

**INFORMATION ONLY****RADIO FIX AND HOLDING DATA RECORD****NAME:** BAMBB**STATE:** IL**COUNTRY:** US**LATITUDE/LONGITUDE:** 420527.50N/0881631.34W**TYPE:** WP**AIRSPACE DOCKET:****FIX TYPE OF ACTION:** ESTABLISH**FIX USE:****USE TYPE**

STAR ERNNY (RNAV)  
STAR ESSPO (RNAV)  
STAR VEECK (RNAV)  
STAR WYNDE (RNAV)

**FAC PAT**

**AIRPORT IDENT CITY**  
KORD CHICAGO  
KORD CHICAGO  
KORD CHICAGO  
KORD CHICAGO

**STATE**

IL (US)  
IL (US)  
IL (US)  
IL (US)

**REQUIRED CHARTING:** STAR**COMPULSORY REPORTING POINT:** NO**RECORD REVISION NUMBER:** ORIG**DATE OF REVISION:** 02/11/2010**DEVELOPED BY:** **DATE:** 07/15/2009**OFFICE:** AVN-120**NAME:** STEVEN SZUKALA (SCOTT CORY)**APPROVED BY:** **DATE:** 11/04/2009**OFFICE:** AVN-120**NAME:** SUE CRUMB**SIGNATURE:****DISTRIBUTION:**

NFDC  
FPO: CEN  
ARTCC: ZAU  
ATC FACILITY:  
OTHER:

QUALITY  
17  
CHECKED

# INFORMATION ONLY

## RADIO FIX AND HOLDING DATA RECORD

NAME: BITTR

STATE: MI

COUNTRY: US

LATITUDE/LONGITUDE: 430717.68N/0855638.18W

TYPE: WP, 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	PULLMAN	PMM	VOR/DME	H	010.19	010.19	39.96	39.96		12000	45000

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	N	PMM	VOR/DME	010.19	190.19	R	1 1/2		18000	45000	18	31
2	N		WP	013.41	193.41	R		10	9000	45000	15	30

### CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
2	230	TOWER (26-002926)	431835.40N/0855444.80W	1847	5D

### HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERNS.

### REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.  
PAT 2: EVALUATED WITH 10 DME LEG LENGTH AT ATC REQUEST.

### FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	J548	1				(US)
STAR	PAITN	1	1	KORD	CHICAGO	IL (US)
STAR	WYNDE (RNAV)		2	KORD	CHICAGO	IL (US)

REQUIRED CHARTING: STAR, CONTROLLER, EN ROUTE HIGH

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 6

DATE OF REVISION: 10/15/2015

### REASON FOR REVISION:

HOLDING PAT 2: CHANGED MIN TEMPLATE FROM 10 TO 15.

DEVELOPED BY: DATE: 03/09/2015 OFFICE: AJV-353 NAME: THOMAS KIRKPATRICK

APPROVED BY: DATE: 08/17/2015 OFFICE: AJV-353 NAME: GEORGE GONZALEZ

SIGNATURE:

DISTRIBUTION:

NFDC  
FPO: CEN  
ARTCC: ZAU  
ATC FACILITY:  
OTHER:

QUALITY  
17  
CHECKED

# INFORMATION ONLY

## RADIO FIX AND HOLDING DATA RECORD

NAME: CSTLO

STATE: MI

COUNTRY: US

LATITUDE/LONGITUDE: 431050.36N/0852232.67W

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 NM	FAC FEET	MRA	MAA
1	VICTORY	VIO	VOR/DME	H	016.70	012.70	24.23	24.23		18000	45000

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	N	VIO	VOR/DME	016.70	196.70	R	1 1/2		24000	32000	20	24
2	N		WP	015.89	195.89	R		12	6000	32000	20	24

### CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
2	200	TOWER (26-002264)	433136.00N/0851307.00W	1475	1A

### HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERNS.

### REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.  
PAT 2: 12 DME LEG LENGTH AT ATC REQUEST.

### FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	PAITN	1	1	KORD	CHICAGO	IL (US)
STAR	WYNDE (RNAV)		2	KORD	CHICAGO	IL (US)

REQUIRED CHARTING: STAR, CONTROLLER, EN ROUTE HIGH

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 4

DATE OF REVISION: 11/13/2014

### REASON FOR REVISION:

CHANGED FAC 1 FROM GRAND RAPIDS (GRR) TO VICTORY (VIO).  
CHANGED HOLDING PAT 1 IDENT FROM GRR TO VIO.  
CHANGED HOLDING PAT 2 MIN TEMPLATE FROM 6 TO 20, AND CONTROLLING OBST FROM 1275 MSL TOWER TO 1475 MSL TOWER.

DEVELOPED BY: DATE: 03/07/2014 OFFICE: AJV-353 NAME: THOMAS KIRKPATRICK

APPROVED BY: DATE: 11/13/2014 OFFICE: AJV-353 NAME: GEORGE GONZALEZ

SIGNATURE:

DISTRIBUTION: NFDC  
FPO: CEN  
ARTCC: ZAU  
ATC FACILITY:  
OTHER:

QUALITY  
17  
CHECKED

**INFORMATION ONLY****RADIO FIX AND HOLDING DATA RECORD****NAME:** DITCA**STATE:** MI**COUNTRY:** US**LATITUDE/LONGITUDE:** 424450.45N/0854300.14W**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 NM	FAC FEET	MRA	MAA
1	VICTORY	VIO	VOR/DME	H	260.40	256.40	9.99	9.99		10000	45000

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

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	PAITN	1		KORD	CHICAGO	IL (US)
STAR	WYNDE (RNAV)			KORD	CHICAGO	IL (US)

**REQUIRED CHARTING:** STAR**COMPULSORY REPORTING POINT:** NO**RECORD REVISION NUMBER:** 2**DATE OF REVISION:** 11/13/2014**REASON FOR REVISION:**

CHANGED FAC 1 FROM GRAND RAPIDS (GRR) TO VICTORY (VIO).

**DEVELOPED BY:**      **DATE:** 03/07/2014**OFFICE:** AVN-120**NAME:** THOMAS KIRKPATRICK**APPROVED BY:**      **DATE:** 11/13/2014**OFFICE:** AJV-353**NAME:** GEORGE GONZALEZ**SIGNATURE:****DISTRIBUTION:**NFDC  
FPO: CEN  
ARTCC: ZAU  
ATC FACILITY:  
OTHER:QUALITY  
17  
CHECKED

# INFORMATION ONLY

## RADIO FIX AND HOLDING DATA RECORD

**NAME:** EMMMA

**STATE:** MI

**COUNTRY:** US

**LATITUDE/LONGITUDE:** 425303.96N/0843450.40W

**TYPE:** WP, 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 NM	FAC FEET	MRA	MAA
1	FLINT	FNT	VORTAC	H	268.63	262.63	37.08	37.08		18000	45000

**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	FNT	VORTAC	268.63	268.63	R	1 1/2		24000	32000	21	25
2	E		WP	085.63	265.63	R		12	6000	32000	20	24

**CONTROLLING OBSTRUCTIONS:**

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
2	230	STACK (26-000056)	424308.00N/0843328.00W	1449	3C

**HOLDING RESTRICTIONS:**

HOLDING LIMITED TO ESTABLISHED PATTERNS.

**REMARKS:**

PRECIPITOUS TERRAIN EVALUATION COMPLETED.  
PAT 2: EVALUATED WITH 12 DME LEG LENGTH AT ATC REQUEST.

