

RADIO FIX AND HOLDING DATA RECORD

NAME: ALRGI

STATE: TX

COUNTRY: US

ICAO REGION CODE: K4

LATITUDE/LONGITUDE: 293200.61N/0982018.87W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: MODIFY

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

FIX USE:

USE TYPE
STAR

USE TITLE
QERVO (RNAV)

FAC

PAT

AIRPORT IDENT
KSAT

CITY
SAN ANTONIO

STATE
TX (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 1

DATE OF REVISION: 01/25/2024

REASON FOR REVISION:

1. FIX LOCATION: UPDATED FROM 293147.50N/0982025.17W TO 293200.61N/0982018.87W. FIX MOVED 1437 FT NE.
2. FIX USE: DELETED BRAUN (RNAV) STAR FROM KSAT, KRND, KSSF, AND KSKF.
3. FIX USE: ADDED QERVO (RNAV) STAR FOR KSAT.

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A423

NAME: PATRICK COMBS

APPROVED BY:

DATE: 08/10/2023

OFFICE: AJV-A423

NAME: ALLAN WILL

SIGNATURE:

RADIO FIX AND HOLDING DATA RECORD

NAME: AREEA

STATE: TX

COUNTRY: US

ICAO REGION CODE: K4

LATITUDE/LONGITUDE: 294202.57N/0982458.21W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: ESTABLISH

HOLDING:

HOLDING TYPE OF ACTION:

FIX USE:

USE TYPE

IAP

STAR

USE TITLE

RNAV (GPS) Y RWY 22

QERVO (RNAV)

FAC

PAT

AIRPORT IDENT

KSAT

KSAT

CITY

SAN ANTONIO

SAN ANTONIO

STATE

TX (US)

TX (US)

REQUIRED CHARTING: STAR, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG

DATE OF REVISION: 01/25/2024

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A423

NAME: PATRICK COMBS

APPROVED BY:

DATE: 08/10/2023

OFFICE: AJV-A423

NAME: ALLAN WILL

SIGNATURE:

RADIO FIX AND HOLDING DATA RECORD

NAME: BLEWE

STATE: TX

COUNTRY: US

ICAO REGION CODE: K4

LATITUDE/LONGITUDE: 311227.65N/0971232.47W

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	CENTEX	CWK	VORTAC	VH	012.39	018.39	52.33	52.33	6000	45000
2	GOOCH SPRINGS	AGJ	VORTAC	H	083.17	088.17		48.02	6000	45000
3	WACO	ACT	VORTAC	VH	164.53	173.53	27.39	27.39	6000	45000

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
CWK	VORTAC	R-012	53	8000	15100
AGJ	VORTAC	R-083	49	8000	15700

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

REMARKS:

CENTEX (FAC 1) AND GOOCH SPRINGS (FAC 2) AND WACO (FAC 3) USED TO ESTABLISH FIX COORDINATES.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE (US)
EN ROUTE	PITCH/CATCH POINT					
STAR	BLEWE	1, 2, 3		KAUS	AUSTIN	TX (US)
STAR	BLEWE	1, 2, 3		KEDC	AUSTIN	TX (US)
STAR	QERVO (RNAV)			KCVB	CASTROVILLE	TX (US)
STAR	BLEWE	1, 2, 3		KRYW	LAGO VISTA	TX (US)
STAR	BLEWE	1, 2, 3		3R9	LAKEWAY	TX (US)
STAR	QERVO (RNAV)			KBAZ	NEW BRAUNFELS	TX (US)
STAR	QERVO (RNAV)			KPEZ	PLEASANTON	TX (US)
STAR	QERVO (RNAV)			5C1	SAN ANTONIO	TX (US)
STAR	MARCS	1, 2, 3		KSAT	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KSAT	SAN ANTONIO	TX (US)
STAR	MARCS	1, 2, 3		KSKF	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KSKF	SAN ANTONIO	TX (US)
STAR	MARCS	1, 2, 3		KSSF	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KSSF	SAN ANTONIO	TX (US)
STAR	BLEWE	1, 2, 3		KHYI	SAN MARCOS	TX (US)
STAR	BLEWE	1, 2, 3		T74	TAYLOR	TX (US)
STAR	MARCS	1, 2, 3		KRND	UNIVERSAL CITY	TX (US)
STAR	QERVO (RNAV)			KRND	UNIVERSAL CITY	TX (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 8

DATE OF REVISION: 08/07/2025

REASON FOR REVISION:

CHANGED ALL 3 FACILITIES MRA FROM 8000 TO 6000 IN FIX MAKE-UP FACILITIES.
ADDED CONTROLLER HIGH TO REQUIRED CHARTING.

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A432

NAME: SILVIA YOUNG

APPROVED BY:

DATE: 07/03/2025

OFFICE: AJV-A432

NAME: CASIMIR TABAKA

SIGNATURE:

RADIO FIX AND HOLDING DATA RECORD

NAME: CAAGE

STATE: TX

COUNTRY: US

ICAO REGION CODE: K4

LATITUDE/LONGITUDE: 295724.76N/0952045.25W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: ESTABLISH

HOLDING:

HOLDING TYPE OF ACTION:

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	SNIDR (RNAV)			KCVB	CASTROVILLE	TX (US)
DP	SNIDR (RNAV)			KBAZ	NEW BRAUNFELS	TX (US)
DP	SNIDR (RNAV)			KPEZ	PLEASANTON	TX (US)
DP	SNIDR (RNAV)			5C1	SAN ANTONIO	TX (US)
DP	SNIDR (RNAV)			KSAT	SAN ANTONIO	TX (US)
DP	SNIDR (RNAV)			KSKF	SAN ANTONIO	TX (US)
DP	SNIDR (RNAV)			KSSF	SAN ANTONIO	TX (US)
DP	SNIDR (RNAV)			KRND	UNIVERSAL CITY	TX (US)
STAR	QERVO (RNAV)			KCVB	CASTROVILLE	TX (US)
STAR	QERVO (RNAV)			KBAZ	NEW BRAUNFELS	TX (US)
STAR	QERVO (RNAV)			KPEZ	PLEASANTON	TX (US)
STAR	QERVO (RNAV)			5C1	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KSAT	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KSKF	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KSSF	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KRND	UNIVERSAL CITY	TX (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG

DATE OF REVISION: 01/25/2024

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A423

NAME: PATRICK COMBS

APPROVED BY:

DATE: 08/10/2023

OFFICE: AJV-A423

NAME: ALLAN WILL

SIGNATURE:

RADIO FIX AND HOLDING DATA RECORD

NAME: CARNE

STATE: TX

COUNTRY: US

ICAO REGION CODE: K4

LATITUDE/LONGITUDE: 294341.83N/0983522.29W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: ESTABLISH

HOLDING:

HOLDING TYPE OF ACTION:

FIX USE:

USE TYPE
STAR

USE TITLE
QERVO (RNAV)

FAC

PAT

AIRPORT IDENT
KSAT

CITY
SAN ANTONIO

STATE
TX (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG

DATE OF REVISION: 01/25/2024

REASON FOR REVISION:

11/22/23: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 08/11/23.

1. TYPE: ADDED WP.

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A423

NAME: PATRICK COMBS

APPROVED BY:

DATE: 08/10/2023

OFFICE: AJV-A423

NAME: ALLAN WILL

SIGNATURE:

RADIO FIX AND HOLDING DATA RECORD

NAME: COMUT

STATE: TX

COUNTRY: US

ICAO REGION CODE: K4

LATITUDE/LONGITUDE: 293708.44N/0982134.69W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: ESTABLISH

HOLDING:

HOLDING TYPE OF ACTION:

FIX USE:

USE TYPE
STAR

USE TITLE
QERVO (RNAV)

FAC

PAT

AIRPORT IDENT
KSAT

CITY
SAN ANTONIO

STATE
TX (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG

DATE OF REVISION: 01/25/2024

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A423

NAME: PATRICK COMBS

APPROVED BY:

DATE: 08/10/2023

OFFICE: AJV-A423

NAME: ALLAN WILL

SIGNATURE:

RADIO FIX AND HOLDING DATA RECORD

NAME: DERRR

STATE: TX

COUNTRY: US

ICAO REGION CODE: K4

LATITUDE/LONGITUDE: 294404.08N/0981132.49W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: ESTABLISH

HOLDING:

HOLDING TYPE OF ACTION:

FIX USE:

USE TYPE
STAR

USE TITLE
QERVO (RNAV)

FAC

PAT

AIRPORT IDENT
KSAT

CITY
SAN ANTONIO

STATE
TX (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG

DATE OF REVISION: 01/25/2024

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A423

NAME: PATRICK COMBS

APPROVED BY:

DATE: 08/10/2023

OFFICE: AJV-A423

NAME: ALLAN WILL

SIGNATURE:

RADIO FIX AND HOLDING DATA RECORD

NAME: DOMNK

STATE: TX

COUNTRY: US

ICAO REGION CODE: K4

LATITUDE/LONGITUDE: 294248.63N/0983413.45W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: ESTABLISH

HOLDING:

HOLDING TYPE OF ACTION:

FIX USE:

USE TYPE
STAR

USE TITLE
QERVO (RNAV)

FAC

PAT

AIRPORT IDENT
KSAT

CITY
SAN ANTONIO

STATE
TX (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG

DATE OF REVISION: 01/25/2024

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A423

NAME: PATRICK COMBS

APPROVED BY:

DATE: 08/10/2023

OFFICE: AJV-A423

NAME: ALLAN WILL

SIGNATURE:

RADIO FIX AND HOLDING DATA RECORD

NAME: ERROR

STATE: TX

COUNTRY: US

ICAO REGION CODE: K4

LATITUDE/LONGITUDE: 294540.87N/0981403.75W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: ESTABLISH

HOLDING:

HOLDING TYPE OF ACTION: ESTABLISH

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	NE		WP	036.97	216.97	R	5	6000	9000	6	10

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	AAO	294854.00N/0981839.00W	1660	4E

HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERN.

REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (GPS) Y RWY 22			KSAT	SAN ANTONIO	TX (US)
IAP	RNAV (RNP) Z RWY 22			KSAT	SAN ANTONIO	TX (US)
STAR	CRVZA (RNAV)		1	KSAT	SAN ANTONIO	TX (US)
STAR	DNKIN (RNAV)		1	KSAT	SAN ANTONIO	TX (US)
STAR	POPP0 (RNAV)		1	KSAT	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)		1	KSAT	SAN ANTONIO	TX (US)

REQUIRED CHARTING: STAR, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG

DATE OF REVISION: 01/25/2024

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A423

NAME: WILLIAM MELTON

APPROVED BY:

DATE: 08/10/2023

OFFICE: AJV-A420

NAME: MARLON ROBINSON

SIGNATURE:

RADIO FIX AND HOLDING DATA RECORD

NAME: FJITA

STATE: TX

COUNTRY: US

ICAO REGION CODE: K4

LATITUDE/LONGITUDE: 294531.17N/0981649.01W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: ESTABLISH

HOLDING:

HOLDING TYPE OF ACTION:

FIX USE:

USE TYPE
STAR

USE TITLE
QERVO (RNAV)

FAC

PAT

AIRPORT IDENT
KSAT

CITY
SAN ANTONIO

STATE
TX (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG

DATE OF REVISION: 01/25/2024

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A423

NAME: PATRICK COMBS

APPROVED BY:

DATE: 08/10/2023

OFFICE: AJV-A423

NAME: ALLAN WILL

SIGNATURE:

RADIO FIX AND HOLDING DATA RECORD

NAME: FOALL

STATE: TX

COUNTRY: US

ICAO REGION CODE: K4

LATITUDE/LONGITUDE: 292010.18N/0983205.13W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: ESTABLISH

HOLDING:

HOLDING TYPE OF ACTION:

FIX USE:

USE TYPE

IAP

IAP

STAR

USE TITLE

ILS OR LOC RWY 4

RNAV (GPS) Y RWY 4

QERVO (RNAV)

