



# Toronto Pearson Noise Management Forums Runway Rehabilitation Update

June 27, 2022



# Special Agenda

- Runway 06L/24R Rehabilitation Project
  - Project Progress Update
  - Operational + Community Impacts
  - Frequently Asked Questions
  - How to stay in touch
- Questions



# Project Progress Update

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# Temporary Closure of 06L/24R



- Like all major infrastructure, our runways need regular maintenance to keep them safe.
- On April 4, Pearson started an eight-month rehabilitation of 06L/24R, the airport's second-busiest runway.
- First built in the 1960s, the 3-km runway needed to be fully rehabilitated due to the wearing down of its concrete sub-structure as a result of weather conditions, use and time.



# Restoration work in action



# Project Progress (06L/24R) : June 2022



- Work is sequenced to proceed from left to right (west to east)
- Work has been completed in the area marked by the green box. This area is now operational
- Work is currently occurring inside the area marked by the red box
- Area inside the orange box is currently operational. This area will be shut down for work once some area inside the red box has been completed and operational

**Project is progressing well and currently on track to be completed by end of November as planned.**

# Photos of the Rehabilitation Area



Photos of the completed Surface and returned to ops



Milling on RWY 06L-24R



Two breakers at work on RWY 06L-24R



Concrete crushing operation commenced on RWY 06L-24R.



Excavating concrete on TWY D8 and hauling to crusher.



Stage 1A: Installation of 250mm dia. subdrain placement at Taxiway D8 centerline.



Stage 1A Taxiway D8: Surface PCC concrete paving.



Stage 1A: Pouring concrete slab on Runway



Rwy. 06L: Subdrain installation.



CSB placement completed.



Stage 1E: Trenching for electrical conduits.



Stage 1B and 1E: Filter cloth, geogrid and granular base installation.



# Operational Background

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# Our Runways

Toronto Pearson has five runways

- Two runways go in the north-south direction:
  - Runway 15L/33R
  - Runway 15R/33L
- Three runways go in the east-west direction:
  - Runway 05/23
  - Runway 06L/24R
  - Runway 06R/24L
- Runways can be used from both ends, so while there are five runways, there are 10 operational ends for arrivals and departures



# Runway Selection



Air Traffic Controllers consider many factors when selecting a runway configuration:



**Wind** - direction, windspeed, crosswinds



**Runway and Taxiway Availability** - can be affected by maintenance, snow clearing and other factors



**Surface conditions** - (wet, dry, ice, snow) combined with wind conditions



**Distance to Runway** – the primary departure runway is typically the shortest distance from the terminal – less fuel consumption, less GHG



**Traffic Demand & Capacity** – traffic levels vary seasonally and even throughout the day. Runway configurations are selected for optimal capacity



**Time of Day** – the Nighttime Preferential Runway System is used between midnight and 6:30 am. It is designed to affect the fewest people in the nighttime hours



**Runway Length** –sometimes a longer runway is needed for long haul, large/heavy aircraft

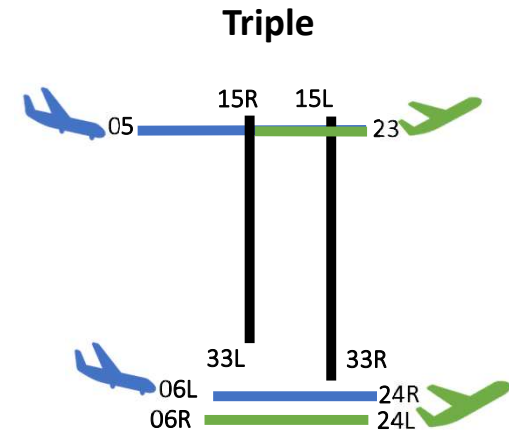
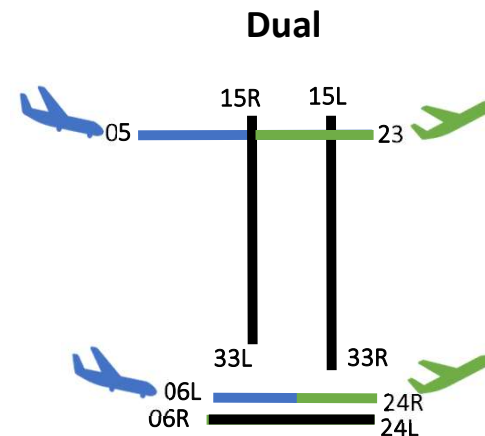
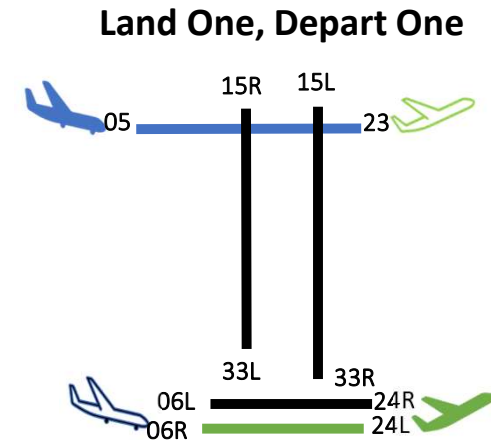
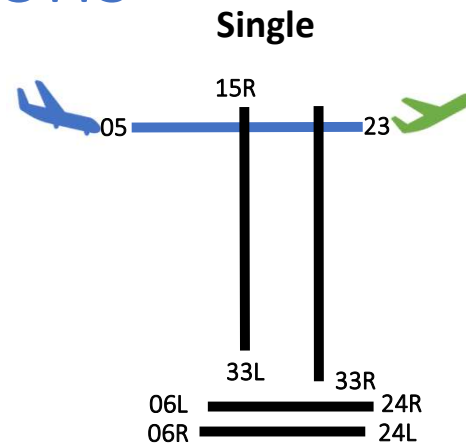
The east/west runways are used for ~95% of traffic, due to predominant easterly/westerly winds, and capacity

# Runway Configurations

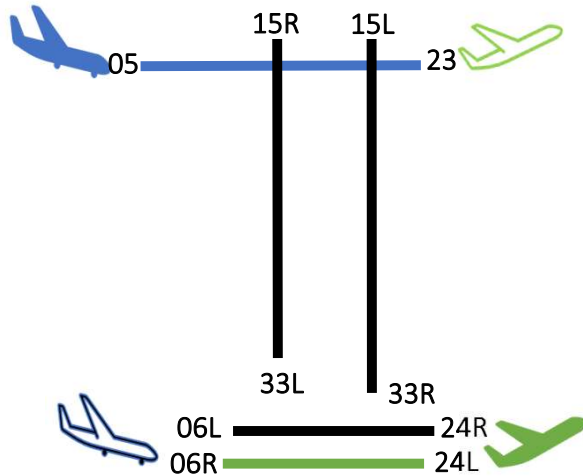
Runways are configured as a system to maximize efficiency based on traffic levels. There are four main options:

1. **Single** – very low traffic
2. **Land One, Depart One** – low traffic
3. **Dual** – high traffic
4. **Triple** – very high traffic

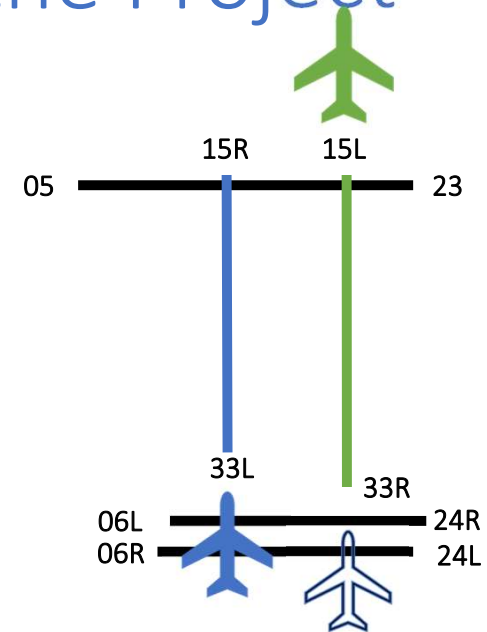
Due to runway closure - Land One, Depart One configuration is currently being used despite high traffic levels. This means a higher concentration of traffic on main runways in use. **This higher than typical rate of traffic is driving increased complaints.**



# Runway Configurations during the Project



Land One, Depart One



**East/West** –the airport is using the east/west runways in a land one, depart one configuration in a traffic level scenario that would usually call for dualling or tripling.

- offloads may be more frequent, and residents affected by the 'main' runways can expect more traffic. **It may feel like more traffic than in 2019.**

**North/South** – at times, depending on temporary restrictions on the airfield during different phases of the runway rehabilitation, the North/South configuration will be the most suitable choice to handle a higher rate of traffic than a land one, depart one East/West configuration. This means that residents affected by North/South runway operations can expect more traffic.

