML FROM 10.66 TO 10.91, ALGIN FROM 13.62 TO 14.05, UBTYA FROM 16.53 TO 17.19, AND CCJAY FROM 19.40 TO 20.33.
5. CHANGED DISTANCE HAMML TO JACKO FROM 3.01 TO 3.14, ALGIN TO HAMML FROM 2.95 TO 3.14, UBTYA TO ALGIN FROM 2.91 TO 3.14, AND CCJAY TO UBTYA FROM 2.87 TO 3.14.
6. CHANGED DIST FAF TO MAP/THLD FROM 6.51 TO 6.62.
7. CHANGED AASUN FROM 3.46 DME/RADAR 1520* TO 2.81 DME/RADAR 1420*
8. CHANGED TCH FROM 52.0 TO 52.2.
9. CHANGED VDP DME FROM 2.14 TO 2.16.
10. CHANGED DIST TO THLD FROM 100 HAT FROM 867 TO 920.
11. ADDED DIST FROM THLD FROM 150 HAT 1874.
SEE 8260-10

REASONS:

1. FAC MAG VAR CHANGE FROM 1E TO 0E.
2-3, 20. FPT REQUEST.
4-6. APPLIED 8260.54A, PFAF FORMULA 2-16B.
7, 15. AASUN RELOCATED 0.65NM SOUTHEAST.
8. UTILIZED UNROUNDED VALUE/FC RDH.
9. PER 8260.3, PARA 253A.
10, 18. "AS BUILT" MAP STUDY.
11. ADDITION OF SA CAT I MINIMA.
12. STANDARDIZATION OF ALL PROCEDURES AT KMSP.
13-14, 19. APPLICATION OF CURRENT VISIBILITY TABLE VALUES.
16. AIRPORT ELEVATION CHANGED FROM 841 TO 842.
17. AFS-400 MEMO DATED OCT 27, 2010.

01/08/13: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 10/24/12.
1. DELETED THE AFFECTS OF THE CHANGES, REQUESTED BY THE FPT, IN CHANGES #20, AT THE REQUEST OF THE FPT.

QUALITY CHECKED

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above aiport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

NOTES, (CONT.):
CATEGORY III ILS SPECIAL AIRCREW AND AIRCRAFT CERTIFICATION REQUIRED. S-ILS 12L: CAT IIIa CAT A,B,C,D, RVR 700. CAT IIIb CAT A, B, C, D, RVR 600. CAT IIIc NA.

CHART NOTE: SIMULTANEOUS APPROACH AUTHORIZED WITH RWY 12R.
CHART NOTE: FOR INOPERATIVE ALSF, INCREASE S-ILS 12L CAT E VISIBILITY TO RVR 4000, S-LOC 12L CAT E VISIBILITY TO 1 3/4 MILE. AASUN FIX MINIMUMS: INCREASE S-LOC 12L CAT C/D/E VISIBILITY TO 1 1/8 MILE.
CHART PLANVIEW: RADAR REQUIRED.
CHART PROFILE NOTE: VGSI AND ILS GLIDEPATH NOT COINCIDENT.
SA CAT I CHART NOTE: REQUIRES SPECIFIC OPSPEC, MSPEC, OR LOA APPROVAL AND USE OF HUD TO DH.
CAT II CHART NOTE: RVR 1000 AUTHORIZED WITH SPECIFIC OPSPEC, MSPEC, OR LOA APPROVAL AND USE OF AUTOLAND OR HUD TO TOUCHDOWN.

QUALITY CHECKED 4

CITY AND STATE	ELEVATION: 842 THRE: 839	FACILITY IDENTIFIER:	PROCEDURE NO./ AMDT NO./EFFECTIVE DATE:	SUP:
MINNEAPOLIS, MN	AIRPORT NAME: MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN	I-PJL	ILS OR LOC RWY 12L, AMDT 9 ILS RWY 12L (SA CAT I) ILS RWY 12L (CAT II) , ILS RWY 12L (CAT III)	AMDT: 8 DATED: 02/11/2010

ALL AFFECTED PROCEDURES REVIEWED?	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE
☐ YES ☐ NO		

COORDINATED WITH:

ATA	AAT	ALPA	APA	AOPA	NBAA	OTHER (specify)
☐	☐	☐	☐	☐	☐	☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	FIFO	DATE:
APPROVED BY		
NAME:	FIFO	DATE:

CHANGES:

CHANGES CONT.
12. CHANGED MSA FROM FCM VOR/DME TO MSP VOR/DME. 13. CHANGED FOR INOPERATIVE ALSF NOTES TO FOR INOPERATIVE ALSF, INCREASE S-ILS 12L CAT E VISIBILITY TO RVR 4000, S-LOC 12L CAT E VISIBILITY TO 1 3/4 MILE. AASUN FIX MINIMUMS: INCREASE S-LOC 12L CAT C/D/E VISIBILITY TO 1 1/8 MILE. 14. CHANGED S-LOC 12L CAT C VIS FROM 1 1/2 TO 1 1/4, CAT D VIS FROM 1 3/4 TO 1 1/4, CAT E VIS FROM 2 TO 1 1/4, AND AASUN FIX MINIMUMS S-LOC 12L CAT E VIS FROM RVR 5000 TO RVR 4000. 15. CHANGED S-LOC 12L MDA/HAT FROM 1520/681 TO MDA/HATH 1420/581 AND CIRCLING CAT A/B/C/D MDA/HAA FROM 1520 TO 1420/578. 16. CHANGED CIRCLING CAT E HAA FROM 819 TO 818 AND AASUN FIX MINIMUMS CIRCLING CAT A/B/C/D HAA FROM 519 TO 518 AND CAT E HAA FROM 819 TO 818. 17. ADDED SA CAT I MINIMA. 18. CHANGED CAT II ILS RA FROM 115 TO 91. 19. DELETED ALTERNATE MINS ILS CAT A, B, C 700-2 AND LOC CAT D 800-2 1/4. 20. CHANGED ALTITUDE CCJAY TO UBTYA FROM 6000 TO 5000 AND PROFILE STARTS AT CCJAY TO ALGIN.

REASONS:

QUALITY CHECKED

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

ILS STANDARD INSTRUMENT APPROACH PROCEDURE

FLIGHT STANDARDS SERVICES - **FAR PART 97.29**

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

ARINC PACKET - 424-18 - ILS

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                 1         2         3         4         5         6         7         8         9         0         1         2         3
NAVAID  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAD        MSP   K3011530VDLW N44534740W093141153    N44534740W093141153E0020008331     NARMINNEAPOLIS
        SUSAD KMSPK3 IPJL  K3011070 IT                    IPJLN44530368W093114887     008260     NARMINNEAPOLIS-ST PAUL INTL/WOLD-

                 1         2         3         4         5         6         7         8         9         0         1         2         3
WP      123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAEAENRT   ALGIN K30    C     N45001607W093284758                      E0007     NAR           ALGIN
        SUSAEAENRT   CCJAY K30    C     N45033066W093362244                      E0008     NAR           CCJAY
        SUSAEAENRT   HAMML K30    C     N44583858W093250045                      E0006     NAR           HAMML
        SUSAEAENRT   KANAC K30    C   L N44520191W092555314                      E0003     NAR           KANAC
        SUSAEAENRT   UBTYA K30    C     N45015343W093323491                      E0007     NAR           UBTYA
        SUSAEAENRT   WASHY K30    C     N44570096W093211353                      E0006     NAR           WASHY

                 1         2         3         4         5         6         7         8         9         0         1         2         3
AIRPORT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KMSPK3AMSP     0     110YHN44525510W093131840E000000842         1800018000C    MNAR    MINNEAPOLIS-ST PAUL INTL/WOLD-

                 1         2         3         4         5         6         7         8         9         0         1         2         3
SEGMENT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KMSPK3FI12L  ACCJAY 010CCJAYK3EA0E  A    IF                                + 07000     18000                 0 NS
        SUSAP KMSPK3FI12L  ACCJAY 020UBTYAK3EA0E       TF                                + 06000                           0 NS
        SUSAP KMSPK3FI12L  ACCJAY 030ALGINK3EA0E  B    TF                                + 05000                           0 NS
        SUSAP KMSPK3FI12L  ACCJAY 040HAMMLK3EA0EE      CF IPJLK3      3014011212130031PI  + 04000                           0 NS
        SUSAP KMSPK3FI12L  I      010HAMMLK3EA0E  I    IF IPJLK3      30140112        PI  J 040000300018000                 0 NS
        SUSAP KMSPK3FI12L  I      020WASHYK3EA0E  F    CF IPJLK3      3014008012100031PI  H 0300003000        -300MSP   K3D 0 NS
        SUSAP KMSPK3FI12L  I      030RW12LK3PG0GY M    CF IPJLK3      3014001412100066PI    00891             -300          0 NS
        SUSAP KMSPK3FI12L  I      040         0  M     CA                     1213        + 01300                           0 NS
        SUSAP KMSPK3FI12L  I      050KANACK3EA0EY      CF MSP K3      0956013109560120D   + 03000                           0 NS
        SUSAP KMSPK3FI12L  I      060KANACK3EA0EE  R   HM                     2756T010    + 03000                           0 NS

