County of Ventura
Sidewalk Repair Standards

Dec. 2022

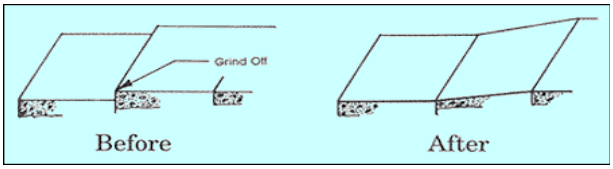
The Ventura County Public Works Agency, Department of Transportation, is working with property owners in unincorporated Ventura County to keep sidewalks safe for the public. In compliance with local and state codes, sidewalks must remain in a condition that is not dangerous to persons using the sidewalk and will not interfere with the public convenience in the use of the sidewalk. Further, the Americans with Disabilities Act (ADA) contains guidelines for sidewalks that have been incorporated within the County's sidewalk standards.

In October 2014 and August 2015, the County Board of Supervisors provided direction for sidewalk repair standards to be followed within the unincorporated areas of the County of Ventura. In September 2022, the Board approved a revision to these standards which has been incorporated. They also asked that alternative methods (engineered ramping and alternative materials) and shallower tree roots be allowed for consideration. Any repair method or material not listed below, to include tree roots shallower than 12" requires processing of a for-fee Encroachment Permit in accordance with Ventura County Municipal Code section 4540.

<u>Vertical displacement of Sidewalk</u>

- 0" to 1/2": The displacement may remain; no repairs are required.

- 1/2" to 1½ ": The displacement must be removed, either by grinding (or laterally sawcutting) one side or by replacing one or both of the slabs. Grinding or lateral sawcutting must have a slope of 12H:1V or flatter. (Hence, grinding off a 1" step would create a 12" wide ramp.)



In this example, involving grinding, the displacement must be 1½ " or less.

  Grinding (or laterally sawcutting) up to 1½" is allowed only if the remaining slab thickness is at least 2½" thick. (2x4 lumber forms, normally only measure 3½" deep. These are often used to construct sidewalks, resulting in 3½" thickness.)

- Greater than 1½": The displacement must be eliminated by sidewalk replacement; grinding is not allowed, because of decreased slab thickness and strength.

  If the cause of the heaving of the sidewalk is ongoing, such as due to an existing

tree, grinding is only a temporary repair. A permanent repair can only be completed if the roots beneath the slab are trimmed or removed to halt the heaving. If present, roots beneath the slab shall be removed to a minimum depth of 12".

Horizontal Displacement and Warping of Sidewalk

- Gaps or cracks in the sidewalk less than 1/2" wide need no repairs. Where there are gaps or cracks greater than 1/2" wide, the slab must be replaced.

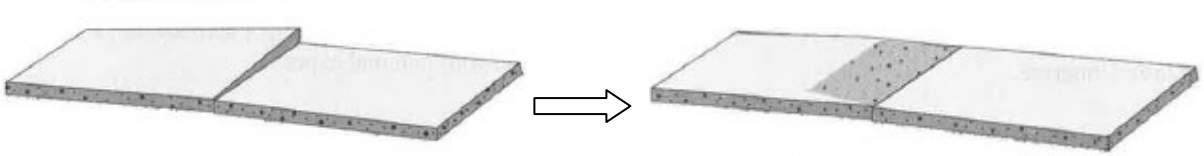
- If the sidewalk has been uplifted or has settled so that it becomes sloped or warped, the following guidance applies (based on ADA standards):
    - Longitudinal slope shall not exceed 8.3% (12:1 ratio).
    - The cross slope may not exceed 2% (1/4" per foot).
    - The rate of change of grade shall not exceed 13%, whether at a dip or a ridge. That is, the total difference of the slopes on each side shall not be more than 13%.

A + B < 13%

    - Where there are uneven surfaces due to sidewalk cracking, judgment must be exercised regarding safety for pedestrians and wheelchairs. In such cases, County staff shall decide if replacement is required.

Angled displacement of Sidewalk

- Where there is an uneven displacement so that the height of displacement varies across the width of the sidewalk, the guidance given above still applies. Where the displacement is over 1/2", but is not more than 1", it may be ground or replaced. If part of the displacement is greater than 1" but is not more than one fourth of the sidewalk width, it may also be ground, provided that at least 32" of width will have 1/2" or less of displacement.
- In cases with angled displacement and warping, County staff shall make the final decision whether grinding or replacement is required.



Example: Grinding of a sidewalk with angled displacement.

Sidewalk Construction Standards:

If new sidewalk is to be constructed, the following standards apply. When these standards are followed, a for-fee encroachment permit is not required.

- The slab shall be a minimum of 4" thick, made of concrete class 470-C-2000 (2000 psi) or stronger. (Note that 2x4 boards, often used as forms for sidewalks, are actually only 3½" deep. The County standard requires the sidewalk slab to be 4"

thick.) At driveways, the sidewalk shall be 6” thick.

- The sidewalk width shall match the existing sidewalk in the area, with score marks no further than 5 feet apart. The surface finish shall match the existing sidewalk in the area. If there is no local sidewalk to match, the width shall be 5 feet and the surface shall receive a light broom finish.
- Sidewalk workmanship shall comply with Section 303-5 of the Standard Specifications for Public Works Construction (SSPWC or Greenbook, 2021), except as modified here. See Exhibit 1, attached.
- Reinforcing steel is not required in sidewalks, unless ramping is done. If ramping is done, a for-fee permit is required which requires a plan signed by an engineer. Steel reinforcement is required if a sidewalk is ramped.
- Base aggregate or sand is not required beneath sidewalks, but the native earth must be compacted to 95% relative density before the concrete is placed.
- Rubber sidewalks are allowed, and must follow the specifications shown in Exhibit 2, attached.

Director, Transportation Dept.

Dec 20, 2022
Date

Deputy Dir., D&C Division (CE 42276)

COUNTY OF VENTURA, SIDEWALK REPAIR STANDARDS "GREENBOOK" SPECIFICATION SECTION 303-5 (2021)

303-5 CONCRETE CURBS, WALKS, GUTTERS, CROSS GUTTERS, ALLEY INTERSECTIONS, ACCESS RAMPS, AND DRIVEWAYS.

303-5.1 Requirements.

303-5.1.1 General. Concrete curbs, walks, gutters, cross gutters, alley intersections, access ramps, and driveways shall be constructed of Portland cement concrete of the class and other requirements specified in 201-1. The finish coat to be applied to curbs shall consist of Class .B. mortar prepared as specified in 201-5.1. Subgrade preparation shall conform to 301-1.

Unless otherwise shown on the Plans, and except as otherwise specified in 303-5.1.3, the minimum thickness of walks shall be 3 inches (75 mm). The thickness of gutters, cross gutters, alley intersections, access ramps, and driveway aprons shall be as shown on the Plans.

303-5.1.2 Drainage Outlets Through Curb. Where existing building drains occur along the line of work, the new curb shall be suitably sleeved to provide for such drains. Similar sleeves shall be installed to serve low areas on adjacent property where drainage has been affected by the work. The location and size of the sleeves and construction of connecting sidewalk drains shall be as shown on the Plans or specified in the Special Provisions.

303-5.1.3 Driveway Entrances. Driveway entrances shall be provided in new curb at all existing driveways along the line of the work, at locations shown on the Plans, and at such other locations as may be designated by the Engineer.

The fully depressed curb opening at driveway entrances shall be 1 inch (25 mm) above gutter flowline at the curb face. The top of the fully depressed portion of the curb shall be finished to a transverse slope toward the gutter of 3/4 inch (19 mm).

Where a walk is to be constructed across driveways to commercial establishments, the thickness thereof shall be 6 inches (150 mm) unless otherwise specified or shown on the Plans. At residential driveways, the thickness of the walk will be 4 inches (100 mm) unless otherwise specified or shown on the Plans.

303-5.2 Forms.

303-5.2.1 Standard Forms. Forms shall be free from warp, with smooth and straight upper edges, and if used for the face of curb, shall be surfaced on the side against which the concrete is to be placed. Wooden forms for straight work shall have a net thickness of at least 1-1/2 inches (38 mm). Metal forms for such a work shall be of a gage that will provide equivalent rigidity and strength. Curb face forms used on monolithic curb and gutter construction shall be of a single plank width when the curb face is 10 inches (250 mm) or less, except for those used on curb returns. Forms used on curb returns shall be not less than 3/4 inch (19 mm) in thickness, cut in the length and radius as shown on the Plans, and held rigidly in place by the use of metal stakes and clamps. The curb face form shall be cut to conform exactly with the curb face batter as well as being cut to the required length and radius. Forms shall be of sufficient rigidity and strength, and shall be supported to adequately resist springing or deflection from placing and tamping the concrete.

Form material shall be clean at the time it is used and shall be given a coating of light oil, or other equally suitable material, immediately prior to the placing of the concrete.

All forms except back planks of curb shall be set with the upper edges flush with the specified grade of the finished surface of the improvement to be constructed, and all forms shall be not less than a depth equivalent to the full specified thickness of the concrete to be placed.

Back forms shall be held securely in place by means of stakes driven in pairs at intervals not to exceed 4 feet (1.2 m), one at the front form and one at the back. Clamps, spreaders, and braces shall be used to such extent as may be necessary to ensure proper form rigidity. Forms for walk, gutter, and similar work shall be firmly secured by means of stakes driven flush with the upper edge of the form at intervals not to exceed 5 feet (1.5 m). Form stakes shall be of sufficient size and be driven so as to adequately resist lateral displacement.

Commercial form clamps for the curb and gutter may be used provided they fulfill the requirements specified herein.

303-5.2.2 Slip-Forms. At the option of the Contractor and with the approval of the Engineer, slipform

equipment may be used for the construction of concrete curb and gutter.
Slip-form equipment shall be provided with traveling side and top forms of suitable dimensions, shapes, and strength to support the concrete for a sufficient length of time during placement to produce curb and gutter of the required cross section. The equipment shall spread, consolidate, and screed the freshly placed concrete to provide a dense and homogeneous product.
The slip-form equipment shall have automatic sensor controls which operate from an offset control line. The line and grade of the slip-form equipment shall be automatically controlled.
303-5.3 Placing Concrete. Concrete shall be placed on a subgrade sufficiently dampened to ensure that no moisture will be absorbed from the fresh concrete.
Concrete shall be placed in curb, gutter, and curb and gutter forms in horizontal layers not exceeding 6 inches (150 mm) in thickness, each layer being spaded along the forms and thoroughly tamped. Concrete may be placed in layers of more than 6 inches (150 mm) in thickness only when authorized by the Engineer and the spading and tamping is sufficient to consolidate the concrete for its entire depth.
After the concrete for walk has been placed, a strikeoff shall be used to bring the surface to the proper elevation when compacted. It shall be spaded along the form faces and tamped to assure a dense and compact mass, and to force the larger aggregate down while bringing to the surface not less than 3/8 inch (9.5 mm) of the free mortar for finishing purposes.
Concrete shall be placed in cross gutters in horizontal layers of not more than 4 inches (100 mm) in thickness, each layer being spaded along the form faces and thoroughly tamped into a dense and compact mass. If internal vibrators are used, the full specified thickness may be placed in one operation.
After the concrete has been placed and tamped, the upper surface shall be struck off to the specified grade.
303-5.4 Joints.
303-5.4.1 General. Joints in concrete curb, gutter, and walk shall be designated as expansion joints and weakened plane joints.
303-5.4.2 Expansion Joints. Expansion joints shall be constructed in curb, walk, and gutter as specified herein unless otherwise shown on the Plans. Such joints shall be filled with premolded joint filler conforming with the requirements prescribed in 201-3.2. No such joints shall be constructed in cross gutters, alley intersections, access ramps, or driveways except as may be approved by the Engineer.
Joints 1/4 inch (6 mm) thick shall be constructed in curb and gutter at the end of all returns except where cross gutter transitions extend beyond the curb return, in which case they shall be placed at theends of the cross gutter transition. No joints shall be constructed in returns. Where monolithic curb and gutter is constructed adjacent to concrete pavement, no expansion joints will be required except at the EC and BC of curb returns.
Expansion joint filler 1/4 inch (6 mm) thick shall be placed in walk at the EC and BC of all walk returns and around all utility poles which may project into the concrete along the line of the work. Joints 1/4 inch (6 mm) thick shall be constructed in walk returns between the walk and the back of curb returns when required by the Engineer. At the EC and BC and around utility poles, the joint filler-strips shall extend the full depth of the concrete being placed. Joint filler-strips between walk and curb shall be the depth of the walk plus 1 inch (25 mm) with the top set flush with the specified grade of the top of curb.
All expansion joint filler strips shall be installed vertically, and shall extend to the full depth and width of the work in which they are installed, and be constructed perpendicular to straight curb or radially to the line of the curb constructed on a curve. Expansion joint filler materials shall completely fill these joints to within 1/4 inch (6 mm) of any surface of the concrete. Excess filler material shall be trimmed off to the specified dimension in a neat and workmanlike manner. During the placing and tamping of the concrete, the filler strips shall be held rigidly and securely in proper position.
303-5.4.3 Weakened Plane Joints.
a) General. Weakened plane joints shall be straight and constructed in accordance with Subsections b) or c) below, unless otherwise shown on the Plans.
In walks, joints shall be transverse to the line of work and at regular intervals not exceeding 10 feet (3 m). At curves and walk returns, the joint shall be radial.
In gutter, including gutter integral with curb, joints shall be at regular intervals not exceeding 20 feet (6 m). Where integral curb and gutter is adjacent to concrete pavement, the joint shall be aligned with the pavement joints where practical.

b) Control Joint. After preliminary troweling, the concrete shall be parted to a depth of 2 inches (50 mm) with a straightedge to create a division in the coarse aggregate. The concrete shall then be refloated to fill the parted joint with mortar. Headers shall be marked to locate the weakened plane for final joint finishing, which shall be accomplished with a jointer tool having a depth of 1/2 inch (12.5 mm) and a radius of 1/8 inch (3 mm). The finished joint opening shall not be wider than 1/8 inch (3 mm).

c) Plastic Control Joint. The joint material shall be a T-shaped plastic strip at least 1 inch (25 mm) deep, having suitable anchorage to prevent vertical movement, and having a removable stiffener with a width of at least 3/4 inch (19 mm). After preliminary troweling, the concrete shall be parted to a depth of 2 inches (50 mm) with a straightedge. The plastic strip shall be inserted in the impression so that the upper surface of the removable stiffener is flush with the concrete. After floating the concrete to fill all adjacent voids, the removable stiffener shall be stripped. During final troweling, the edges shall be finished to a radius of 1/8 inch (3 mm), using a slit jointer tool.

303-5.5 Finishing.

303-5.5.1 General. Finishing shall be completed as specified herein for the type work being performed.

303-5.5.2 Curb. The front forms may be stripped as soon as the concrete has set sufficiently. Class .B. mortar, as prescribed in 201-5.1 and thinned to the consistency of grout, shall be immediately applied to the top and face of the curb. If monolithic curb and gutter is being constructed, this mortar shall be applied to the full exposed curb face; otherwise, it shall extend 2 inches (50 mm) below the gutter surface.

The face and top of the curb shall then be carefully troweled to a smooth and even finish; the top being finished to a transverse slope of 1/4 inch (6 mm) toward the gutter, with both edges rounded to a radius of 1/2 inch (12.5 mm). The troweled surface shall be finished with a fine-hair broom applied parallel with the line of the work. The edge of the concrete at all expansion joints shall be rounded to a 1/4 inch (6 mm) radius. The surface of the work shall be finished as prescribed; after which the name of the Contractor, together with the year in which the improvement is constructed, shall be stamped therein to a depth of 1/4 inch (6 mm) in letters not less than 3/4 inch (19 mm) high, at the BC and EC of curb returns.
Joints shall conform to 303-5.4.

303-5.5.3 Walk. The forms shall be set to place the finished surface in a plane sloping up from the top of curb 2 percent when measured at right angles to the curb.
Following placing, the concrete shall be screeded to the required grade, tamped to consolidate the concrete and to bring a thin layer of mortar to the surface, and floated to a smooth, flat, uniform surface. The concrete shall then be edged at all headers, given a preliminary troweling and provided with weakened plane joints.
Walk shall be steel troweled to a smooth and even finish. All formed edges shall be rounded to a radius of 1/2 inch (12.5 mm). Edges at expansion joints shall be rounded to a radius of 1/8 inch (3 mm). Preliminary troweling may be done with a long handled trowel or .Fresno,. but the finish troweling, shall be done with a hand trowel. After final troweling, walk on grades of less than 6 percent shall be given a fine-hair-broom finish applied transversely to the centerline. On grades exceeding 6 percent, walk shall be finished by hand with a wood float. Walk shall be remarked as necessary after final finish, to assure neat uniform edges, joints, and score lines.
Scoring lines, where required, shall have a minimum depth of 1/4 inch (6 mm) and a radius of 1/8 inch (3 mm). When longitudinal scoring lines are required, they shall be parallel to, or concentric with, the lines of the work. Walk 20 feet (6 m) or more in width shall have a longitudinal center scoring line. In walk returns, one scoring line shall be made radially midway between the BCR and ECR. When directed by the Engineer, longitudinal and transverse scoring lines shall match the adjacent walk. The Contractor shall have sufficient metal bars, straightedges, and joint tools on the Work site.
Headers shall remain in place for at least 16 hours after completion of the walk but must be removed before the Work is accepted.

303-5.5.4 Gutter. After the concrete has been thoroughly tamped to force the larger aggregate into the concrete and bring to the top sufficient free mortar for finishing, the surface shall be worked to a true and even grade by means of a float, troweled with a long handled trowel or .Fresno,. and wood-float finished.

The flowline of the gutter shall be troweled smooth for a width of approximately 4 inches (100 mm) for integral curb and gutter and 4 inches (100 mm) on either side of the flowline on cross gutters and longitudinal gutters. The outer edges of the gutter shall be rounded to a radius of 1/2 inch (12.5 mm). Side forms shall remain in place for at least 24 hours after completion of the gutter, but must be removed before the work will be accepted.

Joints shall conform to 303-5.4.

303-5.5.5 Alley Intersections, Access Ramps, and Driveways. Alley intersections, access ramps, and driveways shall be constructed as specified for concrete pavement in 302-6, except final finishing for alley intersections, access ramps, and the sloping portion of driveways shall be done by hand with a wood float and the remaining portion of the driveway finished as specified for walks in accordance with 303-5.5.3.

303-5.6 Curing. Immediately after finishing operations are completed, curing compound conforming to 201-4.1 shall be applied.

The curing compound shall be applied in a manner to entirely cover all exposed surfaces of the concrete with a continuous membrane.

No power equipment used for the preparation of subgrade will be permitted adjacent to concrete curb, gutter, or alley intersections until the fourth day following placement of the concrete. The placement of bituminous pavement adjacent to concrete curb, gutter, or alley intersections will not be permitted until the seventh day following the placement of concrete nor will concrete paving operations be permitted until the seventh day where placing or finishing equipment will ride on the previously placed concrete. If admixtures, additional cement or Type III cement is used to obtain high early strength concrete in accordance with 201-1, grading operations will be permitted on the second day following the placement of the concrete and paving operations on the third day.

303-5.7 Repairs and Replacements. Any new work found to be defective or damaged prior to its acceptance shall be repaired or replaced as approved by the Engineer.

303-5.8 Backfilling and Cleanup. Backfilling to the finished surface of the newly constructed improvement must be completed before acceptance of the Work.

Upon completion of the work the surface of the concrete shall be thoroughly cleaned and the site left in a neat and orderly condition.

303-5.9 Measurement and Payment. Payment for concrete curbs, walks, gutters, cross gutters, alley intersections, access ramps, and driveways will be made as shown in the Bid.

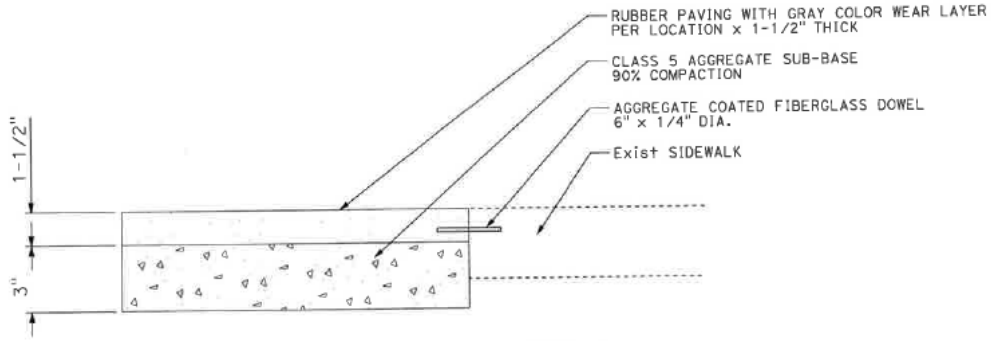
COUNTY OF VENTURA, SIDEWALK REPAIR STANDARDS