FAC

PAT

AIRPORT IDENT

KSAT

KSAT

KSAT

CITY

SAN ANTONIO

SAN ANTONIO

SAN ANTONIO

STATE

TX (US)

TX (US)

TX (US)

REQUIRED CHARTING: STAR, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG

DATE OF REVISION: 01/25/2024

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A423

NAME: PATRICK COMBS

APPROVED BY:

DATE: 10/05/2023

OFFICE: AJV-A423

NAME: ALLAN WILL

SIGNATURE:

RADIO FIX AND HOLDING DATA RECORD

NAME: HARDD

STATE: TX

COUNTRY: US

ICAO REGION CODE: K4

LATITUDE/LONGITUDE: 292122.05N/0983803.63W

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	SAN ANTONIO	I-SAT	LOC/DME		216.78	220.78	14.77	14.77	3500	5200
2	STINSON	SSF	VOR	L	297.34	300.34		11.60	3500	5200

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		WP	216.67	036.67	R	5	5000 8000	6 9

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (48-007753)	291439.85N/0984428.08W	1211	5D

HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERN.

REMARKS:

SAN ANTONIO (FAC 1) USED TO ESTABLISH FIX COORDINATES.
PRECIPITOUS TERRAIN EVALUATION COMPLETED.
ILS DME COORDINATES: 293232.95N/0982658.69W.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS OR LOC RWY 4	1, 2		KSAT	SAN ANTONIO	TX (US)
IAP	RNAV (GPS) Y RWY 4			KSAT	SAN ANTONIO	TX (US)
IAP	RNAV (RNP) Z RWY 4			KSAT	SAN ANTONIO	TX (US)
STAR	CRVZA (RNAV)		1	KSAT	SAN ANTONIO	TX (US)
STAR	DNKIN (RNAV)		1	KSAT	SAN ANTONIO	TX (US)
STAR	POPPO (RNAV)		1	KSAT	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)		1	KSAT	SAN ANTONIO	TX (US)

REQUIRED CHARTING: STAR, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 10

DATE OF REVISION: 08/07/2025

REASON FOR REVISION:

FIX MAKE-UP: FAC 2 STINSON (SSF) VOR MAG BRG CHANGED FROM "291.34" TO "297.34".

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A421

NAME: TRAVIS BRISTOW

APPROVED BY:

DATE: 07/03/2025

OFFICE: AJV-A421

NAME: DAVID DANNER

SIGNATURE:

RADIO FIX AND HOLDING DATA RECORD

NAME: HOSAY

STATE: TX

COUNTRY: US

ICAO REGION CODE: K4

LATITUDE/LONGITUDE: 295044.02N/0970520.01W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: ESTABLISH

HOLDING:

HOLDING TYPE OF ACTION:

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	QERVO (RNAV)			KCVB	CASTROVILLE	TX (US)
STAR	QERVO (RNAV)			KBAZ	NEW BRAUNFELS	TX (US)
STAR	QERVO (RNAV)			KPEZ	PLEASANTON	TX (US)
STAR	QERVO (RNAV)			5C1	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KSAT	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KSKF	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KSSF	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KRND	UNIVERSAL CITY	TX (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG

DATE OF REVISION: 01/25/2024

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A423

NAME: PATRICK COMBS

APPROVED BY:

DATE: 08/10/2023

OFFICE: AJV-A423

NAME: ALLAN WILL

SIGNATURE:

RADIO FIX AND HOLDING DATA RECORD

NAME: JEFRE

STATE: TX

COUNTRY: US

ICAO REGION CODE: K4

LATITUDE/LONGITUDE: 293433.54N/0981758.57W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: ESTABLISH

HOLDING:

HOLDING TYPE OF ACTION:

FIX USE:

USE TYPE
STAR

USE TITLE
QERVO (RNAV)

FAC

PAT

AIRPORT IDENT
KSAT

CITY
SAN ANTONIO

STATE
TX (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG

DATE OF REVISION: 01/25/2024

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A423

NAME: PATRICK COMBS

APPROVED BY:

DATE: 08/10/2023

OFFICE: AJV-A423

NAME: ALLAN WILL

SIGNATURE:

RADIO FIX AND HOLDING DATA RECORD

NAME: MARCS

STATE: TX

COUNTRY: US

ICAO REGION CODE: K4

LATITUDE/LONGITUDE: 295352.04N/0975140.70W

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	SAN ANTONIO	SAT	VORTAC	H	055.99	063.99	34.82	34.82		3100	45000
2	CENTEX	CWK	VORTAC	H	205.02	211.02		33.55		2900	45000
3	STONEWALL	STV	VORTAC	H	104.60	112.60	47.70	47.70		5000	45000
4	HUMBLE	IAH	VORTAC	H	264.08	269.08	131.20	131.20		19000	45000
5	JUNCTION	JCT	VORTAC	H	103.91	111.91		109.96		18000	45000

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
STV	VORTAC	R-105	48	5000	16100
IAH	VORTAC	R-264	132	19000	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	NE	SAT	VORTAC	055.99	235.99	R	1		6000 24000	7 21

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	AAO	295654.00N/0975645.00W	1096	4B

HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERN.

REMARKS:

SAN ANTONIO (FAC 1) AND CENTEX (FAC 2) AND STONEWALL (FAC 3) USED TO ESTABLISH FIX COORDINATES.
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	BORRN (RNAV)			T00	ANAHUAC	TX (US)
DP	BORRN (RNAV)			KL BX	ANGLETON/LAKE JACKSON	TX (US)
DP	BORRN (RNAV)			54T	BAYTOWN	TX (US)
DP	BORRN (RNAV)			KHPY	BAYTOWN	TX (US)
DP	BORRN (RNAV)			6R3	CLEVELAND	TX (US)
DP	BORRN (RNAV)			KGLS	GALVESTON	TX (US)
DP	BORRN (RNAV)			KAXH	HOUSTON	TX (US)
DP	BORRN (RNAV)			KCXO	HOUSTON	TX (US)
DP	BORRN (RNAV)			KDWH	HOUSTON	TX (US)
DP	BORRN (RNAV)			KEFD	HOUSTON	TX (US)
DP	RETYR (RNAV)			KHOU	HOUSTON	TX (US)
DP	BNDTO (RNAV)			KIAH	HOUSTON	TX (US)
DP	PITZZ (RNAV)			KIAH	HOUSTON	TX (US)
DP	BORRN (RNAV)			KIWS	HOUSTON	TX (US)
DP	BORRN (RNAV)			KL VJ	HOUSTON	TX (US)
DP	BORRN (RNAV)			KSGR	HOUSTON	TX (US)
DP	BORRN (RNAV)			KTME	HOUSTON	TX (US)
DP	BORRN (RNAV)			T41	LA PORTE	TX (US)
DP	BORRN (RNAV)			T78	LIBERTY	TX (US)
EN ROUTE	J15	2, 4, 5				(US)
EN ROUTE	J27	1, 3				(US)
EN ROUTE	T220					(US)
EN ROUTE	T466					(US)
IAP	RNAV (GPS) RWY 35			KBAZ	NEW BRAUNFELS	TX (US)
STAR	QERVO (RNAV)			KCVB	CASTROVILLE	TX (US)
STAR	QERVO (RNAV)			KBAZ	NEW BRAUNFELS	TX (US)
STAR	QERVO (RNAV)			KPEZ	PLEASANTON	TX (US)
STAR	QERVO (RNAV)			5C1	SAN ANTONIO	TX (US)
STAR	MARCS	1, 2, 3	1	KSAT	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KSAT	SAN ANTONIO	TX (US)
STAR	MARCS	1, 2, 3	1	KSKF	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KSKF	SAN ANTONIO	TX (US)
STAR	MARCS	1, 2, 3	1	KSSF	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KSSF	SAN ANTONIO	TX (US)
STAR	MARCS	1, 2, 3	1	KRND	UNIVERSAL CITY	TX (US)
STAR	QERVO (RNAV)			KRND	UNIVERSAL CITY	TX (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 21

DATE OF REVISION: 08/07/2025

REASON FOR REVISION:

1. DELETED FAC 4 (CLL) VORTAC FROM FIX MAKE UP.
2. DELETED CLL VORTAC ESV.
3. FIX USE REMOVED FAC 4 FROM MARCS STAR AT KSAT, KSKF, KSSF, KRND.
4. FIX MAKE-UP: RAISED STV VORTAC MRA FROM 4500 TO 5000.
5. ESV: UPDATED STV MIN ALTITUDE FROM 4500 TO 5000.
6. DELETED AIRSPACE DOCKET.

INITIATED BY:**DATE:****ORGANIZATION:****NAME:****OFFICE OF PRIMARY RESPONSIBILITY:**

AJV-A432

NAME: JOSEPH ZEDER**APPROVED BY:****DATE:** 07/03/2025**OFFICE:** AJV-A432**NAME:** CASIMIR TABAKA**SIGNATURE:**

RADIO FIX AND HOLDING DATA RECORD

NAME: MCRTY

STATE: TX

COUNTRY: US

ICAO REGION CODE: K4

LATITUDE/LONGITUDE: 292831.05N/0982401.46W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: ESTABLISH

HOLDING:

HOLDING TYPE OF ACTION:

FIX USE:

USE TYPE

IAP

STAR

USE TITLE

RNAV (RNP) Z RWY 4

QERVO (RNAV)

FAC

PAT

AIRPORT IDENT

KSAT

KSAT

CITY

SAN ANTONIO

SAN ANTONIO

STATE

TX (US)

TX (US)

REQUIRED CHARTING: STAR, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG

DATE OF REVISION: 01/25/2024

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A423

NAME: PATRICK COMBS

APPROVED BY:

DATE: 10/05/2023

OFFICE: AJV-A423

NAME: ALLAN WILL

SIGNATURE:

RADIO FIX AND HOLDING DATA RECORD

NAME: MOLLR

STATE: TX

COUNTRY: US

ICAO REGION CODE: K4

LATITUDE/LONGITUDE: 293920.23N/0951635.83W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: NO CHANGE

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	SNIDR (RNAV)			KCVB	CASTROVILLE	TX (US)
DP	SNIDR (RNAV)			KBAZ	NEW BRAUNFELS	TX (US)
DP	SNIDR (RNAV)			KPEZ	PLEASANTON	TX (US)
DP	SNIDR (RNAV)			5C1	SAN ANTONIO	TX (US)
DP	SNIDR (RNAV)			KSAT	SAN ANTONIO	TX (US)
DP	SNIDR (RNAV)			KSKF	SAN ANTONIO	TX (US)
DP	SNIDR (RNAV)			KSSF	SAN ANTONIO	TX (US)
DP	SNIDR (RNAV)			KRND	UNIVERSAL CITY	TX (US)
EN ROUTE	Q24					(US)
EN ROUTE	Q56					(US)
EN ROUTE	T200					(US)
EN ROUTE	T220					(US)
EN ROUTE	T224					(US)
EN ROUTE	T256					(US)
STAR	QERVO (RNAV)			KCVB	CASTROVILLE	TX (US)
STAR	WAPPL (RNAV)			KHOU	HOUSTON	TX (US)
STAR	QERVO (RNAV)			KBAZ	NEW BRAUNFELS	TX (US)
STAR	QERVO (RNAV)			KPEZ	PLEASANTON	TX (US)
STAR	QERVO (RNAV)			5C1	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KSAT	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KSKF	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KSSF	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KRND	UNIVERSAL CITY	TX (US)

REQUIRED CHARTING: SECTIONAL, DP, STAR, EN ROUTE LOW, EN ROUTE HIGH, CONTROLLER LOW, CONTROLLER HIGH

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 4

DATE OF REVISION: 06/12/2025

REASON FOR REVISION:

1. FIX USE: REMOVED WAPPL (RNAV) STAR AY KGLS, KTME, KAXH, KHPY, T41, 54T, T00, KSGR, KARM, KBYY, KLBX, KLVJ, KIWS, AND KEFD.

