

LOT 8 CONCESSION A-B OVERFLOW

Site Number 002113

CONCESSION A ROAD, SOUTH WALSINGHAM

2.8km W on County Highway 59

Ontario Structure Inspection Manual - Inspection Form

Site Number:

Inventory Data:			
Structure Name <input type="text" value="Lot 9 Concession A-B Overflow"/>			
Main Hwy/Road # <input type="text" value="CON A S WALS"/>	<input checked="" type="checkbox"/> On <input type="checkbox"/> Under	Crossing Type: <input type="checkbox"/> Rail <input type="checkbox"/> Road <input type="checkbox"/> Navig. Water <input type="checkbox"/> Ped. <input type="checkbox"/> Other <input checked="" type="checkbox"/> Non-Navig. Water	
Hwy/Road Name <input type="text" value="CONCESSION A ROAD, SOUTH WALSINGHAM"/>			
Structure Location <input type="text" value="2.8km W on County Highway 59"/>			
Latitude <input type="text" value="N/A"/>	Longitude <input type="text" value="N/A"/>		
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"/> <input type="text" value="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"/> <input type="text" value="London / Stratford"/>	Posted Speed <input type="text" value="80"/>	No. of Lanes <input type="text" value="1"/>	
Old County <input type="text" value="20"/> <input type="text" value="Norfolk"/>	AADT <input type="text" value="0"/>	% Trucks <input type="text"/>	
Geographic Twp. <input type="text" value="585"/> <input type="text" value="South Walsingham"/>	Inspection Route Sequence <input type="text"/>		
Structure Type <input type="text" value="10"/> <input type="text" value="Arch Culvert"/>	Interchange Number <input type="text"/>		
Total Deck Length <input type="text" value="5.2"/> (m)	Interchange Structure Number <input type="text"/>		
Overall Str. Width <input type="text" value="4.8"/> (m)	Min. Vertical Clearance <input type="text" value="2"/> (m)		
Total Deck Area <input type="text" value="24.96"/> (m ²)	Special Route <input type="checkbox"/> Truck <input type="checkbox"/> Emergency <input type="checkbox"/> School <input type="checkbox"/> Bicycle		
Roadway Width <input type="text" value="4.5"/> (m)	Detour Length Around Bridge <input type="text" value="10"/> (km)		
Skew Angle <input type="text"/> (Degrees)	Direction of Structure <input type="text" value="North / South"/>		
No. of Spans <input type="text" value="1"/>	Fill on Structure <input type="text" value="0.3"/> (m)		
Span Length <input type="text" value="4.6"/> (m)			

Historical Data:			
Year Built <input type="text" value="1919"/>	Year of Last Major Rehab. <input type="text"/>		
Last OSIM Inspection <input type="text" value="June 10, 2014"/>	Last Evaluation <input type="text"/>		
Last Enhanced OSIM Inspection <input type="text"/>	Current Load Limit <input type="text" value="3"/> / / (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)			

Field Inspection Information:		
Date of Inspection:	July 5, 2016	Type of Inspection: <input checked="" type="checkbox"/> OSIM <input type="checkbox"/> Enhanced OSIM
Inspector:	Matt Alderson, G. Douglas Vallee Ltd.	
Others in Party:	Andrew Vallee	
Access Equipment Used:	Hammer, Binoculars, Measuring Tape, Camera, etc.	
Weather:	Sunny	
Temperature:	25 °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: Culvert is on closed road.			

