November 24, 2005
16-01039-01-TP1

Mr. Wesley Hicks, P. Eng.
Manager of Transportation Planning
Public Works - Operations
City of Windsor
1266 McDougall Street
Windsor, ON
N8X 3M7

RE: Cabana/Division Road Corridor – Huron Church Road to Walker Road
Environmental Study Report

Dear Mr. Hicks,

Marshall Macklin Monaghan is very pleased to submit our final report on the Environmental Assessment (EA) for the Cabana/Division Road Corridor.

We appreciate the opportunity to undertake this study on behalf of the City of Windsor. As you know, this study has undergone a significant level of public participation to actively involve all stakeholders who had an interest in this undertaking. The five Public Information Centres represent a substantial investment by the City to involve all of the key members of the public, property owners and agencies who would be affected by this project. We believe the recommendations outlined in this EA document will result in a careful balance between the transportation requirements in the corridor and needs of the local community to minimize the impacts on their properties as well as the natural and socio-economic environment.

I would be pleased to attend the Council Meeting when this report is tabled for consideration to answer any questions from the public or Members of Council.

Yours very truly,

MARSHALL MACKLIN MONAGHAN LIMITED

David B. Richardson, P. Eng., PTOE
Senior Project Manager & Associate Partner
Transportation Planning

Enclosure

J:\2001jobs\16-01039.db\2005work\Covering Letter (Nov 24).doc
Executive Summary

This Environmental Study Report documents the Schedule C Class Environmental Assessment (EA) planning process completed to identify the transportation improvements necessary for the Cabana-Division Road corridor, in the City of Windsor. The study area corridor is comprised of Cabana Road and Division Road from Huron Church Road to just east of Walker Road. In the portion of the corridor from Huron Church Road to Walker Road, Cabana-Division Road is configured as a two-lane cross-section. At signalized intersections, there are typically exclusive left turn lanes. In the Windsor Area Long-Range Transportation Study (WALTS), the City of Windsor identified this corridor as a Class II Arterial road and predicted an increase in traffic over the next 20 years. It is expected that traffic will increase due to an intensification of uses immediately adjacent to the corridor as well as the development of the surrounding neighbourhoods. The City of Windsor retained Marshall Macklin Monaghan Limited to carry out this Schedule C Class EA of the Cabana-Division Road corridor to provide short-term solutions to existing traffic issues, and long-term solutions to deal with projected traffic increases.

In general, the Class EA process is undertaken in five primary steps:

- Phase 1 – Identify the problem or opportunity;
- Phase 2 – Identify and evaluate alternative solutions;
- Phase 3 – Identify and evaluate alternative design concepts for the preferred solution;
- Phase 4 – Prepare the Environmental Study Report; and
- Phase 5 – Implementation.

A Public Information Centre (PIC) is typically conducted in each of the first three phases of the Class EA process. The purpose of these PIC’s is to present information to the public and receive their input and opinions on the information presented. The Cabana-Division Road corridor Class EA process was unique in its composition and execution. When this study was completed to Phase 3, public opposition to the preferred design compelled the study team to revisit Phases 2 and 3 prior to advancing to Phase 4 of the study. For this reason, a total of five PIC’s were held during this process, as follows:

- PIC #1 – Phase 1
- PIC #2 – Phase 2
- PIC #3 – Phase 3
- PIC #4 – Phase 2 revisited
- PIC #5 – Phase 3 revisited
The study process unfolded in the following manner:

**Phase 1: Identify the Problem or Opportunity**

A PIC was held as part of this phase of the study, and a Problem Statement was developed to frame the issues pertinent to the study. The problem statement identified the following issues:

- Traffic congestion;
- Driveway and Local Access;
- Roadside Conditions; and
- School Safety.

The problem statement developed for this project is: existing conditions along the Cabana-Division Road corridor indicate the need to make improvements to accommodate travel demands and to improve the conditions for drivers, cyclists, pedestrians and other users of the corridor.

The purpose of PIC #1 was to inform the public of the City's identification of the need to improve the current and projected traffic conditions along the Cabana-Division Road corridor and to receive initial input on the study objectives.

**Phase 2: Identify and Evaluate Alternative Solutions**

The alternative solutions developed by the study team, which were based on technical traffic data, were presented to the public in Phase 2 of the study. The purpose of this PIC was to review the study process and background studies that provided a technical justification for the transportation improvements identified in Phase 1 of the study.

The alternative solutions brought forth at PIC #2 included:

- Do Nothing;
- Add bike lanes only;
- Three-lanes;
- Three-lanes plus bike lanes;
- Four-lanes;
- Four-lanes plus bike lanes;
- Five-lanes; and
- Five-lanes plus bike lanes.

The input provided by the participants at PIC #2 on the alternative solutions was inconclusive. The highest ranked option was five-lanes plus bike lanes, however, three-lanes plus bike lanes and four lanes plus bike lanes were also highly ranked. Based on the technical evaluation of existing and projected conditions along the corridor as well as input from the participants at PIC #2, the five-lanes plus bike lanes configuration was selected as the preferred solution.
Phase 3: Identify and Evaluate Alternative Design Concepts for the Preferred Solution

During phase 3 of the project, alternative design concepts for the five-lanes plus bike lanes preferred solution were developed and evaluated leading to a recommended design for the five-lane plus bike lanes cross-section. A third PIC was held to present the recommended design to the public, and to receive input so that the recommended design could be finalized and become the preferred design for the Environmental Study Report (ESR).

Clear public opposition to the five-lane design was communicated during PIC #3. Although more than three PIC’s are very rarely held in an EA of this kind, the study team recognized that a re-evaluation of the design solutions was in order. PIC #4 revisited Phase 2 of the Class Environmental Assessment process so that the team could re-evaluate and “tailor” the design of the roadway solutions to meet the technical and social needs of the Cabana-Division Road corridor.

Phase 2 Revisited

PIC #4 revisited Phase 2 of the EA study process. The purpose of this PIC was to present tailored design options to the public that were believed to better reflect the prevailing nature of the corridor and the desires of residents along Cabana-Division Road.

The alternative solutions brought forth at PIC #4 included:

- Three-lanes plus bike lanes;
- Three-lanes plus bike lanes and paved shoulders;
- Four-lanes plus bike lanes;
- Four-lanes plus bike lanes and paved shoulders; and
- Four-lanes plus bike lanes with curbs and gutters.

It was found that most respondents were in favour of a three-lane configuration. The use of curbs and gutters was also favoured among participants. Despite the preference by most attendees for a three-lane cross-section, the four-lane plus bike lanes with curbs and gutters cross-section was selected as the preferred solution after PIC #4, based on the technical needs of the corridor.

Phase 3 Revisited

The preferred four-lane with bike lanes with curb and gutter cross-section was evaluated and further investigated when Phase 3 was revisited. The four-lane with bike lanes recommended road design was presented to the public at PIC #5 to receive input on the design.

Respondents favoured a three-lane option over the four-lane recommended design. Many participants were against the four-lane recommended design, and most of these were residents that live along Cabana Road.
The Preferred Design

The study team was required to carefully weigh the projected transportation demands of the corridor with social impacts and the prevailing character of the neighbourhood. In so doing, the preferred design was identified as having four-lanes with bike lanes plus curbs and gutters despite the preference of some of the residents that live along Cabana Road for a three-lane cross-section.

It should be recognized that the optimal technical solution is the five-lane cross section. The study team weighed the public input and technical considerations ensuing from the PIC’s and concluded the following:

• A four-lane cross section is required to accommodate the projected traffic demands of this corridor, and to mitigate the impacts of motorists that slow traffic when making left turns onto the various driveways and side streets along the corridor.
• After PIC #2, which indicated that the public supported the City’s plans to provide bike lanes on the Cabana-Division Road corridor, the provisions for bike lanes were never removed from the tailored solutions during the technical re-examination of the design solutions.
• Curbs and gutters were chosen to replace ditches for two primary reasons: to improve drainage by removing open ditches, and to provide a visible and well defined edge to the road to emphasize that further road widening in the future was not contemplated.
• Public preference for a reduced pavement width was also met. It should be noted that there is a difference of only 2.4 metres in the width of pavement between the three-lane and four-lane cross sections.

Therefore, the preferred design was found to be a four-lane cross section with bike lanes, curbs and gutters.

Possible Road Closures

There are numerous minor residential cross streets that can be considered for closure to reduce the number of access points to Cabana Road, which would improve the flow of vehicular traffic along this arterial road. While these were discussed in general terms at some of the public open houses, there were no conclusions reached on the need and justification for these closures.

Public sentiment with regard to possible road closures was mixed, depending on where a particular individual lived and the resulting impact on the accessibility of their home. Accordingly, any road closures will need to be examined more thoroughly at the detailed design stage, complete with a more exhaustive public participation process for the individual streets that are being considered for closure.

Property Requirements

Another issue that will require more in-depth examination and public consultation at the detail design stage of the project is property acquisition. As this report outlines, the future widening of Cabana Road will require property acquisition throughout the corridor. However, the preferred road alignment was designed in a manner that attempts to minimize property acquisition, wherever possible.
Environmental Mitigation

Several environmental mitigation measures are recommended in the report. Some of these include, but are not limited to:

- Sidewalks meandering around existing mature trees to avoid their removal;
- Provisions for various types of alternative transportation, such as transit and cycling; and
- Mitigation of the impact of the road widening through the provision of boulevard improvements such as tree planting that enhance the pedestrian environment.

Preliminary Construction and Cost Estimates

The analyses of traffic conditions and demands have revealed that the key traffic “bottlenecks” are the major intersections along the Cabana-Division Road corridor. The first phase of construction should focus on improvements to the major signalized intersections such as Provincial Road, Huron Church Road, and Dominion Boulevard. Subsequent phases of construction should focus on roadway improvements between major intersections in a manner that optimizes costs and minimizes traffic impacts due to construction constraints.

Preliminary cost estimates were conducted breaking down the roadway improvements for the Cabana-Division Road Corridor. The total cost for the preferred design was estimated at $21,211,300. This price does not include any property acquisition or utility relocation costs that may be necessary.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>SECTION</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXECUTIVE SUMMARY</td>
<td>i</td>
</tr>
<tr>
<td>TABLE OF CONTENTS</td>
<td>v</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>viii</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>ix</td>
</tr>
<tr>
<td><strong>1.0</strong> INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>1.1 BACKGROUND</td>
<td>1</td>
</tr>
<tr>
<td>1.2 STUDY AREA</td>
<td>1</td>
</tr>
<tr>
<td>1.3 LAND USE PLANNING CONTEXT</td>
<td>1</td>
</tr>
<tr>
<td>1.3.1 City of Windsor Official Plan</td>
<td>1</td>
</tr>
<tr>
<td>1.3.2 Windsor Area Long-Range Transportation Study (WALTS)</td>
<td>3</td>
</tr>
<tr>
<td>1.3.3 Bicycle Use Master Plan (BUMP)</td>
<td>4</td>
</tr>
<tr>
<td>1.4 LAND USE PLANNING CONTEXT IN NEIGHBOURING MUNICIPALITIES</td>
<td>4</td>
</tr>
<tr>
<td>1.4.1 Town of LaSalle</td>
<td>4</td>
</tr>
<tr>
<td>1.4.2 Town of Tecumseh</td>
<td>5</td>
</tr>
<tr>
<td>1.5 PROPOSED DEVELOPMENT</td>
<td>6</td>
</tr>
<tr>
<td><strong>2.0</strong> OVERVIEW OF THE CLASS ENVIRONMENTAL ASSESSMENT PLANNING PROCESS</td>
<td>7</td>
</tr>
<tr>
<td>2.1 PHASES OF THE CLASS EA PROCESS</td>
<td>7</td>
</tr>
<tr>
<td>2.2 EA PROJECT CLASSIFICATIONS</td>
<td>8</td>
</tr>
<tr>
<td><strong>3.0</strong> OVERVIEW OF THE CABANA-DIVISION ROAD CORRIDOR EA PLANNING AND PUBLIC CONSULTATION PROCESS</td>
<td>10</td>
</tr>
<tr>
<td>3.1 INTRODUCTION</td>
<td>10</td>
</tr>
<tr>
<td>3.2 OVERVIEW OF THE PUBLIC CONSULTATION PROCESS</td>
<td>10</td>
</tr>
<tr>
<td>3.2.1 Agency Notification</td>
<td>11</td>
</tr>
<tr>
<td>3.2.2 Committee Meetings</td>
<td>11</td>
</tr>
<tr>
<td>3.2.3 Public Notification</td>
<td>12</td>
</tr>
<tr>
<td>3.2.4 Website</td>
<td>12</td>
</tr>
<tr>
<td>3.2.5 Study Newsletters</td>
<td>12</td>
</tr>
<tr>
<td>3.2.6 Public Information Centres (PIC's)</td>
<td>12</td>
</tr>
<tr>
<td>3.3 PHASE 1: IDENTIFY THE PROBLEM</td>
<td>13</td>
</tr>
<tr>
<td>3.4 PHASE 2: IDENTIFY AND EVALUATE ALTERNATIVE SOLUTIONS</td>
<td>13</td>
</tr>
<tr>
<td>3.5 PHASE 3: IDENTIFY AND EVALUATE ALTERNATIVE DESIGN CONCEPTS FOR THE FIVE-LANE SOLUTION</td>
<td>15</td>
</tr>
<tr>
<td>3.6 PHASE 2 REVISITED</td>
<td>16</td>
</tr>
<tr>
<td>3.7 PHASE 3 REVISITED</td>
<td>16</td>
</tr>
<tr>
<td>3.8 PHASE 4: PREPARE THE ENVIRONMENTAL STUDY REPORT (ESR)</td>
<td>17</td>
</tr>
<tr>
<td><strong>4.0</strong> PROBLEM IDENTIFICATION (PHASE 1)</td>
<td>18</td>
</tr>
<tr>
<td>4.1 DEVELOPMENT OF THE PROBLEM STATEMENT</td>
<td>18</td>
</tr>
<tr>
<td>4.2 PROBLEM STATEMENT</td>
<td>18</td>
</tr>
<tr>
<td><strong>5.0</strong> PROJECT AREA CONDITIONS</td>
<td>20</td>
</tr>
<tr>
<td>5.1 TRANSPORTATION NETWORK</td>
<td>20</td>
</tr>
<tr>
<td>5.1.1 Divided Highways</td>
<td>20</td>
</tr>
<tr>
<td>5.1.2 Arterial Roads</td>
<td>20</td>
</tr>
<tr>
<td>5.1.3 Collector Roads</td>
<td>21</td>
</tr>
<tr>
<td>5.1.4 Local Roads</td>
<td>21</td>
</tr>
<tr>
<td>5.1.5 Access to Cabana-Division Road from Abutting Properties</td>
<td>21</td>
</tr>
</tbody>
</table>
5.1.6 Transit Service ................................................................. 22
5.1.7 Existing Traffic Demands .................................................. 22
5.1.8 Collision Analysis .............................................................. 23
5.1.9 Traffic at Railway Grade Crossings .................................... 25
5.2 EXISTING CAPACITY DEFIENCIES .............................................. 25
5.2.1 Intersection Analysis ......................................................... 25
5.2.2 Traffic Operations along the Cabana-Division Road Corridor ..... 26
5.3 FUTURE TRANSPORTATION NEEDS ........................................... 27
5.3.1 The Context of the WALTS Report and Other Studies .............. 27
5.3.2 Projected Traffic Growth .................................................... 28
5.3.3 Corridor Analysis ............................................................ 29
5.3.4 Horizon 2011 Intersection Capacity Analysis ....................... 30
5.3.5 Future Cross Section Needs ............................................... 33
5.3.6 Projected Exposure Indices for At-Grade Rail Crossings .......... 34
5.4 UTILITIES ........................................................................ 34
5.5 NATURAL ENVIRONMENT ...................................................... 35
5.5.1 Floral Resources ............................................................. 35
5.5.2 Faunal Resources ........................................................... 38
5.6 SOCIO-ECONOMIC ENVIRONMENT ......................................... 38
5.6.1 Community Structure ....................................................... 38
5.6.2 Local Economy ............................................................... 39
5.6.3 Noise Levels ................................................................ 39
5.7 CULTURAL ENVIRONMENT .................................................... 40
5.7.1 Stage 1 Archaeological Assessment ..................................... 40
5.7.2 Built Heritage Issues ....................................................... 40
5.7.3 Civic Way Issues ............................................................ 41

6.0 ALTERNATIVE SOLUTIONS (PHASE 2) ........................................ 42
6.1 ALTERNATIVE SOLUTION STRATEGIES ...................................... 42
6.2 IDENTIFICATION OF THE ALTERNATIVE SOLUTIONS ................. 42
6.2.1 Do Nothing ................................................................ 42
6.2.2 Add Bike Lanes Only ....................................................... 43
6.2.3 Three Lanes ................................................................. 43
6.2.4 Three Lanes with Bike Lanes ............................................. 43
6.2.5 Four Lanes ................................................................. 43
6.2.6 Four Lanes with Bike Lanes .............................................. 43
6.2.7 Five Lanes ................................................................. 44
6.2.8 Five Lanes plus Bike Lanes ................................................ 44
6.3 EVALUATION ................................................................... 44
6.3.1 Technical Environment Factors .......................................... 46
6.3.2 Natural Environment Factors ............................................. 46
6.3.3 Social-Cultural and Economic Environment Factors ............ 47
6.4 PUBLIC INPUT .................................................................. 48

7.0 IDENTIFICATION AND REFINEMENT OF THE ALTERNATIVE DESIGN CONCEPTS (PHASE 3) ................. 49
7.1 IDENTIFICATION OF THE PREFERRED DESIGN ALTERNATIVE ........ 49
7.2 CONSTRAINTS ................................................................ 49
7.3 PUBLIC INPUT ................................................................ 49
7.4 REFINEMENT OF THE DESIGN ALTERNATIVES ...................... 49
7.4.1 Cabana Road-Northway Avenue to California Avenue (Oak Tree Area) ........ 49
7.4.2 Intersection Alignment of Cabana Road at Howard Avenue ....... 50

8.0 REVISITING ALTERNATIVE SOLUTIONS (PHASE 2) ..................... 53
8.1 ALTERNATIVE SOLUTION STRATEGIES ............................................................. 53
8.2 IDENTIFICATION OF THE NEW ALTERNATIVE DESIGN SOLUTIONS ............... 53
  8.2.1 Tailored Solutions for Cabana Road West of Provincial Road ......................... 53
  8.2.2 Tailored Solutions for Cabana-Division Road East of Provincial Road ................ 54
8.3 EVALUATION .................................................................................................... 55
  8.3.1 Technical Environment Factors ........................................................................ 57
  8.3.2 Natural Environment Factors ........................................................................... 57
  8.3.3 Social-Cultural and Economic Environment Factors ........................................ 57
8.4 PUBLIC INPUT .................................................................................................. 58
9.0 THE PREFERRED ALTERNATIVE (PHASE 3) ...................................................... 59
  9.1 IDENTIFICATION OF THE PREFERRED ALTERNATIVE .................................. 59
  9.2 PUBLIC INPUT ................................................................................................. 59
10.0 THE PREFERRED DESIGN ................................................................................ 61
  10.1 PRELIMINARY DESIGN CRITERIA ................................................................. 61
  10.2 PROPERTY ACQUISITION .............................................................................. 61
  10.3 ROADWAY CHARACTERISTICS .................................................................... 61
    10.3.1 Cross Section ............................................................................................... 61
    10.3.2 Alignment .................................................................................................... 62
    10.3.3 Right-of-Way Requirements ........................................................................ 62
    10.3.4 Intersections ............................................................................................... 62
    10.3.5 Potential Road Closures ............................................................................. 63
    10.3.6 Access ........................................................................................................ 63
    10.3.7 Railway Crossings / DRTP Corridor ............................................................ 63
    10.3.8 Utilities ...................................................................................................... 63
    10.3.9 Transit ........................................................................................................ 64
    10.3.10 School Access Improvements .................................................................... 64
    10.3.11 Bicycle and Pedestrian Facilities ............................................................. 64
    10.3.12 Corridor Design Elements ........................................................................ 65
  10.4 CONSTRUCTION PHASING ............................................................................ 65
  10.5 COST ESTIMATES ........................................................................................ 65
  10.6 NATURAL ENVIRONMENTAL FACTORS ......................................................... 66
    10.6.1 Floral and Faunal Effects ............................................................................ 66
    10.6.2 Social-Cultural and Economic Environment Effects ..................................... 66
    10.6.3 Construction Related Environmental Effects ............................................... 67
  10.7 ENVIRONMENTAL MITIGATION .................................................................. 68
    10.7.1 Summary of Mitigation Measures .............................................................. 68

APPENDIX A: PUBLIC CONSULTATION MATERIALS

APPENDIX B: PIC SUMMARY PUBLIC INPUT AND STUDY TEAM RESPONSES

APPENDIX C: TRANSPORTATION NETWORK ANALYSIS

APPENDIX D: NATURAL ENVIRONMENTAL CONDITION REPORTS

APPENDIX E: ARCHAEOLOGICAL STUDY

APPENDIX F: UTILITIES SUMMARY

APPENDIX G: NOISE STUDY
## LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 5.1</td>
<td>Collision Data at Signalized Intersections along Cabana-Division Road 1998-2000</td>
<td>23</td>
</tr>
<tr>
<td>Table 5.2</td>
<td>Cabana-Division Road Link Collision Data 1998-2000</td>
<td>24</td>
</tr>
<tr>
<td>Table 5.3</td>
<td>Existing Traffic Analysis Summary (2002)</td>
<td>26</td>
</tr>
<tr>
<td>Table 5.4</td>
<td>Comparison of Volume to Capacity</td>
<td>31</td>
</tr>
<tr>
<td>Table 5.5</td>
<td>Traffic Analysis Summary Horizon 2011</td>
<td>32</td>
</tr>
<tr>
<td>Table 5.6</td>
<td>Required Increase in Train Operations to Reach an Exposure Index of 200,000</td>
<td>34</td>
</tr>
<tr>
<td>Table 6.1</td>
<td>Evaluation of Interactive Environmental Effects</td>
<td>45</td>
</tr>
<tr>
<td>Table 7.1</td>
<td>Comparison of Alternatives in Oak Tree Area</td>
<td>51</td>
</tr>
<tr>
<td>Table 7.2</td>
<td>Comparison of Alternatives – Cabana Road – Howard Avenue Intersection</td>
<td>52</td>
</tr>
<tr>
<td>Table 8.1</td>
<td>Roadway Designs for West of Provincial Road</td>
<td>53</td>
</tr>
<tr>
<td>Table 8.2</td>
<td>Roadway Designs for East of Provincial Road</td>
<td>54</td>
</tr>
<tr>
<td>Table 8.3</td>
<td>Evaluation of Interactive Environmental Effects (revisited)</td>
<td>56</td>
</tr>
<tr>
<td>Table 10.1</td>
<td>Preliminary Cost Estimate</td>
<td>66</td>
</tr>
</tbody>
</table>
LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1.1</td>
<td>Location Map</td>
<td>1</td>
</tr>
<tr>
<td>Figure 1.2</td>
<td>City of Windsor Official Plan – Road and Bikeways</td>
<td>1</td>
</tr>
<tr>
<td>Figure 1.3</td>
<td>City of Windsor Official Plan – Civic Image</td>
<td>2</td>
</tr>
<tr>
<td>Figure 1.4</td>
<td>City of Windsor Official Plan – Land Use</td>
<td>3</td>
</tr>
<tr>
<td>Figure 1.5</td>
<td>Town of LaSalle Official Plan – Land Use Plan</td>
<td>4</td>
</tr>
<tr>
<td>Figure 1.6</td>
<td>Town of Tecumseh Official Plan – Land Use Plan</td>
<td>5</td>
</tr>
<tr>
<td>Figure 2.1</td>
<td>Municipal Class EA Planning and Design Process</td>
<td>7</td>
</tr>
<tr>
<td>Figure 5.1</td>
<td>Road Network</td>
<td>20</td>
</tr>
<tr>
<td>Figure 5.2</td>
<td>Existing Lane Configurations</td>
<td>20</td>
</tr>
<tr>
<td>Figure 5.3</td>
<td>Transit Windsor Network</td>
<td>22</td>
</tr>
<tr>
<td>Figure 5.4</td>
<td>Base Year (2001) Peak Hour Volumes</td>
<td>23</td>
</tr>
<tr>
<td>Figure 5.5</td>
<td>Horizon 2011 Peak Hour Volumes</td>
<td>31</td>
</tr>
<tr>
<td>Figure 5.6</td>
<td>Natural Heritage Sites</td>
<td>35</td>
</tr>
<tr>
<td>Figure 5.7</td>
<td>Existing Land Uses</td>
<td>38</td>
</tr>
<tr>
<td>Figure 5.8</td>
<td>Existing Residential Uses</td>
<td>39</td>
</tr>
<tr>
<td>Figure 5.9</td>
<td>Existing Institutional Uses</td>
<td>39</td>
</tr>
<tr>
<td>Figure 5.10</td>
<td>Existing Commercial Uses</td>
<td>39</td>
</tr>
<tr>
<td>Figure 6.1</td>
<td>3 Lane Cross Section Alternatives</td>
<td>42</td>
</tr>
<tr>
<td>Figure 6.2</td>
<td>4 &amp; 5 Lane Cross Section Alternatives</td>
<td>42</td>
</tr>
<tr>
<td>Figure 7.1</td>
<td>Oak Tree – Option A</td>
<td>51</td>
</tr>
<tr>
<td>Figure 7.2</td>
<td>Oak Tree – Option B</td>
<td>51</td>
</tr>
<tr>
<td>Figure 7.3</td>
<td>Oak Tree – Option C</td>
<td>51</td>
</tr>
<tr>
<td>Figure 7.4</td>
<td>Oak Tree – Option D</td>
<td>51</td>
</tr>
<tr>
<td>Figure 7.5</td>
<td>Oak Tree – Option E</td>
<td>51</td>
</tr>
<tr>
<td>Figure 7.6</td>
<td>Cabana Road at Howard Avenue Option 1</td>
<td>52</td>
</tr>
<tr>
<td>Figure 7.7</td>
<td>Cabana Road at Howard Avenue Option 2</td>
<td>52</td>
</tr>
<tr>
<td>Figure 7.8</td>
<td>Cabana Road Alignment Option A with Howard Avenue Alignment Option 1</td>
<td>52</td>
</tr>
<tr>
<td>Figure 7.9</td>
<td>Cabana Road Alignment Option B with Howard Avenue Alignment Option 2</td>
<td>52</td>
</tr>
<tr>
<td>Figure 8.1</td>
<td>3 Lane &quot;Soft Edge&quot; Typical Sections</td>
<td>54</td>
</tr>
<tr>
<td>Figure 8.2</td>
<td>4 Lane &quot;Hard Edge&quot; Typical Sections</td>
<td>54</td>
</tr>
<tr>
<td>Figure 8.3</td>
<td>&quot;Hard Edge&quot; Typical Sections with Minimum R.O.W</td>
<td>54</td>
</tr>
<tr>
<td>Figure 8.4a-e</td>
<td>Option A – 3 Lane “Soft Edge”</td>
<td>54</td>
</tr>
<tr>
<td>Figure 8.5a-e</td>
<td>Option D – 4 Lane “Hard Edge”</td>
<td>54</td>
</tr>
<tr>
<td>Figure 10.1</td>
<td>Oak Trees Northway to California Typical Sections</td>
<td>62</td>
</tr>
<tr>
<td>Figure 10.2</td>
<td>4 Lane &quot;Optimized&quot; Design Northway to California</td>
<td>62</td>
</tr>
<tr>
<td>Figure 10.3a-d</td>
<td>The Preferred Design</td>
<td>62</td>
</tr>
<tr>
<td>Figure 10.4</td>
<td>Roseland Public School Driveway</td>
<td>64</td>
</tr>
<tr>
<td>Figure 10.5</td>
<td>Southwood Public School Driveway</td>
<td>64</td>
</tr>
</tbody>
</table>
1.0 Introduction

1.1 Background

This Environmental Study Report (ESR) documents the Schedule C Class Environmental Assessment (EA) planning process completed to identify the transportation improvements necessary for the Cabana-Division Road corridor, in the City of Windsor, Ontario. In the Windsor Area Long-Range Transportation Study (WALTS), the City of Windsor identified this corridor as a Class II Arterial road and predicted an increase in traffic over the next 20 years. It is expected that traffic will increase due to an intensification of uses immediately adjacent to the corridor as well as the development of the surrounding neighbourhoods.

The City of Windsor retained Marshall Macklin Monaghan Limited to carry out this Schedule C Class EA of the Cabana-Division Road corridor to provide short-term solutions to existing traffic issues, and long-term solutions to deal with projected traffic increases.

1.2 Study Area

The study area corridor is comprised of Cabana Road and Division Road from Huron Church Road to just east of Walker Road. Cabana Road begins at the west city limit, immediately east of Huron Church Road, and extends to just east of Sixth Concession Road. At this point, Cabana Road merges with Division Road. At the time the study was initiated, Division Road extended to the east city limit, just east of Walker Road (Figure 1.1). The east city limit has since been extended to just east of Lauzon Road, but the study area corridor remained to just east of Walker Road.

1.3 Land Use Planning Context

1.3.1 City of Windsor Official Plan

The City of Windsor Official Plan provides a 20-year guideline for the physical development of the City, taking into consideration important social, economic and environmental matters. The City’s Official Plan was adopted by Council on October 25, 1999 and approved by the Minister of Municipal Affairs on March 28, 2000.

The Official Plan recognizes the importance of developing a transportation system that balances the use of all modes of transportation and creates an improved street environment.

The Cabana-Division Road Corridor is designated a “Class II Arterial Road” on Schedule F of the Official Plan (refer to Figure 1.2).

The operational and design characteristics listed in the Official Plan for a Class II Arterial Road are defined in Section 7.2.6.4 of the Official Plan. These are:
Figure 1.1 Location Map

STUDY CORRIDOR

Figure 1.1 Location Map

Gerry Waldron

Archaeologic Inc.

Cabana - Division Road Corridor Class Environmental Assessment
Figure 1.2: City of Windsor Official Plan - Roads and Bikeways

CITY CENTRE INSET

Cabana-Division Road Corridor Class Environmental Assessment
7.2.6.4 Council will provide for Class II Arterial Roads as follows:

a) Class II Arterial Roads shall be designated on Schedule F: Roads & Bikeways and in any secondary plan, where appropriate;

b) operational and design characteristics:

i) Class II Arterial Roads shall be designed to carry high volumes of passenger and commercial traffic for intra-city travel at moderate speeds;

ii) Class II Arterial Roads usually consist of four undivided travel lanes, with right-of-way widths no more than 30 metres;

iii) intersections with Controlled Access Highways, Class I and Class II Arterial Roads and Class I and Class II Collector Roads shall be permitted;

iv) intersections with Local Roads shall be discouraged;

v) direct property access will not be permitted near Class I and Class II Arterials and Class I Collector intersections;

vi) direct property access will be discouraged where other alternatives exist. Where direct property access is required, the use of shared driveways and interconnected on-site circulation systems with adjacent properties will be encouraged to limit the number and spacing of driveways. Where this cannot be accomplished, access will be limited to one per property unless it can be demonstrated that additional driveways are required for traffic capacity or safety reasons; and

vii) commuter cycling lanes, including Bikeways, may be permitted along the paved travel lanes on a site specific basis.”

The Official Plan designates a portion of Cabana Road, between California Avenue and Sixth Concession, as a “Bikeway” (Figure 1.2).

With respect to Bikeways, the Official Plan recognizes the exact locations of such facilities will be determined on a site-specific basis. It should be noted that the Bicycle Use Master Plan (BUMP), which was prepared after the adoption of the Official Plan, identifies the entire length of the Cabana-Division Road corridor for bike lanes.

Along the Cabana-Division Road corridor, Division Road is designated as a “Civic Way”. Further, a “Gateway” is located in the Division Road and Walker Road area as well as at the intersection of Cabana Road and Huron Church Road (see Figure 1.3).

A “Civic Way” is intended to identify major entries into the City where a high standard of roadway design is expected. The design characteristics sought for Civic Ways are defined in Sections 8.11.2.12 and 8.11.2.13 of the Official Plan. These are:

8.11.2.12 Council will promote the development of Civic Ways at the locations identified on Schedule G (Figure 1.3): Civic Image. Such Civic Ways will be designed to:

a) promote and present an attractive and unifying image of Windsor;

b) maintain a sense of welcome and arrival for travelers;
Figure 1.3: City of Windsor Official Plan - Civic Image
c) create a memorable impression of Windsor; and

d) complement and enhance the Municipality’s capital investment in major infrastructure.

8.11.2.13 Council will recognize the significance of roads designated as Civic Ways on Schedule G (Figure 1.3): Civic Image by:

a) enhancing the public rights-of-way along major entry points into Windsor consistent with a highly attractive and distinctive image using unifying elements such as landscaping, fixtures and boulevard and median treatments; and

b) protecting and enhancing significant views and vistas, public space and heritage resources along the Civic Way."

A “Gateway” is intended to identify major entry points into the City of Windsor. The design characteristics sought for Gateways are defined in Section 8.2.2.5 of the Official Plan. These are:

“Council will promote gateways at the major entry points into Windsor identified on Schedule G: Civic Image and at other strategic locations within Windsor as appropriate. Such gateways will be designed to:

a) provide a sense of welcome and arrival;

b) assist in orientation;

c) create a memorable image; and

d) contribute to the social, cultural, historic or thematic character of the area being defined.”

The land fronting on Cabana Road, from Huron Church Road to Provincial Road, is primarily designated “Residential” in the City of Windsor’s Official Plan, and is occupied by low-density housing, with the exception of the south side of the corridor between Huron Church Road and Dominion Boulevard where a large “Institutional” land use designation is found. Commercial uses are located at the intersections with Dougall Avenue, Howard Avenue, Provincial Road and Walker Road and are designated “Commercial Corridor”. There are also designated “Industrial” areas on the south side of Division Road near Walker Road and a “Natural Heritage” designation is found on the north side of Division Road, east of Provincial Road (refer to Figure 1.4 for a detailed illustration of the land use designations along the corridor).

1.3.2 Windsor Area Long-Range Transportation Study (WALTS)

WALTS was adopted in 1998 and provided the direction to proceed with an assessment of road needs on the Cabana-Division Road corridor. WALTS is a transportation master plan prepared in accordance with the Province’s Class Environmental Assessment process. Key findings in the WALTS report include:
Figure 1.4: City of Windsor Official Plan - Land Use
• 50,000 new residents are expected in the City of Windsor by 2016
• 33,000 new jobs are projected to be created in the City of Windsor by 2016
• Traffic growth - WALTS found that volumes grew by 3% per year in the study area of the City, during the 1990's
• WALTS recommended a transportation plan which includes travel demand management and roadway improvements
• One of the recommended corridors for "operational and capacity improvements" was Cabana-Division Road, from Huron Church Road to Lauzon Parkway. This could include widening, upgrading, intersection improvements or other changes
• WALTS has satisfied major parts of Phases 1 and 2 of the Class EA process

1.3.3 Bicycle Use Master Plan (BUMP)

The Bicycle Use Master Plan (BUMP) was completed in 2001 and provides a guide for the development of a visible and connected cycling network that is easily accessible, safe and actively used by all types of cyclists. The Plan is an update of the City’s 1991 Bicycle Use Development Study (BUDS).

