

Flight Procedures Cover Page	Task Action: FLIGHT CHECK	Task Type: STAR	Estimated Chart Date: 11/30/2023	APWS Task ID: 6E1D46C15AEC48B1907D34949AF3D294	APWS Project ID: C2188928772A4640858ACC97E75B0994
Procedure: STAR ZONNA (RNAV) TWO		Enroute: YES	Specialist: Neidigh, Jon		Agreement Number:
Airport ID: KTUS			Airport City: TUCSON		State: AZ
Facility ID:	Facility Type:	Flight Inspection Remark Type: New FC Slot			
<div>Procedure Comments:</div> <div>Amendment of all affected procedure due to runway rehab and renumbering.</div> <div>Assigned MAG VAR, KTUS: OLD 12E-NEW 9E</div> <div>ESVS: (5): COLUMBUS (CUS) VDME (1); DOUGLAS (DUG) VDME (1); FT HUACHUCA (FHU) VDME (1); ST JOHNS (SJN) TACAN (1); STANFIELD (TFD) TACAN (1)</div> <div>Pending airport data used</div> <div>Contact Casimir Tabaka 405-954-7931</div> <div>10/05/2023: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 07/20/2023</div> <div>REMOVED V16 FROM FIX USE.</div> <div>07/19/2023</div> <div>QUALITY 14 CHECKED</div> <div>QUALITY 38 CHECKED</div>					

DME ESVs								
#	Name	Lat/Lon	MAGVAR	Range	Elevation [ft]	Frequency	Replaces	Status
1	CUS FAA 698115 - 010 CUS [IFPA]	N31° 49' 08.7618", W107° 34' 28.1778"	12.0 E	40	4008	111.2	CUS FAA 698115 - 010	
ESV:		Bearing [True]: 282.0° to 291.0° Bearing [Mag]: 270.0° to 279.0°				Arc Distance: Out to 106.0 NM Altitude: 20000.0 to 29000.0 ft		
2	DUG FAA 131966 - 022 DUG [IFPA]	N31° 28' 21.6250", W109° 36' 07.3931"	13.0 E	130	4130.5	108.8	DUG FAA 131966 - 022	
Restriction:		Bearing [True]: 58.0° to 78.0° Bearing [Mag]: 45.0° to 65.0°				Distance: Beyond 26.0 NM Altitude: Below 10000.0 ft		
Restriction:		Bearing [True]: 8.0° to 23.0° Bearing [Mag]: 355.0° to 10.0°				Distance: Beyond 35.0 NM Altitude: Below 11300.0 ft		
Restriction:		Bearing [True]: 78.0° to 108.0° Bearing [Mag]: 65.0° to 95.0°				Distance: Beyond 28.0 NM Altitude: Below 9500.0 ft		
ESV:		Bearing [True]: 305.0° to 313.0° Bearing [Mag]: 292.0° to 300.0°				Arc Distance: Out to 71.0 NM Altitude: 8300.0 to 18700.0 ft		
3	FHU AR 123110 - 004 FHU [IFPA]	N31° 35' 22.7618", W110° 21' 17.7929"	13.0 E	25	4665	113.6	FHU AR 123110 - 004	
Restriction:		Bearing [True]: 123.0° to 248.0° Bearing [Mag]: 110.0° to 235.0°				Distance: Beyond 10.0 NM Altitude: Below 99999.0 ft		
ESV:		Bearing [True]: 26.0° to 50.0° Bearing [Mag]: 13.0° to 37.0°				Arc Distance: Out to 58.0 NM Altitude: 14200.0 to 29000.0 ft		
4	SJN FAA 704093-044 SJN [IFPA]	N34° 25' 26.5500", W109° 08' 36.7100"	12.0 E	130	6840	112.3	SJN FAA 704093-044	
ESV:		Bearing [True]: 182.0° to 191.0° Bearing [Mag]: 170.0° to 179.0°				Arc Distance: Out to 137.0 NM Altitude: 20000.0 to 29000.0 ft		
5	TFD FAA 704183-052 TFD [IFPA]	N32° 53' 09.0757", W111° 54' 31.4443"	12.0 E	130	1316	114.8	TFD FAA 704183-052	
ESV:		Bearing [True]: 119.0° to 126.0° Bearing [Mag]: 107.0° to 114.0°				Arc Distance: Out to 82.0 NM Altitude: 8300.0 to 15900.0 ft		