Overall Structure Notes:	
Recommended Work on Structure:	<input type="checkbox"/> None <input type="checkbox"/> Minor Rehab. <input checked="" type="checkbox"/> Replace <input type="checkbox"/> Maintenance <input type="checkbox"/> Major Rehab.
Timing of Recommended Work:	<input checked="" type="checkbox"/> 1 to 5 years <input type="checkbox"/> 6 to 10 years
Overall Comments:	Culvert is in-que for replacement along with adjacent structures.
Date of next Inspection:	July 5, 2018

Suspected Performance Deficiencies

- | | | |
|---|--|---|
| <ul style="list-style-type: none"> 01 Load carrying capacity 02 Excessive deformations (deflections & rotations) 03 Continuing settlement 04 Continuing movements 05 Seized bearings | <ul style="list-style-type: none"> 07 Bearing not uniformly loaded/unstable 08 Jammed expansion joint 09 Pedestrian/vehicular hazard 10 Rough riding surface 11 Deck drainage | <ul style="list-style-type: none"> 12 Slippery surfaces 13 Flooding/channel blockage 14 Undermining of foundation 15 Unstable embankments 16 Other |
|---|--|---|

Maintenance Needs

- | | | |
|---|--|---|
| <ul style="list-style-type: none"> 01 Lift and swing bridge maintenance 02 Bridge cleaning 03 Bridge handrail maintenance 04 Painting steel bridge structures 05 Bridge deck joint repair 06 Bridge bearing maintenance | <ul style="list-style-type: none"> 07 Repair to structural steel 08 Repair of bridge concrete 09 Repair of bridge timber 10 Bailey bridges - maintenance 11 Animal/pest control 12 Bridge surface repair | <ul style="list-style-type: none"> 13 Erosion control at bridges 14 Concrete sealing 15 Rout and seal 16 Bridge deck drainage 17 Scaling (Loose concrete or ACR steel) 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	
X		Wingwalls			X		
		Wearing Surface (Approaches)					
	X	Barrels			X		
X		Inlet Components			X		
X		Outlet Components			X		
		Foundation (below ground level)					
X		Barrier System on Walls			X		
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
	TOTAL Estimated Cost:	\$0

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Element Data

Element Group:		900 Abutments				Length:	7.9
Element Name:		903 Wingwalls				Width:	0.25
Location:		Each End				Height:	2.6
Material:		4 Cast-in-place Concrete				Count:	2
Element Type:		Reinforced Concrete				Total Quantity:	10.3 sq.m
Environment:		Moderate				Limited Inspection:	
Protection System:		Unknown				Perform. Deficiencies	
Condition	Units	Exc.	Good	Fair	Poor	Load carrying capacity	
Data:	sq.m	0	0	10.3	0		
Comments: 0.4m above road.							
Recommended Work: Rehab <input checked="" type="checkbox"/> Replace <input type="checkbox"/>				Maintenance Needs: Repair of Bridge Concrete			
Timing: Urgent <input type="checkbox"/> < 1yr <input type="checkbox"/> 1 - 5 yr <input checked="" type="checkbox"/> 6 - 10 yr <input type="checkbox"/>				<input type="checkbox"/> Urgent <input type="checkbox"/> 1 year <input checked="" type="checkbox"/> 2 year			

Element Group:		1600 Approaches				Length:	
Element Name:		1601 Wearing Surface (Approaches)				Width:	
Location:						Height:	
Material:		6 Gravel				Count:	1
Element Type:						Total Quantity:	1 Each
Environment:						Limited Inspection:	
Protection System:		Unknown				Perform. Deficiencies	
Condition	Units	Exc.	Good	Fair	Poor	Load carrying capacity	
Data:	Each	0	0	0	1		
Comments: One (1) lane only. 4.3m road width. Overgrown due to road closing.							
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:		1200 Culverts				Length:	4.8
Element Name:		1203 Barrels				Width:	4.3
Location:						Height:	2
Material:		4 Cast-in-place Concrete				Count:	1
Element Type:		Arch				Total Quantity:	41.3 sq.m
Environment:		Moderate				Limited Inspection:	
Protection System:		Unknown				Perform. Deficiencies	
Condition	Units	Exc.	Good	Fair	Poor	Load carrying capacity	
Data:	sq.m	0	0	20.6	20.6		
Comments: Large cracking at midspan. Poor concrete at end. Recommend replacement. Exposed rebar on soffit.							
Recommended Work: Rehab <input type="checkbox"/> Replace <input checked="" type="checkbox"/>				Maintenance Needs: Repair of Bridge Concrete			
Timing: Urgent <input type="checkbox"/> < 1yr <input type="checkbox"/> 1 - 5 yr <input checked="" type="checkbox"/> 6 - 10 yr <input type="checkbox"/>				<input type="checkbox"/> Urgent <input checked="" type="checkbox"/> 1 year <input type="checkbox"/> 2 year			