                 1         2         3         4         5         6         7         8         9         0         1         2         3
RUNWAY  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KMSPK3GRW12L   0082001213 N44533463W093131557-0200    +022840083900005215 0IIPJL3

                 1         2         3         4         5         6         7         8         9         0         1         2         3
ILS     123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KMSPK3IIPJL3   011070RW12LN44525033W0931133251213N44533112W0931256700426 13450350300E00005200831
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QUALITY CHECKED 4

CITY AND STATE	ELEVATION: 842 THRE: 839	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
MINNEAPOLIS, MN	AIRPORT NAME: **MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN**	**I-PJL**	**ILS OR LOC RWY 12L, AMDT 9** **ILS RWY 12L (SA CAT I)** **ILS RWY 12L (CAT II), ILS RWY 12L (CAT III)**	AMDT: **8** DATED: **02/11/2010**

ALL AFFECTED PROCEDURES REVIEWED?	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE
☐ YES ☐ NO		

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ OTHER ☐ (specify) _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	NFPG	DATE:
APPROVED BY		
NAME:	NFPG	DATE:

CHANGES:

REASONS:

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

```
                 1         2         3         4         5         6         7         8         9         0         1         2         3
MSA     123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KMSPK3SMSP  K3D                0   0902700352527009002825                                                                M
```

QUALITY CHECKED 4

CITY AND STATE	ELEVATION: 842 THRE: 839	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
MINNEAPOLIS, MN	AIRPORT NAME: MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN	I-PJL	ILS OR LOC RWY 12L, AMDT 9 ILS RWY 12L (SA CAT I) ILS RWY 12L (CAT II), ILS RWY 12L (CAT III)	AMDT: 8 DATED: 02/11/2010

ALL AFFECTED PROCEDURES REVIEWED?	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE
☐ YES ☐ NO		

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ OTHER (specify) ☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	NFPG	DATE:
APPROVED BY		
NAME:	NFPG	DATE:

CHANGES:

REASONS:

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

ILS STANDARD INSTRUMENT APPROACH PROCEDURE

FLIGHT STANDARDS SERVICES - **FAR PART 97.29**

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

ARINC SUMMARY - 424-18 - ILS

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	CCJAY	CCJAY	010	IAF	IF		FB				AA 07000	
	CCJAY	UBTYA	020		TF		FB				AA 06000	
	CCJAY	ALGIN	030		TF		FB				AA 05000	
	CCJAY	HAMML	040		CF		FB		121.3()	003.1	AA 04000	
		HAMML	010	FACF	IF		FB				AA 04000 GI 03000	
		WASHY	020	FAF	CF		FB		121.0()	003.1	GI 03000 GS 03000	
		RW12L	030	MAP	CF		FO		121.0()	006.6	AT 00891	

MISSED APPROACH	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
		040		CA		FB		121.3()		AA 01300	
	KANAC	050		CF		FO		095.6()	012.0	AA 03000	
	KANAC	060		HM	R	FO		275.6()	T01.0	AA 03000	

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	MSP	N445347.40	W0931411.53	N4453.790	W09314.192
	IPJL (DME)	N445303.68	W0931148.87	N4453.061	W09311.815
	ALGIN	N450016.07	W0932847.58	N4500.268	W09328.793
	CCJAY	N450330.66	W0933622.44	N4503.511	W09336.374
	HAMML	N445838.58	W0932500.45	N4458.643	W09325.008
	KANAC	N445201.91	W0925553.14	N4452.032	W09255.886
	UBTYA	N450153.43	W0933234.91	N4501.891	W09332.582
	WASHY	N445700.96	W0932113.53	N4457.016	W09321.226
	RW12L	N445334.63	W0931315.57	N4453.577	W09313.260
	IPJL (LOC)	N445250.33	W0931133.25	N4452.839	W09311.554

RUNWAY DATA	RWY	THRESHOLD ELEVATION	TCH
	RW12L	00839	52

QUALITY 4 CHECKED

CITY AND STATE	ELEVATION: 842 THRE: 839	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
MINNEAPOLIS, MN	AIRPORT NAME: MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN	I-PJL	ILS OR LOC RWY 12L, AMDT 9 ILS RWY 12L (SA CAT I) ILS RWY 12L (CAT II), ILS RWY 12L (CAT III)	AMDT: 8 DATED: 02/11/2010

ALL AFFECTED PROCEDURES REVIEWED?	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE
☐ YES ☐ NO		

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ OTHER (specify) ☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	NFPG	DATE:
APPROVED BY		
NAME:	NFPG	DATE:

CHANGES:

REASONS:

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

LOC STANDARD INSTRUMENT APPROACH PROCEDURE

FLIGHT STANDARDS SERVICES - **FAR PART 97.25**

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

ARINC PACKET - 424-18 - LOC

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                 1         2         3         4         5         6         7         8         9         0         1         2         3
NAVAID  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAD        MSP   K3011530VDLW N44534740W093141153    N44534740W093141153E0020008331     NARMINNEAPOLIS
        SUSAD KMSPK3 IPJL  K3011070 IT                     IPJLN44530368W093114887     008260     NARMINNEAPOLIS-ST PAUL INTL/WOLD-

                 1         2         3         4         5         6         7         8         9         0         1         2         3
WP      123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAEAENRT   AASUN K30    R     N44542645W093151541                     E0005     NAR           AASUN
        SUSAEAENRT   ALGIN K30    C     N45001607W093284758                     E0007     NAR           ALGIN
        SUSAEAENRT   CCJAY K30    C     N45033066W093362244                     E0008     NAR           CCJAY
        SUSAEAENRT   HAMML K30    C     N44583858W093250045                     E0006     NAR           HAMML
        SUSAEAENRT   KANAC K30    C   L N44520191W092555314                     E0003     NAR           KANAC
        SUSAEAENRT   UBTYA K30    C     N45015343W093323491                     E0007     NAR           UBTYA
        SUSAEAENRT   WASHY K30    C     N44570096W093211353                     E0006     NAR           WASHY

                 1         2         3         4         5         6         7         8         9         0         1         2         3
AIRPORT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KMSPK3AMSP     0     110YHN44525510W093131840E000000842        1800018000C    MNAR    MINNEAPOLIS-ST PAUL INTL/WOLD-

                 1         2         3         4         5         6         7         8         9         0         1         2         3
SEGMENT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KMSPK3FL12L  ACCJAY 010CCJAYK3EA0E  A    IF                                + 07000     18000                 0 NS
        SUSAP KMSPK3FL12L  ACCJAY 020UBTYAK3EA0E       TF                                + 06000                           0 NS
        SUSAP KMSPK3FL12L  ACCJAY 030ALGINK3EA0E  B    TF                                + 05000                           0 NS
        SUSAP KMSPK3FL12L  ACCJAY 040HAMMLK3EA0EE      CF IPJLK3      3014011212130031PI  + 04000                           0 NS
        SUSAP KMSPK3FL12L  L      010HAMMLK3EA0E  I    IF IPJLK3      30140112        PI  + 04000     18000                 0 NS
        SUSAP KMSPK3FL12L  L      020WASHYK3EA0E  F    CF IPJLK3      3014008012100031PI  + 03000                MSP   K3D 0 NS
        SUSAP KMSPK3FL12L  L      021AASUNK3EA0E S     CF IPJLK3      3014003112100050PI  + 01420            -301          0 NS
        SUSAP KMSPK3FL12L  L      030RW12LK3PG0GY M    CF IPJLK3      3014001412100017PI    00891            -301          0 NS
        SUSAP KMSPK3FL12L  L      040         0  M     CA                       1213     + 01300                          0 NS
        SUSAP KMSPK3FL12L  L      050KANACK3EA0EY      CF MSP K3      0956013109560120D   + 03000                          0 NS
        SUSAP KMSPK3FL12L  L      060KANACK3EA0EE  R   HM                       2756T010  + 03000                          0 NS

                 1         2         3         4         5         6         7         8         9         0         1         2         3
RUNWAY  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KMSPK3GRW12L   0082001213 N44533463W093131557-0200    +022840083900005215 0IIPJL3