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A432

NAME: BARBARA GORMAN

APPROVED BY:

DATE: 05/08/2025

OFFICE: AJV-A430

NAME: CASIMIR TABAKA

SIGNATURE:

RADIO FIX AND HOLDING DATA RECORD

NAME: OUTLW

STATE: TX

COUNTRY: US

ICAO REGION CODE: K4

LATITUDE/LONGITUDE: 302242.22N/0973147.67W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: ESTABLISH

HOLDING:

HOLDING TYPE OF ACTION:

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	QERVO (RNAV)			KCVB	CASTROVILLE	TX (US)
STAR	QERVO (RNAV)			KBAZ	NEW BRAUNFELS	TX (US)
STAR	QERVO (RNAV)			KPEZ	PLEASANTON	TX (US)
STAR	QERVO (RNAV)			5C1	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KSAT	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KSKF	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KSSF	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KRND	UNIVERSAL CITY	TX (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG

DATE OF REVISION: 01/25/2024

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A423

NAME: PATRICK COMBS

APPROVED BY:

DATE: 08/10/2023

OFFICE: AJV-A423

NAME: ALLAN WILL

SIGNATURE:

RADIO FIX AND HOLDING DATA RECORD

NAME: PGOUT

STATE: TX

COUNTRY: US

ICAO REGION CODE: K4

LATITUDE/LONGITUDE: 295207.96N/0975658.71W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: ESTABLISH

HOLDING:

HOLDING TYPE OF ACTION:

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	QERVO (RNAV)			KCVB	CASTROVILLE	TX (US)
STAR	QERVO (RNAV)			KBAZ	NEW BRAUNFELS	TX (US)
STAR	QERVO (RNAV)			KPEZ	PLEASANTON	TX (US)
STAR	QERVO (RNAV)			5C1	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KSAT	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KSKF	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KSSF	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KRND	UNIVERSAL CITY	TX (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG

DATE OF REVISION: 01/25/2024

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A423

NAME: PATRICK COMBS

APPROVED BY:

DATE: 08/10/2023

OFFICE: AJV-A423

NAME: ALLAN WILL

SIGNATURE:

RADIO FIX AND HOLDING DATA RECORD

NAME: POYYO

STATE: TX

COUNTRY: US

ICAO REGION CODE: K4

LATITUDE/LONGITUDE: 294944.86N/0980407.36W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: ESTABLISH

HOLDING:

HOLDING TYPE OF ACTION:

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	QERVO (RNAV)			KCVB	CASTROVILLE	TX (US)
STAR	QERVO (RNAV)			KBAZ	NEW BRAUNFELS	TX (US)
STAR	QERVO (RNAV)			KPEZ	PLEASANTON	TX (US)
STAR	QERVO (RNAV)			5C1	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KSKF	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KSSF	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KRND	UNIVERSAL CITY	TX (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG

DATE OF REVISION: 01/25/2024

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A423

NAME: PATRICK COMBS

APPROVED BY:

DATE: 08/10/2023

OFFICE: AJV-A423

NAME: ALLAN WILL

SIGNATURE:

RADIO FIX AND HOLDING DATA RECORD

NAME: QERVO

STATE: TX

COUNTRY: US

ICAO REGION CODE: K4

LATITUDE/LONGITUDE: 295027.75N/0980158.46W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: ESTABLISH

HOLDING:

HOLDING TYPE OF ACTION:

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	QERVO (RNAV)			KCVB	CASTROVILLE	TX (US)
STAR	QERVO (RNAV)			KBAZ	NEW BRAUNFELS	TX (US)
STAR	QERVO (RNAV)			KPEZ	PLEASANTON	TX (US)
STAR	QERVO (RNAV)			5C1	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KSAT	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KSKF	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KSSF	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KRND	UNIVERSAL CITY	TX (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG

DATE OF REVISION: 01/25/2024

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A423

NAME: PATRICK COMBS

APPROVED BY:

DATE: 08/10/2023

OFFICE: AJV-A423

NAME: ALLAN WILL

SIGNATURE:

RADIO FIX AND HOLDING DATA RECORD

NAME: RBNSN

STATE: TX

COUNTRY: US

ICAO REGION CODE: K4

LATITUDE/LONGITUDE: 294355.67N/0984349.16W

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	SAN ANTONIO	I-ANT	LOC/DME		307.60	311.60	18.66	18.66		5000	6000
2	STONEWALL	STV	VORTAC	VH	174.59	182.59	28.44	28.44		5000	45000
3	SAN ANTONIO	SAT	VORTAC	VH	282.63	290.63		15.01		5000	45000
4	CENTER POINT	CSI	VORTAC	VH	106.14	114.14	27.71	27.71		6000	45000

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
I-ANT	LOC/DME	R-308	19	5000	6000

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	NW		WP	307.60	127.60	R		5	6000	9000	6	10

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (48-005697)	295027.00N/0984933.00W	3048	5E

HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERN.

REMARKS:

SAN ANTONIO (FAC 1) AND STONEWALL (FAC 2) USED TO ESTABLISH FIX COORDINATES.
ILS DME COORDINATES: 293129.09N/0982749.96W.
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS OR LOC RWY 13R	1		KSAT	SAN ANTONIO	TX (US)
IAP	ILS RWY 13R (CAT II)	1		KSAT	SAN ANTONIO	TX (US)
IAP	RNAV (GPS) Y RWY 13R			KSAT	SAN ANTONIO	TX (US)
IAP	RNAV (RNP) Z RWY 13R			KSAT	SAN ANTONIO	TX (US)
STAR	CENTERPOINT	1, 2, 3, 4		KSAT	SAN ANTONIO	TX (US)
STAR	CRVZA (RNAV)		1	KSAT	SAN ANTONIO	TX (US)
STAR	DNKIN (RNAV)		1	KSAT	SAN ANTONIO	TX (US)
STAR	POPPO (RNAV)		1	KSAT	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)		1	KSAT	SAN ANTONIO	TX (US)
STAR	STONEWALL	1, 2, 3		KSAT	SAN ANTONIO	TX (US)

REQUIRED CHARTING: STAR, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 2

DATE OF REVISION: 08/07/2025

REASON FOR REVISION:

ADDED FAC 4 CSI VORTAC TO FIX MAKE-UP FACILITIES.
ADDED STAR CENTERPOINT FOR KSAT AIRPORT IN FIX USE.

