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TEMPORARY ROAD CLOSURES

The Transportation and Works Committee recommends the adoption of the recommendations contained in the following report, March 12, 2004, from the Commissioner of Transportation and Works:

1. RECOMMENDATIONS

It is recommended that:

1. The Commissioner of Transportation and Works be authorized to exercise any of the powers of Regional Council for the temporary closure of the following roads:
 - a) Langstaff Road (Y.R. 72) from Islington (Y.R. 7) Avenue to Pine Valley Drive (Y.R. 57) in the City of Vaughan (*see Attachment 1*).
 - b) St. John's Sideroad (Y.R. 26) between Yonge Street (Y.R. 1) and Industrial Parkway North and from Bayview Avenue (Y.R. 34) to Leslie Street (Y.R. 12) in the Town of Aurora (*see Attachment 2*).
 - c) Gamble Road (Y.R. 29) between Bathurst Street and Yonge Street (Y.R. 1) in the Town of Richmond Hill (*see Attachment 3*).
 - d) Major Mackenzie Drive East (Y.R. 25) from Highway 48 (Y.R. 68) to Ninth Line (Y.R. 69) in the Town of Markham (*see Attachment 4*).
 - e) Old Homestead Road (Y.R. 79) structure over watercourse 1350m east of Warden Avenue (Y.R. 65) in the Town of Georgina (*see Attachment 5*).
 - f) Green Lane (Y.R. 19) at GO Level Crossing in the Town of East Gwillimbury (*see Attachment 6*).
 - g) Mulock Drive (Y.R. 74) at GO Level Crossing in the Town of Newmarket (*see Attachment 7*).
2. The Regional Solicitor be authorized to prepare the necessary by-laws to give effect to the foregoing.

2. PURPOSE

The purpose of this report is to provide authorization for the Commissioner of Transportation and Works to temporarily close the specified Regional roads to through traffic to accommodate construction projects.

3. BACKGROUND

In order to complete some roadwork activities, it is often necessary to temporarily close sections of a road to through traffic. The Municipal Act allows a municipal council to delegate authority to temporarily close roads for the purposes of construction or maintenance.

It is difficult to pinpoint the required dates for the temporary closures, as the construction schedules often change because of delays, weather, and supply of materials. It is therefore appropriate to delegate the authority to temporarily close roads to the Commissioner of Transportation and Works. The following roadworks require temporary road closures for construction activities:

- Langstaff Road, City of Vaughan
Islington Avenue to Pine Valley Drive
- St. John's Sideroad, Town of Aurora
Yonge St. to Industrial Parkway North
- St. John's Sideroad, Town of Aurora
Bayview Avenue to Leslie Street
- Gamble Road, Town of Richmond Hill
Bathurst Street to Yonge Street
- Major Mackenzie Drive East, Town of Markham
Highway 48 to Ninth Line
- Old Homestead Road, Town of Georgina
East of Warden Avenue
- Green Lane Railway Crossing Improvements, Town of East Gwillimbury
East of 2nd Concession
- Mulock Drive Railway Crossing Improvements, Town of Newmarket
West of Bayview Avenue

3.1 Langstaff Road, Islington Avenue to Pine Valley Drive

Under the 2004 Roads Construction Program, Langstaff Road between Islington Avenue and Weston Road is scheduled for reconstruction and widening. Included with this work is the construction of a new Pressure District (PD) 5 Regional watermain and a sanitary sewer forcemain along the section of Langstaff Road between Islington Avenue and Pine Valley Drive.

The reconstruction and widening of Langstaff Road, including bridge widening over the Humber River, is planned to be carried out under a two stage construction scenario to maintain local and through traffic along Langstaff Road during the entire construction period. Construction is expected to commence in early May 2004 and be substantially completed by November 2004.

However, apart from the road and bridge work that can be carried out while maintaining traffic, it will be necessary to temporarily close Langstaff Road between Islington Avenue and Pine Valley Drive for approximately a one week period between May 15, 2004 and August 31, 2004, to accommodate watermain and sanitary sewer road crossings

in the vicinity of the Humber River bridge. A road closure for this aspect of the work is required because narrow existing road at the bridge location and the depth of the new services makes it impractical and less cost effective to construct the facilities while staging the traffic. In addition, given the roadway curvature through the specific area, public and worker safety will be enhanced through a temporary road closure.

3.2 St. John's Sideroad, Yonge Street to Industrial Parkway North and between Bayview Avenue and Leslie Street, Town of Aurora

The reconstruction and widening of St. John's Sideroad is scheduled to commence in May 2004 and includes the construction of a Regional trunk sanitary sewer and a Town of Aurora watermain.

3.3 Gamble Road between Bathurst Street and Yonge Street, Town of Richmond Hill

The reconstruction and widening of Gamble Road is scheduled to commence by late summer 2004 with completion in 2005. The work on Gamble Road includes significant cut and fill areas due to the existing rolling topography, the placement of new culverts, turning lanes at side streets, plus new sidewalks and illumination on behalf of the Town of Richmond Hill.

3.4 Major Mackenzie Drive East, east of Highway 48 to Ninth Line Town of Markham - Railway Crossing Improvements

The new automatic warning devices to be installed on the widened Major Mackenzie Drive require the existing signals to be removed from service. GO Rail has advised York Region that the crossing cannot be operated without warning devices in service. Therefore, a road closure is required to enable the installation of the new signal equipment and the transfer of operation from old to new.

3.5 Old Homestead Road

This project is for the replacement of the structure that carries Old Homestead Road over a watercourse east of Warden Avenue in the Town of Georgina. This work is to be carried out in 2004.

The replacement of this structure is planned to be carried out in a single stage. The road closure will be required for a one-week duration. A temporary road closure is required for the removal and replacement of the structure because of the existing narrow road at this location. The traffic flow would be restored as soon as possible upon completion of the construction of the new structure. Public and worker's safety will be better addressed with the full closure of the road. In addition, the cost for removing the existing structure and installing the new structure in a single process rather than in a staged approach would be greatly reduced.

3.6 Green Lane – Railway Crossing Improvements

This project is for the rehabilitation of the at grade rail crossing east of the 2nd Concession in the Town of East Gwillimbury. The work is scheduled to be completed in the 2004 program year.

A temporary full road closure during a weekend in May 2004 is required for this work. The proposed work includes the removal and replacement of the rails and ties and/or an adjustment to the elevation of the rail to coincide with the current grade of the road surface. The type of repair will be determined by GO Transit as further inspections take place this spring.

The connections of the replacement rails have to be made outside of the travelled roadway. In order for this to be done it will be necessary to temporarily close the road to traffic.

3.7 Mulock Drive – Railway Crossing Improvements

This project involves the rehabilitation of the at grade rail crossing west of Bayview Ave. in the Town of Newmarket.

A temporary full road closure during a week end in May 2004 is required for this work. The proposed work includes the removal and replacement of the rails and ties and/or an adjustment to the elevation of the rail to coincide with the current grade of the road surface. The type of repair will be determined by GO Transit as further inspections take place this spring.

4. ANALYSIS AND OPTIONS

4.1 Rationale for Temporary Road Closures

Where possible, Regional staff co-ordinate the construction activities to keep the roads open to through traffic. However, it is not always feasible to maintain through traffic because of the very nature of the work and it is often safer and more cost effective to complete the work under a temporary full road closure.

Temporary road closures, where implemented, reduce safety risks to both the travelling public and work crews and provide a work environment that enhances construction quality. Furthermore, temporary closures significantly reduce the costs and time schedule for any work, thus minimizing public impact and disruption when applied.

4.2 Public Notification and Mitigation

Notification of the temporary road closures will be placed on arterial and local roads two weeks prior to the closure period along with advertisements (for closure longer than two days) in the local newspapers. All emergency public service agencies (police, fire and ambulance) and public and school transit authorities will also be informed of the closures. Temporary road closure schedules will also be posted on the York Region website.

A detailed signage plan will be put in place for each closure to clearly identify detour routes. Measures will also be provided to maintain local access to residents, businesses, schools and other institutions. Only property owners that will be affected by local access will be advised directly by mail.

The duration period for all temporary road closures will be minimized by imposing timing constraints within the individual contracts for each project. Once a road closure is in effect, efficient utilization of the time period will be an obligation of the contractor to ensure that public impact and inconvenience is limited through effective work planning and operations.

Table 1 summarizes the durations and timing pertaining to each road closure recommended in this report.

Table 1
Temporary Road Closures

Location	Municipality	Duration	Timing
Langstaff Road from Islington Avenue to Pine Valley Drive	Vaughan	1 week	Between May 15, 2004 and August 31, 2004
St. John's Sideroad from Yonge St. to Industrial Parkway North	Aurora	5 months	Spring 2004 to Fall 2005
St. John's Sideroad between Bayview Avenue and Leslie Street	Aurora	4 months	Winter 2004/2005 to Summer 2005
Gamble Road Bathurst St. to Yonge St.	Richmond Hill	4 months	Summer/Fall 2004
Major Mackenzie Drive East from Highway 48 to Ninth Line	Markham	2 day weekend	Spring/Summer 2004
Old Homestead Road	Georgina	2-3 days	Dates TBD
Green Lane	East Gwillimbury	1 weekend	April or May 2004
Mulock Drive	Newmarket	1 weekend	April or May 2004

4.3 Project Closure Requirements

4.3.1 Langstaff Road, City of Vaughan

Several design and construction schemes have been evaluated for the installation of both the PD 5 watermain and sanitary sewer forcemain at the Humber River, with the objective of maintaining traffic at all times during the construction. The options included different pipe alignments and construction schemes which required extensive and expensive temporary shoring requirements due to grade differences during excavation. Certain design alignments were not acceptable because of the environmental impact the construction would create within the valley at the Humber River.

As a further alternative to the temporary road closure, the possibility to provide one lane traffic operation controlled by traffic control signals was also reviewed. This option would take much longer to construct and would inconvenience and delay traffic throughout the prolonged period of construction. Furthermore, this method of staged construction would increase the project cost with the requirement for temporary traffic control signals and would still require continued shoring and barriers for the protection of the roadway from the excavation.

The exact closure dates and durations will be determined once the contract has been awarded and a contractor work schedule developed that minimizes the actual closure periods.

4.3.2 St. John's Sideroad, Town of Aurora

It is proposed to temporarily close St. John's Sideroad between Yonge Street and Industrial Parkway North to allow the construction of road side retaining walls, a watermain and a sanitary sewer through the environmental sensitive McKenzie Marsh. In order to maintain traffic on this section of road during the construction of any one of these facilities, a temporary detour road would need to be installed within the wetland limits of the marsh. This would result in significant environmental impacts to the marsh, both in terms of physical intrusion as well as increased duration of construction. The five month duration of this closure has been established based on the sequential construction of first the sanitary sewer, then the watermain and finally the roadside retaining walls. Once a contractor has been hired for this project, opportunities will be explored to conduct some of these activities concurrently thereby decreasing the duration of this closure.

This project also includes the construction of a trunk sanitary sewer from Industrial Parkway North to approximately 400 metres east of Bayview Avenue. The section of St. John's Sideroad east of Bayview Avenue is not being widened as part of this project. As such, this section of sewer must be constructed within a relatively constrained road width. In light of the above, it is also proposed to temporarily close St. John's Sideroad between Bayview Avenue and Leslie Street to allow the cost effective and expeditious construction of this trunk sanitary sewer. Given that this closure is required later in the project schedule, the exact timing will be better established once the contract has been awarded and a detailed work schedule developed. All opportunities will be explored with

the contractor to minimize the duration of this closure as well as eliminate any overlap with the above closure at the McKenzie Marsh.

4.3.3 Gamble Road, Town of Richmond Hill

The existing topography is undulating and the new road profile will require lowering of existing crests in the road and raising of existing sags. Lowering or filling in some areas will exceed 4.0 metres. It is not physically practical to undertake this work without closing the road to local traffic. The contract will require the contractor to prepare a staging plan that will ensure local residents can access existing residences on Gamble Road and streets adjoining Gamble Road, however vehicle thoroughfare from Bathurst to Yonge will not be practical.

Closing of the road to enable the required earth grading will reduce the overall duration of construction and will be less expensive than requiring a temporary through road be constructed and maintained during construction.

The exact closure dates and durations will be determined once the contract has been awarded and a contractor work schedule developed that minimizes the actual closure periods.

4.3.4 Major Mackenzie Drive, East of Highway 48 Railway Crossing Improvements, Town of Markham

The closure of Major Mackenzie Drive from Highway 48 to Ninth Line, is required for the installation of automatic warning devices at the Major Mackenzie Drive – GO Rail railway crossing.

The railway crossing on Major Mackenzie Drive, east of Highway 48 is required for the installation of automatic warning devices as required for the widened Major Mackenzie Drive.

4.3.5 Old Homestead Road, Town of Georgina

It is proposed to temporarily close Old Homestead Road for approximately one week during the removal and replacement of the existing culvert. The actual dates of the closure will be decided upon after the bridge and culvert repair contract has been awarded for 2004. The Contractor will be required to submit a schedule that will best fit the needs of the citizens in the vicinity of the work, the Region, and the contractor.

4.3.6 Green Lane, Town of East Gwillimbury

Because of the type of repair required at this crossing it is necessary to temporarily close Green Lane to traffic. This closure will take place over a weekend with the road being reopened prior to the peak hour traffic on the following Monday morning.

4.3.7 Mulock Drive, Town of Newmarket

Because of the type of repair required at this crossing it is necessary to temporarily close Mulock Drive to traffic. This closure will take place over a weekend with the road being reopened prior to the peak hour traffic on the following Monday morning.

5. FINANCIAL IMPLICATIONS

The proposed temporary road closures are expected to result in a substantial savings in construction cost, compared to cost of maintaining traffic during construction. Funds for the works are included in approved 10 year Capital Plan for 2004.

6. LOCAL MUNICIPAL IMPACT

The construction of each of these projects will have a positive impact on the local community through the improvement of the road, water and sewer infrastructure within each of the local municipalities.

The closure of any road creates an inconvenience to the travelling public. Regional staff will undertake a number of mitigative measures to ensure that this disruption is kept to a minimum.

Signage forewarning of the proposed temporary road closures will be placed well in advance of the road closure dates and residents will be advised directly by mail. Local traffic will be maintained at all times to provide access to businesses and residences.

Traffic management plans are incorporated in all Regional construction contracts. Advertisements (for closures longer than two days) will be placed in the local newspapers indicating the closure location and duration. Detour signs will be installed to properly guide motorists around the closure. Emergency services and school boards will be notified in advance of the closure to ensure no interruption in service provision.

Staff at each of the local municipalities have been contacted regarding these proposed temporary road closures and concur with the proposed closures.

7. CONCLUSION

Under the Municipal Act, Regional Council may delegate authority to temporarily close roads.

It is therefore recommended, that authorization be delegated to the Commissioner of Transportation and Works for the temporary closure of:

- Langstaff Road from Islington Avenue to Pine Valley Drive in the City of Vaughan.
- St. John's Sideroad between Yonge Street and Industrial Parkway North and from Bayview Avenue to Leslie Street in the Town of Aurora.
- Gamble Road between Bathurst Street and Yonge Street in the town of Richmond Hill.
- Major Mackenzie Drive East in the Town of Markham.
- Old Homestead Road east of Warden Avenue in the Town of Georgina.
- Green Lane east of the 2nd Concession in the Town of East Gwillimbury.

- Mulock Drive east of Yonge Street in the Town of Newmarket.

The closure of these roads will allow for more cost effective and safe construction works to occur. Regional staff will take all necessary precautions to ensure that road closures are kept to a minimum and that appropriate notification is made to all that may be affected by these closures.

The Senior Management Group has reviewed this report.

(A copy of the attachments referred to in the foregoing has been forwarded to each Member of Council with the April 7, 2004 Transportation and Works Committee agenda and a copy thereof is on file in the Office of the Regional Clerk.)