                 1         2         3         4         5         6         7         8         9         0         1         2         3
ILS     123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
```

QUALITY CHECKED

CITY AND STATE	ELEVATION: 842 THRE: 839	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
MINNEAPOLIS, MN	AIRPORT NAME: **MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN**	**I-PJL**	**ILS OR LOC RWY 12L, AMDT 9** **ILS RWY 12L (SA CAT I)** **ILS RWY 12L (CAT II), ILS RWY 12L (CAT III)**	AMDT: **8** DATED: **02/11/2010**

ALL AFFECTED PROCEDURES REVIEWED?	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE
☐ YES ☐ NO		

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ OTHER (specify) ☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	NFPG	DATE:
APPROVED BY		
NAME:	NFPG	DATE:

CHANGES:

REASONS:

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

LOC STANDARD INSTRUMENT APPROACH PROCEDURE

FLIGHT STANDARDS SERVICES - **FAR PART 97.25**

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

```
        ----------------------------------------------------------------------------------------------------------------------------
        SUSAP KMSPK3IIPJL3    011070RW12LN44525033W0931133251213N44533112W0931256700426 13450350300E00005200831
        ----------------------------------------------------------------------------------------------------------------------------
                 1         2         3         4         5         6         7         8         9         0         1         2         3
MSA     12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ----------------------------------------------------------------------------------------------------------------------------
        SUSAP KMSPK3SMSP  K3D                0    0902700352527009002825                                                     M
```

QUALITY 4 CHECKED

CITY AND STATE	ELEVATION: 842 THRE: 839	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
MINNEAPOLIS, MN	AIRPORT NAME: **MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN**	**I-PJL**	**ILS OR LOC RWY 12L, AMDT 9** **ILS RWY 12L (SA CAT I)** **ILS RWY 12L (CAT II), ILS RWY 12L (CAT III)**	AMDT: **8** DATED: **02/11/2010**

ALL AFFECTED PROCEDURES REVIEWED?	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE
☐ YES ☐ NO		

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ OTHER (specify) ☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	NFPG	DATE:
APPROVED BY		
NAME:	NFPG	DATE:

CHANGES:

REASONS:

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

LOC STANDARD INSTRUMENT APPROACH PROCEDURE

FLIGHT STANDARDS SERVICES - **FAR PART 97.25**

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

ARINC SUMMARY - 424-18 - LOC

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	CCJAY	CCJAY	010	IAF	IF		FB				AA 07000	
	CCJAY	UBTYA	020		TF		FB				AA 06000	
	CCJAY	ALGIN	030		TF		FB				AA 05000	
	CCJAY	HAMML	040		CF		FB		121.3()	003.1	AA 04000	
		HAMML	010	FACF	IF		FB				AA 04000	
		WASHY	020	FAF	CF		FB		121.0()	003.1	AA 03000	
		AASUN	021	SDF	CF		FB		121.0()	005.0	AA 01420	
		RW12L	030	MAP	CF		FO		121.0()	001.7	AT 00891	

MISSED APPROACH	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
		040		CA		FB		121.3()		AA 01300	
	KANAC	050		CF		FO		095.6()	012.0	AA 03000	
	KANAC	060		HM	R	FO		275.6()	T01.0	AA 03000	

POINT DATA

WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
MSP	N445347.40	W0931411.53	N4453.790	W09314.192
IPJL (DME)	N445303.68	W0931148.87	N4453.061	W09311.815
AASUN	N445426.45	W0931515.41	N4454.441	W09315.257
ALGIN	N450016.07	W0932847.58	N4500.268	W09328.793
CCJAY	N450330.66	W0933622.44	N4503.511	W09336.374
HAMML	N445838.58	W0932500.45	N4458.643	W09325.008
KANAC	N445201.91	W0925553.14	N4452.032	W09255.886
UBTYA	N450153.43	W0933234.91	N4501.891	W09332.582
WASHY	N445700.96	W0932113.53	N4457.016	W09321.226
RW12L	N445334.63	W0931315.57	N4453.577	W09313.260
IPJL (LOC)	N445250.33	W0931133.25	N4452.839	W09311.554

RUNWAY DATA

RWY	THRESHOLD ELEVATION	TCH
RW12L	00839	52

QUALITY CHECKED 4

CITY AND STATE	ELEVATION: 842 THRE: 839	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
MINNEAPOLIS, MN	AIRPORT NAME: MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN	I-PJL	ILS OR LOC RWY 12L, AMDT 9 ILS RWY 12L (SA CAT I) ILS RWY 12L (CAT II), ILS RWY 12L (CAT III)	AMDT: 8 DATED: 02/11/2010

ALL AFFECTED PROCEDURES REVIEWED?	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE
☐ YES ☐ NO		

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ OTHER (specify) ☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	NFPG	DATE:
APPROVED BY		
NAME:	NFPG	DATE:

CHANGES:

REASONS:

STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD

PART - A OBSTRUCTION DATA

1. APP SEGMENT	FROM	TO	OBSTRUCTION	COORDINATES	ELEV. MSL	ROC	ALT. ADJUSTMENTS	MIN. ALT.
INITIAL	CCJAY INT/20.33	UBTYA INT/17.19	1. TOWER (27-001535)	450306.00N/0933413.00W	1436 (6F)	1000	AT3314 AC250	6000
	DME	DME	2. TERRAIN	450021.00N/0933545.00W	1086 (1100)		AS1500	2600
INITIAL: STEPDOWN	UBTYA INT/17.19	ALGIN INT/14.05	3. AAO	445948.00N/0933115.00W	1273 (4E)	1000	AT2727	5000
	DME	DME	4. TERRAIN	445948.00N/0933115.00W	1073 (1100)		AS1500	2600
INTERMEDIATE	ALGIN INT/14.05	HAMML INT/10.91	5. TOWER (27-000393)	445934.00N/0932841.00W	1319 (5D)	500	AT2181	4000
	DME	DME	6. TERRAIN	445745.00N/0932551.00W	1041 (1000)		AS1500	2500
INTERMEDIATE:	HAMML INT/10.91	WASHY INT/7.77	7. TOWER (27-000565)	445956.00N/0932354.00W	1361 (4D)	500	AT1139	3000
STEPDOWN	DME	DME/RADAR	8. TERRAIN	445742.00N/0932548.00W	1041 (1000)		AS1500	2500
FINAL: ILS	WASHY INT/7.77	RW12L				ASC		1039/200
	DME/RADAR							
FINAL: LOC	WASHY INT/7.77	AASUN/2.81	9. AAO	445706.37N/0932113.77W	1139 (2C)	250	XL31	1420
	DME/RADAR	DME/RADAR						
FINAL: LOC STEPDOWN	AASUN/2.81	6.62 MILES AFTER	10. TREE (KMSP0221)	445415.73N/0931533.57W	951 (1A)	250	XP39	1240
	DME/RADAR	WASHY INT/7.77						
		DME/RADAR OR AT						
