

# PUBLIC INFORMATION CENTRE #3



# **WELCOME TO THE KING CITY EAST JOINT CLASS 'C' ENVIRONMENTAL ASSESSMENT PUBLIC INFORMATION CENTRE (PIC#3).**

**Please sign-in on the sheet provided, view display boards and ask questions. There will be no presentation.**

**The purpose of the third Public Information Centre (PIC) is to present the preferred crossing location and preliminary bridge design.**

**The main themes presented are:**

- **Result of Screening of Alternatives - Preferred Option**
- **Preliminary Design Detail of the Crossing**
- **Overview of FS/DAS Update**

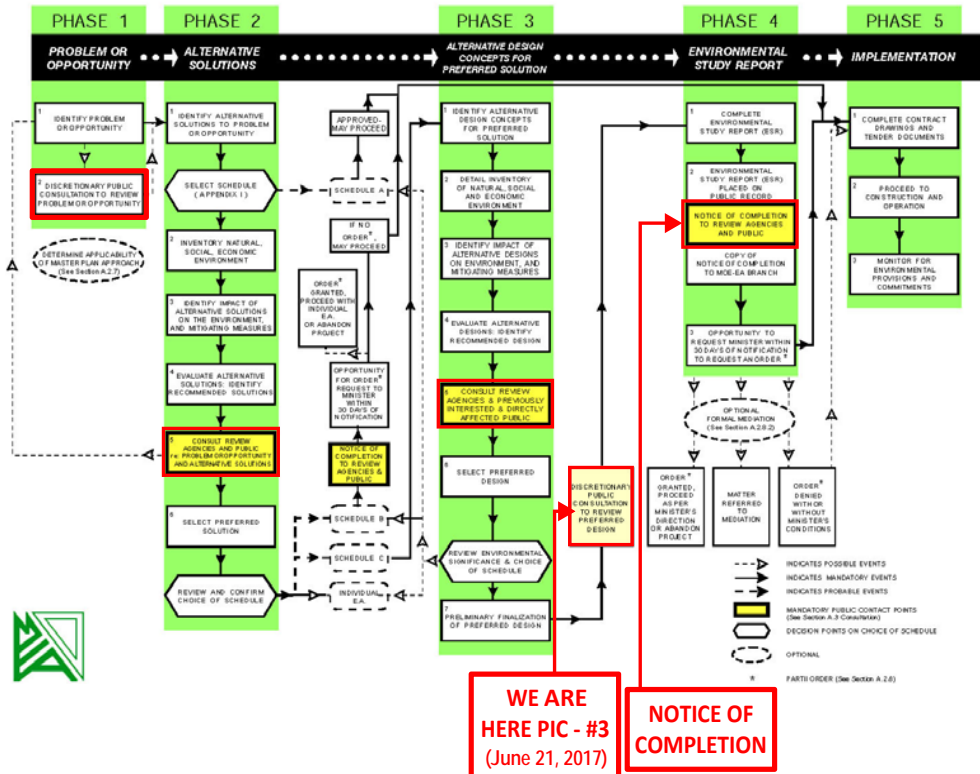
**The Project Team wants to hear from you. Provide comments and ask questions. We will be pleased to discuss any aspect of the project with you.**

**Comment sheets are available tonight or to take home and send to the Project Team within 30 days.**

**Panels are available to view on the Town's website at [www.king.ca](http://www.king.ca)**

# ENVIRONMENTAL ASSESSMENT PROCESS

NOTE: This flow chart is to be read in conjunction with Part A of the Municipal Class EA



## Problem Statement:

The findings of the Township's Transportation Master Plan and the Council approved Functional Servicing Study (2007) identified the need to create a transportation network within the King East community that provides internal connectivity for residents while minimizing intrusions into the Natural Heritage System.

## Project History:

This EA process will build on previous and ongoing studies.

King's Official Plan Review establishes seven policy directions that will inform the preparation of the new Official Plan. These will be considered through the EA process.

The Township's Transportation Master Plan (TMP) was completed in 2014 and provides a conceptual road network for the King City East lands. The road network set by the TMP has been used as a basis for determining crossing locations for the EA process.

A Functional Servicing and Development Area Study (FS/DAS) for the King City East lands was prepared in 2006 for the undeveloped lands in the two quadrants of King City east of Keele Street. This study provided guidance for the location of key infrastructure, parks, trails and an elementary school. The FS/DAS will be updated concurrent with the EA process.

The King City East Landowners Group is undertaking an integrated approach with the Planning Act for an Environmental Assessment (EA) to determine if and where a watercourse road crossing is required in the King City East area. The material presented at this PIC will address Phase 1 and 2 (Schedule 'C') of the Planning and Design process as outlined in the Municipal Engineers Association Class Environmental Assessment document (October 2000, as amended in 2007 & 2011).

# FS/DAS PROCESS

Concurrent with the Environmental Assessment, a Functional Servicing Development Area Study (FS/DAS) update is being carried in support of the development plan and will provide supporting information and details for the EA process.

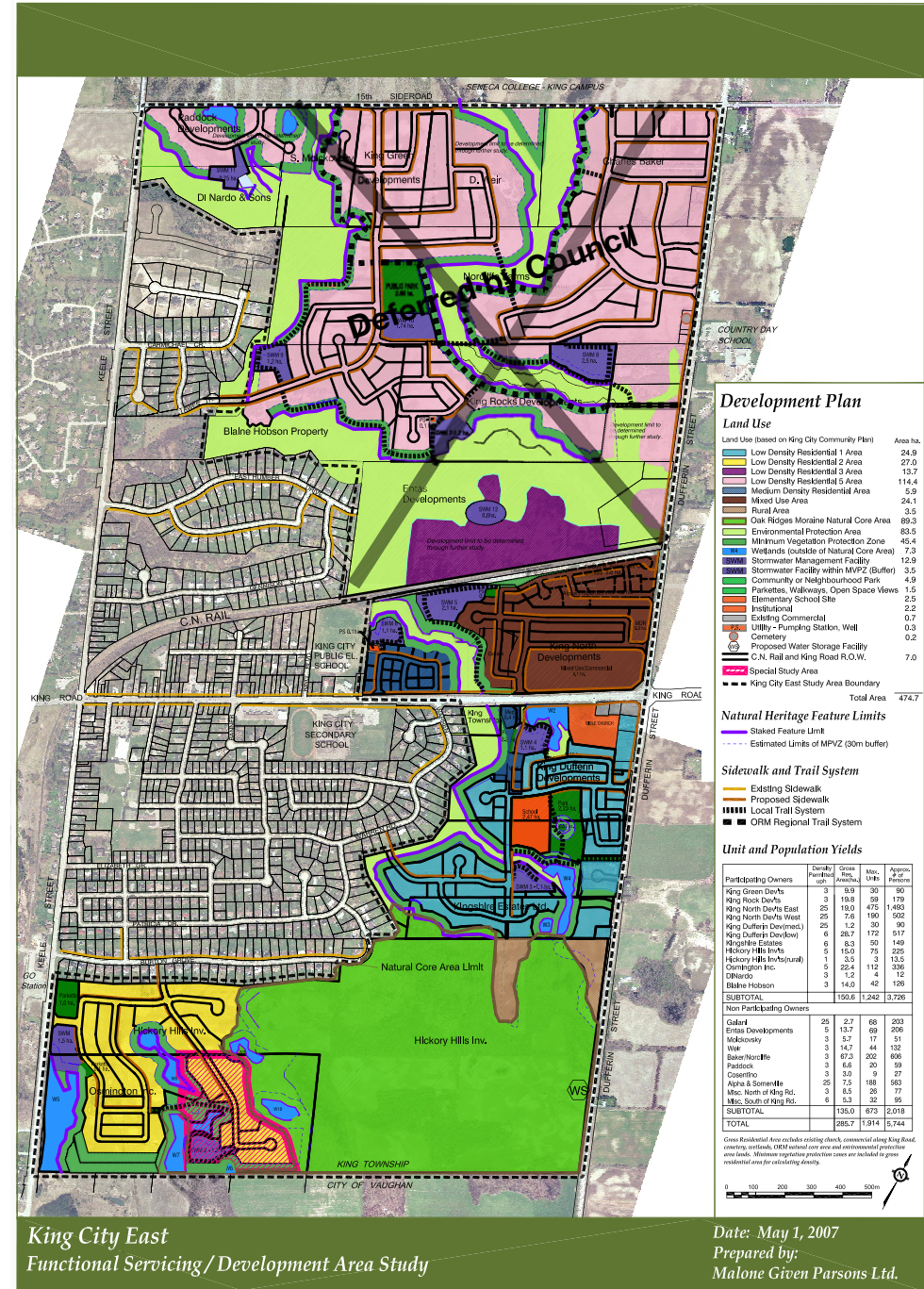
An FS/DAS for the King City East lands was prepared in 2006 for the undeveloped lands in the two quadrants of King City east of Keele Street.

The study provided guidance for the location of key infrastructure, parks, trails and an elementary school. At that time, provision was made for one or two crossings of the valleys.

Council approved the FS/DAS in 2007 for the lands south of the rail and deferred the approval of the northern lands.

The EA and FS/DAS process will inform each other to help to determine if a valley crossing is required and where a potential crossing will be located.

The results of the EA will be incorporated into the final FS/DAS.



# TRANSPORTATION MASTER PLAN

The Township's Transportation Master Plan process (completed in 2014), was undertaken to “guide the development of the Township's long-term transportation vision for the next twenty years and will be undertaken in accordance with the applicable planning policy framework at the provincial, regional, and local levels, including the Provincial Policy Statement.”

The study was carried out through an open public process in accordance with the requirements of Phases 1 and 2 of the Municipal Class Environmental Assessment (EA) process.

## Key objectives of the Transportation Master Plan

Design urban transportation infrastructure that accommodates all citizens (ages 8 to 80)

Offer alternative modes of transportation to the automobile

Create complete streets designed to enable safe access for all users (pedestrians, bicyclists, motorists, and transit riders) to contribute to sustainable and livable communities

Promote Active Transportation oriented development and alternatives to the automobile

Provide a rational road classification to guide future planning and capital works



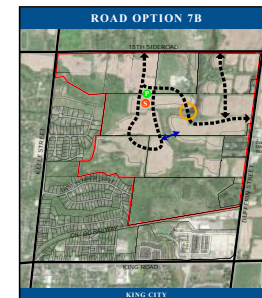
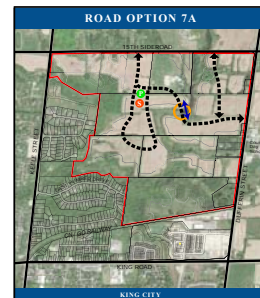
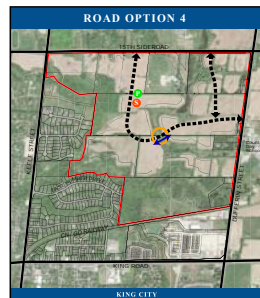
King TMP: Proposed Road Network