**FIX USE:**

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	Q436					(US)
STAR	PAITN	1	1	KORD	CHICAGO	IL (US)
STAR	WYNDE (RNAV)		2	KORD	CHICAGO	IL (US)

**REQUIRED CHARTING:** STAR, CONTROLLER, EN ROUTE HIGH

**COMPULSORY REPORTING POINT:** NO

**RECORD REVISION NUMBER:** 3

**DATE OF REVISION:** 10/15/2015

**REASON FOR REVISION:**

HOLDING PAT 2: CHANGED MIN TEMPLATE FROM 10 TO 20.  
CONTROLLING OBSTRUCTION: CHANGED AIRSPEED FROM 200 TO 230, CONTROLLING OBST FROM 1199 MSL TOWER TO 1499 MSL STACK.

**DEVELOPED BY:**      **DATE:** 03/10/2015      **OFFICE:** AJV-353      **NAME:** THOMAS KIRKPATRICK

**APPROVED BY:**      **DATE:** 08/17/2015      **OFFICE:** AJV-353      **NAME:** GEORGE GONZALEZ

**SIGNATURE:**

**DISTRIBUTION:**      NFDC  
FPO: CEN  
ARTCC: ZAU  
ATC FACILITY:  
OTHER:

QUALITY  
17  
CHECKED

**INFORMATION ONLY****RADIO FIX AND HOLDING DATA RECORD**

NAME: ERNNY

STATE: IL

COUNTRY: US

LATITUDE/LONGITUDE: 422019.39N/0873203.06W

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	FAC FEET	MRA	MAA
1	NORTHBROOK	OBK	VOR/DME	H	071.13	069.13	19.88	19.88		5000	17500
2	CHICAGO O'HARE	ORD	VOR/DME	L	036.03	038.03	26.77	26.77		5000	17500

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

**REMARKS:**

NORTHBROOK (FAC 1) USED TO ESTABLISH FIX COORDINATES  
STAR MEA 8000, ATC REQUEST 6000 FOR VECTORING.

**FIX USE:**

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	ERNNY (RNAV)			KORD	CHICAGO	IL (US)
STAR	PAITN	1, 2		KORD	CHICAGO	IL (US)
STAR	WYNDE (RNAV)			KORD	CHICAGO	IL (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 2

DATE OF REVISION: 10/17/2013

**REASON FOR REVISION:**

ADDED REMARK, NORTHBROOK (FAC 1) USED TO ESTABLISH FIX COORDINATES.  
CHANGED FAC 1 TRUE/MAG BRG FROM 069.15/071.15 TO 069.13/071.13.  
CHANGED FAC 1 DME AND FAC DIST FROM 19.89 TO 19.88.  
CHANGED FAC 2 DME AND FAC DIST FROM 26.78 TO 26.77.  
CHANGED FAC 1,2 MEA FROM 6000 TO 5000.

DEVELOPED BY:

DATE: 05/13/2013

OFFICE: AJV-353

NAME: JILL OLSON (AISHAT NAUZO)

APPROVED BY:

DATE: 08/30/2013

OFFICE: AJV-353

NAME: LARRY STROUT

SIGNATURE:

DISTRIBUTION:

NFDC  
FPO: CEN  
ARTCC: ZAU  
ATC FACILITY:  
OTHER:

QUALITY  
17  
CHECKED

**INFORMATION ONLY****RADIO FIX AND HOLDING DATA RECORD****NAME:** FIYER**STATE:** IL**COUNTRY:** US**LATITUDE/LONGITUDE:** 422351.97N/0871916.21W**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 NM	FAC FEET	MRA	MAA
1	NORTHBROOK	OBK	VOR/DME	H	071.13	069.13	29.99	29.99		3000	17500

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

STAR MEA 8000, ATC REQUEST 3000 FOR VECTORING.

**FIX USE:**

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	PAITN	1		KORD	CHICAGO	IL (US)
STAR	WYNDE (RNAV)			KORD	CHICAGO	IL (US)

**REQUIRED CHARTING:** STAR, CONTROLLER, EN ROUTE LOW**COMPULSORY REPORTING POINT:** NO**RECORD REVISION NUMBER:** 2**DATE OF REVISION:** 10/17/2013**REASON FOR REVISION:**CHANGED TRUE/ MAG BRG FROM 069.15/071.15 TO 069.13/071.13.  
CHANGED DME AND FAC DISTANCE FROM 30 TO 29 NM.**DEVELOPED BY:****DATE:** 05/13/2013**OFFICE:** AJV-353**NAME:** JILL OLSON (AISHAT NAUZO)**APPROVED BY:****DATE:** 08/30/2013**OFFICE:** AJV-353**NAME:** LARRY STROUT**SIGNATURE:****DISTRIBUTION:**NFDC  
FPO: CEN  
ARTCC: ZAU  
ATC FACILITY:  
OTHER:QUALITY  
17  
CHECKED

# INFORMATION ONLY

## RADIO FIX AND HOLDING DATA RECORD

**NAME:** FLINT VORTAC

**STATE:** MI

**COUNTRY:** US

**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	FAC FEET	MRA	MAA
1	FLINT	FNT	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 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)	425427.12N/0835006.85W	1190	4D
2	200	TOWER (26-000637)	430504.99N/0834018.41W	1075	2B

**REASON FOR NONSTANDARD HOLDING:**

PAT 1 OBSTRUCTION

**HOLDING RESTRICTIONS:**

HOLDING LIMITED TO ESTABLISHED PATTERNS.

**REMARKS:**

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

**FIX USE:**

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

QUALITY  
17  
CHECKED



STAR	WYNDE (RNAV)		KORD	CHICAGO	IL (US)
STAR	SPRTN	1	KDET	DETROIT	MI (US)
STAR	POLAR	1	KDTW	DETROIT	MI (US)

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

**COMPULSORY REPORTING POINT:** NO

**RECORD REVISION NUMBER:** 17                      **DATE OF REVISION:** 05/26/2016

**REASON FOR REVISION:**  
UPDATE FIX USE.

**DEVELOPED BY:**              **DATE:** 11/16/2015              **OFFICE:** AJV-5423              **NAME:** THOMAS KIRKPATRICK

**APPROVED BY:**              **DATE:**              **OFFICE:** AJV-5420              **NAME:** GEORGE GONZALEZ

**SIGNATURE:**

**DISTRIBUTION:**      **NFDC**  
                         **FPO:** CEN  
                         **ARTCC:** ZOB  
                         **ATC FACILITY:** FNT ATCT/FNT APP CON  
                         **OTHER:**



**INFORMATION ONLY****RADIO FIX AND HOLDING DATA RECORD**

NAME: GAULT

STATE: MI

COUNTRY: US

LATITUDE/LONGITUDE: 440436.79N/0850537.13W

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 NM	FAC FEET	MRA	MAA
1	VICTORY	VIO	VOR/DME	H	016.70	012.70	79.38	79.38		18000	45000
2	AU SABLE	ASP	VOR/DME	H	260.64	253.64	76.60	76.60		18000	45000

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	N	VIO	VOR/DME	016.70	196.70	R	1 1/2		24000	32000	21	25
2	N	WP	WP	016.26	196.26	R		12	9000	32000	20	24

**CONTROLLING OBSTRUCTIONS:**

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
2	230	TOWER (26-000202)	440812.00N/0852033.00W	2999	4D

**HOLDING RESTRICTIONS:**

HOLDING LIMITED TO ESTABLISHED PATTERNS.

**REMARKS:**

AU SABLE (FAC 2) AND VICTORY (FAC 1) USED TO ESTABLISH FIX COORDINATES  
PRECIPITOUS TERRAIN EVALUATION COMPLETED.  
PAT 2: 12 DME LEG LENGTH AT ATC REQUEST.