As a 20-year guide, the BUMP establishes a vision, guiding principles and goals for cycling in Windsor. A cycling network and design guidelines are presented along with specific strategies for improving cycling awareness, the cycling-transit link and end-of-trip facilities.

The BUMP identifies bike lanes be established within 5 years along the Cabana-Division Road Corridor. Bike lanes are defined as: "...a dedicated portion of the road surface for exclusive bicycle use. They are designated by pavement markings that separate that portion of the road used by motor vehicles from that portion used by bicycles."

1.4 Land Use Planning Context in Neighbouring Municipalities

1.4.1 Town of LaSalle

The Town of LaSalle’s Official Plan provides a strategy of planned growth within the Town for the next 20 years. The following provides a summary of the relevant components of this document.

The Town of LaSalle’s Official Plan provides a 20-year guide for the physical development of the Town taking into consideration important social, economic and environmental matters. LaSalle’s Official Plan was adopted by Council on October 14, 1997 and approved by the Minister of Municipal Affairs on April 23, 1998.

Figure 1.5 identifies that the planned land uses along the Todd Lane corridor are predominately residential, with a commercial district located at the intersection of Todd Lane and Huron Church Road.

Section 1.4 of the Town’s Official Plan recognizes the importance of establishing and maintaining a transportation network that is: "capable of providing safe, efficient and convenient vehicular and pedestrian traffic movements to/from areas situated within the Town and to/from other parts of...the City of Windsor."
Figure 1.5: Town of LaSalle Official Plan - Land Use Plan
Todd Lane is designated a collector road on the Town’s transportation schedule of the Official Plan.

Collector roads are defined in Section 5.5 of the Town’s Plan as:

“intended to provide for the movement of moderate volumes of traffic between local roads and the arterial roads at low to moderate speeds, while at the same time providing access to individual properties.”

The required right-of-way width for a collector road is identified as between 22.0 and 26.2 metres.

The Town’s policy framework also outlines urban design standards for roads.

The Environmental Study Report for the Todd Lane Environmental Assessment was never completed since it was abandoned in 2002. No configurations for a widened roadway with turn lanes or other enhanced geometry or bike lanes were ever conceived or accepted by the Town of LaSalle for Todd Lane.

1.4.2 Town of Tecumseh

As of January 1, 2003, the western portion of the Town of Tecumseh, which includes the lands adjacent to the Cabana-Division Road corridor, became part of the City of Windsor. Since the Cabana-Division Road Corridor EA began before this transfer of land, the planning policies for this section of what was the Town of Tecumseh are relevant to the background planning review. However, the City of Windsor Official Plan and Zoning By-law are currently being reviewed, to incorporate the annexed lands from the Town of Tecumseh.

Of particular relevance to the Cabana-Division Road corridor EA is one document: the (former) Township of Sandwich South Official Plan. The following provides a summary of the relevant components of this document.

The Township’s Official Plan provides a 20-year guide for the physical development of the Township taking into consideration important social, economic and environmental matters. The Official Plan was adopted by Council on June 23, 1997 and approved by the Minister of Municipal Affairs on March 13, 1998.

County Road 42 becomes Division Road west of the rail line near Walker Road. The planned land uses along County Road 42 within the study area are predominately business park uses as identified in Figure 1.6.

The Township’s Official Plan recognizes the importance of establishing and maintaining a transportation network that is: “capable of providing safe, efficient and convenient vehicular and pedestrian traffic movements to/from areas situated within the Township and to/from other parts of...the City of Windsor.”

Schedule C identifies the Town’s roads plan, wherein County Road 42 is designated an arterial road.
Figure 1.6: Town of Tecumseh Official Plan - Land Use Plan

SCHEDULE "A"
TOWN OF TECUMSEH
OFFICIAL PLAN
LAND USE PLAN

- Residential
- Recreational
- Community Facility
- Restricted Community Facility Only
- Neighbourhood Commercial
- General Commercial
- Highway Commercial
- General Industrial
- Restricted Industrial

Cabana-Division Road Corridor Class Environmental Assessment
Arterial roads are defined in Section 5.5 of the Township’s Official Plan as: “intended to provide fast and efficient movement of large volumes of vehicular traffic from one area of the Township to another and to destinations beyond the corporate limits of the municipality.”

1.5 Proposed Development

There are three proposed developments in the vicinity of the study area.

A commercial plaza with a grocery store, restaurants and gas station is proposed in the Town of LaSalle at the northwest quadrant of the intersection of Todd Lane at Huron Church Road, which is adjacent to the study area.

Two development applications were submitted to the City of Windsor for residential development, both of which are to be located on the south side of Cabana Road, just west of St. Clair College. The two applications include the development of 106 condo units and 11 apartment units.

St. Clair College, which fronts onto Cabana Road, is considering a number of expansion opportunities. These include additional student residences, athletic field house improvements, potential construction of an educational facility and corporate training centre, among other potential developments.
2.0 Overview of the Class Environmental Assessment Planning Process

2.1 Phases of the Class EA Process

The Class Environmental Assessment (EA) process is an approved process under the Ontario Environmental Assessment Act that applies to municipal infrastructure projects including roads, water, and wastewater projects. For projects initiated by the municipality, the municipality is the proponent and is responsible for project compliance with the Municipal Class EA process.

