

Flight Procedures Cover Page	Task Action: FLIGHT CHECK	Task Type: STAR	Estimated Chart Date: 01/25/2024	APWS Task ID: 6554276D737D4881BE679656B2EFFBB9	APWS Project ID: 8A590ADECFF24FB1AEB7A48C00FCCA25
Procedure: STAR DNKIN (RNAV) ONE		Enroute: YES	Specialist: Melton, William		Agreement Number:
Airport ID: KSAT			Airport City: SAN ANTONIO		State: TX
Facility ID:	Facility Type:	Flight Inspection Remark Type: New FC Slot			
<div>Procedure Comments: ESVs: (4): BROWNWOOD (BWD) DME (1); LLANO (LLO) TACAN (1); SAN ANGELO (SJT) TACAN (1); STONEWALL (STV) TACAN. APPROVAL LETTER MANOO TO DYNMO DESCENT GRADIENT. CONTACT ALLAN WILL (405) 954-6103.</div> <div>06/13/2023: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 04/17/2023. 1. CHANGED COMMUNICATIONS FROM CHART: HOUSTON APP CON TO CHART: SAN ANTONIO APP CON - CORRECT ADMINISTRATIVE ERROR.</div> <div>11/03/2023: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 08/16/2023: 1. CHANGED ALTITUDE AT LDRON FROM 9000 TO 7000 - ALIGN WITH IAPS. 2. ADDED 210 KIAS SPEED RESTRICTION AT LDRON - FPT REQUEST TO ALIGN WITH IAPS.</div>					

Digitally signed by
MICHAEL GARRITY
Nov 09, 2023



11/08/2023



FIPC DME/DME FORM						
PROCEDURE: STAR DNKIN (RNAV) ONE SAN ANTONIO TX KSAT			AIRPORT NAME: SAN ANTONIO INTL		AIRPORT ID: KSAT	SPECIAL CONTROL NO: OG-06-207-23
FAC ID: DNKIN1		CITY: SAN ANTONIO			ST: TX	ORIG CHART DATE: 10/05/2023
DFL TYPE: PROC/D	THIRD PARTY: <input type="checkbox"/> YES	EST. TIME ON SITE: 1.0	REIMB. NUMBER:	PTS TASK ID: 6554276D737D4881BE679656B2EFFBB9		
PREFLIGHT NOTES						
REVIEWER:					DATE:	
COMMENTS:					CHECK ONE: <input type="checkbox"/> FLT CK REQ <input type="checkbox"/> NFCR <input type="checkbox"/> REJECT <div style="display: flex; justify-content: flex-end; margin-top: 5px;"> <div style="border: 1px solid black; padding: 2px 5px;">YES</div> <div style="border: 1px solid black; padding: 2px 5px;">NO</div> </div>	
					CPV COMPLETE? <div style="display: flex; justify-content: flex-end;"><div style="border: 1px solid black; padding: 2px 5px;">X</div></div>	
PROCEDURE RESULTS						
INSPECTION DATE: 08/10/2023	CREW #: VN258	N #: N85	INSTRUMENT PROCEDURE STATUS: <input checked="" type="checkbox"/> SAT <input type="checkbox"/> SAT W/CHANGES <input type="checkbox"/> UNSAT		ARINC CODING: <input checked="" type="checkbox"/> SAT <input type="checkbox"/> SAT/GOLD <input type="checkbox"/> UNSAT	
FLIGHT INSPECTOR SIGNATURE: james hawley @ 08/14/2023 10:46			PRINTED NAME: HAWLEY, JAMES MICHAEL			NOTAM INITIATED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
FLIGHT INSPECTOR REMARKS:						
DME/DME STATUS: <input checked="" type="checkbox"/> SAT <input type="checkbox"/> UNSAT		SPECIALIST SIGNATURE: jose g-ctr medina @ 08/15/2023 10:37			PRINTED NAME: Jose G. Medina	
SPECIALIST REMARKS: Post Flight DME/DME has been performed on the segments of the KSAT DNKIN1 STAR flown by Flight Inspection. Segments flown under the KSAT DNKIN1 STAR procedure name received ESV's and DME's as modelled and are suitable for navigation using DME/DME/IRU. Segments flown were: DNKIN-IXION, FOLLK-TRVLL, MANOO-KAWAI, MOPPP-LOWWN.						
IN-FLIGHT OBSTACLE REPORT						
OBSTRUCTION ID #:	COORDINATES OR LOCATION:	GNSS ALTITUDE (MSL):	BAROMETRIC ALTITUDE (MSL):	HEIGHT ABOVE GROUND LEVEL:		

