

FEDERAL AVIATION ADMINISTRATION  
FLIGHT STANDARDS SERVICE  
ILS STANDARD INSTRUMENT APPROACH PROCEDURE  
TITLE 14 CFR PART 97.29

Bearings, headings, courses, tracks 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 feet RVR.

|                                 |                                             |                                                 |                                           |                            |                      |                           |
|---------------------------------|---------------------------------------------|-------------------------------------------------|-------------------------------------------|----------------------------|----------------------|---------------------------|
| <u>AIRPORT ID</u><br>SAT        | <u>PROCEDURE NAME</u><br>ILS OR LOC RWY 31L | <u>ORIGINAL/AMENDMENT</u><br>12                 | <u>CITY</u><br>SAN ANTONIO                | <u>STATE</u><br>TX         |                      |                           |
| <u>AIRPORT ELEVATION</u><br>809 | <u>TDZE</u><br>31L 790<br>31R 788           | <u>SUPERSEDED</u><br>ILS OR LOC RWY 31L         | <u>ORIGINAL/AMENDMENT</u><br>11           | <u>DATED</u><br>12/02/2021 | <u>MAG VAR</u><br>4E | <u>EPOCH YEAR</u><br>2020 |
| <u>FACILITY</u><br>I-IZR        | <u>COORDINATES OF FACILITIES</u>            | <u>ACTUAL EFFECTIVE DATE</u><br>25 JANUARY 2024 | <u>REQUIRED EFFECTIVE DATE</u><br>ROUTINE | <u>CANCEL/SUSPEND</u>      |                      |                           |

**TERMINAL ROUTES** THIS IS A CORRECTED COPY OF A PROCEDURE ORIGINALLY PUBLISHED IN TL 24-03.

| <u>FROM</u>     | <u>FIX TYPE</u> | <u>TO</u>      | <u>FIX TYPE</u> | <u>LEG TYPE</u> | <u>FO/FB</u> | <u>RNP</u> | <u>COURSE</u> | <u>DISTANCE</u> | <u>ALTITUDE</u> |
|-----------------|-----------------|----------------|-----------------|-----------------|--------------|------------|---------------|-----------------|-----------------|
| TRNKS           | IAF             | SLLOW/8.09 DME |                 | TF              | FB           | 1.00       | 037.61        | 4.70            | 2700            |
| TRSMO           | IAF             | SLLOW/8.09 DME |                 | TF              | FB           | 1.00       | 217.68        | 4.70            | 2700            |
| CUGRR/11.59 DME | IAF             | SLLOW/8.09 DME |                 |                 |              |            | 307.61        | 3.50            | 2700            |
| SLLOW/8.09 DME  | IF              | DEFIX/4.11 DME |                 |                 |              |            | 307.61        | 3.97            | 2200            |

**MISSED APPROACH**

**MAP:**  
ILS: DA  
LOC: 4.28 NM AFTER DEFIX/4.11 DME OR AT I-IZR 0.17 DME

**MISSED APPROACH INSTRUCTIONS:**  
CLIMB TO 4200 DIRECT HASDO AND TRACK 307.48 TO REUBE AND HOLD.

**ALTERNATE MISSED APPROACH INSTRUCTIONS:**

**PROFILE:**

|                                 |                                          |                                   |                         |                  |                               |
|---------------------------------|------------------------------------------|-----------------------------------|-------------------------|------------------|-------------------------------|
| 1. <b>PT</b>                    | <b>SIDE OF COURSE</b>                    | <b>OUTBOUND</b>                   | <b>FT WITHIN</b>        | <b>MILES OF</b>  | (IAF)                         |
| 2. <b>PROFILE STARTS AT</b>     | SLLOW                                    |                                   |                         |                  |                               |
| 3. <b>FAC:</b>                  | 307.61                                   | <b>FAF:</b> DEFIX/4.11 DME        | <b>DIST FAF TO MAP:</b> | 4.28             | <b>DIST FAF TO THLD:</b> 4.28 |
| 4. <b>MIN ALT:</b>              | SLLOW/8.09 DME 2700, DEFIX/4.11 DME 2200 |                                   |                         |                  |                               |
| 5. <b>DIST TO THLD FROM OM:</b> |                                          | <b>MM:</b>                        | <b>IM:</b>              | <b>150 HAT:</b>  | <b>GS ANT:</b> 1055           |
| 6. <b>MIN GS INCPT:</b>         | 2200                                     | <b>GS ALT AT PFAF:</b> DEFIX 2200 | <b>OM:</b>              | <b>MM:</b>       | <b>IM:</b>                    |
| 7. <b>GS ANGLE:</b>             | 3.00                                     | <b>34:1:</b> IS CLEAR             | <b>20:1:</b> IS CLEAR   | <b>TCH:</b> 59.9 |                               |
| 8. <b>MSA FROM:</b>             | SAT VORTAC 225-315 4100, 315-225 3300    |                                   |                         |                  |                               |



**PBN REQUIREMENTS NOTE:**

RNP APCH - GPS.

**EQUIPMENT REQUIREMENTS NOTES:**AIRCRAFT NOT GPS EQUIPPED - RADAR REQUIRED FOR PROCEDURE ENTRY.  
DME REQUIRED.**NOTES:**CHART PROFILE NOTE: VGSI AND ILS GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).  
CHART NOTE: \*RVR 1800 AUTHORIZED WITH USE OF FD OR AP OR HUD TO DA.  
CHART NOTE: CIRCLING NA NW OF RWYS 4 AND 13R.  
CHART SPEED ICON IN PLANVIEW AT TRNKS: MAX 210 KIAS.

CHART SPEED ICON IN PLANVIEW AT TRSMO: MAX 210 KIAS.

**ADDITIONAL FLIGHT DATA:**HOLD NW, RT, 116.77 INBOUND.  
CHART FAS OBST: 1098 TOWER (48-014294) 292942N/0982455W.  
CHART A-635.  
CHART VDP AT 1.36 DME.  
DISTANCE VDP TO THLD 1.52 NM.  
CHART MANDATORY 4000 AT CUGRR.  
CHART CIRCLING ICON.  
CHART IN PROFILE VIEW: I-IZR DME ANTENNA.**MINIMUMS:****TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT****ALTERNATE:** NA ☐ ILS: STANDARD; LOC: STANDARD - CAT D 800-2 1/4

| <b><u>CATEGORY:</u></b>  | <b><u>A</u></b>      |                   |                       | <b><u>B</u></b>      |                   |                       | <b><u>C</u></b>      |                   |                       | <b><u>D</u></b>      |                   |                       | <b><u>E</u></b>      |                   |                       |
|--------------------------|----------------------|-------------------|-----------------------|----------------------|-------------------|-----------------------|----------------------|-------------------|-----------------------|----------------------|-------------------|-----------------------|----------------------|-------------------|-----------------------|
| <b><u>FINAL TYPE</u></b> | <b><u>DA/MDA</u></b> | <b><u>VIS</u></b> | <b><u>HAT/HAA</u></b> | <b><u>DA/MDA</u></b> | <b><u>VIS</u></b> | <b><u>HAT/HAA</u></b> | <b><u>DA/MDA</u></b> | <b><u>VIS</u></b> | <b><u>HAT/HAA</u></b> | <b><u>DA/MDA</u></b> | <b><u>VIS</u></b> | <b><u>HAT/HAA</u></b> | <b><u>DA/MDA</u></b> | <b><u>VIS</u></b> | <b><u>HAT/HAA</u></b> |
| S-ILS 31L*               | 990                  | 2400              | 200                   | 990                  | 2400              | 200                   | 990                  | 2400              | 200                   | 990                  | 2400              | 200                   |                      |                   |                       |
| S-LOC 31L                | 1360                 | 2400              | 570                   | 1360                 | 2400              | 570                   | 1360                 | 6000              | 570                   | 1360                 | 6000              | 570                   |                      |                   |                       |
| SIDESTEP 31R             | 1360                 | 1                 | 572                   | 1360                 | 1                 | 572                   | 1360                 | 1 1/2             | 572                   | 1360                 | 2                 | 572                   |                      |                   |                       |
| CIRCLING                 | 1360                 | 1                 | 551                   | 1360                 | 1                 | 551                   | 1420                 | 1 3/4             | 611                   | 1520                 | 2 1/4             | 711                   |                      |                   |                       |

**CHANGES - REASONS**

1. CHART FAS OBSTACLE "1098 TOWER (48-014294) 292942N/0982455W" ONLY, REMOVED FAS OBST "915 BUILDING (48-030233) 293055N/0982655W - IAW 8260.19I 8-6-10(C)
2. MISSED APPROACH INSTRUCTIONS CHANGED FROM "CLIMB TO 3200 DIRECT ALAMO LOM AND HOLD. CONTINUE CLIMB-IN-HOLD TO 3200" TO "CLIMB TO 4200 DIRECT HASDO AND TRACK 307.48 TO REUBE AND HOLD" - ALAMO LOM SCHEDULED FOR DECOMMISSION, RNAV MISSED APPROACH UTILIZED DUE TO CONVENTIONAL MISSED APPROACH DID NOT MEET CRITERIA
3. ALTERNATE MISSED APPROACH INSTRUCTIONS DELETED - NO LONGER REQUIRED
4. IF/IAF "ROTT" DELETED, NEW IF/IAF NAMED "CUGRR" LOCATED 2923.48N/09817.52W - PER FPT REQUEST
5. HOLDING AT IF/IAF NOT REQUIRED - PER FPT REQUEST
6. FAF ROWAK REMOVED AND NEW FAF NAMED DEFIX AT COORDINATES 292847.17N/0982416.24W - PER FPT REQUEST
7. CHANGED FAF TO MAP/THLD DISTANCE FROM "5.53" TO "4.28" - REVISED OBSTACLE DATA
8. CHANGED CHART VDP FROM "0.96 DME" TO "1.36 DME" - IAW 8260.19 8-6-10(M)
9. DISTANCE TO VDP TO THLD CHANGED FROM "1.12 NM" TO "1.52 NM" - IAW 8260.19 8-6-10(M) MEMO
10. REMOVED CHART NOTE "ADF REQUIRED" - NOT REQUIRED
11. REMOVED CHART NOTE "FOR INOPERATIVE ALS, INCREASE S-LOC 31L CATS C/D VISIBILITY TO 1 5/8 SM - NOT REQUIRED
12. FIX "CIBUS" MINIMUMS REMOVED - NO LONGER NEEDED, FIX "CIBUS" CANCELED
13. ADDED IAF "TRNKS" LOCATED 2922.36N/09824.26W AND "TRSMO" LOCATED 2929.39N/09817.17W - PER FPT REQUEST
14. LOC MINIMUMS DECREASED FROM "CAT C/D 1 1/4" TO "CAT C/D 6000" - REVISED OBSTACLE DATA
15. ADDED "RNP APCH - GPS" IN PBN REQUIREMENTS NOTE - IAW 8260.19I 8-6-8C(2)(A)
16. MAP: CHANGED FROM "LOC: 5.53 NM AFTER ROWAK INT/I-IZR 5.37 DME OR AT I-IZR 0.17 DME" TO "LOC: 4.28 NM AFTER DEFIX/4.11 DME OR AT I-IZR 0.17 DME" - NEW PFAF
17. CHANGED CIRCLING CHART NOTE FROM "CHART NOTE: CIRCLING NA W OF RWYS 4 AND 13R" TO "CHART NOTE: CIRCLING NA NW OF RWYS 4 AND 13R" - PER 8260.19I 8-6-11
18. ADDED EQUIPMENT REQUIREMENTS NOTE "AIRCRAFT NOT GPS EQUIPPED - RADAR REQUIRED FOR PROCEDURE ENTRY. DME REQUIRED - PER 8260.19I 8-6-8
19. ADDED "CHART MANDATORY 4000 AT CUGRR" - PER FPT REQUEST

12/18/2023: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 09/06/23

1. ADDED ASTERISK TO S-ILS 31L MINIMUMS IN FINAL TYPE COLUMN

**COORDINATED WITH:**

**A4A** ☒ **ALPA** ☒ **AOPA** ☒ **APA** ☒ **HAI** ☐ **NBAA** ☒ **OTHER:** ZHU ARTCC, SAT APP, AMGR

**FLIGHT CHECKED BY**

*Digitally signed by*

TERRY LEE HESTER

**MICHAEL GARRITY**

Dec 19, 2023

**OFFICE**

FIOG

**DATE**

11/07/2023

**DEVELOPED BY**

JASON KRETSCHMER (CHRISTOPHER MENDENHALL)

*Digitally signed by*

**CHRIS MENDENHALL**

Dec 18, 2023

**OFFICE**

AJV-A421

**DATE**

08/30/2023

**APPROVED BY**

MARLON J. ROBINSON

*Digitally signed by*

**MICHAEL GARRITY**

Dec 19, 2023

**OFFICE**

AJV-A420

**DATE**

01/25/2024

**TITLE**

MANAGER