# Operational & Community Impacts April - June

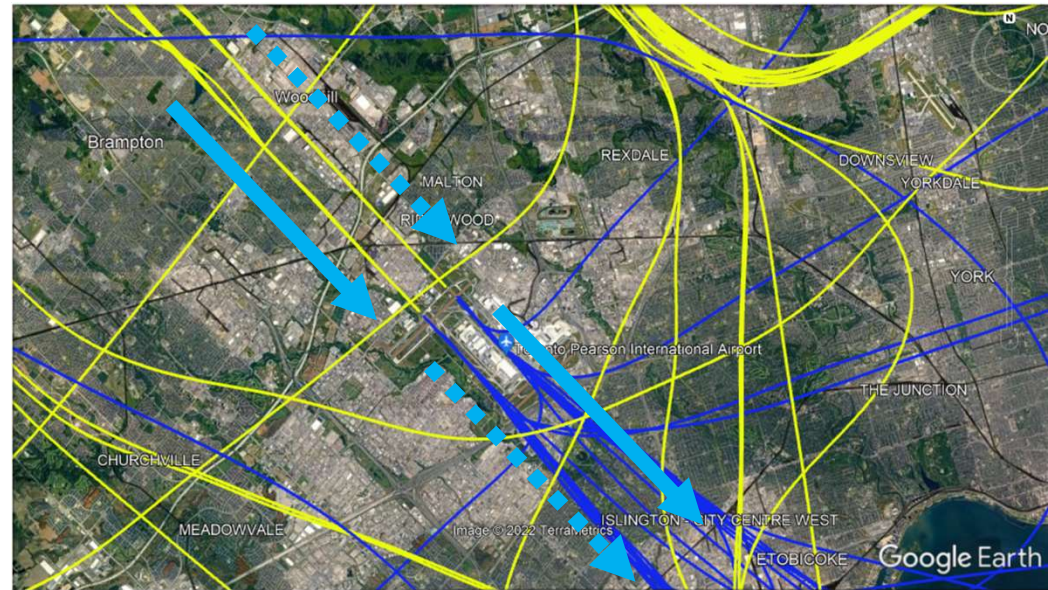
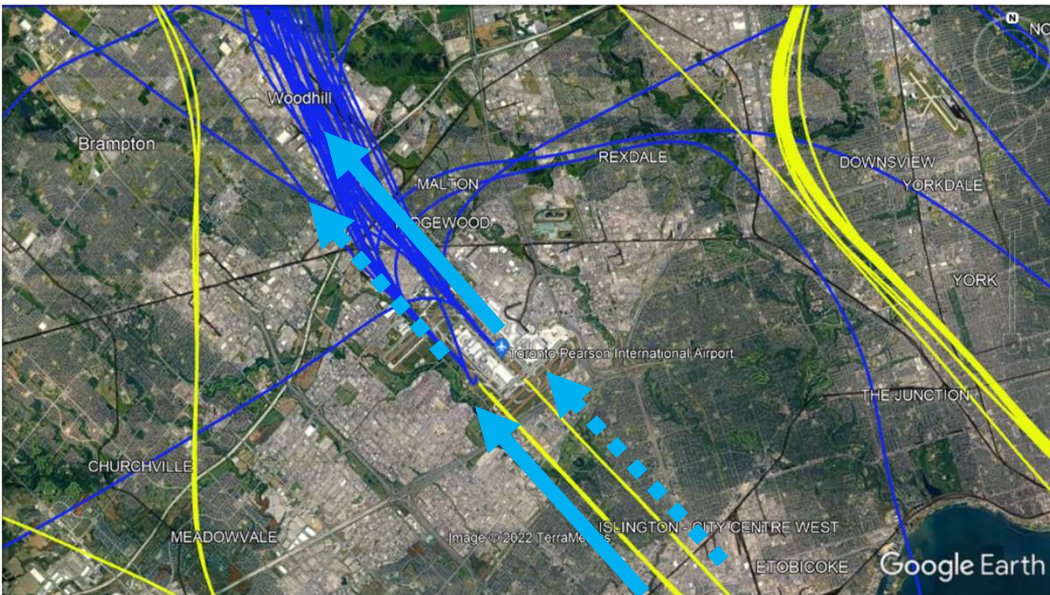
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# North/South Configurations



Northerly configuration – Runways 33L & 33R

Southerly configuration – Runways 15L & 15R



Primary arrival or departure runway   
Secondary arrival or departure runway 

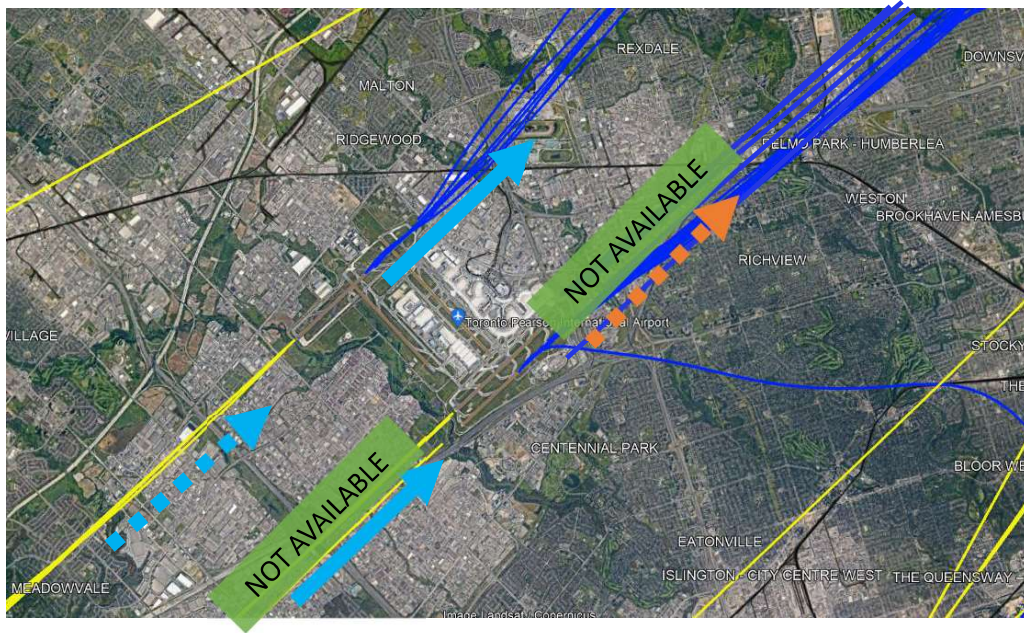
**As always, safety comes first when selecting runway configurations**



# April through June - East/West Configurations






## Easterly configuration – Runways 05, 06R



## Westerly configuration – Runways 23, 24L

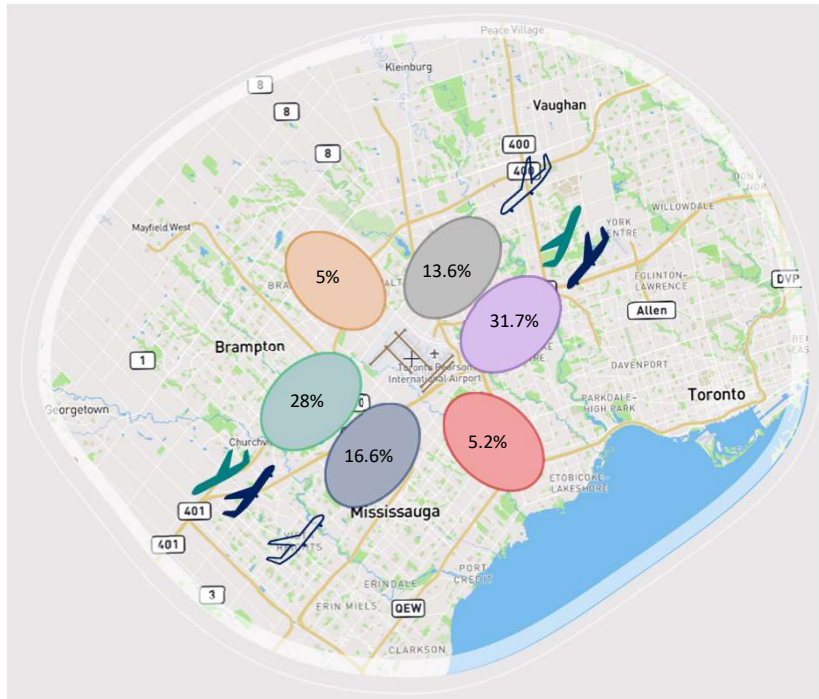


- Main arrival or departure runway 
- Secondary arrival or departure runway 
- Limited availability 

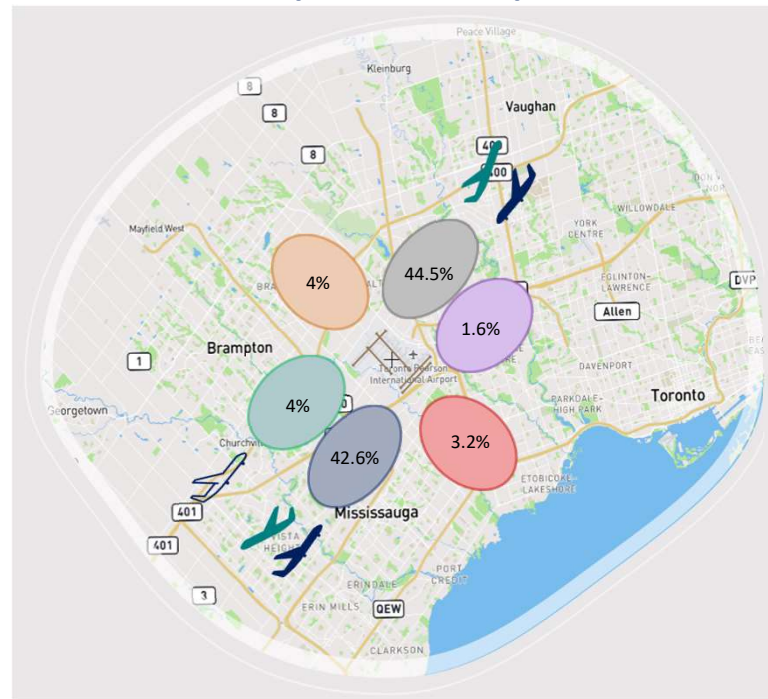


# Community Impacts To Date

2019



April-June sample



- Brampton, Malton
- Maple/Vaughan, Richmond Hill, Thornhill, Rexdale
- Midtown Toronto, North York, Weston, Markham
- Etobicoke-Lakeshore, Alderwood, Long Branch, Markland Wood
- Meadowvale, Alderwood, Erin Mills, Streetsville, Clarkson, Port Credit, Oakville
- Brampton, Georgetown, Milton, Meadowvale, Streetsville

2019 – traffic based on typical runway configurations; work to date has seen mainly land one, depart one configurations with highest traffic levels in the Northeast and Southwest

Complaints reflect the traffic distribution



# Operational & Community Impacts Look Forward

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# Northeast

## Arrivals Runway 23, Departures Runway 05

Main Ridings impacted:

