

UNITED STATES AIR FORCE FLIGHT STANDARDS SERVICE TACAN STANDARD INSTRUMENT APPROACH PROCEDURE

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</u> EUGENE F KRANZ TOLEDO EXPRESS		<u>AIRPORT ID</u> KTOL	<u>PROCEDURE NAME</u> HI - TACAN RWY 25	<u>ORIGINAL/AMENDMENT</u> 4C	<u>CITY</u> TOLEDO	<u>STATE</u> OH
<u>AIRPORT ELEVATION</u> 683	<u>TDZE</u> 678	<u>SUPERSEDED</u> HI - TACAN RWY 25	<u>ORIGINAL/AMENDMENT</u> 4B	<u>DATED</u> 04/27/2017	<u>MAG VAR</u> 5W	<u>EPOCH YEAR</u> 1990
<u>FACILITY</u> TOL TACAN	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>		

TERMINAL ROUTES

FROM	FIX TYPE	TO	FIX TYPE	LEG TYPE	FO/FB	RNP	COURSE	DISTANCE	ALTITUDE
CRL VOR/DME		MYANN/TOL 25.00 DME					192.94	52.17	18000
FWA VORTAC		MYANN/TOL 25.00 DME					085.14	70.64	18000
ROD VORTAC		MYANN/TOL 25.00 DME					022.91	56.95	18000
MYANN/TOL 25.00 DME	IAF	POUDR/TOL 15.00 DME					350.00	10.00 (TOL R-170)	10000
POUDR/TOL 15.00 DME CCW	IF/IAF	IKASE/TOL 15.00 DME					15.00 DME ARC		4000
IKASE/TOL 15.00 DME	IF	ORUYI/TOL 6.00 DME					260.00	9.00	2400

MISSED APPROACH

MAP:

IXOQY/TOL 1.00 DME FIX

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 3000 THEN LEFT TURN ON TOL TACAN R-170 TO POUDR/15.00 DME AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

- PT SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)
- PROFILE STARTS AT MYANN
- FAC: 260.00 FAF: ORUYI/TOL 6.00 DME DIST FAF TO MAP: DIST FAF TO THLD: 5.83
- MIN ALT: MYANN/TOL 25.00 DME 15000, POUDR/TOL 15.00 DME 10000, IKASE/TOL 15.00 DME 4000, ORUYI/TOL 6.00 DME 2400, ZARIP/TOL 2.50 DME 1240
- MSA FROM: TOL TACAN 3100, ESA W/IN 100 NM 4000

EQUIPMENT REQUIREMENTS NOTES:

QUALITY
24
CHECKED

NOTES:

CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT ROD VORTAC ON V47 SOUTHWEST BOUND.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVAL ON FWA VORTAC AIRWAY RADIALS 077 CW 130.
CHART PROFILE NOTE: VGSI AND DESCENT ANGLES NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART NOTE: FOR INOPERATIVE ALS, INCREASE S-25 CAT C VISIBILITY TO 1 SM.

ADDITIONAL FLIGHT DATA:

CHART ARRIVAL HOLDING AT MYANN: HOLD S, LT, 350.00 INBOUND, 15,000.
HOLD S, LT, 350.00 INBOUND.
CHART FAS OBST: 786 TOWER 413529N/0834654W.
CHART TOL R-170 AT POUDR.
FAC CROSSES RWY C/L EXTENDED 956 FT FROM THLD.
CHART: ASR.
CHART CIRCLING ICON.
ORUYI TO RW25: 2.69/69.

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD - CAT D 800-2 1/4, CAT E 800-2 1/2, NA WHEN LOCAL WEATHER NOT AVAILABLE.

