

**Terry Fox Drive CEAA
Screening
Part A Second Line Road
to March Road
Final Report
*February 2010***

Submitted to
Infrastructure Canada

*Canadian Environmental
Assessment Registry
Reference Number: 09-01-49604*

Submitted by
City of Ottawa

Prepared by
Dillon Consulting Limited
Dillon Project No. 09-1518

TABLE OF CONTENTS

1.0 Introduction	1
1.1 General	1
<i>1.1.1 Project Location</i>	<i>1</i>
1.2 Need for Road Widening/Extension	2
1.3 Project Background	4
<i>1.3.1 Completed Municipal Class EA (2000)</i>	<i>5</i>
<i>1.3.2 Addendum and Details (2007)</i>	<i>5</i>
<i>1.3.3 Current Study – 2007 – Present.....</i>	<i>5</i>
<i>1.3.4 Temporary Connection Roadway Class EA</i>	<i>6</i>
1.4 CEAA Triggers	6
1.5 Notification of Other Jurisdictions	7
1.6 Legislation Considered.....	7
2.0 Project Description.....	9
2.1 Part A Project Sections.....	9
2.2 Construction Activities.....	14
<i>2.2.1 Site Preparation.....</i>	<i>15</i>
<i>2.2.1.1 Vegetation and Topsoil Removal.....</i>	<i>15</i>
<i>2.2.1.2 Earth Grading and Rock Excavation and Blasting.....</i>	<i>15</i>
<i>2.2.2 Roadway Construction.....</i>	<i>16</i>
<i>2.2.3 Construction of New Pedestrian Pathway/Sidewalks.....</i>	<i>17</i>
<i>2.2.4 Installation of Traffic Control Signals, Road Signs and Street lighting.....</i>	<i>17</i>
<i>2.2.5 Temporary Construction Laydown Areas.....</i>	<i>17</i>
<i>2.2.6 Disposal of Waste Materials.....</i>	<i>18</i>
<i>2.2.6.1 Waste from Clearing Activities.....</i>	<i>18</i>
<i>2.2.6.2 Excavated Materials</i>	<i>18</i>
<i>2.2.6.3 Solid Non-Hazardous Construction Waste</i>	<i>18</i>
<i>2.2.6.4 Dewatering Activities.....</i>	<i>19</i>
<i>2.2.7 Site Restoration.....</i>	<i>19</i>
<i>2.2.8 Use and Storage of Construction Vehicles and Equipment.....</i>	<i>19</i>
<i>2.2.9 Transportation and Storage of Construction Materials</i>	<i>20</i>
2.3 Operational Activities	20
<i>2.3.1 Minor Repairs.....</i>	<i>20</i>
<i>2.3.2 Sediment, Debris and Snow Removal</i>	<i>20</i>
<i>2.3.3 General Cleaning and Maintenance Activities.....</i>	<i>21</i>
<i>2.3.4 Modifications</i>	<i>21</i>
2.4 Project Schedule	21
3.0 Scope of Project	23
4.0 Scope of the Assessment	24
4.1 Environmental Assessment Method.....	25

4.2	Valued Environmental Components	26
4.3	Project Interactions.....	28
4.4	Evaluating Significance	30
4.5	Boundaries for Environmental Effects Assessment.....	30
4.5.1	<i>Spatial Boundaries</i>	30
4.5.2	<i>Temporal Boundaries</i>	31
5.0	Description of Existing Environment	32
5.1	Environmental Setting.....	32
5.2	Socioeconomic Setting.....	32
5.3	Planning Context.....	32
5.3.1	<i>City of Ottawa Official Plan</i>	33
5.4	Existing Natural Environment.....	35
5.4.1	<i>Surface Water Quality and Quantity</i>	35
5.4.1.1	Vernal Pools and Spring.....	36
5.4.2	<i>Groundwater Quality and Quantity</i>	36
5.4.3	<i>Bedrock Geology, Surficial Geology and Soils</i>	37
5.4.3.1	Bedrock and Surficial Geology	37
5.4.3.2	Soils.....	37
5.4.4	<i>Air Quality, Atmospheric Conditions, Noise</i>	38
5.4.4.1	Local Climate	38
5.4.4.2	Air Quality	38
5.4.4.3	Noise	39
5.4.5	<i>Vegetation Cover Type and Ecological Land Classification</i>	39
5.4.5.1	Vegetation Cover Type	39
5.4.5.2	Ecological Land Classification and Vegetation	40
5.4.6	<i>Wetlands</i>	43
5.4.7	<i>Wildlife</i>	44
5.4.7.1	Mammals.....	45
5.4.7.2	Herpetofaunal Habitat	46
5.4.7.3	Fish and Aquatic Habitat.....	46
5.4.8	<i>Migratory Birds</i>	47
5.4.9	<i>Species of Special Concern</i>	48
5.4.9.1	Overview of Species at-risk in the Terry Fox Drive Study Area ...	48
5.4.9.2	Butternut Trees.....	51
5.4.9.3	Blanding's Turtle	52
5.4.9.4	Other Potential Endangered SAR within the Study Area	54
5.4.9.5	Other Potential Threatened SAR within the Study Area	56
5.4.9.6	Other Potential Special Concern SAR within the Study Area	61
5.4.9.7	Other Potential Species of Conservation Concern within the Study Area	63
5.4.10	<i>Land Uses</i>	68
5.4.10.1	Existing Land Use	68
5.4.10.2	Areas of Natural and Scientific Interest and Environmentally Significant Areas (ANSI).....	69

5.4.10.3 Future Land Use.....	71
5.4.11 <i>Land and Resource Use by Aboriginal People</i>	73
5.4.12 <i>Physical and Cultural Heritage, Structures/Sites or Things of Historical, Archaeological, Paleontological or Architectural Significance</i>	73
6.0 Potential Environmental Impacts and Mitigation Measures	74
6.1 Surface Water Quality and Quantity	76
6.2 Groundwater Quality and Quantity	79
6.3 Surface Geology and Soils	80
6.4 Air Quality	81
6.5 Noise	83
6.6 Vegetation	85
6.7 Wetlands.....	88
6.8 Wildlife	89
6.9 Migratory Birds.....	90
6.10 Species of Special Concern.....	92
6.10.1 <i>Butternut Mitigation and Monitoring</i>	96
6.10.2 <i>Blanding's Turtle Mitigation and Monitoring</i>	98
6.10.3 <i>Other Potential SAR Species</i>	100
6.10.4 <i>Species of Special Concern Summary</i>	101
6.11 Land Use (Including ANSI)	103
6.12 Land and Resource Use by Aboriginal People	104
6.13 Physical and Cultural Heritage, Structures/Sites or Things of Historical, Archaeological, Paleontological or Architectural Significance	105
6.14 Additional Mitigation and Management Commitments.....	128
7.0 Accidents and Malfunctions, and Effects of the Environment on the Project.....	107
7.1 Accidents and Malfunctions.....	107
7.1.1 <i>Equipment/machinery leaks or spills or explosions</i>	107
7.2 Effects of the Environment on the Project	108
8.0 Cumulative Effects	110
8.1 Potential Cumulative Projects	110
8.1.1 <i>Morgans Grant Subdivision Development</i>	111
8.1.2 <i>Second Line Road Extension</i>	111
8.1.3 <i>TFD Part B</i>	111
8.1.4 <i>Goulbourn Forced Road Realignment</i>	111
8.1.5 <i>Future Subdivision Developments</i>	111
8.2 Potential Cumulative Effects with Other Projects and Activities	112
8.2.1 <i>Air Quality</i>	112
8.2.2 <i>Water Quality</i>	113
8.2.3 <i>Noise</i>	113
8.2.4 <i>Migratory Birds</i>	113
8.2.5 <i>Wildlife</i>	114
8.2.6 <i>At-risk Species</i>	114

8.2.7 <i>Cumulative Effects Summary</i>	115
9.0 Public and Agency Consultation	117
9.1 Agency and Public Stakeholder Contact.....	117
9.2 Commitment to Stakeholder Consultation	122
9.3 Aboriginal Consultation	123
10.0 Monitoring and Follow-Up Programs	126
10.1 Environmental Compliance Monitoring	126
10.2 Follow-up Programs	127
11.0 Screening Conclusion	128
12.0 Sign-Off	131
13.0 References	132

LIST OF TABLES

Table 1 – Authorizations, Permits and Approvals	8
Table 2 - Components	13
Table 3 – Project Components	23
Table 4 – TFD Part A VEC Scoping and Pathway Analysis	27
Table 5 – Potential Project to Environmental Interaction Matrix	29
Table 6 – Soils in the Project Study Area	37
Table 7 – Description of Ecological Land Classification Communities	42
Table 8 – Federal Species at-risk, Potentially Within the Study Area	50
Table 9 – Potential Project Interactions with Surface Water	77
Table 10 – Potential Project Interactions with Ground Water	79
Table 11 – Potential Project Interactions with Surface Geology and Soils	81
Table 12 – Potential Project Interactions with Air Quality	83
Table 13 – Potential Project Interactions with Noise	84
Table 14 – Potential Project Interactions with Vegetation	87
Table 15 – Potential Project Interactions with Wetlands	88
Table 16 – Potential Project Interactions with Wildlife	90
Table 17 – Potential Project Interactions with Migratory Birds	92
Table 18 – Temporary Tree Protection Zones for Retainable Butternuts within the Road Grading Limit	98
Table 19 – Potential Project Interactions with Species of Special Concern	102
Table 20 – Potential Project Interactions with Land Use	104
Table 21 – Potential Project Interactions with Historical, Archaeological, Paleontological and Architectural Resources	106
Table 22 – Expected Future Projects/Activities	110
Table 23 – Potential Cumulative Interactions of Other Projects with Past A TFD	112

Table 24 – Cumulative Effects Assessment.....	116
Table 25 – Meetings with the Major Land Owners and Agencies	120

LIST OF FIGURES

Figure 1: Project Location Plan	3
Figure 2: Study Area.....	10
Figure 3: Typical Road Cross Sections.....	11
Figure 4: Natural Features Inventory	41
Figure 5: Provincial Heritage Features	70
Figure 6: Alignment and Adjacent Proposed Development	72

LIST OF APPENDICES

Appendix A – Botanical Survey Results
Appendix B – Wildlife Survey Results
Appendix C – Bird Survey Results
Appendix D – Butternut Assessment Report
Appendix E – Aboriginal Consultation Data