

# Appendix F : Kelowna International Airport Master Plan Technical Report– Air Traffic Forecasts Report

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**Kelowna International Airport Master Plan 2045  
Technical Report – Air Traffic Forecasts (Final)**

**Kelowna International Airport**

**March 2016 (Amended August 2016)**







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- A Aircraft Gating Charts for Busiest Day in Busy Week in 2015, 2020, 2025, 2030 and 2035**
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## **1.0 INTRODUCTION**

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Aviation traffic forecasts are the cornerstone of the airport master planning process. Credible forecasts define the demand for infrastructure by sector and the likely capacity requirements that will need to be met – airside, groundside and everywhere in between. They help define the trigger conditions for infrastructure investment in a way that can be readily understood by Airport Boards who are asked to make investment decisions and those that finance those capital investments – such as banks and bond holders. They also form the basis of revenue projections, both aeronautical and non-aeronautical, which in turn help define the debt that will be incurred in any CapEx activity.

The air traffic forecasts described in this report were prepared as part of the Master Plan for Kelowna International Airport (YLW).

### **1.1 PURPOSE**

The primary objective of this component of the Master Plan Study was to develop a reliable and comprehensive set of traffic forecasts that could be used for medium and long-term facility planning for YLW. In particular, through analysis and consultation with key stakeholders, the study develops:

- Annual forecasts of passengers, aircraft movements and cargo in aggregate and by sector and segment for 2015 to 2045;
- Forecasts of peak planning day/hour passengers by direction and sector, aircraft movements by segment and future flight schedules; and
- Aircraft gate and stand requirements by ICAO code and sector.

### **1.2 METHODOLOGY**

The steps undertaken in developing the traffic forecasts are summarized below:

1. Data collection and interviews with airport personnel, air carriers, and local economic development and tourism organizations;
2. Analysis/review of historical traffic and the operating environment;
3. Analysis of factors driving traffic growth;
4. Development and calibration the forecasting model;
5. Specification of forecast assumptions;
6. Preparation of annual forecasts;
7. Preparation of busy week nominal schedules; and
8. Development of peak hour and gating requirement forecasts.

The primary data sources were:

- Kelowna International Airport – passenger and cargo traffic, facilities and plans;



- International Air Transport Association (IATA) Innovata SRS and Official Airline Guide (OAG) – airline schedules 2004-2016;
- Conference Board of Canada – Kelowna and Canada economic data;
- Major Canadian banks – economic data and forecasts
- International Monetary Fund (IMF) – Canada, U.S., and international economic data;
- Statistics Canada – Aircraft movement data, and economic data; and
- BC Stats and BC Tourism – demographic and tourism data.

Interviews were conducted with the following:

- WestJet – Station Manager;
- Air Canada – Station Manager; and
- Kelowna International Airport – planning and air service development staff.





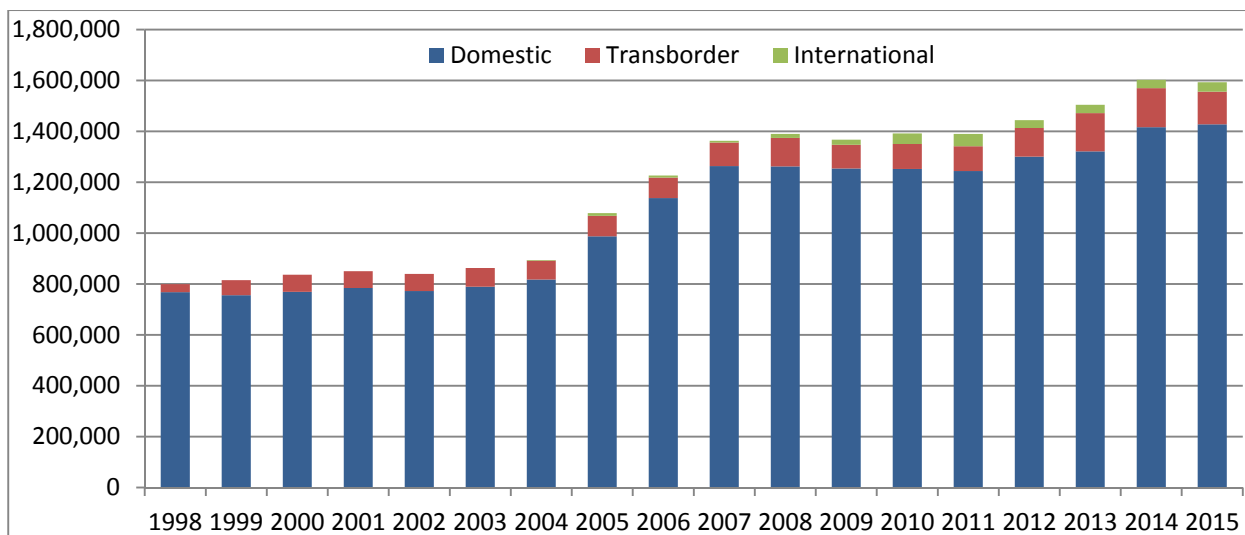
## 2.0 HISTORICAL TRAFFIC REVIEW AND FACTOR ASSESSMENT

### 2.1 HISTORICAL ACTIVITY

#### 2.1.1 PASSENGER TRAFFIC

YLV handled 1.594 million passengers in 2015, slightly less than 2014, but an increase of 6.0% over 2013. Domestic passengers totaled 1.432 million, 89.9% of the total. As shown in Exhibit 2.1, passenger traffic at YLV increased slowly in the late 1990 and early 2000s but grew strongly during the four year period of strong economic growth from 2005 to 2008. Traffic declined in 2009 with the global financial crisis and recession, then recovered slowly in 2010 and 2011, before growing strongly again in 2012 to 2014. YLV first received transborder service in 2004 and, since then, transborder passengers have accounted for 6.5% to 10% of total traffic, the high being reached in 2013. Other international traffic has fluctuated between 0.3% and 3.5% of total traffic, the high being recorded in 2011.

**Exhibit 2.1**  
**Annual Enplaned/Deplaned Passengers by Sector, 1998 to 2015**



The numbers of Enplaned/Deplaned (E/D) passengers by sector, as well as annual and average growth rates for the past 17-, 10- and 5-year periods are presented in Exhibit 2.2. Annual growth rates have varied from a high of 20% in 2005 to a decline of 1.6% in 2009. For the aggregate periods, growth rates fluctuated significantly. Over the past 17 years, growth in total traffic averaged 4.1%, but averaged only 2.8% over the past five years. Growth has been much higher for transborder, 8.6% and other international<sup>1</sup>, 13.8%, while domestic traffic grew by only 3.8% per year between 2005 and 2015.

<sup>1</sup> International includes transborder unless otherwise stated throughout this report

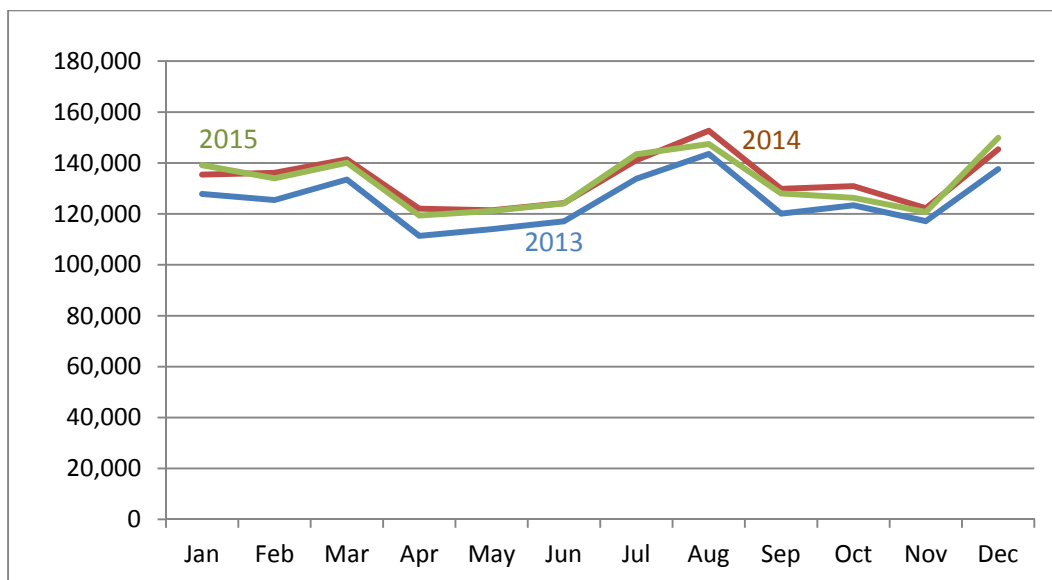


**Exhibit 2.2**  
Annual E/D Passengers by Sector, 2004 to 2015, and Average Annual Growth Rates

| Year                       | Domestic  | Transborder | Intern'l | Total     | Growth |
|----------------------------|-----------|-------------|----------|-----------|--------|
| 2004                       | 817,659   | 74,084      | 2,818    | 894,561   | 1.8%   |
| 2005                       | 987,368   | 80,976      | 10,308   | 1,078,652 | 20.6%  |
| 2006                       | 1,138,176 | 80,085      | 8,181    | 1,226,442 | 13.7%  |
| 2007                       | 1,263,943 | 92,506      | 6,942    | 1,363,391 | 11.2%  |
| 2008                       | 1,262,380 | 112,359     | 15,144   | 1,389,883 | 1.9%   |
| 2009                       | 1,254,544 | 92,531      | 20,556   | 1,367,631 | -1.6%  |
| 2010                       | 1,252,112 | 98,329      | 41,366   | 1,391,807 | 1.8%   |
| 2011                       | 1,243,999 | 97,601      | 48,587   | 1,390,187 | -0.1%  |
| 2012                       | 1,301,068 | 112,250     | 30,679   | 1,443,997 | 3.9%   |
| 2013                       | 1,321,453 | 150,661     | 32,580   | 1,504,694 | 4.2%   |
| 2014                       | 1,415,423 | 154,017     | 33,459   | 1,602,899 | 6.5%   |
| 2015                       | 1,432,456 | 126,559     | 34,591   | 1,593,606 | -0.5%  |
| Average Annual Growth Rate |           |             |          |           |        |
| 1998-2015                  | 3.7%      | 8.6%        | n.a.     | 4.1%      |        |
| 2005-2015                  | 3.8%      | 4.6%        | 12.8%    | 4.0%      |        |
| 2010-2015                  | 2.7%      | 5.2%        | -3.5%    | 2.7%      |        |

The number of E/D passengers by month for 2013, 2014 and 2015 are presented in Exhibit 2.3. The busiest month for total passengers is August, while for transborder and other international passengers (not shown) it is March. December is the second busiest month in total traffic and March is the third busiest, while April and November are the least busy. The season variation in traffic has been very consistent over these years.

**Exhibit 2.3**  
Total Passengers by Month, 2013 to 2015



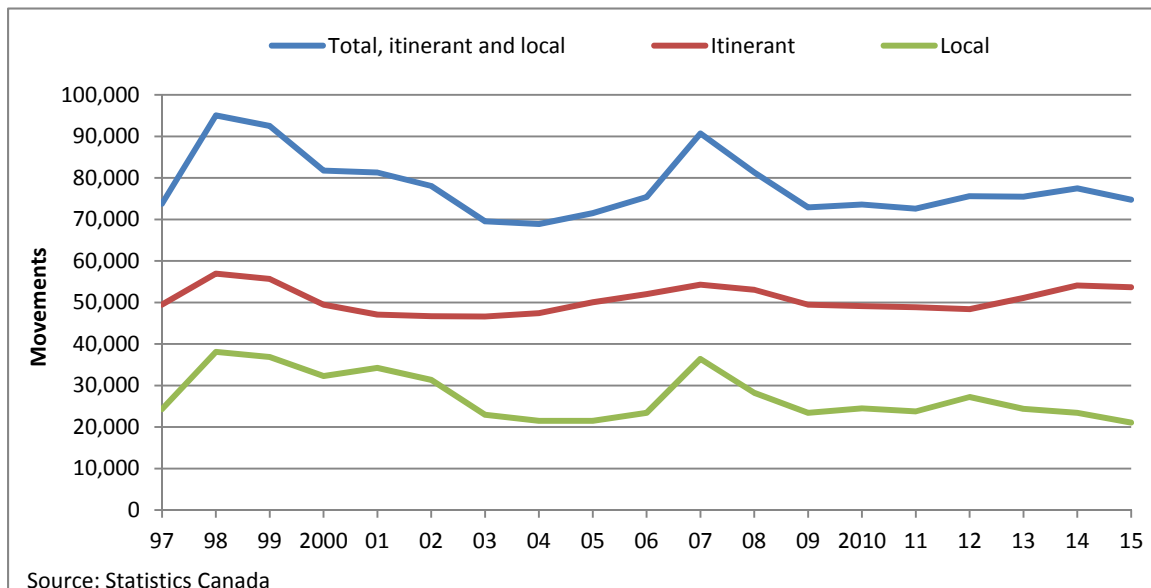


YLW has very few connecting passengers, less than 1% of the total, thus almost all passengers have YLW as either their origin or destination. Approximately 20% of flights are through flights which could carry transit passengers, but almost all are flights between Vancouver (YVR) and Calgary (YYC) and, as there are many non-stop flights per day between those cities, people would only use flights stopping over at YLW when the non-stop flights are full. There is a weekly flight between YVR and Whitehorse which stops at YLW and could also carry transit passengers. One seasonal winter charter flight to/from Mexico starts and ends at Vancouver and has some transit passengers onboard at YLW. These passengers stay on the plane and do not enter the terminal building in either direction. Overall, the number of transit passengers at YLW is likely very small, less than 2%, and all transit passengers would remain on the aircraft.

**2.1.2 AIRCRAFT MOVEMENTS**

In 2015 YLW had 74,789 aircraft movements, 53,669 being itinerant and 21,120 being local. The number of aircraft movements at YLW has fluctuated over the past 18 years, as shown in Exhibit 2.4, but has not changed significantly over that period. The variation generally follows periods of economic growth in the region. The variation in total movements is largely due to changes in local movements (essentially recreation and flight training aircraft movements) which account for 30-40% of all movements. Over most of the 18-year period, itinerant movements showed a similar trend as local movements, but with less variation. However, since 2012, itinerant movements have increased by 11% (3.6%/yr) while local movements have declined significantly (-8.1%/yr).

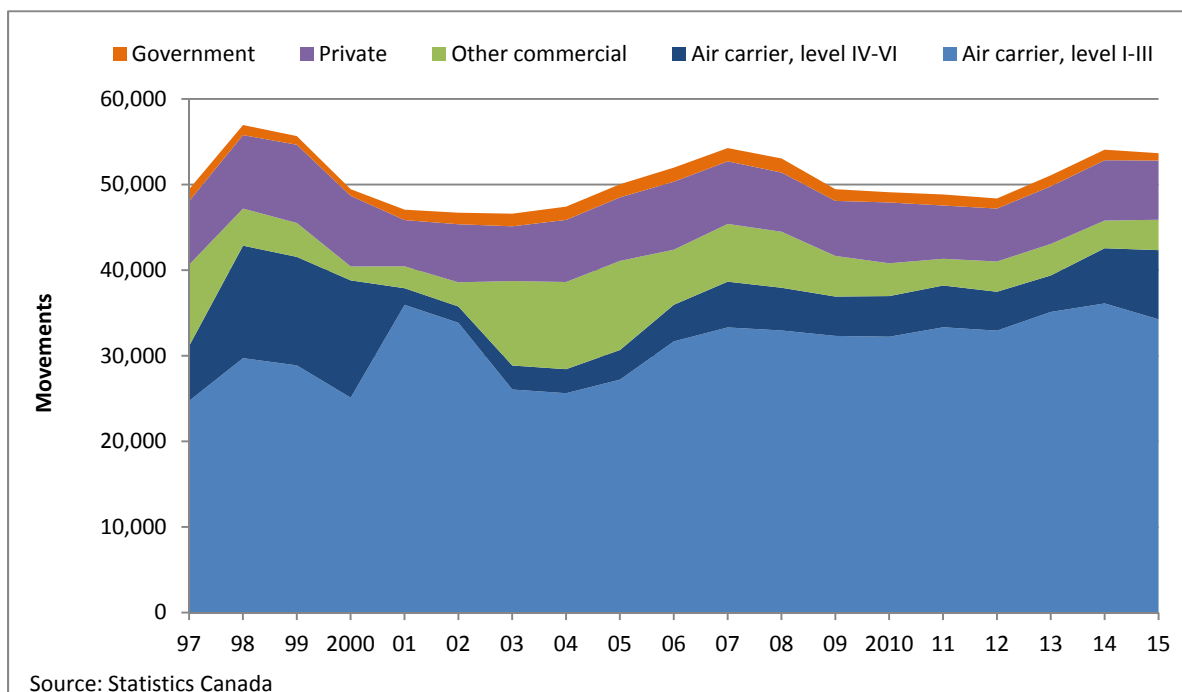
**Exhibit 2.4  
Annual Itinerant and Local Aircraft Movements, 1997 to 2015**





Air carriers are the predominant operator of aircraft at YLW accounting for 79% of itinerant movements in 2015 – see Exhibit 2.5. The larger, Levels I-III air carriers<sup>2</sup> accounted for most of these itinerant movements (34,264, 64% of the total). These include 25,414 movements on scheduled service, accounting for 47% of itinerant movements. Private is the next largest operator segment accounting for 13% of itinerant movements. “Other commercial” (aerial photography, remote sensing, etc.) accounted for 7% of itinerant movements, down from 21% in 2005, while government accounted for only 2% in 2015. Large air carriers (Levels I-III) are the only segment of operators whose movements have increased significantly over the past 18 years, with an average growth rate of 1.8% per year. Other commercial movements have declined over the period, changing by an average of -5.3% per year, while private and government have declined slowly averaging -0.4% and -2.6% per year, respectively.

**Exhibit 2.5  
Annual Itinerant by Operator Type, 1997 to 2015**



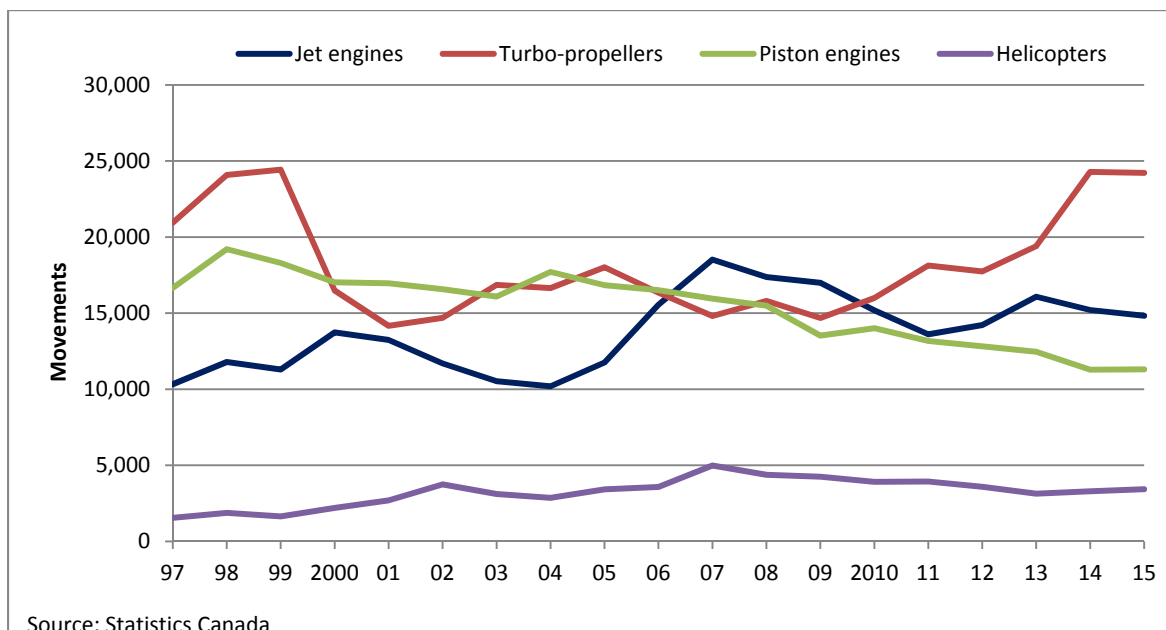
Itinerant movements by engine type are presented in Exhibit 2.6. The numbers of movements for each engine type have fluctuated significantly over the 18-year period. Turboprops were the most common type in the late 1990s. Their prominence declined greatly in 2001, but their numbers have increased significantly since 2011. In 2014, with the use of Q400s by both Air Canada and WestJet, turboprops were again the most common type accounting for 45% of

<sup>2</sup> Levels I-III carriers includes every Canadian air carrier that, in each of the two calendar years immediately preceding the report year, transported 100,000 revenue passengers or more, or 30,000 tonnes of revenue goods, or realized annual gross revenues of \$1,000,000 or more for the air services for which the air carrier held a licence.



itinerant movements, and remained at that level in 2015. Jet aircraft accounted for 28% of itinerant movements in 2015 and have grown by an average of 2.1% per year since 1997. Piston aircraft movements declined steadily between 1997 and 2015, averaging of -2.4% per year, and their share of itinerant movements has fallen from 34% to 20% in that period. This is consistent with a general trend in the industry. Helicopter movements increased fairly steadily from 1997 to 2007, but declined slowly from 2008 to 2013, before increasing slightly in 2014 and 2015.

**Exhibit 2.6  
Annual Itinerant by Engine Type, 1997 to 2015**



A more detailed breakdown of itinerant movements by aircraft types in 2014/2015 based on NCAMS data<sup>3</sup> is presented in Exhibit 2.7<sup>4</sup>. The figure also shows the split between flights under visual and instrument flight rules (VFR and IFR) for each type in 2014/2015. Overall, 72% of itinerant movements are IFR.

<sup>3</sup> NCAMS data includes detailed information on each movement collected by Nav Canada and is published by Statistics Canada but excludes Military and RCMP flights

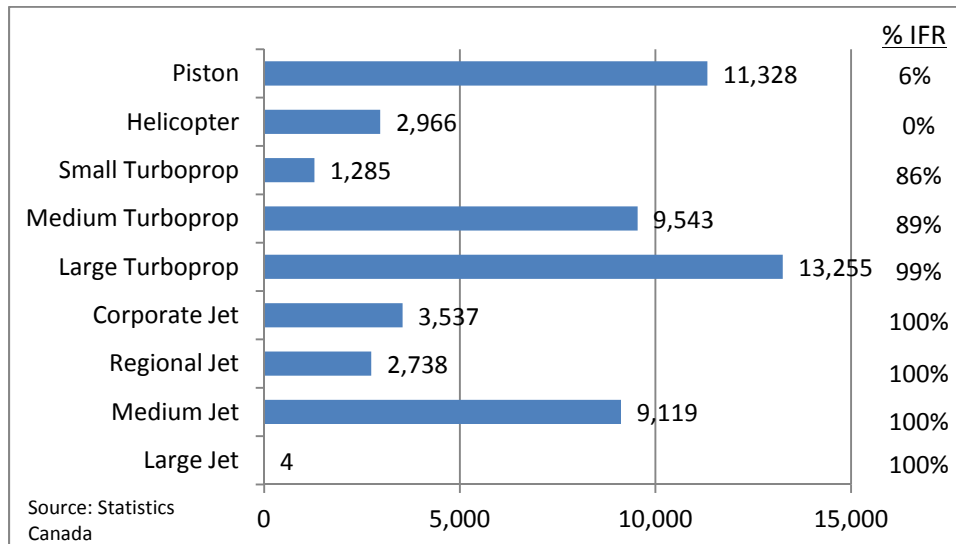
<sup>4</sup> Data for Mar. 2014 to Feb. 2015. For the purposes of this report, the following definitions are used:

| Aircraft Categories  | Weight (t) | Example Aircraft    | Aircraft Categories | Weight (t) | Example Aircraft       |
|----------------------|------------|---------------------|---------------------|------------|------------------------|
| Large Jet - Widebody | >100       | B767, A330          | Large Turboprop     | 14+        | DHC-8 (all), ATR-72/42 |
| - Narrowbody         | >100       | B757                | Medium Turboprop    | 5.67 - 14  | DO328, BE1900, BE200   |
| Medium Jet           | 50 - 100   | A321, 737-800, MD87 | Small Turboprop     | <5.67      | DHC-6, E110, BE-100    |
| Regional Jet         | 20 - 50    | E190, CRJ9, E135    | Piston              | All        |                        |
| Corporate Jet        | 3 - 30     | GLF6, CL60, C550    | Helicopters         | All        |                        |



The breakdown of movements by runway for the 12-months March 2014 to February 2015 is summarized in Exhibit 2.8. Runway 16 is by far the most commonly used runway handling 72% of itinerant flights, and 77% of itinerant flights which use a runway.

**Exhibit 2.7**  
**Annual Itinerant by Aircraft Category and Percentage IFR, March 2014 to February 2015**



**Exhibit 2.8**  
**Annual Itinerant Movements by Runway in 12 Months, March 2014 to February 2015**

| Runway           | No. of Movements | % of Total Movements | % of Runway Movements |
|------------------|------------------|----------------------|-----------------------|
| <b>Runways</b>   | <b>50,752</b>    | <b>94%</b>           | <b>100%</b>           |
| 16               | 38,868           | 72%                  | 77%                   |
| 34               | 11,884           | 22%                  | 23%                   |
| <b>No Runway</b> |                  |                      |                       |
| Helicopter       | 3,023            | 6%                   | n.a.                  |
| <b>Total</b>     | <b>53,775</b>    | <b>100%</b>          | <b>n.a.</b>           |

Source: Statistics Canada, NCAMS data (excludes Military and RCMP flights)

### 2.1.3 AIR CARGO

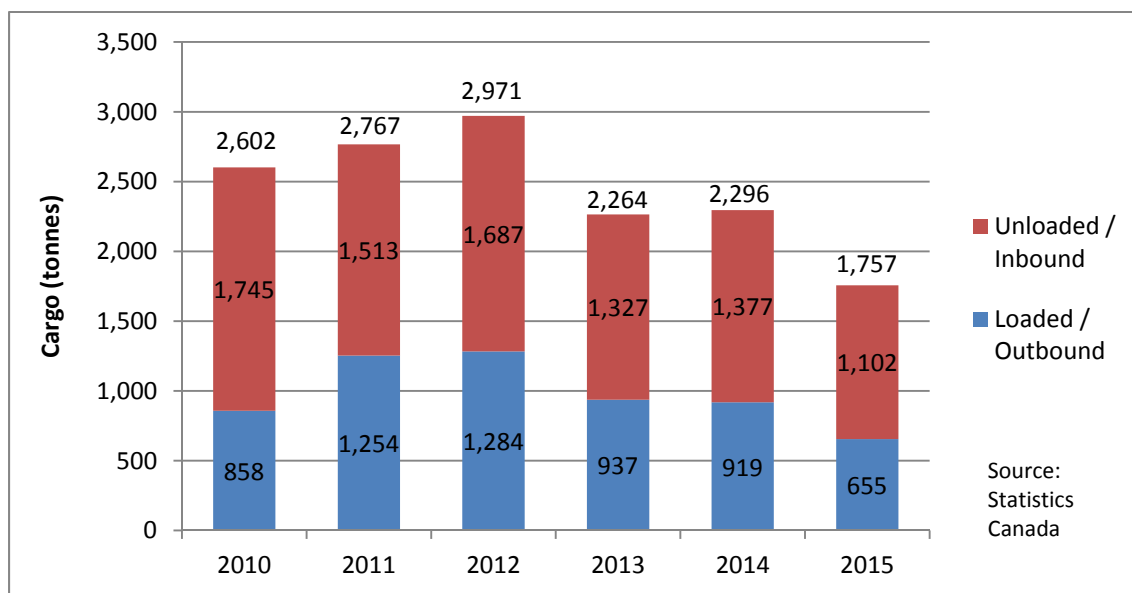
Comprehensive information on air cargo is not available. Only one carrier reports cargo tonnages to YLW. Statistics Canada data is often dated and incomplete, although its coverage has improved greatly from 5-10 years ago. Historical air cargo tonnages by direction for 2010 to 2015 reported by Statistics Canada are presented in Exhibit 2.9<sup>5</sup>. Total cargo handled peaked in 2012 at 2,971 tonnes, but declined by 24% in 2013 and a further 23% in 2015 to 1,757 tonnes. Approximately 60% of the cargo is inbound and unloaded at YLW. Tonnages for the period 2005

<sup>5</sup> 2015 values not available from Statistics Canada as of February 16, 2016



to 2015 were available from one carrier accounting for a third of the total tonnages and indicated their cargo handled fluctuated, but on average increased by an average of 1.1% per year over the ten years. All of this growth, however, was due to increases in inbound cargo.

**Exhibit 2.9**  
**Air Cargo by Direction at YLW, 2010-2015**



Kelowna Flightcraft has its base at YLW and operated freighter services throughout Canada on behalf of Purolator until March 15<sup>th</sup> 2015 when their contract expired. They operate one weekly scheduled courier flight from YLW and also provide on demand charter air cargo service. FedEx also provides courier services out of YLW. Some cargo at YLW is also carried in the belly of passenger aircraft on scheduled passenger service. A breakdown of the types of cargo handled at YLW was provided by two of the smaller cargo carriers and items included airline company materials (e.g., aircraft parts), wine, fruit, personal effects, general cargo and kenneled animals.

**2.1.4 BASED AIRCRAFT**

YLW had 101 aircraft based at the airport in March 2015. Exhibit 2.10 presents a breakdown by aircraft type and operator segment. Two-thirds of the based aircraft were owned by commercial operators and included 17 narrow-body jets, 4 wide-body jets, 30 turboprops and 9 helicopters. All 33 privately owned aircraft were piston. The operators with the most based aircraft were Carson with 33, Kelowna Flightcraft with 20, and Flair Airlines with 7. The loss of the large contract with Purolator could affect the numbers of aircraft operated by Kelowna Flightcraft and based at YLW in the future.





**Exhibit 2.10  
Based Aircraft at YLW by Aircraft Type and Operator Segment**

| Type       |              | Commercial | Private | Total |
|------------|--------------|------------|---------|-------|
| Fixed Wing | Piston       | 5          | 33      | 38    |
|            | Turboprop    | 30         |         | 30    |
| Jet        | Business Jet | 3          |         | 3     |
|            | Narrow-body  | 17         |         | 17    |
|            | Wide-body    | 4          |         | 4     |
| Helicopter |              | 9          |         | 9     |
| Total      |              | 68         | 33      | 101   |

Note: Numbers as of February 2015

## 2.2 HISTORIC AND CURRENT AIR SERVICES

In June 2016, YLW was served by seven airlines providing scheduled or major charter service, including:

- Two mainline Canadian operators (including their regional affiliates) – Air Canada (including Air Canada Express) and WestJet (including Encore);
- Two regional operators – Central Mountain Air (CMA) and Pacific Coastal Airlines<sup>6</sup>;
- One U.S. based operators – Alaska Airlines (operated by Horizon); and
- Two airlines providing major charter services – Air Transat and Sunwing.

These carriers link Kelowna to eight destinations year-round, including seven domestic (Vancouver, Calgary, Toronto, Edmonton, Victoria, Cranbrook, Prince George), and one U.S. (Seattle). YLW also has service to six seasonal destinations, including two in the U.S. and four in Mexico. A number of charter carriers also provide domestic passenger service from the air terminal building (ATB) in 2014/2015, including Air North, Flair Airlines and Canadian North, and the private operator, Suncor, although this declined in the second half of 2015.

### 2.2.1 TRENDS IN PASSENGER SERVICES

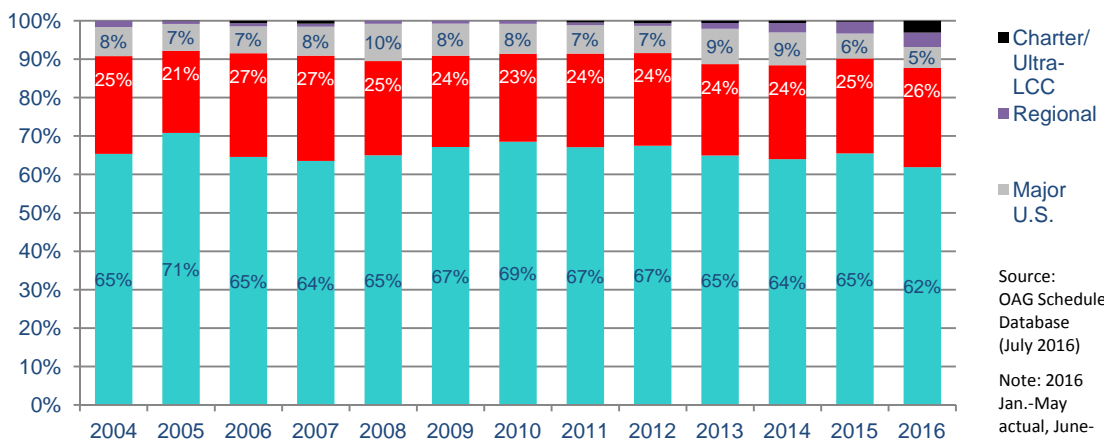
WestJet accounts for almost two-thirds the available seat capacity at YLW, as shown in Exhibit 2.11, but this is anticipated to drop to 62% in 2016 (based on published schedules). Air Canada’s share has remained at around 25% during that period, while the share for U.S. based airlines has been in the range 7-10% of capacity, but is expected to fall to 5% in 2016. Regional carriers account for only 3% of seats, up from 1% in the past 10 years, and charter/ultra low-cost carriers’ share of seats is anticipated to be 3% of the total in 2016 with the commencement of service by NewLeaf.

<sup>6</sup> Northwestern Air suspended service to Red Deer in mid-March 2015





**Exhibit 2.11  
Market Share of Departing Seats from YLW by Airline Group, 2004-2015**

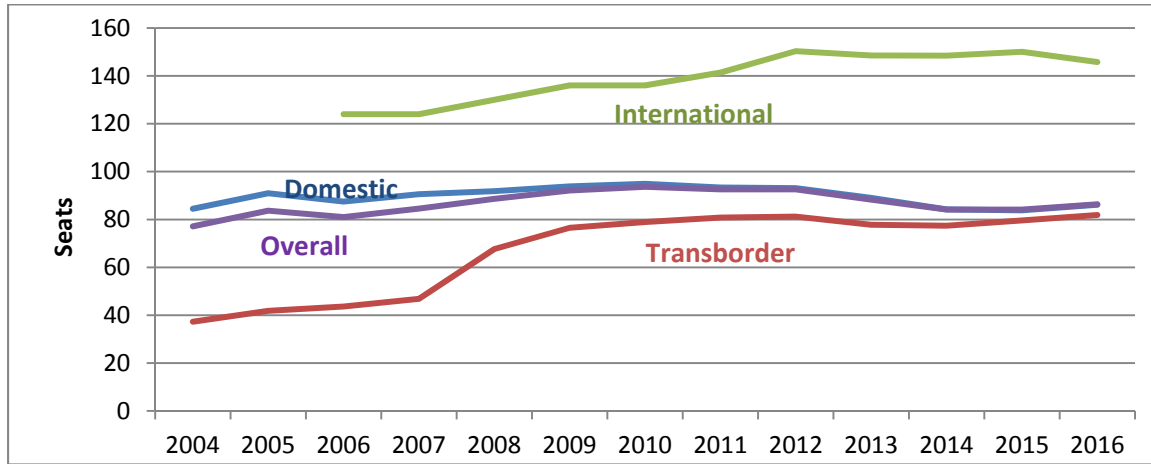


There is competition for the three major domestic markets (Vancouver, Calgary and Toronto) plus two international markets, but in most of the smaller markets competition is provided by connecting service. Competition to U.S. destinations was relatively strong in 2014 with both Alaska and United offering connecting service through U.S. airports; and Air Canada and, to a lesser extent WestJet, through YVR and YYC, to most major destinations. WestJet also serves the major winter seasonal markets (Los Vegas and Phoenix). However, competition decreased in 2015 with the suspension of United Airlines service in April. United previously operated a service to Los Angeles from late 2012 and they switched the service to San Francisco in September 2015 due to scheduling issues at Los Angeles International Airport.

The size of aircraft serving YLW, as measured by the average number of seats per aircraft, has not changed significantly over the past 12 years – see Exhibit 2.12. After increasing steadily to an average of 94 seats per aircraft in 2010, it has declined to 86 in 2016 – the same size as in 2007-2008. Aircraft size increased in the transborder sector with the replacement of the Dash 8-300 with larger Q400s in 2008-2009; while use of the Q400s rather than larger jet aircraft and the increase in commuter flights in the 2011 to 2014 period led to a decline in average seats on domestic services. The size of aircraft on service to other international markets has increased with the introduction of B737-800s on many of these services.

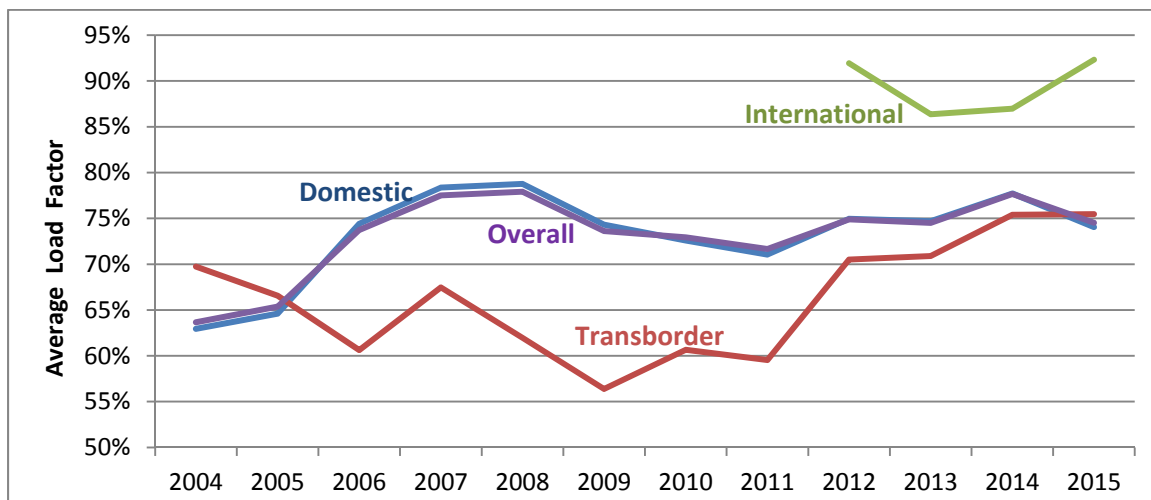


**Exhibit 2.12**  
Average Seats per Aircraft from YLW by Sector, 2004-2016



Average load factors on flights from YLW have for the most part followed industry trends over the past 10 years. Exhibit 2.13 presents the average E/D load factors by sector for the period 2004 to 2015. Note that E/D load factors do not include the transit passengers onboard and actual loads can be significantly higher on some flights. Domestic load factors have remained in the 70-78% range since 2006. They declined to the low 70% following the 2009 recession, but increased back to 78% in 2014 before falling to 74.2% in 2015. Including transit passengers, average domestic load factors are likely around 76%. Transborder load factors were low during much of this period, but increased sharply in 2012 to over 70% and averaged 75% in 2014 and 77% in 2015. Other international flights are all operated on a seasonal basis, many by charter airlines and load factors have been high, in the 87-92% range between 2012 and 2015.

**Exhibit 2.13**  
Average Enplaning/Deplaning Load Factors by Sector, 2004-2015





## **2.4 DRIVERS OF AIR TRAFFIC GROWTH**

There are a number of drivers of air passenger traffic at YLW. These are discussed below.

### **2.4.1 POPULATION AND DEMOGRAPHICS**

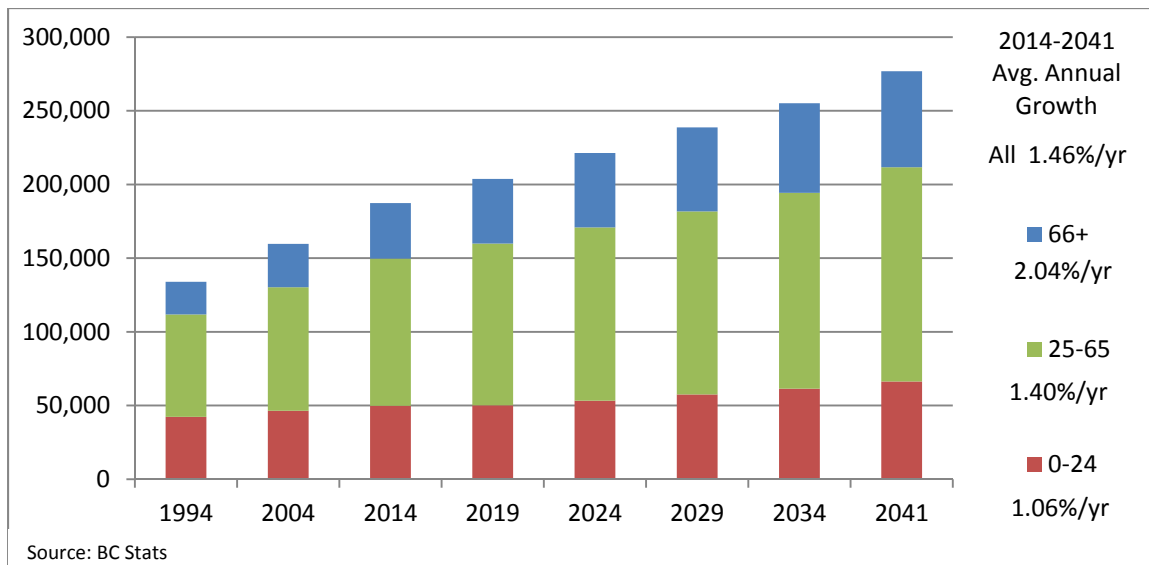
Population growth in Kelowna and the Central Okanagan region (including Peachland, West Kelowna, Kelowna and Lake Country) has been a strong driver of air travel demand at YLW. High migrant inflows to the Central Okanagan have resulted in the population doubling in the 25 years, 1986 to 2011 from 93,000 to 183,000. Average annual growth rates average 2.75% during this period. This is well above the population growth of B.C. as a whole, which averages only 1.5% per year over this period. The population of the City of Kelowna has also grown strongly with a consistent growth rate of around 1.82% per year for the 15 years from 1996 to 2011. BC Stats data indicates that that population growth in the Central Okanagan has slowed greatly in the past few years averaging only 0.7% per year over the 3 year 2012, 2013 and 2014.

BC Stats forecasts population growth in the Central Okanagan to slow from 1.69% per year between 2014 to 2019 to 1.06% per year between 2034 and 2041. Growth over the 27 year period, 2014 to 2041, is forecast to average 1.40% per year. All of this growth is forecast to be due to people moving to the region as the fertility rate is forecast to fall to close to zero. The high proportion of migrants to the region should stimulate air travel associated with visiting friends and relatives. Population growth in the Central Okanagan is forecast to be 36% higher than that of B.C. as a whole where growth is expected to average just 1.03% per year over that 27-year period. The City of Kelowna Official Community Plan (OCP), released in November 2013, projected a population of 161,701 in 2030 which corresponds to an average annual growth rate since 2011 by 1.7%, which is significantly higher than the more recent forecasts by BC Stats.

The age structure of the population is also an important factor in air travel demand as children and elderly people travel far less than people in the 20 to 70 year age group. This age group is strongly correlated to disposable income as people in this age group are likely to have much higher incomes than other age groups. The population of the Central Okanagan is forecast to age over the next 25 years with the proportion of people aged over 65 increasing from 20% to 24%, and aged 80 or older increasing from 5.8 to 8.8%. This is due to the much faster growth rates forecast for the older age groups as shown in Exhibit 2.14. The Okanagan Business Development Commission has recognized that an aging population could cause a shortage of workers in the region and has implemented a strategy to bring more young workers and their families to the region. This strategy was successful in 2014 and could, if this continues over the longer term, reduce the aging of the population and spur economic growth and air travel demand.



**Exhibit 2.14**  
**Actual and Forecast Population of Central Okanagan and Growth Rates by Age Group, 2014-2041**



**2.4.2 INCOME AND LOCAL ECONOMY**

The propensity to travel by air grows as people’s disposable income rises and/or business activity increases. The Gross Domestic Product (GDP) is a measure of an economy’s total economic activity and includes not only the income of the population, but the activity of businesses in the area. Thus, GDP includes the effects of changes in demographic factors such as population and age structure, as well as personal and business related income. Real disposable income (RDI) is a similar measure related more to the total amount of income residents have available for spending on activities such as travel and has been found to be strongly correlated with air travel demand.

As many of the passengers at YLW are visitors to the region, air travel demand is related to not only the GDP and RDI of the Central Okanagan region, but of Canada as a whole for domestic traffic, and of the U.S. for transborder traffic. Almost all travellers on other international flights at YLW are residents of the area and thus other international traffic is most strongly related to local regional GDP and RDI. Travellers from overseas access the Okanagan via large international airports such as Vancouver or Calgary and travel on domestic flights to Kelowna and thus, domestic traffic is related to a small extent to economic growth in the regions of these visitors.

Central Okanagan is the hub of the Okanagan Valley and has a well-diversified economy with health care, education, construction, high technology, manufacturing, agriculture and tourism being key economic drivers. The warm climate and sunny skies (boasting 2,000 hours of sunlight annually) makes this area one of the more important agricultural centres in the province and is



one of many attractions for tourists. The Central Okanagan has the most small businesses per capita in Canada. Many of these are professionals and consultants that choose to live in the area for the lifestyle it affords and travel a lot by air on business. The IT sector employs over 6,500 workers in the region and has strong connections to Silicon Valley and Los Angeles. For example, Disney bought out a Kelowna startup IT company and now has 400 employees in the area.

The University of B.C. Okanagan Campus (UBCO) is located in Kelowna and is a significant economic driver for the community. With 15,000 students, two-thirds from outside the area, including international students, the staff and students generate significant economic activity and air travel in the area. The Kelowna General Hospital, which had a \$218 million expansion in 2012, is also an important generator of economic activity in the region. The construction industry is buoyant due to the population growth and increasing demands for residential, business and commercial space, including a \$120 million building downtown for businesses, a 21 story condo complex and a 24-story 200-room hotel and convention centre.

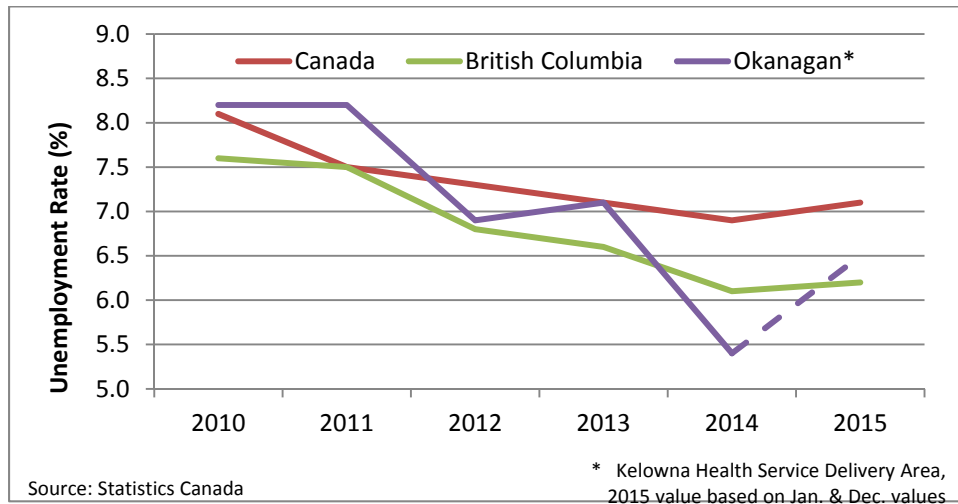
The Okanagan had approximately 5,000 workers that commute to work in Northern B.C. or Alberta, mostly on rotational shifts, in 2014. This segment alone represented approximately one hundred thousand passengers per year travelling through YLW in 2014. These workers, many with families in the Okanagan, spend most of their earning in the Okanagan. The recent drop in the price of oil has led to a slowdown in construction activity in the oil sands and led to a reduction in commuter workers, which negatively impacted traffic at YLW in 2015. Construction activity in the Central Okanagan remains strong and many will find work locally. Also, the commencement of work on the Site C hydro dam project in B.C and potential LNG projects in northern B.C. could create demand for commuter workers using YLW in the future.

The median household income of residents of the Central Okanagan rose by an estimated 2.5% per year from 2011 to 2014 to \$60,360, which is consistent with provincial trends<sup>7</sup>. Kelowna's unemployment rate closely followed that of B.C. and Canada over the five years from 2009 to 2015 except for 2014 when it was significantly lower (see Exhibit 2.15). The unemployment rate for Kelowna was 2.9% and for the southern interior BC region was 6.7% in January 2015 but increased to 7.5% in January 2016. The labour force participation rate was close to that for Vancouver and B.C. as a whole (63%) in 2014, but declined in 2015 and was 59.3% in January 2016. This is much lower than for major Alberta cities such as Calgary and Edmonton (68-70%). GDP data is not available for Kelowna or the Central Okanagan, but the City estimates that economic activity grew by over 10% per year in the four years 2005 to 2008. This is consistent with the growth in population and per capita incomes in B.C. during that period.

<sup>7</sup> Source: Environics Based on National Household Survey and Regional District of Central Okanagan



**Exhibit 2.15**  
**Unemployment Rate in Okanagan, B.C and Canada – 2010 to 2015**

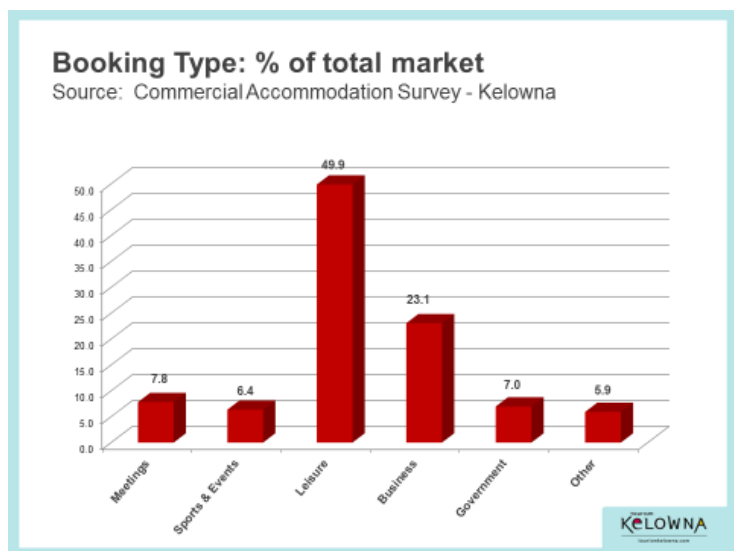


### 2.4.3 TOURISM

The drivers of tourism growth are largely related to the same factors affecting air passenger travel in general such as population, age structure and income in the origin region, and travel costs. Tourism growth also depends on improvements to tourism infrastructure, including hotels and transportation, security, and tourism marketing.

Tourism is a significant component of the economy of Kelowna and the Central Okanagan and the region attracts many visitors from all over Canada and internationally. International travellers typically fly into Vancouver or Calgary and either travel by road for fly on domestic flights to YLW. The major tourism segments in the Central Okanagan are:

- Wine travel, primarily April to October;
- Skiing / snowboarding / back country in winter;
- Lake / hiking in summer
- Meetings / conventions / festivals / sporting events;
- Golf in April to October; and
- Food & agri-tourism (farm/orchard/ farmers market visits; farm to table food movement).







In 2011, 1.5 million tourists visited the Kelowna area, up 27% from the number in 2006 (6%/year). In 2014, the number of tourists was expected to reach 1.7 million. Leisure accounts for almost half of the booking of overnight accommodation in Kelowna. Air travel is particularly important for meetings/conferences, events, and golf and ski vacations, while summer vacation travellers tends to predominantly access the area by road. While all segments have been growing, summer leisure tourism has been growing faster than other segments, but this segment has lower proportion travel by air than tourism overall. It is estimated that roughly 400,000 tourists accessed the Kelowna area by air in 2014, representing almost a quarter of all tourists to the area<sup>8</sup>.

Most tourists come from Canada, the large majority of these from B.C. (60%) or Alberta (23%). Approximately 17% come from more distant provinces where all would likely fly, with Ontario being the largest of these accounting for 7% of domestic tourists. International tourists account for about 10% of tourists, the majority of these from the U.S. (mostly Washington State), with 1-2% of the total coming from Europe, and a similar number from other international regions.

Kelowna Tourism uses a very targeted marketing approach to align with drive and fly markets and travellers within these markets that have a demonstrated interest in the experiences available in the area. Significant improvements in consumer and on-line research techniques has allowed for marketing to become very efficient, focused and targeted. Kelowna Tourism has stable funding which increases as tourism grows. With the continuation of strong marketing of tourism in the area, the numbers of tourists are expected to grow in line with growth in population and disposable incomes of the major tourism markets for the region. Growth in tourism infrastructure will for the most part be by incremental improvements of many smaller facilities. Only one major new tourism development is planned for the region to open in the next four years, a 24-story hotel and convention centre in Kelowna. No other developments are planned which by themselves would significantly impact air travel at YLW.

The Thompson Okanagan Tourism Association (TOTA) markets the wider Okanagan region and has a 10-year strategy for the region to be a highly successful year-round destination, with a strong and attractive image that is clearly differentiated from its competitors. TOTA identifies the key primary geographic markets for the Okanagan Valley as B.C. and Alberta. Many tourists from these provinces will access the area by road. Secondary markets include Manitoba, Ontario, western United States, the UK, Germany and Australia. Emerging markets that have a growing interest in the Valley include Florida, the eastern US, Mexico, Brazil, India and China. All tourists from the secondary and emerging markets will access the region by air, although some may fly from YLW. The strategy is focused on achieving a target of 3% real growth in revenue

<sup>8</sup> Kelowna Tourism indicated that visitor travel represents approximately 50% of total air passengers at YLW. Half the deplaning passengers at YLW, or approximately 400,000 passengers are deemed to be tourists. Assuming number of visitors in 2014 is 1.7 million, roughly 24% of tourists to the region are coming by air. For 2011 the ratio was 23%.



per year throughout the Okanagan region and in each Regional District and sub-region.

#### **2.4.4 TRAVEL COSTS**

Reductions in the cost of travel have been a significant driver of increases in air travel over the past 20 years. Real airfares for travel within Canada were 30-35% lower in 2014 than in the early 1990s despite the increase in fuel costs. The emergence of the low-cost airline model catering primarily to non-business travellers has reduced airfares and stimulated new demand for air travel. This has particularly benefited markets such as Kelowna which have a high proportion of leisure travellers. Leisure travellers are more price sensitive than other travellers and would travel more due to availability of low-cost air service. Network air carriers have had to improve the cost efficiency of their operations and lower their airfares to compete with the low-cost carriers, further stimulating traffic. Increases in airport and air navigation charges (discussed later) and ancillary fees (for checked bags, meals, seat selection, etc.) have offset some of this decline in airfares.

Reductions in airline costs per passenger have been achieved through improvements in various aspects of airline operations, including:

- **Ticketing** – electronic tickets, direct sale of tickets through the internet, reduction in fees paid to travel agents, common-use self-serve terminals (for obtaining boarding passes), etc.;
- **Customer service efficiencies** – provision of many customer services through their internet sites and email, including notices of schedule and flight changes, booking itineraries and confirmations, etc.;
- **Capacity management** – better matching of capacity to demand levels resulting in higher load factors, lower operating costs per passengers and higher aircraft utilization;
- **Controlling employee costs;**
- **Leasing aircraft** – leasing part or all of their aircraft fleet which allows greater flexibility to match capacity to demand; and
- **Improvements in aircraft design** – allows carriers to better match the aircraft to the properties of the route, provide improved fuel efficiency, and lower noise levels.

While further improvement in many of these aspects can be expected in the future, some will reach a point where further savings are difficult to achieve. For example, improvements in load factors of 10-15% have been achieved by most airlines over the past 20 years. However, with average load factors over 80% for many carriers, the scope to improve them much further is limited. It is generally accepted that the effective maximum average load factors for scheduled carriers is in the 85-90%.

Another important component of travel costs is the cost of aviation fuel. With the price of oil at around CND\$60 per barrel in 2015, fuel accounted for 15% of operating costs, much lower than





30% of operating costs when oil was priced at around CND\$100 per barrel in 2014. Due to competitive pressures, airlines are slow to increase fares as prices rise but must eventually do so to cover costs; while when prices fall they are slow to reduce prices without strong competitive forces. Oil prices (in US dollars) fell by 70% between August 2014 and January 2016 due to various factors including the expansion of oil production from alternative sources such as shale oil in the U.S. and oil sands in Canada, export sanctions lifted on Iran, weak global demand, and an unwillingness of key suppliers not to reduce supply. The more costly producers are scaling back production and delaying expansion of new production and this is expected to lead to a gradual increase in the price over the coming years as world demand grows. Forecasters are predicting the price of oil will average US\$43 per barrel in 2016 and increase to around \$48 in 2017 increasing to \$60 in 2020, and average around US\$65 in the following ten years, barring wars and other conflicts impacting supply. However, the growing demand in emerging economies such as China, India and Brazil, as well as the higher cost of developing most new petroleum sources, could possibly increase the price of oil to \$75 or more per barrel in the longer term.

Small increases in the real (inflation adjusted) price of oil of around 0.5% per year will not significantly affect airfares as this increase can be offset by improvements in fuel efficiency of airline fleets. However, price increases of more than this will start to affect the cost of air travel and travel demand.

The impact of higher oil prices on airline travellers is threefold: first, fare increases raise the cost of airline travel; second, increased energy prices faced by consumers in other (non-airline travel-related) areas tend to reduce the discretionary income available for airline travel; and thirdly, people in regions benefiting from higher oil prices have greater income, offsetting the impacts of airfare and other price increases, and will likely travel more (e.g., residents of Alberta).

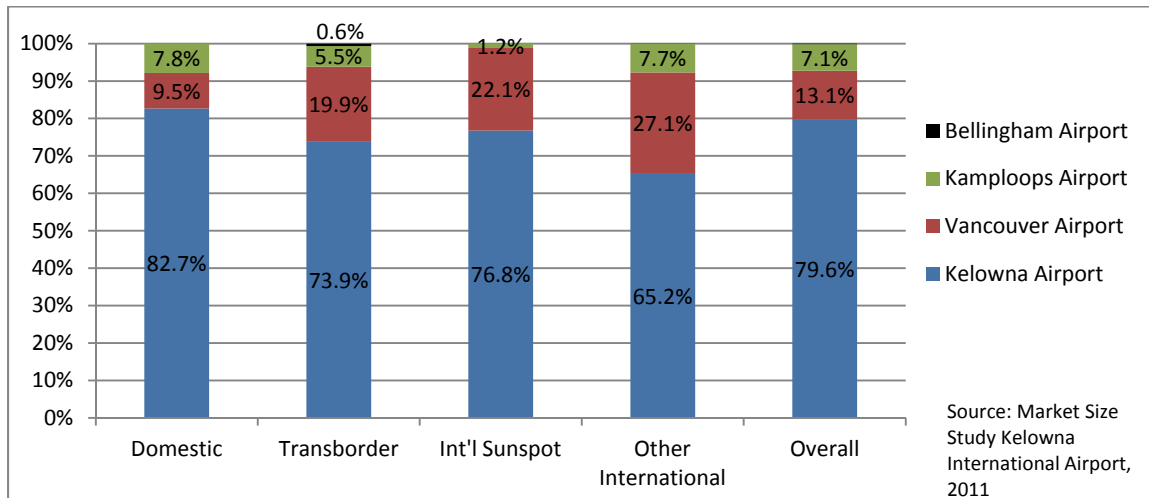
An associated cost is charges and/or taxes to reduce the amount of greenhouse gas (GHG) emissions emitted when burning fossil fuel. B.C. introduced a carbon tax on 2008 which increased from \$10 to \$30 per tonne over the years 2008 to 2012. The tax applies to jet fuel, but international flights are exempt. While a number of jurisdictions have instituted a carbon tax or carbon trading scheme, there is no national scheme and their scope and impact is limited. However, at the United Nations Paris Climate Change Conference in November 2015 the urgency for reductions in GHG emissions was acknowledged, and countries, including Canada, have committed to instituting measures to significantly reduce GHGs. Some form of carbon pricing is likely across Canada in the next year or two and this would likely increase the price of air travel and dampen air travel growth to some extent. The carbon price, will likely increase in future years in order to reach GHG emission targets and could significantly impact air transportation demand over the 30-year planning period.



**2.4.8 COMPETITION FROM NEARBY AIRPORTS**

The Central Okanagan region is the primary catchment area for YLW. However, YLW has long experienced competition for travel from Vancouver Airport (YVR), particularly for international travel, and to a much less extent, from Kamloops Airport. YVR, 400 km from Kelowna, has multiple airlines with non-stop flights to the U.S., Europe and Asia with fares often significantly lower than flying out of YLW. There is also a greater choice of charter flights to sun destinations which attract some Kelowna residents. A market study for YLW conducted in 2011 estimated the breakdown of the local airports used by origin/destination passengers in the Central Okanagan region and the results are summarized in Exhibit 2.16<sup>9</sup>. Overall 80% of passengers used YLW and 20% were leaked to other airports, mostly YVR. It was estimated that 27% of travellers between Kelowna and Europe, the Middle East and Asia use YVR and travel by car or bus to/from Kelowna. Without direct service, this is unlikely to change significantly. Leakage of domestic passengers was much smaller, 17.3%, and will decrease as traffic grows and air services improve at YLW. Leakage to international sunspot destination, accounting for 23% of Kelowna area passengers to those destinations in 2010, will also decrease as demand grows and more flights are offered to those destinations from YLW.

**Exhibit 2.16**  
**Proportion of Kelowna Catchment Area Passengers by Local Airport Used, 2010**



Bellingham Airport in Washington State is 367 km (3 hours 45 min drive) from Kelowna and attracts many Kelowna area residents travelling to the U.S. Travellers are attracted by the cheap fares to U.S. destinations, especially on low-cost airlines, and lower fees (by avoiding the ATSC and U.S. customs & immigration fees, and with lower U.S. taxes, air navigation and airport fees).

<sup>9</sup> The study was updated in 2016, but findings provided only gave the airport breakdown of passengers for the full catchment area (including the Northwest, Northeast and Southern Okanagan areas), not just Central Okanagan



Leakage in 2010 to Bellingham was estimated to be approximately 0.6% of travellers to the U.S., mostly vacation travellers, but this has likely increased as low-cost carriers have increased service at Bellingham Airport and more people are aware of the option. Almost 20% of Kelowna area transborder passengers in 2010 used YVR, but this is likely less now, possibly 15%, with the introduction of the Phoenix and Los Angeles/San Francisco services in 2011 and 2012.

The Okanagan region has three main airports, YLW, Kamloops and Penticton. Each has Air Canada and WestJet service and all have schedule service to YVR and YYC. YLW also has service to Toronto and Seattle and several regional airports, and seasonal service to several U.S. and Mexican destinations, plus greater frequencies and larger aircraft than Kamloops and Penticton. Kamloops and Penticton service their local area, but YLW attracts air travellers from throughout the Okanagan region due to the superior services it provides. A study in 2011 estimated that 18% of the passengers using the Kelowna airport come from outside of the Primary Kelowna catchment area, broken down as follows:

- 8% from Revelstoke/Shuswap;
- 7% from South Okanagan (prior to WestJet service from Penticton); and
- 3% from Kamloops.

The proportion from the Southern Okanagan has likely decreased significantly to around 4% with the commencement of WestJet Encore service from Penticton to Calgary in 2014. In future, as travel demand grows, air services are expected to improve and traffic to grow at all three airports. The levels of leakage from Penticton and Kamloops airports to YLW will however likely remain similar or increase, as YLW is more likely to get services to new destinations given its central location in the area and greater population.

Overall, YLW can be expected to recover some of the leakage to YVR and to continue to capture and possibly increase passengers from other parts of the Okanagan Valley in the future as demand rises and air service at YLW continues to improve.

#### **2.4.9 EXCHANGE RATE**

Changes in exchange rates can significantly affect the total cost of an international trip. An increase in the value of the Canadian dollar will make it cheaper for Canadians to travel abroad and more expensive for people travelling to Canada. If the numbers of people travelling between the Okanagan and another country are split equally between Okanagan residents and visitors, the overall effect of a change in the exchange rate would be negligible. However, the number of local resident travellers typically exceeds the number of visitors by a factor of 2:1 in Canada.

The value of the Canadian dollar increased from around US\$0.65 in 1996 to close to parity between 2010 and 2013. This resulted in a reduction in total travel costs by Canadians to the



U.S., Mexico and the Caribbean (costs in Mexican and Caribbean vacation areas closely follow the U.S. dollar), but increased costs for travellers from those regions. As the large majority of the travellers to/from YLW are Canadian, the increase in the exchange rate over that period stimulated total travel demand. However, in the past year the value of the Canadian dollar fell to US\$0.70 before recovering to around US\$0.77 which has increased the cost for Canadians travelling to the U.S. and Mexico, and has, to some extent, discouraged travel, particularly to the U.S. However, the fall in the value of the dollar may contribute to stimulating demand for domestic travel to and from the region.

#### **2.4.5 OTHER FACTORS**

**Taxes and charges on air tickets** levied on travellers by airports and governments (including security, immigration and air navigation charges) increase the cost of travel and can account for a significant proportion of the fare, often over 30%. Airport and air navigation fees have increased significantly over the past 20 years, off-setting some of the decrease in airfares. However, the increased charges have resulted in improved efficiency of airport and air navigation systems, saving time and fuel for airlines and improving the traveller experience.

The higher level of ticket taxes and fees in Canada than the U.S., and the U.S. immigration fees applied to transborder air tickets but not to travellers crossing at land borders, has resulted in a large number of people driving to U.S. border airports rather than flying from Canada. The impact on Kelowna transborder traffic is low compared to many Canadian cities. Bellingham Airport, with service by several low-cost U.S. airlines, likely attracts only about 1% of people travelling between Kelowna and the U.S. based on the 2011 YLW market study.

**Air transport liberalization** can be a macro-driver of traffic growth. The signing of the Open Skies agreement between the U.S. and Canada in 1995 led to a large increase in non-stop service and airline competition for flights to the U.S. The YLW Horizon/Alaska service would likely not have commenced without the Open Skies agreement. No new agreements are likely to significantly impact YLW traffic over the forecast period.

**Air service characteristics** will influence demand and travel patterns to/from specific markets. Strong growth in low-cost airline services in Canada, the U.S., and other countries, and in charter services internationally has led to reductions in airfares and increase service to leisure destinations. WestJet's expansion to international destinations has greatly benefited YLW. Expansion of Air Canada Rouge and possible startup of new ultra-low cost airlines Canada will continue to stimulate growth in air travel demand in Canada. Much of the growth in air travel in the developed world over the past 20 years is associated with the expansion of low-cost carriers.

Increases in direct, particularly non-stop, air service also stimulate travel demand. The expansion of services to Mexico since 2005 by low-cost and charter carriers, has led to strong growth in passengers to this region. Similarly, reductions in direct service will decrease demand



given the likely reduction in competition. Service on some new routes, likely to regional airports in B.C. are likely over the forecast period, and possibly a seasonal charter flight from Europe.

**Security** concerns affect people’s propensity to fly, particularly for U.S. travellers. Measures to improve security have been successful in deterring terrorist in developed countries with terrorists tending to focus on softer targets. However, these measures can also discourage air travel as they are costly. The Air Transport Security Charge (ATSC) at \$14.69 round-trip domestically, is approximately 4% of the average domestic airfare. Line-ups for security screening and uncertainty in time to get through security add to total travel time and can significantly erode the travel time advantage for short-haul flights. Also, security screening procedures such as body searches and scans are annoying and intrusive, and many travellers are concerned that frequent scans can be a health hazard. No significant changes in security and its impact of air travel demand is envisaged during the forecast period, but any event could significantly impact traffic growth.

**Airport facilities** can significantly impact the amount of traffic at the airport. Runway and terminal congestion can restrict the number of aircraft arrivals and departures, as well as the number of aircraft that can be gated at any given time. This typically only restricts air traffic during the peak periods. Runway congestion usually has a greater effect on traffic levels than congestion in the terminal. Airport facilities such as the runway length can also impact the air services that can be provided, either restricting the service, or requiring the use of inefficient aircraft which could jeopardize the service. The extension of the runway at YLW to allow B767-300 flights from Europe has removed an obstacle to this service and opens the way for a possible flight in the future.

**Interconnectivity**, including trade, and residents and business ties with people across Canada, the U.S. and internationally, also affect the demand for air travel. Greater use of web-based conferencing (including both shared computer screen displays, voice over internet and/or video) may also impact air travel demand, particularly during economic downturns or periods of government restraint. However, past experience has shown that people and businesses prefer face-to-face meetings and that travel usually recovers once economic conditions improve. Interconnectivity is a strong driver of air travel due to the large number of people moving to the region and high numbers of professionals and consultants living in the area.



## **3.0 ANNUAL TRAFFIC FORECASTS**

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### **3.1 INTRODUCTION**

This section outlines the structure of the model for forecasting annual passenger, aircraft movement and air cargo traffic, and the numbers of based aircraft. The input variables, and parameter values for the model, and the assumptions made, are provided and the traffic forecasts presented in this section.

### **3.2 FORECASTING MODEL**

#### **3.2.1 MODEL STRUCTURE**

The model forecasts total passengers and breaks downs passengers by sectors using forecasts of the percentages of passengers in each sector. While it is preferable to forecast origin/destination (O/D) passengers, E/D passengers forecast provided, as less than 1% of passengers are connecting at YLW and reliable historical data on O/D passengers are unavailable.

Passenger traffic in future years is forecast using an estimated value for 2016 and forecasts of the change in traffic due to changes in various factors for future years. Elasticity parameters are used which provide estimates of the percentage change in passengers due to a given percentage change in a specific parameter. In addition, adjustments are made which incorporate the effects of other factors which could not be included in the mathematical model calibrated on historical traffic. These include, for example, announced changes in air services, the impact of major tourism events, development projects and changes in leakage to other airports. The estimated value in 2016 takes into account changes in airline seat capacity (as reported in February 2016), and expected changes in load factors and economic factors in 2016. The reported seat capacity is typically fairly accurate for the next six months, but can change significantly for the period of six months to a year ahead as airlines adjust capacity to match the evolving demand levels. Load factors can also change significantly so that changes in scheduled future seat capacity are only a guide to possible future passengers.

The following factors are incorporated into the model:

- RDI and GDP for B.C. and Canada;
- Population growth for Central Okanagan;
- Change in average airfare which includes changes in oil price, environmental charges, fleet fuel efficiency, airline efficiency improvements, etc.; and
- Average exchange rate change with the U.S. dollar which affects transborder and international travel.





It should be noted that the elasticities for travel cost, RDI and GDP apply to changes in real costs and real GDP, i.e., excluding changes due to inflation.

Population, RDI and GDP were found to be strongly correlated with each other and, similarly, GDP and RDI values for B.C., Canada and the U.S. were also found to be strongly correlated. When the factors (independent regression variables) are highly correlated it is not possible to accurately estimate the relationship with each due to multi-co-linearity. As GDP and RDI forecasts were not available for Kelowna or the Central Okanagan, but population forecasts were available from BC Stats, the GDP and RDI for the Central Okanagan were approximated by multiplying the average RDI and GDP per capita for B.C. by the forecast population of the Central Okanagan. These were then examined for inclusion in the model. Where it was appropriate, the average RDI growth rates for Central Okanagan and Canada were used rather than the rates separately to avoid the problem of multi-co-linearity. A similar approach as used for GDP.

### **3.2.2 MODEL CALIBRATION AND PARAMETER VALUES**

The elasticity parameters were determined using historical data for each factor and E/D passengers from 1996 to 2015. Sub-periods within this 20-year timeframe were also considered to ensure coefficients were relatively stable.

RDI, GDP and population values for B.C. and Canada were obtained from the Conference Board of Canada, Central Okanagan population values were obtained from BC Stats, and the Canadian-US dollar exchange rate were obtained from the IMF World Economic Database. Canadian domestic and international airfares were obtained from Statistics Canada.

Regression analysis [ $\log(Y)$  to  $\log(Xs)$ ] is used to estimate the elasticity parameters. Various combinations of the factor-variables were examined. The RDI or GDP measure with the highest explanatory power was used in the model. Factors which were not at all significant were excluded.