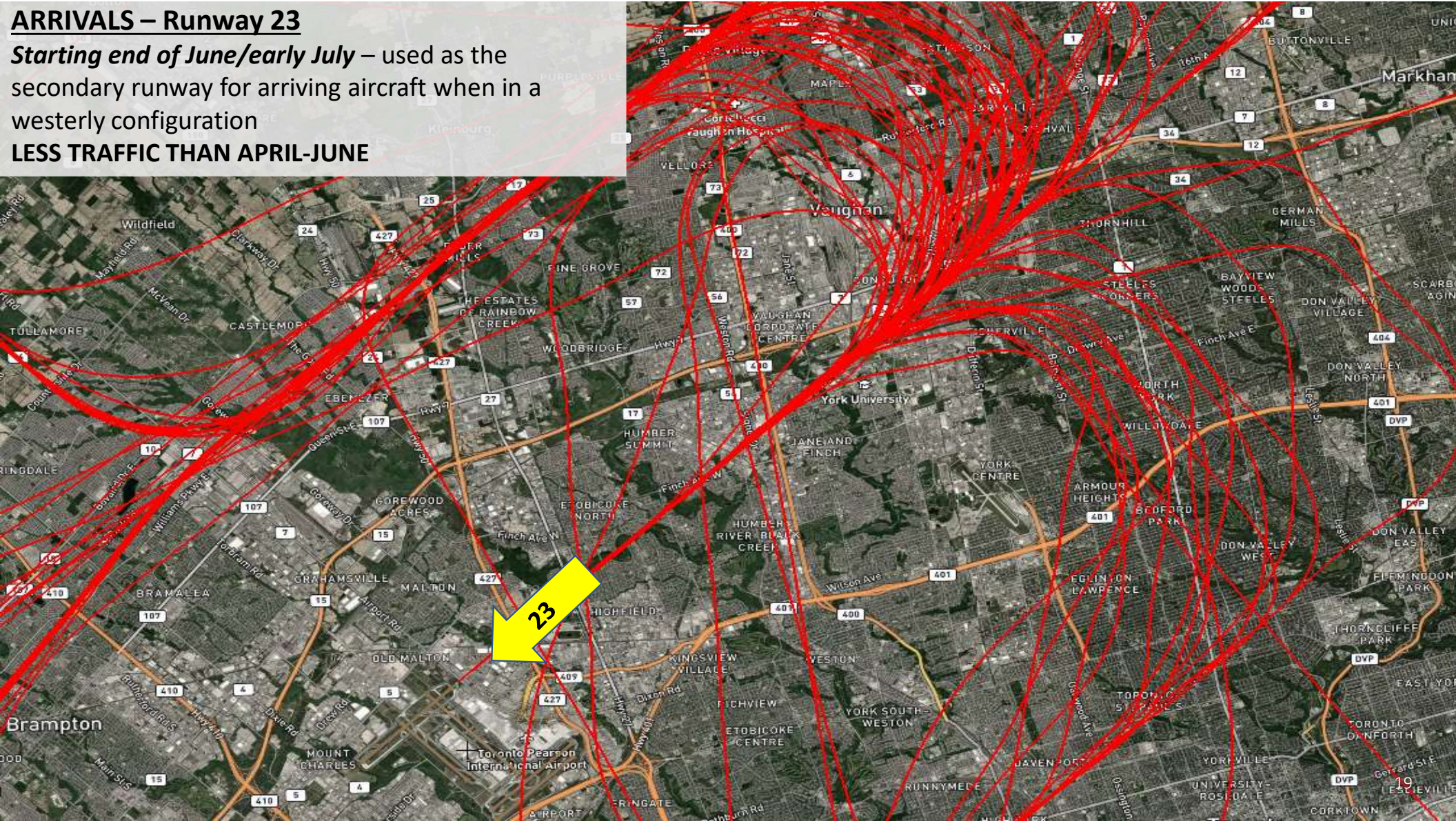
Etobicoke North, Humber River-Black Creek, Vaughan-Woodbridge, Thornhill,  
King Vaughan



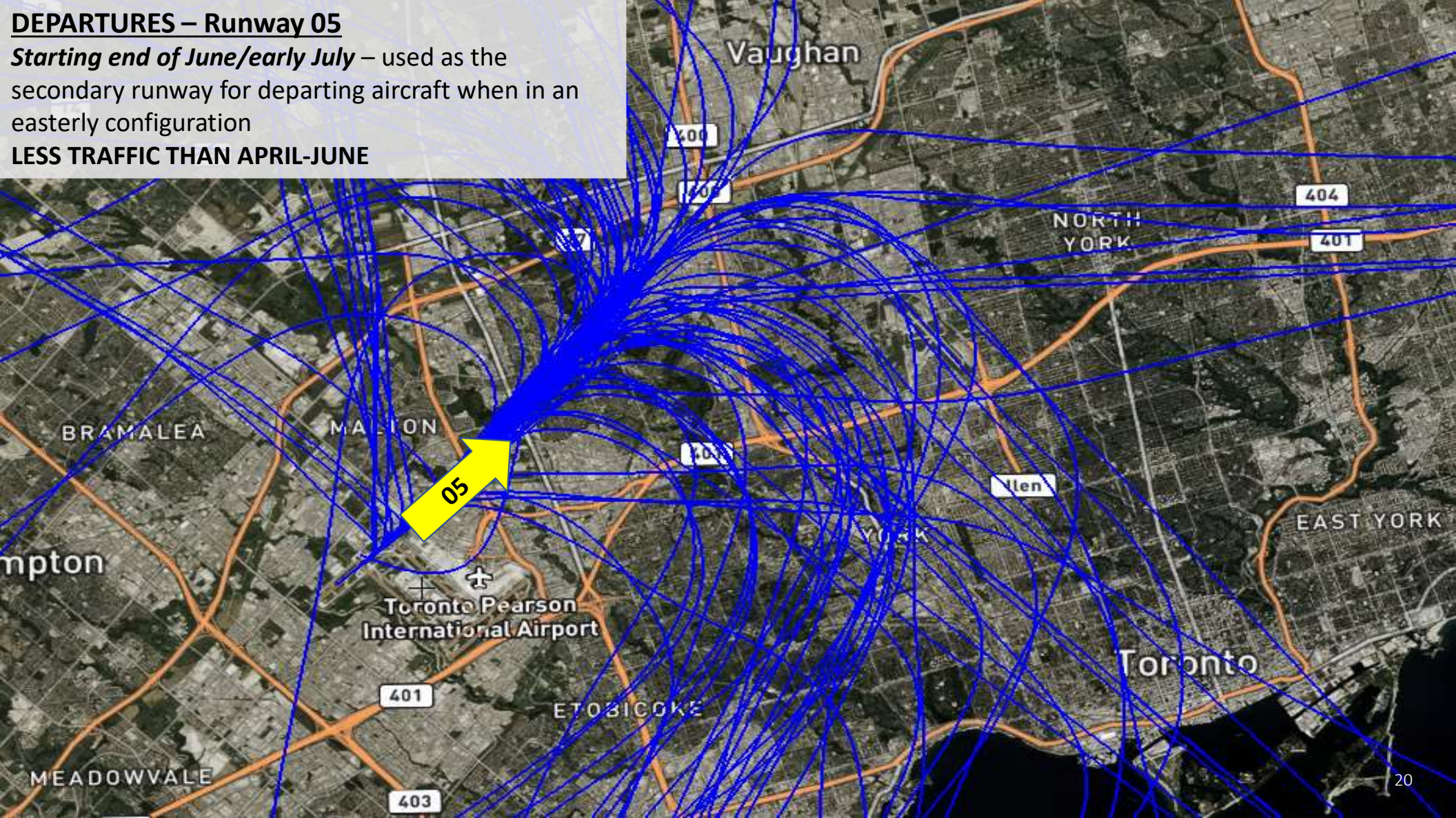
## ARRIVALS – Runway 23

*Starting end of June/early July* – used as the secondary runway for arriving aircraft when in a westerly configuration

**LESS TRAFFIC THAN APRIL-JUNE**



**DEPARTURES – Runway 05**  
*Starting end of June/early July* – used as the secondary runway for departing aircraft when in an easterly configuration  
**LESS TRAFFIC THAN APRIL-JUNE**



# Southeast

## Arrivals Runway 24L/R

## Departures Runway 06L/R

### Main Ridings Impacted:

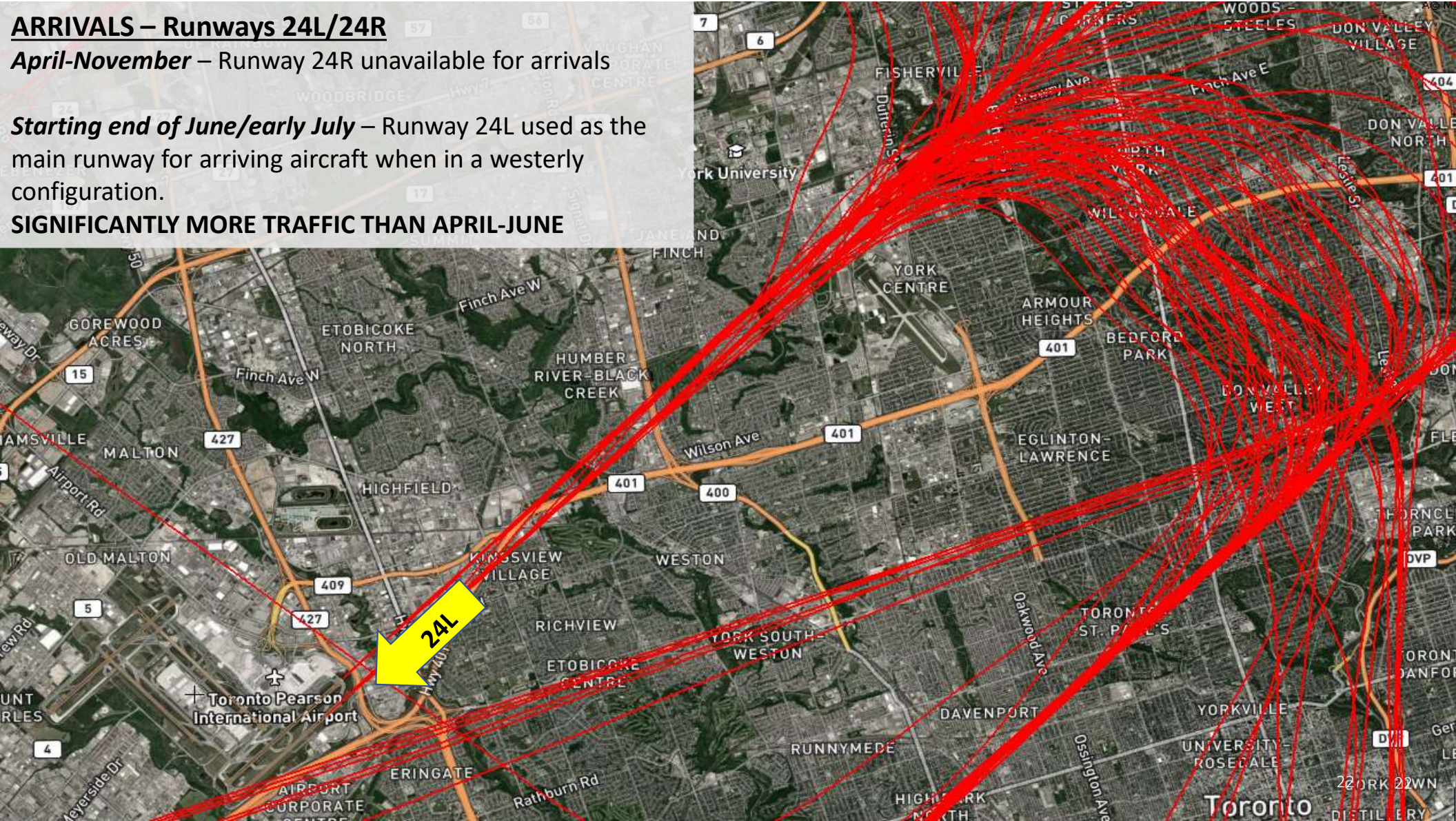
Etobicoke-Centre (northeast), Etobicoke-North (south), Humber River Black Creek (south), York South Weston, York Centre, Willowdale, Don Valley North, Don Valley East, Don Valley West, Toronto St Paul's, Davenport, High Park Parkdale

## **ARRIVALS – Runways 24L/24R**

***April-November*** – Runway 24R unavailable for arrivals

***Starting end of June/early July*** – Runway 24L used as the main runway for arriving aircraft when in a westerly configuration.

