

RADIO FIX AND HOLDING DATA RECORD

NAME: EMORE

STATE: MN

COUNTRY: US

ICAO REGION CODE: K3

LATITUDE/LONGITUDE: 434220.34N/0921109.07W

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	ROCHESTER	RST	VOR/DME	L	099.40	104.40	18.47	18.47		3000	17500
2	NODINE	ODI	VORTAC	H	247.58	248.58		33.58		3000	17500
3	ROCHESTER	I-RST	LOC		131.14	132.14		19.31		2800	8000

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
I-RST	LOC	R-131	20	2800	8000

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

REMARKS:

ROCHESTER (FAC 1) AND ROCHESTER (FAC 3) USED TO ESTABLISH FIX COORDINATES

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	V24	1, 2				(US)
IAP	RNAV (GPS) RWY 29			KFKA	PRESTON	MN (US)
IAP	COPTER ILS Y OR LOC Y RWY 31	1, 2, 3		KRST	ROCHESTER	MN (US)
IAP	ILS Z OR LOC Z RWY 31	1, 2, 3		KRST	ROCHESTER	MN (US)
IAP	RNAV (GPS) RWY 2			KRST	ROCHESTER	MN (US)
IAP	RNAV (GPS) RWY 31			KRST	ROCHESTER	MN (US)

REQUIRED CHARTING: IAP, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 10

DATE OF REVISION: 01/03/2019

REASON FOR REVISION:

UPDATED FIX USE - ILS OR LOC RWY 31 CHANGED TO ILS Z OR LOC Z RWY 31 @ KRST.

UPDATED FIX USE - COPTER ILS OR LOC RWY 31 CHANGED TO COPTER ILS Y OR LOC Y RWY 31 @ KRST.

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-5431

NAME: ROBERT GRIM

APPROVED BY:

DATE:

OFFICE: AJV-5430

NAME: PATRICK MULQUEEN

SIGNATURE:

DISTRIBUTION:

NFDC
FPO: CEN
ARTCC: ZMP
ATC FACILITY: RST ATCT
OTHER:

RADIO FIX AND HOLDING DATA RECORD

NAME: EYATE **STATE:** MN **COUNTRY:** US **ICAO REGION CODE:** K3

LATITUDE/LONGITUDE: 440217.74N/0921557.25W **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	FAC FEET	MRA	MAA
1	WAUKON	UKN	VOR/DME	L	320.35	325.35	55.46	55.46		4800	17500
2	NODINE	ODI	VORTAC	H	281.60	282.60	35.41	35.41		4800	17500

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
UKN	VOR/DME	R-320	56	4800	17500

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

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME	HOLDING ALTITUDES DME	MIN	MAX	TEMPLATES MIN	MAX
1	SE	UKN	VORTAC	320.35	320.35	R	1		4800	6000	7	7

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (27-000201)	440228.00N/0922026.00W	2239	5E

HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERN.

REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.
WAUKON (FAC 1) AND NODINE (FAC 2) USED TO ESTABLISH FIX COORDINATES.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	V218	1, 2				(US)
IAP	COPTER ILS Y OR LOC Y RWY 31	1, 2	1	KRST	ROCHESTER	MN (US)
IAP	ILS Z OR LOC Z RWY 31	1, 2	1	KRST	ROCHESTER	MN (US)
IAP	RADAR-1	1	1	KRST	ROCHESTER	MN (US)

REQUIRED CHARTING: IAP, EN ROUTE LOW, CONTROLLER LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 3 **DATE OF REVISION:** 01/03/2019

REASON FOR REVISION:

ADDED FAC 1 AND FAC 2 TO V218 AND ILS Z OR LOC Z RWY 31 IN FIX USE.
ADDED REMARK: WAUKON (FAC 1) AND NODINE (FAC 2) USED TO ESTABLISH FIX COORDINATES.
ADDED REMARK: PRECIPITOUS TERRAIN EVALUATION COMPLETED.
DELETED FAC 3 - NOT A NAVIGATIONAL FACILITY.
DELETED REMARK: DME HOLDING ONLY DUE TO LEAST DIVERGENCE ANGLE LESS THAN 45 DEGREES.
DELETED REMARK: FAC 1 USED FOR FIX MAKEUP.
DELETED REMARK: FAC 2 USED FOR ALTERNATE MISSED GUIDANCE.
CHANGED FAC 1 TYPE FROM "VORTAC" TO "VOR/DME".
CHANGED FAC 2 MAG/TRUE BRG ROM "281.59/282.59" TO "281.60/282.60" AND DME FROM "35.40" TO "35.41".
ADDED DIST FROM FAC IN NM TO FAC 1 AND 2.
CHANGED PAT 1 HOLDING LEG LENGTH FROM 5 DME TO 1 MIN.
MOVED "HOLDING LIMITED TO ESTABLISHED PATTERN" FROM REMARKS TO HOLDING RESTRICTIONS.
ADDED "CONTROLLER LOW" TO REQUIRED CHARTING.
UPDATED FIX USE - ILS OR LOC RWY 31 CHANGED TO ILS Z OR LOC Z RWY 31 @ KRST.
UPDATED FIX USE - ADDED COPTER ILS Y OR LOC Y RWY 31 @ KRST.

