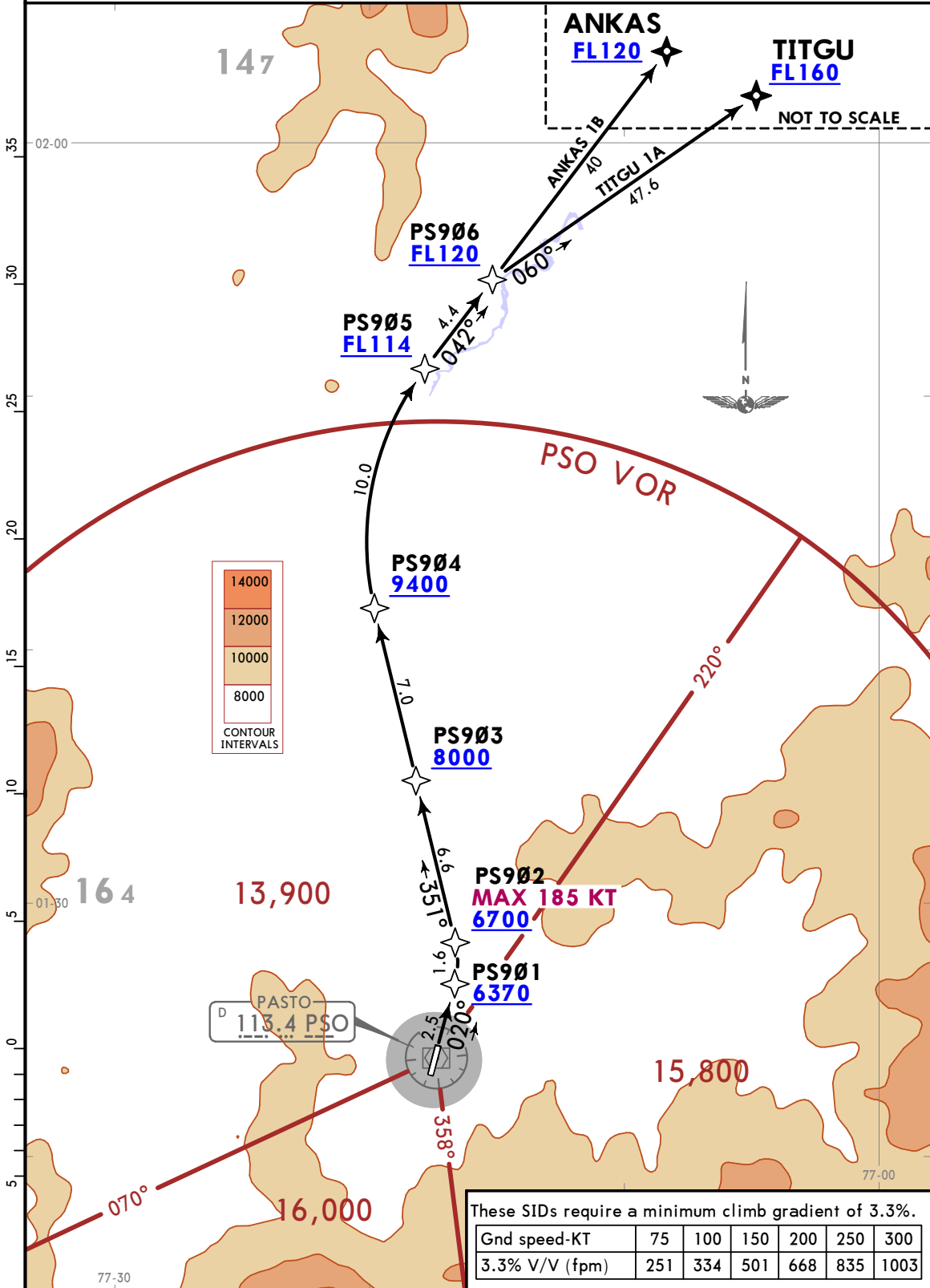


Apt Elev 5951	Trans alt: 11000
	RNP 1 RF required

**ANKAS 1B [ANKA1B], TITGU 1A [TITG1A]**  
RNAV (GNSS) DEPARTURES  
(RWY 02)  
CAT B & C



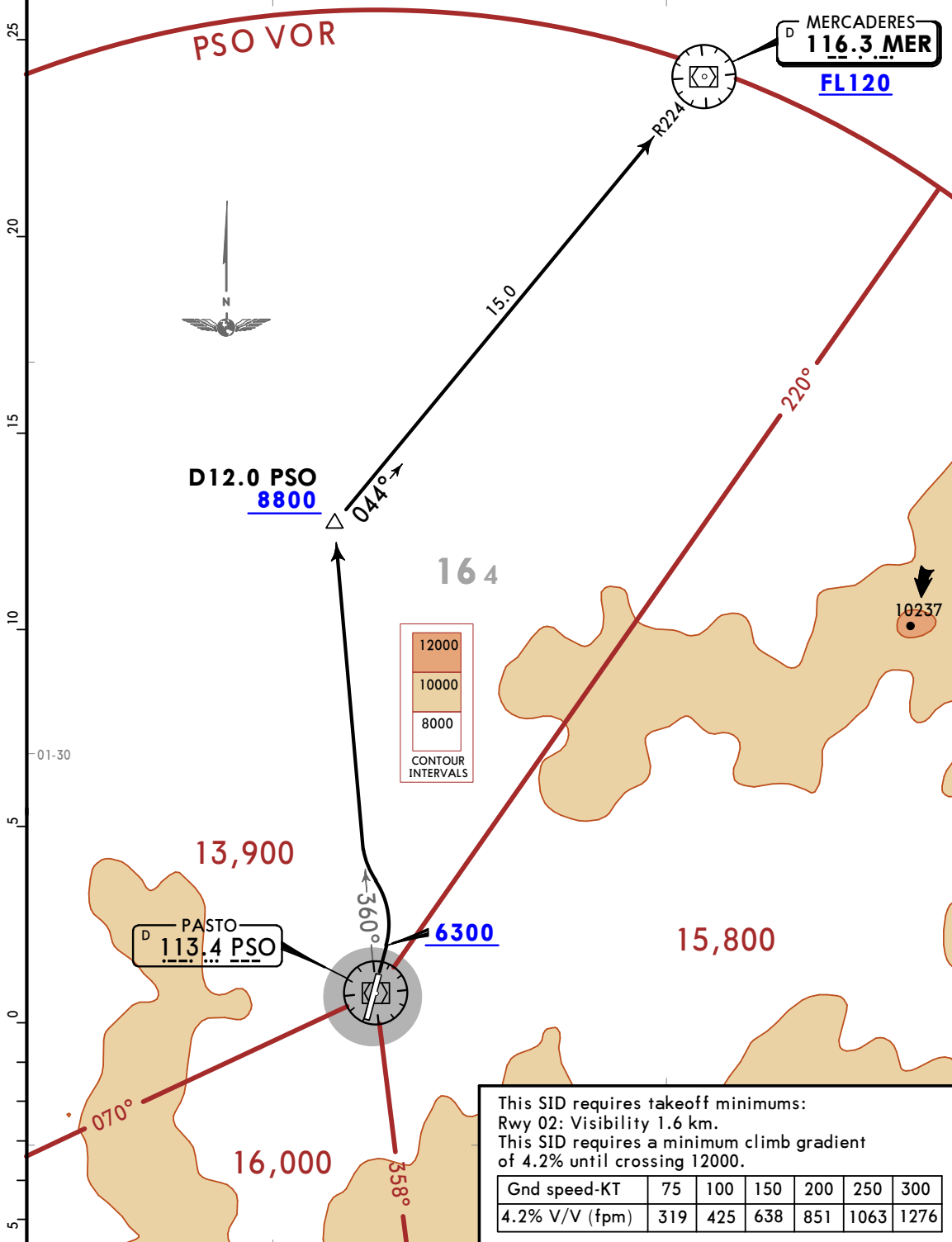
These SIDs require a minimum climb gradient of 3.3%.

Gnd speed-KT	75	100	150	200	250	300
3.3% V/V (fpm)	251	334	501	668	835	1003

Apt Elev  
5951

Trans alt: 11000  
Turn before DER prohibited.