		1.15 DME FIX						
2. PROCEDURE TURN	NA							
3. MISSED APPROACH — MAP:	DA / 6.62 MILES	KANAC INT/MSP				ASC		3000
	AFTER WASHY	13.13 DME	11. AAO	445457.00N/0925645.00W	1339 (4E)	1000		2400
ELEV:	872/990		12. TERRAIN	445457.00N/0925645.00W	1139 (1100)		AS1500	2600

4. CIRCLING AREA	DISTANCE	HT. ABV. ARPT. REQUIRED	ACTUAL							
CATEGORY A	1.3 NM	350	578 / 518	13. BLDG (27-000367)	445120.51N/0931334.62W	1043 (1A)	300	SI	1420 / 1360
CATEGORY B	1.5 NM	450	578 / 518	13. BLDG (27-000367)	445120.51N/0931334.62W	1043 (1A)	300	SI	1420 / 1360
CATEGORY C	1.7 NM	450	578 / 518	13. BLDG (27-000367)	445120.51N/0931334.62W	1043 (1A)	300	SI	1420 / 1360
CATEGORY D	2.3 NM	550	618 / 618	14. TANK (27-001379)	445503.51N/0930959.71W	1158 (1A)	300		1460 / 1460
CATEGORY E	4.5 NM	550	818 / 818	15. STACK (27-000479)	444839.00N/0931457.00W	1305 (5D)	300	AC50 / AC50	1660 / 1660

5. MINIMUM SAFE ALTITUDES — PRIMARY NAVAID: MSP VOR/DME

SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A	SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	MSA
090-270	TWR (27-001201)	151/ 14.3	1753 (5D)	2800					
270-090	TWR (27-000499)	022/ 10.8	2438 (1D)	3500					

QUALITY CHECKED 4

CITY AND STATE	ELEVATION: 842 / AIRPORT NAME:	FACILITY	PROCEDURE AND AMENDMENT NO:	REGION
MINNEAPOLIS, MN	MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN	I-PJL	ILS OR LOC RWY 12L, AMDT 9 ILS RWY 12L (SA CAT I), ILS RWY 12L (CAT II), ILS RWY 12L (CAT III)	AGL

PART B - SUPPLEMENTAL DATA

1. COMMUNICATIONS WITH:	2. WEATHER SERVICE			3. ALTIMETER SETTING
MSP APP CON MSP TOWER		N W S	OTHER: ASOS	SOURCE: KMSP
		F A A		DISTANCE:
		A / C		HOURS REMOTE OPERATION:
SATISFACTORY ON:				
X V H F X U H F H F	LOCATION: KMSP			ADJUSTMENT: 0

4. MONITOR STATUS	PRIMARY NAVAID: I-PJL	
	MONITOR POINT: MSP ATCT	
	HRS OPTN: CAT 1	24
	HRS OPTN: CAT 3	
5. APPROACH & RUNWAY LIGHTING	X	ALSF-1 12R ALSF-2 12L, 30L, 35
		(S) SALS
	X	MALSR 22, 04 MALSF 30R
	X	HIRL 12L, 30R, 17, 22, 30L, 04, 12R, 35
		MIRL
	X	REIL 30R, 17
	X	TDZ 12L, 30L, 12R, 35
	X	C/L 12L, 30R, 17, 30L, 12R, 35
	X	OTHER (SPECIFY) PAPI-4R 17 PAPI-4L 12L, 30R, 22, 30L, 04, 12R, 35
6. RUNWAY MARKINGS	BASIC	
	ALL WEATHER	PIR-G 12L, 30R, 22, 30L, 04, 12R, 35
	INSTRUMENT	NPI-G 17
7. RUNWAY VISUAL RANGE	APPROACH	12L, 30R, 17, 22, 30L, 04, 12R, 35
	MIDFIELD	12L, 30R, 17, 30L, 12R, 35
	ROLL OUT	12L, 30R, 17, 22, 30L, 04, 12R, 35
8. GLIDE PATH	GP ANGLE: 3.00	ELEV RWY THRESHOLD: 838.6
	DISTANCE FROM RWY: 1345	ELEV GP ANTENNA: 832
		THRESHOLD CROSSING HEIGHT: 52.2
9. FINAL APPROACH COURSE AIMING	X	RUNWAY THRESHOLD — FT. FROM THRESHOLD
	X	ON CENTERLINE — FT. FROM CENTERLINE

10. WAIVERS: NONE

PART D - PREPARED BY: STEVE NELSON	DATE: 10/24/2012
TITLE: AERONAUTICAL INFORMATION SPECIALIST	OFFICE: AJV-353

PART C - REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

NO ADDITIONAL AIRSPACE REQUIRED.

BACKUP ALTIMETER SOURCE NOT UTILIZED. KMSP HAS REDUNDANT WEATHER SOURCING.

WASHY TO CCJAY FIX PLACEMENT DEVELOPED UTILIZING 8260.54A, FORMULA 2-16B AT 1000' INTERVALS.

VGSI DATA: 3.00/78.90.

OBS 10: XP TO MAINTAIN CURRENT MDA.

MISSED APPROACH OBSTACLES CONT.
ALTERNATE:
ASC 3000
11. AAO 445457.00N/0925645.00W 1339 (4E) 1000 2400
12. TERRAIN 445457.00N/0925645.00W 1139 (1100) AS1500 2600

QUALITY CHECKED 4

STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD

PART - A OBSTRUCTION DATA

1. APP SEGMENT	FROM	TO	OBSTRUCTION	COORDINATES	ELEV. MSL	ROC	ALT. ADJUSTMENTS	MIN. ALT.
FINAL: ILS CAT II	**WASHY INT/7.77**	**RW12L**				**ASC**		**939/100**
	DME/RADAR							
FINAL: ILS SA CAT I	**WASHY INT/7.77**	**RW12L**				**ASC**		**989/150**
	DME/RADAR							

3. MISSED APPROACH								
	MAP:							
	ELEV:							

4. CIRCLING AREA	DISTANCE	HT. ABV. ARPT. REQUIRED	HT. ABV. ARPT. ACTUAL
CATEGORY A	1.3 NM	350	
CATEGORY B	1.5 NM	450	
CATEGORY C	1.7 NM	450	
CATEGORY D	2.3 NM	550	
CATEGORY E	4.5 NM	550	

5. MINIMUM SAFE ALTITUDES PRIMARY NAVAID:

SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A	SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A

QUALITY CHECKED

CITY AND STATE		FACILITY	PROCEDURE AND AMENDMENT NO:	REGION
MINNEAPOLIS, MN	**ELEVATION: 842** AIRPORT NAME: **MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN**	**I-PJL**	**ILS OR LOC RWY 12L, AMDT 9** **ILS RWY 12L (SA CAT I),** **ILS RWY 12L (CAT II), ILS RWY 12L (CAT III)**	**AGL**

PART B - SUPPLEMENTAL DATA

1. COMMUNICATIONS WITH:	2. WEATHER SERVICE			3. ALTIMETER SETTING
SATISFACTORY ON:		N W S	OTHER:	SOURCE:
		F A A		DISTANCE:
		A / C		HOURS REMOTE OPERATION:
V H F / U H F / H F	LOCATION:			ADJUSTMENT:

4. MONITOR STATUS	PRIMARY NAVAID:	
	MONITOR POINT:	
	HRS OPTN: CAT 1	
	HRS OPTN: CAT 3	
5. APPROACH & RUNWAY LIGHTING		**ALS**
		(S) SALS
		MALS
		HIRL
		MIRL
		REIL
		TDZ
		C/LINE
		OTHER (SPECIFY)
6. RUNWAY MARKINGS	BASIC	
	ALL WEATHER	
	INSTRUMENT	
7. RUNWAY VISUAL RANGE	APPROACH	
	MIDFIELD	
	ROLL OUT	
8. GLIDE PATH	GP ANGLE:	ELEV RWY THRESHOLD:
	DISTANCE FROM RWY:	ELEV GP ANTENNA:
		THRESHOLD CROSSING HEIGHT:
9. FINAL APPROACH COURSE AIMING	RUNWAY THRESHOLD	FT. FROM THRESHOLD
	ON CENTERLINE	FT. FROM CENTERLINE

10. WAIVERS:

PART D - PREPARED BY:	DATE:
TITLE:	OFFICE:

PART C - REMARKS:

RADIO FIX AND HOLDING DATA RECORD

NAME: AASUN **STATE:** MN **COUNTRY:** US

LATITUDE/LONGITUDE: 445426.45N/0931515.41W **TYPE:** RADAR, DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	MINNEAPOLIS	I-PJL	LOC/DME		301.33	301.33	2.81	3.08		1320	5300

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

REMARKS:
I-PJL DME LAT/LONG: 445303.68N/0931148.87W.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS OR LOC RWY 12L	1		KMSP	MINNEAPOLIS	MN (US)

REQUIRED CHARTING: MILITARY IAP, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 9 **DATE OF REVISION:** 03/07/2013

REASON FOR REVISION:
1. RELOCATED FIX 0.65NM (3955.88') SOUTHEAST.
2. CHANGED FAC 1 MAG BRG FROM 300.33 TO 301.33, DME FROM 3.46 TO 2.81, DIST FROM FAC NM FROM 3.73 TO 3.08, MRA FROM 1360 TO 1320.

