

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD**

**ACCESS ROAD
(ft)
CODE 560**

DEFINITION

A travelway constructed as part of a conservation plan.

to very high standards. Some trails facilitate control of forest fires are used for logging, serve as access to remote areas for recreation, or are used for maintenance of facilities.

SCOPE

This standard applies to vehicular and equipment roads constructed to provide access to farms, ranches, fields, conservation systems, structures, woodlands, recreation areas, and construction sites.

Where general public use is anticipated, roads should be designed to meet applicable federal, state, or local criteria.

PURPOSE

To provide a fixed route for travel for moving livestock, produce, equipment, and supplies; and to provide access for proper operation, maintenance, and management of conservation enterprises while controlling runoff to prevent erosion and maintain or improve water quality.

Sound engineering practices shall be followed to insure that the road meets the requirements of its intended use and that maintenance requirements are in line with operating budgets.

Location. Roads shall be located to serve the purpose intended, to facilitate the control and disposal of water, to control or reduce erosion, to make the best use of topographic features, and to include scenic vistas where possible. The roads should generally follow natural contours and slopes to minimize disturbance of drainage patterns. Roads should be located where they can be maintained and so water management problems are not created. To reduce pollution, roads should not be located too near watercourses.

CONDITIONS WHERE PRACTICE APPLIES

Where access is needed from a private or public road or highway to a conservation enterprise or measure, or where travelways are needed in a planned land use area.

Alignment. The gradient and vertical and horizontal alignment shall be adapted to the intensity of use, mode of travel, and the level of development.

DESIGN CRITERIA

Access roads shall be designed to serve the enterprise or planned use with the expected vehicular or equipment traffic. The type of vehicle or equipment, speed, loads, climatic, and other conditions under which vehicles and equipment are expected to operate need to be considered.

Grades normally should not exceed 10 percent except for short lengths, but maximum grades of 20 percent or more may be used if necessary for special uses.

Visual resources and environmental values shall be considered in planning and designing the road system.

Width. The minimum width of the roadbed is 14 ft for one-way traffic and 20 ft for two-way traffic. Single-lane logging or special-purpose roads have a minimum width of 10 ft, with greater widths at curves and turnouts. The two-way traffic width

Access roads range from seldom used trails to all-weather roads heavily used by the public and built

NRCS-Minnesota
October 1999

Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version of this standard, contact the Natural Resource Conservation Service.

shall be increased approximately 4 ft for trailer traffic.

The minimum tread width is 10 ft for one-way traffic and 15 ft for two-way traffic. The tread width for two-way traffic shall be increased approximately 4 ft for trailer traffic.

The minimum shoulder width is 2 ft on each side of the tread width.

Where turnouts are used, road width shall be increased to a minimum of 20 ft for a distance of 30 ft.

Side slopes. All cuts and fills shall have side slopes designed to be stable for the particular site conditions.

Areas with geological conditions and soils subject to slides shall be avoided or treated to prevent slides.

Drainage. The type of drainage structure used will depend on the type of enterprise and runoff conditions. Culverts, bridges, or grade dips for water management shall be provided at all natural drainageways. The capacity and design shall be consistent with sound engineering principles and shall be adequate for the class of vehicle, type of road, development, or use.

Roadside ditches shall be adequate to provide surface drainage for the roadway and deep enough, as needed to serve as outlets for subsurface drainage. Channels shall be designed to be on stable grades or protected with structures or linings for stability.

Water breaks or bars may be used to control surface runoff on low-intensity use forest or similar roads. On steep grades where runoff and erosion is anticipated down the road, waterbars should be considered. Waterbars must be constructed of materials that are compatible with the use and maintenance of the road surface. Waterbar discharge areas must be well vegetated or have other erosion resistant materials.

Temporary Stream Crossings. Temporary stream crossings are to be provided where construction traffic must cross flowing streams. Disturbance to

stream banks and the channel bottom shall be kept to a minimum. Temporary bridges, culverts, or rock fords may be utilized.

Rock fords shall cross the stream at as close to a 90 degree angle as possible. Rock fords shall be covered with a 6 inch layer of 1-4 inch gravel.

Temporary Gravel Construction Entrance.

Temporary gravel construction entrances are used at points of access from construction sites to public roads. The purpose of the gravel entrance is to minimize the amount of mud carried off the site by vehicle tires.

The gravel pad must be 1-4 inch graded rock with a minimum thickness of 6 inches. The pad should have a length of 50 feet or more. The pad should be maintained by top-dressing or replacement as needed.

Surfacing. Access roads shall be given a wearing course or surface treatment if required by traffic needs, climate, erosion control, or dust control. The type of treatment depends on local conditions, available materials, and the existing road base. If these factors or the volume of traffic is not a problem, no special treatment of the surface is required.

Unsurfaced roads may require controlled access to prevent damage or hazardous conditions during adverse climatic conditions.

Toxic and acid-forming materials shall not be used on roads. This should not be construed to prohibit use of chemicals for dust control and snow and ice removal.

Traffic safety. Passing lanes, turnouts, guardrails, signs, and other facilities shall be provided as needed for safe traffic flow. Traffic safety shall be a prime factor in selecting the angle and grade of the intersection with public highways. Preferably, the angles shall be not less than 85 degrees. The public highway shall be entered either at the top of a hill or far enough from the top or a curve to provide visibility and a safe sight distance. The clear sight distance to each side shall not be less than 300 feet, if site conditions permit.

Erosion control. If soil and climatic conditions are favorable, roadbanks and disturbed areas shall be

vegetated as soon as possible and skid trails, landings, logging, and similar roads shall be vegetated after harvesting or seasonal use is completed. If the use of vegetation is precluded and protection against erosion is needed, protection shall be provided by nonvegetative materials, such as gravel or other mulches.

Roadside channels, cross drains, and drainage structure inlets and outlets shall be designed to be stable without protection. If protection is needed, riprap or other similar materials shall be used.

GENERAL CRITERIA

Watercourses and water quality shall be protected during and after construction by erosion-control facilities and maintenance. Filter strips, sediment and water control basins, and other conservation practices shall be used and maintained as needed.

Dead end roads shall be provided with a turnaround. In some areas turnarounds may also be desirable for stream, lake, recreation, or other access purposes.

Parking space as needed shall be provided to keep vehicles off the road or from being parked in undesirable locations.

PLANS AND SPECIFICATIONS

Plans and specifications for constructing access roads shall be in keeping with this standard and shall describe the requirements for applying the practice to achieve its intended purpose.

ACCESS ROAD SPECIFICATIONS

Construction operations shall be carried out in such a manner that erosion and air and water pollution are minimized and held within legal limits. The completed job shall present a workmanlike finish. Construction shall be according to the following requirements as specified for the job:

1. Trees, stumps, roots, brush, weeds, and other objectionable material shall be removed from the work area.
2. Unsuitable material shall be removed from the roadbed area.
3. Grading, subgrade preparation, and compaction shall be done as needed.
4. Surfacing shall be done as needed.
5. Roads shall be planned and laid out according to good landscape management principles.