FIPC DME/DME FORM						
PROCEDURE: STAR DNKIN (RNAV) ONE SAN ANTONIO TX KSAT			AIRPORT NAME: SAN ANTONIO INTL		AIRPORT ID: KSAT	SPECIAL CONTROL NO: OG-06-207-23
FAC ID: DNKIN1		CITY: SAN ANTONIO			ST: TX	ORIG CHART DATE: 10/05/2023
DFL TYPE: PROC/D	THIRD PARTY: <input type="checkbox"/> YES	EST. TIME ON SITE: 1.0	REIMB. NUMBER:	PTS TASK ID: 6554276D737D4881BE679656B2EFFBB9		
PREFLIGHT NOTES						
REVIEWER:					DATE:	
COMMENTS:					CHECK ONE: <input type="checkbox"/> FLT CK REQ <input type="checkbox"/> NFCR <input type="checkbox"/> REJECT	
					YES	NO
					CPV COMPLETE? <input checked="" type="checkbox"/> X <input type="checkbox"/>	
PROCEDURE RESULTS						
INSPECTION DATE: 08/10/2023	CREW #: VN258	N #: N85	INSTRUMENT PROCEDURE STATUS: <input checked="" type="checkbox"/> SAT <input type="checkbox"/> SAT W/CHANGES <input type="checkbox"/> UNSAT		ARINC CODING: <input checked="" type="checkbox"/> SAT <input type="checkbox"/> SAT/GOLD <input type="checkbox"/> UNSAT	
FLIGHT INSPECTOR SIGNATURE: james hawley @ 08/14/2023 10:46			PRINTED NAME: HAWLEY, JAMES MICHAEL			NOTAM INITIATED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
FLIGHT INSPECTOR REMARKS:						
DME/DME STATUS: <input type="checkbox"/> SAT <input type="checkbox"/> UNSAT	SPECIALIST SIGNATURE:				PRINTED NAME:	
SPECIALIST REMARKS:						
IN-FLIGHT OBSTACLE REPORT						
OBSTRUCTION ID #:	COORDINATES OR LOCATION:	GNSS ALTITUDE (MSL):	BAROMETRIC ALTITUDE (MSL):	HEIGHT ABOVE GROUND LEVEL:		



Federal Aviation Administration

Memorandum

Date: January 20, 2023

To: Tom Lattimer, Airspace Manager CSA PBN Team

From: Dave Mullinax, Support Manager, Airspace and Procedures,
Houston/Gulf Coast District

Prepared by: William Roth, Senior ATC Specialist, NAVTAC Support

Subject: Letter of Approval Request DNKIN STAR, KSAT

DAVE
MULLINAX

Digitally signed by DAVE
MULLINAX
Date: 2023.01.20 12:49:29
-06'00'

KSAT DNKIN Standard Terminal Arrival Route (STAR): MANOO to DYNMO Descent Gradient.

Currently, FAAO 8260.3E, para 2-2-8a (2), the maximum permissible descent gradient below 10,000ft MSL and above is 318 ft/nm (approximately 3.0 degrees). MANOO AT or BELOW 9000 ft MSL and DYNMO AT OR ABOVE 7,000 ft MSL. The descent gradient (444.66 ft/NM) from MANOO to DYNMO is greater than the maximum permissible gradient allowed. Flight Standards approval is required.