**SIGNIFICANTLY MORE TRAFFIC THAN APRIL-JUNE**



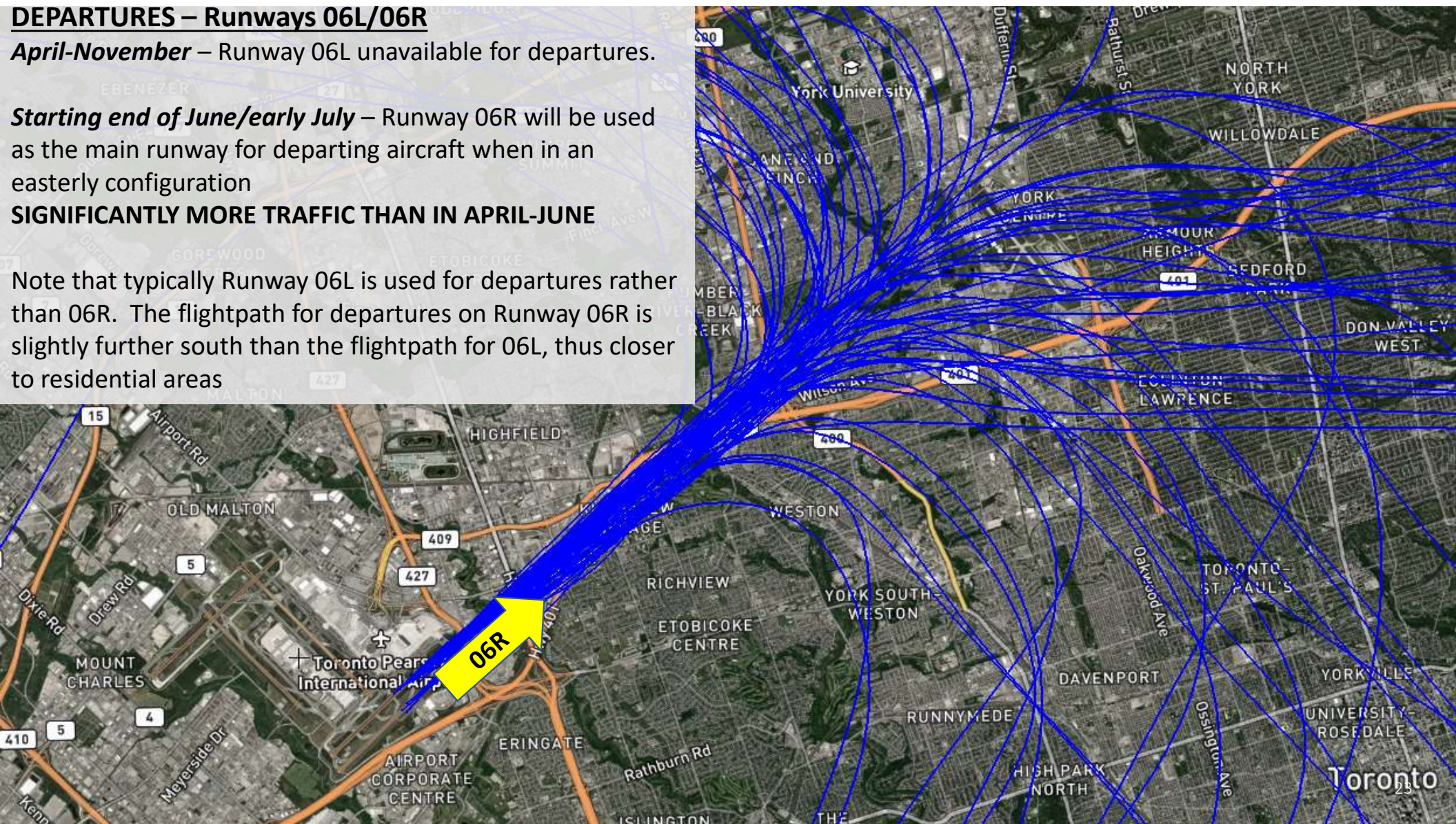
## **DEPARTURES – Runways 06L/06R**

***April-November*** – Runway 06L unavailable for departures.

***Starting end of June/early July*** – Runway 06R will be used as the main runway for departing aircraft when in an easterly configuration

**SIGNIFICANTLY MORE TRAFFIC THAN IN APRIL-JUNE**

Note that typically Runway 06L is used for departures rather than 06R. The flightpath for departures on Runway 06R is slightly further south than the flightpath for 06L, thus closer to residential areas



# Northwest

## Arrivals Runway 05

## Departures Runway 23

**Main Ridings Impacted:**

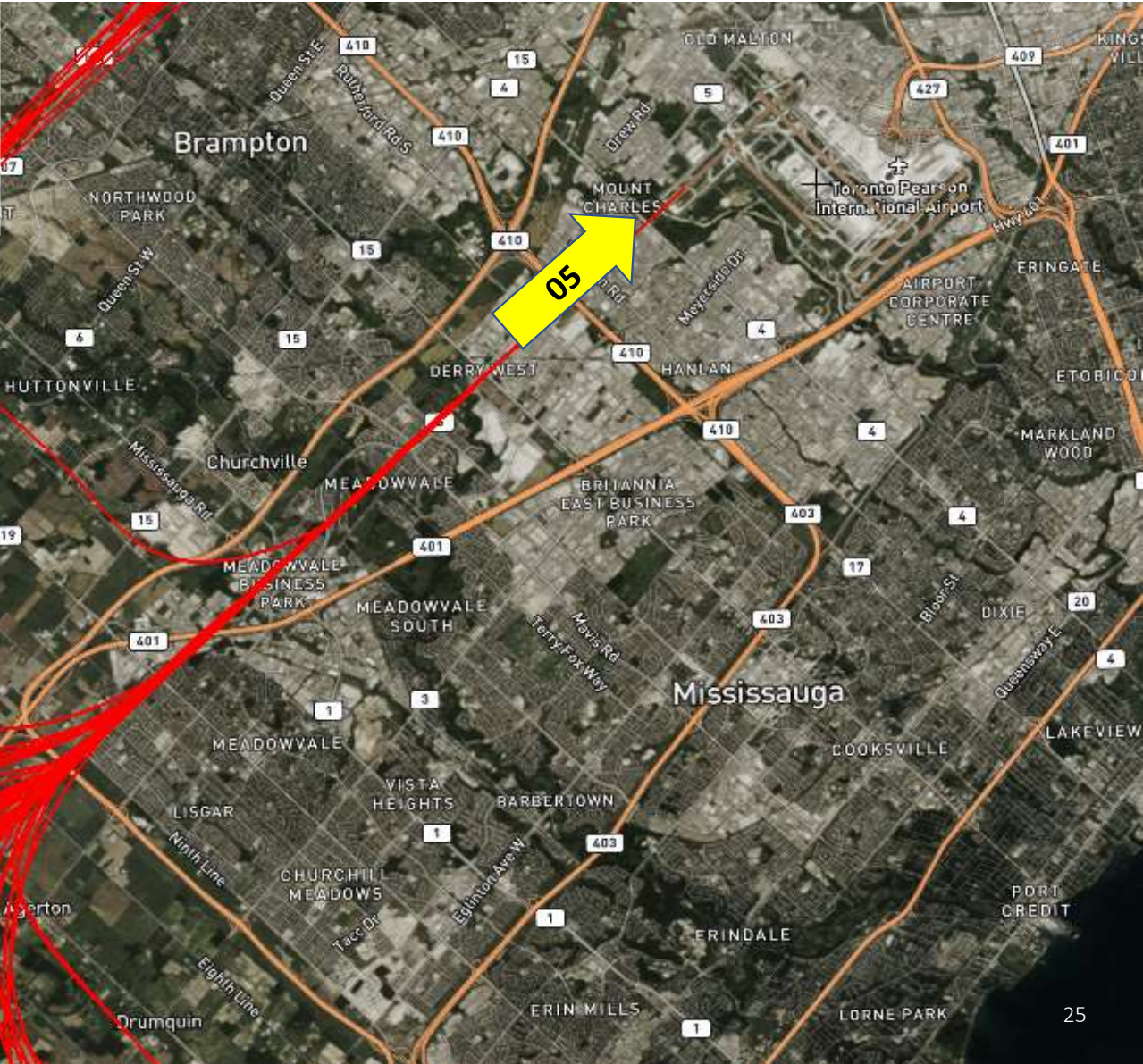
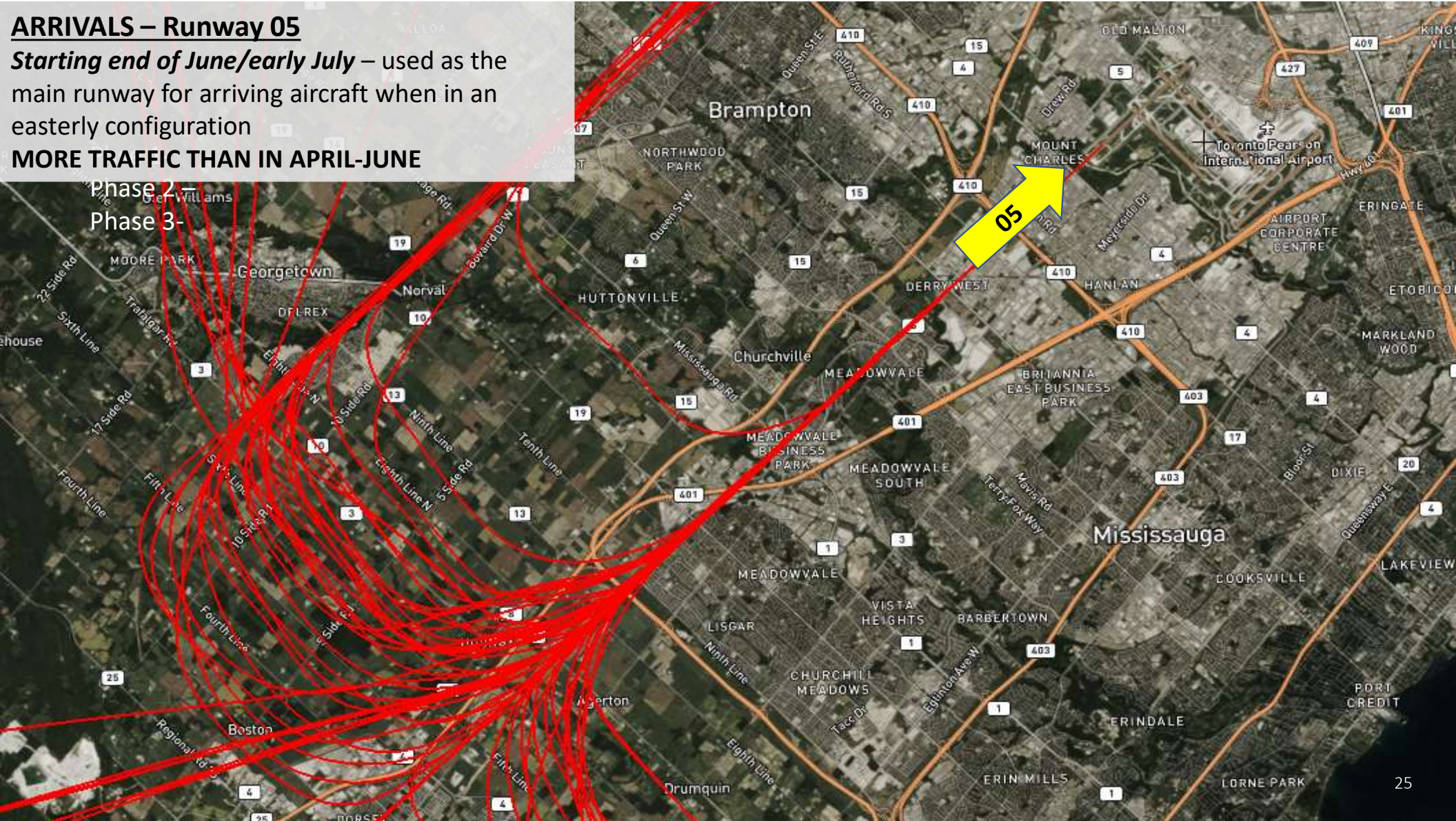
Brampton, Georgetown, Milton, Meadowvale, Streetsville



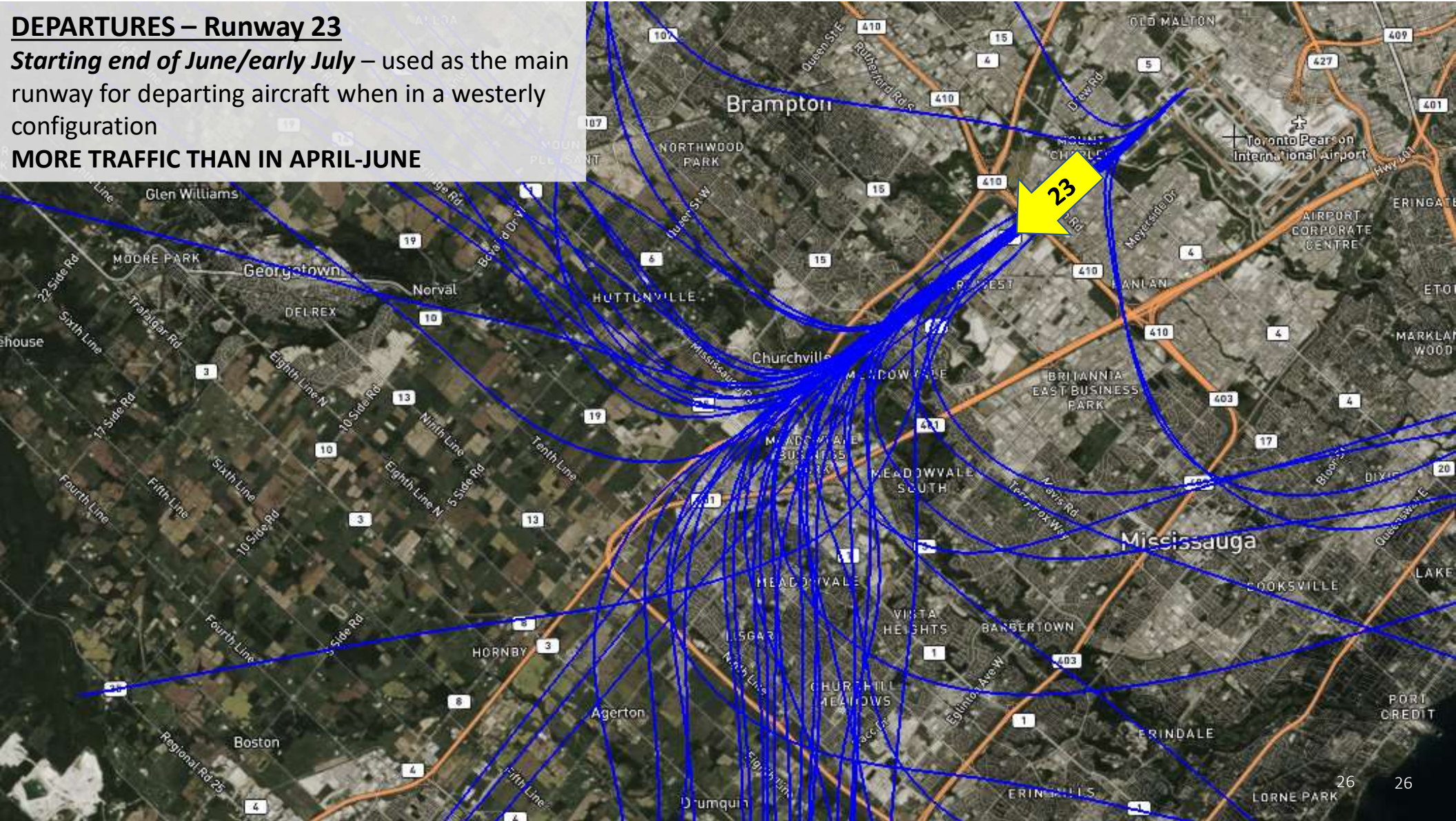


**ARRIVALS – Runway 05**  
*Starting end of June/early July – used as the main runway for arriving aircraft when in an easterly configuration*  
**MORE TRAFFIC THAN IN APRIL-JUNE**

Phase 2 –  
Phase 3 –



**DEPARTURES – Runway 23**  
*Starting end of June/early July* – used as the main runway for departing aircraft when in a westerly configuration  
**MORE TRAFFIC THAN IN APRIL-JUNE**



# Southwest

## Arrivals Runway 06L/R

## Departures Runway 24L/R

Main Ridings impacted:

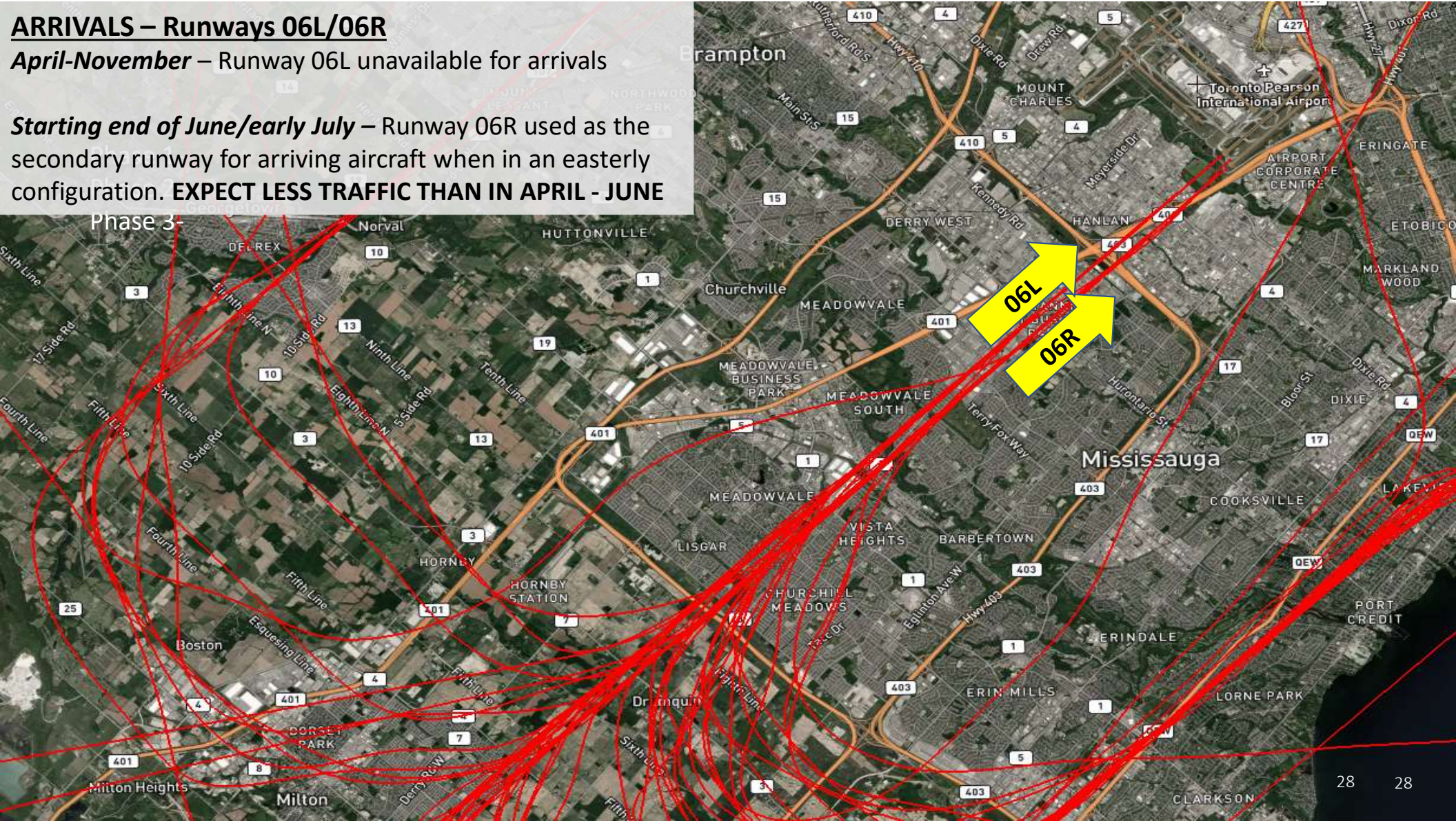
Mississauga-Malton (south), Mississauga-Streetsville, Mississauga-Erin Mills,  
Milton, Oakville-North Burlington



## ARRIVALS – Runways 06L/06R

*April-November* – Runway 06L unavailable for arrivals

*Starting end of June/early July* – Runway 06R used as the secondary runway for arriving aircraft when in an easterly configuration. **EXPECT LESS TRAFFIC THAN IN APRIL - JUNE**



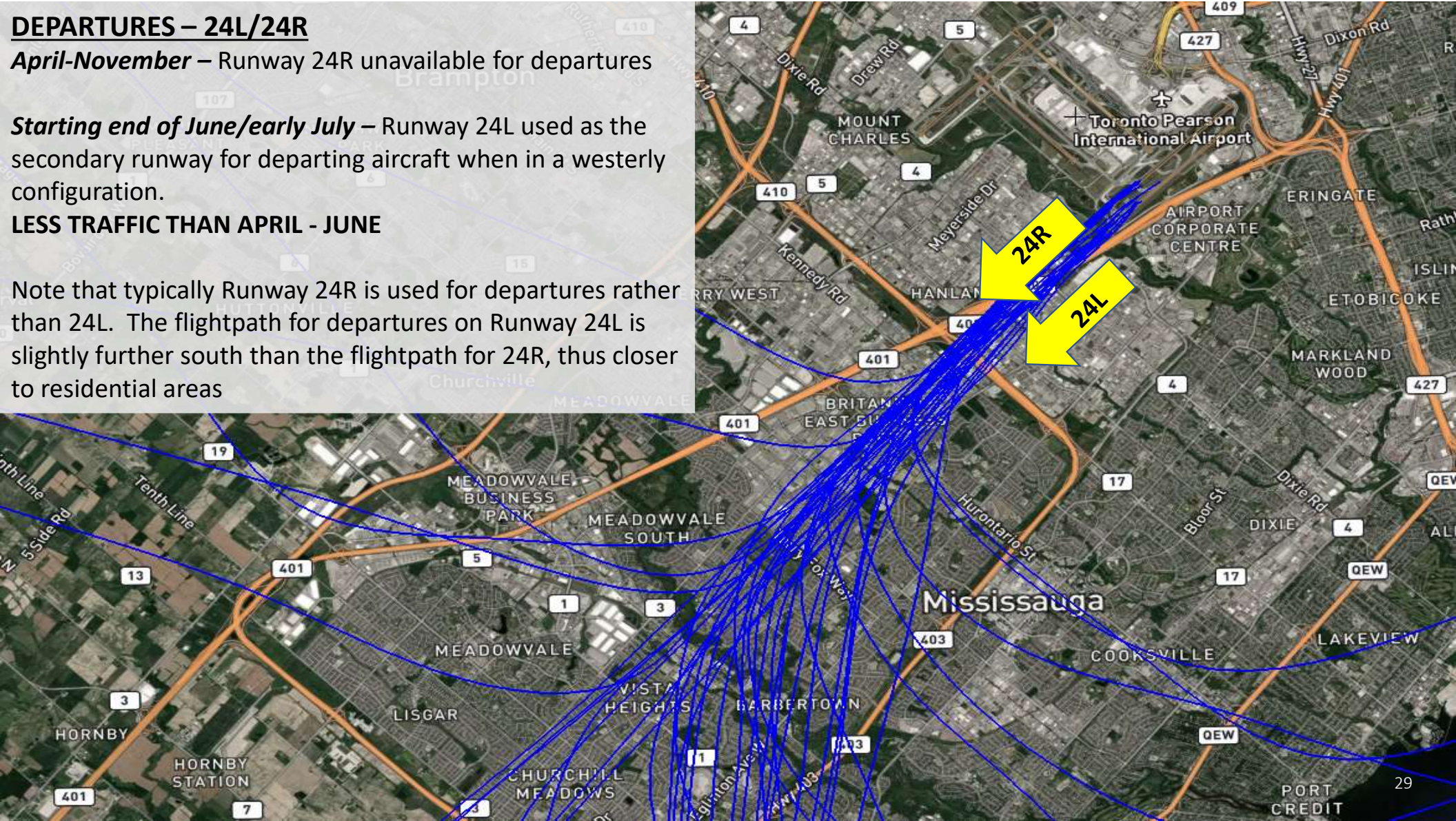
## DEPARTURES – 24L/24R

*April-November* – Runway 24R unavailable for departures

*Starting end of June/early July* – Runway 24L used as the secondary runway for departing aircraft when in a westerly configuration.

### LESS TRAFFIC THAN APRIL - JUNE

Note that typically Runway 24R is used for departures rather than 24L. The flightpath for departures on Runway 24L is slightly further south than the flightpath for 24R, thus closer to residential areas



# North

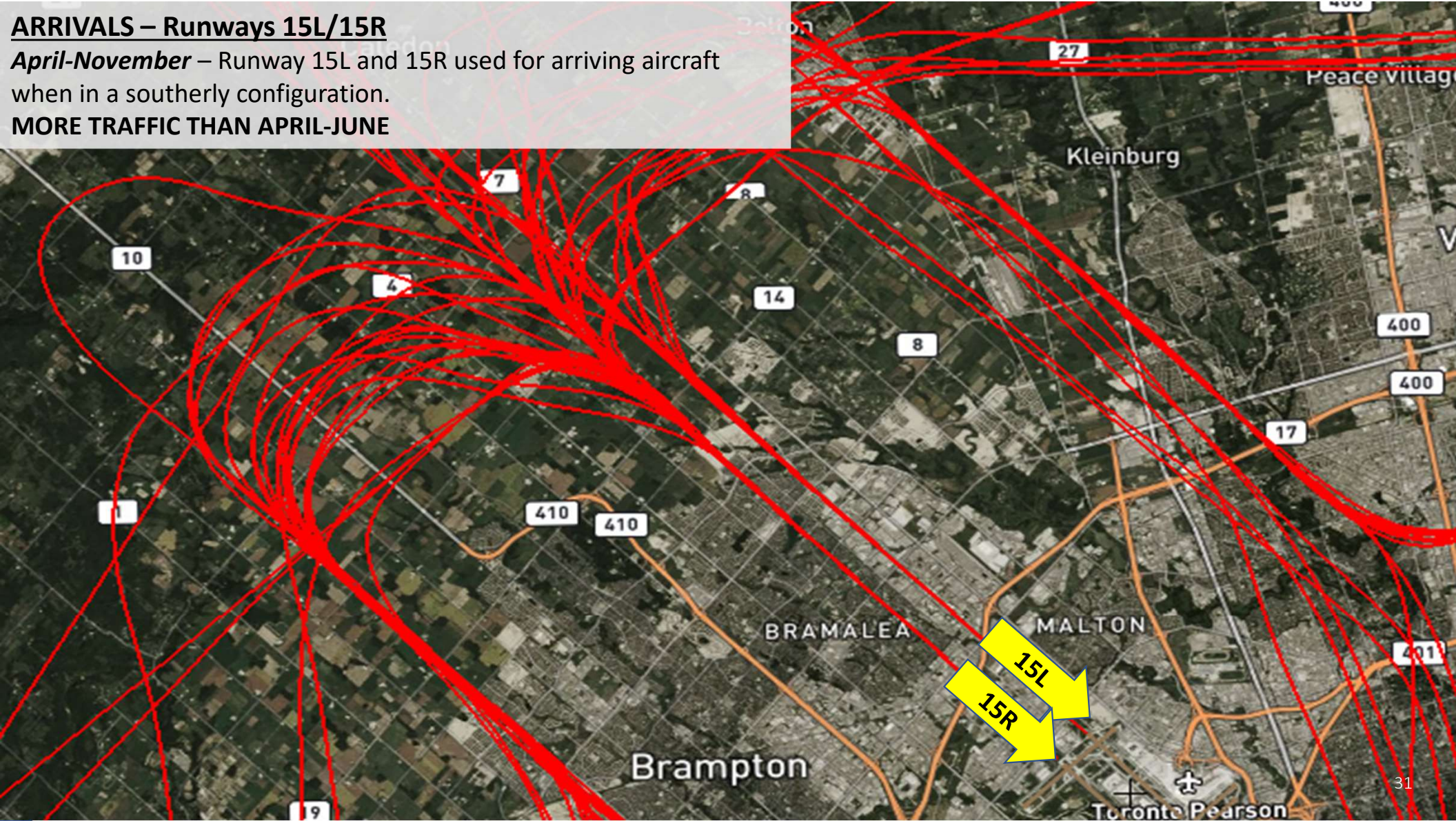
Arrivals Runway 15L/R  
Departures Runway 33L/R

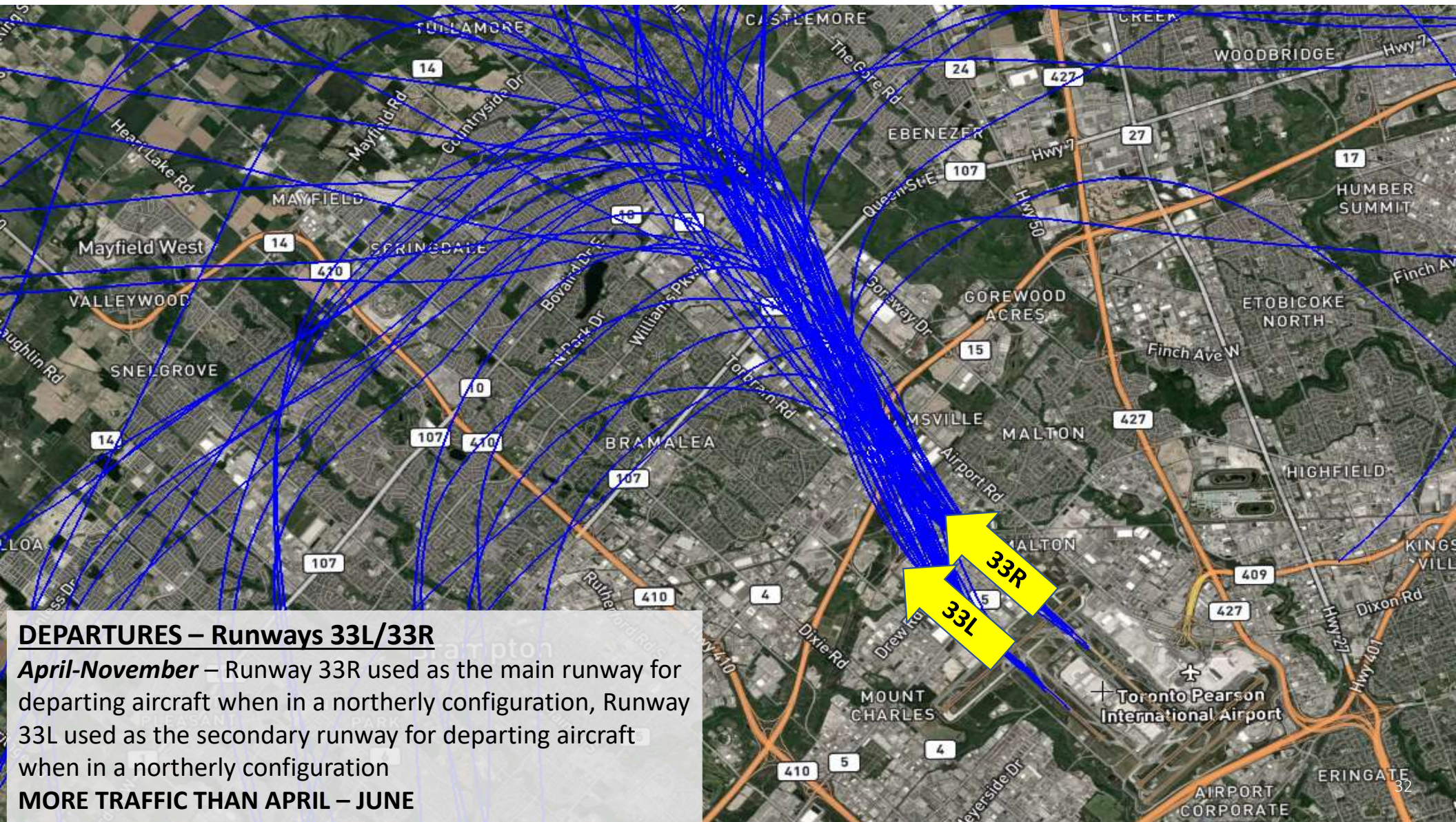
Main Ridings impacted:

Mississauga-Malton (north), Brampton-East, Brampton Centre, Brampton North,  
Dufferin-Caledon



**ARRIVALS – Runways 15L/15R**  
*April-November* – Runway 15L and 15R used for arriving aircraft when in a southerly configuration.  
**MORE TRAFFIC THAN APRIL-JUNE**





**DEPARTURES – Runways 33L/33R**

**April-November** – Runway 33R used as the main runway for departing aircraft when in a northerly configuration, Runway 33L used as the secondary runway for departing aircraft when in a northerly configuration  
**MORE TRAFFIC THAN APRIL – JUNE**



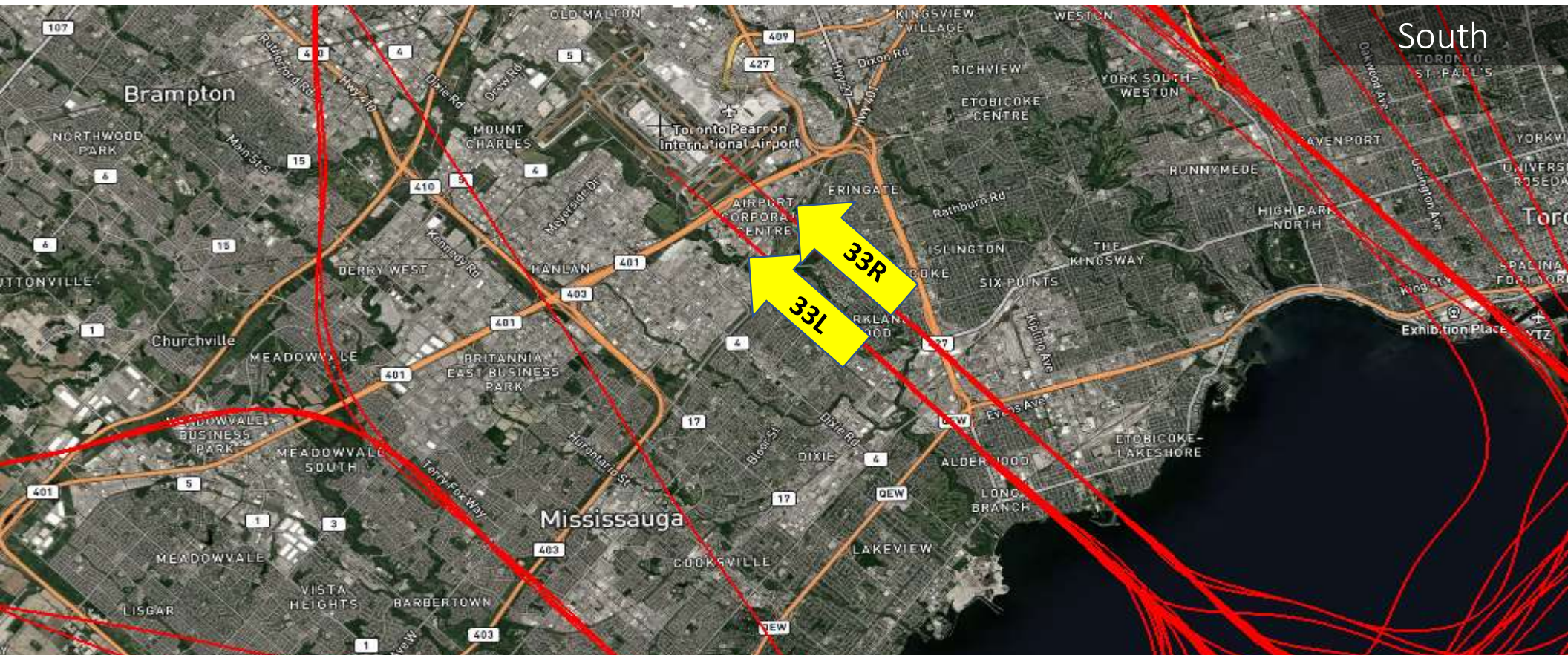
# South

Arrivals Runway 33L/R  
Departures Runway 15L/R

Main Ridings impacted:

Etobicoke-Centre, Etobicoke-Lakeshore, Mississauga – East Cooksville





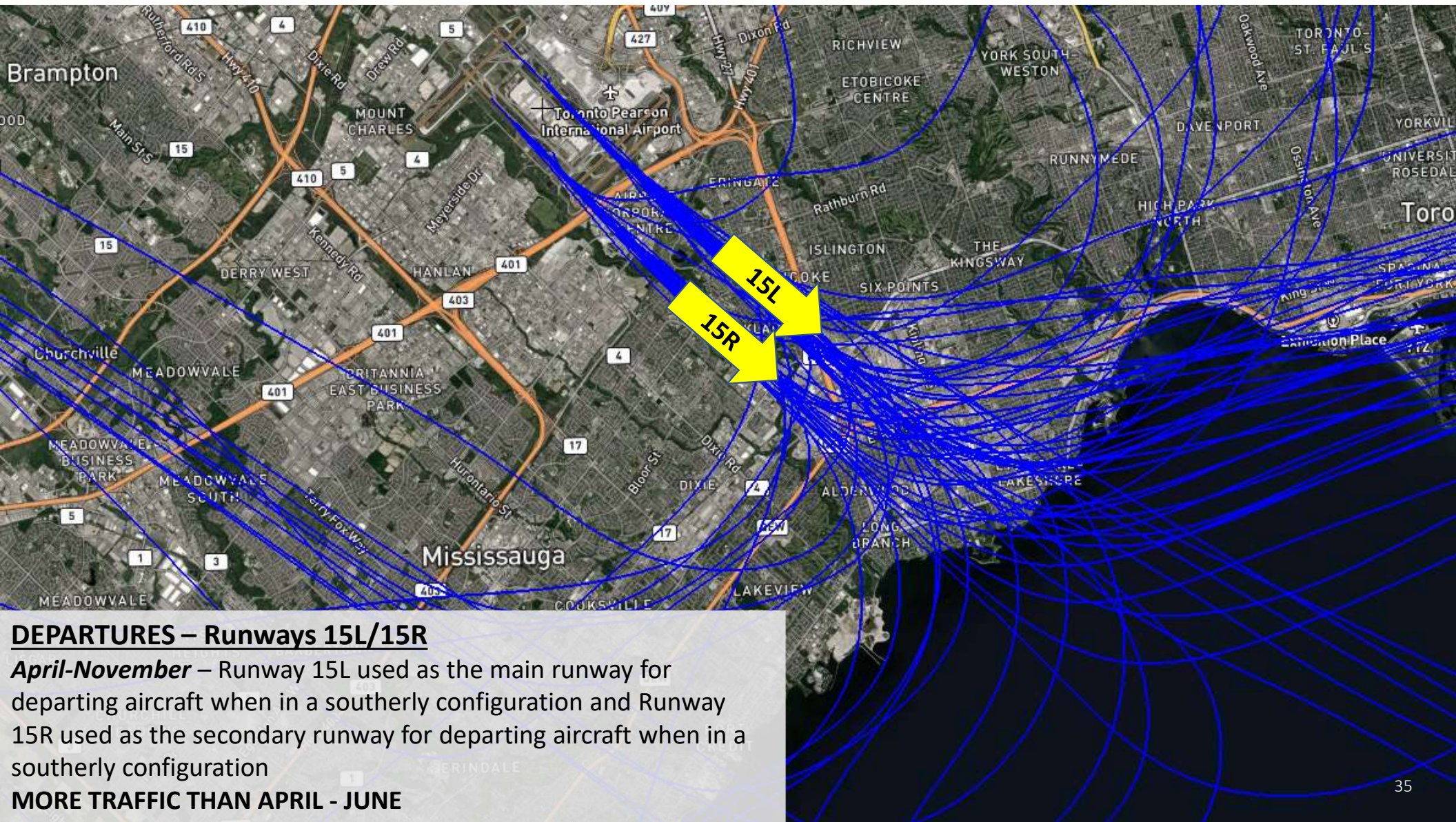
South

Toronto

**ARRIVALS – Runways 33L/3R**

*April-November* – Runway 33L used as the main runway for arriving aircraft when in a northerly configuration and Runway 33R used as the secondary runway for arriving aircraft when in a northerly configuration.

**MORE TRAFFIC THAN APRIL - JUNE**



# Summary – Community Impacts

Main Impacted Ridings	Operations	April-June	July-Sep
Northeast - Etobicoke North, Humber River-Black Creek, Vaughan-Woodbridge, Thornhill, King Vaughan	Arr Rwy 23 Dep Rwy 05	Heavy use	Lower use
Southeast - Etobicoke-Centre(northeast), Etobicoke-North (south), Humber River Black Creek (south), York South Weston, York Centre, Willowdale	Arr Rwy 24L Dep Rwy 06R	Very low use	Heavy use
Northwest - Mississauga Malton, Mississauga Streetsville, Brampton South, Brampton West, Brampton North Wellington Halton Hills, Milton	Arr Rwy 05 Dep Rwy 23	Relatively low use	Heavy use
Southwest - Mississauga-Malton (south), Mississauga-Streetsville, Mississauga-Erin Mills, Milton, Oakville-North Burlington	Arr Rwy 06R Dep Rwy 24L	Heavy use	Lower use.
North - Mississauga-Malton (north), Brampton-East, Brampton Centre, Brampton North, Dufferin-Caledon	Arrivals Rwy 15L/15R Dep Rwy 33L/33R	Relatively low use April and May, increasing in June	Higher use
South - Etobicoke-Centre, Etobicoke-Lakeshore, Mississauga-East Cooksville	Arr Rwy 33L/33R Dep Rwy 15L/15R	Relatively low use	Higher use

# Frequently Asked Questions

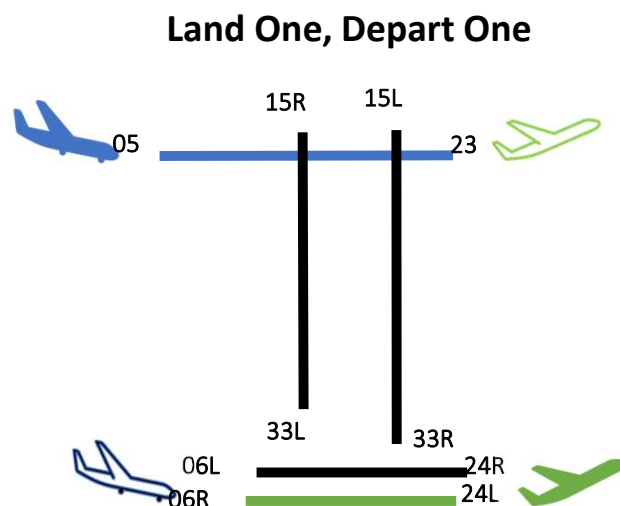




## Why is there so much traffic on certain runways?

As mentioned earlier in this presentation, runways are used as a system. Due to the 06L/24R runway closure – a Land One, Depart One configuration is being used in a traffic level scenario that would usually call for dualling or tripling.

The main arrival and departure runways are handling higher than typical traffic levels with this configuration. **It may feel like more traffic than in 2019.**





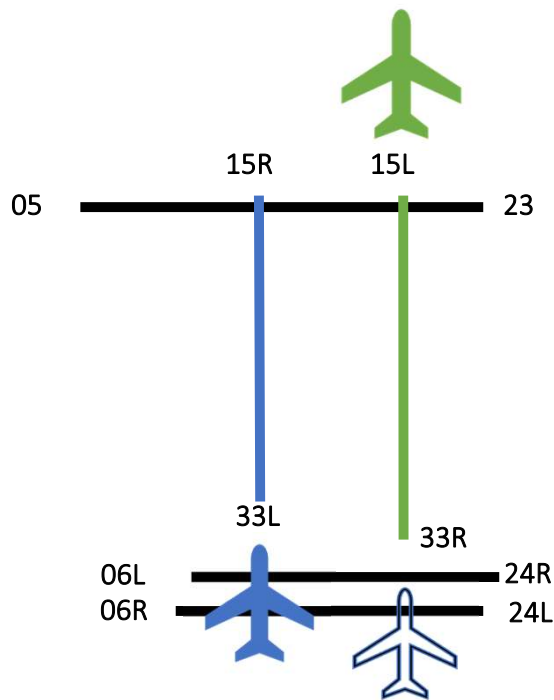
## Why can't you be specific about which runways will be used, and when?

There are a number of variables considered when selecting runways. Many of these such as weather and even traffic levels aren't known with any certainty until the day of operation. We are communicating about potential community impacts based on the information we have available to us in advance.





## Why do you use the North/South runways?



The North/South runways (15L/33R and 15R/33L) are typically used due to wind/weather - approximately 5% of operations.

Currently, two East/West runways are available for use – Runway 05/23 and Runway 06R/24L. In certain stages, there are access limitations on Runway 06R/24L, resulting in a further reduction in capacity of an East/West runway operation. In those times, a North/South runway configuration is able to handle a higher rate of traffic than an East/West runway configuration. So when traffic levels are high, a North/South runway configuration may be used.







## Is this permanent?

No. The work started in early April 2022 and will last to late Fall 2022. There is no permanent airspace change associated with this project.

## Will there be project delays?

The project is going well and is on schedule to be completed in November. A buffer is included in the timeline to allow for delays for reasons such as weather or unexpected reasons. We will update the project webpage with any changes to the timeline.





## Why didn't you do this work when traffic levels were lower?

A number of maintenance projects took place in sequence over the last two years despite funding restraints due to the dramatic impacts of COVID-19.

Regular surface repairs over the years have extended the life of Runway 06L/24R until this year. A full replacement of its concrete substructure is now required.

## Are you going to do this type of work every year?

Airport surfaces require regular maintenance which often limit access or close runways for a period of time. Another full runway closure is not expected next year.



# Stay in Touch



Visit dedicated web page [torontopearson.com/runwayrehab](https://torontopearson.com/runwayrehab)



Sign up for our monthly community e-newsletter, Checking In at [torontopearson.com/checkingin](https://torontopearson.com/checkingin)



Learn more about airport operations and community impacts at [airportnoise.torontopearson.com](https://airportnoise.torontopearson.com)



Email us a question, or invite us to attend a community meeting at [community.engagement@gtaa.com](mailto:community.engagement@gtaa.com)



To log a complaint, call us at 416-247-7682 or [submit online](#)



# Question Period

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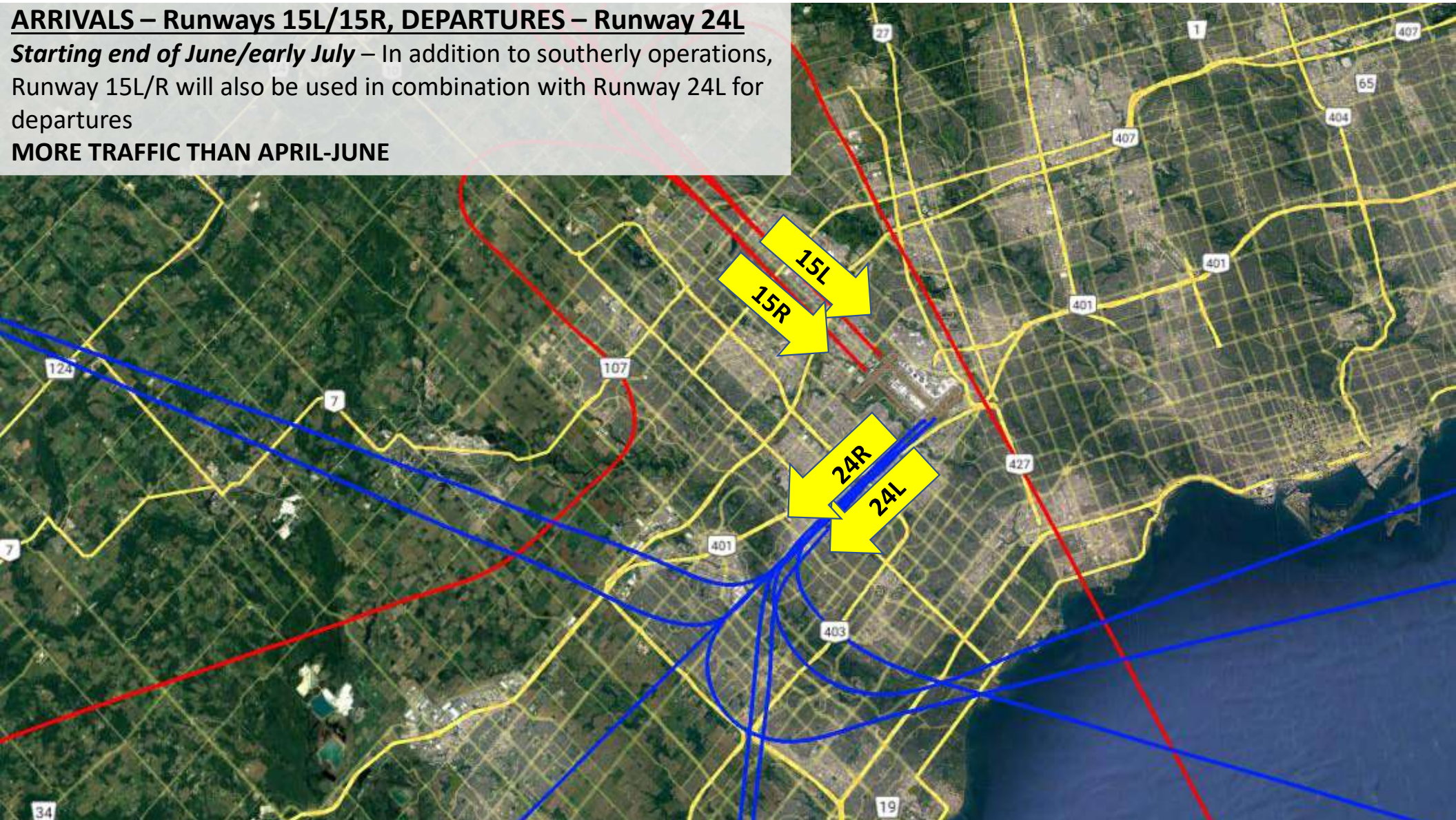


# Thank You

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Next Meeting: September 22<sup>nd</sup> 2022

**ARRIVALS – Runways 15L/15R, DEPARTURES – Runway 24L**  
*Starting end of June/early July* – In addition to southerly operations, Runway 15L/R will also be used in combination with Runway 24L for departures  
**MORE TRAFFIC THAN APRIL-JUNE**



**ARRIVALS – Runways 15L/15R, DEPARTURES – Runway 24L**

**Starting end of June/early July** – In addition to westerly operations, Runway 24L will be used for departures in combination with Runways 15L/R for arrivals

**MORE TRAFFIC THAN APRIL - JUNE**