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-25		NA			NA		1040	3/4	362	1040	1	362	1040	1	362
CIRCLING		NA			NA		1360	2	677	1400	2 1/4	717	1400	2 1/2	717

CHANGES - REASONS

1. CHANGED AIRPORT NAME FROM TOLEDO EXPRESS TO EUGENE F KRANZ TOLEDO EXPRESS - CHANGED TO UPDATED NAME
2. CHANGED MISSED APPROACH FROM "CLIMB TO 3000 THEN LEFT TURN VIA TOL TACAN R-170 TO POUDR/15.00 DME AND HOLD." TO "CLIMB TO 3000 THEN LEFT TURN ON TOL TACAN R-170 TO POUDR/15.00 DME AND HOLD." - UPDATED TO CURRENT CRITERIA, 8260.19H, PARA 8-6-6, D, (7).
3. CHANGED MAP IN MISSED APPROACH SECTION FROM "5.00 NM AFTER ORUYI/TOL 6.00 DME OR AT IXOQY/TOL 1.00 DME FIX" TO "IXOQY/TOL 1.00 DME" - PROCEDURE DOES NOT REQUIRE A TIMING TABLE
4. ADDED PLANVIEW NOTE "PROCEDURE NA FOR ARRIVAL ON FWA VORTAC AIRWAY RADIALS 077 CW 134" - ANGLE OF INTERSECTION MUST NOT EXCEED 120 DEGREES IAW 8260.3D 2-3-1 A(1)
5. ADDED PLANVIEW NOTE "PROCEDURE NA FOR ARRIVALS AT ROD VORTAC ON V47 SOUTHWEST BOUND" - ANGLE OF INTERSECTION MUST NOT EXCEED 120 DEGREES IAW 8260.3D 2-3-1 A(1)
6. CHANGED ALTERNATE MINIMUMS FROM "STANDARD - CAT D 800-2 1/4, CAT E 800-2 1/2" TO "STANDARD - CAT D 800-2 1/4, CAT E 800-2 1/2, NA WHEN LOCAL WEATHER NOT AVAILABLE." - IAW 8260.3D 3-4-1 A(3).
7. ADDED ADDITIONAL FLIGHT DATA NOTE "ORUYI TO RW25: 2.69/69." - IAW 8260.19H PARA 8-6-10P
8. ADDED PROFILE NOTE "VGSI AND DESCENT ANGLES NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET})." - IAW 8260.19H PARA 8-6-9 (M)2
9. CHANGED NOTE FROM "WHEN ALS INOP INCREASE CAT C VIS TO 1 MILE" TO "FOR INOPERATIVE ALS, INCREASE S-25 CAT C VISIBILITY TO 1 SM." - 8-6-11, 3(D)
10. PROFILE LINE 3: REMOVED FAF TO MAP DISTANCE "5.00" - TIMING TABLE NOT BEING PUBLISHED SO FAF TO MAP DISTANCE IS NOT REQUIRED.



COORDINATED WITH:

A4A ☐ **ALPA** ☐ **AOPA** ☐ **APA** ☐ **HAI** ☐ **NBAA** ☐ **OTHER:** ZOB, TOL APP CON, AMGR, TOL APP CON

FLIGHT CHECKED BY

PROCESSED IAW AIRCRAFT OPERATIONS GROUP (AJF-10) MEMO, APRIL 29, 2020, SUBJECT:
FLIGHT INSPECTION REVIEW NOT REQUIRED

OFFICE**DATE***Digitally signed by***ALLAN WILL**

Jun 24, 2020

*Digitally signed by***ALLAN WILL****DEVELOPED BY**

JOSEPH BLANCO

OFFICE

AJV-A423

DATE

04/16/2020

RECOMMENDED BY

MARLON J. ROBINSON

OFFICE

AJV-A420

DATEJun 24, 2020
*Digitally signed by***ALLAN WILL****TITLE**

MANAGER

APPROVED BY**OFFICE****DATE**

Jun 24, 2020

TITLE

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

AIRPORT	AIRPORT ID	PROCEDURE NAME	AMDT NO.	CITY	STATE	AIRPORT ELEVATION	FACILITY
EUGENE F KRANZ TOLEDO EXPRESS	KTOL	HI - TACAN RWY 25	4C	TOLEDO	OH	683	TOL TACAN