INITIATED BY:	DATE:	ORGANIZATION:	NAME:
OFFICE OF PRIMARY RESPONSIBILITY:		AJV-5431	NAME: ROBERT GRIM
APPROVED BY:	DATE:	OFFICE: AJV-5430	NAME: PATRICK MULQUEEN
SIGNATURE:			

DISTRIBUTION: NFDC
FPO: CEN
ARTCC: ZMP
ATC FACILITY: RST ATCT

OTHER: RST APP CON

RADIO FIX AND HOLDING DATA RECORD

NAME: MINGO

STATE: MN

COUNTRY: US

ICAO REGION CODE: K3

LATITUDE/LONGITUDE: 435110.57N/0922434.16W

TYPE: WP, INT

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	FAC FEET	MRA	MAA
1	ROCHESTER	I-RST	LOC		131.14	132.14		6.17	37512	2800	5700
2	ROCHESTER	RST	VOR/DME	L	057.64	062.64		9.16		2800	5700

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 MIN	ALTITUDES MAX	TEMPLATES MIN	MAX
1	SE	I-RST	LOC	131.14	311.14	R	1		2800	5000	4	5

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (27-002477)	435117.71N/0922010.62W	1655	4D

HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERN.

REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.
ROCHESTER (FAC 1) AND ROCHESTER (FAC 2) USED TO ESTABLISH FIX COORDINATES.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	COPTER ILS Y OR LOC Y RWY 31	1, 2	1	KRST	ROCHESTER	MN (US)
IAP	ILS Z OR LOC Z RWY 31	1, 2	1	KRST	ROCHESTER	MN (US)
IAP	RNAV (GPS) RWY 31			KRST	ROCHESTER	MN (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 8

DATE OF REVISION: 01/03/2019

REASON FOR REVISION:

LATITUDE/LONGITUDE CHANGED FROM 435112.06N/0922436.42W TO 435110.57N/0922434.16W, FIX MOVED 224.03 FT DUE TO ROCHESTER (I-RST) TCH CHANGE.
ADDED DISTANCE FROM FACILITY IN NM (6.17) AND FT (37512) TO FAC 1.
CHANGED FAC 2 TRUE/MAG BRG FROM 062.41/057.41 TO 062.64/057.64.
ADDED DISTANCE FROM FACILITY IN NM (9.16) TO FAC 2.
CHANGED FIX USE TITLE FROM ROCHESTER INTL, ILS OR LOC RWY 31 (PAT 1) TO ILS Z OR LOC Z RWY 31.
CHANGED FIX USE TITLE FROM COPTER ILS OR LOC RWY 31 (PAT 1) TO COPTER ILS Y OR LOC Y RWY 31.
ADDED REMARK: PRECIPITOUS TERRAIN EVALUATION COMPLETED.
ADDED REMARK: ROCHESTER (FAC 1) AND ROCHESTER (FAC 2) USED TO ESTABLISH FIX COORDINATES.
ADDED RNAV (GPS) RWY 31 (KRST) TO FIX USE.
ADDED "WP" TO FIX TYPE.
LOWERED FAC 2 MAA FROM "17500" TO "5700".
MOVED "HOLDING LIMITED TO ESTABLISHED PATTERN" FROM REMARKS TO HOLDING RESTRICTIONS.

11-6-18: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 10-5-18.

1. DELETED DME DISTANCE FROM FAC 2 (RST VOR/DME).
2. DELETED DME FROM FIX TYPE.

INITIATED BY:

DATE:

ORGANIZATION:

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OFFICE OF PRIMARY RESPONSIBILITY:

AJV-5431

NAME: ROBERT GRIM

APPROVED BY:

DATE:

OFFICE: AJV-5430

NAME: PATRICK MULQUEEN

SIGNATURE:

DISTRIBUTION:

NFDC
FPO: CEN
ARTCC: ZMP
ATC FACILITY: RST ATCT
OTHER: RST APP CON

RADIO FIX AND HOLDING DATA RECORD

NAME: ROCHESTER VOR/DME STATE: MN COUNTRY: US ICAO REGION CODE: K3
 LATITUDE/LONGITUDE: 434658.45N/0923549.06W 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	MAA
1	ROCHESTER	RST	VOR/DME	L						17500

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	SW	RST	VOR/DME	205.14	025.14	R	1	3000 6000	4 5
2	NE		WP	060.00	240.00	R	4	2900 6000	5 6
3	SE	RST	VOR/DME	139.26	319.26	R	1	3000 6000	4 5

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	WINDMILL (27-026327)	434254.73N/0924248.59W	1893	5D
2	200	WINDMILL (27-026327)	434254.73N/0924248.59W	1893	5D
3	200	TOWER (27-001580)	433834.00N/0923136.00W	2499	5D

HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERNS.

REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.
 ASSIGNED FACILITY MAGVAR: 5E (1965).
 PAT 3 CONTROLLING OBSTACLE LIES IN SECONDARY AREA 4205 FT FROM EDGE OF PRIMARY (PRIMARY EQUIVALENT HEIGHT 1826.01)

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	ROCHESTER			KANE	MINNEAPOLIS	MN (US)
DP	ZMBRO			KANE	MINNEAPOLIS	MN (US)
DP	ROCHESTER			KFCM	MINNEAPOLIS	MN (US)
DP	ZMBRO			KFCM	MINNEAPOLIS	MN (US)
DP	MEADOW LAKE			KMSP	MINNEAPOLIS	MN (US)
DP	MINNEAPOLIS			KMSP	MINNEAPOLIS	MN (US)
DP	ROCHESTER			KMSP	MINNEAPOLIS	MN (US)
DP	ZMBRO			KMSP	MINNEAPOLIS	MN (US)
DP	ROCHESTER			KSTP	ST PAUL	MN (US)
DP	ZMBRO			KSTP	ST PAUL	MN (US)
EN ROUTE	V161					(US)
EN ROUTE	V170					(US)
EN ROUTE	V24					(US)
EN ROUTE	V398					(US)
EN ROUTE	V411					(US)
EN ROUTE	V503					(US)
EN ROUTE	V67					(US)
EN ROUTE	V82					(US)
IAP	ILS OR LOC RWY 35		1	KAUM	AUSTIN	MN (US)
IAP	RNAV (GPS) RWY 17			KAUM	AUSTIN	MN (US)
IAP	RNAV (GPS) RWY 35			KAUM	AUSTIN	MN (US)
IAP	VOR RWY 17			KAUM	AUSTIN	MN (US)
IAP	RNAV (GPS) RWY 16			KTOB	DODGE CENTER	MN (US)
IAP	RNAV (GPS) RWY 34			KTOB	DODGE CENTER	MN (US)
IAP	VOR-A		3	KTOB	DODGE CENTER	MN (US)
IAP	ILS OR LOC RWY 30			KOWA	OWATONNA	MN (US)
IAP	RNAV (GPS) RWY 30			KOWA	OWATONNA	MN (US)
IAP	RNAV (GPS) RWY 11			KFKA	PRESTON	MN (US)
IAP	COPTER ILS Y OR LOC Y RWY 31		1	KRST	ROCHESTER	MN (US)
IAP	ILS OR LOC RWY 13		1	KRST	ROCHESTER	MN (US)
IAP	ILS Z OR LOC Z RWY 31		1	KRST	ROCHESTER	MN (US)
IAP	RADAR-1		1	KRST	ROCHESTER	MN (US)
IAP	RNAV (GPS) RWY 13		2	KRST	ROCHESTER	MN (US)
IAP	RNAV (GPS) RWY 20		2	KRST	ROCHESTER	MN (US)
IAP	VOR RWY 2		1	KRST	ROCHESTER	MN (US)
IAP	VOR RWY 20		1	KRST	ROCHESTER	MN (US)
IAP	ILS Y OR LOC Y RWY 30			KONA	WINONA	MN (US)
SPECIAL IAP	COPTER RNAV (GPS) 140			K99MN	ROCHESTER	MN (US)
SPECIAL IAP	COPTER RNAV (GPS) 326			K99MN	ROCHESTER	MN (US)
STAR	JANESVILLE			KORD	CHICAGO	IL (US)
STAR	KASPR			KMSP	MINNEAPOLIS	MN (US)

REQUIRED CHARTING: DP, STAR, IAP, EN ROUTE LOW, EN ROUTE HIGH, SPECIAL IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 23

DATE OF REVISION: 01/03/2019

REASON FOR REVISION:

UPDATED FIX USE - ILS OR LOC RWY 31 CHANGED TO ILS Z OR LOC Z RWY 31 @ KRST.

UPDATED FIX USE - COPTER ILS OR LOC RWY 31 CHANGED TO COPTER ILS Y OR LOC Y RWY 31 @ KRST.

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-5431

NAME: ROBERT GRIM

APPROVED BY:

DATE:

OFFICE: AJV-5430

NAME: PATRICK MULQUEEN

SIGNATURE:

DISTRIBUTION:

NFDC

FPO: CEN

ARTCC: ZMP

ATC FACILITY: RST APP CON

OTHER: