CITY OF **VANCOUVER**

ADMINISTRATIVE REPORT

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TO: Vancouver City Council

FROM: General Manager of Engineering Services

SUBJECT: Enhancing Pedestrian Crossings at Lane Entrances

INFORMATION

The General Manager of Engineering Services submits for Council's INFORMATION that a new design for concrete pedestrian pathways extending across lane entrances has been developed and successfully tested, and will be applied for lane entrances as described in this report.

COUNCIL POLICY

Council approved the 2002 Downtown Transportation Plan to improve downtown accessibility and liveability by creating a balanced transportation system that includes the creation of improved sidewalk crossing at rear lanes.

Council approved the 1997 Vancouver Transportation Plan that emphasized the accommodation of pedestrians as a high priority within the transportation system and the provision of safe and convenient road crossings for pedestrians.

As part of the Sidewalk Task Force, Council directed staff to examine the feasibility of extending sidewalks across lanes.

PURPOSE

The purpose of this report is to inform Council of a new standard treatment involving the use of concrete to visually extend the pedestrian pathway across rear laneways.

BACKGROUND

In 2002, Council approved the Downtown Transportation Plan (DTP). The DTP makes a number of recommendations to improve the pedestrian environment such that walking becomes a more safe, efficient and comfortable way to experience the city. The goal is not just to accommodate walking, but to encourage it through a wide range of enhancements such as wider sidewalks, weather protection, lighting, and way-finding signage. One particular recommendation was to improve the sidewalk crossing conditions across rear lanes. Where there is a high potential for conflict (areas of high pedestrian volumes and limited sight lines), the DTP recommended providing sidewalk continuity across rear lanes by extending the sidewalk treatment.

In 2004, while receiving an update on the implementation of the Sidewalk Task Force recommendations, Council requested that staff examine the feasibility of extending sidewalks across lanes and driveways instead of giving structural priority to vehicle traffic.

More recently, the West End Residents Association requested in January, 2005 that the City adopt guidelines for the future development of laneways throughout the West End to be carried out over time. One specific suggestion was that sidewalk surfaces should be continued across laneway entrances.

DISCUSSION

For the past several decades, the City has constructed lane entrances in a manner that distinguishes them from sidewalks and driveway crossings. For example, lanes have been constructed with asphalt, whereas sidewalks and driveways have been constructed with concrete. Additionally, the transition between roadways and lanes has been smooth, while the transition between roadways and driveways has involved a change in elevation. These distinctions have been viewed as beneficial: they prevent motorists from mistaking driveways for lane entrances, they encourage drivers to slow down and be especially vigilant in looking for pedestrians at driveway crossings, and they provide a visual indication for pedestrians to take special care of vehicular traffic at lane crossings.

Further to the recommendations of the Downtown Transportation Plan and the Sidewalk Task Force, the Engineering Department has examined methods of enhancing pedestrian crossings at lane entrances. Based on experience to date, it was understood that the ideal design would achieve the following objectives:

- Retain the benefits of the City's previous designs
- Provide a strong visual message that pedestrians have right of way
- Provide tactile cues to help guide people with visual impairments
- Be distinct from regular sidewalks in order to warn pedestrians of potential vehicle crossings
- Maintain proper drainage to keep the sidewalk clear
- Be durable and require little maintenance
- Be cost effective and applicable in a wide variety of sidewalk/lane configurations

Staff considered various options: simply painting a crosswalk; installing a pedestrian pathway composed of pavers or stamped asphalt; creating a driveway-type crossing; constructing a concrete pathway level with the laneway; and constructing a concrete pathway raised relative to the laneway. It was concluded that constructing a concrete pathway level with the laneway would most effectively enhance pedestrian crossings at lane entrances. In addition to the above-mentioned criteria, the following are a few points that were considered in making this decision:

- The visual aesthetics of a concrete pathway would surpass that of a painted crosswalk
- A concrete pathway would be more durable than stamped asphalt or unit pavers
- A driveway-type crossing could cause drivers to confuse lane entrances with driveway entrances
- A raised concrete pathway would not be attainable in most situations as sidewalks are often flush with lane entrances; moreover, a raised crossing would act like a dam across the laneway, frequently necessitating the relocation or addition of storm drains

The new standard concrete pathway would be similar to the lane crossing constructed at Mole Hill (see Figure One). Appendix A shows the new design standard, including a detail of the transition between the asphalt and concrete edges to ensure durability. The concrete sidewalk crossing at rear lanes is estimated to cost about $3,000 per crossing, not including the cost of curb letdowns.

Figure One: Lane south of Comox at Thurlow (Mole Hill Development)

Since the concrete pathway will enhance pedestrian crossings, staff plan to install them throughout the City wherever feasible. The exception would be in industrial areas where there is a concern that the crossing will not wear well at the concrete/asphalt edge because of heavy truck traffic. Fortunately, these areas also tend to have lower pedestrian volumes with fewer pedestrian/vehicle conflicts. This standard treatment could be enhanced in areas

that require other special treatments, such as along Greenways or in historic areas such as Gastown.

CONSULTATION

Consultation was carried out with the goal of ensuring that the new lane crossing standard would facilitate the mobility and independence of people with disabilities. The first phase of consultation involved a test in which people with visual disabilities traversed the lane crossing at the Mole Hill development and provided City staff with feedback on usability. The second phase involved a presentation of the new crossing standard to the Advisory Committee on Disability Issues and solicitation of feedback.