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Element Data

Element Group:		1200 Culverts				Length:	4.3
Element Name:		1201 Inlet Components				Width:	
Location:						Height:	2
Material:		4 Cast-in-place Concrete				Count:	1
Element Type:						Total Quantity:	8.6 sq.m
Environment:		Moderate				Limited Inspection:	
Protection System:		Unknown				Perform. Deficiencies	
Condition	Units	Exc.	Good	Fair	Poor	Load carrying capacity	
Data:	sq.m	0	0	4.3	4.3		
Comments: Concrete is aged and in poor condition. Spalling and delamination.							
Recommended Work:				Rehab <input checked="" type="checkbox"/> Replace <input type="checkbox"/>		Maintenance Needs: Repair of Bridge Concrete	
Timing:				Urgent <input type="checkbox"/> < 1yr <input type="checkbox"/> 1 - 5 yr <input checked="" type="checkbox"/> 6 - 10 yr <input type="checkbox"/>		<input type="checkbox"/> Urgent <input type="checkbox"/> 1 year <input checked="" type="checkbox"/> 2 year	

Element Group:		1200 Culverts				Length:	4.3
Element Name:		1202 Outlet Components				Width:	
Location:						Height:	2
Material:		4 Cast-in-place Concrete				Count:	1
Element Type:						Total Quantity:	8.6 sq.m
Environment:		Moderate				Limited Inspection:	
Protection System:		Unknown				Perform. Deficiencies	
Condition	Units	Exc.	Good	Fair	Poor	Load carrying capacity	
Data:	sq.m	0	0	4.3	4.3		
Comments: Concrete is aged and in poor condition. Spalling and delamination.							
Recommended Work:				Rehab <input checked="" type="checkbox"/> Replace <input type="checkbox"/>		Maintenance Needs: Repair of Bridge Concrete	
Timing:				Urgent <input type="checkbox"/> < 1yr <input type="checkbox"/> 1 - 5 yr <input checked="" type="checkbox"/> 6 - 10 yr <input type="checkbox"/>		<input type="checkbox"/> Urgent <input type="checkbox"/> 1 year <input checked="" type="checkbox"/> 2 year	

Element Group:		1300 Foundations				Length:	
Element Name:		1301 Foundation (below ground level)				Width:	
Location:						Height:	
Material:						Count:	
Element Type:						Total Quantity:	
Environment:						Limited Inspection:	X
Protection System:		Unknown				Perform. Deficiencies	
Condition	Units	Exc.	Good	Fair	Poor		
Data:							
Comments: Limited inspection. Not visible.							
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:	1100 Retaining Walls					Length:	7.9
Element Name:	1102 Barrier System on Walls					Width:	0.25
Location:	N & S					Height:	0.4
Material:	4 Cast-in-place Concrete					Count:	2
Element Type:	Parapet Wall without Railing					Total Quantity:	1.6 sq.m
Environment:	Severe					Limited Inspection:	
Protection System:	Unknown					Perform. Deficiencies	
Condition Data:	Units sq.m	Exc. 0	Good 0	Fair 0.8	Poor 0.8	Pedestrian/vehicular hazard.	
Comments: No guide rail on approaches.							
Recommended Work: Rehab <input checked="" type="checkbox"/> Replace <input type="checkbox"/>				Maintenance Needs: Repair of Bridge Concrete			
Timing: Urgent <input type="checkbox"/> < 1yr <input type="checkbox"/> 1 - 5 yr <input checked="" 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



Figure 4 South Profile



Figure 5 Upstream



Figure 6 Downstream



Figure 7 Deterioration of Fascia



Figure 8 Deterioration of Wingwall



Figure 9 Transverse Crack Along Soffit