



OTTAWA TERMINAL

PUBLIC RNAV (RNP) IMPLEMENTATION

CUSTOMER BRIEFING DOCUMENT

EFFECTIVE: 0901Z SEPT 15TH, 2016

CYOW Public RNAV (RNP) & (GNSS) Implementation

The purpose of this document is to provide information, expectations and standard operating practices specific to the implementation of these new RNP procedures.

Effective Sept 15th, 2016, NAV CANADA AIM will be publishing new and updated Performance Based Navigation (PBN) procedures at CYOW:

- New RNAV (RNP) approaches
- Updated RNAV (GNSS) approaches
- Updated RNAV STAR procedures

Traditional approaches remain and have been reviewed.

***All depictions of this document shall not be used for navigation.

RNAV (RNP) AR

New TP308 public design criteria RNAV (RNP) AR procedures will be available to all customers that have the applicable RNP AR Operations Specification:

- RNAV (RNP) Y RWY 07
- RNAV (RNP) Y RWY 14
- RNAV (RNP) Y RWY 25
- RNAV (RNP) Y RWY 32

The CYOW Westjet RCAP RNP procedures will be revoked coincidentally.

OPERATING PROCEDURES

- When in use, the RNAV approach will be advertised on the ATIS with the following message:

“IFR APPROACH **RNAV Y** or **RNAV Z** RWY 32, ADVISE OTTAWA ARRIVAL OF REQUESTED APPROACH ON INTIAL CONTACT”

- **All pilots** are required to inform **Ottawa Arrival** on initial contact of the planned approach. Do **not** advise the Enroute sectors.

“WJA123 FL210 for 8 000’, information Alpha request RNAV Y 32”

NOTE 1: The “Short Gate” expression shall not be used.

NOTE 2: As per AIC 13/16 RNAV AS PRIMARY APCH ON ATIS, the ILS will **not** be listed on ATIS unless weather requires it. However, the ILS may remain available upon request for pilots not able to fly RNAV Y, RNAV Z or visual.

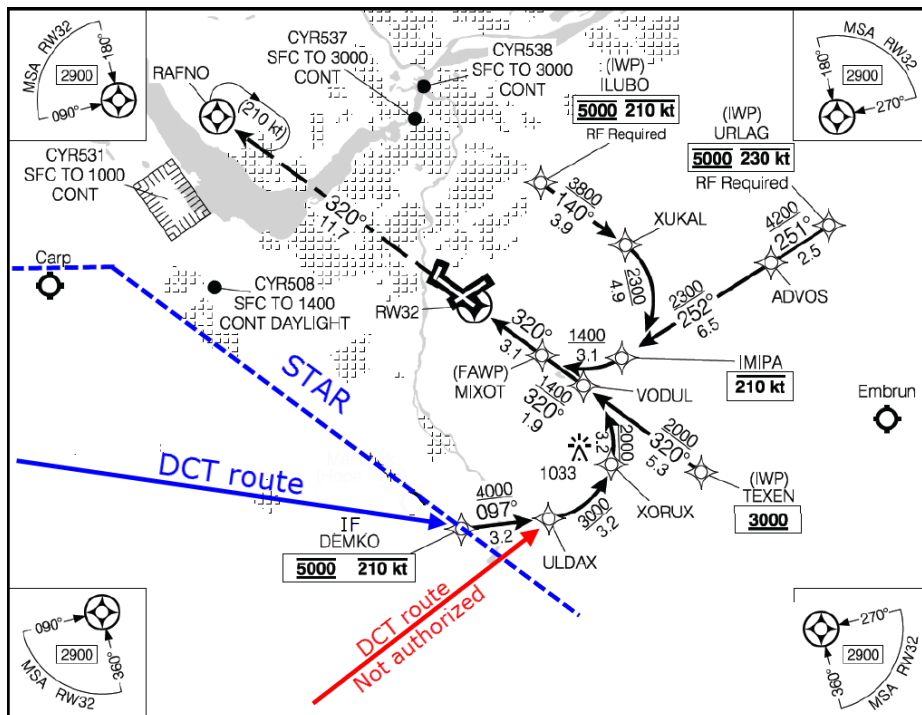
- Controller will confirm the approach.

“WJA123 plan RNAV Y 32”

NOTE: Direct routing to any waypoint past the IF **is not** possible.

Approach clearance format:

“WJA123 cleared RNAV Yankee three two approach, DEMKO transition”

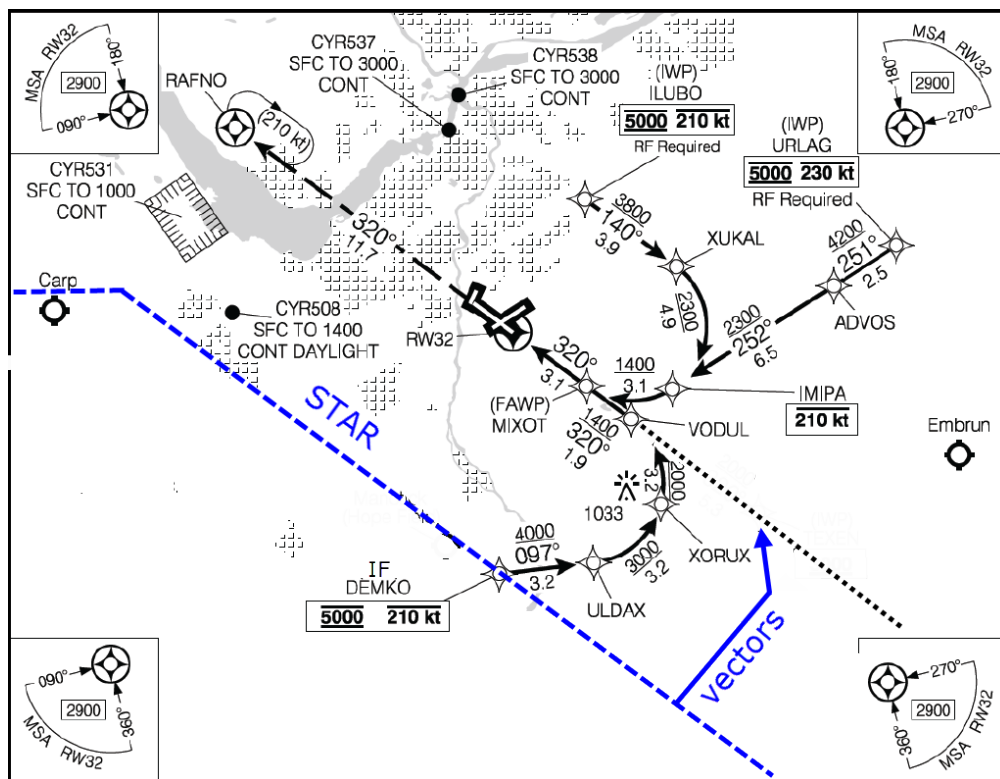


- Radar vectors to the final approach course will be provided if the requested transition is not available. In these occurrences, pilots are not expected to configure another transition or another approach.

“ACA234 unable DEMKO transition, expect vectors, base turn in 12 miles”

Approach clearance format:

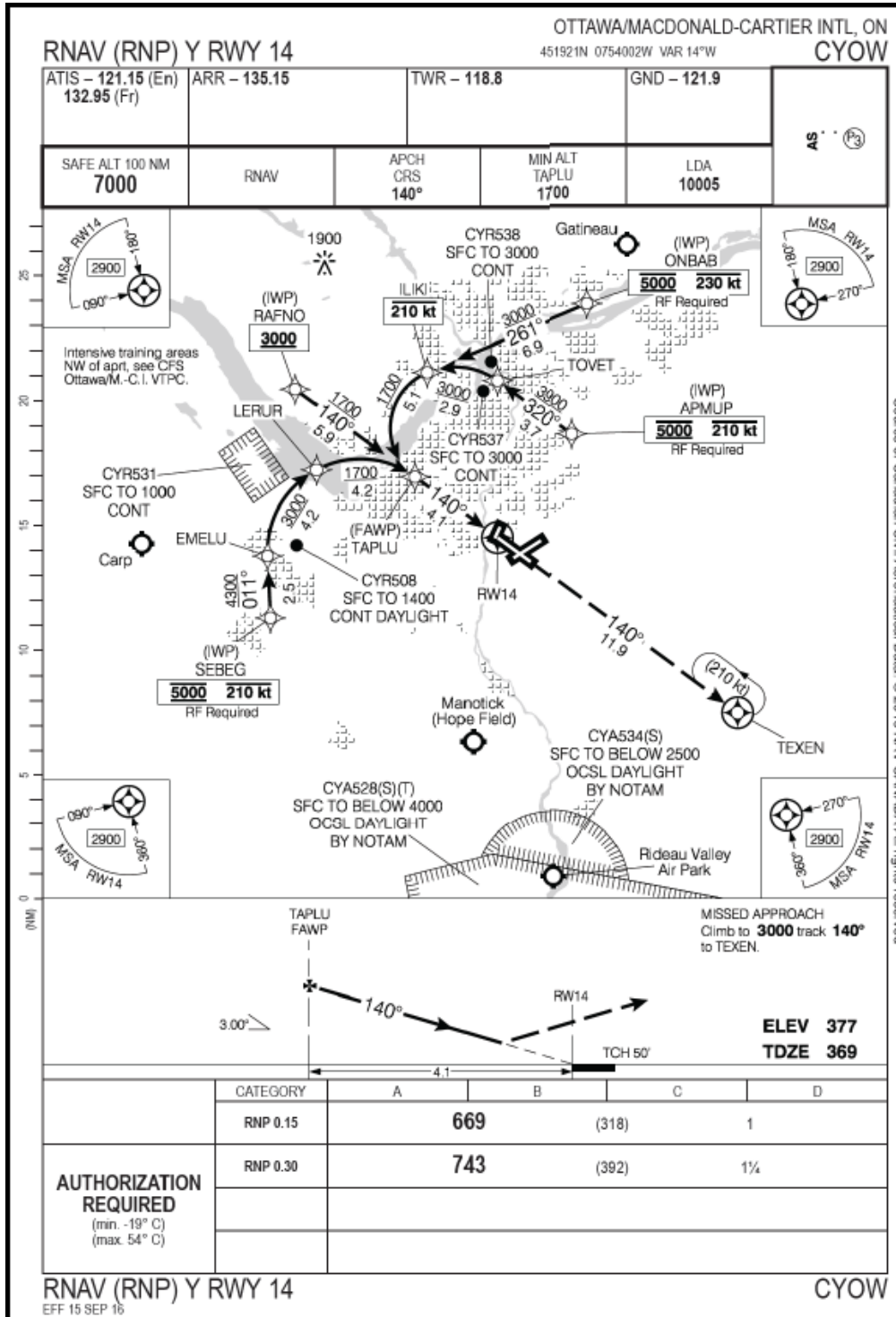
“ACA234 turn left heading 350, intercept final approach course, cleared RNAV yankee three two approach”



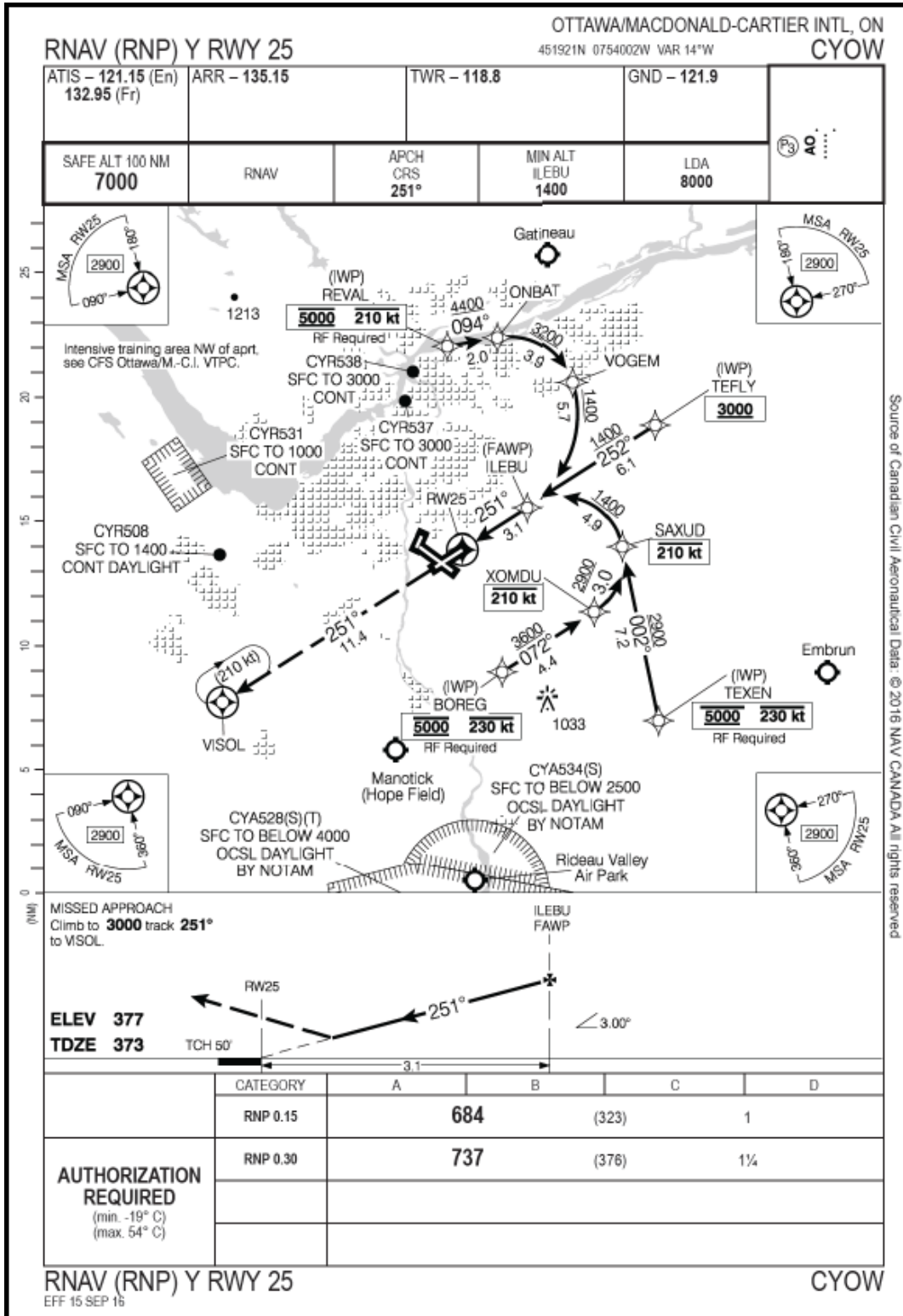
- Controllers will endeavour to cancel STAR altitude and speed restrictions when not required.

“ACA234 DEMKO restrictions cancelled, expect base turn in 12 miles”

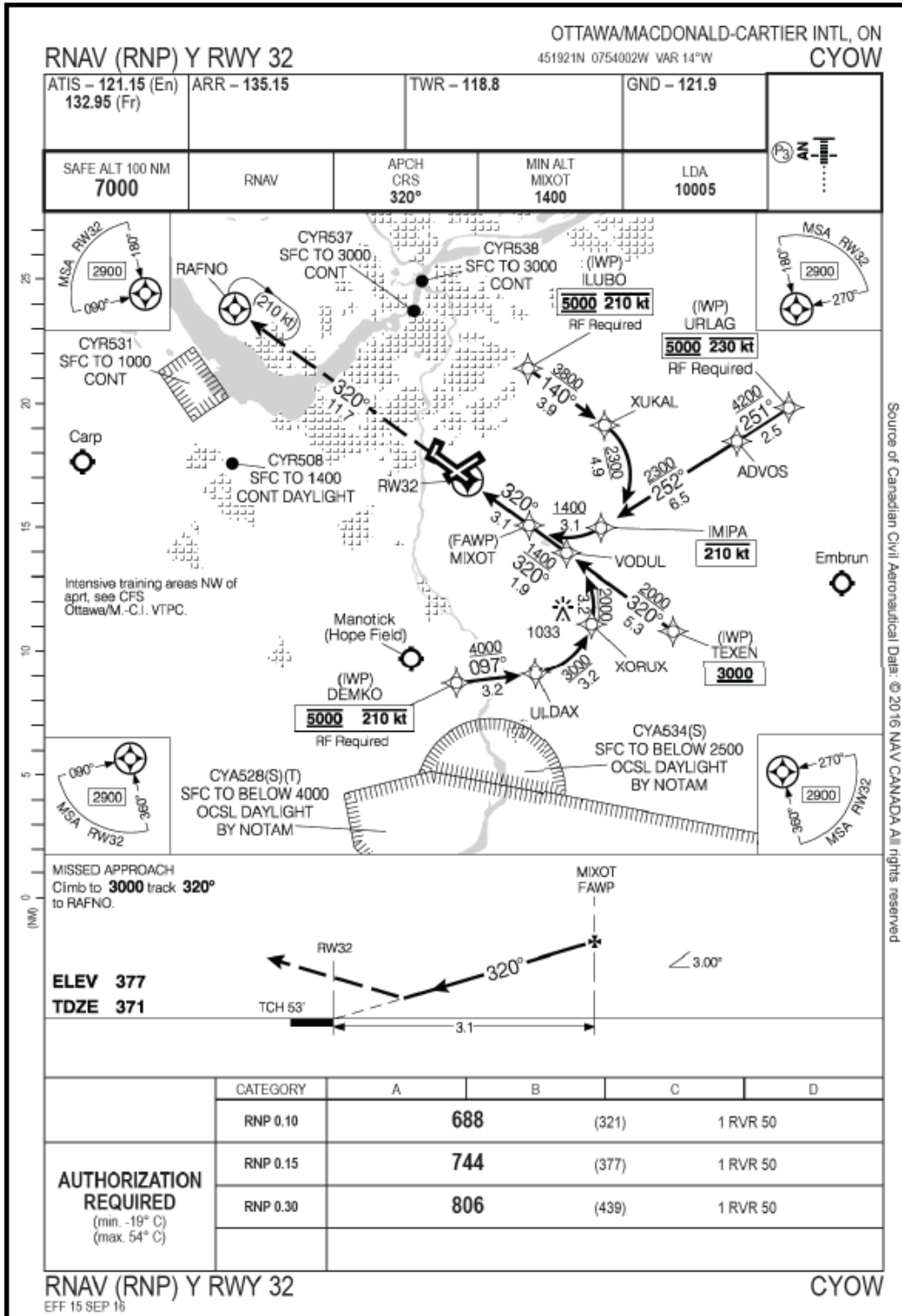
RNAV (RNP) Y RWY 14



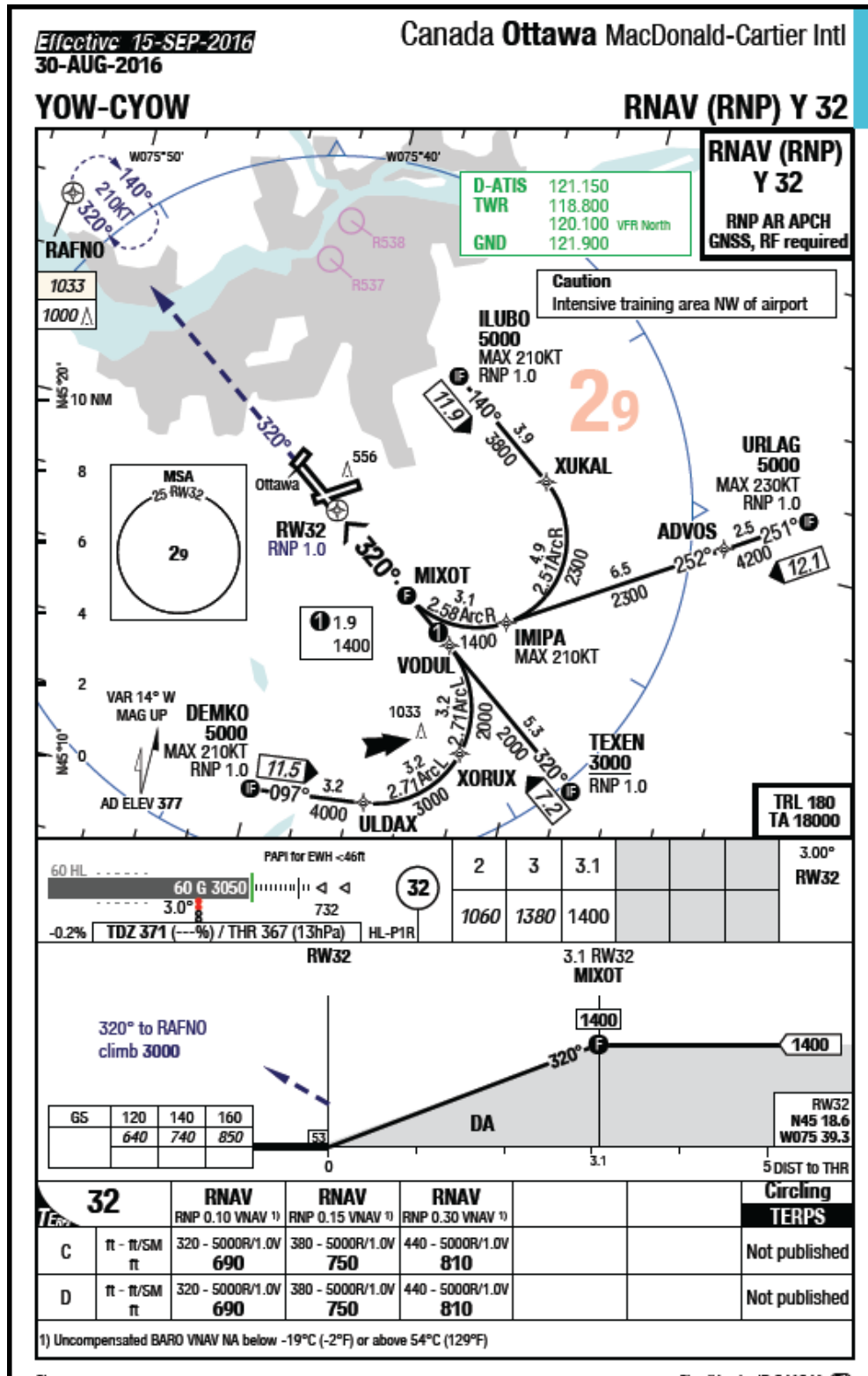
RNAV (RNP) Y RWY 25



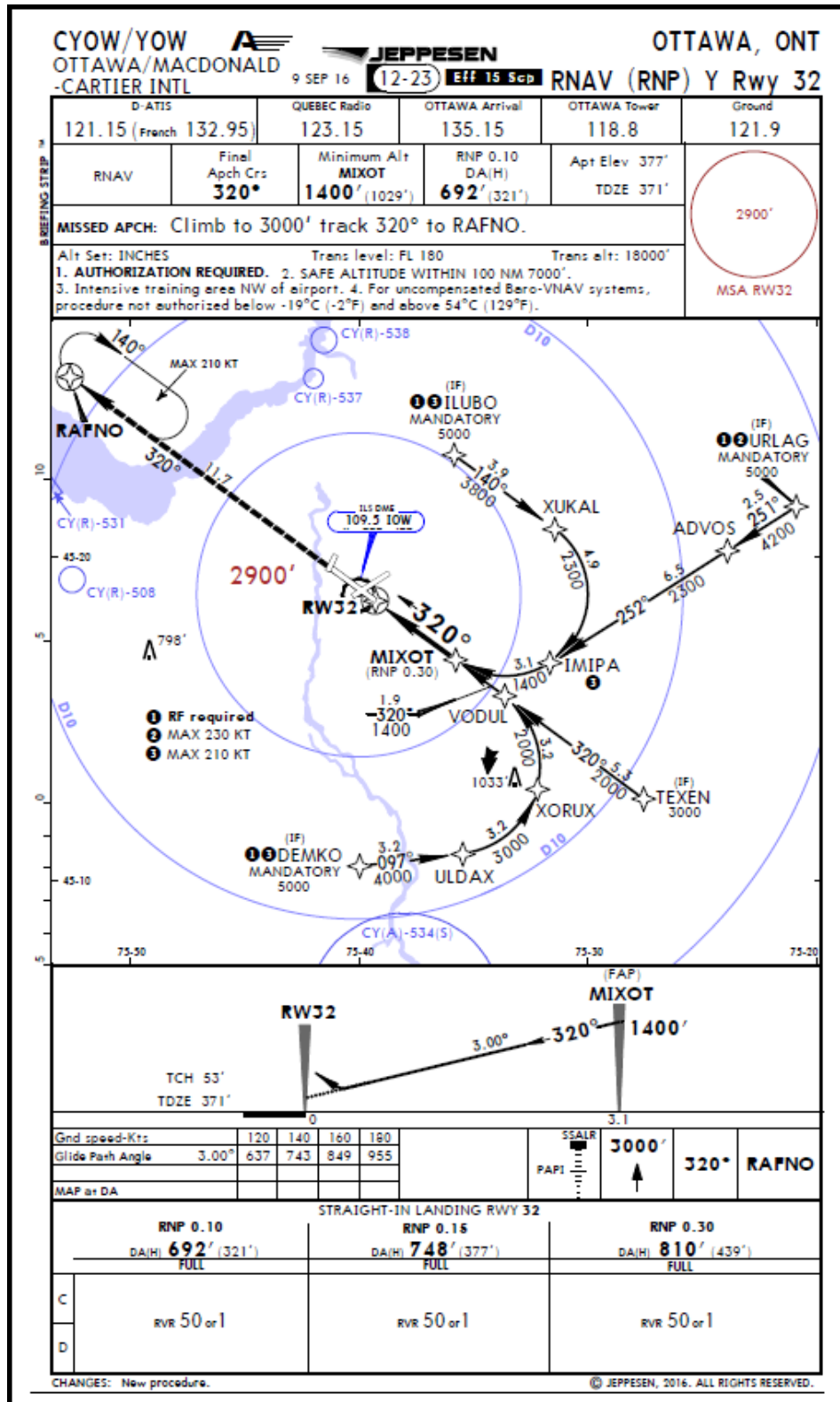
RNAV (RNP) Y RWY 32



LIDO example



Jeppesen example



RNAV (GNSS)

The following procedures have been updated.

- RNAV (GNSS) Z RWY 07
- RNAV (GNSS) Z RWY 14
- RNAV (GNSS) Z RWY 25
- RNAV (GNSS) Z RWY 32

They all have LPV, LNAV/VNAV and LNAV minimums.

OPERATING PROCEDURES

- When in use, the RNAV approach will be advertised on the ATIS with the following message:

“IFR APPROACH **RNAV Y** or **RNAV Z** RWY 32, ADVISE OTTAWA ARRIVAL OF REQUESTED APPROACH ON INTIAL CONTACT”

- **All pilots** are required to inform **Ottawa Arrival** on initial contact of the planned approach. Do **not** advise the Enroute sectors.

“JZA123 FL210 for 8 000’, information Alpha request RNAV Z 32”

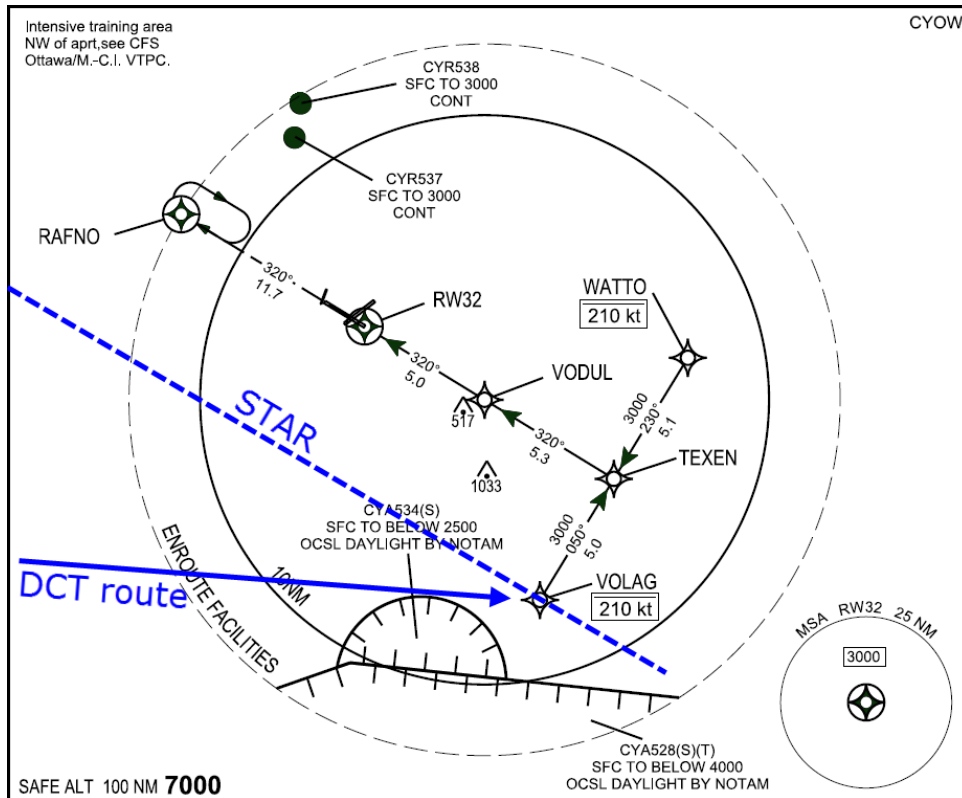
NOTE: As per AIC 13/16 RNAV AS PRIMARY APCH ON ATIS, the ILS will **not** be listed on ATIS unless weather requires it. However, the ILS may remain available upon request for pilots not able to fly RNAV Y, RNAV Z or visual.

- Controller will confirm the approach.

“JZA123 plan RNAV Z 32

Approach clearance format:

“JZA123 cleared RNAV Zulu three two approach, VOLAG transition”



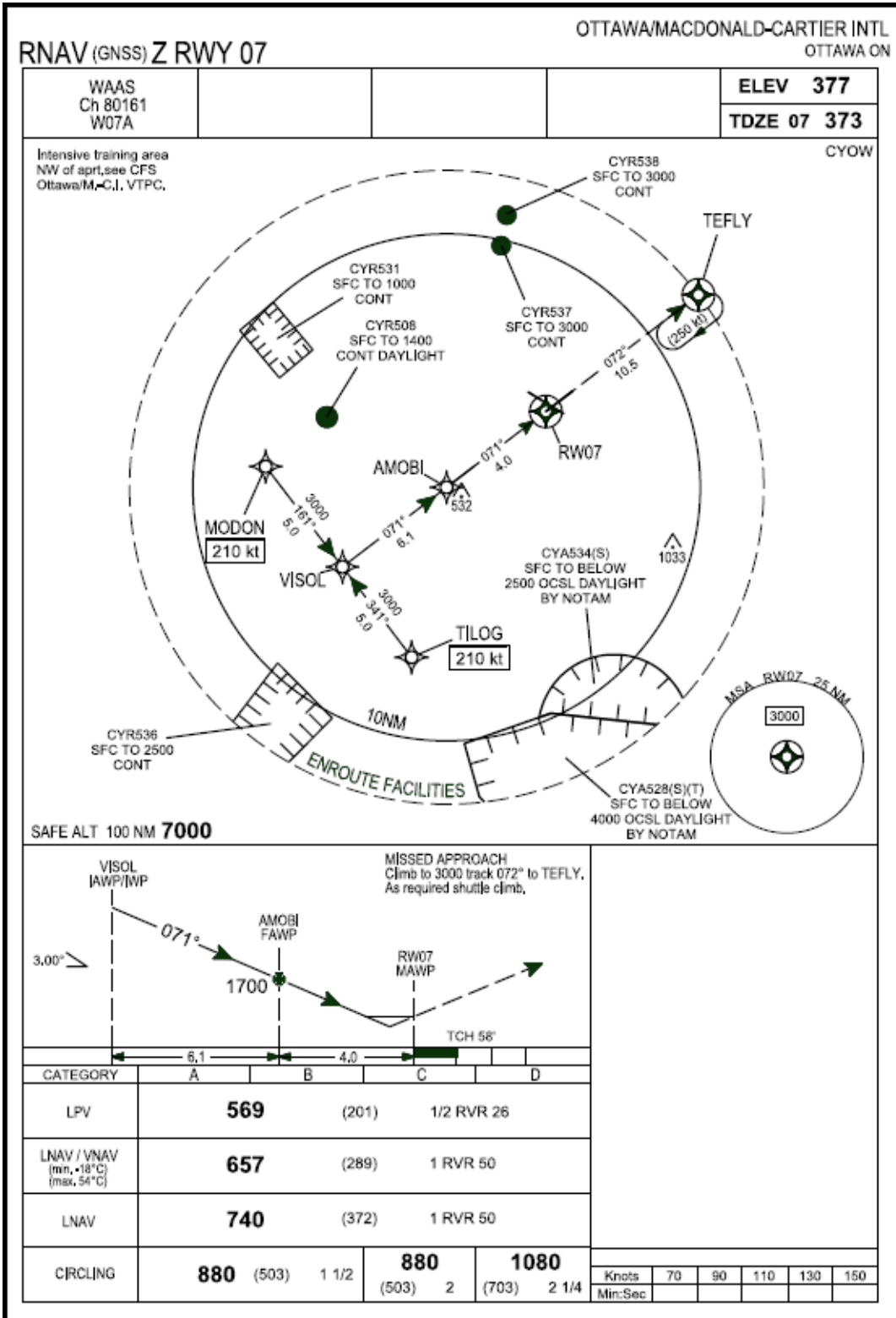
- Radar vectors to the final approach course will be provided if the requested transition is not available. In these occurrences, pilots are not expected to configure another transition or another approach.

“JZA123 unable VOLAG transition, expect vectors, base turn in 12 miles”

Approach clearance format:

“JZA123 turn left heading 350, intercept final approach course, cleared RNAV zulu three two approach”

RNAV (RNP) Z RWY 07



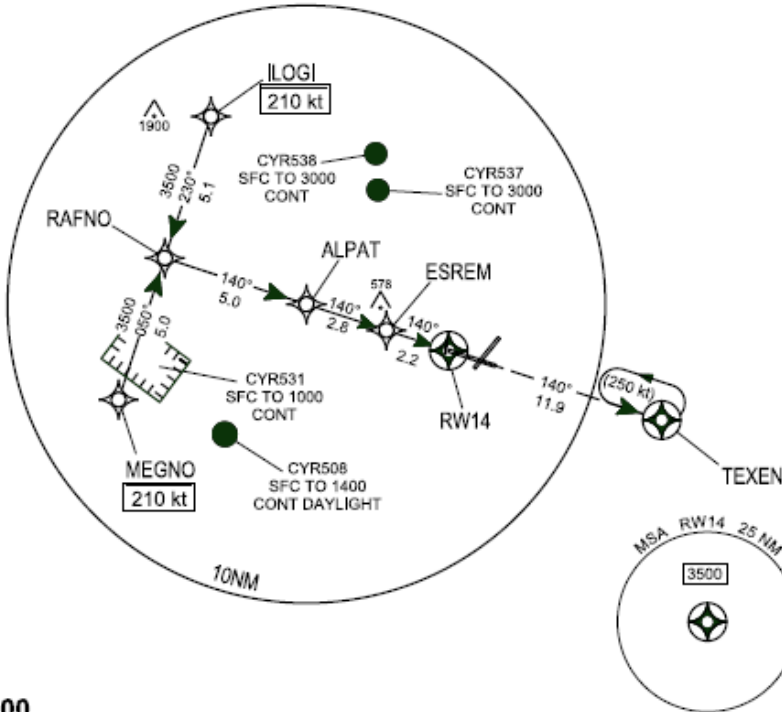
RNAV (RNP) Z RWY 14

RNAV (GNSS) Z RWY 14

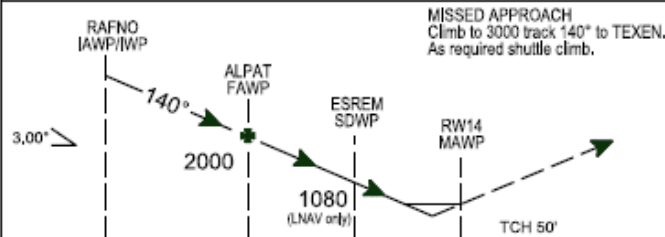
OTTAWA/MACDONALD-CARTIER INTL
OTTAWA ON

WAAS Ch 80160 W14A				ELEV 377
				TDZE 14 369

Intensive training area
NW of aprt, see CFS
Ottawa/M.-C.I. VTPC. CYOW



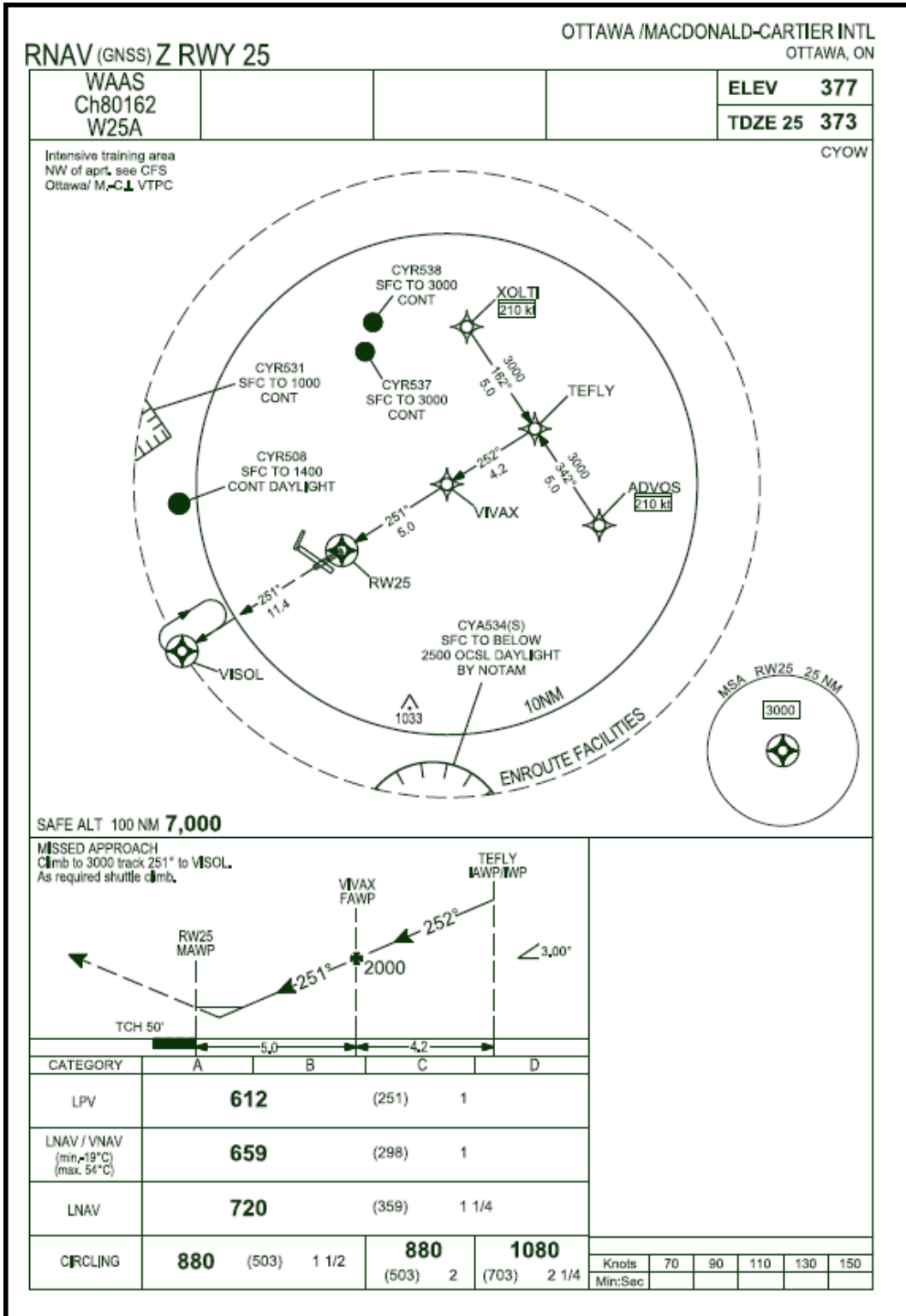
SAFE ALT 100 NM **7000**



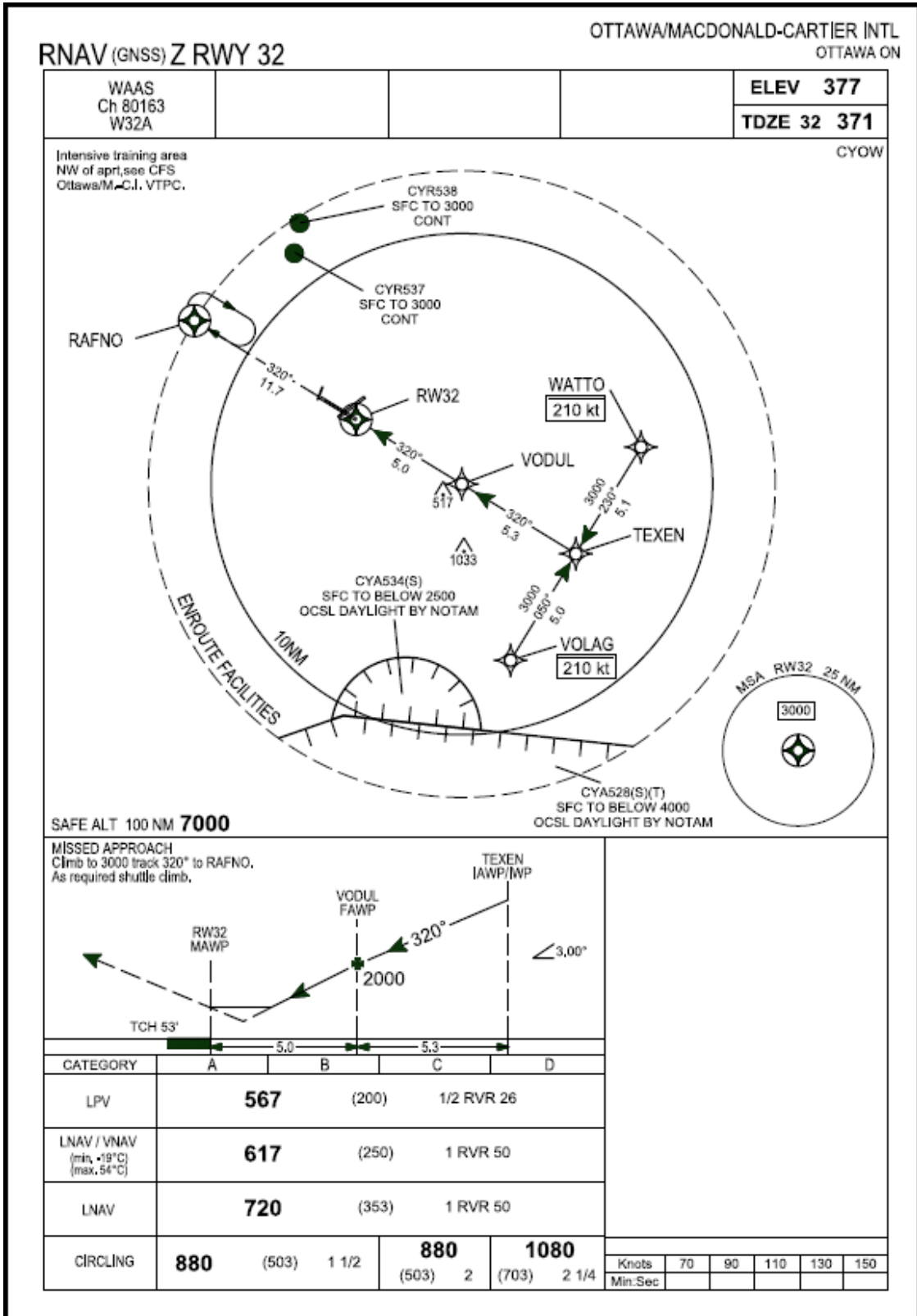
CATEGORY	A	B	C	D
LPV	601	(250)	1	
LNAV / VNAV (min, -19°C) (max, 54°C)	621	(270)	1	
LNAV	740	(389)	1 1/4	
CIRCLING	880	(503) 1 1/2	880 (503) 2	1080 (703) 2 1/4

Knots	70	90	110	130	150
Min:Sec					

RNAV (RNP) Z RWY 25



RNAV (RNP) Z RWY 32



Other approach procedures

The following procedures have been updated.

- ILS07 (IF relocated closer to the runway)
- NDB25
- ILS32 (IF relocated closer to the runway – NDB minimum revoked)
- NDB32 (New – Formerly part of the ILS32 procedure)

RNAV STAR

The following procedures have been updated.

- CAPITAL ARR
- DEANS ARR
- RIVER ARR
- LEAMY ARR
- MEECH ARR

Summary of changes:

- Removal of the DTW on the downwind transitions. The updated STAR cannot be closed with DTW to FACF. This allows for designing a shorter final approach course.
- Straight-in transitions are “closed STAR”. The FACF labelling of the IF is no longer part of the depiction standards.
- Termination of the runway transition with at “track” as opposed to a “heading”;
- Lowering of the altitude constraint at the STAR/RNAV(GNSS) Z IAF common waypoint (ie VOLAG on CAPITAL ARR RWY 32/RNAV(GNSS)Z 32);
- Addition of a STAR/RNAV (RNP) Y IF common waypoint associated with an altitude and speed constraint for enhancing the approach connectivity (ie DEMKO on CAPITAL ARR RWY32/RNAV(GNSS)Y 32);
- Addition of a note about the applicability of the STAR/RNAV (RNP) Y IF common waypoint constraints (see the operating procedure section)

OPERATING PROCEDURES

- RNAV (RNP) Y approaches are shorter resulting in STAR vertical profiles significantly lower than those of the RNAV (GNSS) Z approaches.

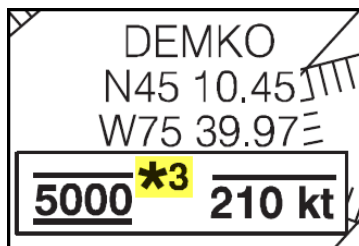
Altitude constraints specific for the RNAV(RNP)Y operation are built into the STAR procedures for enhancing the RNAV(RNP)Y approach connectivity.

While these constraints are a benefit for aircraft planning the RNAV(RNP)Y approaches, it is a drawback for those planning the RNAV(GNSS)Z approaches as they force them below an optimum vertical profile.

For maintaining the flight efficiencies of aircraft not planning a RNAV(RNP)Y approach and for mitigating noise effects, pilots are requested to delete as early as possible the altitude constraint associated with a pertaining note. To assist with FMC vertical guidance pilots may replace the "AT 5000" or "MANDATORY 5000" with a higher altitude to accommodate a longer and more efficient distance to final.

ATC doesn't need to be informed of this specific action.

NAV CANADA CAP example

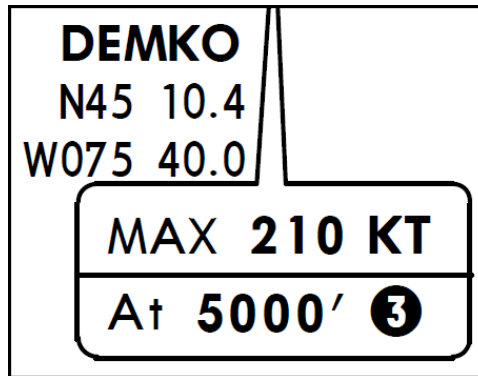


***3** Aircraft not planning RNAV (RNP) Y
RWY 32 - Mandatory altitude at
DEMKO N/A

The N/A acronym is defined in the Canada Air Pilot GEN section as such:

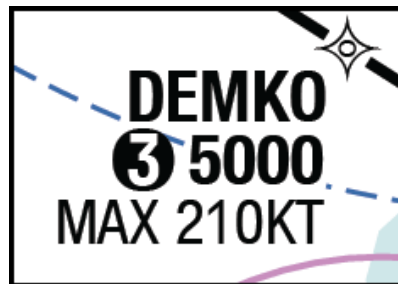
N	
N	North
N/A	Not Applicable
NAD	North American Datum

JEPPESEN EXAMPLE



5. ③ Aircraft not planning RNAV (RNP) Y RWY 32 - mandatory altitude at DEMKO not applicable.

LIDO EXAMPLE



③ ALT N/A if not planning RNAV (RNP) Y 32

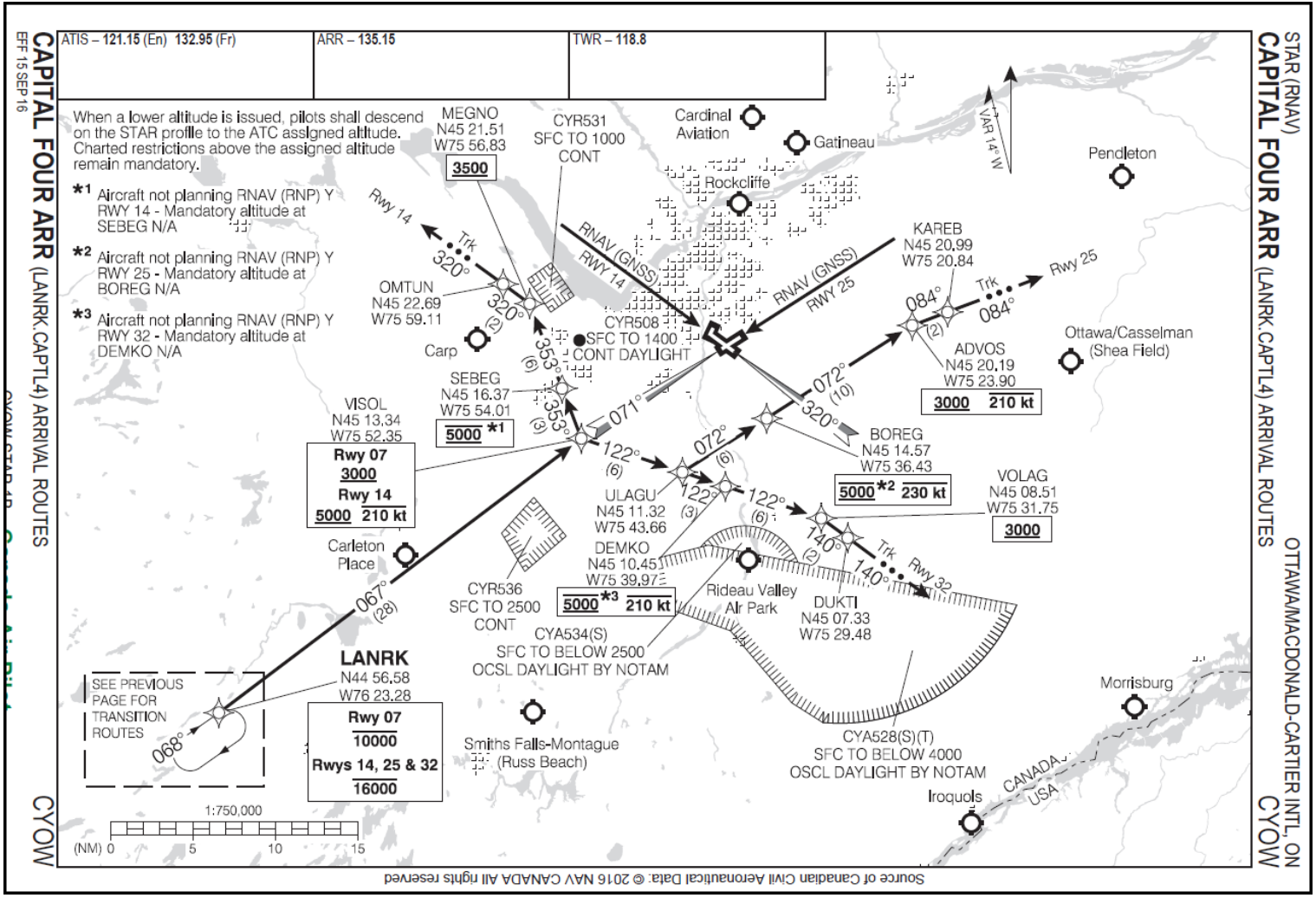
- Winter operations often require the use of runway 14 for departing to reduce taxi time after the de-icing operation. Also long-haul flights frequently require using runway 14 for a longer take-off run.

These departures interfere with the RNAV (RNP) Y 25 thus limiting ATC's ability to make these operations occur simultaneously.

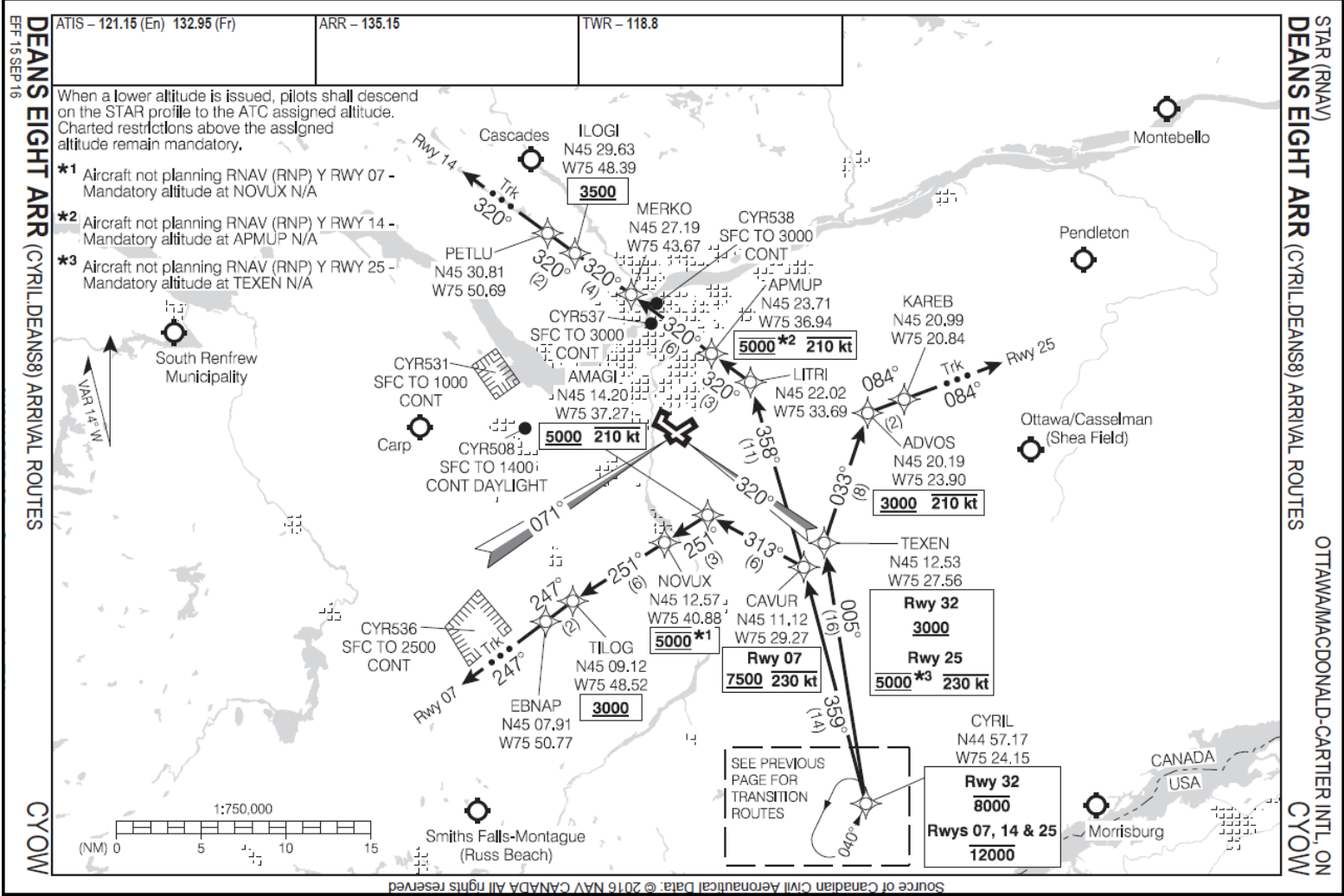
ATC will tactically prioritize the post de-icing departing flight over an arriving flight.

