

January 23, 2024

HALIFAX

Gravel Road Paving Program – Halifax Regional Municipality Roads

Report to Halifax Regional Council

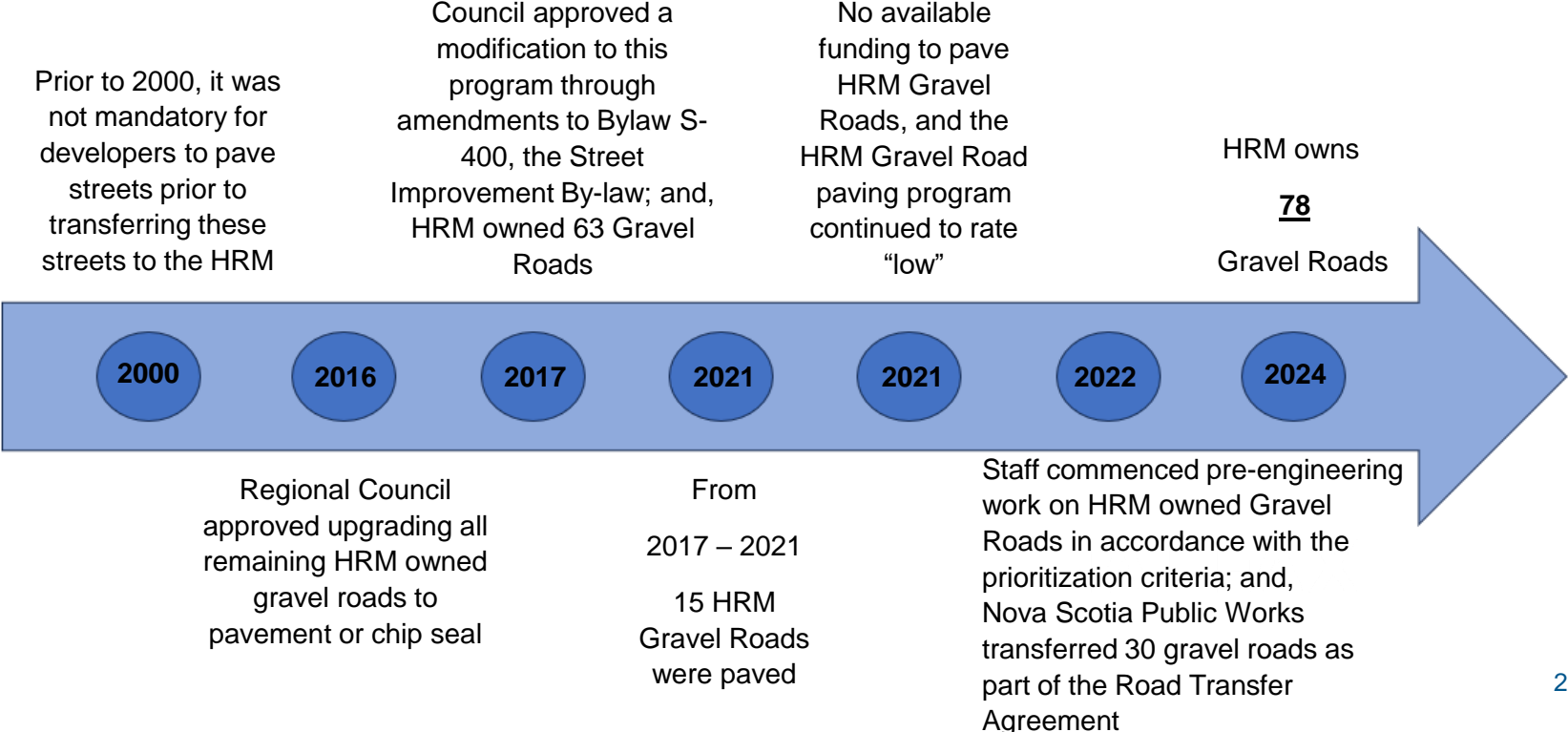
Origin

July 12, 2022, Halifax Regional Council passed the following motion (item 18.1):

THAT Halifax Regional Council direct the Chief Administrative Officer to:

1. Provide a staff report evaluating a potential Gravel Road Paving Program for HRM-owned roads that considers an annual funding allocation and the following prioritization criteria:
 - a. Cost-benefit of paving
 - b. Existing Road Condition and Level of Maintenance
 - c. Road Classification
 - d. Traffic Volume
 - e. Storm Water Management
 - f. Winter Maintenance
 - g. Surrounding public amenities such as parks, schools, lake access, etc.