PART A: OBSTRUCTION DATA SEGMENTS

FEEDER

FROM
CRL VOR/DME

TO
MYANN/TOL 25.00 DME

<u>RNP</u>	<u>DISTANCE</u> 52.17	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</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>	<u>MIN ALT</u>
1.TOWER (39-001418)	413922.00N/0832645.00W	1848	500	50	5D	1000				AT15152	18000
2.TERRAIN	411057.00N/0833412.00W	749 (700)								AS1500	2200

COMPUTATIONS

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

FEEDER

FROM
FWA VORTAC

TO
MYANN/TOL 25.00 DME

<u>RNP</u>	<u>DISTANCE</u> 70.64	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</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>	<u>MIN ALT</u>
3.TOWER (39-000616)	410812.00N/0835424.40W		1817	500	50	5D	1000				AT15183	18000
4.TERRAIN	405624.00N/0850003.00W		1817 (1800)								AS1500	3300

COMPUTATIONS

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



FEEDER

FROM

ROD VORTAC

TO

MYANN/TOL 25.00 DME

RNP	DISTANCE	PAT	MAP	HAT			HMAS					
	56.95											
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
5.TOWER (39-000804)	401821.00N/0840654.00W		1529	500	50	5D	1000				AT15471	18000
6.TERRAIN	403524.00N/0835018.00W		1109 (1100)								AS1500	2600

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INITIAL

FROM

MYANN/TOL 25.00 DME

TO

POUDR/TOL 15.00 DME

RNP	DISTANCE	PAT	MAP	HAT			HMAS					
	10.00											
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
7.WINDMILL (39-004119)	412227.50N/0834427.43W		1068	250	50	4D	1000				AT7932	10000
8.TERRAIN	411136.00N/0834042.00W		735 (700)								AS1500	2200

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



INITIAL: ARC

FROM

POUDR/TOL 15.00 DME CCW

TO

IKASE/TOL 15.00 DME

RNP	DISTANCE	PAT	MAP	HAT			HMAS					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
1.TOWER (39-001418)	413922.00N/0832645.00W		1848	500	50	5D	1000				AT1152	4000
9.TERRAIN	411851.00N/0833845.00W		726 (700)								AS1500	2200

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INTERMEDIATE

FROM

IKASE/TOL 15.00 DME

TO

ORUYI/TOL 6.00 DME

RNP	DISTANCE	PAT	MAP	HAT			HMAS					
	9.00											
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
10.TOWER (39-002110)	413912.00N/0833253.00W		1058	500	50	5D	500				AT842	2400
11.TERRAIN	413639.00N/0833024.00W		673 (700)								AS1500	2200

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



<u>AIRPORT</u> EUGENE F KRANZ TOLEDO EXPRESS		<u>AIRPORT ID</u> KTOL	<u>PROCEDURE NAME</u> HI - TACAN RWY 25		<u>AMDT NO.</u> 4C	<u>CITY</u> TOLEDO		<u>STATE</u> OH	<u>AIRPORT ELEVATION</u> 683		<u>FACILITY</u> TOL TACAN		
FINAL													
<u>FROM</u> ORUYI/TOL 6.00 DME					<u>TO</u> ZARIP/TOL 2.50 DME								
<u>RNP</u>		<u>DISTANCE</u> 3.50	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</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>	<u>MIN ALT</u>
12.TOWER (39-000799)		413732.00N/0834241.00W		938	250	50	4D	250				AC50	1240
COMPUTATIONS													
<u>ALT</u>		<u>KIAS</u>	<u>KTAS</u>	<u>HAA</u>	<u>VKTW</u>	<u>TR</u>	<u>BA</u>	<u>DTA</u>	<u>COURSE CHANGE</u>	<u>DVEB</u>	<u>VEB OCS</u>	<u>RF CENTER FIX/DISTANCE</u>	

SEGMENT REMARKS:

FINAL: STEPDOWN

FROM

ZARIP/TOL 2.50 DME

TO

IXOQY/TOL 1.00 DME FIX

RNP

DISTANCE

1.50

PAT

MAP

IXOQY/TOL 1.00 DME FIX

HAT

362(CDE)