**ESV Details**

Originating Office :AJO		Airspace Docket Number :		Request Type :Establish		
<b>Facility Data</b>						
Chart Name:COLUMBUS		City:COLUMBUS		Ident:CUS		State:NM
Type/Class: DME		Frequency: M1010		Reference Number: 23052803		
<b>Extended Service Volume Data: (Requesting Officer)</b>						
ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	
FAA 698115 - 010	270	279	106	200	290	
Requirement: KTUS ZONNA STAR DME COVERAGE AND MITIGATE CRITICAL DMES						
Signature:Brechbiel Joshua		Routing Symbol:				Date:05/02/2023
<b>Extended Service Volume Data: (FMO)</b>						
ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698115 - 010	270	279	106	200	290	APPROVE
Requirement/Remarks: KTUS ZONNA STAR DME COVERAGE AND MITIGATE CRITICAL DMESAPPROVED. FREQ. PROTECTION & FIELD STRENGTH. PENDING FLIGHT INSPECT @ REQUIRED. DIST. & MIN ALT..						
Signature:Bowers Michael		Routing Symbol:			Date:05/02/2023	
<b>Extended Service Volume Data: (Super FMO)</b>						
ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698115 - 010	270	279	106	200	290	APPROVE
Requirement/Remarks: KTUS ZONNA STAR DME COVERAGE AND MITIGATE CRITICAL DMESAPPROVED. FREQ. PROTECTION & FIELD STRENGTH. PENDING FLIGHT INSPECT @ REQUIRED. DIST. & MIN ALT..						
Signature:Hughes Dennis		Routing Symbol:			Date:05/02/2023	
<b>Extended Service Volume Data: (FIFO)</b>						
ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698115 - 010	270	279				
Requirement/Remarks:						
Signature:		Routing Symbol:			Date:	

**ESV Details**

Originating Office :AJO		Airspace Docket Number :		Request Type :Establish		
<b>Facility Data</b>						
Chart Name:DOUGLAS		City:DOUGLAS		Ident:DUG		State:AZ
Type/Class: TACAN		Frequency: M986		Reference Number: 23052801		
<b>Extended Service Volume Data: (Requesting Officer)</b>						
ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	
FAA 131966 - 022	292	300	71	83	187	
Requirement: KTUS ZONNA STAR DME COVERAGE AND MITIGATE CRITICAL DMES.						
Signature:Brechbiel Joshua		Routing Symbol:				Date:05/02/2023
<b>Extended Service Volume Data: (FMO)</b>						
ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 131966 - 022	292	300	71	83	187	APPROVE
Requirement/Remarks: KTUS ZONNA STAR DME COVERAGE AND MITIGATE CRITICAL DMES.APPROVED. FREQ. PROTECTION & FIELD STRENGTH. PENDING FLIGHT INSPECT @ REQUIRED. DIST. & MIN ALT..						
Signature:HEPSEN JOHN		Routing Symbol:			Date:05/02/2023	
<b>Extended Service Volume Data: (Super FMO)</b>						
ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 131966 - 022	292	300	71	83	187	APPROVE
Requirement/Remarks: KTUS ZONNA STAR DME COVERAGE AND MITIGATE CRITICAL DMES.APPROVED. FREQ. PROTECTION & FIELD STRENGTH. PENDING FLIGHT INSPECT @ REQUIRED. DIST. & MIN ALT..						
Signature:Hughes Dennis		Routing Symbol:			Date:05/03/2023	
<b>Extended Service Volume Data: (FIFO)</b>						
ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 131966 - 022	292	300				
Requirement/Remarks:						
Signature:		Routing Symbol:			Date:	

**ESV Details**

Originating Office :AJO		Airspace Docket Number :		Request Type :Establish		
<b>Facility Data</b>						
Chart Name:FT HUACHUCA		City:FT HUACHUCA		Ident:FHU		State:AZ
Type/Class: DME		Frequency: M1170		Reference Number: 23052804		
<b>Extended Service Volume Data: (Requesting Officer)</b>						
ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	
AR 123110 - 004	13	37	58	142	290	
Requirement: KTUS ZONNA STAR DME COVERAGE AND MITIGATE CRITICAL DMES.						
Signature:Brechbiel Joshua		Routing Symbol:				Date:05/02/2023
<b>Extended Service Volume Data: (FMO)</b>						
ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
AR 123110 - 004	13	37	58	142	290	APPROVE
Requirement/Remarks: KTUS ZONNA STAR DME COVERAGE AND MITIGATE CRITICAL DMES.APPROVED. FREQUENCY PROTECTION & FIELD STRENGTH. PENDING FLIGHT INSPECT @ REQUIRED. DIST. & MIN ALT..						
Signature:HEPSEN JOHN		Routing Symbol:			Date:05/02/2023	
<b>Extended Service Volume Data: (Super FMO)</b>						
ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
AR 123110 - 004	13	37	58	142	290	APPROVE
Requirement/Remarks: KTUS ZONNA STAR DME COVERAGE AND MITIGATE CRITICAL DMES.APPROVED. FREQUENCY PROTECTION & FIELD STRENGTH. PENDING FLIGHT INSPECT @ REQUIRED. DIST. & MIN ALT..						
Signature:Hughes Dennis		Routing Symbol:			Date:05/03/2023	
<b>Extended Service Volume Data: (FIFO)</b>						
ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
AR 123110 - 004	13	37				
Requirement/Remarks:						
Signature:		Routing Symbol:			Date:	

