

REPORT NO. 160 of the
ENVIRONMENT, TRANSPORTATION & PUBLIC SAFETY
STANDING COMMITTEE

of its meeting held September 25, 2013

Present: Councillor J. Gignac
Councillor A. Halberstadt
Councillor R. Jones
Councillor F. Valentinis, Chair

Regrets: Councillor H. Payne

That the following recommendations of the Environment, Transportation and Public Safety Standing Committee **BE APPROVED:**

Moved by Councillor Valentinis, seconded by Councillor Halberstadt,

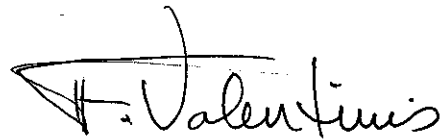
A. That Traffic By-Law 9148 **BE AMENDED** as per Appendix C to remove the eastbound left turn restriction at the intersection of Tecumseh Road and Windsor Avenue; and further

B. That signage **BE ERECTED** stating "Do Not Block Intersection" on Tecumseh Road East at the intersection with Windsor Avenue.

Carried.

Livelihood 16734 ST2013

Clerk's Note: The administrative report authored by the Policy Analyst dated September 10, 2013 entitled "*Tecumseh Road East – Eastbound Left Turn at Windsor Avenue*" is **attached** as background information. Also **attached** is the supplementary information memo dated September 19, 2013.



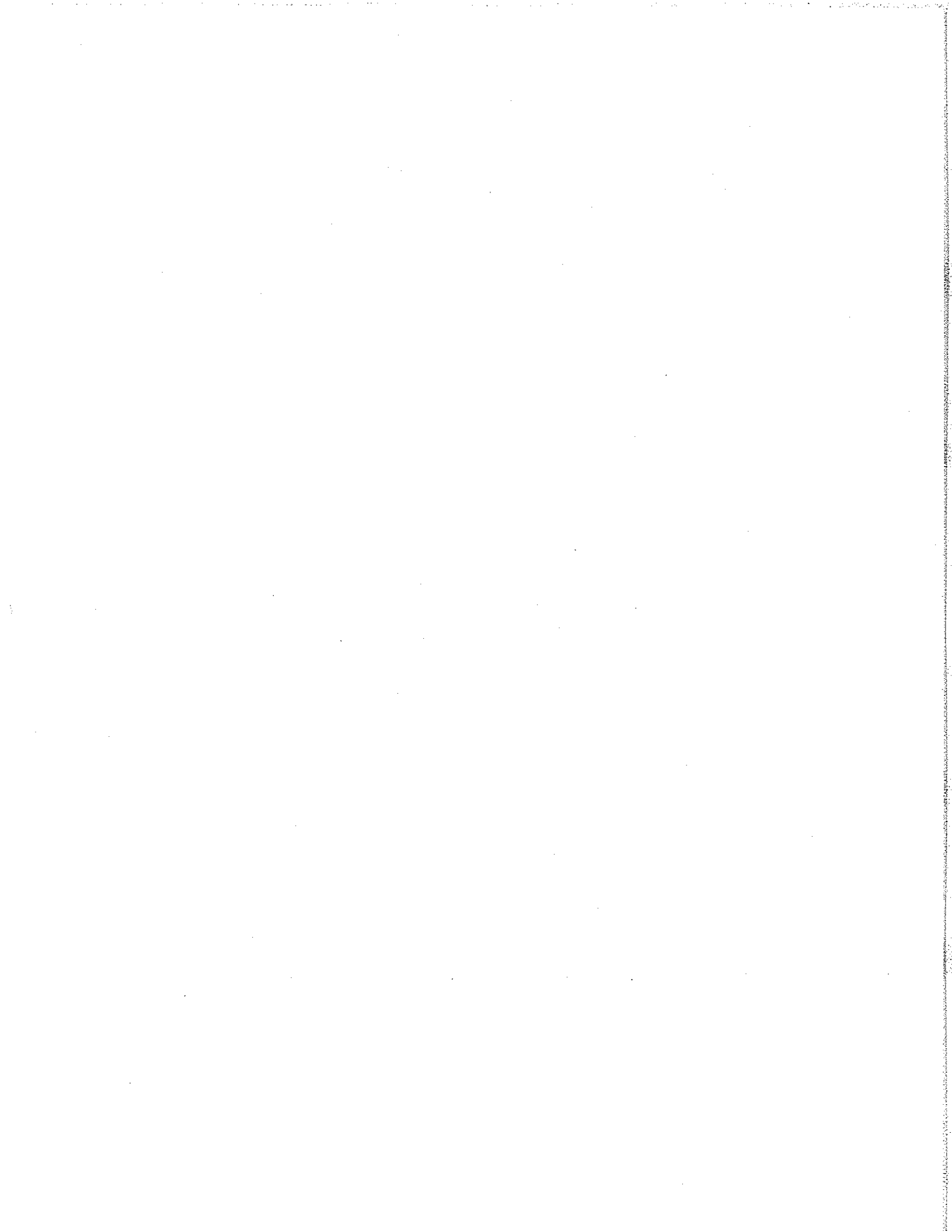
CHAIRPERSON



DEPUTY CLERK

NOTIFICATION:				
Name	Address	Email Address	Phone	FAX
John Tofflemire R.C. Spencer & Associates	18 Talbot Street West Leamington ON N8H 1M4			
1882076 Ontario Ltd.	810 Huron Street LaSalle, ON N9J 3E6			

1164936 Ontario Inc. Attn: Joanne Doher	110 Tecumseh Rd. E. Windsor ON N8X 2P8			
Shawn Bartlett		shawn.bartlett@sympatico.ca		
Gary Leslie		gleslie5@cogeco.ca		
Margaret Messenger Can-Am Urban Native Homes		canamhomes@yahoo.ca		
Michelle Johnson Fusion Hair Studio	180 Tecumseh Rd. E. Windsor ON N8X 2P8			



THE CORPORATION OF THE CITY OF WINDSOR
Environment, Transportation & Public Safety Standing Committee –
Admin Report – Environment Transportation



MISSION STATEMENT:

"The City of Windsor, with the involvement of its citizens, will deliver effective and responsive municipal services, and will mobilize innovative community partnerships"

LiveLink REPORT #: 16734 ST2013	Report Date: September 10, 2013 PW#3671-09/12/13:eb
Author's Name: Jeff Hagan	Date to Committee: September 25, 2013
Author's Phone: (519) 255-6247 ext. 6003	Classification #:
Author's E-mail: jhagan@city.windsor.on.ca	

To: Environment, Transportation & Public Safety Standing Committee

Subject: Tecumseh Road East – Eastbound Left Turn at Windsor Avenue

1. RECOMMENDATION: City Wide: Ward(s): 3

- A. That an eastbound left turn lane **BE PROVIDED** at the intersection of Tecumseh Road and Windsor Avenue as shown in Appendix A.
- B. That Parking By-Law 9023 **BE AMENDED** as per Appendix B to remove on-street parking on Tecumseh Road between Goyeau Street and Windsor Avenue to accommodate the left turn lane for Windsor Avenue.
- C. That Traffic By-Law 9148 **BE AMENDED** as per Appendix C to remove the eastbound left turn restriction at the intersection of Tecumseh Road and Windsor Avenue.

EXECUTIVE SUMMARY:

N/A

2. BACKGROUND:

A site plan application for 250 Tecumseh Road East, located on the north side of Tecumseh Road between Windsor Avenue and McDougall Street, was recently approved. The development is currently under construction. The plans for this development include a retail plaza and a fast food restaurant with drive-through.

Once fully developed, site trips to and from the development will increase traffic volumes in the area. The traffic impact study prepared by the developer's consultant (R. C. Spencer & Associates) identified that in the weekday PM peak hour under future conditions, Windsor Avenue will experience 14 site trips (approximately 1 every 4 minutes) north of the site driveway and 96 site trips south of the site driveway. During this period, 57 vehicles per hour (including both site traffic and background traffic) are forecast to make an eastbound left turn at the Windsor Avenue / Tecumseh Road intersection.

The approved development application calls for accesses on McDougall Street and Windsor Avenue, as well as an access on Hanna Street intended primarily for trucks. The site plan for the development is provided as Appendix D.

Eastbound left turns are prohibited at all other intersections on Tecumseh Road between Ouellette Avenue and McDougall Street:

- At Dufferin Place: eastbound and southbound left turns are prevented by median
- At Goyeau Street: eastbound left turns are prohibited at all times
- At Windsor Avenue: eastbound left turns are prohibited 3:00 pm – 6:00 pm, Monday to Saturday

Further east, a continuous left turn lane is provided on Tecumseh Street between McDougall Street and Howard Avenue.

Based on the traffic volume estimates provided in the traffic impact study prepared by R. C. Spencer and Associates for the site plan application for 250 Tecumseh Road East, a left turn lane will be warranted at Windsor Avenue in future with the removal of the left turn restriction and the addition of site traffic.

3. DISCUSSION:

A review of the request to facilitate eastbound Tecumseh Road left turn movements to Windsor Avenue northbound was undertaken to establish warrant. The warrant for a left turn lane is based on the delay and congestion effects caused by vehicles waiting to turn left on through traffic.

Based on the supported need, a review of the options to achieve this movement was completed to identify a technically preferred solution.

This technically preferred solution consists of the following components:

- Remove the eastbound left turn restriction at Tecumseh Road and Windsor Avenue
- Provide a new eastbound left turn lane on Tecumseh Road at Windsor Avenue by re-striping within the existing pavement width
- Relocate the existing on-street parking on Tecumseh Road between Goyeau Street and Windsor Avenue onto Windsor Avenue to accommodate the left turn lane

Each of these components is discussed in detail below.

Removal of the Eastbound Left Turn Prohibition

As noted under *Section 2 - Background*, the development at 250 Tecumseh Road East, currently under construction, will generate site traffic that will increase traffic volumes in the area. The approved development application calls for accesses on McDougall Street and Windsor Avenue, as well as an access on Hanna Street intended primarily for trucks.

With the eastbound left turn restriction in place at the intersection of Windsor Avenue and Tecumseh Road, eastbound traffic accessing the site during the weekday PM peak would be required to use McDougall Street. Under existing conditions, the McDougall Street / Tecumseh Road intersection operates near capacity in the weekday PM peak hour with significant levels of delay. Increased volumes in the intersection, particularly left turn volumes, would tend to exacerbate conditions and contribute to even greater levels of delay.

The removal of the turn restriction at Tecumseh Road and Windsor Avenue would allow eastbound vehicles to access the site by way of Windsor Avenue, thereby reducing pressure on the McDougall Street / Tecumseh Road intersection. For this reason, it is recommended that the existing left turn restriction (3:00 pm to 6:00 pm, Monday to Saturday) be removed.

Further, as noted below, an eastbound left turn lane is currently warranted at this location based on Saturday peak hour volumes. Because of the potential for driver confusion, it would be undesirable to provide a left turn lane at this location while the left turn restriction was still in place. Therefore, removing the left turn restriction is a necessary first step to allow a left turn lane to meet the existing identified need.

Road Safety Considerations

Both the Tecumseh Road/McDougall Street and Tecumseh Road/Ouellette Avenue intersections were identified in the 2012 Road Safety Report as high collision locations, both with collision rates approximately 70% higher than the city-wide average for signalized intersections. From a safety perspective, it is considered preferable to avoid traffic increases at these intersections, particularly for turning movements. Therefore, where possible, it is preferable to provide alternate routes for the vehicles that would otherwise turn at these intersections, provided that safety issues along these alternate routes are properly addressed.

Eastbound Left Turn Lane

In a shared through-left lane, left turning vehicles can impede through vehicles; the magnitude of this effect depends on the volume of traffic turning left, the volume opposing the turning movement, and the advancing volume that is impeded by vehicles waiting to turn left.

The Ministry of Transportation of Ontario (MTO) has developed standards for when a left turn lane is warranted. Based on these standards, an eastbound left turn lane on Tecumseh Road at Windsor Avenue is currently warranted in the Saturday peak hour (note: the Saturday peak occurs before the left turn prohibition comes into effect at 3:00 pm). Based on the traffic volume estimates provided in the traffic impact study prepared by R. C. Spencer and Associates for the site plan application for 250 Tecumseh Road East, a left turn lane will be warranted in future with the removal of the left turn restriction and the addition of site traffic.

While MTO left turn lane warrants do not carry regulatory weight on City of Windsor roads and streets, they are considered good professional practice. Further, a recent before-and-after study of

intersections in the City of Vancouver found that providing a left turn lane can reduce the risk of collisions at the intersection by approximately 20% on average (El-Basyouny and Sayed, Jan. 2011). Therefore, it is recommended that an eastbound left turn lane be provided on Tecumseh Road at Windsor Avenue to address both congestion and safety considerations.

The existing pavement width on Tecumseh Road between Goyeau Street and Windsor Avenue is not wide enough to accommodate the proposed left turn lane along with four through lanes and the existing parking lane. Three options were considered regarding the left turn lane:

1. Retain the existing on-street parking and widen Tecumseh Road southerly to allow the addition of the left turn lane,
2. Remove the existing on-street parking on this section of Tecumseh Road and provide the left turn lane by re-striping within the existing pavement width, or
3. Simply remove the eastbound left turn restriction (Monday to Saturday, 3:00 am to 6:00 pm) with no change to parking and no left turn lane created.

Option 1 would require the relocation of at least 4 hydro poles and 1 catch basin, as well as the removal of several established trees along the edge of Jackson Park. These impacts were considered prohibitive, and therefore Option 1 was not carried forward.

Option 2 can be accomplished within the existing pavement width. The removal of existing parking on Tecumseh Road can be mitigated by providing additional parking on Windsor Avenue; this is discussed in the section below.

As noted previously, Option 3 would not address the operational and safety considerations that would be addressed by a left turn lane. Considering the volume of traffic that would make the eastbound left turn movement at Tecumseh Road and Windsor Avenue and the volume of traffic opposing this movement, Option 3 is not recommended.

Since Options 1 and 3 were excluded, Option 2 was carried forward as the recommended approach.

Removal of Parking

To accommodate the eastbound left turn lane at Tecumseh Road and Windsor Avenue within the existing pavement width available while maintaining two through lanes in each direction, it will be necessary to remove the existing on-street parking on the north side of Tecumseh Road between Goyeau Street and Windsor Avenue.

Between Goyeau Street and Windsor Avenue, parking is prohibited on the south side of Tecumseh Road at all times. On the north side, there is a 33 metre long (capacity: 5 cars) zone with 2 hour time limited parking from 9:00 am to 3:00 pm Monday to Friday and 9:00 am to 6:00 pm Saturday. Outside of these times, parking is allowed without a time restriction (beyond the general restrictions in Parking By-law 9023).

There are two properties on the north side of this block of Tecumseh Road: a 2-storey office building, and a mixed-used building that varies between 2 and 3 stories with first floor retail and upper floor residential apartments. Both buildings have off-street parking available. On the south side of Tecumseh Road, Jackson Park extends along the entire length of this block.

Parking occupancy for Tecumseh Road between Goyeau Street and Windsor Avenue was surveyed several times at various times of day. The observed parking occupancy is summarized in the table below.

Date	Time	Parked Vehicles	Capacity	Occupancy
Thursday, July 18	12:25 pm	2	5	40%
	1:35 pm	1		20%
	5:05 pm	1		20%
Friday, July 19	12:30 pm	1		20%
	1:50 pm	1		20%

The highest observed number of vehicles parked in this section of Tecumseh Road was 2; during most observed periods, the observed number of parked vehicles was 1. This parking demand can be accommodated either on site or on Windsor Avenue or Goyeau Street. While a formal parking occupancy study of Windsor Avenue and Goyeau Street were not undertaken, they were observed to have good parking availability at all survey times.

Therefore, it is recommended that parking on Tecumseh Road between Goyeau Street and Windsor Avenue be removed to accommodate the proposed left turn lane. This is in keeping with the vision given in the Official Plan and Tecumseh Road's classification as a Class II Arterial Road:

7.2.2.15 Council may allow, restrict or partially restrict on-street parking on specific roads as follows:

[...]

(b) parking will be discouraged on Class II Arterial Roads and Class I Collector Roads and may only be allowed in areas where adequate and convenient off-street parking is not available;

Windsor Avenue Parking Lay-By

While the low parking utilization in the existing time-limited parking zone on Tecumseh Road can be accommodated in the existing off-street capacity at 110 and 180 Tecumseh Road East and the on-street capacity on Windsor Avenue and Goyeau Street, if desired, the removal of on-street parking from Tecumseh Road can be mitigated by providing additional parking on Windsor Avenue.

In the vicinity of Tecumseh Road, parking is provided on one side of Windsor Avenue. While the pavement width would not allow parking on both sides of the street, additional parking could be provided by constructing a parking lay-by on the east side of Windsor Avenue. To provide space for the same number of vehicles that can currently be accommodated on Tecumseh Road, a lay-by 30 metres in length (5 spaces) would be required. Based on the parking utilization survey, a lay-by 12 metres in length (2 spaces) would be sufficient to accommodate the peak parking demand observed on Tecumseh Road. Construction of a parking lay-by on Windsor Avenue would be at the City's expense as funds allow.

Sight Distance at the Goyeau Street / Tecumseh Road Intersection

Removal of parking from this section of Tecumseh Road would also improve sight lines at the Goyeau Street / Tecumseh Road intersection: with a large vehicle parked at the west end of the existing parking zone, turning sight distance to the east for a driver on Goyeau Street is limited to approximately 57 metres, which corresponds to a design speed of less than 35 kilometres per hour.

The 5-year collision history (2008 through 2012) was reviewed for the intersection of Goyeau Street and Tecumseh Road. Over this period, 14 collisions occurred at the intersection, making it the eighteenth worst unsignalized intersection in the City of Windsor based on number of collisions. The review found that of the 14 collisions that occurred between 2008 and 2012, 6 of them (43%) involved southbound turning vehicles being struck by westbound vehicles. One additional collision also appeared to involve sight distance for southbound vehicles looking east (a vehicle that had pulled forward waiting to turn from Goyeau Street reversed into the vehicle behind while trying to avoid a collision with a westbound vehicle). This collision history suggests that the reduced sight distance to the east may be resulting in a safety issue at the intersection.

With no vehicles parked in this area, the available sight distance to the east would extend beyond McDougall Street, which would exceed the minimum sight distance at an appropriate design speed for Tecumseh Road (60 km/h) when a vehicle has pulled forward to the curb line.

Hanna Street and Windsor Avenue All-Way Stop Warrant

Administration was requested to review the intersection of Hanna Street and Windsor Avenue to determine whether it would meet the warrant for an all-way stop. Based on a warrant study carried out in September 2013, an all-way stop is not currently warranted based on volume. The distance from Tecumseh Road to Hanna Street (226 m) is shorter than the minimum distance from an all-way stop to another traffic control device specified in the City's all-way stop warrant (250 m).

Based on the site traffic estimates provided in the TIS report for the 250 Tecumseh Road East development, the construction of the development is not likely to bring traffic volumes at the Hanna Street and Windsor Avenue intersection above the warrant threshold.

4. RISK ANALYSIS:

If the left turn prohibition is not removed, eastbound vehicles on Tecumseh Road that are destined for businesses and homes on Windsor Avenue would be forced to use alternate routes, such as Ouellette Street or McDougall Street, to access their destinations. Because the Tecumseh Road / Ouellette Street and Tecumseh Road / McDougall Street intersections operate at or near capacity in the weekday peak hours, eastbound left turns at these intersections would contribute more to overall delay and congestion on the road network than eastbound left turns Windsor Avenue.

Due to traffic volumes on Tecumseh Road East, if the eastbound left turn restriction is removed at Windsor Avenue without providing an eastbound left turn lane, at high-volume periods of the day, eastbound vehicles waiting to turn left would tend to impede eastbound through vehicles. This would increase overall average delay for road users and could increase the potential for rear-end collisions.

5. FINANCIAL MATTERS:

The cost to provide an eastbound left turn lane on Tecumseh Road at Windsor Avenue, including obliteration of existing pavement markings, applying new pavement markings, and modifying signage as required is \$3,500. This work was not addressed in the servicing agreement for 250 Tecumseh Road East. It would be funded from the Traffic Operations signs and markings budget. Since this expenditure was not budgeted, it will result in a variance.

If Council so chooses, the preliminary cost estimate to provide a parking lay-by on Windsor Avenue is as follows:

- \$23,000 for a 12 m (2 space) lay-by to accommodate the peak parking demand observed in the parking zone removed from Tecumseh Road, or
- \$40,000 for a 30 m (5 space) lay-by to provide the same parking supply as that which was removed.

Administration has not identified a source of funds for a parking lay-by.

6. CONSULTATIONS:

John Wolf, Traffic Operations
John Revell, Planning Department
Patrick Winters, Engineering Department

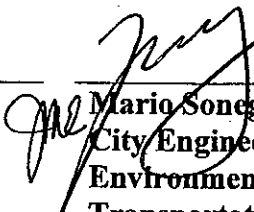
7. CONCLUSION:

Based on existing and forecast future traffic volumes at the intersection, it is recommended that eastbound left turns be permitted at all times at the intersection of Tecumseh Road at Windsor Avenue, and that an eastbound left turn lane be provided to properly accommodate turning traffic. This will require removal of the existing on-street parking on Tecumseh Road between Goyeau Street and Windsor Avenue.

Observations indicate that the low number of vehicles using this parking area (maximum observed during parking survey: 2 vehicles) can be accommodated by the existing on- and off-street parking capacity in this area. However, if Council chooses, the reduction in parking supply can be offset by constructing a parking lay-by on Windsor Avenue.



Jeff Hagan
Policy Analyst



Mario Songco
City Engineer and Corporate Leader
Environmental Protection and
Transportation



Helga Reidel
Chief Administrative Officer

JH

APPENDICES:

- A – Figure: Proposed Eastbound Left Turn Lane**
- B – Proposed Amendment to Parking By-Law 9023**
- C – Proposed Amendment to Traffic By-Law 9148**
- D – Site Plan: 250 Tecumseh Road East**
- E – Letter: R. C. Spencer & Associates**

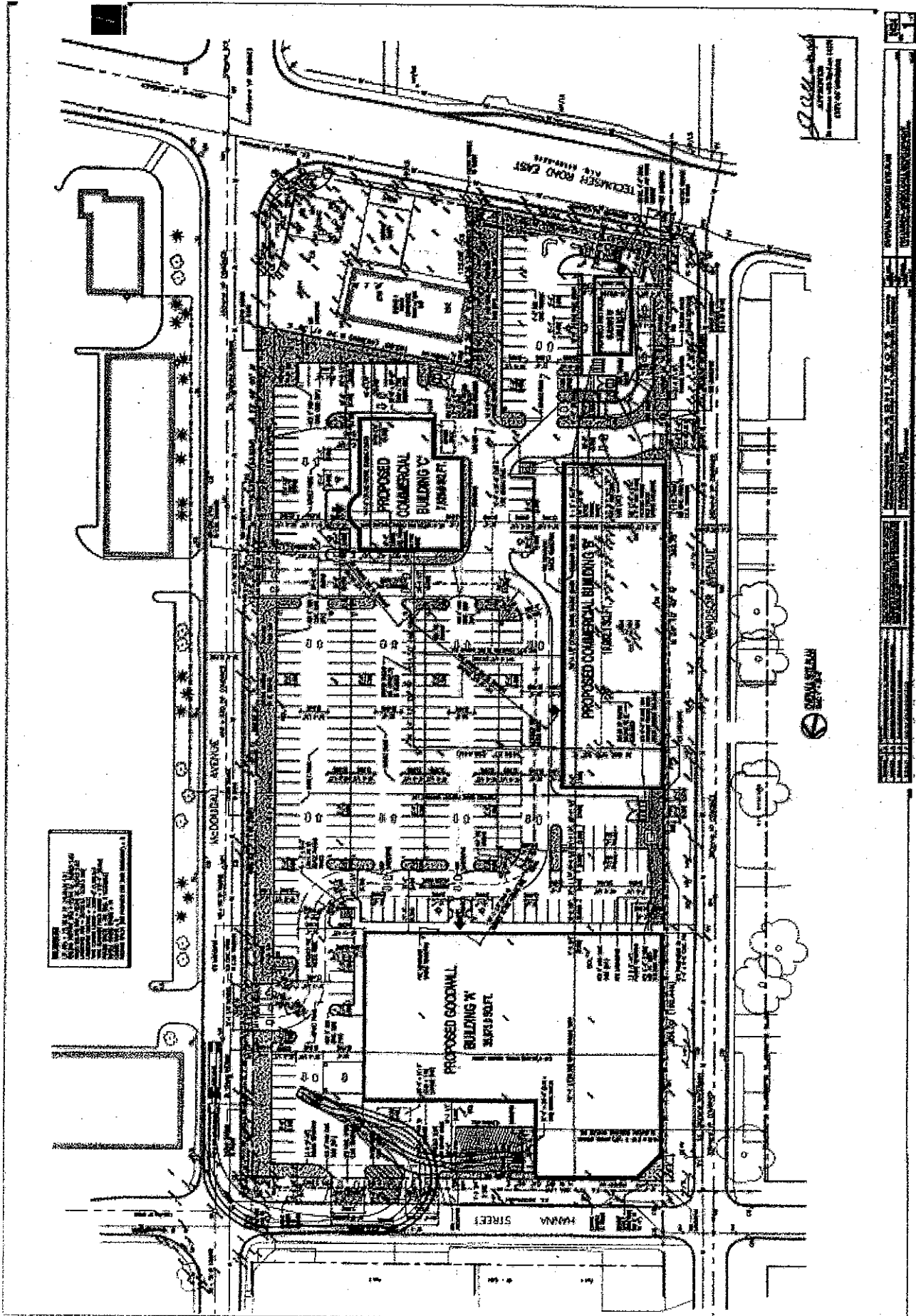
DEPARTMENTS/OTHERS CONSULTED:**Name:****Phone #: 519 ext.****NOTIFICATION:**

Name	Address	Email Address	Telephone	FAX
Councillor Valentinis		fvalentinis@city.windsor.on.ca		
Area property owners	180 Tecumseh Road East, 250 Tecumseh Road East, 1641-1677 Windsor Avenue			
1164936 Ontario Inc. c/o Joanne Doher	110 Tecumseh Road East Windsor ON N8X 2P8			
1882076 Ontario Ltd.	810 Huron Street LaSalle ON N9J 3E6			
R. C. Spencer & Associates Attn: John Tofflemire	18 Talbot Street West Leamington ON N8H 1M4			

AMENDMENTS TO PARKING BY-LAW 9023					
ITEM	REGULATION	STREET	LOCATION	DESCRIPTION	REASON
1	Schedule "A" Limited Parking DELETE	Tecumseh Road	North Side	From Goyeau Street to Windsor Avenue – 2 hour limit – 9 AM to 3 PM – Monday to Friday – 9 AM to 6 PM – Saturday	Accommodate left turn lane at Windsor Avenue
2	Schedule "C" No Parking DELETE	Tecumseh Road	Both sides	From Pelissier Street to Goyeau Street	Accommodate left turn lane at Windsor Avenue
3	Schedule "C" No Parking DELETE	Tecumseh Road	South side	From Goyeau Street to Windsor Street	Accommodate left turn lane at Windsor Avenue
4	Schedule "C" No Parking DELETE	Tecumseh Road	Both sides	From Windsor Avenue to Howard Avenue	Accommodate left turn lane at Windsor Avenue
5	Schedule "C" No Parking ADD	Tecumseh Road	Both sides	From Pelissier Street to Howard Avenue	Accommodate left turn lane at Windsor Avenue

AMENDMENTS TO TRAFFIC BY-LAW 9148

ITEM	REGULATION	STREET	DIRECTION OF TRAFFIC	INTERSECTING STREET	TYPE OF RESTRICTION	PERIOD OF PROHIBITION	REASON
1	Schedule "F" Prohibited Turns DELETE	Tecumseh Road	Eastbound	Windsor Avenue	Left turns	3 PM to 6 PM – Monday to Saturday	Allow eastbound left turns at Windsor Avenue





RC SPENCER ASSOCIATES INC.
Consulting Engineers

5 June 2013
File No.: 12-255

Public Works
1266 McDougall

JUN 10 2013

The Corporation of the City of Windsor
Public Works Department
1266 McDougall Street
Windsor, Ontario, N8X 3M7

Time:

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Attn: Mr. Michael Palanacki, P. Eng.
Executive Director of Operations

Re: 250 Tecumseh Road East site plan
Removal of P.M. peak hour left turn prohibition
Tecumseh Road at Windsor Avenue

Dear Mr. Palanacki:

This letter is pursuant to the site plan control application for the redevelopment of the lands at 250 Tecumseh Road East for a commercial plaza, which will include among other uses, a Goodwill Industries retail and warehouse building.

As you will recall, the site was rezoned in April 2011 (CR 136/2011) to allow commercial development, and placed in a Holding category; through discussions with administration, all of the conditions have been completed to remove the Holding category and the development is ready to proceed.

In 2011, a Traffic Impact Study was completed in support of the rezoning; one of the recommendations at that time was the removal of the left turn prohibition at the intersection of Tecumseh Road and Windsor Avenue during the p.m. peak period. The 2011 Traffic Impact Study has been updated in support of the current site plan for the Goodwill Industries plaza, and the removal of the turning prohibition is again recommended. It is notable that the uses proposed for the current development have a significantly lower traffic impact compared to the previous proposal.

The removal of this turning prohibition is not expected to create any adverse impact. Our recent traffic impact study makes note of the following:

"... the intersection of Windsor at Tecumseh will operate at a very good level of service. The turning prohibition for the p.m. peak period should be removed to provide proper accessibility to the site given the removal of site access from Tecumseh Road. It is not practical to expect traffic destined to the proposed restaurant at the corner of Windsor and Tecumseh, to turn left at McDougall, turn left again at the driveway to the plaza, and again in the parking lot."

Windsor Office: 261 Shepherd Street East - Windsor, Ontario, N8X 2K6 • Tel: 519.946.1122
Leamington Office: 18 Talbot Street West - Leamington, Ontario, N8H 1M4 • Tel: 519.324.0606

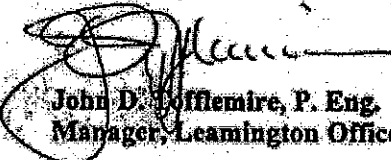
 Professional Engineers
Ontario

I understand through discussions with our client that administration has discussed the issue and that there is agreement with making this recommendation to Council by way of an amendment to the Traffic Bylaw.

Accordingly, we are requesting that you prepare the necessary Council report to amend the Traffic Bylaw to eliminate the p.m. peak period left turn prohibition at Tecumseh Road and Windsor Avenue.

Please notify me when the matter is ready to proceed to Council so that I may be in attendance.

Regards,
RC Spencer Associates Inc.



John D. Hoffmire, P. Eng.
Manager, Leamington Office

cc: Henry Van Minnen
John Rivell