DEVELOPED BY: **DATE:** 09/24/2012 **OFFICE:** AJV-353 **NAME:** STEVE NELSON

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZMP
ATC FACILITY: MSP APP CON, MSP ATCT
OTHER:

QUALITY 4 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: ALGIN **STATE:** MN **COUNTRY:** US

LATITUDE/LONGITUDE: 450016.07N/0932847.58W **TYPE:** WP, INT, DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	MINNEAPOLIS	I-PJL	LOC/DME		301.33	301.33	14.05	14.32		5000	6000
2	GOPHER	GEP	VORTAC	H	202.20	208.20		9.61		5000	6000

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
I-PJL	LOC/DME	R-301	15	5000	6000

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

REMARKS:
MINNEAPOLIS (FAC 1) USED TO ESTABLISH FIX COORDINATES
I-PJL DME LAT/LONG: 445303.68N/0931148.87W.
LOCATION IAW 8260.54A FORMULA 2-16B.
ESTABLISHED ESV IS FOR LOC/GS/DME.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS OR LOC RWY 12L	1, 2		KMSP	MINNEAPOLIS	MN (US)
IAP	ILS RWY 12L (CAT II)	1, 2		KMSP	MINNEAPOLIS	MN (US)
IAP	ILS RWY 12L (CAT III)	1, 2		KMSP	MINNEAPOLIS	MN (US)
IAP	ILS RWY 12L (SA CAT I)	1, 2		KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) Y RWY 12L			KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (RNP) Z RWY 12L			KMSP	MINNEAPOLIS	MN (US)

REQUIRED CHARTING: MILITARY IAP, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 11 **DATE OF REVISION:** 03/07/2013

REASON FOR REVISION:
1. RELOCATED FIX 0.43NM (2623.08') NORTHWEST.
2. ADDED FIX TYPES WP.
3. CHANGED FAC 1 MAG BRG FROM 300.33 TO 301.33, DME FROM 13.62 TO 14.05, DIST FROM FAC NM FROM 13.89 TO 14.32.
4. CHANGED FAC 2 MAG/TRUE BRG FROM 199.64/205.64 TO 202.20/208.20, DIST FROM FAC NM FROM 9.64 TO 9.61, MRA FROM 3000 TO 5000.
5. CHANGED ESV I-PJL RADIAL FROM 300 TO 301, DISTANCE FROM 14 TO 15.
6. ADDED FACILITY USED TO ESTABLISH FIX COORDINATE NOTE.
7. UPDATED FIX USE.

DEVELOPED BY: **DATE:** 09/24/2012 **OFFICE:** AJV-353 **NAME:** STEVE NELSON

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZMP
ATC FACILITY: MSP APP CON
OTHER:

QUALITY CHECKED 4

RADIO FIX AND HOLDING DATA RECORD

NAME: CCJAY **STATE:** MN **COUNTRY:** US

LATITUDE/LONGITUDE: 450330.66N/0933622.44W **TYPE:** WP, INT, DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	MINNEAPOLIS	I-PJL	LOC/DME		301.33	301.33	20.33	20.60		5000	8000
2	GOPHER	GEP	VORTAC	H	236.24	242.24		11.20		5000	8000

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
I-PJL	LOC/DME	R-301	21	5000	8000

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

REMARKS:
MINNEAPOLIS (FAC 1) USED TO ESTABLISH FIX COORDINATES
I-PJL DME LAT/LONG: 445303.68N/0931148.87W.
LOCATION IAW 8260.54A FORMULA 2-16B.
ESTABLISHED ESV IS FOR LOC/GS.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS OR LOC RWY 12L	1, 2		KMSP	MINNEAPOLIS	MN (US)
IAP	ILS RWY 12L (CAT II)	1, 2		KMSP	MINNEAPOLIS	MN (US)
IAP	ILS RWY 12L (CAT III)	1, 2		KMSP	MINNEAPOLIS	MN (US)
IAP	ILS RWY 12L (SA CAT I)	1, 2		KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) Y RWY 12L			KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (RNP) Z RWY 12L			KMSP	MINNEAPOLIS	MN (US)

REQUIRED CHARTING: MILITARY IAP, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 2 **DATE OF REVISION:** 03/07/2013

REASON FOR REVISION:
1. RELOCATED FIX 0.93NM (5626.96') NORTHWEST.
2. ADDED FIX TYPE WP.
3. CHANGED FAC 1 MAG BRG FROM 300.33 TO 301.33, DME FROM 19.40 TO 20.33, DIST FROM FAC NM FROM 19.67 TO 20.60, MRA FROM 7000 TO 5000.
4. CHANGED FAC 2 MAG/TRUE BRG FROM 232.01/238.01 TO 236.24/242.24, DIST FROM FAC NM FROM 10.75 TO 11.20, MRA FROM 3000 TO 5000.
5. CHANGED ESV I-PJL RADIAL FROM 300 TO 301, DISTANCE FROM 20 TO 21, MIN ALTITUDE FROM 7000 TO 5000.
6. ADDED FACILITY USED TO ESTABLISH FIX COORDINATE NOTE.
7. UPDATED FIX USE.

DEVELOPED BY: **DATE:** 09/24/2012 **OFFICE:** AJV-354 **NAME:** STEVE NELSON

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: CEN
ARTCC: ZMP
ATC FACILITY: MSP APP CON
OTHER:

QUALITY CHECKED A

RADIO FIX AND HOLDING DATA RECORD

NAME: GOPHER VORTAC **STATE:** MN **COUNTRY:** US

LATITUDE/LONGITUDE: 450844.47N/0932223.45W **TYPE:**

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	GOPHER	GEP	VORTAC	H							45000

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME	LEG LENGTH DME	HOLDING ALTITUDES MIN	HOLDING ALTITUDES MAX	TEMPLATES MIN	TEMPLATES MAX
1	NW	GEP	VORTAC	297.00	117.00	L	1		3000	14000	4	10
2	N	GEP	VORTAC	346.00	166.00	L	1		2600	14000	4	10
3	W	GEP	VORTAC	264.00	084.00	R	1		2700	14000	4	10
4	NW		WP	297.00	117.00	L		4	3000	14000	5	11
5	N		WP	346.00	166.00	L		4	2700	14000	5	11
6	W		WP	265.00	085.00	R		4	2700	14000	5	11

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (27-000032)	451043.00N/0932100.00W	1530	4D
1	265	TOWER (27-000032)	451043.00N/0932100.00W	1530	4D
2	200	TOWER (27-000032)	451043.00N/0932100.00W	1530	4D
3	200	TOWER (27-000032)	451043.00N/0932100.00W	1530	4D
4	200	TOWER (27-000032)	451043.00N/0932100.00W	1530	4D
4	265	TOWER (27-000032)	451043.00N/0932100.00W	1530	4D
5	200	TOWER (27-000032)	451043.00N/0932100.00W	1530	4D
5	265	TOWER (27-000990)	452012.00N/0932329.00W	2049	5D
6	200	TOWER (27-000032)	451043.00N/0932100.00W	1530	4D

REASON FOR NONSTANDARD HOLDING:
PAT 1 ATC REQUEST
PAT 2 ATC REQUEST
PAT 4 ATC REQUEST
PAT 5 ATC REQUEST

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERNS.

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED.
HOLDING PATTERN 1 AND 4 EVALUATED FOR MILITARY AIRCRAFT AT KMSP.
HOLDING PATTERN 5 EVALUATED FOR MILITARY AIRCRAFT AT KMIC.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	DES MOINES			KDSM	DES MOINES	IA (US)
DP	COULT			KANE	MINNEAPOLIS	MN (US)
DP	KBREW			KANE	MINNEAPOLIS	MN (US)
DP	ORSKY			KANE	MINNEAPOLIS	MN (US)
DP	WLSTN			KANE	MINNEAPOLIS	MN (US)
DP	COULT			KFCM	MINNEAPOLIS	MN (US)
DP	KBREW			KFCM	MINNEAPOLIS	MN (US)
DP	ORSKY			KFCM	MINNEAPOLIS	MN (US)
DP	WLSTN			KFCM	MINNEAPOLIS	MN (US)
DP	COULT			KMSP	MINNEAPOLIS	MN (US)
DP	KBREW			KMSP	MINNEAPOLIS	MN (US)
DP	ORSKY			KMSP	MINNEAPOLIS	MN (US)
