



Beyond, Every Day.

**Mail: PO Box 23750, Airport Postal Outlet
Richmond, BC V7B 1Y7 CANADA**

MINUTES OF SPEICAL MEETING

Aeronautical Noise Management Committee (ANMC)
Wednesday 22 July 2015 - 1:30PM YVR Environment Office, Meeting Room E111/E113

Those in attendance were:

Chairperson:	Mark Cheng	Supervisor Noise Abatement & Air Quality, YVRAA
Secretariat:	Rachel Min	Noise Information Officer, YVRAA
Participants:	Gary Abrams	City of Richmond (citizen representative)
	Joan Caravan	City of Richmond (staff)
	Meg Brown	City of Vancouver (citizen representative)
	Heather Burpee	City of Vancouver (staff)
	Rick Hedley	Corporation of Delta (citizen representative)
	Paula Kolisnek	Corporation of Delta (staff)
	Ron Sorensen	City of Surrey (citizen representative)
	Craig MacFarlane	City of Surrey (staff)
	Scott McPherson	Canadian Business Aircraft Association
	Brett Patterson	Director Airside Operations, YVRAA
	Marion Town	Director Environment, YVRAA
	Brent Bell	NAV CANADA (Vancouver Tower)
Guests:	Brad Waddell	Air Canada
	John Reid	NAV CANADA (Vancouver Area Control Centre)
	Greg Dansereau	NAV CANADA (Vancouver Area Control Centre)
	Todd Neidig	NAV CANADA (Vancouver Area Control Centre)
	Jeff Cochrane	NAV CANADA (Ottawa)
	Michelle Bishop	NAV CANADA (Ottawa)

Next ANMC Meeting: TBD	
Rachel Min	31 July 2015
Secretariat Signature	Date

1.0 INTRODUCTIONS AND ADOPTION OF AGENDA

Mark Cheng welcomed ANMC members and reviewed the meeting agenda.

Mark outlined the following objectives of the meeting:

1. Provide Committee members information on a new arrival procedure for runway 08L at Vancouver International Airport that will be published in October 2105.
2. Explain how the communications plan for this procedure fits within the Airspace Change Communication & Consultation Protocol, which was recently approved by the federal Minister of Transport.

This new procedure will use Required Navigation Performance (RNP) technology to allow a more efficient descent and approach to the airport. The use of this technology has a benefit of reducing emissions compared to conventional procedures due to the efficient descent profile of the aircraft, and is identified as one of the major ways to meet greenhouse gas reduction commitments outlined in Canada's Action Plan to Reduce Greenhouse Gas Emissions from Aviation.

2.0 TECHNOLOGY BACKGROUND & OVERVIEW OF RNP 08L PROCEDURE

Mark introduced Greg Dansereau (Manager Area Control Centre Operations, NAV CANADA), who presented background information on RNP technology and then discussed the new RNP 08L approach procedure.

Background:

Greg explained that aviation is moving towards more GPS based navigation. Currently, Vancouver International Airport has a number of Area Navigation (RNAV) arrival procedures which combine the use of GPS system and direction from air traffic control to align the aircraft with the runway centerline and allow the pilots to intercept the instrument landing system.

RNP is a newer type of satellite based procedure that allows aircraft to follow very accurate paths, both laterally and vertically, and gives greater flexibility in how flight paths are designed.

Noise generated from an aircraft using an RNP approach is less than that from an aircraft using current conventional procedures. RNP allows aircraft to maintain a clean configuration (flapless) and has a continuous descent profile, thereby eliminating noise from changes in flap reconfiguration and power application for level flight segments associated with a conventional approach.

In order to use an RNP procedure, the aircraft must have specific type of equipment and the air crew must be trained and certified. In Canada, RNP has been used primarily by WestJet since 2004, and these procedures were restricted and only available to WestJet. To date, over 20 airports in Canada have RNP approaches – but Calgary and Ottawa are the only “major” airports with them.

Transport Canada has recently published new design criteria for RNP, which allows expanded development of RNP procedures for more airlines and more aircraft types. Initial priority for the development of RNP procedures will be for major airports where benefits could be realized immediately, and airports located in challenging terrain where RNP may improve access.

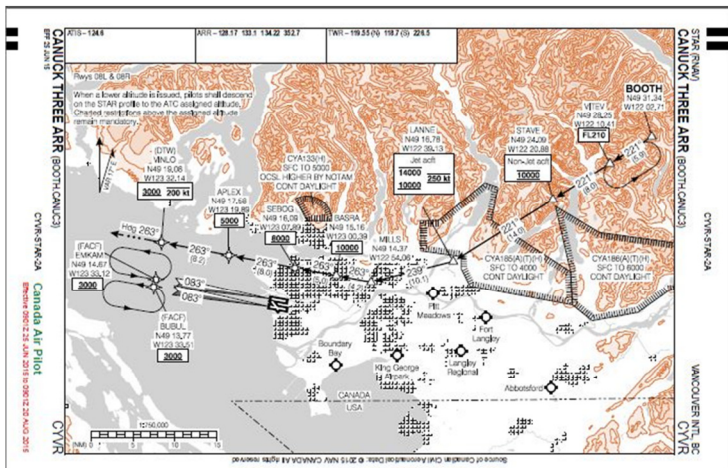
The new RNP 08L approach procedure was developed with input from the Airport Authority, and will be one of the first to be published for public use. This would mean that any aircraft that is suitably equipped and has a trained air crew could use the procedure when assigned by air traffic control. The intent is to publish the RNP for 08L arrivals only at this time, which will allow air traffic controllers time to get used to integrating RNP with current traffic.

RNP 08L Approach Procedure

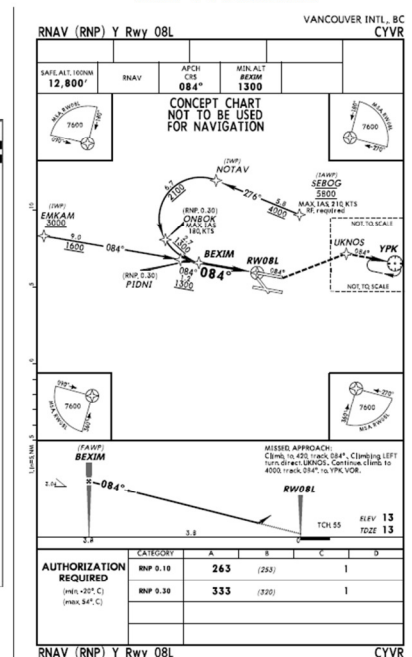
A Standard Terminal Arrival Route (STAR) is a published procedure used by arriving aircraft on an IFR flight plan. A STAR simplifies air traffic control clearance procedures as it codifies many of the standard instructions given by the air traffic controller to the air crew.

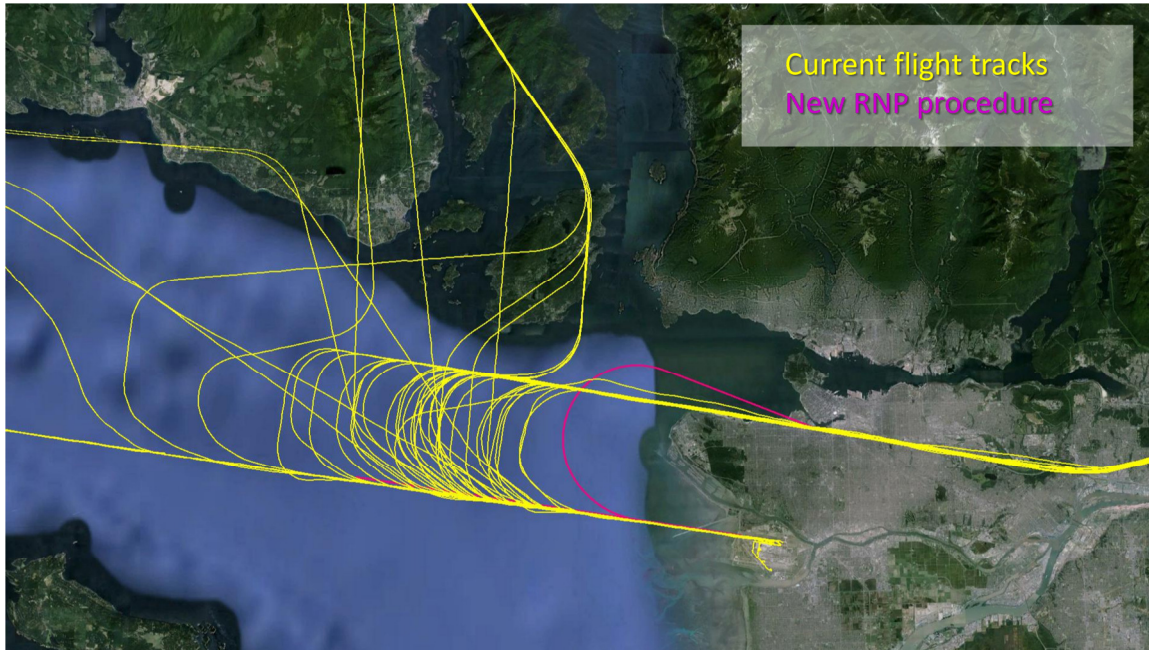
There are number of STARs published for YVR and these account for aircraft arriving from different directions. The RNP 08L approach procedure will use one of these existing STARs (the CANUCK THREE ARR) for most of arrival and then transitions to RNP leg, at the waypoint SEBOG, during the final segment of the approach (see figure below). The CANUCK THREE ARR STAR is used by aircraft approaching YVR from the north east, primarily from originating airports such as Calgary, Edmonton, and some airports in Northern BC.

Current STAR



RNP Procedure





The figure above illustrates sample flight tracks of aircraft using the current CANUCK THREE ARR (yellow) compared to the flight track to be followed by an aircraft using the RNP approach (magenta).

Notes:

- The lateral shift of the flight track associated with the RNP approach occurs over English Bay, and is away from populated areas.
- In order to transition to using the RNP approach, aircraft would need to be at 5,800 feet at SEBOG compared to 8,000 feet if following the conventional CANUCK STAR. This difference in altitude should not change the sound levels experienced for an observer on the ground under the track¹.
- Usability of this procure will start small, with less than less than 10% of this route's current traffic, due to the limited number of eligible aircraft and given air traffic control's ability to fit RNP operations into the sequence.
- From a noise perspective, the RNP approach procedure is expected to have positive community benefits as it reduces over-flights of populated areas.

3.0 STAKEHOLDER COMMUNICATIONS

Mark provided background on the development of the Airspace Change Communications & Consultation Protocol², which was recently approved by the Minister of Transport in June 2015. The Protocol was developed to jointly between NAV CANADA and the Canadian Airports Council to improve how the aviation industry engages with communities on airspace change. In drafting the Protocol, practices in the UK and Australia were reviewed and input from airlines was sought throughout the process.

¹ In order to have a perceptible change in the sound level to an observer on the ground, the aircraft would need to be at an altitude of 4,000 feet or lower.

² A copy of the Protocol can be found here http://cacairports.ca/sites/default/files/Airspace_Change_Communications_and_Consultation_Protocol-EN_0.pdf

The Protocol has the following objectives:

1. Define when communications versus consultation will occur.
2. Ensure residents know and can learn about changes and why they are necessary.
3. In cases where the scale of change indicates consultation should occur, provide opportunity for input for consideration as part of the design process.
4. Outline roles and responsibilities to aviation partners.

The scale of the airspace change being proposed will dictate whether communication or consultation occurs. Per the Protocol:

Broad communication will occur on changes between 4,000 and 6,000 ft or in the vicinity of an airport, when new communities will be overflowed.

Consultation occurs whenever moving flight paths laterally below 4,000 ft AGL or changing procedures to materially increase flight frequency on an existing flight path.

In the case of the RNP 08L initiative under discussion, since the changes related to the approach procedure occurs at an altitude above 4,000 feet and that the lateral shift of flight tracks will occur over unpopulated areas, a communications plan will be developed by the Airport Authority and NAV CANADA.

Core elements of the communications plan will include:

- Meeting with Transport Canada Pacific Region staff.
- Hosting a briefing session for the YVR Noise management Committee.
- Prepare web based materials and make these available on the YVR website.
- Explore options for notification and information dissemination.

Discussions:

During general discussion with Committee members, the following points were raised:

- Citizen representatives cautioned against focusing on fuel savings/emission reduction as a driver for change.
- Future procedures under development.
- A suggestion to conduct noise monitoring under the SEBOG waypoint.

Given the interest in the development of future procedures, an agenda item will be added to the next Committee meeting.

4.0 OTHER BUSINESS

Brett Patterson advised that the Runway End Safety Work this summer is proceeding well so far. However, we have identified the need to undertake urgent repairs to Taxiway Delta.

South Runway will continue to be closed five days per week (Mon, Tues, Wed, Fri, Sun) and the North Runway will continue to be used for departures 5 nights per week (as above) and arrivals 7 nights per week for RESA related work. Because of the urgent repair work needed to Taxiway Delta, we are extending the hours of construction on the nights when work occurs.

Starting on Sunday 26 July, the following new hours will take effect:

- Construction start time: 9:00 PM (same as before)
- Construction end time: 8:30 AM (previously 7:00 AM)

Between 6:30 AM and 8:30 AM, the South Runway will be available for limited operations due to construction on Taxiway Delta. Subject to safety and operational factors, we will endeavoring to use the North Runway between the hours of 6:30 AM and 8:30 AM in a way that is sensitive to the community – the current plan for runway usage during runway 08 (easterly flow) and runway 26 (westerly flow) operations is as follows:

Air Traffic Flow	Arrivals	Departures
Westerly	26L	26R
Easterly	08L	08R

This will aim to minimize over flights of populated areas by aircraft using the north runway.

We anticipate completing all work by August 31; however, this may need to be extended based on work progress on Taxiway Delta.

MEETING ADJOURNMENT

Mark thanked Committee members and guests for their attendance and adjourned the meeting at 2:50 PM.