

Infrastructure, Bridge, Culverts and Roads Innovation Committee
Tuesday, December 10, 2019 - 5:00 p.m.
Chatham-Kent Civic Centre – Council Chambers
Record of Business

Present: Councillor Anthony Ceccacci, Councillor Jamie McGrail, Councillor Mark Authier, David Charron, Steve Piche, Kris Harris

Administrative support: Thomas Kelly, Gord Quinton, Nancy vandenBoorn, Don Shropshire

Regrets: Robert Little, Patrick Langan, Councillor Carmen McGregor

Call to Order

The meeting was called to order at 5:06 p.m.

Appointment of Chair

It was moved by Councillor Jamie McGrail and seconded by Steve Piche:
“That Councillor Mark Authier be elected chair of the committee.” CARRIED

Adoption of Agenda

It was moved by Councillor Jamie McGrail and seconded by Dave Charron:
“That the agenda be adopted as written.” CARRIED

Declaration of Pecuniary/Conflict of Interest

None declared.

Deputations regarding items on the committee agenda

None received.

Motion for Approval of previous meeting minutes – November 5, 2019

It was moved by Steve Piche and seconded by Kris Harris:
“That the minutes be approved as written.” CARRIED

Business arising from the minutes

Technical Representative Appointment – update from administration:

Nancy updated the committee that the volunteer opportunity was:

- Posted on the website - November 15

- Media release – November 19
- Calls open until November 29th
- No applications or inquiries

The committee agreed to re-advertise the vacancy in 2020 for a longer period and add to additional social media locations.

Meeting with MTO – update – deferred

Thomas reported that a preliminary meeting was held but there is more information coming. Thomas will present to both the committee and to Council once all information is received.

Municipal Sourcing Process

As requested, administration provide information to the committee on:

- 1) The viability of Council recommending a specific process or type of product for engineering projects during the sourcing process.
- 2) The feasibility of releasing bidding packages for culverts as a dual tender, including providing engineered drawings for both steel and concrete solutions in an effort to increase the competitiveness of the tendering process.

A summary of the discussion is:

1) Chatham-Kent Purchasing By-Law

- There are two different categories within the purchasing by-law that dictate approvals required for expenses incurred on projects:
 - a) The purchase of goods and services (excludes consultants) – depending on cost, administration will carry out a request for quote or a tender. Administration may approve up to \$250,000. Any purchase greater than \$250,000 is approved by Council.
 - b) Retaining a consultant – assignments under \$75,000 the GM has approval to retain as a direct appointment. Anything above that threshold goes to the RFP process. This is to increase efficiency of completing the smaller jobs so not so many reports were going to Council. Administration has a good database of typical bridge design costs in order to determine appropriate

fee distribution. If administration knows it will be over \$75,000, it will go directly to an RFP.

- When an RFP is posted, bidding and sourcing is open to any qualified firm. Opportunities exist to provide a specialized solution (bailey bridges, alternate materials, innovative construction solutions, etc.) in place of the proposed solution.
- IES Council reports now include an “Innovation” section to clarify the designs considered and why the proposed solution was selected. It is the consultant’s job to consider all technologies available and make an independent recommendation on the best overall solution(s).
- There is always new technology and improved processes. When Chatham-Kent administration attends conferences, many other municipalities wish to copy what Chatham-Kent is doing. Chatham-Kent is considered a leader in innovation and asset management throughout Ontario.
- Administration presents facts, proven theories and solutions based on peer reviews and information provided by experts. Members of the public are permitted to speak at Council meetings and at times the information is incorrect. Unfortunately, Administration is not provided the opportunity to clarify public comments unless requested. Council and the general public are often left with the impression that these statements are factual which may not be the case.
- For some projects, there may be solutions that initially cost less, but they may not be the best solution for long-term investment and savings when overall life is considered. Design recommendations provide the lowest cost to the taxpayer considering both investment and life.
- For a number of years, the Engineering Department has been releasing tenders as bundles and with flexible timelines in order to achieve costs savings and construction efficiencies. This is proving to be a very effective strategy. Both Council and the committee confirmed that administration continue this practice whenever it is feasible. It has been proven to save money for the municipality and assists contractors in better planning their projects and workforce.
- Administration is currently investigating the use of a roster for consultants when assigning projects. The benefits include a locked in rate for a specific timeframe. This is not a straightforward process however, as some consulting firms charge a

higher rate per hour because of their expertise, but their ability to complete the work is faster and less expensive, often with a lower construction cost.

- The committee agreed it would be beneficial for Council and members of the public to understand the whole picture regarding projects being completed by Engineering. Many projects are not discussed on the Council floor as the cost is below what requires Council approval. Administration will develop a report that summarizes all projects for Council's information in 2020.
- The Director of Engineering promotes Chatham-Kent's projects at the Heavy Construction Association Annual Meeting held in Windsor. This provides the opportunity for all local municipalities to advise members of the Association, which projects are planned for the upcoming years and provides CK the opportunity to emphasize that we are looking for innovative cost-savings solutions.

2) Dual Tender Pilot Project:

- For the dual tender pilot project, documents were specified as Option #1 (traditional) and Option #2 (innovative). In the form of Tender, the Contractor(s) were to populate either Option #1, Option #2 or both.
- Dual tender results were as follows:
 - 7 Contractors for Option #1 ranging from \$723,846 to \$1,260,797
 - 3 Contractors for Option #2 ranging from \$891,739 to \$1,232,265
 - Only one of the nine Contractors submitted for both options
- Most did not submit both design options as the time required to engineer two very different solutions is cost prohibitive. In the end, firms submitted the design they felt was the best option in their opinion.
- Dual Tendering process will increase design time and increase design costs.
- The pilot project did not produce lower construction costs.
- Engineering detailed design stage already evaluates all design alternatives.
- As a result, dual tenders are not recommended.

It was moved by Councillor Ceccacci seconded by Councillor McGrail,
"That the presentation be accepted" CARRIED.

New Business

None

Next Steps

Divestment of Assets:

At the December 9, 2019 meeting, Council directed staff to not bring forward any more divestment opportunities until we had a matrix approved by Council. Council has directed administration to look at parks, buildings, roads and bridges and develop the matrix for Council's consideration. However, there are two opportunities that Council should consider in the interim.

One opportunity is where two identical structures are 200 metres apart. The drain crosses the road, then crosses back again. A realignment of the drain would eliminate the need for both bridges which would be a divestment. Also, near Provincial Highway 401 there are a number of dead end roads. One of the structures due for replacement is on one of these roads. There is one property affected but there may be another solution through the Drainage Act. This too would be a divestment. Based on Council's direction, administration is not able to bring forward these divestment opportunities but the structures need to be addressed.

The committee agreed that when opportunities present themselves, Chatham-Kent needs to take advantage of them in order to reduce inventory and save money.

The committee discussed the fact that at their Council Strategic Planning session, Council told administration how important divestment of assets is but when opportunities are brought forward, there is no support to move forward with the recommendations.

The committee noted that there are agricultural representatives on the committee. Would they be willing to find farmers who are on these dead-end roads and willing to work with administration on the elimination of these assets if the currently identified location comes to a positive resolve? There are opportunities as well for the farmer to take over ownership of the road if they are the only property with access from it. The KFA is in favour of cost saving measures as long as the farmers are supported.

Proposed Action: The KFA will bring forward recommendations on potential road divestment opportunities.

Following discussion, the committee agreed that rather than being a divestment, these specific situations are innovative solutions that save money, reduce the inventory and have no impact on the motoring public. The committee will consider a report from administration at their next meeting recommending administration continue to bring these types of unique situations forward to Council as solutions rather than divestments and reduction in service. If the committee is in agreement with the recommendations from administration, a report from the committee will go forward to Council for their consideration.

It was moved by Chair Authier, seconded by Steve Piche, that:

“At the next meeting, administration present recommendations to the committee on a proposal that in specific situations the divestment of a structure results in overall cost savings, reduction of inventory and an alternate solution is available the project carry forward prior to the adoption of the divestment matrix.” CARRIED.

Next Meeting

Tuesday, March 3, 2020

Chatham-Kent Civic Centre – Room 212

5:00 p.m.

Adjournment

Moved by Steve Piche, seconded by Councillor McGrail that,
“The meeting be adjourned” CARRIED (7:00 P.M.)

Infrastructure, Bridge, Culverts and Roads Innovation Committee
Tuesday, December 15, 2020 - 5:00 p.m.
Skype Meeting
Record of Business

Present: Councillor Anthony Ceccacci, Councillor Mark Authier, Councillor Carmen McGregor, David Charron, Steve Piche, Kris Harris, Patrick Langan

Administrative support: Thomas Kelly, Don Shropshire, Chris Thibert, Brendan Falkner, Ryan Brown, Gord Quinton, Janet Couvillon

Regrets: Councillor Jamie McGrail

Call to Order

The meeting was called to order at 5:07 p.m.

Adoption of Agenda

It was moved by Patrick Langan and seconded by Dave Charron:
“That the agenda be adopted as written.” CARRIED

Declaration of Pecuniary/Conflict of Interest

None declared.

Deputations regarding items on the committee agenda

One item received from Mr. Robert W. (Bob) Little.

Motion for Approval of previous meeting minutes – December 10, 2019

It was moved by Councillor Carmen McGregor and seconded by Councillor Anthony Ceccacci:
“That the minutes be approved as written.” CARRIED

Business arising from the minutes

Meeting with MTO – update – deferred

Chatham-Kent has collaborated with the MTO on a number of occasions regarding purchasing and design processes. Information exchanges and on-going dialogue are in process. Updates will be provided as new information becomes available.

New Business

Committee Membership:

i. Technical Representative Appointment – with the resignation of Bob Little, there are now 2 technical rep vacancies. A vacancy was posted in March 2020 but no inquiries were received.

ii. Revision to Terms of Reference - on June 1, 2020, the following motion was brought to Council:

“That the membership of the Infrastructure Committee be realigned to add one member from the Ontario Federation of Agriculture (OFA) to join the member of the Kent Federation of Agriculture and; 2. That in the absence of either of those representatives, a substitute member of the organization be allowed to attend in their place at meetings.”

Discussion on “ii”

The original creation of the committee was based on a public representation model consisting of 3 technical experts and 3 from the agricultural sector to ensure a balance of input. Resumes were received, evaluated, ranked, and then submitted to Council for final approval. The particular farming federation or affiliation was not a part of the original criteria. It was strictly based on the knowledge and experience of the individual.

To assist with the membership drive, it was suggested that the committee should consider expanding the qualifications to include urban and business representatives, or retired building inspectors.

It was moved by Steve Piche and seconded by Pat Langan that:

“The committee structure be modified to include other professionals or complimentary positions; and that the composition of committee be revised to be a maximum of 4 members of Council, 4 agricultural representatives and 4 technical experts”. Motion CARRIED.

Next, the second part of the motion was discussed -

“That in the absence of either of those representatives, a substitute member of the organization be allowed to attend in their place at meetings.”

Dave Taylor (Director, Legal Services) provided a list of concerns regarding the use of a substitute member. These included qualifications of the substitute member, the level of knowledge and history of past discussions, and the difficult position of being required to vote on items without complete familiarity. For these reasons, a substitute member is not

recommended. The committee agreed the terms of reference will remain unchanged in this regard.

Chatham-Kent Innovation Update

Introduction of Brendan Falkner – (Manager, Engineering), Ryan Brown (Director, Public Works) and Chris Thibert (Director, Engineering)

Presentation:

- 1) Research and Development Presentation (Process Flow Chart attached)
- 2) Draft RTC – IES Innovation Update

Discussion

IES provided a comprehensive list of new technologies that have been implemented to date. A draft form of the Report to Council was provided to the Committee for their review and comment.