Checks were made to ensure that the values were reasonable – the correct sign and in the range of elasticity values found for other airports from published research and past experience. Elasticities tend to decrease over time, particularly for high growth regions and traffic segments. The data was examined to determine if such an effect was evident for traffic at YLW.

RDI was found to be more closely related to passenger travel at YLW than GDP. The RDI Index for Central Okanagan was found to have the strongest correlation with passenger traffic and was used in the model. An elasticity of 1.45 was estimated. The elasticity is fairly high and shows a decreasing trend over the historical analysis period. This is incorporated into the forecasts with the elasticity falling to 1.36 in 2025, to 1.29 in 2035 and to 1.24 in 2045. A low elasticity with exchange rate of -0.08 was found and is consistent with the expected effect of the exchange rate on travel demand. Fare elasticities estimated were found to be of the wrong sign, likely due



to the correlation between airfares and RDI, and the use of average national domestic airfares. Other studies have found airfares to impact travel demand and a conservative estimate of their effect was incorporated in the model. An elasticity value of -0.4 used corresponds to a low elasticity for a route of 0.6 multiplied by a factor of 0.7 to account for all routes being affected by the fare change (factors based on published research). The immediate effect of factors affecting airline costs may not lead to expected change in fares initially due to competitive pressures, but over the longer term the changes in costs will be largely be reflected in airfares.

### **3.2.3 AIRCRAFT MOVEMENTS**

Aircraft movements were forecast separately for itinerant by operator type (commercial passenger air carrier, other air carrier, other commercial, private and government) and for local movements.

The numbers of commercial passenger aircraft movements were determined based on the forecast numbers of E/D passengers, and the average load factors and average numbers of passenger seats on flights.

Other commercial, private, government and local movements were forecast based on previous trends at YLW, economic forecasts, outlook for the industry, and input from major operators.

### **3.2.3 BASED AIRCRAFT**

The numbers of based aircraft at YLW were forecast separately by operator type and aircraft category. Historical data on based aircraft were not available and forecasts are based on information provided by the air carriers and assuming similar growth trends as the forecast numbers of aircraft movements of those operator and aircraft types.

## **3.3 PASSENGER FORECASTS**

Passenger forecasts were prepared under three scenarios: a Medium Case or Most Likely Scenario, a Low Case Scenario, and a High Case Scenario. The assumptions and resulting forecasts under each scenario are presented below.

### **3.3.1 SCENARIO ASSUMPTIONS**

The forecasts under the Medium Case Scenario are based on the following assumptions (see Exhibit 3.1):

- RDI for B.C. and Canada based on forecasts by the Conference Board of Canada with adjustments to reflect decline in oil prices and economic outlook between when those forecasts were developed in Nov. 2015 and Feb. 2016;
- Population growth forecast by BC Stats;





- Growth rate after 2025 for B.C. RDI, not forecast by the Conference Board, was assumed to decline slowly after 2025, similar to the slowdown forecast for Canada;
- Exchange rates, which dropped to around \$0.70 in early 2016, recover slightly to average \$0.73 in 2016 and increase steadily to \$0.80 in 2020 and remain at that level throughout the remainder of the forecast period.

**Exhibit 3.1**

**Average Annual Growth Rates in Real GDP and Exchange Rate – Medium Case Scenario**

| Year      | C. Okanagan Population | B.C. RDI | Canada RDI | Exchange Rate |
|-----------|------------------------|----------|------------|---------------|
| 2016      | 1.70%                  | 2.05%    | 0.36%      | 0.76          |
| 2017      | 1.73%                  | 2.50%    | 0.1.88%    | 0.77          |
| 2018      | 1.71%                  | 2.53%    | 2.04%      | 0.78          |
| 2019      | 1.70%                  | 2.16%    | 2.24%      | 0.79          |
| 2020      | 1.69%                  | 2.85%    | 2.29%      | 0.80          |
| 2020-2025 | 1.62%                  | 1.68%    | 2.08%      | 0.80*         |
| 2025-2030 | 1.43%                  | 1.51%    | 1.95%      | 0.80*         |
| 2030-2035 | 1.22%                  | 1.50%    | 1.92%      | 0.80*         |
| 2035-2045 | 0.99%                  | 1.49%    | 1.88%      | 0.80*         |

\* Exchange rate at end of period

Airfares are forecast to decline in 2016 due to decline in fuel costs, then increase slightly to 2020 as fuel costs rise, then declining a little due to fuel efficiency and operational improvements before increasing again as price on carbon increases – see Exhibit 3.2. This is based on the assumptions:

- Oil Price – 2016 to 2020 prices are values used by major Canadian banks in their economic forecasts, medium term forecasts based on IEA industry statements, long-term forecasts assume price increases 0.5% above inflation rate;
- Airlines pass little of the fuel cost saving to reduce airfares in 2016 and when fuel costs increase in 2017 to 2020, pass only part of the cost increase to passengers in higher fares;
- Price on carbon (in 2014\$s) – B.C. current prices prorated to affect on airfares from Kelowna, national price on carbon starting at \$20/tonne in 2018 and increasing steadily to \$45/tonne in 2025, and to \$80/tonne by 2045 (national price not in addition to B.C. price so no impact until national price exceeds the B.C. price);



**Exhibit 3.2  
Average Price of Oil, Carbon Tax and Airfares– Medium Case Scenario**

| Year | Oil Price US\$ (WTC) | Price on Carbon \$/tonne | Avg. Domestic Airfare |
|------|----------------------|--------------------------|-----------------------|
| 2016 | \$43                 | \$13                     | \$200                 |
| 2017 | \$48                 | \$16                     | \$200                 |
| 2018 | \$50                 | \$20                     | \$201                 |
| 2019 | \$55                 | \$23                     | \$201                 |
| 2020 | \$59                 | \$27                     | \$201                 |
| 2025 | \$64                 | \$46                     | \$197                 |
| 2030 | \$68                 | \$55                     | \$199                 |
| 2035 | \$71                 | \$66                     | \$201                 |
| 2045 | \$78                 | \$80                     | \$203                 |

Notes: Carbon price and airfare values in constant 2014 \$s

- Fleet fuel efficiency improvement averaging 0.6% per year – based on efficiency of new aircraft entering fleet; and
- Non-fuel airline efficiency improvements of 0.7% in 2015, slowing to 0.5% by 2026 and to 0.4% by 2045

Other assumptions under the Medium Case Scenario include:

- Connecting passengers: no significant change, remains at approximately 1% of passengers
- Tourism – growth in-line with growth in RDI of BC and Canada, similar to past trends and in-line with growth targets;
- Leakage of traffic to Vancouver and Bellingham airports slows;
- Taxes – no new air traveller taxes, and taxes increase with inflation rate; and
- Security – continuation of threats but no terrorist attacks on aircraft leading to loss of life in North America.

Note that the Medium Case Scenario forecasts do not consider the impacts of the introduction of new ultra-low-cost carrier services. This provides a conservative reflection of initial service growth at YLW. Strong growth in air service, including an ultra-low-cost carrier, is included in the High Case forecasts.

The High and Low Case scenarios allowed for uncertainty in various model inputs, these included:

- Ultra low-cost airline New Leaf is assumed to commence services at YLW in mid-2016 using the proposed schedule in the High Case scenario;
- RDI annual growth rates will be approximately 0.4% lower for the Low Case scenario and 0.4% higher in the High Case scenario;



- Exchange rates were assumed to be \$0.02 to \$0.03 lower for the Low Case scenario and \$0.02 to \$0.05 higher for the High Case scenario;
- Changes in airfares, which are determined from oil price and airline factors, and were up to \$3 to \$18 higher for the Low Case scenario, and \$2 to \$16 lower for the High Case scenario; and
- RDI elasticity value, which was estimated from historical data, differed from the Medium Case values based on the standard error of the estimated elasticities.

The differences in the RDI growth rates, exchange rate, airfares and RDI elasticity values from the Medium Case scenarios for the High and Low Case scenarios are presented in Exhibit 3.3. The difference varies by year and values are provided for 2016 and for 2045. The level of leakage to or from nearby airports was also assumed to differ a little under the Low and High Case scenarios.

Scheduled seat capacity for 2016<sup>10</sup> shows an increase of 4.1% compared to 2015, but seats for the domestic segment are up 5.0% while transborder are down 6.8% and other international seats are up 5.9%. The model estimates were adjusted up for 2016 to account for some of the changes in seat capacity, but load factors were assumed to decline slightly in 2016 in the Medium Case. Load factors were assumed to be approximately 0.8% higher (lower) in the High Case (Low Case) scenario. Other assumptions made in the Medium Case Scenario remained unchanged.

**Exhibit 3.3**

**Model Inputs for the Low and High Case Scenarios Different from the Medium Case Scenario**

| Scenario  | Year | Difference from Medium Case Value |          |               |                |
|-----------|------|-----------------------------------|----------|---------------|----------------|
|           |      | RDI Growth Rate                   | Airfares | Exchange Rate | RDI Elasticity |
| Low Case  | 2016 | -0.4%                             | \$3      | -\$0.02       | -0.12          |
|           | 2024 | -0.4%                             | \$18     | -\$0.03       | -0.07          |
| High Case | 2016 | 0.4%                              | -\$2     | \$0.02        | 0.12           |
|           | 2045 | 0.4%                              | -\$16    | \$0.05        | 0.07           |

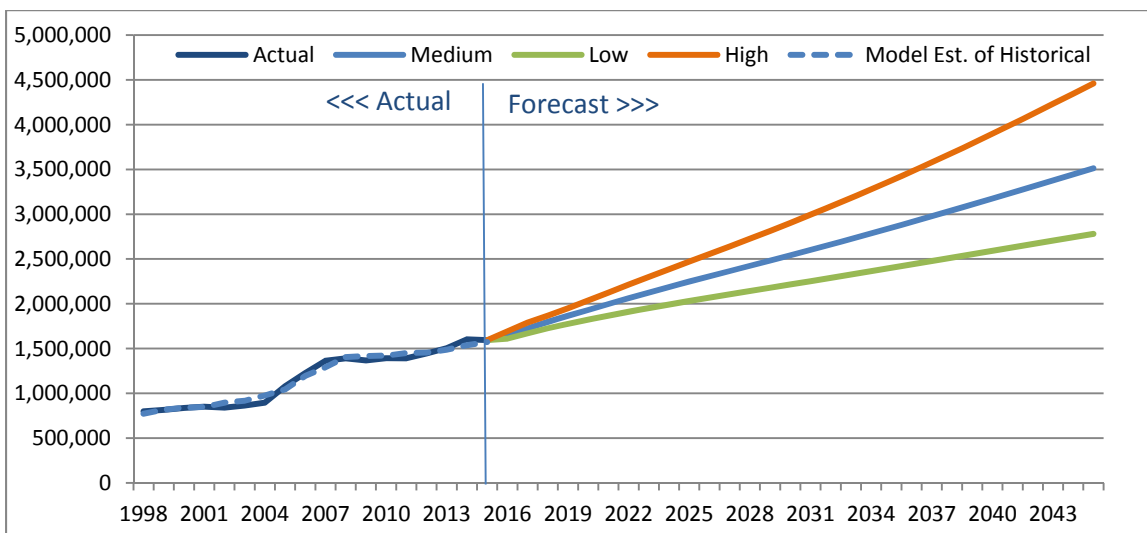
<sup>10</sup> As published by in the OAG on February 11, 2016



**3.3.2 BASE CASE FORECASTS**

Passenger forecasts under the Low, Medium and High Case Scenarios are presented in Exhibit 3.4 together with historical traffic, both actual and estimated using the model. E/D passengers under the three scenarios are tabulated in Exhibit 3.5 and a breakdown by sector is presented in Exhibit 3.6. The forecasts show that traffic will grow at a moderate rate of 3.4% in 2016 under the Medium Case Scenario. Stronger growth of 4.6% and 4.4% is forecast for 2017 and 2018, with growth slowing to 3.7% in 2019 and 3.3% in 2020. Growth slows gradually after that to 2.8% in 2025.

**Exhibit 3.4  
Historical and Forecast E/D Passengers– Low, Medium and High Case Scenarios**





**Exhibit 3.5  
Forecasts E/D Passengers and Average Annual Growth Rates  
Medium, Low and High Case Scenarios**

| Year                               | E/D Passengers |           |           | Avg. Annual Growth Rates |       |       |
|------------------------------------|----------------|-----------|-----------|--------------------------|-------|-------|
|                                    | Medium         | Low       | High      | Medium                   | Low   | High  |
| 2015 Actual                        | 1,593,606      | 1,593,606 | 1,593,606 | -0.6%                    | -0.6% | -0.6% |
| 2016                               | 1,650,000      | 1,610,100 | 1,692,900 | 3.5%                     | 1.0%  | 6.2%  |
| 2017                               | 1,725,000      | 1,670,000 | 1,788,000 | 4.5%                     | 3.7%  | 5.6%  |
| 2018                               | 1,800,000      | 1,726,000 | 1,868,000 | 4.3%                     | 3.4%  | 4.5%  |
| 2019                               | 1,867,000      | 1,776,000 | 1,950,000 | 3.7%                     | 2.9%  | 4.4%  |
| 2020                               | 1,929,000      | 1,820,000 | 2,037,000 | 3.3%                     | 2.5%  | 4.5%  |
| 2021                               | 1,995,000      | 1,865,000 | 2,124,000 | 3.4%                     | 2.5%  | 4.3%  |
| 2022                               | 2,063,000      | 1,911,000 | 2,215,000 | 3.4%                     | 2.5%  | 4.3%  |
| 2023                               | 2,125,000      | 1,952,000 | 2,300,000 | 3.0%                     | 2.1%  | 3.8%  |
| 2024                               | 2,187,000      | 1,992,000 | 2,385,000 | 2.9%                     | 2.0%  | 3.7%  |
| 2025                               | 2,249,000      | 2,031,000 | 2,472,000 | 2.8%                     | 2.0%  | 3.6%  |
| 2026                               | 2,306,000      | 2,068,000 | 2,556,000 | 2.5%                     | 1.8%  | 3.4%  |
| 2027                               | 2,364,000      | 2,105,000 | 2,640,000 | 2.5%                     | 1.8%  | 3.3%  |
| 2028                               | 2,422,000      | 2,142,000 | 2,726,000 | 2.5%                     | 1.8%  | 3.3%  |
| 2029                               | 2,481,000      | 2,179,000 | 2,813,000 | 2.4%                     | 1.7%  | 3.2%  |
| 2030                               | 2,541,000      | 2,216,000 | 2,902,000 | 2.4%                     | 1.7%  | 3.2%  |
| 2035                               | 2,848,000      | 2,401,000 | 3,375,000 | 2.2%                     | 1.6%  | 3.0%  |
| 2040                               | 3,176,000      | 2,592,000 | 3,898,000 | 2.2%                     | 1.5%  | 2.9%  |
| 2045                               | 3,513,000      | 2,780,000 | 4,460,000 | 2.0%                     | 1.3%  | 2.6%  |
| <b>Average Annual Growth Rates</b> |                |           |           |                          |       |       |
| 2005-2015                          | 4.0%           |           |           |                          |       |       |
| 2010-2015                          | 2.7%           |           |           |                          |       |       |
| 2015-2020                          | 3.9%           | 2.7%      | 5.0%      |                          |       |       |
| 2020-2025                          | 3.1%           | 2.2%      | 3.9%      |                          |       |       |
| 2025-2030                          | 2.5%           | 1.8%      | 3.3%      |                          |       |       |
| 2030-2045                          | 2.2%           | 1.5%      | 2.9%      |                          |       |       |
| 2015-2030                          | 3.2%           | 2.2%      | 4.1%      |                          |       |       |
| 2015-2045                          | 2.7%           | 1.9%      | 3.5%      |                          |       |       |

### 3.4 AIRCRAFT MOVEMENT FORECASTS

#### 3.4.1 FORECAST ASSUMPTIONS

Air carrier movements forecast were based on the forecasts of passengers with the assumptions that:

- Load factors will increase over the forecast period from 74% in 2015 to 83% by 2045 on domestic flights, from 79% in 2015 to 84% in 2045 on transborder flights, and will remain at approximately 90% on other international flights; and



**Exhibit 3.6  
Forecasts E/D Passengers and Average Annual Growth Rates – Medium Case Scenario**

| Year                               | E/D Passengers |         |          |           | Avg. Annual Growth Rates |        |          |       |
|------------------------------------|----------------|---------|----------|-----------|--------------------------|--------|----------|-------|
|                                    | Domestic       | TB      | Intern'l | Total     | Domestic                 | TB     | Intern'l | Total |
| 2015 Act'l                         | 1,432,456      | 126,559 | 34,591   | 1,593,606 | 1.1%                     | -17.5% | 4.7%     | -0.6% |
| 2016                               | 1,493,600      | 121,200 | 35,200   | 1,650,000 | 4.3%                     | -4.2%  | 1.8%     | 3.5%  |
| 2017                               | 1,559,900      | 127,400 | 37,700   | 1,725,000 | 4.4%                     | 5.1%   | 7.1%     | 4.5%  |
| 2018                               | 1,626,100      | 133,700 | 40,200   | 1,800,000 | 4.2%                     | 4.9%   | 6.6%     | 4.3%  |
| 2019                               | 1,685,000      | 139,400 | 42,600   | 1,867,000 | 3.6%                     | 4.3%   | 6.0%     | 3.7%  |
| 2020                               | 1,739,200      | 144,800 | 45,000   | 1,929,000 | 3.2%                     | 3.9%   | 5.6%     | 3.3%  |
| 2021                               | 1,796,900      | 150,500 | 47,600   | 1,995,000 | 3.3%                     | 3.9%   | 5.8%     | 3.4%  |
| 2022                               | 1,856,300      | 156,500 | 50,200   | 2,063,000 | 3.3%                     | 4.0%   | 5.5%     | 3.4%  |
| 2023                               | 1,910,200      | 162,000 | 52,800   | 2,125,000 | 2.9%                     | 3.5%   | 5.2%     | 3.0%  |
| 2024                               | 1,963,900      | 167,700 | 55,400   | 2,187,000 | 2.8%                     | 3.5%   | 4.9%     | 2.9%  |
| 2025                               | 2,017,600      | 173,300 | 58,100   | 2,249,000 | 2.7%                     | 3.3%   | 4.9%     | 2.8%  |
| 2026                               | 2,066,700      | 178,600 | 60,700   | 2,306,000 | 2.4%                     | 3.1%   | 4.5%     | 2.5%  |
| 2027                               | 2,116,500      | 184,100 | 63,400   | 2,364,000 | 2.4%                     | 3.1%   | 4.4%     | 2.5%  |
| 2028                               | 2,166,300      | 189,500 | 66,200   | 2,422,000 | 2.4%                     | 2.9%   | 4.4%     | 2.5%  |
| 2029                               | 2,216,700      | 195,200 | 69,100   | 2,481,000 | 2.3%                     | 3.0%   | 4.4%     | 2.4%  |
| 2030                               | 2,268,100      | 200,900 | 72,000   | 2,541,000 | 2.3%                     | 2.9%   | 4.2%     | 2.4%  |
| 2035                               | 2,529,300      | 230,900 | 87,800   | 2,848,000 | 2.1%                     | 2.8%   | 3.9%     | 2.2%  |
| 2040                               | 2,806,300      | 263,800 | 105,900  | 3,176,000 | 2.1%                     | 2.7%   | 3.7%     | 2.2%  |
| 2045                               | 3,088,300      | 298,800 | 125,900  | 3,513,000 | 1.9%                     | 2.5%   | 3.5%     | 2.0%  |
| <b>Average Annual Growth Rates</b> |                |         |          |           |                          |        |          |       |
| 2005-2015                          | 3.8%           | 4.6%    | 12.9%    | 4.0%      |                          |        |          |       |
| 2010-2015                          | 2.7%           | 5.2%    | -3.5%    | 2.7%      |                          |        |          |       |
| 2015-2020                          | 4.0%           | 2.7%    | 5.4%     | 3.9%      |                          |        |          |       |
| 2020-2025                          | 3.0%           | 3.7%    | 5.2%     | 3.1%      |                          |        |          |       |
| 2025-2030                          | 2.4%           | 3.0%    | 4.4%     | 2.5%      |                          |        |          |       |
| 2030-2045                          | 2.1%           | 2.7%    | 3.8%     | 2.2%      |                          |        |          |       |
| 2015-2030                          | 3.1%           | 3.1%    | 5.0%     | 3.2%      |                          |        |          |       |
| 2015-2045                          | 2.6%           | 2.9%    | 4.4%     | 2.7%      |                          |        |          |       |

- Aircraft size will increase overall, particularly as the DHC-8-300s and smaller regional jets (RJs) are replaced with Q400s, with the average seats per aircraft increasing from 85.5 in 2015 to 95 by 2030 and to 99 by 2045;

The long-term trend of declining piston aircraft movements at YLW will continue but slowdown, and this will be offset by an increase in turboprop movements. This is consistent with the current trend throughout North America of growth in business jets and turboprops, and a decline in piston movements. Growth in non-scheduled air carrier, other commercial and private movements show a weak relationship with population and economic activity and were related to these factors, but accounting for a slowdown in the decline in piston movements as their contribution to total movements declines. Government operations have fluctuated over the



past 20 years and are assumed to grow very slowly with increased population in the area.

**3.4.2 ANNUAL MOVEMENT FORECASTS**

The forecast aircraft movements under the Medium Case Scenario are presented with average annual growth rates in Exhibit 3.7.

**Exhibit 3.7  
Forecast Aircraft Movements by Operator Segment – Medium Case Scenarios**

| Year                               | Itinerant Movements   |                           |            |         |            |                 | Local  | Total Movements |
|------------------------------------|-----------------------|---------------------------|------------|---------|------------|-----------------|--------|-----------------|
|                                    | Air carrier Scheduled | Air carrier Non-scheduled | Commercial | Private | Government | Total Itinerant |        |                 |
| 2015 Actual                        | 25,414                | 16,927                    | 3,509      | 6,953   | 866        | 53,669          | 21,120 | 74,789          |
| 2016                               | 25,906                | 17,139                    | 3,515      | 6,958   | 867        | 54,386          | 21,068 | 75,454          |
| 2017                               | 26,400                | 17,482                    | 3,523      | 6,967   | 870        | 55,241          | 21,111 | 76,352          |
| 2018                               | 26,876                | 17,836                    | 3,532      | 6,976   | 872        | 56,092          | 21,157 | 77,249          |
| 2019                               | 27,219                | 18,144                    | 3,540      | 6,983   | 874        | 56,760          | 21,166 | 77,925          |
| 2020                               | 27,345                | 18,413                    | 3,546      | 6,990   | 875        | 57,170          | 21,143 | 78,313          |
| 2021                               | 27,944                | 18,687                    | 3,553      | 6,996   | 877        | 58,057          | 21,120 | 79,177          |
| 2022                               | 28,565                | 18,964                    | 3,560      | 7,003   | 878        | 58,970          | 21,098 | 80,069          |
| 2023                               | 29,099                | 19,211                    | 3,565      | 7,009   | 880        | 59,764          | 21,052 | 80,816          |
| 2024                               | 29,630                | 19,449                    | 3,571      | 7,014   | 881        | 60,545          | 20,998 | 81,543          |
| 2025                               | 29,999                | 19,684                    | 3,576      | 7,019   | 883        | 61,161          | 20,942 | 82,103          |
| 2026                               | 30,455                | 19,921                    | 3,582      | 7,025   | 884        | 61,866          | 20,884 | 82,750          |
| 2027                               | 30,923                | 20,158                    | 3,587      | 7,030   | 885        | 62,583          | 20,824 | 83,407          |
| 2028                               | 31,389                | 20,395                    | 3,592      | 7,035   | 887        | 63,297          | 20,764 | 84,061          |
| 2029                               | 31,865                | 20,633                    | 3,597      | 7,040   | 888        | 64,023          | 20,702 | 84,725          |
| 2030                               | 33,135                | 20,871                    | 3,603      | 7,045   | 889        | 65,543          | 20,638 | 86,181          |
| 2035                               | 36,025                | 22,065                    | 3,628      | 7,070   | 895        | 69,684          | 20,304 | 89,988          |
| 2040                               | 39,338                | 23,265                    | 3,652      | 7,093   | 901        | 74,251          | 19,942 | 94,192          |
| 2045                               | 42,736                | 24,467                    | 3,675      | 7,116   | 907        | 78,902          | 19,555 | 98,457          |
| <b>Average Annual Growth Rates</b> |                       |                           |            |         |            |                 |        |                 |
| 2015-2020                          | 1.5%                  | 1.7%                      | 0.2%       | 0.1%    | 0.2%       | 1.3%            | 0.0%   | 0.9%            |
| 2020-2025                          | 1.9%                  | 1.3%                      | 0.2%       | 0.1%    | 0.2%       | 1.4%            | -0.2%  | 0.9%            |
| 2025-2030                          | 2.0%                  | 1.2%                      | 0.1%       | 0.1%    | 0.1%       | 1.4%            | -0.3%  | 1.0%            |
| 2030-2045                          | 1.7%                  | 1.1%                      | 0.1%       | 0.1%    | 0.1%       | 1.2%            | -0.4%  | 0.9%            |
| 2015-2030                          | 1.8%                  | 1.4%                      | 0.2%       | 0.1%    | 0.2%       | 1.3%            | -0.2%  | 0.9%            |
| 2015-2045                          | 1.7%                  | 1.2%                      | 0.2%       | 0.1%    | 0.2%       | 1.3%            | -0.3%  | 0.9%            |

The number of itinerant aircraft movements is expected to increase by approximately 1.3% per year over the next 15 years, with air carriers accounting for most of this growth. Little growth in private movements is forecast as the increase in private jet and turboprop movements is offset by the decline in piston movements. Local movements are forecast to decline very slightly over the next 30 years. Total movements are forecast to increase by about 0.9% per year over that





period.

The number of aircraft movements under the Low, Medium and High Cases are summarized in Exhibit 3.8. Total movements are forecast to reach 98,400 by 2045 under the Medium Case Scenario, but range from 83,000 to 120,000 under the Low and High Case Scenarios.

**Exhibit 3.8  
Forecast Aircraft Movements under the Medium, Low and High Case Scenarios**

| Year                               | Medium Case |        |        | Low Case   |        |        | High Case  |        |         |
|------------------------------------|-------------|--------|--------|------------|--------|--------|------------|--------|---------|
|                                    | Itin-erant  | Local  | Total  | Itin-erant | Local  | Total  | Itin-erant | Local  | Total   |
| 2015 Actual                        | 53,669      | 21,078 | 74,747 |            |        |        |            |        |         |
| 2016                               | 54,386      | 21,068 | 75,454 | 53,867     | 20,767 | 74,634 | 55,119     | 21,383 | 76,502  |
| 2017                               | 55,241      | 21,111 | 76,352 | 54,479     | 20,683 | 75,162 | 56,490     | 21,553 | 78,043  |
| 2018                               | 56,092      | 21,157 | 77,249 | 55,031     | 20,603 | 75,634 | 57,632     | 21,730 | 79,362  |
| 2019                               | 56,760      | 21,166 | 77,925 | 55,453     | 20,499 | 75,952 | 58,725     | 21,859 | 80,585  |
| 2020                               | 57,170      | 21,143 | 78,313 | 55,645     | 20,378 | 76,022 | 59,890     | 21,949 | 81,840  |
| 2021                               | 58,057      | 21,120 | 79,177 | 56,152     | 20,257 | 76,408 | 61,275     | 22,040 | 83,316  |
| 2022                               | 58,970      | 21,098 | 80,069 | 56,678     | 20,137 | 76,815 | 62,715     | 22,132 | 84,847  |
| 2023                               | 59,764      | 21,052 | 80,816 | 57,111     | 20,003 | 77,115 | 64,022     | 22,192 | 86,215  |
| 2024                               | 60,545      | 20,998 | 81,543 | 57,527     | 19,866 | 77,393 | 65,312     | 22,243 | 87,555  |
| 2025                               | 61,161      | 20,942 | 82,103 | 57,930     | 19,728 | 77,658 | 66,243     | 22,290 | 88,533  |
| 2026                               | 61,866      | 20,884 | 82,750 | 58,308     | 19,590 | 77,897 | 67,589     | 22,335 | 89,924  |
| 2027                               | 62,583      | 20,824 | 83,407 | 58,688     | 19,452 | 78,140 | 68,937     | 22,377 | 91,314  |
| 2028                               | 63,297      | 20,764 | 84,061 | 59,072     | 19,314 | 78,386 | 70,312     | 22,418 | 92,730  |
| 2029                               | 64,023      | 20,702 | 84,725 | 59,457     | 19,176 | 78,633 | 71,701     | 22,457 | 94,158  |
| 2030                               | 65,543      | 20,638 | 86,181 | 59,844     | 19,039 | 78,883 | 73,117     | 22,494 | 95,611  |
| 2035                               | 69,684      | 20,304 | 89,988 | 61,800     | 18,354 | 80,154 | 80,566     | 22,652 | 103,218 |
| 2040                               | 74,251      | 19,942 | 94,192 | 64,016     | 17,675 | 81,691 | 88,725     | 22,764 | 111,489 |
| 2045                               | 78,902      | 19,555 | 98,457 | 66,194     | 17,005 | 83,199 | 97,384     | 22,831 | 120,215 |
| <b>Average Annual Growth Rates</b> |             |        |        |            |        |        |            |        |         |
| 2015-2020                          | 1.3%        | 0.0%   | 0.9%   | 0.7%       | -0.7%  | 0.3%   | 2.2%       | 0.8%   | 1.8%    |
| 2020-2025                          | 1.4%        | -0.2%  | 0.9%   | 0.8%       | -0.6%  | 0.4%   | 2.0%       | 0.3%   | 1.6%    |
| 2025-2030                          | 1.4%        | -0.3%  | 1.0%   | 0.7%       | -0.7%  | 0.3%   | 2.0%       | 0.2%   | 1.6%    |
| 2030-2045                          | 1.2%        | -0.4%  | 0.9%   | 0.7%       | -0.8%  | 0.4%   | 1.9%       | 0.1%   | 1.5%    |
| 2015-2030                          | 1.3%        | -0.2%  | 0.9%   | 0.7%       | -0.7%  | 0.4%   | 2.1%       | 0.4%   | 1.7%    |
| 2015-2045                          | 1.3%        | -0.3%  | 0.9%   | 0.7%       | -0.7%  | 0.4%   | 2.0%       | 0.3%   | 1.6%    |

### 3.4.3 FORECASTS BY AIRCRAFT SIZE CATEGORY

The numbers of movements by aircraft weight category under the Medium Case scenario are summarized in Exhibit 3.9. Aircraft under 2 tonnes, all piston aircraft, are forecast to decline slowly averaging -1.1% per year, while the other categories of aircraft are forecast to grow at around 2% per year.





**Exhibit 3.9  
Forecast Aircraft Movements by Aircraft Weight Category – Base Case Scenarios**

| Year        | 0 - 2.00 tonnes | 2.01 - 4.00 tonnes | 4.01 - 5.67 tonnes | 5.68 - 9.00 tonnes | 9.01 - 18.00 tonnes | 18.01 - 35.00 tonnes | 35.01 - 70.00 tonnes | Over 70 tonnes | Total Itinerant |
|-------------|-----------------|--------------------|--------------------|--------------------|---------------------|----------------------|----------------------|----------------|-----------------|
| 2015 Actual | 12,235          | 1,640              | 4,411              | 8,831              | 1,331               | 15,250               | 9,899                | 72             | 53,669          |
| 2016        | 11,814          | 1,374              | 4,287              | 9,756              | 1,050               | 15,715               | 10,329               | 61             | 54,386          |
| 2017        | 11,678          | 1,422              | 4,463              | 9,995              | 1,079               | 16,015               | 10,527               | 63             | 55,241          |
| 2018        | 11,544          | 1,470              | 4,642              | 10,239             | 1,109               | 16,304               | 10,720               | 64             | 56,092          |
| 2019        | 11,401          | 1,517              | 4,811              | 10,455             | 1,135               | 16,513               | 10,863               | 65             | 56,760          |
| 2020        | 11,251          | 1,561              | 4,971              | 10,643             | 1,160               | 16,591               | 10,927               | 66             | 57,170          |
| 2021        | 11,101          | 1,605              | 5,132              | 10,856             | 1,185               | 16,953               | 11,156               | 67             | 58,057          |
| 2022        | 10,952          | 1,650              | 5,294              | 11,073             | 1,211               | 17,329               | 11,394               | 68             | 58,970          |
| 2023        | 10,798          | 1,693              | 5,449              | 11,271             | 1,234               | 17,652               | 11,599               | 69             | 59,764          |
| 2024        | 10,641          | 1,735              | 5,602              | 11,464             | 1,257               | 17,972               | 11,803               | 70             | 60,545          |
| 2025        | 10,484          | 1,778              | 5,755              | 11,649             | 1,280               | 18,196               | 11,939               | 80             | 61,161          |
| 2026        | 10,327          | 1,820              | 5,907              | 11,839             | 1,303               | 18,470               | 12,114               | 85             | 61,866          |
| 2027        | 10,170          | 1,863              | 6,060              | 12,029             | 1,326               | 18,751               | 12,293               | 90             | 62,583          |
| 2028        | 10,013          | 1,905              | 6,213              | 12,219             | 1,349               | 19,031               | 12,472               | 95             | 63,297          |
| 2029        | 9,856           | 1,948              | 6,366              | 12,410             | 1,372               | 19,317               | 12,654               | 100            | 64,023          |
| 2030        | 9,699           | 1,990              | 6,519              | 12,641             | 1,395               | 20,080               | 13,114               | 105            | 65,543          |
| 2035        | 8,912           | 2,203              | 7,286              | 13,625             | 1,511               | 21,816               | 14,204               | 129            | 69,684          |
| 2040        | 8,124           | 2,415              | 8,053              | 14,631             | 1,627               | 23,806               | 15,442               | 153            | 74,251          |
| 2045        | 7,335           | 2,628              | 8,821              | 15,643             | 1,742               | 25,846               | 16,709               | 177            | 78,902          |

### 3.5 AIRCRAFT CARGO FORECASTS

Air cargo tonnage forecasts are presented in Exhibit 3.10. With the strong economic growth in the region and possible increases in air shipments of time-sensitive agricultural products, cargo volumes are expected to recover from the decline in 2015 over the next 5-10 years, then grow slowly over the longer term. Under the Medium Case scenario, total air cargo is forecast to grow by an average of 2.0% per year. Outbound cargo is forecast to increase more slowly averaging 1.8% per year, while inbound cargo is forecast to grow at a moderate rate of 2.3% per year. The increase in size of aircraft used on passenger services, particularly the transition from DH8-300s to Q400s by Air Canada, should increase the cargo capacity at YLW. Fuel prices are a major component of costs for cargo carriers and the recent decline in fuel prices should greatly benefit cargo carriers. With oil prices are expected to remain low for several years and even in the medium term be in the US\$55-\$65 range, this should lead to lower freight rates which should stimulate new demand. YLW has only limited freighter service and this is not expected to change significantly due to its proximity to the major cargo hub at YVR. Total air cargo is forecast to reach almost 3,200 tonnes by 2045 under the Medium Case Scenario, but ranges from 2,600 to 4,200 under the Low and High Case Scenarios.



