

REGION OF OTTAWA-CARLETON
RÉGION D'OTTAWA-CARLETON

REPORT
RAPPORT

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DATE 17 August 2000

TO/DEST. Co-ordinator Transportation Committee

FROM/EXP. Director Mobility Services and Corporate Fleet Services
Environment and Transportation Department

SUBJECT/OBJET **CRITERIA FOR HIGHER QUALITY PAINT MARKINGS
RESPONSE TO OUTSTANDING INQUIRY NO. TC-25-00**

DEPARTMENTAL RECOMMENDATION

That the Transportation Committee and Council receive this report for information.

BACKGROUND

The purpose of this report is to respond to the following inquiry raised by Councillor Doucet at the Transportation Committee of 05 April 2000.

“WHEREAS pedestrian road markings are important for safe streets and healthy neighbourhoods;

WHEREAS safety at high traffic pedestrian locations is improved with “zebra-stripe” road markings;

WHEREAS the locations where zebra-stripe paint has been laid down have subsequently faded within a matter of months;

WHEREAS the Region’s standard for road paint is a result of budgetary pressures;

THAT staff prepare a priority list of high traffic pedestrian locations across the Region where a higher quality of road paint could be used for zebra-striping. Some examples in Capital Ward where zebra striping has faded are Brewer Way and Bronson, Fifth and Bronson, Bank and Sunnyside and Bank and Glen.”

DISCUSSION

The Region of Ottawa-Carleton currently uses “solvent” based traffic paint for marking Regional roads. Markings at traffic control signals and stop control intersections (including “zebra markings”) are painted twice a year, once in the spring and once in the fall. Factors that affect the duration the paint remains on the road surface are: the quality of the road surface, the ambient temperature when applying paint, the severity of the winter, and the volume of traffic. On average, paint on an urban arterial road surface should last for six months.

For pavement markings to last more than six months, permanent markings must be applied to the roadway. There are different types of permanent markings. The most commonly used are cold plastic, a two part acrylic material; thermoplastic, a heated liquid plastic; and polymer tape, a solid plastic tape. These materials can be applied as an “overlay”, meaning applied directly onto the asphalt surface or as an “inlay”, meaning applied onto the asphalt surface as it is being poured. The life expectancy using the overlay method is approximately one year for polymer tape and three years for cold plastic and thermoplastic. Using the inlay method, the life expectancy for all three materials is approximately five years.

The primary factor affecting the quality of the pavement markings on the roadway is the volume of traffic travelling over the markings. Based on this factor and the fact that locations with a higher pedestrian volume should have a higher priority, it is proposed that the product of the volume of vehicles travelling over the crosswalk and the number of pedestrians using the crosswalk be the criteria to rank the locations with zebra markings. Annex A lists these locations based on this criteria.

There is a substantial increase in cost to use permanent markings over painted markings. For example, at the intersection of Bank Street and Sunnyside Avenue, where zebra markings are currently used, it costs approximately \$500 to paint the intersection. It would cost approximately \$3,000 to use polymer tape, \$4,000 to use cold plastic, and \$8,000 to use thermoplastic.

With this high installation cost, it is important that if permanent markings are to be used, they not be installed at locations where road reconstruction or road resurfacing will take place within the life span of the permanent markings. Experience has shown that the optimum time to install permanent markings is in conjunction with an asphaltic overlay, with an inlay method being the most cost effective.

FINANCIAL IMPLICATION

The cost to use permanent markings at all the intersections listed in Annex A is approximately \$100,000.

CONCLUSION

There is currently no funding to install the permanent markings at pedestrian crossings that utilize the zebra markings. Should funding be made available, the permanent markings should be installed in the order as shown in Annex A (this assumes that the location is not to be reconstructed or resurfaced within the life span of the permanent markings). If the road is to be reconstructed or resurfaced, the permanent markings should be installed at a point in time when the final lift of asphalt is poured.

*Approved by
Doug Brousseau*

PL/js

Attach. (1)

**LOCATIONS AT WHICH ZEBRA MARKINGS ARE CURRENTLY IN PLACE
(RANKED IN DESCENDING ORDER OF PEDESTRIAN VEHICLE VOLUMES)**

MacKenzie King Bridge and DND Entrance
Laurier Avenue and 135 m East of Elgin Street
Bank Street and Sunnyside Avenue
Laurier Avenue and Nicholas Street
Bronson Avenue and Fifth Avenue
Bank Street and Belmont Avenue/Glenn Avenue
St. Patrick Street/Beechwood Avenue and Vanier Parkway
Gladstone Avenue and Booth Street
Bronson Avenue and Entrance to Brewer Park
Jeanne d'Arc Boulevard and St. Joseph Boulevard
Dalhousie Street and Boteler Street
Jeanne d'Arc Boulevard and Regional Road 174 Eastbound Off-ramp
Riverside Drive and Brookfield Road/Hog's Back Road
Merivale Road and Clyde Avenue
Bronson Avenue and Colonel By Drive Southbound Ramp
Richmond Road and Carling Avenue
Airport Parkway and Hunt Club Road
Richmond Road and Pinecrest Road
Merivale Road and Meadowlands Drive
Palladium Drive and Frank Finnigan