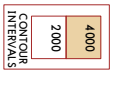


AWOS	127.65	Apt Elev	7
Alt Set: hPA (TN on req)		Trans level: FL190	
1. RNP 1 or RNAV 1.		2. GNSS required.	

- AKPAM 2A [AKPA2A]
- BARRANQUILLA 3B [BAQ3B]
- IRAXU 2B [IRAX2B]
- KOPGI 2B [KOPG2B]
- UBSUX 1A [UBSU1A]
- UGREB 2B [UGRE2B]
- UGSAT 2A [UGSA2A]
- UGSOL 2B [UGSO2B]
- VARON 2B [VARO2B]
- RNAV (GNSS) ARRIVALS (RWY 01)



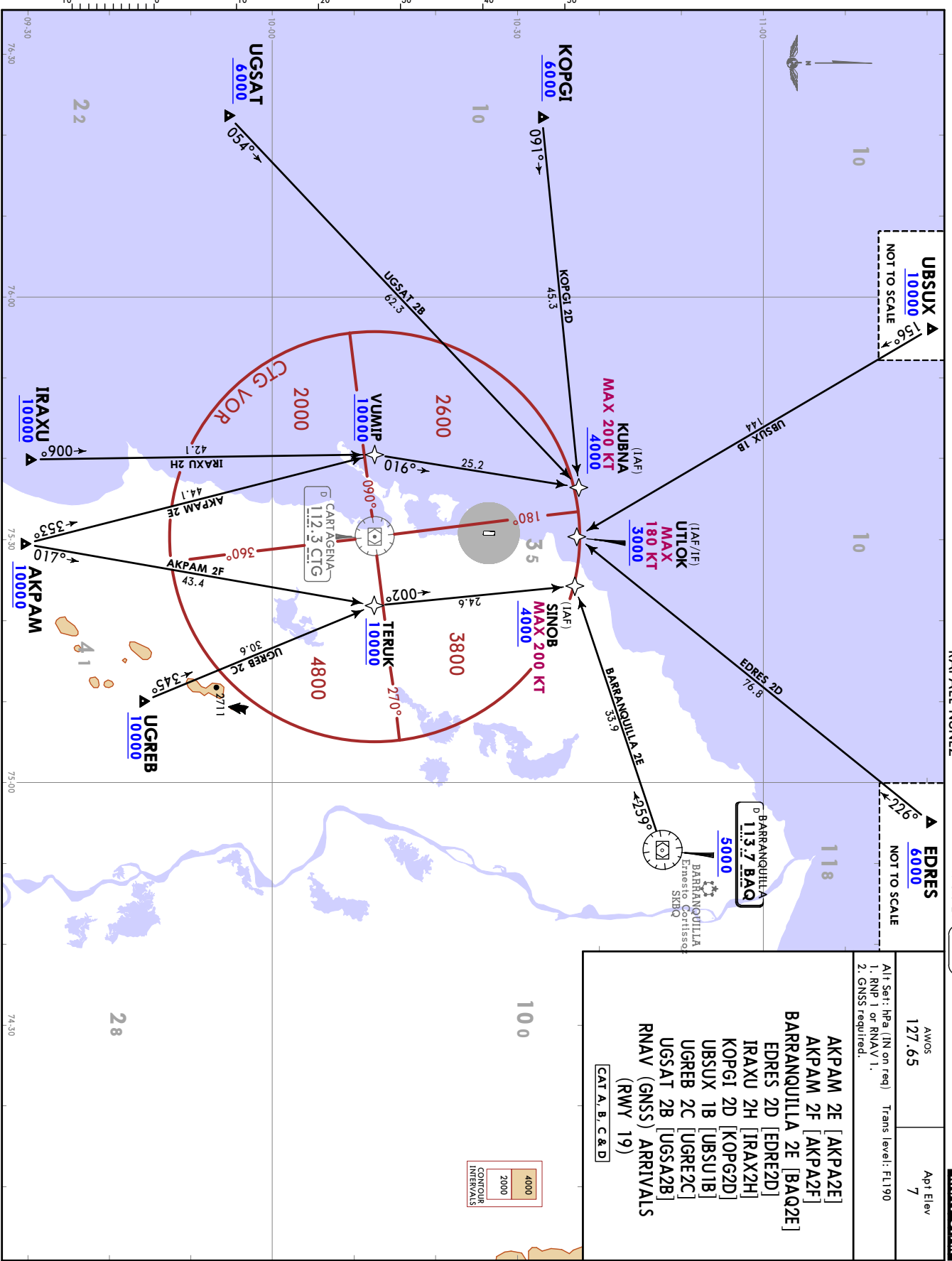
SKCG/CTG
RAFAEL NUÑEZ

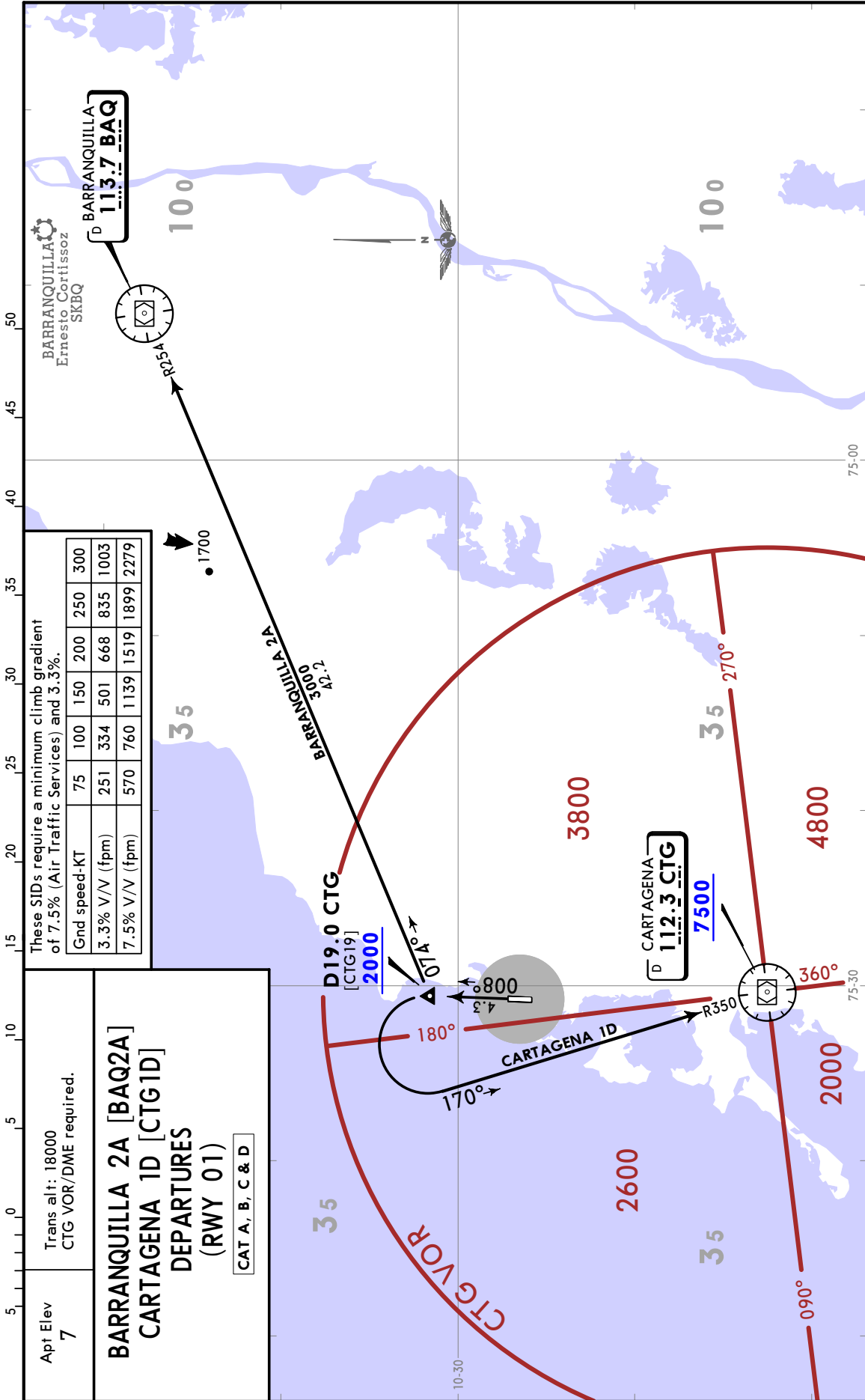
JEPPesen
17 SEP 21 10-2A

CARTAGENA, COLOMBIA
RNAV STAR

AWOS	127.65	Apt Elev	7
Alt Set: HPa (IN on req) Trans Level: E1190			
1. RNP 1 or RNAV 1.			
2. GNSS required.			

- AKPAM 2E [AKPA2E]
 - AKPAM 2F [AKPA2F]
 - BARRANQUILLA 2E [BAQ2E]
 - EDRES 2D [EDRE2D]
 - IRAXU 2H [IRAX2H]
 - KOPGI 2D [KOPG2D]
 - UBSUX 1B [UBSU1B]
 - UGREB 2C [UGRE2C]
 - UGSAT 2B [UGSA2B]
 - RNAV (GNSS) ARRIVALS (RWY 19)
- [CAT A, B, C & D]

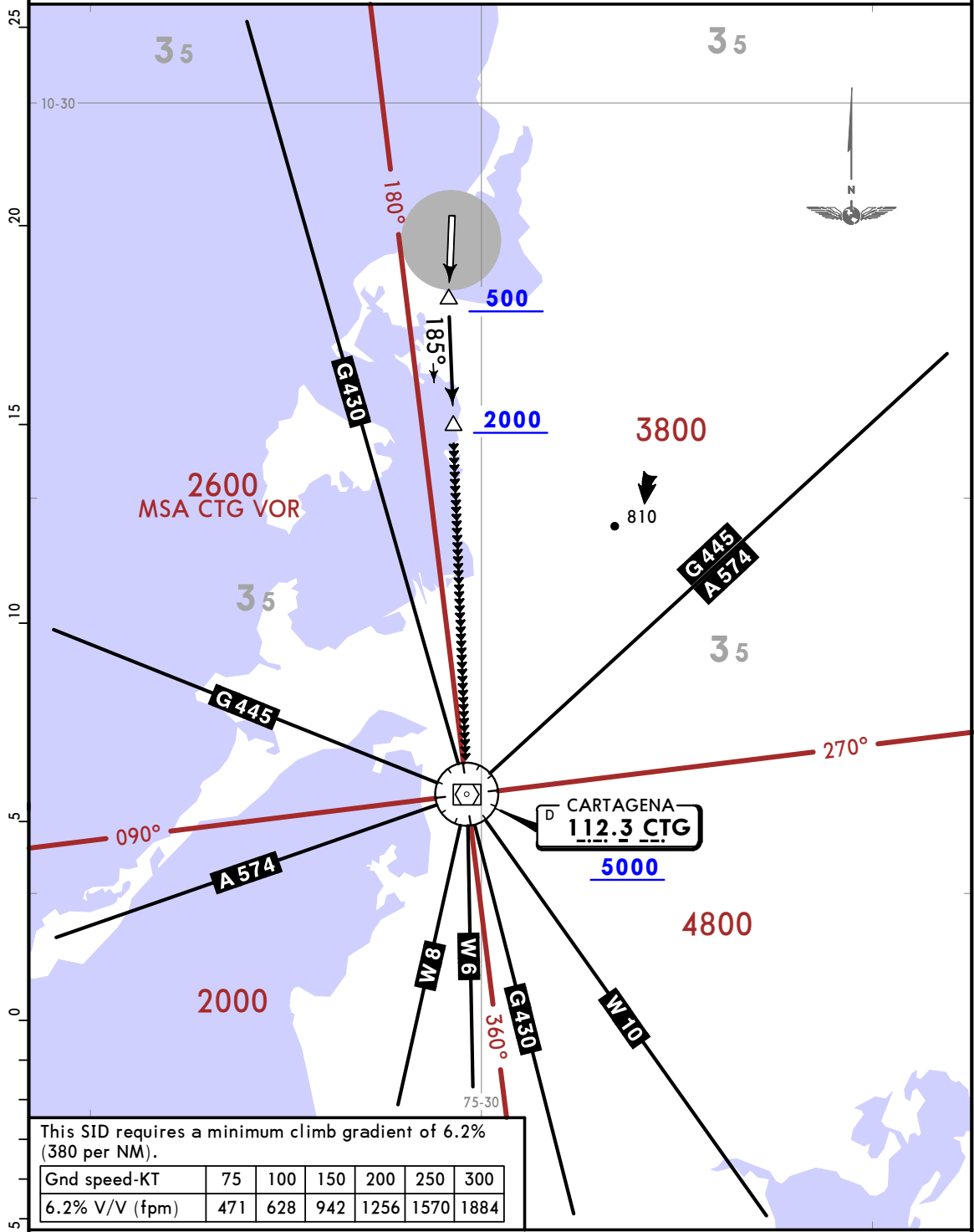




Apt Elev 7	Trans alt: 18000 CTG VOR required.
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CARTAGENA 1B DEPARTURE
[CTG1B]
(RWY 19)

CAT A, B, C & D



This SID requires a minimum climb gradient of 6.2% (380 per NM).

Gnd speed-KT	75	100	150	200	250	300
6.2% V/V (fpm)	471	628	942	1256	1570	1884

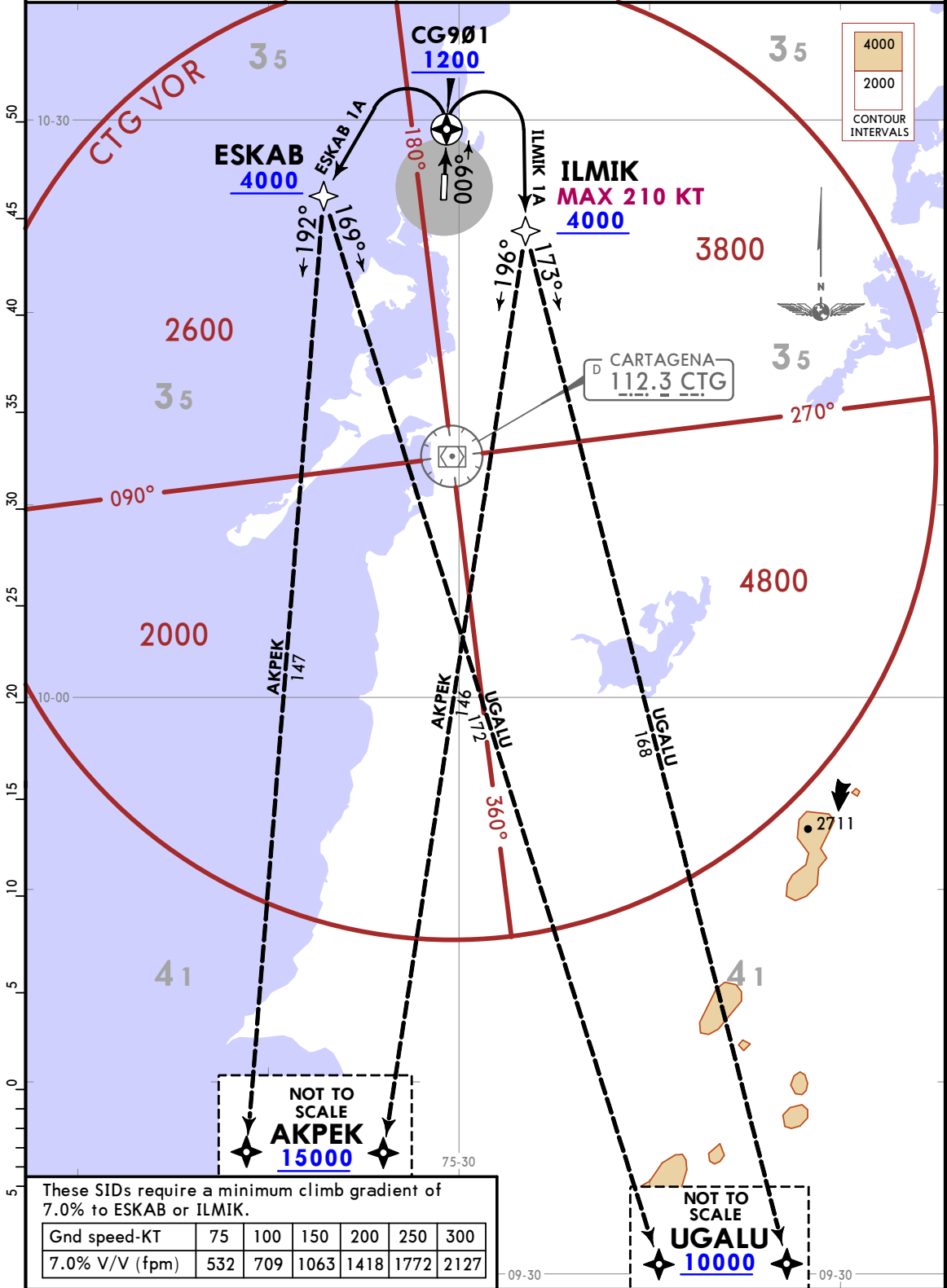
INITIAL CLIMB

MAINTAIN runway heading to 500, then direct to CTG VOR while climbing to 2000. At or above 2000 EXPECT vectors to desired route. If you do not obtain vectors proceed to CTG VOR to cross at or above 5000.

Apt Elev 7	Trans alt: 18000 1. RNP 1 or RNAV 1. 2. GNSS required.
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ESKAB 1A [ESKA1A], ILMIK 1A [ILMI1A]
RNAV DEPARTURES
(RWY 01)

CAT A, B, C & D



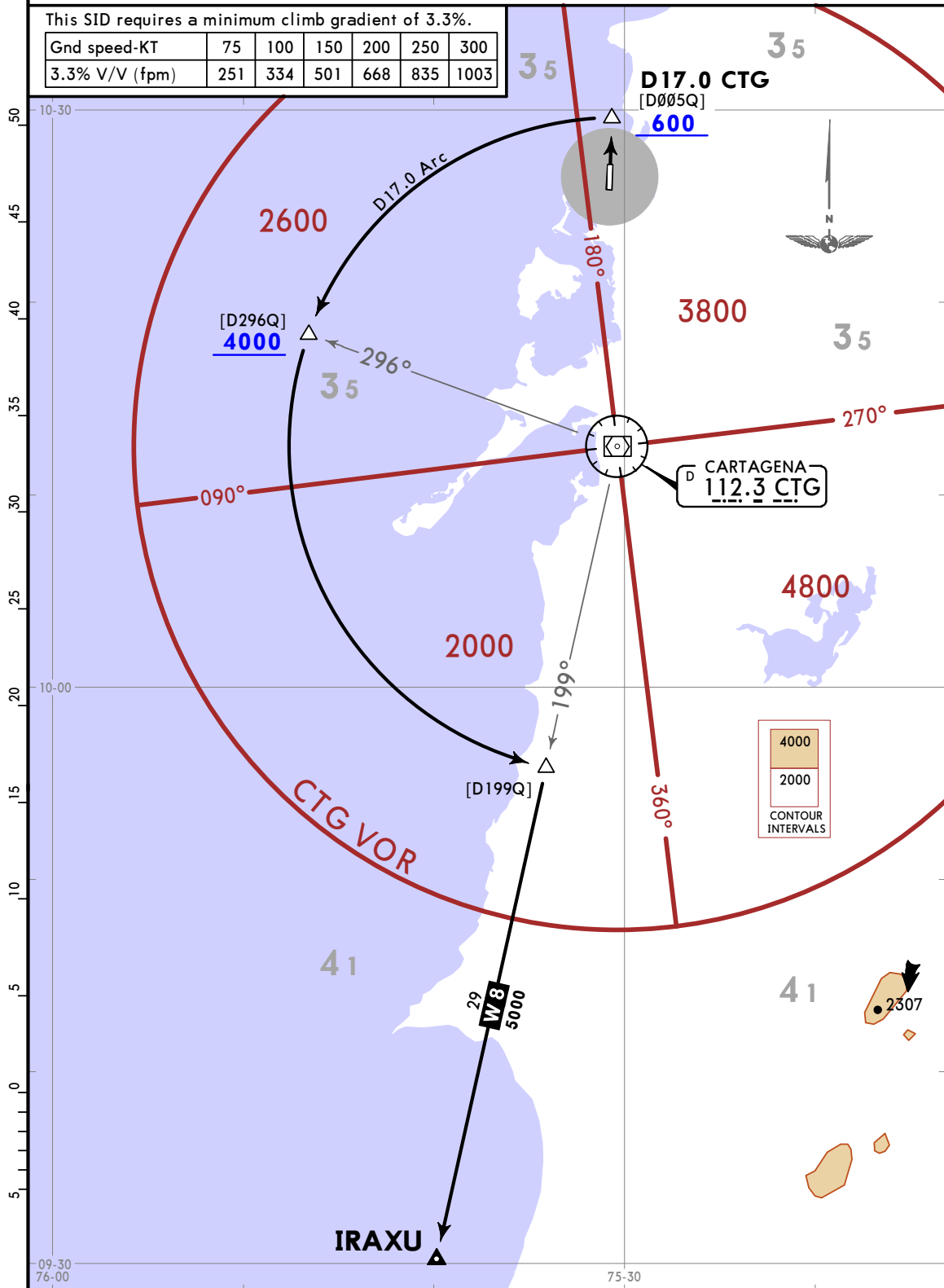
Apt Elev 7	Trans alt: 18000 CTG VOR/DME required.
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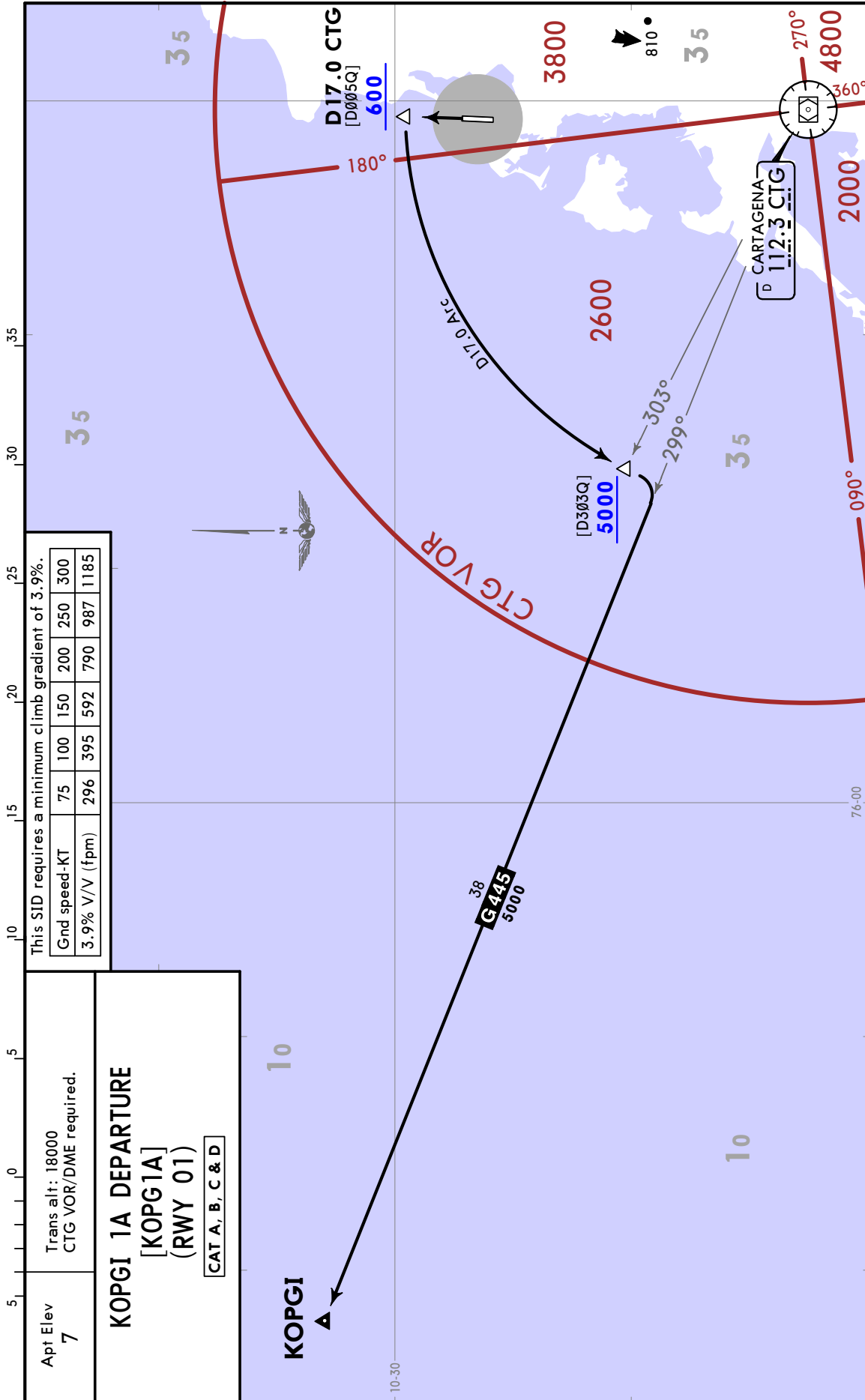
IRAXU 1A DEPARTURE
[IRAX1A]
(RWY 01)

