

LOT CONCESSION 13 ROAD

Site Number 010080

CONCESSION 13 ROAD, TOWNSEND

1.9 km E of County Road 5

Ontario Structure Inspection Manual - Inspection Form

Site Number:

Inventory Data:			
Structure Name <input type="text" value="Lot Concession 13 Road"/>			
Main Hwy/Road # <input type="text" value="CON 13 TOWNSEND"/>	<input checked="" type="checkbox"/> On <input type="checkbox"/> Under	Crossing Type: <input type="checkbox"/> Rail <input type="checkbox"/> Ped.	<input type="checkbox"/> Road <input type="checkbox"/> Other
		<input type="checkbox"/> Navig. Water <input checked="" type="checkbox"/> Non-Navig. Water	
Hwy/Road Name <input type="text" value="CONCESSION 13, TOWNSEND"/>			
Structure Location <input type="text" value="1.9km E of County Road 5"/>			
Latitude <input n"="" type="text" value="42d 53' 11.6"/>	Longitude <input type="text" value="80d 12' 22.2" w"=""/>		
Owner(s) <input type="text" value="Norfolk County"/>	Heritage Designation: <input checked="" type="checkbox"/> Not Cons. <input type="checkbox"/> Cons./not App.	<input type="checkbox"/> List/not Design. <input type="checkbox"/> Design./not List	<input type="checkbox"/> Desig. & List
MTO Region <input type="text" value="30 Southwestern"/>	Road Class: <input type="checkbox"/> Freeway <input type="checkbox"/> Arterial <input type="checkbox"/> Collector <input checked="" type="checkbox"/> Local		
MTO District <input type="text" value="31 London / Stratford"/>	Posted Speed <input type="text" value="80"/>	No. of Lanes <input type="text" value="2"/>	
Old County <input type="text" value="20 Norfolk"/>	AADT <input type="text" value="495"/>	% Trucks <input type="text"/>	
Geographic Twp. <input type="text" value="125 Townsend"/>	Inspection Route Sequence <input type="text"/>		
Structure Type <input type="text" value="12 Rectangular Culvert"/>	Interchange Number <input type="text"/>		
Total Deck Length <input type="text" value="4.6"/> (m)	Interchange Structure Number <input type="text"/>		
Overall Str. Width <input type="text" value="12.2"/> (m)	Min. Vertical Clearance <input type="text" value="1.7"/> (m)		
Total Deck Area <input type="text" value="56.12"/> (m ²)	Special Route <input type="checkbox"/> Truck <input type="checkbox"/> Emergency <input checked="" type="checkbox"/> School <input type="checkbox"/> Bicycle		
Roadway Width <input type="text" value="7"/> (m)	Detour Length Around Bridge <input type="text" value="8"/> (km)		
Skew Angle <input type="text"/> (Degrees)	Direction of Structure <input type="text" value="East / West"/>		
No. of Spans <input type="text" value="1"/>	Fill on Structure <input type="text" value="0"/> (m)		
Span Length <input type="text" value="4.2"/> (m)			

Historical Data:			
Year Built <input type="text" value="1960"/>	Year of Last Major Rehab. <input type="text"/>		
Last OSIM Inspection <input type="text" value="June 9, 2014"/>	Last Evaluation <input type="text"/>		
Last Enhanced OSIM Inspection <input type="text"/>	Current Load Limit <input type="text" value="/ /"/> (tonnes)		
Enhanced Access Equipment (ladder, boat, lift, etc.) <input type="text"/>	Load Limit By-Law # <input type="text"/>		
Last Underwater Inspection <input type="text"/>	By-Law Expiry Date <input type="text"/>		
Last Condition Survey <input type="text"/>			
Rehab History: (Date/description)			

Ontario Structure Inspection Manual - Inspection Form

Site Number:

Field Inspection Information:	
Date of Inspection:	July 6, 2016
Type of Inspection:	<input checked="" type="checkbox"/> OSIM <input type="checkbox"/> Enhanced OSIM
Inspector:	Ben Buchwald M.Eng., EIT, G. Douglas Vallee Ltd.
Others in Party:	N/A
Access Equipment Used:	Hammer, Binoculars, Measuring Tape, Camera, etc.
Weather:	Sunny
Temperature:	28 °C

Additional Investigation Required:	Priority		
	None	Normal	Urgent
Material Condition Survey			
<input checked="" type="checkbox"/> Detailed Deck Condition Survey:		X	
<input checked="" type="checkbox"/> Non-destructive Delamination Survey of Asphalt-Covered Deck:	X		
<input checked="" type="checkbox"/> Concrete Substructure Condition Survey:	X		
<input checked="" type="checkbox"/> Detailed Coating Condition Survey:	X		
<input checked="" type="checkbox"/> Detailed Timber Investigation	X		
<input checked="" type="checkbox"/> Post-Tensioned Strand Investigation	X		
Underwater Investigation:	X		
Fatigue Investigation:	X		
Seismic Investigation:	X		
Structure Evaluation:		X	
Monitoring			
<input checked="" type="checkbox"/> Monitoring of Deformations, Settlements and Movements:	X		
<input checked="" type="checkbox"/> Monitoring Crack Widths:	X		
Investigation Notes:			

Overall Structure Notes:	
Recommended Work on Structure:	<input checked="" type="checkbox"/> None <input type="checkbox"/> Minor Rehab. <input type="checkbox"/> Replace <input type="checkbox"/> Maintenance <input type="checkbox"/> Major Rehab.
Timing of Recommended Work:	<input type="checkbox"/> 1 to 5 years <input type="checkbox"/> 6 to 10 years
Overall Comments:	Structure replaced in 2015.
Date of next Inspection:	July 1, 2018

Suspected Performance Deficiencies

- | | | |
|---|--|------------------------------|
| 01 Load carrying capacity | 07 Bearing not uniformly loaded/unstable | 12 Slippery surfaces |
| 02 Excessive deformations (deflections & rotations) | 08 Jammed expansion joint | 13 Flooding/channel blockage |
| 03 Continuing settlement | 09 Pedestrian/vehicular hazard | 14 Undermining of foundation |
| 04 Continuing movements | 10 Rough riding surface | 15 Unstable embankments |
| 05 Seized bearings | 11 Deck drainage | 16 Other |

Maintenance Needs

- | | | |
|--------------------------------------|---------------------------------|--|
| 01 Lift and swing bridge maintenance | 07 Repair to structural steel | 13 Erosion control at bridges |
| 02 Bridge cleaning | 08 Repair of bridge concrete | 14 Concrete sealing |
| 03 Bridge handrail maintenance | 09 Repair of bridge timber | 15 Rout and seal |
| 04 Painting steel bridge structures | 10 Bailey bridges - maintenance | 16 Bridge deck drainage |
| 05 Bridge deck joint repair | 11 Animal/pest control | 17 Scaling (Loose concrete or ACR steel) |
| 06 Bridge bearing maintenance | 12 Bridge surface repair | 18 Other |

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Rehabilitation Required:		Element	Priority				Estimated Construction Cost
Rehab	Replace		Urgent	Within 1 yr	1-5 yrs	6-10 yrs	
		Wearing Surface (Approaches)					
		Barrels					
		Inlet Components					
		Outlet Components					
		Streams and Waterways					
		Railing System					
		Foundation (below ground level)					
Total Cost							\$0

Associated Work:	Comments	Estimated Construction Cost
Additional Investigations		
Traffic Management		
Utilities		
Road Allowance		
Environmental Assessment		
Engineering		
Other		
Contingencies		
Total Cost		\$0

Justification:	
Notes:	Construction Cost: \$0 Associated Work Cost: \$0 <hr/> TOTAL Estimated Cost: \$0

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Element Data

Element Group:		1600 Approaches				Length:		
Element Name:		1601 Wearing Surface (Approaches)				Width:		
Location:		Top of Fill				Height:		
Material:		2 Asphalt				Count:		1
Element Type:						Total Quantity:		1 All
Environment:		Severe				Limited Inspection:		
Protection System:		Unknown				Perform. Deficiencies		
Condition Data:	Units	Exc.	Good	Fair	Poor			
	All	1	0	0	0			
Comments:								
Recommended Work:						Maintenance Needs:		
Rehab <input type="checkbox"/> Replace <input type="checkbox"/>						<input type="checkbox"/> Urgent <input type="checkbox"/> 1 year <input type="checkbox"/> 2 year		
Timing: Urgent <input type="checkbox"/> < 1yr <input type="checkbox"/> 1 - 5 yr <input type="checkbox"/> 6 - 10 yr <input type="checkbox"/>								

Element Group:		1200 Culverts				Length:		12.2
Element Name:		1203 Barrels				Width:		3.8
Location:		Interior				Height:		2.4
Material:		12 Precast Concrete				Count:		1
Element Type:						Total Quantity:		104.9 sq.m
Environment:		Severe				Limited Inspection:		
Protection System:		Unknown				Perform. Deficiencies		
Condition Data:	Units	Exc.	Good	Fair	Poor			
	sq.m	104.9	0	0	0			
Comments:								
Light leakage and sign of chlorides at bolts on soffit.								
Recommended Work:						Maintenance Needs:		
Rehab <input type="checkbox"/> Replace <input type="checkbox"/>						<input type="checkbox"/> Urgent <input type="checkbox"/> 1 year <input type="checkbox"/> 2 year		
Timing: Urgent <input type="checkbox"/> < 1yr <input type="checkbox"/> 1 - 5 yr <input type="checkbox"/> 6 - 10 yr <input type="checkbox"/>								

