



September 17, 2021

The Honourable Doug Ford
Premier of Ontario
Legislative Building, Queen's Park
Toronto, ON M7A 1A1

sent via email: premier@ontario.ca

Re: Structure Inventory and Inspections

Dear Premier:

At the last regular General Purpose and Administration Committee meeting held September 13, 2021 the above captioned matter was discussed.

I wish to advise that the following resolution was passed which will be going forward for ratification at the September 27, 2021 Township of Scugog Council meeting:

THAT Report PWIS-2021-027, 2021 Structure Inventory and Inspections, be received;

THAT the Township of Scugog 2021 Ontario Structure Inspection Manual Inventory and Inspection Summary Report, prepared by Planmac Engineering Inc., be received;

THAT as part of the annual budget process, the Township continue to increase the amount of funding available for bridges and culverts through the continuation of Roads and Other Infrastructure Levy;

THAT as part of the annual budget process, the Township continue to increase the investment in bridge and culvert maintenance and repair through other means including identifying efficiencies and cost savings and applying for grants through other levels of government for major bridge and culvert replacements;

THAT the Township follow the principles of Asset Management and prioritize preventative maintenance such as waterproofing decks, repaving decks, repair concrete soffits, parapet walls, abutments and wingwalls, etc.

THAT the Province of Ontario and the Government of Canada be encouraged to provide more funding to rural municipalities to support infrastructure projects related to major bridge and culvert replacements; and

THAT a copy of the staff report and resolution be forwarded to the Premier of Ontario, Provincial Minister of Finance, Federal Finance Minister, MP Erin O'Toole, MPP Lindsey Park, AMO, Durham Region and all Ontario municipalities."

Should you require anything further in this regard, please do not hesitate to contact Kevin Arsenault, Capital Projects Technologist at 905-985-7346 ext. 138.

Yours truly,



Becky Jamieson
Director of Corporate Services/Municipal Clerk
Encl.

cc:

Kevin Arsenault, Capital Projects Technologist	karsenault@scugog.ca
Honourable Chrystia Freeland, Federal Minister of Finance	chrystia.freeland@fin.gc.ca
Honourable Peter Bethenfalvy, Ontario Minister of Finance	Minister.fin@ontario.ca
Lindsey Park, MPP, Durham	Lindsey.park@pc.ola.org
Erin O'Toole, MP	Erin.OToole@parl.gc.ca
Ralph Walton, Regional Clerk, The Regional Municipality of Durham	clerks@durham.ca
Association of Municipalities of Ontario (AMO)	amo@amo.on.ca
All Ontario Municipalities	



Township of Scugog Staff Report

To request an alternative accessible format, please contact the Clerks Department at 905-985-7346.

Report Number: PWIS-2021-027

Prepared by: Kevin Arsenault, Capital Projects Technologist

Department: Public Works and Infrastructure Services

Report To: General Purpose and Administration Committee

Date: September 13, 2021

Reference: Strategic Plan Direction 1: Roads and Municipal Infrastructure
Strategic Plan Direction 2: Financial Sustainability
Capital Account No. 2139 Municipal Structure Inventory and Inspection

Report Title: **2021 Structure Inventory and Inspections**

Recommendations:

1. **That** Report PWIS-2021-027, 2021 Structure Inventory and Inspections, be received;
2. **That** the Township of Scugog 2021 Ontario Structure Inspection Manual Inventory and Inspection Summary Report, prepared by Planmac Engineering Inc., be received;
3. **That** as part of the annual budget process, the Township continue to increase the amount of funding available for bridges and culverts through the continuation of Roads and Other Infrastructure Levy;
4. **That** as part of the annual budget process, the Township continue to increase the investment in bridge and culvert maintenance and repair through other means including identifying efficiencies and cost savings and applying for grants through other levels of government for major bridge and culvert replacements; and

5. **That** the Township follow the principles of Asset Management and prioritize preventative maintenance such as waterproofing decks, repaving decks, repair concrete soffits, parapet walls, abutments and wingwalls, etc
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1. Background:

The 2021 Capital Budget included undertaking a Municipal Inventory and Inspection for all Township bridges and culverts with a diameter of 3 metres or more. Planmac Engineering Inc. (Planmac) was retained to complete this project and the results are provided in the 2021 Municipal Structure Inventory and Inspection Summary Report (see Attachment #1).