CAT A, B, C & D

This SID requires 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 7	Trans alt: 18000 1. RNP 1 or RNAV 1 certification required. 2. GNSS required.
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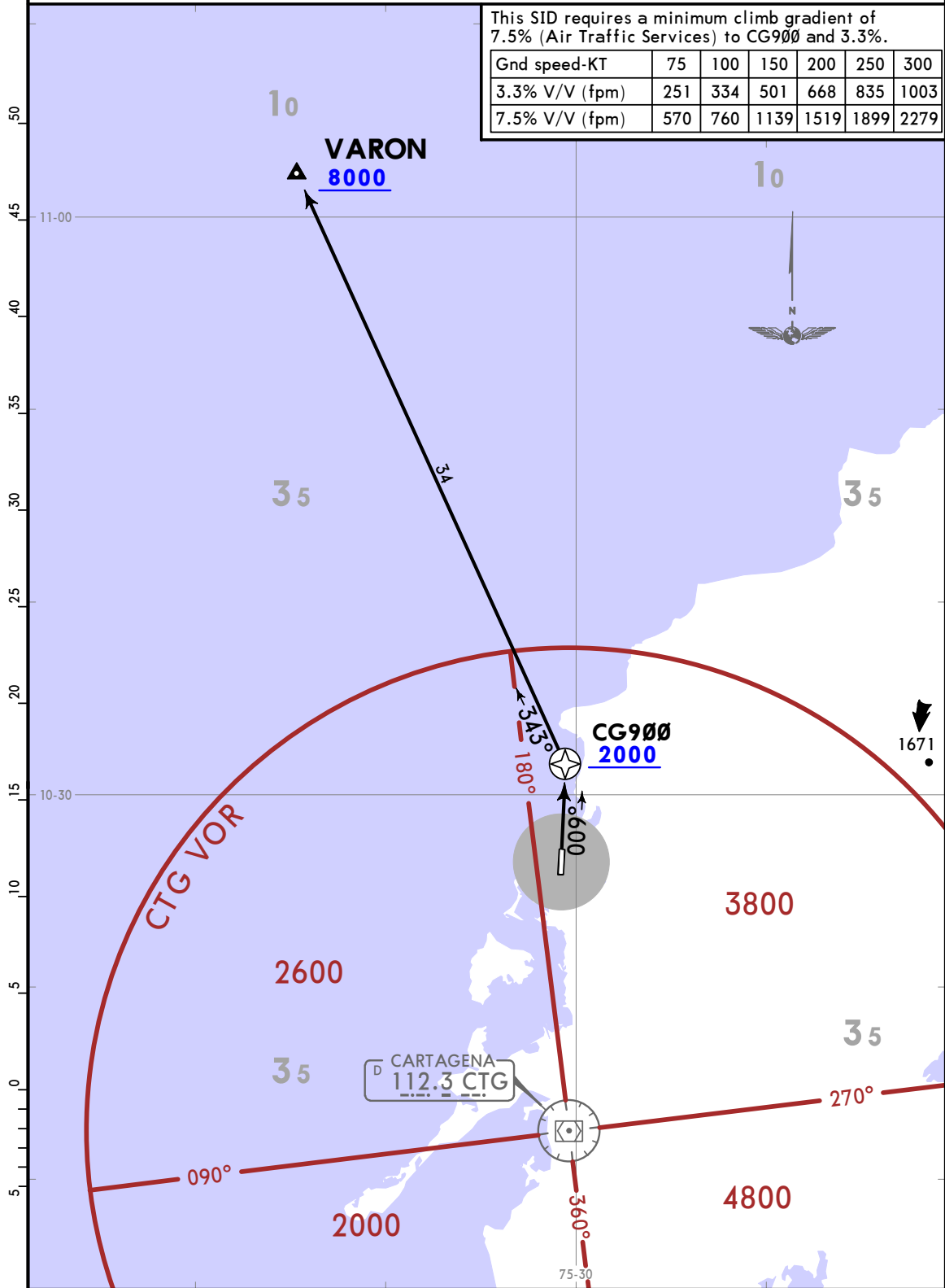
VARON 1A RNAV DEPARTURE

[VAR01A]
(RWY 01)

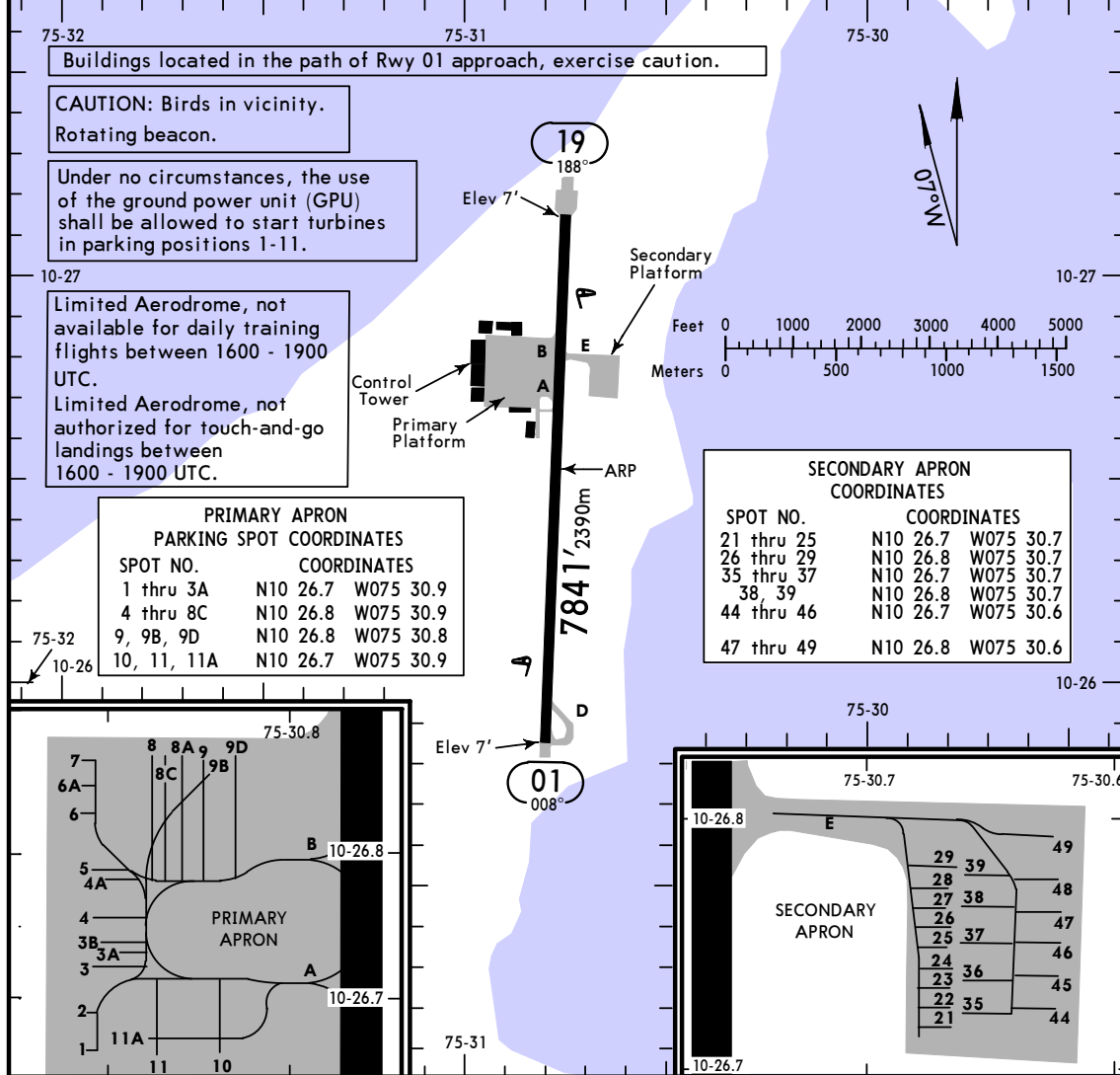
CAT C & D

This SID requires a minimum climb gradient of 7.5% (Air Traffic Services) to CG900 and 3.3%.

Gnd speed-KT	75	100	150	200	250	300
3.3% V/V (fpm)	251	334	501	668	835	1003
7.5% V/V (fpm)	570	760	1139	1519	1899	2279



AWOS 127.65	NUNEZ Clearance 120.3	Tower 118.3	Ground 121.6
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ADDITIONAL RUNWAY INFORMATION

RWY	LANDING BEYOND	USABLE LENGTHS		TAKE-OFF	WIDTH
		Threshold	Glide Slope		
01 19	HIRL PAPI (angle 3.0°)			7940' 2420m	148' 45m

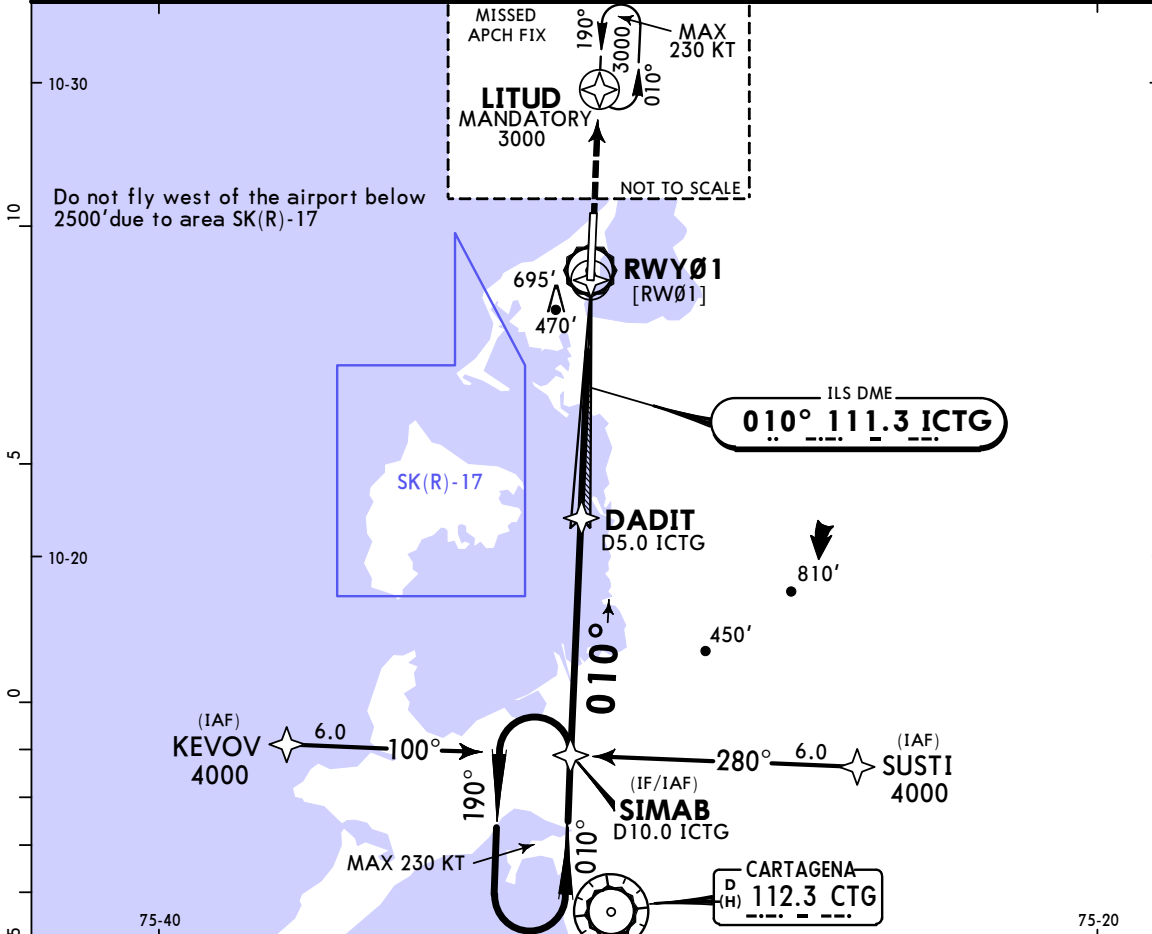
1 TAKE-OFF		STD
All Rwys		
2 Take-off Alternate Airport Filed		STD
RL & CL or RCLM		
1 Eng	880' - 3000m	
2 Eng	1 hr Take-off Alternate Apt Filed (1 Eng inop) 500m	1600m
3 & 4 Eng	2 hr Take-off Alternate Apt Filed (1 Eng inop) 500m	800m