**Exhibit 3.10  
Forecast Air Cargo Tonnage under the Medium, Low and High Case Scenarios**

| Year                               | Medium Case       |                    |       | Low Case          |                    |       | High Case         |                    |       |
|------------------------------------|-------------------|--------------------|-------|-------------------|--------------------|-------|-------------------|--------------------|-------|
|                                    | Loaded / Outbound | Unloaded / Inbound | Total | Loaded / Outbound | Unloaded / Inbound | Total | Loaded / Outbound | Unloaded / Inbound | Total |
| 2015 Act'l                         | 655               | 1,102              | 1,757 | 655               | 1,102              | 1,757 | 655               | 1,102              | 1,757 |
| 2016                               | 682               | 1,140              | 1,822 | 679               | 1,133              | 1,812 | 689               | 1,148              | 1,838 |
| 2017                               | 711               | 1,178              | 1,889 | 703               | 1,165              | 1,868 | 725               | 1,196              | 1,921 |
| 2018                               | 741               | 1,218              | 1,958 | 728               | 1,198              | 1,926 | 763               | 1,246              | 2,009 |
| 2019                               | 771               | 1,259              | 2,031 | 754               | 1,231              | 1,985 | 803               | 1,298              | 2,101 |
| 2020                               | 804               | 1,302              | 2,105 | 781               | 1,266              | 2,047 | 845               | 1,352              | 2,197 |
| 2021                               | 837               | 1,346              | 2,183 | 809               | 1,301              | 2,110 | 889               | 1,408              | 2,298 |
| 2022                               | 872               | 1,391              | 2,263 | 838               | 1,337              | 2,176 | 935               | 1,467              | 2,403 |
| 2023                               | 908               | 1,438              | 2,346 | 868               | 1,375              | 2,243 | 984               | 1,528              | 2,512 |
| 2024                               | 946               | 1,487              | 2,433 | 900               | 1,413              | 2,313 | 1,035             | 1,592              | 2,627 |
| 2025                               | 981               | 1,539              | 2,520 | 928               | 1,455              | 2,383 | 1,083             | 1,662              | 2,746 |
| 2026                               | 996               | 1,553              | 2,549 | 935               | 1,461              | 2,396 | 1,108             | 1,696              | 2,805 |
| 2027                               | 1,009             | 1,570              | 2,579 | 941               | 1,468              | 2,409 | 1,134             | 1,731              | 2,865 |
| 2028                               | 1,023             | 1,587              | 2,609 | 948               | 1,474              | 2,422 | 1,160             | 1,766              | 2,926 |
| 2029                               | 1,036             | 1,604              | 2,640 | 954               | 1,480              | 2,435 | 1,186             | 1,802              | 2,988 |
| 2030                               | 1,050             | 1,621              | 2,671 | 961               | 1,487              | 2,448 | 1,213             | 1,839              | 3,052 |
| 2035                               | 1,121             | 1,709              | 2,830 | 995               | 1,520              | 2,515 | 1,359             | 2,034              | 3,393 |
| 2040                               | 1,197             | 1,802              | 2,999 | 1,030             | 1,554              | 2,583 | 1,522             | 2,251              | 3,772 |
| 2045                               | 1,278             | 1,900              | 3,178 | 1,066             | 1,588              | 2,654 | 1,704             | 2,490              | 4,194 |
| <b>Average Annual Growth Rates</b> |                   |                    |       |                   |                    |       |                   |                    |       |
| 2015-2020                          | 4.2%              | 3.4%               | 3.7%  | 3.6%              | 2.8%               | 3.1%  | 5.2%              | 4.2%               | 4.6%  |
| 2020-2025                          | 4.1%              | 3.4%               | 3.7%  | 3.5%              | 2.8%               | 3.1%  | 5.1%              | 4.2%               | 4.6%  |
| 2025-2030                          | 1.4%              | 1.0%               | 1.2%  | 0.7%              | 0.4%               | 0.5%  | 2.3%              | 2.0%               | 2.1%  |
| 2030-2045                          | 1.3%              | 1.1%               | 1.2%  | 0.7%              | 0.4%               | 0.5%  | 2.3%              | 2.0%               | 2.1%  |
| 2015-2030                          | 3.2%              | 2.6%               | 2.8%  | 2.6%              | 2.0%               | 2.2%  | 4.2%              | 3.5%               | 3.7%  |
| 2015-2045                          | 2.3%              | 1.8%               | 2.0%  | 1.6%              | 1.2%               | 1.4%  | 3.2%              | 2.8%               | 2.9%  |



### 3.4 BASED AIRCRAFT FORECASTS

The forecast numbers of based aircraft by operator segment and aircraft category are presented in Exhibit 3.11. Total based aircraft are forecast to increase from 101 in 2014 to 125 in 2045 with most of the growth being in turboprop aircraft. Under the Low Case scenario, the numbers of based aircraft are forecast to increase to 106 by 2045 with the numbers of narrow-body and wide-body jets declining, while under the High Case based aircraft are forecasts increase to 153 by 2045.

**Exhibit 3.11**  
**Forecast Numbers of Based Aircraft by Operator Segment and Aircraft Category and by Scenario for Total Aircraft**

| Year                        | Medium Case      |                 |             |              |             |           |             |       | Low Case Total | High Case Total |
|-----------------------------|------------------|-----------------|-------------|--------------|-------------|-----------|-------------|-------|----------------|-----------------|
|                             | Private          | Commercial      |             |              |             |           |             | Total |                |                 |
|                             | Piston - Private | Piston - Comm'l | Turbo -prop | Business Jet | Narrow-body | Wide-body | Heli-copter |       |                |                 |
| 2015                        | 31               | 4               | 29          | 3            | 11          | 3         | 9           | 92    | 88             | 93              |
| 2016                        | 31               | 5               | 30          | 3            | 11          | 3         | 9           | 92    | 88             | 95              |
| 2017                        | 30               | 5               | 31          | 3            | 12          | 3         | 9           | 94    | 89             | 97              |
| 2018                        | 30               | 5               | 32          | 3            | 12          | 3         | 10          | 95    | 90             | 99              |
| 2019                        | 30               | 5               | 33          | 3            | 13          | 3         | 10          | 97    | 91             | 101             |
| 2020                        | 30               | 5               | 34          | 3            | 13          | 4         | 10          | 98    | 92             | 103             |
| 2021                        | 29               | 5               | 34          | 3            | 14          | 4         | 10          | 100   | 93             | 105             |
| 2022                        | 29               | 5               | 35          | 3            | 14          | 4         | 10          | 101   | 94             | 108             |
| 2023                        | 29               | 5               | 36          | 4            | 15          | 4         | 10          | 102   | 95             | 110             |
| 2024                        | 28               | 5               | 37          | 4            | 15          | 4         | 10          | 104   | 96             | 112             |
| 2025                        | 28               | 5               | 37          | 4            | 16          | 4         | 11          | 105   | 97             | 114             |
| 2026                        | 28               | 5               | 38          | 4            | 16          | 4         | 11          | 106   | 97             | 116             |
| 2027                        | 28               | 5               | 39          | 4            | 16          | 4         | 11          | 107   | 98             | 118             |
| 2028                        | 27               | 5               | 40          | 4            | 16          | 4         | 11          | 108   | 98             | 119             |
| 2029                        | 27               | 5               | 40          | 4            | 17          | 4         | 11          | 109   | 99             | 121             |
| 2030                        | 27               | 5               | 41          | 4            | 17          | 5         | 11          | 110   | 99             | 123             |
| 2035                        | 25               | 6               | 45          | 4            | 18          | 5         | 12          | 115   | 102            | 132             |
| 2040                        | 24               | 6               | 49          | 5            | 19          | 5         | 13          | 120   | 104            | 142             |
| 2045                        | 22               | 6               | 52          | 5            | 20          | 5         | 14          | 125   | 106            | 153             |
| Average Annual Growth Rates |                  |                 |             |              |             |           |             |       |                |                 |
| 2015-2020                   | -1.2%            | 1.7%            | 2.9%        | 3.8%         | 3.7%        | 3.5%      | 1.5%        | 1.3%  | 1.1%           | 2.1%            |
| 2020-2025                   | -1.0%            | 1.2%            | 2.2%        | 1.8%         | 3.7%        | 3.7%      | 1.5%        | 1.4%  | 1.0%           | 2.0%            |
| 2025-2030                   | -1.1%            | 0.9%            | 1.9%        | 1.6%         | 1.2%        | 1.2%      | 1.5%        | 0.9%  | 0.5%           | 1.5%            |
| 2030-2045                   | -1.3%            | 0.6%            | 1.6%        | 1.4%         | 1.2%        | 1.2%      | 1.5%        | 0.9%  | 0.5%           | 1.5%            |
| 2015-2030                   | -1.1%            | 1.3%            | 2.3%        | 2.4%         | 2.8%        | 2.8%      | 1.5%        | 1.2%  | 0.8%           | 1.9%            |
| 2015-2045                   | -1.2%            | 0.9%            | 2.0%        | 1.9%         | 2.0%        | 2.0%      | 1.5%        | 1.0%  | 0.7%           | 1.7%            |



### 3.6 COMPARISON WITH OTHER RECENT FORECASTS

Exhibit 3.12 compares the forecasts passenger growth rates by SLI for YLW with those by Boeing, Airbus and the FAA prepared in 2015 on a national basis. SLI’s forecast growth rates for domestic, transborder and international traffic at YLW are about 0.5% higher than those by Airbus and Boeing, but are a slightly lower than the FAA’s forecast for total transborder traffic. The generally higher forecasts for YLW are considered to be reasonable as traffic growth at YLW is likely to be higher than the average over the Canada/North America region given the higher forecasts of population and economic growth for Kelowna and B.C. than for Canada as a whole.

**Exhibit 3.12  
Comparison of Forecasts Passenger Growth Rates by SLI and Other Groups**

| Sector              | Source | Airport/<br>Region | Average Annual Growth Rates |           |           |
|---------------------|--------|--------------------|-----------------------------|-----------|-----------|
|                     |        |                    | 2015-2020                   | 2015-2025 | 2015-2035 |
| Domestic            | SLI    | YLW                | 4.0%                        | 3.5%      | 2.9%      |
|                     | Airbus | Canada             |                             |           | 2.4%      |
|                     | Boeing | North Am.          |                             |           | 2.4%      |
| Transborder         | SLI    | YLW                | 2.7%                        | 3.2%      | 3.1%      |
|                     | FAA    | Canada             | 3.5%                        | 3.4%      |           |
|                     | Airbus | Canada             |                             |           | 2.5%      |
| Other International | SLI    | YLW                | 5.4%                        | 5.3%      | 4.8%      |
|                     | Airbus | Canada             |                             |           | 4.0%      |
|                     | Boeing | North Am.          |                             |           | 4.3%      |
| Total               | SLI    | YLW                | 3.9%                        | 3.5%      | 2.9%      |
|                     | Airbus | Canada             |                             |           | 2.6%      |

It should be noted that the Boeing and Airbus rates are for growth in revenue passenger miles, thus, if international traffic grows faster than domestic, their growth rates for “Total” will be higher than the rate for passengers at airports due to the longer flight distances of international flights.



## **4.0 PEAK HOUR TRAFFIC FORECASTS**

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### **4.1 PEAK HOUR FORECASTING METHODS AND ASSUMPTIONS**

**Planning Peak Hour Passengers** (PPHPs) represent the demand during a typical very busy period, rather than the busiest hour of the year. Different definitions/methodologies are used to define the PPHPs, such as the 40<sup>th</sup> or 30<sup>th</sup> busiest hour of the year, or the second busiest day during a typical week during the busy month. Reasons behind selecting a specific definition/methodology depend primarily on the data available, and on the acceptable frequency and degree to which passenger levels can be above planned capacity.

An industry norm for the peak hour methodology when flight-by-flight passenger data is not available is that it be based on a typical week in the peak month.

#### **4.1.1 PEAK HOUR PASSENGER FORECAST APPROACH**

The methodology used to develop the peak hour passengers and movements involves four steps:

1. Develop forecasts of nominal flight schedules for a typical week in the busiest month (described below) and project peak hour passengers based on these schedule;
  - a. Considers peak hour values on each day of the week;
  - b. Use a combination of maximum, second highest, average and median peak values over the days of the week - this typically gives a value close to the second highest, but is more representative of a busy day in some situations;
2. Project the ratio of PPHPs to annual traffic by traffic segment (sector/total, arrival/departure/total) and use these ratios to project future peak hour passenger values by multiplying the annual traffic values by the adjusted peak hour share;
3. Finalize PPHP values based on the nominal schedule and ratio approaches; and
4. Adjust load factors in nominal schedules to produce a consistent estimate of future PPHP values by traffic segment.

A nominal schedule is a forecast of specific flights: the airline, aircraft type, arrival and departure times, destination or origin and probable passenger loads. Firstly, the current year airline flight schedules of arriving and departing flights on the Busy Week are combined into a single aircraft schedule showing the times of arrival and departure of each aircraft, the origin of the arrival and destination of the departure, airline, aircraft type, seats, etc. A Busy Week aircraft schedule is then developed for each of the forecast years 2020, 2025, 2030 and 2035. This is done by assigning new flights or modifying existing flights so that the traffic in each sector grows at a similar rate as annual traffic, allowing for any changes in seasonality. Input from airlines and airport staff regarding likely route development and fleet changes are used.



Some of the elements taken into account in developing the nominal schedules include:

- Current schedules to each destination and whether carriers will likely add frequency or up-gauge aircraft;
- Fleet development plans of airlines and likely replacement of older aircraft types;
- Operational suitability of aircraft type;
- The aircraft rotations and banks of flights for hub carriers;
- The time of day of current flights and flight times; and
- Airport curfews and other limitations which might exist at YLW and/or the airport at the other end of the route.

August is the busiest month for domestic and total passenger traffic at YLW, while March is the busiest month for international passengers (both transborder and other international) and is the third busiest month for total traffic. The schedules in the second week of August and March in 2015 were examined for use as the Busy Week. The week in March was found to have 8 more flights than the week in August (254 vs 246) but 2% less seats (20,721 vs 21,159). The August week had less than half as many international flights (14 vs 36) and only a third as many seats as the March week. For domestic, the numbers of flights and seats were 6% and 13% less, respectively, in March, but the busiest two days had only one less flight each (34 vs 35) in March. So as to best represent the various segments of traffic for determining the PPHPs and aircraft gate requirements, the second week in March was taken to be the Busy Week and used as the basis for developing the nominal schedules. Load factors for domestic flights were based on the higher August load factors and increased by 4% so that they would better reflect the peak hour passengers in August.

The NCAMS data obtained for Statistics Canada was used to estimate the PPHP values using the 30<sup>th</sup> busiest clock-hour and the 98<sup>th</sup> percentile of rolling 60-minute interval hourly passengers over the year based on actual aircraft movements but with estimated passengers allowing for higher values in the peak periods. This approach is useful, particularly for domestic flights, as it considers all flights over the whole year. These were also used in finalizing the PPHP values.

#### **4.1.2 FACTORS AFFECTING PEAK HOUR TRAFFIC**

Airlines serving YLW will be upgrading their fleets over the forecast period and the new more fuel efficient aircraft that will be replacing the existing aircraft often differ in seat capacity and, more importantly, size/wingspan affecting ICAO Code. The most important changes are as follows.

- **DHC-8-300** (50-seat) replaced with the **Q400** (74 seats, 50% more), both Code C, but preference is for Q400 to use a loading bridge;



- **CRJ** (50-seat) replaced with the **Q400** (74 seats, 50% more), change Code B to C (wingspan 21.1 to 28.4 m), both use loading bridges;
- **E90** –replaced with the CS100 or CS300 – the CS100 will have similar seat capacity as the E90, while the CS300 would be about 25% greater, and both are same Code (C), but the wingspan increases from 28.7 to 35.1 m for CS100/300;
- **B767** – replaced with B787, both have similar seat capacity, but Code changes from D to E;
- **B737** and **A320** aircraft –likely be replaced with B737-MAX and A320-NEO models, possibly with higher seat capacity, all have similar wingspan and will remain Code C; and
- **A319** – likely replaced with CS300 or A319-NEO, both have similar seat capacity and wingspan and will remain Code C.

The net effect of the aircraft replacements will be that slower growth in aircraft required in peak periods due to increases in aircraft seat capacity, increased demand for loading bridges, and/or the wingspan and Code of aircraft will increase. The latter issue can result in additional terminal frontage and apron area being required to handle the same number of passengers.

Load factors are fairly high at YLW, averaging 78% for domestic and 76% for transborder in 2014, but will likely increase over time as airlines continue to better match capacity with demand and reduce costs.

#### **4.2.3 ASSUMPTIONS**

The major air services changes incorporated into the nominal schedules for YLW are as follows:

- Air Canada replaces CRJ and DHC-8-300 aircraft with Q400s gradually over next 7 years, and E90 with CS100 or CS300 between 2020 and 2025;
- WestJet adds second daily to Victoria using Q400 by 2020;
- WestJet adds new daily using Q400 to Comox by 2020 and to Nanaimo by 2030;
- United SFO flight restored to daily by 2020, WestJet serves LAX by 2030;
- New commuter service to Terrace and to Fort St. John by 2020;
- New service to central U.S. hub (Minneapolis or Chicago) by 2025;
- New weekly seasonal charter service to Europe using B767-300 by 2025, switching to B787 by 2035;
- Additional flights to sunspot vacation destinations in southwest U.S. and Mexico; and
- Increases in frequency and/or aircraft size on other routes.

Passenger values were calculated for each flight based on estimated load factors in the peak period. These load factors were assumed to be about 5% higher than average load factor for the airline and sector in that month, March for international and August for domestic in 2015. The





domestic load factors were increased by 4% to account for the use of March instead of August for the Busy Week. Load factors at YLW are relatively high in 2014, but declined in 2015 by approximately 3%, but are expected to increase 2014 levels by 2020 then increase slightly over next 25 years, more so for those segments with lower load factors. Load factors used in the peak hour analysis are presented in Exhibit 4.1. It was also assumed that the load factors on transit flights will be marginally higher and load factors were increased by 5% more than those in the table.

**Exhibit 4.1  
Load Factors in the Busy Week Used in the Peak Hour Passenger Analysis**

| Airline         | Sector        | 2016 | 2020 | 2025 | 2035 |
|-----------------|---------------|------|------|------|------|
| Air Canada      | Domestic      | 86%  | 89%  | 89%  | 90%  |
|                 | Transborder   | 86%  | 89%  | 89%  | 90%  |
|                 | Other Int'l   | 86%  | 89%  | 89%  | 90%  |
| WestJet         | Domestic      | 86%  | 89%  | 89%  | 90%  |
|                 | Transborder   | 86%  | 89%  | 90%  | 90%  |
|                 | Other Int'l   | 87%  | 90%  | 90%  | 91%  |
| Tier 3 carriers | Domestic      | 65%  | 69%  | 70%  | 71%  |
| U.S. carriers   | Transborder   | 79%  | 82%  | 82%  | 84%  |
| Charter         | International | 93%  | 93%  | 93%  | 93%  |
| Other           | Domestic      | 85%  | 85%  | 86%  | 86%  |

Note: includes a 4% increase for domestic due to use of week in March as the Busy Week

#### 4.2 CURRENT PASSENGERS BY DAY OF WEEK AND HOUR OF DAY

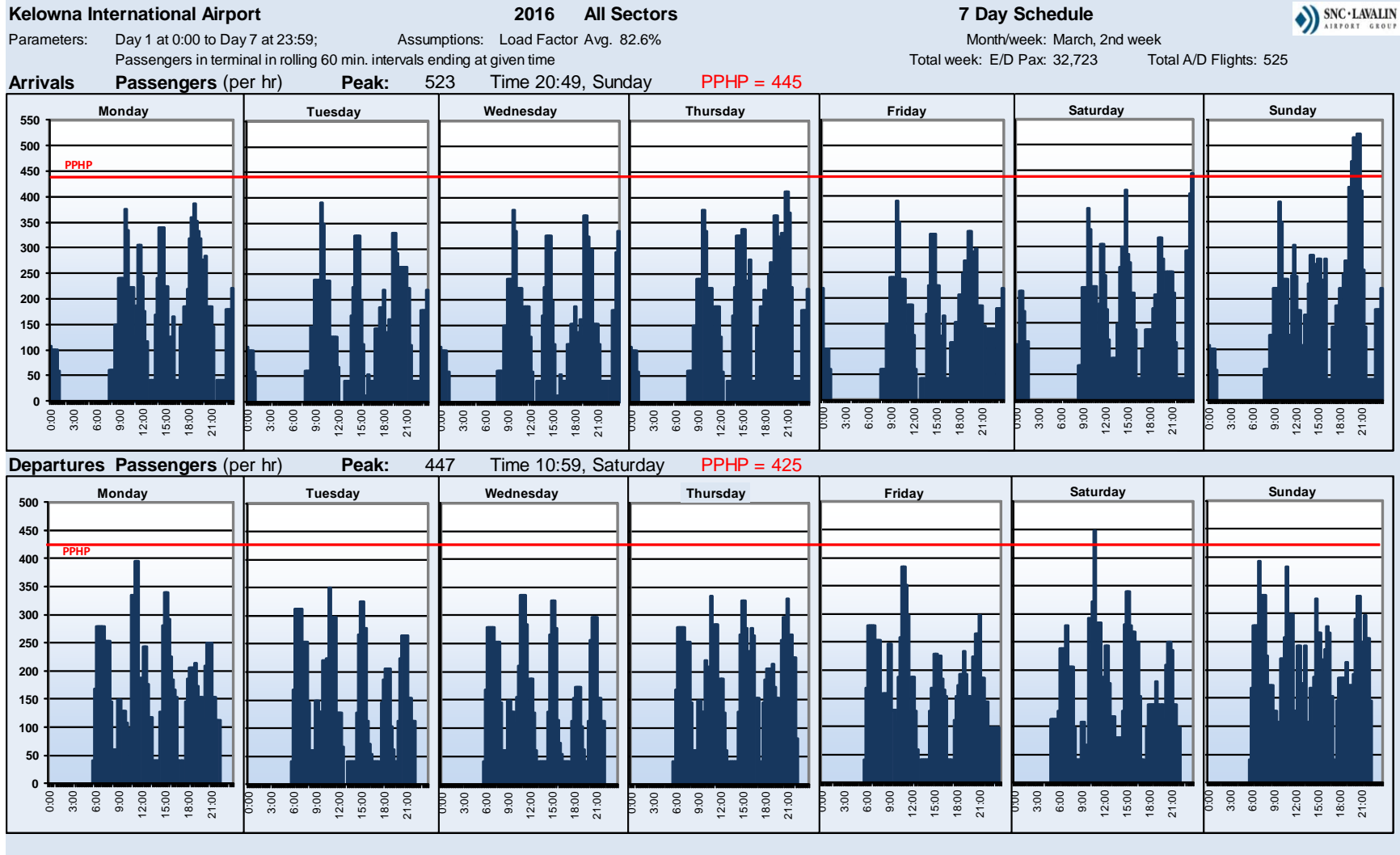
Exhibits 4.2 to 4.4 present the numbers of deplaning/arriving and enplaning/departing passengers (separately) by day and hour during the Busy Week in 2016 overall and for each sector. The peak activity on each day is fairly similar during the mid-week period, but is different on the weekend which has higher peaks. For total traffic, the daily arriving peak is on Sunday at 20:20, while the departing peak is greatest on Saturday and occurs around 10:45. For domestic traffic, the arrivals peak is at around 20:45 on Thursday, 19:15 on Sunday and 9:45 on other days, while departing peaks occur between 10:45 and 11:30 on most days, the greatest being on Sunday. International daily peaks are based on only a few flights and for arrivals occurs around 20:15 on Sunday, and for departures occurs at 7:00 on Sunday and 16:00 on Saturday.

The PPHP values found using the Busy Week schedule were very similar to those estimated based on the NCAMS flight-by-flight data over the whole year. Differences between the two approaches were 15 for total arrivals, total departures and domestic arrivals. The PPHP values given in the charts are the final values based on the two approaches.



## Kelowna International Airport Master Plan 2045 Technical Report – Air Traffic Forecasts (Draft 4)

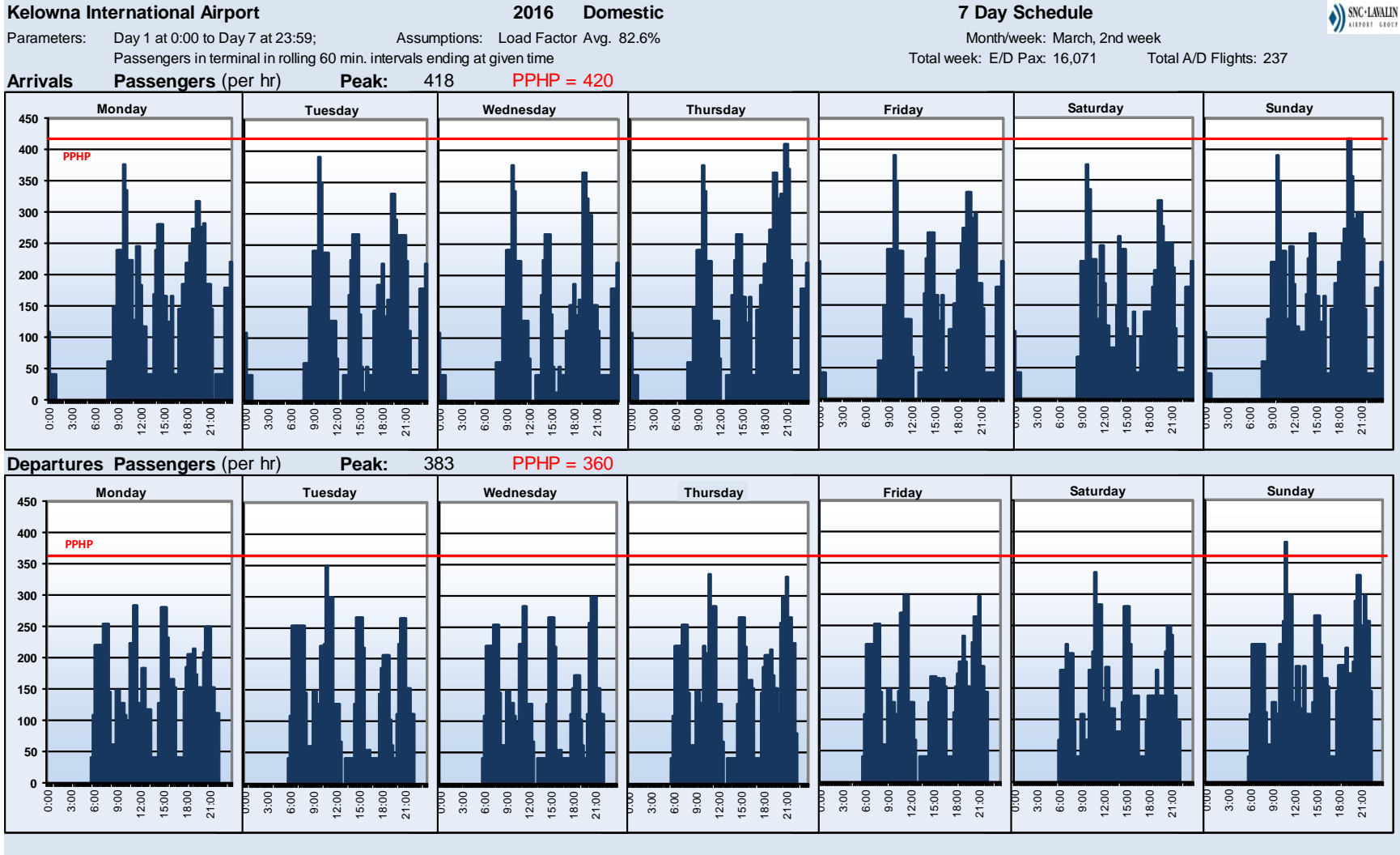
**Exhibit 4.2 Total Arriving and Departing Passengers at YLW by Hour and Day of Week, Busy Week, 2016**





## Kelowna International Airport Master Plan 2045 Technical Report – Air Traffic Forecasts (Draft 4)

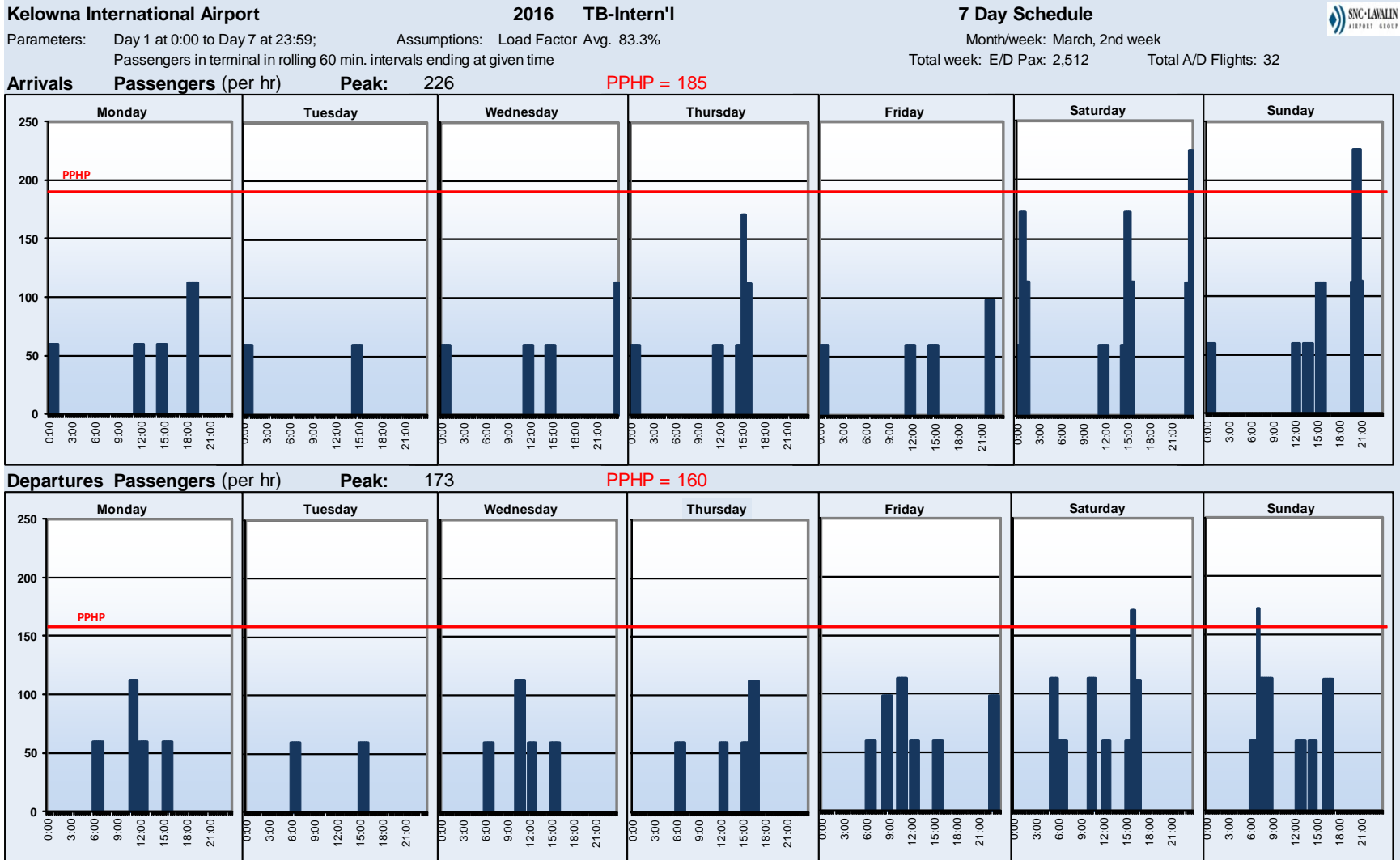
**Exhibit 4.3 Arriving and Departing Domestic Passengers at YLW by Hour and Day of Week, Busy Week, 2016**





## Kelowna International Airport Master Plan 2045 Technical Report – Air Traffic Forecasts (Draft 4)

**Exhibit 4.4 Arriving and Departing International Passengers at YLW by Hour and Day of Week, Busy Week, 2016**





### 4.3 FORECAST PEAK PASSENGER ACTIVITY

Due to the different processing requirements, planning peak hour passenger (PPHP) forecasts were developed separately for the following segments of traffic:

- All sectors combined for both arriving and for departing;
- Arriving domestic passengers;
- Arriving international passengers (including transborder);

Departing passengers are not required to be segregated by sector, thus separate peak hour values by sector are not required. The peak hour passenger forecasts by segment, and combined over all segments, are used for the sizing of various facilities and all are needed when determining facility requirements.

Exhibit 4.5 presents the mid-range (median), mean, second greatest and maximum values of the daily peaks in hourly passengers on all flights at YLW from the nominal schedules, together with peak passenger values obtained using the Ratio Method<sup>11</sup>. These are used in setting the recommended PPHP values which are also presented. Nominal schedules were not prepared for after 2035 due to the uncertainty predicting schedules that far into the future and PPHP values for these years are based on the 2035 values and the growth in annual traffic after 2035.

**Exhibit 4.5  
Peak Hour Passenger Values during Busy Week and Recommended PPHP – All Sectors**

| Year              | Nominal Schedule - Rolling 60 min Intervals |         |              |         | Ratio Method | Recommended PPHP* |
|-------------------|---|---------|--------------|---------|--------------|-------------------|
|                   | Median                                      | Average | 2nd Greatest | Maximum |              |                   |
| <b>Arrivals</b>   |   |         |              |         |              |                   |
| 2016              | 390   | 417     | 445          | 523     | 445          | 445               |
| 2020              | 484   | 527     | 607          | 616     | 520          | 565               |
| 2025              | 538   | 552     | 618          | 666     | 606          | 600               |
| 2030              | 559   | 579     | 646          | 666     | 685          | 630               |
| 2035              | 611   | 607     | 646          | 666     | 768          | 660               |
| 2040              |   |         |              |         | 856          | 715               |
| 2045              |   |         |              |         | 947          | 770               |
| <b>Departures</b> |   |         |              |         |              |                   |
| 2016              | 384   | 377     | 447          | 447     | 425          | 425               |
| 2020              | 472   | 474     | 472          | 510     | 497          | 485               |
| 2025              | 555   | 549     | 555          | 556     | 579          | 560               |
| 2030              | 598   | 592     | 599          | 600     | 655          | 605               |
| 2035              | 620   | 636     | 672          | 715     | 734          | 675               |
| 2040              |   |         |              |         | 818          | 735               |
| 2045              |   |         |              |         | 905          | 780               |

\* PPHP values in 2016 also based on NCAMS flight-by-flight data over the whole year not shown in table

<sup>11</sup> Ratio method forecasts PPHP values based on the ratio of PPHPs to annual passengers by segment in 2015 and forecast growth in annual passengers by segment.



The recommended PPHPs increase at a slower rate over the forecast period than would be expected based on total passenger growth (represented by the values with the Ratio Method). This occurs because much of YLW’s traffic flies to two main hubs, YVR and YYC, plus, to a less extent YEG, and as airlines increase capacity on those routes they will often increase the frequency to those hubs, rather than increase the size of aircraft. Initially Air Canada will replace the 50-seat DHC-8-300 and CRJs with the larger Q400s, and once the DHC-8-300s have been replaced, they will increase frequency. WestJet will likely add frequency using Q400s and later possibly up-gauge some of these to 737s. Peak hour passenger values for domestic and international arrivals are presented in Exhibit 4.6.

**Exhibit 4.6  
Peak Hour Passenger Values during Busy Week and Recommended PPHP – By Traffic Segment**

| Year            | Nominal Schedule - Rolling 60 min Intervals |         |             |         | Ratio Method | Recommended PPHP* |
|-----------------|---|---------|-------------|---------|--------------|-------------------|
|                 | Median                                      | Average | 2nd Highest | Maximum |              |                   |
| <b>Arrivals</b> | <b>Domestic</b>                             |         |             |         |              |                   |
| 2016            | 390   | 391     | 410         | 418     | 420          | 420               |
| 2020            | 454   | 467     | 475         | 505     | 489          | 485               |
| 2025            | 459   | 487     | 533         | 544     | 567          | 520               |
| 2030            | 470   | 494     | 533         | 544     | 638          | 545               |
| 2035            | 497   | 504     | 533         | 544     | 711          | 565               |
| 2040            |   |         |             |         | 789          | 590               |
| 2045            |   |         |             |         | 868          | 610               |
| <b>Arrivals</b> | <b>International</b>                        |         |             |         |              |                   |
| 2016            | 113   | 144     | 225         | 226     | 185          | 185               |
| 2020            | 233   | 202     | 234         | 291     | 216          | 235               |
| 2025            | 234   | 241     | 292         | 386     | 251          | 280               |
| 2030            | 235   | 286     | 376         | 391     | 283          | 325               |
| 2035            | 292   | 309     | 376         | 391     | 317          | 340               |
| 2040            |   |         |             |         | 352          | 375               |
| 2045            |   |         |             |         | 389          | 405               |

Note: Departing passengers are not required to be segregated by sector, total departures given in previous table  
 \* PPHP values in 2016 also based on NCAMS flight-by-flight data over the whole year not shown in table

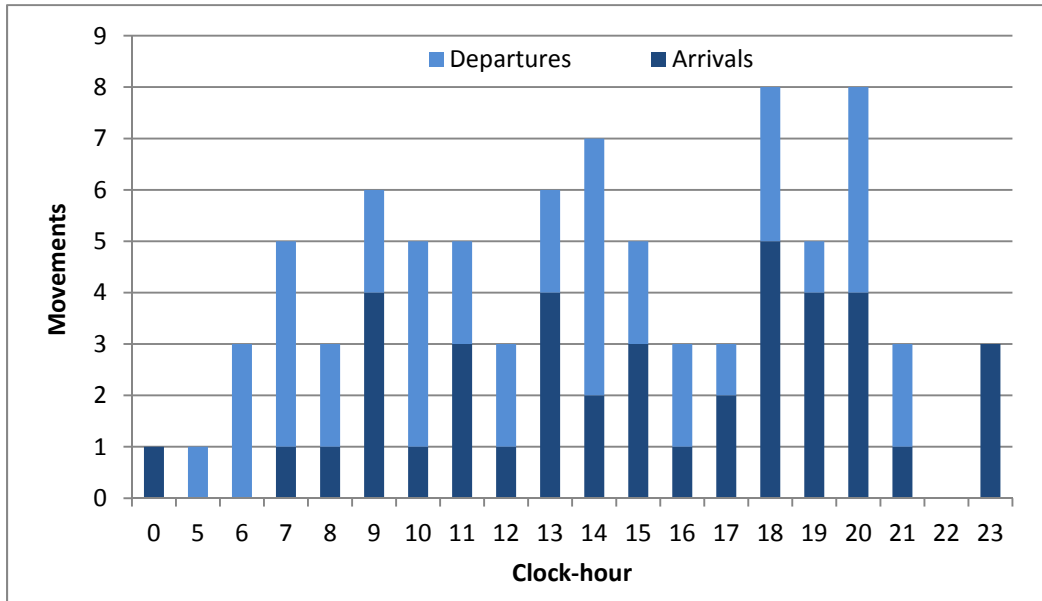
The recommended PPHP values are based on the Medium growth scenario. An indication of the impact of the higher growth scenario was examined by including the proposed schedule for New Leaf Airlines. The additional flights would increase the PPHP by 80 for arrivals and 35 for departures. The domestic arrivals, however, only increase by 5 as the new flights don’t occur in the domestic peak period.