Element Group:		1200 Culverts				Length:		4.2
Element Name:		1201 Inlet Components				Width:		0.3
Location:		North End				Height:		2.4
Material:		12 Precast Concrete				Count:		1
Element Type:						Total Quantity:		4 sq.m
Environment:		Severe				Limited Inspection:		
Protection System:		Unknown				Perform. Deficiencies		
Condition Data:	Units	Exc.	Good	Fair	Poor			
	sq.m	0	4	0	0			
Comments:								
Light impact damage on top of North culvert.								
Recommended Work:						Maintenance Needs:		
Rehab <input type="checkbox"/> Replace <input type="checkbox"/>						Repair of Bridge Concrete		
Timing: Urgent <input type="checkbox"/> < 1yr <input type="checkbox"/> 1 - 5 yr <input type="checkbox"/> 6 - 10 yr <input type="checkbox"/>						<input type="checkbox"/> Urgent <input type="checkbox"/> 1 year <input checked="" type="checkbox"/> 2 year		

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Element Data

Element Group:		1200 Culverts				Length:	4.2
Element Name:		1202 Outlet Components				Width:	0.3
Location:		South End				Height:	2.4
Material:		12 Precast Concrete				Count:	1
Element Type:						Total Quantity:	4 sq.m
Environment:		Severe				Limited Inspection:	
Protection System:		Unknown				Perform. Deficiencies	
Condition Data:	Units sq.m	Exc. 4	Good 0	Fair 0	Poor 0		
Comments:							
Recommended Work: Rehab <input type="checkbox"/> Replace <input type="checkbox"/>					Maintenance Needs:		
Timing: Urgent <input type="checkbox"/> < 1yr <input type="checkbox"/> 1 - 5 yr <input type="checkbox"/> 6 - 10 yr <input type="checkbox"/>					<input type="checkbox"/> Urgent <input type="checkbox"/> 1 year <input type="checkbox"/> 2 year		

Element Group:		1400 Embankments & Streams				Length:	
Element Name:		1401 Streams and Waterways				Width:	
Location:		East and West				Height:	
Material:						Count:	1
Element Type:						Total Quantity:	1 All
Environment:		Moderate				Limited Inspection:	
Protection System:		Unknown				Perform. Deficiencies	
Condition Data:	Units All	Exc. 1	Good 0	Fair 0	Poor 0		
Comments:							
Recommended Work: Rehab <input type="checkbox"/> Replace <input type="checkbox"/>					Maintenance Needs:		
Timing: Urgent <input type="checkbox"/> < 1yr <input type="checkbox"/> 1 - 5 yr <input type="checkbox"/> 6 - 10 yr <input type="checkbox"/>					<input type="checkbox"/> Urgent <input type="checkbox"/> 1 year <input type="checkbox"/> 2 year		

Element Group:		400 Barriers				Length:	
Element Name:		402 Railing System				Width:	
Location:		North and South				Height:	
Material:						Count:	2
Element Type:		Wood Post and 3 Cables				Total Quantity:	2 Each
Environment:		Severe				Limited Inspection:	
Protection System:		Unknown				Perform. Deficiencies	
Condition Data:	Units Each	Exc. 2	Good 0	Fair 0	Poor 0		
Comments:							
Recommended Work: Rehab <input type="checkbox"/> Replace <input type="checkbox"/>					Maintenance Needs:		
Timing: Urgent <input type="checkbox"/> < 1yr <input type="checkbox"/> 1 - 5 yr <input type="checkbox"/> 6 - 10 yr <input type="checkbox"/>					<input type="checkbox"/> Urgent <input type="checkbox"/> 1 year <input type="checkbox"/> 2 year		

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Element Data

Element Group:	1300 Foundations					Length:	
Element Name:	1301 Foundation (below ground level)					Width:	
Location:	Below Ground Level					Height:	
Material:	12 Precast Concrete					Count:	1
Element Type:						Total Quantity:	1 Each
Environment:						Limited Inspection:	
Protection System:	Unknown					Perform. Deficiencies	
Condition Data:	Units Each	Exc. 1	Good 0	Fair 0	Poor 0		
Comments:							
Recommended Work:						Maintenance Needs:	
Rehab <input type="checkbox"/> Replace <input type="checkbox"/> Timing: Urgent <input type="checkbox"/> < 1yr <input type="checkbox"/> 1 - 5 yr <input type="checkbox"/> 6 - 10 yr <input type="checkbox"/>						<input type="checkbox"/> Urgent <input type="checkbox"/> 1 year <input type="checkbox"/> 2 year	



Figure 1 East Approach



Figure 2 West Approach



Figure 3 North Profile, Inlet



Figure 4 South Profile, Outlet



Figure 5 Upstream



Figure 6 Downstream



Figure 7 Barrel



Figure 8 Typical Asphalt Spillway



Figure 9 Light Impact Damage on North Fascia



Figure 10 Light Leakage with Chlorides at Bolts in Soffit