2. Discussion:

The replacement and rehabilitation of municipal bridges and culverts is a critical component of the Township's infrastructure maintenance program. The bridges and culverts to be replaced and/or reconstructed each year are prioritized based primarily on the Municipal Structure Inspection and Inventory. As well, the study forms an important part of the Township's Asset Management Plan which is a legislated requirement by Province of Ontario.

The update to the Municipal Structure Inspection and Inventory is legislated by the Ontario Ministry of Transportation and is required every two years to ensure the safety of the public. The last report was completed in 2019.

The project included detailed visual inspections of 24 roadway structures (16 bridges and 8 culverts) by Planmac staff in April 2021. The inspections were completed in accordance with the Ontario Structure Inspection Manual (OSIM). The report prepared by Planmac provides a recommended maintenance and capital program for the structures.

The Planmac report recommended further structural investigations of two of the bridges: Bridge No. 11 on Edgerton Road and Bridge No. 12 on Jobb Road. The Township then retained a structural engineer to undertake a load capacity evaluation for both of these bridges. The evaluation of the Edgerton Road bridge recommended load restrictions for the bridge, as a result Council passed a by-law for load restrictions in August 2021. The evaluation of the Jobb Road bridge unexpectedly recommended a closure of the bridge due to further deterioration of the bridge. In the interest of public safety, the bridge had to be closed immediately.

Table 1 below provides a summary of the bridges with the age of the bridge, condition rating as provided by Planmac and the status. And Table 2 provides a summary of the culverts.

Table 1: Bridge Condition Summary

Bridge No.	Name/ Location	Age (years)	Condition Rating	Status
1	Malion Bridge - Scugog Line 12, 1.1 km west of Marsh Hill Road	57	66.2	Open
2	Blue Mountain Road, 1.1 km west of Marsh Hill Road	56	72.2	Open
3	Swanick Bridge - Scugog Line 14, 100 m west of March Hill Road	55	78.5	Open
4	Brock Concession 1, 500 m west of Old Simcoe Road	71	89.4	Open Shared with Brock Township
6	Seagrave Bridge – River Street, 950 m north of Simcoe Street	101	94.3	Major rehabilitation in 2019 Open with weight restrictions Single lane
7	Clements Bridge – Scugog Line 12, 1.5 km west of Simcoe Street	41	79.2	Open
8	Fisher Bridge – Old Simcoe Road, 150 m south of Scugog Line 10	42	72.8	Open
9	Scugog Line 8 – 1.7 km east of Hwy. 7/12	81	25.1	Closed to vehicles since 2012 Opened to pedestrians in 2018
10	Edgerton Road, 350 m east of Regional Road #57	66	71.6	Open
11	Edgerton Road, 200 m west of Cartwright East Quarter Line	96	59.6	Open with weight restrictions added in August 2021 Single lane
12	Jobb Road, 900 m east of Regional Road #57	71	39.2	Closed to vehicles in July 2021

Bridge No.	Name/ Location	Age (years)	Condition Rating	Status
				Open to pedestrians
13	Malcolm Road, 1.6 km east of Nestleton Road	42	80.6	Open
14	Cedardale Road, 300 m south of Regional Road #57	19	92.1	Open
16	Concession Road 6, 200 m east of Regional Road #57	71	38.8	Closed and no longer needed
17	McKee Road, 350 m east of Regional Road #57	51	89.3	Open
18	King Street, 1.65 km west of Simcoe Street	53	81.2	Open

Table 2: Culvert Condition Summary

Culvert No.	Name/ Location	Age (years)	Condition Rating	Status
201	Scugog Line 2, 600 m west of Old Simcoe Road	61	70.8	Open
202	Marsh Hill Road, 700 m south of Regional Road 21	41	87.1	Open
203	Marsh Hill Road, 1.15 km south of Scugog Line 6	51	84.1	Open
204	Scugog Line 6, 1.5 km west of Hwy. 7/12	51	68.5	Open
205	Old Simcoe Road, 650 m south of Scugog Line 8	61	81.4	Open
206	Old Simcoe Road, 600 m north of Durward Road	61	39.8	Open but requires replacement
207	Old Simcoe Road, 1.05 km north of Durward Road	61	51.7	Open but requires replacement
301	Scugog Line 14, 400 m west of Hwy. 7/12	51	87.4	Open

