Flight Procedure Tracking Form	Action: FLIGHT CHECK	Task Type: AWSEG	Date Open: 02/27/2012	Task #: 2012022732044601001	Request #: 20120227320446
Procedure: V 190 MITBEE (MMB) VORTAC OK TO SPRINGFIELD (SGF) VORTAC MO Y		Airport ID: OK	Airport:		Reimbursable #:
City:	ST: OK	GPS #:		Estimated Chart Date: 01/10/2013	FICO #:
Fac ID: SGF	Fac. Type: Proc R	Specialist: LORETTA ZUEST			

Procedure Review

	Rec'd	Rel'd	Full Name	Comments
Lead:	03/05/2012	07/11/2012	TOBY HUFF	
QA:	07/11/2012	10/02/2012	LEE STUCKEY	
Liaison:	10/02/2012		Spurlin	

ESV REQUEST INCLUDED

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

pg 2 of 4

AIRWAY: V 190 MITBEE (MMB) VTAC OK - SPRINGFIELD (SGF) VTAC MO ENROUTE-YES FC: 11.13.12 PUB: 1.10.13

ATTACHED FORMS: ESV REPORTS; 8260-16; 8260-2(S): BRATLESVILLE (BVO) VDME, REV 10; CARON-INT, REV 9; EJYAR-INT, REV 2; FIRET-INT, REV 1; IDLUY-INT, REV 1; MIRTH-INT, REV 5; QUALM-INT, REV 6; WACCO-INT, REV 8; (INFO ONLY) MITBEE (MMB) VTAC, REV 8; OSWEGO (OSW) VTAC, REV 13; PIONEER (PER) VTAC, REV 16; SPRINGFIELD (SGF) VTAC, REV 15; TULSA (TUL) VTAC, REV 13.

CONTACT: RAYMOND K. NUSSEAR, ENROUTE MANAGER / TOBY HUFF, ENROUTE LEAD; 301.427.4826, 405.954.9954.

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : MITBEE	City : GAGE	Ident : MMB	State : OK
Type/Class : TACR	Frequency : M1190	Reference No. : 12031201	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 698193-031	49	0	48	50	175

Requirement: GRANDFATHERED: V12-190 FROM MITBEE (MMB) VTAC TO ANTHONY (ANY) VTAC COP

Signature: ZUEST LORETTA | Routing Symbol: AJV-311 | Date: 03/23/2012

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698193-031	49	0	48	50	175	APPROVE

Requirement/Remarks: GRANDFATHERED: V12-190 FROM MITBEE (MMB) VTAC TO ANTHONY (ANY) VTAC COPAPPROVED PEND: FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: mai kimberly | Routing Symbol: | Date: 03/23/2012

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698193-031	49	0	48	50	175	APPROVE

Requirement/Remarks: GRANDFATHERED: V12-190 FROM MITBEE (MMB) VTAC TO ANTHONY (ANY) VTAC COPAPPROVED PEND: FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: Hughes Dennis | Routing Symbol: | Date: 03/26/2012

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698193-031	49	0				

Requirement/Remarks:

Signature: | Routing Symbol: | Date:

ESV Details

Originating Office	Airspace Docket Number	Request Type: Establish	
Facility Data			
Chart Name: MITBEE	City: GAGE	Ident: MMB	State: OK
Type/Class: H-VOR	Frequency: M115.6	Reference No.: 12031200	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 711549-031	49	0	48	50	175

Requirement: GRANDFATHERED: V12-190 FROM MITBEE (MMB) VTAC TO ANTHONY (ANY) VTAC COP

Signature: ZUEST LORETTA | Routing Symbol: AJV-311 | Date: 03/23/2012

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 711549-031	49	0	48	50	175	APPROVE

Requirement/Remarks: GRANDFATHERED: V12-190 FROM MITBEE (MMB) VTAC TO ANTHONY (ANY) VTAC COPAPPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: mai kimberly | Routing Symbol: | Date: 03/23/2012

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 711549-031	49	0	48	50	175	APPROVE

Requirement/Remarks: GRANDFATHERED: V12-190 FROM MITBEE (MMB) VTAC TO ANTHONY (ANY) VTAC COPAPPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: Hughes Dennis | Routing Symbol: | Date: 03/26/2012

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 711549-031	49	0				

Requirement/Remarks:

Signature: | Routing Symbol: | Date:

TRANSMITTAL OF AIRWAYS / ROUTE DATA

AIRWAY NO. OR ROUTE	FROM / TO	ROUTINE OR DOCKET NO.	CONTROLLING @ TERRAIN/OBSTRUCTION AND COORDINATES	MRA / MOCA	MAA / MEA	GNSS MEA	CHANGE OVER POINT	FIX MRA/MCA	REMARKS	FLIGHT INSPECTION DATES
V190	MITBEE, OK VORTAC CARON, OK		TOWER 2673 362605.00N/0994629.00W TERRAIN 2471 @ 362345.00N/0995454.00W	5000 3700	17500 5000 SW 8000 NE		DL CARON		ADD DUAL MEA DUE TO 2/6/12 FC RESTRICTION AT CARON FROM PER VTAC.	PENDING
									DELETE MRA FLAG	
V190	CARON, OK FIRET, OK		TOWER 1768 365155.00N/0983857.00W TERRAIN 1460 @ 370200.00N/0983721.00W	8000 2800	17500 8000				INC MOCA NEW CONTROLLING OBST.	PENDING
									INC MEA 2/6/12 FC RESTRICTION FOR PER VTAC	
V190	FIRET, OK PIONEER, OK VORTAC		TOWER 1564 364535.07N/0970936.88W TERRAIN 1132 @ 365115.00N/0972651.00W	3000 -2600-	17500 3000 E 8000 W				ADD SEGMENT	PENDING
									CLEAR FDC NOTAM	
V190	PIONEER, OK VORTAC BARTLESVILLE, OK VOR/DME		TOWER 1577 364407.92N/0963356.20W TERRAIN 1296 @ 364621.00N/0963236.00W	3000 -2700-	17500 3000		DL IDLUY		CHANGED IDLUY FROM CNF TO DME FIX INC MOCA TO MATCH V256	PENDING

