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|  | Title: Pavement Cut | Policy No: CO-57 |
| | Category: Council Policy | Classification: Engineering |

1. Purpose:

To create a policy for the regulation and administration of pavement cuts within the City of Langley (hereinafter called the “City”) highways and roads, and to define the associated fees and charges.

2. Background:

Pavement cuts reduce the serviceable life of roads, as well as safety, ride quality, aesthetics, and performance. Generally, pavement life ranges between 15 to 35 years depending on traffic volume and the existing pavement structure.

Asphalt pavement is an engineered structure that works by flexing and transmitting traffic loads to a wide area of the pavement’s substructure. Installing a typical utility such as water, sewer, gas or hydro, in existing pavement requires cutting through the pavement structure, which destroys its ability to flex and distribute loads as a unit. Even when the pavement is repaired, the joint between the old asphalt and the new is very weak and cannot transfer the bending loads that made the pre-existing structure work effectively. As traffic moves over the repaired utility cut, the bond between old and new pavement quickly breaks causing cracking and movement between the panels of asphalt. Once this cracking occurs, water penetrates the pavement through the cracks and weakens the granular substructure, which in turn causes more movement and more pavement damage. Eventually, the utility cut will cause potholes that need further repair and ultimately will shorten the life of that section of pavement. Limiting this damage requires an ongoing program of crack filling and patching. However, once the pavement is cut, degraded pavement and a shortened pavement life are inevitable. A Pavement Cut Policy will ensure the appropriate party is accountable for the decreased pavement service life.

3. Scope:

This policy applies to all roads in the City of Langley.

4. Definitions:

- 4.1 **City** means the City of Langley
- 4.2 **HUP** means a Highway Use Permit
- 4.3 **Permittee** means Person or corporation applying for or holding an approved pavement cut permit.
- 4.4 **City Specifications** means the definition of City Specifications as found in the Subdivision and Development Services Bylaw.

- 4.5 **Temporary Pavement Restoration** means the work completed by the Permittee which will be in place for a maximum duration of 12 months. Full depth asphalt milling and filling, minimum 200mm beyond the outer most edge of trench or asphalt cracking.
- 4.6 **Permanent Pavement Restoration** means the work completed by the Permittee within 12 months after all Temporary Pavement Restorations are completed. It involves a 50mm minimum mill and fill, minimum 400mm beyond edge of trench cut or minimum 200mm beyond extent of temporary pavement restorations or asphalt cracking.
- 4.7 **Pavement Reinstatement Deposit** means the deposit taken to ensure the Permanent Pavement Restoration of the pavements cuts is completed. Found in the Fees and Charges Bylaw.
- 4.8 **Pavement Degradation Fee** means the fee charged for the shortened life cycle of the asphalt road being cut. In certain circumstances this is the only fee charged to the permittee. Found in the Fees and Charges Bylaw.
- 4.9 **Pavement Cut Form** means the form used to calculate the required Pavement Reinstatement Deposit and Pavement Degradation Fee. Also used to track pavement cuts for Permanent Pavement Restoration.
- 4.10 **City Engineer** means the Director of Engineering, Parks and Environment for the City of Langley or their designate.
- 4.11 **Engineering Department** means the Engineering Services Division of the Engineering, Parks and Environment Department.

5. Policy Statement:

The City recognizes that a policy for pavement cuts is essential to ensure that the City's road assets are maintained, the working life of City roads are not degraded and that the appropriate party reimburses the City for the repairs required to rehabilitate City roads. The intent of the policy is to extend the service life of roads while keeping ride quality to a high standard, making permittees accountable for the maintenance of road cuts and ensuring monies are available to pay for proper restoration as the life span of the road will be shortened as a result of the cut.

- 5.1 All pavement cuts must be authorized through the City of Langley Highway Use Permit complete with a Pavement Cut Form. Fees and deposits associated with the cut can be found in the Fees and Charges Bylaw.
- 5.2 A pavement cut moratorium is in place for highways or roadways that have been constructed or rehabilitated within the last five years. However, consideration for exceptions may be given by the City if the permittee proves the following:
- 5.2.1 the cut could not have been foreseen;
 - 5.2.2 the work could not have been completed prior to the rehabilitation work;

5.2.3 there is no practical alternative, i.e. pushing or drilling the utility, that is cost effective (within 1.5 times the cost of the open cut option). Cost estimates must be provided by a registered Professional Engineer.

If the City Engineer authorizes the cut, the following special conditions may apply such as:

5.2.4 increased paving extent, over and above the typical 0.4m beyond trench cut and/or to the nearest lane line or lane centerline, i.e. for the full frontage of the property, half road, full road, or travelled lane;

5.2.5 full depth pavement milling and filling in two lifts;

5.2.6 an increased Pavement Degradation Fee;

5.3 Pavement cuts where permitted shall be reinstated to the standards prescribed by City specifications SDR-10, 11, 12, 13.

5.4 The permittee will be responsible to provide and maintain Temporary Pavement Restoration for all HUP's requiring pavement cuts. Repairs on Arterial and Collector roads must be completed by the end of each working day, if the road is open to traffic, and as per the City's specifications SDR-10. Local roads and roads temporarily closed may be restored at a later date; approval from the Engineering Department is required.

5.5 The Permittee is responsible for the maintenance of all non-City performed pavement cut(s) for a minimum of one year after final acceptance of the work.

5.6 If the patch begins to fail, e.g. potholes, cracks, settlement, the Permittee shall repair the patch with 24 hours of becoming aware of the issue. If the Permittee fails to repair a pavement cut when notified to do so, the City will perform the repairs at the Permittee's expense with costs paid from the deposit.

5.7 It is the Permittee's responsibility to complete the Permanent Pavement Restoration. The Permittee shall provide a pavement schedule to the City and will adhere to the schedule unless otherwise approved by the City. The City may complete the Permanent Pavement Restoration at the cost of the Permittee, if the Permittee does not complete the permanent repair within 12 months of the temporary patch. (Some exceptions may be considered by the City)

5.8 All costs associated with this policy including administration, inspection and reinstatement will be offset through fees and charges established and as amended from time to time.

5.9 The City shall coordinate and monitor as necessary the works of B.C. Hydro, Telephone, Gas and Cable.

5.10 Planned work performed by the City shall comply with the restoration requirements of this policy, however, deposits and fees will not be charged. Emergency works will be given special consideration depending on the scope of the work, schedule and weather.

6. Policy Procedure:

- 6.1 Applications for a Pavement Cut Permit shall be made to the Engineering Department along with application and payment for a HUP and Pavement Reinstatement Deposit. Associated fees are contained in the City's Fees and Charges bylaw.
- 6.2 All work shall comply with the HUP, failure to do so will result in rejecting the HUP and the City completing the pavement repair works at the Permittee's expense.
- 6.3 All work requires that an inspector be onsite. The permittee shall coordinate inspections with the Engineering Department.
- 6.4 **Land Development Projects:** Pavement Reinstatement Deposit shall form part of the developer's security deposit. If the Permittee does not complete the Permanent Pavement Restoration the deposit will be collected by the Engineering Department at final construction inspection.
- 6.5 **City Capital Programs:** For contractors, the City Engineer shall establish the cut reinstatement requirements and include in the tender documents prior to tendering.
- 6.6 **Utility Companies:** The location of the proposed road cut will be inspected by the Engineering Department who will assess the condition of the existing pavement and determine the extent of reinstatement and the charge to cover reinstatement.
- 6.7 **Longitudinal Cuts:** Shall comply with Standard Drawing SDR-11, 12, 13 and adhere to the criteria below;
 - 6.7.1 the existing road surface will be milled and filled with 50mm minimum depth of asphalt;
 - 6.7.2 at a minimum to 0.2m beyond the outermost edge of the Temporary Pavement Restoration extents and/or cracking;
and;
 - 6.7.3 to the next middle of a travelled lane and/or lane line, for full length of trench cut.
- 6.8 **Cross Cuts:** Shall comply with Standard Drawings SDR-11 and adhere to the criteria below;
 - 6.8.1 for individual trench cuts mill and fill 50mm minimum asphalt depth;
 - 6.8.2 at a minimum to 0.2m beyond the outermost edge of the Temporary Pavement Restoration extents and/or cracking;
and;
 - 6.8.3 to the next middle of a travelled lane and/or lane line, for full length of trench cut;
 - 6.8.4 for multiple trench cuts with gap between cuts less than or equal to 10m, mill and fill the entire area between cuts to 0.2m beyond the outermost edge and

the entire area between the cuts, the gap. Furthest cross cut from curb determines the restoration width for all;