As noted in Appendix A, condition reports of most projects have been favourable with the exception of one composite fibre bridge structure. This has been a technology that has been strongly promoted by community members as a cost savings at various Council meetings. Since August/20, C-K administration has been attempting to contact the manufacturing firm to arrange an on-site visit to discuss concerns with the composite fibre bridge. There has been no response and e-mails are being rejected or returned as inactive accounts.

This issue reflects the need to have a robust development process in place to ensure a successful prove out of any new technology prior to considering further implementation. Administration takes a very methodical approach to investigate, monitor and test any new technologies to determine if supplier promotional claims are indeed valid. Future product applications must be based on scientific data and actual performance in the field. The life of the product is a key attribute that often takes years to properly assess. Typical manufacturer warranties are only one year in length.

Related to roads, Chris Thibert reported that the Fibre Reinforced and Cold in Place (CIP) are yielding positive results. Engineering will be conducting further investigation on Reclamite asphalt rejuvenation and fibre reinforced surface treatment in 2021. The Hot in Place and the Microsurfacing projects were delayed due to COVID.

Bridge Divestment

Presentation by Chris Thibert - Bridge Divestment Criteria and Public Engagement.

There are currently 7 bridges that remain on the divestment list:

1. Crow Road over McFarlane Relief Drain
2. Ouellette Road over Main Drain
3. Owen Road over Rankin Creek Drain
4. Dashwheel Road over Forbes Internal Drain
5. Mint Line over Baptiste Creek
6. Kennedy Road over Rankin Creek north
7. Kennedy Road over Rankin Creek south

The divestment original list has been reduced from 25 to 7 with the support of Council by increasing the amount of funding on bridges that exceed 3.0 meters in span.

In addition, there are 4 additional bridges that have been identified for potential divestment due to their specific location:

1. Girard Line over Government Drain #1 (triangular road network)
2. Beechwood Line over Buller Drain (Dead end road at the 401)
3. Snobelen Road over Proctor Drain (Dead end road at the 401)
4. Glassford Road over Ellwood Drain (Dead end road at the 401)

Discussion

The Asset Management Plan (AMP) was approved by Council in 2017. It requires 1.4% of new tax dollars per year over a 20-year period to ensure the sustainability of \$5 billion worth of assets that reside in C-K. The current level of funding is approximately 53%. The original AMP assumed a 1% increase in the tax levy per year to address the gap, with 0.4% savings coming from a reduction in asset inventory. To date, there have been no cost savings proposal accepted by Council, resulting in a \$2.0M shortfall in three years to the original plan. The construction index continues to exceed the consumer price index, which expands the gap. To reduce the annual tax increases, Administration was asked by the Infrastructure Committee, and later approved by Council on January 21, 2019 to “investigate opportunities to close roads and bridges to reduce infrastructure inventory where there is minimal impact to the public.”

Administration has presented bridge savings to Council related to the elimination of the McDougall Line Bridge and the potential conversion of two movable bridges to fixed bridges in Wallaceburg.

In the case of the McDougall Line Bridge, Council on September 9, 2019, approved the following motion – “That administration move forward with the replacement of the McDougall Line Bridge over Government Drain #1.”

In the case of the two Wallaceburg bridge conversions, on November 9, 2020, Council approved ““That the recommendations be referred back to administration until the completion of the Secondary Plan for the South Side of Wallaceburg which was brought to us by Community Development and Planning Services on October 19, 2020.”

Also at the November 9, 2020 Council meeting, Administration presented an updated version of the bridge divestment matrix. Administration recommended a best practice of following the Municipal Class Environmental Assessment consultation process for residents directly and indirectly impacted. A pass/fail criteria was developed for various parameters to determine if the bridge met the initial test of divestment. Public engagement would follow with a Report to Council for final decision making. Upon review of the report, Council directed “That the report be referred back to administration for further public engagement and more detail around the public consultation and the agricultural vehicle consideration.”

Councillor C. McGregor asked if the public consultation will be done by community as opposed to all of C-K? As bridges are funded by the general tax levy, the ideal public consultation process will comprise input from all taxpayers. It was noted that 95% of all bridges are located in rural areas, and 5% reside in urban settings. On an investment basis, 80% of available funding supports rural bridges, and 20% supports urban bridges. The majority of the tax levy is supported by the urban areas.

Chris Thibert stated that we have approximately 30 bridge rehabilitations planned in 2021. Allowing contractors to complete their work in a 2-year window is a strategy that has yielded significant tender cost reductions.

Councillor Authier stated his concerns with the 10-minute detour window at posted speeds. It will take longer for a farmer using heavy equipment to take the detour. Chris Thibert advised that the criteria is based on the worst case scenario of the longest route to get from point A to point B. If less than 10 minutes at posted speeds, it is noted as a pass. There will be very few, if any opportunities to consider bridge divestment if evaluated at a lower speed limit.

Steve Piche asked how many roads have more than 400 vehicles per day? Chris Thibert advised that the majority of gravel roads are designated as 400 vehicles per day, and the average of these roads is 100 vehicles per day.

Pat Langan asked if landowners were talked to regarding the McDougall intersection work? The details of the entire McDougall Line costs savings proposal, including safety enhancements, was included in the Report to Council. A public consultation took place in 2011 that led to the original placement of the McDougall Line Bridge on the divestment list. It is clear that no

member of the public wants a bridge removed near his or her home due to the potential future inconvenience.

Councillor Ceccaci commented that several proposals have been brought to Council that would have saved considerable tax dollars, but they were not approved. It was recommended to direct staff resources to areas that will be supported by Council.

Due to the hour and length of the meeting, it was moved by Councillor Ceccaci, seconded by Steve Piche that:

The committee prioritize the divestment matrix at next meeting of Infrastructure meeting.

CARRIED

Next Steps

None

Next Meeting

Next meeting in the New Year. TBD

Via Skypecompaire 5:00 p.m.

Adjournment

Moved by Councillor Anthony Ceccacci, seconded by Pat Langan that,
"The meeting be adjourned" CARRIED (7:37 P.M.)

Research and Development Process Flow Chart

OPPORTUNITY FOR INNOVATION

- Continuous review of innovative processes and products to find efficiencies or improve existing practices as technology is constantly changing

RESEARCH SOLUTIONS

- Attending conferences and workshops
- Contacting and collaborating with other municipalities, provincial bodies and universities
- Investigating new proposals from vendors
- Reviewing print material available in technology-specific magazines

EVALUATION

- Prioritize potential innovations and determine which are feasible and warrant further investigation
- Review with internal departments, other municipalities, suppliers, contractors and consultants
- Has the innovation previously been rejected or accepted? Were there any lessons learned?
- What are the qualitative and quantitative measurables we will use to evaluate this innovation?
- What impacts will this innovation have on the quality of the asset and its service life expectancy
- Perform cost-benefit analysis to determine if it is an effective use of resources
- What impacts will this have on the upfront capital, lifecycle, maintenance and operational costs?
- Will this innovation reduce restoration costs or closure times associated with construction?
- Is this a proprietary product that is limited to one supplier or contractor and what is the support in the local market for the innovation?
- Is this innovation compliant with the associated standards and codes?
- Will this reduce the environmental impact over conventional construction methods?
- Overall enhancement in compliance to the Minimum Maintenance Standards

IMPLEMENTATION

- Select trial projects based on the target of the innovative product or process
- Create trial contracts or incorporate into existing contracts
- Complete and ensure that the required testing is satisfactory

REVIEW

- Continually review, monitor and compare to other conventional or innovative methods
- Were the expected savings or efficiencies realized?
- Were the benefits of this pilot project proven through the use of empirical data?
- Proven that the innovation has resulted in an overall improvement to the asset, including its up front capital and future maintenance and lifecycle costs
- Does the cost-benefit analysis support continuing with the innovation?
- What can be done to improve on the constant process of innovation?