The DNKIN STAR serves San Antonio International Airport. The descent gradient of 444.66 ft/NM from MANOO to DYNMO is calculated from altitude of at or below 9000 ft MSL at MANOO descending to an at or above altitude of 7000ft MSL at DYNMO, over a distance of 12.80 NM. However, the gradient over multiple fixes is within the maximum permissible descent gradient. Descending from altitude of 9000ft MSL at MANOO to a mandatory altitude of at 6000ft MSL at GOKUU, over a distance of 34.74 NM, is a gradient of 86.36 ft/NM. The maximum altitude of 9000ft MSL at MANOO is for ATC operational requirement. Simulator data indicates aircraft of varying weights with varying wind conditions will all be below 9000ft MSL. The reference software indicated no descent gradient issues but the below 9000ft MSL restriction is operationally necessary for procedural deconfliction. SIM data supports the overall profile and lateral design. Industry indicates that the procedure can be easily managed without increased energy management actions by the flight crew.

Therefore, ZHU is requesting a Letter of Approval to utilize the mandatory altitude at MANOO (AT or BELOW 9000 ft MSL) to DYNMO (AT OR ABOVE 7,000 ft MSL) resulting in a descent gradient of 444.66ft/NM as developed for the DNKIN STAR.

ARRIVAL ROUTE DESCRIPTION

MOPPP TRANSITION (MOPPP.DNKIN1)

TRVLL TRANSITION (TRVLL.DNKIN1)

SAN ANTONIO INTL (SAT):

From AIRBL on track 109° to cross FOLLK between 9000 and 13000, then on track 109° to DNKIN.

LANDING RUNWAY 4: From DNKIN on track 127° to cross MANOO at or below 9000, then on track 130° to cross DYNMO at or above 7000 and at 230K, then on track 157° to cross DIIAW at 6000 and at 210K, then on track 157° to TIMMY, then on track 217° to cross LOWWN at 6000, then on track 217°. Expect RADAR vectors to final approach course.

LANDING RUNWAY 13R: From DNKIN on track 112° to cross LDRON at 9000. Expect ILS or LOC Rwy 13R approach.

LANDING RUNWAY 22: From DNKIN on track 108° to cross GERVN at 6000 and at 210K, then on track 101° to ADDYY, then on track 037° to cross IXION at 6000, then on track 037°. Expect RADAR vectors to final approach course.

LANDING RUNWAY 31L: From DNKIN on track 127° to cross MANOO at or below 9000, then on track 130° to cross PATII at or above 7000, then on track 130° to cross KEENM at 6000 and at 210K, then on track 130°. Expect RADAR vectors to final approach course.

LANDING KSKF, KBAZ, KCVB, KSSF, KPEZ, 5C1, KRND: From AIRBL on track 109° to cross FOLLK between 9000 and 13000, then on track 109° to DNKIN, then on track 121° to cross RESST at 9000 and at 210K, then on track 121°. Expect RADAR vectors to final approach course.

LOST COMMUNICATIONS:

RUNWAY 4: After LOWWN, proceed to HHARD at 5000 and hold.