DATE	OFFICE	TITLE	SIGNATURE
	AJV-311	MANAGER	RAY NUSSEAR

Q4 B APPROVED

TRANSMITTAL OF AIRWAYS / ROUTE DATA

AIRWAY NO. OR ROUTE	FROM / TO	ROUTINE OR DOCKET NO.	CONTROLLING @ TERRAIN/OBSTRUCTION AND COORDINATES	MRA / MOCA	MAA / MEA	GNSS MEA	CHANGE OVER POINT	FIX MRA/MCA	REMARKS	FLIGHT INSPECTION DATES
V190	BARTLESVILLE, OK VOR/DME OSWEGO, KS VORTAC		TOWER 1305 370309.00N/0952121.00W TERRAIN 1027 @ 370206.00N/0952051.00W	2700 -2400-	17500 2700		DL EJYAR		INC MEA NEW CONTROLLING OBST	PENDING
V190	OSWEGO, KS VORTAC * WACCO, MO		TOWER 2049 @ 371315.00N/0944226.OOW TERRAIN 1078 371240.00N/0944852.00W	3100 -3100-	17500 3100		DL WACCO	* 3700	INC MEA NEW CONTROLLING OBST ADD WACCO MRA NEW SEGMENT	PENDING
V190	WACCO, MO * QUALM, MO		TOWER 1956 @ 370549.20N/0943425.80W TERRAIN 1096 370839.00N/0941836.00W	3700 3000	17500 3700			* 3700	NEW SEGMENT. ADD QUALM MRA. MEA DUE TO ESV. CONT OBS FROM V88.	PENDING
V190	QUALM, MO * MIRTH, MO		TOWER 1757 372011.00N/0933213.00W TERRAIN 1378 @ 371345.00N/0935233.00W	3000 -2800-	17500 3000			*3700	NO CHANGES	PENDING
V190	MIRTH, MO SPRINGFIELD, MO VORTAC		TOWER 1757 372011.00N/0933213.00W TERRAIN 1378 @ 371345.00N/0933523.00W	3000 -2800-	17500 3000				ADD MEA BREAK 100 RED TO RETAIN CARD ALT	PENDING
									3/15/13: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 1/29/13.	
									1. ADDED QUALM TO MIRTH SEGMENT. 2. RETAIN 3700 MRA AT MIRTH.	

DATE	OFFICE	TITLE	SIGNATURE
	AJV-311	MANAGER	RAY NUSSEAR

QA B APPROVED

FAA FORM 8260-16 / October 2002 (computer generated)

RADIO FIX AND HOLDING DATA RECORD

NAME: BARTLESVILLE VOR/DME **STATE:** OK **COUNTRY:** US

LATITUDE/LONGITUDE: 365003.61N/0960106.35W **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	BARTLESVILLE	BVO	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	LEG LENGTH DME	HOLDING ALTITUDES MIN	HOLDING ALTITUDES MAX	TEMPLATES MIN	TEMPLATES MAX
1	N	BVO	VOR/DME	347.00	167.00	R	1		2500	6000	4	5
2	N	BVO	VOR/DME	346.00	166.00	R	1		3100	6000	4	5

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	AAO	364755.00N/0960523.00W	1219	2C
1	310	TOWER (40-001175)	364523.00N/0960930.00W	1387	1A
2	200	AAO	364755.00N/0960523.00W	1219	2C

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERNS.

PROCEDURES REQUIRING CLIMB-IN-HOLD:

PAT	PROCEDURE TITLE	AIRPORT IDENT	CITY	STATE
1	VOR RWY 17	KBVO	BARTLESVILLE	OK (US)
1	LOC RWY 17	KBVO	BARTLESVILLE	OK (US)

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETE

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	BENTON			KVBT	BENTONVILLE	AR (US)
DP	RAZORBACK			KFYV	FAYETTEVILLE	AR (US)
DP	HIGHFILL			KXNA	FAYETTEVILLE/SPRINGDALE/ROGERS	AR (US)
DP	ROGERS			KROG	ROGERS	AR (US)
DP	SPRING			KASG	SPRINGDALE	AR (US)
DP	TULSA			KRVS	TULSA	OK (US)
DP	TULSA			KTUL	TULSA	OK (US)
EN ROUTE	Q128					(US)
EN ROUTE	Q148					(US)
EN ROUTE	V190					(US)
IAP	ILS OR LOC RWY 35			KIDP	INDEPENDENCE	KS (US)
IAP	NDB RWY 35			KIDP	INDEPENDENCE	KS (US)
IAP	RNAV (GPS) RWY 35			KIDP	INDEPENDENCE	KS (US)
IAP	VOR-A		2	KIDP	INDEPENDENCE	KS (US)
IAP	LOC RWY 17		1	KBVO	BARTLESVILLE	OK (US)
IAP	RNAV (GPS) RWY 17			KBVO	BARTLESVILLE	OK (US)
IAP	RNAV (GPS) RWY 35			KBVO	BARTLESVILLE	OK (US)
IAP	VOR RWY 17		1	KBVO	BARTLESVILLE	OK (US)
IAP	VOR/DME RWY 35		1	KBVO	BARTLESVILLE	OK (US)
IAP	VOR/DME - A			KOWP	SAND SPRINGS	OK (US)
STAR	VINTA			KTUL	TULSA	OK (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 10 **DATE OF REVISION:** 05/02/2013

REASON FOR REVISION:
UPDATED COORDINATES FROM 365003.29N/0960105.94W DUE TO NEW SURVEY DATA.
UPDATED FIX USE.

01/22/13: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 12/21/12.
1. MOVED HOLDING LIMITED TO ESTABLISHED PATTERNS NOTE TO HOLDING RESTRICTIONS.
2. ADDED NOTE, PRECIPITOUS TERRAIN EVALUATION COMPLETED TO REMARKS.