HMAS

OBSTRUCTION

COORDINATES

ELEV MSL

HORZ

VERT

AC

ROC

OCS

CG

CGTA

ADJUSTMENTS

MIN ALT

CAT C: 13.TOWER (39-020986)

413528.58N/0834654.09W

786

20

3

1A

250

1040

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



MISSED APPROACH

FROM

IXOQY/TOL 1.00 DME FIX

TO

POUDR/15.00 DME

RNP	DISTANCE	PAT	MAP	HAT			HMAS					
								790				
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
								ASC				3000
7.WINDMILL (39-004119)	412227.50N/0834427.43W		1068	250	50	4D	1000					2100
14.TERRAIN	413651.00N/0840109.00W		758 (800)								AS1500	2300

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 C											
15.TOWER (39-000157)	413602.00N/0835302.00W	2.88	677	998	250	50	4D	300		AC50	1360
CATEGORY D											
16.TOWER (39-003822)	413603.54N/0835426.34W	3.76	717	1049	500	50	5D	300		AC50	1400
CATEGORY E											
16.TOWER (39-003822)	413603.54N/0835426.34W	4.7	717	1049	500	50	5D	300		AC50	1400

CIRCLING REMARKS:



AIRPORT	AIRPORT ID	PROCEDURE NAME	AMDT NO.	CITY	STATE	AIRPORT ELEVATION	FACILITY
EUGENE F KRANZ TOLEDO EXPRESS	KTOL	HI - TACAN RWY 25	4C	TOLEDO	OH	683	TOL TACAN

HELICOPTER 'VISUAL PORTION OF FINAL' PENETRATIONS

and/or

5280-FT "PROCEED VFR" SEGMENT LEVEL SURFACE AREA PENETRATIONS

PENETRATIONS REMARKS:

PART C: GENERAL REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

VDP NOT ESTABLISHED - VDP LESS THAN 0.5 NM BEFORE MAP.

ORDER 8260.3, VOLUME 1, CHAPTER 2, NEW CIRCLING CRITERIA APPLIED.

QUALITY
24
CHECKED

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<u>AIRPORT</u> EUGENE F KRANZ TOLEDO EXPRESS	<u>AIRPORT ID</u> KTOL	<u>PROCEDURE NAME</u> HI - TACAN RWY 25	<u>AMDT NO.</u> 4C	<u>CITY</u> TOLEDO	<u>STATE</u> OH	<u>AIRPORT ELEVATION</u> 683	<u>FACILITY</u> TOL TACAN
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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	3.47
WIDTH OF	FINAL	SEGMENT AT 1000FT POINT	2.45
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1000FT POINT	255
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1000FT POINT	700
DISTANCE FROM	THLD	TO 1500FT POINT	5.40
WIDTH OF	INTERMEDIATE	SEGMENT AT 1500FT POINT	2.64
TRUE COURSE OF	INTERMEDIATE	SEGMENT CONTAINING 1500FT POINT	255
HIGH TERRAIN IN	INTERMEDIATE	SEGMENT CONTAINING 1500FT POINT	700

THRESHOLD
COORDINATES
(IF STR-IN)

413533.62N/0834741.97W

ARP COORDINATES

413512.50N/0834828.20W

RUNWAY APCH END
AND DIST FURTHEST
FROM ARP

RUNWAY 7 DISTANCE 1.08 NM

FAF
COORDINATES

413710.30N/0834014.08W

FIX NAME
COORDINATES

REMARKS

NO ADDITIONAL AIRSPACE REQUIRED

QUALITY
24
CHECKED

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PART E: PREPARED BY							
<u>NAME</u> JOSEPH BLANCO			<u>OFFICE</u> AJV-A423	<u>DATE</u> 04/16/2020	<u>TITLE</u> AERONAUTICAL INFORMATION SPECIALIST		

QUALITY
24
CHECKED

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