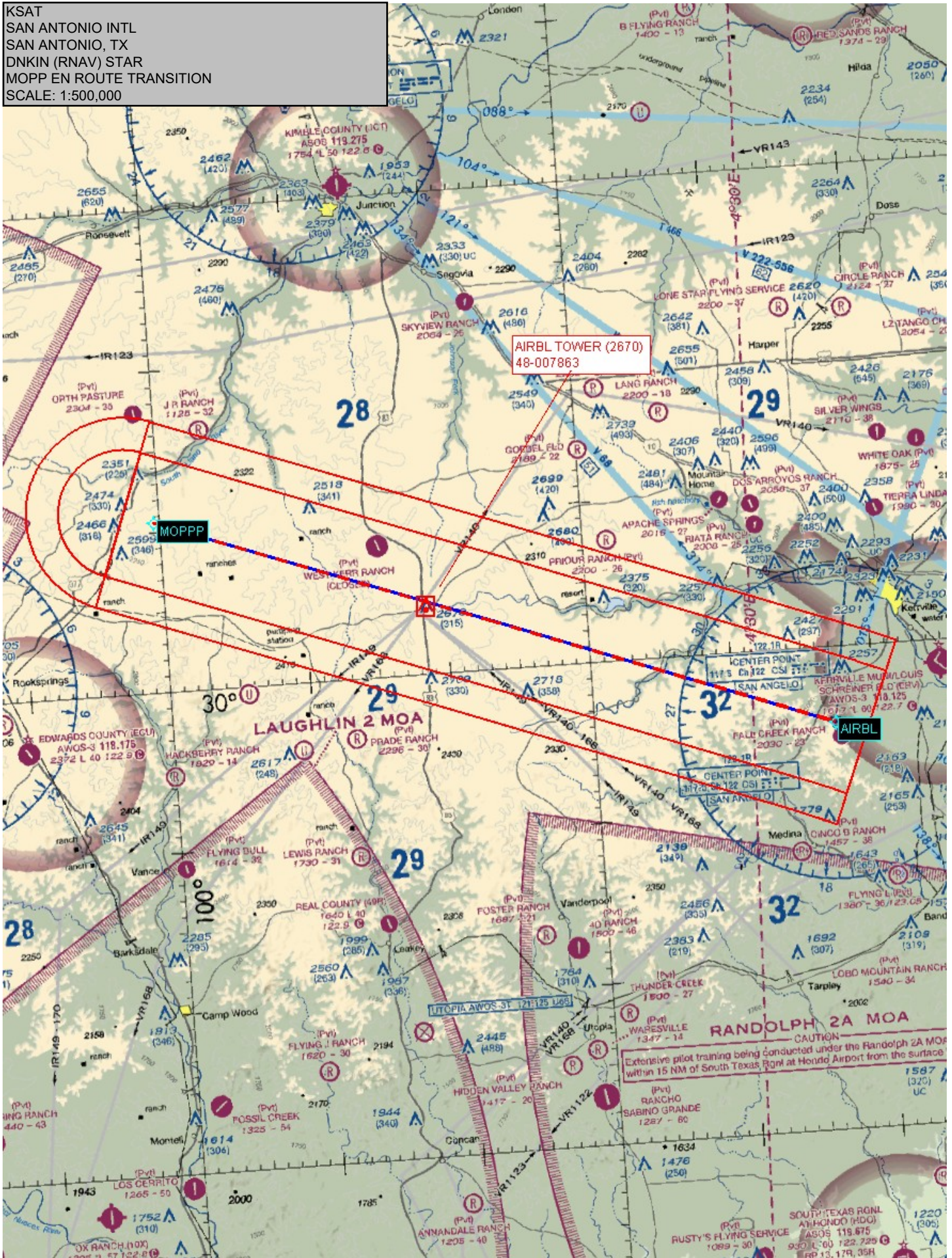
RUNWAY 13R: After LDRON, then on ILS or LOC Rwy 13R or RNAV (GPS) Y Rwy 13R approach.

RUNWAY 22: After IXION proceed direct to ERROR and hold.