**FIX USE:**

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	PAITN	1, 2	1	KORD	CHICAGO	IL (US)
STAR	WYNDE (RNAV)		2	KORD	CHICAGO	IL (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 4

DATE OF REVISION: 11/13/2014

**REASON FOR REVISION:**

CHANGED FAC 1 FROM GRAND RAPIDS (GRR) TO VICTORY (VIO).  
CHANGED HOLDING PAT 1 IDENT FROM GRR TO VIO.  
CHANGED HOLDING PAT 2 MIN TEMPLATE FROM 10 TO 20, AND CONTROLLING OBST FROM 1946 MSL WINDMILL TO 2999 MSL TOWER.

DEVELOPED BY: DATE: 03/07/2014 OFFICE: AJV-353 NAME: THOMAS KIRKPATRICK

APPROVED BY: DATE: 11/13/2014 OFFICE: AJV-353 NAME: GEORGE GONZALEZ

SIGNATURE:

DISTRIBUTION: NFDC  
FPO: CEN  
ARTCC: ZAU  
ATC FACILITY:  
OTHER:

QUALITY  
17  
CHECKED

# INFORMATION ONLY

## RADIO FIX AND HOLDING DATA RECORD

NAME: JODEE

STATE: MI

COUNTRY: US

LATITUDE/LONGITUDE: 451643.30N/0844203.77W

TYPE: WP, 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	SAULT STE MARIE	SSM	VOR/DME	H	197.53	193.53	69.92	69.92		18000	45000

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	N	SSM	VOR/DME	197.53	197.53	R	1-1 1/2	24000 32000	21 25
2	N		WP	016.53	196.53	R	12	9000 32000	20 24

### CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
2	230	TOWER (26-001587)	451014.00N/0844505.00W	2168	5D

### HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERNS.

### REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.  
PAT 2: EVALUATED WITH 12 DME LEG LENGTH AT ATC REQUEST.

### FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	PAITN	1	1	KORD	CHICAGO	IL (US)
STAR	WYNDE (RNAV)		2	KORD	CHICAGO	IL (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 3

DATE OF REVISION: 10/15/2015

### REASON FOR REVISION:

HOLDING PAT 2: CHANGED MIN TEMPLATE FROM 10 TO 20.

DEVELOPED BY:      DATE: 03/10/2015      OFFICE: AJV-353      NAME: THOMAS KIRKPATRICK

APPROVED BY:      DATE: 08/17/2015      OFFICE: AJV-353      NAME: GEORGE GONZALEZ

SIGNATURE:

DISTRIBUTION:

NFDC  
FPO: CEN  
ARTCC: ZAU  
ATC FACILITY:  
OTHER:

QUALITY  
17  
CHECKED

# INFORMATION ONLY

## RADIO FIX AND HOLDING DATA RECORD

NAME: JORJO

STATE: IL

COUNTRY: US

LATITUDE/LONGITUDE: 415304.14N/0875918.78W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: MODIFY

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

### FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	JORJO (RNAV)			KPWK	CHICAGO/PROSPECT HEIGHTS/WHEELING	IL (US)
DP	JORJO (RNAV)			KUGN	CHICAGO/WAUKEGAN	IL (US)
STAR	BENKY (RNAV)			KORD	CHICAGO	IL (US)
STAR	ERNNY (RNAV)			KORD	CHICAGO	IL (US)
STAR	ESSPO (RNAV)			KORD	CHICAGO	IL (US)
STAR	FYTTE (RNAV)			KORD	CHICAGO	IL (US)
STAR	MADII (RNAV)			KORD	CHICAGO	IL (US)
STAR	TRTLL (RNAV)			KORD	CHICAGO	IL (US)
STAR	VEECK (RNAV)			KORD	CHICAGO	IL (US)
STAR	WYNDE (RNAV)			KORD	CHICAGO	IL (US)

REQUIRED CHARTING: DP, STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 3

DATE OF REVISION: 11/13/2014

### REASON FOR REVISION:

UPDATED FIX USE.

DEVELOPED BY: DATE: 05/30/2014

OFFICE: AJV-353

NAME: AISHAT NAUZO

APPROVED BY: DATE: 11/13/2014

OFFICE: AJV-353

NAME: GEORGE GONZALEZ

SIGNATURE:

### DISTRIBUTION:

NFDC  
FPO: CEN  
ARTCC: ZAU  
ATC FACILITY: ORD APP CON  
OTHER:

QUALITY  
17  
CHECKED

# INFORMATION ONLY

## RADIO FIX AND HOLDING DATA RECORD

NAME: KURKK

STATE: IL

COUNTRY: US

LATITUDE/LONGITUDE: 420530.61N/0880137.92W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: MODIFY

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

### FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	BENKY (RNAV)			KORD	CHICAGO	IL (US)
STAR	ERNNY (RNAV)			KORD	CHICAGO	IL (US)
STAR	ESSPO (RNAV)			KORD	CHICAGO	IL (US)
STAR	FYTTE (RNAV)			KORD	CHICAGO	IL (US)
STAR	MADII (RNAV)			KORD	CHICAGO	IL (US)
STAR	TRTLL (RNAV)			KORD	CHICAGO	IL (US)
STAR	VEECK (RNAV)			KORD	CHICAGO	IL (US)
STAR	WYNDE (RNAV)			KORD	CHICAGO	IL (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 1

DATE OF REVISION: 11/13/2014

### REASON FOR REVISION:

UPDATED FIX USE.

DEVELOPED BY:

DATE: 05/30/2014

OFFICE: AJV-353

NAME: AISHAT NAUZO

APPROVED BY:

DATE: 11/13/2014

OFFICE: AJV-353

NAME: GEORGE GONZALEZ

SIGNATURE:

DISTRIBUTION:

NFDC  
FPO: CEN  
ARTCC: ZAU  
ATC FACILITY: ORD APP CON  
OTHER:

QUALITY  
17  
CHECKED

# INFORMATION ONLY

## RADIO FIX AND HOLDING DATA RECORD

NAME: LTOUR

STATE: MI

COUNTRY: US

LATITUDE/LONGITUDE: 425057.69N/0845505.90W

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 NM	FAC FEET	MRA	MAA
1	FLINT	FNT	VORTAC	H	268.63	262.63	52.13	52.13		18000	45000
2	VICTORY	VIO	VOR/DME	H	085.44	081.44	25.83	25.83		18000	45000

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

### REMARKS:

VICTORY (FAC 2) USED TO ESTABLISH FIX COORDINATES

### FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	PAITN	1, 2		KORD	CHICAGO	IL (US)
STAR	WYNDE (RNAV)			KORD	CHICAGO	IL (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 3

DATE OF REVISION: 11/13/2014

### REASON FOR REVISION:

CHANGED FAC 2 FROM GRAND RAPIDS (GRR) TO VICTORY (VIO).