**ESV Details**

Originating Office :AJO		Airspace Docket Number :		Request Type :Establish		
<b>Facility Data</b>						
Chart Name:ST JOHNS		City:ST JOHNS		Ident:SJN		State:AZ
Type/Class: TACAN		Frequency: M1157		Reference Number: 23052805		
<b>Extended Service Volume Data: (Requesting Officer)</b>						
ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	
FAA 704093 - 044	170	178	137	200	290	
Requirement: KTUS ZONNA STAR DME COVERAGE AND MITIGATE CRITICAL DMES.						
Signature:Brechbiel Joshua		Routing Symbol:				Date:05/02/2023
<b>Extended Service Volume Data: (FMO)</b>						
ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 704093 - 044	170	178	137	200	290	APPROVE
Requirement/Remarks: KTUS ZONNA STAR DME COVERAGE AND MITIGATE CRITICAL DMES.APPROVED. FREQUENCY PROTECTION & FIELD STRENGTH. PENDING FLIGHT INSPECT @ REQUIRED. DIST. & MIN ALT..						
Signature:HEPSEN JOHN		Routing Symbol:			Date:05/02/2023	
<b>Extended Service Volume Data: (Super FMO)</b>						
ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 704093 - 044	170	178	137	200	290	APPROVE
Requirement/Remarks: KTUS ZONNA STAR DME COVERAGE AND MITIGATE CRITICAL DMES.APPROVED. FREQUENCY PROTECTION & FIELD STRENGTH. PENDING FLIGHT INSPECT @ REQUIRED. DIST. & MIN ALT..						
Signature:Hughes Dennis		Routing Symbol:			Date:05/03/2023	
<b>Extended Service Volume Data: (FIFO)</b>						
ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 704093 - 044	170	178				
Requirement/Remarks:						
Signature:		Routing Symbol:			Date:	

**ESV Details**

Originating Office :AJO		Airspace Docket Number :		Request Type :Establish		
<b>Facility Data</b>						
Chart Name:STANFIELD		City:STANFIELD		Ident:TFD		State:AZ
Type/Class: TACAN		Frequency: M1182		Reference Number: 23052802		
<b>Extended Service Volume Data: (Requesting Officer)</b>						
ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	
FAA 704183 - 052	107	114	82	83	159	
Requirement: KTUS ZONNA STAR DME COVERAGE AND MITICATE CRITICAL DMES.						
Signature:Brechbiel Joshua		Routing Symbol:				Date:05/02/2023
<b>Extended Service Volume Data: (FMO)</b>						
ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 704183 - 052	107	114	82	83	159	APPROVE
Requirement/Remarks: KTUS ZONNA STAR DME COVERAGE AND MITICATE CRITICAL DMES.APPROVED. FREQ. PROTECTION & FIELD STRENGTH. PENDING FLIGHT INSPECT @ REQUIRED. DIST. & MIN ALT..						
Signature:HEPSEN JOHN		Routing Symbol:			Date:05/02/2023	
<b>Extended Service Volume Data: (Super FMO)</b>						
ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 704183 - 052	107	114	82	83	159	APPROVE
Requirement/Remarks: KTUS ZONNA STAR DME COVERAGE AND MITICATE CRITICAL DMES.APPROVED. FREQ. PROTECTION & FIELD STRENGTH. PENDING FLIGHT INSPECT @ REQUIRED. DIST. & MIN ALT..						
Signature:Hughes Dennis		Routing Symbol:			Date:05/03/2023	
<b>Extended Service Volume Data: (FIFO)</b>						
ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 704183 - 052	107	114				
Requirement/Remarks:						
Signature:		Routing Symbol:			Date:	

(ZONNA ZONNA2) FIG

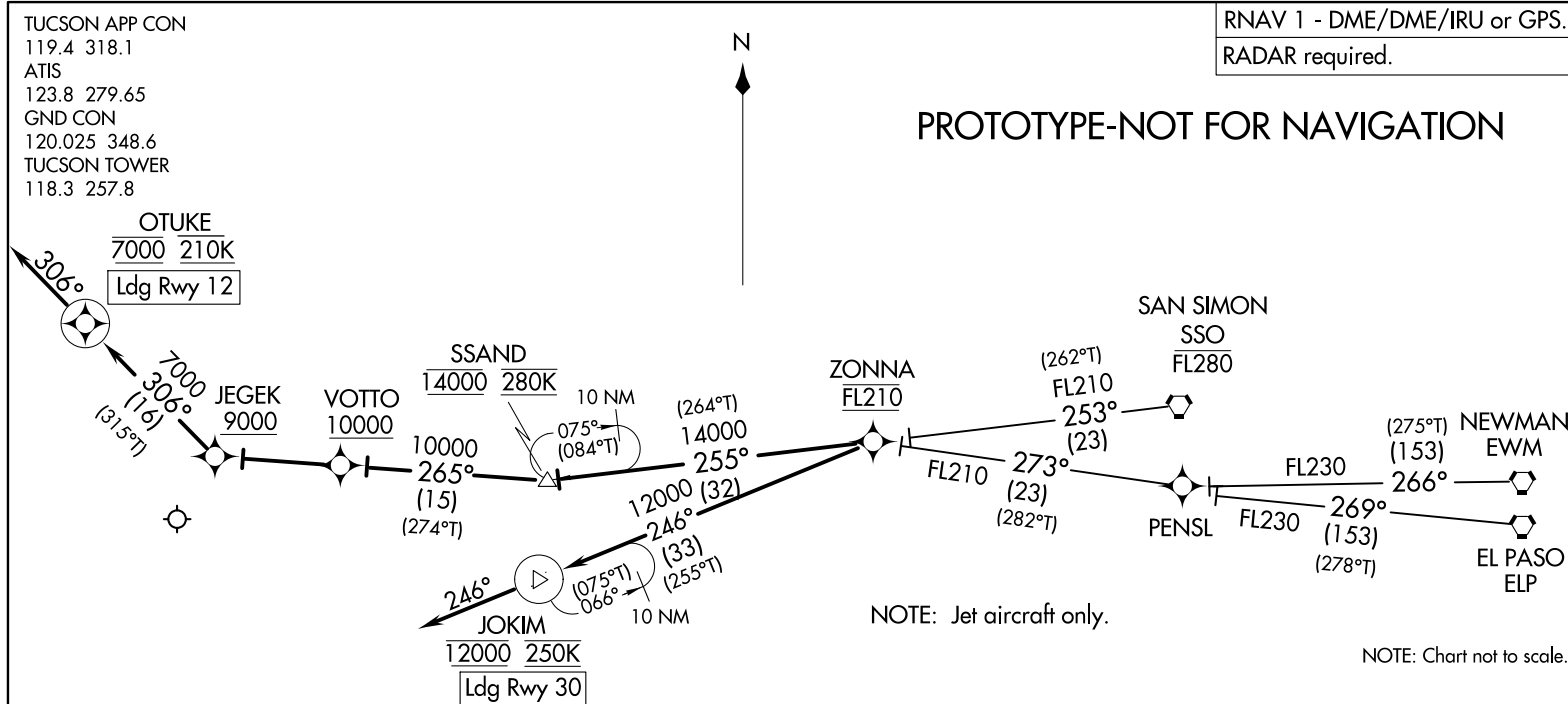
ZONNA TWO ARRIVAL (RNAV)

