

RADIO FIX AND HOLDING DATA RECORD

NAME: CULAK

STATE: MI

COUNTRY: US

ICAO REGION CODE: K5

LATITUDE/LONGITUDE: 432600.12N/0840723.54W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: MODIFY

HOLDING:

HOLDING TYPE OF ACTION: MODIFY

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	W		WP	276.74	096.74	R	4	2800	6000	5	6

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (26-002117)	432442.00N/0841319.00W	1140	5D

HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERNS.

REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (GPS) RWY 10		1	KHYX	SAGINAW	MI (US)
IAP	RNAV (GPS) RWY 28		1	KHYX	SAGINAW	MI (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 1

DATE OF REVISION: 10/12/2017

REASON FOR REVISION:

UPDATED FIX USE FOR KHYX MAGVAR ROTATION: RNAV (GPS) RWY 9 CHANGED TO RNAV (GPS) RWY 10; RNAV (GPS) RWY 27 CHANGED TO RNAV (GPS) RWY 28.
CHANGED FIX LAT/LONG FROM 432600.190N/0840709.56W TO 432600.122N/0840723.536W TO EXTEND INTERMEDIATE/INITIAL LEG LENGTHS TO 6 MILES OR MORE.
CHANGED PAT 1 INBOUND COURSE FROM 093.75 TO 096.74 TO ALIGN WITH FAC.
CHANGED PAT 1 LEG LENGTH FROM 5 DME TO 4 DME IAW 7130.3A.
REMOVED KHYX R9 FROM FIX MAKE-UP FACILITIES; A RUNWAY AS A FIX MAKE-UP FACILITY IS NO LONGER REQUIRED FOR WAYPOINTS.

DEVELOPED BY:

DATE: 04/25/2017

OFFICE: AJV-5423

NAME: DION LANCIA (STEPHANIE BARBEE)

APPROVED BY:

DATE:

OFFICE: AJV-5420

NAME: JULIE MORGAN

SIGNATURE:

DISTRIBUTION:

NFDC
FPO: CEN
ARTCC: ZOB
ATC FACILITY: MBS/ SAGINAW APP CON
OTHER:

QUALITY
25
CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: FLINT VORTAC **STATE:** MI **COUNTRY:** US **ICAO REGION CODE:** K5

LATITUDE/LONGITUDE: 425800.38N/0834449.08W **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	FLINT	FNT	VORTAC	H						45000

FIX RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERNS.

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

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	FNT	VORTAC	254.15	074.15	L	1	2200 6000	4 5
2	N	FNT	VORTAC	012.00	192.00	R	1	2600 4000	4 4

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (26-003098)	425426.95N/0835006.18W	1189	4D
2	200	TOWER (26-000637)	430504.99N/0834018.41W	1075	2B

REASON FOR NONSTANDARD HOLDING:
PAT 1 OBSTRUCTION

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED.
ASSIGNED FACILITY MAG VAR: 6W 2000.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	J36					(US)
EN ROUTE	J547					(US)
EN ROUTE	J68					(US)
EN ROUTE	J94					(US)
EN ROUTE	Q818					(US)
EN ROUTE	Q822					(US)
EN ROUTE	Q824					(US)
EN ROUTE	T616					(US)
EN ROUTE	T781					(US)
EN ROUTE	V353					(US)
EN ROUTE	V450					(US)
IAP	RNAV (GPS) RWY 6			KCFS	CARO	MI (US)
IAP	VOR RWY 8		1	K6G0	DAVISON	MI (US)
IAP	ILS OR LOC RWY 27			KFNT	FLINT	MI (US)
IAP	ILS OR LOC RWY 9			KFNT	FLINT	MI (US)
IAP	RNAV (GPS) RWY 9			KFNT	FLINT	MI (US)
IAP	VOR RWY 18			KFNT	FLINT	MI (US)
IAP	VOR RWY 36			KFNT	FLINT	MI (US)
IAP	ILS OR LOC RWY 13			KOZW	HOWELL	MI (US)
IAP	RNAV (GPS) RWY 13			KOZW	HOWELL	MI (US)
IAP	ILS OR LOC RWY 10R			KLAN	LANSING	MI (US)
IAP	VOR-A			KD95	LAPEER	MI (US)
IAP	VOR-A		2	K9G2	LINDEN	MI (US)
IAP	VOR/DME RWY 29			KRNP	OWOSSO	MI (US)
IAP	RNAV (GPS) RWY 27L			KPTK	PONTIAC	MI (US)
IAP	RNAV (GPS) RWY 9R			KPTK	PONTIAC	MI (US)
IAP	ILS OR LOC RWY 4			KPHN	PORT HURON	MI (US)
IAP	NDB RWY 4			KPHN	PORT HURON	MI (US)
IAP	ILS OR LOC RWY 28			KHYX	SAGINAW	MI (US)
IAP	RNAV (GPS) RWY 10			KHYX	SAGINAW	MI (US)
IAP	RNAV (GPS) RWY 28			KHYX	SAGINAW	MI (US)
IAP	VOR RWY 14			KMBS	SAGINAW	MI (US)
STAR	PAITN			KORD	CHICAGO	IL (US)
STAR	WYNDE (RNAV)			KORD	CHICAGO	IL (US)
STAR	SPRTN			KDET	DETROIT	MI (US)
STAR	POLAR			KDTW	DETROIT	MI (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 20 **DATE OF REVISION:** 10/12/2017

