

Main Street Markham Paver Restoration

Presentation to
Development Services Committee
May 8, 2017



Agenda

1. Background
2. Factors considered in Restoration Options
3. Options and Cost Estimates
4. Staff Recommended Option
5. Questions & Answers
6. Recommendations



Photo Credit: Unilock



Background

1. Main Street Markham pavers experienced premature failures starting 2014
2. Engineering Department investigated the reasons for failure and identified 6 options for restoration
3. Options were discussed with Markham Village BIA, Heritage Markham, Main Street Markham Committee and internal Markham Departments
4. Staff identified a preferred option and recommended for funding in the 2017 Budget process

1967-2017 / celebrates Canada 150



North of Intersection

Intersection

South of Intersection

Factors Considered in Restoration Options (1)

Options 1-3 (Paver Options)

- Requires re-design of pavers and edge restraints which will take approximately 45 days to complete. Additionally, relaying of pavers will take 15-30 days depending on the option selected
- Will not require a capital replacement as the pavers are being replaced and reinstated annually
- Annual maintenance of pavers will affect operations and on-going events for Main Street Markham (lane closures will be required for annual maintenance)

Factors Considered in Restoration Options (2)

Options 4-6 (Impressed Asphalt Option)

- Restoration will restrict traffic to single lane for 14 -20 days depending on the option but no design work is required
- Requires full asphalt pavement replacement and regular maintenance similar to other asphalt roads. Application of asphalt impression and epoxy colour will be required every few years and can be done with minimum disruption.
- Pavement structure does not fail in the same way as the pavers

Concrete Pavers





Impressed Asphalt



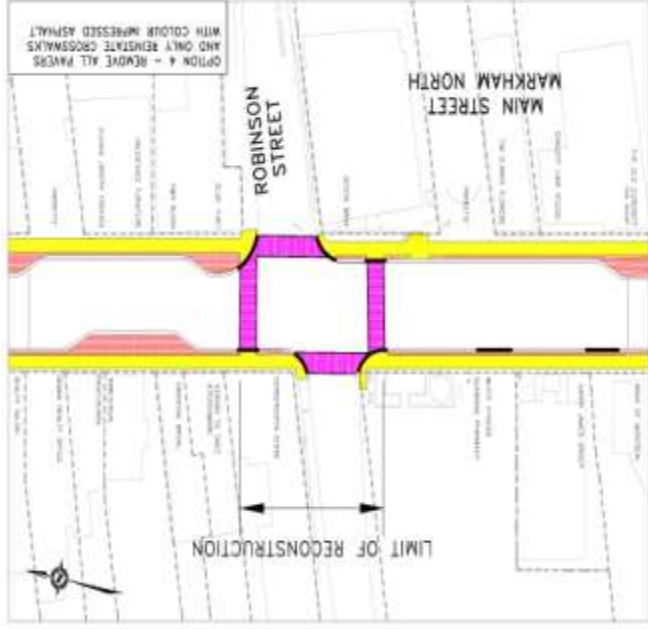
Restoration Options

Option	Proposed Work	Capital Cost	Annual Maintenance Cost	Construction Duration	Life Cycle and Maintenance Estimate (in 20 years)
1 (Pavers)	Remove crosswalk pavers, install concrete edge restraints, re-install <u>crosswalk</u> pavers, reset uneven areas	\$ 282,000	\$ 70,000	15 Days	\$ 1,400,000
2 (Pavers and asphalt)	Remove all pavers, install concrete edge restraints, re-install <u>crosswalk</u> and <u>intersection</u> pavers only. Pave north and south of intersection with asphalt	\$ 531,000	\$ 35,000	26 Days	\$ 700,000
3 (Pavers)	Remove all pavers, install concrete edge restraints, re-install <u>all pavers</u>	\$ 542,000	\$ 65,000	30 Days	\$ 1,300,000
4 (Asphalt)	Remove all pavers, pave all areas, <u>impressed asphalt</u> for <u>crosswalks</u> only	\$ 351,000	\$ 5,000	14 Days	\$ 451,000
5 (Asphalt)	Remove all pavers, pave all areas with asphalt, <u>impressed asphalt</u> for <u>intersection</u> and <u>crosswalks</u>	\$ 463,000	\$ 12,000	15 Days	\$ 703,000
6 (Asphalt)	Remove all pavers, pave <u>all areas</u> with <u>impressed asphalt</u>	\$ 871,000	\$ 40,000	20 Days	\$ 1,671,000



Staff Recommendation

- City Staff recommends Option 4
- Supported by Main Street Markham Committee and Main Street Markham BIA
- Heritage Markham Meeting June 5, 2016: “That the Committee recommends Option 4 as the preferred approach from a heritage perspective, to address the road and pedestrian crossing treatment at Festival Square.”
- Similar design as other intersections (Highway 7, Centre Street, Princess Street) and pedestrian crossings
- Approved 2017 Capital Budget is based on this option and no additional funds will be required.





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Questions & Answers



Photo Credit: Google Map



Recommendations (DRAFT)

1. That the staff presentation be received
2. That staff recommendation of Option 4 be approved
3. That the Director of Engineering and Senior Manager, Purchasing be authorized to invite a selected group of qualified suppliers based on past performance to submit a tender for restoration
4. That the Chief Administrative Office be authorized to award the construction tender to the successful bidder