AL-430 (FAA)

TUCSON INTL (TUS)  
TUCSON, ARIZONA

RNAV 1 - DME/DME/IRU or GPS.  
RADAR required.

PROTOTYPE-NOT FOR NAVIGATION



#### ARRIVAL ROUTE DESCRIPTION

EL PASO TRANSITION (ELP.ZONNA2)  
NEWMAN TRANSITION (EWM.ZONNA2)  
SAN SIMON TRANSITION (SSO.ZONNA2)

LANDING RWY 12: From ZONNA on track 255° to cross SSAND at 14000 and at 280K, then on track 265° to cross VOTTO at or above 10000, then on track 265° to cross JEGEK at or above 9000, then on track 306° to cross OTUKE at 7000 and at 210K, then on track 306°. Expect RNAV (GPS) Z RWY 12 approach or radar vectors to final approach course.

LANDING RWY 30: From ZONNA on track 246° to cross JOKIM at 12000 and at 250K, then on track 246°. Expect RNAV (GPS) Z RWY 30 approach or radar vectors to final approach course.

AUTOMATED AL-430 ZONNA ARRIVAL

SW-4  
7-20-23  
COMPILED: JUN  
REVIEWER:  
DBL CHKR:  
EFF DATE: FIG

ZONNA TWO ARRIVAL (RNAV)  
(ZONNA.ZONNA2) FIG

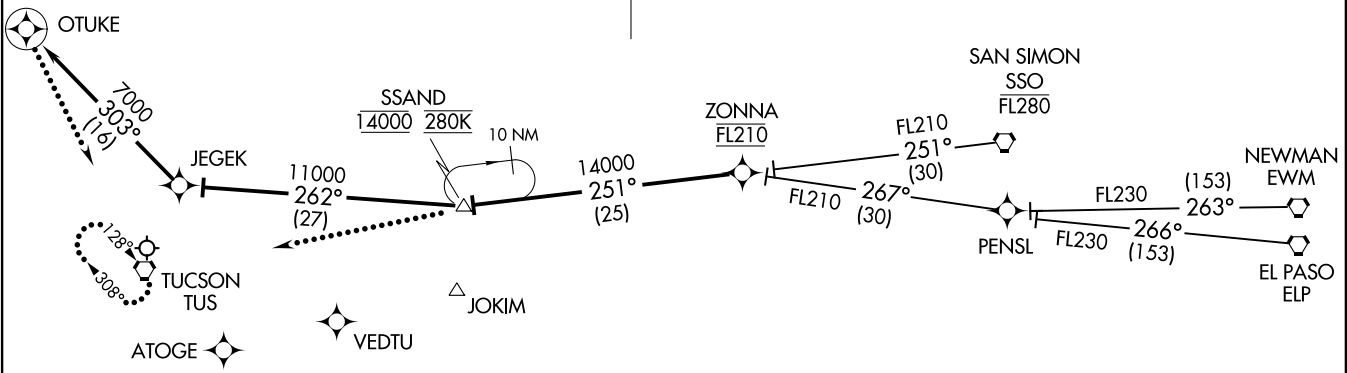
TUCSON, ARIZONA  
TUCSON INTL (TUS)



ZONNA ONE ARRIVAL (RNAV)  
(ZONNA.ZONNA1) 30AUG07

TUCSON APP CON  
119.4 318.1  
ATIS  
123.8 279.65  
GND CON  
120.025 348.6  
TUCSON TOWER  
118.3 257.8

OLD



ARRIVAL ROUTE DESCRIPTION

EL PASO TRANSITION (ELP.ZONNA1)  
NEWMAN TRANSITION (EWM.ZONNA1)  
SAN SIMON TRANSITION (SSO.ZONNA1)

From ZONNA via 251° track to SSAND, cross SSAND at 14000 and 280K, then via 262° track to JEJEK, then via 303° track to OTUKE. Expect radar vectors to final approach course.

LOST COMMUNICATIONS

RWY 29R: At SSAND proceed direct TUS VORTAC and hold, maintain 14000.  
RWY 11L: Execute RNAV (GPS) Z RWY 11L approach. If unable, at OTUKE proceed direct TUS VORTAC and hold, maintain 14000.

- NOTE: RADAR required.
- NOTE: All Rwys: expect radar vectors to final approach.
- NOTE: RNAV 1.
- NOTE: DME/DME/IRU, or GPS required.
- NOTE: For turbojets only.
- NOTE: All transitions: for non-GPS equipped aircraft DUG, TFD, and TUS must be operational.
- NOTE: Landing Rwy 29: Expect radar vectors after SSAND to final approach course.
- NOTE: Chart not to scale.

TUCSON, ARIZONA  
TUCSON INTL (TUS)

(ZONNA.ZONNA1) 23110  
ZONNA ONE ARRIVAL (RNAV)

AL-430 (FAA)

TUCSON INTL (TUS)  
TUCSON, ARIZONA

NM  
FT

19

38

57

200000

STAR, ZONNA TWO  
KTUS, TUCSON, AZ  
1 OF 2  
1:500,000

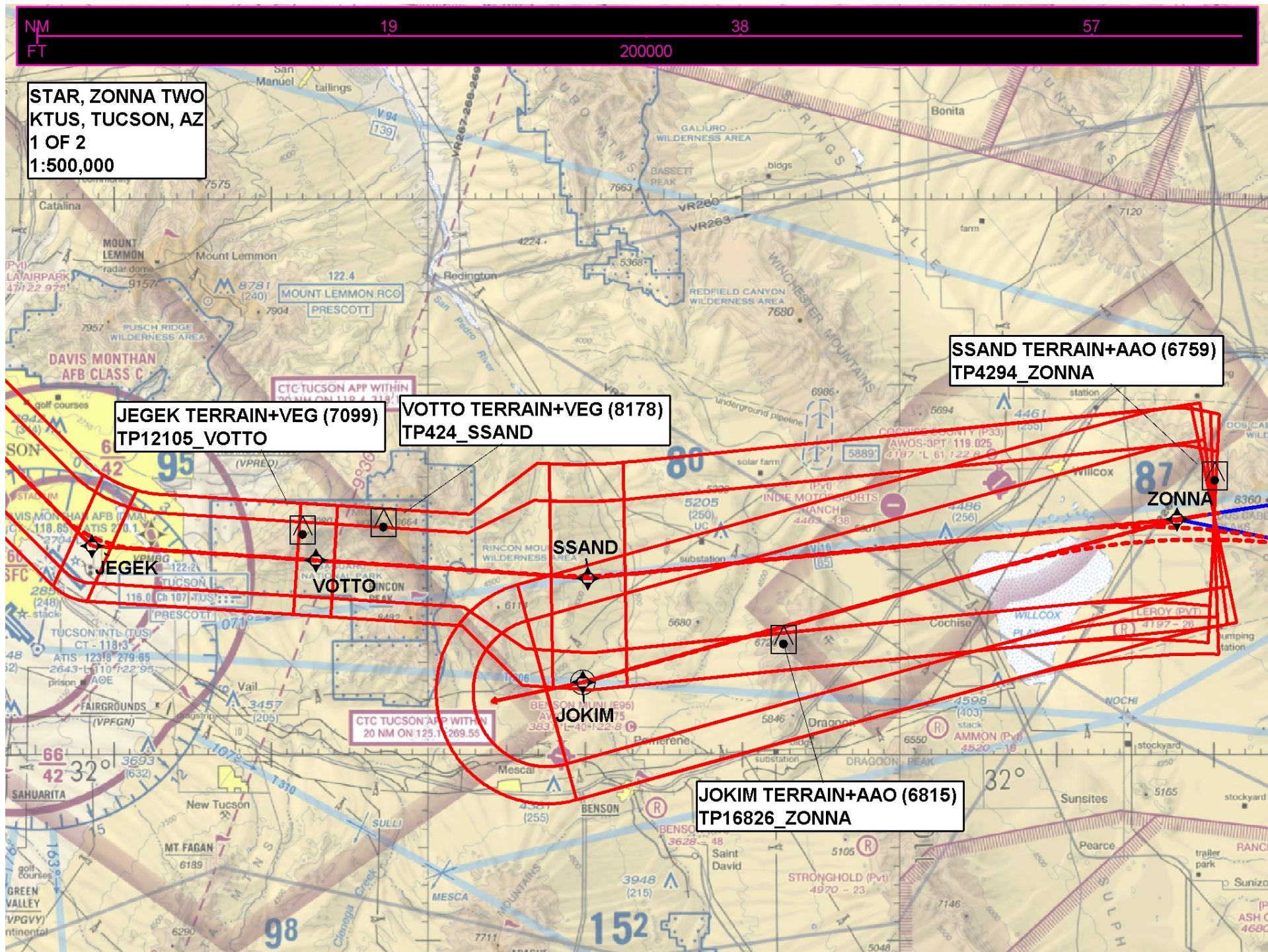
SSAND TERRAIN+AAO (6759)  
TP4294\_ZONNA