Of the 24 structures inspected, 21 structures were identified as requiring some form of repair, rehabilitation and/or replacement. The urgency of rehabilitation varies based on the condition of individual bridge/culvert elements, and therefore priority should be given to the

rehabilitation of structures that exhibit advanced states of deterioration or have sustained serious structural damage. Work that is deemed urgent (i.e., time of need is “now”) has been recommended for completion in 2022. The total estimated cost for this work is \$7,242,000.

Of the 16 bridges under the Township’s jurisdiction:

- Three bridges are closed:
 - Bridge No. 9 on Scugog Line 8 (1.7 km east of Highway 7/12) has been closed to vehicle traffic since 2012 due to structure deficiencies. Work was completed in 2018 to make the bridge safe for pedestrians and cyclists,
 - Bridge No. 12 on Jobb Road was closed in July 2021 to vehicle traffic due to structure deficiencies and is open for pedestrian traffic, and
 - Bridge No. 16 is located on a closed road allowance east of Beacock Road (200 m east of Regional Road 57) and is no longer needed.
- Two bridges have load restrictions:
 - Bridge No. 6 on River Street in Seagrave, and
 - Bridge No. 11 on Edgerton Road (200 m west of Cartwright East Quarter Line) in Cadmus.

In addition, the Township has eight culverts greater than 3 m in diameter. Of these, two are recommended for replacement as soon as possible at an estimated cost of \$1,050,000 each.

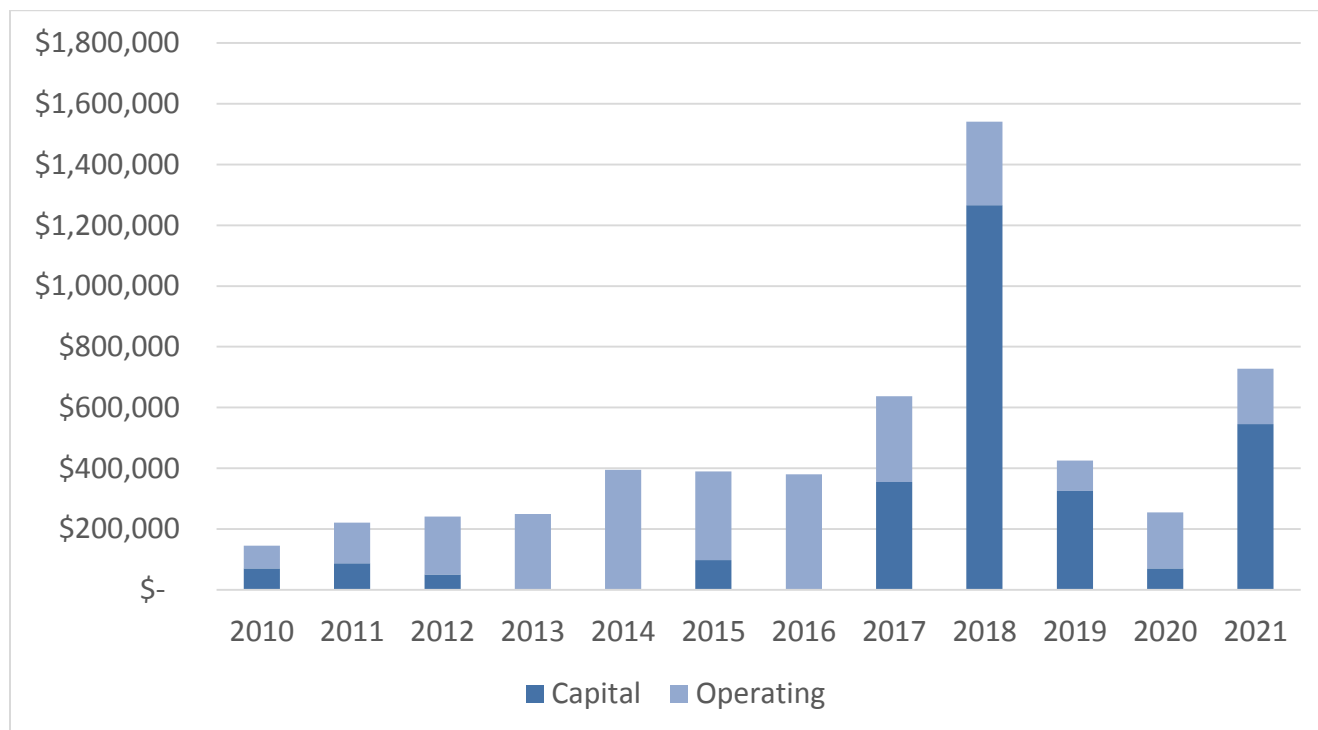
3. Financial Implications:

The current bridge and culvert conditions are a result of the extensive road network within the Township of Scugog which includes 16 bridges and 8 culverts greater than 3 m in diameter and the fact maintenance and reconstruction/ replacement has been underfunded for many years. Over the past 5 years, there has been an increase in capital bridge and culvert work including:

- Installation of Bridge Impact Systems in 2017
- Replacement of Culvert 0681 on Coates Road (project shared with City of Oshawa) in 2018
- Rehabilitation of Bridge No 6 in Seagrave in 2018/ 2019
- Culvert Relinings and Replacement in 2020
- Replacement of culvert on Townline Road (project shared with the Town of Whitby) in 2020

Figure 1 below shows the amount budgeted for the last 12 years for bridge and culvert maintenance and replacement. The substantial increase in 2018 is a result of a Provincial grant for \$945,585 for the rehabilitation of the Seagrave Bridge.

Figure 1: Scugog Bridge and Culvert Operating and Capital Budgets



Bridge and culvert maintenance, rehabilitation and replacement are funded through the Townships Roads and Infrastructure Reserve and funding received from the Province under the Ontario Community Infrastructure Fund (currently \$375,700 in 2021).

Current funding levels are not sufficient to complete the recommended works. Without sufficient funding additional bridges and culverts will have load restrictions and will eventually be closed.

4. Communication Considerations:

N/A

5. Conclusion:

The Township of Scugog has close to \$500 million in assets to manage, the majority of which are roads related and bridges. Our aging infrastructure is a concern and Council has taken steps to start addressing needed investments in the infrastructure we own. A recent study identified a significant deficit for road and infrastructure repair and replacement, including bridges. The age of our infrastructure, a large geographical area of the Township as compared to a relatively small population and other priorities within a limited tax base means that we cannot address all of our needs at once.

Council and staff have been working to phase in increased investment in our assets through identifying efficiencies and cost savings, implementation of dedicated levies and grants from other levels of government. Through these initiatives, investments into our roads and bridges have grown to an average of \$4.97 million per year over the past 5 years as compared to an average of \$1.75 million for the previous 5-year period (an increase of almost 300%).

While this is a significant achievement, it is still not enough to address the needs of all our assets. As a result, we need to make informed decisions based on the data available and be strategic in our spending, both in the type of maintenance undertaken and the timing of the investment to ensure we make best use of the limited funding available. We will continue to follow the Asset Management Plan to reach these goals by continuing with efficiencies, dedicated levies, strategic investments in our assets, and seeking opportunities for grants.

To improve the condition of bridges and culverts throughout the Township to an acceptable level it is recommended that capital spending on these structures be increased to an average of \$1 million per year. This should be accomplished through:

- Continuation of the Roads and Infrastructure Levy each year;
- Continuation of increasing the investment in bridge and culvert maintenance and reconstruction through other means including identifying efficiencies and costs savings, grant applications with other levels of government, etc., and
- Following the principles of Asset Management and prioritizing preventative maintenance such as waterproofing decks, repaving decks, repair concrete soffits, parapet walls, abutments and wingwalls, etc.

Respectfully Submitted by:

Reviewed By:

Kevin Arsenault
Capital Project Technologist

Carol Coleman, P.Eng.
Director of Public Works, Parks and Recreation

Attachments:

ATT 1: 2021 Ontario Structure Inspection Manual Inventory and Inspection Summary Report