

THE CRAWFORD COUNTY ROAD COMMISSION

REQUIREMENTS & SPECIFICATIONS FOR ROAD CONSTRUCTION IN CRAWFORD COUNTY, MICHIGAN

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INTRODUCTION

Purpose

The Board of County Road Commissioners of the County of Crawford, recognizing our responsibility to assure that public roads are constructed using adequate practices and materials, have authorized and published these Requirements and Specifications for Road Construction, thereby to inform and assist municipalities, land developers, and others of acceptable standards for public and private roads coming under our jurisdiction.

Authority

This document is promulgated pursuant to the provisions of Act 288, Public Acts of 1967, the Subdivision Control Act as amended; and of Act 51, Public Acts of 1951 as amended, part of Michigan highway law.

DESIGN STANDARDS

General

Road design shall conform to the following:

A Policy on Geometric Design of Highways and Streets, American Association of State Highway and Transportation Officials (AASHTO), current edition.

Design Guidelines AASHTO Interim Structural Pavement Design Procedure, Engineering Services Division, Michigan Department of Transportation.

Design speed shall be consistent with the functional classification of the road, and with the volume of traffic served. Design traffic volume shall be chosen to allow for future demand.

Geometry

Provide horizontal and vertical alignment and cross-section dimensions, which are consistent with the design speed.

Comply with the following minimum cross-section requirements, for new construction. These dimensions provide for a 30-foot-wide constructed width. Where functional classification and traffic volume warrant, wider cross-section dimensions and higher standards will be required.

Right-of-way	Width 66 feet
Lane Width	11 feet (paved)
Shoulder Width	4 feet (23A gravel)
Crown	0.02 feet per foot
Foreslope	1:3
Ditch Depth	2.0 feet below finished grade
Backslope	1:2 or flatter

Drainage

Provide acceptable drainage facilities in the form of curbs, gutters, drains, sewers, culverts, bridges, and other elements. Acceptable facilities are those which provide for safely carrying away intercepted water, and for removing water from the road surface and subsurface components, all without flooding, erosion, or sedimentation.

Drainage design shall conform to the following:

Highway Drainage Guidelines, Volume 1-7, AASHTO, current edition.

CONSTRUCTION STANDARDS

Materials

Materials used in construction shall conform to the requirements of the approved plans. Unless specifically otherwise provided for in the approved plans, all materials and construction shall conform to the Michigan Department of Transportation Standard Specifications for Construction, current edition. Materials shall be tested in accordance with those standards, and written documentation of compliance shall be furnished, prior to final acceptance of the road.

Subgrade

In wet areas and areas of unstable soils, the subgrade shall be excavated to a stable base and back filled with porous material. Remove all trees, brush, roots, and other deleterious material. Subgrade elevation shall be as required to provide a finished grade at least 2 feet above known water levels.

Subbase

In areas of poorly draining subgrades, provide a minimum of 10 inches of Class II or III Granular subbase. In areas of freely draining subgrade, subbase is not required. Trim the subbase to match the design crown.

Gravel Base Course

Place gravel base course only after the subgrade or subbase is approved. Base course shall be not less than 6 inches of 23A aggregate. Trim and compact the base course to the required thickness and crown.

Bituminous Surface Course

Place bituminous surface course only after the gravel base course is approved. Bituminous surface course shall be not less than 2 inches compacted thickness (220 lbs. per square yard) of bituminous mixture number 13A. The County Engineer prior to placement must approve Mix design.

Bituminous lane width shall be 11 foot for the traveled portion.

The Board of Road Commissioners and the County Engineer reserved the right to require additional bituminous lane widths to facilitate the need of unique considerations; Examples: Non-motorized traffic, special drainage details, etc.

Drainage

Existing county road ditches county drains or watercourses shall be cleaned when necessary to provide adequate drainage. Drainage ditches shall be constructed on each side of the roadway to provide adequate surface and sub-surface drainage. Where deemed necessary, an approved drainage system shall be installed in the subbase of the road. Ditches shall be seeded and mulched, except that ditches having a gradient steeper than 4% shall be sodded. Ditches shall be stabilized and free of sedimentation, prior to acceptance of roads.

Erosion Control

Design and manage construction so as to conform to the following:

Act 346, 1972: The Inland Lakes and Streams Act

Act 347, 1972: The Soil Erosion and Sedimentation Control Act

Local Soil Erosion Control Ordinance or requirements.

Prepare a project soil erosion and sedimentation control program for approval by local agent having jurisdiction. The program shall, as a minimum, provide for the following:

Prevent sediment owing to construction from leaving the construction site.
Prevent increased runoff owing to construction from damaging downstream locations.

Restore to stable vegetated surface, all project areas disturbed by construction.

Minimum acceptable restoration treatment is 60 pounds per acre of seed with 240 pounds per acre of chemical fertilizer nutrient and two tons per acre of mulch on two inches of topsoil.

Signs and Pavement Marking

Each project, during construction, and upon completion shall conform to the requirements of the Michigan Manual of Uniform Traffic Control Devices, Current Edition.

Inspection Requirements:

Preliminary Plat:

- a. Plan and profile and site plan shall be submitted for the Road Commission's review.

Construction:

Inspections shall be conducted by the Crawford County Road Commission at the following intervals.

- a. After clearing and grubbing of site and prior to sand grade construction.
- b. After construction of sand grade and prior to placing gravel base course.
- c. After construction of Gravel grade and prior to paving.
- d. During application of bituminous surface course.
- e. Final inspection after, traffic control devices are installed and seed and mulch is applied.

Inspection fee of \$500.00 shall be paid to the Crawford County Road Commission before any inspection shall take place.

Crawford County Road Commission personnel shall be on site prior to commencing bituminous surface course application. It is the intent of the Crawford County Road Commission to provide inspection during the application.

LEGAL REQUIREMENTS

Permits

Conform to the permitting requirements of federal, state, and local authorities having jurisdiction, including (not limited to) United States Army Corps of Engineers, Michigan Department of Natural Resources, Michigan Department of Public Health, Michigan Department of Transportation, The Road Commission For Crawford County, other. Obtain all necessary permits before starting construction.

Insurance

Carry in effect, those kinds and amounts of Public Liability, Property Damage, Motor Vehicle, Worker's Compensation, and other insurance as might be deemed necessary by The Road Commission for Crawford County for the orderly undertaking of a particular project.

Upon request by The Road Commission for Crawford County, provide certificates or other appropriate evidence of the kinds and amount of insurance carried and in effect.

Public Safety

Ensure to the satisfaction of The Road Commission For Crawford County that the safety of users of roads coming under their jurisdiction is adequately provided for and protected during and after construction of the road. Safety provisions might include (not be limited to) acceptable detours, barricades, flagging, details of design and construction, pavement marking, signs, others, as might be appropriate to the requirements of a particular project

Specifications revised at the regular Board meeting of the Board of Road Commissioners of Crawford County on August 17,2000.
Revisions included elimination of paved shoulders, adding 23A gravel shoulders, and reserving the right to require additional bituminous width for special considerations.

Specifications revised at the regular Board meeting of the Board of Road Commissioners of Crawford County on September 9, 2004.
Revisions include the Inspection requirement section.