JEJEK TERRAIN+VEG (7099)  
TP12105\_VOTTO

VOTTO TERRAIN+VEG (8178)  
TP424\_SSAND

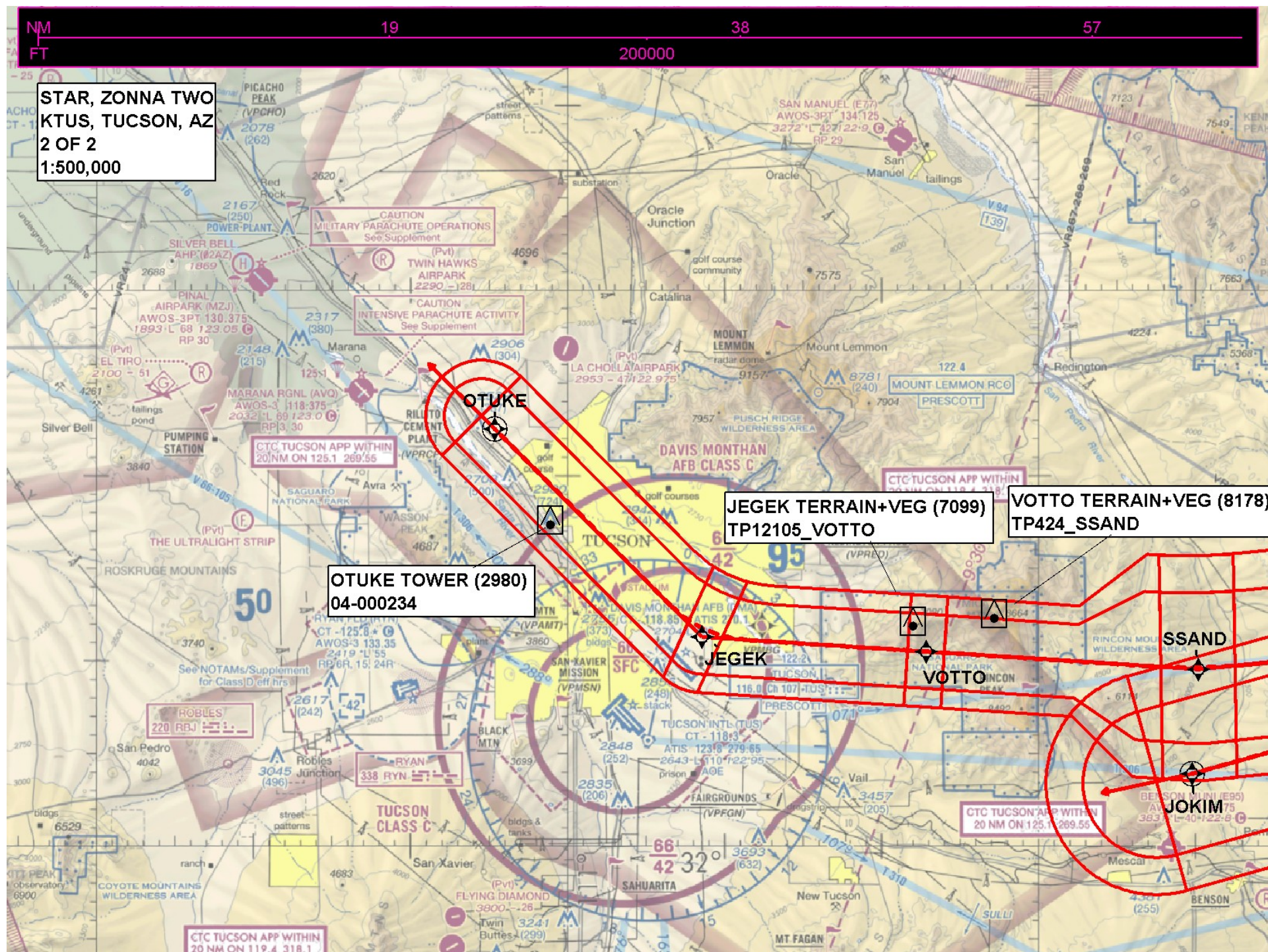
ZONNA

JOKIM TERRAIN+AAO (6815)  
TP16826\_ZONNA



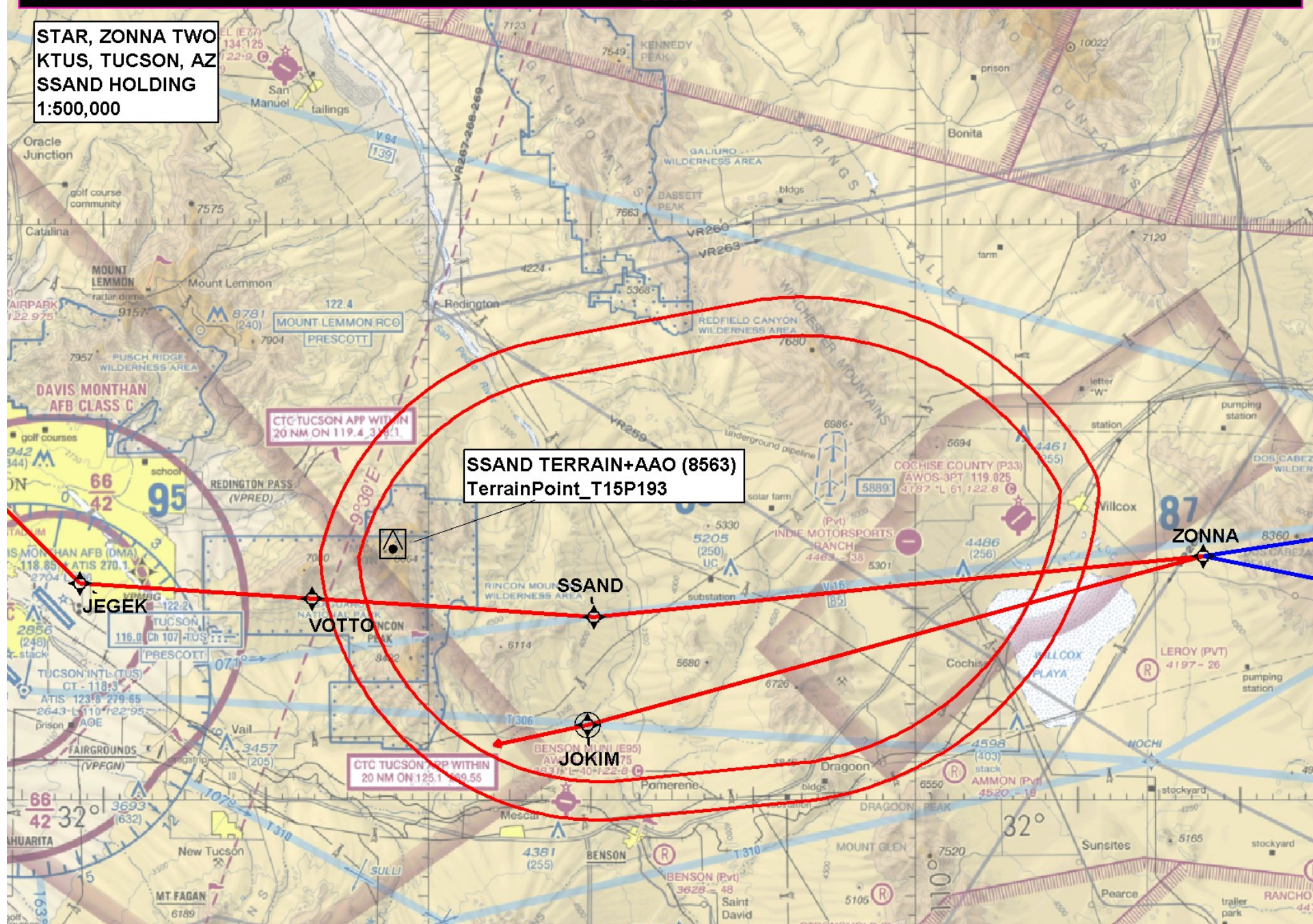


STAR, ZONNA TWO  
KTUS, TUCSON, AZ  
2 OF 2  
1:500,000





**STAR, ZONNA TWO  
KTUS, TUCSON, AZ  
SSAND HOLDING  
1:500,000**





NM  
FT

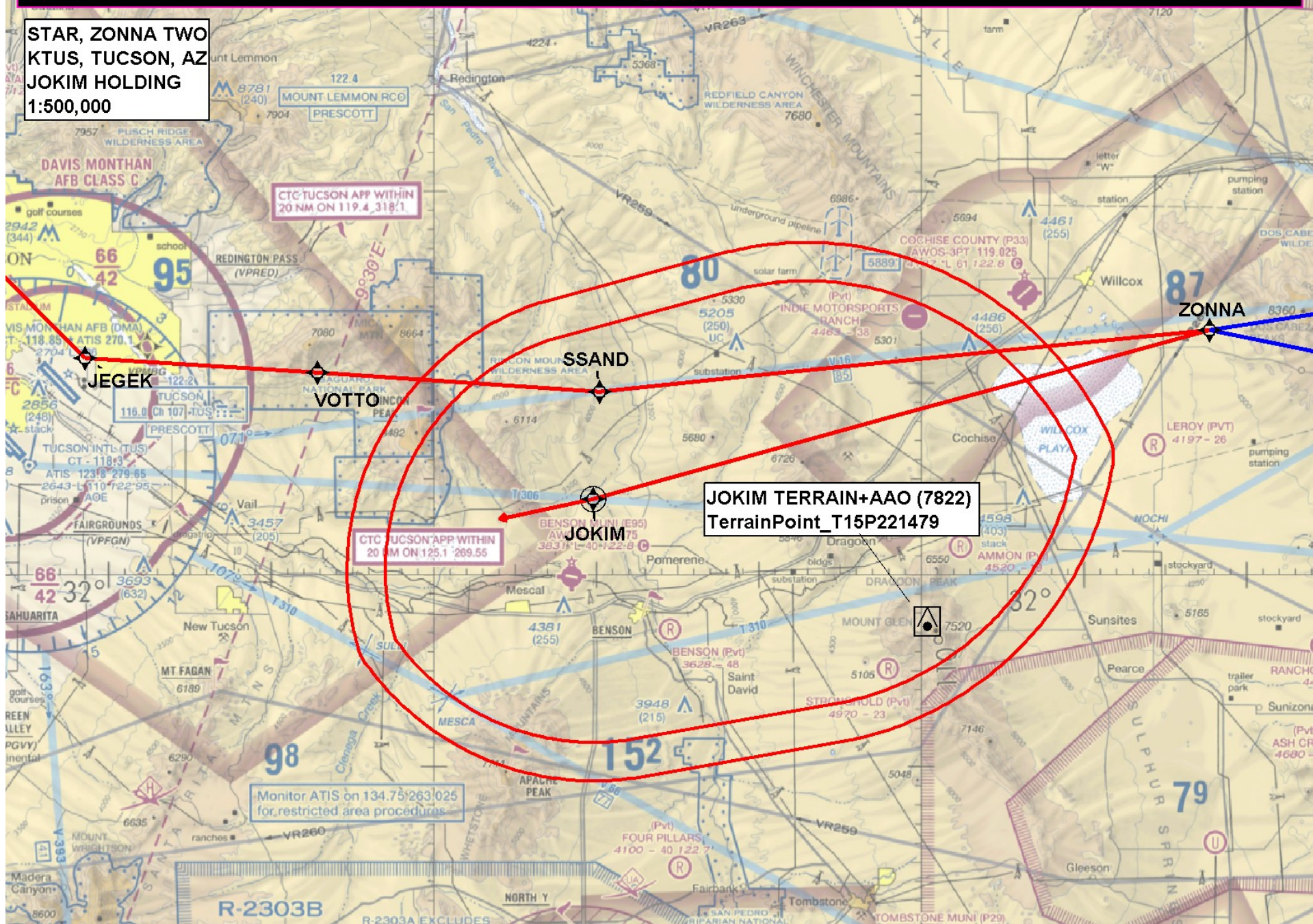
19

38

57

200000

STAR, ZONNA TWO  
KTUS, TUCSON, AZ  
JOKIM HOLDING  
1:500,000







# Federal Aviation Administration

## Initial Development Notification for AIRNAV Pending Records

To: Scott Jerden, Manager Aeronautical Data Team, AJV-A31

From: Bev Bordy, Manager Instrument Flight Procedures Projects Team, AJV-A4

Subject: **ACTION:** Request for Pending Records **KTUS\_\_TUCSON INTL, , AZ US**

