

<b>To:</b>	Warden Hicks and Members of Grey County Council
<b>Committee Date:</b>	February 14, 2019
<b>Subject / Report No:</b>	TR-CW-01-19
<b>Title:</b>	Seasonal Load Restriction Assessment
<b>Prepared by:</b>	Matt Marck, Engineering Manager
<b>Reviewed by:</b>	Pat Hoy, Director of Transportation Services
<b>Lower Tier(s) Affected:</b>	Member Municipalities
<b>Status:</b>	

## Recommendation

1. That Report TR-CW-01-19 regarding a Seasonal Load Restriction Assessment be received; and
2. That the seasonal load restrictions remain as previously established, with the exception of the removal of Grey Road 5 (8<sup>th</sup> Street East) between 9<sup>th</sup> Avenue East and Highway 26 in the City of Owen Sound; and
3. That Schedule “S” of By-Law 4788-13 be amended to reflect the current and proposed changes to Seasonal Load Restrictions.

## Executive Summary

The Transportation Services Department receives multiple requests every year to remove the (spring) Seasonal Load Restrictions (SLR) on many roads. To establish rationale, Transportation Services procured the services of a Consultant to examine strength characteristics of selected Grey Roads that are subject to Seasonal Load Restrictions. This additional data was intended to help Transportation Services make informed, fact based decisions with regards to Seasonal Load Restrictions.

Based on examination of the data, Transportation Services recommends that seasonal load restrictions remain in place on the existing seasonal load restricted roads, with the exception of a section of Grey Road 5 (8<sup>th</sup> Street East, Owen Sound).

## Background and Discussion

Seasonal Load Restrictions are a standard practice for many jurisdictions to prevent roadways from being subject to damage from fully loaded trucks, when they are at their weakest, due to spring thaw conditions. In the spring, as roads begin to thaw, the road base becomes saturated

and it loses some of its structural integrity, reducing the strength and bearing capacity of the road. Traditionally, this is annually from early March to May. Exceptions to the Seasonal Load Restrictions are legislated under the Highway Traffic Act and include snow plows, emergency vehicles, public utility vehicles and milk trucks.

Seasonal Load Restrictions set the maximum weight a commercial truck can carry during such periods at 5000 kilograms (5 tonnes) per axle. Roads which are designated as such must be signed and a by-law put in place.

Data generated from various testing completed on traditional load restricted roads was extracted from a Consulting Engineer Report and examined to support the recommendations contained in this report.

The Consultant was instructed to perform non-destructive testing, which included Ground Penetrating Radar (GPR) and Falling Weight Deflectometer (FWD). The intent was to determine the pavement thickness and various structural characteristics of the road. This information was used to make informed decisions with regards to spring load restrictions.

The data was examined and the majority of spring load restrictions are recommended to remain in place due to various factors, including asphalt structure and weak or poorly draining subgrade.

Roads in Ontario lose 35 percent or more of their strength during spring thaw. A heavy asphalt structure can act as a “bridge” on roads to reduce impacts on the subsurface structure. Provincial highways are typically built on that principle; however, a pavement structure of 150 to 200 millimeters (6 to 8 inches) is not economically viable at the County or municipality level.

The only section of road that was determined to be removed from the spring load restriction was Grey Road 5 (8<sup>th</sup> Street East, Owen Sound) between 9<sup>th</sup> Avenue East and Highway 26. This is predominately due to a thick pavement structure of 150 millimeters (6 inches) on average and strong subgrade.

Some other sections of Grey Roads that have the spring load restriction demonstrated fairly healthy asphalt and base structure, but not enough to outweigh the risk of damage due to full loading in the spring. The benefit to trucks does not outweigh the possible damage and lower life expectancy of an expensive road asset.

## Legal and Legislated Requirements

As per Section 122 of the Highway Traffic Act, *the municipality or other authority having jurisdiction over a highway may by by-law designate the date on which a reduced load period shall start or end and the highway or portion thereof under its jurisdiction to which the designation applies.*

An updated version of Schedule “S” of By-Law 4788-13 is included in this report to reflect current seasonal load restricted roads and the revision to remove the section of Grey Road 5 (8<sup>th</sup> Street East, Owen Sound) between 9<sup>th</sup> Avenue East and Highway 26.

## Financial and Resource Implications

None.

## Relevant Consultation

- Internal
- External  
City of Owen Sound

## Appendices and Attachments

[Grey County Road Assessment Study](#)

[County of Grey By-Law 4788-13 Regulate Traffic and Parking](#)

Proposed Schedule S

Proposed Reduced Load Restriction Map

# Schedule "S"

By-Law 4788-13  
Section 5.4 (c)

## Limited Loads on Grey Roads

Column 1	Column 2	Column 3	Column 4
Grey Road Number	From	To	Period
2	Grey County/Dufferin County Boundary	Grey Road 4	March and April
3	Grey County/Wellington County Boundary	Grey Road 9, Ayton	March and April
5	Grey Road 18	7 <sup>th</sup> Street SW	March and April
5 (2 <sup>nd</sup> Avenue East)	7 <sup>th</sup> Street SW	6 <sup>th</sup> Street East	March and April
5 (6 <sup>th</sup> Street East, Owen Sound)	2 <sup>nd</sup> Avenue East	9 <sup>th</sup> Avenue East (Kings Highway No. 6 and 10)	March and April
<del>5 (8<sup>th</sup> Street East, Owen Sound)</del>	<del>9<sup>th</sup> Avenue East (King's Highway No. 6 and 10)</del>	<del>28<sup>th</sup> Avenue East</del>	<del>March and April</del>
<del>5 (28<sup>th</sup> Avenue East, Owen Sound)</del>	<del>8<sup>th</sup> Street East</del>	<del>16<sup>th</sup> Street East (Kings Highway No. 26)</del>	<del>March and April</del>
8	Hwy. 89	Grey Road 9	March and April
9	Grey County/Dufferin County Boundary	Grey Road 124	March and April
15 (3 <sup>rd</sup> Avenue East, Owen Sound)	6 <sup>th</sup> Street East	20 <sup>th</sup> Street East	March and April
15 (East Bay Shore Road)	3 <sup>rd</sup> Avenue East	36 <sup>th</sup> Street East	March and April
15	36 <sup>th</sup> Street East	Kings Highway No. 26	March and April
16	Grey-Bruce Line	Kings Highway No. 6&10	March and April
17	Kings Highway 6, Springmount	Kings Highway 6, Wiarton	March and April
17A	Grey Road 17	Grey Road 1	March and April
17B	Grey Road 17	10 <sup>th</sup> Street West (Kings Highway No. 6 and 21)	March and April
Grey Road 18	Grey Road 11	Grey Road 29	March and April
Grey Road 23	Grey Road 9	Grey Road 4	March and April

Column 1	Column 2	Column 3	Column 4
<b>Grey Road Number</b>	<b>From</b>	<b>To</b>	<b>Period</b>
Grey Road 25	Grey Road 3	Kings Highway No. 6	March and April
Grey Road 30	Grey Road 12	Grey Road 13	March and April
Grey Road 31	Grey Road 2	140 m North of Simcoe Road 91	March and April
Grey Road 32	Kings Highway 10	Grey Road 30	March and April
119	Grey Road 13	Grey Road 19	March and April
170	Kings Highway No. 6	Grey Road 17	March and April