Rubber Sidewalk— Plan and Specification

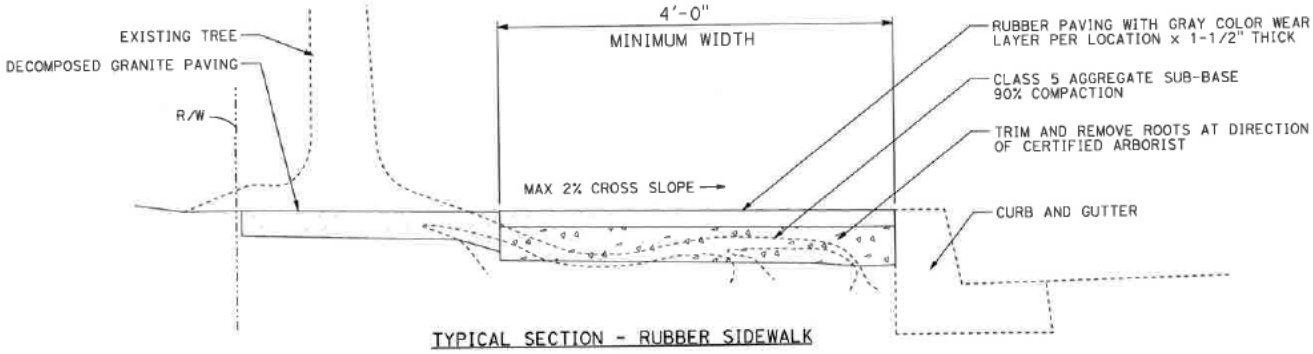
SCOPE

This specification describes the materials and placement of pourable rubber sidewalk according to the County standards. It is intended to be placed only where a sidewalk passes immediately adjacent to a tree, and only for the distance within the influence of the root zone. This specification is derived from Caltrans specifications.

Rubber sidewalk consists of a half-inch rubber wearing course over a 1-inch rubber base course (together called rubber paving), over a 3-inch layer of Class 5 aggregate (compacted). Beneath these two layers is leveled native soil, with no roots protruding. See the figures below.



TYPICAL SECTION - RUBBER SIDEWALK AT CONCRETE SIDEWALK



TYPICAL SECTION - RUBBER SIDEWALK AT CURB

The property owner shall construct the rubber sidewalk in accordance with Caltrans specifications, Section 25-1 CLASS 5 AGGREGATE SUBBASE and Section 73-5 PERMEABLE RUBBER SIDEWALK. These two specifications follow.

25-1 CLASS 5 AGGREGATE SUBBASE

25-1.01 GENERAL

25-1.01A Summary

Section 25-1 includes specifications for placing aggregate subbase for permeable rubber sidewalk.

25-1.01B Definitions

Permeable: Property of a material that permits movement of water through the material under ordinary hydrostatic pressure.

25-1.02C MATERIALS

Class 5 aggregate subbase must be clean and free of decomposed material, organic material, and other deleterious substances including cement, asphalt, reclaimed asphalt concrete, Portland Cement Concrete (PCC), and shall consist of the following:

1. Broken stone
2. Crushed gravel
3. Natural rough-surfaced gravel
4. Sand

Class 5 aggregate subbase gradation must be within the percentage passing limits for the sieve sizes shown in the following table:

Aggregate Gradation

Sieve size	Percentage passing
1/2"	100
3/8"	95
1/4"	75
No.4	62
No. 8	35
No. 16	20
No. 30	12-13
No. 40	10-11

25-1.03 CONSTRUCTION

Compact the Class 5 aggregate subbase to at least 90 percent relative compaction.

73-5 PERMEABLE RUBBER SIDEWALK

73-5.01 GENERAL

73-5.01A Summary

Section 73-5 includes specifications for constructing permeable rubber sidewalks. Class 5

aggregate subbase must comply with section 29-4

73-5.01B Definitions

Permeable rubber sidewalk: Porous rubber pavement system consisting of a permeable aggregate subbase, a base layer of crumb rubber and binder, and a wear layer of granulated rubber and binder that allows air and water to infiltrate from the sidewalk to the subsoil below.