The Magnetic Variation (MV) data for the airport(s) and/or facility(s) listed will be revised effective concurrent with the publication of the procedure(s) listed below. Estimated Chart Date: 11/30/2023

Current/Assigned MV E 12 1995 New MV E 9 2025

ECD	Airport ID	Procedure Name	AMDT #	Task Report Type Selections
11/30/2023	KTUS	APPROACH ILS OR LOC RWY 12 ORIG		MAGVAR
11/30/2023	KTUS	APPROACH RNAV (GPS) Z RWY 12 ORIG		MAGVAR
11/30/2023	KTUS	APPROACH RNAV (GPS) Z RWY 30 ORIG		MAGVAR
11/30/2023	KTUS	APPROACH RNAV (RNP) Y RWY 12 ORIG		MAGVAR
11/30/2023	KTUS	APPROACH RNAV (RNP) Y RWY 30 ORIG		MAGVAR
11/30/2023	KTUS	APPROACH VOR OR TACAN RWY 12 ORIG		MAGVAR
11/30/2023	KTUS	APPROACH VOR OR TACAN RWY 30 ORIG		MAGVAR
11/30/2023	KTUS	SID BURRO (RNAV) SIX TUCSON AZ KTUS		MAGVAR RNAV SID
11/30/2023	KTUS	SID TUCSON NINE TUCSON AZ KTUS		MAGVAR
11/30/2023	KTUS	SID WLDKT (RNAV) FIVE TUCSON AZ KTUS		MAGVAR RNAV SID
11/30/2023	KTUS	STAR DINGO SIX TUCSON AZ KTUS		MAGVAR RNAV STAR
11/30/2023	KTUS	STAR ZONNA (RNAV) TWO TUCSON AZ KTUS		MAGVAR RNAV STAR
11/30/2023	KTUS	TUCSON (DVA) KTUS AZ AMDT 7		MAGVAR
11/30/2023	KTUS	TUCSON AZ KTUS AMDT 7		MAGVAR

NAVAID ID / RWY	Type / Old No.	Use / New RWY/Note
i-TUS	ILS	ILS
RWY	29R	30
RWY	11L	12
RWY	21	22
RWY	3	4

RUNWAY NUMBERS WILL CHANGE: RWY 11R/29L WILL BE DECOMMISSIONED. THE RUNWAY CHANGES ARE ALREADY REFLECTED IN THE PENDING AIRNAV RECORD FOR THE 11/30/2023 CHART DATE. VOR NAVAID NOT BEING ROTATED.

IF you have any questions please notify: Casimir.L.Tabaka@faa.gov

Processed Thursday, June 22, 2023