DEVELOPED BY: **DATE:** 07/03/2012 **OFFICE:** AJV-311 **NAME:** LORETTA ZUEST

04 B APPROVED

APPROVED BY: **DATE:** 12/21/2012 **OFFICE:** AJV-311 **NAME:** RAY NUSSEAR

SIGNATURE:

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

RADIO FIX AND HOLDING DATA RECORD

NAME: CARON **STATE:** OK **COUNTRY:** US

LATITUDE/LONGITUDE: 365642.51N/0983739.30W **TYPE:** 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	ANTHONY	ANY	VORTAC	L	232.86	239.86	25.41	25.41		3000	17500
2	PIONEER	PER	VORTAC	H	274.00	280.00	71.66	71.66		8000	17500

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
PER	VORTAC	R-274	72	8000	15600

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

REMARKS:
ANTHONY (FAC 1) USED TO ESTABLISH FIX COORDINATES
ESV FROM MITBEE (MMB) VTAC R-049 D48 50/175 USED FOR DOGLEG COP ON V190 FROM MMB VTAC TO PIONEER (PER) VTAC.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	V12-190	1, 2				(US)
IAP	RNAV (GPS) RWY 36			KANY	ANTHONY	KS (US)
IAP	VOR OR GPS-B	1		K8K2	HARPER	KS (US)

REQUIRED CHARTING: IAP, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 9 **DATE OF REVISION:** 01/10/2013

REASON FOR REVISION:
CHANGE FIX TYPE FROM INT/DME TO DME.
CHANGE FAC USED TO ESTABLISH FIX POSITION FROM FAC 1 ANY AND FAC 2 ODG TO FAC 1 ANY.
DELETE FAC 2 (ODG), CHANGE FAC 3 (PER) TO FAC 2.
RAISED FAC 2 MRA FROM 5000 TO 8000.
RAISED PER VTAC ESV MIN ALTITUDE FROM 5000 TO 8000.
DELETED MRA RESTRICTION.

DEVELOPED BY: **DATE:** 03/20/2012 **OFFICE:** AJV-311 **NAME:** LORETTA ZUEST

APPROVED BY: **DATE:** **OFFICE:** AJV-311 **NAME:** RAY NUSSEAR

SIGNATURE:

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

RADIO FIX AND HOLDING DATA RECORD

NAME: EJYAR **STATE:** OK **COUNTRY:** US

LATITUDE/LONGITUDE: 365536.99N/0953501.43W **TYPE:** 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	BARTLESVILLE	BVO	VOR/DME	L	067.02	075.02	21.65	21.65		2800	17500
2	OSWEGO	OSW	VORTAC	L	225.00	233.00	22.90	22.90		2800	17500

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	V190	1, 2				(US)

REQUIRED CHARTING: CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 2 **DATE OF REVISION:** 01/10/2013

REASON FOR REVISION:
CHANGED FAC 1 MAG/TRUE BRG FROM 067.00/075.00 TO 067.02/075.02 DUE TO BVO VDME COORDINATES CHANGE
INCREASED FAC 1 AND 2 MRA FROM 2500 TO 2800 DUE TO NEW CONTROLLING OBSTACLE

DEVELOPED BY: **DATE:** 06/28/2012 **OFFICE:** AJV-311 **NAME:** LORETTA ZUEST

APPROVED BY: **DATE:** **OFFICE:** AJV-311 **NAME:** RAY NUSSEAR

SIGNATURE:

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

RADIO FIX AND HOLDING DATA RECORD

NAME: FIRET **STATE:** OK **COUNTRY:** US

LATITUDE/LONGITUDE: 364722.57N/0972759.94W **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	DIST FROM FAC FEET	MRA	MAA
1	PIONEER	PER	VORTAC	H	274.00	280.00	15.00	15.00		3000	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	W		WP	275.00	095.00	R		5	5000	10000	6	10

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (40-020379)	365204.55N/0973626.67W	1512	4D

REMARKS:
PIONEER (FAC 1) USED TO ESTABLISH FIX COORDINATES
HOLDING LIMITED TO ESTABLISHED PATTERN.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	V190	1				(US)
IAP	RNAV (GPS) RWY 17		1	KO53	MEDFORD	OK (US)
IAP	RNAV (GPS) RWY 35		1	KO53	MEDFORD	OK (US)

REQUIRED CHARTING: IAP, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 1 **DATE OF REVISION:** 01/10/2013

REASON FOR REVISION:
UPDATE FORMAT
ADD DIST FROM FAC AND MRA TO FAC 1
DELETE FAC 2 LIBEY FIX
CHANGE HOLDING PATTERN LKEG LENGTH FROM 4 NM TO 5 NM.
CHANGED HOLDING TEMPLATE FROM MIN 5 MAX 7 TO MIN 6 MAX 10
UPDATE HOLDING CONTROLLING OBSTACLE
DELETED C-I-H REMARK
UPDATE FIX USE

DEVELOPED BY: **DATE:** 03/20/2012 **OFFICE:** AJV-311 **NAME:** LORETTA ZUEST

APPROVED BY: **DATE:** **OFFICE:** AJV-311 **NAME:** RAY NUSSEAR

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: CEN
ARTCC: ZKC
ATC FACILITY:
OTHER: VANCE APP CON

RADIO FIX AND HOLDING DATA RECORD

NAME: IDLUY **STATE:** OK **COUNTRY:** US

LATITUDE/LONGITUDE: 364251.12N/0963632.58W **TYPE:** 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	PIONEER	PER	VORTAC	H	088.00	094.00	26.65	26.65		3000	17500
2	BARTLESVILLE	BVO	VOR/DME	L	247.99	255.99	29.37	29.37		3000	17500

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

REMARKS:
PIONEER (FAC 1) USED TO ESTABLISH FIX COORDINATES

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	V190	1, 2				(US)
EN ROUTE	V256	1				(US)

REQUIRED CHARTING: CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 1 **DATE OF REVISION:** 01/10/2013

REASON FOR REVISION:
CHANGED FROM CNF TO DME FIX
ADDED FAC 1 AND 2
UPDATED FIX USE

DEVELOPED BY: **DATE:** 06/28/2012 **OFFICE:** AJV-311 **NAME:** LORETTA ZUEST

APPROVED BY: **DATE:** **OFFICE:** AJV-311 **NAME:** RAY NUSSEAR

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: FTW
ARTCC: ZKC
ATC FACILITY:
OTHER:

RADIO FIX AND HOLDING DATA RECORD

NAME: MIRTH **STATE:** MO **COUNTRY:** US

LATITUDE/LONGITUDE: 371704.76N/0935445.98W **TYPE:** 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	SPRINGFIELD	SGF	VORTAC	H	257.41	261.41	28.03	28.03		3000	17500
2	BUTLER	BUM	VORTAC	H	148.00	155.00		65.20		3700	17500

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
BUM	VORTAC	R-148	66	3700	15400

FIX RESTRICTIONS:
MRA V88-190 3700

HOLDING: **HOLDING TYPE OF ACTION:** CANCEL

REMARKS:
BUTLER (FAC 2) AND SPRINGFIELD (FAC 1) USED TO ESTABLISH FIX COORDINATES
FIX USED BY ATC AS COORDINATION POINT.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	V190	1, 2				(US)
EN ROUTE	V88	1, 2				(US)
IAP	NDB RWY 3				LAMAR	MO (US)

REQUIRED CHARTING: IAP, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 5 **DATE OF REVISION:** 05/02/2013

REASON FOR REVISION:
DELETE HOLDING.
UPDATED FORMAT.
ADDED DIST FROM FAC TO FAC 1 AND 3.

01/22/13: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 12/21/12.
1. RETAINED FIX RESTRICTION MRA V88-190 3700.
2. REMOVED FAC 2 NEOSHO (EOS)VDME.
3. RETAINED SGF VTAC AS FAC 1 AND BUM VTAC AS FAC 2.

DEVELOPED BY: **DATE:** 06/29/2012 **OFFICE:** AJV-311 **NAME:** LORETTA ZUEST

APPROVED BY: **DATE:** 12/21/2012 **OFFICE:** AJV-311 **NAME:** RAY NUSSEAR

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: CEN
ARTCC: ZKC
ATC FACILITY:
OTHER: COU AFSS

RADIO FIX AND HOLDING DATA RECORD

NAME: QUALM **STATE:** MO **COUNTRY:** US

LATITUDE/LONGITUDE: 371418.80N/0941628.84W **TYPE:** 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	DIST FROM FAC FEET	MRA	MAA
1	SPRINGFIELD	SGF	VORTAC	H	257.41	261.41	45.57	45.57		3000	17500
2	NEOSHO	EOS	VOR/DME	H	011.00	018.00		24.96		3000	17500

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
SGF	VORTAC	R-257	46	3000	15800

FIX RESTRICTIONS:
MRA V190 3700
MRA V88 3700

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	SGF	VORTAC	257.41	257.41	R	1		3000	14000	5	12

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (29-001308)	371857.00N/0940907.00W	1375	2C

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERN.

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED.
FIX 3.8 FEET NORTH OF AIRWAY CENTERLINE NOT MOVED PER ENROUTE POLICY LETTER DATED 2/28/2012.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	V190	1, 2				(US)
IAP	ILS OR LOC RWY 13			KJLN	JOPLIN	MO (US)

REQUIRED CHARTING: IAP, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 6 **DATE OF REVISION:** 01/10/2013

REASON FOR REVISION:
UPDATE FIX USE.
UPDATE HOLDING OBST ID NUMBER.

DEVELOPED BY: **DATE:** 10/01/2012 **OFFICE:** AJV-311 **NAME:** LEE STUCKEY

APPROVED BY: **DATE:** **OFFICE:** AJV-311 **NAME:** RAY NUSSEAR

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: MKC
ARTCC: ZKC
ATC FACILITY: JLN ATCT
OTHER:

RADIO FIX AND HOLDING DATA RECORD

NAME: WACCO **STATE:** MO **COUNTRY:** US

LATITUDE/LONGITUDE: 371200.81N/0943407.63W **TYPE:** 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	TULSA	TUL	VORTAC	H	036.00	044.00		84.14		6200	17500
2	OSWEGO	OSW	VORTAC	L	077.00	085.00	30.55	30.55		3100	17500
3	NEOSHO	EOS	VOR/DME	H	336.43	343.43		22.37		3100	17500
4	SPRINGFIELD	SGF	VORTAC	H	257.41	261.41		59.86		3700	17500

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
SGF	VORTAC	R-257	60	3700	15800
TUL	VORTAC	R-036	85	6200	15200

FIX RESTRICTIONS:
MCA V88 6200 SOUTHWEST BOUND
MRA V190 3700

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

REMARKS:
OSWEGO (FAC 2) AND TULSA (FAC 1) USED TO ESTABLISH FIX COORDINATES

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	V-190	2, 3, 4				(US)
EN ROUTE	V-88	1, 3, 4				MO (US)
IAP	RNAV (GPS) RWY 34			KPTS	PITTSBURG	KS (US)
IAP	NDB RWY 3			KLLU	LAMAR	MO (US)

REQUIRED CHARTING: CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 8 **DATE OF REVISION:** 03/07/2013

REASON FOR REVISION:
CHANGE FAC 2 TO FAC 3, FAC 1 TO FAC 2, ADD TUL AS NEW FAC 1, ADD SGF AS NEW FAC 4.
CHANGE FAC 2 AND 3 MRA FROM 3000 TO 3100.
CHANGE FACS TO FORM FIX COORDINATES FROM OSW AND EOS TO OSW AND TUL.
ADD MRA FLAGS.

12/11/12: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 08/07/12.
CHANGED FIX RESTRICTIONS FROM MRA V88 6200 TO MCA V88 6200 SW.

DEVELOPED BY: **DATE:** 08/07/2012 **OFFICE:** AJV-311 **NAME:** LEE STUCKEY

APPROVED BY: **DATE:** **OFFICE:** AJV-311 **NAME:** RAY NUSSEAR

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: MKC
ARTCC: ZKC
ATC FACILITY:
OTHER:

QA B APPROVED

INFO ONLY

INFO ONLY

RADIO FIX AND HOLDING DATA RECORD

NAME: MITBEE VORTAC **STATE:** OK **COUNTRY:** US

LATITUDE/LONGITUDE: 362037.44N/0995248.44W **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	MITBEE	MMB	VORTAC	H							45000

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	MMB	VORTAC	107.00	287.00	R	1		4000	14000	4	10
2	N	MMB	VORTAC	016.59	196.59	R	1		4000	14000	4	10

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	AAO	362424.00N/0995621.00W	2694	4D
2	200	TOWER (40-020056)	362933.80N/0995252.69W	2793	1A

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERNS.