1 OMNIDIRECTIONAL DEPARTURE PROCEDURE

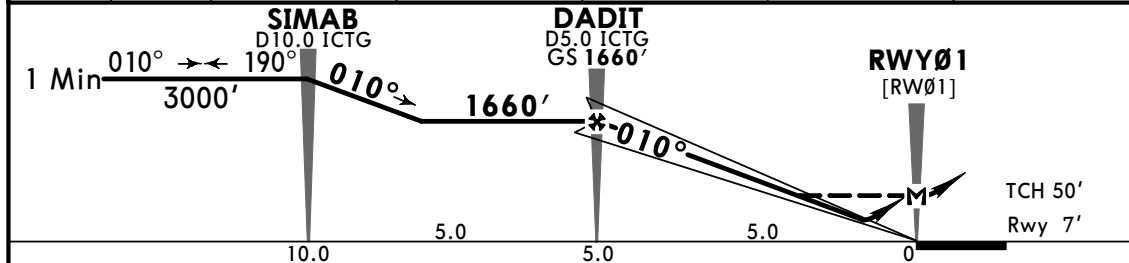
TAKE-OFF RUNWAY 19: Maintain runway heading to 500' altitude then intercept and follow CTG VOR R-005° to CTG VOR, cross fix 7.0 NM CTG VOR R-005° at or above 2000'. Maintain minimum climb gradient 5.5% to 2000', then follow vector guidance and ATC instructions to proceed according to flight plan.

2 With appropriate approval.

AWOS 127.65		BARRANQUILLA Approach North 119.1		RAFAEL NUNEZ Tower 118.3		Ground 121.6			
LOC ICTG 111.3	Final Apch Crs 010°	DADIT 1660' (1653')	ILS DA(H) 250' (243')	Apt Elev 7' Rwy 7'					
MISSED APCH: Proceed direct to LITUD and hold at 3000'. Missed approach requires a minimum climb gradient of 3.8%.									
Alt Set: IN (hPa on req)		Trans level: FL 190		Trans alt: 18000'					
RNAV 1 certification required.									



LOC (GS out)	ICTG DME	5.0	4.0	3.0	2.0	1.0
	ALTITUDE	1660'	1335'	1016'	696'	376'

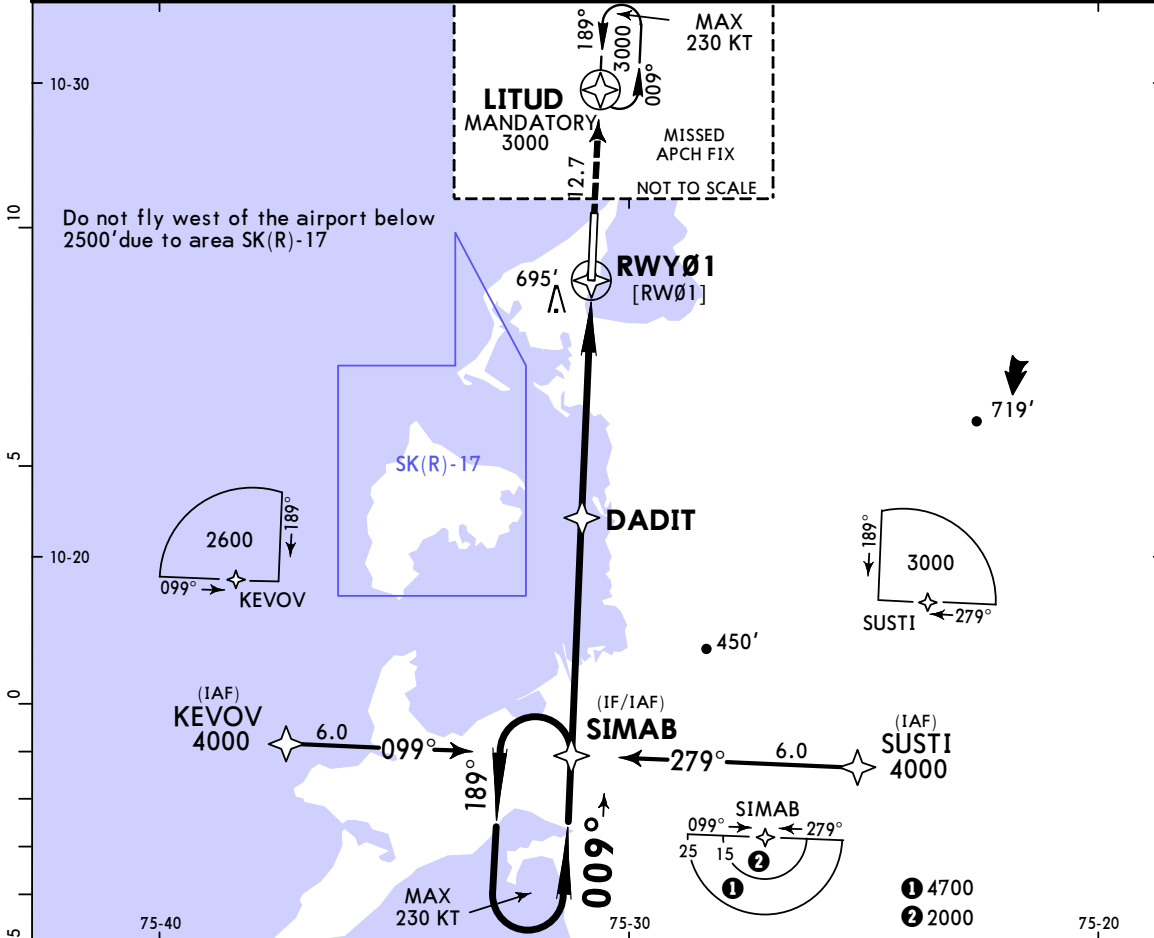


Gnd speed-Kts	70	90	100	120	140	160	PAPI	3000'	D	LITUD	
ILS GS or LOC Descent Angle	3.00°	372	478	531	637	743					849
MAP at RWY01 or FAF to MAP	5.0	4:17	3:20	3:00	2:30	2:09					1:53

