



INFORMATION REPORT

TO:	Chair and Members Planning Committee
COMMITTEE DATE:	February 18, 2014
SUBJECT/REPORT NO:	Fifty Road (PED14034) (Ward 11) (Outstanding Business List Item)
WARD(S) AFFECTED:	Ward 11
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SIGNATURE:	

Council Direction:

This Information Report is in follow-up to Council direction provided on May 8, 2013 that staff report back to Planning Committee on the timeline of the improvements on Fifty Road including Barton Street intersection, and the at-grade CN rail crossing, to accommodate current and future development.

Consulted Departments:

In the preparation of this Information Report, staff has consulted with Geomatics and Corridor Management Section within Engineering Services Division of the Public Works Department.

Information:

Fifty Road is located within the boundary of Ward 11, and generally forms the eastern boundary of the City urban limits and the Stoney Creek Urban Boundary Expansion (SCUBE) Area. Within the SCUBE Area, Fruitland Road and Fifty Road are the only two roadways that provide direct access to the Queen Elizabeth Expressway (QEW) from the surrounding residential and commercial/industrial land uses to the north and south of the QEW.

Under the current condition, Fruitland Road is grade-separated at the CNR corridor, whereas Fifty Road is an at-grade crossing. With the anticipated increase in population and employment, 15,400 people and 6,580 jobs, respectively; the need to consider a

grade-separated crossing was identified within the “Niagara Service Expansion Environmental Study Report (ESR)” (GO Transit, April 2011).

As part of a Council direction provided on May 8, 2013 (Item 6.1), and as discussed at Planning Committee Meeting of April 30, 2013, Applications for Amendments to the City of Stoney Creek Official Plan and Hamilton Zoning By-law No. 05-200 for Lands Located at 1361 Barton Street (Stoney Creek) (PED13073) (Ward 11), the following direction was provided:

- That staff have formal discussion with CN regarding any/all improvements including a grade separation at the Fifty Road Crossing; and,
- That staff report back on the timeline of the improvements on Fifty Road including the Barton Street intersection to accommodate current and future developments.

The City retained MMM Group Consultants to carry out a Grade Separation Needs Assessment Study for the existing Fifty Road at-grade crossing. The Study evaluated the need for a grade separation in consideration of current Provincial and Federal criteria.

Warrant Analysis

Warrants for at-grade crossing safety measures and consideration for grade separations are evaluated based on the ‘Exposure Index’ (EI) of the related crossing. The EI is the cross product of the ‘annual average daily traffic’ (AADT) and the number of trains per day (i.e. AADT multiplied by number of trains per day). Current engineering practice suggests that when the EI for an at-grade crossing exceeds 200,000 a grade-separation should be considered.

To establish the vehicle traffic to be used in the analysis, the City carried out a traffic count at the intersections of Fifty Road/South Service Road in October 2013, and applied traffic forecasts counts from the Foothills of Winona Subdivision Traffic Impact Study (2013) focusing on the Fifty Road/Barton Street intersection. Railway traffic has been established based on the GO Transit “Niagara Service Expansion ESR” (April 2011).

The warrant analysis assessed the EI for the current year (2013) and the years of 2016, 2021, 2026 and 2031. The horizon years of 2016, 2021 and 2031 were used in the assessment as these years were in common with approved area transportation and planning studies (Penady Commercial Development, SCUBE Transportation Master Plan, Niagara Rail Service Expansion Environmental Study Report, City of Hamilton Official Plan). The results of the Grade Separation Needs Assessment are provided in Table 1.

TABLE 1 – Grade Separation Needs Assessment				
Analysis Scenarios:	Year	AADT (veh/day)	Train Frequency (trains/day)	Cross-Product
Existing (Oct 2013) vehicular traffic and existing train traffic	2013	7,274	13	94,562
2016 vehicular traffic and existing train traffic	2016	11,158	13	145,054
2016 vehicular traffic with the GO estimated 2016 train traffic	2016	11,158	20	223,160
2021 vehicular traffic and existing train traffic	2021	11,727	13	152,451
2021 vehicular traffic with the GO estimated 2016 train traffic	2021	11,727	20	234,540
2026 vehicular traffic with existing train traffic	2026	12,325	13	160,225
2026 vehicular traffic with the GO estimated 2016 train traffic	2026	12,325	20	246,500
2031 vehicular traffic and existing train traffic	2031	12,954	13	168,402
2031 vehicular traffic with the GO estimated 2031 train traffic	2031	12,954	24	310,896

Table 1 illustrates that the EI increases with the combination of planned growth in motor vehicle traffic and rail traffic in the Fifty Road area. Based on forecast traffic demand and anticipated increased rail traffic the exposure index will marginally exceed the 200,000 threshold by 2016; however, the assessment also shows that the increase in the exposure limit to the 200,000 threshold and beyond is directly related to the increase in railway traffic. That is, vehicular traffic only marginally impacts the exposure index since the exposure index will remain below the 200,000 threshold through to 2031 if rail traffic remains static.

Staff have received confirmation of railway traffic from CN. Rail traffic at Fifty Road has been reported to be six (6) trains per day (on average). CN qualified that railway “traffic volumes may fluctuate due to overall economic conditions, varying traffic demands, weather conditions, track maintenance programs, statutory holidays and traffic detours that when required may be heavy although temporary”. Therefore, the evaluation of the exposure index at Fifty Road, as presented, is considered by staff to be a conservative estimate.

Summary

A grade-separation at Fifty Road is considered to be unwarranted based on the current motor vehicle and rail traffic volumes, and would remain unwarranted based on the planned increase in motor vehicle traffic through to 2031, so long as rail traffic remained at 2013 frequencies.

However, rail traffic through this corridor is planned to increase, as documented within the GO Transit “Niagara Service Expansion ESR” (as presented in Table 1 above). With the increase in rail traffic and the marginal increase in motor vehicle traffic it has been demonstrated that a grade-separation at Fifty Road and the CNR would be warranted (i.e. exposure index exceeds 200,000) as soon as the calendar year of 2016. Although a grade separation may be warranted; the existing safety infrastructure (gates, flashing lights and bells) present today meets the current rail safety requirements.

By not providing a grade-separated crossing, when the exposure index exceeds 200,000, delays can be expected to vehicular/pedestrian traffic (i.e. impacting level of service) and increased potential for motor vehicle and train collisions. City staff will continue to dialogue with CN in monitoring the rail traffic through this corridor.

City does not control growth through the rail corridor; however the City does have the ability to develop a strategy to address the future needs and demands of the residents and businesses impacted by the increase in rail traffic, which would involve the City taking the appropriate steps to plan for a future grade separation. The City has taken the initial steps in protecting land for a grade separation, by including policy within the Fruitland-Winona Secondary Plan.

Following the adoption of policy, a Class Environmental Assessment (EA) of Fifty Road is required to identify corridor improvements and the land requirements to implement the proposed improvements, including consideration of a grade-separation at the CN Rail.

Based on the information presented in this information report, a need to grade-separate Fifty Road at CNR is not firmly established: i.e. if rail volumes don't increase then the threshold EI will not reach a level that triggers the need to consider one. In that regard, the growth in road and rail traffic needs to be monitored such that the City is able to move forward with a plan if needed.

Upgrades to Fifty Road and Barton Street

In addition to the grade-separation warrant analysis, additional work is scheduled to be undertaken to assess and evaluate growth related improvements to the transportation network. This includes carrying out a Schedule C Class Environmental Assessment for improvements to Barton Street approved in the SCUBE Transportation Master Plan, including the intersections at Fifty Road and Winona Road as it pertains to expected growth in the Penady commercial block to the north. The terms of reference for the Class

EA are being prepared in late 2014, with the study commencing in 2015. The earliest the recommendations identified from the Barton Street Class EA could be constructed is 2018, following the detail engineering design. It should be noted that the Barton Street EA has been scheduled as such to coincide with the work plan for the SCUBE Block Servicing Study, as grading and drainage are common components between the two studies.

To address neighbourhood concerns, staff will be monitoring traffic at the above intersections annually to determine what if any improvements may be required in advance of full road upgrades: e.g. adding turning lanes, signalization. Currently, staff are of the opinion that traffic volumes at the intersections are manageable (no changes required), but as development of the Penady commercial area progresses it will become more apparent as to what type of improvements should be considered and the timing of implementation.

Staff intends to undertake a Class EA for Fifty Road following the Barton Street EA in 2015. The terms of reference will be prepared in 2016, with the study commencing in 2017. Construction of any recommended improvements to the Fifty Road corridor would likely be constructed after the calendar year of 2020.

It should be noted that the intersection of Fifty Road and Barton Street will be reviewed in both the Barton Street EA and the Fifty Road EA, therefore intersection improvements at Fifty Road and Barton Street would come as a result of the completion of either EA.

Given this information, it is recommended that this item should be removed from the Planning Committee Outstanding Business List as discussed at the Planning Committee meeting of January 4, 2014.

GN/RM/mah