Three people with varying degrees of visual disability traversed the Mole Hill Development lane crossing (see Figure One), a location chosen for its similarity to the new crossing standard. Test results underscored the importance of certain design components:

- longitudinal score lines on the approach to curb let-downs bordering the crossing are important in guiding people with visual disabilities along the correct line of travel
- the contrast between the colour of the concrete pathway and the adjoining asphalt laneway is beneficial in guiding someone with a partial visual disability across the lane
- the score lines at the edge of the pathway are helpful in guiding someone using a white cane across the lane

The new crossing standard was presented to the Advisory Committee on Disability Issues for review and feedback. The Advisory Committee endorsed the design, subject to the inclusion of a score line down the middle of the concrete pathway. The design drawing appended to this report has been updated to include this score line.

FINANCIAL IMPLICATIONS

Each lane crossing will cost approximately $3,000, not including curb let-downs. For new construction, funding for this work can be provided by an increase to the project budget, typically through the Engineering Basic Capital Budget.

IMPLEMENTATION PLAN

Every opportunity will be sought to install these pedestrian pathways at lane entrances, for example as part of new construction and adjacent restoration activities. This would be the most cost effective method of installation, as construction crews would already be in the vicinity and additional costs would be marginal. For retrofitting other areas, lane crossings would be allocated to high priority areas within the city where pedestrian activities are high and the traffic volumes in the lanes are also relatively high. The Downtown peninsula and West End is one such possible area. Retrofits in other areas can be considered by Council as part of future capital budgets.

Further to the City's policy of prioritizing the pedestrian realm, Council has expressed interest in having staff examine the effects of flattening out the sidewalk portion of driveway crossings. Staff believe that the current design can be improved in many instances and will construct some pilot projects to explore this concept.

CONCLUSION

This report provides Council with information on a new design standard for the construction of concrete pedestrian pathways across lane entrances as part of the renewal of related infrastructure such as sidewalks and laneways. The concrete lane crossings will enhance the pedestrian crossing location and help to forewarn motorists in the laneway of potential pedestrian crossings.

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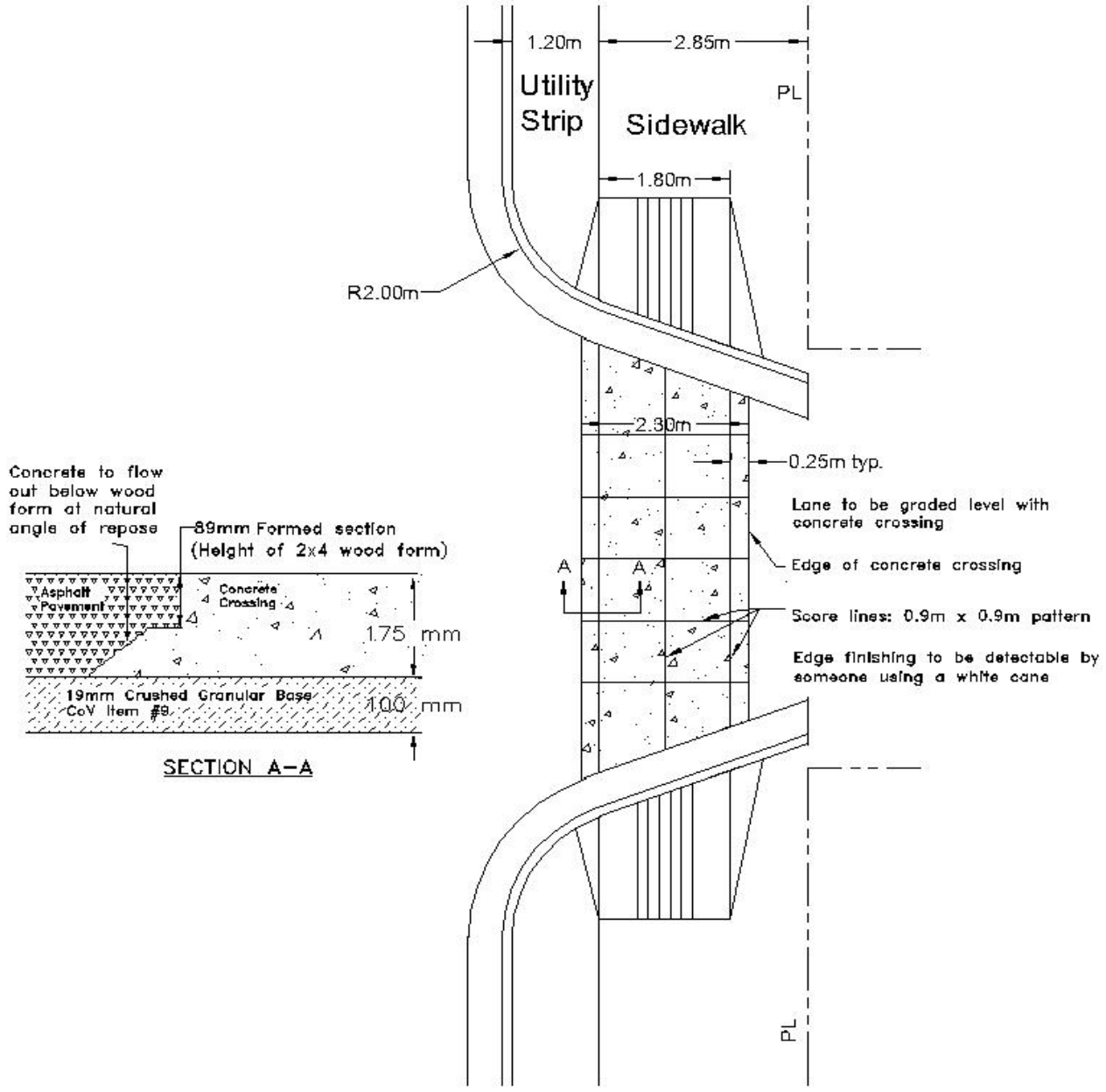
Appendix A
Proposed Lane Crossing Standard



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