- 6.8.5 when five or more trench cuts occur within a 100m section of road, the permittee will be required to pay the pavement degradation fee based on the 100m section of road.
- 6.9 For roads identified in the City's Road Rehabilitation Program, the final reinstatement may be deferred and the charges kept as cash-in-lieu for future repaving of the entire street if the existing pavement conditions suffice. Full pavement overlay may be required where numerous close proximity pavement cuts occur.
- 6.10 Pavement Cuts shall consist of a 4 stage process:
 - 6.10.1 Initial cut and Temporary Pavement Restoration (Standard Drawing SDR-10).
 - 6.10.2 Maintenance of the Temporary Pavement Restoration for a maximum of 12 months at the expense of the permittee. Unless pavement cut completed by the City.
 - 6.10.3 Permanent Pavement Restoration will be completed by the Permittee and Pavement Degradation Fee will apply. If completed by the City, it will be at the expense of the Permittee and the Pavement Reinstatement Deposit be collected to cover the costs (Standard Drawing SDR-10).
 - 6.10.4 Maintenance of the Permanent Pavement Restoration for a maximum of 1 year at the expense of the permittee. Unless pavement cut completed by the City.

7. Warranty requirements:

- 7.1 The Permittee is responsible for the maintenance of all work completed by them for the warranty period.
 - 7.1.1 Permanent Pavement Restoration shall have a warranty period of one year. The patch shall be repaired as necessary until the warranty period has ended.
 - 7.1.2 All warranties shall start over if rehabilitation work is performed within the patched area, i.e. one year from when rehabilitation work is accepted by the City.
 - 7.1.3 All curb, sidewalk and structures that are affected by the excavation shall be included in this policy and have a warranty period of one year.
 - 7.1.4 All concrete work shall be to the latest MMCD Standards.
 - 7.1.5 Warranty covered defects include:
 - a) Sunken pavement patches greater than or equal to 10mm measured with a 3m straight edge.

- b) Failure to meet visual rating.
- c) Poor workmanship.
- d) Inadequate compaction.
- e) Sunken or damaged curb sidewalk or structures.
- f) Cracks within patched area.