DEVELOPED BY:

DATE: 03/07/2014

OFFICE: AJV-353

NAME: THOMAS KIRKPATRICK

APPROVED BY:

DATE: 11/13/2014

OFFICE: AJV-353

NAME: GEORGE GONZALEZ

SIGNATURE:

DISTRIBUTION:

NFDC  
FPO: CEN  
ARTCC: ZAU  
ATC FACILITY:  
OTHER:

QUALITY  
17  
CHECKED

# INFORMATION ONLY

## RADIO FIX AND HOLDING DATA RECORD

NAME: MONKZ

STATE: IL

COUNTRY: US

LATITUDE/LONGITUDE: 415303.59N/0874806.47W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: MODIFY

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

### FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	MONKZ (RNAV)			KPWK	CHICAGO/PROSPECT HEIGHTS/WHEELING	IL (US)
DP	MONKZ (RNAV)			KUGN	CHICAGO/WAUKEGAN	IL (US)
STAR	BENKY (RNAV)			KORD	CHICAGO	IL (US)
STAR	ERNNY (RNAV)			KORD	CHICAGO	IL (US)
STAR	ESSPO (RNAV)			KORD	CHICAGO	IL (US)
STAR	FYTTE (RNAV)			KORD	CHICAGO	IL (US)
STAR	MADII (RNAV)			KORD	CHICAGO	IL (US)
STAR	TRTLL (RNAV)			KORD	CHICAGO	IL (US)
STAR	VEECK (RNAV)			KORD	CHICAGO	IL (US)
STAR	WYNDE (RNAV)			KORD	CHICAGO	IL (US)

REQUIRED CHARTING: DP, STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 3

DATE OF REVISION: 11/13/2014

### REASON FOR REVISION:

UPDATED FIX USE.

DEVELOPED BY: DATE: 05/30/2014

OFFICE: AJV-353

NAME: AISHAT NAUZO

APPROVED BY: DATE: 11/13/2014

OFFICE: AJV-353

NAME: GEORGE GONZALEZ

SIGNATURE:

### DISTRIBUTION:

NFDC  
FPO: CEN  
ARTCC: ZAU  
ATC FACILITY: ORD APP CON  
OTHER:

QUALITY  
17  
CHECKED

**INFORMATION ONLY**

**RADIO FIX AND HOLDING DATA RECORD**

**NAME:** OBSTR

**STATE:** MI

**COUNTRY:** US

**LATITUDE/LONGITUDE:** 434142.20N/0851253.53W

**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 NM	FAC FEET	MRA	MAA
1	VICTORY	VIO	VOR/DME	H	016.70	012.70	55.88	55.88		18000	45000

**HOLDING:**

**HOLDING TYPE OF ACTION:** NO CHANGE

**FIX USE:**

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	PAITN	1		KORD	CHICAGO	IL (US)
STAR	WYNDE (RNAV)			KORD	CHICAGO	IL (US)

**REQUIRED CHARTING:** STAR, CONTROLLER, EN ROUTE HIGH

**COMPULSORY REPORTING POINT:** NO

**RECORD REVISION NUMBER:** 3

**DATE OF REVISION:** 11/13/2014

**REASON FOR REVISION:**

CHANGED FAC 1 FROM GRAND RAPIDS (GRR) TO VICTORY (VIO).

**DEVELOPED BY:**      **DATE:** 03/07/2014

**OFFICE:** AJV-353

**NAME:** THOMAS KIRKPATRICK

**APPROVED BY:**      **DATE:** 11/13/2014

**OFFICE:** AJV-353

**NAME:** GEORGE GONZALEZ

**SIGNATURE:**

**DISTRIBUTION:**

NFDC  
FPO: CEN  
ARTCC: ZAU  
ATC FACILITY:  
OTHER:

QUALITY  
17  
CHECKED



# RADIO FIX AND HOLDING DATA RECORD

NAME: ODAXY

STATE: MI

COUNTRY: US

LATITUDE/LONGITUDE: 443800.86N/0831216.23W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: NO CHANGE

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

FIX USE:

USE TYPE  
IAP  
STAR

USE TITLE  
RNAV (GPS) RWY 24  
WYNDE (RNAV)

FAC PAT

AIRPORT IDENT  
KOSC  
KORD

CITY  
OSCODA  
CHICAGO

STATE  
MI (US)  
IL (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 1

DATE OF REVISION: 05/26/2016

DEVELOPED BY: DATE: 02/03/2016

OFFICE: AJV-5442

NAME: RICHARD CLARK

APPROVED BY: DATE:

OFFICE: AJV-5420

NAME: GEORGE GONZALEZ

SIGNATURE:

DISTRIBUTION:

NFDC  
FPO: CEN  
ARTCC: ZAU  
ATC FACILITY:  
OTHER: LAN FSS

QUALITY  
17  
CHECKED

# INFORMATION ONLY

## RADIO FIX AND HOLDING DATA RECORD

**NAME:** PAITN

**STATE:** MI

**COUNTRY:** US

**LATITUDE/LONGITUDE:** 423339.71N/0864321.38W

**TYPE:** WP, 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	MRA FEET	MAA
1	PULLMAN	PMM	VOR/DME	H	281.95	281.95	28.00	28.00	4000	17500
2	VICTORY	VIO	VOR/DME	H	260.40	256.40	55.91	55.91	6000	17500
3	NORTHBROOK	OBK	VOR/DME	H	071.15	069.15	58.32	58.32	6000	17500

**EXPANDED SERVICE VOLUME (ESV):**

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
VIO	VOR/DME	R-260	56	6000	15300
OBK	VOR/DME	R-071	59	6000	15200

**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	E	VIO	VOR/DME	260.40	260.40	R	8	10000	17500	11	18	
2	E	WP	WP	078.88	258.88	R	9	6000	17500	13	17	

**CONTROLLING OBSTRUCTIONS:**

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	230	208' SHIP	423438.28N/0864029.39W	786	2C
2	200	208' SHIP	423438.28N/0864029.39W	786	2C

**HOLDING RESTRICTIONS:**

HOLDING LIMITED TO ESTABLISHED PATTERNS.

**REMARKS:**

PULLMAN (FAC 1) USED TO ESTABLISH FIX COORDINATES  
 PRECIPITOUS TERRAIN EVALUATION COMPLETED.  
 PAT 2: EVALUATED WITH 9 DME LEG LENGTH AT ATC REQUEST.

**FIX USE:**

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	V170	1				(US)
STAR	PAITN	1, 2, 3	1	KORD	CHICAGO	IL (US)
STAR	WYNDE (RNAV)		2	KORD	CHICAGO	IL (US)

**REQUIRED CHARTING:** STAR, CONTROLLER, EN ROUTE LOW

**COMPULSORY REPORTING POINT:** NO

**RECORD REVISION NUMBER:** 4

**DATE OF REVISION:** 10/15/2015

**REASON FOR REVISION:**

HOLDING PAT 2: CHANGED MIN TEMPLATE FROM 6 TO 13.

**DEVELOPED BY:**

**DATE:** 03/09/2015

**OFFICE:** AJV-353

**NAME:** THOMAS KIRKPATRICK

**APPROVED BY:**

**DATE:** 08/17/2015

**OFFICE:** AJV-353

**NAME:** GEORGE GONZALEZ

**SIGNATURE:**

**DISTRIBUTION:**

NFDC  
 FPO: CEN  
 ARTCC: ZAU  
 ATC FACILITY:  
 OTHER:

QUALITY  
17  
CHECKED

# INFORMATION ONLY

## RADIO FIX AND HOLDING DATA RECORD

NAME: PAPPI

STATE: IL

COUNTRY: US

LATITUDE/LONGITUDE: 421611.90N/0873625.93W

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	FEET	MRA	MAA
1	CHICAGO HEIGHTS	CGT	VORTAC	L	356.00	358.00	45.61	45.61		2500	17500
2	NORTHBROOK	OBK	VOR/DME	H	081.13	079.13	15.63	15.62		2500	17500
3	CHICAGO O'HARE	ORD	VOR/DME	L	036.03	038.03	21.52	21.52		5000	17500

### EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
CGT	VORTAC	R-356	46	2500	17500

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

### REMARKS:

NORTHBROOK (FAC 2) AND CHICAGO HEIGHTS (FAC 1) USED TO ESTABLISH FIX COORDINATES

### FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	V7	1, 2				(US)
EN ROUTE	V84	1, 2				(US)
IAP	ILS OR LOC RWY 22R			KORD	CHICAGO	IL (US)
IAP	RNAV (GPS) RWY 22R			KORD	CHICAGO	IL (US)
IAP	RNAV (GPS) RWY 16			KPWK	CHICAGO/PROSPECT HGTS/WHEELING	IL (US)
IAP	RNAV (GPS) RWY 23			KUGN	CHICAGO/WAUKEGAN	IL (US)
IAP	RNAV (GPS) RWY 5			KUGN	CHICAGO/WAUKEGAN	IL (US)
IAP	RNAV (GPS) RWY 33			KENW	KENOSHA	WI (US)
STAR	ERNNY (RNAV)			KORD	CHICAGO	IL (US)
STAR	PAITN	2, 3		KORD	CHICAGO	IL (US)
STAR	WYNDE (RNAV)			KORD	CHICAGO	IL (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 15

DATE OF REVISION: 10/17/2013

### REASON FOR REVISION:

CHANGED FAC 2 TRUE/BRG CRS FROM 079.16/081.16 TO 079.13/081.13.  
CHANGED FAC 2 DME AND FAC DIST FROM 15.63 TO 15.62.

DEVELOPED BY:

DATE: 05/14/2013

OFFICE: AJV-353

NAME: JILL OLSON (AISHAT NAUZO)

APPROVED BY:

DATE: 08/30/2013

OFFICE: AJV-353

NAME: LARRY STROUT

SIGNATURE:

DISTRIBUTION:

NFDC  
FPO: CEN  
ARTCC: ZAU  
ATC FACILITY: CHI APP CON  
OTHER:

QUALITY  
17  
CHECKED

# INFORMATION ONLY

## RADIO FIX AND HOLDING DATA RECORD

NAME: PECOK

STATE: MI

COUNTRY: US

LATITUDE/LONGITUDE: 440027.67N/0854314.71W

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	MRA	MAA
1	GREEN BAY	GRB	VORTAC	H	105.25	106.25	111.58	111.58	18000	45000
2	TRAVERSE CITY	TVC	VOR/DME	H	192.57	190.57	40.29	40.29	12000	45000

### EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
GRB	VORTAC	R-105	112	18000	18800
TVC	VOR/DME	R-193	41	12000	15400

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	N	TVC	VOR/DME	192.57	192.57	R	1-1 1/2	18000 28000	18 23
2	N		WP	013.57	193.57	R	10	9000 28000	15 22

### CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
2	230	TOWER (26-000204)	441633.00N/0854249.00W	2549	5E

### HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERNS.

### REMARKS:

GREEN BAY (FAC 1) AND TRAVERSE CITY (FAC 2) USED TO ESTABLISH FIX COORDINATES  
PRECIPITOUS TERRAIN EVALUATION COMPLETED.  
PAT 2: EVALUATED WITH 10 DME LEG LENGTH AT ATC REQUEST.

### FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	PAITN	2	1	KORD	CHICAGO	IL (US)
STAR	WYNDE (RNAV)		2	KORD	CHICAGO	IL (US)

REQUIRED CHARTING: STAR, CONTROLLER, EN ROUTE HIGH

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 6

DATE OF REVISION: 10/15/2015

### REASON FOR REVISION:

REMOVED AIRSPACE DOCKET NUMBER.  
HOLDING PAT 2: CHANGED MIN TEMPLATE FROM 10 TO 15.

DEVELOPED BY:

DATE: 03/10/2015

OFFICE: AJV-353

NAME: THOMAS KIRKPATRICK

APPROVED BY:

DATE: 08/17/2015

OFFICE: AJV-353

NAME: GEORGE GONZALEZ

SIGNATURE:

DISTRIBUTION:

NFDC  
FPO: CEN  
ARTCC: ZAU  
ATC FACILITY:  
OTHER:

QUALITY  
17  
CHECKED

# INFORMATION ONLY

## RADIO FIX AND HOLDING DATA RECORD

**NAME:** PULLMAN VOR/DME

**STATE:** MI

**COUNTRY:** US

**LATITUDE/LONGITUDE:** 422757.73N/0860617.32W

**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	PULLMAN	PMM	VOR/DME	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 DME	HOLDING ALTITUDES MIN MAX	TEMPLATES MIN MAX
1	E	PMM	VOR/DME	073.13	253.13	R	1-1 1/2	3000 29000	4 22
2	NE	PMM	VOR/DME	044.31	224.31	R	1	2500 10000	4 9

**CONTROLLING OBSTRUCTIONS:**

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
UPN	200	TOWER (26-003032)	423021.00N/0860318.00W	1169	4D
1	200	TOWER (26-003032)	423021.00N/0860318.00W	1169	4D
2	200	TOWER (26-003032)	423021.00N/0860318.00W	1169	4D

**HOLDING RESTRICTIONS:**

UNPLANNED HOLDING AUTHORIZED AT OR ABOVE 3000.

**REMARKS:**

CHART PAT 1 ON ENROUTE LOW.  
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

**FIX USE:**

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	PALACE			KARB	ANN ARBOR	MI (US)
DP	PALACE			KDET	DETROIT	MI (US)
DP	PALACE			KDTW	DETROIT	MI (US)
DP	PALACE			KYIP	DETROIT	MI (US)
DP	PALACE			KPTK	PONTIAC	MI (US)
DP	MITCHELL			KMKE	MILWAUKEE	WI (US)
EN ROUTE	J548					(US)
EN ROUTE	J70					(US)
EN ROUTE	J94-547		1			(US)
EN ROUTE	V170					(US)
EN ROUTE	V193					(US)
EN ROUTE	V274					(US)
EN ROUTE	V30					(US)
EN ROUTE	V55					(US)
EN ROUTE	V84					(US)
IAP	RNAV (GPS RWY 29)			K35D	ALLEGAN	MI (US)
IAP	RNAV (GPS) RWY 11			K35D	ALLEGAN	MI (US)
IAP	VOR RWY 29			K35D	ALLEGAN	MI (US)
IAP	ILS OR LOC RWY 8R			KGRR	GRAND RAPIDS	MI (US)
IAP	ILS OR LOC/DME RWY 26			KBIV	HOLLAND	MI (US)
IAP	VOR-A			KBIV	HOLLAND	MI (US)
IAP	ILS OR LOC RWY 35			KAZO	KALAMAZOO	MI (US)
IAP	RNAV (GPS) RWY 05			KLWA	SOUTH HAVEN	MI (US)
IAP	VOR RWY 23		2	KLWA	SOUTH HAVEN	MI (US)
STAR	PAITN			KORD	CHICAGO	IL (US)
STAR	WYNDE (RNAV)			KORD	CHICAGO	IL (US)

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

**COMPULSORY REPORTING POINT:** NO

**RECORD REVISION NUMBER:** 13

**DATE OF REVISION:** 02/11/2010

**REASON FOR REVISION:**

MOVED UNPLANNED HOLDING NOTE FROM REMARKS TO HOLDING RESTRICTIONS.  
CONDUCTED/DOCUMENTED PRECIPITOUS TERRAIN EVALUATION.  
UPDATED FIX USE.