MERCADERES 4 DEPARTURE  
[MER4]  
(RWY 02)  
CAT A, B & C

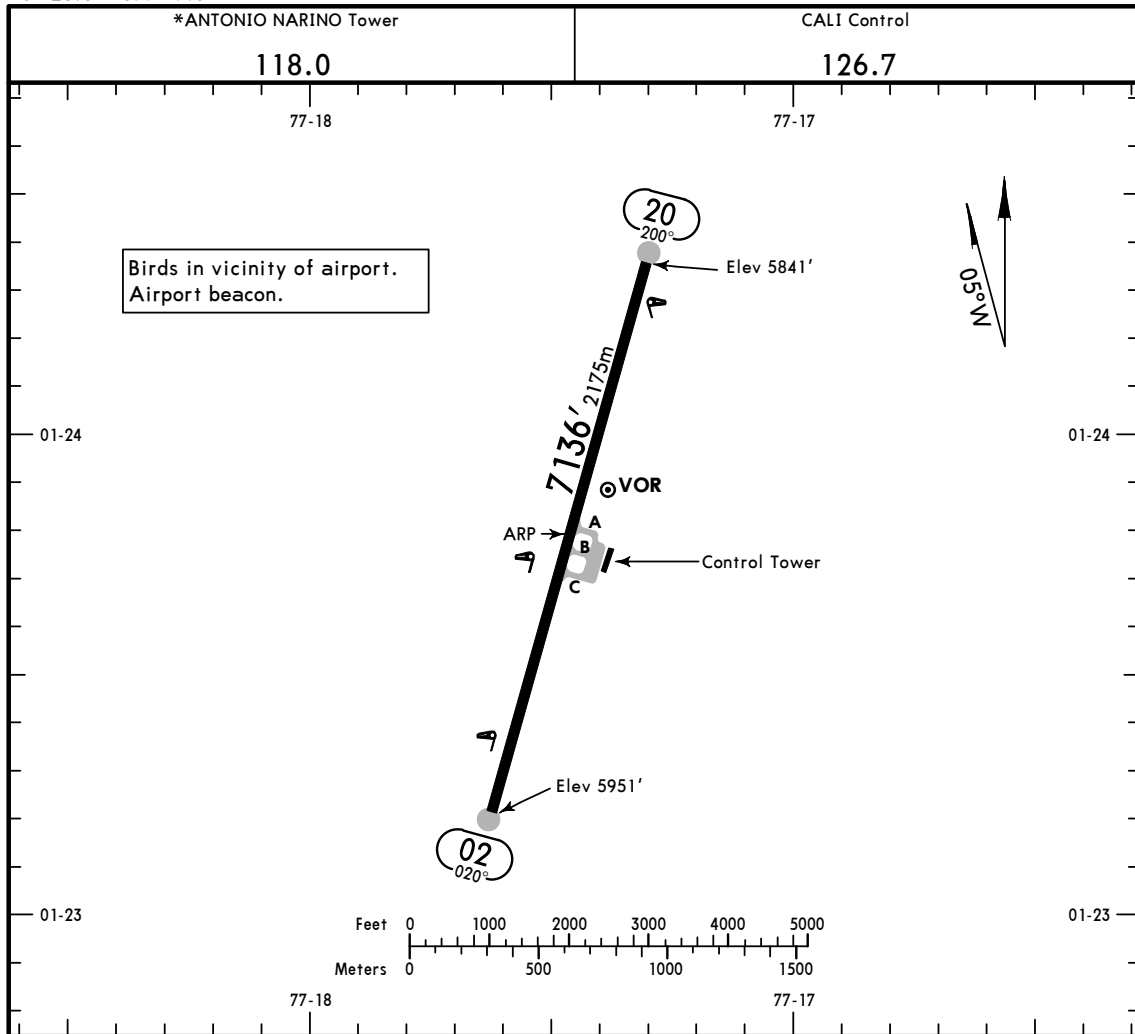


This SID requires takeoff minimums:  
Rwy 02: Visibility 1.6 km.  
This SID requires a minimum climb gradient of 4.2% until crossing 12000.

Gnd speed-KT	75	100	150	200	250	300
4.2% V/V (fpm)	319	425	638	851	1063	1276

INITIAL CLIMB

MAINTAIN runway heading to 6300, then turn LEFT to intercept PSO R360. At D12.0 PSO and 8800 or above, turn RIGHT to intercept MER R224.



**ADDITIONAL RUNWAY INFORMATION**

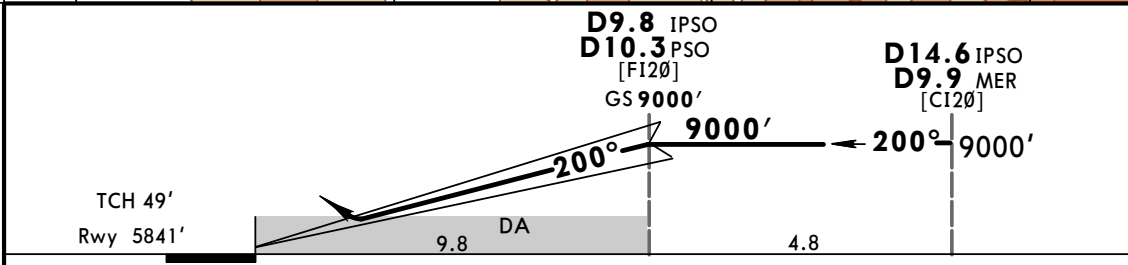
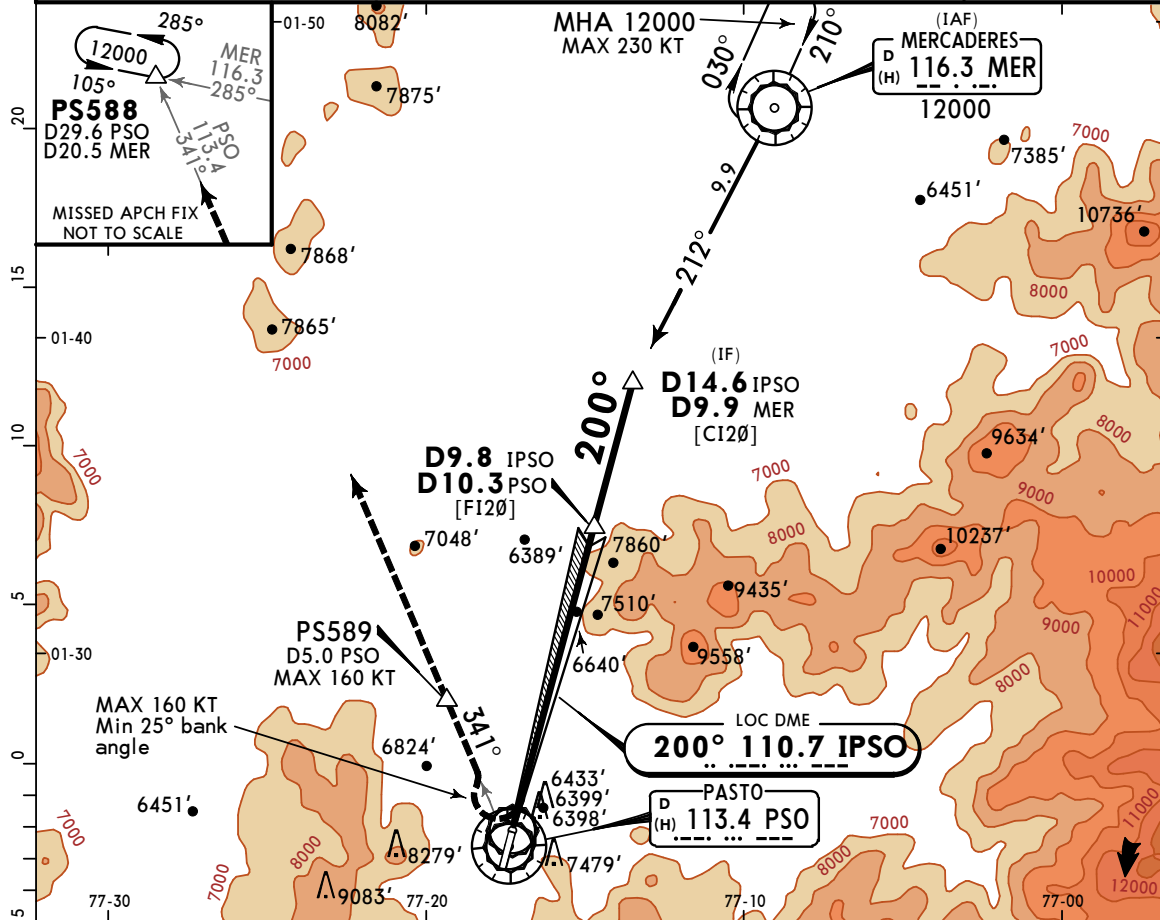
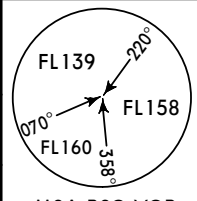
RWY		USABLE LENGTHS			
		LANDING BEYOND		TAKE-OFF	WIDTH
		Threshold	Glide Slope		
02	MIRL SSALS PAPI-L (angle 3.0°)			1 7283' 2220m	128'
20	MIRL HIALS REIL PAPI-L (angle 3.0°)		6344' 1934m	2 7303' 2226m	39m

- 1 Turn platform 02 is part of the TORA and of the track.
- 2 Turn platform 20 is part of the TORA and of the track.

**TAKE-OFF**

	Rwy 02	Rwy 20
A		
B	1.6 km	8.0 km
C		
D	NOT APPLICABLE	

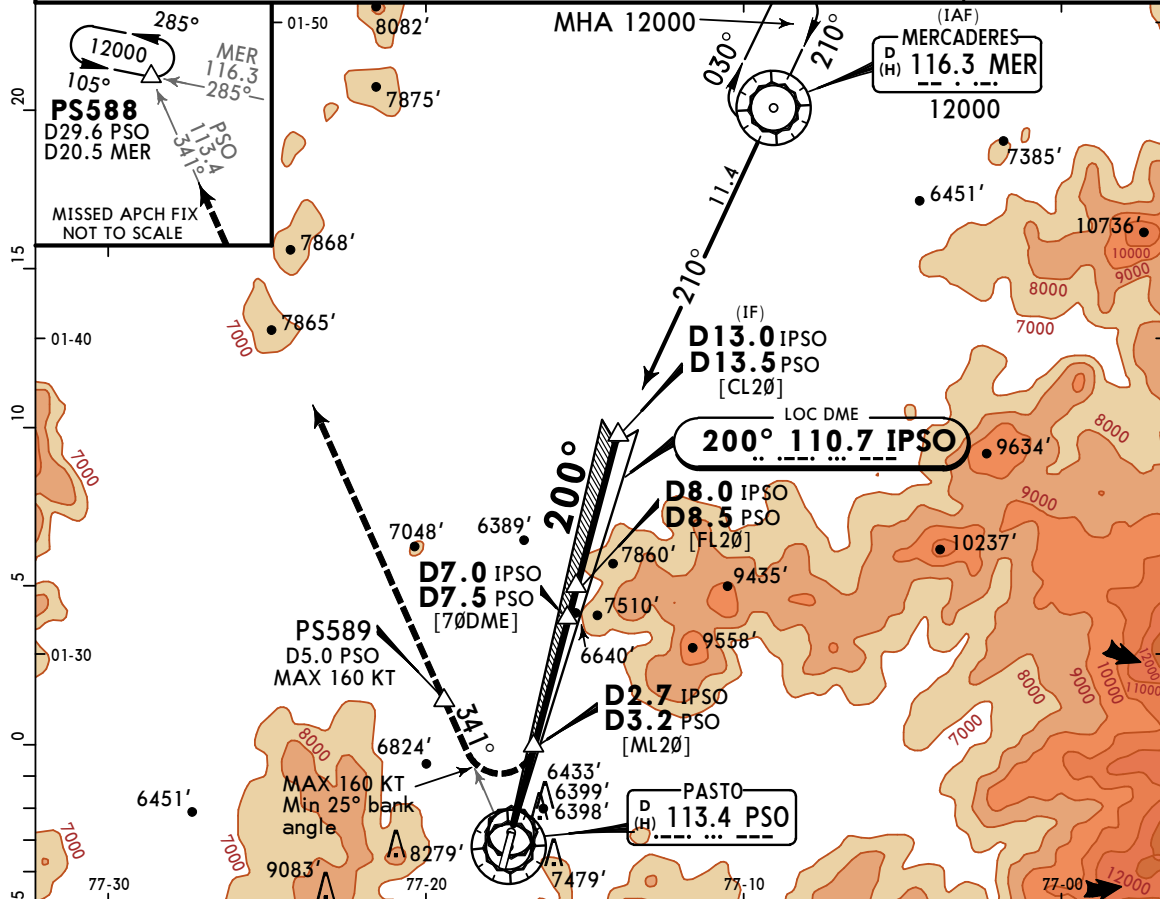
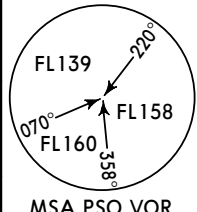
CALI Control 126.7			*ANTONIO NARINO Tower 118.0		
LOC IPSO <b>110.7</b>	Final Apch Crs <b>200°</b>	D9.8 IPSO D10.3 PSO <b>9000'</b> (3159')	ILS DA(H) Refer to Minimums	Apt Elev 5951' Rwy 5841'	
<b>MISSED APCH: Turn RIGHT to PS589 then outbound via PSO VOR R-341, climbing to 12000' to PS588 holding. MAX 160 KT until PS589.</b>					
Alt Set: IN (hPa on req)		Trans level: FL 120		Trans alt: 11000'	
MER and PSO VOR required.					MSA PSO VOR



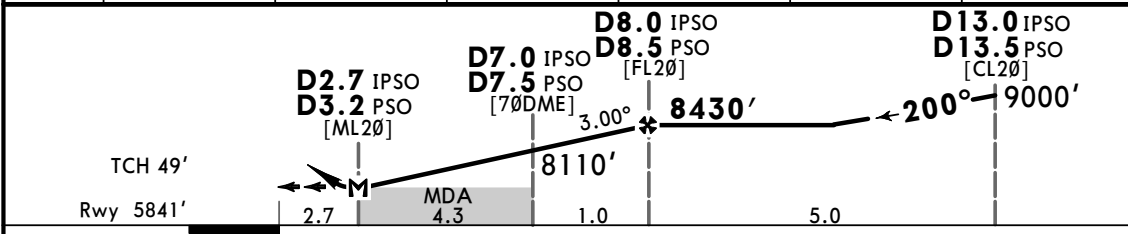
Gnd speed-Kts	70	90	100	120	140	160	HIALS REIL PAPI	12000' PSO via 113.4 PS589 RT R-341
GS	3.00°	372	478	531	637	743		

<b>State</b>						STRAIGHT-IN LANDING ILS		CIRCLE-TO-LAND			
Missed Apch climb gradient mim 5.0%						Missed Apch climb gradient mim 4.0%		Missed Apch climb gradient mim 2.5%		Visual Circling not authorized to the East	
DA(H) 6574' (733')		DA(H) 6631' (790')		DA(H) 6831' (990')		Max Kts		MDA(H)			
FULL		ALS out		FULL		ALS out		FULL		ALS out	
A	V1500m		V1500m		V1500m		100	6860' (909')		V4500m	
B	V1500m		V1500m		V1500m		135	7610' (1659')		V6000m	
C	V2100m	V2400m	V2400m	V2400m	V2400m	V2400m	180	8720' (2769')		V8000m	
D	NOT APPLICABLE		NOT APPLICABLE		NOT APPLICABLE		D	NOT APPLICABLE			

CALI Control 126.7			*ANTONIO NARINO Tower 118.0		
LOC IPSO <b>110.7</b>	Final Apch Crs <b>200°</b>	D8.0 IPSO D8.5 PSO <b>8430'</b> (2589')	DA/MDA(H) <b>6940'</b> (1099')	Apt Elev 5951'	Rwy 5841'
<b>MISSED APCH: Turn RIGHT to PS589 then intercept PSO VOR R-341</b> outbound climbing to 12000' to PS588 holding pattern. Minimum climb gradient 5% until 12000'. MAX 160 KT until PS589.					
Alt Set: IN (hPa on req)		Trans level: FL 120		Trans alt: 11000'	
1. MER VOR and PSO VOR required.			2. IPSO DME or PSO DME required.		



IPSO DME	3.0	4.0	5.0	6.0	7.0	8.0
ALTITUDE	6820'	7140'	7460'	7780'	8110'	8430'

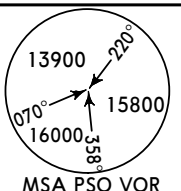


Gnd speed-Kts	70	90	100	120	140	160	HIALS REIL PAPI	12000' PSO on 113.4 PS589 RT R-341	
Descent Angle	3.00°	372	478	531	637	743			849
MAP at D2.7 IPSO/D3.2 PSO									
FAF to MAP	5.3	4:33	3:32	3:11	2:39	2:16	1:59		

<b>State</b> STRAIGHT-IN LANDING Missed Apch climb gradient mim 5.0% CDFA 1 DA/MDA(H) <b>6940'</b> (1099') ALS out		CIRCLE-TO-LAND Visual Circling not authorized to the East MDA(H) 100 <b>6860'</b> (909') V4500m 135 <b>7610'</b> (1659') V6000m 180 <b>8720'</b> (2769') V8000m D NOT APPLICABLE	
A	V1500m 2	Max Kts	100
B			135
C	V2400m 3		180
D	NOT APPLICABLE		D

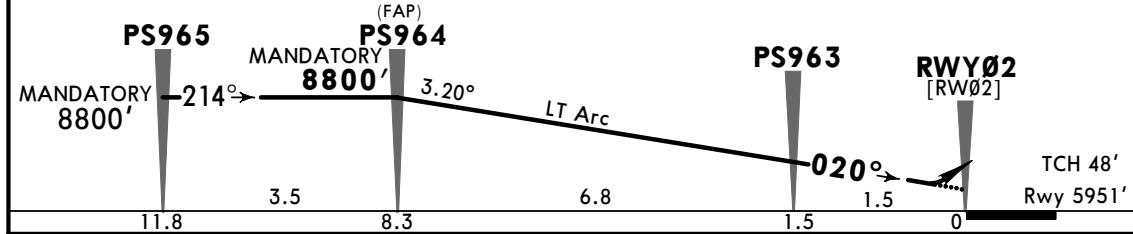
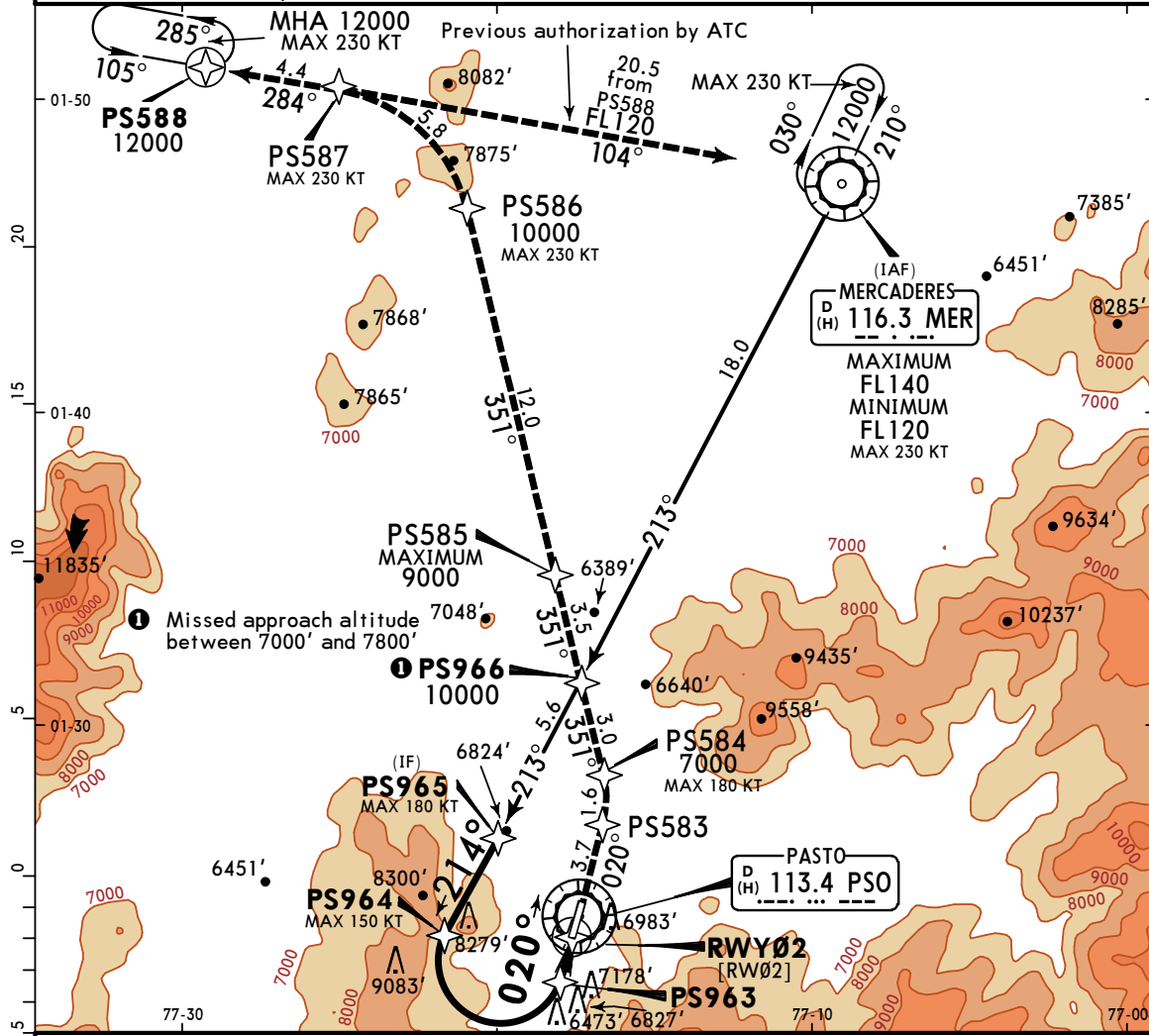
1 VNAV DA(H) in lieu of MDA(H) depends on operator policy.  
 2 Non-CDFA CAT A/B increase by 200m. 3 Non-CDFA CAT C increase by 400m.

