# Douglas County Roadway Design and Technical Criteria Manual

## I. Purpose

Below is a construction tolerance list to aid in the construction of subdivision improvements, and to provide technical guidelines for acceptance by Douglas County Department of Public Works. It is to be used by the owner/developer prior to any acceptance inspection for repairs or replacement of work to meet Douglas County as guidelines during construction, probationary and final acceptances.

This list of construction specification tolerances are additions to the latest edition of the Colorado Department of Highways Standard Specification for Road and Bridge Construction, Special Provisions and revisions thereto and by the current subdivision regulations of Douglas County, Colorado.

## II. Tolerances

#### A. Curb, Gutter, Walk, Crosspans, etc.

1.

Any localized humps and/or depressions greater than 1/4 inch (as measured with a 10 foot straight edge) will require removal and replacement of the work in question.

2.

No ponding of water greater than 3/8 inch shall be allowed.

3.

Combination curb, gutter and walk and/or vertical curb and gutter flowline depth shall not vary from adopted standards by more than +1/2 inch, measured vertically from the top of curb to the gutter invert.

4.

Pedestrian walks shall have a minimum of 1.0 percent and a maximum of 2.0 percent slope toward the roadway.

5.

Contraction and construction joints shall be placed at the maximum spacing of 10 feet in curb, gutter, sidewalks, crosspans, trickle channel, etc. For detached walk, joints spacing shall match the width of the sidewalk. For curb, gutter, and sidewalk adjacent to concrete pavement, joint spacing shall match the concrete pavement. A minimum spacing of 5 feet will be allowed for repairs.

6.

Heave or settlement of sidewalk, relative to separate curb pour, greater than 1/4 inch shall be cause for corrective action. This provision shall not apply to transverse sidewalk joints.

## **B.** Roadways

#### 1. Gravel Roadways

a)

If gravel surface is the final surface for the roadway or shoulder, then the manholes, water valves, etc. shall be buried 7 inches below the final grade.

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## 2. Asphalt Roadways

a)

All manholes, water valves, range boxes, etc., shall be 1/4 inch to 1/2 inch below the final paved grade. The finish grade of pavement shall be 1/4 inch above the rim elevation with a 2 foot transition provided.

b)

Any humps and depressions greater than 1/4 inch as measured with a 10 foot straight edge shall be cause for corrective measure.

c)

Additional asphalt thickness of up to 1/2 inch will be permitted at the joint of the roadway and gutter pan and will be included in the actual asphalt thickness. In no case will asphalt in excess of 1/2 inch above the lip of the gutter pan be accepted.

# 3. Concrete Roadways

a)

All manholes, water valves, range boxes, etc., shall be flush to 1/4 inch below the final surface roadway grade.

# **III. General Specifications**

### A. Curb, Gutter, and Walk, Crosspans, etc.

1.

No utility facilities shall be placed in curb, gutter or walk, crosspans, etc., unless shown on the approved construction plans. This includes water stop box, manholes, power poles, fire hydrants, water valves, etc.

#### 2. Concrete Cracks

a)

At the time of initial or final acceptance inspection, no cracks, except for hairline cracks, will be accepted and shall be removed to the nearest control joints. Any hairline cracks left in place shall be sealed with methacrylate or similar or similar product to prevent water infiltration.

b)

Hairline cracks will be allowed unless the crack is located longitudinally in the flowline of the gutter or are due to poor workmanship, which would then require action per 2.a) above. For the purpose of this section, a hairline crack is one that is reasonably immeasurable and without separation or vertical displacement as determined by Douglas County.

## 3. Final Grade

a)

A light broom finish (not to expose the aggregate) to all concrete shall be required.

b)

All concrete work shall have the proper finished grade. No reversal of the flow path will be accepted by Douglas County.



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c)

No abrupt changes in the grade shall be allowed, i.e., curb returns from new existing, driveway entrances, etc.

## **B.** Roadways

## 1. Asphalt

a)

Individual and non-deflecting cracks in the asphalt shall, at the discretion of Douglas County, be sealed with hot applied rubberized asphalt sealant approved by Douglas County, to include cracks or open sawed joints at patch areas. Infrared patching will be allowed for minor asphalt repairs at the discretion of the Douglas County Inspector.

### 2. Concrete

a)

At initial acceptance, no cracks will be allowed and shall be repaired on a full panel basis.

b)

At final acceptance, no cracks will be allowed and shall be repaired on a full panel basis.

c)

All saw cuts for removal of slabs shall be full depth cuts.

d)

All panels with faulted joints resulting from settlement, pumping, and/or curling of the edges shall be repaired by removal and replacement, or in the case of curling, may be repaired by grinding at the discretion of the Representative of the County.

e)

All joint seal damage that allows the intrusion of water or foreign material shall be cleaned and replaced in accordance with County Standards.