ATC will tactically prioritize the arriving RNAV (RNP) Y 25 flight over "non-de-icing" flight using runway 14 for departing.

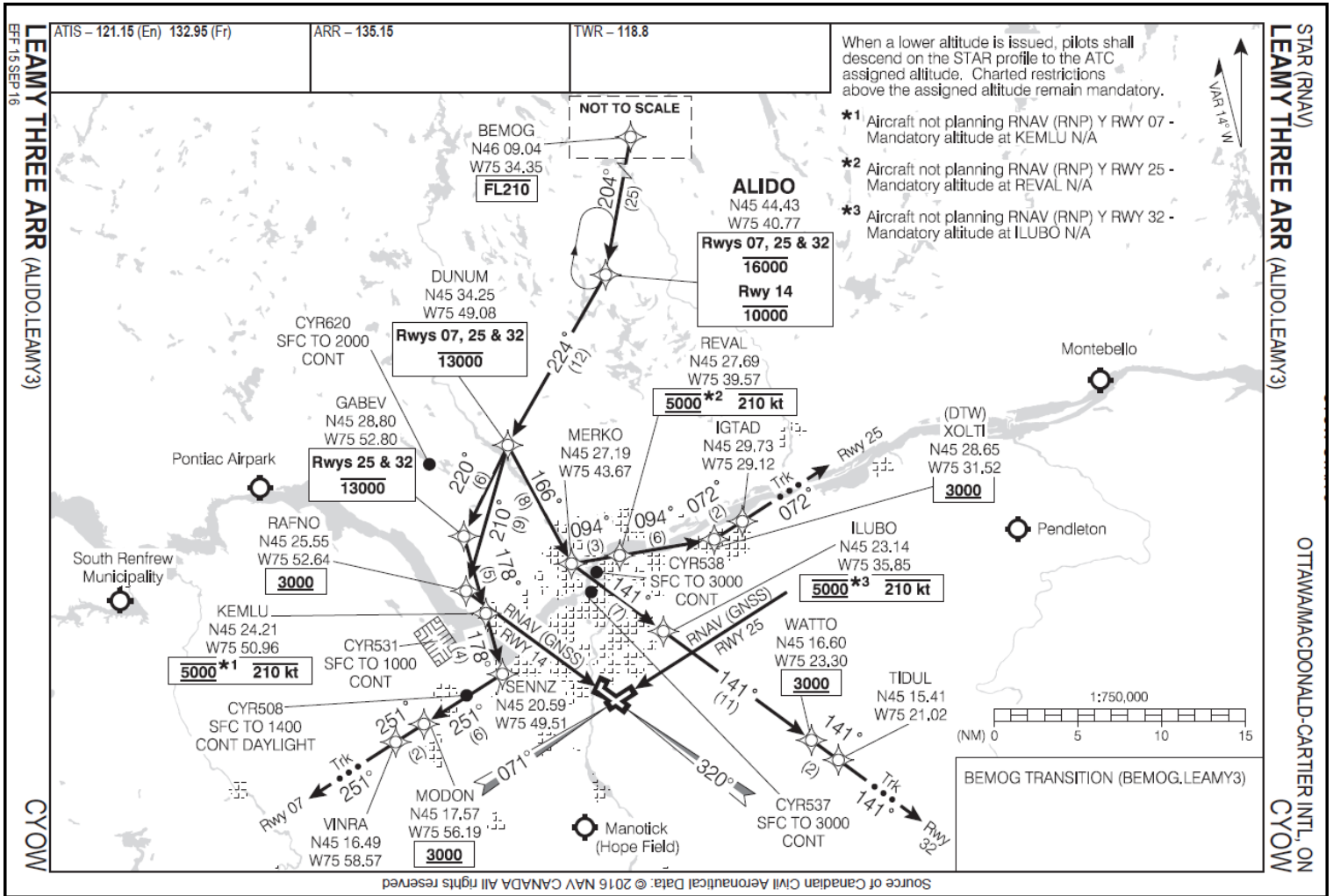
CAPITAL ARR



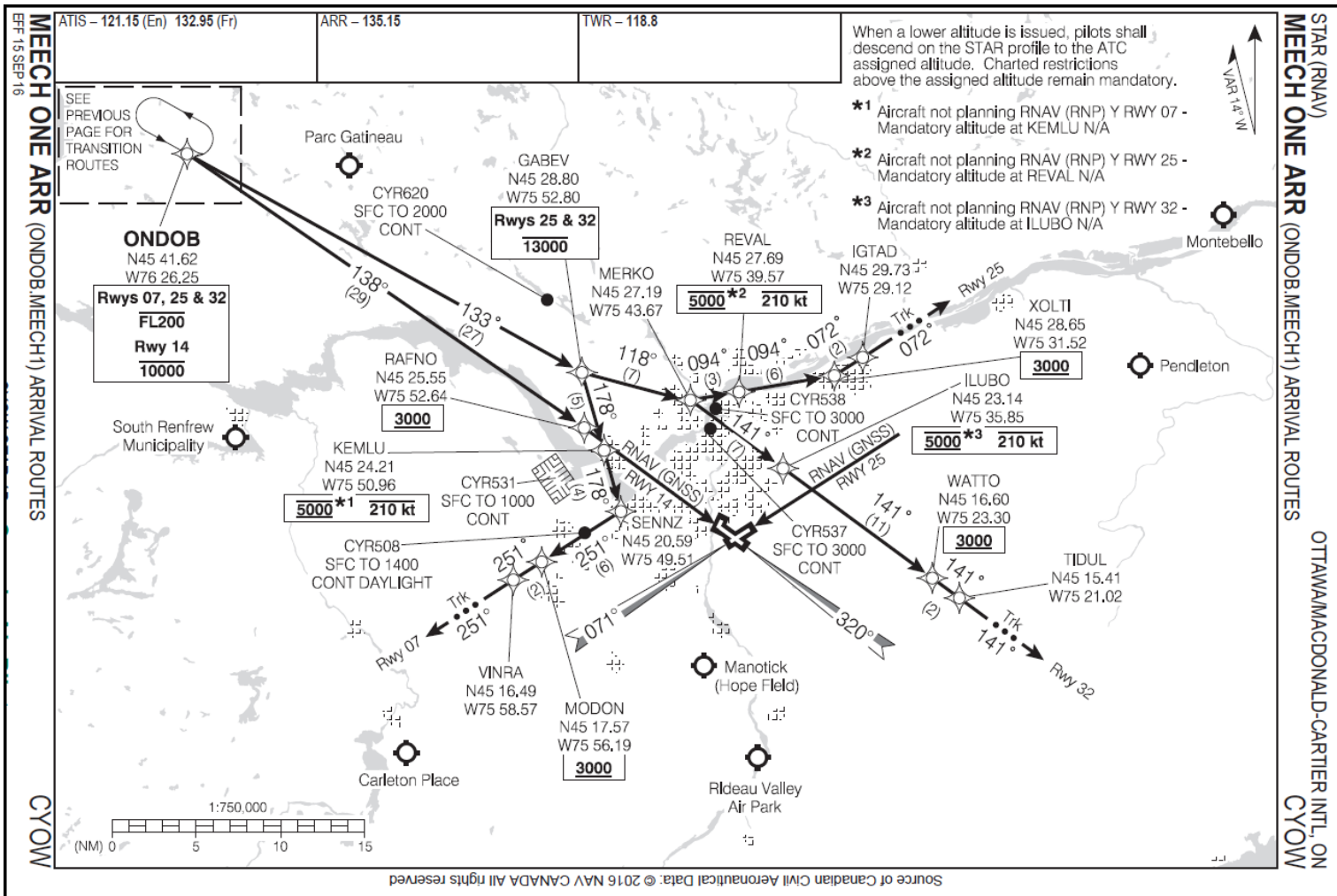
DEANS ARR



LEAMY ARR



MEECH ARR



JEPPESEN EXAMPLE