**4.4 FORECAST PEAK AIRCRAFT ACTIVITY**

Movements of aircraft on commercial passenger (scheduled and major charter) service by clock hour on the busiest day of the Busy Week, Sunday, in March 2016 are presented in Exhibit 4.7. Sunday was the busiest day with 41 arrivals and 42 departures. The maximum movements in a clock-hour was 8, occurring in the two hours 18:00-18:59 and 20:00-20:59, with either 4 or 5 arrivals. The maximum number of movements in a sixty minute interval on the busiest day of the Busy Week was 9 at around 14:00 and 20:00, down from 10 in 2015.

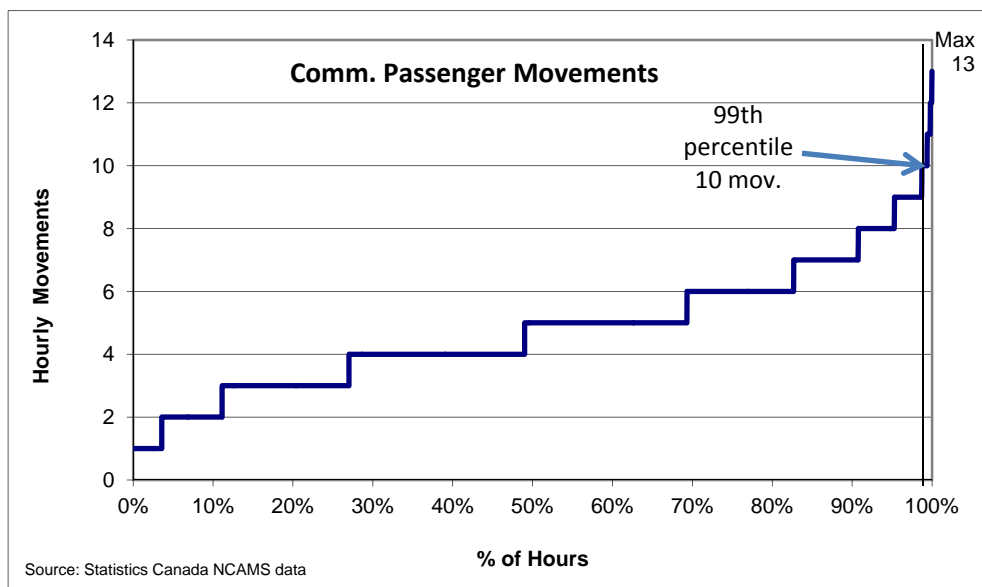


**Exhibit 4.7**  
**Commercial Passenger Aircraft Movements by Hour on Busiest Day of the Busy Week, 2016**



Movement data for the 12-month period March 2014 to February 2015 obtained from Statistics Canada was used to examine the distribution of hourly flights over the year. Exhibit 4.8 shows the distribution of hourly commercial passenger aircraft movements over the year at YLW. The number of the maximum hourly movements over the year was 13, the 95<sup>th</sup> percentile<sup>12</sup> was 8, and the 99<sup>th</sup> percentile was 10 similar to the maximum number in a 60-minute interval in the Busy Week schedule in 2015.

**Exhibit 4.8**  
**Distribution of Commercial Passenger Hourly Aircraft Movements, March 2014 – February 2015**



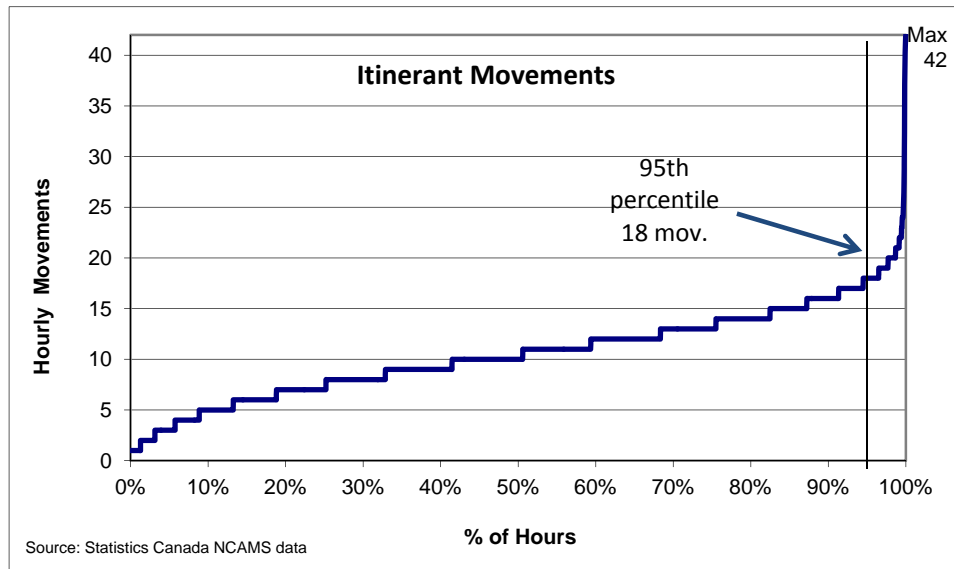
<sup>12</sup> 5% of movements are in hours with more movements than the 95<sup>th</sup> percentile value





Exhibit 4.9 shows the distribution of hourly itinerant aircraft movements over the year at YLW. The maximum number of itinerant movements in an hour in the 12 month period was 42 which occurred on June 7, 2014 at 11:00-11:59. The 95<sup>th</sup> percentile of the hourly itinerant movements over the year was 18 and the 99<sup>th</sup> percentile was 21. During the peak hour, 49% of movements were arriving aircraft.

**Exhibit 4.9**  
**Distribution of Itinerant Hourly Aircraft Movements, March 2014 – February 2015**



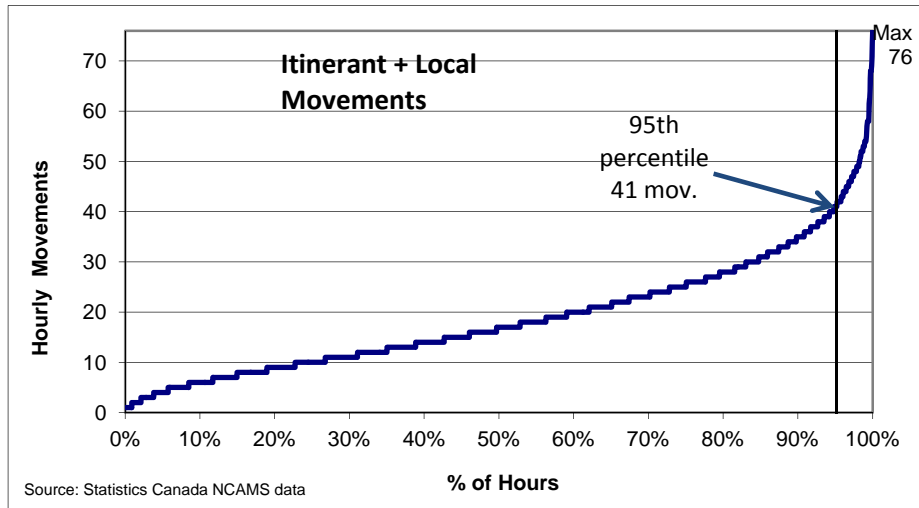
Helicopters account for 6% of itinerant movements at YLW and do not use the runway. The maximum number of itinerant movements in an hour where a runway was used in the 12 months was 40 and the 95<sup>th</sup> percentile of the hourly movements was 17.

The maximum number of local movements in an hour of the 12-month period was 64 and the 95<sup>th</sup> percentile of hourly local movements was 36.

The distribution of hourly total movements (itinerant plus local) is presented in Exhibit 4.10. The maximum number of all movements in an hour in the 12 months was much higher than for itinerant, 76, and the 95<sup>th</sup> percentile was 41 and the 99<sup>th</sup> percentile 54. Excluding movements not using a runway, the maximum was again 76 and the 95<sup>th</sup> percentile was 40. During the peak periods around 70% of movements are local, averaging 30 per hour. During the busiest hours with around 60 movements per hour, Touch-and-Go movements account for roughly half the movements according to Nav Canada staff. Using this ratio, it is estimated that of the 40 PPHMs, 20 are Touch-and-Go movements.



**Exhibit 4.10**  
**Distribution of Hourly Total Aircraft Movements, March 2014 – February 2015**



The Planning Peak Hour Movement (PPHM) values are based on the 95<sup>th</sup> percentile hourly movements, except for commercial passenger movements where the 99<sup>th</sup> percentile hourly movements is used. Growth in commercial passenger PPHMs is based on growth in maximum hourly movements in the nominal schedules. Forecasts of the PPHM for itinerant movements were developed based on the PPHM value of 18 movements in 2014 and the forecast growth in itinerant movements at YLW<sup>13</sup>. It is assumed that the peaking characteristics in relation to total traffic will remain the same over the forecast period. Forecasts of PPHM for all movements (itinerant + local) were developed considering the local movements in the peak hour (41-18 = 23) and the forecast growth of local movements. Forecast for itinerant and total movements using the runway were developed in a similar way. Forecasts of the maximum number of movements per hour and the PPHM are presented in Exhibit 4.11.

**Exhibit 4.11**  
**Forecast Planning Peak Hour Activity for Aircraft Movements**

| Segment                                 | 2014 | 2015 | 2020 | 2025 | 2030 | 2035 | 2040 | 2045 |
|---|------|------|------|------|------|------|------|------|
| Itinerant - Max. Hourly                 | 42   | 47   | 48   | 58   | 57   | 61   | 65   | 69   |
| Sched. Pass. Aircraft                   | 10   | 10   | 11   | 11   | 12   | 15   | 16   | 17   |
| Itinerant using Runway                  | 17   | 18   | 19   | 20   | 22   | 23   | 25   | 26   |
| Itinerant                               | 18   | 19   | 20   | 22   | 23   | 25   | 26   | 28   |
| All (Itinerant + Local)                 | 41   | 42   | 43   | 44   | 46   | 47   | 48   | 49   |
| Itinerant + Local Excluding Helicopters | 40   | 41   | 42   | 43   | 44   | 45   | 47   | 48   |

<sup>13</sup> PPHM values for 2015 were determined based on the PPHM values in 2014 and the increase in average monthly peak hour movement values in 2015 compared to 2014 using published Statistics Canada values in CANSIM Table 401-0007



#### 4.5 BUSY DAY TRAFFIC

The Busy Day is typically taken to be the second busiest day of the Busy Week and is representative of the 95% busiest day over the year. For total traffic, the Busy Day is a Thursday and the numbers of arriving and departing flights and passengers on that day are summarized in Exhibit 4.12. The busiest day of the week is Sunday for most years, particularly for international passengers where there is more variation over the week. The Busy Day flight schedule for the planning years are summarized in Appendix B.

**Exhibit 4.12  
Forecast Busy Day Flights and E/D Passengers**

| Year | Flights  |           |       | E/D Passengers |           |        |
|------|----------|-----------|-------|----------------|-----------|--------|
|      | Arriving | Departing | Total | Arriving       | Departing | Total  |
| 2015 | 39       | 40        | 79    | 2,730          | 2,730     | 5,460  |
| 2016 | 39       | 38        | 77    | 2,800          | 2,768     | 5,568  |
| 2020 | 45       | 46        | 91    | 3,415          | 3,310     | 6,725  |
| 2025 | 52       | 53        | 105   | 4,021          | 4,002     | 8,023  |
| 2030 | 58       | 59        | 117   | 4,461          | 4,442     | 8,903  |
| 2035 | 64       | 66        | 130   | 4,893          | 5,031     | 9,924  |
| 2045 | 76       | 78        | 154   | 5,872          | 6,038     | 11,910 |

#### 4.6 AIRCRAFT GATING REQUIREMENTS

The nominal schedules were used to determine the aircraft gating requirements. The ratio method of scaling up current gate requirements based on increases in annual commercial passenger aircraft movements provides an additional simple check, but does not take into account changes in the composition of the fleet and differing growth rates between regions.

##### 4.6.1 AIRCRAFT GATE ASSIGNMENT

In assigning aircraft to gates, it was assumed that aircraft at the airport for over a minimum specified time will be moved off the gate if the gate is required by another aircraft. The gate assignments are considered for planning purposes. The following criteria were used in the assignment of aircraft to gates:

- Buffer time between departure and arrival of at least 20 minutes;
- For cases where aircraft are moved from the gate, the maximum time at a gate without being moved varies from 1.5 hours for Code B & C aircraft to 2 hours for Code D & E aircraft; if moved, the aircraft is moved 20-45 minutes after arrival and is moved back 30-60 minutes before departure (low values for Code B, high values for Code E);
- Smaller aircraft can use the gates suitable for larger aircraft (e.g., Code C aircraft use Code D and E gates), but larger aircraft cannot use smaller gates; and



- International flights must use either an international or swing gate on arrival, domestic flights must use either domestic or swing gates on arrival, and while there is no distinction between sectors for departing flights.

Aircraft were classified by ICAO Aerodrome Aircraft Reference Code. To distinguish aircraft that do, or do not use a loading bridge, Code B regional jets are designated as Code B+, while the DHC-8-300 is designated Code C-. The classifications used were as follows:

- B Wingspan < 24m and turboprop (BE1900, Metroliner)
- B+ Wingspan 24 - 28m RJ (CRJ, CR7, CR9, E145) use a loading bridge
- C- Wingspan 24 -36m (DHC-8-300) do not use a loading bridge
- C Wingspan 24 -36m (737, 319, 320, 321, E170, E190, Q400) use a loading bridge
- D Wingspan 36 - 52m (757, 767)
- E Wingspan 52 - 65m (330, 787, 777, 747)

#### **4.6.2 EXISTING GATES**

YLW currently has nine operational aircraft gates, including:

- One Code D gate with a loading bridge (Gate 4);
- Seven Code C gates, four with loading bridges (Gates 6, 7, 8 & 9) and three without loading bridges (Gates 1, 2 & 3); and
- One Code B gate with no loading bridge (Gate 10).

There is currently one non-operational gate, Gate 5, which can handle Code C aircraft up to the size of a Q400. Gate 5 is closed until construction of the baggage room is completed in 2017. Other characteristics of specific gates include::

- Gates 1 and 2 can be occupied by one Code E, but Gates 3 and 4 cannot be occupied while a Code E enters or exits the Gates 1 and 2 area.
- Gate 4 is a Code D swing gate, but limited to no larger than B767-300ERW. An MD-11 or a B767-400 would not fit at this gate; and
- Gate 10 is a Code B gate, but limited to no larger than Beech 1900D (used by Central Mountain Air).

In total, five gates have loading bridges: one Code D and four Code C gates. Two of the Code C gates with loading bridges can be used for DHC-8-300 aircraft. The DHC-8-300s can also use the three walkout Code C gates. All gates can be used for either domestic or international flight, although Gates 3 and 4 are specifically designated for international use (but Gate 3 does not have a loading bridge).

Plans are for Gate 3 to be equipped with a loading bridge by 2017 or 2018. Also, Gate 10 could become a Q400 non-bridged stand, but with restrictions depending on the size of aircraft parked at Gate 9.

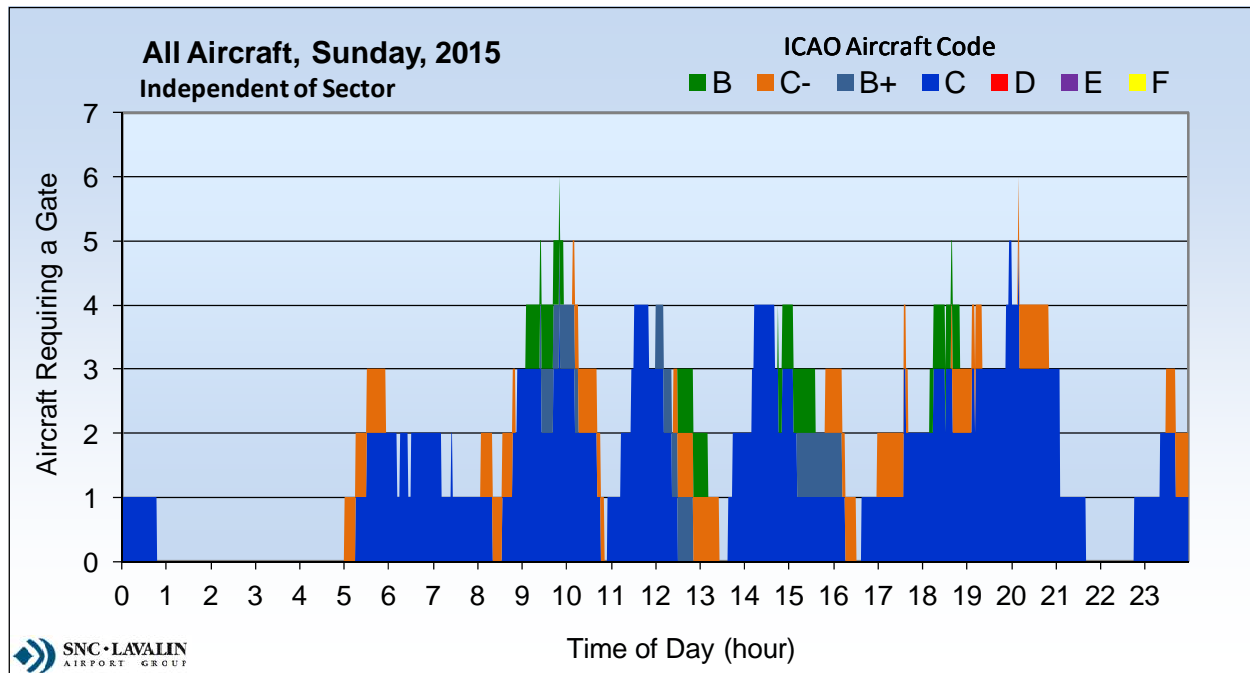


**4.6.3 MINIMUM CURRENT AND FORECAST REQUIRED GATES**

The minimum number of gates required to gate aircraft for each of the nominal schedules was determined considering the numbers of aircraft requiring a gate over the day and creating gate charts with aircraft assigned to particular gates, in each case allowing for the buffer times and removal from the gate if minimum removal times are exceeded. Note that the number of aircraft requiring a gate may be less than the number of gates required to gate these aircraft as it is assumed aircraft are not moved between gates which are empty for short times to reduce the total gates required. The numbers of aircraft requiring a gate does, however, provide a very good indication of the demand levels and typically the number of gates required is roughly 10% greater.

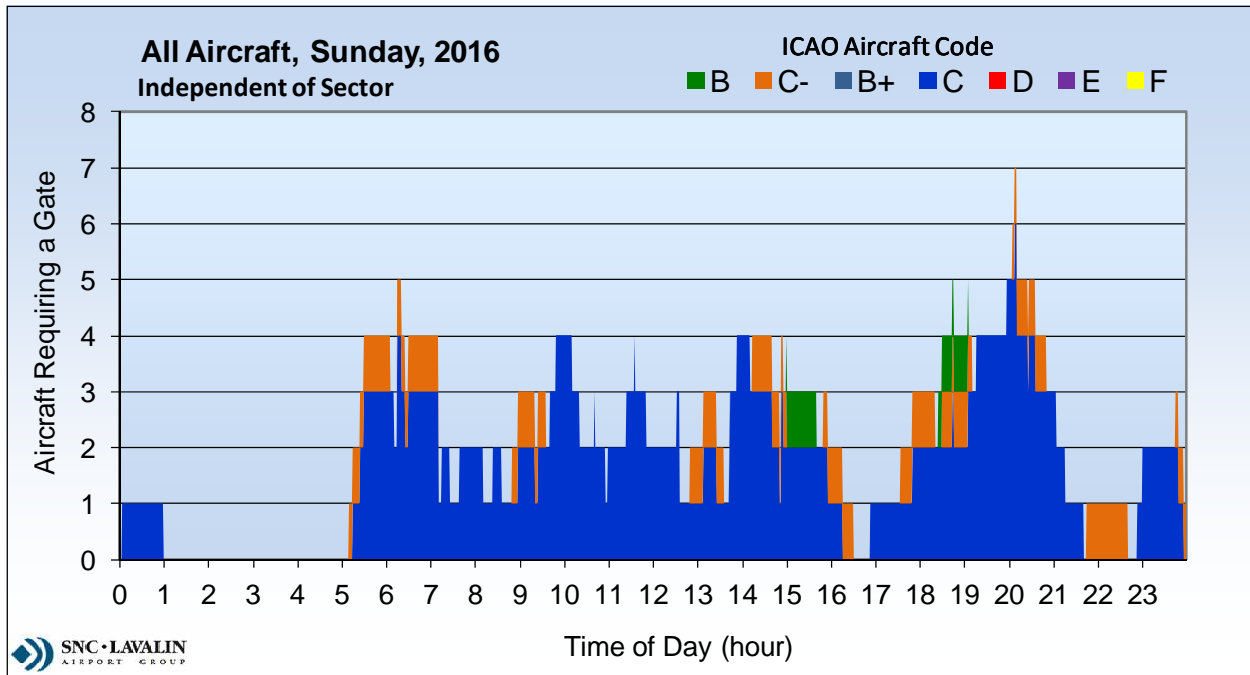
The numbers of aircraft requiring a gate were examined for each day of the Busy Week using the nominal schedules and Sunday was found to be the day when the most gates are required in each year of the forecast years. The numbers of aircraft requiring a gate, independent of sector, on the Sunday of the Busy Week in 2015, 2016, 2020, 2025, 2030 and 2035 are presented in Exhibits 4.13 to 4.18. Note that if all international gates are swing gates, as is presently the case, accounting for sector of the flights will not increase the total number of gates required. The gate requirements become very peaked in 2016 due to the change in flight times of the Air North flight which operates once per week.

**Exhibit 4.13  
Numbers of Aircraft Requiring a Gate by ICAO Code, Busiest Day of Busy Week, 2015**

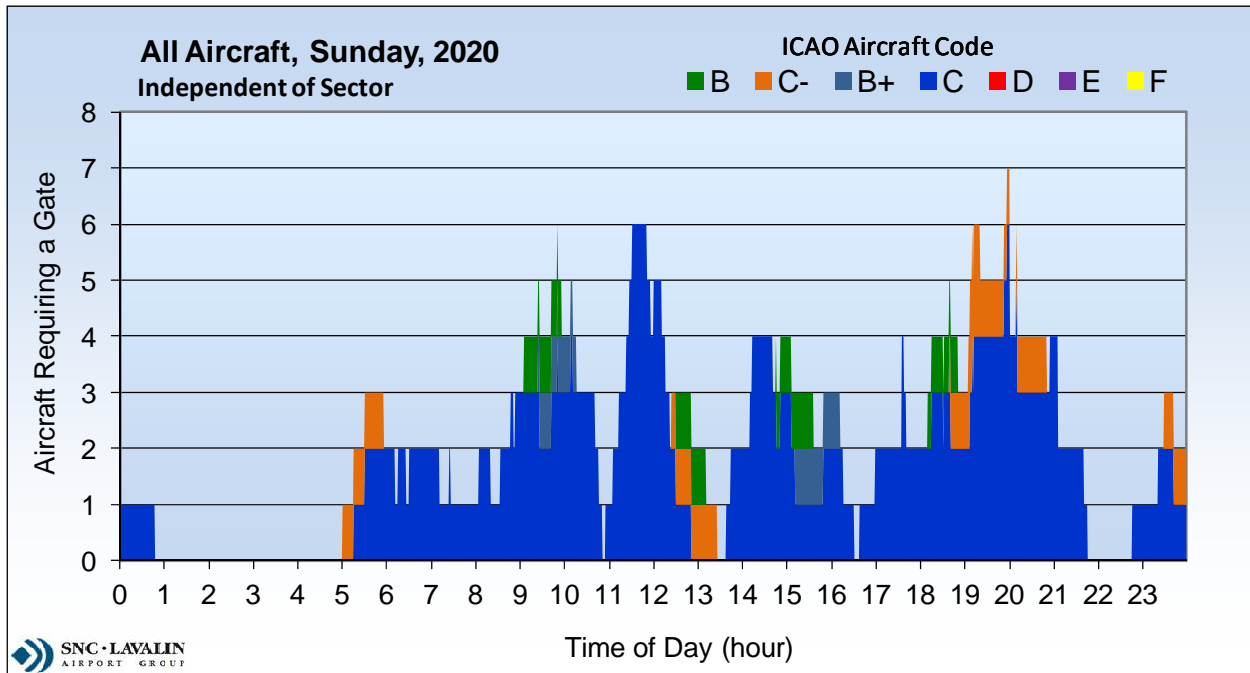




**Exhibit 4.14**  
**Numbers of Aircraft Requiring a Gate by ICAO Code, Busiest Day of Busy Week, 2016**

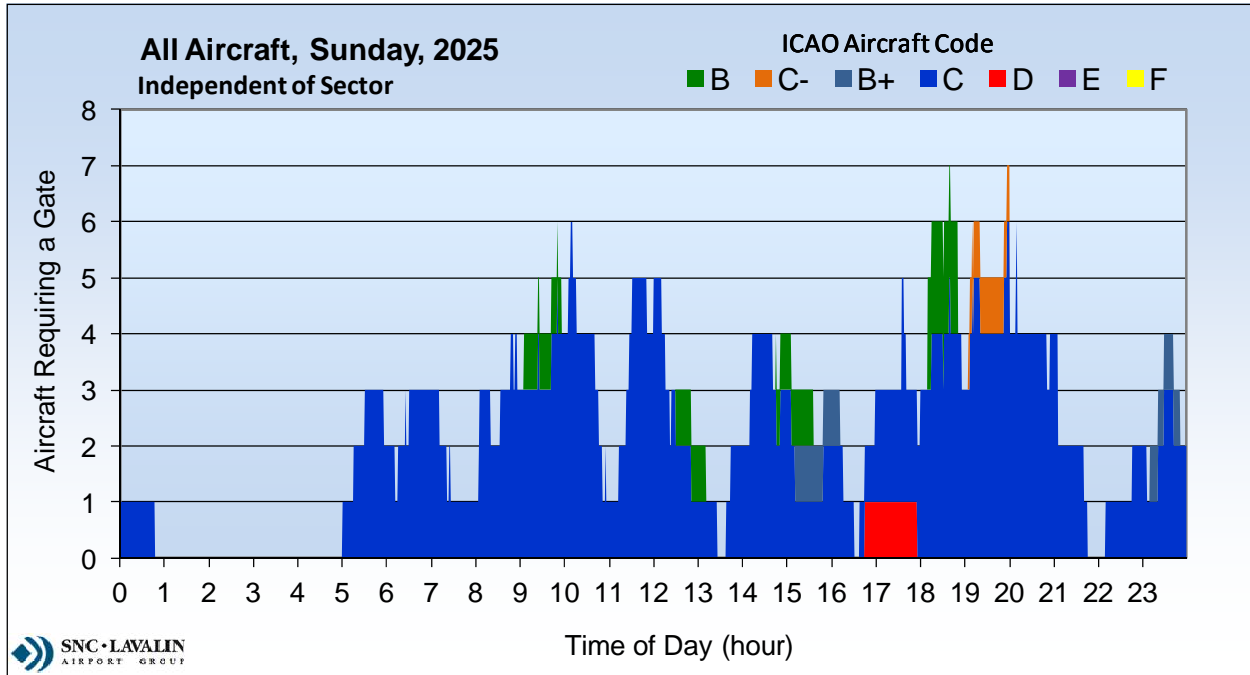


**Exhibit 4.15**  
**Numbers of Aircraft Requiring a Gate by ICAO Code, Busiest Day of Busy Week, 2020**

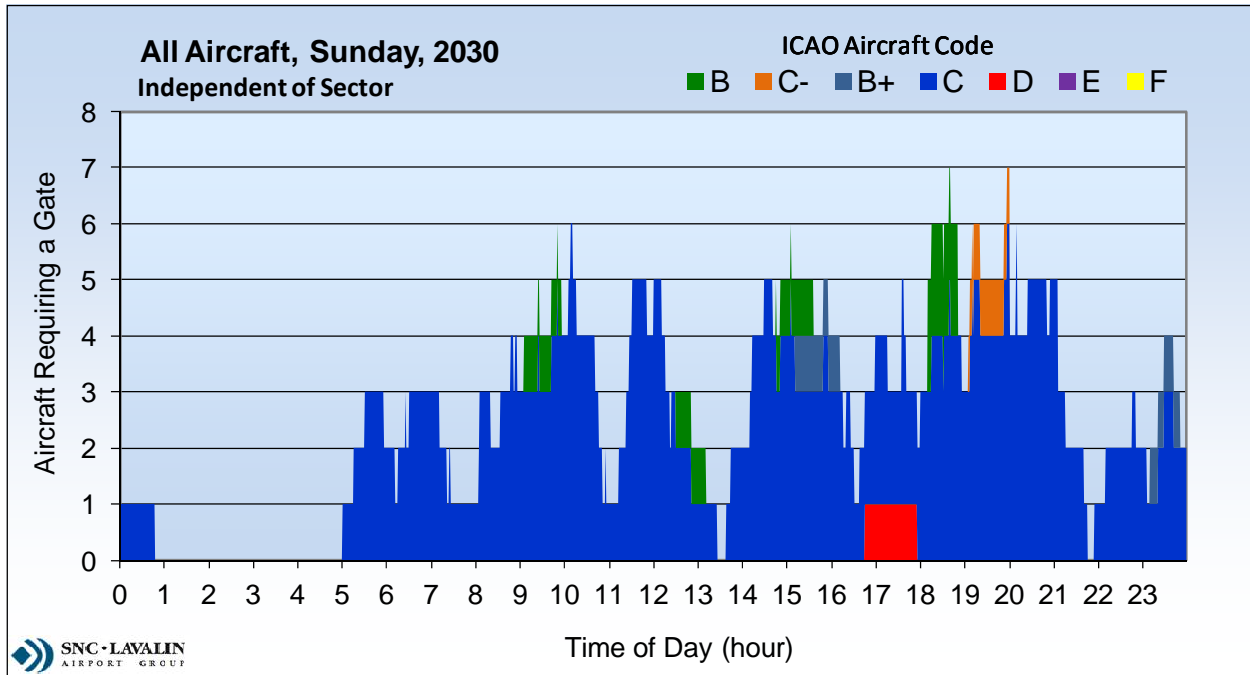




**Exhibit 4.16**  
**Numbers of Aircraft Requiring a Gate by ICAO Code, Busiest Day of Busy Week, 2025**



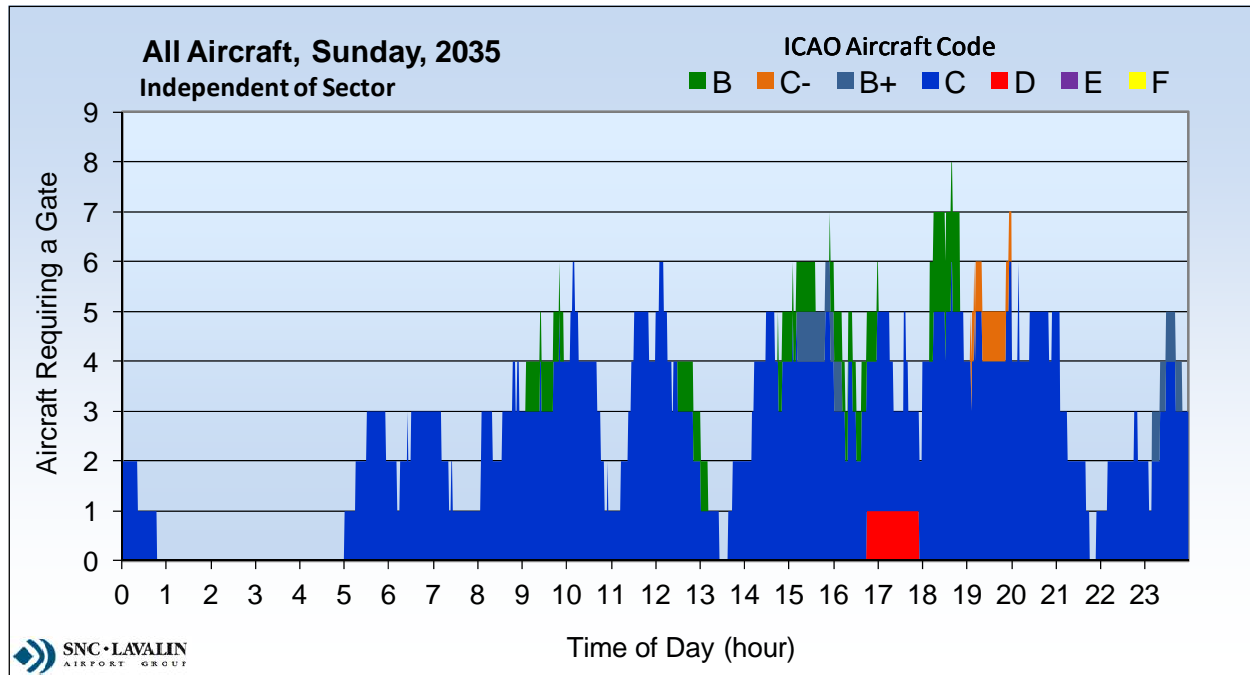
**Exhibit 4.17**  
**Numbers of Aircraft Requiring a Gate by ICAO Code, Busiest Day of Busy Week, 2030**







**Exhibit 4.18**  
**Numbers of Aircraft Requiring a Gate by ICAO Code, Busiest Day of Busy Week, 2035**



The peak periods for aircraft requiring a gate, assuming they can be transferred to a remote stand if not requiring a gate at that time, is around 9:40 and again at 20:15 in 2015, and is around 20:15 in 2016. Four Code C or B+ aircraft require a loading bridge in 2015 and five in 2016, and two Code B or C-aircraft requiring a walkout gate (or loading bridge for DHC-8-300s) in both years. In later years Sunday evening remains the period of greatest demand for gates.

In the above exhibits, aircraft are assumed to be removed from the gate so as to indicate the minimum numbers of aircraft requiring a gate. The exhibits therefore do not show the overnighing aircraft, nor those aircraft on the remote stand. Exhibit 4.19 shows the numbers of aircraft requiring a **gate or stand** by ICAO Code and time of day for the busiest day for overnighing aircraft, Thursday, for each of the planning years. These charts provide an indication of the minimum total gates and remote stands required.

Gating charts were developed for each of the nominal schedule years, 2015, 2020, 2025, 2030 and 2035. The gating chart for the 2020 schedule is presented in Exhibit 4.20 and charts for all five years, including remote stand requirements, are included in Appendix A. Gate number and types given on the chart match existing gates at YLW. The gates are colour coded by sector (domestic, international or swing on arrival), as are the sectors of each aircraft on arrival and departure. Domestic charter flights are coloured separately.