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A432

NAME: SILVIA YOUNG

APPROVED BY:

DATE: 07/03/2025

OFFICE: AJV-A432

NAME: JOSEPH ZEDER

SIGNATURE:

RADIO FIX AND HOLDING DATA RECORD

NAME: RODIO

STATE: TX

COUNTRY: US

ICAO REGION CODE: K4

LATITUDE/LONGITUDE: 295211.90N/0972625.75W

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 ALTITUDES MIN MAX	TEMPLATES MIN MAX
1	E		WP	090.64	270.64	R	10	16000 24000	16 20

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	265	TOWER (48-008828)	295702.15N/0972213.49W	1524	4D

HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERN.

REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	QERVO (RNAV)		1	KCVB	CASTROVILLE	TX (US)
STAR	QERVO (RNAV)		1	KBAZ	NEW BRAUNFELS	TX (US)
STAR	QERVO (RNAV)		1	KPEZ	PLEASANTON	TX (US)
STAR	QERVO (RNAV)		1	5C1	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)		1	KSAT	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)		1	KSKF	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)		1	KSSF	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)		1	KRND	UNIVERSAL CITY	TX (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 2

DATE OF REVISION: 01/25/2024

REASON FOR REVISION:

1. HOLDING: ADDED PAT 1.
2. FIX USE: DELETED BRAUN (RNAV) STAR FROM KSAT, KRND, KSSF, AND KSKF.
2. FIX USE: ADDED QERVO (RNAV) STAR TO KSAT, KRND, KSKF, KSSF, KCVB, KBAZ, 5C1, AND KPEZ.

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A423

NAME: PATRICK COMBS

APPROVED BY:

DATE: 08/10/2023

OFFICE: AJV-A423

NAME: ALLAN WILL

SIGNATURE:

RADIO FIX AND HOLDING DATA RECORD

NAME: SALZA

STATE: TX

COUNTRY: US

ICAO REGION CODE: K4

LATITUDE/LONGITUDE: 294232.60N/0982551.34W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: ESTABLISH

HOLDING:

HOLDING TYPE OF ACTION:

FIX USE:

USE TYPE

IAP

STAR

USE TITLE

RNAV (RNP) Z RWY 13R

QERVO (RNAV)

FAC

PAT

AIRPORT IDENT

KSAT

KSAT

CITY

SAN ANTONIO

SAN ANTONIO

STATE

TX (US)

TX (US)

REQUIRED CHARTING: STAR, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG

DATE OF REVISION: 01/25/2024

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A423

NAME: PATRICK COMBS

APPROVED BY:

DATE: 08/10/2023

OFFICE: AJV-A423

NAME: ALLAN WILL

SIGNATURE:

RADIO FIX AND HOLDING DATA RECORD

NAME: SLOW

STATE: TX

COUNTRY: US

ICAO REGION CODE: K4

LATITUDE/LONGITUDE: 292608.28N/0982052.13W

TYPE: WP, DME

AIRSPACE DOCKET:

FIX TYPE OF ACTION: ESTABLISH

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM NM	FAC FEET	MRA	MAA
1	SAN ANTONIO	I-IZR	LOC/DME		127.61	131.61	8.09	9.88		2700	5300

HOLDING:

HOLDING TYPE OF ACTION: ESTABLISH

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	SE		WP	127.61	307.61	R	5	4000 7000	5 9

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (48-007712)	291739.00N/0981532.00W	2043	5D

HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERN.

REMARKS:

DME COORDINATES: 293129.09N/0982749.96
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS OR LOC RWY 31L	1		KSAT	SAN ANTONIO	TX (US)
IAP	RNAV (GPS) Y RWY 31L			KSAT	SAN ANTONIO	TX (US)
IAP	RNAV (RNP) Z RWY 31L			KSAT	SAN ANTONIO	TX (US)
STAR	CRVZA (RNAV)		1	KSAT	SAN ANTONIO	TX (US)
STAR	DNKIN (RNAV)		1	KSAT	SAN ANTONIO	TX (US)
STAR	POPPA (RNAV)		1	KSAT	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)		1	KSAT	SAN ANTONIO	TX (US)

REQUIRED CHARTING: STAR, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG

DATE OF REVISION: 01/25/2024

REASON FOR REVISION:

8/16/2023: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 04/17/2023.
1. FIX MAKE-UP: UPDATED MAA FROM 4500 TO 5200.

8/29/2023: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 04/17/2023.
1. FIX MAKE-UP: UPDATED MAA FROM 5200 TO 5300.

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A423

NAME: PATRICK COMBS

APPROVED BY:

DATE: 01/25/2024

OFFICE: AJV-A423

NAME: MICHAEL GARRITY

SIGNATURE:

RADIO FIX AND HOLDING DATA RECORD

NAME: TAHKO

STATE: TX

COUNTRY: US

ICAO REGION CODE: K4

LATITUDE/LONGITUDE: 294801.20N/0980918.40W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: MODIFY

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

REMARKS:

NAME RETAINED PER ATC FOR OPERATIONAL NECESSITY.

FIX USE:

USE TYPE

USE TITLE

FAC

PAT

AIRPORT IDENT

CITY

STATE

STAR

QERVO (RNAV)

KSAT

SAN ANTONIO

TX (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 1

DATE OF REVISION: 01/25/2024

REASON FOR REVISION:

1. FIX LOCATION: UPDATED FROM 292539.08N/0981231.80W 59W TO 294801.20N/0980918.40W. FIX MOVED 22.49 NM NORTH.
2. REMARKS: ADDED "NAME RETAINED PER ATC FOR OPERATIONAL NECESSITY."
3. FIX USE: DELETED BRAUN (RNAV) STAR FROM KSAT, KRND, KSSF, AND KSKF.
4. FIX USE: ADDED QERVO (RNAV) STAR FOR KSAT.

