

EXECUTIVE SUMMARY

E.1 INTRODUCTION

The Provincial/Division Road corridor has experienced a significant increase in traffic volume in recent years. This is largely due to the tremendous growth in the development of nearby commercial and residential centres, particularly along the Walker Road corridor. As a result of this growth, the transportation network in this area is experiencing traffic congestion and deteriorating operating conditions.

The study corridor includes the following limits: Provincial Road from the City Limits, just beyond Walker Road, to the junction with Division Road near Marentette Avenue, continuing along Division Road to Howard Avenue (approximately 4.4 km in length). The study corridor will also include the portion of Division Road from Cabana Road through to Marentette Avenue (approximately 1.3 km in length). The entire corridor is classified as a Class II Arterial Roadway in the City of Windsor's Official Plan (Schedule F: Roads and Bikeways).

In order to review the operational and functional performance along this corridor, the City of Windsor has carried out the Provincial/Division Road Class Environmental Assessment (EA) Study in accordance with the Schedule 'C' requirements under the Municipal Class Environmental Assessment process (June 2000), which is an approved process under the Ontario Environmental Assessment Act (OEAA). Under this process, an Environmental Study Report (ESR) is required and has been prepared. This process is described in further detail in Chapter 1.

E.2 PROBLEM/OPPORTUNITY BEING ADDRESSED BY THE STUDY

Based on the review of the Provincial/Division Road corridor, the analysis of existing traffic volumes and projected future travel demands, the problem/opportunity being addressed by the study was defined as follows:

Problems

- Capacity deficiencies along Division Road in the vicinity of Devonshire Mall between Howard Avenue and Sydney Avenue;
- Capacity deficiencies along Provincial Road between Cabana Road & Walker Road;
- Capacity and structural deficiencies at intersections along the entire study corridor;
- Safety concerns at both the Provincial Road/Cabana Road intersection and at the Provincial Road/Sixth Concession Road intersection; and
- Drainage capacity deficiencies.

Opportunities

- Improve the drainage and infrastructure;
- Incorporate measures for alternative transportation (pedestrian, bicycle and transit);
- Build on the "Civic Way" designation as defined in the City of Windsor Official Plan (1999) by integrating a strong urban design component;

- Improve landscaping along the corridor; and
- Address the frequency of commercial driveway accesses along Provincial Road, south of Cabana Road.

E.3 PREFERRED DESIGN

Based on the problem being addressed, existing and future conditions, evaluations of alternatives, potential environmental impacts and associated mitigation, and input from the public, property owners, and stakeholders, the preferred design has been determined and is shown on Figure 6.0. It includes the following:

- The widening of Division Road to five lanes (four through lanes and one continuous two-way left turn lane) from north of Sydney Ave. to Marentette Ave.
- The widening of Provincial Road to five lanes from the junction with Division Road near Marentette Ave. to Walker Road.
- The widening of Cabana Road East from two lanes to four from the DRTP rail to Barracuda Ave.
- The improvement of Division Road from Cabana Road East to Marentette Ave.
- The improvement of Sixth Concession between the DRTP rail and Cabana Road East.
- Improvement to all intersections within the study area.
- Providing pedestrian and bicycle facilities throughout the corridor.

A drainage study will need to be conducted prior to the implementation of the preferred design.

The nature of the recommended undertaking identifies it as a Schedule C under the Municipal Class EA. This in turn requires that an ESR be prepared and filed for a minimum of 30-day public review period. The purpose of the ESR is discussed in Chapter 1.

E.4 PROPERTY REQUIREMENTS

Based on the recommended design, some properties will be required in order to accommodate the proposed improvements. Required properties and easements are as follows:

Required Properties

- Northwest and southwest corners of Provincial/Cabana Road intersection.
- Along the south side of Cabana Rd. East.
- Northeast and southwest corners of Provincial/6th Concession Road intersection.
- Along the southeast corner of Provincial/Legacy Park Road intersection.
- At the northeast and northwest corners of Provincial/Walker Road intersection.
- Along the front of 1850 Provincial Rd.

Required 2 m Easement

- Along the north and south property lines on Marentette Ave.
- Along the west side of Provincial Rd. from just north of Cabana Rd. to Walker Rd.

E.5 ENVIRONMENTAL AFFECTS AND PROPOSED MITIGATION

The main environmental effects and proposed mitigation are outlined in Chapter 4 of the ESR and are summarized as follows:

Land Use

- Improved access to existing and future businesses along the corridor.

Natural Environment

- There were formerly three Candidate Natural Heritage Sites abutting the corridor. Two have since been eliminated from future consideration as a result of the sites being cleared and the third has been recommended for deletion by the Adopted Subwatershed Study (CR 1366/98)
- Some trees will be directly impacted from the proposed improvements to the corridor. The impacts and the proposed mitigating measures are discussed in further detail in Chapter 4.

Social/Cultural Environment

- Improvements to overall community access.
- There are no built heritage structures within the study area.
- Improvements to the corridor will produce a memorable image of the city.
- Air quality is expected to improve.

Economic Environment

- The improvements to the corridor are expected to have a positive impact on the adjacent businesses.

Transportation

- Increased capacity in the Provincial/Division Rd. corridor to accommodate existing and future traffic volumes.
- Increased safety for motorists with the introduction of a continuous two-way left turn lane.
- Improved accessibility for pedestrians and cyclists.
- Potential for increased transit service.

E.6 CONSULTATION

Consultation with potentially affected stakeholders including agencies, adjacent municipalities, utilities and the public including adjacent property owners and interest groups, was an important part of the process.

The main points in public consultation included:

- May 3rd, 2006 Notice of Study Commencement
- May 16, 2006 Public Information Centre #1
- October 25, 2006 Public Information Centre #2
- February 3rd, 2007 Notice of Completion

The comments received are discussed throughout the ESR and were used to finalize the recommended design. Refer to Appendix F to view all comments.

E.7 IMPLEMENTATION AND STAGING

The improvements to the Provincial/Division Road corridor have been divided into eight phases. The limits of each phase and the estimated costs are described below. Refer to Figure 6.0 for the preferred design.

	ESTIMATED COST*
<i>Phase 1</i>	
• Provincial Rd./Cabana Rd. Intersection	\$2,692,000.00
<i>Phase 2</i>	
• Provincial Rd./6th Concession Rd. Intersection	\$1,863,000.00
<i>Phase 3</i>	
• Division Rd./Sydney Ave. Intersection	\$2,283,000.00
<i>Phase 4</i>	
• Division Rd. - From south limit of Phase 3 to south of Marentette Ave.	\$2,344,000.00
<i>Phase 5</i>	
• Provincial Rd. - From south end of Phase 4 to north end of Phase 1	\$2,737,000.00
<i>Phase 6</i>	
• Provincial Rd. - From south limit of Phase 2 to south of Legacy Park Dr.	\$2,908,000.00
<i>Phase 7</i>	
• Provincial Rd. - From south limit of Phase 6 to Walker Rd.	\$1,622,000.00
<i>Phase 8</i>	
• Remainder of Division Rd./6th Concession Rd./Cabana Rd.	\$2,531,000.00
	Contingency (10%) \$1,898,000.00
	Engineering (15%) \$2,847,000.00
Total	\$23,725,000.00

*Property acquisition, landscaping, hydro relocation, cable relocation, sewer studies, sewers, and taxes are not included in the estimated cost.

Storm drainage and sanitary sewer were not included in this study and will be subject to separate studies.

The following factors can affect the timing/staging of construction of the preferred design:

- Obtaining necessary approvals.
- Obtaining required funding.
- Acquiring necessary land.
- Preparation of final construction documents.

1.0 BACKGROUND INFORMATION

1.1 INTRODUCTION

The Provincial/Division Road corridor has experienced a significant increase in traffic volume in recent years. This is largely due to the tremendous growth in the development of nearby commercial and residential centres, particularly along the Walker Road corridor. As a result of this growth, the transportation network in this area is experiencing traffic congestion and deteriorating operating conditions.

The Windsor Area Long Range Transportation Study (WALTS) has identified the Provincial Rd. corridor from Cabana Rd. to Walker Rd. as needing operational and capacity improvements. WALTS follows the Class Environmental Assessment (EA) Master Plan process (June 1993), which is an approved process under the Ontario Environmental Assessment Act (OEAA).

The study corridor is shown in Figure 1.0 and includes the following limits: Provincial Rd. from the city limits, just beyond Walker Rd., to the junction with Division Rd. near Marentette Ave., continuing along Division Rd. to Howard Ave. (approximately 4.4 km in length). The study area will also include the portion of Division Rd. from Cabana Rd. through to Marentette Ave. (approximately 1.3 km in length). The entire corridor is classified as a Class II Arterial Roadway in the City of Windsor's Official Plan (Schedule F: Roads and Bikeways).

In order to review the operational and functional performance along this corridor, the City of Windsor has carried out the Provincial/Division Road Class Environmental Assessment (EA) Study in accordance with the Schedule 'C' requirements under the Municipal Class Environmental Assessment process (June 2000), which is an approved process under the OEAA. Under this process, an Environmental Study Report (ESR) is required and has been prepared. This process is described in further detail in Chapter 1.

1.2 PROBLEM/OPPORTUNITY STATEMENT

The objective of the Provincial/Division Rd. Class EA as stated in the project Terms of Reference is:

To provide an improved transportation corridor that will serve the needs of the transportation system and area growth over a 20-year period.

The Terms of Reference can be found in Appendix B. Current conditions and future development trends have identified the following problems and opportunities for the Provincial/Division Road corridor:

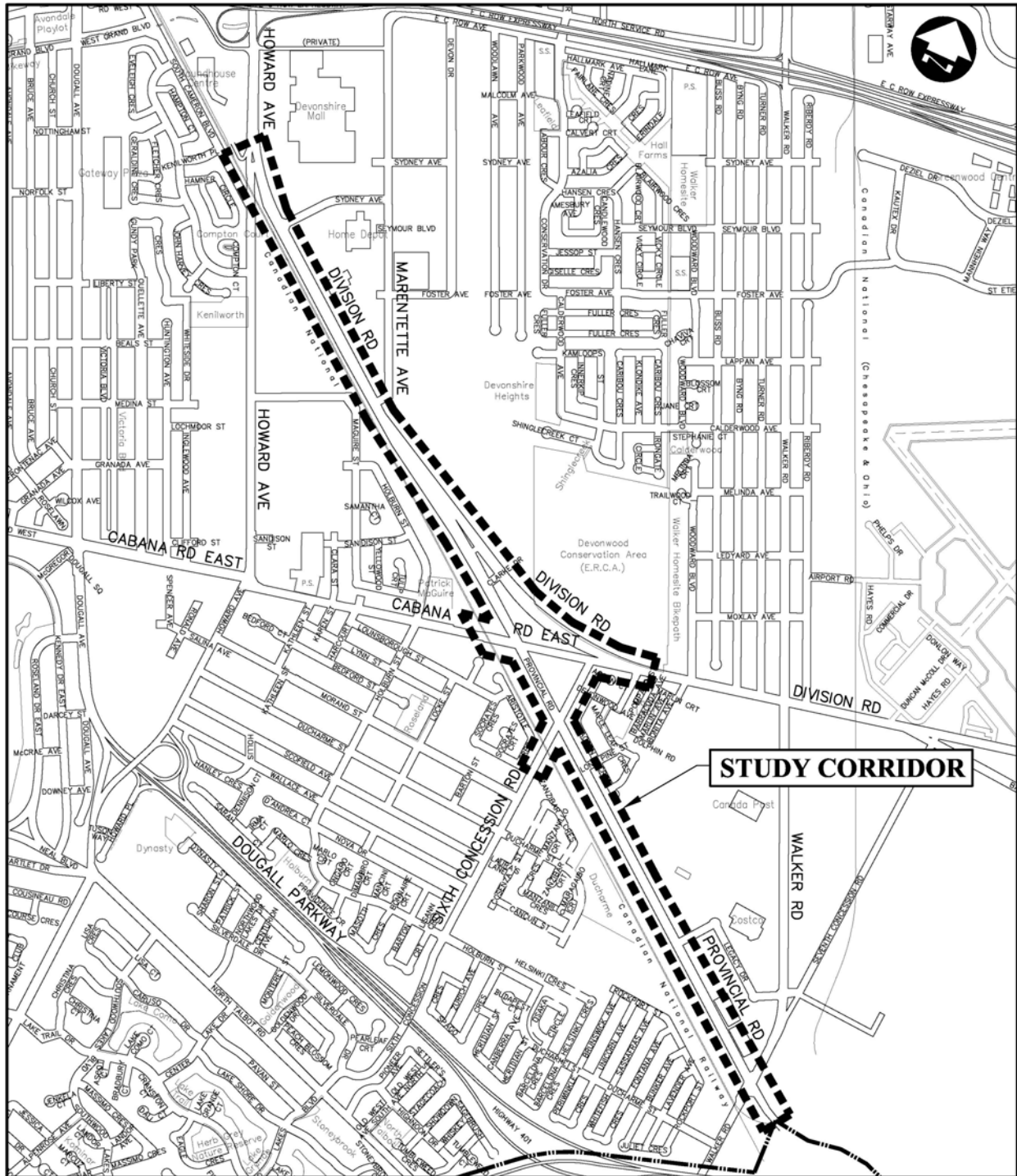


Figure 1.0
Provincial/Division Rd. Key Plan

Problems

- Capacity deficiencies along Division Rd. in the vicinity of Devonshire Mall between Howard Ave. and Sydney Ave.
- Capacity deficiencies along Provincial Rd. between Cabana Rd. & Walker Rd.
- Capacity and structural deficiencies at intersections within the study area.
- Safety concerns at both the Provincial Rd./Cabana Rd. intersection and at the Provincial Rd./Sixth Concession Rd. intersection.
- Drainage capacity deficiencies

Opportunities

- Improve the drainage and infrastructure.
- Incorporate measures for alternative transportation (pedestrian, bicycle and transit).
- Build on the “Civic Way” designation as defined in the City of Windsor Official Plan (1999) by integrating a strong urban design component.
- Improve landscaping along the corridor.
- Address the frequency of commercial driveway accesses along Provincial Rd., south of Cabana Rd.

As such, the study endeavours to address the short and long term traffic impacts, adjacent road network, provisions for cyclists and pedestrians and improved public safety.

1.3 ONTARIO ENVIRONMENTAL ASSESSMENT ACT (OEAA)

The Ontario EA Act applies to municipal infrastructure projects including roads, water and wastewater projects. The purpose of the Act is to provide for:

...the betterment of the people of the whole or any part of Ontario by providing for the protection, conservation and wise management in Ontario of the environment (Part I – Section 2).

To achieve this, the Ontario EA Act ensures that: public consultation is addressed early in and throughout the process; considerations are given to a reasonable range of alternatives; the effects on all aspects of the environment are identified; a thorough evaluation of all alternatives is conducted; and documentation of the decision making process is recorded.

The Act requires that a Municipal Class EA be conducted for all warranted municipal infrastructure projects. The Municipal Class EA process is an approved process under the Ontario EA Act with the study proponent, in this case the City of Windsor, responsible for compliance with this process. The process itself is a self-assessment process and non-compliance could result in intervention by the Ministry of the Environment (MOE).

1.3.1 MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT PROCESS

The Class EA process is a municipal planning process intended to guide the proponent in conducting the study in a manner such that the requirements of the Ontario EA Act are met. The essential elements of the Class EA are incorporated into five phases as follows:

Phase 1 - Identify the problem (deficiency) or opportunity

Phase 2 - Identify alternative solutions to address the problem or opportunity

Phase 3 - Examine alternative design concepts for the preferred solution

Phase 4 - Document, in an Environmental Study Report (ESR), a summary of the rationale, and the planning, design and consultation process of the project

Phase 5 - Implement the preferred design through preparation of the contract drawings and documents and proceed to construction

A detailed flowchart depicting this process is found in Figure 2.0.

For a more comprehensive outline of the planning and design process refer to the Municipal Engineers Association Municipal Class Environmental Assessment (MEA 2000) document.

The three categories of projects (based on degree of environmental impact) to which the Municipal Class EA applies are:

Schedule 'A'- Projects which are limited in scale with minimal adverse environmental effects. These projects are pre-approved and may proceed to implementation (Phase 5) without following the full Class EA process.

Schedule 'B'- Projects that have potential for some adverse environmental effects. Projects of this nature must undergo a screening process involving contact with directly affected public and relevant review agencies to ensure that they are fully aware of the project. Following this, providing there are no outstanding issues, the project may proceed to implementation (Phase 5) without further review.

Schedule 'C'- Projects that have the potential for significant environmental effects. These projects must proceed under the complete planning and documentation procedures in accordance with the Municipal Engineers Association Municipal Class Environmental Assessment (MEA 2000) document.

The proposed alternative design concepts considered to properly address the deficiencies along the study corridor led to the potential for significant environmental impacts, thus identifying the study as a Schedule 'C' project. As such, an ESR was prepared and is to be filed for public and agency review for a minimum 30-day period.

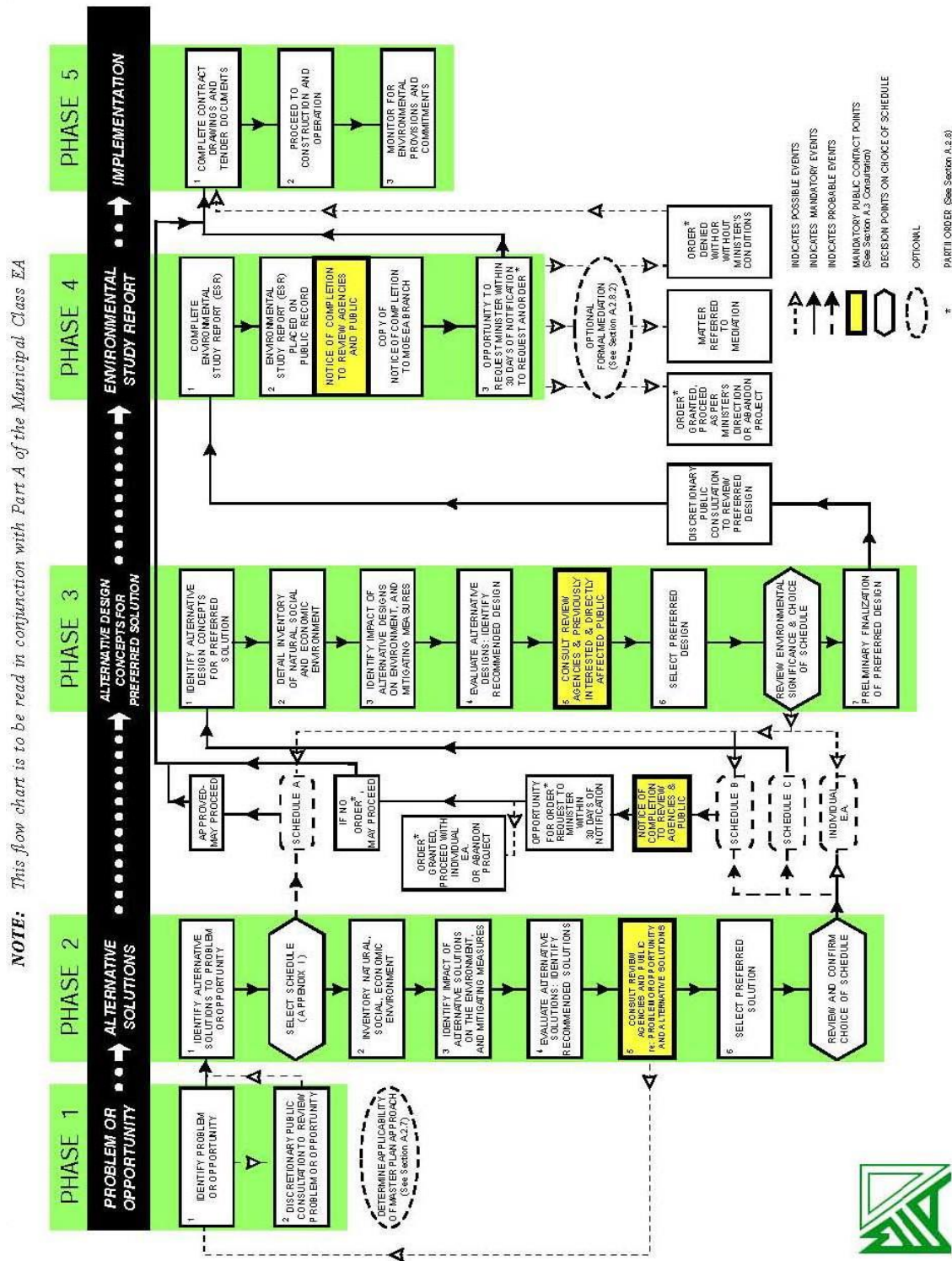


Figure 2.0
Municipal Class EA Planning and Design Process

1.3.2 PART II ORDER

The Class EA process has provisions for an appeal process for those stakeholders (members of the public, interest groups and/or review agencies) having concerns about the ESR. All efforts should be made to address and resolve these concerns directly with the proponent. However, if a resolution cannot be reached, the stakeholder may request the Minister of the Environment to order the proponent to comply with Part II of the EA Act before proceeding with the proposed undertakings to which the Class EA would otherwise apply. The Minister of the Environment may decide to: deny the request; refer the matter to mediation; or require the proponent to comply with Part II of the EA Act. Part II of the EA Act requires that the proponent conduct a detailed Individual environmental assessment for the project as per the Ontario EA Act.

1.3.3 PURPOSE OF THE ENVIRONMENTAL STUDY REPORT (ESR)

As stipulated in Phase 4 of the planning and design procedure of the Class EA process, an ESR is required for all Schedule ‘C’ projects. The ESR documents the activities conducted in Phases 1, 2 and 3 of the process, including detailed descriptions of:

- The problem/opportunity and relevant background information.
- The rationale utilized in selecting the preferred solution and subsequently, the preferred design.
- The potential environmental impacts of the preferred design.
- The potential mitigating measures and the efforts employed to minimize adverse environmental effects.
- The consultation and monitoring process.

1.4 CANADIAN ENVIRONMENTAL ASSESSMENT ACT (CEAA)

This project must also comply with the requirements of the Canadian Environmental Assessment Act. The following table identifies the main potential “triggers” under CEAA and their application to the recommended undertaking.

Table 1.0
CEAA Triggers and Applicability to this EA

Trigger	Applicability
Federal Funding or Federal Lands	no federal lands affected or federal funding anticipated
Canadian Transportation Agency	two railway crossings contact to be made during detailed design
Department of Fisheries and Oceans	no fish/fish habitat affected
Canadian Coast Guard	navigable water crossings are not impacted

A copy of the Act is available on the Agency’s website at www.ceaa.gc.ca.

1.5 STUDY APPROACH

In order to fulfill the Municipal Class EA requirements and to ensure a thorough understanding of the problem being addressed, the alternatives considered and their associated potential environmental impacts and mitigation measures, and to enable consultation with the public and technical agencies, the study followed the Municipal Class EA process.

1.6 PROJECT STUDY TEAM

A Project Study Team (PST) consisting of City of Windsor representatives from Public Works, Planning, Parks & Facility Operations and Legal was formulated early in the Class EA process. The knowledge and expertise brought forth by each representative allowed for the team to work collectively to identify and address the needs of the study area, establish a reasonable range of alternative solutions, identify the preferred solution, and compose a preliminary design, all in accordance with the Class EA process.

A Steering Committee, which included the Executive Director of Operations, the Executive Director of Parks & Facility Operations, the City Planner, and the Manager of Urban Planning & Community Development also provided direction and guidance throughout the study.

Regularly scheduled progress meetings were held with both the PST and the Steering Committee to ensure that the Class EA process was adhered to and that all requirements were met. Refer to Appendix G for the meeting minutes.

1.7 PUBLIC AND AGENCY CONSULTATION

Consultation is a fundamental part of the EA planning process, and as such it was incorporated early in and frequently throughout the study. Effective consultation ensures that potentially interested stakeholders including the general public, affected property owners, community representatives, interest groups, review agencies and other municipalities are notified of the study's progress and are provided with an opportunity to convey information and to aid in the decision making process with respect to the:

- Existing conditions of the study area;
- Problems/opportunities being addressed;
- Alternative solutions and potential impacts;
- Alternative design concepts;
- Recommended design; and
- Proposed mitigating measures.

The discretionary and mandatory points of consultation are shown on the Municipal Class EA Planning and Design Process flowchart in Figure 2.0.

1.7.1 CONSULTATION

Four formal points of public contact occurred over the course of the study, two of which were Public Information Centres (PICs) conducted in each of the second and third phases of the Class EA process. These contact points occurred as follows:

Contact Point #1 - Notice of Study Commencement & Public Information Centre #1

- Two notices were placed in The Windsor Star in May 2006 announcing the commencement of the study.

Contact Point #2 – Public Information Centre #1

- Two notices were placed in The Windsor Star in May 2006 announcing the PIC.
- The first Public Information Centre was held in May 2006 at the Roseland Golf & Curling Club.

Contact Point #3 – Public Information Centre #2

- Two notices were placed in The Windsor Star in October 2006 announcing the upcoming PIC.
- The second PIC was held in October 2006 at the Roseland Golf & Curling Club.

Contact Point #4 – Notice of Study Completion of ESR

- A notice was placed in The Windsor Star in February 2007 announcing the completion of the ESR.

Refer to Appendices D, E, and F, for a more detailed account of PIC #1, PIC #2, and comments received.

1.7.2 AGENCIES AND UTILITIES

Technical agencies and utility companies were notified at mandatory contact points, as stipulated by the Class EA process, and were requested to provide guidance and comment. Refer to Appendix C for a complete contact list.

2.0 THE ENVIRONMENT

2.1 INTRODUCTION

This section describes the existing environmental conditions of the study area. These conditions help to determine the advantages and disadvantages associated with each alternative solution.

2.2 EXISTING & FUTURE LAND USE

The existing land use along the corridor is established as mixed commercial and industrial, with a small area being residential, refer to Figure 3.0. The City of Windsor Official Plan provides direction for future land use within the study area.

2.3 NATURAL ENVIRONMENT

2.3.1 CANDIDATE NATURAL HERITAGE SITES (NHS)

There were formerly three Candidate Natural Heritage Sites (NHS) abutting the subject corridor, namely NHS #15, 21, and 22. Two of these (NHS #15 and 21) have been since eliminated from future consideration as a result of the sites being cleared by the respective owners. The remaining Natural Area is site #22, a portion of which was developed in 2000 on the site of 1150 Provincial Road. Some notable trees were retained as part of the development. The Adopted Subwatershed Study (CR 1366/98) recommended deletion of this site from the list of NHS.

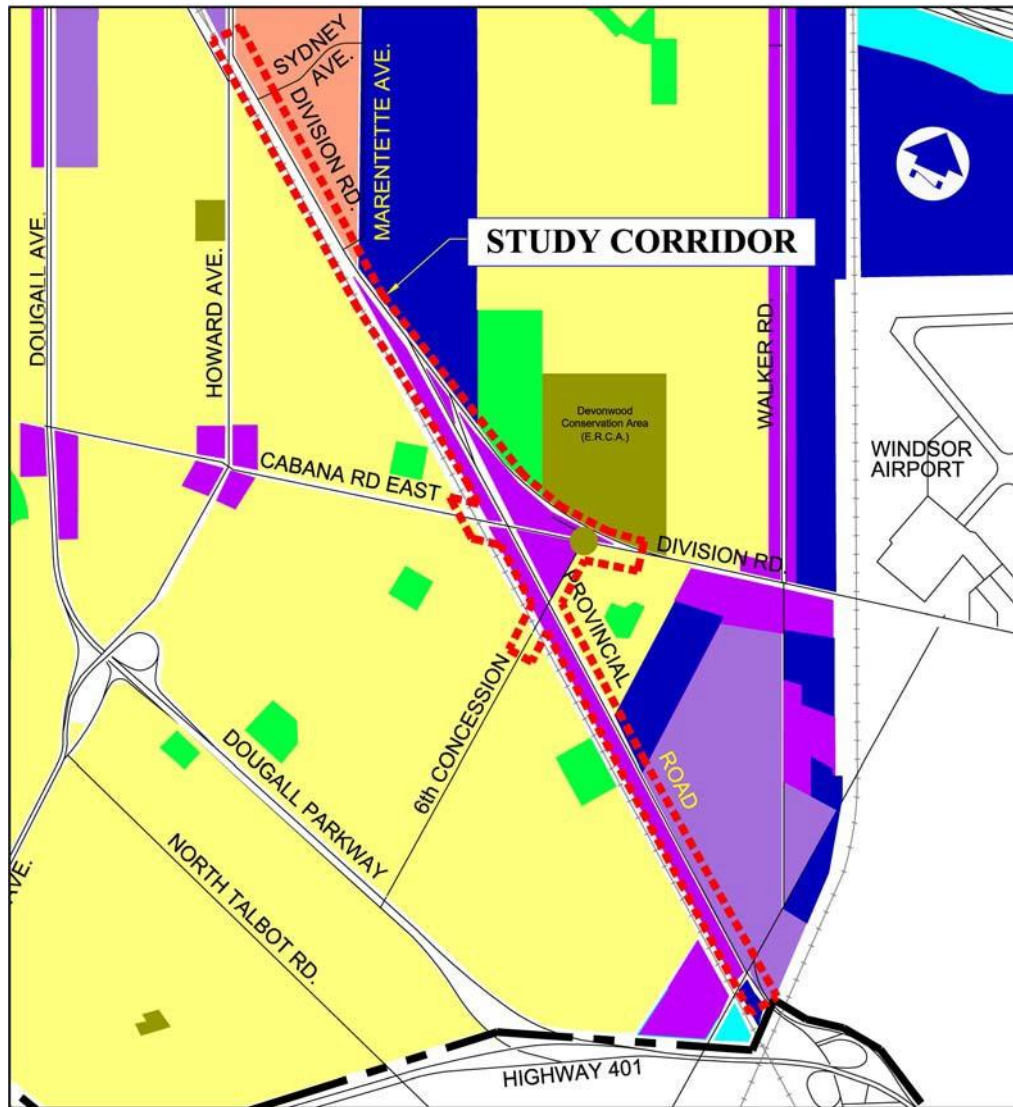
2.3.2 TREES

Biological Inventory Evaluation Report for NHS #22 (1992)

Candidate NHS Site #22 contains a canopy of mature trees with a similar species composition as the adjacent Devonwood Conservation Area. However, the remaining band of woods at this site is too small to support itself for very long in its present condition. Although the entire site is approximately 4.9 acres in size, the natural understorey only occurs under the canopy in the northwest corner of the property. Evaluation of Candidate N.H.S. #22 indicates fulfillment of none of the eight prescribed criteria.

A biological inventory was conducted in 1992 with the following trees being the dominant species:

- *Carya ovata*
- *Crataegus* spp.
- *Fraxinus pennsylvanica*
- *Quercus* spp.
- *Ulmus Americana*



LEGEND:









RESIDENTIAL		OPEN SPACE	
MIXED USE		NATURAL HERITAGE	
COMMERCIAL CENTRE		BUSINESS PARK	
COMMERCIAL CORRIDOR		INDUSTRIAL	

Figure 3.0
Existing Land Use

Devonwood Conservation Area

The Devonwood Conservation Area immediately abuts the Division Road portion of the EA study area. This park is owned and managed by the Essex Region Conservation Authority (ERCA). There is a gravel driveway access to the park from Division Road, immediately opposite the dwelling at 1325 Division Road. The vegetation abutting the Division Road right-of-way is a mixture of young tree growth interspersed with a few very large and mature tree specimens. The young growth consists of Hickory, Ash, and Elm. Of the large specimens, two White Oaks are immediately abutting the right-of-way. The White Oak situated approximately opposite the access driveway to the motel at 1425 Division Rd. has a canopy that overhangs the right-of-way and therefore care must be taken to ensure vehicles or machinery do not require an overhead clearance in excess of the lowest branches of the tree canopy. Furthermore, any consideration of road widening along this portion of roadway should address any potential impact on the root zone or canopy of the trees within the Devonwood Conservation Area immediately abutting the Division Road right-of-way.

Mature Trees Within Right-of-Way

There are two mature Elm trees located adjacent to 1155 Provincial Rd. that are within the right-of-way.

A group of three Elm trees, each approximately 0.2m in DBH (trunk diameter at breast height measured at a point 1.2m above surrounding grade) is situated in the Cabana Rd. East right-of-way adjacent to 1325 Division Road. One dead Ash tree is situated in the same location.

One Elm tree (0.25m DBH), two dead Ash trees (0.2m DBH), and one White Oak tree (0.9m DBH) are situated in the ditch within the right-of-way adjacent to the rear property boundary of the residence at 3863 Acorn Court.

One Poplar (0.85m DBH), and one Silver Maple (0.6m DBH) are also located within the right-of-way in front of 1065 Cabana Rd. East.

Several notable trees are situated on private property within a few metres of the Division Road right-of-way, specifically two White Oak trees (0.75m DBH) and one Sycamore tree (0.8m DBH) at 1425 Division Rd. Any consideration of road widening along this portion of roadway should address any potential impact on the root zone or canopy of the above noted trees. Refer to Appendix J for a complete list of the affected trees within the corridor.

2.4 SOCIAL/CULTURAL ENVIRONMENT

2.4.1 SOCIAL ENVIRONMENT

The social environment includes a predominance of commercial development along Provincial/Division Road. Commercial development includes big box retail, strip plazas, and car sales lots. The buildings are set back generously with parking fronting onto the main arterial. The road is not curbed and in most cases, there are ditches on either side of

the road. On the west side of Provincial Road, there are two significant and well-established residential developments namely, South Windsor, and Roseland with some small parks integrated within. On the east side of Howard Avenue is Windsor's largest indoor shopping center called Devonshire Mall.

At the junction of Provincial Road, Cabana Road, and Division Road, the area is endowed with Devonwood Conservation Area, a significant woodlot for recreational purposes, and the Windsor Memorial Gardens Cemetery in this predominantly commercialized area. It should be noted that there is a significant undeveloped tract of land adjacent to the cemetery and conservation area.

2.4.2 CULTURAL ENVIRONMENT

French settlement in the Windsor area used the existing Native trail system and water transport along the Detroit River. Since the interior was swampy, settlement did not extend inland until well into the 19th century. Although County lands were surveyed and grants given by the 1820s, roads and settlers had to wait for provincial and federal drainage projects. Early settlement roads include Riverside Drive, Sandwich Street, Front Road, Huron Church Line, Old Talbot Road, Tecumseh Road, Grand Marais Road, Cabana Road (former Concession 3), and Division Road (former Concession 2). The King's Highway No. 2 (locally known as Concession 2), was the major east-west provincial highway in Southern Ontario, running from Windsor (today, it is known as Division Road) in the west to Lancaster in the east and joining together the towns and cities of the western two-thirds of the Quebec City/Windsor Corridor in Ontario.

The construction of Highway 401 during the 1940's, 1950's and '60s along a mostly parallel route, bypassed the town and city cores, and made Highway 2 largely redundant except for local travel and tourism, and led to a decline of many businesses built alongside it. In many cases, businesses moved from town and city centres to malls and plazas located closer to Highway 401. Provincial downloading of highways to local municipalities has largely resulted in the elimination of this highway as a provincial entity. According to historic maps, early structures can be found within a relatively short distance from these roads, if they have not already been replaced or compromised by 20th century development.

Other than a Euro-Canadian settlement noted at Walker Road and Provincial Road (Pelton), there are no others within the study area. The area has undergone intensive redevelopment since it was first settled in the 19th century. According to the Windsor Archaeological Master Plan, the study area has been marked as having low archaeological potential with one patch of land located in the industrial zoned land use marked as having high archaeological potential.

2.4.3 RESIDENTIAL

At the southeast corner of Provincial Rd. and 6th Concession Rd. is the Devonwood Subdivision, a predominantly low density, single detached residential neighborhood that was developed in the late 1990's. The subdivision occupies roughly 40 acres.

2.4.4 RECREATIONAL

Devonwood Conservation Area is the primary constituent for recreational activity adjacent to the study area. This park is owned and managed by the Essex Region Conservation Authority (ERCA). More than 4.5 kilometers of trails are located within this 94-acre forest. Also neighboring the study area is Maple Leaf Park located inside Devonwood subdivision. This 2-acre park is equipped with a baseball diamond and children's play unit.

2.4.5 BUILT HERITAGE FEATURES

There are no structures within the study area that are registered in either the Ontario Heritage Property database or the City of Windsor Heritage Property Inventory list.

2.4.6 ARCHEOLOGICAL OVERVIEW

According to the Windsor Archaeological Master Plan the study area has been marked as having low archaeological potential. However, there is one patch of land located in the industrial zoned land between Marentette Ave. and Parkwood Ave. south of Foster Ave. that has high archaeological potential. Proposed improvements to the corridor will not impact this area.

2.4.7 URBAN DESIGN

A few of the goals set out by the City of Windsor Official Plan regarding urban design, are to achieve a memorable image of the city, pedestrian access to all developments, and comfortable conditions along roads. Currently, Urban Design principles have not been incorporated into the corridor. The study area falls short on many objectives; there are no sidewalks along the corridor, existing road conditions are deficient, and there is a lack of landscaping and proper streetscaping amenities.

2.5 ECONOMIC ENVIRONMENT

2.5.1 COMMERCIAL

The commercial environment along the corridor includes big box retail, a furniture store, numerous car dealerships, and shopping plazas. The majority of the car dealerships are located at or near the Provincial/Cabana Rd. intersection. All of these businesses have direct access from either Provincial, Division, or Cabana Roads.

2.5.2 INSTITUTIONAL/INDUSTRIAL ENVIRONMENT

Mixed in with the commercial businesses along the study area are light industrial operations such as metal stamping facilities, manufacturing companies, an auto recycler, construction supply depot, and welding supplier. All have direct access to either Provincial or Division Rd. There are no institutional entities within the study area.

2.6 TRANSPORTATION

Division and Provincial Roads are currently classified as Class II Arterials. They service and provide access to the abutting, primarily commercial and industrial land uses as well as surrounding residential areas while serving an important function of providing access on a regional basis to/from the Town of Tecumseh, and County of Essex as well as Highway # 401.

Both Division and Provincial Roads are designated Truck Routes in the City's Traffic Bylaw with a posted speed limit of 60 km/hr.

2.6.1 EXISTING ROADWAY CONDITIONS

Provincial Road

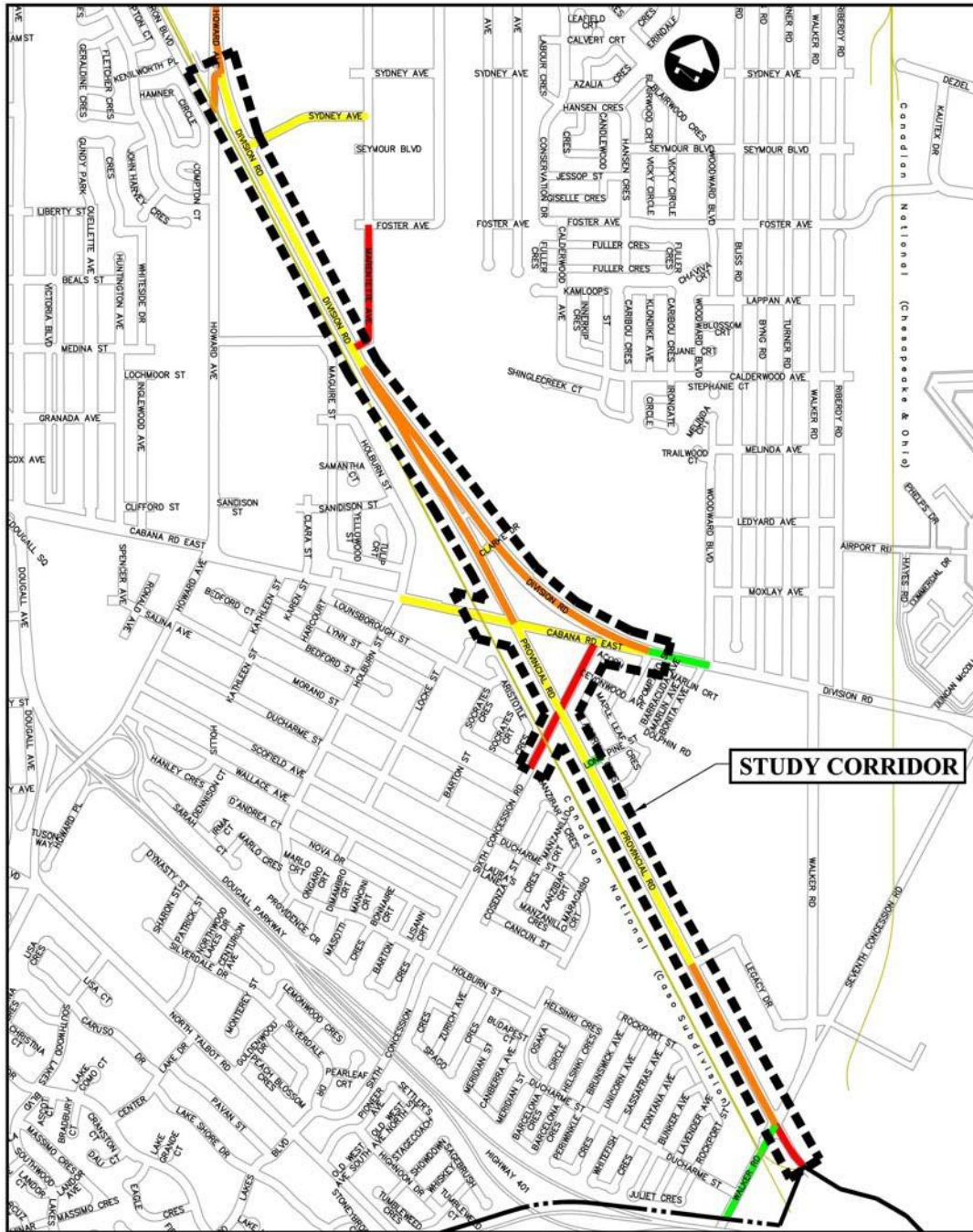
The existing roadway from the south City limits to just north of Cabana Road consists of a two lane rural cross-section with left turn lanes at signalized intersections and some other key locations.

The pavement width varies from 7.3m between Sixth Concession and Walker Roads to 7.1m between Cabana and Sixth Concession Roads to 10.1m north of Cabana Road. The roadway consists of an asphalt pavement with no curbing, gravel shoulders, roadside ditches/swales, and no pedestrian or bicycle facilities. According to the City of Windsor's Road Rating Map, Figure 4.0, some sections of the road on Provincial Rd. will be deficient within 1-5 years. There is longitudinal, transverse, alligator and edge cracking.

Division Road

The existing roadway from Cabana Road to Howard Avenue varies in the number of lanes. At the south end, north of Cabana Road and adjacent to Devonwood Conservation Area, the roadway consists of a 5m wide pavement with no curbs, gravel shoulders, roadside ditches/swales and no pedestrian or bicycle facilities. This section of Division Road functions as a one-lane, one-way northbound facility.

Where Division Road merges with Provincial Road northerly to Howard Avenue, the roadway consists of a 15.6m wide pavement with no curbs, gravel shoulders, roadside ditches/swales and no pedestrian facilities. This section of the corridor consists of four traveled lanes with left turn lanes at the signalized intersections with Sydney Avenue and Howard Avenue. The pavement on Division Road is in poor condition according to the City of Windsor's Road Rating Map. Again with some longitudinal, transverse, alligator and edge cracking.



LEGEND:

- | | |
|---|---|
| NOW DEFICIENT | 6- 10 YEAR DEFICIENT |
| 1 - 5 YEAR DEFICIENT | ADEQUATE |

Figure 4.0
Existing Road Condition

2.6.2 EXISTING & FUTURE TRAFFIC VOLUMES

Existing Traffic Volumes

Based on the most recent traffic volume data, it is estimated that between 17,500 to 21,900 vehicles travel on Provincial/Division Road between Howard Avenue and the City Limits. A few of the existing intersections operate at an acceptable level of service with the exception of Provincial and Cabana which operates at an overall rating of 'D'. This intersection experiences extensive delays in the afternoon peak for through traffic and southbound left turns.

Traffic Forecast

Traffic Volume forecasts were performed based on existing traffic volumes at a growth rate of 1.5% per year for the 10 year and 20 year horizons. By 2026 it is estimated that 23,570 to 29,496 vehicles will travel on Provincial/Division Rd. Refer to Appendix H for a detailed summary.

2.6.3 EXISTING COLLISION RATES

Collision data for the Division/Provincial corridor, from Howard Avenue to the City limits was collected for both intersections and mid-blocks from 2002 to 2004.

For this 3-year period, three intersections stand out as having a significant number of collisions, those being Division/Howard, Cabana/Provincial and Walker/Provincial. Since the Division/Howard and Walker/Provincial intersections already have approved designs, no further work is required. At the Provincial/Cabana intersection there was an average of 11.33 collisions per year within the 3-year period. The high number of collisions at this intersection highlights the operations issues at this location.

The collisions occurring in the mid-blocks and the corresponding ratios in collisions per million vehicle-kilometers (MVK) between intersections are summarized in Appendix H

Based on the latest Ontario Road Safety Report (2003), the average collision rate from 2000 to 2003 was approximately 2.0 collisions per MVK. Based on the link collision data noted in Appendix H, the only link that exceeded the provincial average is on Provincial Road from Cabana to Sixth Concession Road. The section of Provincial Road from Clarke Road to Walker Road, approximately 55 % of the collisions, in the time under review, were rear end collisions.

2.6.4 LEVEL OF SERVICE (CAPACITY)

The measure of level of service (LOS) is based on the ratio of the traffic volume to the theoretical capacity of the roadway or intersection. A six-letter scale is used to classify the LOS of a roadway, with 'A' representing the best and most excellent level of service down to LOS 'F' which represents gridlock or complete failure with considerable delays to traffic.

Existing Conditions

For the most part, Division Rd. is operating at an acceptable level of service, while Provincial Road is currently operating at a less than acceptable level of service. Furthermore, intersections along the Provincial Road section of the corridor are experiencing significant delays which is resulting in long queues along the sections between the intersections.

A significant number of trucks utilize this corridor to gain access to an auto hauler depot operation between 6th Concession and Walker Roads. Trucks frequently travel north and south from that depot to and from Highway #401. Between Howard Ave. and Marentette Ave. an adjacent industrial park generates a significant number of truck trips.

The highest traffic volumes were in the vicinity of Devonshire Mall between Howard Ave. and Sydney Ave. This section currently has a 4-lane cross-section and experiences a relatively good level of service. Along Division Rd., minor delays do occur where vehicles make left turns into a few scattered businesses and retail entities. The next highest volumes were near the Cabana Rd. intersection where the road narrows to one lane in each direction. Significant delays associated with left turns and peak traffic volumes plague the section of Provincial Rd. between Cabana and Walker Roads.

2.6.5 FUTURE TRAFFIC VOLUMES

Future traffic estimates were based on population and employment growth in the area along this corridor, and based on historical traffic growth for the City of Windsor.

The level of service for each signalized intersection has been broken down into AM peak and PM peak to give a greater understanding of the critical movements that can be used to develop alternatives for consideration in the later parts of the study. Please refer to Appendix H for a detailed account of future traffic volumes.

Division Road at Howard Ave.

No analysis is being performed for this intersection, as its design is the subject of a previously approved Environmental Study Report.

Division Road at Sydney Ave.

Consistent congestion occurs on the southbound left turn lane to Sydney in the AM peak. Employment generators in the area and retail outlets continue to draw significant vehicle traffic. This intersection serves a number of retail locations and an adjacent industrial park. No future expansion of the retail area is planned at this time and as such only the standard growth rate has been applied to this intersection.

Division Road at Marentette Ave.

Future traffic volumes at the intersection of Division and Marentette may need to be adjusted to compensate for a Collector Road, which will connect Marentette to the residential area to the east. It is expected that this connection will take a significant amount of traffic from the South Service Road which now offers the only connection to

Howard from the residential area to the east. Further modeling of future volumes may be necessary.

Provincial Road at Cabana Road

Congestion on eastbound Cabana is experienced during the morning rush. Similarly, congestion on northbound Howard at Division Rd. also occurs at the same time. Because Howard backs up so frequently, drivers choose the alternative route of eastbound Cabana to northbound Provincial in order to continue their trip downtown or to other nearby employment generators. Planned improvements to Howard may lessen this volume, however it is not expected to lessen it significantly.

Current congestion is expected to deteriorate into absolute gridlock in the 10-year horizon with nearly every leg of this intersection experiencing levels of service of D or worse. Recent retail and residential developments south of this area have only compounded the problem.

Provincial Road at Sixth Concession

Current congestion is limited to the eastbound and westbound legs of 6th Concession_{th} where it meets Provincial. In particular, left turn movements_{th} will increase from 6th Concession eastbound considerably as development south of 6th Concession continues. Westbound traffic currently experiences a moderate amount of congestion related to left turns. Eastbound left turns will experience continuing increasing congestion that will need to be addressed.

Provincial at Walker

No analysis is being performed for this intersection, as its design is the subject of a previously approved Environmental Study Report.

Summary of Future Traffic Volumes and Level of Service

Two lane sections of Provincial Road will experience poor levels of service in the 10-year horizon. While currently the majority of problems are resultant from delays at intersections where traffic queues extend for many metres beyond the intersection, the majority of mid block sections currently operate at a reasonable level of service. However, with the current growth in commercial uses and residential development, traffic in this area is expected to continue to increase beyond acceptable levels of service. As such, improvements will need to be made to allow for this future traffic.

2.6.6 PUBLIC TRANSIT

Current Operations

Transit Windsor currently operates two bus routes on the Division/Provincial Corridor and one route that intersects the corridor. The following is a description of those services.

Transway 1A

- Southbound on Division Rd. from Howard Ave. to Sydney Ave. where the buses turn left and head east on Sydney Ave. to enter the Devonshire Mall.

Service Operations: 7 Days per week, Weekdays/Saturdays 20 minutes all day until 7:00pm, 30 minutes until 9:00pm, 60 minutes until 12:00am. Sunday 60 minute service all day.

South Windsor 7

- Runs southbound and northbound from Marentette Ave. to Cabana Rd. Southbound only from Cabana Rd. to Legacy Park Dr.

Service Operations: 6 Days per week, Weekdays/Saturdays 40 minutes all day until 11:00pm. No Sunday service.

Walkerville 8

- Southbound on Walker, crossing over Provincial Rd. heading toward North Talbot Rd.

Traffic Congestion effect on Transit Service

Significant delays occur on the South Windsor 7, particularly during the afternoon peak for southbound buses along Provincial Road. Bottlenecks at the Cabana intersection result in an almost daily regiment of late buses. This new route must continue to utilize Provincial Rd. to access the Legacy Park Dr. retail area and as such Transit Windsor has no alternative but to utilize Provincial Rd.

The Transway 1A experiences some delays associated with traffic turning left from southbound Division to eastbound Sydney. These delays occur mainly in the afternoon peak and are easily recovered at the end of the line.

2.6.7 CYCLISTS

There are currently no designated cycling facilities within the corridor. The Bicycle Use Master Plan (BUMP), approved in 2001, identifies various future cycling facilities within the corridor. They are:

- Division Road – On-road bike lanes
- Provincial Road – On-road bike lanes
- Cabana Road – On-road bike lanes
- Sydney Avenue – On-road bike lanes
- Sixth Concession Road – On-road bike lanes
- Marentette Avenue – Signed bike route

2.6.8 PEDESTRIANS

Currently, there are no pedestrian facilities within the corridor.

2.6.9 RAILWAY

The DRTP rail line runs parallel to Division Rd. and Provincial Rd. Along Division Rd., the railway right of way is adjacent to the Division right of way. Further south along Provincial Road, the right of way is a short distance to the west with commercial properties in the gap between the railway right of way and the Provincial Road right of way.

Because of the close proximity of the railway right of way, intersections such as Provincial at Cabana and Provincial at 6 Concession must take into account the railway when designing both intersections.

The current railway operations on this line are limited and amount to approximately 1-2 trains per day. DRTP itself does not own or operate any trains, but rather it leases track rights to other rail companies. Currently lease agreements are in place with Canadian National, Canadian Pacific and Norfolk Southern. At this time, Canadian National Railway moves traffic between itself and Essex Terminal Railway and as such generates the majority of traffic.

2.7 EXISTING INFRASTRUCTURE & UTILITIES

Within the Provincial/Division Rd. corridor, the following utilities and municipal services exist:

Utilities

- Hydro – Enwin Utilities
- Data – Maxiss
- Telephone – Bell Canada
- Gas – Union Gas
- Cable Television – Cogeco

Services

- Watermain – Windsor Utilities Commission
- Sanitary sewers – City of Windsor
- Storm sewers – City of Windsor
- Traffic Signal Infrastructure – City of Windsor
- Street Lighting – City of Windsor/Enwin Utilities

The type of utilities and their location are discussed further in Section 4.1.5 and Appendix K.

2.8 GEOTECHNICAL

Prior to the final design of the proposed undertaking, a full geotechnical investigation of the study area is recommended.

2.9 ENVIRONMENTAL INVESTIGATION

The land use along the Provincial/Division Rd. corridor is established as mostly commercial and industrial. Commercial and industrial businesses include a gas station, metal stamping facilities, manufacturing companies, and an auto recycler. Based on the types of businesses within the study area an environmental investigation is recommended prior to property acquisition.

3.0 EVALUATION OF ALTERNATIVE SOLUTIONS AND SELECTION OF RECOMMENDED DESIGN

3.1 PRELIMINARY DEVELOPMENT OF ALTERNATIVES

The following alternative solutions were considered for the study area:

- Do nothing;
- Improve intersections only;
- Three-lanes plus sidewalks and bike lanes;
- Four-lanes plus sidewalks and bike lanes;
- Four-lanes with continuous center median plus sidewalks and bike lanes; and
- Five-lanes plus sidewalks and bike lanes.

3.1.1 DO NOTHING

In any EA process, the option to “Do Nothing” must be explored. This alternative solution doesn’t address the problem even though the need for improvement has been established through technical investigations in this study. It is included in the evaluation to provide a benchmark against which other alternatives are compared.

3.1.2 IMPROVE INTERSECTIONS ONLY

Intersection improvements such as additional turn lanes and increased storage lengths will help to alleviate congestion at the intersections but does little to address future traffic volumes along the corridor. Also, having to terminate an extra lane downstream of the signal would require a merge, which has a negative impact on lane capacity.

3.1.3 THREE-LANES PLUS SIDEWALKS AND BIKE LANES

The option to provide three lanes plus sidewalks and bike lanes along the east and west sides of the corridor was presented to the public. This road configuration is not expected to provide maximum benefits to the city in regards to traffic operations. It does however introduce sidewalks and bike lanes along the corridor to accommodate both pedestrians and bicyclists.

3.1.4 FOUR-LANES PLUS SIDEWALKS AND BIKE LANES

This alternative is able to accommodate future traffic volumes and provides accessibility for both bicyclists and pedestrians. However, vehicles turning left may impede through traffic, which poses a safety issue.

3.1.5 FOUR-LANES WITH MEDIAN, SIDEWALKS, AND BIKE LANES

This design alternative is similar to the four-lane option with the difference being a traffic median along the center of the roadway. A continuous median provides an opportunity to enhance the city's civic image as outlined in the City of Windsor Official Plan.

3.1.6 FIVE-LANES PLUS SIDEWALKS AND BIKE LANES

The five-lane alternative consists of four through lanes (two in each direction) and a centre two-way left turn lane. Based on technical investigations within the study, there is strong evidence that a five-lane plus sidewalks and bike lanes cross-section will best accommodate the forecasted traffic volumes. Also, a continuous two-way left turn lane will remove left-turning vehicles from the through lane and will reduce safety hazards.

3.2 EVALUATION OF ALTERNATIVE SOLUTIONS

The alternative solutions were evaluated by the Project Study Team with respect to the following evaluation criteria:

- Natural Environment Impacts
- Social/Cultural Environment Impacts;
- Landscape/Urban Design;
- Economic Environment;
- Transportation and Safety; and
- Municipal Services and Utilities.

The evaluation of the alternative solutions is shown in Table 2.0, Evaluation Summary of Alternative Solutions. The Project Study Team reviewed the public input received from PIC #1, evaluated the information which led to the identification of the preferred solution.

3.2.1 NATURAL ENVIRONMENT IMPACTS

Do Nothing

This alternative to "Do Nothing" is a great benefit to the existing trees and vegetation because it does not require the removal of any vegetation. However, the air and noise quality will continue to deteriorate as traffic volumes increase.

Improve Intersections Only

This alternative has little to no impact on existing trees and vegetation. The noise level is expected to decrease and air quality to increase minimally due to less wait times at signalized intersections.

Three-lanes plus sidewalks and bike lanes

This alternative adds no benefit to the natural environment, since it requires the removal of some trees along the corridor. It requires the removal of the fewest number of trees of all roadway-widening options.

Four-lanes plus sidewalks and bike lanes

This alternative does have an impact on the environment. It requires the removal of some trees along the corridor. The additional lane will improve traffic conditions thereby reducing vehicle emissions.

Four-lanes with median, sidewalks, and bike lanes

This alternative has the largest impact on the natural environment. The continuous median will require additional space therefore, affecting more trees.

Five-lanes plus sidewalks and bike lanes

This alternative does not have as big of an impact on the natural environment as the four-lane with median alternative. Vehicle emissions are expected to decrease due to the additional lanes. The additional lanes will reduce vehicle idling times.

3.2.2 SOCIAL/CULTURAL ENVIRONMENT

Do Nothing

Doing nothing along the corridor will have a negative effect on the accessibility to and from the surrounding neighborhoods due to the projected increase in future traffic volumes.

Improve Intersections Only

This alternative will slightly improve the accessibility to and from surrounding neighborhoods but will not fully address the problem along the entire study area.

Three-lanes plus sidewalks and bike lanes

This alternative will impart limited benefit to the community since the two-way left turn lane will increase safety and through traffic flow will slightly improve. The sidewalks and bike lanes would provide recreational benefits, and accessibility to pedestrians and cyclists.

Four-lanes plus sidewalks and bike lanes

This alternative would improve traffic flow. Since this cross-section does not include a two-way left turn lane there are safety concerns. The sidewalks and bike lanes would provide recreational benefits to the surrounding communities and provide accessibility to pedestrians and cyclists.

Four-lanes with median, sidewalks, and bike lanes

A continuous median would not provide optimal accessibility to the surrounding neighborhoods. However, the sidewalks and bike lanes would provide recreational benefits and accessibility to pedestrians and cyclists.

Five-lanes plus sidewalks and bike lanes

This alternative would benefit the community by accommodating present and future traffic. The two-way left turn lane will improve safety and accessibility. The sidewalks and bike lanes would provide recreational opportunities and accessibility to the community.

3.2.3 LANDSCAPE/URBAN DESIGN

Do Nothing

Given that Provincial/Division Rd. is one of the principal entry corridors into the city, the present situation of the roadway may be detracting from efforts elsewhere in Windsor to establish a positive Civic Image. Existing traffic congestion at peak periods and a notable lack of trees along the corridor may present a negative impression to visitors.

Improve Intersections Only

This alternative will provide a minor improvement to traffic flow and somewhat improve the driving experience for visitors, however no change to the landscape of the corridor would be achieved by this option.

Three-lanes plus sidewalks and bike lanes

This alternative will allow existing trees to remain and ample room to plant new trees along the roadway. The residual space on both sides of the right-of-way would permit a continuous landscape boulevard, consisting of tree planting between the roadway and the sidewalk, including a paved splash strip alongside and integral with the curb. This configuration could provide shade to the bike lane and a portion of the roadway and is also regarded as the most desirable from an aesthetic standpoint.

Four-lanes plus sidewalks and bike lanes

This alternative would require removal of some existing trees, but not to the extent of the following two options. Sufficient room on both sides of Provincial Road would allow for continuous tree planting throughout the corridor. In some segments of the corridor, it would also permit tree planting on both sides of the sidewalk.

Four-lanes with median, sidewalks, and bike lanes

The inclusion of a continuous median represents the greatest impact in terms of landscape and urban design improvements. It is consistent with Section 8.11.2.4 of the Official Plan; "Council will support the provision of boulevard and median strips on roads of more than four lanes for aesthetic and safety reasons.". Given that traffic lanes, sidewalks and the median would consume the width of the right-of-way in many sections of the corridor, available space for tree planting along the sides of the roadway is limited to certain sections of the corridor. However, the median could accommodate continuous tree planting except in proximity to the intersections.

Five-lanes plus sidewalks and bike lanes

This alternative provides for a few limited medians/landscape islands, which may be considered sufficient to address Section 8.11.2.4 of the Official Plan.

However, no more than one median would be visible within any given viewshed along the corridor. One option to heighten the impact of the dispersed medians would be to locate public art within each of the five landscape medians, consistent with Section 8.10.2.3, "Council will encourage the integration of art in the early stages of the planning process for new developments and infrastructure undertakings."

Space for tree planting along the sides of the roadway is limited given that traffic lanes, sidewalks and the continuous left-turn lane would occupy the entire width of the right-of-way in many sections of the corridor. However, where space is available, the plan would include tree planting at various intervals along one or both sides of the roadway.

3.2.4 ECONOMIC ENVIRONMENT

Do Nothing

Doing nothing would have no impact on property acquisitions costs along the corridor, however, there would be high operational costs associated with on-going maintenance. This alternative could hurt the local economy as congestion and delays would affect businesses along the corridor.

Improve Intersections Only

The intersection alternative would require property acquisition at the intersections along the corridor due to additional turning lanes and longer storage lengths. This alternative would have minimal benefit to businesses located within the study area.

Three-lanes plus sidewalks and bike lanes

This alternative solution would impart a slightly larger benefit than the previous alternative since sidewalks and bike lanes would broaden the spectrum of potential consumers and employees of local businesses. This alternative would require minimal property acquisition.

Four-lanes plus sidewalks and bike lanes

The four-lane alternative would have a slightly larger property acquisition cost due to the additional lane. The addition of sidewalks and bike lanes could attract more consumers to local businesses along the study area.

Four-lanes with median, sidewalks, and bike lanes

This alternative is similar to the four-lane option with the exception that there would be a larger property acquisition due to the continuous median along the corridor. This alternative could have a negative effect on local business since motorists will be restricted from turning left; therefore limiting accessibility.

Five-lanes plus sidewalks and bike lanes

This alternative would provide accessibility to and from businesses. The sidewalks and bike lanes would impart a slightly larger benefit to businesses since they broaden the spectrum of potential consumers and employees. Out of the six alternative solutions this option will have the highest property acquisition cost.

3.2.5 TRANSPORTATION AND SAFETY

Do Nothing

This alternative will not add any benefit to the existing and future transportation needs along the corridor.

Improve Intersections Only

This alternative will impart very little benefit to the transportation and safety needs of the study area. Roadway conditions will improve slightly but the level of service will still be deficient.

Three-lanes plus sidewalks and bike lanes

The three-lane alternative adds limited benefits to current and projected traffic demands. They would marginally increase the through capacity of the roadway. The two-way centre left turn lane would provide limited relief from existing traffic demands by displacing left-turning motorists. This option has the least benefit among road-widening options.

Four-lanes plus sidewalks and bike lanes

This alternative would improve traffic operations, however left-turning vehicles would still obstruct through traffic. The four-lane cross-section also fails to address the safety concern of rear-end collisions involving vehicles waiting to make left-turns.

Four-lanes with median, sidewalks, and bike lanes

This alternative would improve roadway conditions, level of service, and include both pedestrian and bicycle facilities. However, from a safety perspective, the response time of emergency vehicles may be affected by the median.

Five-lanes plus sidewalks and bike lanes

Current and future traffic demands are fully accommodated by the five-lane option. The additional through lanes in this design present the best available transportation network improvement. The two-way left turn lane further accommodates the flow of traffic by providing storage for vehicles waiting to make left-turns into driveways and side streets along the corridor.

3.2.6 MUNICIPAL SERVICES AND UTILITIES

Aside from the “Do Nothing” option all alternatives will have an impact on the existing drainage capacity and utilities along the corridor. The road widening options will have the biggest impact, since they require more of the right of way.

3.3 PUBLIC INPUT

The first PIC was held on May 16th, 2006. The purpose of the PIC was to introduce the project, present the alternative solutions, and solicit comments and concerns from the public.

The Study Commencement and Notice of Public Information Centre #1 was placed in the Windsor Star on May 3 , 2006 and May 8 , 2006 and also on the Project Website. Refer to Appendix D.

A total of forty-eight people attended the first PIC with seventeen of them submitting comment sheets.

The main comments are summarized as follows:

- General recognition of the problem being addressed with many people indicating the need for capacity improvements along the corridor;
- Improve all intersections along corridor;
- Include a continuous two-way left turn lane;
- Generally supportive of the three or five-lane option.

Copies of the comments received resulting from the first information centre are provided in Appendix F.

3.4 SELECTION OF THE PREFERRED SOLUTION

The selection of the preferred solution came about through a series of activities:

- The Project Study Team and the Steering Committee identified the alternative solutions to the problem/opportunity.
- The Project Study Team reviewed each alternative based on key technical and environmental considerations;
- The alternative solutions were then reviewed by agencies, stakeholders, property owners, and the public;
- The preferred solution was chosen based on the comments received, and the net effects on the environment.

The net effects that the alternatives have on the environment were summarized in Table 2.0. This table was developed with an understanding of mitigating measures that have become common practice in municipal Environmental Assessment projects.

Based on the net effects, the Project Study Team determined that the five-lane with bike lanes and sidewalks option would have the least negative effect on the environment while at the same time fully addressing the problem statement.

3.5 ALTERNATIVE DESIGNS FOR PREFERRED SOLUTION

After the preferred solution is confirmed, the next step in the EA process is to identify alternative designs for the preferred solution. There are usually a number of ways in which a project can be developed and designed to implement the preferred solution.

3.5.1 ALTERNATIVE DESIGN CONCEPTS

The five alternative design concepts that were considered for this study were:

Shifting Division Rd. to the east between Sydney Ave. and Marentette Ave.

Shifting the road to the east would result in a larger area on the west side of the road for city use. This concept may have lead to additional property requirements.

Centre road within the right-of-way

This concept would have the least impact on adjacent properties.

Shift Division Rd. to the west between Sydney Ave. and Marentette Ave.

This alternative design concept would have a greater impact on the west side of the right-of-way. Pursuing this concept would have a larger impact on trees that are located within the right-of-way.

Intersection configurations

Various configurations were examined for intersection layouts. The possibility of additional left turn lanes, or designated right turn lanes were explored. Factors such as storage lengths, right-of-way, and traffic volumes influenced the recommended design.

Location and size of medians

As stated in the City of Windsor Official Plan, the Provincial/Division Road corridor is designated a Civic Way. In order to provide a memorable image of the city the possibility of adding landscaped medians at various locations throughout the study area was considered. Factors such as vehicle and pedestrian safety, sight lines, and type of landscaping had to be evaluated when determining the location of the medians.

Based on alternative design concept evaluations, a recommended design was chosen by the Project Study Team and Steering Committee.

3.6 REVIEW OF RECOMMENDED DESIGN

October 25th, 2006 Public Information Centre #2

The purpose of the second PIC was to review and obtain public input regarding the recommended design and associated mitigating measures.

The notice of the second PIC was placed in the October 18th, 2006 and October 21st, 2006 edition of the Windsor Star. Refer to Appendix E. The notice was also placed on the Project Website. Information regarding PIC #2 was distributed to:

- Property owners within the study area plus those who attended the first PIC.
- City of Windsor Council
- Interest Groups
- Agencies
- Adjacent Municipalities
- Utility Companies

The information centre was held on October 25th, 2006 at the Roseland Golf & Curling Club between 3:00 pm and 8:00 pm. Approximately 39 members of the public attended. A *Frequently Asked Questions* handout was provided at the PIC. A copy of the display boards, sign in sheets, and handouts are provided in Appendix E. Some of the comments resulting from PIC #2 include:

- Support for continuous turn lane;
- Support for bike lanes and sidewalks; and
- Landscaping corridor.

The comments received regarding PIC #2 can be found in Appendix F.

3.7 MODIFICATIONS TO RECOMMENDED DESIGN

Taking into account the problem/opportunity, the environmental considerations, potential environmental effects and mitigating measures, and comments received from agencies, interest groups, and the public, the recommended design was refined. The modifications to the recommended design led to the preferred design. The preferred design is shown in Figure 6.0.

4.0 PREFERRED DESIGN

4.1 DETAILED DESCRIPTION OF PREFERRED DESIGN

The main considerations and mitigating measures to further work associated with the undertaking are described herein. While changes may occur during the detail design stage, they should not alter the intent of the ESR. During detail design, there will be further consultation with technical agencies and affected property owners.

Preliminary plans of the preferred design are included in the ESR at a scale of 1:1250. Refer to Figure 6.0.

Improvements to Provincial/Division Road include the following:

- Widening of Division Road to five lanes (four through lanes and one continuous two-way left turn lane) from Sydney Ave. to Marentette Ave.
- Widening of Provincial Road to five lanes from the junction with Division Road near Marentette Ave. to Walker Road.
- Widening of Cabana Road East from two lanes to four from the DRTP rail to Barracuda Ave.
- Improvement of Division Road from Cabana Road East through to Marentette Ave.
- Improvement of Sixth Concession from the DRTP rail to Cabana Road East.
- Improvements to all intersections within the study area.
- Improvement of pedestrian and bicycle facilities throughout the corridor.

4.1.1 DESIGN CRITERIA

The preferred geometric design criteria for different sections of the study area are listed below.

4.1.1 a PROVINCIAL/DIVISION ROAD – SYDNEY AVE. AND WALKER RD.

Posted Speed	60 km/hr
Number of Vehicle Lanes ⁽¹⁾	5
Vehicle Lane Width	3.65 m (12 ft)
Bicycle Lane Width	1.5 m (5 ft)
Sidewalk Width	1.2 m - 1.5 m (4 ft - 5 ft)

Note: (1) Additional turning lanes provided at Provincial/Marentette/Cabana Rd. intersections

Cross-Section

Figure 5.0a shows a typical 5-lane cross section of Provincial and Division Roads from Sydney Ave. to Walker Rd. The proposed cross section includes:

- 5 lanes (4 through lanes and a continuous two-way left turn lane);
- Curb and gutter;
- Sidewalks on east and west sides;
- Dedicated on-street bike lanes; and
- Signed bike route on Marentette Ave.

The on-street bike lane and sidewalk on the west side of the road will be transitioned to a 3 m multi use trail approximately 120m from the Provincial/Walker Rd. intersection.

Alignment

In general the preferred road design alignment follows the existing road alignment with the exception of a portion of Provincial Rd. between Marentette Ave. and Cabana Rd.

The above change to the roadway alignment is to provide a smoother and safer drive for vehicles.

Drainage/Stormwater Management (SWM)

Existing drainage is by way of roadside ditches. The widening of the corridor will require the removal of the ditches and the installation of underground storm sewers with roadside catchbasins. Details of these facilities will be determined during detail design.

Intersections

Division Rd./Sydney Ave.

- Increased storage length for the southbound left turn lane onto Sydney Ave. from Division Rd.
- A new northbound through/right turn lane onto Sydney Ave. from Division Rd.
- New traffic islands.
- Possible future northbound acceleration lane.

Division Rd./Marentette Ave.

- New southbound left turn lane onto Marentette Ave. from Division Rd.
- Dual westbound left turn lanes onto Division Rd. from Marentette Ave.
- New traffic islands on Division Rd.

Provincial Rd./Cabana Rd. East

- New left turn lanes including dual southbound left turn lanes onto Cabana Rd. East from Provincial Rd.
- New traffic islands.
- New directional islands
- Increased storage lengths

Provincial Rd./6th Concession Rd.

- Increased north and southbound left turn lanes storage lengths on Provincial Rd.
- Increased eastbound left turn lane storage length on 6th Concession Rd.
- New westbound left turn lane on 6th Concession.
- New traffic islands

Provincial Rd./Legacy Park Dr.

- New southbound left turn lane onto Legacy Park Dr. from Provincial Rd.
- New traffic islands

Provincial Rd./Walker Rd.

- New landscaped median
- This intersection will be designed based on the preferred design included in the Walker Rd. Improvements EA (1995)

4.1.1 b DIVISION RD. – BETWEEN CABANA RD. EAST & MARENTETTE AVE.

Posted Speed	60 km/hr
Number of Vehicle Lanes	1
Vehicle Lane Width	6.0 m (20 ft)
Bicycle Lane Width	1.5 m (5 ft)

Cross Section

Figure 5.0b shows a typical section of Division Road from Cabana Rd. East to the junction with Provincial Rd. The proposed cross section includes:

- 1 northbound lane;
- Curb and gutter; and
- Dedicated on-street bike lane.

Alignment

The alignment differs from the existing road at the Division/Provincial junction. Vehicles will be able to merge safely with the addition of an acceleration/right turn lane.

Drainage/SWM

Existing drainage is by way of roadside ditches. The widening of the corridor will require the removal of the ditches and the installation of underground storm sewers with roadside catchbasins. Details of these facilities will be determined during detail design.

4.1.1 c CABANA RD. – DRTP RAIL TO BARRACUDA AVE.

Posted Speed	60 km/hr
Number of Vehicle Lanes	4
Vehicle Lane Width	3.65 m (12 ft)
Bicycle Lane Width	1.5 m (5 ft)
Sidewalk Width	1.2 m - 1.5 m (4 ft - 5 ft)

Cross-Section

Figure 5.0c shows the typical 4-lane cross-section on Cabana Rd. East. The proposed cross-section includes the following:

- 4 lanes;
- Curb and gutter;
- Sidewalks on north and south sides; and
- Dedicated on-street bike lanes.

Since Cabana Rd. East is designated as a truck route in the City of Windsor Official Plan, it is recommended that the vehicle lane width be 3.65 metres.

Alignment

The Cabana Rd. centreline, east of Provincial Rd. will be shifted approximately 3.7m. This shift will eliminate property acquisition on the north side of the road and minimize property acquisition costs.

Drainage/SWM

Existing drainage is by way of roadside ditches. The widening of the corridor will require the removal of the ditches and the installation of underground storm sewers with roadside catchbasins. Details of these facilities will be determined during detail design.

4.1.1 d 6th CONCESSION ROAD – DRTP RAIL TO CABANA RD. EAST

Posted Speed	60 km/hr
Number of Vehicle Lanes	2
Vehicle Lane Width	3.65 m (12 ft)
Bicycle Lane Width	1.5 m (5 ft)
Sidewalk Width	1.2 m - 1.5 m (4 ft - 5 ft)

Cross Section

Figure 5.0d shows a typical cross section of 6th Concession Rd. from DRTP rail to Cabana Rd. East. The proposed cross section includes:

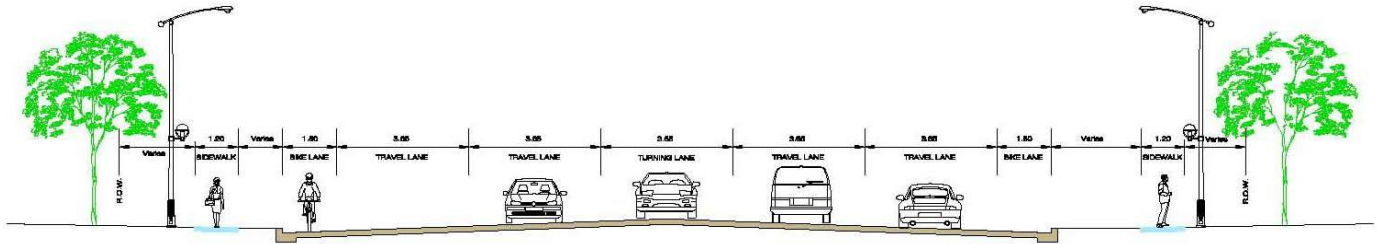
- 2 lanes;
- Curb and gutter with storm sewers;
- Sidewalks on north and south sides; and
- Dedicated on-street bike lanes.

Alignment

The centreline of 6th Concession Rd. will be shifted south by approximately 0.5m.

Drainage/SWM

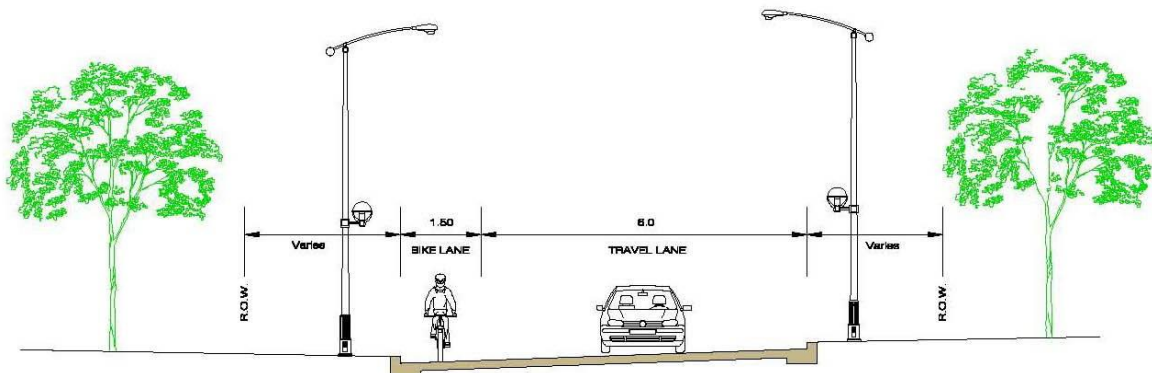
Existing drainage is by way of roadside ditches. The widening of the corridor will require the removal of the ditches and the installation of underground storm sewers with roadside catchbasins. Details of these facilities will be determined during detail design.



TYPICAL 5 LANE CROSS SECTION

PROVINCIAL / DIVISION ROAD - SYDNEY AVENUE to WALKER ROAD

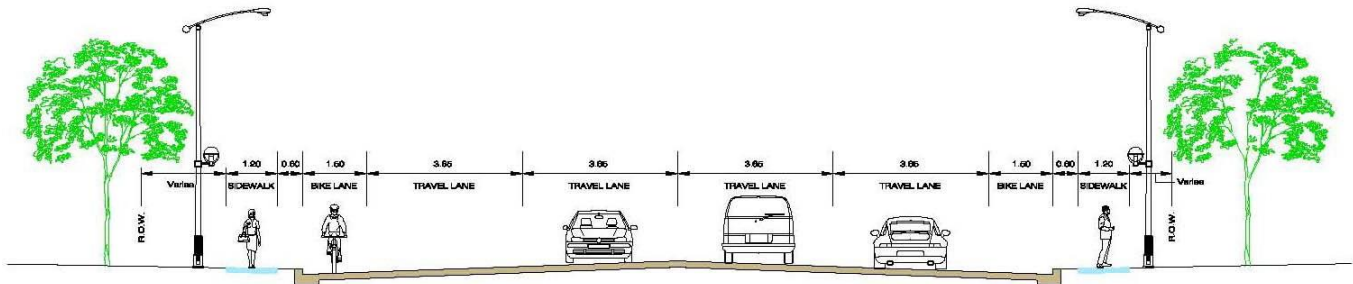
FIGURE 5.0a
Not To Scale



TYPICAL 1 LANE CROSS SECTION

DIVISION ROAD - CABANA ROAD EAST to MARENTETTE AVENUE

FIGURE 5.0b
Not To Scale

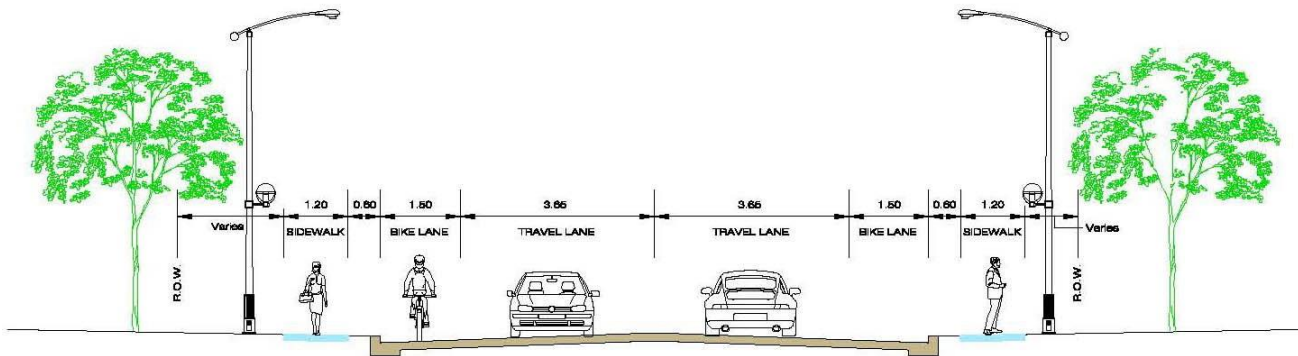


TYPICAL 4 LANE CROSS SECTION

CABANA ROAD EAST - DRTP RAIL to BARRACUDA AVENUE

FIGURE 5.0c

Not to Scale



TYPICAL 2 LANE CROSS SECTION

6th CONCESSION ROAD - DRTP RAIL to CABANA ROAD EAST

FIGURE 5.0d

Not to Scale

4.1.2 SIDEWALKS

In keeping with a smooth, well defined alignment and where space permits, it is recommended that sidewalks, be spaced farther away from the roadway.