The exhibit shows that the existing eight gates plus one remote stand will be required in 2020. Two of the Code C (or D) gates must be swing gates able to handle international arrivals. However, on a less busy day for gate demand overall, Thursday, three swing gates are required. Note that it is possible to reduce the number of gates required by moving aircraft to another gate between arrival and departure, but for aircraft with short-to-medium turn times of less than 60 minutes, this is far from optimal. Only in one case is this done in the 2035 schedule where the turn-time was almost 2 hours and was done to



reduce the number of swing gates required.

Exhibit 4.19

Aircraft Requiring a Gate or Stand by ICAO Code and Time of Day for the Busiest Day of Busy Week for Overnighting Aircraft, Thursday, for Each Planning Year

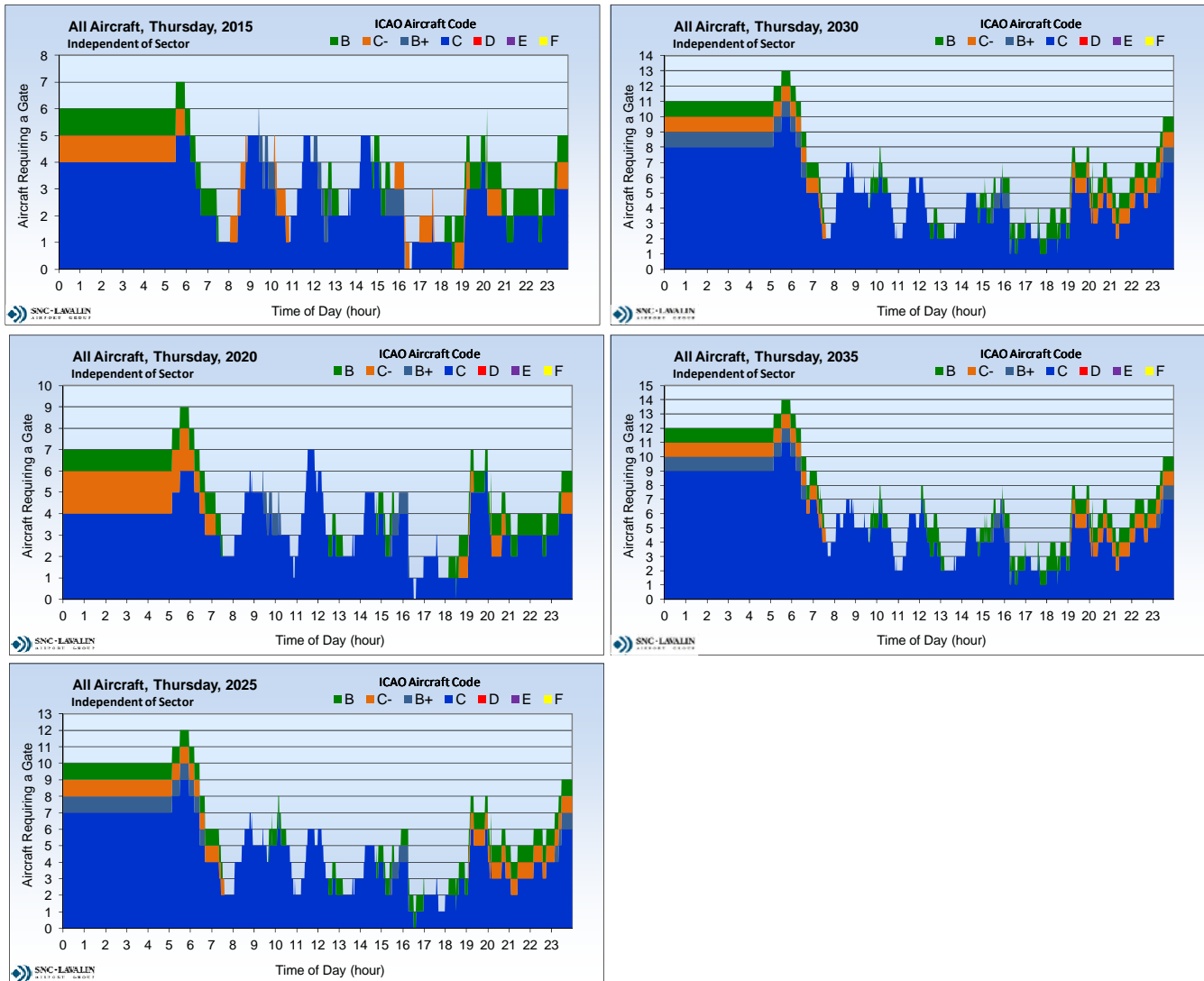
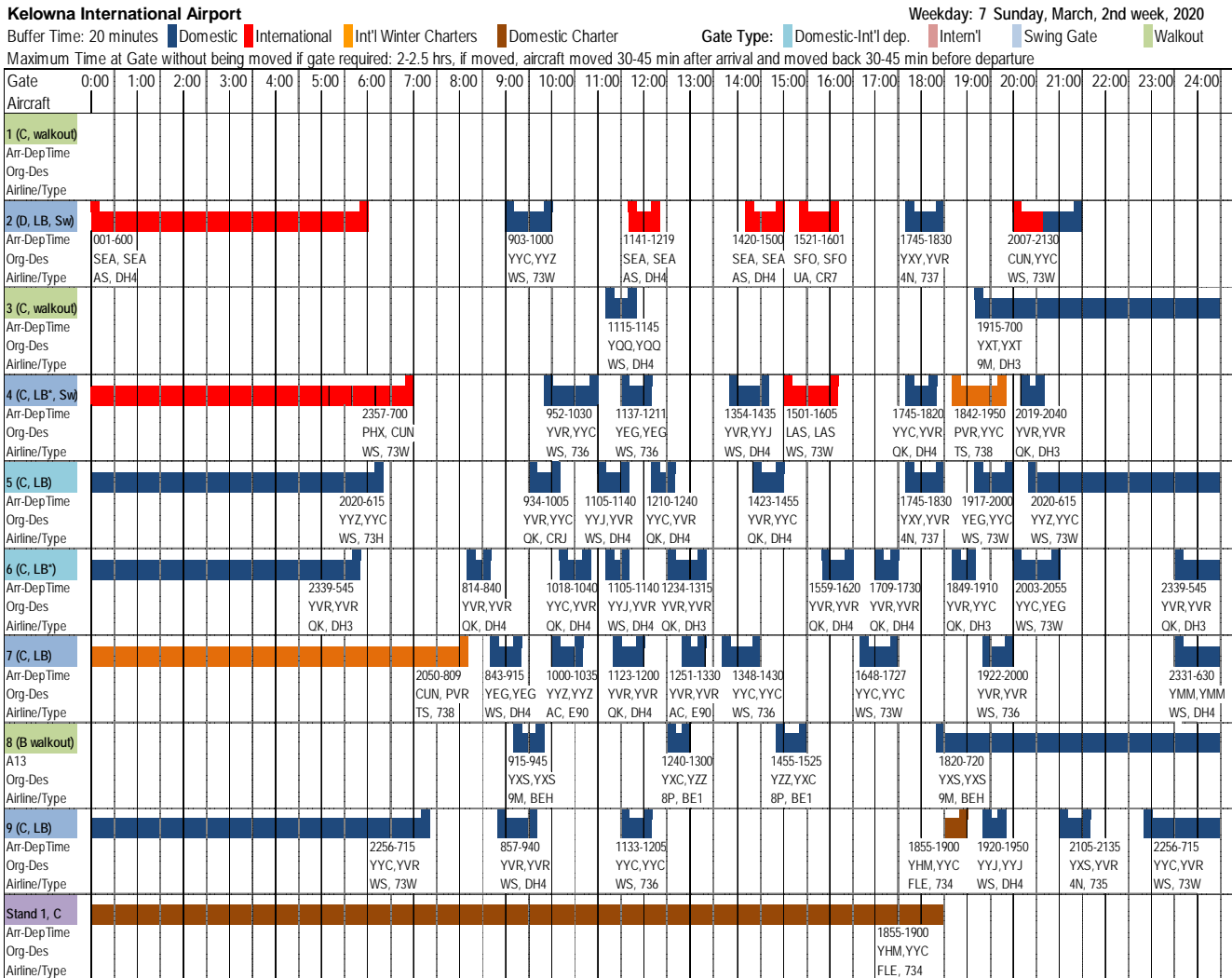




Exhibit 4.20  
Aircraft Gating Chart for Busiest Day of Busy Week, 2020



The minimum numbers of required gates by ICAO Code and number which must be swing gates and the number of remote stands by forecast year based on nominal schedules are presented in Exhibit 4.21. Note that it is assumed that Code B turboprops (e.g., B1900D) do not use Code C gates with loading bridges as walkout gates. The number of remote stands required is forecast to increase as more flights have late evening arrivals and early morning departures. These flights often don't operate on Saturday evening-Sunday morning and the number of remote stands required is therefore less on the Sunday for which the gate charts are provided. The total minimum required number of gates based on the forecast schedules increases at slightly less than the minimum number based on growth in commercial passenger aircraft movements. However, the total gate and remote stand required, shown at the bottom of Exhibit 4.21, increase at slightly more than the growth in commercial passenger aircraft movements.



**Exhibit 4.21  
Minimum Gates Required by ICAO Code Based on Nominal Schedules**

| Type of Gate / Stand            | ICAO Size Code | ATB (2016) | 2015 | 2016 | 2020 | 2025 | 2030 | 2035  | 2040  | 2045  |
|---------------------------------|----------------|------------|------|------|------|------|------|-------|-------|-------|
| No Loading Bridge               | B              | 1          | 1    | 1    | 1    | 1    | 1    | 1     | 1     | 1     |
|                                 | C              | 3 (+1*)    | 1    | 1    | 1    | 1    | 1    | 1     | 1     | 1     |
| Req. Loading Bridge             | B+             | 0          | 0    | 0    | 0    | 0    | 0    | 0     | 0     | 0     |
|                                 | C              | 4^         | 5    | 6    | 6    | 6    | 6    | 7     | 8     | 8     |
|                                 | D (E)          | 1          | 0    | 0    | 0    | 1    | 1    | 1 (E) | 1 (E) | 1 (E) |
| All                             | Total          | 9 (+1*)    | 7    | 8    | 8    | 9    | 9    | 10    | 11    | 11    |
| L/B gates which must be Swing** |                | 2          | 2    | 2    | 3    | 3    | 3    | 3     | 3     | 4     |
| Off-gate Parking Stands Code C  |                |            | 0    | 0    | 1    | 3    | 4    | 4     | 4     | 5     |
| Total Gates + Stands            |                | 9 (+1*)    | 7    | 8    | 9    | 12   | 13   | 14    | 15    | 16    |

\* One Code C up to size of Q400 is closed to 2017

\*\* Able to handle arriving international flights

^ Three Code C bridged gates can also handle walkout loading of aircraft

Note: B+ aircraft are ICAO Code B aircraft which use a loading bridge (e.g., CRJ, CR7)

With the currently closed gate becoming operational in 2017, there will be ample gate capacity until after 2020.

The Code D gate would need to be enlarged to accommodate Code E aircraft if the B767-300 aircraft forecast to be used on the European charter service is replaced with a B787. The nominal schedules assume this occurs sometime after 2035.

With the closed Code C gate becoming operational in 2017, no new gates will be required until after 2025. The additional gates required **relative to the gate availability in late 2017** (i.e., with Gate 5 operational) based on the most likely future forecast schedules and current gate time parameters are as follows:

- By 2020: One additional remote stand
- By 2025: Three additional remote stands, and add loading bridge to an existing Code C gate,
- By 2030: Four additional remote stands, and add loading bridge to an existing Code C gate,
- By 2035: One additional Domestic Code C gate, four additional remote stands, and add loading bridge to an existing Code C gate
- By 2040: Two additional Domestic Code C gates, four additional remote stands, and add loading bridge to an existing Code C gate
- By 2045: Three additional Domestic Code C gates, five additional remote stands, and add loading bridge to an existing Code C gate



#### **4.6.5 IMPACTS OF HIGHER TRAFFIC GROWTH**

The ratio method was used to estimate the total additional number of gates required under the High Case scenario and it was assumed the ultra-low cost carrier, NewLeaf, would operate at YWL, initially using the scheduled proposed in January 2015. The additional gates under the High Case scenarios above those required under the Medium Case scenario are as follows:

- In 2020            1
- In 2025            1
- In 2030            1
- In 2035            2
- In 2040            2-3
- In 2045            3



## **APPENDIX A**

### **Aircraft Gating Charts for Busiest Day of Busy Week in 2015, 2020, 2025, 2030 and 2035**

#### **Notes:**

Charts are for the Busiest Day using the current (2015) and forecast nominal schedules.

Aircraft are removed from the gate if at the airport for more than 1.5-2 hours and gate is required by another aircraft. Also, aircraft may, if necessary, be moved between gates of different sectors if at airport more than 60 minutes. Buffer time between flights is 20 minutes.

The DHC-8-Q400 is denoted by DH4 in the gate charts



# Kelowna International Airport Master Plan 2045 Technical Report – Air Traffic Forecasts (Draft 4)

## Kelowna International Airport

Weekday: 7 Sunday, March, 2nd week, 2015

Buffer Time: 20 minutes ■ Domestic ■ International ■ Int'l Winter Charters ■ Domestic Charter ■ Gate Type: Domestic-Int'l dep. ■ Intern'l ■ Swing Gate ■ Walkout

Maximum Time at Gate without being moved if gate required: 2-2.5 hrs, if moved, aircraft moved 30-45 min after arrival and moved back 30-45 min before departure

| Gate                  | 0:00  | 1:00 | 2:00 | 3:00 | 4:00 | 5:00 | 6:00 | 7:00 | 8:00 | 9:00 | 10:00 | 11:00 | 12:00 | 13:00 | 14:00 | 15:00 | 16:00 | 17:00 | 18:00 | 19:00 | 20:00 | 21:00 | 22:00 | 23:00 | 24:00 |
|-----------------------|---|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| <b>Aircraft</b>       |   |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| <b>1 (C, walkout)</b> |   |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Arr-Dep Time          |   |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Org-Des               |   |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Airline/Type          |   |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| <b>2 (C, LB, Sw)</b>  |   |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Arr-Dep Time          |   |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Org-Des               |   |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Airline/Type          |   |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| <b>3 (C, walkout)</b> | GATE CLOSED FROM SPRING OF 2015 FOR 2 YEARS |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| <b>4 (C, LB, Sw)</b>  |   |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Arr-Dep Time          |   |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Org-Des               |   |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Airline/Type          |   |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| <b>5 (C, LB)</b>      |   |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Arr-Dep Time          |   |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Org-Des               |   |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Airline/Type          |   |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| <b>6 (C, LB*)</b>     |   |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Arr-Dep Time          |   |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Org-Des               |   |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Airline/Type          |   |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| <b>7 (C, LB)</b>      |   |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Arr-Dep Time          |   |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Org-Des               |   |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Airline/Type          |   |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| <b>8 (B walkout)</b>  |   |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| A13                   |   |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Org-Des               |   |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Airline/Type          |   |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| <b>Stand 1, C</b>     |   |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Arr-Dep Time          |   |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Org-Des               |   |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Airline/Type          |   |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| <b>Stand 2, C</b>     |   |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Arr-Dep Time          |   |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Org-Des               |   |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Airline/Type          |   |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |





# Kelowna International Airport Master Plan 2045 Technical Report – Air Traffic Forecasts (Draft 4)

## Kelowna International Airport

Weekday: 7 Sunday, March, 2nd week, 2020

Buffer Time: 20 minutes Domestic International Int'l Winter Charters Domestic Charter Gate Type: Domestic-Int'l dep. Intern'l Swing Gate Walkout

Maximum Time at Gate without being moved if gate required: 2-2.5 hrs, if moved, aircraft moved 30-45 min after arrival and moved back 30-45 min before departure

| Gate   | 0:00 | 1:00 | 2:00 | 3:00 | 4:00 | 5:00 | 6:00 | 7:00 | 8:00 | 9:00 | 10:00 | 11:00 | 12:00 | 13:00 | 14:00 | 15:00 | 16:00 | 17:00 | 18:00 | 19:00 | 20:00 | 21:00 | 22:00 | 23:00 | 24:00 |  |
|--|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| <b>1 (C, walkout)</b><br>Arr-Dep Time<br>Org-Des<br>Airline/Type |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| <b>2 (D, LB, Sw)</b><br>Arr-Dep Time<br>Org-Des<br>Airline/Type  |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| <b>3 (C, walkout)</b><br>Arr-Dep Time<br>Org-Des<br>Airline/Type |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| <b>4 (C, LB*, Sw)</b><br>Arr-Dep Time<br>Org-Des<br>Airline/Type |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| <b>5 (C, LB)</b><br>Arr-Dep Time<br>Org-Des<br>Airline/Type      |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| <b>6 (C, LB*)</b><br>Arr-Dep Time<br>Org-Des<br>Airline/Type     |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| <b>7 (C, LB)</b><br>Arr-Dep Time<br>Org-Des<br>Airline/Type      |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| <b>8 (B walkout)</b><br>A13<br>Org-Des<br>Airline/Type           |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| <b>9 (C, LB)</b><br>Arr-Dep Time<br>Org-Des<br>Airline/Type      |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| <b>Stand 1, C</b><br>Arr-Dep Time<br>Org-Des<br>Airline/Type     |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |



# Kelowna International Airport Master Plan 2045 Technical Report – Air Traffic Forecasts (Draft 4)

## Kelowna International Airport

Weekday: 7 Sunday, March, 2nd week, 2025

Buffer Time: 20 minutes Domestic International Int'l Winter Charters Domestic Charter

Gate Type: Domestic-Int'l dep. Int'l Swing Gate Dom. Walkout

Maximum Time at Gate without being moved if gate required: 2-2.5 hrs, if moved, aircraft moved 30-45 min after arrival and moved back 30-45 min before departure

| Gate                  | 0:00 | 1:00 | 2:00 | 3:00 | 4:00 | 5:00 | 6:00 | 7:00 | 8:00 | 9:00 | 10:00 | 11:00 | 12:00 | 13:00 | 14:00 | 15:00 | 16:00 | 17:00 | 18:00 | 19:00 | 20:00 | 21:00 | 22:00 | 23:00 | 24:00 |  |
|-----------------------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| <b>Aircraft</b>       |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| <b>1 (C, walkout)</b> |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| Arr-Dep Time          |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| Org-Des               |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| Airline/Type          |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| <b>2 (D, LB, Sw)</b>  |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| Arr-Dep Time          |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| Org-Des               |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| Airline/Type          |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| <b>3 (C, walkout)</b> |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| Arr-Dep Time          |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| Org-Des               |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| Airline/Type          |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| <b>4 (C, LB, Sw)</b>  |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| Arr-Dep Time          |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| Org-Des               |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| Airline/Type          |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| <b>5 (C, LB, Sw)</b>  |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| Arr-Dep Time          |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| Org-Des               |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| Airline/Type          |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| <b>6 (C, LB)</b>      |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| Arr-Dep Time          |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| Org-Des               |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| Airline/Type          |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| <b>7 (C, LB)</b>      |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| Arr-Dep Time          |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| Org-Des               |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| Airline/Type          |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| <b>8 (B walkout)</b>  |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| A13                   |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| Org-Des               |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| Airline/Type          |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| <b>9 (C, LB)</b>      |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| Arr-Dep Time          |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| Org-Des               |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| Airline/Type          |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| <b>10 (C, LB)</b>     |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| Arr-Dep Time          |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| Org-Des               |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| Airline/Type          |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| <b>Stand 1, C</b>     |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| Arr-Dep Time          |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| Org-Des               |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| Airline/Type          |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| <b>Stand 2, C</b>     |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| Arr-Dep Time          |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| Org-Des               |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| Airline/Type          |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| <b>Stand 3, C</b>     |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| Arr-Dep Time          |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| Org-Des               |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| Airline/Type          |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |



# Kelowna International Airport Master Plan 2045 Technical Report – Air Traffic Forecasts (Draft 4)

## Kelowna International Airport

Weekday: 7 Sunday, March, 2nd week, 2030

Buffer Time: 20 minutes Domestic International Int'l Winter Charters Domestic Charter

Gate Type: Domestic-Int'l dep. Intern'l Swing Gate Dom. Walkout

Maximum Time at Gate without being moved if gate required: 2-2.5 hrs, if moved, aircraft moved 30-45 min after arrival and moved back 30-45 min before departure

| Gate                  | 0:00     | 1:00 | 2:00 | 3:00 | 4:00 | 5:00 | 6:00 | 7:00 | 8:00 | 9:00     | 10:00 | 11:00     | 12:00 | 13:00     | 14:00     | 15:00 | 16:00 | 17:00 | 18:00 | 19:00     | 20:00 | 21:00 | 22:00 | 23:00 | 24:00    |  |
|-----------------------|----------|------|------|------|------|------|------|------|------|----------|-------|-----------|-------|-----------|-----------|-------|-------|-------|-------|-----------|-------|-------|-------|-------|----------|--|
| <b>Aircraft</b>       |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| <b>1 (C, walkout)</b> |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| Arr-Dep Time          |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| Org-Des               |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| Airline/Type          |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| <b>2 (D, LB, Sw)</b>  |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| Arr-Dep Time          | 001-600  |      |      |      |      |      |      |      |      | 903-1000 |       | 1141-1219 |       | 1439-1615 | 1605-1745 |       |       |       |       | 2007-2130 |       |       |       |       | 2320-630 |  |
| Org-Des               | SEA, SEA |      |      |      |      |      |      |      |      | YYC, YYZ |       | SEA, SEA  |       | SJD, PHX  | FRA, FRA  |       |       |       |       | CUN, YYC  |       |       |       |       | MSP, MSP |  |
| Airline/Type          | AS, DH4  |      |      |      |      |      |      |      |      | WS, 73W  |       | AS, DH4   |       | WS, 73H   | DE, 763   |       |       |       |       | WS, 73W   |       |       |       |       | DL, CR7  |  |
| <b>3 (C, walkout)</b> |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| Arr-Dep Time          |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| Org-Des               |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| Airline/Type          |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| <b>4 (C, LB, Sw)</b>  |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| Arr-Dep Time          |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| Org-Des               |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| Airline/Type          |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| <b>5 (C, LB, Sw)</b>  |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| Arr-Dep Time          |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| Org-Des               |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| Airline/Type          |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| <b>6 (C, LB*)</b>     |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| Arr-Dep Time          |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| Org-Des               |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| Airline/Type          |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| <b>7 (C, LB)</b>      |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| Arr-Dep Time          |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| Org-Des               |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| Airline/Type          |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| <b>8 (B walkout)</b>  |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| Arr-Dep Time          |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| Org-Des               |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| Airline/Type          |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| <b>9 (C, LB)</b>      |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| Arr-Dep Time          |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| Org-Des               |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| Airline/Type          |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| <b>10 (C, LB)</b>     |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| Arr-Dep Time          |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| Org-Des               |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| Airline/Type          |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| <b>Stand 1, C</b>     |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| Arr-Dep Time          |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| Org-Des               |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| Airline/Type          |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| <b>Stand 2, C</b>     |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| Arr-Dep Time          |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| Org-Des               |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| Airline/Type          |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| <b>Stand 3, C</b>     |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| Arr-Dep Time          |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| Org-Des               |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |
| Airline/Type          |          |      |      |      |      |      |      |      |      |          |       |           |       |           |           |       |       |       |       |           |       |       |       |       |          |  |



# Kelowna International Airport Master Plan 2045 Technical Report – Air Traffic Forecasts (Draft 4)

## Kelowna International Airport

Weekday: 7 Sunday, March, 2nd week, 2035

Buffer Time: 20 minutes Domestic International Int'l Winter Charters Domestic Charter Gate Type: Domestic-Int'l dep. Intern'l Swing Gate Dom. Walkout  
 Maximum Time at Gate without being moved if gate required: 2-2.5 hrs, if moved, aircraft moved 30-45 min after arrival and moved back 30-45 min before departure

| Gate                  | 0:00     | 1:00 | 2:00 | 3:00 | 4:00 | 5:00 | 6:00 | 7:00 | 8:00 | 9:00                | 10:00 | 11:00               | 12:00 | 13:00               | 14:00 | 15:00               | 16:00 | 17:00 | 18:00 | 19:00               | 20:00 | 21:00 | 22:00 | 23:00 | 24:00               |  |
|-----------------------|----------|------|------|------|------|------|------|------|------|---------------------|-------|---------------------|-------|---------------------|-------|---------------------|-------|-------|-------|---------------------|-------|-------|-------|-------|---------------------|--|
| <b>Aircraft</b>       |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| <b>1 (C, walkout)</b> |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| Arr-Dep Time          |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| Org-Des               |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| Airline/Type          |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| <b>2 (D, LB, Sw)</b>  |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| Arr-Dep Time          | 001-600  |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| Org-Des               | SEA, SEA |      |      |      |      |      |      |      |      | 903-1000            |       | 1141-1219           |       | 1439-1615           |       | 1605-1745           |       |       |       | 2007-2130           |       |       |       |       | 2320-630            |  |
| Airline/Type          | AS, DH4  |      |      |      |      |      |      |      |      | YYC, YYZ<br>WS, 73W |       | SEA, SEA<br>AS, DH4 |       | SJD, PHX<br>WS, 73H |       | FRA, FRA<br>DE, 763 |       |       |       | CUN, YYC<br>WS, 73W |       |       |       |       | MSP, MSP<br>DL, CR7 |  |
| <b>3 (C, walkout)</b> |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| Arr-Dep Time          |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| Org-Des               |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| Airline/Type          |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| <b>4 (C, LB, Sw)</b>  |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| Arr-Dep Time          |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| Org-Des               |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| Airline/Type          |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| <b>5 (C, LB, Sw)</b>  |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| Arr-Dep Time          |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| Org-Des               |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| Airline/Type          |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| <b>6 (C, LB*)</b>     |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| Arr-Dep Time          |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| Org-Des               |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| Airline/Type          |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| <b>7 (C, LB)</b>      |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| Arr-Dep Time          |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| Org-Des               |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| Airline/Type          |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| <b>8 (B walkout)</b>  |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| A13                   |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| Org-Des               |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| Airline/Type          |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| <b>9 (C, LB)</b>      |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| Arr-Dep Time          | 2320-010 |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| Org-Des               | YYZ, YYZ |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| Airline/Type          | AC, E90  |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| <b>10 (C, LB)</b>     |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| Arr-Dep Time          |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| Org-Des               |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| Airline/Type          |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| <b>Stand 1, C</b>     |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| Arr-Dep Time          |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| Org-Des               |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| Airline/Type          |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| <b>Stand 2, C</b>     |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| Arr-Dep Time          |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| Org-Des               |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| Airline/Type          |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| <b>Stand 3, C</b>     |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| Arr-Dep Time          |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| Org-Des               |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |
| Airline/Type          |          |      |      |      |      |      |      |      |      |                     |       |                     |       |                     |       |                     |       |       |       |                     |       |       |       |       |                     |  |



## **APPENDIX B**

### **Busy Week Flight Schedule for 2020, 2025, 2030 and 2035**



**Kelowna International Airport Master Plan 2045 Technical Report – Air Traffic Forecasts (Draft 4)**

**Nominal Schedule for Kelowna International Airport, Busy Week 2020**

| Origin  |       | Arr Time | Dep Time | Destination |       | Air Carrier | Aircraft |       | Arrival on Day # |   |   |   |   |   |   | Load Factor | % In-Transit | Pax | Depart on Day # |   |   |   |   |   |   | Seasonal |        |
|---------|-------|----------|----------|-------------|-------|-------------|----------|-------|------------------|---|---|---|---|---|---|-------------|--------------|-----|-----------------|---|---|---|---|---|---|----------|--------|
| Airport | Sect. |          |          | Airport     | Sect. |             | Type     | Seats | 1                | 2 | 3 | 4 | 5 | 6 | 7 |             |              |     | 1               | 2 | 3 | 4 | 5 | 6 | 7 |          |        |
| .       | D     |          | 615      | YYC         | D     | WS          | 73W      | 136   | 0                | 0 | 0 | 0 | 0 | 0 | 0 | 0           | 89%          | 0%  | 0               | 0 | 0 | 0 | 1 | 0 | 0 | 0        | All    |
| YEG     | D     | 843      | 915      | YEG         | D     | WS          | DH4      | 78    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 1           | 89%          | 0%  | 70              | 1 | 1 | 1 | 1 | 1 | 1 | 1        | All    |
| YEG     | D     | 1137     | 1211     | YEG         | D     | WS          | 736      | 119   | 1                | 1 | 1 | 1 | 1 | 0 | 1 |             | 89%          | 0%  | 106             | 1 | 1 | 1 | 1 | 1 | 0 | 1        | All    |
| YEG     | D     | 1917     | 2000     | YYC         | D     | WS          | 73W      | 136   | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 1           | 89%          | 0%  | 121             | 1 | 1 | 1 | 1 | 1 | 1 | 1        | All    |
| YMM     | D     | 2331     | 630      | YMM         | D     | WS          | DH4      | 78    | 1                | 1 | 1 | 1 | 1 | 0 | 1 |             | 89%          | 0%  | 70              | 1 | 1 | 1 | 1 | 1 | 1 | 0        | All    |
| YVR     | D     | 1915     | 1955     | YXY         | D     | 4N          | 737      | 122   | 0                | 0 | 0 | 1 | 0 | 0 | 0 |             | 71%          | 0%  | 87              | 0 | 0 | 0 | 1 | 0 | 0 | 0        | All    |
| YVR     | D     | 1251     | 1330     | YVR         | D     | AC          | E90      | 97    | 1                | 1 | 1 | 1 | 1 | 0 | 0 |             | 89%          | 0%  | 87              | 1 | 1 | 1 | 1 | 1 | 0 | 0        | All    |
| YVR     | D     | 804      | 840      | YVR         | D     | QK          | DH4      | 74    | 0                | 0 | 0 | 0 | 0 | 1 | 0 |             | 85%          | 0%  | 63              | 0 | 0 | 0 | 0 | 0 | 1 | 0        | All    |
| YVR     | D     | 814      | 840      | YVR         | D     | QK          | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 0 | 1 |             | 85%          | 0%  | 63              | 1 | 1 | 1 | 1 | 1 | 0 | 1        | All    |
| YVR     | D     | 934      | 1005     | YYC         | D     | QK          | CRJ      | 50    | 1                | 1 | 1 | 1 | 1 | 0 | 1 |             | 85%          | 0%  | 43              | 1 | 1 | 1 | 1 | 1 | 0 | 1        | All    |
| YVR     | D     | 934      | 1240     | YVR         | D     | QK          | CRJ      | 50    | 0                | 0 | 0 | 0 | 0 | 1 | 0 |             | 85%          | 0%  | 43              | 0 | 0 | 0 | 0 | 0 | 1 | 0        | All    |
| YVR     | D     | 1123     | 1200     | YVR         | D     | QK          | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 1 | 1 |             | 85%          | 0%  | 63              | 1 | 1 | 1 | 1 | 1 | 1 | 1        | All    |
| YVR     | D     | 1234     | 1315     | YVR         | D     | QK          | DH3      | 50    | 0                | 0 | 0 | 0 | 0 | 1 | 1 |             | 85%          | 0%  | 43              | 0 | 0 | 0 | 0 | 0 | 1 | 1        | All    |
| YVR     | D     | 1423     | 1455     | YYC         | D     | QK          | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 1 | 1 |             | 85%          | 0%  | 63              | 1 | 1 | 1 | 1 | 1 | 1 | 1        | All    |
| YVR     | D     | 1559     | 1620     | YVR         | D     | QK          | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 1 | 1 |             | 85%          | 0%  | 63              | 1 | 1 | 1 | 1 | 1 | 1 | 1        | All    |
| YVR     | D     | 1709     | 1730     | YVR         | D     | QK          | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 1 | 1 |             | 85%          | 0%  | 63              | 1 | 1 | 1 | 1 | 1 | 1 | 1        | All    |
| YVR     | D     | 1849     | 1910     | YYC         | D     | QK          | DH3      | 50    | 1                | 1 | 1 | 1 | 1 | 1 | 1 |             | 85%          | 0%  | 43              | 1 | 1 | 1 | 1 | 1 | 1 | 1        | All    |
| YVR     | D     | 2019     | 2040     | YVR         | D     | QK          | DH3      | 50    | 1                | 1 | 1 | 1 | 1 | 1 | 1 |             | 85%          | 0%  | 43              | 1 | 1 | 1 | 1 | 1 | 1 | 1        | All    |
| YVR     | D     | 2339     | 545      | YVR         | D     | QK          | DH3      | 50    | 1                | 1 | 1 | 1 | 1 | 1 | 1 |             | 85%          | 0%  | 43              | 1 | 1 | 1 | 1 | 1 | 1 | 1        | All    |
| YVR     | D     | 518      | 843      | CUN         | I     | TS          | 738      | 189   | 0                | 0 | 0 | 1 | 0 | 1 | 0 |             | 0%           | 0%  | 0               | 0 | 0 | 0 | 1 | 0 | 1 | 0        | Winter |
| YVR     | D     | 835      | 925      | ZIH         | I     | WG          | 738      | 189   | 0                | 0 | 0 | 1 | 0 | 0 | 0 |             | 0%           | 0%  | 0               | 0 | 0 | 0 | 1 | 0 | 0 | 0        | Winter |
| YVR     | D     | 857      | 940      | YVR         | D     | WS          | DH4      | 78    | 1                | 1 | 1 | 1 | 1 | 1 | 1 |             | 89%          | 0%  | 70              | 1 | 1 | 1 | 1 | 1 | 1 | 1        | All    |
| YVR     | D     | 952      | 1030     | YYC         | D     | WS          | 736      | 119   | 1                | 1 | 1 | 1 | 1 | 1 | 1 |             | 89%          | 0%  | 106             | 1 | 1 | 1 | 1 | 1 | 1 | 1        | All    |
| YVR     | D     | 1354     | 1435     | YYJ         | D     | WS          | DH4      | 78    | 1                | 1 | 1 | 1 | 1 | 0 | 1 |             | 89%          | 0%  | 70              | 1 | 1 | 1 | 1 | 1 | 0 | 1        | All    |
| YVR     | D     | 1404     | 1445     | YYJ         | D     | WS          | DH4      | 78    | 0                | 0 | 0 | 0 | 0 | 1 | 0 |             | 89%          | 0%  | 70              | 0 | 0 | 0 | 0 | 0 | 1 | 0        | All    |
| YVR     | D     | 1922     | 2000     | YVR         | D     | WS          | 736      | 119   | 1                | 1 | 1 | 1 | 1 | 1 | 1 |             | 89%          | 0%  | 106             | 1 | 1 | 1 | 1 | 1 | 1 | 1        | All    |
|         | D     |          | 1510     | YVR         | D     | WS          | 736      |       | 0                | 0 | 0 | 0 | 0 | 0 | 0 |             | 89%          | 0%  | 0               | 1 | 1 | 1 | 1 | 1 | 1 | 1        | All    |
| YVR     | D     | 1747     |          |             | D     | WS          | 736      |       | 1                | 1 | 1 | 1 | 1 | 1 | 1 |             | 89%          | 0%  | 0               | 0 | 0 | 0 | 0 | 0 | 0 | 0        | All    |
| YXC     | D     | 1240     | 1300     | YZZ         | D     | 8P          | BE1      | 19    | 1                | 1 | 1 | 1 | 1 | 0 | 1 |             | 71%          | 0%  | 14              | 1 | 1 | 1 | 1 | 1 | 0 | 1        | All    |