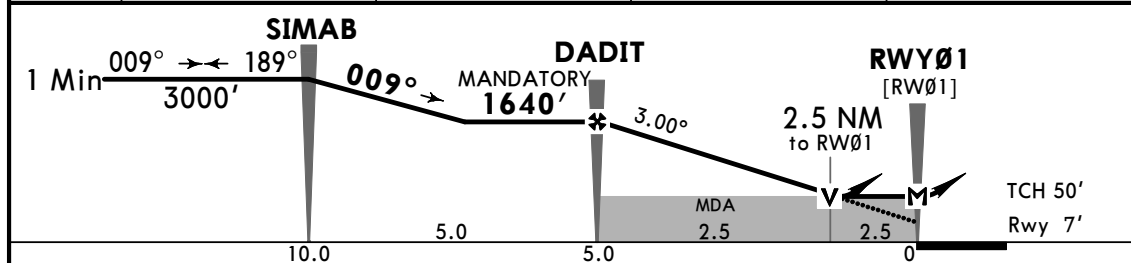
STRAIGHT-IN LANDING RWY 01						CIRCLE-TO-LAND				
ILS DA(H) 250' (243')			LOC (GS out) MDA(H) 750' (743')							

PANS OPS	A	1300m	3700m	NOT APPLICABLE
	B			
	C			
	D			

AWOS 127.65		BARRANQUILLA Approach North 119.1		RAFAEL NUNEZ Tower 118.3		Ground 121.6		
RNAV	Final Apch Crs 009°	DADIT MANDATORY 1640' (1633')	RNAV/VNAV DA(H) 830' (823')	Apt Elev 7' Rwy 7'		TAA 25 NM IAF		
MISSED APCH: Climb on runway heading to LITUD and hold at 3000'.								
Alt Set: IN (hPa on req)		Trans level: FL 190		Trans alt: 18000'				
1. RNP APCH certification required. 2. For uncompensated Baro-VNAV systems, LNAV/VNAV usable between 16°C (61°F) and 40°C (104°F).								



DIST to THR	6.0	5.0	4.0	3.0
ALTITUDE	1966'	1648'	1330'	1011'



Gnd speed-Kts	70	90	100	120	140	160	PAPI 3000' on Rwy hdg to LITUD
Descent Angle	3.00°	372	478	531	637	849	
LNAV/VNAV: MAP at DA. LNAV: MAP at RWY01							
FAF to MAP	5.0	4:17	3:20	3:00	2:30	2:09	1:53

STRAIGHT-IN LANDING RWY01			CIRCLE-TO-LAND		
LNAV/VNAV DA(H) 830' (823')		LNAV MDA(H) 830' (823')	Max Kts MDA(H)		
A	3800m	4000m	100	1000' (993') - 4500m	
B		4200m	135	1100' (1093') - 4900m	
C			180		
D			205		

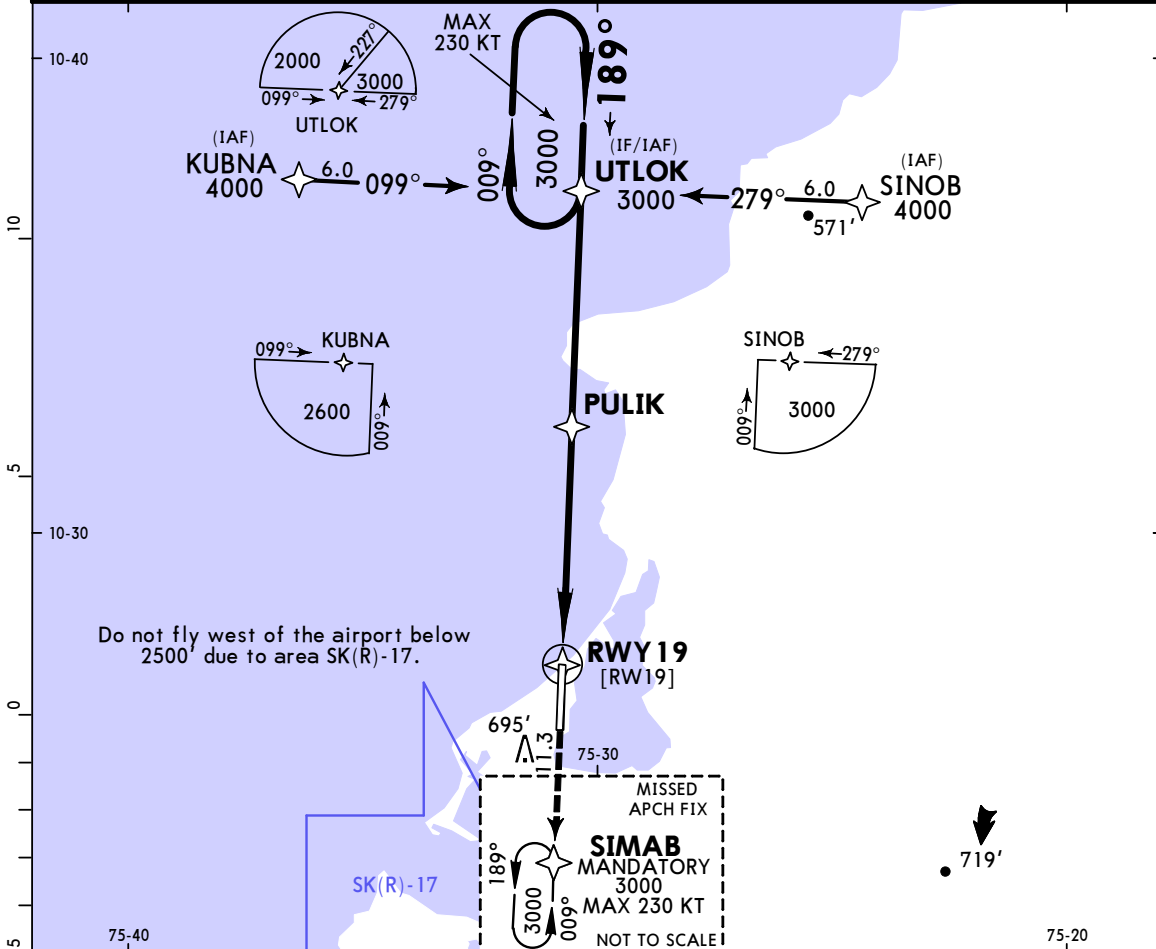
PANS OPS

SKCG/CTG
RAFAEL NUNEZ

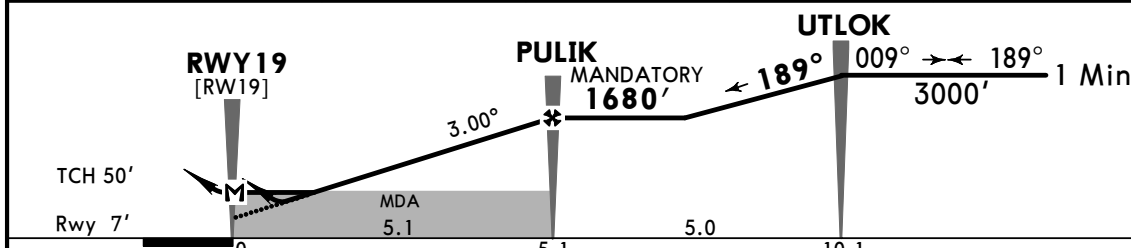
JEPPESEN
25 DEC 20
Eff 31 Dec (12-2) MISSED APCH CLIMB
GRADIENT MIM 4.0%

CARTAGENA, COLOMBIA
RNP Rwy 19

AWOS 127.65		BARRANQUILLA Approach North 119.1		RAFAEL NUNEZ Tower 118.3		Ground 121.6	
RNAV	Final Apch Crs 189°	PULIK MANDATORY 1680' (1673')		LNAV/VNAV DA(H) 410' (403')		Apt Elev 7' Rwy 7'	
MISSED APCH: Climb on runway heading to SIMAB and hold at 3000'. Missed Approach Climb Gradient Mim 4.0%.							TAA 25 NM IAF
Alt Set: IN (hPa on req)			Trans level: FL 190		Trans alt: 18000'		
1. RNP APCH certification required. 2. For uncompensated Baro-VNAV systems, LNAV/VNAV usable between 16°C (61°F) and 40°C (104°F).							



DIST to THR	2.0	3.0	4.0	5.0	6.0
ALTITUDE	694'	1012'	1331'	1649'	1967'



Gnd speed-Kts	70	90	100	120	140	160	PAPI	3000'	Rwy hdg	to SIMAB
Descent Angle	3.00°	372	478	531	637	849				
LNAV/VNAV: MAP at DA. LNAV: MAP at RWY19										
FAF to MAP	5.1	4:22	3:24	3:04	2:33	2:11	1:55			

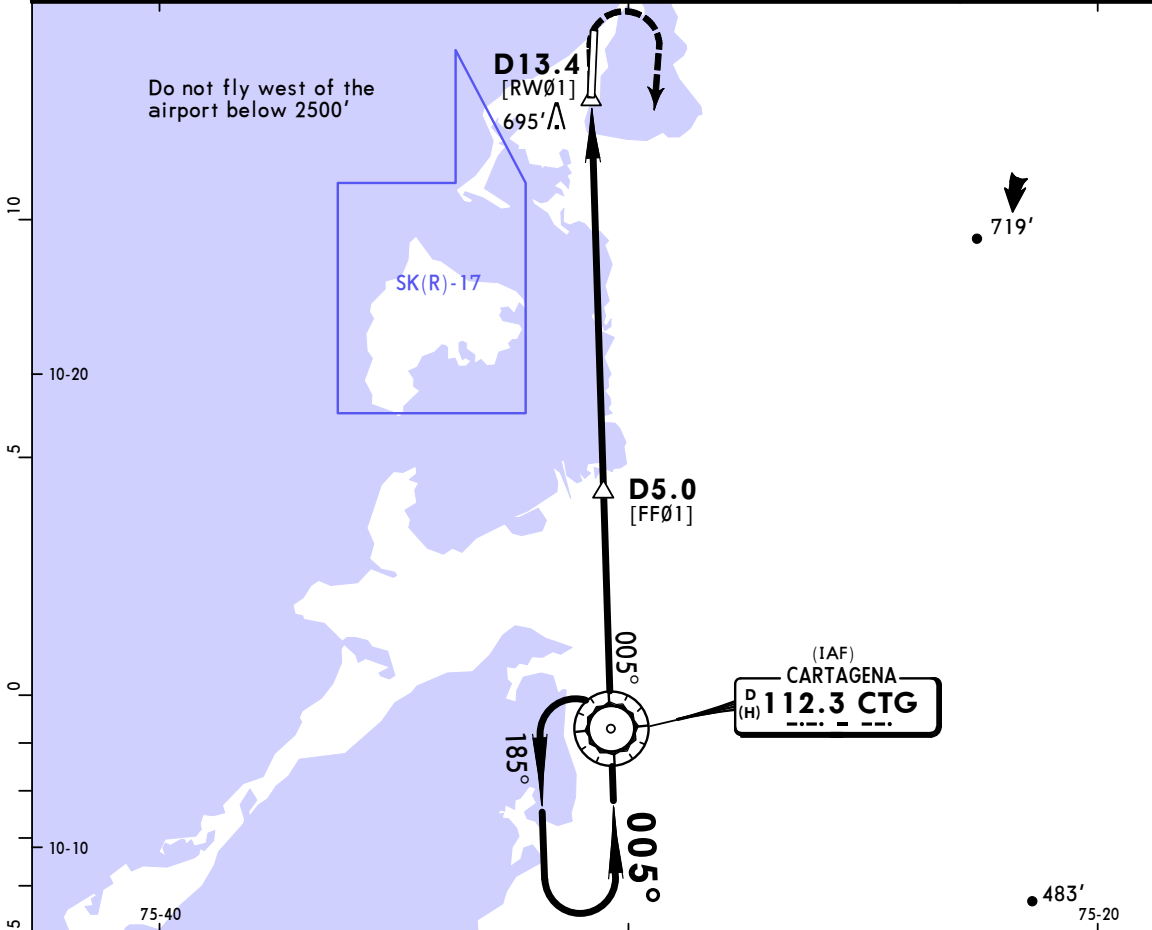
STRAIGHT-IN LANDING RWY19				CIRCLE-TO-LAND			
LNAV/VNAV DA(H) 410' (403')		LNAV MDA(H) 610' (603')		Max Kts		MDA(H)	
1900m		3000m		100		1000' (993') -4500m	
		3200m		135			
				180		1100' (1093') -4900m	
				205			

PANS OPS

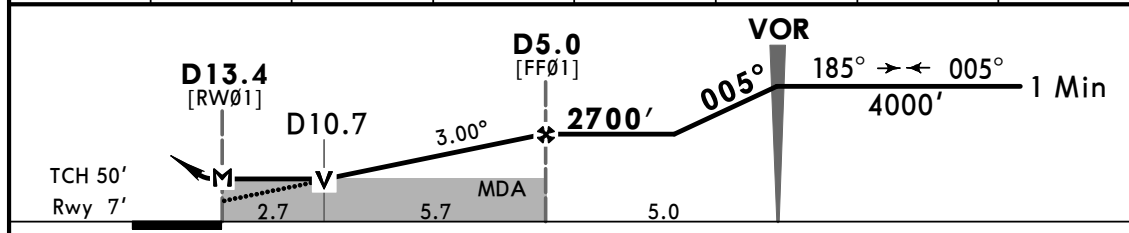
CHANGES: Procedure title, FAF altitude, chart format.

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AWOS 127.65	BARRANQUILLA Approach North 119.1	NUNEZ Tower 118.3	Ground 121.6
VOR CTG 112.3	Final Apch Crs 005°	D5.0 2700' (2693')	MDA(H) 890' (883')
MISSED APCH: Climb on approach heading until reaching 1500', then turn RIGHT to CTG VOR holding pattern. Restriction: Cross CTG VOR at 4000' or above.			Apt Elev 7' Rwy 7'
Alt Set: IN (hPa on req) Trans level: FL 190 Trans alt: 18000' 1. CTG DME required. 2. Within 10 DME CTG VOR it is possible to continue a descent from the MEA to 4000'.			 MSA CTG VOR



CTG DME	10.7	10.0	9.0	8.0	7.0	6.0	5.0
ALTITUDE	890'	1131'	1447'	1763'	2079'	2395'	2700'



Gnd speed-Kts	70	90	100	120	140	160	PAPI	1500'	on	APCH	4000'	CTG 112.3
Descent Angle	3.00°	372	478	531	637	849		↑	hdg	RT		
MAP at D.13.4 or FAF to MAP	8.4	7:12	5:36	5:02	4:12	3:36		3:09				

STRAIGHT-IN LANDING RWY01				CIRCLE-TO-LAND			
MDA(H) 890' (883')				Max Kts	MDA(H)		
A	4200m			100	1000' (993') -4500m		
B				135			
C	4400m			180	1100' (1093') -4900m		
D				205			

PANS OPS