4.1.3 BIKE LANES

The inclusion of on-street bike lanes and signed bike routes throughout the corridor support the City of Windsor Bicycle Use Master Plan (BUMP). It is recommended that strategies for improving cycling awareness and safety be incorporated into the final design.

4.1.4 DETOUR REQUIRMENTS

A detour plan will be determined during the detailed design of this project.

4.1.5 UTILITIES

Storm Sewers

The existing roadside drains will be replaced by an enclosed storm sewer system and roadside catchbasins. The final storm sewer design will be determined as part of the detailed design of this project. A drainage functional analysis study within the corridor will also be required prior to the detailed design.

Sanitary Sewers

The existing sanitary system within the study area will be evaluated prior to design to determine the extent of the improvements. A servicing study focusing on the areas without sanitary sewers within the corridor will be required prior to the detailed design and construction of the project.

Watermain

The exact details of the watermain design will be determined as part of the detailed design of this project.

Bell Canada

Based on the anticipated improvements to the Provincial/Division Rd corridor, conflicts with the existing underground concrete duct structure are not anticipated and therefore not reflected in the cost estimate. Bell Canada has indicated that the existing direct buried cables should be relocated to a location beyond the pavement limits. The exact location of the buried cables will depend on property acquisition and location of other utilities. In addition to the cables, Bell Canada has several pedestals that will need to be relocated throughout the corridor.

Union Gas

Union Gas has indicated that the existing 250mm line is under the proposed road improvements. The existing 250mm line is considered in good condition, however, any future maintenance on the line would require a portion of the concrete road to be removed and replaced. Therefore, an option would be to replace the existing 250mm line

with a new 200mm steel pipeline on the west side of Provincial Road, starting from Walker Rd. to just south of the Provincial/Cabana Rd. intersection. The line would have to be relocated to a location beyond the pavement limits. This would require an easement in sections where sufficient room does not exist. If this option were chosen, Union Gas would require property acquisition and easements finalized for the entire length of the project so that the new gas line could be constructed in a single phase. The total cost of the replacement is included in Phase 1 of the cost estimate.

Enwin Powerlines

No information received from Enwin Powerlines. Enwin Powerlines to be contacted prior to detailed design.

Cogeco Cable

No information received from Cogeco Cable. Cogeco Cable to be contacted prior to detailed design.

Maxess

No information received from Maxess. Maxess to be contacted prior to detailed design.

4.1.6 PAVEMENT DESIGN

Since the Provincial/Division Rd. corridor is designated as a truck route in the City of Windsor Official Plan, it is recommended that a concrete pavement section be used. Pavement section details will be determined at the final design stage.

4.2 PROPERTY REQUIREMENTS

Generally, most of the property required for right-of-way improvements occur at the intersections and along the south side of Cabana Rd., between Provincial Rd. and 6th Concession Rd. In addition, a two metre wide easement, where needed, will be required to accommodate utility relocations.

The property requirements and two metre wide easement are shown in Figure 6.0.

Part of the property requirements in the study area may be gratuitously conveyed to the City through the Site Plan Control process. Otherwise, a negotiated sale will be required.

As the proposed improvements are implemented, the City of Windsor will initiate negotiations to purchase the necessary properties based on an independent property appraisal.

4.3 PRELIMINARY CONSTRUCTION PHASING & COST ESTIMATES

Preliminary cost estimates have been prepared for the preferred design based on typical unit prices being tendered for similar work. The estimates presented in Table 3.0 include the cost of utility relocations, and construction. The costs do not include unanticipated

utility lowering, on-site soils investigations, landscaping, hydro relocation, cable relocation, costs of financing, legal costs, property acquisition costs, and GST.

**Table 3.0
 Preliminary Cost Estimates**

PHASE	LOCATION	ESTIMATED COST*
Phase 1	Provincial Rd./Cabana Rd. Intersection	\$2,692,000.00
Phase 2	Provincial Rd./6th Concession Rd. Intersection	\$1,863,000.00
Phase 3	Division Rd./Sydney Ave. Intersection	\$2,283,000.00
Phase 4	Division Rd. - From south limit of Phase 3 to south of Marentette Ave.	\$2,344,000.00
Phase 5	Provincial Rd. - From south end of Phase 4 to north end of Phase 1	\$2,737,000.00
Phase 6	Provincial Rd. - From south limit of Phase 2 to south of Legacy Park Dr.	\$2,908,000.00
Phase 7	Provincial Rd. - From south limit of Phase 6 to Walker Rd.	\$1,622,000.00
Phase 8	Remainder of Division Rd./6th Concession Rd./Cabana Rd.	\$2,531,000.00
	Contingency (10%)	\$1,898,000.00
	Engineering (15%)	\$2,847,000.00
	TOTAL	\$23,725,000.00

* Property acquisition, landscaping, lighting, sewer studies, sewers and taxes are not included in the estimated cost.

Storm drainage and sanitary sewer were not included in this study and will be subject to separate studies.

4.4 POTENTIAL ENVIRONMENTAL CONDITIONS & MITIGATING MEASURES

4.4.1 LAND USE

The proposed undertaking provides an improvement to existing and future land uses adjacent to the Provincial/Division Rd. corridor.

4.4.2 NATURAL ENVIRONMENT

Natural Heritage Features

The proposed undertaking will have no anticipated impact on the only remaining Natural Heritage Site (NHS #22) within the study corridor. This site is situated between 1150 Provincial Rd. and 1425 Division Rd. It should be noted that NHS #22 was recommended for deletion by the Adopted Subwatershed Study (CR 1366/98).

Tree Removal & Vegetation Protection

A tree inventory was conducted in September 2006 to determine the number of affected trees resulting from the proposed improvements. The tree species, diameter at breast height (DBH) were recorded in a table, which is included in Appendix J.

Although the aboveground portion of a tree may not be directly impacted, it may have its roots significantly impacted. The root zone of a tree may in some instances extend beyond the horizontal distance of the tree's canopy. Several precautions should be taken during the detailed design to help preserve existing trees and maintain their function, including;

- Preparing a Tree Protection Plan. This plan will provide guidelines for protecting trees during construction, as well as avoiding soil compaction by establishing a root preservation zone that is off-limits to the contractor. A detailed assessment of the health and structure of the trees by a consulting arborist will also be included, in order to assign a condition rating and appraisal, in the event that the contractor is assessed the monetary value of trees damaged by construction operations under the contract. The plan should further recommend insect and disease control, and measures for aerating, watering and mulching.
- Including in the Construction Contract documents all detailed measures recommended by the Tree Protection Plan.
- Reminding the successful bidder at the pre-construction meeting, to ensure that his employees have an understanding of all the required tree protection measures.
- Requiring the contractor to employ a registered professional Arborist or Forester to conduct tree canopy and root pruning and additional measures specified in the above mentioned Plan.
- Implementing design modifications to help reduce tree impacts including;
 - o Adjusting the sidewalk location to accommodate large trees where feasible.
 - o Adjusting utility locations where feasible.
 - o Tunneling of utilities where other means are not feasible and only within an acceptable limit of approach in relation to the size and species of the tree(s) concerned.
 - o Investigating a sidewalk construction design that will minimize changes in grade at and around trees.
- Preparing a Replanting Plan to be implemented after construction.

In addition, any Ash trees that are removed must be disposed-of in accordance with the Canadian Food Inspection Agency Quarantine order.

4.4.3 SOCIAL/CULTURAL ENVIRONMENT

Residential

In terms of the existing residential community the proposed undertaking will improve the overall community access to the corridor.

Recreational

The improvements to the corridor will have a positive impact on the access to recreational areas such as Devonwood Conservation Area.

Built Heritage Features

There are no Built Heritage Features within or abutting the study area.

Urban Design

The inclusion of strong Urban Design principles into the Provincial EA corridor will allow us to enhance many long awaited needs. Urban Design principles will have beneficial impacts on Provincial Rd, the surrounding community, and the City. Building on Provincial Roads "Civic Way" image, as defined in the Official Plan; will allow for integration of an attractive corridor which will enhance the image of Windsor as an attractive livable City and give travelers a sense of welcome. It will create a sense of continuity in the area with attractive streetscaping amenities. Convenient and safe streetscaping amenities will establish a pedestrian-friendly environment, improve lighting and include bicycle access throughout the area. The resident's quality of life will be enhanced and will create a greater sense of community pride in the surrounding neighborhoods.

Noise

As part of the Class EA study, a noise analysis was carried out. Where an existing roadway is proposed to be modified adjacent to a noise sensitive area, the Ministry of the Environment (MOE) requires that the future noise level with the proposed improvements be compared to the future noise level without the proposed improvements. The provision of noise mitigation is to be investigated should the future noise level with the proposed improvements result in a greater than 5 dBA increase over the future noise level without improvements.

The projected noise level increases are less than 5 dBA; therefore the consideration of noise mitigation is not required based on MOE criteria. The noise analysis is included in Appendix I.

Air Quality

While an air quality analysis was not carried out for this study, air emissions are predicted to decrease within the study area as the number vehicle lanes and fuel-efficient cars increases. Allowing continuous traffic flow with minimal vehicle idling.

4.4.4 ECONOMIC ENVIRONMENT

Commercial/Industrial Environment

In terms of the commercial and industrial facilities within the study area, the proposed undertaking:

- Will improve access to abutting businesses
- Broadens the spectrum of potential consumers and employees as a result of sidewalks and bike lanes.
- Improves flow of consumers and goods along this corridor
- Improves traffic operations for commuters, consumers, and visitors to the City of Windsor.

4.4.5 TRANSPORTATION AND SAFETY

The benefits of the proposed improvements to Provincial/Division Rd. are:

- Increased capacity in the corridor to accommodate existing and future traffic demands.
- Increased vehicular safety through the introduction of the continuous two-way left turn lane.
- Improvements to all the intersections within the study area.
- Improvements to area roadway network flexibility to serve existing and future land use.
- Alleviating traffic on neighboring residential streets.
- Pedestrian safety and accessibility via sidewalks throughout the corridor.
- Improvements to cycling network through new multi-use trails and bike lanes.

4.5 MONITORING & MAINTENANCE

During construction, the City will ensure that the environmental protection recommendation in the ESR and other subsequent agency approval conditions are complied with. A full inspection of every part of the undertaking will be carried out one year after the completion of each phase. Additional monitoring may be required.