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED.
"NAME CHANGED FROM GAGE VORTAC TO MITBEE VORTAC".

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	J26					(US)
EN ROUTE	J98					(US)
EN ROUTE	V12					(US)
EN ROUTE	V17					(US)
EN ROUTE	V190					(US)
EN ROUTE	V280					(US)
EN ROUTE	V390					(US)
EN ROUTE	V402					(US)
EN ROUTE	V507					(US)
IAP	NDB-A			KBFK	BUFFALO	OK (US)
IAP	VOR/DME-A			KWWR	WOODWARD	OK (US)
IAP	RNAV (GPS) RWY 22			KHHF	CANADIAN	TX (US)
IAP	RNAV (GPS) RWY 35			KT93	FOLLETT	TX (US)
IAP	VOR/DME-A		1	KT93	FOLLETT	TX (US)
IAP	VOR/DME-A		2	K1X1	HIGGINS	TX (US)
IAP	NDB-A			KPYX	PERRYTON	TX (US)
IAP	RNAV (GPS) RWY 35			KPYX	PERRYTON	TX (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 8 **DATE OF REVISION:** 06/03/2010

REASON FOR REVISION:
NAME CHANGED FROM GAGE VORTAC TO MITBEE VORTAC.
ID CHANGED FROM GAG TO MMB.
UPDATED HOLDING OBSTACLE.

DEVELOPED BY: **DATE:** 12/11/2009 **OFFICE:** AVN-120 **NAME:** DEANNA FIELDS

APPROVED BY: **DATE:** 03/10/2010 **OFFICE:** AVN-120 **NAME:** SUE CRUMB

SIGNATURE:

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

INFO ONLY INFO ONLY

RADIO FIX AND HOLDING DATA RECORD

NAME: OSWEGO VORTAC **STATE:** KS **COUNTRY:** US

LATITUDE/LONGITUDE: 370927.04N/0951213.08W **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	DIST FROM FAC FEET	MRA	MAA
1	OSWEGO	OSW	VORTAC	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	LEG LENGTH DME	HOLDING ALTITUDES MIN	HOLDING ALTITUDES MAX	TEMPLATES MIN	TEMPLATES MAX
1	N	OSW	VORTAC	019.00	199.00	R	1-1 1/2		2500	17500	4	16

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
UPN	200	TOWER (20-001772)	371044.00N/0951852.00W	1324	2C
1	200	TOWER (20-002351)	371107.90N/0950715.49W	1296	1A

HOLDING RESTRICTIONS:
UNPLANNED HOLDING AUTHORIZED AT OR ABOVE 2500.

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	V161					(US)
EN ROUTE	V190					(US)
EN ROUTE	V307					(US)
EN ROUTE	V516					(US)
IAP	RNAV (GPS) RWY 36			KCNU	CHANUTE	KS (US)
IAP	NDB RWY 35			KCFV	COFFEYVILLE	KS (US)
IAP	RNAV (GPS) RWY 35			KCFV	COFFEYVILLE	KS (US)
IAP	VOR/DME-A	1		KCFV	COFFEYVILLE	KS (US)
IAP	ILS OR LOC RWY 35			KIDP	INDEPENDENCE	KS (US)
IAP	NDB RWY 35			KIDP	INDEPENDENCE	KS (US)
IAP	VOR-A			KIDP	INDEPENDENCE	KS (US)
IAP	VOR OR GPS RWY 2			K2K7	NEODESHA	KS (US)
IAP	VOR/DME RWY 4			KPTS	PITTSBURG	KS (US)
IAP	ILS OR LOC/DME RWY 18			KJLN	JOPLIN	MO (US)
IAP	ILS OR LOC/NDB RWY 13			KJLN	JOPLIN	MO (US)
IAP	LOC BC RWY 31			KJLN	JOPLIN	MO (US)
IAP	LOC RWY 17			KBVO	BARTLESVILLE	OK (US)
IAP	VOR/DME-A		1	KMIO	MIAMI	OK (US)

REQUIRED CHARTING: IAP, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 13 **DATE OF REVISION:** 06/03/2010

REASON FOR REVISION:
RESTRICTIONS/REMARKS UPDATED.
FIX USE UPDATED.

DEVELOPED BY: **DATE:** 11/17/2009 **OFFICE:** AVN-120 **NAME:** ANGELO VENTRESCA

APPROVED BY: **DATE:** 03/23/2010 **OFFICE:** AVN-120 **NAME:** SUE CRUMB

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: CEN
ARTCC: ZKC
ATC FACILITY: JLN ATCT
OTHER:

INFO ONLY

INFO ONLY

RADIO FIX AND HOLDING DATA RECORD

NAME: PIONEER VORTAC **STATE:** OK **COUNTRY:** US

LATITUDE/LONGITUDE: 364447.51N/0970936.56W **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	DIST FROM FAC FEET	MRA	MAA
1	PIONEER	PER	VORTAC	H							45000

FIX RESTRICTIONS:
RNAV (GPS) RWY 17 (SPECIAL)

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	W	PER	VORTAC	290.65	110.65	L	1		2700	14000	4	10
2	E	PER	VORTAC	083.40	263.40	R	1		2800	14000	4	10
3	S	PER	VORTAC	188.98	008.98	R	1		3000	14000	4	10

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	230	TOWER (40-001505)	364535.07N/0970936.88W	1564	1A
2	230	TOWER (40-001505)	364535.07N/0970936.88W	1564	1A
3	230	TOWER (40-001505)	364535.07N/0970936.88W	1564	1A

REASON FOR NONSTANDARD HOLDING:
PAT 1 ATC REQUEST

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERNS.

