

## 2017 Sidewalk Preservation Repair/Replacement Criteria

This document serves as a guide for selection of sidewalk and curb treatment requirements based on defects or combination of defects. Sidewalk preservation treatments are completed on a priority basis. Sidewalks along the roadway preservation program are currently the top priority for the sidewalk preservation program in order to rejuvenate street corridors as a whole. Below are some examples of the city's common sidewalk defects and the criteria that would trigger a specific type of treatment that would be applied based on the defects severity.

### **TRIP HAZARDS:**

A trip hazard is when the sidewalk lifts or depresses causing a ledge of 20mm or more. Most trip hazards occur at the control joints but can also occur along a crack.

- Up to 40mm and less than 2m of trip length per panel - Grinding or Saw Cutting
- More than 40mm and > 2m per panel - Mud Jacking or Replacement



**Repair – Grinding or Saw Cut**



**Mud Jack or Replacement**

### **LONGITUDINAL & TRANSVERSE CRACKS:**

A Longitudinal crack is a crack that goes down the length of the sidewalk. A transverse crack is a crack that goes across the sidewalk other than control joints.

- Less than 3 connecting cracks or crack width less than or equal to 30mm - Crack Fill
- More than and including 3 connecting cracks or crack width greater than 30mm - Replacement
- More than and including 2 Longitudinal, 2 Transverse, or 2 Corner cracks – Replacement



**Repair - Crack Fill**



**Replacement**

**MISSING SECTIONS:**

Missing sections are pieces of concrete that have chipped out of the sidewalk and cause an irregular surface potentially causing a trip.

- Localized area Less than and equal to 200mm x 200mm – MG Krete Repair



**Repair**



**Replacement**

- > 200mm x 200mm in localized missing area or any missing due to a Utility Cut – Replacement

**SCALING:**

Scaling is when the sidewalk becomes pitted due to poor concrete mixes. Concrete breaks down and creates an uneven surface.

- Light severity (3-6mm depth) – No Treatment
- Medium severity (6-10mm depth) with no cracks – MG Krete Overlay
- High severity (>10mm depth) – MG Krete Overlay
- Disintegration - Replacement



**Light Severity – No Treatment**



**Medium Severity – MG Krete Overlay**



**High Severity – MG Krete Overlay**

### **CROSS FALL SLOPES:**

Cross fall slopes are when the sidewalk panel tips either towards the property or towards the street. A typical sidewalk has a 2% cross fall slope towards the street. Cross fall slopes can cause poor drainage creating ponding or create an uncomfortable slant when walking along a sidewalk.

- Cross Fall Slope less than 5% towards the street or less than 3.5% towards property – No Treatment
- Cross Fall Slope more than 5% towards the street or more than 3.5% towards property – Mud Jacking or Replacement



**Mud Jacking or Replacement**

### **CROWN AND SWALE SLOPES:**

Crown and swale slopes are slopes that occur longitudinally down the sidewalk. These slopes create peaks or valleys along the sidewalk which make the sidewalks uneven.

- Slight Crown or Swale – Crack Seal
- Any noticeable Crown or Swale that affects function of sidewalk – Replacement



**Crown - Replacement**



**Swale - Replacement**

### **LONGITUDINAL GRADE SLOPES:**

Longitudinal Grade slopes are slopes that affect sidewalks in the direction of travel. When the grade, also called incline, is too high, sidewalks become difficult for wheelchairs and people with mobility issues.

- More than 8% Grade Slope - Replacement

### **UTILITY SETTLEMENTS:**

Utility Settlements are when a sidewalk depresses due to settlement where a water and sewer connection connects to the property. Severe utility settlements where drainage is compromised will require panel replacement. Utility settlements may require up to 6 panels to be replaced to bring the sidewalk back to a safe walking surface without water ponding.

- Curb height greater than 50mm – No Treatment
- Curb height less than or equal to 50mm – Mud Jacking or Replacement
- More than 4% Grade Slope - Replacement



**Utility Settlement – Mud Jack or Replacement**

### **TREE ROOTS:**

Tree roots cause sidewalk panels to heave and therefore cause trip hazards or difficult slopes to navigate by those with mobility issues. Tree roots may require up to 6 panels to be replaced to bring the sidewalk back to a safe walking surface with acceptable slopes.

- More than 8% Grade Slope – Replacement



**Tree Root – Replacement**

### ***ASPHALT OVERLAYS:***

Asphalt overlays were placed when panels required immediate attention due to sidewalk distresses mentioned above.

- Any Condition – Replacement



**Good Condition Asphalt Overlay  
Curb Deteriorated - Replacement**



**Fair Condition Asphalt Overlay -  
Replacement**



**Poor Condition Asphalt Overlay -  
Replacement**

### ***EXISTING ASPHALT OR MG KRETE PATCHING:***

Asphalt or MG Krete patched sidewalks are considered temporary treatments and are used to maintain safety. All temporary treatments should be removed and permanent solutions implemented

- Asphalt/MG Krete Fillets – Remove and Repair or Replace
- Asphalt/MG Krete Patches – Remove and Repair or Replace