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A423

NAME: PATRICK COMBS

APPROVED BY:

DATE: 08/10/2023

OFFICE: AJV-A423

NAME: ALLAN WILL

SIGNATURE:

RADIO FIX AND HOLDING DATA RECORD

NAME: TEXNN

STATE: TX

COUNTRY: US

ICAO REGION CODE: K4

LATITUDE/LONGITUDE: 293902.62N/0981328.53W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: ESTABLISH

HOLDING:

HOLDING TYPE OF ACTION:

FIX USE:

USE TYPE
STAR

USE TITLE
QERVO (RNAV)

FAC

PAT

AIRPORT IDENT
KSAT

CITY
SAN ANTONIO

STATE
TX (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG

DATE OF REVISION: 01/25/2024

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A423

NAME: PATRICK COMBS

APPROVED BY:

DATE: 08/10/2023

OFFICE: AJV-A423

NAME: ALLAN WILL

SIGNATURE:

RADIO FIX AND HOLDING DATA RECORD

NAME: TRITP

STATE: TX

COUNTRY: US

ICAO REGION CODE: K4

LATITUDE/LONGITUDE: 295245.11N/0982048.14W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: ESTABLISH

HOLDING:

HOLDING TYPE OF ACTION:

FIX USE:

USE TYPE
STAR

USE TITLE
QERVO (RNAV)

FAC

PAT

AIRPORT IDENT
KSAT

CITY
SAN ANTONIO

STATE
TX (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG

DATE OF REVISION: 01/25/2024

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A423

NAME: PATRICK COMBS

APPROVED BY:

DATE: 08/10/2023

OFFICE: AJV-A423

NAME: ALLAN WILL

SIGNATURE:

RADIO FIX AND HOLDING DATA RECORD

NAME: TRTLA

STATE: TX

COUNTRY: US

ICAO REGION CODE: K4

LATITUDE/LONGITUDE: 294354.29N/0982138.62W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: ESTABLISH

HOLDING:

HOLDING TYPE OF ACTION:

FIX USE:

USE TYPE
STAR

USE TITLE
QERVO (RNAV)

FAC

PAT

AIRPORT IDENT
KSAT

CITY
SAN ANTONIO

STATE
TX (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG

DATE OF REVISION: 01/25/2024

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A423

NAME: PATRICK COMBS

APPROVED BY:

DATE: 08/10/2023

OFFICE: AJV-A423

NAME: ALLAN WILL

SIGNATURE:

RADIO FIX AND HOLDING DATA RECORD

NAME: WAILN

STATE: TX

COUNTRY: US

ICAO REGION CODE: K4

LATITUDE/LONGITUDE: 294829.63N/0963417.12W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: NO CHANGE

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	BORRN (RNAV)			T00	ANAHUAC	TX (US)
DP	BORRN (RNAV)			KLBX	ANGLETON/LAKE JACKSON	TX (US)
DP	BORRN (RNAV)			54T	BAYTOWN	TX (US)
DP	BORRN (RNAV)			KHPY	BAYTOWN	TX (US)
DP	BORRN (RNAV)			6R3	CLEVELAND	TX (US)
DP	BORRN (RNAV)			KGLS	GALVESTON	TX (US)
DP	BORRN (RNAV)			KAXH	HOUSTON	TX (US)
DP	BORRN (RNAV)			KCXO	HOUSTON	TX (US)
DP	BORRN (RNAV)			KDWH	HOUSTON	TX (US)
DP	BORRN (RNAV)			KEFD	HOUSTON	TX (US)
DP	RETYR (RNAV)			KHOU	HOUSTON	TX (US)
DP	BNDTO (RNAV)			KIAH	HOUSTON	TX (US)
DP	PITZZ (RNAV)			KIAH	HOUSTON	TX (US)
DP	BORRN (RNAV)			KIWS	HOUSTON	TX (US)
DP	BORRN (RNAV)			KLVJ	HOUSTON	TX (US)
DP	BORRN (RNAV)			KSGR	HOUSTON	TX (US)
DP	BORRN (RNAV)			KTME	HOUSTON	TX (US)
DP	BORRN (RNAV)			T41	LA PORTE	TX (US)
DP	BORRN (RNAV)			T78	LIBERTY	TX (US)
STAR	WLEEE (RNAV)			KAUS	AUSTIN	TX (US)
STAR	POTRR (RNAV)			KEDC	AUSTIN	TX (US)
STAR	QERVO (RNAV)			KCVB	CASTROVILLE	TX (US)
STAR	POTRR (RNAV)			KGTU	GEORGETOWN	TX (US)
STAR	POTRR (RNAV)			KRYW	LAGO VISTA	TX (US)
STAR	POTRR (RNAV)			3R9	LAKEWAY	TX (US)
STAR	QERVO (RNAV)			KBAZ	NEW BRAUNFELS	TX (US)
STAR	QERVO (RNAV)			KPEZ	PLEASANTON	TX (US)
STAR	QERVO (RNAV)			5C1	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KSAT	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KSKF	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KSSF	SAN ANTONIO	TX (US)
STAR	POTRR (RNAV)			KHYI	SAN MARCOS	TX (US)
STAR	POTRR (RNAV)			T74	TAYLOR	TX (US)
STAR	QERVO (RNAV)			KRND	UNIVERSAL CITY	TX (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 4

DATE OF REVISION: 01/25/2024

REASON FOR REVISION:

1. DELETED BRAUN (RNAV) STAR FROM KSAT, KRND, KSSF, AND KSKF FROM FIX USE.
2. ADDED QERVO (RNAV) STAR FOR KSAT, KRND, KSKF, KSSF, KBAZ, KCVB, KPEZ, AND 5C1 TO FIX USE.
3. CHANGED CONTROLLER TO CONTROLLER LOW IN REQUIRED CHARTING.

