

RADIO FIX AND HOLDING DATA RECORD

NAME: CASNS

STATE: MN

COUNTRY: US

ICAO REGION CODE: K3

LATITUDE/LONGITUDE: 444617.13N/0943303.10W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: NO CHANGE

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM NM	FAC FEET	MRA	MAA
1	ENCEE					073.34	39.37				18000

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	ENCEE (RNAV)			KANE	MINNEAPOLIS	MN (US)
STAR	ENCEE (RNAV)			KFCM	MINNEAPOLIS	MN (US)
STAR	ENCEE (RNAV)			KLVN	MINNEAPOLIS	MN (US)
STAR	ENCEE (RNAV)			KMIC	MINNEAPOLIS	MN (US)
STAR	ENCEE (RNAV)			KSTP	ST PAUL	MN (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 1

DATE OF REVISION: 06/22/2017

REASON FOR REVISION:

UPDATED FIX USE.

DEVELOPED BY:

DATE: 03/20/2017

OFFICE: AJV-5411

NAME: ROBERT COOK

APPROVED BY:

DATE:

Digitally signed by

OFFICE: AJV-5410

NAME: GEORGE DAVIS

SIGNATURE: **ALLAN WILL**

May 30, 2017

DISTRIBUTION:

NFDC

FPO: CEN

ARTCC: ZMP

ATC FACILITY: ZMP, MINNEAPOLIS APP CON

OTHER:

QUALITY
17
CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: ENCEE

STATE: MN

COUNTRY: US

ICAO REGION CODE: K3

LATITUDE/LONGITUDE: 443512.19N/0952559.89W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: NO CHANGE

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM NM	FAC FEET	MRA	MAA
1	SIOUX FALLS	FSD	VORTAC	H		045.55	80.97				35000

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	ENCEE (RNAV)			KANE	MINNEAPOLIS	MN (US)
STAR	ENCEE (RNAV)			KFCM	MINNEAPOLIS	MN (US)
STAR	ENCEE (RNAV)			KLVN	MINNEAPOLIS	MN (US)
STAR	ENCEE (RNAV)			KMIC	MINNEAPOLIS	MN (US)
STAR	ENCEE (RNAV)			KSTP	ST PAUL	MN (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 1

DATE OF REVISION: 06/22/2017

REASON FOR REVISION:

1. UPDATED FIX USE.

DEVELOPED BY:

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OFFICE: AJV-5411

NAME: ROBERT COOK

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OFFICE: AJV-5410

NAME: GEORGE DAVIS

SIGNATURE: **ALLAN WILL**

May 30, 2017

DISTRIBUTION:

NFDC

FPO: CEN

ARTCC: ZMP

ATC FACILITY: MINNEAPOLIS APP CON

OTHER:

QUALITY
17
CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: FUDGE **STATE:** MN **COUNTRY:** US **ICAO REGION CODE:** K3
LATITUDE/LONGITUDE: 450403.27N/0933451.81W **TYPE:** WP, INT, DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** NO CHANGE

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	FAC FEET	MRA	MAA
1	GOPHER	GEP	VORTAC	H	236.12	242.12	10.00	10.00		3000	17500
2	FLYING CLOUD	FCM	VOR/DME	L	336.97	337.97		15.69		3000	17500

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	V148	1, 2				(US)
IAP	RNAV (GPS) RWY 28			KMGG	MAPLE LAKE	MN (US)
IAP	ENCEE (RNAV)			KLVN	MINNEAPOLIS	MN (US)
STAR	ENCEE (RNAV)			KANE	MINNEAPOLIS	MN (US)
STAR	ENCEE (RNAV)			KFCM	MINNEAPOLIS	MN (US)
STAR	ENCEE (RNAV)			KMIC	MINNEAPOLIS	MN (US)
STAR	ENCEE (RNAV)			KSTP	ST PAUL	MN (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 6 **DATE OF REVISION:** 06/22/2017

REASON FOR REVISION:

1. UPDATED FIX USE.

DEVELOPED BY: **DATE:** 03/21/2017 **OFFICE:** AJV-5411 **NAME:** ROBERT COOK

APPROVED BY: **DATE:** **OFFICE:** AJV-5410 **NAME:** GEORGE DAVIS

Digitally signed by

SIGNATURE: *ALLAN WILL*

May 30, 2017

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



RADIO FIX AND HOLDING DATA RECORD

NAME: MLHOF

STATE: MN

COUNTRY: US

ICAO REGION CODE: K3

LATITUDE/LONGITUDE: 444922.61N/0941751.65W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: NO CHANGE

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM NM	FAC FEET	MRA	MAA
1	ENCEE					073.34	50.62				17500

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	ENCEE (RNAV)			KANE	MINNEAPOLIS	MN (US)
STAR	ENCEE (RNAV)			KFCM	MINNEAPOLIS	MN (US)
STAR	ENCEE (RNAV)			KLVN	MINNEAPOLIS	MN (US)
STAR	ENCEE (RNAV)			KMIC	MINNEAPOLIS	MN (US)
STAR	ENCEE (RNAV)			KSTP	ST PAUL	MN (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 1

DATE OF REVISION: 06/22/2017

REASON FOR REVISION:

1. UPDATED FIX USE.

DEVELOPED BY:

DATE: 03/21/2017

OFFICE: AJV-5411

NAME: ROBERT COOK

APPROVED BY:

DATE:

Digitally signed by

OFFICE: AJV-5410

NAME: GEORGE DAVIS

SIGNATURE: **ALLAN WILL**

May 30, 2017

DISTRIBUTION:

NFDC

FPO: CEN

ARTCC: ZMP

ATC FACILITY: MINNEAPOLIS APP CON

OTHER:

QUALITY
17
CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: RAZMU

STATE: MN

COUNTRY: US

ICAO REGION CODE: K3

LATITUDE/LONGITUDE: 441402.76N/0955653.19W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: NO CHANGE

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM NM	FAC FEET	MRA	MAA
1	SIoux FALLS	FSD	VORTAC	H		045.55	50.34				45000

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	ENCEE (RNAV)			KANE	MINNEAPOLIS	MN (US)
STAR	ENCEE (RNAV)			KFCM	MINNEAPOLIS	MN (US)
STAR	ENCEE (RNAV)			KLVN	MINNEAPOLIS	MN (US)
STAR	ENCEE (RNAV)			KMIC	MINNEAPOLIS	MN (US)
STAR	ENCEE (RNAV)			KSTP	ST PAUL	MN (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 1

DATE OF REVISION: 06/22/2017

REASON FOR REVISION:

1. UPDATED FIX USE.

DEVELOPED BY:

DATE: 03/21/2017

OFFICE: AJV-5411

NAME: ROBERT COOK

APPROVED BY:

DATE:

Digitally signed by

OFFICE: AJV-5410

NAME: GEORGE DAVIS

SIGNATURE: **ALLAN WILL**

May 30, 2017

DISTRIBUTION:

NFDC

FPO: CHI

ARTCC: ZMP

ATC FACILITY: MINNEAPOLIS APP CON

OTHER:

QUALITY
17
CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: SIOUX FALLS VORTAC STATE: SD COUNTRY: US ICAO REGION CODE: K3
 LATITUDE/LONGITUDE: 433858.14N/0964652.02W TYPE:

AIRSPACE DOCKET: FIX TYPE OF ACTION: NO CHANGE

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	MRA FEET	MAA
1	SIOUX FALLS	FSD	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 TIME	LENGTH DME	HOLDING ALTITUDES MIN	MAX	TEMPLATES MIN	MAX
1	NW	FSD	VORTAC	327.00	147.00	L	1-1 1/2		3400	17500	4	16

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (46-000442)	434449.00N/0965320.00W	2269	3D
1	310	TOWER (46-000442)	434449.00N/0965320.00W	2269	3D

REASON FOR NONSTANDARD HOLDING:

PAT 1 AT REQUEST

HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERN.

PROCEDURES REQUIRING CLIMB-IN-HOLD:

PAT	PROCEDURE TITLE	AIRPORT IDENT	CITY	STATE
1	TAKEOFF MINIMUMS	KFSD	SIOUX FALLS	SD (US)

REMARKS:

CHART PAT 1 EN ROUTE LOW.
 PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	DES MOINES			KDSM	DES MOINES	IA (US)
DP	MEADOW LAKE			KMSP	MINNEAPOLIS	MN (US)
DP	MINNEAPOLIS			KMSP	MINNEAPOLIS	MN (US)
DP	BLUFS			KOMA	OMAHA	NE (US)
DP	TAKEOFF MINIMUMS		1	KFSD	SIOUX FALLS	SD (US)
EN ROUTE	J114					(US)
EN ROUTE	J16					(US)
EN ROUTE	J197					(US)
EN ROUTE	J45					(US)
EN ROUTE	J82					(US)
EN ROUTE	Q19					(US)
EN ROUTE	V120					(US)
EN ROUTE	V148					(US)
EN ROUTE	V15					(US)
EN ROUTE	V170					(US)
EN ROUTE	V181					(US)
EN ROUTE	V462					(US)
EN ROUTE	V80					(US)
IAP	ILS OR LOC RWY 12			KMML	MARSHALL	MN (US)
IAP	VOR RWY 12			KMML	MARSHALL	MN (US)
IAP	RNAV (GPS) RWY 18			KPQN	PIPESTONE	MN (US)
IAP	RNAV (GPS) RWY 36			KPQN	PIPESTONE	MN (US)
IAP	RNAV (GPS) RWY 30			KBKX	BROOKINGS	SD (US)
IAP	RNAV (GPS) RWY 33			KMDS	MADISON	SD (US)
IAP	HI-ILS OR LOC RWY 3			KFSD	SIOUX FALLS	SD (US)
IAP	HI-ILS RWY 21			KFSD	SIOUX FALLS	SD (US)
IAP	HI-TACAN RWY 15			KFSD	SIOUX FALLS	SD (US)
IAP	ILS OR LOC RWY 21		1	KFSD	SIOUX FALLS	SD (US)
IAP	ILS OR LOC RWY 3		1	KFSD	SIOUX FALLS	SD (US)
IAP	RNAV (GPS) RWY 21			KFSD	SIOUX FALLS	SD (US)
IAP	RNAV (GPS) RWY 27			KFSD	SIOUX FALLS	SD (US)
IAP	RNAV (GPS) RWY 9			KFSD	SIOUX FALLS	SD (US)
IAP	VOR OR TACAN RWY 15		1	KFSD	SIOUX FALLS	SD (US)
IAP	VOR/DME OR TACAN RWY 33		1	KFSD	SIOUX FALLS	SD (US)
STAR	ENCEE (RNAV)			KANE	MINNEAPOLIS	MN (US)
STAR	ENCEE (RNAV)			KFCM	MINNEAPOLIS	MN (US)
STAR	ENCEE (RNAV)			KLVN	MINNEAPOLIS	MN (US)
STAR	ENCEE (RNAV)			KMIC	MINNEAPOLIS	MN (US)
STAR	ENCEE (RNAV)			KSTP	ST PAUL	MN (US)

QUALITY
 17
 CHECKED

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 20

DATE OF REVISION: 06/22/2017

REASON FOR REVISION:

REMOVED KMML - VOR/DME RWY 30 FROM FIX USE.

UPDATED FIX COORDINATES FROM 433858.17N/0964652.05W TO 433858.14N/0964652.02W

DEVELOPED BY: **DATE:** 03/20/2017 **OFFICE:** AJV-5411 **NAME:** ROBERT COOK

APPROVED BY: **DATE:** *Digitally signed by* **OFFICE:** AJV-5410 **NAME:** GEORGE DAVIS

SIGNATURE: **ALLAN WILL**

May 30, 2017

DISTRIBUTION: **NFDC**
 FPO: CEN
 ARTCC: ZMP
 ATC FACILITY: MINNEAPOLIS APP CON, FSD ATCT
 OTHER:

QUALITY
17
CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: WOOD STATE: MN COUNTRY: US ICAO REGION CODE: K3
 LATITUDE/LONGITUDE: 444128.81N/0945617.50W TYPE: WP

AIRSPACE DOCKET: FIX TYPE OF ACTION: NO CHANGE

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	MRA	MAA
1	ENCEE					073.34	22.12			25000

HOLDING: HOLDING TYPE OF ACTION: NO CHANGE

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME DME	HOLDING ALTITUDES MIN MAX	TEMPLATES MIN MAX
1	W		WP	251.34	071.34	L	10	14000 25000	14 21

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	265	TOWER (24-0110)	444533.00N/0945224.00W	1591	4D

REASON FOR NONSTANDARD HOLDING:

PAT 1 ATC REQUEST

REMARKS:

HOLDING LIMITED TO ESTABLISHED PATTERN.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	ENCEE (RNAV)			KANE	MINNEAPOLIS	MN (US)
STAR	ENCEE (RNAV)			KFCM	MINNEAPOLIS	MN (US)
STAR	ENCEE (RNAV)			KLVN	MINNEAPOLIS	MN (US)
STAR	ENCEE (RNAV)			KMIC	MINNEAPOLIS	MN (US)
STAR	ENCEE (RNAV)			KSTP	ST PAUL	MN (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 1 DATE OF REVISION: 06/22/2017

REASON FOR REVISION:

1. UPDATED FIX USE.

DEVELOPED BY: DATE: 03/21/2017 OFFICE: AJV-5411 NAME: ROBERT COOK

APPROVED BY: DATE: Digitally signed by OFFICE: AJV-5410 NAME: GEORGE DAVIS

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May 30, 2017

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 FPO: CEN
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 ATC FACILITY: MINNEAPOLIS APP CON
 OTHER:

