



2017 Runway 05/23 Rehabilitation

Overview



What is not happening?

• Why is the work being done?

• Introduction to Runway 05/23

Planning

What is <u>not</u> happening?



- Not being lengthened or widened
- Not using new flight paths
- Not permanent change in runway usage
- Not funded with taxpayer money
- Not part of Toronto Noise Mitigation Initiatives or Toronto Airspace Noise Review (HELIOS)

Why is the work being done?



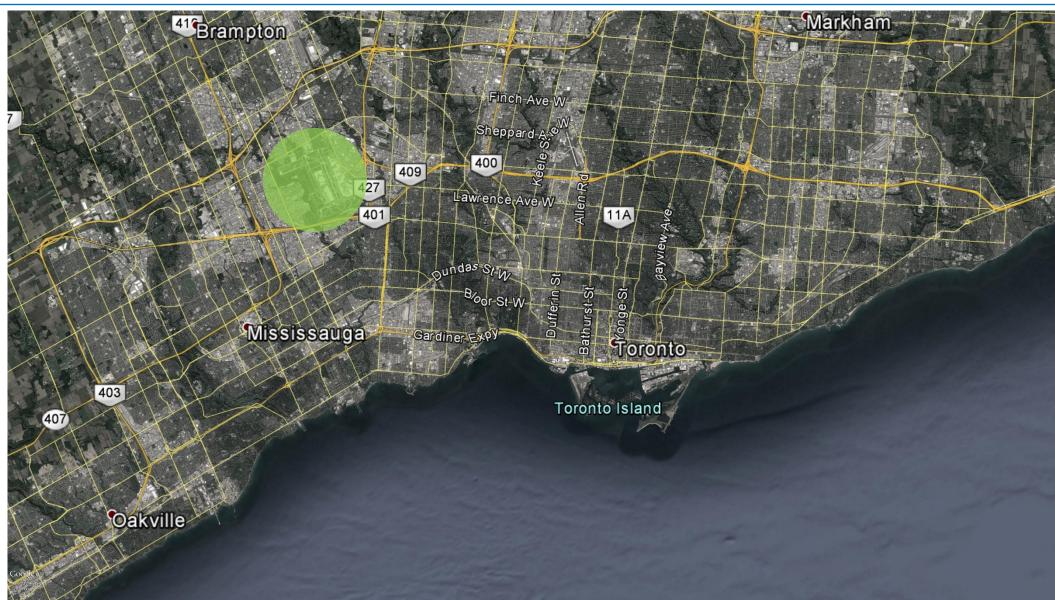
To enable continued safe operations

Sub-surface requires significant rehabilitation

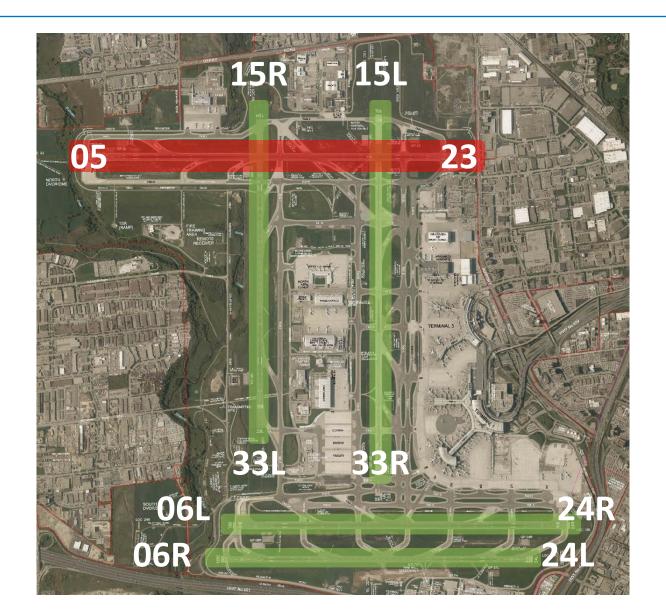
Runway constructed in 1930s with an extension in late 1960s

Last rehabilitation works completed in 2005/2006

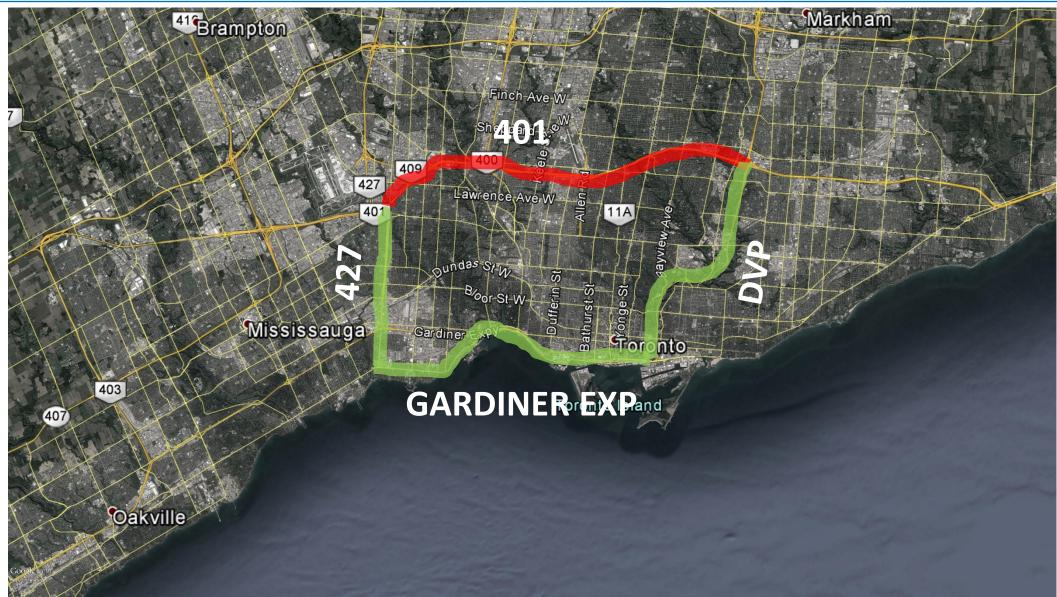




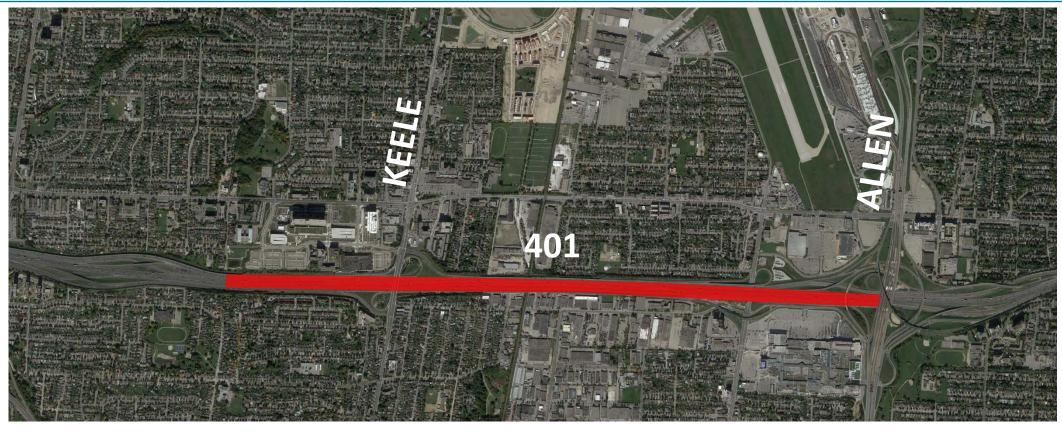












Rehabilitation works equivalent to a 3.4km length across almost all lanes of 401



Toronto Pearson 45

Runway 05/23 202,000 (45%)

Calgary 250,953

Montreal Trudeau 238,523

Ottawa 75,107

Planning – Core Planning Group



GTAA

- Aviation Services
- Airport Planning & Technical Services
- Nav Canada
- Air Canada
- WestJet
- Jazz
- PaveAl / Gazzola Joint Venture

Planning – Assumptions



- Start early to avoid summer (weather risk)
- Phasing of works to minimize impact
- Temporary restrictions on air traffic implemented
- Sufficient recovery time for significant issue resolution
- Alternate runway configurations to minimize disruption aligned with current operating parameters

Planning – Assumptions



- Potential impact to approximately 6M passengers throughout construction period
- Commercial airline schedules reduced during full closure period (April 24, 2017 → May 16, 2017)
- General/Business Aviation Flight restrictions applied for duration of construction works (March 28 → May 16, 2017)



2016 RUNWAY OPERATIONS

	05	06L	06R	15L	15R	23	24L	24R	33L	33R	TOTAL
DEP	18,613	56,764	1,235	1,660	486	81,413	801	49,164	762	13,812	224,710
ARR	52,906	16,653	10,160	2,520	1,572	49,091	21,257	64,446	9,170	959	228,734
TOTAL	71,519	73,417	11,395	4,180	2,058	130,504	22,058	113,610	9,932	14,771	453,444
%	15.8%	16.2%	2.5%	0.9%	0.5%	28.8%	4.9%	25.1%	2.2%	3.3%	100.0%

MARCH 28, 2017 [RWY 05/23 RESTORATION WORKS START] TO APRIL 17, 2017

	05	06L	06R	15L	15R	23	24L	24R	33L	33R	TOTAL
DEP	75	1450	233	829	1162	85	115	2653	569	6102	13,273
ARR	0	363	1677	1958	995	253	2240	207	4712	583	12,988
TOTAL	75	1813	1910	2787	2157	338	2355	2860	5281	6685	26,261
%	0.3%	6.9%	7.3%	10.6%	8.2%	1.3%	9.0%	10.9%	20.1%	25.5%	100.0%



- Usage of north/south runway configurations has far exceed planning assumptions
 - ~65% of all movements during rehabilitation on north/south runways
 - ~56% of 2016 annual north/south runway movements experienced during rehabilitation activities to-date
 - ~7% typical annual usage of north/south runways
- Abnormal weather experienced during rehabilitation period exceeded planning assumptions for alternate runway configurations (strong winds, low ceilings, rain, snow)



- Significant operational impact during rehabilitation activities
 - 54% Arrivals on-time performance (76% 2016)
 - 67% Departures on-time performance (78% 2016)



• 200,000m² asphalt resurfacing

• 23,000m³ concrete excavation and replacement

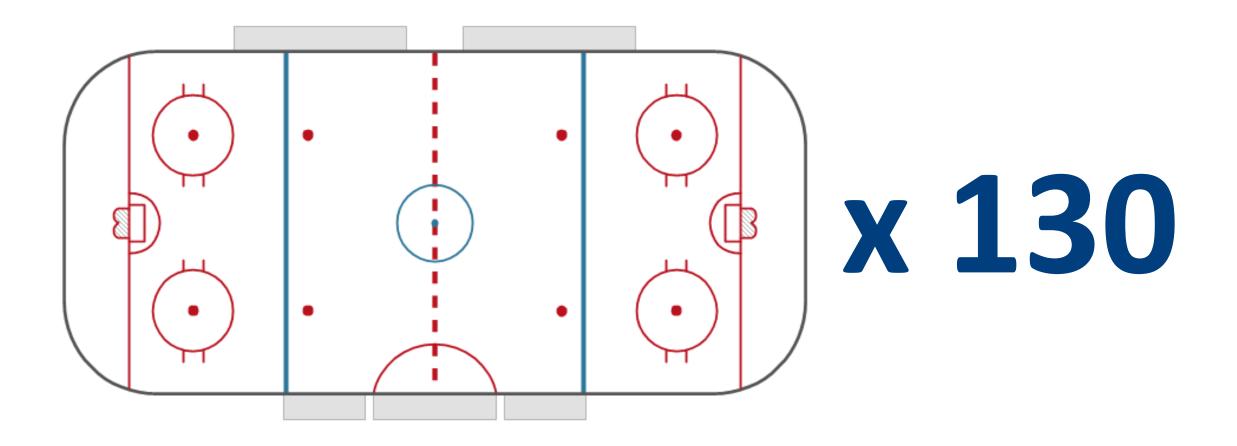
420km of single line paint markings

5,000 sub-surface stabilization incisions

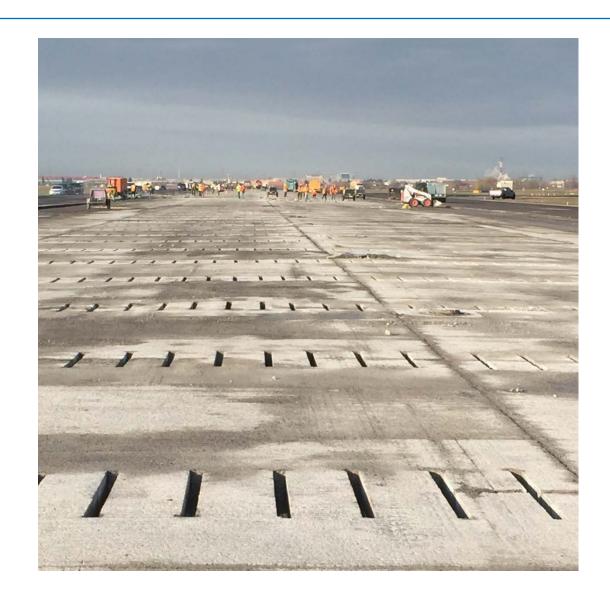
1,000 Inset Lights / Navigational Aids

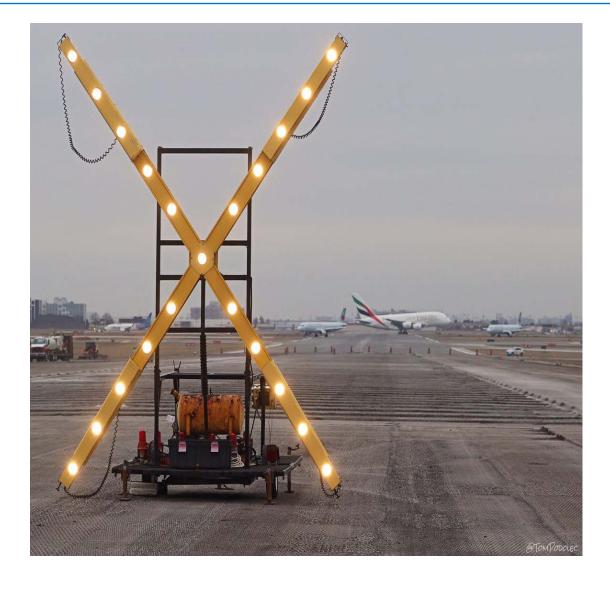


• 200,000m² asphalt resurfacing











Questions?