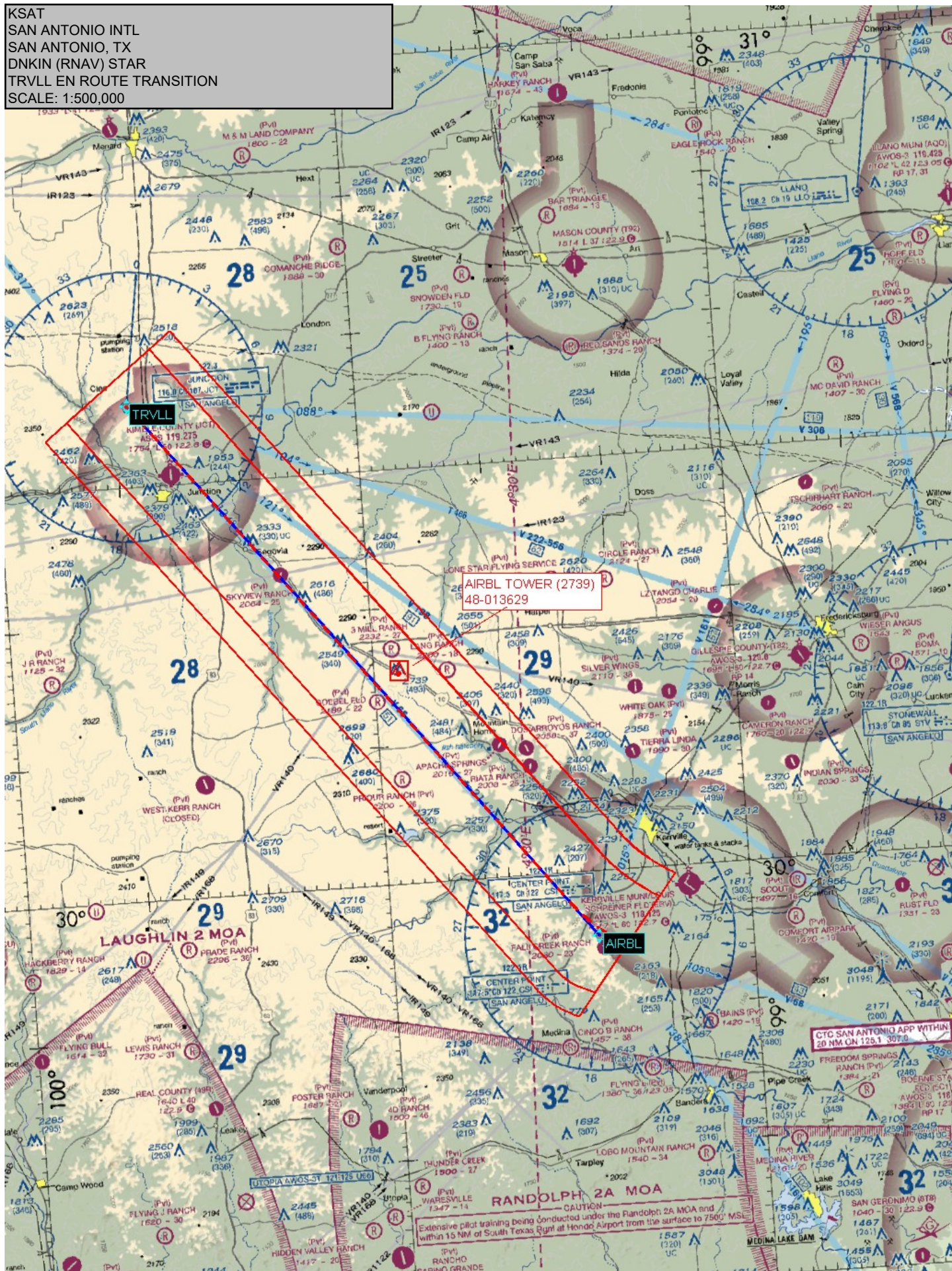
RUNWAY 31L: After KEENM proceed to TRNKS, then on ILS or LOC Rwy 31L or RNAV (GPS) Y Rwy 31L approach.

PROTOTYPE-NOT FOR NAVIGATION

KSAT
SAN ANTONIO INTL
SAN ANTONIO, TX
DNKN (RNAV) STAR
MOPP EN ROUTE TRANSITION
SCALE: 1:500,000



KSAT
SAN ANTONIO INTL
SAN ANTONIO, TX
DNKN (RNAV) STAR
TRVLL EN ROUTE TRANSITION
SCALE: 1:500,000



KSAT
SAN ANTONIO INTL
SAN ANTONIO, TX
DNKIN (RNAV) STAR
COMMON ROUTE AIRBL TO DNKIN
SCALE: 1:500,000

FOLK TERRAIN+AAO (2386)
TP640_AIRBL

AIRBL

FOLK

DNKIN

DNKIN TOWER (2308)
48-011672

RANDOLPH 2A MOA
CAUTION
Extensive pilot training being conducted under the Randolph 2A MOA and within 15 NM of South Texas Rgnl at Hondo Airport from the surface to 7500' MSL

