

# Borough of Lewistown

Pennsylvania

Codes Enforcement Office

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## SIDEWALK AND CURB REGULATIONS

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### SECTION 1. GENERAL PROVISIONS

1.1 Drawings—All curbs, sidewalks, and curb cuts shall conform with Penn Dot standard drawings Publication 72m, April 2004 Edition, Page RC64M.

1.2 Materials—Concrete shall be used for all structures and shall comply with the following requirements.

Cement: Class A Cement shall be Compressive 3300 (or equal strength) PSI Strength Air-Entrained Portland Blast Furnace Slag Cement.

Fine Aggregate: Sand shall be composed of hard, durable grains thoroughly cleaned by washing, free from lumps of clay and all vegetable and deleterious substances.

Course Aggregate: Type C or better, Number 2A, shall be prepared from durable rock, free from slate texture or cleavage planes.

Water: Water shall be clean, free from vegetable matter, oil, acid, or alkali.

1.3 Proportioning of Materials—When mixing the above mentioned materials to produce a concrete mix, the following proportions by weight shall be used:

- 1 Part Cement
- 2 Parts Fine Aggregate
- 3 Parts Course Aggregate

The amount of water used per bag of cement shall be the minimum to obtain a satisfactory, workable concrete, but shall not exceed 5.6 gallons, including the free water in aggregate.

1.4 Placing and Finishing Concrete—The concrete shall be placed in the forms in horizontal layers not to exceed 5 inches, and spaded sufficiently to eliminate all voids. The exposed surface shall be finished true to line and grade in a smooth, neat, and even manner by means of wood floats, and the edges shall be

rounded to a radius as indicated on the detail drawings or to match the existing curb or sidewalk. Cements should be spread on a layer of Number 2A to a minimum compacted depth of 3 inches.

1.5 Clean-up—After the construction has been completed and all backfill made, any excess material shall be removed from the site and cleaned up to the satisfaction of the Borough Manager/Secretary or staff.

1.6 Rejection of Work—All work rejected by the Borough shall be promptly removed and replaced, at the expense of the property owner.

## SECTION 2. NEW PLAIN CEMENT CONCRETE CURB

2.1 Forms—Forms for the curb shall be wood or metal. Forms shall be straight, free from warp, and of sufficient strength when staked to resist the pressure of the concrete without springing. Metal forms shall be of approved section and shall have a flat surface on top. These forms shall be of depth equal to the depth of the curb, designed to permit secure fastening of the face and back forms at the top. These fastenings shall be constructed in a manner that will not obstruct satisfactory finishing and edging of the top of the curb but will permit removal of the inside face forms. The inside face forms shall have a batter from the top of the curb to the finish surface line of the pavement, and shall be straight from this line to bottom. Steel templates 1/8 inch thick, of the width of the curb and not less than 2 inches longer than the depth of the curb, shall be used to separate adjacent section. All forms shall be thoroughly cleaned and treated with oil before being used. Forms shall be accurately set to line and grade in a manner to prevent settlement or displacement.

A. Curb Machine—The curb may be placed with an acceptable self propelled machine.

2.2 Excavation—Excavation shall be made to the required depth and the material upon which the curb is to be constructed shall be compacted to a firm, even surface.

2.3 Curb Joints—The curb shall be constructed in uniform lengths or sections of 10 feet, except where shorter sections are necessary for closure or curves, but no section shall be less than 4 feet. Premoulded expansion joints 3/4 inch in thickness and cut to conform to the cross section of the curb, shall be placed at the ends of sections of curved curb and at intervals of not more than 120 feet.

2.4 Removal of Forms—The face form shall be removed to correct irregularities in the face of the curb.

## SECTION 3. REPLACEMENT OF DAMAGED OR BROKEN CURB

3.1 Forms for this type of curb replacement may be either wood or metal. Forms shall be straight, free from warp, and of sufficient strength to resist the pressure of the concrete without springing. These forms shall be to a depth of 18 inches in the front and 8 inches in the back, unless backed up with sidewalk, in which case no back form will be required. The remainder of the back excavation may be made to a neat vertical plane and concrete poured to this vertical plane.

3.2 Excavation—A minimum section of 3 feet of curb length shall be replaced. The outside limits shall be cut with a concrete saw, in a neat vertical plane to a depth of at least 8 inches below the top of the curb, and then the entire section of curb shall be removed to the full depth of the old curb. Some excavation in the roadway area in front of the curb may be necessary for access to the bottom of the old curb, and to set forms for the new section of curb. The material, upon which the new curb is to be placed, shall be a firm, even and solid surface.

3.3 Curb Joints—The curb shall be constructed in uniform lengths or sections of 10 feet, except where shorter sections are necessary for closure or curves by no section shall be less than 4 feet in length. Pre-molded expansion joints 3/4 inch in thickness and cuts to conform to the cross-section of the curb shall be placed at the ends of the sections.