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	J23					(US)
EN ROUTE	V190					(US)
EN ROUTE	V256					(US)
EN ROUTE	V354					(US)
EN ROUTE	V516					(US)
EN ROUTE	V532					(US)
EN ROUTE	V74					(US)
EN ROUTE	V77					(US)
IAP	ILS OR LOC RWY 35			KWLD	WINFIELD/ARKANSAS CITY	KS (US)
IAP	RNAV (GPS) RWY 17			KBKN	BLACKWELL	OK (US)
IAP	RNAV (GPS) RWY 35			KBKN	BLACKWELL	OK (US)
IAP	VOR-A		2	KBKN	BLACKWELL	OK (US)
IAP	ILS OR LOC RWY 35			KWDG	ENID	OK (US)
IAP	RNAV (GPS) RWY 17			KWDG	ENID	OK (US)
IAP	RNAV (GPS) RWY 35			KWDG	ENID	OK (US)
IAP	VOR RWY 17			KWDG	ENID	OK (US)
IAP	VOR RWY 35			KWDG	ENID	OK (US)
IAP	RNAV (GPS) RWY 17 (SPECIAL)			K29OK	PERRY	OK (US)
IAP	RNAV (GPS) RWY 17			KF22	PERRY	OK (US)
IAP	VOR/DME RWY 17		3	KF22	PERRY	OK (US)
IAP	ILS OR LOC/DME RWY 17		1	KPNC	PONCA CITY	OK (US)
IAP	VOR-A		1	KPNC	PONCA CITY	OK (US)
IAP	ILS OR LOC RWY 17			KSWO	STILLWATER	OK (US)
IAP	NDB RWY 17			KSWO	STILLWATER	OK (US)
IAP	VOR RWY 17			KSWO	STILLWATER	OK (US)
STAR	GULLI			KCHK	CHICKASHA	OK (US)
STAR	GULLI			KRQO	EL RENO	OK (US)
STAR	GULLI			K1K4	GOLDSBY	OK (US)
STAR	GULLI			KGOK	GUTHRIE	OK (US)
STAR	GULLI			KOUN	NORMAN	OK (US)
STAR	GULLI			KHSD	OKLAHOMA CITY	OK (US)
STAR	GULLI			KOKC	OKLAHOMA CITY	OK (US)
STAR	GULLI			KPWA	OKLAHOMA CITY	OK (US)
STAR	GULLI			KRCE	OKLAHOMA CITY	OK (US)
STAR	GULLI			KTIK	OKLAHOMA CITY	OK (US)
STAR	GULLI			KSNL	SHAWNEE	OK (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 16 **DATE OF REVISION:** 05/03/2012

REASON FOR REVISION:
UPDATED HOLDING ALTITUDES AND MIN TEMPLATE SIZE.
UPDATED FIX USE.
UPDATED REQUIRED CHARTING.

DEVELOPED BY:	**DATE:** 08/05/2011	**OFFICE:** AJV-353	**NAME:** JOSE ALFONSO (ANDREA CHANEY)
APPROVED BY:	**DATE:**	**OFFICE:** AJV-353	**NAME:** GREGORY YAMAMOTO
	SIGNATURE:		

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZKC
ATC FACILITY: OKC APP CON
OTHER:

INFO ONLY INFO ONLY

RADIO FIX AND HOLDING DATA RECORD

NAME: SPRINGFIELD VORTAC **STATE:** MO **COUNTRY:** US

LATITUDE/LONGITUDE: 372121.41N/0932002.54W **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	FAC FEET	MRA	MAA
1	SPRINGFIELD	SGF	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	N	SGF	VORTAC	016.00	196.00	R	1-1 1/2		2900	17500	4	16
2	SE		WP	156.02	336.02	R		5	3000	17500	4	16

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (29-001455)	372552.00N/0931605.00W	1670	3C
2	200	TOWER (29-000186)	371325.00N/0931431.00W	1983	2C

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERN

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	BENTON			KVBT	BENTONVILLE	AR (US)
DP	RAZORBACK			KFYV	FAYETTEVILLE	AR (US)
DP	HIGHFILL			KXNA	FAYETTEVILLE/SPRINGDALE/R	AR (US)
DP	ROGERS			KROG	ROGERS	AR (US)
DP	SPRING			KASG	SPRINGDALE	AR (US)
DP	RACER			KFLV	FORT LEAVENWORTH	KS (US)
DP	RACER			KIXD	OLATHE	KS (US)
DP	RACER			KOJC	OLATHE	KS (US)
DP	RACER			KMCI	KANSAS CITY	MO (US)
DP	RACER			KMKC	KANSAS CITY	MO (US)
DP	RACER			KSTJ	ST JOSEPH	MO (US)
DP	TULSA			KRVS	TULSA	OK (US)
DP	TULSA			KTUL	TULSA	OK (US)
DP	MEMPHIS			KMEM	MEMPHIS	TN (US)
EN ROUTE	J105					(US)
EN ROUTE	J41					(US)
EN ROUTE	J8					(US)
EN ROUTE	J98					(US)
EN ROUTE	V132					(US)
EN ROUTE	V14					(US)
EN ROUTE	V14-88-132					(US)
EN ROUTE	V159					(US)
EN ROUTE	V190					(US)
EN ROUTE	V506					(US)
EN ROUTE	V527					(US)
EN ROUTE	V63					(US)
EN ROUTE	V63-506-527					(US)
EN ROUTE	V71					(US)
EN ROUTE	V88-190					(US)
IAP	VOR/DME-A	1		K2H2	AURORA	MO (US)
IAP	RNAV (GPS) RWY 18		2	KM17	BOLIVAR	MO (US)
IAP	RNAV (GPS) RWY 36		2	KM17	BOLIVAR	MO (US)
IAP	VOR/DME RWY 36			KM17	BOLIVAR	MO (US)
IAP	VOR-A			KH21	CAMDENTON	MO (US)
IAP	LOC/DME RWY 21			KAIZ	KAISER/LAKE OZARK	MO (US)
IAP	VOR RWY 3			KAIZ	KAISER/LAKE OZARK	MO (US)
IAP	SDF RWY 36			KLBO	LEBANON	MO (US)
IAP	VOR RWY 32			KK15	OSAGE BEACH	MO (US)
IAP	ILS OR LOC RWY 14		1	KSGF	SPRINGFIELD	MO (US)
IAP	ILS OR LOC RWY 2		1	KSGF	SPRINGFIELD	MO (US)
IAP	RNAV (GPS) RWY 14	1		KSGF	SPRINGFIELD	MO (US)
IAP	VOR OR TACAN RWY 20			KSGF	SPRINGFIELD	MO (US)
IAP	VOR/DME OR TACAN RWY 2		1	KSGF	SPRINGFIELD	MO (US)
IAP	VOR/DME OR GPS-A			KMO3	STOCKTON	MO (US)
STAR	TYGER			KMCI	KANSAS CITY	MO (US)
STAR	KAYLA (RNAV)			KSTL	ST LOUIS	MO (US)
STAR	TRAKE			KSTL	ST LOUIS	MO (US)
STAR	GULLI			KCHK	CHICKASHA	OK (US)
STAR	GULLI			KRQO	EL RENO	OK (US)
STAR	GULLI			K1K4	GOLDSBY	OK (US)

