

Type of Deficiencies

Step or lip -- height.

Opening – max. width

Spalling – max. depth

Hump – max. slope

$$\text{Slope} = \frac{\text{Height}}{\text{Length}}$$

Sunken section – max. slope

Patch with Concrete

Step or lip – ¼"

Opening – 1"

Spalling – ½"

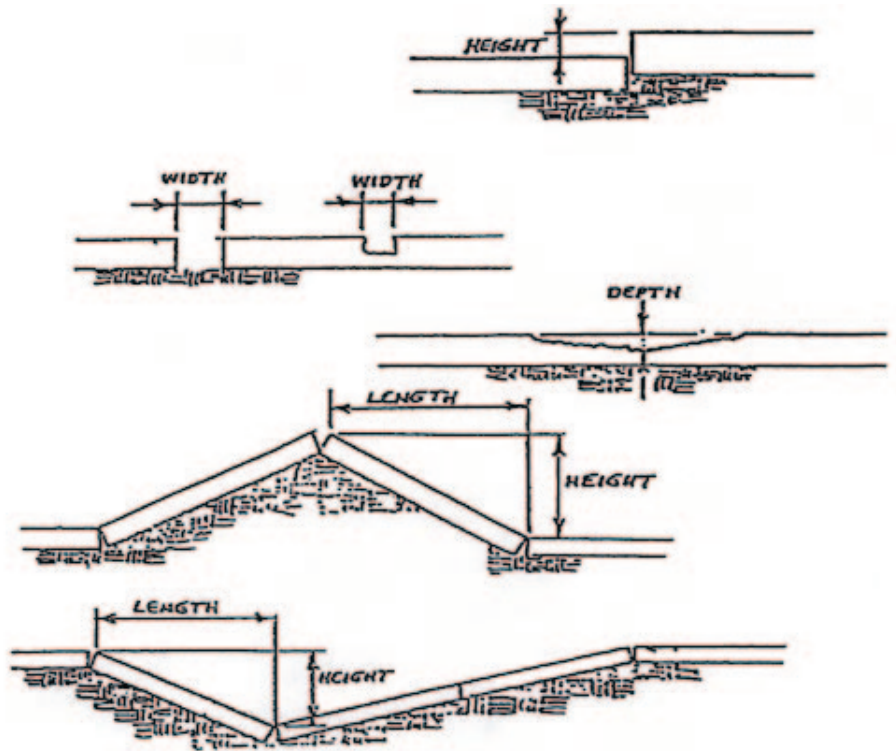
Replace Section of Sidewalk

Step or lip – higher than ¼"

Spalling – deeper than ½"

Hump or sunken section – 1" per foot or steeper

Opening – wider than 1"



Village Of Grand Rapids Criteria For Sidewalk Repair Or Replacement

Any block having multiple cracks or any single crack larger than ¼" wide and any section of block having 3 or more cracks. A block with a single tight crack may be acceptable.

- Adjoining sections of block, or portion thereof, whose edges differ vertically by ½" or more. Settlement or lifting of blocks resulting in vertical displacements causing tripping hazards of ½" or more between adjacent blocks.

- Blocks having a transverse slope in excess of 5/8" per vertical foot desired. All slabs shall have a positive slope towards the roadway, ¼" per foot desired. Allowable slopes shall not be greater than 5/8" per foot.

- Blocks having a reverse slope that impounds water to a depth of ¾" or more. Walk slopes to private property (ponds water). Blocks having depressions, reverse cross-slope (sloping away from street) or below curb grade so as to impound 2 s.f. per block of mud or water. Slab has settled to prevent water from draining off sidewalk.

- Where the settlement is caused by water, sewer, or gas laterals, blocks should be removed and ½" steel rebar placed in concrete to minimize future settlement.

- Blocks having disintegrated or deteriorated areas. Replace sidewalks that are deteriorating over a 25% or larger area as evidenced by spalling or irregular surfaces.
- Blocks that cause an abrupt change in the longitudinal grade of the walk. Blocks pushed up due to tree roots one inch (1") or more. Any section with a longitudinal slope with respect to adjacent sections consisting of a "V" upward or downward of 5/8" per foot or more, or when water is caused to pond.
- Blocks that have holes in them 1" in diameter or are cracked and broken so that pieces are missing or loose.
- Lawn area between the sidewalk and the street that protrudes above the sidewalk and impounds an excessive amount of water on the sidewalk. These areas should be adjusted rather than reconstructing the sidewalk.
- Foreign Materials: An asphalt sidewalk and asphalt drive approach.
- Other:
Trees, bushes, or shrubs that overhang the sidewalk. The tree limbs should be trimmed to at least ten feet above the sidewalk. Bushes or shrubs should be trimmed so as not to overhang the sidewalk even after a rain.

Any block which the Village Council determines to be hazardous, regardless of whether it has any of the characteristics set forth in paragraphs (1) through (8) of this division.

Blocks that are smooth so that they are slippery when wet. New sidewalks where surface finish or joint construction is not in accordance with Village standards.

Other condition or combination of conditions causing an unsafe condition in the opinion of Village Council.

Definitions:

Block: A section of sidewalk consisting of the area between the contraction joints x sidewalk width.

Contraction Joint: Formed, sawed, or tooled groove in a concrete structure to create a weakened plane and regulate the location of cracking resulting from the dimensional change of different parts of the structure; sometimes called control joint.

Spalling: Local flaking away of the near-surface portion of hardened concrete. Depth of spalling is usually about 1/8 inch to 3/4 inch.