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A423

NAME: WILLIAM MELTON

APPROVED BY:

DATE: 08/10/2023

OFFICE: AJV-A420

NAME: MARLON ROBINSON

SIGNATURE:

RADIO FIX AND HOLDING DATA RECORD

NAME: WINDU STATE: TX COUNTRY: US ICAO REGION CODE: K4
 LATITUDE/LONGITUDE: 313149.93N/0970457.06W TYPE: WP, INT, DME

AIRSPACE DOCKET: FIX TYPE OF ACTION: NO CHANGE

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	MRA	MAA
1	MAVERICK	TTT	VOR/DME	VH	175.54	181.54	80.18	80.18	5000	45000
2	WACO	ACT	VORTAC	VH	120.47	129.47	12.39	12.39	5000	45000
3	CENTEX	CWK	VORTAC	VH	012.39	018.39	72.72	72.72	6000	45000

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
TTT	VOR/DME	R-176	81	5000	15100
CWK	VORTAC	R-012	73	6000	15100

HOLDING: HOLDING TYPE OF ACTION: NO CHANGE

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH DME	HOLDING ALTITUDES MIN MAX	TEMPLATES MIN MAX
1	N		WP	014.58	194.58	R	14	24000 35000	26 27

HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERN.

REMARKS:

MAVERICK (FAC 1) AND WACO (FAC 2) USED TO ESTABLISH FIX COORDINATES.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	JOE POOL	1, 2, 3		KGKY	ARLINGTON	TX (US)
DP	JOE POOL	1, 2, 3		KCPT	CLEBURNE	TX (US)
DP	JOE POOL	1, 2, 3		KADS	DALLAS	TX (US)
DP	CURLO (RNAV)			KDAL	DALLAS	TX (US)
DP	JOE POOL	1, 2, 3		KDAL	DALLAS	TX (US)
DP	RAMBL (RNAV)			KDAL	DALLAS	TX (US)
DP	VENUS	1, 2, 3		KDAL	DALLAS	TX (US)
DP	JOE POOL	1, 2, 3		KRBD	DALLAS	TX (US)
DP	JOE POOL	1, 2, 3		KTKI	DALLAS	TX (US)
DP	JASPA (RNAV)			KDFW	DALLAS-FORT WORTH	TX (US)
DP	JOE POOL	1, 2, 3		KDFW	DALLAS-FORT WORTH	TX (US)
DP	KEENE			KDFW	DALLAS-FORT WORTH	TX (US)
DP	JOE POOL	1, 2, 3		KLUD	DECATUR	TX (US)
DP	JOE POOL	1, 2, 3		KDTO	DENTON	TX (US)
DP	JOE POOL	1, 2, 3		50F	FORT WORTH	TX (US)
DP	JOE POOL	1, 2, 3		KAFW	FORT WORTH	TX (US)
DP	JOE POOL	1, 2, 3		KFTW	FORT WORTH	TX (US)
DP	JOE POOL	1, 2, 3		KFWS	FORT WORTH	TX (US)
DP	JOE POOL	1, 2, 3		KNFW	FORT WORTH	TX (US)
DP	JOE POOL	1, 2, 3		KGPM	GRAND PRAIRIE	TX (US)
DP	JOE POOL	1, 2, 3		KLNC	LANCASTER	TX (US)
DP	JOE POOL	1, 2, 3		KHQZ	MESQUITE	TX (US)
DP	JOE POOL	1, 2, 3		KJWY	MIDLOTHIAN/WAXAHACHIE	TX (US)
DP	JOE POOL	1, 2, 3		F46	ROCKWALL	TX (US)
DP	JOE POOL	1, 2, 3		KWEA	WEATHERFORD	TX (US)
STAR	BLEWE	1, 2, 3		KAUS	AUSTIN	TX (US)
STAR	SEWZY (RNAV)		1	KAUS	AUSTIN	TX (US)
STAR	QERVO (RNAV)			KCVB	CASTROVILLE	TX (US)
STAR	GABOO (RNAV)			KRYW	LAGO VISTA	TX (US)
STAR	BLEWE	1, 2, 3		3R9	LAKEWAY	TX (US)
STAR	GABOO (RNAV)			3R9	LAKEWAY	TX (US)
STAR	QERVO (RNAV)			KBAZ	NEW BRAUNFELS	TX (US)
STAR	QERVO (RNAV)			KPEZ	PLEASANTON	TX (US)
STAR	QERVO (RNAV)			5C1	SAN ANTONIO	TX (US)
STAR	MARCS	1, 2, 3		KSAT	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KSAT	SAN ANTONIO	TX (US)
STAR	MARCS	1, 2, 3		KSKF	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KSKF	SAN ANTONIO	TX (US)
STAR	MARCS	1, 2, 3		KSSF	SAN ANTONIO	TX (US)
STAR	QERVO (RNAV)			KSSF	SAN ANTONIO	TX (US)
STAR	BLEWE	1, 2, 3		KHYI	SAN MARCOS	TX (US)
STAR	GABOO (RNAV)			KHYI	SAN MARCOS	TX (US)
STAR	GABOO (RNAV)			T74	TAYLOR	TX (US)
STAR	MARCS	1, 2, 3		KRND	UNIVERSAL CITY	TX (US)
STAR	QERVO (RNAV)			KRND	UNIVERSAL CITY	TX (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 17

DATE OF REVISION: 08/07/2025

REASON FOR REVISION:

1. FIX USE: ADDED DP JOE POOL AT 50F, KCPT, F46, KJWY, KLUD AND KWEA.

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A431

NAME: BRYANT SMITH

APPROVED BY:

DATE: 07/03/2025

OFFICE: AJV-A431

NAME: ERIC N SUSKI

SIGNATURE:

RADIO FIX AND HOLDING DATA RECORD

NAME: XLANT

STATE: TX

COUNTRY: US

ICAO REGION CODE: K4

LATITUDE/LONGITUDE: 292900.76N/0981627.62W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: ESTABLISH

HOLDING:

HOLDING TYPE OF ACTION:

FIX USE:

USE TYPE
STAR

USE TITLE
QERVO (RNAV)

FAC

PAT

AIRPORT IDENT
KSAT

CITY
SAN ANTONIO

STATE
TX (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG

DATE OF REVISION: 01/25/2024

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A423

NAME: PATRICK COMBS

APPROVED BY:

DATE: 08/10/2023

OFFICE: AJV-A423

NAME: ALLAN WILL

SIGNATURE: