

CONCRETE CONSTRUCTION GUIDELINES AND PROCEDURES

Dump Site:

Contractors are responsible for finding their own site for disposing of concrete.

Minimum Sidewalk Width Requirement

All sidewalks must be constructed to match existing width.

Utility Location

Prior to doing removals, you should contact Gopher State One-Call at 1-800-252-1166 to have the utilities in the area located.

Standard Specifications and Drawings

Attached is a copy of MNDOT's Standard Specifications 2521 (Walks) for your reference. These are the guidelines used for concrete construction in the City. Also attached are copies of SS drawing 8, Pedestrian Curb Ramp drawing, MNDOT drawing 7100G that cover concrete construction. I would like to point out some of the more important details in the enclosed specifications:

1. The maximum slump allowed is three (3) inches.
2. Contraction joints have to be at least one-third (1/3) the depth of the slab.
3. Flat work in the City right-of-way must have a broom finish for traction.

Water Stop Boxes

You are responsible for making sure the water stop boxes are raised and accessible.

2521.1 DESCRIPTION

This work shall consist of concrete walkway construction in accordance with these Specifications and close conformity with the liens and grades indicated in the Plans.

2521.2 MATERIALS

- A. Concrete, Mix No. 3A32.....2461 (4000 psi 6% air intrained minimum)
- B. Concrete, Mix No. 3A36.....2461 (4000 psi 6% air intrained)
- C. Granular Materials.....3149

2521.3 CONSTRUCTION REQUIREMENTS

A. Foundation Preparations

The foundation shall be excavated, shaped, and compacted to a firm, uniform bearing surface, conforming to the planned section and established grade. Unsuitable subgrade soils shall be removed and replaced as directed. Granular material, as specified and where required by the Plans, shall be furnished, placed, and compacted thoroughly to the required depth.

B. Forms

Forms shall be of wood or metal, coated on the contact face with form treating material, and in a condition that will allow proper finishing and subsequent form removal. The form height shall be at least that of the planned walk thickness.

C. Concrete

C1 Placing and Finishing Concrete

The foundation and forms shall be thoroughly wetted immediately prior to the placing of the concrete.

The concrete shall be placed, consolidated to fill all voids, struck off to the required grade, and floated smooth. After the water sheen has disappeared, the joints shall be edged and the surface lightly brushed to a uniform texture.

The surface shall not vary more than 5 mm (3/16 inch) from a 3 m (10-foot) straight edge, and the formed concrete shall be within 13 mm (1/2 inch) of the required location.

C1a Exposed Aggregate Finish

Concrete Mix No. 3A36, modified for exposed aggregate construction shall conform to the requirements of MN/DOT 3137 CA-50 and be multi-colored rounded stone. Provide an exposed aggregate finish using surface retardation to produce a medium to deep exposure, so that the aggregate becomes the dominant surface feature. Embedment or top seeding of aggregate is not permitted.

C2 Joint Construction

The walk shall be divided into panels of uniform size, outlined with contraction or expansion joints as required by the Plans. The panels shall be squared where practicable and generally have not more than 3 m² (36 square feet) of area.

Joints shall be vertical and straight, and be parallel with or at right angles to the walk centerline where possible. The joints shall align with like joints in adjoining work unless the work is isolated by 13 mm (1/2) inch preformed joint filler.

All joints and edges of the walk shall be rounded with a 6 mm (1/4 inch) radius edging tool. All joints shall extend to at least 30 percent of the walk thickness and shall be approximately 3 mm (1/8 inch) wide.

Expansion joints shall be 13 mm (1/2 inch) wide and shall be equal in depth to the full thickness of the walk.

Preformed joint filler material, 13 mm (1/2 inch) thick, shall be placed adjacent to all fixed objects so as to separate the object from the abutting concrete edges.

D. Backfilling

Following removal of the forms, the area adjacent to the walk shall be finished in a neat and workmanlike manner using material obtained from the excavation. Surplus excavated materials shall be disposed of by the Contractor.