CALI Control 126.7		*ANTONIO NARINO Tower 118.0		
RNAV	Final Apch Crs <b>020°</b>	<b>PS964</b> MANDATORY <b>8800'</b> (2849')	RNP 0.15 DA(H) <b>6300'</b> (349')	Apt Elev 5951' Rwy 5951'



**MISSED APCH:** Follow RNAV (RNP) track to PS588 holding pattern climbing to FL120. Cross PS584 7000' or above, PS966 between 7000' and 8000', PS585 9000' or below, PS586 10000' or above, PS588 FL120 or above. RNP 0.3 in missed approach until PS585.

- RNP AR Alt Set: IN (hPa on req) Trans level: FL 120 Trans alt: 11000'
- AUTHORIZATION REQUIRED.
  - RF required.
  - Double GNSS and an IRS required for RNP 0.15.
  - Procedure not authorized with remote QNH.
  - Procedure not authorized at night when PAPI is inoperative.
  - Procedure not authorized below 12°C or above 27°C.
  - RNP 1.0 MER VOR to PS965, RNP 0.5 PS965 to PS964, RNP 0.15 PS964 to RWY02.



Gnd speed-Kts	70	90	100	120	140	160	SSALS	12000'	RNAV	PS588
Glide Path Angle	3.20°	396	510	566	679	906	PAPI-L	↑	on	RNP track
MAP at DA	STRAIGHT-IN LANDING RWY 02									

RNP 0.15 DA(H) <b>6300'</b> (349')		RNP 0.30 DA(H) <b>7000'</b> (1049')	
---------------------------------------	--	----------------------------------------	--

A	NOT APPLICABLE	
B	1600m	5500m
C	NOT APPLICABLE	
D	NOT APPLICABLE	

CALI Control  
126.7

\*ANTONIO NARINO Tower  
118.0

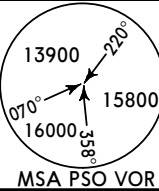
RNAV

Final  
Apch Crs  
200°

PS720  
9000' (3159')