DP	WLSTN			KMSP	MINNEAPOLIS	MN (US)
DP	COULT			KSTP	ST PAUL	MN (US)
DP	KBREW			KSTP	ST PAUL	MN (US)
DP	ORSKY			KSTP	ST PAUL	MN (US)
DP	WLSTN			KSTP	ST PAUL	MN (US)
DP	BLUFS			KOMA	OMAHA	NE (US)
EN ROUTE	J106					(US)
EN ROUTE	J114					(US)
EN ROUTE	J21					(US)
EN ROUTE	J25					(US)
EN ROUTE	J36					(US)
EN ROUTE	J68-70					(US)
EN ROUTE	J70					(US)
EN ROUTE	Q501					(US)
EN ROUTE	Q501-502					(US)
EN ROUTE	Q502					(US)
EN ROUTE	V148					(US)
EN ROUTE	V2					(US)

QUALITY CHECKED 4

EN ROUTE	V2-97				(US)
EN ROUTE	V218				(US)
EN ROUTE	V413-510				(US)
EN ROUTE	V505				(US)
EN ROUTE	V78				(US)
EN ROUTE	V82-161				(US)
IAP	VOR -B		KCFE	BUFFALO	MN (US)
IAP	NDB RWY 34		KCBG	CAMBRIDGE	MN (US)
IAP	RNAV (GPS) RWY 34		KCBG	CAMBRIDGE	MN (US)
IAP	RNAV (GPS) RWY 28		KMGG	MAPLE LAKE	MN (US)
IAP	VOR-A		KMGG	MAPLE LAKE	MN (US)
IAP	ILS OR LOC/DME RWY 27	3	KANE	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) RWY 18		KANE	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) RWY 27	6	KANE	MINNEAPOLIS	MN (US)
IAP	VOR RWY 9	3	KANE	MINNEAPOLIS	MN (US)
IAP	VOR/DME RWY 27	3	KANE	MINNEAPOLIS	MN (US)
IAP	COPTER ILS OR LOC RWY 10R		KFCM	MINNEAPOLIS	MN (US)
IAP	ILS OR LOC RWY 10R		KFCM	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) RWY 10L		KFCM	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) RWY 10R		KFCM	MINNEAPOLIS	MN (US)
IAP	VOR RWY 10R		KFCM	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) RWY 14L	5	KMIC	MINNEAPOLIS	MN (US)
IAP	VOR OR GPS-A	2	KMIC	MINNEAPOLIS	MN (US)
IAP	CONVERGING ILS RWY 30L	1	KMSP	MINNEAPOLIS	MN (US)
IAP	CONVERGING ILS RWY 30R	1	KMSP	MINNEAPOLIS	MN (US)
IAP	ILS OR LOC RWY 30R	1	KMSP	MINNEAPOLIS	MN (US)
IAP	LOC RWY 17		KMSP	MINNEAPOLIS	MN (US)
IAP	LOC RWY 22		KMSP	MINNEAPOLIS	MN (US)
IAP	LOC RWY 4	1	KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) RWY 4	4	KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) Y RWY 30R	4	KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) Y RWY 35	4	KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (RNP) Z RWY 30R	4	KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (RNP) Z RWY 35	4	KMSP	MINNEAPOLIS	MN (US)
IAP	NDB RWY 15		KPNM	PRINCETON	MN (US)
IAP	ILS OR LOC RWY 9		KRGK	RED WING	MN (US)
IAP	GPS RWY 34		KROS	RUSH CITY	MN (US)
IAP	LOC RWY 34		KSGS	SOUTH ST PAUL	MN (US)
IAP	NDB OR GPS-B		KSGS	SOUTH ST PAUL	MN (US)
IAP	ILS OR LOC RWY 31		KSTC	ST CLOUD	MN (US)
IAP	VOR RWY 31		KSTC	ST CLOUD	MN (US)
IAP	VOR/DME RWY 13		KSTC	ST CLOUD	MN (US)
IAP	NDB RWY 4		K21D	ST PAUL	MN (US)
IAP	COPTER ILS OR LOC RWY 32		KSTP	ST PAUL	MN (US)
IAP	ILS OR LOC RWY 14		KSTP	ST PAUL	MN (US)
IAP	ILS OR LOC RWY 32		KSTP	ST PAUL	MN (US)
IAP	NDB RWY 31		KSTP	ST PAUL	MN (US)
IAP	RNAV (GPS) RWY 14		KSTP	ST PAUL	MN (US)
STAR	AGUDE		KCFE	BUFFALO	MN (US)
STAR	AGUDE		KFBL	FARIBAULT	MN (US)
STAR	AGUDE		KGYL	GLENCOE	MN (US)
STAR	AGUDE		KMGG	MAPLE LAKE	MN (US)
STAR	AGUDE		KANE	MINNEAPOLIS	MN (US)
STAR	ENCEE		KANE	MINNEAPOLIS	MN (US)
STAR	GOPHER		KANE	MINNEAPOLIS	MN (US)
STAR	TWOLF		KANE	MINNEAPOLIS	MN (US)
STAR	AGUDE		KFCM	MINNEAPOLIS	MN (US)
STAR	ENCEE		KFCM	MINNEAPOLIS	MN (US)
STAR	GOPHER		KFCM	MINNEAPOLIS	MN (US)
STAR	TWOLF		KFCM	MINNEAPOLIS	MN (US)
STAR	AGUDE		KLVN	MINNEAPOLIS	MN (US)
STAR	ENCEE		KLVN	MINNEAPOLIS	MN (US)
STAR	GOPHER		KLVN	MINNEAPOLIS	MN (US)
STAR	TWOLF		KLVN	MINNEAPOLIS	MN (US)
STAR	AGUDE		KMIC	MINNEAPOLIS	MN (US)
STAR	ENCEE		KMIC	MINNEAPOLIS	MN (US)
STAR	GOPHER		KMIC	MINNEAPOLIS	MN (US)
STAR	TWOLF		KMIC	MINNEAPOLIS	MN (US)
STAR	EAU CLAIRE		KMSP	MINNEAPOLIS	MN (US)
STAR	GOPHER		KMSP	MINNEAPOLIS	MN (US)
STAR	SAUGR (FMS)		KMSP	MINNEAPOLIS	MN (US)
STAR	TWOLF		KMSP	MINNEAPOLIS	MN (US)
STAR	WILDD		KMSP	MINNEAPOLIS	MN (US)
STAR	AGUDE		KRGK	RED WING	MN (US)
STAR	AGUDE		KSGS	SOUTH ST PAUL	MN (US)
STAR	AGUDE		K21D	ST PAUL	MN (US)
STAR	AGUDE		KSTP	ST PAUL	MN (US)
STAR	ENCEE (RNAV)		KSTP	ST PAUL	MN (US)
STAR	GOPHER		KSTP	ST PAUL	MN (US)
STAR	AGUDE		KRNH	NEW RICHMOND	WI (US)
STAR	TWOLF		KRNH	NEW RICHMOND	WI (US)
STAR	AGUDE		KOEO	OSCEOLA	WI (US)
STAR	TWOLF		KOEO	OSCEOLA	WI (US)

REQUIRED CHARTING: DP, STAR, MILITARY IAP, IAP, AREA, CONTROLLER, EN ROUTE LOW, EN ROUTE HIGH

QUALITY 4 CHECKED

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 14 **DATE OF REVISION:** 03/07/2013

REASON FOR REVISION:
ADDED HOLDING PATTERN REMARK FOR KMIC.
REMOVED HOLDING PATTERN 5 REMARK FOR KMSP.
CHANGED HOLDING PATTERN 1 MIN ALTITUDE FROM 4000 TO 3000.
CHANGED HOLDING PATTERN 4 MIN ALTITUDE FROM 4000 TO 3000.

DEVELOPED BY:	**DATE:** 09/18/2012	**OFFICE:** AJV-353	**NAME:** JILL OLSON (KISSY MAXFIELD)
APPROVED BY:	**DATE:**	**OFFICE:** AJV-353	**NAME:** LARRY STROUT
	SIGNATURE:		

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZMP
ATC FACILITY: MSP APP CON, MSP ATCT
OTHER:

QUALITY CHECKED 4

RADIO FIX AND HOLDING DATA RECORD

NAME: HAMML **STATE:** MN **COUNTRY:** US

LATITUDE/LONGITUDE: 445838.58N/0932500.45W **TYPE:** WP, INT, DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	MINNEAPOLIS	I-PJL	LOC/DME		301.33	301.33	10.91	11.18		4000	5300
2	GOPHER	GEP	VORTAC	H	184.42	190.42		10.27		4000	5300

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

REMARKS:
MINNEAPOLIS (FAC 1) USED TO ESTABLISH FIX COORDINATES
I-PJL DME LAT/LONG: 445303.68N/0931148.87W.
LOCATION IAW 8260.54A FORMULA 2-16B.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS OR LOC RWY 12L	1, 2		KMSP	MINNEAPOLIS	MN (US)
IAP	ILS RWY 12L (CAT II)	1, 2		KMSP	MINNEAPOLIS	MN (US)
IAP	ILS RWY 12L (CAT III)	1, 2		KMSP	MINNEAPOLIS	MN (US)
IAP	ILS RWY 12L (SA CAT I)	1, 2		KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) Y RWY 12L			KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (RNP) Z RWY 12L			KMSP	MINNEAPOLIS	MN (US)

REQUIRED CHARTING: MILITARY IAP, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 2 **DATE OF REVISION:** 03/07/2013

REASON FOR REVISION:
1. RELOCATED FIX 0.25NM (1522.88') NORTHWEST.
2. ADDED FIX TYPES WP.
3. CHANGED FAC 1 MAG BRG FROM 300.33 TO 301.33, DME FROM 10.66 TO 10.91, DIST FROM FAC NM FROM 10.93 TO 11.18, MAA FROM 5300 TO 5000.
