

- d. Neither cause nor contribute to, directly or indirectly, the violation of state or federal water quality standards applicable to receiving waters.
  - e. Refrain from seriously altering the normal flow of water in streambeds or drainage channels.
  - f. Prevent or control damage to public or private property, including the prevention or mitigation of adverse effects on lands within the boundaries of units of the national park system, the national wildlife refuge system, the national system of trails, the national wilderness preservation system, the wild and scenic rivers system, including designated study rivers, and national recreation areas designated by act of Congress.
9. Use nonacid-forming and nontoxic-forming substances in road surfacing.
3. The design and construction or reconstruction of roads must incorporate appropriate limits for grade, width, surface materials, surface drainage control, culvert placement, and culvert size, in accordance with current, prudent engineering practices, and any necessary design criteria established by the commission.
  4. Roads must be located to minimize downstream sedimentation and flooding, but in no case may roads be located in the channel of an intermittent or perennial stream unless specifically approved by the commission under section 69-05.2-16-20, and all other applicable requirements of chapter 69-05.2-16 are met.
  5. Roads must be maintained to meet the performance standards of this chapter and any additional criteria specified by the commission.
  6. A road damaged by a catastrophic event, such as a flood or earthquake, must be repaired as soon as is practicable after the damage has occurred.

**History:** Effective August 1, 1980; amended effective May 1, 1992; April 1, 2007.

**General Authority:** NDCC 38-14.1-03

**Law Implemented:** NDCC 38-14.1-24

**69-05.2-24-02. Performance standards - Roads - Location.** Repealed effective May 1, 1992.

**69-05.2-24-03. Performance standards - Roads - Design and construction of primary roads.** Primary roads must meet the requirements of section 69-05.2-24-01 and the additional requirements of this section.

1. The construction or reconstruction of primary roads must be certified in a report to the commission by a qualified registered professional engineer with experience in the design and construction of roads. The report must indicate that the primary road has been constructed or reconstructed as designed and in accordance with the approved plan.
2. Each primary road embankment must have a minimum static factor of safety of 1.3.
3. To minimize erosion, a primary road must be located, insofar as is practicable, on the most stable available surface.
4. Fords of perennial or intermittent streams by primary roads are prohibited unless they are specifically approved by the commission as temporary routes during periods of road construction.
5. In accordance with the approved plan, all primary roads must:
  - a. Be constructed or reconstructed and maintained to have adequate drainage control, using structures such as bridges, ditches, cross drains, and ditch relief drains. The drainage control system must be designed to safely pass the peak runoff from a ten-year, six-hour precipitation event, or greater event as specified by the commission.
  - b. Have drainage pipes and culverts installed as designed. Both must be maintained in a free and operating condition and erosion at inlets and outlets must be prevented or controlled.
  - c. Have drainage ditches constructed and maintained to prevent uncontrolled drainage over the road surface and embankment.
  - d. Have culverts installed and maintained to sustain the vertical soil pressure, the passive resistance of the foundation, and the weight of vehicles using the road.
  - e. Not alter or relocate natural stream channels unless specifically approved by the commission under section 69-05.2-16-20 and all other applicable requirements of chapter 69-05.2-16 are met.
  - f. Except as provided by subsection 4, construct perennial or intermittent stream channel crossings using bridges, culverts, low-water crossings, or other structures designed, constructed, and maintained using current, prudent engineering practices. The commission will ensure that low-water crossings are designed, constructed, and maintained to prevent erosion of the structure or streambed and additional contributions of suspended solids to streamflow.