Wear layer: The top layer of the permeable rubber sidewalk composed of granulated rubber (EPDM) and a clear polyurethane binder containing UV inhibitors.

Base Layer: The base layer lies just beneath the wear layer and is composed of crumb rubber and amber-colored polyurethane binder.

Binder: The binder is a moisture-curing formula composed of solvent-free polyurethane.

Crumb rubber: crumb rubber is derived from recycled scrap tires or industrial rubber.

EPDM (ethylene propylene diene monomer): EPDM is a rubber product that can be applied in granulated form with a binder to create the wear layer.

Permeable aggregate subbase: The bottom layer of the permeable rubber sidewalk composed of stone, gravel, and sand.

73-5.01C Submittals

At least 21 days before construction, the applicant must submit for County review and approval:

1. A sample of multi-layer rubber sidewalk pavement system with the specified color wear layer
2. A sample of loose granulated crumb rubber sidewalk material
3. Manufacturer's product information,
4. Installation instructions,
5. Manufacturer, Supply, Distribution (MSD) sheets

73-5.01D Quality Control and Assurance

A certified arborist must oversee the pruning or removal of tree roots within the project area.

If the base layer of the permeable rubber sidewalk is being attached to an existing concrete sidewalk, the concrete surface must be level, clean, and without cracks.

Store rubber surfacing components in a secure, clean, dry location at a temperature above 55°F.

Do not store rubber surfacing components outside unless fully protected from moisture with a 10 mil polyethylene barrier and tarpaulin.

Rubber surfacing components must remain free of moisture at all times. Moisture can cause the polyurethane binder to foam during mixing.

The polyurethane binders can stain surfaces. Protect surrounding work areas from contact.

Clean mixing containers to prevent intermingling of base layer and wear layer material.

73-5.02 MATERIALS

73-5.02A Binder:

The type of binder must comply with manufacturer recommendations for use with crumb rubber in base layer and EDPM granules in wear layer.

73-5.028 Crumb Rubber:

Crumb rubber is recycled tire material shredded and ground into granules between 0.04 and 0.12 inches in size.

73-5.02C EPDM:

EPDM (ethylene propylene diene monomer) is rubber material granulated to between 0.04 and 0.12 inches in size and manufactured in various colors

73-5.020 Forms:

1. Must be smooth on the side placed against the rubber surfacing.
2. Set to the required alignment, grade, and dimensions with a straight upper edge.
3. Be coated with liquid detergent prior to placing the rubber surfacing to allow the release of the forms.

73-5.03 CONSTRUCTION

73-5.0JA General

Permeable rubber sidewalk surfacing installation consists of a permeable aggregate subbase, a minimum 1 inch thick base layer of crumb rubber and amber-colored polyurethane binder, and a 1/2 inch wear layer consisting of EPDM granules and clear polyurethane binder containing UV inhibitors. Both top layers are mixed on site and formed in place by hand.

73-5.03B Site Prep

Before spreading the permeable aggregate sub-base, the subgrade must be tamped and be free from loose or extraneous material.

73-5.0JC Installation

1. The crumb rubber base layer must be placed on top of a 3 inch thick minimum permeable aggregate subbase. The permeable subbase material must be dry before the base layer is placed. Do not wet the sub-base prior to the placement of the base layer.
2. Embed aggregate coated fiberglass dowels with epoxy 3 inches deep into edges of existing concrete sidewalk where rubber sidewalk is attached, 3 inches from each corner, evenly spaced across the face of the joint at maximum 24 inches on center, and 1 inch below existing sidewalk surface. Aggregate coated fiberglass dowel is 6 inch x 1/4 inch diameter.
3. To ensure adhesion of the base layer and wear layer to the existing sidewalk, prime the

concrete edges with binder 30 minutes prior to placing the rubber surfacing.

4. Spread, lightly tamp, and level the base layer to 1/2 inch below the top edge of the form and allow to cure.

5. Spread and level the wear layer to within 1/32 inch of the adjoining concrete sidewalks.

6. Spread the wear layer rubber surfacing by screed and troweling.

7. Do not compact the wear layer rubber surfacing.

73-5.03D Curing

Follow manufacturer's instructions to cure the permeable rubber sidewalk base layer and wear layer at each installation step.