RNP 0.30  
DA(H)  
Refer to  
Minimums

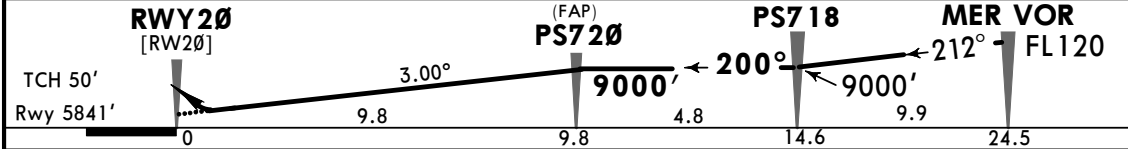
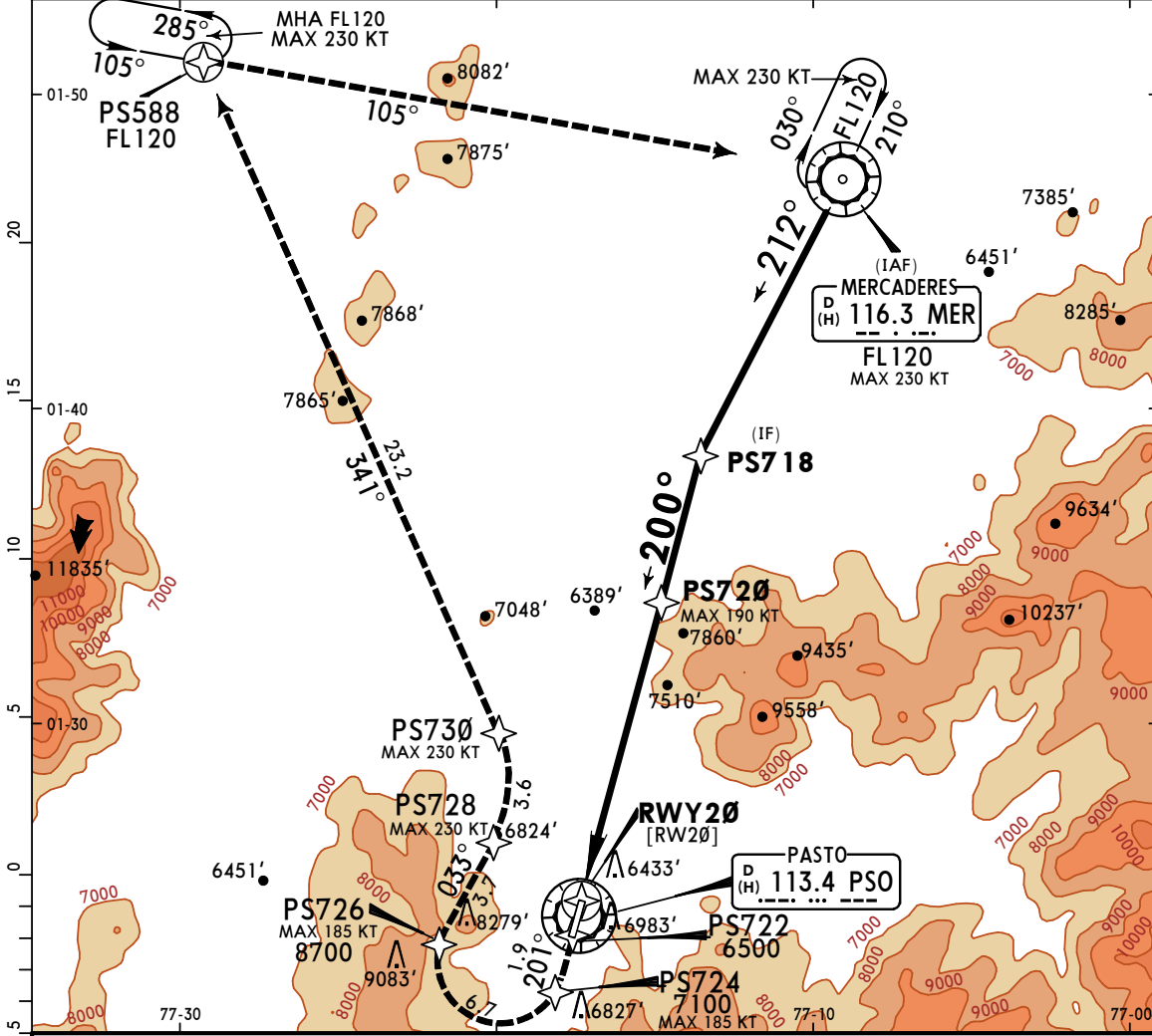
Apt Elev 5951'  
Rwy 5841'



**MISSED APCH:** Climb to FL120 on the RNAV (RNP) missed approach track to the PS588 holding pattern, cross PS722 at 6500' or above, PS726 at 8700' or above.

RNP AR Alt Set: IN (hPa on req) Trans level: FL 120 Trans alt: 11000'

1. AUTHORIZATION REQUIRED. 2. RF required. 3. Procedure not authorized with remote QNH.
4. Procedure not authorized at night when PAPI is inoperative. 5. For uncompensated Baro-VNAV systems, procedure not authorized below 12°C or above 27°C.
6. RNP values- Initial: 1.0, Intermediate: 0.5, Final: 0.3, Missed apch: 0.2 until PS730.



Gnd speed-Kts	70	90	100	120	140	160	HIALS	FL 120	RNAV	PS588
Glide Path Angle	3.00°	372	478	531	637	743	REIL	↑	on	track
MAP at DA							PAPI			

RNP 0.30 With height loss of 50'			RNP 0.30 With height loss of 150'		
Missed Apch climb gradient mim 5.0% DA(H)	Missed Apch climb gradient mim 4.0% DA(H)	Missed Apch climb gradient mim 5.0% DA(H)	Missed Apch climb gradient mim 4.0% DA(H)	Missed Apch climb gradient mim 3.0% DA(H)	Missed Apch climb gradient mim 2.5% DA(H)
6240' (399')	6340' (499')	6340' (499')	6440' (599')	6540' (699')	6740' (899')
ALS out	ALS out	ALS out	ALS out	ALS out	ALS out

PANS OPS	A	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE
	B	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE
	C	1400m	1800m	1800m	2300m	2400m
	D	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE

CHANGES: Procedure title, Rwy 20 elev, RNP value on final .

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