As shown in Figure 2.1, the Municipal Class EA planning and design process is undertaken in five primary phases:

Phase 1 – Identify the problem or opportunity;
Phase 2 – Identify and evaluate alternative solutions;
Phase 3 – Identify and evaluate alternative design concepts for the preferred solution;
Phase 4 – Prepare the Environmental Study Report; and
Phase 5 – Implementation.

Phase 1: Identify the Problem or Opportunity

This phase involves identifying the problem by phrasing it in a clear problem statement. The public and review agencies can be consulted as part of Phase 1. Figure 2.1 shows the discretionary and mandatory public consultation events.

Phase 2: Identify and Evaluate Alternative Solutions

This phase begins with an inventory of existing conditions and requires the development of all feasible alternative solutions to the problem. The alternatives are evaluated in terms of their net positive and negative effects on the natural, social, cultural and economic environments. The alternatives are evaluated by the public and review agencies in order to narrow the alternatives and identify a preferred solution. This consultation is the first mandatory consultation point in the EA process. Feedback from the consultation is used to finalize the design into the preferred design of the ESR.

Phase 3: Identify and Evaluate Alternative Design Concepts for the Preferred Solution

This phase involves the identification and evaluation of all reasonable alternative design concepts for the preferred solution, which was identified in Phase 2. The alternative design concepts are evaluated in terms of their net positive and negative effects on the natural, social, cultural and economic environments and a recommended design is chosen. The recommended design, as well as the alternative designs, is presented to the public and appropriate review agencies for consultation. This consultation is the second mandatory consultation point in the EA process. Feedback from the consultation is used to finalize the design into the preferred design of the ESR.
MUNICIPAL CLASS EA PLANNING AND DESIGN PROCESS

Note: This flow chart is to be read in conjunction with Part A of the Municipal Class EA

**PHASE 1**
- Identify Problem or Opportunity
- Identify Alternative Solutions to Problem or Opportunity
- Evaluate Alternative Solutions
- Select Preferred Solution
- Review and Confirm Change of Schedule

**PHASE 2**
- Select Schedule (Approach 1)
- Inventory: Natural, Social, Economic Environment
- Impact of Alternative Solutions on the Environment and Mitigating Measures
- Evaluate Alternative Solutions
- Recommend Alternative Solutions
- Schedule

**PHASE 3**
- Identify Alternative Design Concepts for Preferred Solution
- Detailed Inventory of Natural, Social, and Economic Environment
- Identify Impact of Alternative Designs on Environmental and Mitigating Measures
- Evaluate Alternative Designs
- Identify Recommended Design
- Conduct Review: Agencies & Interested Intervenoids
- Select Preferred Design
- Review Environmental: Significance & Choices of Mitigating Measures

**PHASE 4**
- Environmental Study Report
- Final Environmental Study Report (ESR)
- Notice of Completion to Review Agencies and Public
- Copy of Notice of Completion to Provincial Agency

**PHASE 5**
- Implementation
- Complete Environmental Study Report (ESR)
- Proceed to Construction and Operation
- Notify for Environmental Permissions and Commitments

This flow chart documents the EA Process. Public Consultation forums are highlighted in light green.

Municipal Engineers Association

Marshall Macklin Monaghan

Cabana - Division Road Corridor Class Environmental Assessment

FIGURE 2.1
MUNICIPAL CLASS EA PLANNING AND DESIGN PROCESS
Phase 4: Prepare the Environmental Study Report (ESR)

The ESR is the documentation of all planning and design activities undertaken throughout Phases 1 to 3. The ESR must be filed on the public record for a period of not less than 30 calendar days to give the public and review agencies time to review the document. The Minister of Environment is ultimately responsible for the approval of the project prior to construction, through Phase 5: Implementation.

If members of the public or review agencies have concerns with respect to the ESR and these concerns cannot be resolved through discussions with the proponent, a person or agency may request that the Minister of Environment make an order for the project to comply with Part II of the Environmental Assessment Act before the project can proceed to Phase 5, Implementation. This is referred to as a Part II Order request, formerly a “Bump up” request. This requests that the project be subjected to a higher level of assessment through completion of an individual EA for the project. The Ministry will consider the request, and any response that may be made by the proponent (i.e. the City), to determine what recommendation should be made regarding the Part II Order request. The Minister’s decision is final.

Phase 5: Implementation

This phase involves the interpretation of the preferred design, as detailed in the ESR, into detailed design. The preferred design is the “base” for final design. The detailed design is used for the purposes of construction. Detailed design and construction may be separated into phases.

2.2 EA Project Classifications

Since municipal projects vary in terms of potential environmental effects, they are classified into three schedules, or groups, as follows:

Schedule A: These projects are limited in scale and have minimal adverse effects on the environment. The majority of municipal road maintenance and operational activities fall under this classification. These projects are permitted to proceed directly to Phase 5 (Implementation) without following Phases 2 to 4 of the Class EA process as illustrated in Figure 2.1.

Schedule B: These projects have the potential for adverse effects on the environment. It is required that a project file be prepared as part of the Schedule B process. In this process, the municipality must complete Phases 1 and 2, which is called a screening process. The screening involves contact with members of the public and review agencies that are directly affected to notify them of the project and address any concerns they may have. Although it is recommended that the study proponent, members of the public, interest groups and review agencies work together to resolve any concerns, if issues are raised which cannot be resolved during the screening process, then these groups may request a Part II Order. The process for dealing with a Part II Order is outlined above.

If there are no outstanding concerns after the completion of the screening process, then the project can move on to Phase 5 for Implementation.
Schedule C: These projects are anticipated to have the largest effects on the environment, which requires them to be processed under the full planning and documentation procedures specified in the Class EA process. Upon the completion of Phases 1 to 4, an Environmental Study Report (ESR) must be prepared and submitted for review by agencies and the public. Similar to the process described for Schedule B, if concerns are raised that cannot be resolved by the ESR, then these groups may request a Part II Order.

If members of the public, interest groups and review agencies raise no outstanding concerns, then the project can move onto Phase 5 for Implementation.