4. CHANGED FAC 2 MAG/TRUE BRG FROM 183.13/189.13 TO 184.42/190.42, DIST FROM FAC NM FROM 10.36 TO 10.27, MRA FROM 3000 TO 4000, MAA FROM 5300 TO 5000.
5. REMOVED ESV. NOT NECESSARY FOR THIS FIX.
6. ADDED FACILITY USED TO ESTABLISH FIX COORDINATE NOTE.
7. UPDATED FIX USE.

DEVELOPED BY: **DATE:** 09/24/2012 **OFFICE:** AJV-353 **NAME:** STEVE NELSON

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZMP
ATC FACILITY: MSP APP CON
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: KANAC **STATE:** MN **COUNTRY:** US

LATITUDE/LONGITUDE: 445201.91N/0925553.14W **TYPE:** WP, INT, DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	GOPHER	GEP	VORTAC	H	125.47	131.47	25.16	25.16		3000	17500
2	FARMINGTON	FGT	VORTAC	H	031.00	037.00	17.77	17.77		3000	17500
3	MINNEAPOLIS	MSP	VOR/DME	L	095.59	097.59	13.13	13.13		3000	17500

HOLDING: **HOLDING TYPE OF ACTION:** ESTABLISH

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME	LEG LENGTH DME	HOLDING ALTITUDES MIN	HOLDING ALTITUDES MAX	TEMPLATES MIN	TEMPLATES MAX
1	SE	GEP	VORTAC	125.47	305.47	R	1		3000	14000	5	11
2	E	MSP	VOR/DME	095.59	275.59	R	1		3000	14000	5	11
3	E		WP	095.59	275.59	R		4	3000	14000	5	11

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	AAO	445457.00N/0925645.00W	1339	4E
1	265	AAO	444615.00N/0923542.00W	1395	4E
2	200	AAO	445457.00N/0925645.00W	1339	4E
2	265	TOWER (55-000156)	445630.32N/0923935.00W	1466	2C
3	200	AAO	445457.00N/0925645.00W	1339	4E
3	265	TOWER (55-000156)	445630.32N/0923935.00W	1466	2C

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERN.

REMARKS:
FARMINGTON (FAC 2) AND GOPHER (FAC 1) USED TO ESTABLISH FIX COORDINATES
PRECIPITOUS TERRAIN EVALUATION COMPLETED.
HOLDING PATTERNS EVALUATED FOR MILITARY AIRCRAFT AT KMSP.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE (US)
EN ROUTE	V2-97	1, 2				
IAP	CONVERGING ILS RWY 30L (ALT MA)	2, 3	2	KMSP	MINNEAPOLIS	MN (US)
IAP	CONVERGING ILS RWY 30R (ALT MA)	2, 3	2	KMSP	MINNEAPOLIS	MN (US)
IAP	ILS OR LOC RWY 12L	2, 3	2	KMSP	MINNEAPOLIS	MN (US)
IAP	ILS OR LOC RWY 12L (ALT MA)	1, 2	1	KMSP	MINNEAPOLIS	MN (US)
IAP	ILS OR LOC RWY 30R (ALT MA)	2, 3	2	KMSP	MINNEAPOLIS	MN (US)
IAP	ILS RWY 12L (CAT II)	2, 3	2	KMSP	MINNEAPOLIS	MN (US)
IAP	ILS RWY 12L (CAT II) (ALT MA)	1, 2	1	KMSP	MINNEAPOLIS	MN (US)
IAP	ILS RWY 12L (CAT III)	2, 3	2	KMSP	MINNEAPOLIS	MN (US)
IAP	ILS RWY 12L (CAT III) (ALT MA)	1, 2	1	KMSP	MINNEAPOLIS	MN (US)
IAP	ILS RWY 12L (SA CAT I)	2, 3	2	KMSP	MINNEAPOLIS	MN (US)
IAP	ILS RWY 12L (SA CAT I) (ALT MA)	1, 2	1	KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) Y RWY 12L		3	KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (RNP) Z RWY 12L		3	KMSP	MINNEAPOLIS	MN (US)

REQUIRED CHARTING: MILITARY IAP, IAP, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 03/07/2013

DEVELOPED BY: **DATE:** 10/16/2012 **OFFICE:** AJV-353 **NAME:** STEVE NELSON

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: CEN
ARTCC: ZMP
ATC FACILITY: MSP APP CON
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: UBTYA **STATE:** MN **COUNTRY:** US

LATITUDE/LONGITUDE: 450153.43N/0933234.91W **TYPE:** WP, INT, DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	MINNEAPOLIS	I-PJL	LOC/DME		301.33	301.33	17.19	17.46		5000	7000
2	GOPHER	GEP	VORTAC	H	220.56	226.56		9.95		5000	7000

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
I-PJL	LOC/DME	R-301	18	5000	7000

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

REMARKS:
MINNEAPOLIS (FAC 1) USED TO ESTABLISH FIX COORDINATES
I-PJL DME LAT/LONG: 445303.68N/0931148.87W.
LOCATION IAW 8260.54A FORMULA 2-16B.
ESTABLISHED ESV FOR LOC/GS/DME.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS OR LOC RWY 12L	1, 2		KMSP	MINNEAPOLIS	MN (US)
IAP	ILS RWY 12L (CAT II)	1, 2		KMSP	MINNEAPOLIS	MN (US)
IAP	ILS RWY 12L (CAT III)	1, 2		KMSP	MINNEAPOLIS	MN (US)
IAP	ILS RWY 12L (SA CAT I)	1, 2		KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) Y RWY 12L			KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (RNP) Z RWY 12L			KMSP	MINNEAPOLIS	MN (US)

REQUIRED CHARTING: MILITARY IAP, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 2 **DATE OF REVISION:** 03/07/2013

REASON FOR REVISION:
1. RELOCATED FIX 0.66NM (3994.69') NORTHWEST.
2. CHANGED FAC 1 MAG BRG FROM 300.33 TO 301.33, DME FROM 16.53 TO 17.19, DIST FROM FAC NM FROM 16.80 TO 17.46, MRA FROM 6000 TO 5000.
3. CHANGED FAC 2 MAG/TRUE BRG FROM 216.85/222.85 TO 220.56/226.56, DIST FROM FAC NM FROM 9.80 TO 9.95, MRA FROM 3000 TO 5000.
4. CHANGED ESV I-PJL RADIAL FROM 300 TO 301, DISTANCE FROM 17 TO 18, MIN ALTITUDE FROM 6000 TO 5000.
5. ADDED FACILITY USED TO ESTABLISH FIX COORDINATE NOTE.
6. UPDATED FIX USE.

DEVELOPED BY: **DATE:** 09/24/2012 **OFFICE:** AJV-353 **NAME:** STEVE NELSON

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: CEN
ARTCC: ZMP
ATC FACILITY: MSP APP CON
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: WASHY **STATE:** MN **COUNTRY:** US

LATITUDE/LONGITUDE: 445700.96N/0932113.53W **TYPE:** WP, RADAR, INT, DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	MINNEAPOLIS	I-PJL	LOC/DME		301.33	301.33	7.77	8.04	48868	3000	5300
2	GOPHER	GEP	VORTAC	H	169.96	175.96		11.76		3000	5300

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

REMARKS:
MINNEAPOLIS (FAC 1) USED TO ESTABLISH FIX COORDINATES
LOCATION IAW 8260.54A FORMULA 2-16B.
I-PJL DME LAT/LONG: 445303.68N/0931148.87W.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS OR LOC RWY 12L	1, 2		KMSP	MINNEAPOLIS	MN (US)
IAP	ILS RWY 12L (CAT II)	1, 2		KMSP	MINNEAPOLIS	MN (US)
IAP	ILS RWY 12L (CAT III)	1, 2		KMSP	MINNEAPOLIS	MN (US)
IAP	ILS RWY 12L (SA CAT I)	1, 2		KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) Y RWY 12L			KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (RNP) Z RWY 12L			KMSP	MINNEAPOLIS	MN (US)

REQUIRED CHARTING: MILITARY IAP, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 6 **DATE OF REVISION:** 03/07/2013

REASON FOR REVISION:
1. RELOCATED FIX 0.12NM (710.18') NORTHWEST.
2. CHANGED FAC 1 MAG BRG FROM 300.33 TO 301.33, DME FROM 7.65 TO 7.77, DIST FROM FAC NM/FT FROM 7.93/48158 TO 8.04/48868.
3. CHANGED FAC 2 MAG/TRUE BRG FROM 169.50/175.50 TO 169.96/175.96, DIST FROM FAC NM FROM 11.82 TO 11.76.
4. ADDED FACILITY USED TO ESTABLISH COORDINATE NOTE.
5. UPDATED FIX USE.

DEVELOPED BY: **DATE:** 10/18/2012 **OFFICE:** AJV-353 **NAME:** STEVE NELSON

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZMP
ATC FACILITY: MSP APP CON, MSP ATCT
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: WHISK **STATE:** MN **COUNTRY:** US

LATITUDE/LONGITUDE: 450823.57N/0925743.72W **TYPE:** WP, INT, DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	GOPHER	GEP	VORTAC	H	085.00	091.00	17.46	17.46		3000	17500
2	FLYING CLOUD	FCM	VOR/DME	L	046.15	047.15		27.84		3400	17500
3	FARMINGTON	FGT	VORTAC	H	011.00	017.00	31.95	31.95		4000	17500
4	MINNEAPOLIS	MSP	VOR/DME	L	036.55	038.55	18.70	18.70		3400	17500

HOLDING: **HOLDING TYPE OF ACTION:** MODIFY

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME	LEG LENGTH DME	HOLDING ALTITUDES MIN	HOLDING ALTITUDES MAX	TEMPLATES MIN	TEMPLATES MAX
1	E	GEP	VORTAC	085.00	265.00	R	1		3000	14000	5	11
2	N		WP	014.00	194.00	R		4	3000	14000	5	11
3	N	FGT	VORTAC	011.00	191.00	R	1		4000	14000	6	11
4	NE	MSP	VOR/DME	036.55	216.55	R	1		4000	14000	5	11

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	AAO	450730.00N/0925754.00W	1250	4E
2	200	AAO	450730.00N/0925754.00W	1250	4E
3	200	TOWER (27-000481)	450828.00N/0930602.00W	1426	5D
4	200	AAO	451506.00N/0924948.00W	1280	4E

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERN.

REMARKS:
GOPHER (FAC 1) AND FARMINGTON (FAC 3) USED TO ESTABLISH FIX COORDINATES
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	V13	1, 2, 3				(US)
EN ROUTE	V78	1, 2, 3				(US)
IAP	RNAV (GPS) RWY 22			KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) RWY 32		2	K21D	ST PAUL	MN (US)
IAP	ILS OR LOC RWY 14	1, 2	1	KSTP	ST PAUL	MN (US)
IAP	ILS OR LOC RWY 14 (ALT MA)	4	1	KSTP	ST PAUL	MN (US)
IAP	ILS OR LOC RWY 32	4	4	KSTP	ST PAUL	MN (US)
IAP	ILS OR LOC RWY 32 (ALT MA)	3	3	KSTP	ST PAUL	MN (US)
IAP	RNAV (GPS) RWY 14		2	KSTP	ST PAUL	MN (US)
IAP	RNAV (GPS) RWY 32		2	KSTP	ST PAUL	MN (US)
STAR	AGUDE	1, 2, 3, 4		KFBL	FARIBAULT	MN (US)
STAR	AGUDE	1, 2, 3, 4		KGYL	GLENCOE	MN (US)
STAR	AGUDE	1, 2, 3, 4		KMGG	MAPLE LAKE	MN (US)
STAR	AGUDE	1, 2, 3, 4		KANE	MINNEAPOLIS	MN (US)
STAR	AGUDE	1, 2, 3, 4		KFCM	MINNEAPOLIS	MN (US)
STAR	AGUDE	1, 2, 3, 4		KLVN	MINNEAPOLIS	MN (US)
STAR	AGUDE	1, 2, 3, 4		KMIC	MINNEAPOLIS	MN (US)
STAR	AGUDE	1, 2, 3, 4		KRGK	RED WING	MN (US)
STAR	AGUDE	1, 2, 3, 4		KSGS	SOUTH ST PAUL	MN (US)
STAR	AGUDE	1, 2, 3, 4		K21D	ST PAUL	MN (US)
STAR	AGUDE	1, 2, 3, 4		KSTP	ST PAUL	MN (US)
STAR	AGUDE	1, 2, 3, 4		KRNH	NEW RICHMOND	WI (US)
STAR	AGUDE	1, 2, 3, 4		KOEO	OSCEOLA	WI (US)

REQUIRED CHARTING: STAR, MILITARY IAP, IAP, CONTROLLER, EN ROUTE LOW

QUALITY CHECKED

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 12 **DATE OF REVISION:** 03/07/2013

REASON FOR REVISION:
1. CHANGED FAC 1 MRA FROM 3400 TO 3000.
2. CHANGED FAC 3 MRA FROM 5500 TO 4000.
3. DELETED PAT 2.
4. DELETED 265KT EVALUATION AND CORRESPONDING REMARK FROM PAT 1 AND 4.
5. ADDED FACILITIES USED TO ESTABLISH FIX COORDINATE NOTE.
6. UPDATED FIX USE.

DEVELOPED BY:	**DATE:** 09/17/2012	**OFFICE:** AJV-353	**NAME:** STEVE NELSON
APPROVED BY:	**DATE:**	**OFFICE:** AJV-353	**NAME:** LARRY STROUT
	SIGNATURE:		

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZMP
ATC FACILITY: MSP APP CON
OTHER:

QUALITY CHECKED

Federal Aviation Administration

Memorandum

Date:

To: Dick Powell Manager, National Flight Data Center, AJV-21

From: Larry H. Strout, Manager, Central Products Team, AJV-353

Subject: **ACTION:** Magnetic Variation Change for Minneapolis-St Paul Intl/Wold-Chamberlain (KMSP)

The Magnetic Variation (MV) data for the airport(s) and/or facility(s) listed under the 'Airport/Facility" column will be revised effective concurrent with the publication of the procedure(s) listed below.

CONVERGING ILS RWY 30L, AMDT 1
CONVERGING ILS RWY 30R, AMDT 2
CONVERGING ILS RWY 35, AMDT 3
ILS OR LOC RWY 12L, ILS RWY 12L (CAT II), ILS RWY 12L (CAT III), AMDT 9
ILS OR LOC RWY 12R, ILS RWY 12R (CAT II), ILS RWY 12R (CAT III), AMDT 10
ILS OR LOC RWY 30L, ILS RWY 30L (CAT II), AMDT 45
ILS OR LOC RWY 30R, AMDT 14
ILS OR LOC RWY 35, ILS RWY 35 (CAT II), ILS RWY 35 (CAT III), AMDT 3
LOC RWY 4, AMDT 2
LOC RWY 17, AMDT 2
LOC RWY 22, AMDT 2
RNAV (GPS) Y RWY 12L, AMDT 3
RNAV (GPS) Y RWY 12R, AMDT 2
RNAV (GPS) Y RWY 30L, AMDT 3
RNAV (GPS) Y RWY 30R, AMDT 2
RNAV (GPS) Y RWY 35, AMDT 2
RNAV (GPS) Z RWY 12L, ORIG
RNAV (GPS) Z RWY 12R, ORIG
RNAV (GPS) Z RWY 30L, ORIG
RNAV (GPS) Z RWY 30R, ORIG
RNAV (GPS) Z RWY 35, AMDT 1

STARS:
ARCHS (RNAV) ONE
BAINY (RNAV) ONE
CLFAX (RNAV) ONE
DOWNZ (RNAV) ONE

FEINT (RNAV) ONE
HHOGS (RNAV) ONE

STARS:
HORML (RNAV) ONE
KKILR (RNAV) ONE
MORSS (RNAV) ONE
MUSCL (RNAV) ONE
NITZR (RNAV) ONE
TORGY (RNAV) ONE

GRAPHIC DP:
HESTIN TWO
LEINY FOUR
SLAYER TWO
SMERF FIVE

Estimated Chart Date: 03/07/2013

Please publish these changes in the National Flight Data Digest.

MINNESOTA

Location	Name	Airport /Facility	Identifier	Assigned Magnetic Variation Is	Epoch Year
Minneapolis	Minneapolis-St Paul Intl/Wold-Chamberlain	Airport	KMSP / MSP	Old 2° East New 0° East	2015
Minneapolis		ILS (CAT III)	BMA	Old 1° East New 0° East	2015
Minneapolis		ILS (CAT III)	HKZ	Old 2° East New 0° East	2015
Minneapolis		ILS	INN	Old 1° East New 0° East	2015
Minneapolis		ILS (CAT II)	MSP	Old 0° East New 0° East	2015
Minneapolis		ILS (CAT III)	PJL	Old 1° East New 0° East	2015
Minneapolis		LOC	APL	Old 1° East New 0° East	2015
Minneapolis		LOC	SIJ	Old 1° East New 0° East	2015
Minneapolis		LOC	TJZ	Old 1° East New 0° East	2015
Minneapolis	Minneapolis APP CON	ASR-9	MSP	Old 3° East New 0° East	2015

If you have any questions please notify Larry H. Strout, larry.h.strout@faa.gov (405-954-5070).