REASON FOR REVISION:

UPDATED KHYX IAP'S FROM RWY 27 TO RWY 28 AND RWY 9 TO RWY 10 FOR MAGVAR ROTATION.

REMOVED "/DME" FROM KHYX PROCEDURE NAME; CHANGED FROM ILS OR LOC/DME RWY 28 TO ILS OR LOC RWY 28 IAW 8260.3B, VOL. 1, SEC. 6.

DEVELOPED BY: **DATE:** 04/25/2017 **OFFICE:** AJV-5423 **NAME:** DION LANCIA (STEPHANIE BARBEE)**APPROVED BY:** **DATE:** **OFFICE:** AJV-5420 **NAME:** JULIE MORGAN**SIGNATURE:****DISTRIBUTION:** **NFDC**
 FPO: CEN
 ARTCC: ZOB
 ATC FACILITY: FNT ATCT/FNT APP CON
 OTHER:

RADIO FIX AND HOLDING DATA RECORD

NAME: IVODY STATE: MI COUNTRY: US ICAO REGION CODE: K5
 LATITUDE/LONGITUDE: 432601.68N/0833451.56W TYPE: WP, 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	MRA	MAA
1	SAGINAW	I-HQW	LOC/DME		096.94	089.94	12.89	12.88	2700	5000

HOLDING: HOLDING TYPE OF ACTION: MODIFY

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	E		WP	097.13	277.13	L		4	2700	6000	5	6
2	E	I-HQW	LOC/DME	096.94	276.94	L	1		3100	6000	4	5

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (26-000570)	432428.00N/0832223.00W	1153	5D
2	200	TOWER (26-000570)	432428.00N/0832223.00W	1153	5D

REASON FOR NONSTANDARD HOLDING:
 PAT 2 ATC REQUEST

HOLDING RESTRICTIONS:
 HOLDING LIMITED TO ESTABLISHED PATTERNS.

REMARKS:

I-HQW DME: 432604.77N/0835232.73W
 PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS OR LOC RWY 28	1	2	KHYX	SAGINAW	MI (US)
IAP	RNAV (GPS) RWY 10		1	KHYX	SAGINAW	MI (US)
IAP	RNAV (GPS) RWY 28		1	KHYX	SAGINAW	MI (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 3 DATE OF REVISION: 10/12/2017

REASON FOR REVISION:

FOR I-HQW MAGVAR ROTATION: DME DIST FROM 11.82 TO 12.89 AND ADDED DIST FROM FAC: 12.88 NM.
 HOLDING PAT 1 LEG LENGTH CHANGED FROM 5 DME TO 4 DME; PAT 2 LEG LENGTH CHANGED FROM 5 DME TO 1 MINUTE.
 UPDATED FIX USE FOR I-HQW MAGVAR ROTATION: CHANGED RWY 9 IAP'S TO RWY 10; CHANGED RWY 27 IAP'S TO RWY 28.
 CHANGED PAT 2 INBOUND COURSE FROM 273.94 TO 276.94 FOR I-HQW MAGVAR ROTATION.
 CHANGED FIX LAT/LONG FROM 432601.84N-0833619.77W TO 432601.684N-0833451.562W FOR INTERMEDIATE SEGMENT CRITERIA.
 REMOVED "/DME" FROM THE ILS OR LOC/DME RWY 28 PER 8260.3B, VOL. 1, SEC. 6.
 REMOVED FAC 2 FROM FIX MAKE-UP FACILITIES - RWY 28 NOT NEEDED TO DEFINE FIX.
 ADDED "PRECIPITOUS TERRAIN EVALUATION COMPLETED" NOTE TO REMARKS PER 8260.19G.
 CHANGED PAT 1 INBOUND COURSE FROM 274.11 TO 277.13 TO ALIGN WITH FAC.

