




City of Richmond

Report to Committee

To: General Purposes Committee
From: Victor Wei, P. Eng.
Director, Transportation
Date: December 22, 2016
File: 01-0153-04-01/2016-
Vol 01
Re: **2016 Report from City Citizen Representatives to the Vancouver International
Airport Aeronautical Noise Management Committee (YVR ANMC)**

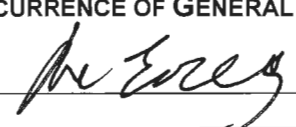
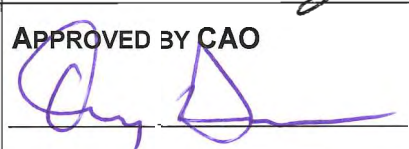
Staff Recommendation

That the report from the City citizen representatives appointed to the Vancouver International Airport Aeronautical Noise Management Committee (YVR ANMC) regarding the Committee's 2016 activities dated December 22, 2016, from the Director, Transportation, be received for information.



Victor Wei, P. Eng.
Director, Transportation
(604-276-4131)

Att. 1

REPORT CONCURRENCE		
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER
Policy Planning	<input checked="" type="checkbox"/>	
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	INITIALS: DW	APPROVED BY CAO 

Staff Report

Origin

As directed by Council, the City's two citizen appointees to the YVR ANMC provide annual updates directly to the General Purposes Committee on agenda items discussed at the YVR ANMC meetings. This report provides the 2016 update through a status report prepared by the City's appointees to the YVR ANMC (Attachment 1).

Analysis

The YVR ANMC continues to achieve good participation from all cities and agencies and provides the opportunity for insightful discussions on a wide range of aeronautical noise-related topics as well as continued educational tours to enhance members' understanding of airport operations. The attached status report from the citizen appointees provides a summary of the key agenda items discussed at three Committee meetings held in March, June and December 2016 as well as a special joint meeting held in September 2016 with the YVR Environmental Advisory Committee as part of the YVR 2037 Master Plan process; staff also provide the following supplemental comments.

Runway End Safety Area (RESA)

RESA is a pending requirement from Transport Canada that would require an additional area at each end of a runway to enhance aircraft and passenger safety. These areas reduce the severity of damage to an aircraft should one overrun or undershoot during landing thereby increasing passenger safety, as well as providing an area for better access for emergency response vehicles. YVR is proactively planning to construct RESAs for its three runways (north, south and crosswind) that will meet existing international safety recommendations.

Year two of a three-year project to construct RESAs on the south airfield commenced in Summer 2016. Construction occurred between May and August at night between 9:00 pm and 7:00 am on most nights of the week. During this time, the south runway was closed and air traffic diverted to the north runway. Additional runway maintenance work was undertaken in conjunction with the closures to maximize efficiency. South runway closures in 2017 will again be required to complete this multi-year project.

YVR 2037 Master Plan Update

The Vancouver Airport Authority (VAA) is required to submit a Master Plan every 10 years per the lease agreement with the Federal Government. The current YVR Master Plan covers the period 2007-2027 and the update to the Plan, which commenced in May 2015, will span the time period 2017-2037. VAA has established a separate website for the process (www.yvr2037.ca).

The YVR Master Plan will be prepared in four phases as shown in Table 1. Staff have established a City Team that continued to meet with VAA staff during 2016 including with the YVR AMNC and the YVR Environmental Advisory Committee (EAC).

Table 1: YVR Master Plan Phases and Work Items

Phase	Dates	Status	Theme	Work Items
1	May-Sept 2015	Completed	<i>Our World 2057</i>	Develop possible future events and forecasts
2	Sep-Dec 2016 ⁽¹⁾	Currently Underway	<i>Building a World Class Sustainable Airport</i>	Develop options, scenarios and evaluation criteria
3	Jan 2017 ⁽²⁾	Not Started	<i>Preparing The YVR Draft 2037 Master Plan</i>	Evaluate options, develop recommendations and draft plan
4	Late 2017 ⁽³⁾	Not Started	<i>Approval of the YVR 2037 Master Plan</i>	Finalize Master Plan

(1) VAA has advised that it intends to have a public summary of Phase 2 consultation available by December 31, 2016.

(2) VAA has advised that it will have a draft Master Plan and Land Use Plan with recommendations available for the public by January 19, 2017.

(3) In late 2017, VAA intends to submit the Master Plan to the Minister of Transport for approval. In 2018, VAA will publicly release the Master Plan following its approval.

Phase 2 was completed in November 2016 and included a number of themed stakeholder workshops (attended by staff) as well as public workshops and an open house. To protect and advance the City's interests, staff have identified a comprehensive list of City issues which VAA staff have been asked to address in preparing the Master Plan (e.g., land use, noise, transportation, environmental, revised Noise Exposure Forecast contours).

Phase 3 is planned to commence in January 2017 with the release of the draft Master Plan that will identify the preferred future state for each of the six Phase 2 focus areas: terminals, airside/airspace, ground access, environment, community amenities, and land use. The final Master Plan is anticipated to be submitted to the federal Minister of Transport by the end of 2017 and would be made public following its approval, anticipated in early 2018. As identified in previous staff updates, City staff will be meeting with VAA staff to discuss the draft Plan on January 26, 2017 and will subsequently update Council by February 3, 2017. With this timeline, City staff anticipate taking a report to the General Purposes Committee to advise Council on the draft Master Plan by March 31, 2017.

As part of the Master Plan update process, the YVR Five-Year Airport Noise Management Plan that runs to the end of 2018 will subsequently be updated (for 2019 - 2023) with respect to noise exposure contours and more specific noise management strategies.

2016 Aeronautical Noise Management – Summary Report¹

During January 1 to December 17, 2016, YVR received a total of 1,798 noise concerns from 294 individuals across Metro Vancouver, which is a 12 per cent increase in the number of concerns and no change in the number of complainants over the same time period in 2015 (Figure 1). One individual in South Surrey registered 67 per cent of all noise concerns during this period in 2016 (i.e., 1,201 concerns regarding overflights of the area). Of the balance of 597 concerns, 100 were received regarding night-time use of the north runway during the annual south runway closure for maintenance and RESA work, including 25 concerns from 19 individuals in Richmond.

¹ This section presents statistics for the period January 1 to December 17, 2016 whereas the status report from the City's appointees to the YVR ANMC cover the period January 1 through November 26, 2016.

The increase in the number of Richmond-related concerns (Figure 2) for this time period in 2013 and 2014 were attributable to one individual in Richmond who resides adjacent to the float plane route. In 2015, a different single individual living in the same area registered similar concerns.

Of the 245 concerns registered by Richmond residents during this time period in 2016, three individuals registered 116 concerns (47 per cent of all concerns) mainly regarding float planes, propeller departures and engine run-up activities. Of the 55 concerns related to float planes (23 per cent of all concerns), nearly all the concerns (96 per cent) were registered by one individual.

Compared to 2015, the total number of concerns registered by Richmond residents decreased by four per cent (255 in 2015 to 245 in 2016). The total number of complainants residing in Richmond also decreased (92 in 2015 and 81 in 2016).

As shown in Figure 3, the operational concerns identified include jet departures and float plane operations followed by propeller departures, engine run-ups, and all aircraft movements.

Update to YVR Website

VAA launched an update of its website in March 2016. The new site is now mobile-optimized, accessibility compliant and available in English, French and Chinese, including materials in the noise management section (e.g., noise FAQs).

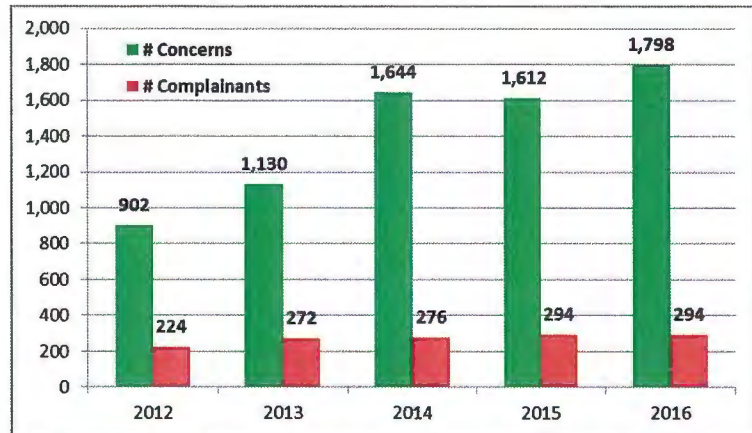


Figure 1: Region-wide Noise Concerns and Complainants

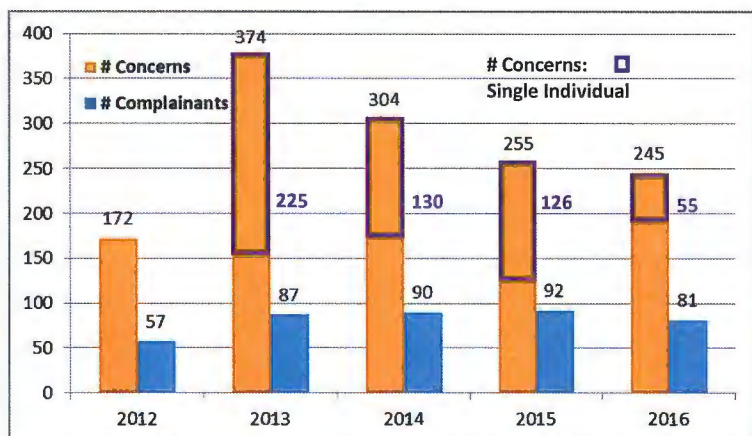


Figure 2: Richmond-Related Noise Concerns and Complainants

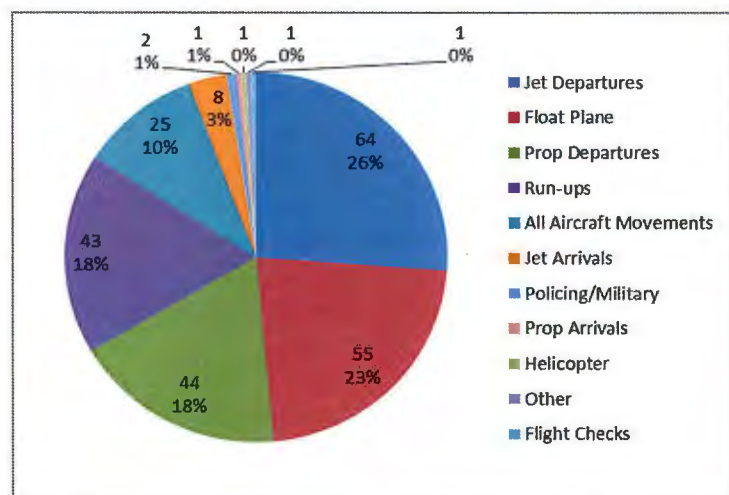


Figure 3: Total Number and Per Cent of Richmond-Related Noise Concerns by Operational Category

Financial Impact

None.

Conclusion

The City's citizen representatives to the YVR ANMC continue to uphold Richmond's profile at the Committee and contribute positively to discussions. The YVR ANMC remains a valuable forum for addressing aeronautical noise impacts on Richmond. The provision of input regarding action items to support VAA's new *2017-2037 Master Plan* will be an opportunity for the City and the City's representatives to the YVR ANMC to ensure that the initiatives are consistent with a goal of minimizing aeronautical noise impacts to the community and enhancing residents' quality of life.



Joan Caravan
Transportation Planner
(604-276-4035)

In collaboration with: Gary Abrams and Margot Spronk
City Citizen Representatives to the YVR ANMC

Att. 1: Report from City Citizen Representatives to the YVR ANMC

Date: December 16, 2016

To: City of Richmond General Purposes Committee

From: Margot Spronk
Gary W.D. Abrams
City of Richmond City Citizen YVR ANMC Representatives

2016 Status Report: YVR Aeronautical Noise Management Committee

City Appointees

Margot Spronk, a retired air traffic controller who was General Manager for NAV CANADA's Vancouver Flight Information Region, completed seven years of service as a City Citizen Representative at the December 1, 2016 meeting of the Committee. Gary W.D. Abrams, a Richmond lawyer with military and civil flying experience and involvement in the British Columbia Aviation Council and other aviation organizations, has served as a City Citizen Representative since his appointment in November 2015 for a two-year term to end on December 31, 2017. Both live in Richmond.

Past Year at the YVR Aeronautical Noise Management Committee

The YVR ANMC met on March 3, June 14 and December 1, 2016 as well as a joint meeting with the YVR Environmental Advisory Committee on September 12, 2016. Gary Abrams also attended an Area Operations Consultation Meeting on October 6, 2016 at the NAV CANADA Vancouver Area Control Centre. Highlights of these meetings are provided below.

YVR 2037 Master Plan

Both Citizen Representatives attended a joint meeting of the YVR ANMC and the YVR Environmental Advisory Committee, at which comments were sought from a number of community representatives on the environmental aspects of the YVR 2037 Master Plan. The discussion guide provided at the meeting contains information on the reduction in aircraft noise emissions between the late 1950s and the present (from 115 to 90 decibels, with the quieter passenger aircraft now in use), the projected more frequent use of the north runway for departures in peak periods, and the future use of Required Navigation Performance (RNP) approaches to Runway 08L (the north runway).

As part of the Master Plan update, YVR will review the long-term planning Noise Exposure Forecast (NEF) Contour, in accordance with the metric prescribed by Transport Canada for airport noise assessment. The Airport Authority is to continue, among other things, its review of best practices and the development of traffic projections and runway operational plans with the objective of providing information on future noise to cities (Richmond and Vancouver) to incorporate into their planning decisions and policies.

Engine Run-ups

In 2015, consultants reviewed the area to the north of the Air Canada South Hangar, which currently has a low number of run-ups, to assess the benefits of installing noise and blast barriers if this area were to receive increased run-ups in the future. The Airport Authority has decided not to implement, at least for the present, barriers or berms at this location due to their limited value in reducing the impact of run-up noise, in Burkeville or beyond, and potential problems with design, placement, and meeting height requirements associated with airport zoning.

Use of North Runway

On account of increased traffic and to avoid delays beyond the average of four minutes regarded as tolerable, use of the north runway for departures for substantial periods some days was required in 2016. Most of the aircraft departing eastbound have destinations to the northeast or north, that is, away from Richmond.

Runway End Safety Areas (RESA)

The planned construction schedule, over the spring and summer of 2016, of a Runway End Safety Area (RESA) at the east end of the south runway was reviewed. The construction will require the closure of that runway six nights a week.

Annual Flight Checks

A presentation was given by NAV CANADA, whose responsibilities include two flight checks each year of the ILS (Instrument Landing System) at Vancouver and other airports. The Airport Authority recently agreed that the flight checks in August 2016 would take place before sunrise when air traffic volumes are lower. The flight checks for three of the five Vancouver runways with ILS take place over water and have no noise impact on the community.

Reducing Greenhouse Gas Emissions

The National Airlines Council of Canada (NACC), which represents the four major Canadian carriers, delivered a detailed report on the efforts of the airline industry, Transport Canada, and the International Civil Aviation Organization (ICAO) to reduce greenhouse gas emissions. Airline fossil fuel-related emissions account for two per cent of all fossil fuel-related emissions worldwide. A memorandum of understanding between the industry and Transport Canada in 2005 has exceeded its targets, including a reduction of 24 per cent reduction in emissions from 1990 to 2012. Transport Canada created a new Action Plan in 2012, in which an average annual improvement in fuel efficiency of 2 per cent is projected. NACC carriers, from 2005 to 2015, achieved an improvement of 1.32 per cent. The use of alternate aviation fuels will, however, achieve the next big gain in emission reduction.

The Airport Authority also reviewed its initiatives regarding emission reduction via efficient ground and air movements and support of bio jet fuel initiatives and other means.

Use of Steeper Glidescope

A review of recent experiments at Frankfurt (Germany) and London Heathrow airports in the use, on one runway, of an ILS glide path of 3.2 degrees instead of the traditional 3 degrees was

presented. A slight reduction in noise below the flight path was achieved but would not be perceptible to humans. No operational problems developed.

Noise Management Reports

A comparison of the YVR Noise Management Report for 4th Quarter 2016 with the 4th Quarter 2015 report yields no significant conclusions. The number of complaints, and of individuals complaining, in Richmond was slightly lower for 2016 (240 and 78, respectively). Only one Richmond complaint was about flight checks. A far higher total of complaints about jet and prop departures, 107 (2016) versus 37 (2015), may reflect the greater use of the north runway in 2016 for the reasons outlined above. On the other hand, float plane complaints numbered only 55, as opposed to 138 in the 4th Quarter of 2015, a large number of which emanated from one person.

One of the City's citizen representatives also answered a request for information from a new resident of Richmond, who was surprised to experience aircraft noise at his home near Kwantlen Polytechnic University. The resident was advised that aircraft noise can be expected in this area due to the proximity to the airport and the necessary alignment of flight paths with the runways.

Recommendations to the General Purposes Committee

No specific recommendations are made. The work of the Committee will continue, with the participation of the citizen representative recently appointed.

Margot Spronk
Gary Abrams