

**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> KTUS | <u>PROCEDURE NAME</u> ILS OR LOC RWY 11L | <u>ORIGINAL/AMENDMENT</u> 14E | <u>CITY</u> TUCSON | <u>STATE</u> AZ | | |
| <u>AIRPORT ELEVATION</u> 2643 | <u>TDZE</u> 2599 | <u>SUPERSEDED</u> ILS OR LOC RWY 11L | <u>ORIGINAL/AMENDMENT</u> 14D | <u>DATED</u> 07/15/2021 | <u>MAG VAR</u> 12E | <u>EPOCH YEAR</u> 1995 |
| <u>FACILITY</u> I-TUS | <u>COORDINATES OF FACILITIES</u> | <u>ACTUAL EFFECTIVE DATE</u> | <u>REQUIRED EFFECTIVE DATE</u> 12/29/2022 | <u>CANCEL/SUSPEND</u> | | |

TERMINAL ROUTES

| <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> |
|---------------------------|-----------------|---------------------------|-----------------|-----------------|--------------|------------|---------------|-------------------|-----------------|
| SSAND/TUS 30.00 DME | | TUS VORTAC | | | | | 250.81 | 30.00 | 10700 |
| TUS VORTAC | | LIPTE INT/I-TUS 17.50 DME | | | | | 303.05 | 17.75 | 7500 |
| TACUB/TUS 29.10 DME | IAF | LIPTE INT/I-TUS 17.50 DME | NOPT | | | | 123.05 | 11.35 (TUS R-303) | 6000 |
| LIPTE INT/I-TUS 17.50 DME | IF/IAF | WASON INT/I-TUS 12.54 DME | | | | | 123.03 | 4.96 (I-TUS) | 5500 |
| WASON INT/I-TUS 12.54 DME | | CALLS INT/I-TUS 10.22 DME | | | | | 123.03 | 2.33 (I-TUS) | 5000 |
| CALLS INT/I-TUS 10.22 DME | | POCIB INT/I-TUS 8.22 DME | | | | | 123.03 | 2.00 (I-TUS) | 4600 |

MISSED APPROACH

MAP:

ILS: DA

LOC: 5.67 NM AFTER POCIB INT/I-TUS 8.22 DME OR AT HUGIK/I-TUS 2.54 DME

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 4000 THEN CLIMBING RIGHT TURN TO 6000 ON HEADING 300 AND TUS VORTAC R-270 TO RYN NDB/TUS 12.84 DME AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)

2. HOLD NW LIPTTE, RT, 123.03 INBOUND, 6000 FT. IN LIEU OF PT (IAF), MAX 10000.

3. FAF: 123.03 FAF: POCIB INT/I-TUS 8.22 DME DIST FAF TO MAP: 5.67 DIST FAF TO THLD: 6.07

4. MIN ALT: LIPTTE INT/I-TUS 17.50 DME 6000, WASON INT/I-TUS 12.54 DME 5500, CALLS INT/I-TUS 10.22 DME 5000, POCIB INT/I-TUS 8.22 DME 4600, PARCS INT/I-TUS 4.82 DME 3480

5. DIST TO THLD FROM OM: MM: IM: 150 HAT: GS ANT: 939

6. MIN GS INCPT: 4600 GS ALT AT PFAF : POCIB INT/I-TUS 8.22 DME 4600 OM: MM: IM:

7. GS ANGLE: 3.00 34:1: 20:1: TCH: 55.4

8. MSA FROM: TUS VORTAC 240-330 6600, 330-240 10700

EQUIPMENT REQUIREMENTS NOTES:

ADF OR DME REQUIRED.
RADAR AND DME REQUIRED FOR PROCEDURE ENTRY AT TACUB.
DME REQUIRED FOR ARRIVALS AT SSAND.

NOTES:

CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT SSAND ON J104 EASTBOUND.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVAL ON TUS VORTAC AIRWAY RADIALS 288 CW 308.
CHART PROFILE NOTE: USE I-TUS DME WHEN ON THE LOCALIZER COURSE.
CHART PROFILE NOTE: VGSI AND ILS GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART NOTE: FOR INOPERATIVE ALS, INCREASE S-ILS CAT E VISIBILITY TO RVR 4000, S-LOC 11L CAT E VISIBILITY TO 2 1/2 SM; PARCS FIX MINIMUMS: S-LOC 11L CAT C/D/E VISIBILITY TO RVR 5500.

ADDITIONAL FLIGHT DATA:

CHART IN PLANVIEW: DINGO/TUS 40.00 DME/RADAR.
HOLD W, RT, 089.80 INBOUND.
CHART FAS OBST: 2609 POLE 320803N/1105742W.
CHART 4060 AAO 321123N/1110318W.

MINIMUMS:
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT

ALTERNATE: NA ☐ ILS: STANDARD; LOC: CAT A, B 900-2, CAT C 900-2 1/2, CAT D 1100-3, CAT E 1300-3

| CATEGORY: | A | | | B | | | C | | | D | | | E | | |
|--------------------|--------|-------|---------|--------|-------|---------|--------|-------|---------|--------|------|---------|--------|------|---------|
| FINAL TYPE | DA/MDA | VIS | HAT/HAA | DA/MDA | VIS | HAT/HAA | DA/MDA | VIS | HAT/HAA | DA/MDA | VIS | HAT/HAA | DA/MDA | VIS | HAT/HAA |
| S-ILS 11L | 2800 | 2400 | 201 | 2800 | 2400 | 201 | 2800 | 2400 | 201 | 2800 | 2400 | 201 | 2800 | 2400 | 201 |
| S-LOC 11L | 3480 | 4000 | 881 | 3480 | 4000 | 881 | 3480 | 2 | 881 | 3480 | 2 | 881 | 3480 | 2 | 881 |
| CIRCLING | 3480 | 1 1/4 | 837 | 3480 | 1 1/4 | 837 | 3480 | 2 1/2 | 837 | 3660 | 3 | 1017 | 3920 | 3 | 1277 |
| PARCS FIX MINIMUMS | | | | | | | | | | | | | | | |
| S-LOC 11L | 2960 | 2400 | 361 | 2960 | 2400 | 361 | 2960 | 4000 | 361 | 2960 | 4000 | 361 | 2960 | 4000 | 361 |
| CIRCLING | 3160 | 1 | 517 | 3220 | 1 | 577 | 3220 | 1 1/2 | 577 | 3660 | 3 | 1017 | 3920 | 3 | 1277 |

CHANGES - REASONS

1. DELETED FEEDER SEGMENT DINGO TO TACUB. - AVQ NDB DECOMMISSIONED AND NO COURSE GUIDANCE.
2. CHANGED FIX TACUB MAKEUP FROM "TACUB INT/TUS 29.10 DME" TO "TACUB/TUS 29.10 DME". - FIX TYPE CHANGED, NO LONGER AN INTERSECTION DUE TO AVQ NDB DECOMMISSIONING.
3. ADDED CHART IN PLANVIEW: DINGO/TUS 40.00 DME/RADAR. - ATC REQUEST FOR THEIR LOA BETWEEN ZAB AND U90 (ARTCC AND TERMINAL APPROACH).
4. DELETED EQUIPMENT REQUIREMENTS NOTE "ADF OR RADAR REQUIRED FOR ARRIVALS AT DINGO". - FEEDER SEGMENT DINGO TO TACUB DELETED DUE TO AVQ NDB DECOMMISSIONING.
5. ADDED EQUIPMENT REQUIREMENTS NOTE "RADAR AND DME REQUIRED FOR PROCEDURE ENTRY AT TACUB". - IAW FAAO 8260.19I PARAGRAPH 8-6-8.A.(1)(D).
6. CHANGED LINE 4 FIX PARCS MAKEUP FROM "PARCS INT/4.82 DME" TO "PARCS INT/I-TUS 4.82 DME". - IAW FAAO 8260.19I PARAGRAPH 8-2-6.C.(3).
7. DELETED LINE 4 "" FROM FIX PARCS MINIMUM ALTITUDE AND DELETED ASSOCIATED CHART PROFILE NOTE ""LOC ONLY". - NO LONGER REQUIRED.
8. ADDED CHART PLANVIEW NOTE "PROCEDURE NA FOR ARRIVALS AT SSAND ON J104 EASTBOUND". - IAW FAAO 8260.19I 8-2-5.E.(2).
9. CHANGED MISSED APPROACH FIX DESCRIPTION FROM "HUGIK/I-TUS 2.54 DME FIX" TO "HUGIK/I-TUS 2.54 DME". - FORMAT IAW FAAO 8260.19I PARAGRAPH 8-2-6.
10. CHANGED ALTERNATE MINIMUMS FROM "S-ILS 11L STANDARD, S-LOC 11L STANDARD EXCEPT CAT A/B 900-2, CAT C 900-2 1/2, CAT D 1100-3, CAT E 1300-3" TO "ILS: STANDARD; LOC: CAT A, B 900-2, CAT C 900-2 1/2, CAT D 1100-3, CAT E 1300-3". - LOC ALTERNATE MINIMUMS ARE NOT STANDARD FOR ANY CATEGORY.
11. DELETED ALTERNATE MINIMUMS NOTE FOR ILS AND LOC "NA WHEN LOCAL WEATHER NOT AVAILABLE". - NOT REQUIRED FOR AIRPORTS WITHOUT A BACKUP ALTIMETER IAW AJV MEMO 276, IMPLEMENTATION OF FAA ORDER 8260.19I - FLIGHT PROCEDURES AND AIRSPACE, DATED JUNE 29, 2020.
12. CHANGED COURSE ON FEEDER SEGMENT SSAND TO TUS VORTAC FROM 251.31 TO 250.81. - UPDATED COURSE EVALUATION.

COORDINATED WITH:

A4A ☒ **ALPA** ☒ **AOPA** ☒ **APA** ☒ **HAI** ☐ **NBAA** ☒ **OTHER:** ZAB, U90 (TUS TRACON), TUS ATCT, AZ AERO, AMGR, NGB/A306 (ANG)

FLIGHT CHECKED BY

PROCESSED IAW TECHNICAL SUPPORT GROUP (AJF-17) MEMO DATED 07/07/2021 GUIDANCE FOR PROCEDURAL CHANGES REQUIRING FLIGHT INSPECTION/VALIDATION

OFFICE

DATE

Digitally signed by

ERIC N SUSKI

Oct 31, 2022

DEVELOPED BY

ERIC N SUSKI (MICHAEL MCCARTNEY)

OFFICE

AJV-A431

DATE

10/04/2022

Digitally signed by

ERIC N SUSKI

Oct 31, 2022

APPROVED BY

JOHNNIE BAKER

OFFICE

AJV-A431

DATE

TITLE

MANAGER

Digitally signed by

ERIC N SUSKI

Oct 31, 2022



FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD

| | | | | | | |
|---------------------------|---|------------------------|-----------------------|--------------------|----------------------------------|--------------------------|
| <u>AIRPORT ID</u> KTUS | <u>PROCEDURE NAME</u> ILS OR LOC RWY 11L | <u>AMDT NO.</u> 14E | <u>CITY</u> TUCSON | <u>STATE</u> AZ | <u>AIRPORT ELEVATION</u> 2643 | <u>FACILITY</u> I-TUS |
|---------------------------|---|------------------------|-----------------------|--------------------|----------------------------------|--------------------------|

PART A: OBSTRUCTION DATA SEGMENTS

FEEDER

FROM
SSAND/TUS 30.00 DME

TO
TUS VORTAC

| <u>RNP</u> | <u>DISTANCE</u> 30.00 | <u>PAT</u> | <u>MAP</u> | <u>HAT</u> | | | <u>HMAS</u> | | | | | <u>MIN ALT</u> |
|--------------------|--------------------------|------------|-----------------|-------------|-------------|-----------|-------------|------------|-----------|-------------|--------------------|----------------|
| <u>OBSTRUCTION</u> | <u>COORDINATES</u> | | <u>ELEV MSL</u> | <u>HORZ</u> | <u>VERT</u> | <u>AC</u> | <u>ROC</u> | <u>OCS</u> | <u>CG</u> | <u>CGTA</u> | <u>ADJUSTMENTS</u> | |
| AAO | 320722.90N/1103107.00W | | 8682 | 1000 | 3 | 6A | 2000 | | | | | 10700 |
| TERRAIN | 320722.90N/1103107.00W | | 8482 (8500) | | | | | | | | AS1500 | 10000 |

COMPUTATIONS

ALT KIAS KTAS HAA VKTW TR BA DTA COURSE CHANGE DVEB VEB OCS RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

FEEDER

FROM
TUS VORTAC

TO
LIPTE INT/I-TUS 17.50 DME

| <u>RNP</u> | <u>DISTANCE</u> 17.75 | <u>PAT</u> | <u>MAP</u> | <u>HAT</u> | | | <u>HMAS</u> | | | | | <u>MIN ALT</u> |
|--------------------|--------------------------|------------|-----------------|-------------|-------------|-----------|-------------|------------|-----------|-------------|--------------------|----------------|
| <u>OBSTRUCTION</u> | <u>COORDINATES</u> | | <u>ELEV MSL</u> | <u>HORZ</u> | <u>VERT</u> | <u>AC</u> | <u>ROC</u> | <u>OCS</u> | <u>CG</u> | <u>CGTA</u> | <u>ADJUSTMENTS</u> | |
| AAO | 321640.80N/1110845.50W | | 4887 | 1000 | 3 | 6A | 2000 | | | | AT600 | 7500 |
| TERRAIN | 321640.80N/1110845.50W | | 4687 (4700) | | | | | | | | AS1500 | 6200 |

COMPUTATIONS

ALT KIAS KTAS HAA VKTW TR BA DTA COURSE CHANGE DVEB VEB OCS RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



INITIAL

FROM
TACUB/TUS 29.10 DME

TO
LIPTE INT/I-TUS 17.50 DME

| RNP | DISTANCE 11.35 | PAT | MAP | HAT | | | HMAS | | | | | |
|-------------|------------------------|-----|-------------|------|------|----|------|-----|----|------|-------------|---------|
| OBSTRUCTION | COORDINATES | | ELEV MSL | HORZ | VERT | AC | ROC | OCS | CG | CGTA | ADJUSTMENTS | MIN ALT |
| AAO | 322043.46N/1110903.25W | | 3779 | 50 | 20 | 2C | 1000 | | | | AT1221 | 6000 |
| TERRAIN | 322043.46N/1110903.25W | | 3579 (3600) | | | | | | | | AS1500 | 5100 |

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INTERMEDIATE

FROM
LIPTE INT/I-TUS 17.50 DME (IF/IAF)

TO
WASON INT/I-TUS 12.54 DME

| RNP | DISTANCE | PAT | MAP | HAT | | | HMAS | | | | | |
|-------------|------------------------|-----|-------------|------|------|----|------|-----|----|------|-------------|---------|
| | 4.96 | | | | | | | | | | | |
| OBSTRUCTION | COORDINATES | | ELEV MSL | HORZ | VERT | AC | ROC | OCS | CG | CGTA | ADJUSTMENTS | MIN ALT |
| AAO | 321640.80N/1110845.50W | | 4887 | 1000 | 3 | 6A | 500 | | | | PR78 AT35 | 5500 |
| TERRAIN | 321640.80N/1110845.50W | | 4687 (4700) | | | | | | | | AS0 | 4700 |

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



INTERMEDIATE: STEPDOWN

FROM
WASON INT/I-TUS 12.54 DME

TO
CALLS INT/I-TUS 10.22 DME

| RNP | DISTANCE 2.33 | PAT | MAP | HAT | | | HMAS | | | | | |
|-------------|------------------------|-----|-------------|------|------|----|------|-----|----|------|-------------|---------|
| OBSTRUCTION | COORDINATES | | ELEV MSL | HORZ | VERT | AC | ROC | OCS | CG | CGTA | ADJUSTMENTS | MIN ALT |
| AAO | 321232.79N/1110623.93W | | 4499 | 50 | 20 | 2C | 500 | | | | | 5000 |
| TERRAIN | 321232.79N/1110623.93W | | 4299 (4300) | | | | | | | | AS0 | 4300 |

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INTERMEDIATE: STEPDOWN

FROM
CALLS INT/I-TUS 10.22 DME

TO
POCIB INT/I-TUS 8.22 DME

| RNP | DISTANCE 2.00 | PAT | MAP | HAT | | | HMAS | | | | | |
|-------------|------------------------|-----|-------------|------|------|----|------|-----|----|------|-------------|---------|
| OBSTRUCTION | COORDINATES | | ELEV MSL | HORZ | VERT | AC | ROC | OCS | CG | CGTA | ADJUSTMENTS | MIN ALT |
| AAO | 321123.40N/1110317.70W | | 4060 | 1000 | 3 | 6A | 500 | | | | | 4600 |
| TERRAIN | 321123.40N/1110317.70W | | 3860 (3900) | | | | | | | | AS0 | 3900 |

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



FINAL: ILS

FROM
POCIB INT/I-TUS 8.22 DME

TO
RW11L

| RNP | DISTANCE 6.07 | PAT | MAP DA | HAT 201 | HMAS | | | | | | | |
|-------------|------------------|-----|-----------|------------|------|----|-----|-----|----|------|-------------|---------|
| OBSTRUCTION | COORDINATES | | ELEV MSL | HORZ | VERT | AC | ROC | OCS | CG | CGTA | ADJUSTMENTS | MIN ALT |
| | | | | | | | | ASC | | | XP1 | 2800 |

| COMPUTATIONS | ALT | KIAS | KTAS | HAA | VKTW | TR | BA | DTA | COURSE CHANGE | DVEB | VEB OCS | RF CENTER FIX/DISTANCE |
|--------------|-----|------|------|-----|------|----|----|-----|---------------|------|---------|------------------------|
|--------------|-----|------|------|-----|------|----|----|-----|---------------|------|---------|------------------------|

SEGMENT REMARKS:
XP: TO MAINTAIN CURRENT MINIMUMS.
FINAL: LOC

FROM
POCIB INT/I-TUS 8.22 DME

TO
PARCS INT/I-TUS 4.82 DME

| RNP | DISTANCE 3.39 | PAT | MAP | HAT 881 | HMAS | | | | | | | |
|-------------|------------------------|-----|----------|------------|------|----|-----|-----|----|------|-----------------|---------|
| OBSTRUCTION | COORDINATES | | ELEV MSL | HORZ | VERT | AC | ROC | OCS | CG | CGTA | ADJUSTMENTS | MIN ALT |
| TREE | 321001.13N/1110057.43W | | 2939 | 50 | 20 | 2C | 250 | | | | DG314 SA-27 XL4 | 3480 |

| COMPUTATIONS | ALT | KIAS | KTAS | HAA | VKTW | TR | BA | DTA | COURSE CHANGE | DVEB | VEB OCS | RF CENTER FIX/DISTANCE |
|--------------|-----|------|------|-----|------|----|----|-----|---------------|------|---------|------------------------|
|--------------|-----|------|------|-----|------|----|----|-----|---------------|------|---------|------------------------|

SEGMENT REMARKS:
OBST: LOCATED 181 FEET FROM EDGE OF PRIMARY AREA.



FINAL: LOC STEPDOWN

FROM

PARCS INT/I-TUS 4.82 DME

TO

5.67 NM AFTER POCIB INT/I-TUS 8.22 DME OR AT HUGIK/I-TUS 2.54 DME

| | | | | | |
|-----|----------|-----|---|-----|------|
| RNP | DISTANCE | PAT | MAP | HAT | HMAS |
| | 2.28 | | 5.67 NM AFTER POCIB INT/I-TUS 8.22 DME OR AT HUGIK/I-TUS 2.54 DME | 361 | |

| OBSTRUCTION | COORDINATES | ELEV MSL | HORZ | VERT | AC | ROC | OCS | CG | CGTA | ADJUSTMENTS | MIN ALT |
|--------------------|------------------------|----------|------|------|----|-----|-----|----|------|-------------|---------|
| POLE (KTUST000705) | 320803.03N/1105742.48W | 2609 | 20 | 3 | 1A | 250 | | | | MA83 | 2960 |

COMPUTATIONS

| | | | | | | | | | | | |
|-----|------|------|-----|------|----|----|-----|---------------|------|---------|------------------------|
| ALT | KIAS | KTAS | HAA | VKTW | TR | BA | DTA | COURSE CHANGE | DVEB | VEB OCS | RF CENTER FIX/DISTANCE |
|-----|------|------|-----|------|----|----|-----|---------------|------|---------|------------------------|

SEGMENT REMARKS:

OBST. TERRAIN ON FINAL SLOPES DOWNWARD FROM R11L/R THLDS. APPLICATION OF AAO BETWEEN R11L/R AND PARCS RESULTS IN R11R TDZ AS THE CONTROLLING OBSTACLE (PER SIAP PUBLISHED 08/03/2006).

HOLD-IN-LIEU OF PT

FROM

LIPTE

TO

P-10

| | | | | | |
|-----|----------|------|-----|-----|------|
| RNP | DISTANCE | PAT | MAP | HAT | HMAS |
| | | P-10 | | | |

| OBSTRUCTION | COORDINATES | ELEV MSL | HORZ | VERT | AC | ROC | OCS | CG | CGTA | ADJUSTMENTS | MIN ALT |
|-------------|------------------------|-------------|------|------|----|------|-----|----|------|-------------|---------|
| AAO | 321640.80N/1110845.50W | 4887 | 1000 | 3 | 6A | 1000 | | | | AT113 | 6000 |
| TERRAIN | 321640.80N/1110845.50W | 4687 (4700) | | | | | | | | AS1000 | 5700 |

COMPUTATIONS

| | | | | | | | | | | | |
|-----|------|------|-----|------|----|----|-----|---------------|------|---------|------------------------|
| ALT | KIAS | KTAS | HAA | VKTW | TR | BA | DTA | COURSE CHANGE | DVEB | VEB OCS | RF CENTER FIX/DISTANCE |
|-----|------|------|-----|------|----|----|-----|---------------|------|---------|------------------------|

SEGMENT REMARKS:



MISSED APPROACH : ILS

FROM
DA

TO
RYN NDB/TUS 12.84 DME

| RNP | DISTANCE | PAT | MAP | HAT | | | HMAS 2622 | | | | | |
|-------------|------------------------|-----|-------------|------|------|----|--------------|-----|----|------|-------------|---------|
| OBSTRUCTION | COORDINATES | | ELEV MSL | HORZ | VERT | AC | ROC | OCS | CG | CGTA | ADJUSTMENTS | MIN ALT |
| | | | | | | | | ASC | | | | 6000 |
| AAO | 320522.10N/1110315.10W | | 3899 | 1000 | 3 | 6A | 1000 | | | | | 4900 |
| TERRAIN | 320522.10N/1110315.10W | | 3699 (3700) | | | | | | | | AS1500 | 5200 |

| COMPUTATIONS | ALT | KIAS | KTAS | HAA | VKTW | TR | BA | DTA | COURSE CHANGE | DVEB | VEB OCS | RF CENTER FIX/DISTANCE |
|--------------|-----|------|------|-----|------|----|----|-----|---------------|------|---------|------------------------|
|--------------|-----|------|------|-----|------|----|----|-----|---------------|------|---------|------------------------|

SEGMENT REMARKS:

MISSED APPROACH : LOC

FROM
5.67 NM AFTER POCIB INT/I-TUS 8.22 DME OR AT HUGIK/I-TUS 2.54 DME

TO
RYN NDB/TUS 12.84 DME

| RNP | DISTANCE | PAT | MAP | HAT | | | HMAS 2710 | | | | | |
|---------------------------|------------------------|-----|-------------|------|------|----|--------------|-----|----|------|-------------|---------|
| OBSTRUCTION | COORDINATES | | ELEV MSL | HORZ | VERT | AC | ROC | OCS | CG | CGTA | ADJUSTMENTS | MIN ALT |
| CONTROL TOWER (04-023899) | 320639.77N/1105643.80W | | 2848 | 20 | 3 | 1A | | ASC | | | | 6000 |
| AAO | 320522.10N/1110315.10W | | 3899 | 1000 | 3 | 6A | 1000 | | | | | 4900 |
| TERRAIN | 320522.10N/1110315.10W | | 3699 (3700) | | | | | | | | AS1500 | 5200 |

| COMPUTATIONS | ALT | KIAS | KTAS | HAA | VKTW | TR | BA | DTA | COURSE CHANGE | DVEB | VEB OCS | RF CENTER FIX/DISTANCE |
|--------------|-----|------|------|-----|------|----|----|-----|---------------|------|---------|------------------------|
|--------------|-----|------|------|-----|------|----|----|-----|---------------|------|---------|------------------------|

SEGMENT REMARKS:



CIRCLING

☒ ALL CATS

☒ CAT A

☒ CAT B

☒ CAT C

☒ CAT D

☒ CAT E

☐ NOT AUTHORIZED

| OBSTRUCTION | COORDINATES | RADIUS | HAA | ELEV MSL | HORZ | VERT | AC | ROC | OCS | ADJUSTMENTS | MIN ALT |
|-------------------------------|------------------------|--------|-----------|----------|------|------|----|-----|-----|-------------|-----------|
| CATEGORY A | | | | | | | | | | | |
| ATCT (04-023899) | 320639.77N/1105643.80W | 1.34 | 837/517 | 2848 | 20 | 3 | 1A | 300 | | SI | 3480/3160 |
| CATEGORY B | | | | | | | | | | | |
| TREE (04-024338) | 320623.68N/1105917.50W | 1.90 | 837/577 | 2868 | 20 | 10 | 1B | 300 | | SI | 3480/3220 |
| CATEGORY C | | | | | | | | | | | |
| TRANSMISSION LINE (04-056776) | 320431.54N/1105234.33W | 3.00 | 837/577 | 2894 | 20 | 3 | 1A | 300 | | SI | 3480/3220 |
| CATEGORY D | | | | | | | | | | | |
| AAO | 320540.87N/1110141.87W | 3.93 | 1017/1017 | 3360 | 50 | 20 | 2C | 300 | | | 3660/3660 |
| CATEGORY E | | | | | | | | | | | |
| AAO | 320515.53N/1110239.36W | 4.94 | 1277/1277 | 3620 | 50 | 20 | 2C | 300 | | | 3920/3920 |

CIRCLING REMARKS:

MSA

CENTER
TUS VORTAC

RADIUS
25

| SECTOR | OBSTRUCTION | COORDINATES | BEARING | DISTANCE | ELEV MSL | HORZ | VERT | AC | ROC | OCS | ADJUSTMENTS | MIN ALT |
|---------|-------------|------------------------|---------|----------|----------|------|------|----|------|-----|-------------|---------|
| 240-330 | AAO | 322221.00N/1105624.00W | 344 | 17.1 | 5512 | 500 | 125 | 5E | 1000 | | | 6600 |
| 330-240 | AAO | 314148.00N/1105054.00W | 159 | 23.9 | 9653 | 500 | 125 | 5E | 1000 | | | 10700 |

MSA REMARKS:



| AIRPORT ID | PROCEDURE NAME | AMDT NO. | CITY | STATE | AIRPORT ELEVATION | FACILITY |
|------------|--------------------|----------|--------|-------|-------------------|----------|
| KTUS | ILS OR LOC RWY 11L | 14E | TUCSON | AZ | 2643 | I-TUS |

NOTES/EXPLANATIONS FROM PROCEDURE SEGMENTS:

1. VEGETATION: 60 FT TREE.
2. ALTERNATE MISSED APPROACH NOT CONSTRUCTED DUE TO AVAILABILITY OF SUITABLE NAVAIDS.
3. CHART FIX DINGO PER ATC REQUEST FOR THEIR LOA BETWEEN ZAB AND U90 (ARTCC AND TERMINAL APPROACH).
4. MVA AT FIX DINGO IS 5500.
5. FULL ROC APPLIED TO OBSTACLES ON INTERMEDIATE SEGMENTS WASON TO CALLS, CALLS TO POCIB, AND FINAL SEGMENT POCIB TO PARCS. ATC/CRITERIA (ILS/GPS/RNP PROCEDURES) MANDATE FIX ALTITUDES AND DERIVE NO BENEFIT FROM MINOR SA REDUCTIONS (PER SIAP PUBLISHED 08/03/2006). - (CARRIED OVER FROM PREVIOUS FORMS).
6. AIRSPACE FOR TERRAIN ON INTERMEDIATE SEGMENTS LIPTE TO WASON, WASON TO CALLS, AND CALLS TO POCIB, REQUIRE EXTENSION OF SURFACE AREA TO IF (LIPTE) (ALTITUDE ADJUSTMENT OF 0 USED FOR INTERMEDIATE SEGMENT PER PREVIOUS AMENDMENT). - (CARRIED OVER FROM PREVIOUS FORMS).
7. FAAO 8260.52 USED TO DETERMINE PFAF COORDINATES. - (CARRIED OVER FROM PREVIOUS FORMS).
8. FAAO 8260.45 NOT USED; EXISTING RNAV (GPS) Z AND RNAV (RNP) Y TO SAME RWY NOT BEING REVISED AND PFAF LEFT AT POSITION OTHER PROCEDURES USE. FORMULAS DIFFER BY 1.01 FEET. - (CARRIED OVER FROM PREVIOUS FORMS).
9. I-TUS DME ANTENNA COORDINATES CHANGED FROM 320554.93N/1105503.39W TO 320554.97N/1105503.23W.



PART B: SUPPLEMENTAL DATA

COMMUNICATIONS WITH
ZAB ARTCC, TUS APP CON, TUS TOWER

| | | | | | | |
|---------------------------|-------------------------|----------------------------|---------------------------------|----------------------|-----------------------|-------------------------|
| <u>WX SERVICE</u> ASOS | <u>LOCATION</u> KTUS | <u>HRS OPERATION</u> 24 | <u>ALTIMETER SOURCE</u> KTUS | <u>DISTANCE</u> 0 | <u>SERVICE-A</u> Y | <u>ADJUSTMENTS</u> 0 |
| <u>BACK-UP WX SERVICE</u> | <u>LOCATION</u> | <u>HRS OPERATION</u> | <u>ALTIMETER SOURCE</u> | <u>DISTANCE</u> | <u>SERVICE-A</u> | <u>ADJUSTMENTS</u> |

WX REMARKS:
NO BACKUP ALTIMETER DUE TO REDUNDANT WEATHER SOURCES AVAILABLE.

| | | | |
|--|----------------------------------|----------------------------|----------------------------|
| <u>PRIMARY NAVAID</u> I-TUS | <u>MONITOR POINT</u> TUS ATCT | <u>HRS OPERATION</u> 24 | <u>CAT</u> 1 |
| <u>APPROACH AND RUNWAY LIGHTING SYSTEM</u> | | <u>RUNWAY MARKINGS</u> | <u>RUNWAY VISUAL RANGE</u> |
| RW11R - MIRL, PAPI-4L | | BSC-G | |
| RW29L - MIRL, REIL | | BSC-G | |
| RW03 - MIRL | | NPI-G | |
| RW21 - MIRL, REIL, PAPI-4L | | NPI-G | |
| RW29R - HIRL, REIL, PAPI-4L | | NPI-G | ROLL OUT |
| RW11L - MALSR, HIRL, PAPI-4L | | PIR-G | APPROACH |

| | | | | | | |
|---------------------------------|-------------------------------------|--------------------|----------------------------------|---------------------------------|---------------------------|--------------------|
| <u>GLIDESLOPE ANGLE</u> 3.00 | <u>ELEV RWY THRESHOLD</u> 2577.7 | <u>TCH</u> 55.4 | <u>ELEV GS ANTENNA</u> 2580.1 | <u>DISTANCE FROM RWY</u> 939 | <u>VGSI ANGLE</u> 3.00 | <u>TCH</u> 73.4 |
|---------------------------------|-------------------------------------|--------------------|----------------------------------|---------------------------------|---------------------------|--------------------|

| | | | |
|-------------------------------------|-------------------------------------|--------------------|------------------------------|
| <u>FINAL APPROACH COURSE AIMING</u> | | | |
| RUNWAY THRESHOLD | <input checked="" type="checkbox"/> | FT FROM THRESHOLD | DISPLACED THRESHOLD DISTANCE |
| ON CENTERLINE | <input checked="" type="checkbox"/> | FT FROM CENTERLINE | |

| | | | |
|------------------------------|----------------------|------------|----------------|
| <u>CRITICAL TEMPERATURES</u> | | | |
| <u>CRITICAL LOW</u> | <u>CRITICAL HIGH</u> | <u>ACT</u> | <u>APT ISA</u> |

CRITICAL TEMPERATURE REMARKS:



"VISUAL PORTION OF FINAL" PENETRATIONS

HELICOPTER 'VISUAL PORTION OF FINAL' PENETRATIONS

and/or
5280-FT "PROCEED VFR" SEGMENT LEVEL SURFACE AREA PENETRATIONS

PENETRATIONS REMARKS:

PART C: GENERAL REMARKS:
VDP NOT ESTABLISHED - FIX WITHIN 0.50 NM OF MAP.
PRECIPITOUS TERRAIN EVALUATION COMPLETED.
ORDER 8260.3, CHAPTER 2, NEW CIRCLING CRITERIA APPLIED.

| | | | | | | |
|---------------------------|---|------------------------|-----------------------|--------------------|----------------------------------|--------------------------|
| <u>AIRPORT ID</u> KTUS | <u>PROCEDURE NAME</u> ILS OR LOC RWY 11L | <u>AMDT NO.</u> 14E | <u>CITY</u> TUCSON | <u>STATE</u> AZ | <u>AIRPORT ELEVATION</u> 2643 | <u>FACILITY</u> I-TUS |
|---------------------------|---|------------------------|-----------------------|--------------------|----------------------------------|--------------------------|

PART D: AIRSPACE

DOCKET #

ALL DISTANCES TO 1/100NM; ELEVATION TO NEAREST 100 FEET; COORDINATES TO 1/100 SECOND; DEG TO 1/100 DEGREE

| | | | |
|--|--|---------------------------------|--------|
| DISTANCE FROM | THLD | TO 1000FT POINT | 8.34 |
| WIDTH OF | INTERMEDIATE | SEGMENT AT 1000FT POINT | 2.02 |
| TRUE COURSE OF | INTERMEDIATE | SEGMENT CONTAINING 1000FT POINT | 135.03 |
| HIGH TERRAIN IN | INTERMEDIATE | SEGMENT CONTAINING 1000FT POINT | 4700 |
| DISTANCE FROM | THLD | TO 1500FT POINT | 9.70 |
| WIDTH OF | INTERMEDIATE | SEGMENT AT 1500FT POINT | 2.31 |
| TRUE COURSE OF | INTERMEDIATE | SEGMENT CONTAINING 1500FT POINT | 135.03 |
| HIGH TERRAIN IN | INTERMEDIATE | SEGMENT CONTAINING 1500FT POINT | 4700 |
| THRESHOLD COORDINATES (IF STR-IN) | 320724.13N/1105652.49W | | |
| ARP COORDINATES | 320657.85N/1105627.65W | | |
| RUNWAY APCH END AND DIST FURTHEST FROM ARP | RUNWAY 29R DISTANCE 1.25 NM | | |
| FAF COORDINATES | 321142.36N/1110155.96W | | |
| FIX NAME COORDINATES | IF/IAF LIPTE: 321816.95N/1110941.08W, IF WASON: 321446.22N/1110532.49W, IF CALLS: 321307.35N/1110336.01W | | |
| REMARKS | NO ADDITIONAL AIRSPACE REQUIRED. | | |

QUALITY
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CHECKED

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Electronic Version

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PART E: PREPARED BY

| | | | |
|---|---------------------------|---------------------------|---|
| <u>NAME</u> ERIC N SUSKI (MICHAEL MCCARTNEY) | <u>OFFICE</u> AJV-A431 | <u>DATE</u> 10/04/2022 | <u>TITLE</u> AERONAUTICAL INFORMATION SPECIALIST |
|---|---------------------------|---------------------------|---|