**Kelowna International Airport Master Plan 2045 Technical Report – Air Traffic Forecasts (Draft 4)**

| Origin  |       | Arr Time | Dep Time | Destination |       | Air Carrier | Aircraft |       | Arrival on Day # |   |   |   |   |   |   | Load Factor | % In-Transit | Pax | Depart on Day # |   |   |   |   |   |   | Seasonal |
|---------|-------|----------|----------|-------------|-------|-------------|----------|-------|------------------|---|---|---|---|---|---|-------------|--------------|-----|-----------------|---|---|---|---|---|---|----------|
| Airport | Sect. |          |          | Airport     | Sect. |             | Type     | Seats | 1                | 2 | 3 | 4 | 5 | 6 | 7 |             |              |     | 1               | 2 | 3 | 4 | 5 | 6 | 7 |          |
| YQQ     | D     | 1115     | 1145     | YQQ         | D     | WS          | DH4      | 78    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%         | 0%           | 70  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YXS     | D     | 915      | 945      | YXS         | D     | 9M          | BEH      | 19    | 0                | 0 | 0 | 0 | 0 | 0 | 1 | 71%         | 0%           | 14  | 0               | 0 | 0 | 0 | 0 | 0 | 1 | All      |
| YXS     | D     | 1650     | 720      | YXS         | D     | 9M          | BEH      | 19    | 1                | 0 | 0 | 0 | 0 | 0 | 0 | 71%         | 0%           | 14  | 0               | 1 | 0 | 0 | 0 | 0 | 0 | All      |
| YXS     | D     | 1820     | 945      | YXS         | D     | 9M          | BEH      | 19    | 0                | 0 | 0 | 1 | 0 | 0 | 0 | 71%         | 0%           | 14  | 0               | 0 | 0 | 0 | 1 | 0 | 0 | All      |
| YXS     | D     | 1820     | 1840     | YXS         | D     | 9M          | BEH      | 19    | 0                | 0 | 0 | 0 | 1 | 0 | 0 | 71%         | 0%           | 14  | 0               | 0 | 0 | 0 | 1 | 0 | 0 | All      |
| YXS     | D     | 1820     | 720      | YXS         | D     | 9M          | BEH      | 19    | 0                | 1 | 1 | 0 | 0 | 0 | 1 | 71%         | 0%           | 14  | 1               | 0 | 1 | 1 | 0 | 0 | 0 | All      |
| YXY     | D     | 1745     | 1830     | YVR         | D     | 4N          | 737      | 122   | 0                | 0 | 0 | 0 | 0 | 0 | 1 | 71%         | 0%           | 87  | 0               | 0 | 0 | 0 | 0 | 0 | 1 | All      |
| YXT     | D     | 1915     | 700      | YXT         | D     | 9M          | DH3      | 50    | 1                | 1 | 1 | 0 | 0 | 0 | 1 | 71%         | 0%           | 36  | 1               | 0 | 1 | 1 | 0 | 0 | 0 | All      |
| YYC     | D     | 1018     | 1040     | YVR         | D     | QK          | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 85%         | 0%           | 63  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YYC     | D     | 1210     | 1240     | YVR         | D     | QK          | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 85%         | 0%           | 63  | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| YYC     | D     | 1745     | 1820     | YVR         | D     | QK          | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 85%         | 0%           | 63  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YYC     | D     | 903      | 1000     | YYZ         | D     | WS          | 73H      | 174   | 0                | 0 | 0 | 0 | 0 | 0 | 1 | 89%         | 0%           | 155 | 0               | 0 | 0 | 0 | 0 | 0 | 1 | All      |
| YYC     | D     | 903      | 1000     | YYZ         | D     | WS          | 73H      | 174   | 0                | 1 | 0 | 1 | 0 | 1 | 0 | 89%         | 0%           | 155 | 0               | 1 | 0 | 1 | 0 | 1 | 0 | All      |
| YYC     | D     | 903      | 1020     | CUN         | I     | WS          | 73H      | 174   | 0                | 0 | 1 | 0 | 0 | 0 | 0 | 89%         | 0%           | 155 | 0               | 0 | 1 | 0 | 0 | 0 | 0 | Winter   |
| YYC     | D     | 903      | 1020     | PVR         | I     | WS          | 73H      | 174   | 0                | 0 | 0 | 0 | 1 | 0 | 0 | 89%         | 0%           | 155 | 0               | 0 | 0 | 0 | 1 | 0 | 0 | Winter   |
| YYC     | D     | 903      | 1045     | PHX         | T     | WS          | 73H      | 174   | 1                | 0 | 0 | 0 | 0 | 0 | 0 | 89%         | 0%           | 155 | 1               | 0 | 0 | 0 | 0 | 0 | 0 | All      |
| YYC     | D     | 1348     | 1430     | YYC         | D     | WS          | 736      | 119   | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%         | 0%           | 106 | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YYC     | D     | 1648     | 1727     | YYC         | D     | WS          | 736      | 119   | 0                | 0 | 0 | 0 | 0 | 1 | 0 | 89%         | 0%           | 106 | 0               | 0 | 0 | 0 | 0 | 1 | 0 | All      |
| YYC     | D     | 1648     | 1727     | YYC         | D     | WS          | 73W      | 136   | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 89%         | 0%           | 121 | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| YYC     | D     | 2003     | 2055     | YEG         | D     | WS          | 736      | 119   | 0                | 0 | 0 | 0 | 0 | 1 | 0 | 89%         | 0%           | 106 | 0               | 0 | 0 | 0 | 0 | 1 | 0 | All      |
| YYC     | D     | 2003     | 2055     | YEG         | D     | WS          | 73W      | 136   | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 89%         | 0%           | 121 | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| YYC     | D     | 2113     | 600      | SJD         | I     | WS          | 73W      | 136   | 0                | 0 | 0 | 0 | 1 | 0 | 0 | 89%         | 0%           | 121 | 0               | 0 | 0 | 0 | 0 | 1 | 0 | All      |
| YYC     | D     | 2256     | 715      | YVR         | D     | WS          | 73W      | 136   | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%         | 0%           | 121 | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YYJ     | D     | 1105     | 1140     | YVR         | D     | WS          | DH4      | 78    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%         | 0%           | 70  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YYJ     | D     | 1920     | 1950     | YYJ         | D     | WS          | DH4      | 78    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%         | 0%           | 70  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YYZ     | D     | 1000     | 1035     | YYZ         | D     | AC          | E90      | 97    | 1                | 0 | 1 | 0 | 0 | 1 | 1 | 89%         | 0%           | 87  | 1               | 0 | 1 | 0 | 0 | 1 | 1 | All      |
| YYZ     | D     | 2020     | 615      | YYC         | D     | WS          | 73H      | 174   | 0                | 0 | 0 | 0 | 0 | 1 | 1 | 89%         | 0%           | 155 | 1               | 0 | 0 | 0 | 0 | 0 | 1 | All      |
| YYZ     | D     | 2020     | 615      | YYC         | D     | WS          | 73W      | 136   | 0                | 1 | 0 | 1 | 1 | 0 | 0 | 89%         | 0%           | 121 | 0               | 0 | 1 | 0 | 1 | 0 | 0 | All      |
| YZZ     | D     | 1455     | 1525     | YXC         | D     | 8P          | BE1      | 19    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 71%         | 0%           | 14  | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| CUN     | I     | 2050     | 809      | PVR         | I     | TS          | 738      | 189   | 0                | 0 | 0 | 1 | 0 | 1 | 0 | 93%         | 0%           | 175 | 0               | 0 | 0 | 0 | 1 | 0 | 1 | Winter   |
| CUN     | I     | 2007     | 2130     | YYC         | D     | WS          | 73H      | 174   | 0                | 0 | 0 | 0 | 0 | 0 | 1 | 90%         | 0%           | 157 | 0               | 0 | 0 | 0 | 0 | 0 | 1 | Winter   |





*Kelowna International Airport Master Plan 2045 Technical  
Report – Air Traffic Forecasts (Draft 4)*



**Kelowna International Airport Master Plan 2045 Technical Report – Air Traffic Forecasts (Draft 4)**

**Nominal Schedule for Kelowna International Airport, Busy Week 2025**

| Origin  |       | Arr Time | Dep Time | Destination |       | Air Carrier | Aircraft |       | Arrival on Day # |   |   |   |   |   |   | Load Factor | % In-Transit | Pax | Depart on Day # |   |   |   |   |   |   | Seasonal |
|---------|-------|----------|----------|-------------|-------|-------------|----------|-------|------------------|---|---|---|---|---|---|-------------|--------------|-----|-----------------|---|---|---|---|---|---|----------|
| Airport | Sect. |          |          | Airport     | Sect. |             | Type     | Seats | 1                | 2 | 3 | 4 | 5 | 6 | 7 |             |              |     | 1               | 2 | 3 | 4 | 5 | 6 | 7 |          |
| .       | D     |          | 615      | YYC         | D     | WS          | 73W      | 136   | 0                | 0 | 0 | 0 | 0 | 0 | 0 | 89%         | 0%           | 0   | 0               | 0 | 0 | 1 | 0 | 0 | 0 | All      |
| YEG     | D     | 2220     | 710      | YEG         | D     | WS          | DH4      | 78    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 89%         | 0%           | 70  | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| YEG     | D     | 843      | 915      | YEG         | D     | WS          | DH4      | 78    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%         | 0%           | 70  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YEG     | D     | 1137     | 1211     | YEG         | D     | WS          | 73W      | 136   | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 89%         | 0%           | 122 | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| YEG     | D     | 1917     | 2000     | YYC         | D     | WS          | 73W      | 136   | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%         | 0%           | 122 | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YMM     | D     | 2331     | 630      | YMM         | D     | WS          | DH4      | 78    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 89%         | 0%           | 70  | 1               | 1 | 1 | 1 | 1 | 1 | 0 | All      |
| YQF     | D     | 1215     | 1245     | YQF         | D     | J3          | J31      | 19    | 1                | 0 | 1 | 0 | 1 | 0 | 0 | 66%         | 0%           | 12  | 1               | 0 | 1 | 0 | 1 | 0 | 0 | All      |
| YVR     | D     | 1915     | 1955     | YXY         | D     | 4N          | 737      | 122   | 0                | 0 | 0 | 1 | 0 | 0 | 0 | 72%         | 0%           | 88  | 0               | 0 | 0 | 1 | 0 | 0 | 0 | All      |
| YVR     | D     | 1251     | 1330     | YVR         | D     | AC          | E90      | 97    | 1                | 1 | 1 | 1 | 1 | 0 | 0 | 89%         | 0%           | 87  | 1               | 1 | 1 | 1 | 1 | 0 | 0 | All      |
| YVR     | D     | 804      | 840      | YVR         | D     | QK          | DH4      | 74    | 0                | 0 | 0 | 0 | 0 | 1 | 0 | 86%         | 0%           | 64  | 0               | 0 | 0 | 0 | 0 | 1 | 0 | All      |
| YVR     | D     | 814      | 840      | YVR         | D     | QK          | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 86%         | 0%           | 64  | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| YVR     | D     | 934      | 1005     | YYC         | D     | QK          | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 86%         | 0%           | 64  | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| YVR     | D     | 934      | 1240     | YVR         | D     | QK          | DH4      | 74    | 0                | 0 | 0 | 0 | 0 | 1 | 0 | 86%         | 0%           | 64  | 0               | 0 | 0 | 0 | 0 | 1 | 0 | All      |
| YVR     | D     | 1123     | 1200     | YVR         | D     | QK          | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 86%         | 0%           | 64  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YVR     | D     | 1234     | 1315     | YVR         | D     | QK          | DH4      | 74    | 0                | 0 | 0 | 0 | 0 | 1 | 1 | 86%         | 0%           | 64  | 0               | 0 | 0 | 0 | 0 | 1 | 1 | All      |
| YVR     | D     | 1423     | 1455     | YYC         | D     | QK          | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 86%         | 0%           | 64  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YVR     | D     | 1559     | 1620     | YVR         | D     | QK          | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 86%         | 0%           | 64  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YVR     | D     | 1709     | 1730     | YVR         | D     | QK          | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 86%         | 0%           | 64  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YVR     | D     | 1849     | 1910     | YYC         | D     | QK          | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 86%         | 0%           | 64  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YVR     | D     | 2019     | 2040     | YVR         | D     | QK          | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 86%         | 0%           | 64  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YVR     | D     | 2339     | 545      | YVR         | D     | QK          | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 86%         | 0%           | 64  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YVR     | D     | 518      | 843      | CUN         | I     | TS          | 738      | 189   | 0                | 0 | 0 | 1 | 0 | 1 | 0 | 0%          | 0%           | 0   | 0               | 0 | 0 | 1 | 0 | 1 | 0 | Winter   |
| YVR     | D     | 835      | 925      | ZIH         | I     | WG          | 738      | 189   | 0                | 0 | 0 | 1 | 0 | 0 | 0 | 0%          | 0%           | 0   | 0               | 0 | 0 | 1 | 0 | 0 | 0 | Winter   |
| YVR     | D     | 857      | 940      | YVR         | D     | WS          | 736      | 119   | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%         | 0%           | 106 | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YVR     | D     | 952      | 1030     | YYC         | D     | WS          | 736      | 119   | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%         | 0%           | 106 | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YVR     | D     | 1354     | 1435     | YYJ         | D     | WS          | DH4      | 78    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 89%         | 0%           | 70  | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| YVR     | D     | 1404     | 1445     | YYJ         | D     | WS          | DH4      | 78    | 0                | 0 | 0 | 0 | 0 | 1 | 0 | 89%         | 0%           | 70  | 0               | 0 | 0 | 0 | 0 | 1 | 0 | All      |
| YVR     | D     | 1922     | 2000     | YVR         | D     | WS          | 736      | 119   | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%         | 0%           | 106 | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |



**Kelowna International Airport Master Plan 2045 Technical Report – Air Traffic Forecasts (Draft 4)**

| Origin  |       | Arr Time | Dep Time | Destination |       | Air Carrier | Aircraft |       | Arrival on Day # |   |   |   |   |   |   | Load Factor | % In-Transit | Pax | Depart on Day # |   |   |   |   |   |   | Seasonal |
|---------|-------|----------|----------|-------------|-------|-------------|----------|-------|------------------|---|---|---|---|---|---|-------------|--------------|-----|-----------------|---|---|---|---|---|---|----------|
| Airport | Sect. |          |          | Airport     | Sect. |             | Type     | Seats | 1                | 2 | 3 | 4 | 5 | 6 | 7 |             |              |     | 1               | 2 | 3 | 4 | 5 | 6 | 7 |          |
| YXC     | D     | 1240     | 1300     | YZZ         | D     | 8P          | BE1      | 19    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 72%         | 0%           | 14  | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| YQQ     | D     | 1015     | 1045     | YQQ         | D     | WS          | DH4      | 78    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%         | 0%           | 70  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YXS     | D     | 915      | 945      | YXS         | D     | 9M          | BEH      | 19    | 0                | 0 | 0 | 0 | 0 | 0 | 1 | 72%         | 0%           | 14  | 0               | 0 | 0 | 0 | 0 | 0 | 1 | All      |
| YXS     | D     | 1650     | 720      | YXS         | D     | 9M          | BEH      | 19    | 1                | 0 | 0 | 0 | 0 | 0 | 0 | 72%         | 0%           | 14  | 0               | 1 | 0 | 0 | 0 | 0 | 0 | All      |
| YXS     | D     | 1820     | 945      | YXS         | D     | 9M          | BEH      | 19    | 0                | 0 | 0 | 1 | 0 | 0 | 0 | 72%         | 0%           | 14  | 0               | 0 | 0 | 0 | 1 | 0 | 0 | All      |
| YXS     | D     | 1820     | 1840     | YXS         | D     | 9M          | BEH      | 19    | 0                | 0 | 0 | 0 | 1 | 0 | 1 | 72%         | 0%           | 14  | 0               | 0 | 0 | 0 | 1 | 0 | 1 | All      |
| YXS     | D     | 1820     | 720      | YXS         | D     | 9M          | BEH      | 19    | 0                | 1 | 1 | 0 | 0 | 0 | 1 | 72%         | 0%           | 14  | 1               | 0 | 1 | 1 | 0 | 0 | 0 | All      |
| YXS     | D     | 1605     | 1650     | YXS         | D     | 9M          | BEH      | 19    | 1                | 1 | 1 | 1 | 0 | 0 | 0 | 72%         | 0%           | 14  | 1               | 1 | 1 | 1 | 0 | 0 | 0 | All      |
| YXY     | D     | 1745     | 1830     | YVR         | D     | 4N          | 737      | 122   | 0                | 0 | 0 | 0 | 0 | 0 | 1 | 72%         | 0%           | 88  | 0               | 0 | 0 | 0 | 0 | 0 | 1 | All      |
| YXT     | D     | 1915     | 725      | YXT         | D     | 9M          | DH3      | 50    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 72%         | 0%           | 36  | 1               | 0 | 1 | 1 | 1 | 1 | 0 | All      |
| YXJ     | D     | 950      | 1020     | YXJ         | D     | 9M          | BEH      | 19    | 1                | 1 | 1 | 1 | 1 | 0 | 0 | 72%         | 0%           | 14  | 1               | 1 | 1 | 1 | 1 | 0 | 0 | All      |
| YYC     | D     | 815      | 845      | YYC         | D     | QK          | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 86%         | 0%           | 64  | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| YYC     | D     | 1018     | 1040     | YVR         | D     | QK          | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 86%         | 0%           | 64  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YYC     | D     | 1210     | 1240     | YVR         | D     | QK          | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 86%         | 0%           | 64  | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| YYC     | D     | 1745     | 1820     | YVR         | D     | QK          | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 86%         | 0%           | 64  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YYC     | D     | 903      | 1000     | YYZ         | D     | WS          | 73H      | 174   | 0                | 0 | 0 | 0 | 0 | 0 | 1 | 89%         | 0%           | 156 | 0               | 0 | 0 | 0 | 0 | 0 | 1 | All      |
| YYC     | D     | 903      | 1000     | YYZ         | D     | WS          | 73H      | 174   | 0                | 1 | 0 | 1 | 0 | 1 | 0 | 89%         | 0%           | 156 | 0               | 1 | 0 | 1 | 0 | 1 | 0 | All      |
| YYC     | D     | 903      | 1020     | CUN         | I     | WS          | 73H      | 174   | 0                | 0 | 1 | 0 | 0 | 0 | 0 | 89%         | 0%           | 156 | 0               | 0 | 1 | 0 | 0 | 0 | 0 | Winter   |
| YYC     | D     | 903      | 1020     | PVR         | I     | WS          | 73H      | 174   | 0                | 0 | 0 | 0 | 1 | 0 | 0 | 89%         | 0%           | 156 | 0               | 0 | 0 | 0 | 1 | 0 | 0 | Winter   |
| YYC     | D     | 903      | 1045     | PHX         | T     | WS          | 73H      | 174   | 1                | 0 | 0 | 0 | 0 | 0 | 0 | 89%         | 0%           | 156 | 1               | 0 | 0 | 0 | 0 | 0 | 0 | All      |
| YYC     | D     | 1348     | 1430     | YYC         | D     | WS          | 736      | 119   | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%         | 0%           | 106 | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YYC     | D     | 1648     | 1727     | YYC         | D     | WS          | 736      | 119   | 0                | 0 | 0 | 0 | 0 | 1 | 0 | 89%         | 0%           | 106 | 0               | 0 | 0 | 0 | 0 | 1 | 0 | All      |
| YYC     | D     | 1648     | 1727     | YYC         | D     | WS          | 73W      | 136   | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%         | 0%           | 122 | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YYC     | D     | 1810     | 1845     | YYC         | D     | WS          | 736      | 119   | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 89%         | 0%           | 106 | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| YYC     | D     | 2003     | 2055     | YEG         | D     | WS          | 736      | 119   | 0                | 0 | 0 | 0 | 0 | 1 | 0 | 89%         | 0%           | 106 | 0               | 0 | 0 | 0 | 0 | 1 | 0 | All      |
| YYC     | D     | 2003     | 2055     | YEG         | D     | WS          | 73W      | 136   | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 89%         | 0%           | 122 | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| YYC     | D     | 2113     | 600      | SJD         | I     | WS          | 73W      | 136   | 0                | 0 | 0 | 0 | 1 | 0 | 0 | 89%         | 0%           | 122 | 0               | 0 | 0 | 0 | 0 | 1 | 0 | All      |
| YYC     | D     | 2256     | 715      | YVR         | D     | WS          | 73W      | 136   | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%         | 0%           | 122 | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YYJ     | D     | 1105     | 1140     | YVR         | D     | WS          | DH4      | 78    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%         | 0%           | 70  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YYJ     | D     | 1920     | 1950     | YYJ         | D     | WS          | DH4      | 78    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%         | 0%           | 70  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |



**Kelowna International Airport Master Plan 2045 Technical Report – Air Traffic Forecasts (Draft 4)**

| Origin  |       | Arr Time | Dep Time | Destination |       | Air Carrier | Aircraft |       | Arrival on Day # |   |   |   |   |   |   | Load Factor | % In-Transit | Pax | Depart on Day # |   |   |   |   |   |   | Seasonal |        |
|---------|-------|----------|----------|-------------|-------|-------------|----------|-------|------------------|---|---|---|---|---|---|-------------|--------------|-----|-----------------|---|---|---|---|---|---|----------|--------|
| Airport | Sect. |          |          | Airport     | Sect. |             | Type     | Seats | 1                | 2 | 3 | 4 | 5 | 6 | 7 |             |              |     | 1               | 2 | 3 | 4 | 5 | 6 | 7 |          |        |
| YYZ     | D     | 1000     | 1035     | YYZ         | D     | AC          | E90      | 97    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 1           | 89%          | 0%  | 87              | 1 | 1 | 1 | 1 | 1 | 1 | 1        | All    |
| YYZ     | D     | 2020     | 615      | YYC         | D     | WS          | 73H      | 174   | 0                | 0 | 0 | 0 | 0 | 1 | 1 | 1           | 89%          | 0%  | 156             | 1 | 0 | 0 | 0 | 0 | 0 | 1        | All    |
| YYZ     | D     | 2020     | 615      | YYC         | D     | WS          | 73W      | 136   | 1                | 1 | 1 | 1 | 1 | 0 | 0 | 1           | 89%          | 0%  | 122             | 0 | 1 | 1 | 1 | 1 | 0 | 0        | All    |
| YZZ     | D     | 1455     | 1525     | YXC         | D     | 8P          | BE1      | 19    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 1           | 72%          | 0%  | 14              | 1 | 1 | 1 | 1 | 1 | 0 | 1        | All    |
| CUN     | I     | 2050     | 809      | PVR         | I     | TS          | 738      | 189   | 0                | 1 | 0 | 1 | 0 | 1 | 0 | 1           | 93%          | 0%  | 175             | 0 | 0 | 1 | 0 | 1 | 0 | 1        | Winter |
| CUN     | I     | 2007     | 2130     | YYC         | D     | WS          | 73H      | 174   | 0                | 0 | 0 | 0 | 0 | 0 | 1 | 1           | 90%          | 0%  | 157             | 0 | 0 | 0 | 0 | 0 | 0 | 1        | Winter |
| CUN     | I     | 2332     | 1605     | LAS         | T     | WS          | 73H      | 174   | 0                | 0 | 1 | 0 | 0 | 0 | 0 | 1           | 90%          | 0%  | 157             | 0 | 0 | 0 | 1 | 0 | 0 | 0        | Winter |
| PVR     | I     | 1842     | 1950     | YYC         | D     | TS          | 738      | 189   | 0                | 0 | 0 | 1 | 0 | 0 | 1 | 1           | 93%          | 0%  | 175             | 0 | 0 | 0 | 1 | 0 | 0 | 1        | Winter |
| PVR     | I     | 26       | 615      | YYC         | D     | WS          | 73H      | 174   | 0                | 0 | 0 | 0 | 0 | 1 | 0 | 1           | 90%          | 0%  | 157             | 0 | 0 | 0 | 0 | 0 | 1 | 0        | Winter |
| SJD     | I     | 1439     | 1615     | PHX         | T     | WS          | 73H      | 174   | 0                | 0 | 1 | 0 | 0 | 1 | 0 | 1           | 90%          | 0%  | 157             | 0 | 0 | 1 | 0 | 0 | 1 | 0        | All    |
| ZIH     | I     | 2135     | 2225     | YVR         | D     | WG          | 738      | 189   | 0                | 0 | 0 | 1 | 0 | 1 | 0 | 1           | 98%          | 45% | 102             | 0 | 0 | 0 | 1 | 0 | 1 | 0        | Winter |
| LAS     | T     | 1501     | 1605     | LAS         | T     | WS          | 73H      | 174   | 0                | 1 | 0 | 1 | 0 | 1 | 1 | 1           | 90%          | 0%  | 156             | 0 | 1 | 0 | 1 | 0 | 1 | 1        | All    |
| PHX     | T     | 1827     | 615      | YYC         | D     | WS          | 73H      | 174   | 1                | 0 | 0 | 0 | 0 | 0 | 0 | 1           | 90%          | 0%  | 156             | 0 | 1 | 0 | 0 | 0 | 0 | 0        | All    |
| PHX     | T     | 2357     | 700      | CUN         | I     | WS          | 73H      | 174   | 0                | 1 | 0 | 0 | 0 | 1 | 0 | 1           | 90%          | 0%  | 156             | 0 | 0 | 1 | 0 | 0 | 0 | 1        | All    |
| SEA     | T     | 1        | 600      | SEA         | T     | AS          | DH4      | 76    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 1           | 82%          | 0%  | 63              | 1 | 1 | 1 | 1 | 1 | 1 | 1        | All    |
| SEA     | T     | 1141     | 1219     | SEA         | T     | AS          | DH4      | 76    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 1           | 82%          | 0%  | 63              | 1 | 1 | 1 | 1 | 1 | 1 | 1        | All    |
| SEA     | T     | 1420     | 1500     | SEA         | T     | AS          | DH4      | 76    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 1           | 82%          | 0%  | 63              | 1 | 1 | 1 | 1 | 1 | 0 | 1        | All    |
| SFO     | T     | 1521     | 1601     | SFO         | T     | UA          | CR7      | 70    | 0                | 0 | 0 | 0 | 0 | 1 | 1 | 1           | 82%          | 0%  | 58              | 0 | 0 | 0 | 0 | 0 | 1 | 1        | All    |
| SFO     | T     | 1533     | 1608     | SFO         | T     | UA          | CR7      | 70    | 1                | 1 | 1 | 1 | 1 | 0 | 0 | 1           | 82%          | 0%  | 58              | 1 | 1 | 1 | 1 | 1 | 0 | 0        | All    |
| MSP     | T     | 2320     | 630      | MSP         | T     | DL          | CR7      | 70    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 1           | 82%          | 0%  | 58              | 1 | 1 | 1 | 1 | 1 | 1 | 0        | All    |
| YXS     | D     | 2105     | 2135     | YVR         | D     | 4N          | 735      | 122   | 0                | 0 | 0 | 0 | 0 | 0 | 1 | 1           | 72%          | 0%  | 88              | 0 | 0 | 0 | 0 | 0 | 0 | 1        | All    |
| YYC     | D     | 1550     | 1620     | JHL         | D     | JSN         | CRJ      | 50    | 0                | 0 | 0 | 0 | 1 | 0 | 0 | 1           | 86%          | 0%  | 43              | 0 | 0 | 0 | 0 | 1 | 0 | 0        | All    |
| JHL     | D     | 2020     | 2050     | YYC         | D     | JSN         | CRJ      | 50    | 0                | 0 | 0 | 0 | 1 | 0 | 0 | 1           | 86%          | 0%  | 43              | 0 | 0 | 0 | 0 | 1 | 0 | 0        | All    |
| YYC     | D     | 1900     | 900      | YHM         | D     | FLE         | 734      | 158   | 0                | 0 | 0 | 0 | 1 | 0 | 0 | 1           | 86%          | 0%  | 136             | 0 | 0 | 0 | 0 | 0 | 1 | 0        | All    |
| YHM     | D     | 1855     | 1900     | YYC         | D     | FLE         | 734      | 158   | 0                | 0 | 0 | 0 | 0 | 1 | 0 | 1           | 86%          | 0%  | 136             | 0 | 0 | 0 | 0 | 0 | 0 | 1        | All    |
| FRA     | I     | 1605     | 1745     | FRA         | I     | DE          | 763      | 245   | 0                | 0 | 0 | 0 | 0 | 1 | 0 | 1           | 93%          | 0%  | 227             | 0 | 0 | 0 | 0 | 0 | 0 | 1        | Winter |



## Kelowna International Airport Master Plan 2045 Technical Report – Air Traffic Forecasts (Draft 4)

### Nominal Schedule for Kelowna International Airport, Busy Week 2030

| Origin  |       | Arr Time | Dep Time | Destination |       | Air Carrier | Aircraft |       | Arrival on Day # |   |   |   |   |   |   | Load Factor | % In-Transit | Pax | Depart on Day # |   |   |   |   |   |   | Seasonal |
|---------|-------|----------|----------|-------------|-------|-------------|----------|-------|------------------|---|---|---|---|---|---|-------------|--------------|-----|-----------------|---|---|---|---|---|---|----------|
| Airport | Sect. |          |          | Airport     | Sect. |             | Type     | Seats | 1                | 2 | 3 | 4 | 5 | 6 | 7 |             |              |     | 1               | 2 | 3 | 4 | 5 | 6 | 7 |          |
| .       | D     |          | 615      | YYC         | D     | WS          | 73W      | 136   | 0                | 0 | 0 | 0 | 0 | 0 | 0 | 89%         | 0%           | 0   | 0               | 0 | 0 | 1 | 0 | 0 | 0 | All      |
| YEG     | D     | 2220     | 710      | YEG         | D     | WS          | DH4      | 78    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 89%         | 0%           | 70  | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| YEG     | D     | 843      | 915      | YEG         | D     | WS          | DH4      | 78    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%         | 0%           | 70  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YEG     | D     | 1137     | 1211     | YEG         | D     | WS          | 73W      | 136   | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 89%         | 0%           | 122 | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| YEG     | D     | 1917     | 2000     | YYC         | D     | WS          | 73W      | 136   | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%         | 0%           | 122 | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YEG     | D     | 800      | 832      | YEG         | D     | QK          | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 1 | 0 | 86%         | 0%           | 64  | 1               | 1 | 1 | 1 | 1 | 1 | 0 | All      |
| YEG     | D     | 1630     | 1705     | YEG         | D     | QK          | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 86%         | 0%           | 64  | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| YMM     | D     | 2331     | 630      | YMM         | D     | WS          | DH4      | 78    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 89%         | 0%           | 70  | 1               | 1 | 1 | 1 | 1 | 1 | 0 | All      |
| YQF     | D     | 1215     | 1245     | YQF         | D     | J3          | J31      | 19    | 1                | 0 | 1 | 0 | 1 | 0 | 0 | 66%         | 0%           | 12  | 1               | 0 | 1 | 0 | 1 | 0 | 0 | All      |
| YVR     | D     | 1915     | 1955     | YXY         | D     | 4N          | 737      | 122   | 0                | 0 | 0 | 1 | 0 | 0 | 0 | 72%         | 0%           | 88  | 0               | 0 | 0 | 1 | 0 | 0 | 0 | All      |
| YVR     | D     | 1251     | 1330     | YVR         | D     | AC          | E90      | 97    | 1                | 1 | 1 | 1 | 1 | 0 | 0 | 89%         | 0%           | 87  | 1               | 1 | 1 | 1 | 1 | 0 | 0 | All      |
| YVR     | D     | 804      | 840      | YVR         | D     | QK          | DH4      | 74    | 0                | 0 | 0 | 0 | 0 | 1 | 0 | 86%         | 0%           | 64  | 0               | 0 | 0 | 0 | 0 | 1 | 0 | All      |
| YVR     | D     | 814      | 840      | YVR         | D     | QK          | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 86%         | 0%           | 64  | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| YVR     | D     | 934      | 1005     | YYC         | D     | QK          | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 86%         | 0%           | 64  | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| YVR     | D     | 934      | 1240     | YVR         | D     | QK          | DH4      | 74    | 0                | 0 | 0 | 0 | 0 | 1 | 0 | 86%         | 0%           | 64  | 0               | 0 | 0 | 0 | 0 | 1 | 0 | All      |
| YVR     | D     | 1123     | 1200     | YVR         | D     | QK          | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 86%         | 0%           | 64  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YVR     | D     | 1234     | 1315     | YVR         | D     | QK          | DH4      | 74    | 0                | 0 | 0 | 0 | 0 | 1 | 1 | 86%         | 0%           | 64  | 0               | 0 | 0 | 0 | 0 | 1 | 1 | All      |
| YVR     | D     | 1423     | 1455     | YYC         | D     | QK          | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 86%         | 0%           | 64  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YVR     | D     | 1559     | 1620     | YVR         | D     | QK          | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 86%         | 0%           | 64  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YVR     | D     | 1709     | 1730     | YVR         | D     | QK          | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 86%         | 0%           | 64  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YVR     | D     | 1849     | 1910     | YYC         | D     | QK          | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 86%         | 0%           | 64  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YVR     | D     | 2019     | 2040     | YVR         | D     | QK          | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 86%         | 0%           | 64  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YVR     | D     | 2339     | 545      | YVR         | D     | QK          | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 86%         | 0%           | 64  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YVR     | D     | 518      | 843      | CUN         | I     | TS          | 738      | 189   | 0                | 0 | 0 | 1 | 0 | 1 | 0 | 0%          | 0%           | 0   | 0               | 0 | 0 | 1 | 0 | 1 | 0 | Winter   |
| YVR     | D     | 835      | 925      | ZIH         | I     | WG          | 738      | 189   | 0                | 0 | 0 | 1 | 0 | 0 | 0 | 0%          | 0%           | 0   | 0               | 0 | 0 | 1 | 0 | 0 | 0 | Winter   |
| YVR     | D     | 857      | 940      | YVR         | D     | WS          | 736      | 119   | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%         | 0%           | 106 | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YVR     | D     | 952      | 1030     | YYC         | D     | WS          | 736      | 119   | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%         | 0%           | 106 | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YVR     | D     | 1354     | 1435     | YYJ         | D     | WS          | DH4      | 78    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 89%         | 0%           | 70  | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| YVR     | D     | 1404     | 1445     | YYJ         | D     | WS          | DH4      | 78    | 0                | 0 | 0 | 0 | 0 | 1 | 0 | 89%         | 0%           | 70  | 0               | 0 | 0 | 0 | 0 | 1 | 0 | All      |



