



## Committee of the Whole Presentation

Tuesday April 4, 2017

City of Vaughan, 2141 Major Mackenzie Drive

**MTO Contract 2017-2001**

**Highway 400 Widening**

**Major Mackenzie Drive to King Road**







# Agenda

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## Scope of Work

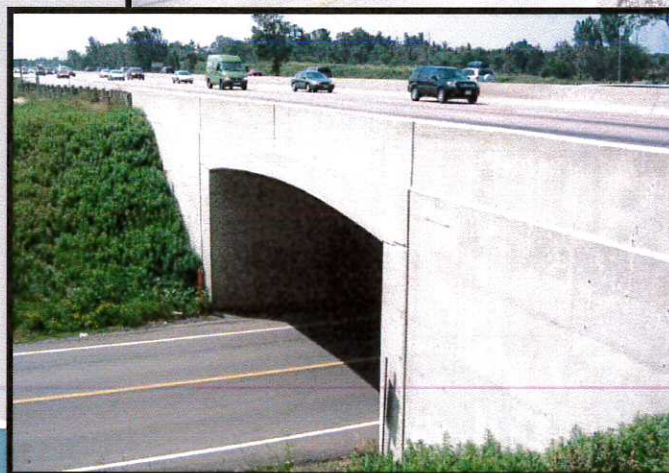
- Structures
- Construction Staging & Detours
- Roadside Safety & Signing
- Environmental Mitigation
- Illumination





## Structures – Kirby Road Overpass

- Reinforced concrete rigid frame with span of 11.3m over 2-lane Kirby Road
- Constructed circa 1950; rehabilitated & widened in 1992
- Will be widened to support ultimate 10-lane section
- Existing bridge will be rehabilitated





## Structures – King-Vaughan Road Underpass

- Reinforced concrete rigid frame 2-lane bridge with span of 37.4m over 6-lane Highway 400
- Constructed in 1960; rehabilitated in 1993
- Will be replaced to support ultimate 10-lane section
- Existing bridge will be demolished





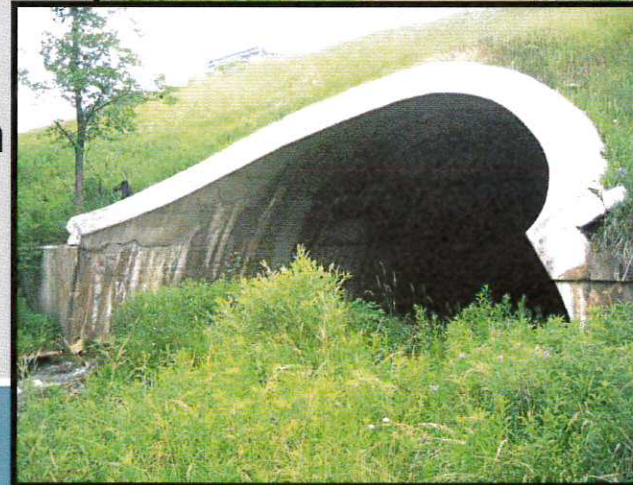
## Structures – King-Vaughan Road Underpass





## Structures – East Humber River Arch Culvert<sup>7</sup>

- Reinforced concrete barrel arch with diameter 12m; total length of 73m under Highway 400
- Constructed in 1946 and widened in 1950s; rehabilitated 1998
- Will be extended to support ultimate 10-lane section
- Located south of King Road in the Township of King





## Construction Staging

- **Kirby Road Temporary Closure**

- Kirby Road needs to be temporarily closed for approximately 5 months (June 2017 to October 2017)
- Access will be maintained for local traffic at all times

- **King-Vaughan Road Temporary Closure**

- King-Vaughan Road needs to be temporarily closed for approximately 8 months (April 2018 to November 2018)
- Access will be maintained for local traffic at all times

- **Highway 400 Temporary Closure**

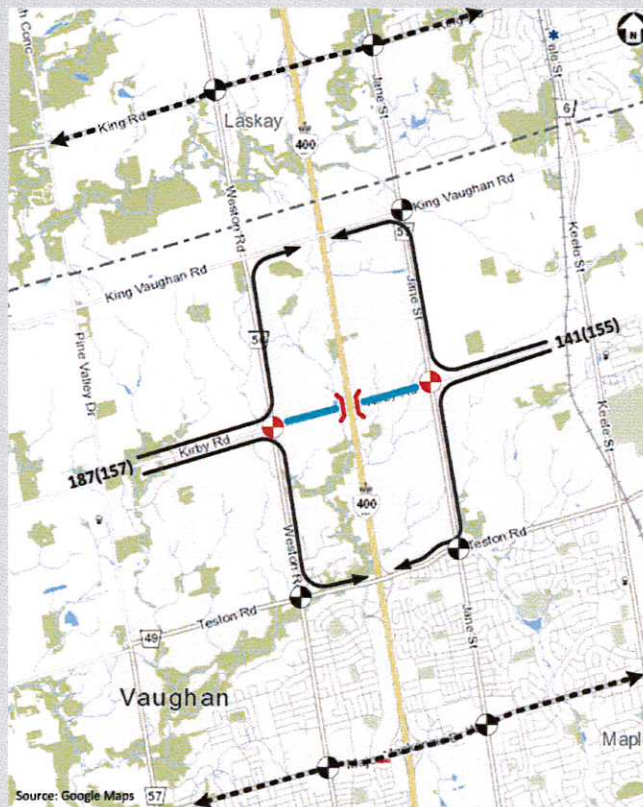
- Bridge demolition at King-Vaughan Road (Sunday 00:00 – 08:00)
- Nightly ramp closures as required for widening/tie-in work





# Construction Staging – Diverted Traffic (Kirby Road Closed)

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- Traffic signals at Kirby/Jane and Kirby/Weston
- King-Vaughan Road open
- Local access maintained to all properties on Kirby Road
- No through traffic on Kirby Road between Weston and Jane

## LEGEND

- |         |  |    |                         |
|---------|--|----|-------------------------|
| →       | Diverted Movement                                      | ⬤  | Existing Traffic Signal |
| ↔       | Alternative Diversion Route                            | ⬤  | Proposed Traffic Signal |
| XX (XX) | Weekday AM<br>(Weekday PM)<br>Diverted Traffic Volumes | —  | Local Traffic Only      |
|         |  | ⌋⌋ | Bridge Closed           |





# Construction Staging – Diverted Traffic (King-Vaughan Road Closed)

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- Traffic signals at Kirby/Jane and Kirby/Weston
- Kirby Road re-opened
- Local access maintained to all properties on King-Vaughan Road
- No through traffic on King-Vaughan Road between Weston and Jane

## LEGEND

- |         |  |   |                         |
|---------|--|---|-------------------------|
| →       | Diverted Movement                                      | ⬤ | Existing Traffic Signal |
| ↔       | Alternative Diversion Route                            | ⬤ | Proposed Traffic Signal |
| XX (XX) | Weekday AM<br>(Weekday PM)<br>Diverted Traffic Volumes | — | Local Traffic Only      |
|         |  | ⬤ | Bridge Closed           |





# Traffic Management and Communication Plan

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## Traffic Management Plan

- Traffic signals installed before Kirby Road closure:
  - Kirby Road at Weston Road and
  - Kirby Road at Jane Street
- York Region will assume ownership and operations of traffic signals following construction
- Local access on Kirby Road and King-Vaughan Road will be maintained during respective bridge closures
- Roadside signage placed in advance of area to inform drivers of the road closures





# Traffic Management and Communication Plan

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## Public Information Plan

- Flyers with general project details and timing of planned closure of Kirby Road will be distributed to property owners/businesses on Jane Street and Weston Road from Major Mackenzie Drive to King Road 2 weeks prior to work
- Flyers with general project details and timing of planned closure of King-Vaughan Road will be distributed to property owners/businesses on Jane Street and Weston Road from Major Mackenzie Drive to King Road 2 weeks prior to work





# Traffic Management and Communication Plan

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## Public Information Plan

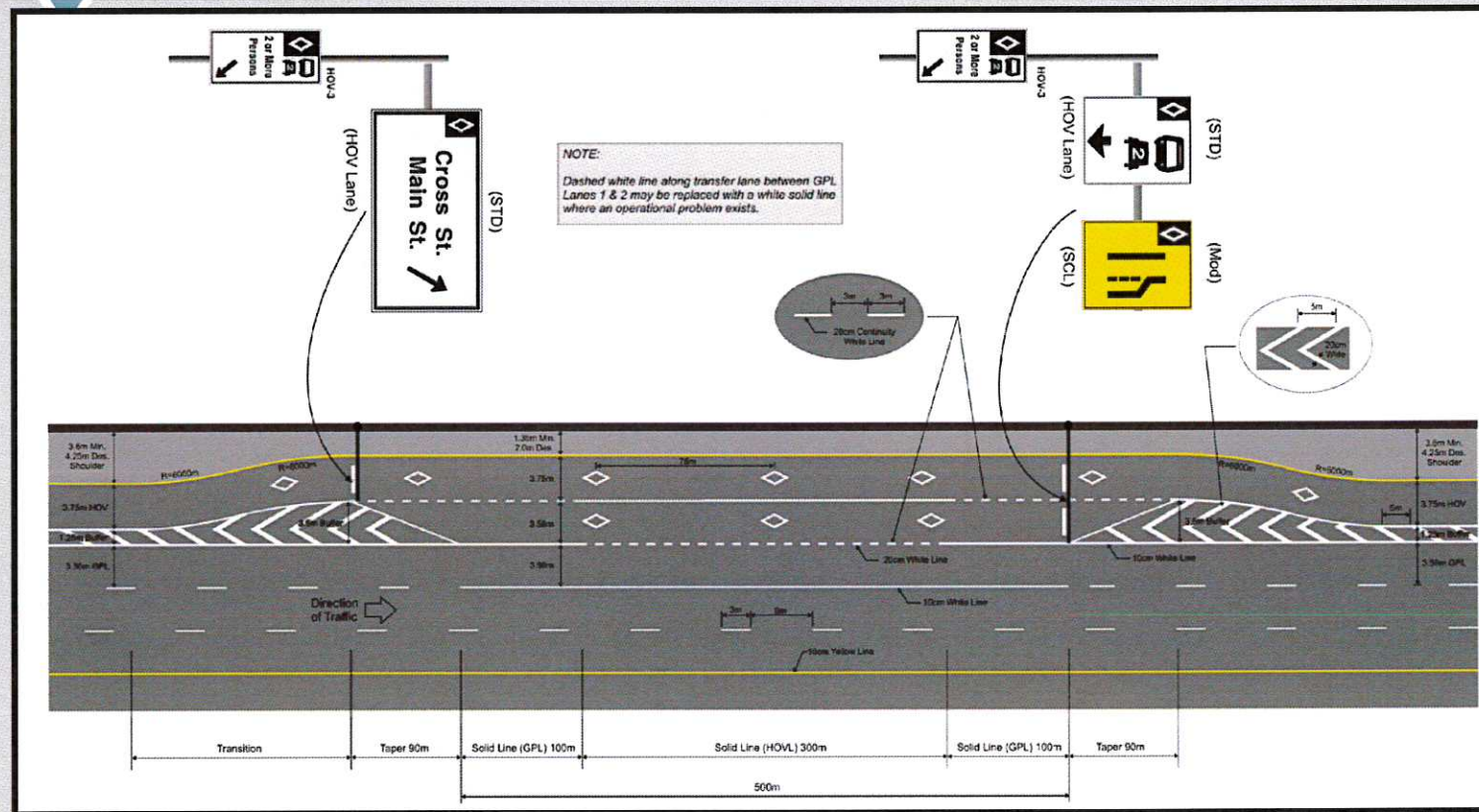
- Weekly updates will be provided to the City of Vaughan on traffic impacts, closure information and traffic detours within the project area
- Area emergency services, school boards and local municipalities will be provided with written advance notification of construction timing, and long term and temporary road closure periods
- The Contract Administrator (CA) will provide closure information to York Region, City of Vaughan and King Township to post on their websites





# HOV Lane – Pilot Project

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## Roadside Safety

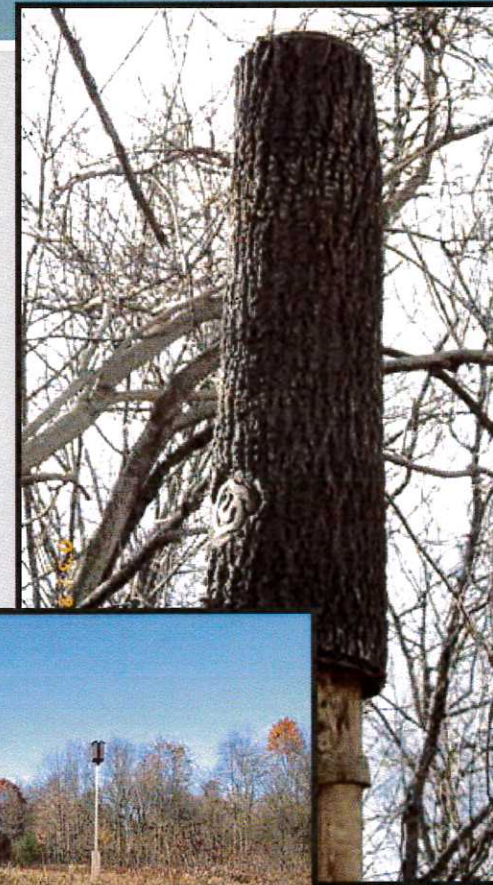
- Median concrete 'Tall Wall' barrier
- Steel Beam Guiderail along outside shoulders





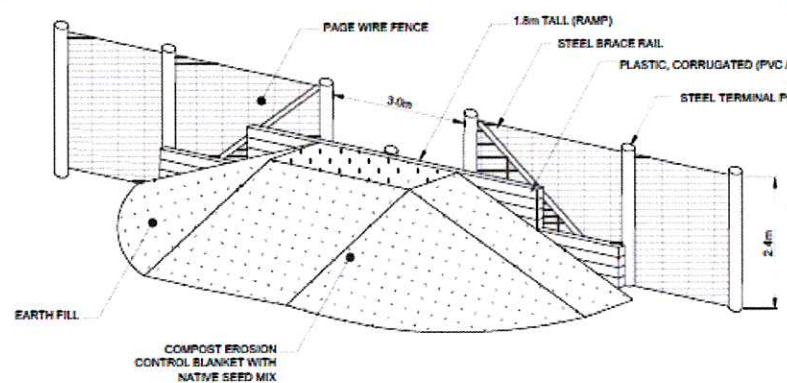
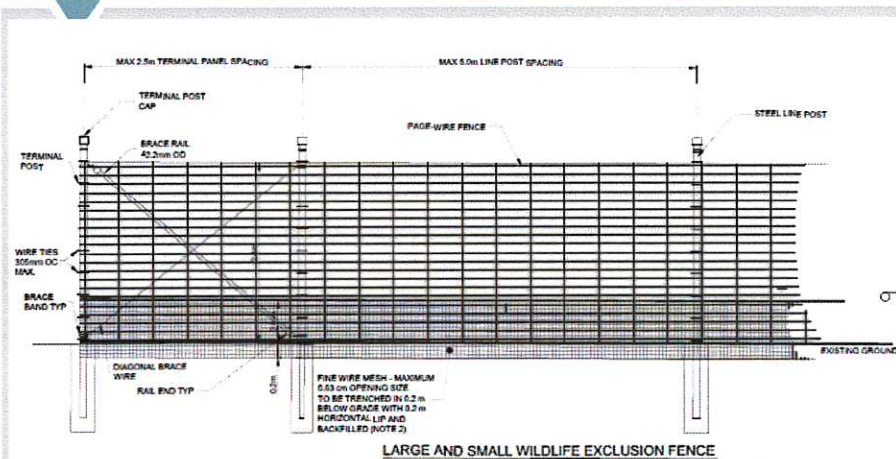
## Environmental

- Advance Clearing contract for migratory birds & bat boxes
- Noise By-Law exemptions (King & Vaughan)
- At the request of MNRF, wildlife fencing will be installed in East Humber River valley to funnel mammals towards the safe crossing at the arch culvert





# Environmental – Wildlife Fence



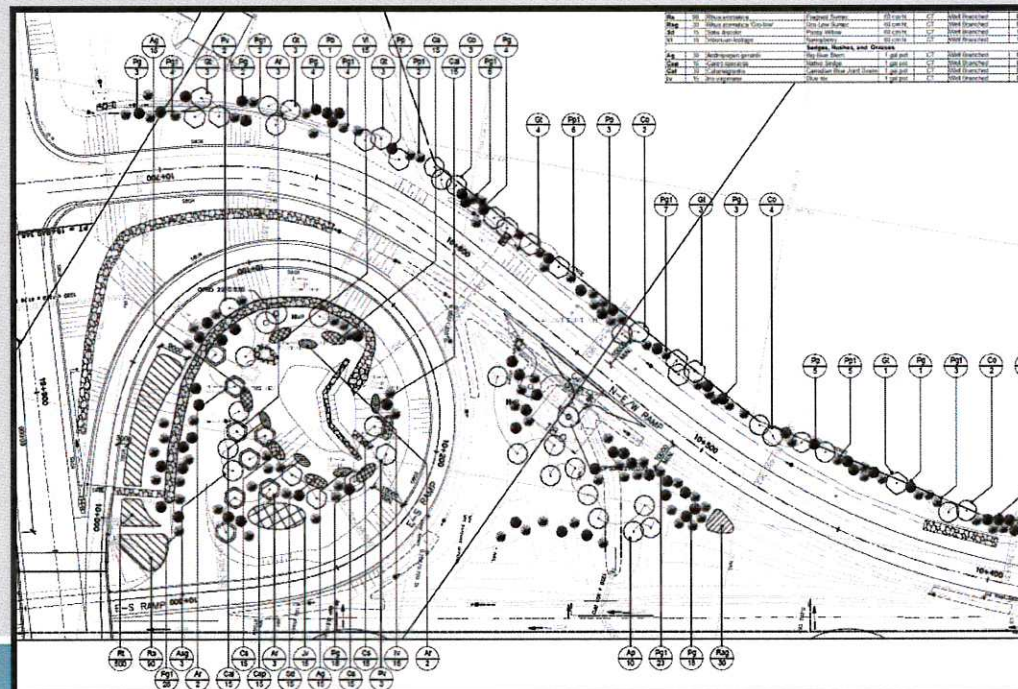
**WILDLIFE ESCAPE RAMP DETAILS**





# Landscaping

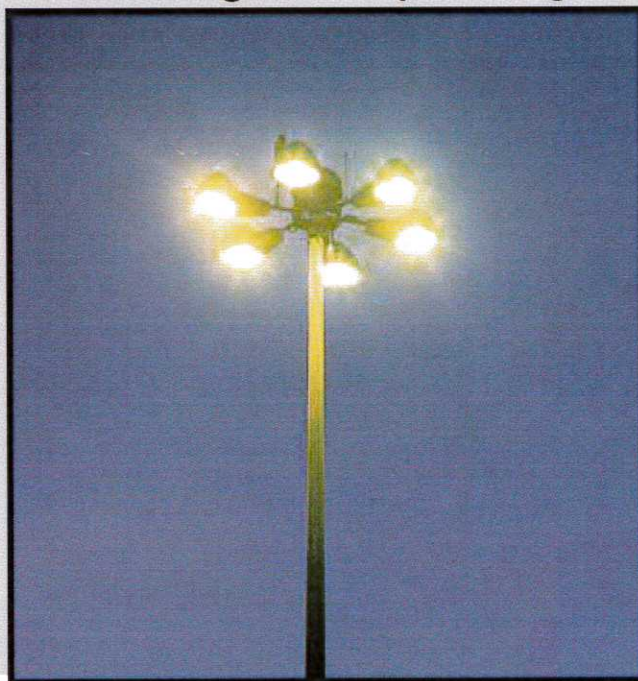
- At King Road Interchange and throughout entire corridor where existing is impacted





# Illumination

- High Mast Lighting will be installed throughout the project limits including underpass lighting




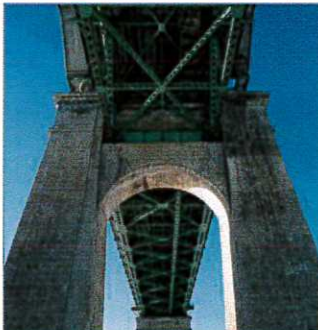


# Project Schedule

Milestone	Date
Tendering	mid-Apr 2017
Construction	2017-2020





			
			
<p>I:\331552\30-Project Management\30-PMC\MC-Meetings\Contracts 2 &amp; 3\2017 04 04 Municipal Council Meeting</p>			
<p>21</p>			