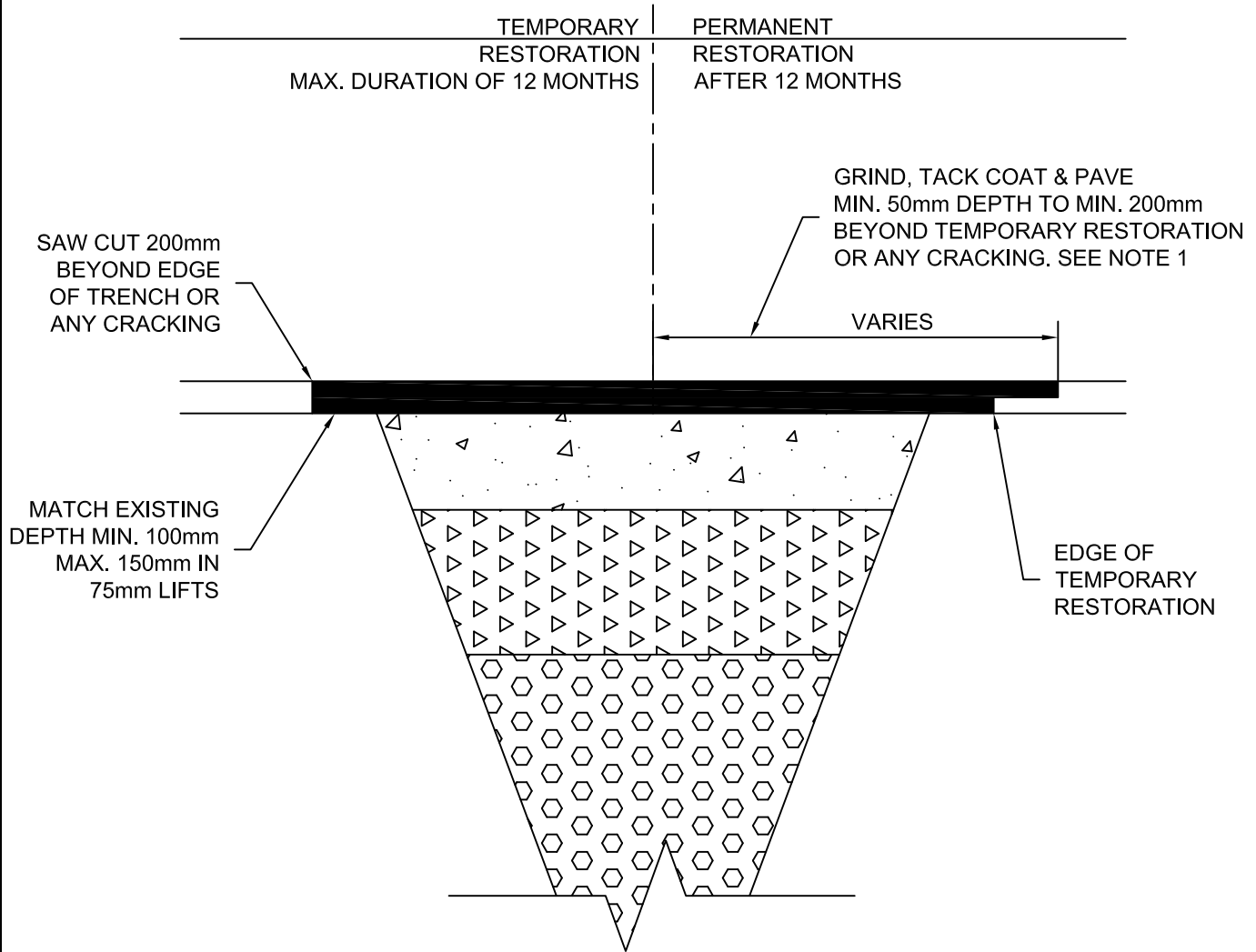
References:

- MMCD – Master Municipal Construction Documents

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| Policy Number: | CO-57 |
| Policy Owner: | Engineering |
| Endorsed by: | Senior Management Team |
| Final Approval: | Council |
| Date Approved: | December 7, 2015 |
| Revision Date: | |
| Amendments: | |
| Related Policies: | |
| Related Publications: | Fees and Charges bylaw, Subdivision and Development Services bylaw and Highway and Traffic Regulation bylaw |

Contact Person:

Contact Person: Kara Jefford
 Position: Manager of Engineering Services
 Phone: 604-514-2929
 Email: kjefford@langleycity.ca



NOTE:

1. REFER TO SDR11, 12 & 13 FOR ADDITIONAL REQUIREMENTS.
2. TEMPORARY RESTORATION TO BE COMPLETED AT THE END OF EACH WORKING DAY IF THE ROAD IS OPEN TO THE PUBLIC.
3. ROAD BASE AND SUB-BASE SHOWN FOR VISUAL PURPOSES ONLY. REFER TO APPLICABLE DOCUMENT FOR SPECIFIC DETAILS.



