



Report to: Development Services Committee

Date Report Authored: April 10th, 2012

SUBJECT: Multi Use Pathway (MUP) from 16th Avenue to Bob Hunter Memorial Park – Class Environmental Assessment

PREPARED BY: Alan Brown, Director of Engineering, ext .7507
Dereje Tafesse, Capital Works Engineer, ext. 2034

RECOMMENDATION:

- 1) THAT the report entitled “ Multi Use Pathway (MUP) from 16th Avenue to Bob Hunter Memorial Park - Class Environmental Assessment dated April 10, 2012, be received;
- 2) AND THAT the preferred alignments for multi use pathway as described in this report be endorsed;
- 3) AND THAT option 4S (street option) for Area 4, which routes pedestrians/cyclist onto Drakefield Road and Willowgate Drive and restricts parking on both sides of such roads, be endorsed on a trial basis;
- 4) AND THAT staff monitor the street option 4S and report back to Council if pedestrians continue to cross at the Milne Creek and whether option 4T-1 (the creek crossing option) needs to be reconsidered;
- 5) AND THAT the Engineering Department staff be authorized to file the Environmental Study with the Ministry of Environment (MOE) for the 30 day public review;
- 6) AND THAT staff be authorized to proceed with the detailed design of the recommended multi use pathway alignments from 16th Avenue to Bob Hunter Memorial Park;
- 7) AND THAT staff report back as to on recommended staging plan for the Multi Use Pathway;
- 8) AND THAT staff be authorized and directed to do all things necessary to give effect to this resolution.

EXECUTIVE SUMMARY:

Staff and our engineering consultant (MMM Group) have completed the Environmental Assessment (EA) study for Multi-use pathway construction from 16th Avenue to Bob Hunter Memorial Park. During the EA process, a high level of public consultation was undertaken with eight (8) Community of Liaison Committee (CLC) meetings, and one public information meeting. The study area has divided into seven sub areas to assist in the development and evaluation of the route options. These areas were evaluated against eight (8) criteria identified during the route selection process, and the preferred alternatives for each of the sub-areas have been identified.

Staff is requesting Council to endorse the preferred alternatives, to authorize the filing of the EA with Ministry of Environment (MOE) for the 30 day public review period and to proceed with the detailed design. Staff will report back to Council with a recommended construction phasing plan when the detailed design and property acquisition have been advanced.

PURPOSE:

The purpose of this report is to seek Council's endorsement of:

- The recommended alignment for the Multi Use Pathway from 16th Avenue to Bob Hunter Memorial Park;
- To file the EA with the MOE;
- To commence the detail design work for the entire study area.

BACKGROUND:

In 2007, Markham completed the Cycling Master Plan, and completed the Pathways and Trails Master Plan in 2008. Both plans expand upon the policy directives within the Town's Official Plan related to pedestrian and cycling movement throughout Markham for recreation and transportation purposes. The Cycling Master Plan, and the Pathways and Trails Master Plan, established the vision and direction for an interconnected system of pathways and trails, which;

- Accommodates a wide variety of users;
- Provides a diversity of experiences which allow greater appreciation and enjoyment of the natural, cultural and heritage environment;
- Encourages residents to walk, run and cycle for fitness, recreation and transportation;
- Connects neighborhoods to key destinations and provides crossing points of significant physical barriers such as river valleys and highways;
- Considers the natural features, species and habitats; and
- Provides improved connections to other existing and planned pedestrian and cycling infrastructure.

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

In December 2010, Markham Council endorsed the Cycling, Pathways and Trails 5 Year Implementation Plan which provides details on 22 individual cycling route, pathway and trail projects identified as short term priorities in the Cycling, Pathways and Trails Master Plans.

In addition to policy direction established by the above noted master plans, the notion of a continuous multi-use pathway system in Markham's valley lands is supported by the York Region Pedestrian and Cycling Master Plan (endorsed in 2008 by Regional Council), and the York Region Greenlands Trails System Concept Study (currently draft).

A priority project identified during the Pathways and Trails Master Planning process was the development of improved pathway connections to, and within, the Milne Dam Conservation Area, an important recreation destination and one of the largest public open spaces in Markham. To respond to this identified priority, the Town of Markham conducted a pathway design study of the Milne Dam Conservation Area in 2008 and 2009.

Council deferred finalizing the MUP in Milne Dam Conservation Area until a broader review of the balance of the MUP east and west of Milne was completed;

Markham Council however directed that all work completed to date by the Milne Working Group be fully considered in the broader Pathway project;

Council also directed that recommendations regarding the east and west connections, alignment and design of pathways within the Milne Dam Conservation Area as these relate to the broader study be subject to further examination and input by a Community of Liaison Committee established for this project, stakeholders and the public.

Subsequently, in 2010 Council approved the Green Print Sustainability Plan that reaffirms Markham direction to provide a multi use pathway system across the Town.

OPTIONS/ DISCUSSION:

1.0 Public Consultation

In September 2010, the Environmental Assessment for multi use pathway from 16th Avenue to Bob Hunter Memorial Park project was awarded to a multi-disciplinary consultant team led by MMM Group. The consultation process was comprehensive and was designed to engage key stakeholders and the broader public to ensure inclusive community participation in the planning process.

Community Liaison Committee

Early in the project, a Community Liaison Committee (CLC) was established with representation from over 20 interest groups and local ratepayers' associations in Markham, and participation from Town Councillors, Town staff and the consulting team. To-date, this group has met eight (8) times, including guided walks of the study area. The site visits were intended to confirm the conditions of the existing pathways, and assessed views, vistas, natural features, hazards and other issues that might have an effect on the MUP planning process. The CLC has assisted in identifying and understanding important issues and opportunities, and has provided input to the recommended trail alignment alternatives.

Agency Working Group

An Agency Working Group was also initiated in the early stages of the project, and designed to meet on an as-needed basis. Invitations were sent out to a broad base of agency representatives and there has been one Agency Working Group meeting to-date, with participation from The Toronto and Region Conservation Authority (TRCA), and York Region. In addition, representatives from TRCA attended two (2) guided walks to key locations within the study area. In addition several one-on-one meetings were held with representatives from the TRCA and York Region at key points during the project.

Milne Dam Conservation Area Working Group

Initially, the Milne Working Group participated in the Milne Park pathway design study conducted by the Town of Markham in 2008 and 2009. All work undertaken by the Group was fully considered by the pathway Environmental Assessment (EA) study. Representatives from the Milne Working Group have also participated as part of the CLC and their comments and suggestions considered into the EA document.

A separate meeting with the Milne Working Group was held on January 23 and February 13, 2012 to discuss the MUP route and the three options for crossing the Milne Creek. TRCA representatives were present in both meetings and provided input and responded to various questions raised by the Group.

Council Update

At the General Committee meeting dated January 24, 2012, a power point presentation of the recommended alignment was provided to Council before the February 23, 2012 PIC.

Public Information Centre

In accordance with the requirements of the Municipal Class Environmental Assessment, a Public Information Centre was held on February 23, 2012, and 89 residents attended the PIC. Stakeholders, review agencies, Community Liaison Committee members and directly impacted property owners were invited to attend and review the recommended alignment for the MUP. Notice of this meeting was advertised in the local newspaper in the February 16th and February 23rd editions of the Markham Economist and Sun. About sixty (60) meeting notices were delivered to affected property owners and Milne area residents by way of assessment roll information. Notice of this meeting was also advertised on the Town's Website from February 14th to February 23rd.

2.0 Route Selection Criteria

The study area has been divided into seven sub-areas (see Attachment "B"), to assist in the development and evaluation of route options. The Route Selection Criteria were developed in consultation with the Community Liaison Committee (CLC) and Toronto and Region Conservation Authority (TRCA). Several route alternatives were developed for each of seven sub-areas. A set of social, environmental, and economic criteria was also developed to evaluate each of the route alternatives in each of the sub-areas. Field work and desktop reviews have been undertaken to assist in the evaluation of alternatives. Preferred alternatives for each of the sub-areas were identified and presented to the CLC. When considered together, the preferred alternative in each of the seven sub-areas becomes the preliminary preferred alternative route for the entire study area. The approximate length of the preferred alternative for the entire study area is about 15.0km and includes the construction of ten (10) new pedestrian bridges/crossings.

The Route Selection Criteria are aimed at achieving the following eight principle goals, and organized 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

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

Recommended Alignment

The Recommended Alignments for the seven areas of multi-use pathways are shown as Attachment "B" and are noted as follows:

Area 1- Pathway Connection from 16th Avenue to Main St. at Carlton Road

Area 1 encompasses the Rouge River valley area located south of 16th Avenue and west of Kennedy Road to Toogood Pond. Six (6) options were evaluated by the Committee against the eight (8) parameters identified in the Route Selection Criteria. The existing pathways located east and west of Toogood Pond have been recommended as primary trails and will be improved to create an accessible loop by making improvements to the main path along the east and west arm and multi-use path along 16th Avenue. The existing nine bridges and pathway widths in the area will be examined during the detail design stage and will be rehabilitated and upgraded. Hard surfacing material will be considered to the existing pathway along the west and east sides of Toogood Pond to define edges and to reduce erosion along the edges of the pathways.

Area 2 – Pathway Connection from Main Street at Carlton Road to Pathway under Kennedy Road

Ten (10) multi-use pathway options were evaluated against the eight (8) parameters specified in the Route Selection Criteria. The highest scoring option requires a short connection over private property (49 Victoria Avenue) utilizing a corridor where a Town sanitary sewer currently exists. The MUP is proposed to cross Main Street north of Main/Carleton intersection and also to cross Carleton Road at Main Street on the east side of Main Street. The MUP is also proposed to cross under the CN Bridge south of 49 Victoria Street on the east side of the river. The advantages of the highest scoring option are that it stays mostly off-road; the route is direct, and stays with the natural setting.

Area 3 – Pathway Connection under Kennedy Road to McCowan Road

Seven (7) route options were evaluated against the eight (8) parameters identified in the Route Selection Criteria. The highest scoring option is using the existing pathway network around Waldon Pond from Kennedy Road to Highway 7. The proposed pathway requires crossing below Hwy 7 at the Rouge Bridge, on the east side of the river which has ample headroom. The pathway also requires access over one private property immediately south of Hwy 7 and two parcels near McCowan Road. The pedestrian/pathway crossing of McCowan Road at the entrance to Milne Dam Conservation Park will require a pedestrian or traffic signal as the crossing below McCowan Road at the Rouge Bridge is not feasible due to insufficient clearance between the bridge under structure and the flood elevation. Town staff will discuss with Regional staff to determine the possibility of installing a pedestrian/traffic signal at McCowan Road.

Area 4 – Pathway Connection from McCowan Road to Markham Road

Area 4 encompasses the Milne Dam Conservation Area. Milne Dam Conservation Area has a large area of 123 hectares or 305 acres, with the Rouge River flowing in the middle and surrounded with a forest on the southern and eastern edges. There are a number of existing well used informal footpaths, in addition to the formal trails installed and maintained by the Town.

Twenty-seven (27) options were evaluated against the eight (8) parameters identified in the Route Selection Criteria. The EA study took into account the work previously undertaken with the Milne Working Group in 2008 and 2009 which was presented to Council on June 16, 2009. The existing trails have ample width (2.4m to 3.0m) and would only require minor improvements and directional signs at pathway intersections.

The main focus of this EA study and meetings held with the Milne Working Group were mainly focused on the alignment from the main parking lot in the park, easterly to Main Street Markham. Route options in the Milne Creek area and crossing of the Rouge River were discussed at length as described below.

Milne Creek Crossing

There are two highest scoring options identified for the Milne Creek crossing (4S and 4T) while Option 4T has two sub options (4T-1 and 4T-2).

- Option 4S (the street option) requires a 2.0 to 2.5m designated space on the south side of Drakefield Road and west side of Willowgate Avenue, delineated by white line and pedestrian/cyclist symbols where the route is on street. This option will necessitate the restriction of any on road parking on these sections of the road.
- Option 4T-1 (the creek crossing option) keeps the pathway within the valley land. This option involves the construction of elevated boardwalk or bridge from “top of bank” to “top of bank” and allows the existing entrance and pathway at Drakefield Road to remain open to provide a neighbourhood connection to the main path.

- Option 4T-2 shows the construction of new boardwalk/bridge similar to 4T-1, however, the existing entrance and path from Drakefield Road would be closed. Also the existing bridge to Drakefield Road would be removed and the valley area on both sides of the creek would be re-naturalized. TRCA has indicated that they could support Option 4T-1 or 4T-2 crossing at the mouth of Milne Creek, however, the approval process would take more design and environmental consideration than Option 4S.

During the Public Information Centre that was held on February 23, 2012 in Council Chambers, the public had an opportunity to comment and select the preferred option at Milne Creek by placing coloured sticker dots manually onto the option that they prefer for the location. A total of 89 residents attended the PIC of which 31 were residents abutting the Milne Conservation Area. The results obtained indicate that 34 people selected Option 4S (street option), 21 people selected Option 4T-1 (creek crossing) and 1 person selected Option 4T-2.

The Cyclist and Pedestrian Advisory Committee (CPAC), Markham Environmental Advisory Committee (MAEC) and other stake holders prefer Option 4T-1 (creek crossing) to keep the MUP within the Rouge valley.

The issue between option 4S and 4T-1 relates to whether pedestrians will use the street option or continue to cross Milne creek using unofficial trails and create adverse environmental impact on the creek slopes and valley. Proponents of the creek crossing (4T-1) indicate people will not use the road option (4S) and continue to use the more direct, informal valley route.

Proponents of the street option (4S) prefer not to have a pedestrian bridge span at the Milne Creek and are concerned about the environmental impact. The TRCA prefer the street option but subject to detailed environmental review and conditions could support the creek crossing option.

The street option will require parking to be restricted and a 2.5m corridor designated on portions of Willowgate Drive and Drakefield Road. Staff notified the impacted residents via a letter on February 13, 2012. From the 35 residents impacted by the parking restrictions, we have received 6 comments in writing supporting the street options, with two opposing.

Based on the public input received, staff recommend 4S (the street option) be implemented on a trial basis. If people do not use the street option (4S) and continue to cross the creek at the mouth of the Milne creek, or Willowgate Drive and Drakefield Road residents oppose restricted parking in front of their houses or there are safety concerns of the on road option, option 4T-1 could be reconsidered by the Town and the TRCA in future.

Rouge River Crossing

As part of the MUP construction option in Area 4, the new pathway includes two new bridges to cross the Milne dam and the Rouge River at Fisher Court road allowance utilizing the old road bridge abutments. Crossing the Rouge River downstream had a number of environmental, wildlife and flooding issues.

Area 5 – Pathway Connection from Markham Road to Highway 407

Eleven (11) alignment options were evaluated for this section of MUP. The recommended alignment continues from the Milne Conservation Park and along the north side of the Rouge River towards the east and passes under the north side of the Main Street Markham Bridge. A supplementary pathway link will be established from the main valley path to Main St. on the east side of the bridge to connect with the proposed MUP on the east side of Markham Road. The recommended option was selected because other options had environmental and slope stability issues. Three new bridges are also required as part of the new pathway system including a supplementary pathway bridge mid way along this section of the valley. This “extra” bridge would provide a formalized pathway connection to neighbourhoods on the north side of the valley and a future pathway connection in valleyland north of Tuclor Lane. In order to link and complete the pathway within the area access is required over one private property.

Area 6 – Pathway Connection from Highway 407 to 14th Avenue

Six (6) options were evaluated for Area 6. The recommended alignment in Area Six proposes to pass under the Highway 407 bridge and extends along the east side of the Rouge River to 14th Avenue. Connections will be made between the existing pathway, along Legacy Dr. and the golf course down to the river, adding a pedestrian bridge loop underneath 14th Avenue on the west side of the river. The study indicates that it is feasible for the new pathway to cross below 14th Avenue bridge on the west side of the river, however, the existing sidewalk/pathway below 14th Avenue on the west side of the river is susceptible to flooding. This will need to be explored in greater detail during the detailed design stage.

Area 7 – Pathway Connection from 14th Avenue to Bob Hunter Memorial Park

Seventeen options were evaluated for Area 7. The final recommended alignment is to use the existing short path immediately south of 14th Avenue, then a new path along the west side of the river to and along the north side of golf course land to 9th Line. A new pathway bridge is required about mid-way along this section of the valley. A “fly over” pedestrian bridge is also proposed over the Box Grove Bypass at Sanders Drive and over the Canadian Pacific rail line to connect to Bob Hunter Memorial Park. Discussion is required with TRCA and Rouge Park Alliance as to funding the pedestrian bridges. The design of this connection will be further explored during the detailed design stage. An additional boulevard pathway is also proposed as part of the recommended alignment along 14th Avenue to connect with the main inter-regional pathway in Bob Hunter/Rouge Park.

Accessibility

As per the Accessibility for Ontarians with Disabilities Act (AODA-2005), the Town’s goal is to give people with disabilities appropriate accessibility to the natural environment where it is feasible and practical. Key areas within the pathway system will be selected to create accessible pathways (e.g. Toogood Pond, Milne Dam Conservation Area) as all pathways within the study area will not meet the design criteria (i.e. width, slope, material type etc.) suggested in the most recent version of the Final Proposed Built Environment Standard, which is currently being considered by the Provincial Government.

Pathway Signs

Pathway signs are an important element of the pathway design. As part of the recommended alignment, the Town will develop a “Family of Signs” by creating a design theme and characteristics that can be reflected in the different types of signs (i.e. material, colours, graphics, fonts, etc.). It is also very important to give 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. Pathway signs can be grouped into the following:

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

Please see Attachment ‘C’ for typical examples of trail signs.

Recommendations for sign type and location are provided in the design concept and will be finalized as part of the detailed design.

Property Acquisition

The construction of the multi use pathway system in the recommended alignment will require the acquisition of properties from six land owners. Staff will report back with an in camera report on this matter.

Project Phasing / Schedule

A detailed phasing plan report will be provided to Council when the detailed design, property negotiation and cost estimates proceeds to a point staff can recommend an implementation plan. The availability of funding will also determine the rate at which the pathway may be implemented. The phasing/implementation plan will then be considered in the annual Capital Budget process.

Design

There are a number of issues that need to be finalized during the design stage, including;

- Signage
- Environmental mitigation
- Multi Use Pathway width and material
- Handicapped access/parking
- Maintenance
- Construction Methodology
- Location of Trash Receptacles
- Washroom facilities
- Seating/benches
- Mapping/brochures

Staff have made a commitment to consult further with the Community Liaison Committee on the issues above during the detailed design of the pathway.

Operational Issues

During the CLC meetings members have expressed concern that Markham's' current trails are not properly maintained and funding is required to ensure that existing and future trails are adequately maintained.

Operations staff recommend that the ongoing operating and life cycle costs associated with the expanded trail network be confirmed at the detailed design stage by the project consultant in consultation with staff from Operations, Engineering and the Financial Services Departments. The additional operating and capital budget requirements will be included in the September 2012 phasing report to senior management and Council.

FINANCIAL CONSIDERATIONS

The total cost for the design and construction of the recommended alignment within the study area is estimated to be approximately \$5.8 Million including engineering and contingencies as follows:

Study Area	Proposed Construction Cost	Comments
Area 1	\$587,400.00	
Area 2	\$118,800.00	
Area 3	\$963,600.00	
Area 4	\$1,650,000.00	
Area 5	\$686,400.00	Not including supplementary bridge
Area 6	\$302,800.00	
Area 7	\$1,452,000.00	
Total	\$5,761,000.00	Not including property acquisition

These costs will be further refined once the detailed designs for the pathways are completed. Land acquisition cost are not included but will be reported to Council separately under a confidential report.

Currently, there is a total of \$2,921,222.89 available in the Capital Accounts listed below for this project.

Project Name	Acct. #	Original Amount	Remaining Amount
Pathways Master Plan Implementation (Phase 1)	640-101-5699-8264	\$400,000.00	\$400,000.00
Major MacKenzie Dr. MUP Construction	83-5350-8502-005	\$4,500,000.00	\$1,800,793.89
Cycling, Pathways and Trails Implementation	80-5350-9355-005	\$725,000.00	\$720,429.00
		Total	\$2,921,222.89

A funding increment of \$2,839,777.11 will need to be considered as part of the capital budget process.

Next Steps

In order to implement the MUP the following action is required;

- File EA study with Ministry of Environment – April 2012
- Prequalify design consultants – April 2012
- Tender design – May 2012
- Award design – June 2012
- CLC meetings – as required to finalize outstanding issues
- Report to Council re phasing – September 11, 2012
- Property acquisition Spring 2012 until spring 2013
- TRCA/MNR/DFO approvals – Fall 2012/early 2013
- Tender construction contract – early 2013
- Construction – Spring 2013 to Fall 2013
 - Phase I - \$2M
 - Phase II – 2014 subject to funding

ALIGNMENT WITH STRATEGIC PRIORITIES:

The Municipal Class Environment Assessment is in line with the Town of Markham's strategic focus relating to Municipal Services, Parks, Recreation including Accessibility and the Environment.

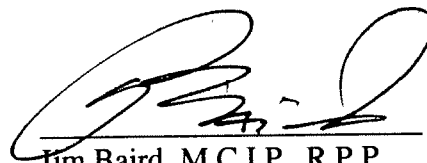
BUSINESS UNITS CONSULTED AND AFFECTED:

The Operations, Asset Management and the Finance Department have reviewed this report and their comments have been incorporated.

RECOMMENDED BY:



Alan Brown C.E.T.
Director, Engineering



Jim Baird, M.C.I.P., R.P.P.
Commissioner, Development Services

ATTACHMENTS:

- Attachment "A" – Site Study Area
- Attachment "B" – Recommended Alignment – 7 areas
- Attachment "C" – Typical Examples of Trail Signs