

Concrete Sidewalk Best Practices

TOOLS

Assemble all of your tools ahead of time. This may include:

- 1-2 contractor grade wheelbarrows
- two or three 5 gallon buckets
- square shovels
- bull float with extension handle
- screed
- concrete broom
- edgers
- screw gun
- groover
- iron rake or concrete mover/rake
- magnesium floats
- 2-pound hammer
- saw



Magnesium Float



Groover

Edger

PREPARING THE BASE



Preparing the base

1. Excavate the area wide enough so that dirt and grass does not get into the fresh concrete. Keep the excavated material away from the work area.

2. Set the forms with the stakes level with the top of the form.

Remember - the stakes go on the outside of the form! Be sure to slope the forms from side to side at the rate of 1/4" per foot, to allow water to drain.

3. Prepare a base of well compacted crushed gravel at least 4" thick. Remove ALL roots, large stones and organic material.



Compaction is critical for a good base

4. All new sidewalks must meet ADA requirements for width, (minimum 60") slope and handicap ramps.

5. **THE GRADE IS CRITICAL!** Set a 2" x 4" across the top of the form and measure to the gravel. For a 4" concrete sidewalk, the distance should be no more than 4 1/4" and no less than 3 3/4". Check the grade every 4-feet.

WORKING WITH CONCRETE

1. Work Safely. Concrete is a great long lasting material, but it can irritate and/or burn your skin. Wear safety glasses, long pants and shirts, knee pads can make kneeling down more comfortable while rubber boots and gloves will protect your feet and hands.

2. A 4000# mix with 3/4" stone, 7% air entrainment and 5" slump is an excellent specification for sidewalks. For a sturdier mix, ask the plant to add fibers. We do not recommend woven wire or rebar.



Pouring and leveling the concrete

- It should not be necessary to add any water to the mix if it was batched to your specification. If you need to add water at the site do it before any is unloaded and make sure the barrel is spun 30 times at mixing speed. The wetter the mix, the weaker the sidewalk.
- Apply a releasing agent to the forms. Place the concrete within 1 1/2 hours of batching. Pour with the chute into the forms and move and tamp with the iron rakes. Make sure to get all air pockets out of the mix. Level the concrete with a bull float or screed. Groove and edge immediately after bull floating and before the water rises to the surface. Blocks should be as square as possible (4' x 4', 5' x 5'). Expansion joints are necessary between existing and new concrete slabs or around a telephone pole or other solid structure.



Bull floating the concrete



Cutting the edge and floating the surface

- If the concrete is setting too quickly due to heat or wind, you may spray a curing agent to slow the process. In cold weather, it may be necessary to cover the concrete with curing blankets to retain the heat.

- Wait for the surface water to disappear before finishing in a sweeping motion with the

magnesium floats. **DO NOT OVERWORK THE CONCRETE AND DO NOT SPRINKLE OR ADD WATER WHILE FINISHING.** Apply a texture with a concrete broom pulled in one direction and not overlapped. Clean the edges and joints.



Cutting the center joint



Applying a broom finish

- Place signs and caution tape at the perimeter. Wait at least one day before removing the forms and backing up the edges. It will take 30 days for the concrete to fully cure. Watch the forecast for the onset of freezing temperatures.



DONE!