2015 Sidewalk Preservation Repair/Replacement Criteria

Sidewalk preservation treatments are completed on a priority basis. Sidewalks along the roadway preservation program are currently our top priority for the sidewalk preservation program in order to rejuvenate streets as a whole. The most economical solution is to repair a sidewalk panel, but if distresses or combination of distresses are extreme enough, a panel may require replacement. Less severe sidewalk panels that are between multiple sidewalk panels slated for replacement may be replaced at the same time to reduce costs and maintain safety. 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.

- Less than and equal to 4dm² missing area – Repair
- More than 4dm² missing area or any missing due to a Utility Cut – Replacement

Repair

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) – Silane Seal
- Medium severity (6-10mm depth) – Replacement
- High severity (>10mm depth) – Replacement

Light Severity – Silane Seal

Medium Severity – Replacement

High Severity – Replacement

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.

- Any noticeable Crown or Swale – Replacement

Crown - Replacement

Swale - Replacement

Grade Slopes

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.

- Good Condition (no cracks-except control, no raveling, no delamination) – No Treatment

- Fair Condition (cracks, raveling, no delamination) – Replacement or Overlay/Seal
- Poor Condition (cracks, raveling, delamination) – Replacement
- Any Condition, Curb Deteriorated – Replacement

Good Condition Asphalt Overlay
Curb Deteriorated - Replacement

Fair Condition Asphalt Overlay
Replacement or Overlay/Seal

Poor Condition Asphalt Overlay
Replacement

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

City of Saskatoon

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