



CITY OF MARKHAM 3D MODELLING PROJECT

DEVELOPMENT SERVICES COMMITTEE

October 31st, 2023

Outline

1. The Project
2. What is CityEngine?
3. CityEngine Examples
4. Model Fly-throughs
5. Questions



The Project

Experimentally develop a 3D model to assist staff with review and analysis of current and future development.

- Tool to **analyze** development proposals and **scenarios**
- 3D Model created in **CityEngine**
- Models cover **Markham Centre** and **Markham Road-Mount Joy** Secondary Plan Areas.
- **Existing conditions** (i.e. existing buildings, parcels, road network, etc.)
- **Proposed Buildings**
- **Site info and statistics** (i.e. density, building height, land use designations, zoning, etc.)

What is CityEngine?

3D modelling software for creating interactive virtual urban environments at any scale:

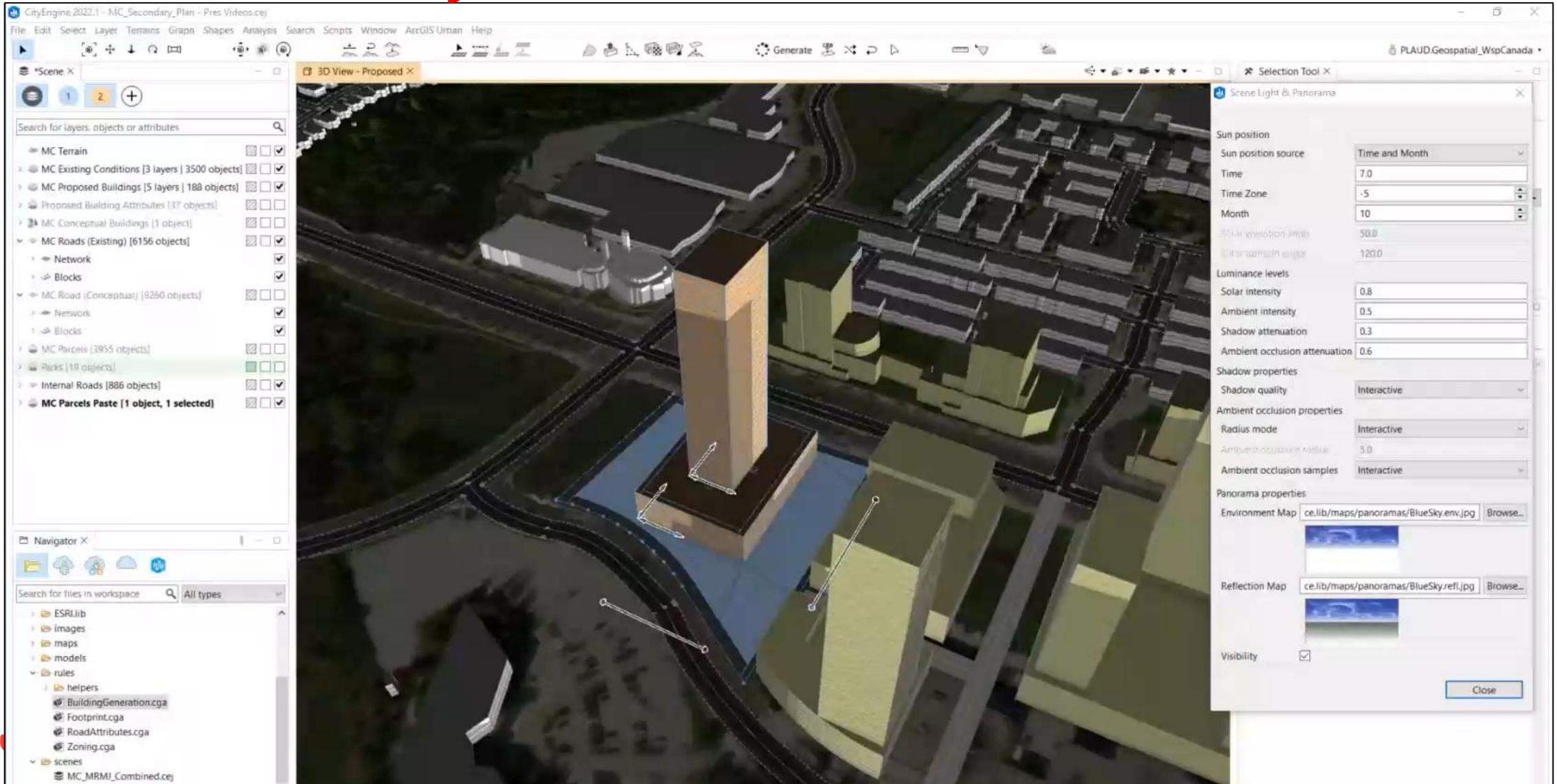
1. **Less time & resources** than traditional methods.
2. Provides a **foundational central data repository** for modelling.
3. Leverage **City & third-party data**, where available.
4. Leverage “**procedural**” modelling approach using **defined rules** (i.e. zoning standards).
5. **Rapidly** create, **visualize & analyze** alternative **development scenarios**.
6. Automatically estimate **site statistics**.
7. Built-in **analysis tools** (i.e. measurement, shadow & viewsheds)
8. Add **custom tools** through programming.
9. **Export** models for use in other platforms (i.e. renders, graphics, etc.).

Generating Buildings



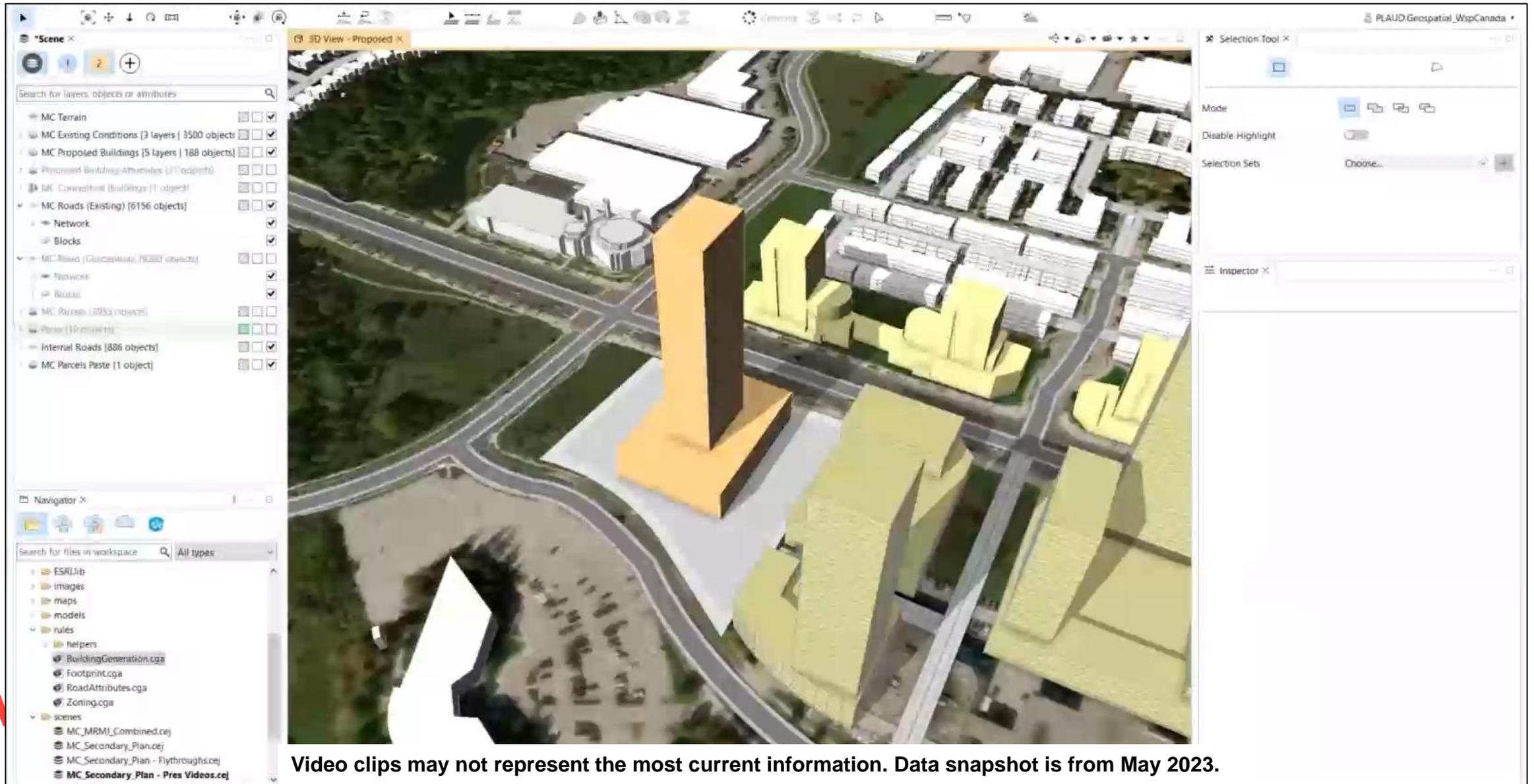
Video clips may not represent the most current information. Data snapshot is from May 2023.

Shadow Analysis



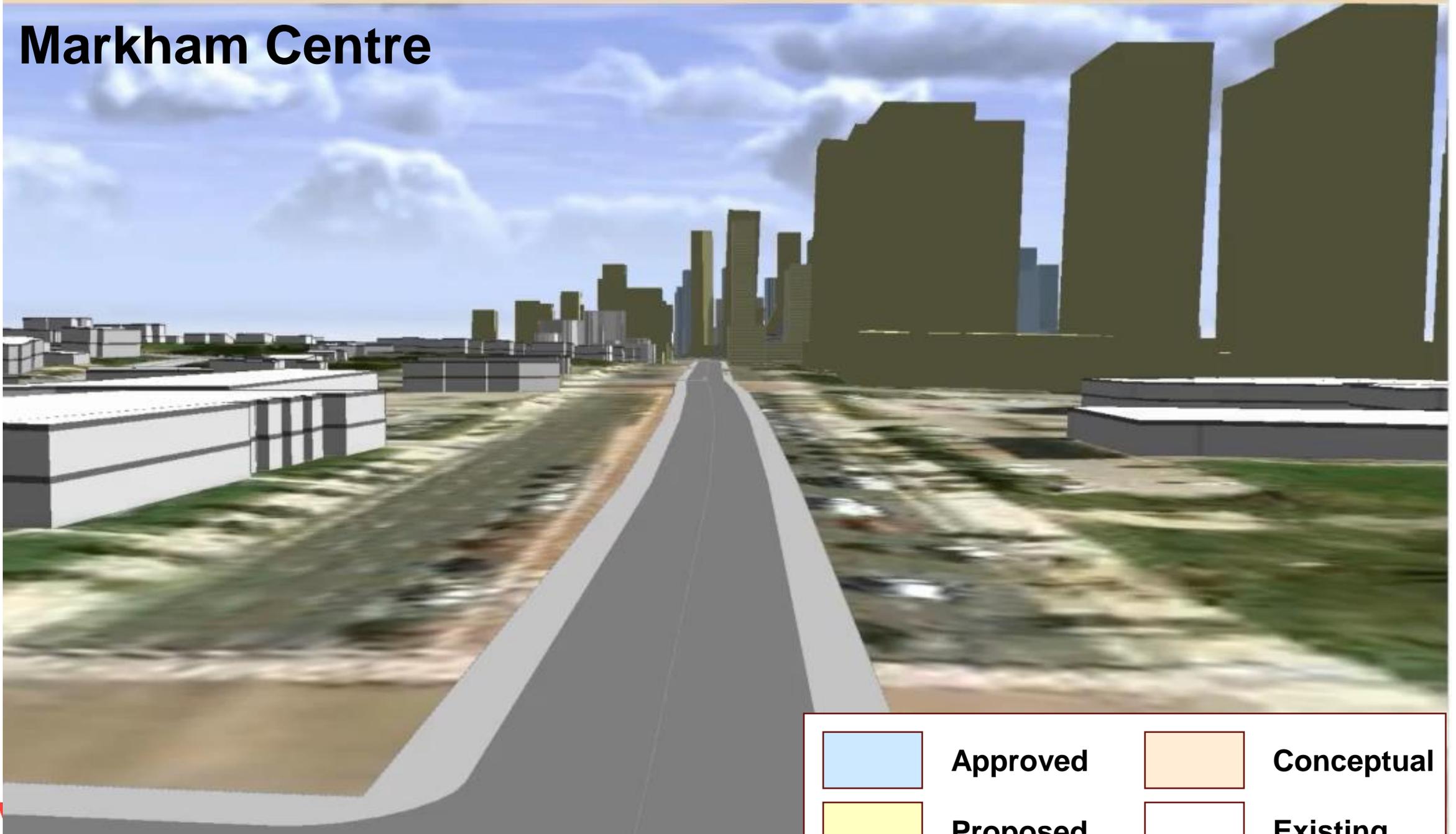
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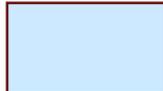
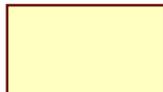
Viewshed Analysis (View Corridor)



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Markham Centre



	Approved		Conceptual
	Proposed		Existing

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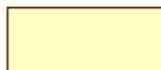
Markham Road – Mount Joy



Approved



Conceptual



Proposed



Existing



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Conclusions, Recommendations & Thank You!