3.4 Removal of Forms—Shall be in accordance with Section 2.4.

3.5 Curb Dimensions—The dimensions of the curb to replace that which was moved shall be exactly as that which was removed, and the line and grade shall meet that undisturbed portion at each end.

3.6 Backfilling and Embankment—As soon as possible after removal of forms.

#### SECTION 4. SKIN PATCH EXPOSED SURFACE OF EXISTING CURB

4.1 Forms—When repairing small sections of exposed areas of existing curbs, forms shall be placed on the front and back of the curb and securely fastened. Those forms shall cover the entire area to be repaired. If the back is adjacent to the sidewalk, no forms will be required on the back. These forms shall extend above the top of the curb grade and line.

4.2 Removal of Broken Concrete—That portion of curb to be repaired shall be cleaned of all loose concrete and foreign material before the new concrete is placed. The minimum length of curbs which can be repaired will be 1 foot and for the full thickness of the curb. The minimum allowable depth for repairs will be 6 inches. Should the repair area be less than these minimum, additional concrete shall be removed to obtain these minimums. Should the existing curb be fractured below the roadway surface, this type of curb repair will not be acceptable and Section 3 of these specifications will govern.

4.3 Removal of Forms—Shall be in accordance with Section 2.4.

4.4 Curb Dimensions—Shall be in accordance with Section 3.5.

#### SECTION 5. CURB CUTS OR DROP CURB

5.1 The Curb Cut or Drop Cut shall be shaped at the time the concrete is placed. The ends of the Curb Cut shall be shaped by hand and shall be sloped from the top of the normal curb in a distance of 2 feet. In the curb cut section a reveal of 2 inches minimum shall be retained and the slope of the top of the Curb Cut shall be required to meet existing conditions.

#### SECTION 6. CEMENT CONCRETE SIDEWALK

6.1 Construction Method—

- (1) Preparation of Foundation. The foundation for the bed shall be formed at a depth of 8 inches below and parallel with the finished surface of the sidewalk. Unsuitable materials shall be removed and replaced with acceptable material, and the foundation shall be thoroughly compacted and finished to a firm, even surface.
- (2) Placing Aggregate for Bed. The approved aggregate shall be spread on the prepared foundation and compacted to a minimum 4 inches in thickness. If cinders are used they shall be saturated thoroughly before placing the concrete.

- (3) Forms. Forms shall be of wood or metal, straight, free from warp and of sufficient strength when staked to resist the pressure of the concrete without springing. Forms shall have a depth equal to the depth of the concrete, and shall be thoroughly cleaned and oiled before concrete is placed against them.
- (4) Joints. Sidewalks shall be constructed in separated slabs 30 feet in length except for closures. These slabs shall be separated by transverse pre-molded expansion joints, 3/4 inch in thickness, for the full depth of the concrete. Transverse pre-molded expansion joints shall be placed adjacent to existing structures where directed. The slabs between joints shall be divided into blocks 5 feet in length, by scoring transversely. Where the slabs are more transverse and longitudinal scoring shall extend for a depth of at least 1/4 inch the thickness of the concrete slab. Pre-molded expansion joints, 1/4 inch in thickness for the full depth of the concrete, shall be placed longitudinally where the sidewalk slab is to be constructed in contact with curb. An edger have 1/4 inch radius shall be used for edging all joints.
- (5) Removal of Forms—Side forms shall not be removed within 24 hours after the concrete has been placed.
- (6) Sealing—All expansion joints and scoring cracks shall be sealed with bituminous material.

<b>SECTION 7. COMBINATION CEMENT CONCRETE SIDEWALK AND CURB</b>
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7.1 Description—Combination Cement Concrete Sidewalk and Curb shall consist of placing the reveal portion of the curb and the sidewalk as one unit.

7.2 Construction Method—

- (1) Preparation of Foundation. All existing curb and sidewalk shall be removed completely. The curb portion shall be removed to appoint 18 inches below the existing road surface. The foundation shall be thoroughly compacted and finished to a firm, even surface.
- (2) Placing Aggregate for Sidewalk Bed. Shall be in accordance with Section 6.1.
- (3) Forms. Shall be in accordance with Section 6.1. Forms for the curb section shall set on the existing road surface and be securely fastened and shall extend above established line and grade. If the adjoining curb has batter, this batter shall exist in the new curb.
- (4) Joints. Shall be in accordance with Section 6.1.
- (5) Removal of Forms. Forms shall not be removed within 48 hours after concrete has been placed.

<b>SECTION 8. DAMAGE TO BOROUGH STREET</b>
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8.1 Description – Any damage to the Borough Street surface shall be replaced at the expense of the contractor and/or owner of the property. The cost shall be set forth by the Borough of Lewistown year to year due to fluctuating costs.

8.2 Method – All damaged surface materials shall be removed and 2RC stones or cold patch shall be tamped in place of the damaged area.