Municipal Class Environmental Assessment for a Multi-Use Path from Toogood Pond, through the Milne Dam Conservation Area, to Bob Hunter Memorial Park in the Rouge River Valley (MUP EA)

Development Services Committee

January 24, 2012

Presentation Outline

Part 1

- Study Background, Purpose, Objectives and Study Area
- Study Outline
- Consultation Process
- Overview of Supporting Policy

Part 2

- Inventory and Key Issues
- Identification of Alternatives

Part 3

- Route Selection Criteria
- Evaluation of the Alternatives and the Preliminary Preferred Route Alignment

Part 4

- Pathway Alignment, Width and Surface Type
- Pathway Signage
- Opinion of Cost for Construction

Part 5

- Next Steps

PART 1:

Study Background Purpose and Supporting Policy Overview

Background

In 2010 the Town of Markham approved the **Cycling Master Plan**, and the **Pathways and Trails Master Plan in 2008**. Both plans expand upon the policies in the Town's Official Plan related to pedestrian and cycling movement throughout Markham.

Key aspects of the vision from these 2 plans include;

- Accommodating a wide variety of users;
- Providing a diversity of experiences which allow greater appreciation and enjoyment of the natural, cultural and heritage environment;
- Encouraging residents to walk, run and cycle for fitness, fun and transportation;
- Connecting neighbourhoods to key destinations and providing crossing points of significant physical barriers such as river valleys and highways;
- Consideration of the natural features, species and habitats; and
- Providing improved connections to other existing and planned pedestrian and cycling infrastructure.

Both of these master plans included a comprehensive public consultation program.

Background cont'd

The **Pathways and Trails Master Plan** identified improved pathway connections to, and within, the Milne Dam Conservation Park as a high priority.

The Town established the **Milne Working Group in 2008** and they conducted a pathway planning exercise in Milne Dam Conservation Park in 2008 and 2009.

Key recommendations from the Milne Working Group were

- that connections to the east and west of the Milne Dam Conservation Park be subject to further examination and input by a Community Liaison Committee, stakeholders and the public; and
- all work completed by the Milne Working Group would be fully considered in a future pathway alignment study to determine the best alignment within a larger study area.

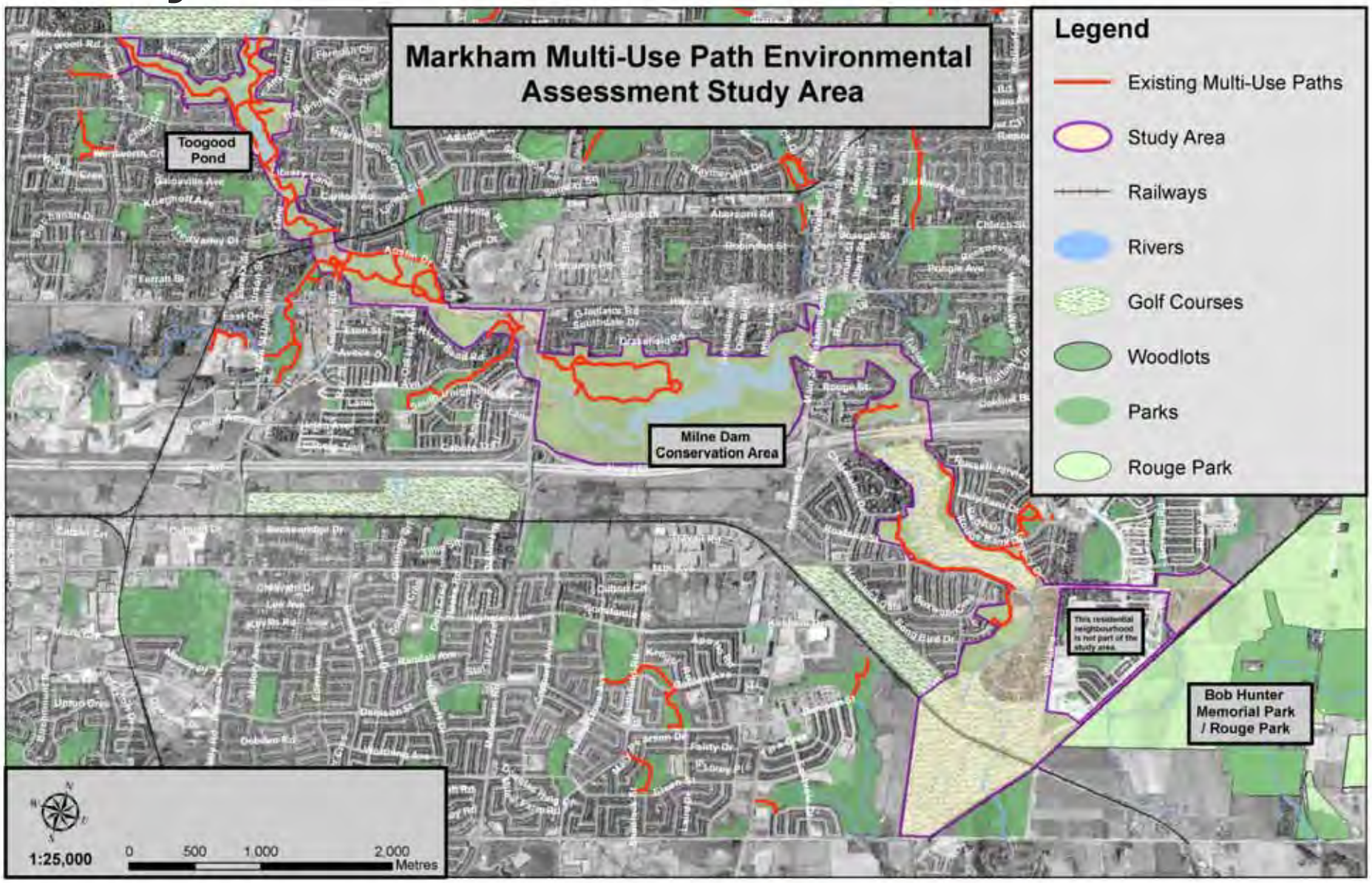
Purpose of the MUP EA

The purpose of this study is to investigate the pathway location and provide a conceptual design for an interconnected multi-use path from 16th Ave. to Bob Hunter Memorial Park in the Rouge River Corridor (see study area highlighted on the following slide).

Key Objectives

- Build on the work completed for Markham's Cycling Master Plan and Markham's Pathways and Trails Master Plan.
- Identify and confirm a preferred pathway alignment, linkages, evaluate potential watercourse crossings, design principles and options
- Communications and community consultations

Study Area


Markham Multi-Use Path Environmental Assessment Study Area
Toogood Pond
Milne Dam Conservation Area
Bob Hunter Memorial Park / Rouge Park
This residential neighbourhood is not part of the study area.
Legend
Existing Multi-Use Paths
Study Area
Railways
Rivers
Golf Courses
Woodlots
Parks
Rouge Park
1:25,000
0
500
1,000
2,000
Metres

Community Liaison Committee

Early in the project, a Community Liaison Committee (CLC) was established with representatives of:

- Over 20 interest groups and local Ratepayers' Associations in Markham;
- Members of Local and Regional Council;
- Town staff; and
- Interested residents

To-date, this group has met eight times, including guided walks of the study area. Meetings have been run by an Independent Facilitator.

The CLC has been essential in identifying and understanding important issues and opportunities, and has provided input to the recommended trail alignment alternatives.

Study Process

Phase 1: Problem Identification - completed

- Understanding scope, reviewing background information, define need, engage CLC, natural and cultural heritage initial screening
- Understanding issues and opportunities
- Develop pathway routing criteria
- CLC Meetings (1,2), Agency Meeting

Phase 2: Identification and Evaluation of Alternatives - completed

- Detailed field investigations
- Identify and map out alternatives, refine evaluation criteria
- Evaluate alternatives, identify preliminary preferred alternative
- Develop pathway width and surface type criteria
- CLC Meetings (3,4,5,6,7), Agency Meetings

Study Process

Phase 3: Conceptual Design – final tasks to be completed January/February 2012

- Prepare preliminary opinion of probable cost for construction
- Update presentation to Development Services Committee
- CLC Meeting (8)
- Public Information Centre
- Select final preferred alignment and refine conceptual design and opinion of probable cost
- Agency Meeting(s)

Phase 4: Reporting – March/April 2012

- Prepare and submit Draft Report
- CLC Meeting (9), Agency Meeting (if required)
- Present to Council
- Finalize report and file for Public Record

Supporting Policy

Numerous policies support the creation of a continuous pathway link through the study area

- TRCA Greenspace Plan for the Greater Toronto Area (1989)
- Rouge Park Management Plan (1994)
- Rouge North Management Plan (2001)
- Provincial Policy Statement (2005)
- York Region Pedestrian and Cycling Master Plan (2008)
- Town of Markham Official Plan (2005)
- Official Plan Amendment 140 (2006)
- Town of Markham Green Print Sustainability Plan (in progress)
- Integrated Leisure Master Plan (2010)
- Town of Markham Cycling Master Plan (2010)
- Town of Markham Pathways and Trails Master Plan (2010)
- Town of Markham Pathways and Trails 5-Year Implementation Plan (2010)

A Chronological Summary of Key Local Initiatives Related to Pathways and Active Transportation

2002 – Markham Transportation Strategic Plan recognized the need to review and update the Town-Wide Bicycle System Study first developed in 1998 to better development cycling and pedestrian facilities

2004 - Cycling and Pedestrian Advisory Committee (CPAC) established by Council

2004 - Cycling Strategy updated and endorsed

2005 - Markham Cycling Master Plan Study commences

2006 - Town-wide Pathways and Trails Master Plan Study commences

2006/07 – Implementation of on-road community bicycle network (100 km signed routes, 12 km of bicycle lanes, 7+ km multi-use pathways)

2006 - 2008 – Cycling and Pathways and Trails Master Plans public consultations (10)

April 2008 – York Region Pedestrian and Cycling Master Plan endorsed

Spring and Summer 2009 – Milne Working Group mandate is undertaken

Fall 2009 – Commence Markham Cycling Pathways and Trails 5 -Year Implementation Program

April 2010 - Cycling, and Pathways and Trails Master Plans endorsed by Council

May 2010 - 5 Year Implementation Program – reviewed and endorsed by Cycling and Pedestrian Committee

Nov. 2010 - Toogood Pond to Bob Hunter Park MUP – EA – Consultation Strategy endorsed by Council

Dec. 2010 – Council Endorsement of the 5 Year Implementation Program

PART 2:

Inventory and Analysis

Key Issues

Alignment

- What is the most appropriate alignment?

Connectivity and Wayfinding

- How can links be made between existing sections of pathway?
- How/where does the pathway connect to Bob Hunter Memorial Park?
- As a user, how do I know where I am on the pathways?

Accessibility

- Can the entire pathway be constructed so that meets new accessibility requirements?
- What is the most appropriate thing to do if it can not be built to meet requirements throughout its entire length

Natural Environment

- Impacts from current uses
- Pathway location and construction impacts

Pathway Design

- What should the pathway be made of?
- What is an appropriate pathway width?

Key Issues

Water Crossings

- Where are the best locations to cross the river?
- What do crossings look like?

Crossing Major Roads

- Where and how do we cross major roads such as Regional roads and Highway 407?

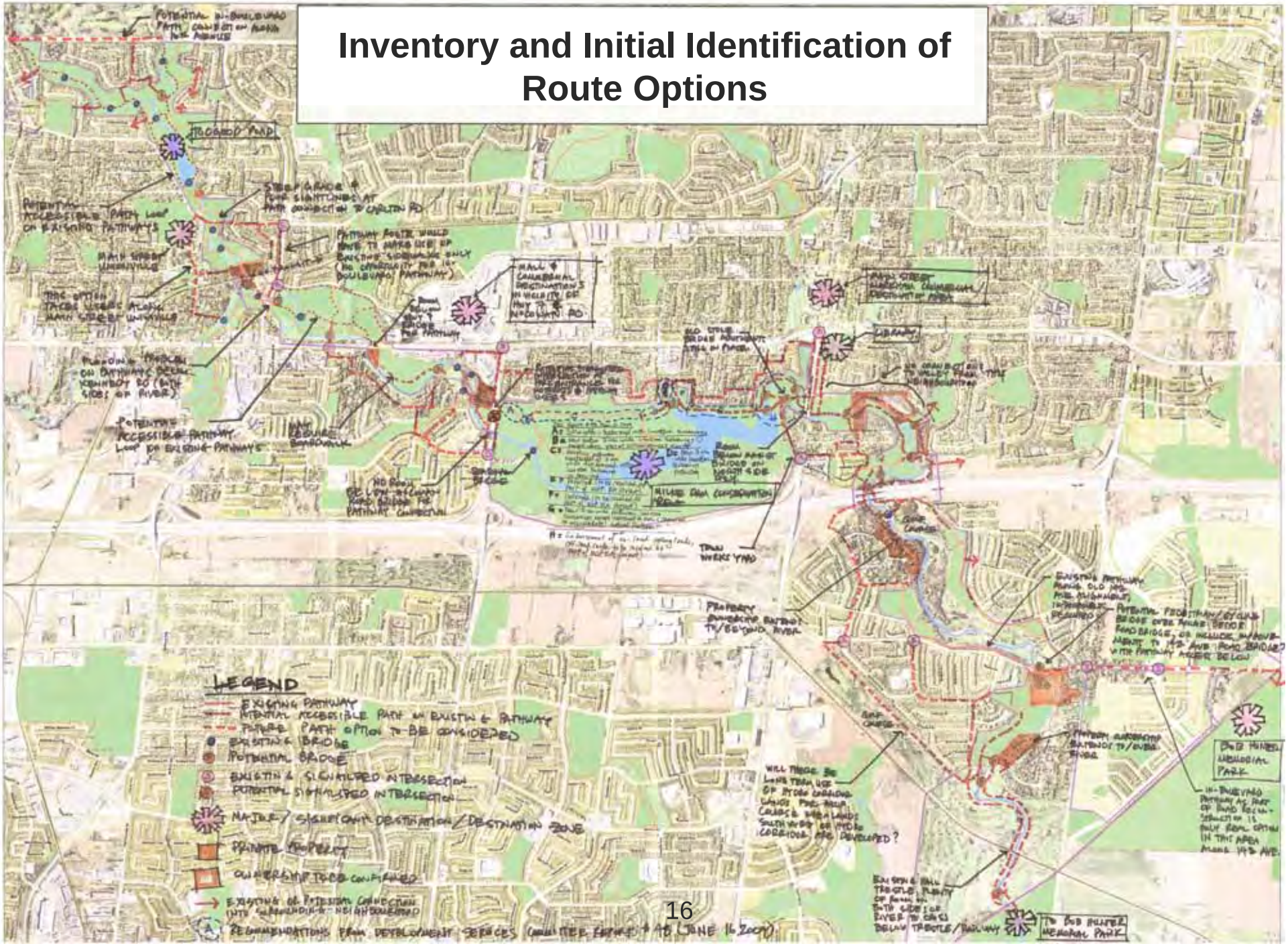
Rights of Private Landowners

- How can privacy be created/maintained for private landowners where the pathway is close to neighbouring properties?
- How can a pathway link be created across private property where there isn't another option, or where crossing private property appears to be the best option?

Phasing and Costs

- What are the priorities for implementation?
- What are the costs to build the pathway?
- What needs to be done for maintenance and how much does that cost?

Inventory and Initial Identification of Route Options



PART 3:

Identification and Evaluation of The Alternatives

The Route Selection Criteria

The criteria were developed in consulation with the CLC. Criteria are organized under 8 headings and used to evaluate / “score ” options relative to one another.