Engineering Department

STANDARD DETAIL DRAWINGS

**UTILITY TRENCH
PAVEMENT RESTORATION**

DATE:
2015-10

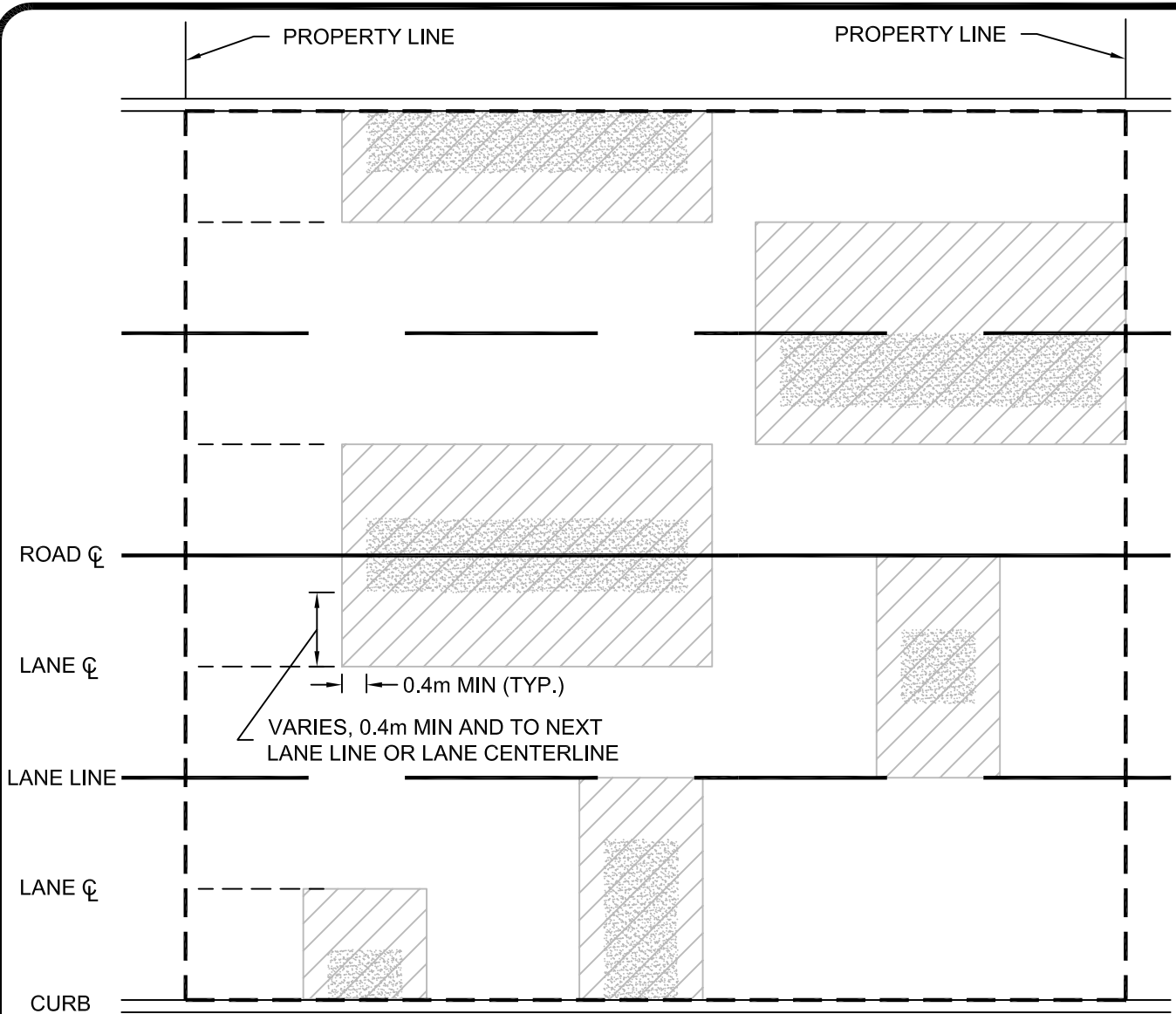
APPROVED BY:

SCALE:
NTS




DRAWN BY:
KF

DRAWING NO.
SDR10

City of Langley



LEGEND:

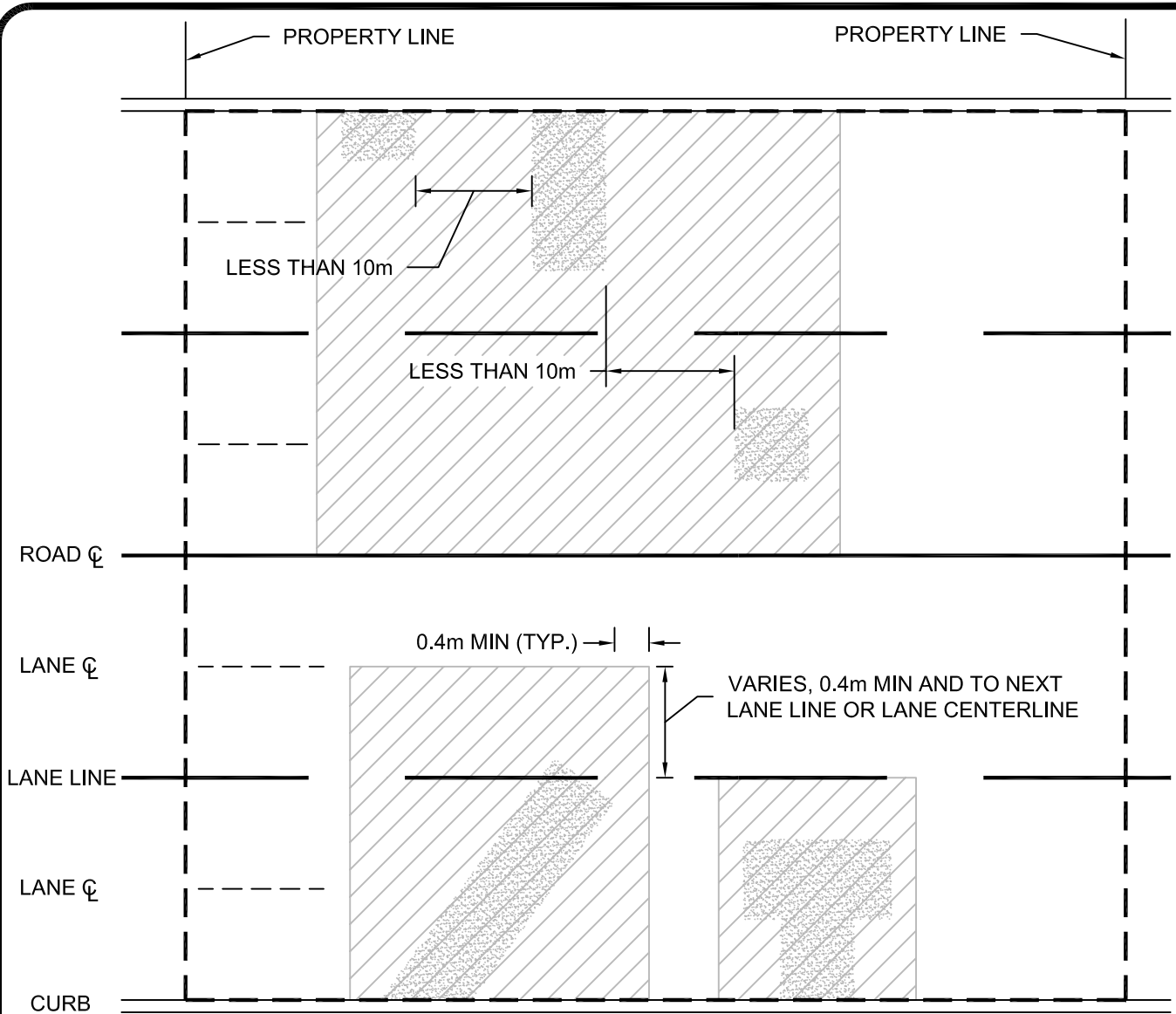
-  RESTORATION EXTENT WHEN PAVEMENT IS LESS THAN 5 YRS OLD
-  PERMANENT PAVEMENT RESTORATION EXTENT
-  TRENCH LIMITS AT TOP OF PAVEMENT

NOTE:




1. PAVEMENT DEPTH 50mm MIN. IN ACCORDANCE WITH STANDARD DRAWING SDR10.
2. ALL CUTS SHALL BE PERPENDICULAR TO DIRECTION OF TRAVEL.
3. HOT MIX ASPHALT CONCRETE ONLY.



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| Engineering Department STANDARD DETAIL DRAWINGS PAVEMENT CUT RESTORATION REQUIREMENTS | DATE: 2015-10 | SCALE: NTS |
| | APPROVED BY: | DRAWN BY: KF |
| | DRAWING NO. SDR11 | |



LEGEND:

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Engineering Department

STANDARD DETAIL DRAWINGS

PAVEMENT CUT RESTORATION REQUIREMENTS

DATE:
2015-10

APPROVED BY:

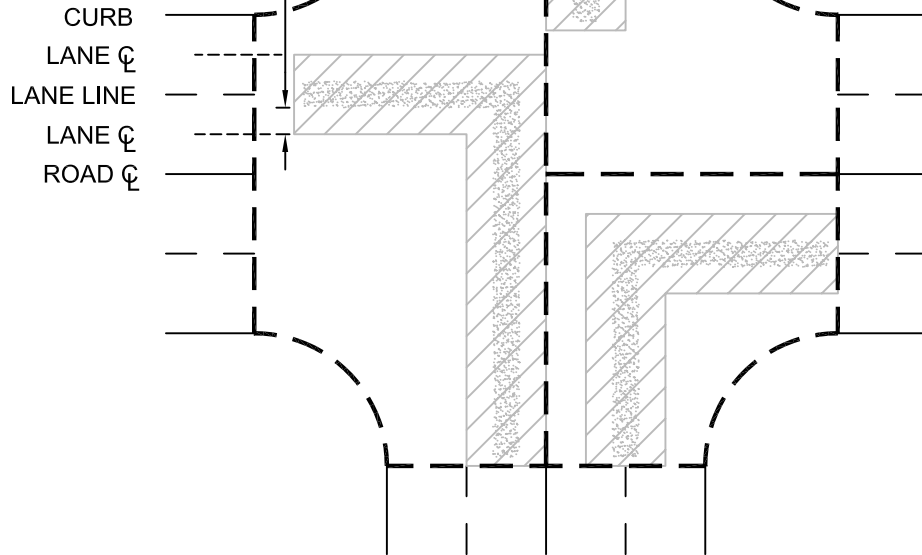
SCALE:
NTS

DRAWN BY:
KF

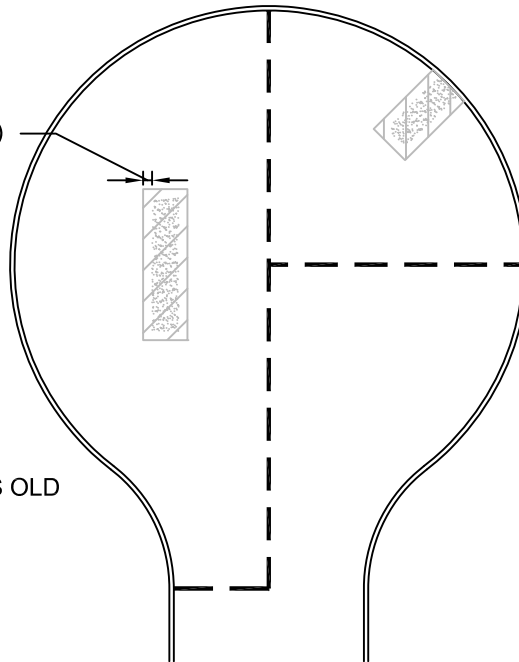
DRAWING NO.

SDR12




VARIABLES, 0.4m MIN AND TO NEXT
LANE LINE OR LANE CENTERLINE



0.4m MIN (TYP.)



LEGEND:

-  RESTORATION EXTENT WHEN PAVEMENT IS LESS THAN 5 YRS OLD
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NOTE:

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Engineering Department

STANDARD DETAIL DRAWINGS

**PAVEMENT CUT
RESTORATION REQUIREMENTS**

DATE:
2015-10

APPROVED BY:

SCALE:
NTS

DRAWN BY:
KF

DRAWING NO.

SDR13