STAR	GULLI	KGOK	GUTHRIE	OK (US)
STAR	GULLI	KOUN	NORMAN	OK (US)
STAR	GULLI	KHSD	OKLAHOMA CITY	OK (US)
STAR	GULLI	KOKC	OKLAHOMA CITY	OK (US)
STAR	GULLI	KPWA	OKLAHOMA CITY	OK (US)
STAR	GULLI	KRCE	OKLAHOMA CITY	OK (US)
STAR	GULLI	KTIK	OKLAHOMA CITY	OK (US)
STAR	GULLI	KSNL	SHAWNEE	OK (US)
STAR	VINTA	KTUL	TULSA	OK (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 15 **DATE OF REVISION:** 09/23/2010

REASON FOR REVISION:
UPDATED FIX USE
UPDATED PAT 1 AND 2 HOLDING OBSTACLE
UPDATED PAT 1 AND 2 HOLDING
ADDED PRECIPITOUS TERRAIN EVALUATION COMPLETED NOTE

DEVELOPED BY: **DATE:** 04/02/2010 **OFFICE:** AVN-120 **NAME:** JOSE ALFONSO (BRYAN BLUE)

APPROVED BY: **DATE:** 06/14/2010 **OFFICE:** AVN-120 **NAME:** SUE CRUMB

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZKC
ATC FACILITY: MIZZU APP CON
OTHER:

INFO ONLY

RADIO FIX AND HOLDING DATA RECORD

NAME: TULSA VORTAC **STATE:** OK **COUNTRY:** US

LATITUDE/LONGITUDE: 361146.54N/0954717.11W **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	TULSA	TUL	VORTAC	H							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	TUL	VORTAC	007.00	187.00	R	1-1 1/2		3000	45000	4	29
2	E	TUL	VORTAC	081.00	261.00	R	1-1 1/2		2400	17500	4	16
3	E	TUL	VORTAC	080.00	260.00	R	1-1 1/2		2400	15000	4	15

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (40-001734)	362002.81N/0954709.50W	1345	2C
2	200	TOWER (40-000147)	360847.60N/0954827.10W	1234	4D
3	200	TOWER (40-000147)	360847.60N/0954827.10W	1234	4D

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERNS.

REMARKS:
CHART PAT 1 ONLY ON LOW AND HIGH ENROUTE CHARTS
PRECIPITOUS TERRAIN EVALUATION COMPLETE.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	BENTON			KVBT	BENTONVILLE	AR (US)
DP	RAZORBACK			KFYV	FAYETTEVILLE	AR (US)
DP	HIGHFILL			KXNA	FAYETTEVILLE/SPRINGDALE/ROGERS	AR (US)
DP	ROGERS			KROG	ROGERS	AR (US)
DP	SPRINGS			KASG	SPRINGDALE	AR (US)
DP	TULSA		3	KRVS	TULSA	OK (US)
DP	TULSA		3	KTUL	TULSA	OK (US)
DP	LEONA			KLBX	ANGLETON/LAKE JACKSON	TX (US)
DP	TEXOMA			KGKY	ARLINGTON	TX (US)
DP	LEONA			K55TA	CONROE	TX (US)
DP	TEXOMA			KADS	DALLAS	TX (US)
DP	KRUMM			KDAL	DALLAS	TX (US)
DP	TEXOMA			KDAL	DALLAS	TX (US)
DP	TEXOMA			KRBD	DALLAS	TX (US)
DP	BLECO (RNAV)			KDFW	DALLAS-FORT WORTH	TX (US)
DP	JACKY			KDFW	DALLAS-FORT WORTH	TX (US)
DP	TEXOMA			KDFW	DALLAS-FORT WORTH	TX (US)
DP	TEXOMA			KDTO	DENTON	TX (US)
DP	TEXOMA			KAFW	FORT WORTH	TX (US)
DP	TEXOMA			KFTW	FORT WORTH	TX (US)
DP	TEXOMA			KFWS	FORT WORTH	TX (US)
DP	TEXOMA			KNFW	FORT WORTH	TX (US)
DP	LEONA			KGLS	GALVESTON	TX (US)
DP	TEXOMA			KGPM	GRAND PRAIRIE	TX (US)
DP	LEONA			KAXH	HOUSTON	TX (US)
DP	LEONA			KCXO	HOUSTON	TX (US)
DP	LEONA			KDWH	HOUSTON	TX (US)
DP	LEONA			KEFD	HOUSTON	TX (US)
DP	LEONA			KEYQ	HOUSTON	TX (US)
DP	LEONA			KHOU	HOUSTON	TX (US)
DP	LEONA			KIAH	HOUSTON	TX (US)
DP	LEONA			KIWS	HOUSTON	TX (US)
DP	LEONA			KSGR	HOUSTON	TX (US)
DP	LEONA			KTME	HOUSTON	TX (US)
DP	LEONA			KT41	LA PORTE	TX (US)
DP	TEXOMA			KLNC	LANCASTER	TX (US)
DP	TEXOMA			KTKI	MC KINNEY	TX (US)
DP	TEXOMA			KHQZ	MESQUITE	TX (US)
EN ROUTE	V256					(US)
EN ROUTE	V506					(US)
EN ROUTE	V73					(US)
EN ROUTE	V88					(US)
EN ROUTE	J25					OK (US)
EN ROUTE	J46					OK (US)
EN ROUTE	J78					OK (US)
EN ROUTE	J87					OK (US)
EN ROUTE	J98					OK (US)