1. Pathway Location

- Pathway provides connections to existing trails and neighbourhoods
- Pathway located on public property
- Pathway remains in valley land or natural environment where possible
- Pathway provides access to scenic views, vistas and landmarks

2. Pathway Design

- Pathway is accessible to the extent possible and practical
- Pathway avoids steep slopes
- Pathway provides a direct, continuous route

3. Community Impact

- Proximity to existing residences
- Pathway link to local businesses

Route Selection Criteria cont'd

4. Safety

- Interaction with vehicular traffic
- The pathway/route location minimizes users' exposure to potentially hazardous situations

5. Policy

- Conformity with approved local, regional and provincial plans and policies

6. Constructability of the Pathway

- Sustainability of pathway (erosion, maintenance, etc.)
- Number of new bridges/water crossings required for pathway
- Approval requirements

7. Natural Environment

- Impact on Groundwater
- Impact on Surface Water and Aquatic Habitat
- Impact on Sensitive Habitat and Species
- Vegetation Removal

8. Cost

- Capital Costs
- Operating and Maintenance Costs

Evaluating Route Options: The Steps

1 Identify Potential Options

1. Assemble and review background information.
2. Receive input on issues and areas of interest from CLC members (beginning with CLC Meeting #2).
3. Conduct field reviews (winter, spring and summer at various locations).
4. Map potential options, including locations for potential river crossings, road crossings and other important features. A total of 83 Options were identified and evaluated throughout the entire study area.
5. Site Tours – August 3 and August 11 with CLC, August 7 and August 25 with staff and TRCA.

2 Develop and Refine Route Selection Principles and Criteria

1. Extract and group Criteria according to broad categories of Social, Environment, Economic, and subcategories of Pathway Location, Pathway Design, Community Impact, Safety, Policy, Constructability, Natural Environment and Cost.

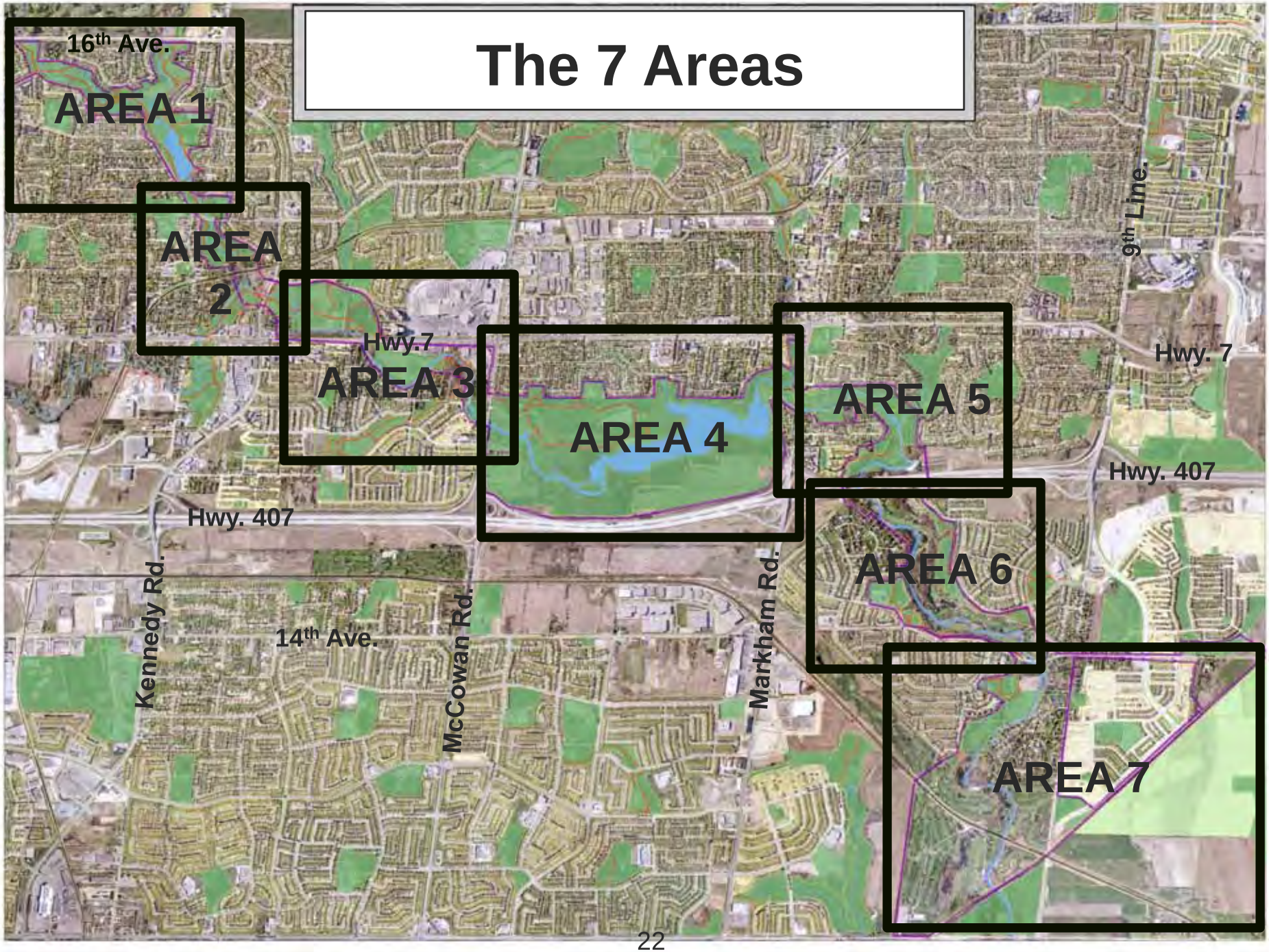
Evaluating Route Options: Steps Cont'd

3 Develop Evaluation System and Complete Draft Evaluation of Route Options

1. Divide entire study area into 7 Areas in order to complete the evaluation of route options **within** each of the areas.
2. Score each Route Option within each of the 7 Areas against each of the criteria **(Score of 0 to 4, where 0 is poor and 4 is excellent)**.
3. Calculate the average score for each option within each of the subcategories.
4. Calculate the sum of the average score for each of the subcategories within each of the route options **(Highest possible score = 32).**
5. Express the sum of the average scores as a percentage of the highest possible score.

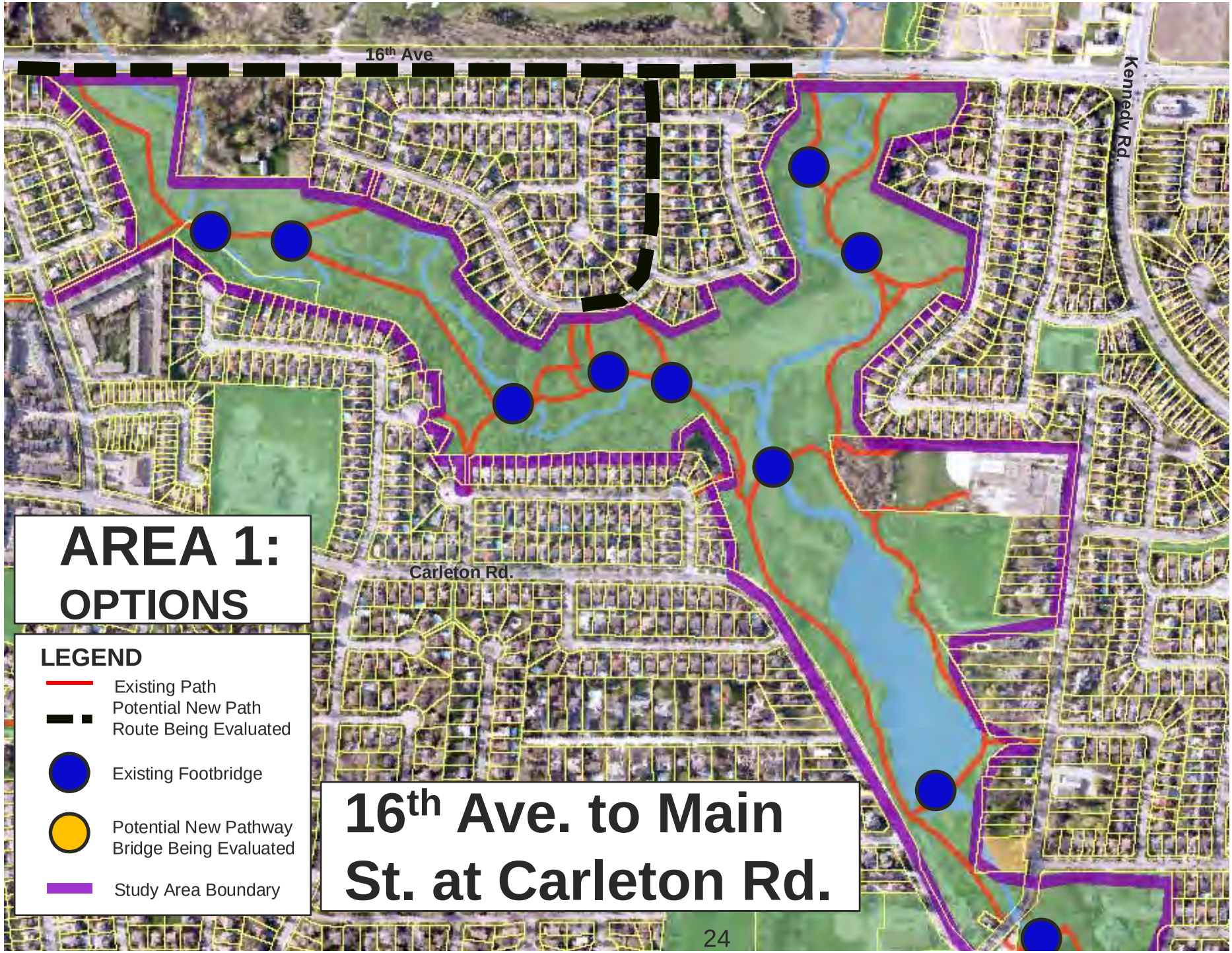
4 Select the Preferred Route

1. Select the highest ranking score within each of the 7 Areas as the Draft Preferred Alignment.
2. Combine the Draft Preferred Alignment within each of the 7 Areas as the Draft Preferred Alignment for the entire study area.


The 7 Areas
16th Ave.
AREA 1
AREA 2
Hwy.7
AREA 3
AREA 4
AREA 5
AREA 6
AREA 7
9th Line
Hwy. 7
Hwy. 407
Hwy. 407
Kennedy Rd.
14th Ave.
McCowan Rd.
Markham Rd.

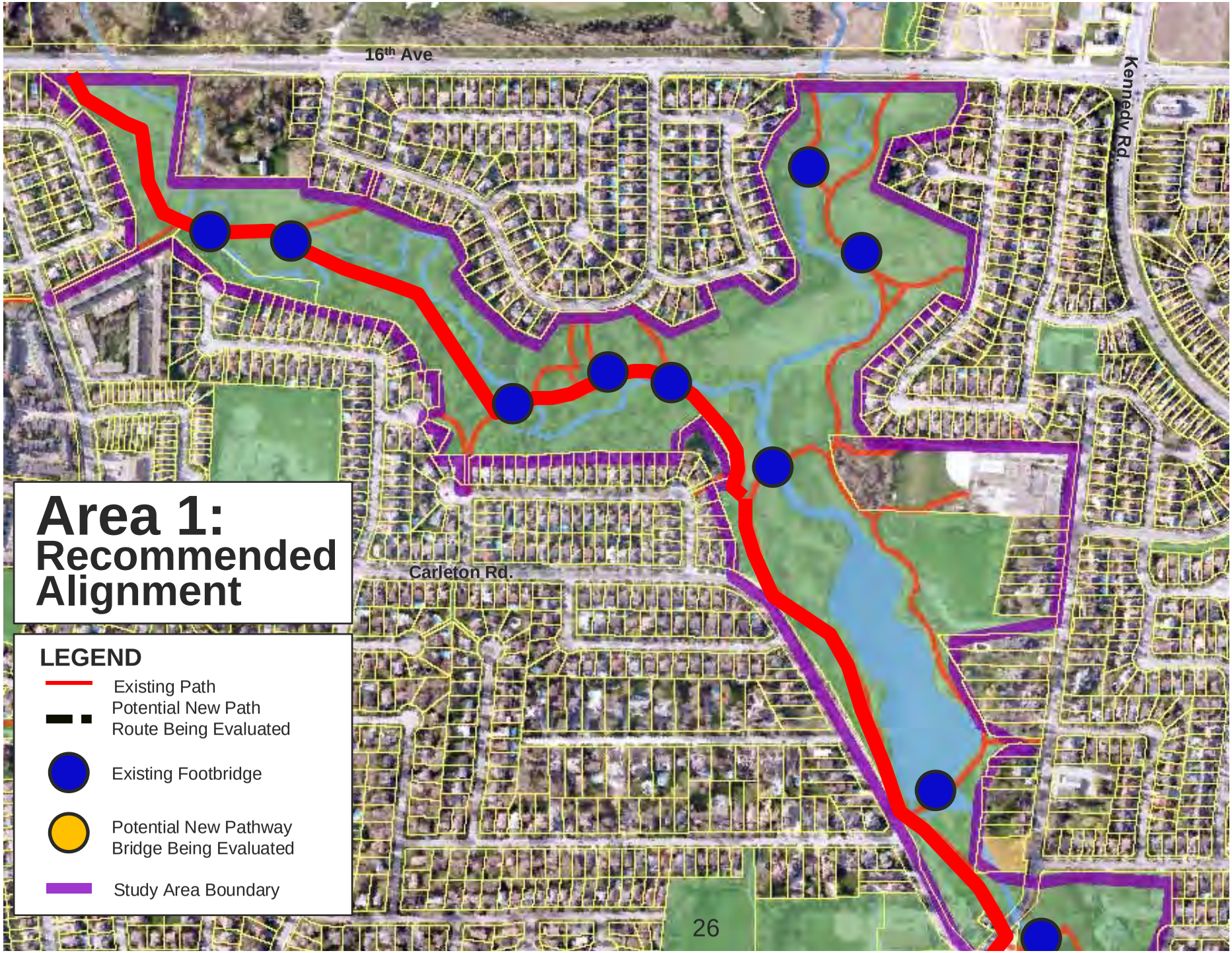
Sample of Evaluation Table

		OPTIONS									
Sub-Category	Criteria	2A	2B	2C	2D	2E	2F	2G	2H	2I	2J
Pathway Location	Pathway provides connections to existing trails and neighbourhoods	2	3	3	2	3	3	3	3	3	3
	Pathway located on public property	4	1	2	4	1	2	4	4	1	2
	Pathway remains in valley land or natural environment where possible	0	1	1	0	1	1	3	3	4	4
	Pathway provides access to scenic views, vistas and landmarks	3	3	3	1	1	1	3	2	4	4
	Pathway Location Subtotal	*9*	*8*	*9*	*7*	*6*	*7*	*13*	*12*	*12*	*13*
	Pathway Location Score	*2.3*	*2.0*	*2.3*	*1.8*	*1.5*	*1.8*	*3.3*	*3.0*	*3.0*	*3.3*
Pathway Design	Pathway is accessible to the extent possible and practical	3	3	3	4	3	3	3	3	3	3
	Pathway avoids steep slopes	3	4	4	3	4	4	3	3	4	4
	Pathway provides a direct, continuous route	2	3	3	2	1	2	2	0	4	4
	Pathway Design Subtotal	8	10	10	9	8	9	8	6	11	11
	Pathway Design Score	*2.7*	*3.3*	*3.3*	*3.0*	*2.7*	*3.0*	*2.7*	*2.0*	*3.7*	*3.7*
Community Impact	Proximity to existing residences	2	1	1	2	2	2	1	2	2	2
	Pathway link to local businesses	4	4	4	1	1	1	3	2	3	3
	Community Impact Subtotal	*6*	*5*	*5*	*3*	*3*	*3*	*4*	*4*	*5*	*5*
	Community Impact Score	*3.0*	*2.5*	*2.5*	*1.5*	*1.5*	*1.5*	*2.0*	*2.0*	*2.5*	*2.5*
Safety	Interaction with vehicular traffic	2	2	2	3	3	3	3	3	4	4
	The pathway/route location minimizes users' exposure to potentially hazardous situations	1	2	2	1	2	2	1	1	3	3
	Safety Subtotal	*3*	*4*	*4*	*4*	*5*	*5*	*4*	*4*	*7*	*7*
	Safety Score	*1.5*	*2.0*	*2.0*	*2.0*	*2.5*	*2.5*	*2.0*	*2.0*	*3.5*	*3.5*
Policy	Conformity with approved local, regional and provincial plans and policies	2	3	3	2	1	1	1	1	4	4
	Policy Subtotal	*2*	*3*	*3*	*2*	*1*	*1*	*1*	*1*	*4*	*4*
	Policy Score	*2.0*	*3.0*	*3.0*	*2.0*	*1.0*	*1.0*	*1.0*	*1.0*	*4.0*	*4.0*
Constructability of pathway	Sustainability of pathway (erosion, maintenance, etc.)	4	3	3	4	3	3	3	3	3	3
	Number of new bridges/watercrossings required for pathway	4	3	4	4	3	4	4	4	3	4
	Approval requirements	4	2	3	4	2	3	4	4	2	3
	Constructability Subtotal	*12*	*8*	*10*	*12*	*8*	*10*	*11*	*11*	*8*	*10*
	Constructability of Pathway Score	*4.0*	*2.7*	*3.3*	*4.0*	*2.7*	*3.3*	*3.7*	*3.7*	*2.7*	*3.3*
Natural Environment	Impact on groundwater	4	4	4	4	4	4	4	4	4	4
	Impact on surface water and aquatic habitat	4	2	2	4	2	2	4	4	2	2
	Impact on sensitive habitat and species	4	3	3	4	3	3	4	4	3	3
	Vegetation Removal	4	2	3	4	2	3	4	4	2	3
	Natural Environment Subtotal	*16*	*11*	*12*	*16*	*11*	*12*	*16*	*16*	*11*	*12*
	Natural Environment Score	*4.0*	*2.8*	*3.0*	*4.0*	*2.8*	*3.0*	*4.0*	*4.0*	*2.8*	*3.0*
Cost	Capital costs	4	2	3	3	2	3	4	4	2	3
	Operating and maintenance costs	4	3	3	4	3	3	4	4	3	3
	Cost Subtotal	*8*	*5*	*6*	*7*	*5*	*6*	*8*	*8*	*5*	*6*
	Cost Score	*4.0*	*2.5*	*3.0*	*3.5*	*2.5*	*3.0*	*4.0*	*4.0*	*2.5*	*3.0*
Total "weighted" score		*23.4*	*20.8*	*22.4*	*21.8*	*17.1*	*19.1*	*22.6*	*21.7*	*[illegible]*	*26.3*
Total Score expressed as a percentage of the highest possible score of 32		73.2	64.8	70.1	68.0	53.4	59.6	70.6	67.7	[illegible]	82.0

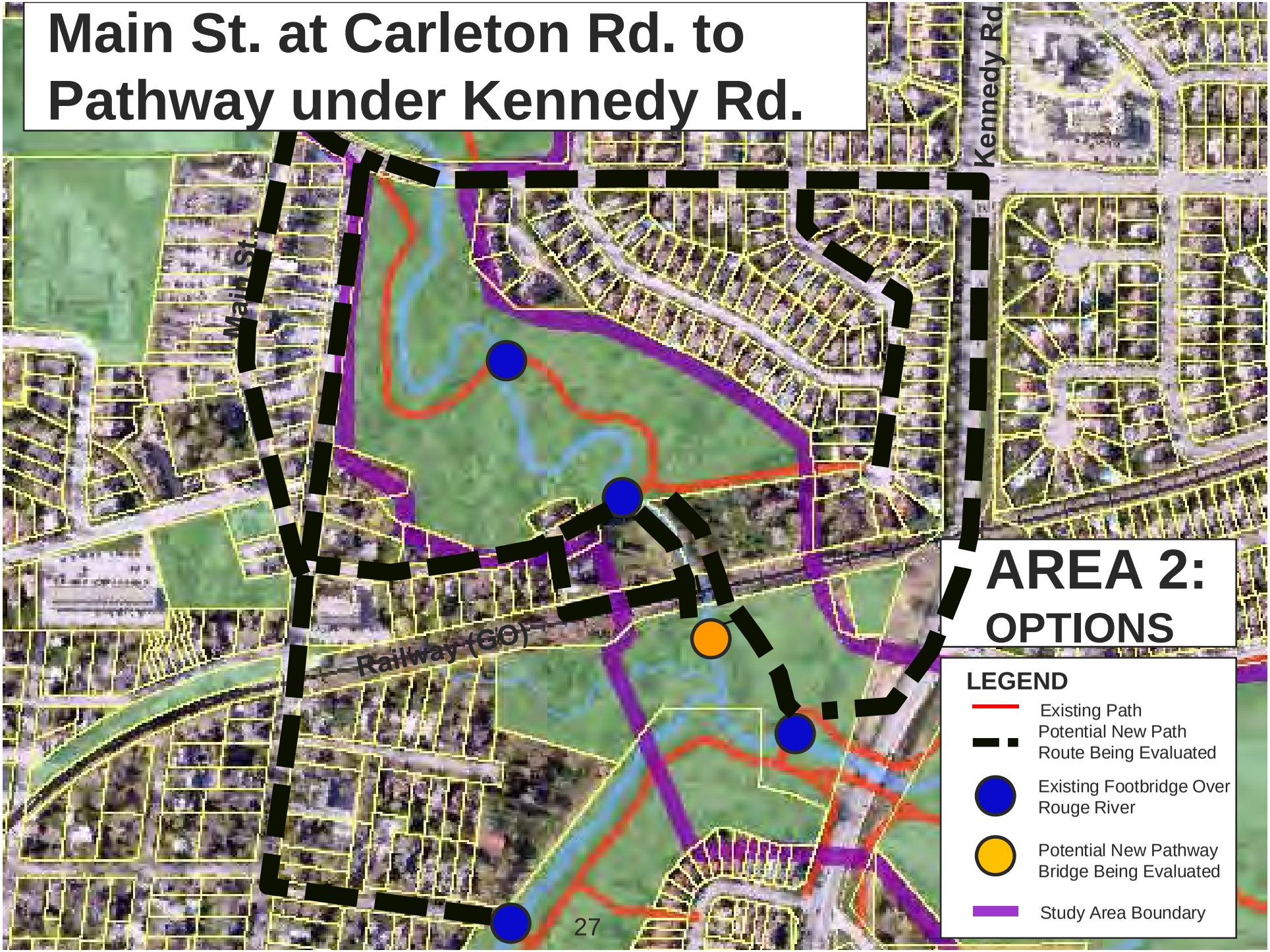

16th Ave
Kennedy Rd.
Carleton Rd.
AREA 1:
OPTIONS
LEGEND
Existing Path
Potential New Path
Route Being Evaluated
Existing Footbridge
Potential New Pathway
Bridge Being Evaluated
Study Area Boundary
16th Ave. to Main
St. at Carleton Rd.

Area 1 Summary

- 6 Options evaluated
- Very complete pathway network already in place
- Very few informal side pathways
- Majority of pathways are 2.2 - 2.4m, some wider, a few narrower
- Majority of existing pathways are asphalt
- 9 existing pathway bridges
- 0 new pathway bridges
- Consider improvements to existing pathways to improve accessibility
- Consider hard surfacing pathway along west side of Toogood Pond to define edges and reduce trampling/erosion along edges of pathway
- **Highest Scoring Option = 1A (score 83.3)**

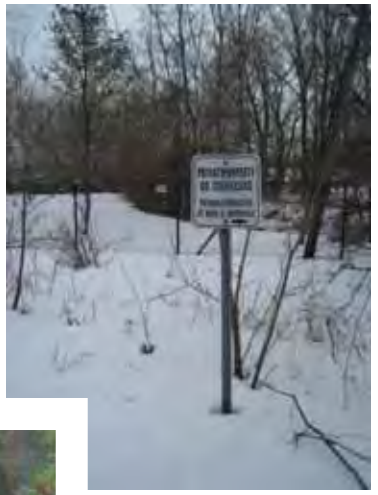

16th Ave
Kennedy Rd.
Carleton Rd.
Area 1:
Recommended
Alignment
LEGEND
Existing Path
Potential New Path
Route Being Evaluated
Existing Footbridge
Potential New Pathway
Bridge Being Evaluated
Study Area Boundary

Main St. at Carleton Rd. to Pathway under Kennedy Rd.

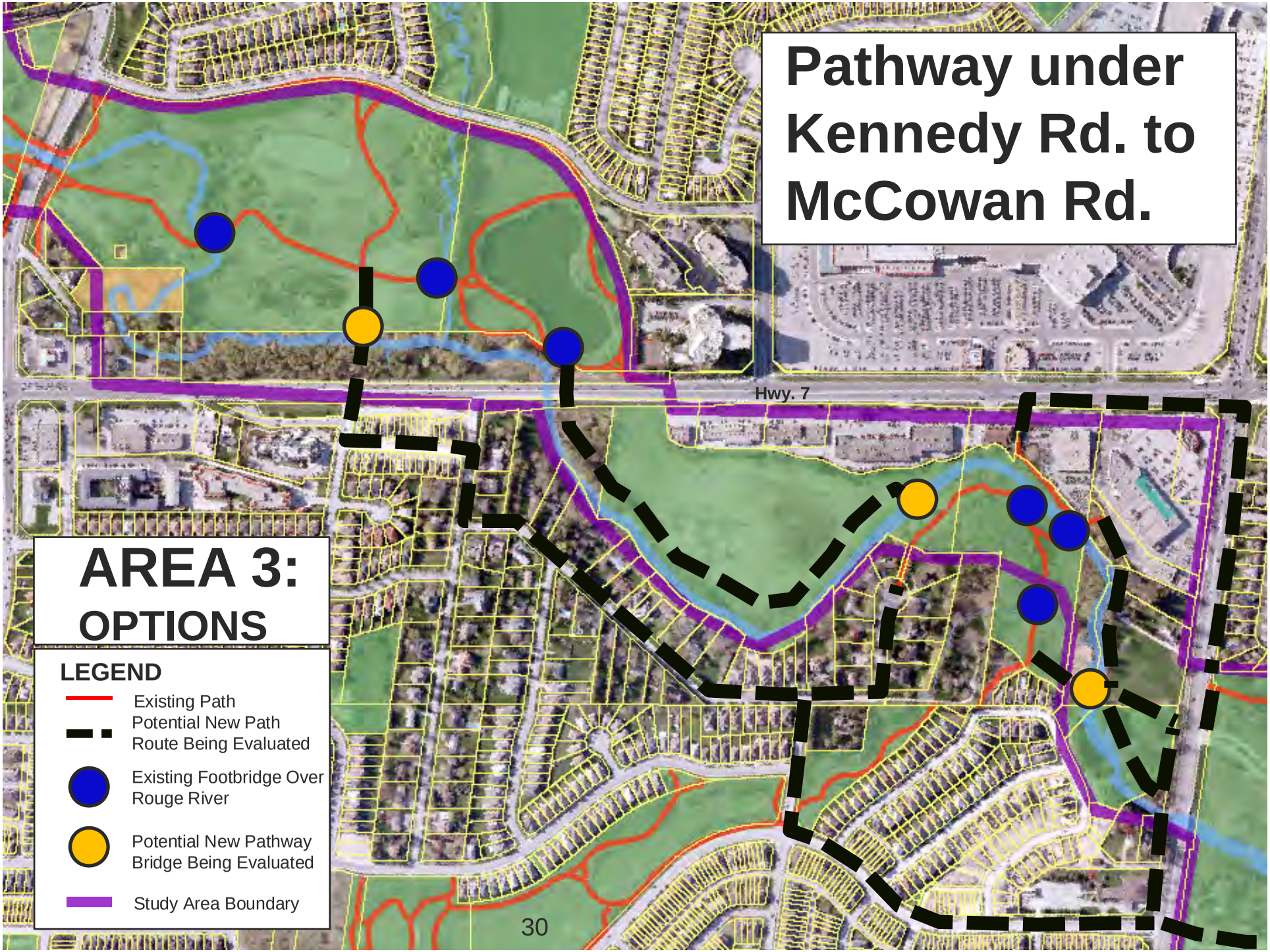


Area 2 Summary

- 10 Options evaluated
- Existing pathways in the north and south portion of the area separated by a short gap
- GO line creates a barrier, and any options that included a new at-grade crossing of the GO line were ruled out based on feasibility of approval with GO Transit
- Options that involved the lane behind Main Street were ruled out due to potential conflicts with vehicles pulling in and out of parking spaces, especially on busy weekends and holidays
- Options that involved crossing Carleton at the Rotary Park Gate were ruled out due to poor sight lines along Carleton and the steep pathway approach to street level
- 5 existing pathway bridges
- 0 new pathway bridges
- Highest scoring option requires a short connection over private property utilizing a corridor where a Town sanitary sewer currently exists
- Consider good wayfinding signage to “invite” pathway users to visit shops on Main Street
- **Highest Scoring Option = 2J (score 82.0)**

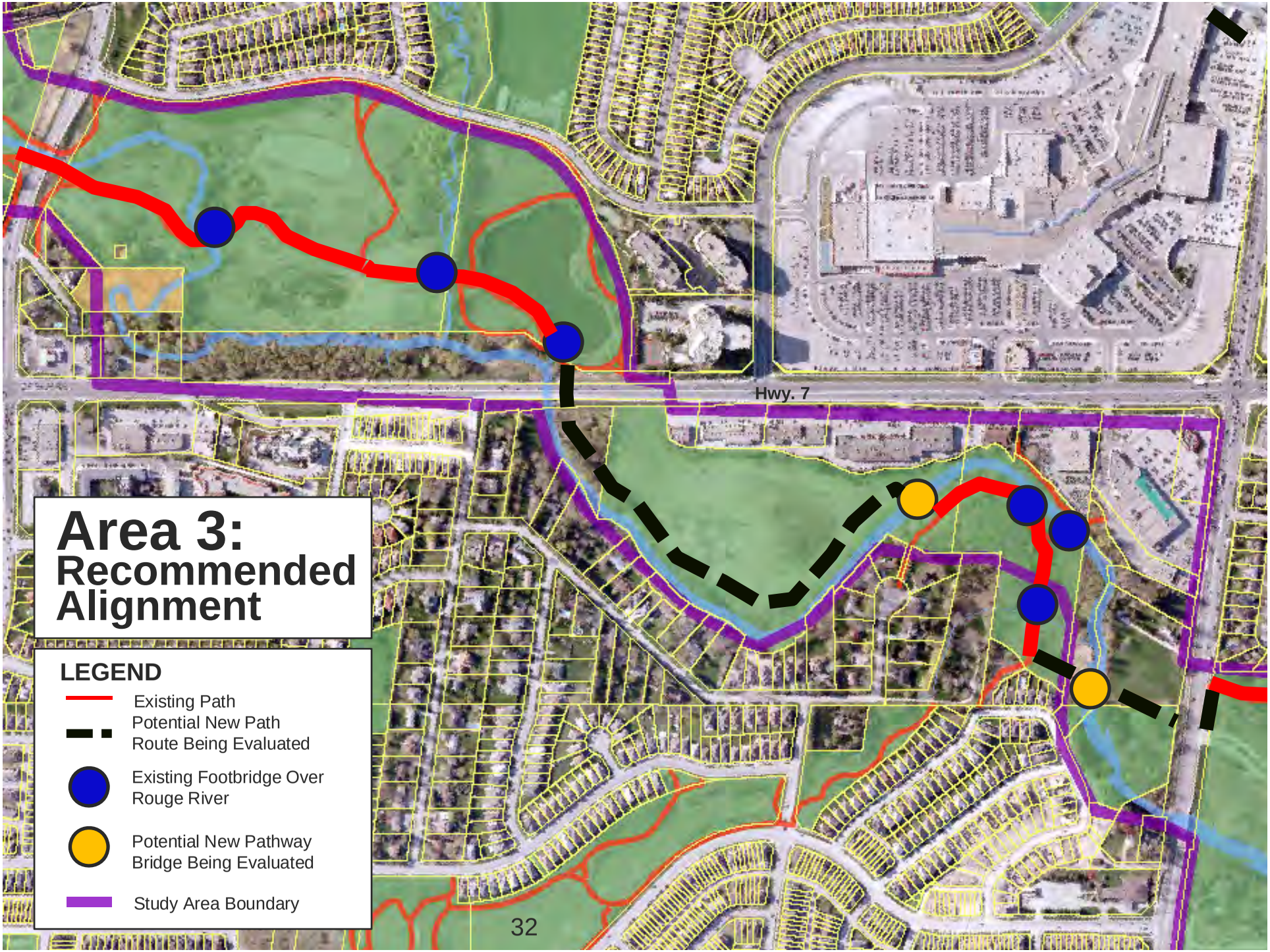


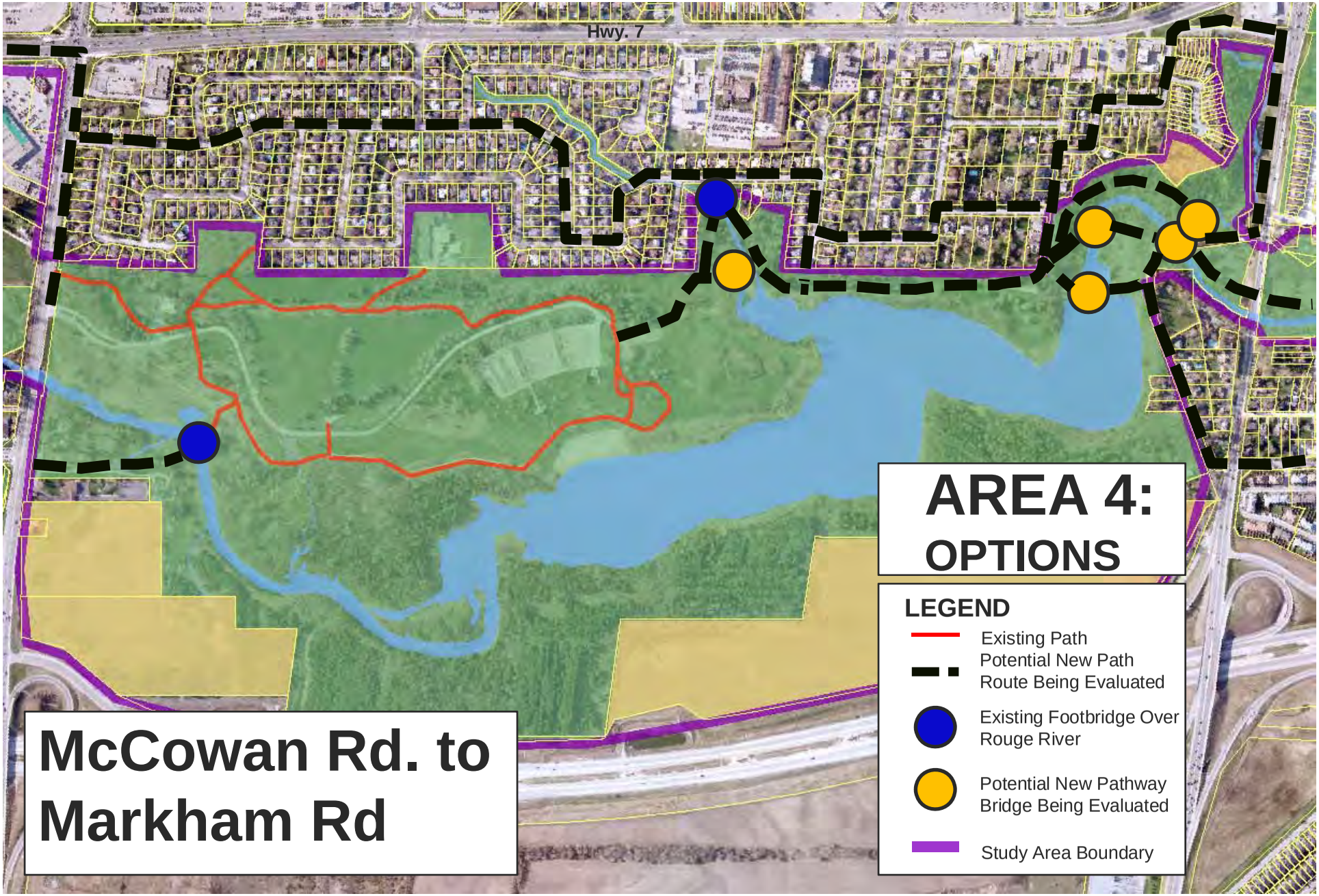

Kennedy Rd.
Main St.
Railway (GO)
Area 2:
Recommended
Alignment
LEGEND
Existing Path
Potential New Path
Route Being Evaluated
Existing Footbridge Over
Rouge River
Potential New Pathway
Bridge Being Evaluated
Study Area Boundary


Pathway under Kennedy Rd. to McCowan Rd.
Hwy. 7
AREA 3:
OPTIONS
LEGEND
Existing Path
Potential New Path Route Being Evaluated
Existing Footbridge Over Rouge River
Potential New Pathway Bridge Being Evaluated
Study Area Boundary

Area 3 Summary

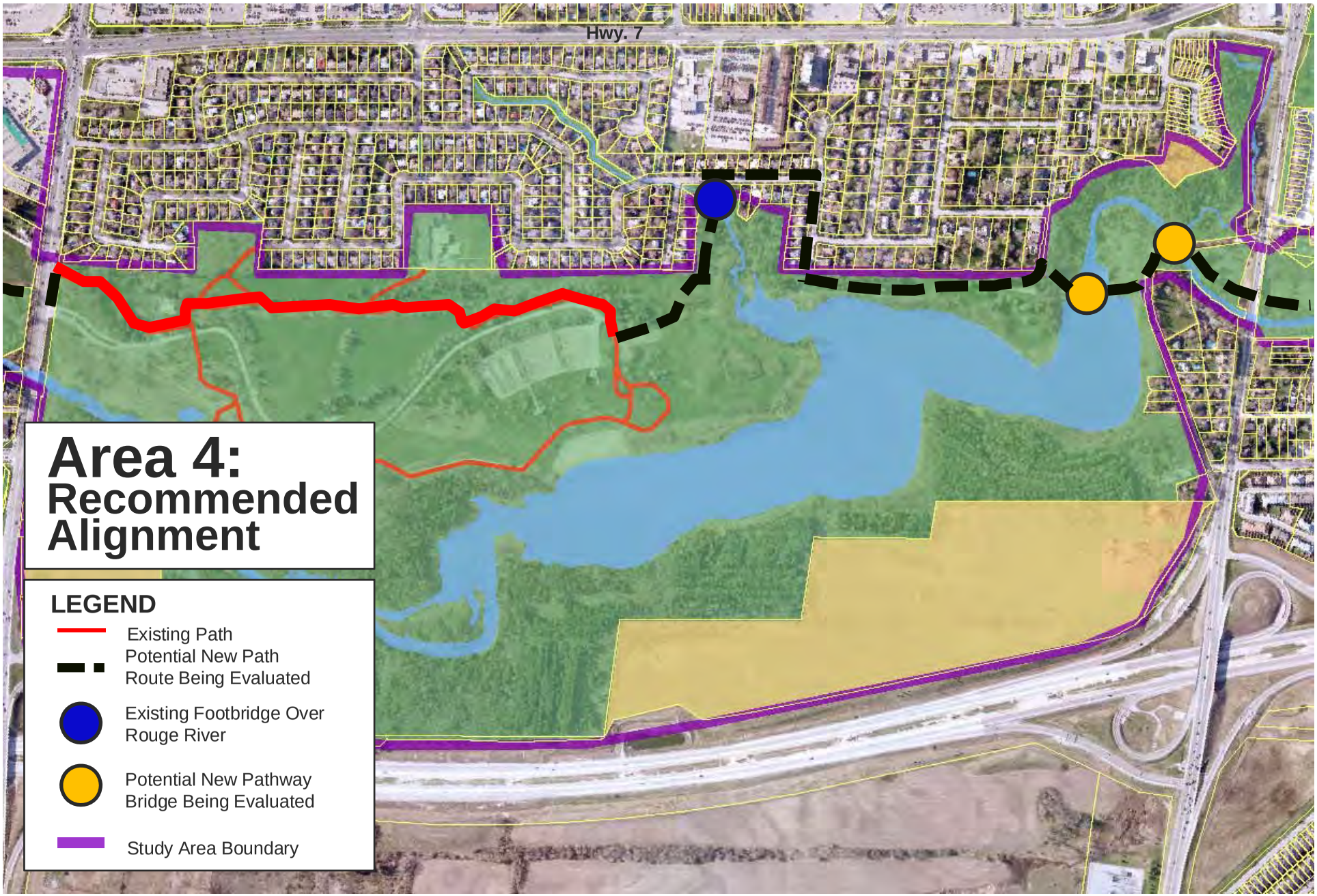
- 7 Options evaluated
- Existing and complete pathway network around Waldon Pond from Kennedy Rd. to Hwy.7
- Crossing below Hwy. 7 at Rouge bridge is feasible (ample headroom for pathway that above water level)
- Requires access over one private property immediately south of Hwy. 7 and two parcels near McCowan Rd.
- 6 existing pathway bridges
- 2 new pathway bridges
- Pedestrian/pathway crossing of McCowan Rd at the entrance to Milne Dam Conservation Park will require a pedestrian activated signal
- Crossing below McCowan at the Rouge bridge is not feasible due to insufficient clearance between bridge understructure and water line
- **Highest Scoring Option = 3E (score 66.1)**

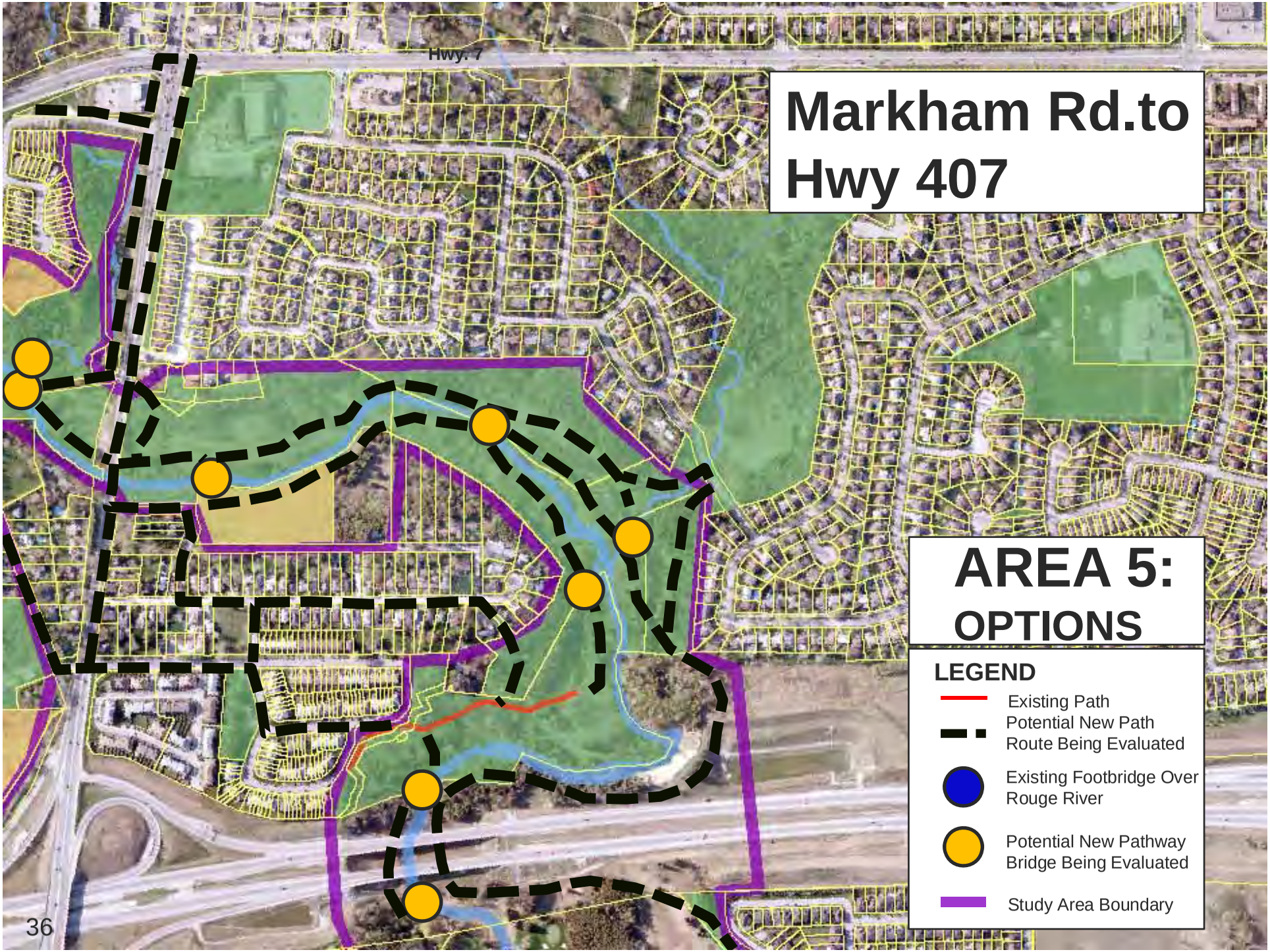

Hwy. 7
Area 3:
Recommended
Alignment
LEGEND
Existing Path
Potential New Path
Route Being Evaluated
Existing Footbridge Over
Rouge River
Potential New Pathway
Bridge Being Evaluated
Study Area Boundary


Hwy. 7
AREA 4:
OPTIONS
LEGEND
Existing Path
Potential New Path
Route Being Evaluated
Existing Footbridge Over
Rouge River
Potential New Pathway
Bridge Being Evaluated
Study Area Boundary
McCowan Rd. to
Markham Rd

Area 4 Summary

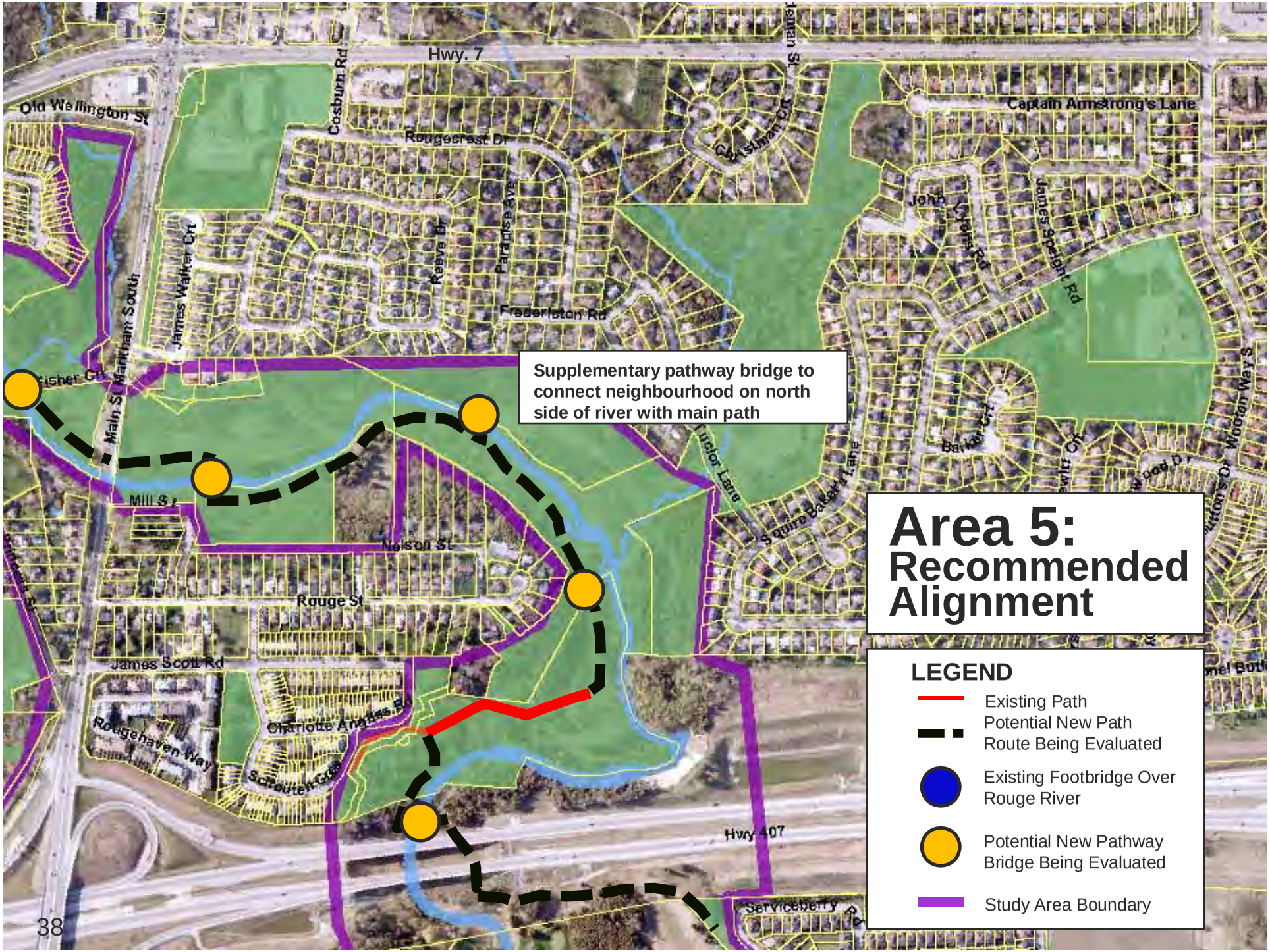
- 26 Options evaluated
- Options utilizing the “summer bridge” to Camp Chimo were ruled out due to the seasonal nature of the bridge, concerns regarding camper security and previous recommendations by the Milne Working Group
- Public “desire” to make connections east along the Rouge as evidenced by well used informal footpaths
- 2 existing pathway bridges
- 2 new pathway bridges
- Existing pathway loop in west half of Milne Park requires minor improvements in 3-4 locations
- TRCA support for Option 4s (top of bank pathway to Drakefield, on street Drakefield and Willowgate)
- Markham Engineering Option 4s- a sidewalk or designated space with line painting on Drakefield and Willowgate
- **Highest Scoring Option = 4S (score 66.1)**

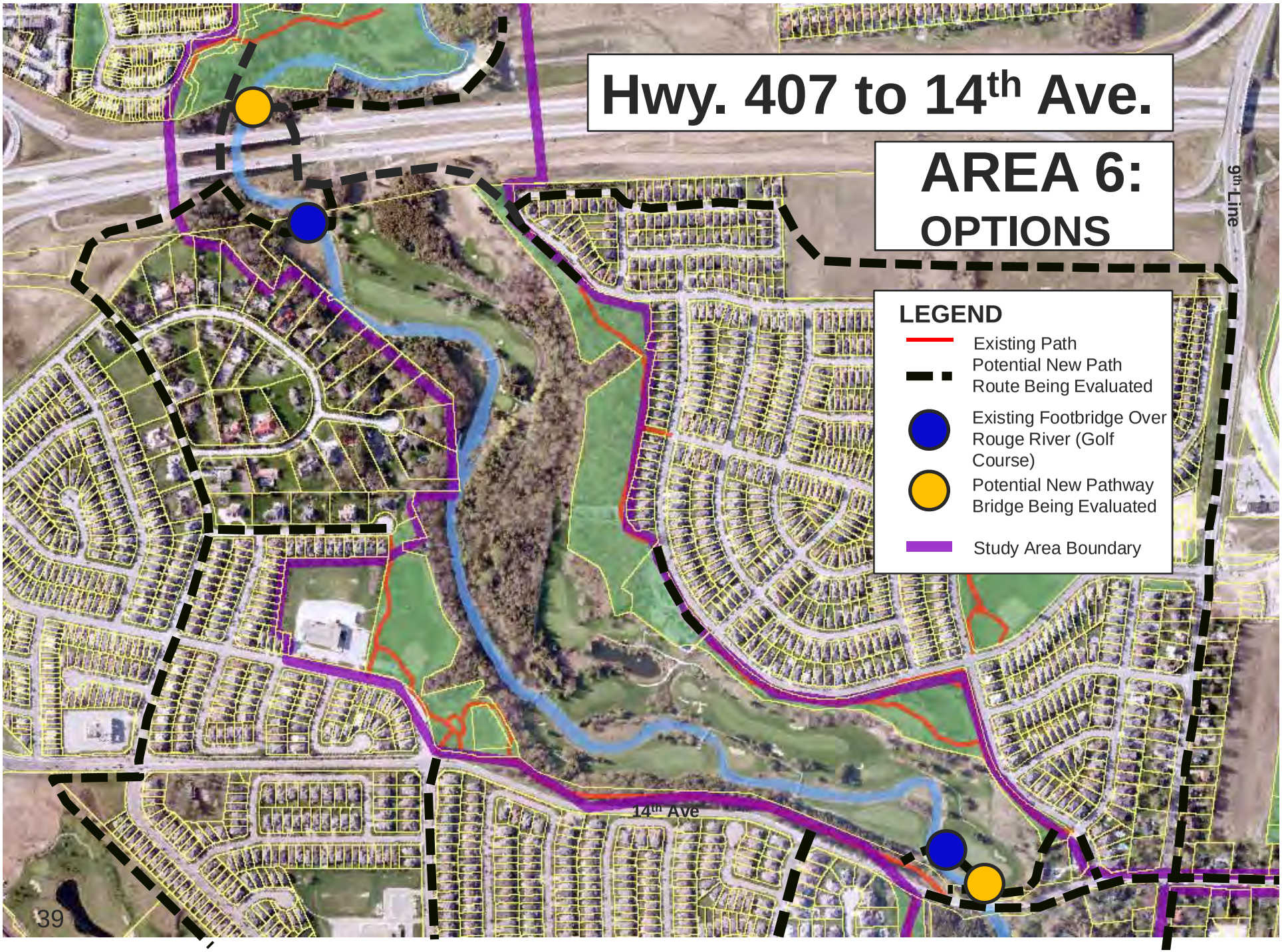

Hwy. 7
Area 4:
Recommended
Alignment
LEGEND
Existing Path
Potential New Path
Route Being Evaluated
Existing Footbridge Over
Rouge River
Potential New Pathway
Bridge Being Evaluated
Study Area Boundary


Hwy. 7
Markham Rd.to
Hwy 407
AREA 5:
OPTIONS
LEGEND
Existing Path
Potential New Path
Route Being Evaluated
Existing Footbridge Over
Rouge River
Potential New Pathway
Bridge Being Evaluated
Study Area Boundary

Area 5 Summary

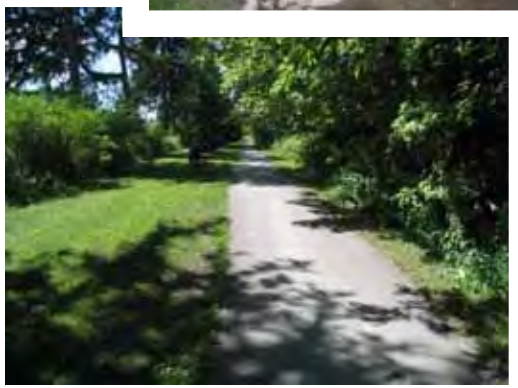
- 11 Options evaluated
- Only one existing formalized pathway in this section, a stormwater management access route from Charlotte Angliss Rd. to valley floor
- Numerous well used informal footpaths along entire length of Rouge River, on both sides of the river
- No clearly defined “main route” results in a proliferation of informal footpaths
- Several areas where existing informal footpaths in steeply sloped areas and other activities such as camp fires, bike ramps etc. are significantly impacting sensitive areas
- Several locations where existing informal footpaths compromise user safety
- 0 existing pathway bridges
- 3 new pathway bridges
- Consider one supplementary pathway bridge mid-way along this section of the valley (not required as part of preferred route-location identified as part of several of the lower scoring options). This “extra” bridge would provide a formalized pathway connection to neighbourhoods on the north side of the valley and future pathway connection in valleyland north of Tuclor Lane
- **Highest Scoring Option = 5J (score 68.5)**

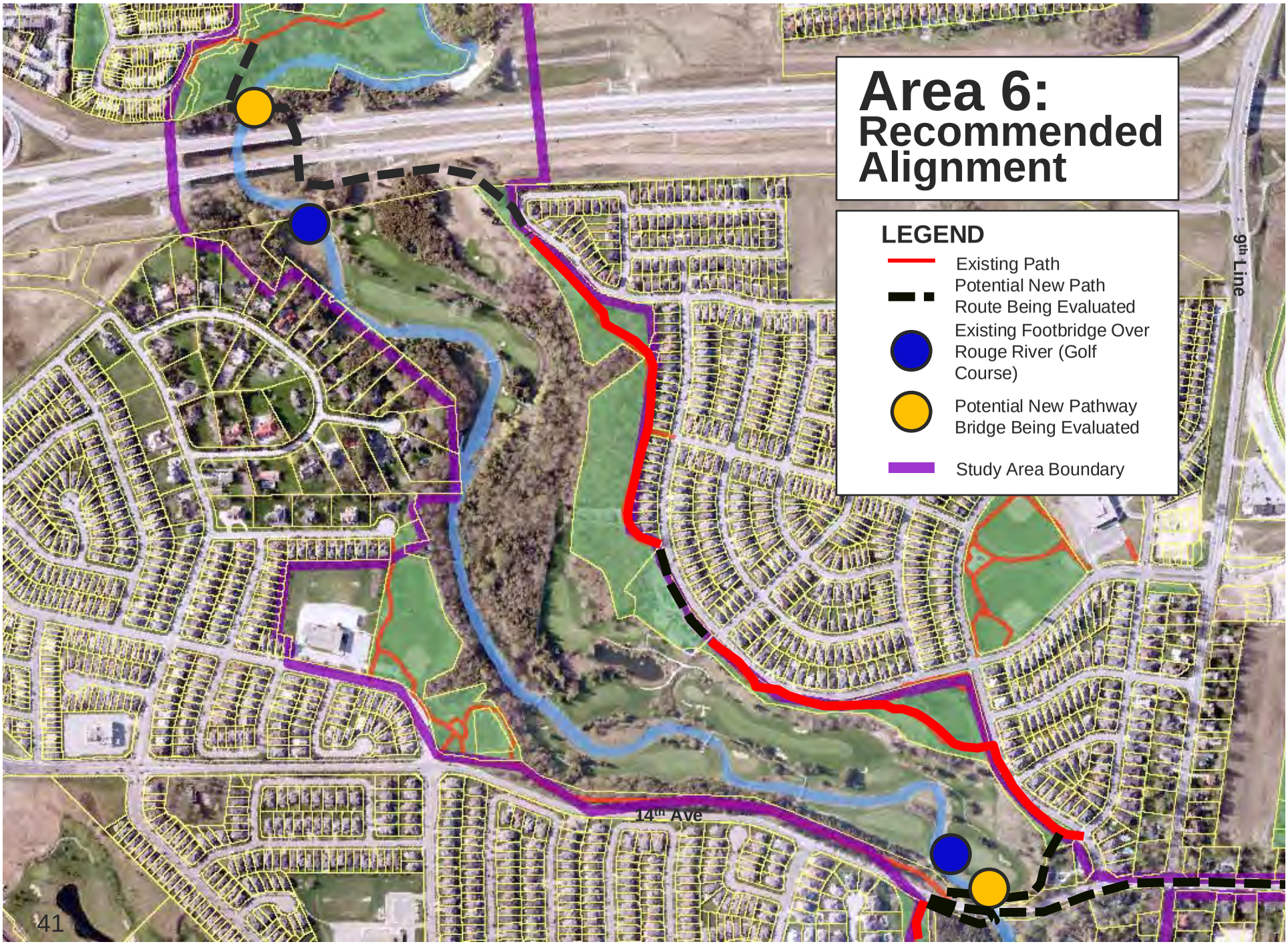

Hwy. 7
Old Wellington St
Cosburn Rd
Rougecrest Dr
Captain Armstrong's Lane
Chastman Cir
Reserve Dr
Paradise Ave
Fredericton Rd
James Walker Cir
Main St Markham South
Fisher Cir
Supplementary pathway bridge to connect neighbourhood on north side of river with main path
Mill St
Nelson St
Rouge St
James Scott Rd
Rougehaven Way
Charlotte Angelas Rd
Schoutenden
Hwy 407
Serviceberry Rd
Area 5:
Recommended Alignment
LEGEND
Existing Path
Potential New Path
Route Being Evaluated
Existing Footbridge Over Rouge River
Potential New Pathway Bridge Being Evaluated
Study Area Boundary

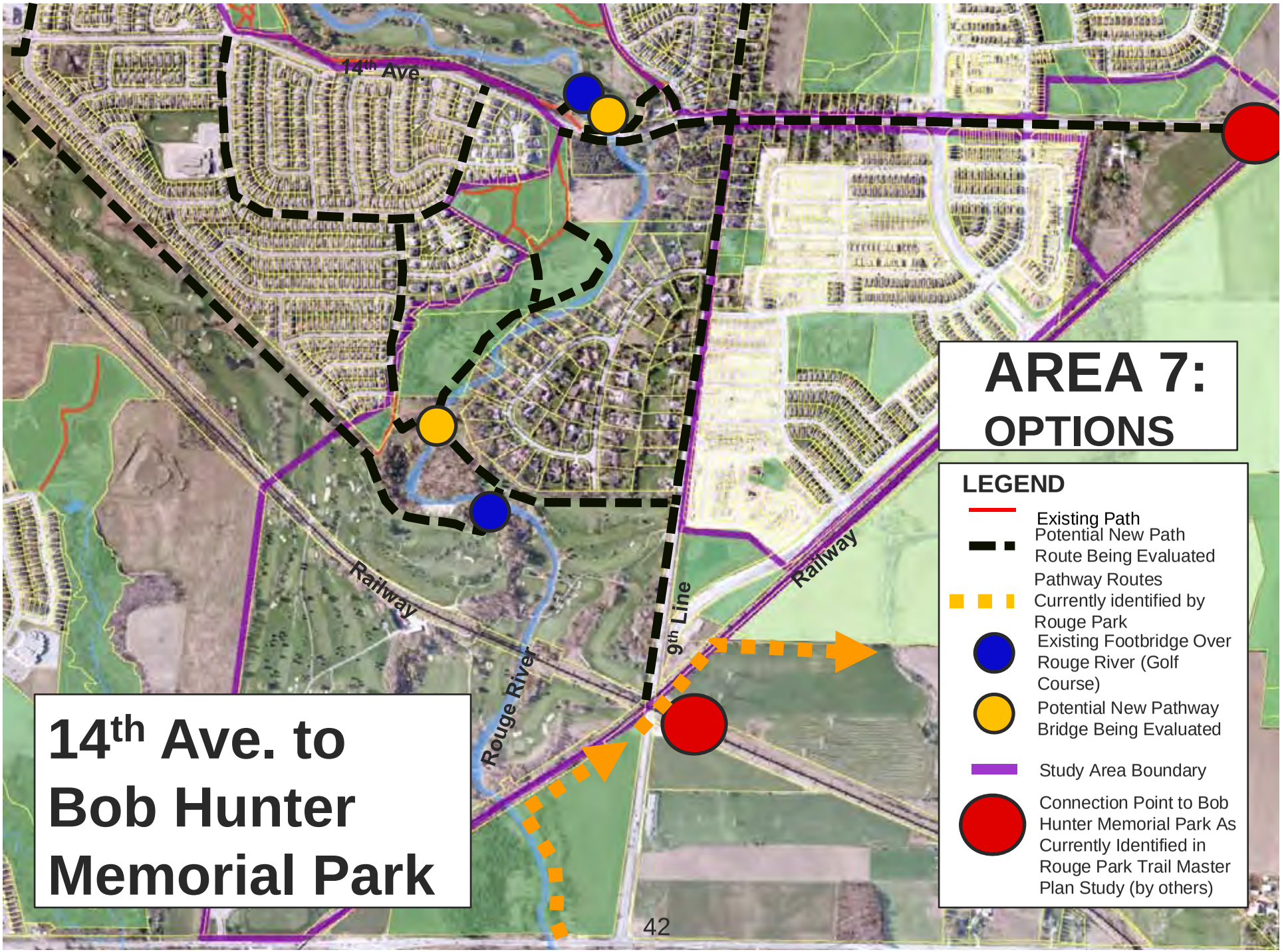

Hwy. 407 to 14th Ave.
AREA 6:
OPTIONS
LEGEND
Existing Path
Potential New Path
Route Being Evaluated
Existing Footbridge Over
Rouge River (Golf
Course)
Potential New Pathway
Bridge Being Evaluated
Study Area Boundary
9th Line
14th Ave

Area 6 Summary

- 6 Options evaluated
- Existing pathway along most of east side of valley and approximately half of west side of valley
- Golf course in valley floor limits access to edge of river
- 14th Ave. is a barrier
- Crossing below 14th Ave. bridge on west side of river is feasible
- 0 existing pathway bridges
- 1 new pathway bridge
- Potential to utilize golf course bridges at north and south end of this section of the valley were ruled out (violates lease agreement)
- Pathway connections outside of active area of the golf course at north end (near Hwy. 7) and south end (near 14th Ave) are feasible, and potential conflicts with golf can be mitigated
- **Highest Scoring Option = 6E (score 73.2)**




Area 6:
Recommended Alignment
LEGEND
Existing Path
Potential New Path Route Being Evaluated
Existing Footbridge Over Rouge River (Golf Course)
Potential New Pathway Bridge Being Evaluated
Study Area Boundary
9th Line
14th Ave

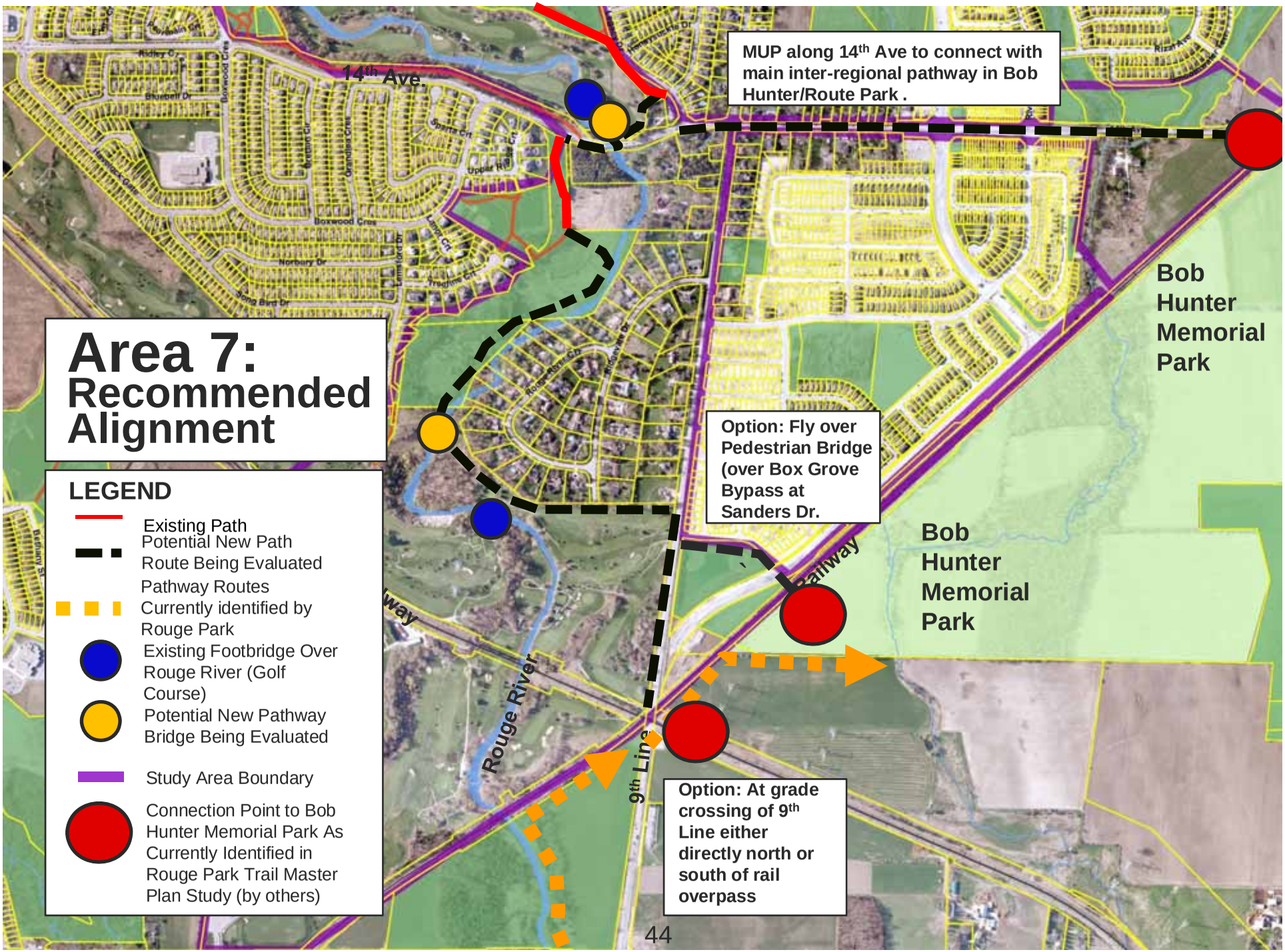

14th Ave.
Railway
Rouge River
9th Line
Railway
AREA 7:
OPTIONS
LEGEND
Existing Path
Potential New Path Route Being Evaluated
Pathway Routes Currently identified by Rouge Park
Existing Footbridge Over Rouge River (Golf Course)
Potential New Pathway Bridge Being Evaluated
Study Area Boundary
Connection Point to Bob Hunter Memorial Park As Currently Identified in Rouge Park Trail Master Plan Study (by others)
14th Ave. to Bob Hunter Memorial Park

Area 7 Summary

- 17 Options evaluated
- Short formal pathway immediately south of 14th Ave.
- Limited/no informal pathways along river south of short formalized pathway
- 0 existing pathway bridges
- 1 new pathway bridge
- Preferred route involves connection to 9th Line via the north edge of golf course property (privately owned)
- **Highest Scoring Option = 7C (score 71.9)**

View north along 9th line at rail overpass

View east of potential flyover point at Sanders Dr.


Area 7:
Recommended Alignment
LEGEND
Existing Path
Potential New Path Route Being Evaluated
Pathway Routes Currently identified by Rouge Park
Existing Footbridge Over Rouge River (Golf Course)
Potential New Pathway Bridge Being Evaluated
Study Area Boundary
Connection Point to Bob Hunter Memorial Park As Currently Identified in Rouge Park Trail Master Plan Study (by others)
14th Ave.
MUP along 14th Ave to connect with main inter-regional pathway in Bob Hunter/Route Park .
Option: Fly over Pedestrian Bridge (over Box Grove Bypass at Sanders Dr.
Option: At grade crossing of 9th Line either directly north or south of rail overpass
Rouge River
9th Line
Bob Hunter Memorial Park
Bob Hunter Memorial Park

PART 4:

Design Concept

Design Concept

Pathway Alignment

- Minor refinements as required during detail design for individual pathway segments as they are scheduled for implementation

Pathway Surface Type and Width

- Refinements as required during the detail design stage

Bridge Locations

- Illustrates locations of existing and proposed pathway bridges
- minor adjustments to proposed locations may occur through the design and approval process

Parking and Access Points

- Illustrates main parking areas and access points
- Location for accessible parking and accessible pathways

Pathway Signage

- Illustrates location for trail head and directional signs

Priorities for Implementation and Opinion of Construction Cost

- Costs developed using unit prices
- Costs for access over private land are not included (e.g. acquisition, easement etc.)

Pathways and Trails Facility Types

(from the Town of Markham Trails Master Plan)

	TYPE I	TYPE II	TYPE III	TYPE IV	TYPE V	TYPE VI
FACILITY TYPE	PRIMARY MULTI-USE TOWN WIDE PATHWAY	SECONDARY TOWN WIDE PATHWAY	PARK PATHWAY	TRAIL	INFORMAL TRAIL	EXISTING SIDEWALK CONNECTION
GENERAL DESCRIPTION	**Off road town wide loops and scenic routes**	**Off road connections to local neighbourhoods**	**Park pathways**	**Local routes through natural areas**	**Smaller, local, informal routes through natural areas**	**Typical municipal sidewalks used as connecting routes between parks and open spaces**
WIDTH	**3.0 meters – No Maximum**	**3.0-4.0 meters**	**2.0-2.4 meters**	**1.0-1.5 meters**	**worn trails**	**per municipal standards**
SURFACE TYPE	**Paved**	**Generally paved, may be gravel**	**Varies**	**unpaved, paved only in special instances**	**dirt, mulch or worn in grass**	**Concrete / Improved streetscape materials**

Applies to most parts of study area if we look only to the Master Plan

Pathways and Trails Facility Types

(from the Town of Markham Trails Master Plan)

	TYPE I	TYPE II	TYPE III	TYPE IV	TYPE V	TYPE VI
FACILITY TYPE	PRIMARY MULTI-USE TOWN WIDE PATHWAY	SECONDARY TOWN WIDE PATHWAY	PARK PATHWAY	TRAIL	INFORMAL TRAIL	EXISTING SIDEWALK CONNECTION
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SURFACE TYPE	**Paved**	**Generally paved, may be gravel**	**Varies**	**unpaved, paved only in special instances**	**dirt, mulch or worn in grass**	**Concrete / Improved streetscape materials**

Applies to some parts of Area 5 if we look only to the Master Plan

However…….

Based on the Route Selection Principles developed for this project, the facility width and surface type needs to be adjusted. Here are some key notes from discussions with the CLC:

- Not all pathways can be accessible (perhaps 70% accessible, 30% not accessible).

- Operational requirements should not dictate pathway width, operational requirements should be modified to reflect the width of the path.

- Consider loops, very few users will walk the pathway from end to end, the reality is that people will likely use it in sections, therefore it doesn't need to be the same design standard from end to end.

Recommendations for pathway width and surface type are provided in the design concept and would be finalized as part of detail design.

Accessibility for Ontarians with Disabilities Act (AODA-2005): "to make Ontario accessible for people with disabilities by 2025"

Ministry of Community and Social Services

Standards Development Committee

- Prepares a draft standard for public review
- Following public review Ministry staff sends the revised standard to the Minister
- Minister has 90 days to recommended that it be enacted in whole or part, or with changes.
- Once enacted it becomes law

Built Environment Standard: "The Accessibility Standard for the Built Environment will help remove barriers in buildings and outdoor spaces for people with disabilities. The standard will only apply to new construction and extensive renovation. **Work is continuing on this standard, expected to build on the Ontario Building Code**."
(http://www.mcss.gov.on.ca/en/mcss/404.aspx?rdr)

Accessibility cont'd

Chapter 11- of the Final Proposed Built Environment Standard deals with technical requirements for paths and trails in natural environments, parks and wilderness areas

- Goal is to give people with disabilities appropriate accessibility to natural environments **wherever it is practical**
- Based on the premise that using a pathway/trail is a voluntary recreational activity.
- Trails are different from exterior walkways - these are covered under Chapter 5- Accessible Exterior Routes

Key Design Criteria

- Maximum running/longitudinal slope of 10%
- Provision of level rest area every 100m where slope exceeds 5%
- Maximum cross slope of 10%
- Minimum width 1.5m
- Surfaces are to be firm, stable with minimal glare
- High tonal or textural changes to distinguish the edge
- Criteria also address changes in level, openings in the surface, edge protection (e.g. near water)
- Signage shall be easily understood and detectable by users of all abilities

Accessibility Conclusions for this Project:

- Not all pathways within the study area will be designed to be accessible
- Create accessible pathways where possible and practical (this is consistent with suggestions from the CLC)
- Select key areas to create accessible pathways (e.g. Toogood Pond, Milne Park Conservation Area) and do it well
- Follow the design criteria outlined in the Final Proposed Built Environment Standard
- **Signage is Key**: Ensure that signage and mapping/messaging clearly communicates which pathways are accessible so that users can make an informed personal decision about which pathways they will use

Pathway Signs

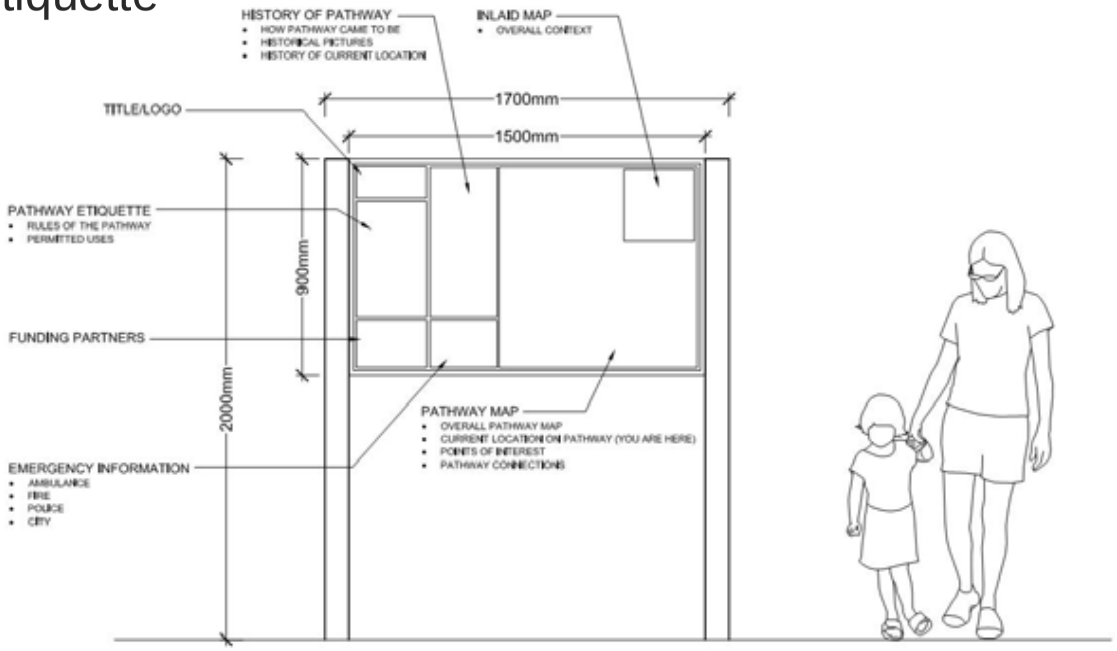
- An important element of the pathway design
- Develop a “Family of Signs” by creating a design theme and characteristics that can be reflected in the different types of signs (materials, colours, graphics, fonts, etc.)
- Gives the signs a consistent and finished look that helps to unify the system and can be essential in branding the pathway system as a whole
- Careful balance between providing enough information for users and avoiding over-signing / sign clutter
- Pathway signs can be grouped into:

    - Trail head Signs
    - Directional / Marker Signs
    - Interpretive Signs
    - Regulatory / Safety / Information Signs

Recommendations for sign type and location are provided in the design concept and would be finalized as part of detail design

Trail Head Signs

- Largest of the pathway signs in the “family of signs”
- Located at main parking areas
- Provide overview of the pathway route/network in the form of map(s)
- Communicate level of accessibility so users can make an informed decision about whether to proceed on the path or not
- Also typically provide emergency contact information, an introduction to interpretive themes, and pathway etiquette



Trail Directional / Marker Signs

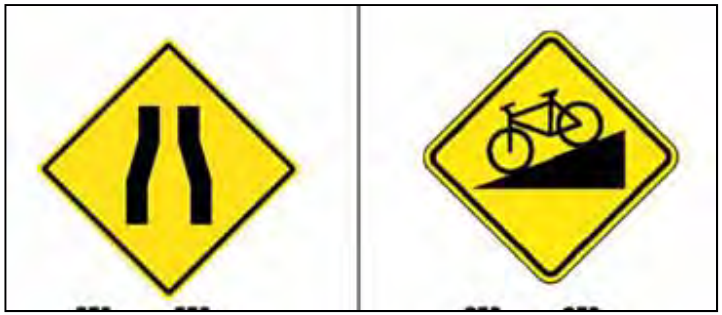
- Located at pathway intersection points and at regular intervals on long uniterrupted sections of pathway
- Assure users they are on the main route
- Contain directional arrows, distance to key destinations along or nearby the pathway, can include GPS information to assist with Emergency Response
- Are an important element in branding the pathway

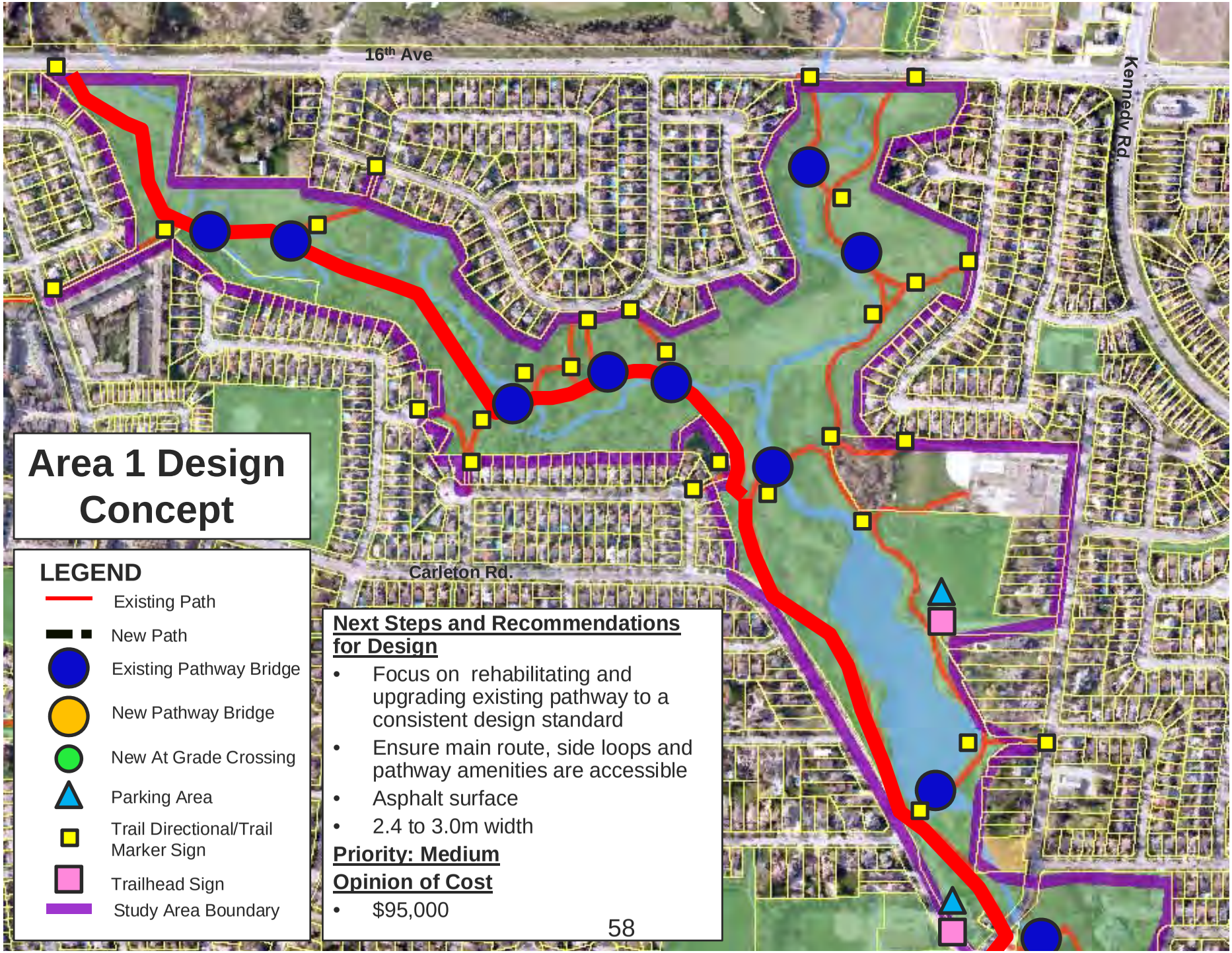
Interpretive Signs

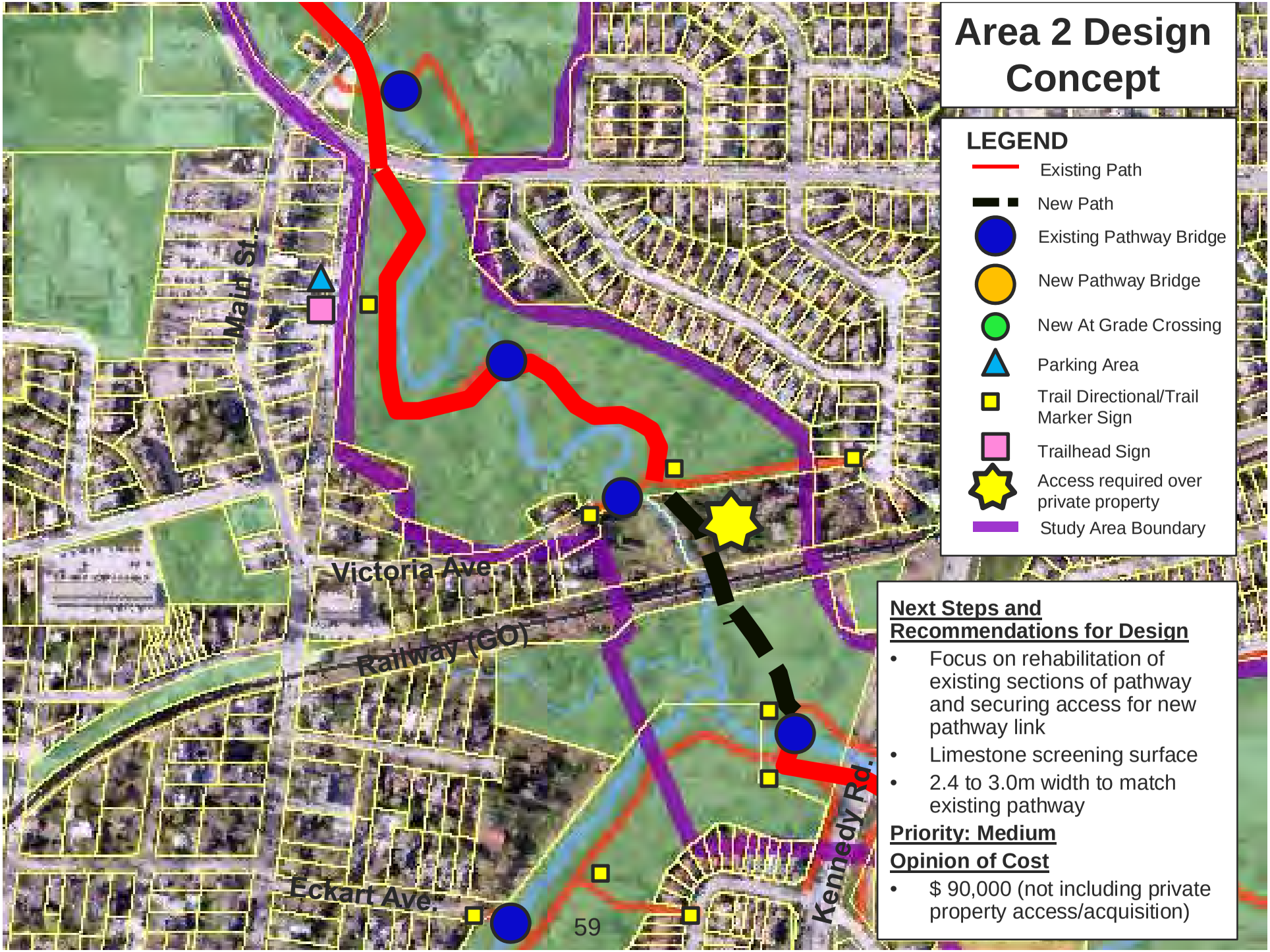
- Located at points of interest along the pathway (natural heritage, cultural heritage, cultural history, significant views)
- Located where there is a learning opportunity
- Can be located at logical rest points, or rest points can be developed at the location where the interpretive sign is located
- Excellent opportunity for partnership (e.g. have local naturalist groups develop the theme and information for the sign)
- Some interpretive signs already in place throughout the study, many more opportunities exist
- In contrast to other types of pathway signs, interpretive signs can be “information intensive” with lots of graphics and text

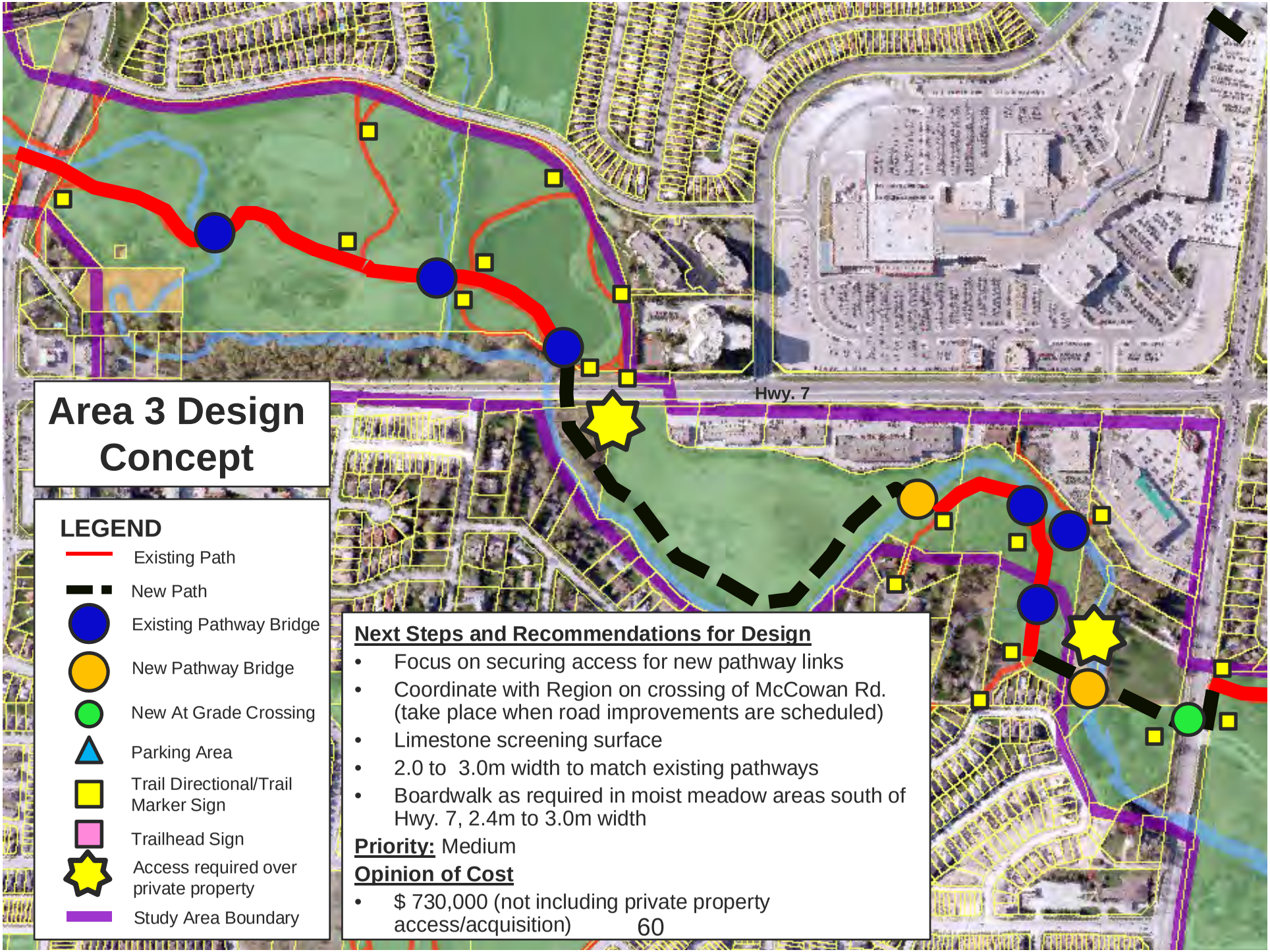
“Regulatory” Signs

- Provide important messages regarding safety (e.g. stop for road crossings, shared pathway, narrow pathway, steep descent ahead etc.)
- Use symbols and sign character that is consistent with those in use on roadway systems
- Sign size is smaller than those used on the roadway system
- Positive reinforcement of pathway user behaviour




16th Ave
Kennedy Rd.
Carleton Rd.
Area 1 Design Concept
LEGEND
Existing Path
New Path
Existing Pathway Bridge
New Pathway Bridge
New At Grade Crossing
Parking Area
Trail Directional/Trail Marker Sign
Trailhead Sign
Study Area Boundary
Next Steps and Recommendations for Design
• Focus on rehabilitating and upgrading existing pathway to a consistent design standard
• Ensure main route, side loops and pathway amenities are accessible
• Asphalt surface
• 2.4 to 3.0m width
Priority: Medium
Opinion of Cost
• $95,000


Area 2 Design Concept
LEGEND
Existing Path
New Path
Existing Pathway Bridge
New Pathway Bridge
New At Grade Crossing
Parking Area
Trail Directional/Trail Marker Sign
Trailhead Sign
Access required over private property
Study Area Boundary
Next Steps and Recommendations for Design
• Focus on rehabilitation of existing sections of pathway and securing access for new pathway link
• Limestone screening surface
• 2.4 to 3.0m width to match existing pathway
Priority: Medium
Opinion of Cost
• $ 90,000 (not including private property access/acquisition)
St. Mary
Victoria Ave.
Railway (GO)
Eckart Ave.
Kennedy Rd.
59



Area 3 Design Concept

LEGEND

- Existing Path
- New Path
- Existing Pathway Bridge
- New Pathway Bridge
- New At Grade Crossing
- Parking Area
- Trail Directional/Trail Marker Sign
- Trailhead Sign
- Access required over private property
- Study Area Boundary

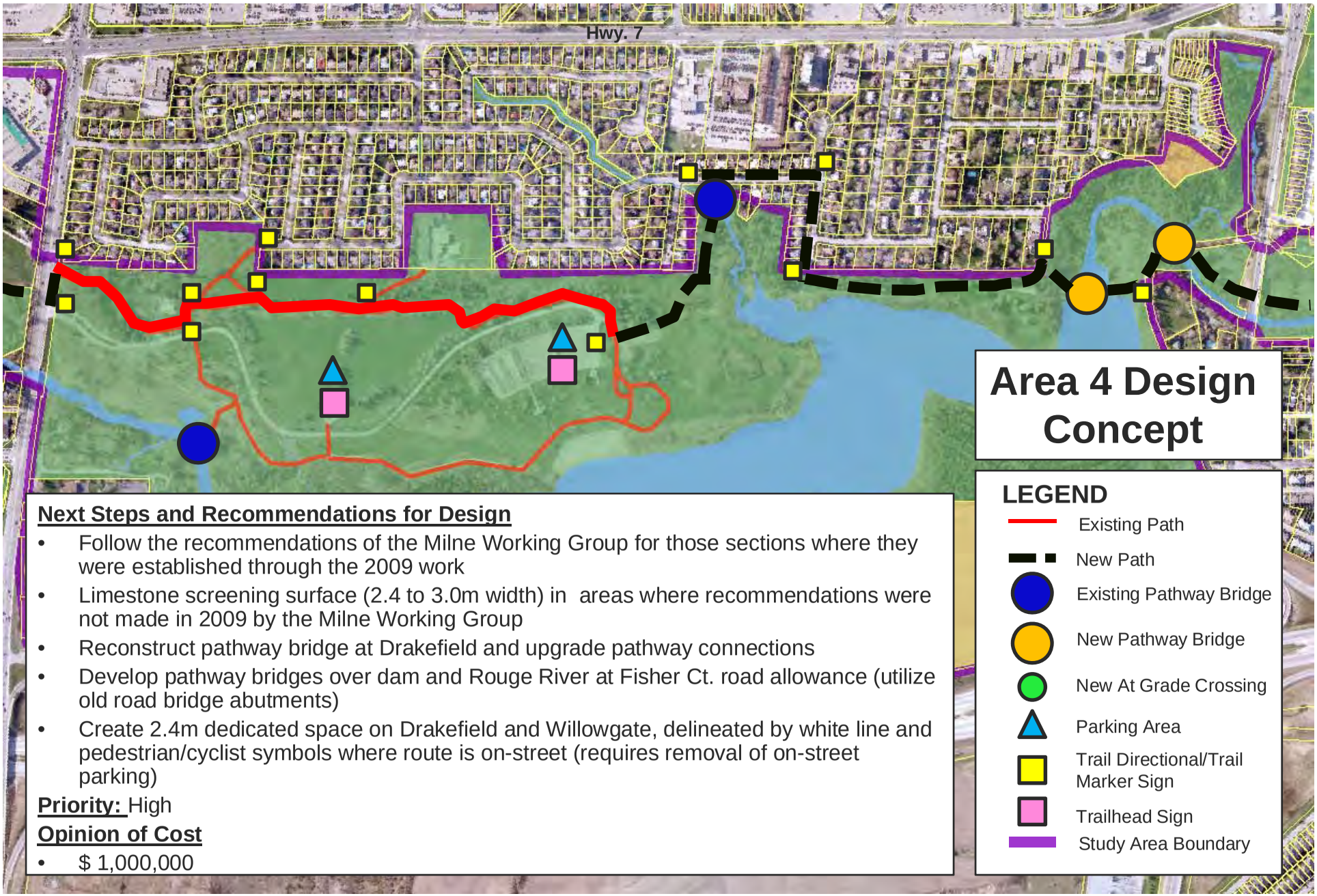
Next Steps and Recommendations for Design

- Focus on securing access for new pathway links
- Coordinate with Region on crossing of McCowan Rd. (take place when road improvements are scheduled)
- Limestone screening surface
- 2.0 to 3.0m width to match existing pathways
- Boardwalk as required in moist meadow areas south of Hwy. 7, 2.4m to 3.0m width

Priority: Medium

Opinion of Cost

- $ 730,000 (not including private property access/acquisition)



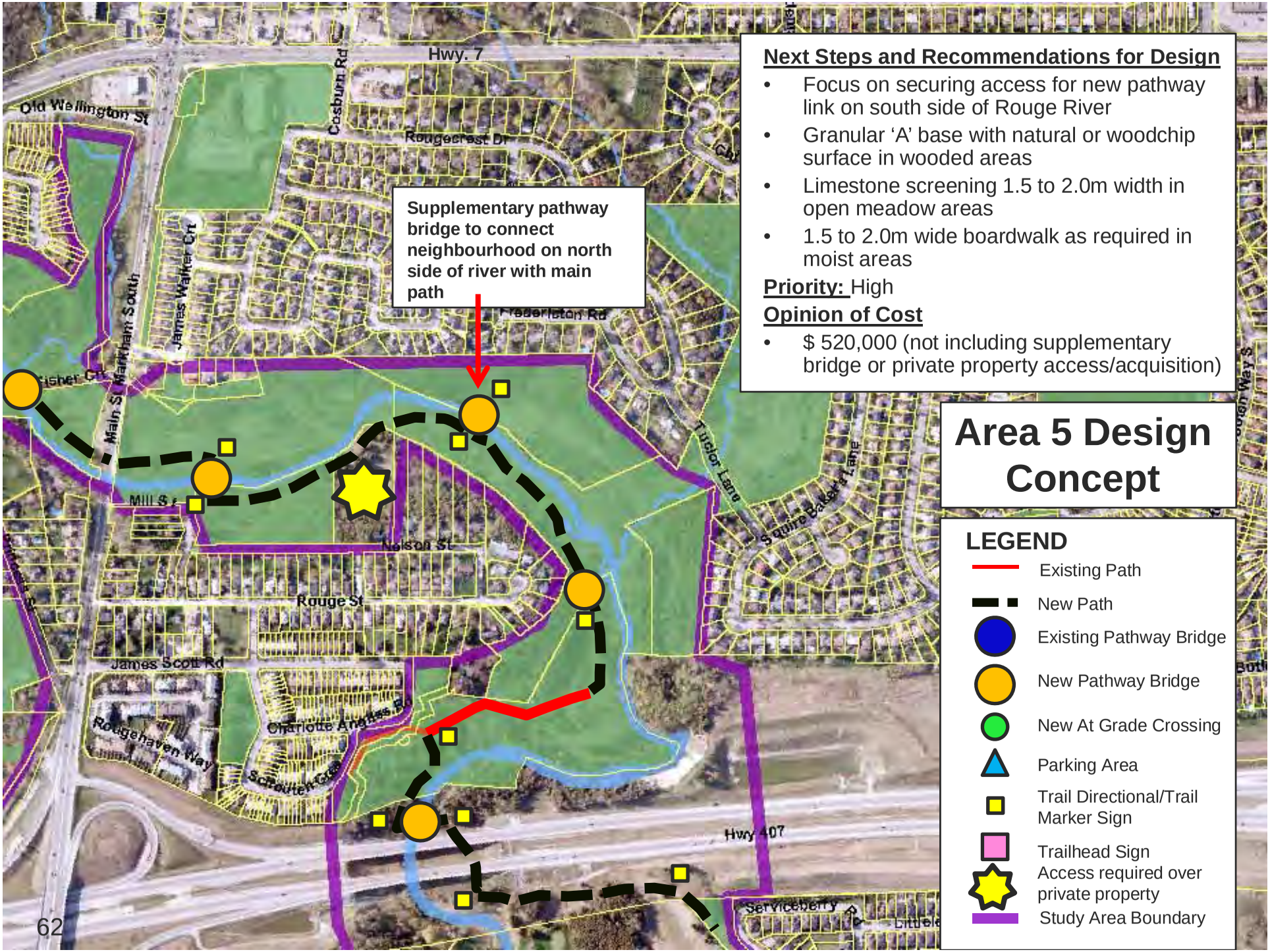
Next Steps and Recommendations for Design

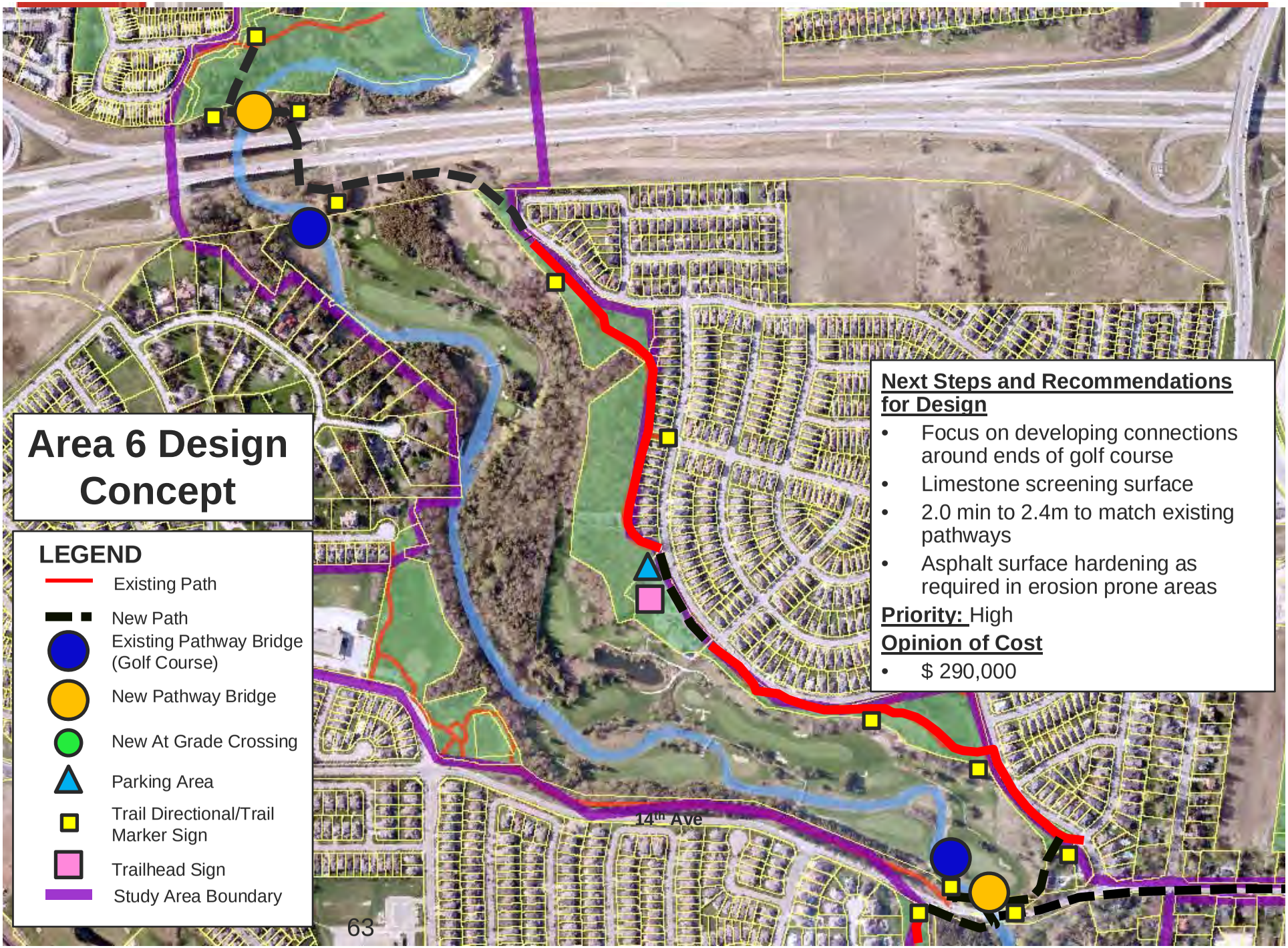
- Follow the recommendations of the Milne Working Group for those sections where they were established through the 2009 work
- Limestone screening surface (2.4 to 3.0m width) in areas where recommendations were not made in 2009 by the Milne Working Group
- Reconstruct pathway bridge at Drakefield and upgrade pathway connections
- Develop pathway bridges over dam and Rouge River at Fisher Ct. road allowance (utilize old road bridge abutments)
- Create 2.4m dedicated space on Drakefield and Willowgate, delineated by white line and pedestrian/cyclist symbols where route is on-street (requires removal of on-street parking)

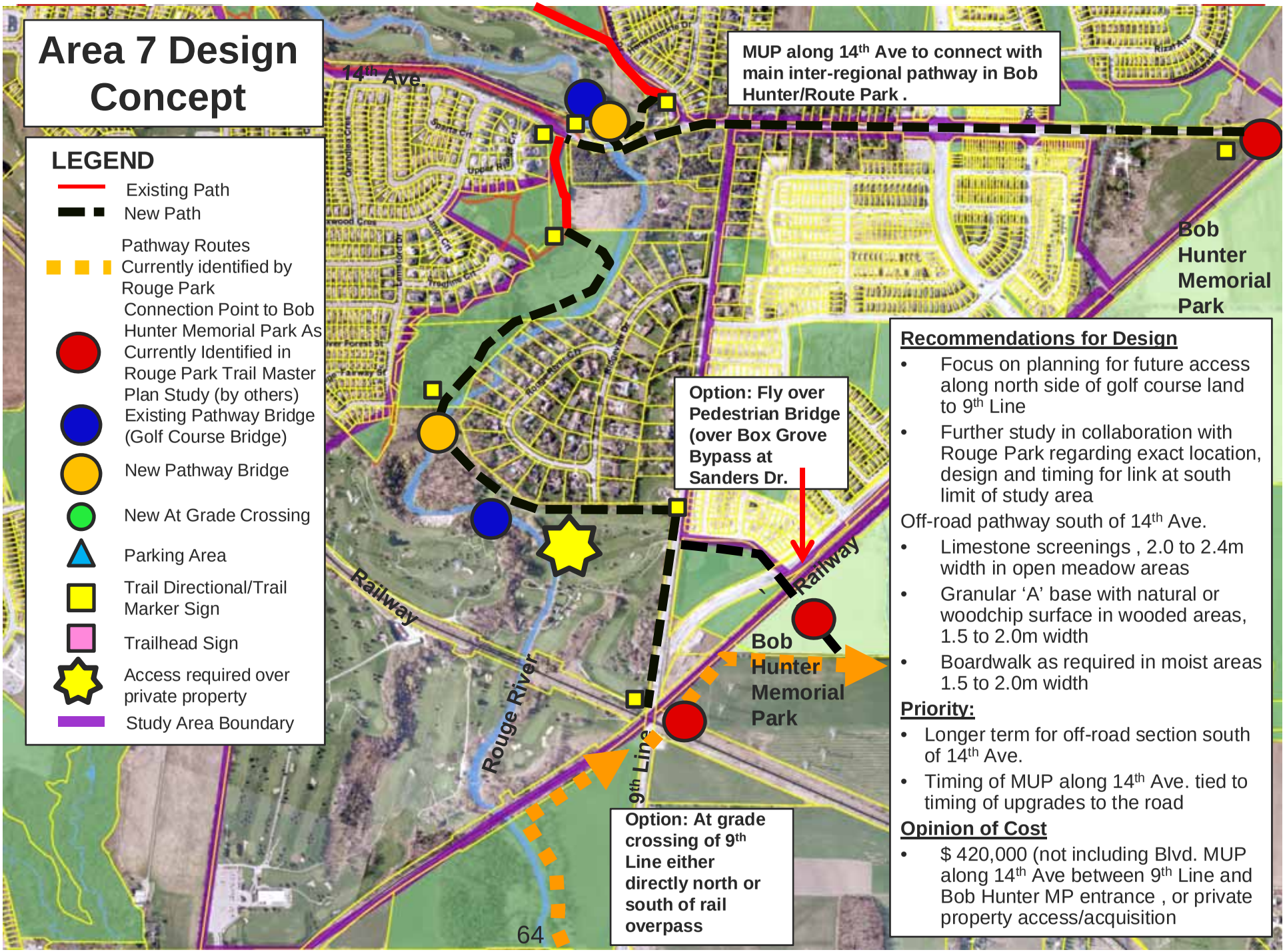
Priority: High

Opinion of Cost

- $ 1,000,000


Hwy. 7
Old Wellington St
Cosburn Rd
Rougecrest Dr
James Walker Crt
Main St Markham South
Fisher Crt
Supplementary pathway bridge to connect neighbourhood on north side of river with main path
Fraserfield Rd
Tudor Lane
Squire Baker Lane
Mill St
Nelson St
Rouge St
James Scott Rd
Rougehaven Way
Charlotte Angelas Rd
Schouten Gate
Hwy 407
Serviceberry
Next Steps and Recommendations for Design
• Focus on securing access for new pathway link on south side of Rouge River
• Granular 'A' base with natural or woodchip surface in wooded areas
• Limestone screening 1.5 to 2.0m width in open meadow areas
• 1.5 to 2.0m wide boardwalk as required in moist areas
Priority: High
Opinion of Cost
• $ 520,000 (not including supplementary bridge or private property access/acquisition)
Area 5 Design Concept
LEGEND
Existing Path
New Path
Existing Pathway Bridge
New Pathway Bridge
New At Grade Crossing
Parking Area
Trail Directional/Trail Marker Sign
Trailhead Sign
Access required over private property
Study Area Boundary


Area 6 Design Concept
LEGEND
Existing Path
New Path
Existing Pathway Bridge (Golf Course)
New Pathway Bridge
New At Grade Crossing
Parking Area
Trail Directional/Trail Marker Sign
Trailhead Sign
Study Area Boundary
14th Ave
Next Steps and Recommendations for Design
• Focus on developing connections around ends of golf course
• Limestone screening surface
• 2.0 min to 2.4m to match existing pathways
• Asphalt surface hardening as required in erosion prone areas
Priority: High
Opinion of Cost
• $ 290,000


Area 7 Design Concept
LEGEND
Existing Path
New Path
Pathway Routes Currently identified by Rouge Park
Connection Point to Bob Hunter Memorial Park As Currently Identified in Rouge Park Trail Master Plan Study (by others)
Existing Pathway Bridge (Golf Course Bridge)
New Pathway Bridge
New At Grade Crossing
Parking Area
Trail Directional/Trail Marker Sign
Trailhead Sign
Access required over private property
Study Area Boundary
14th Ave.
MUP along 14th Ave to connect with main inter-regional pathway in Bob Hunter/Route Park .
Bob Hunter Memorial Park
Option: Fly over Pedestrian Bridge (over Box Grove Bypass at Sanders Dr.
Railway
Railway
Rouge River
9th Line
Bob Hunter Memorial Park
Option: At grade crossing of 9th Line either directly north or south of rail overpass
Recommendations for Design
• Focus on planning for future access along north side of golf course land to 9th Line
• Further study in collaboration with Rouge Park regarding exact location, design and timing for link at south limit of study area
Off-road pathway south of 14th Ave.
• Limestone screenings , 2.0 to 2.4m width in open meadow areas
• Granular 'A' base with natural or woodchip surface in wooded areas, 1.5 to 2.0m width
• Boardwalk as required in moist areas 1.5 to 2.0m width
Priority:
• Longer term for off-road section south of 14th Ave.
• Timing of MUP along 14th Ave. tied to timing of upgrades to the road
Opinion of Cost
• $ 420,000 (not including Blvd. MUP along 14th Ave between 9th Line and Bob Hunter MP entrance , or private property access/acquisition

PART 5:

Next Steps

Next Steps

- Public Information Meeting – February 2012
- Report to Council – March 2012
- Circulate Project File Report and issue Notice of Completion – March 2012
- Design – Spring/Summer 2012
- Phasing report to Council – June 2012
- Further consultation with the CLC on design issues as required
- Construction – Fall 2012/Spring 2013