**DEVELOPED BY:** **DATE:** 07/20/2009

**OFFICE:** AVN-120

**NAME:** STEVEN SZUKALA (SCOTT CORY)

**APPROVED BY:** **DATE:** 11/04/2009

**OFFICE:** AVN-120

**NAME:** SUE CRUMB

QUALITY  
17  
CHECKED

**SIGNATURE:****DISTRIBUTION:**

**NFDC**  
**FPO:** CEN  
**ARTCC:** ZAU  
**ATC FACILITY:** GRR APP CON, MKG APP CON  
**OTHER:**

QUALITY  
17  
CHECKED

# INFORMATION ONLY

## RADIO FIX AND HOLDING DATA RECORD

NAME: POSSM

STATE: IL

COUNTRY: US

LATITUDE/LONGITUDE: 415228.78N/0881630.63W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: MODIFY

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

### FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	ERNNY (RNAV)			KORD	CHICAGO	IL (US)
STAR	ESSPO (RNAV)			KORD	CHICAGO	IL (US)
STAR	VEECK (RNAV)			KORD	CHICAGO	IL (US)
STAR	WYNDE (RNAV)			KORD	CHICAGO	IL (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 2

DATE OF REVISION: 10/15/2015

### REASON FOR REVISION:

UPDATE FIX COORDINATES, FIX MOVED 3407 FEET (0.56 NM) SOUTH.

DEVELOPED BY:

DATE: 03/02/2015

OFFICE: AJV-353

NAME: THOMAS KIRKPATRICK

APPROVED BY:

DATE: 08/17/2015

OFFICE: AJV-353

NAME: GEORGE GONZALEZ

SIGNATURE:

DISTRIBUTION:

NFDC  
FPO: CEN  
ARTCC: ZAU  
ATC FACILITY: CHICAGO APP CON  
OTHER:

QUALITY  
17  
CHECKED

**INFORMATION ONLY****RADIO FIX AND HOLDING DATA RECORD****NAME:** RHIVR**STATE:** MI**COUNTRY:** US**LATITUDE/LONGITUDE:** 423845.44N/0861614.15W**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 NM	FAC FEET	MRA	MAA
1	VICTORY	VIO	VOR/DME	H	260.40	256.40	35.24	35.24		10000	45000

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

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	PAITN	1		KORD	CHICAGO	IL (US)
STAR	WYNDE (RNAV)			KORD	CHICAGO	IL (US)

**REQUIRED CHARTING:** STAR**COMPULSORY REPORTING POINT:** NO**RECORD REVISION NUMBER:** 2**DATE OF REVISION:** 11/13/2014**REASON FOR REVISION:**

CHANGED FAC 1 FROM GRAND RAPIDS (GRR) TO VICTORY (VIO).

**DEVELOPED BY:** **DATE:** 03/07/2014**OFFICE:** AJV-353**NAME:** THOMAS KIRKPATRICK**APPROVED BY:** **DATE:** 11/13/2014**OFFICE:** AJV-353**NAME:** GEORGE GONZALEZ**SIGNATURE:****DISTRIBUTION:**NFDC  
FPO: CEN  
ARTCC: ZAU  
ATC FACILITY:  
OTHER:QUALITY  
17  
CHECKED



# INFORMATION ONLY

## RADIO FIX AND HOLDING DATA RECORD

NAME: SAULT STE MARIE VOR/DME

STATE: MI

COUNTRY: US

LATITUDE/LONGITUDE: 462443.60N/0841853.54W

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	SAULT STE MARIE	SSM	VOR/DME	H						45000

HOLDING:

HOLDING TYPE OF ACTION: MODIFY

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	SE	SSM	VOR/DME	157.00	337.00	R	1		2400	10000	4	10
2	NE		WP	039.00	219.00	R		4	3000	10000	5	10

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
UPN	200	AAO	463448.00N/0841333.00W	1444	4E
1	200	AAO	462627.00N/0841324.00W	1024	4E
2	200	AAO	463442.00N/0841330.00W	1424	4E

HOLDING RESTRICTIONS:

UNPLANNED HOLDING AUTHORIZED AT OR ABOVE 3200.

REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	J101					(US)
EN ROUTE	J140					(US)
EN ROUTE	Q138					(US)
EN ROUTE	Q917					(US)
EN ROUTE	V193					(US)
EN ROUTE	V300					(US)
EN ROUTE	V316					(US)
EN ROUTE	V348					(US)
EN ROUTE	V36					(US)
EN ROUTE	V360					(US)
EN ROUTE	V45					(US)
IAP	HI-ILS OR LOC/DME RWY 1			KAPN	ALPENA	MI (US)
IAP	HI-TACAN RWY 19			KAPN	ALPENA	MI (US)
IAP	HI-VOR/DME OR TACAN RWY 1			KAPN	ALPENA	MI (US)
IAP	VOR RWY 23			KPLN	PELLSTON	MI (US)
IAP	RNAV (GPS) RWY 14			KANJ	SAULT STE MARIE	MI (US)
IAP	RNAV (GPS) RWY 32			KANJ	SAULT STE MARIE	MI (US)
IAP	VOR RWY 32		1	KANJ	SAULT STE MARIE	MI (US)
IAP	ILS RWY 16			KCIU	SAULT STE MARIE	MI (US)
IAP	NDB RWY 34			KCIU	SAULT STE MARIE	MI (US)
IAP	RNAV (GPS) RWY 10			KCIU	SAULT STE MARIE	MI (US)
IAP	RNAV (GPS) RWY 28			KCIU	SAULT STE MARIE	MI (US)
IAP	RNAV (GPS) RWY 34		2	KCIU	SAULT STE MARIE	MI (US)
STAR	PAITN			KORD	CHICAGO	IL (US)
STAR	WYNDE (RNAV)			KORD	CHICAGO	IL (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 13

DATE OF REVISION: 02/04/2016

REASON FOR REVISION:

UPDATED FIX USE.

REMOVED PAT 1.

ADDED "MILITARY IAP" TO REQUIRED CHARTING.

DEVELOPED BY:

DATE: 12/21/2015

OFFICE: AJV-5420

NAME: JACOB POWERS (ERIC KENNEDY)

APPROVED BY:

DATE: 12/29/2015

OFFICE: AJV-5420

NAME: GEORGE GONZALEZ

SIGNATURE:

QUALITY  
17  
CHECKED

**DISTRIBUTION:**    **NFDC**  
                         **FPO: CEN**  
                         **ARTCC: ZMP**  
                         **ATC FACILITY:**  
                         **OTHER: TORONTO CENTER**

QUALITY  
17  
CHECKED

# INFORMATION ONLY

## RADIO FIX AND HOLDING DATA RECORD

NAME: TUBEZ

STATE: IL

COUNTRY: US

LATITUDE/LONGITUDE: 421051.31N/0874202.89W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: ESTABLISH

FIX USE:  
USE TYPE

STAR  
STAR

USE TITLE

ERNNY (RNAV)  
WYNDE (RNAV)

FAC

PAT

AIRPORT IDENT

KORD  
KORD

CITY

CHICAGO  
CHICAGO

STATE

IL (US)  
IL (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG

DATE OF REVISION: 10/17/2013

DEVELOPED BY:

DATE: 04/22/2013

OFFICE: AJV-354

NAME: THOMAS KIRKPATRICK

APPROVED BY:

DATE: 08/30/2013

OFFICE: AJV-353

NAME: LARRY STROUT

SIGNATURE:

DISTRIBUTION:

NFDC  
FPO: CEN  
ARTCC: ZAU  
ATC FACILITY:  
OTHER:

QUALITY  
17  
CHECKED

# INFORMATION ONLY

## RADIO FIX AND HOLDING DATA RECORD

**NAME:** TRAVERSE CITY VOR/DME

**STATE:** MI

**COUNTRY:** US

**LATITUDE/LONGITUDE:** 444004.49N/0853300.06W

**TYPE:**

**AIRSPACE DOCKET:**

**FIX TYPE OF ACTION:** MODIFY

**FIX MAKE-UP FACILITIES:**

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM NM	FAC FEET	MRA	MAA
1	TRAVERSE CITY	TVC	VOR/DME	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	S	TVC	VOR/DME	160.00	340.00	R	1		3000	6000	4	5

**CONTROLLING OBSTRUCTIONS:**

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
UPN	200	TOWER (26-000612)	444537.00N/0854059.00W	1690	4D
1	200	TOWER (26-001838)	443246.00N/0852506.00W	1502	5D
1	310	TOWER (26-001762)	442312.20N/0852232.60W	1704	5D

**HOLDING RESTRICTIONS:**

UNPLANNED HOLDING AUTHORIZED AT OR ABOVE 3000.

**PROCEDURES REQUIRING CLIMB-IN-HOLD:**

PAT	PROCEDURE TITLE	AIRPORT IDENT	CITY	STATE
1	ILS OR LOC RWY 28	KTVC	TRAVERSE CITY	MI (US)

**REMARKS:**

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

**FIX USE:**

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	J548					(US)
EN ROUTE	V133					(US)
EN ROUTE	V193					(US)
EN ROUTE	V285					(US)
EN ROUTE	V320					(US)
EN ROUTE	V420					(US)
IAP	HI-ILS OR LOC/DME RWY 1			KAPN	ALPENA	MI (US)
IAP	HI-TACAN RWY 19			KAPN	ALPENA	MI (US)
IAP	HI-VOR/DME OR TACAN RWY 1			KAPN	ALPENA	MI (US)
IAP	ILS OR LOC RWY 7			KCAD	CADILLAC	MI (US)
IAP	RNAV (GPS) RWY 25			KCAD	CADILLAC	MI (US)
IAP	RNAV (GPS) RWY 7			KCAD	CADILLAC	MI (US)
IAP	RNAV (GPS) RWY 9			KCVX	CHARLEVOIX	MI (US)
IAP	NDB RWY 14			KGOV	GRAYLING	MI (US)
IAP	ILS OR LOC RWY 28		1	KTVC	TRAVERSE CITY	MI (US)
IAP	RNAV (GPS) RWY 28			KTVC	TRAVERSE CITY	MI (US)
IAP	VOR-A		1	KTVC	TRAVERSE CITY	MI (US)
STAR	PAITN			KORD	CHICAGO	IL (US)
STAR	WYNDE (RNAV)			KORD	CHICAGO	IL (US)

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

**COMPULSORY REPORTING POINT:** NO

**RECORD REVISION NUMBER:** 14

**DATE OF REVISION:** 12/10/2015

**REASON FOR REVISION:**

UPDATED FIX USE: REMOVED NDB RWY 28, REMOVED GPS RWY 36.  
DELETED REMARK "NAME CHANGE..."

**DEVELOPED BY:** **DATE:** 10/09/2015

**OFFICE:** AJV-5421

**NAME:** JACOB POWERS (WILLIAM MORGAN)

**APPROVED BY:** **DATE:** 12/01/2015

**OFFICE:** AJV-5420

**NAME:** GEORGE GONZALEZ

**SIGNATURE:**

**DISTRIBUTION:**

NFDC  
FPO: CEN  
ARTCC: ZMP, ZAU  
ATC FACILITY: TVC ATCT  
OTHER:

QUALITY  
17  
CHECKED

# INFORMATION ONLY

## RADIO FIX AND HOLDING DATA RECORD

NAME: UFDUH

STATE: MI

COUNTRY: US

LATITUDE/LONGITUDE: 434235.91N/0854746.97W

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	FAC FEET	MRA	MAA
1	TRAVERSE CITY	TVC	VORTAC	H	192.57	190.57	58.45	58.45		12000	45000

### EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
TVC	VORTAC	R-193	59	12000	15400

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

### REMARKS:

ENROUTE AND STAR MEA 18000, ATC REQUEST 12000 FOR VECTORING.

### FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	J548	1				(US)
STAR	PAITN	1		KORD	CHICAGO	IL (US)
STAR	WYNDE (RNAV)			KORD	CHICAGO	IL (US)

REQUIRED CHARTING: STAR, CONTROLLER, EN ROUTE HIGH

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 2

DATE OF REVISION: 10/17/2013

### REASON FOR REVISION:

UPDATED FAC 1 FROM HISTORY TO ACTIVE STATUS.

DEVELOPED BY:

DATE: 05/14/2013

OFFICE: AJV-353

NAME: JILL OLSON (AISHAT NAUZO)

APPROVED BY:

DATE: 08/30/2013

OFFICE: AJV-353

NAME: LARRY STROUT

SIGNATURE:

DISTRIBUTION:

NFDC  
FPO: CEN  
ARTCC: ZAU  
ATC FACILITY:  
OTHER:

QUALITY  
17  
CHECKED

# INFORMATION ONLY

## RADIO FIX AND HOLDING DATA RECORD

NAME: VICTORY VOR/DME

STATE: MI

COUNTRY: US

LATITUDE/LONGITUDE: 424712.18N/0852949.45W

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	FEET	MRA	MAA
1	VICTORY	VIO	VOR/DME	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 DME	HOLDING ALTITUDES MIN MAX	TEMPLATES MIN MAX
1	SW	VIO	VOR/DME	238.66	058.66	R	1	3000 6000	4 5
2	NW	VIO	VOR/DME	322.43	142.43	L	1	3000 6000	4 5
3	SW		WP	238.66	058.66	R	4	3000 6000	5 6

### CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
UPN	200	TOWER (26-001048)	424112.00N/0853152.00W	1920	5E
1	200	TOWER (26-001048)	424112.00N/0853152.00W	1920	5E
2	200	AAO	424512.00N/0852415.00W	1152	4E
3	200	TOWER (26-001048)	424112.00N/0853152.00W	1920	5E
3	310	TOWER (26-001048)	424112.00N/0853152.00W	1920	5E

### REASON FOR NONSTANDARD HOLDING:

PAT 2 ATC REQUEST

### HOLDING RESTRICTIONS:

UNPLANNED HOLDING AUTHORIZED AT OR ABOVE 3000.

### PROCEDURES REQUIRING CLIMB-IN-HOLD:

PAT	PROCEDURE TITLE	AIRPORT IDENT	CITY	STATE
3	RNAV (GPS) RWY 17	KGRR	GRAND RAPIDS	MI (US)

### REMARKS:

NAME CHANGED FROM GRAND RAPIDS VOR/DME TO VICTORY VOR/DME.  
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

### FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	MITCHELL			KMKE	MILWAUKEE	WI (US)
EN ROUTE	J34					(US)
EN ROUTE	V274					(US)
EN ROUTE	V285					(US)
EN ROUTE	V510					(US)
IAP	RNAV (GPS) RWY 23R			KBTL	BATTLE CREEK	MI (US)
IAP	ILS OR LOC RWY 26L		1	KGRR	GRAND RAPIDS	MI (US)
IAP	ILS OR LOC RWY 35			KGRR	GRAND RAPIDS	MI (US)
IAP	ILS OR LOC RWY 8R		1	KGRR	GRAND RAPIDS	MI (US)
IAP	RNAV (GPS) RWY 17		3	KGRR	GRAND RAPIDS	MI (US)
IAP	VOR RWY 17		1	KGRR	GRAND RAPIDS	MI (US)
IAP	RNAV (GPS) RWY 10			K6D6	GREENVILLE	MI (US)
IAP	RNAV (GPS) RWY 28			K6D6	GREENVILLE	MI (US)
IAP	VOR/DME-A			K6D6	GREENVILLE	MI (US)
IAP	VOR RWY 12		2	K9D9	HASTINGS	MI (US)
IAP	ILS OR LOC/DME RWY 26			KBIV	HOLLAND	MI (US)
IAP	VOR-A			KBIV	HOLLAND	MI (US)
IAP	ILS OR LOC RWY 28L			KLAN	LANSING	MI (US)
IAP	VOR-A			K8D4	SPARTA	MI (US)
STAR	PAITN			KORD	CHICAGO	IL (US)
STAR	WYNDE (RNAV)			KORD	CHICAGO	IL (US)
STAR	POLAR			KDTW	DETROIT	MI (US)
STAR	FAILS			KBKL	CLEVELAND	OH (US)
STAR	FAILS			KCGF	CLEVELAND	OH (US)
STAR	HIMEZ			KCLE	CLEVELAND	OH (US)
STAR	HIMEZ			K1G1	ELYRIA	OH (US)
STAR	HIMEZ			KLPR	LORAIN/ELYRIA	OH (US)
STAR	HIMEZ			K1G5	MEDINA	OH (US)
STAR	FAILS			K7G8	MIDDLEFIELD	OH (US)
STAR	FAILS			K2G1	PAINESVILLE	OH (US)
STAR	FAILS			KLNN	WILLOUGHBY	OH (US)

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

QUALITY  
17  
CHECKED

**COMPULSORY REPORTING POINT: NO****RECORD REVISION NUMBER: 17****DATE OF REVISION: 02/04/2016****REASON FOR REVISION:**

REMOVED KGRR - VOR RWY 35 FROM FIX USE.

**DEVELOPED BY:****DATE:** 11/24/2015**OFFICE:** AJV-5420**NAME:** JACOB POWERS (MEGAN CHAPMAN)**APPROVED BY:****DATE:** 12/03/2015**OFFICE:** AJV-5420**NAME:** GEORGE GONZALEZ**SIGNATURE:****DISTRIBUTION:**

NFDC

FPO: CEN

ARTCC: ZAU

ATC FACILITY: GRR APP CON, GRR ATCT

OTHER:

QUALITY  
17  
CHECKED

# INFORMATION ONLY

## RADIO FIX AND HOLDING DATA RECORD

NAME: VULCN

STATE: IL

COUNTRY: US

LATITUDE/LONGITUDE: 420530.34N/0874739.02W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: MODIFY

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

### FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	BENKY (RNAV)			KORD	CHICAGO	IL (US)
STAR	ERNNY (RNAV)			KORD	CHICAGO	IL (US)
STAR	ESSPO (RNAV)			KORD	CHICAGO	IL (US)
STAR	FYTTE (RNAV)			KORD	CHICAGO	IL (US)
STAR	MADII (RNAV)			KORD	CHICAGO	IL (US)
STAR	TRTLL (RNAV)			KORD	CHICAGO	IL (US)
STAR	VEECK (RNAV)			KORD	CHICAGO	IL (US)
STAR	WYNDE (RNAV)			KORD	CHICAGO	IL (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 1

DATE OF REVISION: 11/13/2014

DEVELOPED BY: DATE: 05/30/2014

OFFICE: AJV-353

NAME: AISHAT NAUZO

APPROVED BY: DATE: 11/13/2014

OFFICE: AJV-353

NAME: GEORGE GONZALEZ

SIGNATURE:

DISTRIBUTION:

NFDC  
FPO: CEN  
ARTCC: ZAU  
ATC FACILITY: ORD APP CON  
OTHER:

QUALITY  
17  
CHECKED



# INFORMATION ONLY

## RADIO FIX AND HOLDING DATA RECORD

NAME: WLTER

STATE: MI

COUNTRY: US

LATITUDE/LONGITUDE: 424111.39N/0860303.94W

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 NM	FAC FEET	MRA	MAA
1	VICTORY	VIO	VOR/DME	H	260.40	256.40	25.22	25.22		6000	45000
2	PULLMAN	PMM	VOR/DME	H	010.19	010.19	13.44	13.44		6000	45000

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	VIO	VOR/DME	260.40	260.40	L		10	18000	28000	17	22
2	E	WP	WP	079.40	259.40	L		10	6000	28000	15	22

### CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
2	200	TOWER (26-001372)	424414.00N/0853716.00W	1460	5D

### REASON FOR NONSTANDARD HOLDING:

PAT 1 ATC REQUEST  
PAT 2 ATC REQUEST

### HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERNS.

### REMARKS:

PULLMAN (FAC 2) USED TO ESTABLISH FIX COORDINATES  
STAR MEA 10000. ATC REQUEST 6000 TO 45000 FOR VECTORING.  
PAT 2: 10 DME LEG LENGTH AT ATC REQUEST.  
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

### FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	J548	1, 2				(US)
STAR	PAITN	1, 2	1	KORD	CHICAGO	IL (US)
STAR	WYNDE (RNAV)		2	KORD	CHICAGO	IL (US)

REQUIRED CHARTING: STAR, CONTROLLER, EN ROUTE HIGH

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 3

DATE OF REVISION: 11/13/2014

### REASON FOR REVISION:

CHANGED FAC 1 FROM GRAND RAPIDS (GRR) TO VICTORY (VIO).  
CHANGED HOLDING PAT 1 IDENT FROM GRR TO VIO.  
CHANGED HOLDING PAT 2 MIN TEMPLATE FROM 6 TO 15, AND CONTROLLING OBST FROM 1370 MSL TOWER TO 1460 MSL TOWER.

DEVELOPED BY: DATE: 03/07/2014

OFFICE: AJV-353

NAME: THOMAS KIRKPATRICK

APPROVED BY: DATE: 11/13/2014

OFFICE: AJV-353

NAME: GEORGE GONZALEZ

SIGNATURE:

DISTRIBUTION:

NFDC  
FPO: CEN  
ARTCC: ZAU  
ATC FACILITY:  
OTHER:

QUALITY  
17  
CHECKED

# INFORMATION ONLY

## RADIO FIX AND HOLDING DATA RECORD

NAME: WYNDE

STATE: IL

COUNTRY: US

LATITUDE/LONGITUDE: 422720.73N/0870636.63W

TYPE: WP, 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 NM	FAC FEET	MRA	MAA
1	NORTHBROOK	OBK	VOR/DME	H	071.14	069.14	39.99	39.99		6000	17500

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	OBK	VOR/DME	071.15	251.15	R		8	10000	17500	11	18
2	E		WP	072.97	252.97	R		9	6000	17500	13	17

### CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	230	208' SHIP	422836.31N/0870743.06W	786	2C
2	200	208' SHIP	422836.31N/0870743.06W	786	2C

### HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERNS.

### REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.  
PAT 2: EVALUATED WITH 9 DME LEG LENGTH AT ATC REQUEST.

### FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	PAITN	1	1	KORD	CHICAGO	IL (US)
STAR	WYNDE (RNAV)		2	KORD	CHICAGO	IL (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 3

DATE OF REVISION: 10/15/2015

### REASON FOR REVISION:

HOLDING PAT 2: CHANGED MIN TEMPLATE FROM 6 TO 13.

DEVELOPED BY: DATE: 03/10/2015 OFFICE: AJV-353 NAME: THOMAS KIRKPATRICK

APPROVED BY: DATE: 08/17/2015 OFFICE: AJV-353 NAME: GEORGE GONZALEZ

SIGNATURE:

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