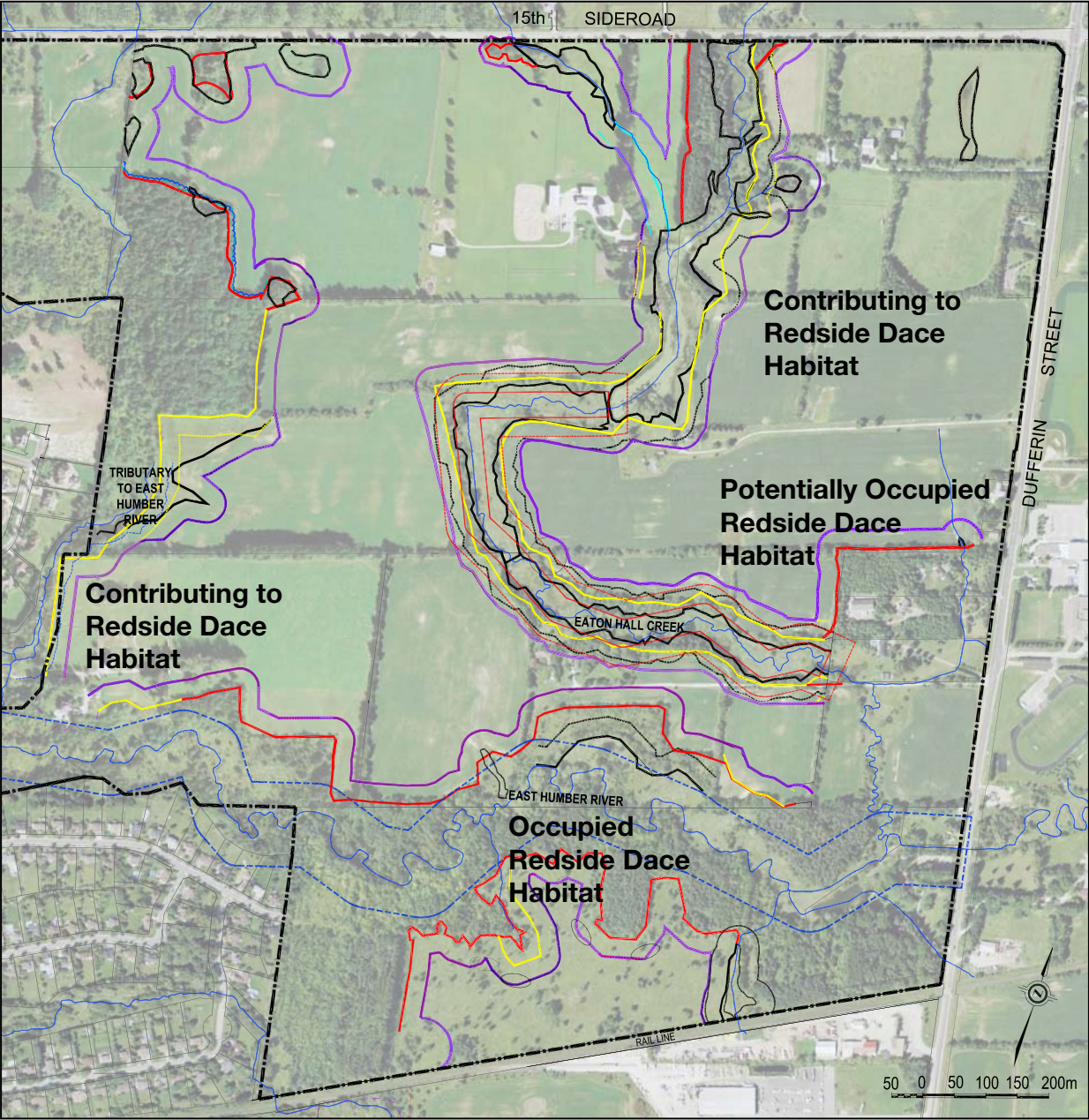
King TMP: Proposed Cycling Network Improvements

# RECOMMENDED OPTION - SCORING SUMMARY

THE KING CITY EAST LANDOWNERS' GROUP	SCHEDULE 'C' CLASS ENVIRONMENTAL ASSESSMENT					
	CONSULTANT	OPTION 4: CENTRAL CROSSING <i>One south-central valley crossing at narrowest point.</i>	OPTION 7A: DAM CROSSING <i>One north-central valley crossing above existing dam location. Servicing crossing within roadway.</i>	OPTION 7B: DAM CROSSING - SEPARATE SERVICING LOCATION <i>One north-central valley crossing at existing dam location. Servicing crossing under valley lands south of dam location.</i>		
ASSESSMENT CRITERIA						
Discipline Summary						
Transportation	3.0	<i>Most efficient and logical collector road system that will connect new neighbourhoods and will provide direct bicycle and trail routes within the new neighbourhoods in accordance with the TMP. The collector road system would best suit transit routing should it occur.</i>	1.4	<i>Convoluted and lengthy collector road system requires off-road pedestrian and bicycle connections to meet TMP. Not as supportive of future transit should it occur.</i>	1.4	<i>Convoluted and lengthy collector road system requires off-road pedestrian and bicycle connections to meet TMP. Not as supportive of future transit should it occur.</i>
Technical	3.0	<i>Shortest and most efficient servicing and collector road layout.</i>	1.8	<i>Excessively deep servicing does not meet Township standards and has less direct and lengthier collector roads.</i>	2.5	<i>Separate valley crossings for bridge and servicing provides efficient servicing but less direct and lengthier collector roads.</i>
Environmental	1.9	<i>One crossing of redside dace occupied habitat with a bridge outside of the meander belt will not impede watercourse, wetland or valley functions and north-south connectivity.</i>	1.9	<i>One crossing north of redside dace occupied habitat with a bridge outside of the meander belt will not impede watercourse, wetland or valley functions and north-south connectivity however it is likely a second crossing for the trail/bike system within redside dace occupied habitat may be required to meet the objectives of the TMP and could have an additional impact on the valley system.</i>	1.2	<i>One crossing north of redside dace occupied habitat with a bridge outside of the meander belt will not impede watercourse, wetland or valley functions and north-south connectivity however intrusion into the valley for the servicing maintenance access and the likely use of the access road for a trail/bike system within redside dace occupied habitat may be required to meet the objectives of the TMP and could have an additional impact on the valley system.</i>
Social, Economic and Cultural	2.8	<i>Central crossing will provide direct connections between the new development on either side of the valley system in an efficient and logical manner while providing pedestrian and cycling connections to the existing neighbourhood to the west in the same location. It will provide logical connections to the community park and potential school site and will provide for the best access to the southwest portion of the new community for emergency access purposes.</i>	1.7	<i>The northern crossing will provide less direct road connections between the new development on either side of the valley system and pedestrian and cycling connections to the existing neighbourhood to the west. It will provide less direct connections to the community park and potential school site than Option 4. Access to the southwest portion of the new community for emergency purposes is less direct than Option 4. Servicing costs are high due to deep sewers that would result in higher construction and maintenance costs.</i>	1.8	<i>The northern crossing will provide less direct road connections between the new development on either side of the valley system and pedestrian and cycling connections to the existing neighbourhood to the west. It will provide less direct connections to the community park and potential school site than Option 4. Access to the southwest portion of the new community for emergency purposes is less direct than Option 4. Servicing is more cost effective than Option 7a as the second crossing location allows sewer depths to meet Township standards.</i>
Overall Average Score	2.7	<b>RECOMMENDED ALTERNATIVE</b>	1.7		1.7	



# STUDY AREA AND NATURAL HERITAGE SYSTEM



- DEVELOPMENT LIMIT (30m buffers \*except where noted)
- MNR STAKED WETLAND LIMIT
- - - 30m MINIMUM VEGETATION PROTECTION ZONE
- TRCA STAKED TOP OF SLOPE
- - - 30m MINIMUM VEGETATION PROTECTION ZONE
- TRCA STAKED VEGETATION LIMIT
- - - 30m MINIMUM VEGETATION PROTECTION ZONE
- CENTRE LINE OF CREEK
- - - 30m FROM CENTRE LINE OF CREEK
- - - MEANDER BELT
- · - · - STUDY AREA BOUNDARY

# RATIONALE FOR SELECTION OF PREFERRED CROSSING OPTION

## 1. Internal Connectivity (schools, bussing, sidewalks)

The community planned for the King City East area north of the railway line is expected to yield approximately 1,000 homes. It includes several parks and an elementary school site. Providing a valley crossing would allow residents to more easily access the school and park sites by walking, bussing, cycling and driving.

The Secondary Plan Community Design Strategy states that “the street pattern and trail system shall provide connectivity between the different areas of the community, but, crossings of natural areas shall be kept to a minimum (Section 9.2.3.2.v).

Internal connectivity also creates benefits for community security and emergency access to the planned community.

The Secondary Plan states that the “safety and security of residents should be a key factor in the design of all development. (Section 9.2.7.1)”

All Options meet this criterion, however, the Preferred Option provides the most direct connections and a more logical road system.

## 2. Preferred Option Minimizes Impacts on the Natural Heritage System

The natural heritage system (NHS) within the study area is comprised of the East Humber River and tributaries and associated valley corridors, Provincially Significant Wetlands, other wetlands, woodlands and terrestrial and aquatic wildlife habitat.

These features have been identified and delineated in the field with the agencies and provide a connected system within the study area.

The Preferred Option scored “Moderate” in the evaluation to reflect a single crossing of the NHS.



Source: GraphicStock



Source: Google Earth



Source: Township of King



Source: Ministry of Natural Resources

## 3. Consistent with Policy

The Transportation Master Plan (TMP) process undertaken by the Township of King incorporated local, regional and provincial policies including the Places to Grow Plan, the York Region Transportation Master Plan and the Regional Growth Strategy.

The proposed road network from the TMP provides a number of options for creating a connected community in the King East Development area including linkages from Dufferin Street to 15th Sideroad and to Keele Street.

All Options meet this criterion.

## 4. Avoids Impact on Redside Dace Habitat-Endangered Species

The watercourses on the subject lands provide either ‘Occupied’ or ‘Contributing’ habitat for the Endangered fish species, Redside Dace.

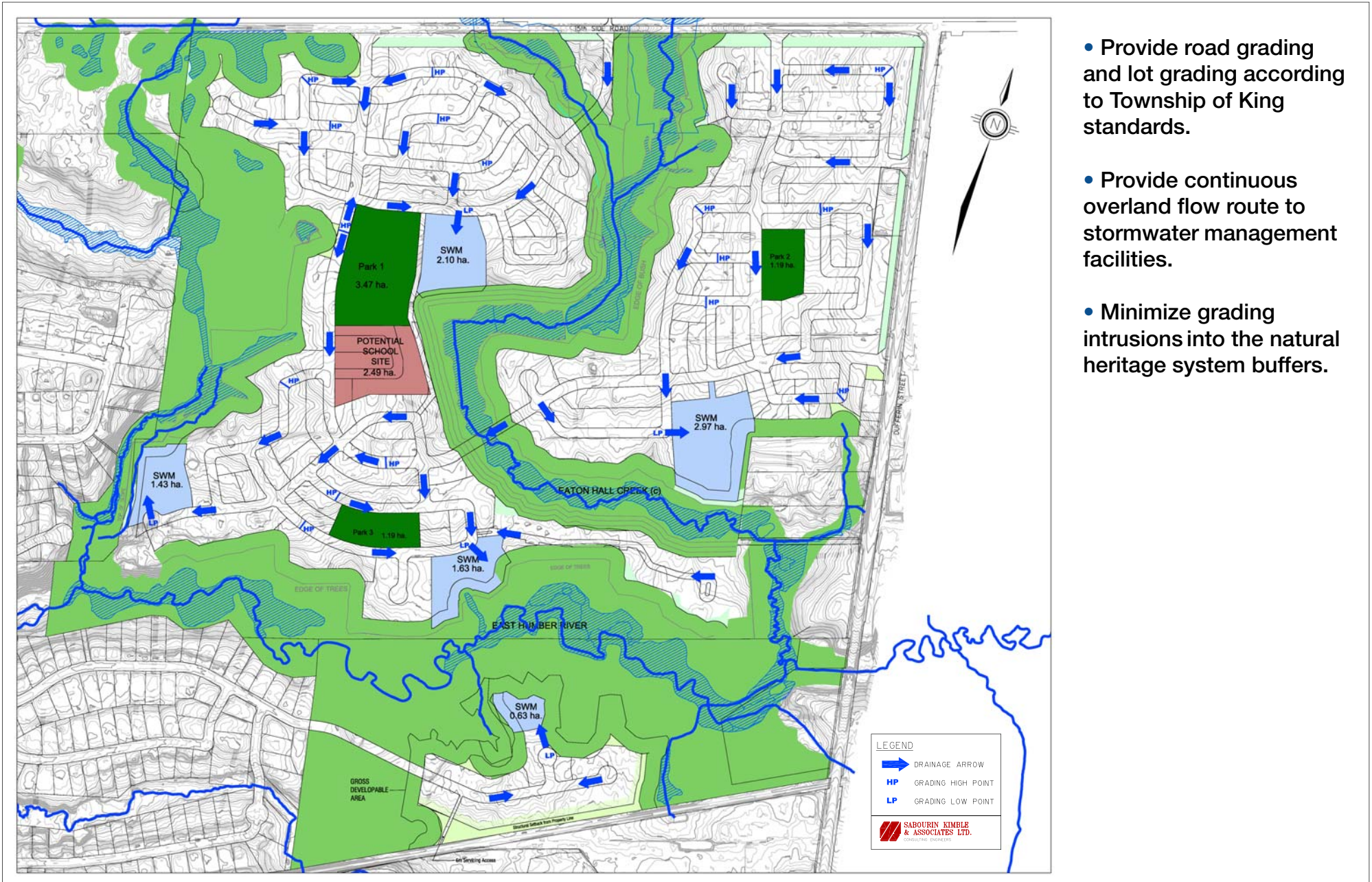
The Preferred Option avoids crossing any habitat that is currently designated ‘Occupied’. The crossing is located in a stream reach that is currently designated ‘Contributing’ habitat.

Therefore, this alternative is ranked ‘Moderate’.

Option 4 scored highest in the evaluation and is therefore the Preferred Option.

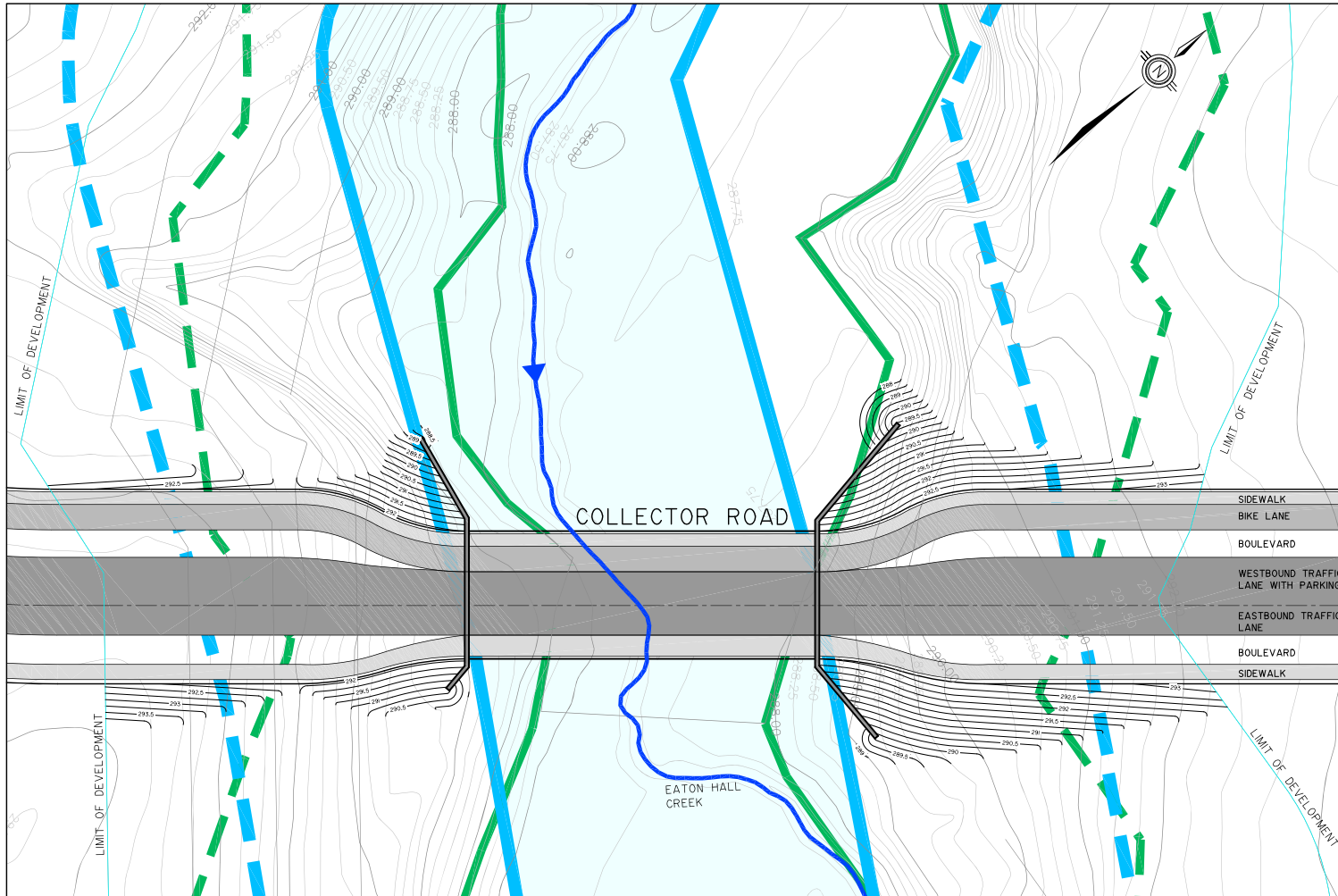


# OVERALL GRADING CONCEPT

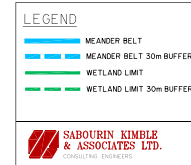


- Provide road grading and lot grading according to Township of King standards.
- Provide continuous overland flow route to stormwater management facilities.
- Minimize grading intrusions into the natural heritage system buffers.

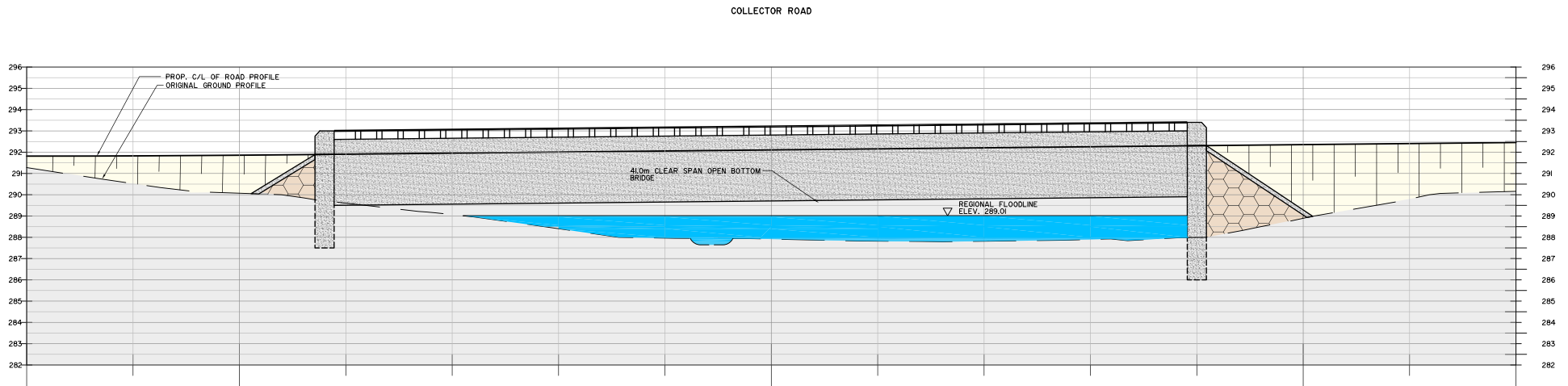
# PRELIMINARY BRIDGE DESIGN



- Provides safe access for pedestrians, bicyclists, motorists and transit.
- Spans the creek meander belt width of 41 metres.
- Minimizes the intrusion into the provincially significant wetland (PSW).
- Minimizes grading footprint in the meander belt and PSW buffers.

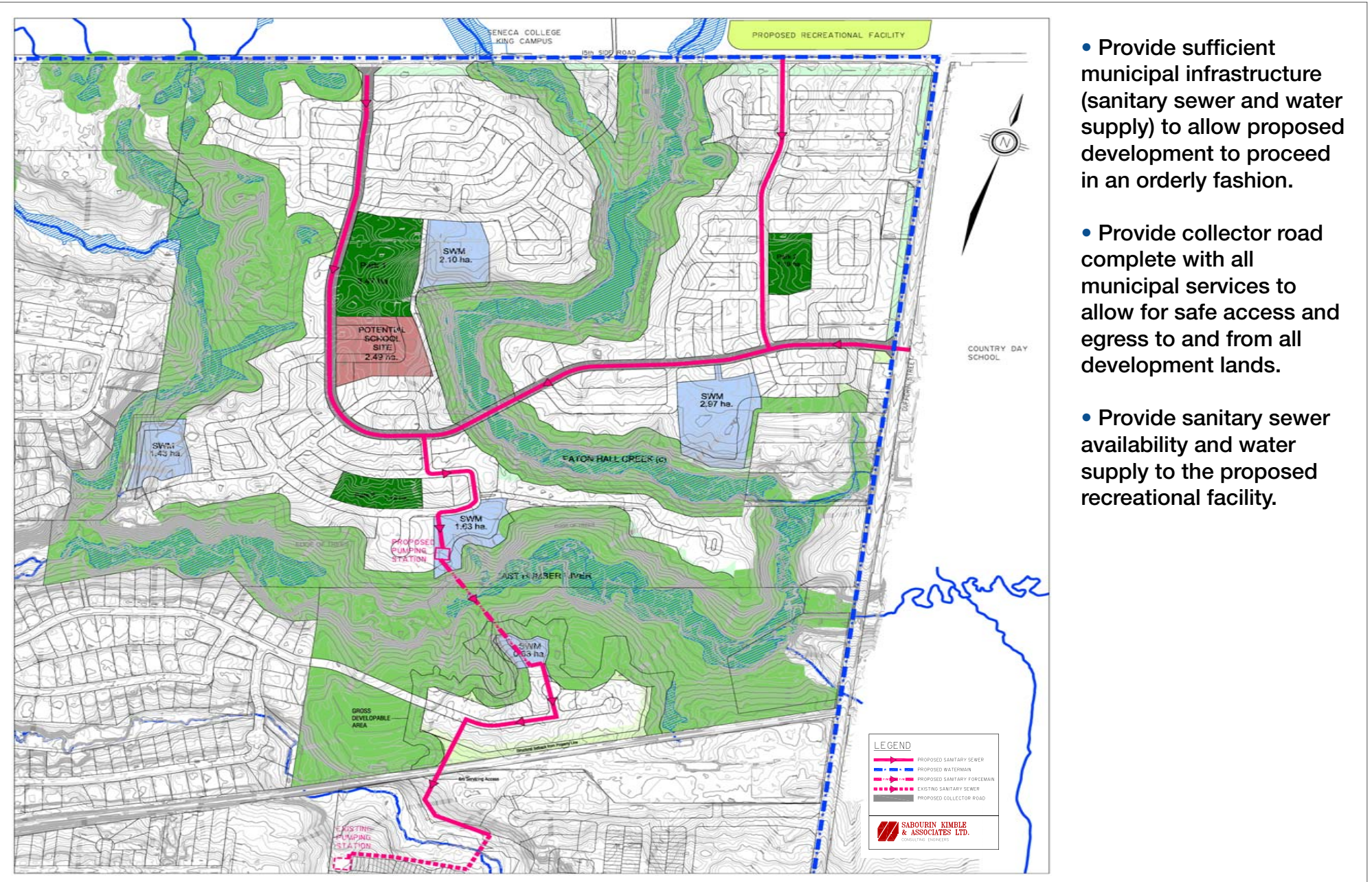


# PRELIMINARY BRIDGE DESIGN - PROFILE



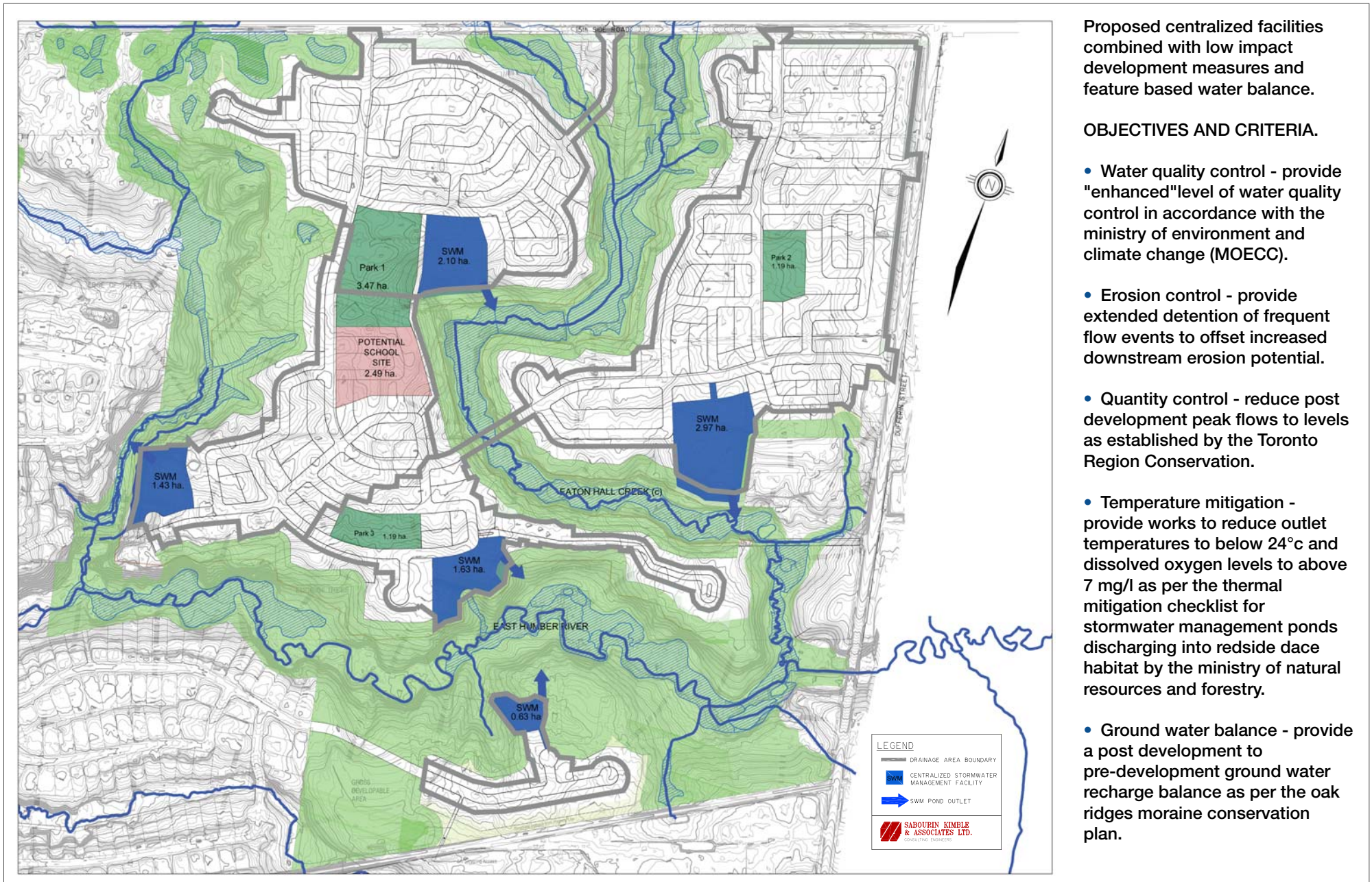
- Maintains existing ground profile under bridge (no channel modifications).
- Provides 2.0-3.0 metres of vertical clearance to existing ground for possible wildlife movement.
- Conveys regional storm flow with no negative impacts upstream or downstream.

# MUNICIPAL SPINE SERVICES



- Provide sufficient municipal infrastructure (sanitary sewer and water supply) to allow proposed development to proceed in an orderly fashion.
- Provide collector road complete with all municipal services to allow for safe access and egress to and from all development lands.
- Provide sanitary sewer availability and water supply to the proposed recreational facility.

# STORMWATER MANAGEMENT PLAN

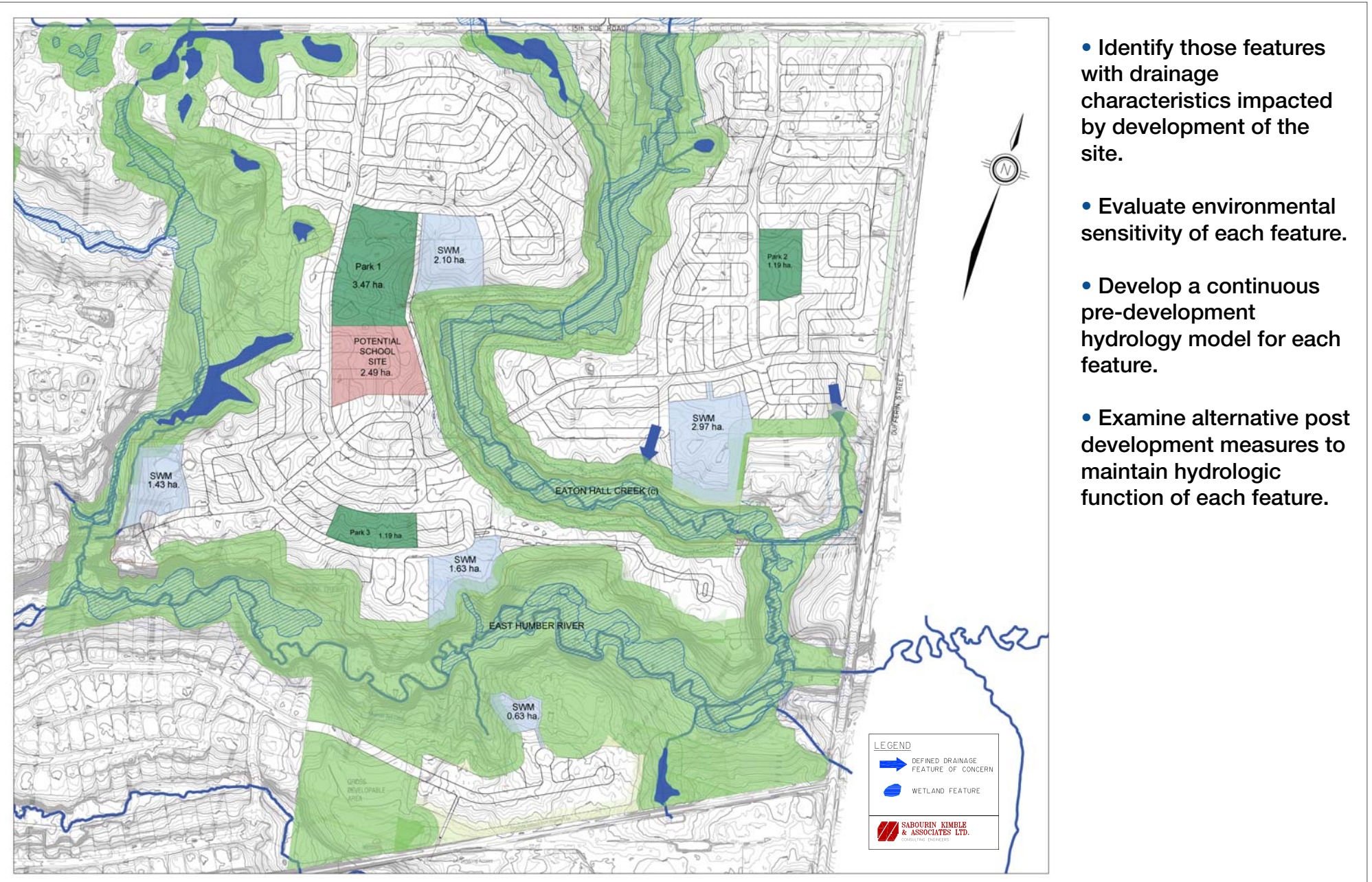


Proposed centralized facilities combined with low impact development measures and feature based water balance.

## OBJECTIVES AND CRITERIA.

- Water quality control - provide "enhanced" level of water quality control in accordance with the ministry of environment and climate change (MOECC).
- Erosion control - provide extended detention of frequent flow events to offset increased downstream erosion potential.
- Quantity control - reduce post development peak flows to levels as established by the Toronto Region Conservation.
- Temperature mitigation - provide works to reduce outlet temperatures to below 24°C and dissolved oxygen levels to above 7 mg/l as per the thermal mitigation checklist for stormwater management ponds discharging into redbed dace habitat by the ministry of natural resources and forestry.
- Ground water balance - provide a post development to pre-development ground water recharge balance as per the oak ridges moraine conservation plan.

# FEATURE BASED WATER BALANCE



- Identify those features with drainage characteristics impacted by development of the site.
- Evaluate environmental sensitivity of each feature.
- Develop a continuous pre-development hydrology model for each feature.
- Examine alternative post development measures to maintain hydrologic function of each feature.

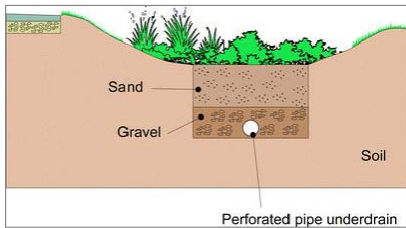
# LOW IMPACT DEVELOPMENT WORKS (LID)

## POSSIBLE LID WORKS

### INFILTRATION:



Infiltration Swale

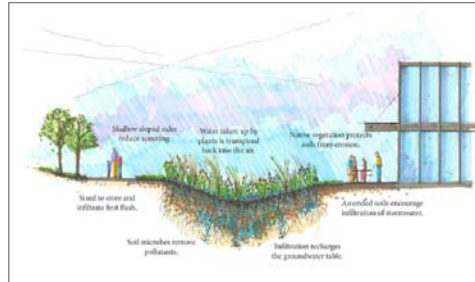


Infiltration Swale



Permeable Pavement

### BIORETENTION:



Bioretention Swale

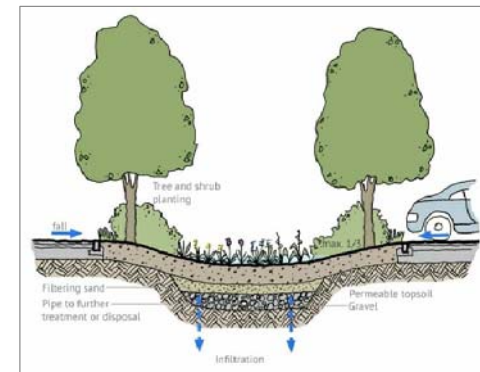


Rain Garden

- Low impact development measures are effective in reducing pollutants and runoff volumes associated with development by providing control measures as close as possible to the source.

- LID works are typically distributed throughout the development to minimize runoff through:

- Infiltration
- Evapotranspiration and plant uptake
- Filtration and detention



Filtration

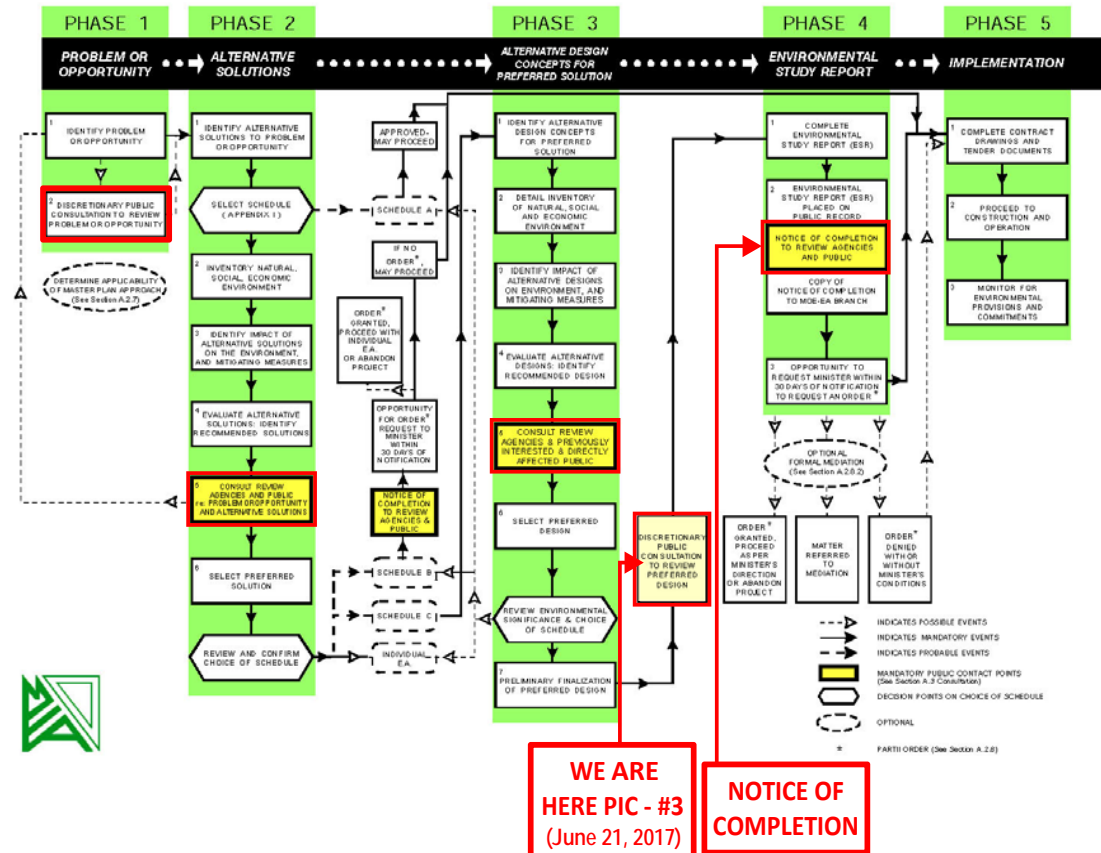
# NEXT STEPS

Following the Public Open House, the project team and Township will;

- Submit the Environmental Study Report to the Ministry of the Environment and Climate Change (MOECC)
- Provide a Notice of Completion to review agencies and the public
- Submit Draft FS/DAS to Township
- Provide the final detailed design, the Environmental Study Report and the FS/DAS for review by agencies and the public at the King City municipal office and public library

Following the submission of the Environmental Study Report there will be a 30 day period where an order (appeal) to the MOECC can be requested.

NOTE: This flow chart is to be read in conjunction with Part A of the Municipal Class EA



Questions and comments?  
Please contact

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# Concept Plan

King City East

## Legend

### Land Use

- Study Area Boundary/Participating Lands
- Single Detached Residential
- Townhomes
- Lifestyle Residential
- Stormwater Management
- Public Parks
- Potential School Sites
- Open Space including Buffers
- MNRF Mapped 2017 Evaluated Wetlands

### Road Connections

- ➔ 23m Collector Road
- ➔ Secondary Access
- Go Transit Railway Line
- Planned Regional Cycling Route
- Potential Local Cycling Route/Multi Use Path

### Trails and Valley Crossings

- ▶ Existing Trail
- ▶ Potential Trail
- SWM Trail Connection
- Potential Pedestrian Crossing
- Existing Pedestrian Crossing
- Valley Crossing

*Prepared For Discussion Purposes*

Prepared By:  
 MALONE GIVEN  
 PARSONS LTD.

Date: June 21, 2017

