Flight Procedure Tracking Form	Action: FLIGHT CHECK	Task Type: IAP	Date Open: 05/06/2009	Task #: 20090506220603 01002	Request #: 20090506220603
Procedure: ILS OR LOC RWY 4 AMDT 22		Airport ID: KSAT	Airport: SAN ANTONIO INTL		Reimbursable #:
City: SAN ANTONIO	ST: TX	GPS #:		Estimated Chart Date: 11/15/2012	FICO #:
Fac ID: SAT	Fac. Type: Proc-A	Specialist: BETTY RICHARDS			

P1

MAG VAR

ESV REQUEST INCLUDED

PKG 4 of 5

Procedure Review

	Rec'd	Rel'd	Full Name	Comments
Lead:	04/18/2012	07/12/2012	JILL OLSON	
QA:	07/12/2012	07/13/2012	STEVEN SZUKALA	
Liaison:	07/13/2012		K. Spurlin	P1; ESV REQUEST INCLUDED; MAGVAR

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

SAN ANTONIO, TX; SAN ANTONIO INTL (KSAT); ILS OR LOC RWY 4, AMDT 22; ENROUTE- YES; FC BY 9/18/12; 11/15/12
ESVS
ATTACHED FORMS: 8260-3, 8260-10, 8260-9, 8260-2(S): HARDD INT, REV 7; NADBE INT, REV 2; RESOC INT, REV 7; TRAGO INT, REV 8; ZINON INT, ORIG; SHEPE INT, REV 4 (INFO ONLY).

CONTACT: JILL OLSON/STEVE BARNETT, AJV-353 LEADS, 405-954-0414/9307.

EXPANDED SERVICE VOLUME REQUEST

PART I - *(FOR USE BY REQUESTING OFFICE)*

FROM (Originating Office)	AIRSPACE DOCKET NUMBER	"x"	EXPANDED SERVICE VOLUME
National Flight Procedures Office (NFPO), AVN-100		☒	ESTABLISH
	STATE: TX		REVISION
			CANCEL

FACILITY DATA

CHART NAME	LOCATION (City)
ILS OR LOC RWY 4	SAN ANTONIO
TYPE/CLASS	**FREQUENCY**
ILS-ID	109.700 DME CHANNEL 34X

EXPANDED SERVICE VOLUME DATA

RADIAL	DISTANCE	ALTITUDE		REQUIREMENT
		MINIMUM	MAXIMUM	
217	22	3500	5000	ILS OR LOC RWY 4..TRAGO INT

SIGNATURE	FACILITY	DATE

PART II - *(FOR USE BY FREQUENCY MANAGEMENT OFFICER)*

EXPANDED SERVICE VOLUME ☐ APPROVED ☐ DISAPPROVED ☐ RESTRICTED

REMARKS *(Distance, Altitudes, Restrictions, etc.)*

SIGNATURE	FACILITY	DATE

PART III - *(FOR USE BY FLIGHT INSPECTION OFFICE)*

EXPANDED SERVICE VOLUME ☐ APPROVED ☐ DISAPPROVED ☐ RESTRICTED

REMARKS

SIGNATURE	FACILITY	DATE

SAN ANTONIO, TEXAS AL-369 (FAA) FIG

ILS or LOC RWY 4
SAN ANTONIO INTL (SAT)

LOC I-SAT	APP CRS	Rwy Idg	7505
109.7	037°	THRE	786
		Apt Elev	809

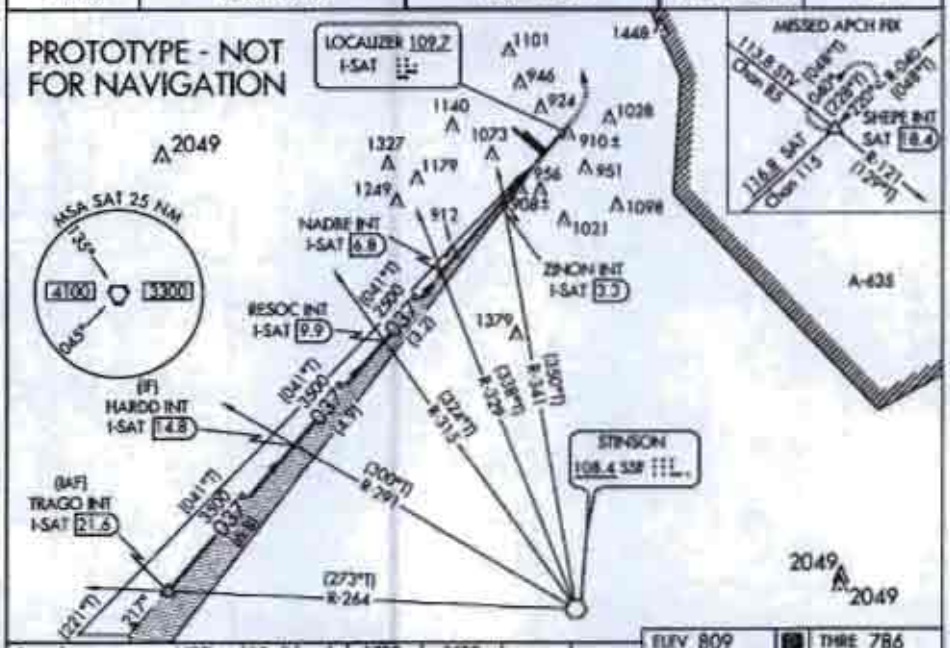
▼ Circling NA southwest of Rwys 12R and 30L. Inop table does not apply to S-ILS 4. For inop MALS, increase S-LOC 4 Cat D visibility to 1¼. ZINON fix minimums: for inop MALS, increase S-LOC 4 Cat D visibility to 1.

MALS

MISSED APPROACH: Climb to 1700 then climbing left turn to 3500 on heading 025° and on SAT VORTAC R-040 to SHEPE INT/SAT 18.4 DME and hold.

ATIS	SAN ANTONIO APP CON	SAN ANTONIO TOWER	GND CON	CLNC DEL
118.9	125.1 307.0	119.8 257.8	121.9 348.6	126.7

PROTOTYPE - NOT FOR NAVIGATION



Procedure Turn NA

VGSI and ILS glidepath not coincident.

1700 | 3500 hdg 025° | SAT R-040 | SHEPE

CATEGORY	A	B	C	D
S-ILS 4	986/40 200 (200-½)			
S-LOC 4	1220/40 434 (500-½)		1220/50 434 (500-1)	
CIRCLING	1300-1 491 (500-1)		1320-1½ 511 (600-1½)	1380-2 571 (600-2)

ZINON FIX MINIMUMS (DUAL VOR RECEIVERS OR DME REQUIRED)

S-LOC 4	1120/40 334 (400-½)		
CIRCLING	1300-1 491 (500-1)	1320-1½ 511 (600-1½)	1380-2 571 (600-2)

ELEV 809 | TDZ THRE 786

TDZ/CL Rwy 12R
REIL Rwys 12L, 21 and 30R
MIRL Rwy 12L-30R
HIRL Rwys 3-21 and 12R-30L

FAF to MAP 5.2 NM

Knots	60	90	120	150	180
Min:Sec	5:12	3:28	2:36	2:05	1:44

SAN ANTONIO, TEXAS
Amdt 22 FIG

29°32'N-98°28'W

SAN ANTONIO INTL (SAT)
ILS or LOC RWY 4

OLD

SAN ANTONIO, TEXAS

AL-369 (FAA)

ILS or LOC RWY 3
SAN ANTONIO INTL (SAT)

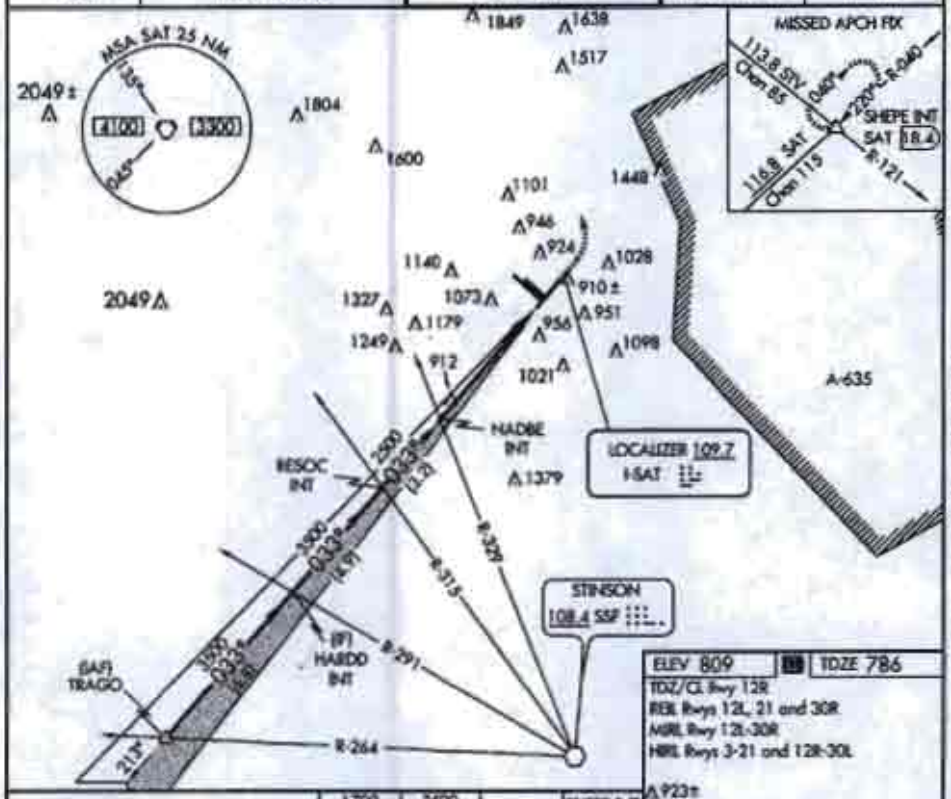
LOC I-SAT	APP CRS	Rwy Idg	7505
109.7	033°	TDZE	786
		Apt Elev	809

Circling NA southwest of Rwy 12R-30L.

MALS

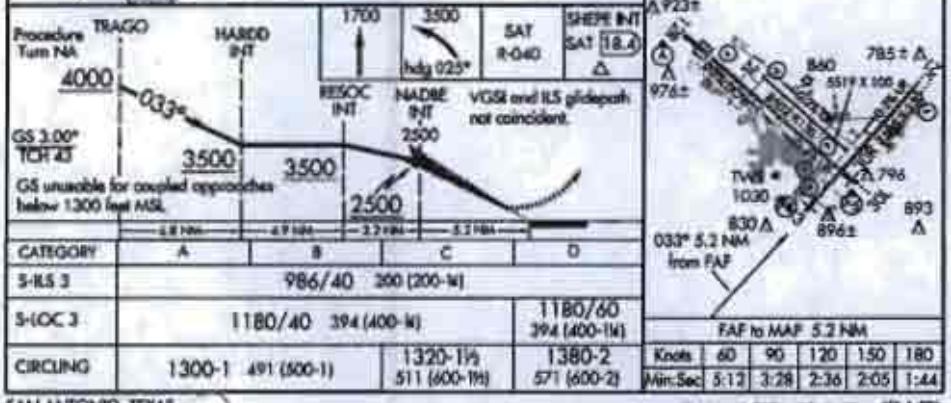
MISSED APPROACH: Climb to 1700 then climbing left turn to 3500 via heading 025° and SAT R-040 to SHEPE INT/SAT 18.4 DME and hold.

ATIS	SAN ANTONIO APP CON	SAN ANTONIO TOWER	GND CON	CLNC DEL
118.9	125.1 307.0	119.8 257.8	121.9 348.6	126.7



ELEV 809 | TDZE 786

TDZ/CL Rwy 12R
REIL Rwys 12L, 21 and 30R
MIRL Rwy 12L-30R
HIRL Rwys 3-21 and 12R-30L



CATEGORY	A	B	C	D
S-ILS 3	986/40 200 (200-½)			
S-LOC 3	1180/40 394 (400-½)			1180/60 394 (400-1¼)
CIRCLING	1300-1 491 (500-1)		1320-1½ 511 (600-1½)	1380-2 571 (600-2)

FAF to MAP 5.2 NM

Knots	60	90	120	150	180
Min:Sec	5:12	3:28	2:36	2:05	1:44

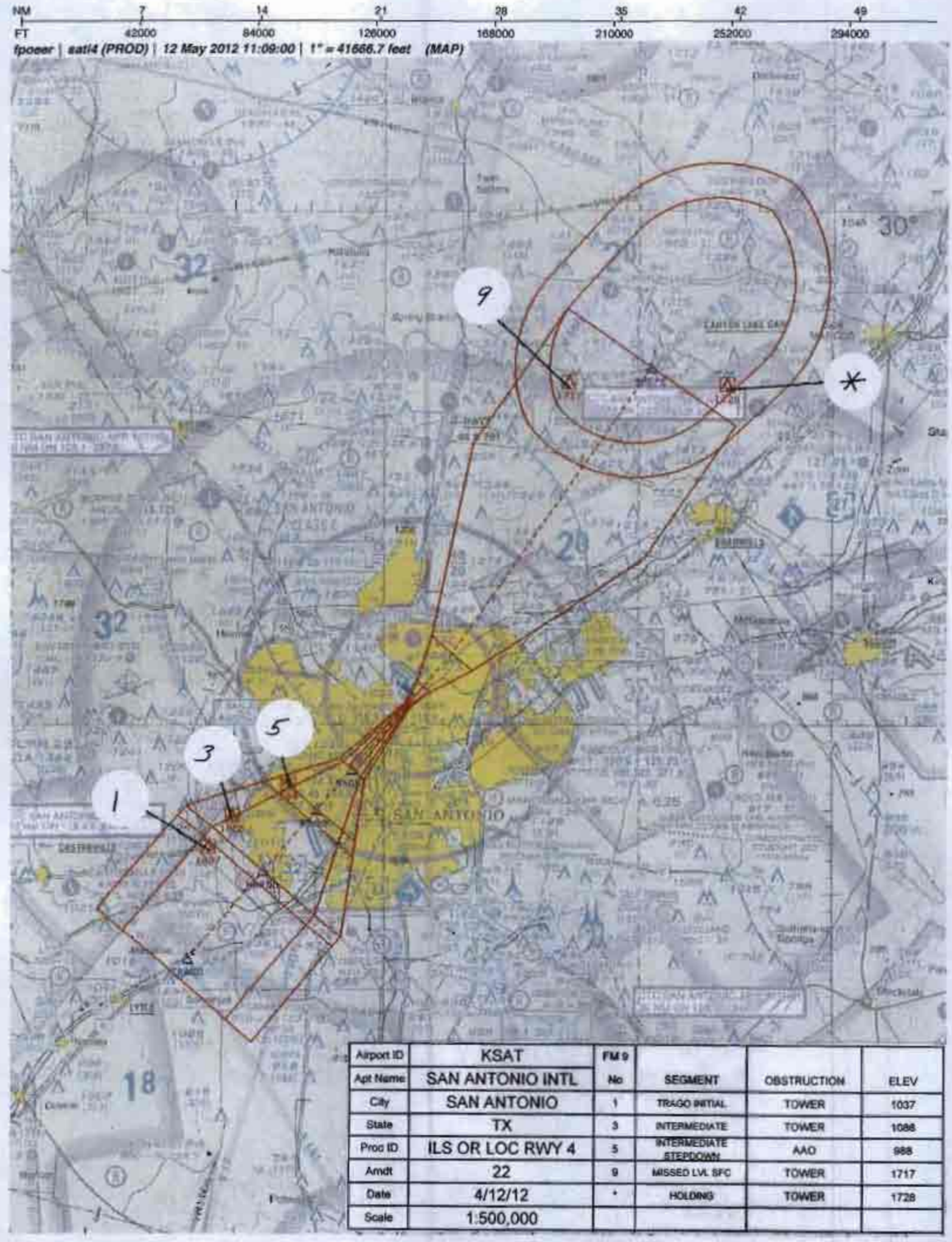
SAN ANTONIO, TEXAS
Amdt 21 12096

29°32'N-98°28'W

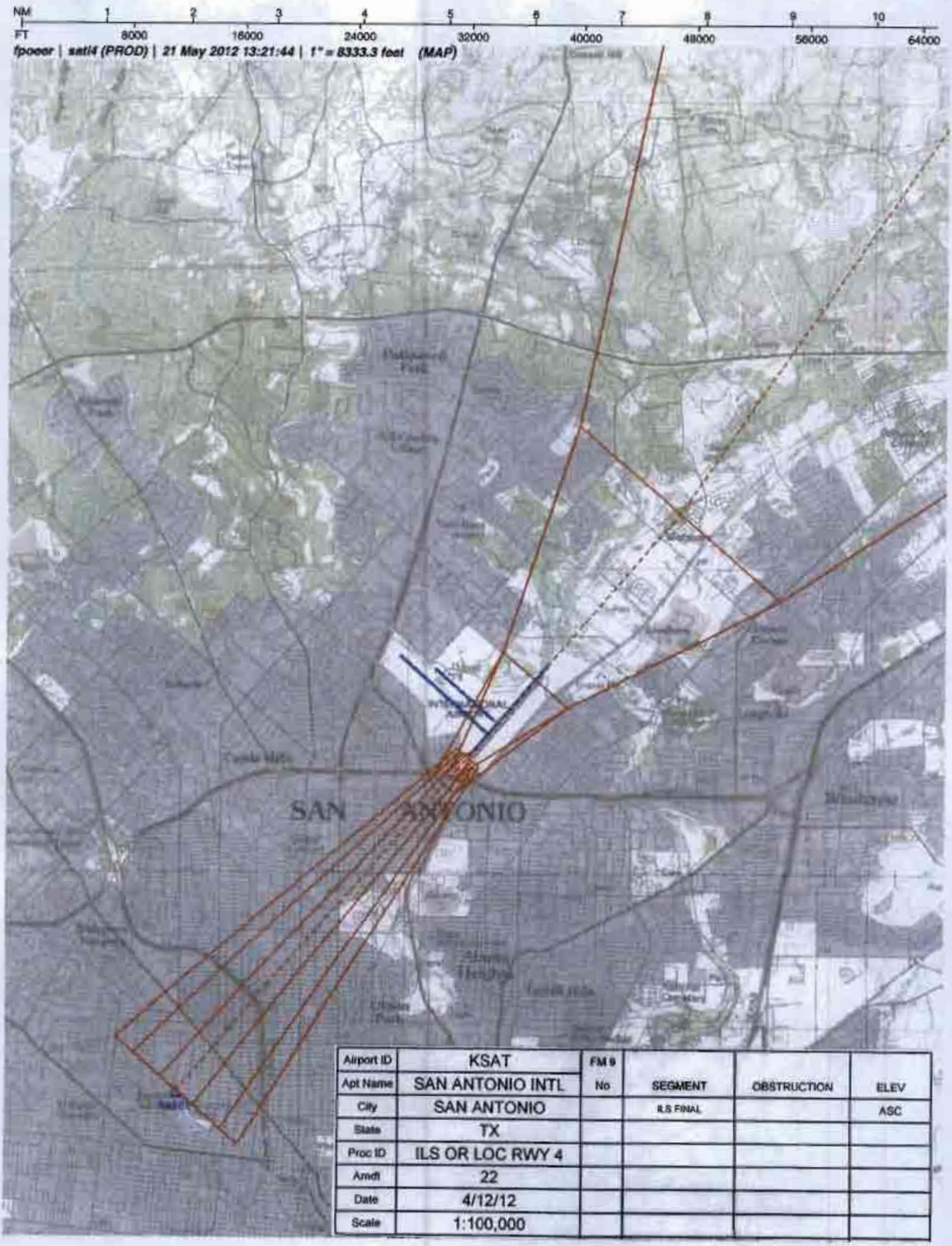
SAN ANTONIO INTL (SAT)
ILS or LOC RWY 3

SC-3, 05 APR 2012 to 03 MAY 2012

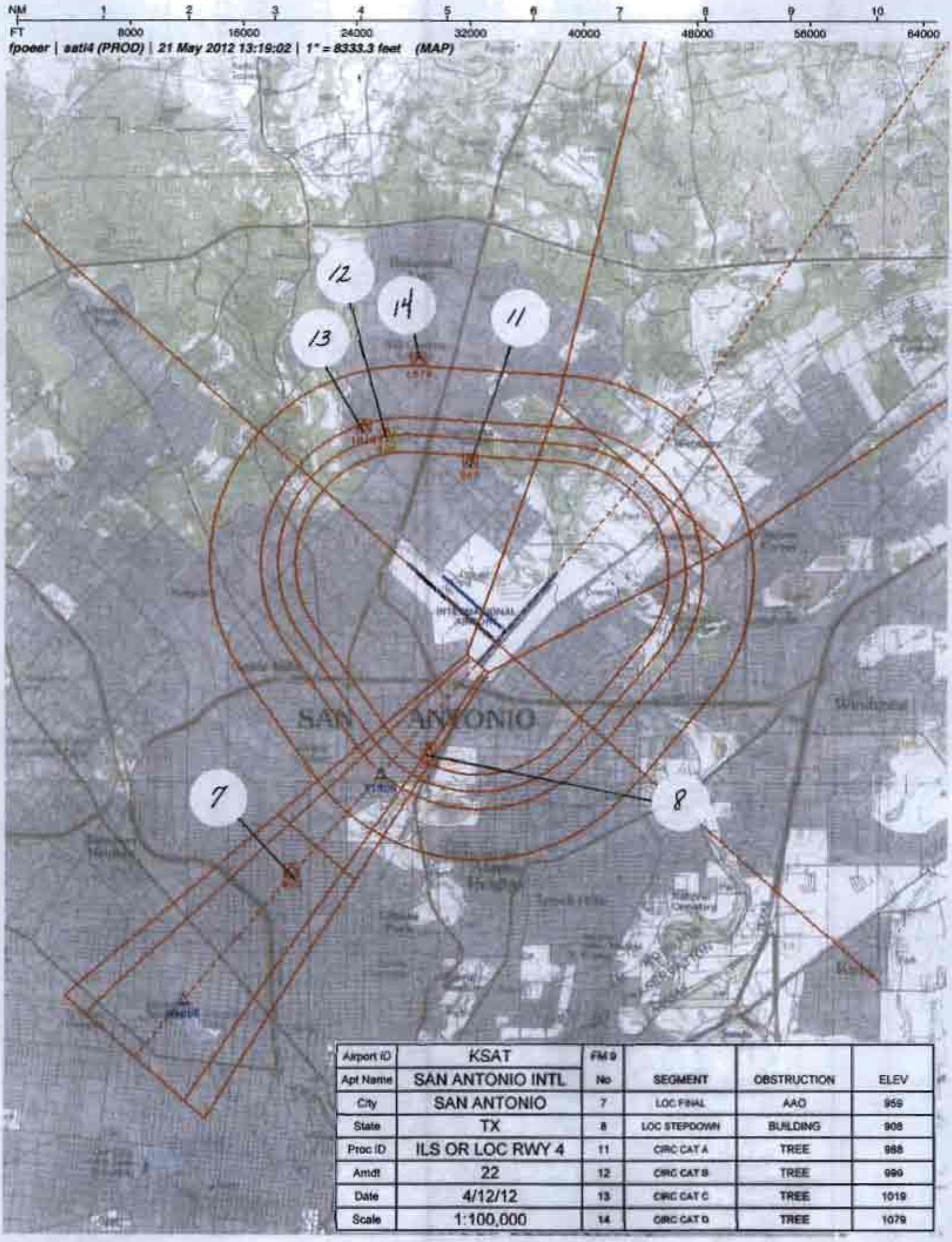
SC-3, 05 APR 2012 to 03 MAY 2012



Airport ID	KSAT	FM 9 No	SEGMENT	OBSTRUCTION	ELEV
Apt Name	SAN ANTONIO INTL				
City	SAN ANTONIO	1	TRAGO INITIAL	TOWER	1037
State	TX	3	INTERMEDIATE	TOWER	1088
Proc ID	ILS OR LOC RWY 4	5	INTERMEDIATE STEPDOWN	AAO	988
Amdt	22	9	MISSED LVL SFC	TOWER	1717
Date	4/12/12	*	HOLDING	TOWER	1728
Scale	1:500,000				



Airport ID	KSAT	FM 9			
Apt Name	SAN ANTONIO INTL	No	SEGMENT	OBSTRUCTION	ELEV
City	SAN ANTONIO		ILS FINAL		ASC
State	TX				
Proc ID	ILS OR LOC RWY 4				
Amdt	22				
Date	4/12/12				
Scale	1:100,000				



Airport ID	KSAT	FM 9			
Apt Name	SAN ANTONIO INTL	No	SEGMENT	OBSTRUCTION	ELEV
City	SAN ANTONIO	7	LOC FINAL	AAD	959
State	TX	8	LOC STEPDOWN	BUILDING	908
Proc ID	ILS OR LOC RWY 4	11	CIRC CAT A	TREE	988
Amdt	22	12	CIRC CAT B	TREE	999
Date	4/12/12	13	CIRC CAT C	TREE	1019
Scale	1:100,000	14	CIRC CAT D	TREE	1079

US DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

ILS - STANDARD INSTRUMENT APPROACH PROCEDURE TITLE 14 CFR PART 97.29

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

TERMINAL ROUTES

FROM	TO	COURSE AND DISTANCE	ALTITUDE
TRAGO INT/21.61 DME (IAF)	HARDD INT/14.77 DME	036.78 / 6.84 (I-SAT)	3500
HARDD INT/14.77 DME (IF)	RESOC INT/9.92 DME	036.78 / 4.85 (I-SAT)	3500
RESOC INT/9.92 DME	NADBE INT/ 6.77 DME	036.78 / 3.15 (I-SAT)	2500

MISSED APPROACH

ILS: DA
LOC: 5.20 MILES AFTER NADBE INT/6.77 DME OR AT 1.57 DME FIX

CLIMB TO 1700 THEN CLIMBING LEFT TURN TO 3500 ON HEADING 025 AND ON SAT VORTAC R-040 TO SHEPE INT/SAT 18.36 DME AND HOLD, OR AS DIRECTED BY ATC.

ALTERNATE MA: CLIMB TO 1700 THEN CLIMBING LEFT TURN TO 3500 ON HEADING 025 FOR RADAR VECTORS.

ADDITIONAL FLIGHT DATA:
HOLD NE, RT, 219.59 INBOUND.
CHART FAS OBST: 908 BLDG 293018N/0982850W CHART A-635.
CHART VDP AT 2.42 DME*;
DISTANCE VDP TO THLD 0.85 MILES.
*LOC ONLY.

1. PT ____ SIDE OF COURSE ____ OUTBOUND ____ FT WITHIN ____ MILES OF ____ (IAF)
2. PROFILE STARTS AT TRAGO INT/21.61 DME
3. FAC: 036.78 FAF: NADBE INT/ 6.77 DME DIST FAF TO MAP: 5.20 THLD: 5.20
4. MIN. ALT: TRAGO 4000, HARDD 3500, RESOC 3500, NADBE 2500, ZINON/ 3.27 DME 1220*
5. DIST TO THLD FROM OM: - MM: - IM: - 150 HAT: - 100 HAT: - GS ANT: 1287
6. MIN GS INCPT: 2500 GS ALT AT: NADBE 2500 OM: - MM: - IM: -
7. GS ANGLE: 3.00 TCH: 56.4
8. MSA FROM: SAT VORTAC 225-315 4100, 315-225 3300

MAG VAR: 4E EPOCH YEAR: 2015

MINIMUMS

TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT | ALTERNATE: N A | ILS: STANDARD LOC: STANDARD

CATEGORY =====>	A			B			C			D			E		
	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA
S-ILS 4	986	4000	200	986	4000	200	986	4000	200	986	4000	200			
S-LOC 4	1220	4000	434	1220	4000	434	1220	5000	434	1220	5000	434			
CIRCLING	1300	1	491	1300	1	491	1320	1 1/2	511	1380	2	571			
ZINON FIX MINIMUMS (DME REQUIRED)															
S-LOC 4	1120	4000	334	1120	4000	334	1120	4000	334	1120	4000	334			
CIRCLING	1300	1	491	1300	1	491	1320	1 1/2	511	1380	2	571			

NOTES:
CHART NOTE: CIRCLING NA SOUTHWEST OF RWYS 12R AND 30L.
CHART PROFILE NOTE: VGSI AND ILS GLIDEPATH NOT COINCIDENT.
CHART NOTE: INOPERATIVE TABLE DOES NOT APPLY TO S-ILS 4. FOR INOPERATIVE MALS, INCREASE S-LOC 4 CAT D VISIBILITY TO 1 1/4. ZINON FIX MINIMUMS: FOR INOPERATIVE MALS, INCREASE S-LOC 4 CAT D VISIBILITY TO 1.

QUALITY CHECKED

CITY AND STATE	ELEVATION: 809 THRE: 786 AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO./AMDT NO./EFFECTIVE DATE:	SUP: ILS OR LOC RWY 3
SAN ANTONIO, TX	SAN ANTONIO INTL	I-SAT	ILS OR LOC RWY 4, AMDT 22	AMDT: 21
				DATED 07/02/2009

ALL AFFECTED PROCEDURES REVIEWED?	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE
[ ] YES [X] NO	SEE CHANGES	ROUTINE

COORDINATED WITH:

ATA	AAT	ALPA	APA	AOPA	NBAA	OTHER (specify)
[X]	[ ]	[X]	[X]	[X]	[X]	[X] ZHU, SAT APP CON, SAT ATCT, AMGR, ST. AVI. DIR.

FLIGHT CHECKED BY

NAME:	FIFO	DATE:
THOMAS ERVIN PAGE	FIOG	09/19/2012

DEVELOPED BY

NAME:	FIFO	DATE:
BETTY RICHARDS	AJV-353	04/24/2012

APPROVED BY

NAME:		FIFO	DATE:
LARRY H STROUT	MANAGER	AJV-353	

CHANGES:

1. RUNWAY NUMBER CHANGED FROM RWY 3 TO RWY 4.
2. DISTANCE HARDD TO RESOC CHANGED FROM 4.87 TO 4.85.
3. DISTANCE RESOC TO NADBE CHANGED FROM 3.16 TO 3.15.
4. DISTANCE FAF TO MAP/THLD CHANGED FROM 5.17 TO 5.20.
5. DISTANCE TO THLD FROM GS ANT CHANGED FROM 953 TO 1287.
6. TCH CHANGED FROM 43.2 TO 56.4.
7. ADDED STEP DOWN FIX ZINON AND SECOND SET OF MINIMUMS.
8. ADDED VDP DATA AND UNNAMED DME FIX TO LOC MISSED APPROACH POINT.
9. UPDATED FACILITY MAG VAR FROM 8E TO 4 E.
10. ADDED ALTERNATE MISSED APPROACH INSTRUCTIONS.
11. CHANGED S-LOC CAT C VISIBILITY FROM RVR 4000 TO RVR 5000, AND CAT D FROM RVR 6000 TO RVR 5000.
12. REMOVED NOTE: GS UNUSABLE FOR COUPLED APPROACHES BELOW 1300 FEET MSL.

GS: 293130.20N / 0982758.06W, LOC: 293235.07N / 0982701.19W, DME: 293233.08N / 0982658.86W, NGS 405 SURVEY

REASONS:

1. RWY RENUMBERED.
2., 3., 4. APPLICATION OF AFS MEMO DATED 07/06/2010.
5. RELOCATION OF ILS.
6. NEW GLIDE SLOPE TCH.
7. AAO RAISED LOC MDA, ABLE TO IMPROVE MDA BY 100 FT WITH FPO CONCURRENCE.
8. FACILITY HAS DME.
9. APPLIED 2015 EPOCH YEAR MAG VAR.
10. FPT/ATC REQUEST.
11. 8260.3B, TABLE 3-5A.
12. GS ANTENNA WAS MOVED 333.76 FT. ASSUMPTION IS THE RESTRICTION IS NO LONGER REQUIRED.

09/24/2012: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 04/24/2012. CHANGED ZINON FIX MINIMUMS (DUAL VOR RECEIVERS OR DME REQUIRED) TO (DME REQUIRED) AND DELETED INT FROM ZINON, MAKING IT A DME ONLY FIX, PER FLIGHT INSPECTION.

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ARINC PACKET - 424-18 - ILS

```
                1         2         3         4         5         6         7         8         9         0         1         2         3
NAVAID  12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------
        SUSAD        SAT   K4011680VTHA N29383851W098274073    N29383851W098274073E0080011602     NARSAN ANTONIO
        SUSAD KSATK4 ISAT  K4010970 IT                    ISATN29323308W098265886     007570     NARSAN ANTONIO INTL

                1         2         3         4         5         6         7         8         9         0         1         2         3
WP      12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------
        SUSAEAENRT   HARDD K40    C     N29212205W098380363                    E0049     NAR           HARDD
        SUSAEAENRT   NADBE K40    C     N29272651W098320532                    E0049     NAR           NADBE
        SUSAEAENRT   RESOC K40    C     N29250315W098342639                    E0049     NAR           RESOC
        SUSAEAENRT   SHEPE K40    C   L N29510219W098120565                    E0047     NAR           SHEPE
        SUSAEAENRT   TRAGO K40    R   L N29160973W098430961                    E0050     NAR           TRAGO

                1         2         3         4         5         6         7         8         9         0         1         2         3
AIRPORT 12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------
        SUSAP KSATK4ASAT     0     085YHN29320130W098281120E008000809         1800018000C    MNAR    SAN ANTONIO INTL

                1         2         3         4         5         6         7         8         9         0         1         2         3
SEGMENT 12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------
        SUSAP KSATK4FI04   ATRAGO 010TRAGOK4EA0E  A    IF                                  + 04000     18000                 0 NS
        SUSAP KSATK4FI04   ATRAGO 020HARDDK4EA0E  B    TF                                  + 03500                           0 NS
        SUSAP KSATK4FI04   ATRAGO 030RESOCK4EA0EE      CF ISATK4      2168009903680049PI   + 03500                           0 NS
        SUSAP KSATK4FI04   I      010RESOCK4EA0E  I    IF ISATK4      21680099         PI  J 035000250018000                 0 NS
        SUSAP KSATK4FI04   I      020NADBEK4EA0E  F    CF ISATK4      2168006803700032PI  H 0250002500        -300SAT   K4D 0 NS
        SUSAP KSATK4FI04   I      030RW04 K4PGOGY M    CF ISATK4      2168001603700052PI    00842             -300            0 NS
        SUSAP KSATK4FI04   I      040          0  M    CA                      0368        + 01700                           0 NS
        SUSAP KSATK4FI04   I      050          0       VI                      0250                                          0 NS
        SUSAP KSATK4FI04   I      060SHEPEK4EA0EY      CF SAT K4      0396018403960030D   + 03500                           0 NS
        SUSAP KSATK4FI04   I      070SHEPEK4EA0EE  R   HM                      2196T010    + 03500                           0 NS

                1         2         3         4         5         6         7         8         9         0         1         2         3
RUNWAY  12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------
        SUSAP KSATK4GRW04     0085050328 N29312364W098281166-0400     +021420078600005615OIISAT1

                1         2         3         4         5         6         7         8         9         0         1         2         3
ILS     12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------
        SUSAP KSATK4IISAT1   010970RW04 N29323507W098270119036 8N29313020W098275806 1025 12870421300E00405600775
```

QUALITY 1

CITY AND STATE	ELEVATION: 809 THRE: 786	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP: ILS OR LOC RWY 3
SAN ANTONIO, TX	AIRPORT NAME: **SAN ANTONIO INTL**	**I-SAT**	**ILS OR LOC RWY 4, AMDT 22**	AMDT: **21**
				DATED: **07/02/2009**

ALL AFFECTED PROCEDURES REVIEWED? ☐ YES ☐ NO	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ OTHER (specify) ☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	NFPG	DATE:
APPROVED BY		
NAME:	NFPG	DATE:

CHANGES:

REASONS:

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION
ILS STANDARD INSTRUMENT APPROACH PROCEDURE
FLIGHT STANDARDS SERVICES - FAR PART 97.29

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```
                1         2         3         4         5         6         7         8         9         0         1         2         3
MSA     123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KSATK4SSAT  K4D                 0   0451350412513504503325                                                          M
```

QUALITY 1 CHECKED

CITY AND STATE	ELEVATION: 809 THRE: 786	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP: ILS OR LOC RWY 3
SAN ANTONIO, TX	AIRPORT NAME: SAN ANTONIO INTL	I-SAT	ILS OR LOC RWY 4, AMDT 22	AMDT: 21
				DATED: 07/02/2009

ALL AFFECTED PROCEDURES REVIEWED? ☐ YES ☐ NO	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ OTHER (specify) ☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	NFPG	DATE:
APPROVED BY		
NAME:	NFPG	DATE:

CHANGES:

REASONS:

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

ILS STANDARD INSTRUMENT APPROACH PROCEDURE

FLIGHT STANDARDS SERVICES - **FAR PART 97.29**

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ARINC SUMMARY - 424-18 - ILS

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	TRAGO	TRAGO	010	IAF	IF		FB				AA 04000	
	TRAGO	HARDD	020		TF		FB				AA 03500	
	TRAGO	RESOC	030		CF		FB		036.8()	004.9	AA 03500	
		RESOC	010	FACF	IF		FB				AA 03500 GI 02500	
		NADBE	020	FAF	CF		FB		037.0()	003.2	GI 02500 GS 02500	
		RW04	030	MAP	CF		FO		037.0()	005.2	AT 00842	

MISSED APPROACH	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
		040		CA		FB		036.8()		AA 01700	
		050		VI		FB		025.0()			
	SHEPE	060		CF		FO		039.6()	003.0	AA 03500	
	SHEPE	070		HM	R	FO		219.6()	T01.0	AA 03500	

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	SAT	N293838.51	W0982740.73	N2938.642	W09827.679
	ISAT (DME)	N293233.08	W0982658.86	N2932.551	W09826.981
	HARDD	N292122.05	W0983803.63	N2921.368	W09838.061
	NADBE	N292726.51	W0983205.32	N2927.442	W09832.089
	RESOC	N292503.15	W0983426.39	N2925.053	W09834.440
	SHEPE	N295102.19	W0981205.65	N2951.037	W09812.094
	TRAGO	N291609.73	W0984309.61	N2916.162	W09843.160
	RW04	N293123.64	W0982811.66	N2931.394	W09828.194
	ISAT (LOC)	N293235.07	W0982701.19	N2932.585	W09827.020

RUNWAY DATA	RWY	THRESHOLD ELEVATION	TCH
	RW04	00786	56

QUALITY CHECKED

CITY AND STATE	ELEVATION: 809 THRE: 786	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP: ILS OR LOC RWY 3
SAN ANTONIO, TX	AIRPORT NAME: **SAN ANTONIO INTL**	**I-SAT**	**ILS OR LOC RWY 4, AMDT 22**	AMDT: **21**
				DATED: **07/02/2009**

ALL AFFECTED PROCEDURES REVIEWED? ☐ YES ☐ NO	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ OTHER (specify) ☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	NFPG	DATE:
APPROVED BY		
NAME:	NFPG	DATE:

CHANGES:

REASONS:

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

ARINC PACKET - 424-18 - LOC

```
                 1         2         3         4         5         6         7         8         9         0         1         2         3
NAVAID  1234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAD        SAT   K4011680VTHA N29383851W098274073    N29383851W098274073E0080011602     NARSAN ANTONIO
        SUSAD KSATK4 ISAT  K4010970 IT                     ISATN29323308W098265886     007570     NARSAN ANTONIO INTL

                 1         2         3         4         5         6         7         8         9         0         1         2         3
WP      1234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAEAENRT   HARDD K40    C     N29212205W098380363                    E0049     NAR           HARDD
        SUSAEAENRT   NADBE K40    C     N29272651W098320532                    E0049     NAR           NADBE
        SUSAEAENRT   RESOC K40    C     N29250315W098342639                    E0049     NAR           RESOC
        SUSAEAENRT   SHEPE K40    C   L N29510219W098120565                    E0047     NAR           SHEPE
        SUSAEAENRT   TRAGO K40    R   L N29160973W098430961                    E0050     NAR           TRAGO
        SUSAEAENRT   ZINON K40    R     N29300621W098292801                    E0048     NAR           ZINON

                 1         2         3         4         5         6         7         8         9         0         1         2         3
AIRPORT 1234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KSATK4ASAT     0     085YHN29320130W098281120E008000809         18000180000C    MNAR    SAN ANTONIO INTL

                 1         2         3         4         5         6         7         8         9         0         1         2         3
SEGMENT 1234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KSATK4FL04   ATRAGO 010TRAGOK4EA0E  A    IF                                    + 04000     18000                  0 NS
        SUSAP KSATK4FL04   ATRAGO 020HARDDK4EA0E  B    TF                                    + 03500                            0 NS
        SUSAP KSATK4FL04   ATRAGO 030RESOCK4EA0EE      CF ISATK4      2168009903680049PI     + 03500                            0 NS
        SUSAP KSATK4FL04   L      010RESOCK4EA0E  I    IF ISATK4      21680099         PI    + 03500     18000                  0 NS
        SUSAP KSATK4FL04   L      020NADBEK4EA0E  F    CF ISATK4      2168006803700032PI     + 02500                SAT   K4D 0 NS
        SUSAP KSATK4FL04   L      021ZINONK4EA0E S     CF ISATK4      2168003303700035PI     + 01220           -301             0 NS
        SUSAP KSATK4FL04   L      030RW04 K4PG0GY M    CF ISATK4      2168001603700017PI       00842           -301             0 NS
        SUSAP KSATK4FL04   L      040         0  M     CA                      0368          + 01700                            0 NS
        SUSAP KSATK4FL04   L      050         0        VI                      0250                                             0 NS
        SUSAP KSATK4FL04   L      060SHEPEK4EA0EY      CF SAT K4      0396018403960030D      + 03500                            0 NS
        SUSAP KSATK4FL04   L      070SHEPEK4EA0EE  R   HM                      2196T010      + 03500                            0 NS

                 1         2         3         4         5         6         7         8         9         0         1         2         3
RUNWAY  1234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KSATK4GRW04     0085050328 N29312364W098281166-0400     +0214200786000056150IISAT1

                 1         2         3         4         5         6         7         8         9         0         1         2         3
ILS     1234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
```

OBSOLETE CHECKED

CITY AND STATE	ELEVATION: 809 THRE: 786	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP: ILS OR LOC RWY 3
SAN ANTONIO, TX	AIRPORT NAME: **SAN ANTONIO INTL**	**I-SAT**	**ILS OR LOC RWY 4, AMDT 22**	AMDT: **21**
				DATED: **07/02/2009**

ALL AFFECTED PROCEDURES REVIEWED? ☐ YES ☐ NO	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ OTHER (specify) ☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	NFPG	DATE:
APPROVED BY		
NAME:	NFPG	DATE:

CHANGES:

REASONS:

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

```
        SUSAP KSATK4IISAT1   010970RW04 N29323507W0982701190368N29313020W0982758061025 12870421300E00405600775
                 1         2         3         4         5         6         7         8         9         0         1         2         3
MSA     123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KSATK4SSAT  K4D                 0   0451350412513504503325                                                          M
```

QUALITY CHECKED

CITY AND STATE	ELEVATION: 809 THRE: 786	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP: ILS OR LOC RWY 3
SAN ANTONIO, TX	AIRPORT NAME: SAN ANTONIO INTL	I-SAT	ILS OR LOC RWY 4, AMDT 22	AMDT: 21
				DATED: 07/02/2009

ALL AFFECTED PROCEDURES REVIEWED? ☐ YES ☐ NO	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ OTHER (specify) ☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	NFPG	DATE:
APPROVED BY		
NAME:	NFPG	DATE:

CHANGES:

REASONS:

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

ARINC SUMMARY - 424-18 - LOC

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	TRAGO	TRAGO	010	IAF	IF		FB				AA 04000	
	TRAGO	HARDD	020		TF		FB				AA 03500	
	TRAGO	RESOC	030		CF		FB		036.8()	004.9	AA 03500	
		RESOC	010	FACF	IF		FB				AA 03500	
		NADBE	020	FAF	CF		FB		037.0()	003.2	AA 02500	
		ZINON	021	SDF	CF		FB		037.0()	003.5	AA 01220	
		RW04	030	MAP	CF		FO		037.0()	001.7	AT 00842	

MISSED APPROACH	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
		040		CA		FB		036.8()		AA 01700	
		050		VI		FB		025.0()			
	SHEPE	060		CF		FO		039.6()	003.0	AA 03500	
	SHEPE	070		HM	R	FO		219.6()	T01.0	AA 03500	

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	SAT	N293838.51	W0982740.73	N2938.642	W09827.679
	ISAT (DME)	N293233.08	W0982658.86	N2932.551	W09826.981
	HARDD	N292122.05	W0983803.63	N2921.368	W09838.061
	NADBE	N292726.51	W0983205.32	N2927.442	W09832.089
	RESOC	N292503.15	W0983426.39	N2925.053	W09834.440
	SHEPE	N295102.19	W0981205.65	N2951.037	W09812.094
	TRAGO	N291609.73	W0984309.61	N2916.162	W09843.160
	ZINON	N293006.21	W0982928.01	N2930.104	W09829.467
	RW04	N293123.64	W0982811.66	N2931.394	W09828.194
	ISAT (LOC)	N293235.07	W0982701.19	N2932.585	W09827.020

RUNWAY DATA	RWY	THRESHOLD ELEVATION	TCH
	RW04	00786	56

QUALITY 1 CHECKED

CITY AND STATE	ELEVATION: 809 THRE: 786	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP: ILS OR LOC RWY 3
SAN ANTONIO, TX	AIRPORT NAME: SAN ANTONIO INTL	I-SAT	ILS OR LOC RWY 4, AMDT 22	AMDT: 21
				DATED: 07/02/2009

ALL AFFECTED PROCEDURES REVIEWED? ☐ YES ☐ NO	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ OTHER (specify) ☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	NFPG	DATE:
APPROVED BY		
NAME:	NFPG	DATE:

CHANGES:

REASONS:

STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD

PART - A OBSTRUCTION DATA

1. APP SEGMENT	FROM	TO	OBSTRUCTION	COORDINATES	ELEV. MSL	ROC	ALT. ADJUSTMENTS	MIN. ALT.
INITIAL	TRAGO INT/21.61	HARDD INT/14.77	1. TOWER (48-011651)	292221.62N/0984146.25W	1037 (2C)	1000	AT1463	3500
	DME	DME	2. TERRAIN	292324.00N/0984206.00W	821 (800)		AS1500	2300
INTERMEDIATE	HARDD INT/14.77	RESOC INT/9.92	3. TOWER (48-014015)	292417.46N/0984008.01W	1086 (5D)	500	AT1914	3500
	DME	DME	4. TERRAIN	292417.46N/0984008.01W	806 (800)		AS1500	2300
INTERMEDIATE:	RESOC INT/9.92	NADBE INT/ 6.77	5. AAO	292615.00N/0983621.00W	988 (4E)	500	AT911 AC98	2500
STEPDOWN	DME	DME	6. TERRAIN	292645.00N/0983512.00W	762 (800)		AS1500	2300
FINAL: ILS	NADBE INT/ 6.77	RW04				ASC		986/200
	DME							
FINAL: LOC	NADBE INT/ 6.77	ZINON INT/ 3.27	7. AAO	292852.38N/0983038.00W	959 (2C)	250		1220
	DME	DME						
FINAL: LOC STEPDOWN	ZINON INT/ 3.27	5.20 MILES AFTER	8. BLDG (48-005539)	293018.00N/0982850.00W	908 (1A)	250	SA-44	1120
	DME	NADBE INT/6.77						
		DME OR AT 1.57						
		DME FIX						
2. PROCEDURE TURN	NA							
3. MISSED APPROACH MAP:	DA / 5.20 MILES	SHEPE INT/SAT				ASC		3500
	AFTER NADBE	18.36 DME	9. TOWER (48-004793)	294946.00N/0981737.00W	1717 (5E)	1000		2800
ELEV:	817/870		10. TERRAIN	294854.00N/0981839.00W	1460 (1500)		AS1500	3000

4. CIRCLING AREA	DISTANCE	HT. ABV. ARPT. REQUIRED	HT. ABV. ARPT. ACTUAL		11. TREE	293340.70N/0982818.10W	988 (2A)	300		1300 / 1300
CATEGORY A	1.3 NM	350	491 / 491		12. TREE	293358.58N/0982924.53W	999 (2C)	300		1300 / 1300
CATEGORY B	1.5 NM	450	491 / 491		13. TREE	293405.33N/0982943.08W	1019 (2C)	300		1320 / 1320
CATEGORY C	1.7 NM	450	511 / 511		14. TREE	293451.63N/0982859.41W	1079 (2C)	300		1380 / 1380
CATEGORY D	2.3 NM	550	571 / 571							
CATEGORY E	4.5 NM	550								

5. MINIMUM SAFE ALTITUDES — PRIMARY NAVAID: SAT VORTAC

SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A	SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A
225-315	TWR (48-005142)	257/ 22.7	3049 (5E)	4100					
315-225	AAO	330/ 28.4	2215 (4E)	3300					

CITY AND STATE	ELEVATION: 809 / AIRPORT NAME:	FACILITY	PROCEDURE AND AMENDMENT NO:	REGION
SAN ANTONIO, TX	SAN ANTONIO INTL	I-SAT	ILS OR LOC RWY 4, AMDT 22	ASW

PART B - SUPPLEMENTAL DATA

1. COMMUNICATIONS WITH:	2. WEATHER SERVICE	3. ALTIMETER SETTING
SAT TOWER SAT APP CON ZHU ARTCC SATISFACTORY ON:	[ ] NWS OTHER: ASOS [ ] FAA [ ] A/C	SOURCE: KSAT DISTANCE: HOURS REMOTE OPERATION:
[X] VHF [X] UHF [ ] HF	LOCATION: KSAT	ADJUSTMENT: 0

4. MONITOR STATUS	PRIMARY NAVAID: I-SAT	
	MONITOR POINT: SAT ATCT	
	HRS OPTN: CAT 1	24
	HRS OPTN: CAT 3	

5. APPROACH & RUNWAY LIGHTING		
	X	ALSF-2 12R
		(S) SALS
	X	MALS 04 MALSR 30L
	X	HIRL 22, 30L, 04, 12R
	X	MIRL 12L, 30R
	X	REIL 12L, 30R, 22
	X	TDZ 12R
	X	C/L 22, 30L, 04, 12R
	X	OTHER (SPECIFY) PAPI-4L 12L, 30R, 22, 30L, 04, 12R

6. RUNWAY MARKINGS	BASIC	BSC-G 30R
	ALL WEATHER	PIR-G 22, 30L, 04, 12R
	INSTRUMENT	NPI-G 12L
7. RUNWAY VISUAL RANGE	APPROACH	30L, 04, 12R
	MIDFIELD	30L, 12R
	ROLL OUT	30L, 12R

8. GLIDE PATH		
	GP ANGLE: 3.00	ELEV RWY THRESHOLD: 786.0
	DISTANCE FROM RWY: 1287	ELEV GP ANTENNA: 775
		THRESHOLD CROSSING HEIGHT: 56.4

9. FINAL APPROACH COURSE AIMING			
	X	RUNWAY THRESHOLD	FT. FROM THRESHOLD
	X	ON CENTERLINE	FT. FROM CENTERLINE

10. WAIVERS: NONE

PART D - PREPARED BY: BETTY RICHARDS	DATE: 04/24/2012
TITLE: AERONAUTICAL INFORMATION SPECIALIST	OFFICE: AJV-353

PART C - REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

SEE ATTACHED AIRSPACE LETTER.

BACK UP ALTIMETER SOURCE NOT PUBLISHED, REDUNDANT WEATHER SOURCES AVAILABLE.

50 FT VEGETATION PER FPT.

MAINTAINED CIRCLING VEGETATION OBSTACLES, ACCURACY CODES AND MINIMUMS FROM PUBLISHED PROCEDURE.

KSAT ASOS ON SERVICE A.

VGSI DATA: 3.00/63.6

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: HARDD **STATE:** TX **COUNTRY:** US

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	DIST FROM FAC 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	291.35	300.35		11.60		3500	5200

HOLDING: **HOLDING TYPE OF ACTION:** ESTABLISH

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	SW		WP	212.70	032.70	R		4	3500	6000	5	6

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:
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

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		1	KSAT	SAN ANTONIO	TX (US)
IAP	RNAV (RNP) Z RWY 4			KSAT	SAN ANTONIO	TX (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 7 **DATE OF REVISION:** 11/15/2012

REASON FOR REVISION:
UPDATED FAC 1 MAG BRG FROM 212.78 TO 216.78.
ADDED DME AS FIX TYPE
UPDATED FIX USE.
ADDED DME DISTANCE FOR FAC 1.
ADDED HOLDING PATTERN.

DEVELOPED BY: **DATE:** 04/24/2012 **OFFICE:** AJV-353 **NAME:** BETTY RICHARDS

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZHU
ATC FACILITY: SAT APP CON
OTHER:

QUALITY CHECKED 5

RADIO FIX AND HOLDING DATA RECORD

NAME: NADBE **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 292726.51N/0983205.32W **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	DIST FROM FAC FEET	MRA	MAA
1	SAN ANTONIO	I-SAT	LOC/DME		216.78	220.78	6.77	6.77	41157	2500	5200
2	STINSON	SSF	VOR	L	329.25	338.25		12.84		2500	5200

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

REMARKS:
RNP CRITERIA APPLIED

