

Runway End Safety Areas at Billy Bishop

Executive Committee
October 1, 2024



New Airport Safety Regulations

- There is a new federal airport safety requirement that must be met at Canada's airports. The requirement is for **Runway End Safety Areas (RESAs)**
- The intention of these Runway End Safety Areas is to **reduce the severity of damage** to an aircraft if it overshoots or overruns a runway
- Transport Canada has identified **three ways** that airports can meet Runway End Safety Area requirements:
 1. Prepare natural, compacted open areas at the ends of a runway
 2. Install an engineered material (an "Engineered Material Arresting System") designed to decelerate an aircraft
 3. Shorten a runway's "declared distance" (shorten a runway)

How is the City of Toronto Involved?

- The Billy Bishop airport is governed by a **Tripartite Agreement between PortsToronto, the City of Toronto, and Transport Canada**
- The Tripartite Agreement was signed in 1983; it serves as both **a lease and an operating agreement**
- Any Tripartite Agreement changes would require three agreement signatories to agree
- **City Council approval would be required for any changes**

Runway End Safety Area Options

- PortsToronto is evaluating three options for Runway End Safety Areas implementation that would prepare natural, compacted open areas:
 - At Toronto's island airport, this would require lakefill, which would require a change to the Tripartite Agreement
- Options which would have shortened the runway's "declared distance" were not considered viable by PortsToronto as they would impact Q400 aircraft operations
- PortsToronto has also looked at an engineered material arresting system; this was not considered viable by PortsToronto

City Policy Considerations

- Impacts on local communities and the environment
- Economic benefits and convenience for travelers
- The context of waterfront revitalization and the City's housing targets
- Lowest possible incremental impact to livability on waterfront
- The need for a broader conversation on the airport

Current Options Under Consideration

Option 1:
Minimum
landmass to
meet regulatory
requirement.

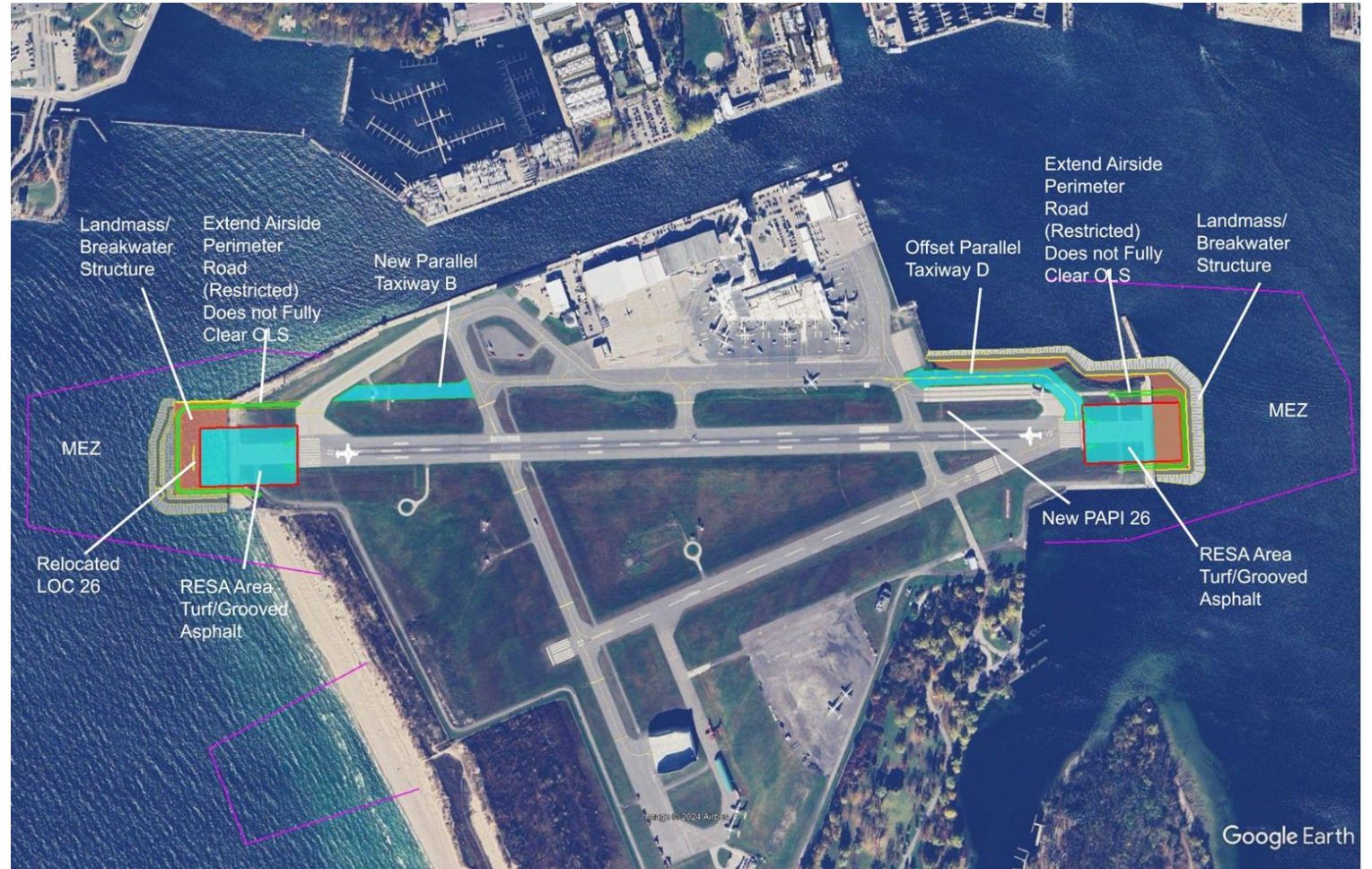
Cost estimate:
\$61-64 M
(source: PortsToronto)



Current Options Under Consideration

Option 2:
Minimum
landmass +
additional
taxiway

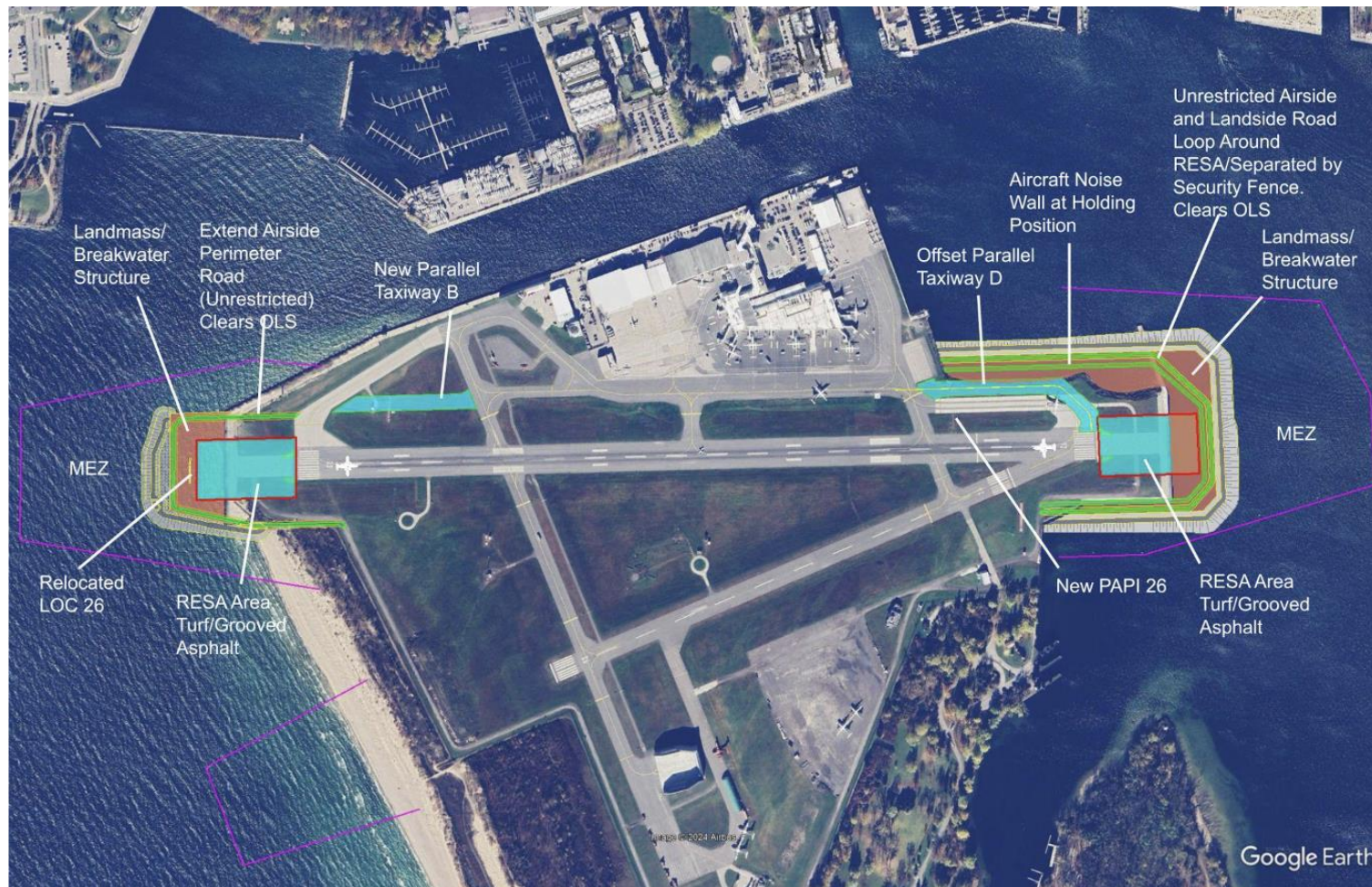
Cost estimate:
\$93-97 M
(source: PortsToronto)



Current Options Under Consideration

Option 3:
Minimum
landmass +
taxiway +
additional airside
roads + sound
barrier +
underground utility
corridor

Cost estimate:
\$169-175 M
(source: PortsToronto)



Runway End Safety Area Key Points

		RESA 1	RESA 2	RESA 3
		Minimum Landmass	Additional Taxiway	Additional Airside Roads, Sound Barrier, Underground Utility Corridor
West End	Lakefill volume	7,850m ²	11,800m ²	12,800m ²
	Landmass length	54m	82m	82m
	Landmass width	145m	145m	150m
East End	Lakefill volume	16,100m ²	11,300m ²	32,700m ²
	Landmass length	54m	52m	66m
	Landmass width	135m	160m	270m
Impact on Marine Exclusion Zone		None	None	None
		\$61-64M	\$93-97M	\$169-175M

What to see in this summary chart:

- Volume of lakefill goes up with each option
- Width of landmass increases with each option
- Landmass on east end increases substantially for RESA 3
- None of these options have an impact on the Marine Exclusion Zone
- None of these options extend the runway
- Cost estimates are very preliminary, subject to change

Summary of City Public Engagement

- Approx. 250 people attended the City's public meeting on September 24, 2024
- Over 2,700 responses to the City's online survey (with over 7,700 visits to the website)

Public meeting

- Participants are looking for city leadership
- Impacts on the environment and local residents, as well as safety were key themes, among many
- Concerns expressed on a range of island airport issues

Online survey

- Repeated many themes from public meeting
- Much more representation from people that are supportive of the island airport
- Much more representation from people advocating for the protection of Hanlan's Point as a safe, culturally significant, queer space in Toronto

Staff Findings – Runway End Safety Areas

- Staff recommend PortsToronto's natural, compacted open area "Option 1" as the most efficient option for compliance:
 - The lowest risk scenario to achieving the mandated federal safety requirements by the July 12, 2027 federal deadline
 - Has a considerably lower project cost
 - Does not require additional Council consideration of Official Plan compliance
 - Provides the shortest construction timeline and smallest scope of lakefill
- A lease extension is not recommended at this time (requires a broader public conversation)

Staff Findings – Broader Conversation

- Separate from the runway ends safety issue, many have noted the need for a broader discussion about the airport
- An airport master plan update can provide a forum to consider the issues holistically (last updated in 2018)
- An effective framework is required to facilitate a robust engagement process, allow for thoughtful consideration of the issues involved, and provide transparency and accountability in decision-making

Recommendation 1

City Council authorize the Deputy City Manager, Development and Growth Services, working with the Director, Waterfront Secretariat, to consider the detailed RESA designs provided by PortsToronto and based on those designs, to negotiate and execute an amendment to the Tripartite Agreement to permit a landmass extension that meets the RESA compliance requirements consistent with RESA Option 1 and as substantially outlined in Attachment 2, in a form satisfactory to the City Solicitor.

Recommendation 2

City Council direct that the execution of the amendment to the Tripartite Agreement authorized by Recommendation 1 be subject to PortsToronto fulfilling the following conditions, to the satisfaction of the Deputy City Manager, Development and Growth Services, working with the Director, Waterfront Secretariat and the City Solicitor:

- a.completing the RESA Environmental Assessment;
- b.engaging Toronto and Region Conservation Authority to leverage their shoreline expertise throughout detailed design and implementation and present detailed RESA designs to Aquatic Habitat Toronto for input and advice on habitat compensations strategies that advance the objectives of the Toronto Waterfront Aquatic Habitat Restoration Strategy;
- c.developing a RESA construction management plan that minimizes community impacts including overnight work; and
- d.developing a traffic management plan related to construction activities.

Recommendation 3

City Council direct the City Manager and/or delegate(s) to participate in discussions with PortsToronto and Transport Canada on a process to update the 2018 airport master plan in advance of the 2033 expiry of the Tripartite Agreement, and report to Executive Committee in 2025 with a framework to guide this process, including funding requirements, which takes into consideration the City's overall vision for waterfront revitalization, economic development and the City's housing targets.

Next Steps

- PortsToronto has noted that City Council decisions that would enable Runway End Safety Areas compliance are needed in late November 2024, to provide enough time so that construction of new runway ends can be complete by Transport Canada's July 12, 2027 compliance deadline
- Next steps are largely for PortsToronto, which has to identify its preferred approach to compliance (recognizing City Council's decision)