CTC SAN ANTONIO APP WITHIN 20 NM ON 125.1 307.0

CTC SAN ANTONIO APP WITHIN 20 NM ON 119.05 353.5

KSAT
 SAN ANTONIO INTL
 SAN ANTONIO, TX
 DNKIN (RNAV) STAR
 COMMON ROUTE AIRBL TO RESST
 SCALE: 1:500,000



KSAT
SAN ANTONIO INTL
SAN ANTONIO, TX
DNKIN (RNAV) STAR
RWY TRANSITION (KSAT RWY31L)
SCALE: 1:500,000

**PATII TERRAIN+AAO (2123)
TPD_MANOO**

**CTC SAN ANTONIO APP WITHIN
20 NM ON 126.7070**

**KEENM TERRAIN+AAO (1260)
TPD_PATII**

**MANOO TERRAIN+AAO (2248)
TPD_DNKIN**

**CTC SAN ANTONIO APP WITHIN
20 NM ON 118.05 353.5**

KSAT
SAN ANTONIO INTL
SAN ANTONIO, TX
DNKIN (RNAV) STAR
RUNWAY TRANSITION (KSAT RWY 13R)
SCALE: 1:500,000



KSAT
SAN ANTONIO INTL
SAN ANTONIO, TX
DNKIN (RNAV) STAR
RUNWAY TRANSITION (KSAT RWY 22)
SCALE: 1:500,000

DNKIN/GERVN TOWER (2308)
48-011672

CTC SAN ANTONIO APP WITHIN
20 NM ON 125.1 307.3

ADDYY TOWER (1849)
48-014597

IXION TOWER (1649)
48-009552

CTC SAN ANTONIO APP WITHIN
20 NM ON 118.05 353.5

KSAT
SAN ANTONIO INTL
SAN ANTONIO, TX
DNKIN (RNAV) STAR
RUNWAY TRANSITION (KSAT RWY 4)
SCALE: 1:500,000



KSAT
SAN ANTONIO INTL
SAN ANTONIO, TX
DNKN (RNAV) STAR
RWY 4 LOST COMM/HARDD HOLDING
SCALE: 1:500,000

HARDD TERRAIN+AAO (1122)
TP1_LOWWWN

CTC SAN ANTONIO APP WITHIN
20 NM ON 118.05 353.5

LOWWWN

HARDD

HARDD TOWER (1211)
48-007753

KSAT
SAN ANTONIO INTL
SAN ANTONIO, TX
DNKN (RNAV) STAR
RWY 22 LOST COMM
SCALE: 1:500,000

CTC AUSTIN APP WITHIN
20 NM ON 119.0 370.85

ERROR TERRAIN+AAO (1660)
TerrainPoint_T6P5381

ERROR TERRAIN+AAO (1598)
TP0_IXION

CTC SAN ANTONIO APP WITHIN
20 NM ON 124.45 335.625

ERROR

IXION

CTC SAN ANTONIO APP WITHIN
20 NM ON 128.05 318.1

[illegible]

KSAT
SAN ANTONIO INTL
SAN ANTONIO, TX
DNKN (RNAV) STAR
ERROR HOLDING
SCALE: 1:500,000



KSAT
SAN ANTONIO INTL
SAN ANTONIO, TX
DNKIN (RNAV) STAR
HARDD HOLDING
SCALE: 1:500,000



KSAT
 SAN ANTONIO INTL
 SAN ANTONIO, TX
 DNKIN (RNAV) STAR
 MOPPP HOLDING
 SCALE: 1:500,000

KSAT
SAN ANTONIO INTL
SAN ANTONIO, TX
DNKIN (RNAV) STAR
RBNSN HOLDING
SCALE: 1:500,000



KSAT
SAN ANTONIO INTL
SAN ANTONIO, TX
DNKN (RNAV) STAR
SLOW HOLDING
SCALE: 1:500,000



KSAT
SAN ANTONIO INTL
SAN ANTONIO, TX
DNKIN (RNAV) STAR
TRVLL HOLDING
SCALE: 1:500,000