Background



Pre-Engineering Work

Goal: Evaluate a potential gravel road paving program, that considers annual funding allocation in accordance with the prioritization criteria

Step 1: Reviewed the 7 prioritization criteria recommended by Regional Council

Prioritization Criteria:

- a. Cost-benefit of paving
- b. Existing Road Condition and Level of Maintenance
- c. Road Classification
- d. Traffic Volume
- e. Storm Water Management
- f. Winter Maintenance
- g. Surrounding public amenities such as parks, schools, lake access, etc.;
- h. Accessibility; and,
- i. Connectivity within the transportation network.

Pre-Engineering Work

Prioritization Criteria	Description
a) Cost Benefit	<ul style="list-style-type: none"> ✓ <i>Estimated costs associated with overall maintenance required over a 20-year life cycle for gravel roads.</i> ✓ <i>Cost to pave a gravel road and conduct ongoing maintenance of the paved road</i>
b) Existing Road Condition and Level of Maintenance	<ul style="list-style-type: none"> ✓ <i>Road grades, approximate dimensions, geometry, condition of gravel shoulders, sight lines, driveway tie-ins, historical data to identify icing and/or ponding issues</i> ✓ <i>Engagement with IMO Division</i> ✓ <i>Geotechnical data</i>
c) Road classification	<ul style="list-style-type: none"> ✓ <i>Access to properties directly fronting the street, low residential density, rural areas</i>
d) Traffic volume	<ul style="list-style-type: none"> ✓ <i>Data collection</i> ✓ <i>Engagement with Traffic Management Division</i>

Pre-Engineering Work

Prioritization Criteria (cont'd)	Description
e) Storm water management	<ul style="list-style-type: none"> ✓ <i>Condition of gravel shoulders and existing storm water infrastructure, potential stormwater issues, historical data to identify icing and/or ponding issues</i> ✓ <i>Engagement with IMO Division</i>
f) Winter Maintenance and Level of Maintenance	<ul style="list-style-type: none"> ✓ <i>Quantity of work orders and service requests, spring and fall grading information, and washout records, estimated costs for maintenance tasks, snow removal priority service level</i> ✓ <i>Engagement with IMO Division</i>
g) Surrounding public amenities	<ul style="list-style-type: none"> ✓ <i>Parks, schools, lake access, etc.</i>
h) Accessibility	<ul style="list-style-type: none"> ✓ <i>Nearby active transportation infrastructure and transit stops</i> ✓ <i>HRM's Sidewalk Assessment Tool</i>
i) Connectivity within the Transportation Network	<ul style="list-style-type: none"> ✓ <i>Connecting road or loop, dead end, and/or an unpaved section of a majority paved road</i>

Pre-Engineering Work

- Step 2:** Input the data collected into a quantitative risk-based matrix for HRM Gravel Roads, and assign points to each prioritization criteria
- Step 3:** Review results of the quantitative risk-based matrix to aid in paving prioritization for HRM Gravel Roads

Pre-Engineering Work

Informed paving prioritization for HRM gravel roads by applying objective and subjective information

Facilitated the creation of the HRM Gravel Road Asset Management & Paving Program

HRM Gravel Road Asset Management & Paving Program

Considers paving prioritization based on the total score of Quantitative Risk-Based Matrix for HRM Gravel Roads

An annual funding allocation in accordance with the prioritization criteria and in line with the proposed 10-year Capital Budget

Recommendation

It is recommended that Halifax Regional Council:

1. Give First Reading to By-law S-453, amending By-law S-400, the *Street Improvements By-law*, as set out in Attachment B to this report.