EN ROUTE	V131				OK (US)
EN ROUTE	V14				OK (US)
EN ROUTE	V140				OK (US)
EN ROUTE	V161				OK (US)
EN ROUTE	V436				OK (US)
EN ROUTE	V74				OK (US)
IAP	VOR/DME RWY 35		KBVO	BARTLESVILLE	OK (US)
IAP	VOR/DME-A		KGCM	CLAREMORE	OK (US)
IAP	VOR/DME-B	2	KGCM	CLAREMORE	OK (US)
IAP	VOR/DME OR GPS-A		KH71	PRYOR	OK (US)
IAP	NDB RWY 35		KOWP	SAND SPRINGS	OK (US)
IAP	RNAV (GPS) RWY 17		KOWP	SAND SPRINGS	OK (US)
IAP	RNAV (GPS) RWY 35		KOWP	SAND SPRINGS	OK (US)
IAP	VOR/DME-A		KOWP	SAND SPRINGS	OK (US)
IAP	ILS OR LOC RWY 1L		KRVS	TULSA	OK (US)
IAP	VOR RWY 1L		KRVS	TULSA	OK (US)
IAP	VOR/DME-A		KRVS	TULSA	OK (US)
IAP	HI-VOR/DME OR TACAN RWY 26		KTUL	TULSA	OK (US)
IAP	ILS OR LOC RWY 18L	2	KTUL	TULSA	OK (US)
IAP	ILS OR LOC RWY 18R		KTUL	TULSA	OK (US)
IAP	ILS OR LOC RWY 36R	2	KTUL	TULSA	OK (US)
IAP	ILS RWY 36R (CAT II)	2	KTUL	TULSA	OK (US)
IAP	RADAR	2	KTUL	TULSA	OK (US)
IAP	VOR OR TACAN RWY 26		KTUL	TULSA	OK (US)
IAP	VOR/DME RWY 8		KTUL	TULSA	OK (US)
STAR	GULLI		KCHK	CHICKASHA	OK (US)
STAR	GULLI		KRQO	EL RENO	OK (US)
STAR	GULLI		K1K4	GOLDSBY	OK (US)
STAR	GULLI		KGOK	GUTHRIE	OK (US)
STAR	GULLI		KOUN	NORMAN	OK (US)
STAR	GULLI		KHSD	OKLAHOMA CITY	OK (US)
STAR	GULLI		KOKC	OKLAHOMA CITY	OK (US)
STAR	GULLI		KPWA	OKLAHOMA CITY	OK (US)
STAR	GULLI		KRCE	OKLAHOMA CITY	OK (US)
STAR	GULLI		KTIK	OKLAHOMA CITY	OK (US)
STAR	GULLI		KSNL	SHAWNEE	OK (US)
STAR	VINTA		KRVS	TULSA	OK (US)
STAR	VINTA		KTUL	TULSA	OK (US)
STAR	MOTZA		KGKY	ARLINGTON	TX (US)
STAR	SASIE		KGKY	ARLINGTON	TX (US)
STAR	FINGR		KADS	DALLAS	TX (US)
STAR	GREGS		KADS	DALLAS	TX (US)
STAR	FINGR		KDAL	DALLAS	TX (US)
STAR	GREGS		KDAL	DALLAS	TX (US)
STAR	FINGR		KRBD	DALLAS	TX (US)
STAR	GREGS		KRBD	DALLAS	TX (US)
STAR	GREGS		KTKI	DALLAS	TX (US)
STAR	BONHAM		KDFW	DALLAS-FORT WORTH	TX (US)
STAR	BOWIE		KDFW	DALLAS-FORT WORTH	TX (US)
STAR	MASTY		KDFW	DALLAS-FORT WORTH	TX (US)
STAR	WILBR		KDFW	DALLAS-FORT WORTH	TX (US)
STAR	GREGS		KDTO	DENTON	TX (US)
STAR	SASIE		KDTO	DENTON	TX (US)
STAR	MOTZA		KAFW	FORT WORTH	TX (US)
STAR	SASIE		KAFW	FORT WORTH	TX (US)
STAR	MOTZA		KFTW	FORT WORTH	TX (US)
STAR	SASIE		KFTW	FORT WORTH	TX (US)
STAR	MOTZA		KFWS	FORT WORTH	TX (US)
STAR	SASIE		KFWS	FORT WORTH	TX (US)
STAR	MOTZA		KNFW	FORT WORTH	TX (US)
STAR	SASIE		KNFW	FORT WORTH	TX (US)
STAR	MOTZA		KGPM	GRAND PRAIRIE	TX (US)
STAR	SASIE		KGPM	GRAND PRAIRIE	TX (US)
STAR	FINGR		KLNC	LANCASTER	TX (US)
STAR	GREGS		KLNC	LANCASTER	TX (US)
STAR	FINGR		KHQZ	MESQUITE	TX (US)
STAR	GREGS		KHQZ	MESQUITE	TX (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 13 **DATE OF REVISION:** 11/15/2012

REASON FOR REVISION:
NEW NAVAID COORDINATES ALREADY NFDD'D. COORDINATES MOVED 7 FT EAST.
UPDATED HOLDING PATTERN 2 & 3 OBSTACLE DATA. COORDINATES CHANGED, ELEVATION CHANGED FROM (1230) TO (1234) AND ACCURCY CODE CHANGED FROM (1D) TO (4D).
UPDATED FIX USE.

DEVELOPED BY: **DATE:** 05/07/2012 **OFFICE:** AJV-353 **NAME:** JILL OLSON (BRIAN BICKETT)

APPROVED BY: **DATE:** 08/24/2012 **OFFICE:** AJV-353 **NAME:** LARRY STROUT

INFO ONLY

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZKC
ATC FACILITY: TUL APP CON
OTHER: ZFW, ZHU