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)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 2 **DATE OF REVISION:** 11/15/2012

REASON FOR REVISION:
UPDATED FAC 1 MAG BRG FROM 212.78 TO 216.78.
REMOVED FAC 3 FROM FIX MAKE UP.
UPDATED FIX USE.
ADDED DME TO FIX TYPE.
MOVED FIX 199.62 FT SOUTHWEST.

DEVELOPED BY: **DATE:** 04/24/2012 **OFFICE:** AJV-353 **NAME:** BETTY RICHARDS

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: FTW
ARTCC: ZHU
ATC FACILITY: SAT APP CON
OTHER:

QUALITY CHECKED 1

RADIO FIX AND HOLDING DATA RECORD

NAME: RESOC **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 292503.15N/0983426.39W **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	DIST FROM FAC FEET	MRA	MAA
1	SAN ANTONIO	I-SAT	LOC/DME		216.78	220.78	9.92	9.92		3500	5200
2	STINSON	SSF	VOR	L	315.43	324.43		11.73		3500	5200

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

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)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 2 **DATE OF REVISION:** 11/15/2012

REASON FOR REVISION:
UPDATED FAC 1 MAG BRG FROM 212.78 TO 216.78.
UPDATED FIX USE.
ADDED DME TO FIX TYPE.
MOVED FIX 125.63 FT SOUTHWEST.

DEVELOPED BY: **DATE:** 04/24/2012 **OFFICE:** AJV-353 **NAME:** BETTY RICHARDS

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZHU
ATC FACILITY: SAT APP CON
OTHER:

QUALITY CHECKED 1

RADIO FIX AND HOLDING DATA RECORD "INFO ONLY"

NAME: SHEPE **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 295102.19N/0981205.65W **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	DIST FROM FAC FEET	MRA	MAA
1	SAN ANTONIO	SAT	VORTAC	H	039.59	047.59	18.36	18.36		3500	17500
2	STONEWALL	STV	VORTAC	H	120.94	128.94		33.82		3500	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	NE	SAT	VORTAC	039.59	219.59	R	1		3500	6000	6	7
2	SW		WP	205.53	025.53	R		4	3500	6000	5	6

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (48-001049)	294936.40N/0980700.00W	1728	2C
2	200	TOWER (48-001049)	294936.40N/0980700.00W	1728	2C

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	V17					TX (US)
IAP	RNAV (GPS) RWY 17			KBAZ	NEW BRAUNFELS	TX (US)
IAP	ILS OR LOC RWY 4	1, 2	1	KSAT	SAN ANTONIO	TX (US)
IAP	RNAV (GPS) Y RWY 4		2	KSAT	SAN ANTONIO	TX (US)
IAP	RNAV (RNP) Z RWY 4		2	KSAT	SAN ANTONIO	TX (US)

REQUIRED CHARTING: IAP, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 4 **DATE OF REVISION:** 05/05/2011

REASON FOR REVISION:
ADDED DISTANCE FROM FACILITY TO FAC 1 AND 2.
REMOVED FAC 3 FROM FIX MAKE UP.
UPDATED FIX USE.

DEVELOPED BY: **DATE:** 10/14/2010 **OFFICE:** AVN-120 **NAME:** BETTY RICHARDS

APPROVED BY: **DATE:** 03/08/2011 **OFFICE:** AVN-120 **NAME:** GREGORY YAMAMOTO

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZHU
ATC FACILITY: SAT APP CON
OTHER:

QUALITY 5

RADIO FIX AND HOLDING DATA RECORD

NAME: TRAGO **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 291609.73N/0984309.61W **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	SAN ANTONIO	I-SAT	LOC/DME		216.78	220.78	21.61	21.61		3500	5200
2	CENTER POINT	CSI	VORTAC	H	138.34	146.34	46.88	46.88		4000	17500
3	STINSON	SSF	VOR	L	263.67	272.67		14.49		4000	17500

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
I-SAT	LOC/DME	R-217	22	3500	5200
CSI	VORTAC	R-138	47	4000	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	NW	CSI	VORTAC	138.34	138.34	R	1		4000	10000	6	11

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	AAO	292503.00N/0985024.00W	1290	4E

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	V161	2, 3				TX (US)
IAP	ILS OR LOC RWY 12R	1, 2, 3	1	KSAT	SAN ANTONIO	TX (US)
IAP	ILS OR LOC RWY 30L	1, 2, 3	1	KSAT	SAN ANTONIO	TX (US)
IAP	ILS OR LOC RWY 4	1, 3		KSAT	SAN ANTONIO	TX (US)
IAP	ILS RWY 12R (CAT II)	1, 2, 3	1	KSAT	SAN ANTONIO	TX (US)

REQUIRED CHARTING: IAP, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 8 **DATE OF REVISION:** 11/15/2012

REASON FOR REVISION:
UPDATED FAC 1 MAG BRG FROM 212.78 TO 216.78.
UPDATED FIX USE.
CHANGED FAC 1 MRA FROM 4000 TO 3500 TO COINCIDE WITH APPROVED ESV.
CHANGED FAC 1 MAA FROM 5000 TO 5200 TO COINCIDE WITH APPROVED ESV.
CHANGED ESV I-SAT LOC/DME RADIAL FROM R-213 TO R-217.
ADDED DISTANCE FROM FACILITY FOR FAC 1, 2 AND 3.
REMOVED BLUIE FROM FIX MAKE-UP FACILITY.
REMOVED WAYPOINT FROM FIX TYPE.

DEVELOPED BY: **DATE:** 04/24/2012 **OFFICE:** AJV-353 **NAME:** BETTY RICHARDS

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZHU
ATC FACILITY: SAT APP CON
OTHER:

QUALITY 5 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: ZINON **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 293006.21N/0982928.01W **TYPE:** DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

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	SAN ANTONIO	I-SAT	LOC/DME		216.78	220.78	3.27	3.27		1120	5200

REMARKS:

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS OR LOC RWY 4	1		KSAT	SAN ANTONIO	TX (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

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

DEVELOPED BY: **DATE:** 05/21/2012 **OFFICE:** AJV-353 **NAME:** BETTY RICHARDS

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZHU
ATC FACILITY: SAT APP CON
OTHER:

09/24/2012: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 05/21/2012. DELETED INT FROM FIX TYPE AND FAC 2 FROM FIX MAKE-UP FACILITIES PER FLIGHT INSPECTION.

QUALITY 4 CHECKED

TERMINAL AIRSPACE DATA REQUIREMENTS

CITY: **SAN ANTONIO** STATE: **TX**

AIRPORT NAME: **SAN ANTONIO INTL** ID: **KSAT**

PROCEDURE: **ILS OR LOC RWY 4** AMDT: **22**

DOCKET#:
(96-AXX-X/Required/Not Required)

ALL DIST TO 1/100 NM; ELEV TO NEAREST FT; COORD TO 1/100 SEC; DEG TO 1/100 DG.

1. Distance from (Enter THLD, FAF, ARP, FACILITY, as appropriate)	**THLD**	to 1000' point	**3.01**
2. Width of (Enter appropriate segment, final, intermediate, etc.)	**FINAL**	segment at 1000' point	**0.87**
3. True Course of	**FINAL**	segment containing 1000' point	**040.78**
4. High Terrain in	**FINAL**	segment containing 1000' point	**831**
5. Distance from (If 1500' point in PT maneuvering area or holding pattern note in remarks)	**THLD**	to 1500' point	**4.80**
6. Width of	**FINAL**	segment at 1500' point	**1.26**
7. True Course of	**FINAL**	segment containing 1500' point	**040.78**
8. High Terrain in	**FINAL**	segment containing 1500' point	**831**

9. Threshold Coordinates (if straight-in) ... **293123.64N** / **0982811.66W**

10. ARP Coordinates ..... **293201.30N** / **0982811.20W**

11. Runway Approach End and distance furthest from ARP ..... RWY **22**

Distance **1.01** NM

12. FAF Coordinates ..... **292726.51N** / **0983205.32W**

REMARKS: Approach/Drawing attached.

Federal Aviation Administration

Memorandum

Date: MAY 24 2012

To: Dick Powell Manager, National Flight Data Center, AJV-21

From: ORIGINAL SIGNED BY Larry Strout, Manager, Terminal Procedures & Charting Services, Central Team, AJV-353

Subject: **ACTION:** Magnetic Variation Change

The Magnetic Variation (MV) data for the airport(s) and/or facility(s) listed under the 'Airport/Facility" column will be revised effective concurrent with the publication of the procedure(s) listed below.

ILS OR LOC RWY 4, AMDT 22

Estimated Chart Date: 11/15/2012

Runway Numbers Only are affected, change 03/21 to 04/22. (Runway extension only – this is not an airport rotation)

Please publish these changes in the National Flight Data Digest.

TEXAS

Location	Name	Airport /Facility	Identifier	Assigned Magnetic Variation Value	Epoch Year
San Antonio		ILS	SAT	Old 8° East New 4° East	2015

If you have any questions please notify Larry H. Strout, larry.h.strout@faa.gov (405) 954-5070

CONCURRENCES

ROUTING SYMBOL	INITIALS/SIG	DATE
AJV-34 SBaker	SB	5-22-12
AJV-353 JOlson	JMO	5-23-12
AJV-353 LStrout	JMO	5-23-12
AJV-341 JAlfonso		

cc: FTW-FPT, AVS-3rf
AJV-353; LStrout :sbj::x7537:05/18/2012 :U:\AVN100\I00Public\MAGVAR\MAGVAR Letters 2012\MV Change Request for San Antonio, TX (KSAT) 5-22-12
Requestor:@Requestor, AJW-3762:RWorthington, Evaluated By:LFortier