**Kelowna International Airport Master Plan 2045 Technical Report – Air Traffic Forecasts (Draft 4)**

| Origin  |       | Arr Time | Dep Time | Destination |       | Air Carrier | Aircraft |       | Arrival on Day # |   |   |   |   |   |   | Load Factor | % In-Transit | Pax | Depart on Day # |   |   |   |   |   |   | Seasonal |
|---------|-------|----------|----------|-------------|-------|-------------|----------|-------|------------------|---|---|---|---|---|---|-------------|--------------|-----|-----------------|---|---|---|---|---|---|----------|
| Airport | Sect. |          |          | Airport     | Sect. |             | Type     | Seats | 1                | 2 | 3 | 4 | 5 | 6 | 7 |             |              |     | 1               | 2 | 3 | 4 | 5 | 6 | 7 |          |
| YVR     | D     | 1922     | 2000     | YVR         | D     | WS          | 736      | 119   | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%         | 0%           | 106 | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YVR     | D     | 2205     | 705      | YVR         | D     | WS          | DH4      | 78    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 89%         | 0%           | 70  | 1               | 1 | 1 | 1 | 1 | 1 | 0 | All      |
| YXC     | D     | 1240     | 1300     | YZZ         | D     | 8P          | BE1      | 19    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 72%         | 0%           | 14  | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| YQQ     | D     | 1015     | 1045     | YQQ         | D     | WS          | DH4      | 78    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%         | 0%           | 70  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YCD     | D     | 1515     | 1545     | YCD         | D     | WS          | DH4      | 78    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%         | 0%           | 70  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YXS     | D     | 915      | 945      | YXS         | D     | 9M          | BEH      | 19    | 0                | 0 | 0 | 0 | 0 | 0 | 1 | 72%         | 0%           | 14  | 0               | 0 | 0 | 0 | 0 | 0 | 1 | All      |
| YXS     | D     | 1650     | 720      | YXS         | D     | 9M          | BEH      | 19    | 1                | 0 | 0 | 0 | 0 | 0 | 0 | 72%         | 0%           | 14  | 0               | 1 | 0 | 0 | 0 | 0 | 0 | All      |
| YXS     | D     | 1820     | 945      | YXS         | D     | 9M          | BEH      | 19    | 0                | 0 | 0 | 1 | 0 | 0 | 0 | 72%         | 0%           | 14  | 0               | 0 | 0 | 0 | 1 | 0 | 0 | All      |
| YXS     | D     | 1820     | 1840     | YXS         | D     | 9M          | BEH      | 19    | 0                | 0 | 0 | 0 | 1 | 0 | 1 | 72%         | 0%           | 14  | 0               | 0 | 0 | 0 | 1 | 0 | 1 | All      |
| YXS     | D     | 1820     | 720      | YXS         | D     | 9M          | BEH      | 19    | 0                | 1 | 1 | 0 | 0 | 0 | 1 | 72%         | 0%           | 14  | 1               | 0 | 1 | 1 | 0 | 0 | 0 | All      |
| YXS     | D     | 1605     | 1650     | YXS         | D     | 9M          | BEH      | 19    | 1                | 1 | 1 | 1 | 0 | 0 | 0 | 72%         | 0%           | 14  | 1               | 1 | 1 | 1 | 0 | 0 | 0 | All      |
| YXY     | D     | 1745     | 1830     | YVR         | D     | 4N          | 737      | 122   | 0                | 0 | 0 | 0 | 0 | 0 | 1 | 72%         | 0%           | 88  | 0               | 0 | 0 | 0 | 0 | 0 | 1 | All      |
| YXT     | D     | 1915     | 725      | YXT         | D     | 9M          | DH3      | 50    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 72%         | 0%           | 36  | 1               | 0 | 1 | 1 | 1 | 1 | 0 | All      |
| YXJ     | D     | 950      | 1020     | YXJ         | D     | 9M          | BEH      | 19    | 1                | 1 | 1 | 1 | 1 | 0 | 0 | 72%         | 0%           | 14  | 1               | 1 | 1 | 1 | 1 | 0 | 0 | All      |
| YXJ     | D     | 1745     | 1815     | YXJ         | D     | 9M          | BEH      | 19    | 1                | 1 | 1 | 1 | 1 | 0 | 0 | 72%         | 0%           | 14  | 1               | 1 | 1 | 1 | 1 | 0 | 0 | All      |
| YYC     | D     | 815      | 845      | YVR         | D     | QK          | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 86%         | 0%           | 64  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YYC     | D     | 1018     | 1040     | YVR         | D     | QK          | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 86%         | 0%           | 64  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YYC     | D     | 1210     | 1240     | YVR         | D     | QK          | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 86%         | 0%           | 64  | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| YYC     | D     | 1745     | 1820     | YVR         | D     | QK          | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 86%         | 0%           | 64  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YYC     | D     | 2035     | 2105     | YYC         | D     | QK          | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 86%         | 0%           | 64  | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| YYC     | D     | 903      | 1000     | YYZ         | D     | WS          | 73H      | 174   | 0                | 0 | 0 | 0 | 0 | 0 | 1 | 89%         | 0%           | 156 | 0               | 0 | 0 | 0 | 0 | 0 | 1 | All      |
| YYC     | D     | 903      | 1000     | YYZ         | D     | WS          | 73H      | 174   | 0                | 1 | 0 | 1 | 0 | 1 | 0 | 89%         | 0%           | 156 | 0               | 1 | 0 | 1 | 0 | 1 | 0 | All      |
| YYC     | D     | 903      | 1020     | CUN         | I     | WS          | 73H      | 174   | 0                | 0 | 1 | 0 | 0 | 0 | 0 | 89%         | 0%           | 156 | 0               | 0 | 1 | 0 | 0 | 0 | 0 | Winter   |
| YYC     | D     | 903      | 1020     | PVR         | I     | WS          | 73H      | 174   | 0                | 0 | 0 | 0 | 1 | 0 | 0 | 89%         | 0%           | 156 | 0               | 0 | 0 | 0 | 1 | 0 | 0 | Winter   |
| YYC     | D     | 903      | 1045     | PHX         | T     | WS          | 73H      | 174   | 1                | 0 | 0 | 0 | 0 | 0 | 0 | 89%         | 0%           | 156 | 1               | 0 | 0 | 0 | 0 | 0 | 0 | All      |
| YYC     | D     | 1348     | 1430     | YYC         | D     | WS          | 736      | 119   | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%         | 0%           | 106 | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YYC     | D     | 1648     | 1727     | YYC         | D     | WS          | 736      | 119   | 0                | 0 | 0 | 0 | 0 | 1 | 0 | 89%         | 0%           | 106 | 0               | 0 | 0 | 0 | 0 | 1 | 0 | All      |
| YYC     | D     | 1648     | 1727     | YYC         | D     | WS          | 73W      | 136   | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%         | 0%           | 122 | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YYC     | D     | 1810     | 1845     | YYC         | D     | WS          | 73H      | 174   | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 89%         | 0%           | 156 | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| YYC     | D     | 2003     | 2055     | YEG         | D     | WS          | 736      | 119   | 0                | 0 | 0 | 0 | 0 | 1 | 0 | 89%         | 0%           | 106 | 0               | 0 | 0 | 0 | 0 | 1 | 0 | All      |
| YYC     | D     | 2003     | 2055     | YEG         | D     | WS          | 73W      | 136   | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 89%         | 0%           | 122 | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |



## Kelowna International Airport Master Plan 2045 Technical Report – Air Traffic Forecasts (Draft 4)

| Origin  |       | Arr Time | Dep Time | Destination |       | Air Carrier | Aircraft |       | Arrival on Day # |   |   |   |   |   |   | Load Factor | % In-Transit | Pax | Depart on Day # |   |   |   |   |   |   | Seasonal |
|---------|-------|----------|----------|-------------|-------|-------------|----------|-------|------------------|---|---|---|---|---|---|-------------|--------------|-----|-----------------|---|---|---|---|---|---|----------|
| Airport | Sect. |          |          | Airport     | Sect. |             | Type     | Seats | 1                | 2 | 3 | 4 | 5 | 6 | 7 |             |              |     | 1               | 2 | 3 | 4 | 5 | 6 | 7 |          |
| YYC     | D     | 2113     | 600      | SJD         | I     | WS          | 73W      | 136   | 0                | 0 | 0 | 0 | 1 | 0 | 0 | 89%         | 0%           | 122 | 0               | 0 | 0 | 0 | 0 | 1 | 0 | All      |
| YYC     | D     | 2256     | 715      | YVR         | D     | WS          | 73W      | 136   | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%         | 0%           | 122 | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YYJ     | D     | 1105     | 1140     | YVR         | D     | WS          | DH4      | 78    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%         | 0%           | 70  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YYJ     | D     | 1920     | 1950     | YYJ         | D     | WS          | DH4      | 78    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%         | 0%           | 70  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YYZ     | D     | 1000     | 1035     | YYZ         | D     | AC          | 320      | 146   | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%         | 0%           | 131 | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YYZ     | D     | 2020     | 615      | YYC         | D     | WS          | 73H      | 174   | 0                | 0 | 0 | 0 | 0 | 1 | 1 | 89%         | 0%           | 156 | 1               | 0 | 0 | 0 | 0 | 0 | 1 | All      |
| YYZ     | D     | 2020     | 615      | YYC         | D     | WS          | 73W      | 136   | 1                | 1 | 1 | 1 | 1 | 0 | 0 | 89%         | 0%           | 122 | 0               | 1 | 1 | 1 | 1 | 0 | 0 | All      |
| YZZ     | D     | 1455     | 1525     | YXC         | D     | 8P          | BE1      | 19    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 72%         | 0%           | 14  | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| CUN     | I     | 2050     | 809      | PVR         | I     | TS          | 738      | 189   | 0                | 1 | 0 | 1 | 0 | 1 | 0 | 93%         | 0%           | 175 | 0               | 0 | 1 | 0 | 1 | 0 | 1 | Winter   |
| CUN     | I     | 2007     | 2130     | YYC         | D     | WS          | 73H      | 174   | 0                | 0 | 0 | 0 | 0 | 0 | 1 | 90%         | 0%           | 157 | 0               | 0 | 0 | 0 | 0 | 0 | 1 | Winter   |
| CUN     | I     | 2332     | 1605     | LAS         | T     | WS          | 73H      | 174   | 0                | 0 | 1 | 0 | 0 | 0 | 0 | 90%         | 0%           | 157 | 0               | 0 | 0 | 1 | 0 | 0 | 0 | Winter   |
| PVR     | I     | 1842     | 1950     | YYC         | D     | TS          | 738      | 189   | 0                | 0 | 0 | 1 | 0 | 0 | 1 | 93%         | 0%           | 175 | 0               | 0 | 0 | 1 | 0 | 0 | 1 | Winter   |
| PVR     | I     | 26       | 615      | YYC         | D     | WS          | 73H      | 174   | 0                | 0 | 0 | 0 | 0 | 1 | 0 | 90%         | 0%           | 157 | 0               | 0 | 0 | 0 | 0 | 1 | 0 | Winter   |
| SJD     | I     | 1439     | 1615     | PHX         | T     | WS          | 73H      | 174   | 0                | 0 | 1 | 0 | 0 | 1 | 1 | 90%         | 0%           | 157 | 0               | 0 | 1 | 0 | 0 | 1 | 1 | All      |
| ZIH     | I     | 2135     | 2225     | YVR         | D     | WG          | 738      | 189   | 0                | 0 | 0 | 1 | 0 | 1 | 0 | 98%         | 45%          | 102 | 0               | 0 | 0 | 1 | 0 | 1 | 0 | Winter   |
| LAS     | T     | 1501     | 1605     | LAS         | T     | WS          | 73H      | 174   | 1                | 1 | 0 | 1 | 0 | 1 | 1 | 90%         | 0%           | 156 | 1               | 1 | 0 | 1 | 0 | 1 | 1 | All      |
| PHX     | T     | 1827     | 615      | YYC         | D     | WS          | 73H      | 174   | 1                | 0 | 0 | 0 | 0 | 0 | 0 | 90%         | 0%           | 156 | 0               | 1 | 0 | 0 | 0 | 0 | 0 | All      |
| PHX     | T     | 2357     | 700      | CUN         | I     | WS          | 73H      | 174   | 0                | 1 | 0 | 0 | 1 | 1 | 0 | 90%         | 0%           | 156 | 0               | 0 | 1 | 0 | 0 | 1 | 1 | All      |
| SEA     | T     | 1        | 600      | SEA         | T     | AS          | DH4      | 76    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 82%         | 0%           | 63  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| SEA     | T     | 1141     | 1219     | SEA         | T     | AS          | DH4      | 76    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 82%         | 0%           | 63  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| SEA     | T     | 1420     | 1500     | SEA         | T     | AS          | DH4      | 76    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 82%         | 0%           | 63  | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| SFO     | T     | 1521     | 1601     | SFO         | T     | UA          | CR7      | 70    | 0                | 0 | 0 | 0 | 0 | 1 | 1 | 82%         | 0%           | 58  | 0               | 0 | 0 | 0 | 0 | 1 | 1 | All      |
| SFO     | T     | 1533     | 1608     | SFO         | T     | UA          | CR7      | 70    | 1                | 1 | 1 | 1 | 1 | 0 | 0 | 82%         | 0%           | 58  | 1               | 1 | 1 | 1 | 1 | 0 | 0 | All      |
| LAX     | T     | 1630     | 1710     | LAX         | T     | WS          | 73W      | 136   | 1                | 0 | 1 | 0 | 0 | 1 | 0 | 90%         | 0%           | 122 | 1               | 0 | 1 | 0 | 0 | 1 | 0 | All      |
| MSP     | T     | 2320     | 630      | MSP         | T     | DL          | CR7      | 70    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 82%         | 0%           | 58  | 1               | 1 | 1 | 1 | 1 | 1 | 0 | All      |
| YXS     | D     | 2105     | 2135     | YVR         | D     | 4N          | 735      | 122   | 0                | 0 | 0 | 0 | 0 | 0 | 1 | 72%         | 0%           | 88  | 0               | 0 | 0 | 0 | 0 | 0 | 1 | All      |
| YYC     | D     | 1550     | 1620     | JHL         | D     | JSN         | CR7      | 70    | 0                | 0 | 0 | 0 | 1 | 0 | 0 | 86%         | 0%           | 60  | 0               | 0 | 0 | 0 | 1 | 0 | 0 | All      |
| JHL     | D     | 2020     | 2050     | YYC         | D     | JSN         | CR7      | 70    | 0                | 0 | 0 | 0 | 1 | 0 | 0 | 86%         | 0%           | 60  | 0               | 0 | 0 | 0 | 1 | 0 | 0 | All      |
| YYC     | D     | 1900     | 900      | YHM         | D     | FLE         | 734      | 158   | 0                | 0 | 0 | 0 | 1 | 0 | 0 | 86%         | 0%           | 136 | 0               | 0 | 0 | 0 | 0 | 1 | 0 | All      |
| YHM     | D     | 1855     | 1900     | YYC         | D     | FLE         | 734      | 158   | 0                | 0 | 0 | 0 | 0 | 1 | 0 | 86%         | 0%           | 136 | 0               | 0 | 0 | 0 | 0 | 0 | 1 | All      |
| FRA     | I     | 1605     | 1745     | FRA         | I     | DE          | 763      | 245   | 0                | 0 | 0 | 0 | 0 | 1 | 0 | 93%         | 0%           | 227 | 0               | 0 | 0 | 0 | 0 | 0 | 1 | Winter   |





**Kelowna International Airport Master Plan 2045 Technical Report – Air Traffic Forecasts (Draft 4)**

**Nominal Schedule for Kelowna International Airport, Busy Week 2035**

| Origin  |       | Arr  | Dep  | Destination |       | Air     | Aircraft |       | Arrival on Day # |   |   |   |   |   |   | Load   | % In-   | Pax | Depart on Day # |   |   |   |   |   |   | Seasonal |
|---------|-------|------|------|-------------|-------|---------|----------|-------|------------------|---|---|---|---|---|---|--------|---------|-----|-----------------|---|---|---|---|---|---|----------|
| Airport | Sect. | Time | Time | Airport     | Sect. | Carrier | Type     | Seats | 1                | 2 | 3 | 4 | 5 | 6 | 7 | Factor | Transit |     | 1               | 2 | 3 | 4 | 5 | 6 | 7 |          |
| .       | D     |      | 615  | YYC         | D     | WS      | 73W      | 136   | 0                | 0 | 0 | 0 | 0 | 0 | 0 | 89%    | 0%      | 0   | 0               | 0 | 0 | 1 | 0 | 0 | 0 | All      |
| YEG     | D     | 2220 | 710  | YEG         | D     | WS      | 73W      | 136   | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 89%    | 0%      | 122 | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| YEG     | D     | 843  | 915  | YEG         | D     | WS      | DH4      | 78    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%    | 0%      | 70  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YEG     | D     | 1137 | 1211 | YEG         | D     | WS      | 73W      | 136   | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 89%    | 0%      | 122 | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| YEG     | D     | 1540 | 1605 | YEG         | D     | WS      | DH4      | 78    | 1                | 1 | 1 | 1 | 1 | 0 | 0 | 89%    | 0%      | 70  | 1               | 1 | 1 | 1 | 1 | 0 | 0 | All      |
| YEG     | D     | 1917 | 2000 | YYC         | D     | WS      | 73W      | 136   | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%    | 0%      | 122 | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YEG     | D     | 800  | 832  | YEG         | D     | QK      | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 1 | 0 | 86%    | 0%      | 64  | 1               | 1 | 1 | 1 | 1 | 1 | 0 | All      |
| YEG     | D     | 1215 | 1250 | YEG         | D     | QK      | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 86%    | 0%      | 64  | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| YEG     | D     | 1630 | 1705 | YEG         | D     | QK      | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 86%    | 0%      | 64  | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| YMM     | D     | 2331 | 630  | YMM         | D     | WS      | DH4      | 78    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 89%    | 0%      | 70  | 1               | 1 | 1 | 1 | 1 | 1 | 0 | All      |
| YQF     | D     | 1215 | 1245 | YQF         | D     | J3      | J31      | 19    | 1                | 1 | 1 | 1 | 1 | 0 | 0 | 66%    | 0%      | 12  | 1               | 1 | 1 | 1 | 1 | 0 | 0 | All      |
| YVR     | D     | 1915 | 1955 | YXY         | D     | 4N      | 737      | 122   | 0                | 1 | 0 | 1 | 0 | 0 | 0 | 72%    | 0%      | 88  | 0               | 1 | 0 | 1 | 0 | 0 | 0 | All      |
| YVR     | D     | 1251 | 1330 | YVR         | D     | AC      | E90      | 97    | 1                | 1 | 1 | 1 | 1 | 0 | 0 | 89%    | 0%      | 87  | 1               | 1 | 1 | 1 | 1 | 0 | 0 | All      |
| YVR     | D     | 700  | 730  | YVR         | D     | QK      | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 0 | 0 | 86%    | 0%      | 64  | 1               | 1 | 1 | 1 | 1 | 0 | 0 | All      |
| YVR     | D     | 804  | 840  | YVR         | D     | QK      | DH4      | 74    | 0                | 0 | 0 | 0 | 0 | 1 | 0 | 86%    | 0%      | 64  | 0               | 0 | 0 | 0 | 0 | 1 | 0 | All      |
| YVR     | D     | 814  | 840  | YVR         | D     | QK      | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 86%    | 0%      | 64  | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| YVR     | D     | 934  | 1005 | YYC         | D     | QK      | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 86%    | 0%      | 64  | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| YVR     | D     | 934  | 1240 | YVR         | D     | QK      | DH4      | 74    | 0                | 0 | 0 | 0 | 0 | 1 | 0 | 86%    | 0%      | 64  | 0               | 0 | 0 | 0 | 0 | 1 | 0 | All      |
| YVR     | D     | 1123 | 1200 | YVR         | D     | QK      | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 86%    | 0%      | 64  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YVR     | D     | 1234 | 1315 | YVR         | D     | QK      | DH4      | 74    | 0                | 0 | 0 | 0 | 0 | 1 | 1 | 86%    | 0%      | 64  | 0               | 0 | 0 | 0 | 0 | 1 | 1 | All      |
| YVR     | D     | 1423 | 1455 | YYC         | D     | QK      | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 86%    | 0%      | 64  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YVR     | D     | 1559 | 1620 | YVR         | D     | QK      | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 86%    | 0%      | 64  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YVR     | D     | 1709 | 1730 | YVR         | D     | QK      | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 86%    | 0%      | 64  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YVR     | D     | 1849 | 1910 | YYC         | D     | QK      | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 86%    | 0%      | 64  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YVR     | D     | 2019 | 2040 | YVR         | D     | QK      | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 86%    | 0%      | 64  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YVR     | D     | 2339 | 545  | YVR         | D     | QK      | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 86%    | 0%      | 64  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YVR     | D     | 518  | 843  | CUN         | I     | TS      | 738      | 189   | 0                | 0 | 0 | 1 | 0 | 1 | 0 | 0%     | 0%      | 0   | 0               | 0 | 0 | 1 | 0 | 1 | 0 | Winter   |
| YVR     | D     | 835  | 925  | ZIH         | I     | WG      | 738      | 189   | 0                | 0 | 0 | 1 | 0 | 0 | 0 | 0%     | 0%      | 0   | 0               | 0 | 0 | 1 | 0 | 0 | 0 | Winter   |
| YVR     | D     | 857  | 940  | YVR         | D     | WS      | 736      | 119   | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%    | 0%      | 106 | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YVR     | D     | 952  | 1030 | YYC         | D     | WS      | 736      | 119   | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%    | 0%      | 106 | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |



**Kelowna International Airport Master Plan 2045 Technical Report – Air Traffic Forecasts (Draft 4)**

| Origin  |       | Arr  | Dep  | Destination |       | Air     | Aircraft |       | Arrival on Day # |   |   |   |   |   |   | Load   | % In-   | Pax | Depart on Day # |   |   |   |   |   |   | Seasonal |
|---------|-------|------|------|-------------|-------|---------|----------|-------|------------------|---|---|---|---|---|---|--------|---------|-----|-----------------|---|---|---|---|---|---|----------|
| Airport | Sect. | Time | Time | Airport     | Sect. | Carrier | Type     | Seats | 1                | 2 | 3 | 4 | 5 | 6 | 7 | Factor | Transit |     | 1               | 2 | 3 | 4 | 5 | 6 | 7 |          |
| YVR     | D     | 1354 | 1435 | YYJ         | D     | WS      | DH4      | 78    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 89%    | 0%      | 70  | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| YVR     | D     | 1404 | 1445 | YYJ         | D     | WS      | DH4      | 78    | 0                | 0 | 0 | 0 | 0 | 1 | 0 | 89%    | 0%      | 70  | 0               | 0 | 0 | 0 | 0 | 1 | 0 | All      |
| YVR     | D     | 1922 | 2000 | YVR         | D     | WS      | 736      | 119   | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%    | 0%      | 106 | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YVR     | D     | 2205 | 705  | YVR         | D     | WS      | DH4      | 78    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 89%    | 0%      | 70  | 1               | 1 | 1 | 1 | 1 | 1 | 0 | All      |
| YXC     | D     | 1240 | 1300 | YZZ         | D     | 8P      | BE1      | 19    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 72%    | 0%      | 14  | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| YQQ     | D     | 1015 | 1045 | YQQ         | D     | WS      | DH4      | 78    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%    | 0%      | 70  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YQQ     | D     | 1810 | 1855 | YQQ         | D     | WS      | DH4      | 78    | 1                | 0 | 1 | 0 | 1 | 0 | 1 | 89%    | 0%      | 70  | 1               | 0 | 1 | 0 | 1 | 0 | 1 | All      |
| YCD     | D     | 1515 | 1545 | YCD         | D     | WS      | DH4      | 78    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%    | 0%      | 70  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YXS     | D     | 915  | 945  | YXS         | D     | 9M      | BEH      | 19    | 0                | 0 | 0 | 0 | 0 | 0 | 1 | 72%    | 0%      | 14  | 0               | 0 | 0 | 0 | 0 | 0 | 1 | All      |
| YXS     | D     | 1650 | 720  | YXS         | D     | 9M      | BEH      | 19    | 1                | 0 | 0 | 0 | 0 | 0 | 0 | 72%    | 0%      | 14  | 0               | 1 | 0 | 0 | 0 | 0 | 0 | All      |
| YXS     | D     | 1820 | 945  | YXS         | D     | 9M      | BEH      | 19    | 0                | 0 | 0 | 1 | 0 | 0 | 0 | 72%    | 0%      | 14  | 0               | 0 | 0 | 0 | 1 | 0 | 0 | All      |
| YXS     | D     | 1820 | 1840 | YXS         | D     | 9M      | BEH      | 19    | 0                | 0 | 0 | 0 | 1 | 0 | 1 | 72%    | 0%      | 14  | 0               | 0 | 0 | 0 | 1 | 0 | 1 | All      |
| YXS     | D     | 1820 | 720  | YXS         | D     | 9M      | BEH      | 19    | 0                | 1 | 1 | 0 | 0 | 0 | 1 | 72%    | 0%      | 14  | 1               | 0 | 1 | 1 | 0 | 0 | 0 | All      |
| YXS     | D     | 1605 | 1650 | YXS         | D     | 9M      | BEH      | 19    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 72%    | 0%      | 14  | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| YXY     | D     | 1745 | 1830 | YVR         | D     | 4N      | 737      | 122   | 0                | 0 | 0 | 0 | 0 | 0 | 1 | 72%    | 0%      | 88  | 0               | 0 | 0 | 0 | 0 | 0 | 1 | All      |
| YXT     | D     | 1915 | 725  | YXT         | D     | 9M      | DH3      | 50    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 72%    | 0%      | 36  | 1               | 0 | 1 | 1 | 1 | 1 | 0 | All      |
| YXT     | D     | 1225 | 1255 | YXT         | D     | 9M      | DH3      | 50    | 1                | 0 | 1 | 0 | 1 | 0 | 0 | 72%    | 0%      | 36  | 1               | 0 | 1 | 0 | 1 | 0 | 0 | All      |
| YXJ     | D     | 950  | 1020 | YXJ         | D     | 9M      | BEH      | 19    | 1                | 1 | 1 | 1 | 1 | 0 | 0 | 72%    | 0%      | 14  | 1               | 1 | 1 | 1 | 1 | 0 | 0 | All      |
| YXJ     | D     | 1745 | 1815 | YXJ         | D     | 9M      | BEH      | 19    | 1                | 1 | 1 | 1 | 1 | 0 | 0 | 72%    | 0%      | 14  | 1               | 1 | 1 | 1 | 1 | 0 | 0 | All      |
| YYC     | D     | 815  | 845  | YVR         | D     | QK      | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 86%    | 0%      | 64  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YYC     | D     | 1018 | 1040 | YVR         | D     | QK      | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 86%    | 0%      | 64  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YYC     | D     | 1210 | 1240 | YVR         | D     | QK      | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 86%    | 0%      | 64  | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| YYC     | D     | 1520 | 1550 | YVR         | D     | QK      | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 86%    | 0%      | 64  | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| YYC     | D     | 1745 | 1820 | YVR         | D     | QK      | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 86%    | 0%      | 64  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YYC     | D     | 2035 | 2105 | YYC         | D     | QK      | DH4      | 74    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 86%    | 0%      | 64  | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| YYC     | D     | 730  | 805  | YYC         | D     | WS      | 736      | 119   | 1                | 1 | 1 | 1 | 1 | 0 | 0 | 89%    | 0%      | 106 | 1               | 1 | 1 | 1 | 1 | 0 | 0 | All      |
| YYC     | D     | 903  | 1000 | YYZ         | D     | WS      | 73H      | 174   | 0                | 0 | 0 | 0 | 0 | 0 | 1 | 89%    | 0%      | 156 | 0               | 0 | 0 | 0 | 0 | 0 | 1 | All      |
| YYC     | D     | 903  | 1000 | YYZ         | D     | WS      | 73H      | 174   | 0                | 1 | 0 | 1 | 0 | 1 | 0 | 89%    | 0%      | 156 | 0               | 1 | 0 | 1 | 0 | 1 | 0 | All      |
| YYC     | D     | 903  | 1020 | CUN         | I     | WS      | 73H      | 174   | 0                | 0 | 1 | 0 | 0 | 0 | 0 | 89%    | 0%      | 156 | 0               | 0 | 1 | 0 | 0 | 0 | 0 | Winter   |
| YYC     | D     | 903  | 1020 | PVR         | I     | WS      | 73H      | 174   | 0                | 0 | 0 | 0 | 1 | 0 | 0 | 89%    | 0%      | 156 | 0               | 0 | 0 | 0 | 1 | 0 | 0 | Winter   |
| YYC     | D     | 903  | 1045 | PHX         | T     | WS      | 73H      | 174   | 1                | 0 | 0 | 0 | 0 | 0 | 0 | 89%    | 0%      | 156 | 1               | 0 | 0 | 0 | 0 | 0 | 0 | All      |



## Kelowna International Airport Master Plan 2045 Technical Report – Air Traffic Forecasts (Draft 4)

| Origin  |       | Arr  | Dep  | Destination |       | Air     | Aircraft |       | Arrival on Day # |   |   |   |   |   |   | Load   | % In-   |     | Depart on Day # |   |   |   |   |   |   | Seasonal |
|---------|-------|------|------|-------------|-------|---------|----------|-------|------------------|---|---|---|---|---|---|--------|---------|-----|-----------------|---|---|---|---|---|---|----------|
| Airport | Sect. | Time | Time | Airport     | Sect. | Carrier | Type     | Seats | 1                | 2 | 3 | 4 | 5 | 6 | 7 | Factor | Transit | Pax | 1               | 2 | 3 | 4 | 5 | 6 | 7 |          |
| YYC     | D     | 1348 | 1430 | YYC         | D     | WS      | 736      | 119   | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%    | 0%      | 106 | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YYC     | D     | 1648 | 1727 | YYC         | D     | WS      | 736      | 119   | 0                | 0 | 0 | 0 | 0 | 1 | 0 | 89%    | 0%      | 106 | 0               | 0 | 0 | 0 | 0 | 1 | 0 | All      |
| YYC     | D     | 1648 | 1727 | YYC         | D     | WS      | 73W      | 136   | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%    | 0%      | 122 | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YYC     | D     | 1810 | 1845 | YYC         | D     | WS      | 73H      | 174   | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 89%    | 0%      | 156 | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| YYC     | D     | 2003 | 2055 | YEG         | D     | WS      | 736      | 119   | 0                | 0 | 0 | 0 | 0 | 1 | 0 | 89%    | 0%      | 106 | 0               | 0 | 0 | 0 | 0 | 1 | 0 | All      |
| YYC     | D     | 2003 | 2055 | YEG         | D     | WS      | 73W      | 136   | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 89%    | 0%      | 122 | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| YYC     | D     | 2113 | 600  | SJD         | I     | WS      | 73W      | 136   | 0                | 0 | 0 | 0 | 1 | 0 | 0 | 89%    | 0%      | 122 | 0               | 0 | 0 | 0 | 0 | 1 | 0 | All      |
| YYC     | D     | 2256 | 715  | YVR         | D     | WS      | 73W      | 136   | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%    | 0%      | 122 | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YYJ     | D     | 1105 | 1140 | YVR         | D     | WS      | DH4      | 78    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%    | 0%      | 70  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YYJ     | D     | 1920 | 1950 | YYJ         | D     | WS      | DH4      | 78    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%    | 0%      | 70  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YYZ     | D     | 1000 | 1035 | YYZ         | D     | AC      | 320      | 146   | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 89%    | 0%      | 131 | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| YYZ     | D     | 2320 | 10   | YYZ         | D     | AC      | E90      | 97    | 1                | 0 | 1 | 0 | 1 | 0 | 1 | 89%    | 0%      | 87  | 1               | 0 | 1 | 0 | 1 | 0 | 1 | All      |
| YYZ     | D     | 2020 | 615  | YYC         | D     | WS      | 73H      | 174   | 0                | 0 | 0 | 0 | 0 | 1 | 1 | 89%    | 0%      | 156 | 1               | 0 | 0 | 0 | 0 | 0 | 1 | All      |
| YYZ     | D     | 2020 | 615  | YYC         | D     | WS      | 73W      | 136   | 1                | 1 | 1 | 1 | 1 | 0 | 0 | 89%    | 0%      | 122 | 0               | 1 | 1 | 1 | 1 | 0 | 0 | All      |
| YZZ     | D     | 1455 | 1525 | YXC         | D     | 8P      | BE1      | 19    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 72%    | 0%      | 14  | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| CUN     | I     | 2050 | 809  | PVR         | I     | TS      | 738      | 189   | 0                | 1 | 0 | 1 | 1 | 1 | 0 | 93%    | 0%      | 175 | 0               | 0 | 1 | 0 | 1 | 1 | 1 | Winter   |
| CUN     | I     | 2007 | 2130 | YYC         | D     | WS      | 73H      | 174   | 0                | 0 | 0 | 0 | 0 | 0 | 1 | 90%    | 0%      | 157 | 0               | 0 | 0 | 0 | 0 | 0 | 1 | Winter   |
| CUN     | I     | 2332 | 1605 | LAS         | T     | WS      | 73H      | 174   | 0                | 0 | 1 | 0 | 0 | 0 | 0 | 90%    | 0%      | 157 | 0               | 0 | 0 | 1 | 0 | 0 | 0 | Winter   |
| PVR     | I     | 1842 | 1950 | YYC         | D     | TS      | 738      | 189   | 0                | 0 | 0 | 1 | 0 | 0 | 1 | 93%    | 0%      | 175 | 0               | 0 | 0 | 1 | 0 | 0 | 1 | Winter   |
| PVR     | I     | 26   | 615  | YYC         | D     | WS      | 73H      | 174   | 0                | 0 | 0 | 0 | 0 | 1 | 0 | 90%    | 0%      | 157 | 0               | 0 | 0 | 0 | 0 | 1 | 0 | Winter   |
| SJD     | I     | 1439 | 1615 | PHX         | T     | WS      | 73H      | 174   | 0                | 0 | 1 | 0 | 0 | 1 | 1 | 90%    | 0%      | 157 | 0               | 0 | 1 | 0 | 0 | 1 | 1 | All      |
| ZIH     | I     | 2135 | 2225 | YVR         | D     | WG      | 738      | 189   | 0                | 0 | 0 | 1 | 0 | 1 | 0 | 98%    | 45%     | 102 | 0               | 0 | 0 | 1 | 0 | 1 | 0 | Winter   |
| LAS     | T     | 1501 | 1605 | LAS         | T     | WS      | 73H      | 174   | 1                | 1 | 0 | 1 | 1 | 1 | 1 | 90%    | 0%      | 156 | 1               | 1 | 0 | 1 | 1 | 1 | 1 | All      |
| PHX     | T     | 1827 | 615  | YYC         | D     | WS      | 73H      | 174   | 1                | 0 | 0 | 0 | 0 | 0 | 0 | 90%    | 0%      | 156 | 0               | 1 | 0 | 0 | 0 | 0 | 0 | All      |
| PHX     | T     | 2357 | 700  | CUN         | I     | WS      | 73H      | 174   | 0                | 1 | 1 | 0 | 1 | 1 | 0 | 90%    | 0%      | 156 | 0               | 0 | 1 | 1 | 0 | 1 | 1 | All      |
| SEA     | T     | 1    | 600  | SEA         | T     | AS      | DH4      | 76    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 82%    | 0%      | 63  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| SEA     | T     | 1141 | 1219 | SEA         | T     | AS      | DH4      | 76    | 1                | 1 | 1 | 1 | 1 | 1 | 1 | 82%    | 0%      | 63  | 1               | 1 | 1 | 1 | 1 | 1 | 1 | All      |
| SEA     | T     | 1420 | 1500 | SEA         | T     | AS      | DH4      | 76    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 82%    | 0%      | 63  | 1               | 1 | 1 | 1 | 1 | 0 | 1 | All      |
| SFO     | T     | 1521 | 1601 | SFO         | T     | UA      | CR7      | 70    | 0                | 0 | 0 | 0 | 0 | 1 | 1 | 82%    | 0%      | 58  | 0               | 0 | 0 | 0 | 0 | 1 | 1 | All      |
| SFO     | T     | 1533 | 1608 | SFO         | T     | UA      | CR7      | 70    | 1                | 1 | 1 | 1 | 1 | 0 | 0 | 82%    | 0%      | 58  | 1               | 1 | 1 | 1 | 1 | 0 | 0 | All      |
| LAX     | T     | 1630 | 1710 | LAX         | T     | WS      | 73W      | 136   | 1                | 0 | 1 | 0 | 1 | 1 | 1 | 90%    | 0%      | 122 | 1               | 0 | 1 | 0 | 1 | 1 | 1 | All      |



**Kelowna International Airport Master Plan 2045 Technical Report – Air Traffic Forecasts (Draft 4)**

| Origin  |       | Arr  | Dep  | Destination |       | Air     | Aircraft |       | Arrival on Day # |   |   |   |   |   |   | Load   | % In-   |     | Depart on Day # |   |   |   |   |   |   | Seasonal |
|---------|-------|------|------|-------------|-------|---------|----------|-------|------------------|---|---|---|---|---|---|--------|---------|-----|-----------------|---|---|---|---|---|---|----------|
| Airport | Sect. | Time | Time | Airport     | Sect. | Carrier | Type     | Seats | 1                | 2 | 3 | 4 | 5 | 6 | 7 | Factor | Transit | Pax | 1               | 2 | 3 | 4 | 5 | 6 | 7 |          |
| MSP     | T     | 2320 | 630  | MSP         | T     | DL      | CR7      | 70    | 1                | 1 | 1 | 1 | 1 | 0 | 1 | 82%    | 0%      | 58  | 1               | 1 | 1 | 1 | 1 | 1 | 0 | All      |
| YXS     | D     | 2105 | 2135 | YVR         | D     | 4N      | 735      | 122   | 0                | 0 | 0 | 0 | 0 | 0 | 1 | 72%    | 0%      | 88  | 0               | 0 | 0 | 0 | 0 | 0 | 1 | All      |
| YYC     | D     | 1550 | 1620 | JHL         | D     | JSN     | CR7      | 70    | 0                | 0 | 0 | 0 | 1 | 0 | 0 | 86%    | 0%      | 60  | 0               | 0 | 0 | 0 | 1 | 0 | 0 | All      |
| JHL     | D     | 2020 | 2050 | YYC         | D     | JSN     | CR7      | 70    | 0                | 0 | 0 | 0 | 1 | 0 | 0 | 86%    | 0%      | 60  | 0               | 0 | 0 | 0 | 1 | 0 | 0 | All      |
| YYC     | D     | 1900 | 900  | YHM         | D     | FLE     | 734      | 158   | 0                | 0 | 0 | 0 | 1 | 0 | 0 | 86%    | 0%      | 136 | 0               | 0 | 0 | 0 | 0 | 1 | 0 | All      |
| YHM     | D     | 1855 | 1900 | YYC         | D     | FLE     | 734      | 158   | 0                | 0 | 0 | 0 | 0 | 1 | 0 | 86%    | 0%      | 136 | 0               | 0 | 0 | 0 | 0 | 0 | 1 | All      |
| FRA     | I     | 1605 | 1745 | FRA         | I     | DE      | 763      | 245   | 0                | 0 | 0 | 0 | 0 | 1 | 0 | 93%    | 0%      | 227 | 0               | 0 | 0 | 0 | 0 | 0 | 1 | Winter   |