DEVELOPED BY: DATE: 04/25/2017 OFFICE: AJV-5423 NAME: DION LANCIA (STEPHANIE BARBEE)

APPROVED BY: DATE: OFFICE: AJV-5420 NAME: JULIE MORGAN

SIGNATURE:

DISTRIBUTION:

NFDC
 FPO: CEN
 ARTCC: ZOB
 ATC FACILITY: MBS
 OTHER:

RADIO FIX AND HOLDING DATA RECORD

NAME: SAGINAW VOR/DME

STATE: MI

COUNTRY: US

ICAO REGION CODE: K5

LATITUDE/LONGITUDE: 433153.95N/0840438.28W

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	FAC FEET	MRA	MAA
1	SAGINAW	MBS	VOR/DME	L							33000

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
MBS	VOR/DME	R-163	45	3000	33000

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	MBS	VOR/DME	267.00	087.00	L	1		3000	10000	4	9
2	NW	MBS	VOR/DME	305.00	125.00	R	1		3000	10000	4	9

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
UPN	200	TOWER (26-002117)	432442.00N/0841319.00W	1140	5D
1	200	TOWER (26-000318)	433342.00N/0835852.00W	1093	4D
2	200	TOWER (26-001850)	433356.00N/0841714.00W	1053	5D
2	310	TOWER (26-002117)	432442.00N/0841319.00W	1140	5D

REASON FOR NONSTANDARD HOLDING:

PAT 1 AIR TRAFFIC REQUEST

HOLDING RESTRICTIONS:

UNPLANNED HOLDING AUTHORIZED AT OR ABOVE 3000.

PROCEDURES REQUIRING CLIMB-IN-HOLD:

PAT	PROCEDURE TITLE	AIRPORT IDENT	CITY	STATE
2	ILS OR LOC/DME RWY 28	KHYX	SAGINAW	MI (US)

REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.
HOLDING LIMITED TO ESTABLISHED PATTERNS.
MBS VOR/DME MAGVAR 3W/1965.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	V133					(US)
EN ROUTE	V274					(US)
EN ROUTE	V320					(US)
EN ROUTE	V45					(US)
EN ROUTE	V609					(US)
EN ROUTE	V78					(US)
IAP	RNAV (GPS) RWY 18			KAMN	ALMA	MI (US)
IAP	RNAV (GPS) RWY 27			KAMN	ALMA	MI (US)
IAP	RNAV (GPS) RWY 04			KBAX	BAD AXE	MI (US)
IAP	RNAV (GPS) RWY 17			KBAX	BAD AXE	MI (US)
IAP	RNAV (GPS) RWY 22			KBAX	BAD AXE	MI (US)
IAP	RNAV (GPS) RWY 35			KBAX	BAD AXE	MI (US)
IAP	VOR-A		1	K3CM	BAY CITY	MI (US)
IAP	RNAV (GPS) RWY 24			KCFS	CARO	MI (US)
IAP	VOR/DME-A			KCFS	CARO	MI (US)
IAP	RNAV (GPS) RWY 27			KGDW	GLADWIN	MI (US)
IAP	RNAV (GPS) RWY 06			KIKW	MIDLAND	MI (US)
IAP	RNAV (GPS) RWY 24			KIKW	MIDLAND	MI (US)
IAP	VOR-A			KIKW	MIDLAND	MI (US)
IAP	ILS OR LOC/DME RWY 28		2	KHYX	SAGINAW	MI (US)
IAP	RNAV (GPS) RWY 10			KHYX	SAGINAW	MI (US)
IAP	RNAV (GPS) RWY 28			KHYX	SAGINAW	MI (US)
IAP	VOR/DME-A		2	KHYX	SAGINAW	MI (US)
IAP	ILS OR LOC RWY 05			KMBS	SAGINAW	MI (US)
IAP	ILS OR LOC RWY 23			KMBS	SAGINAW	MI (US)
IAP	VOR RWY 14			KMBS	SAGINAW	MI (US)
STAR	POLAR			KDTW	DETROIT	MI (US)

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

COMPULSORY REPORTING POINT: NO**RECORD REVISION NUMBER: 21****DATE OF REVISION: 10/12/2017****REASON FOR REVISION:**

UPDATED FIX USE FOR KHYX MAGVAR ROTATION: CHANGED RWY 27 IAP'S TO RWY 28 AND CHANGED RWY 9 IAP TO RWY 10.
REMOVED "/DME" FROM THE ILS OR LOC/DME RWY 27 PER 8260.3B, VOL. 1, SEC. 6.

DEVELOPED BY: **DATE:** 04/25/2017 **OFFICE:** AJV-5423 **NAME:** DION LANCIA (STEPHANIE BARBEE)**APPROVED BY:** **DATE:** **OFFICE:** AJV-5420 **NAME:** JULIE MORGAN**SIGNATURE:**

DISTRIBUTION: **NFDC**
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 OTHER: