

TITLE 9

COMMUNITY DEVELOPMENT

Subtitle 2 — Land Development Code

Division 5 — Conditions, Requirements, Development Standards & Criteria

CHAPTER 935

ACCESS IMPROVEMENT STANDARDS CODE

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I. GENERAL ACCESS REQUIREMENTS

935.005 Title; short title

This Chapter, LCC 935.005 to 935.999, shall be known and cited as the “Linn County Access Improvement Standards Code.” This Chapter may also be referred to and cited as the “Access Improvement Standards Code.”

[Adopted 98-002 §3 eff 3/4/98; amd 99-121 §16 eff 6/30/99]

935.010 Statement of purpose

(A) The purpose of this Chapter shall be to provide the specifications and standards which are required when constructing or improving access as part of developing a property.

(B) All road improvements, including but not limited to pavement, curbs, sidewalks and surface drainage, shall also be governed by the standards and specifications as set forth by the Board and by the Roadmaster. (Appendix A at the end of this Chapter contains a summary of information regarding road improvements, the detailed drawings of which are available from the Road Department.)

(C) This Chapter includes provisions on county roads created outside of the subdivision

process, easements of road access, local access roads, private driveways, and private roads.

[Adopted 98-002 §3 eff 3/4/98]

935.015 General access requirements

(A) A use involving change to an existing use shall be reviewed by the Roadmaster. When reviewing a use and an existing access is subject to change, the Roadmaster may approve or deny the access change.

(B) The applicant for development on a property that has been benefitted by an easement recognized by the Department shall provide proof satisfactory to the Department that the benefitting easement has not been rescinded or otherwise abandoned.

(C) The applicant for development on a property that has been benefitted by a temporary easement granted pursuant to LCC 935.150 (E) shall provide proof satisfactory to the Department that the current access complies with LCC 935.150 (D) or subsection (G) of this section.

(D) All authorized units of land shall have functional road access to a public road by one of the following means:

(1) Frontage abutting a public road, at least 30 feet wide, or the minimum frontage standard specified in the applicable zoning district, whichever is greater; or

(2) An easement of record for road access, or an easement of road access.

(E) If the easement of road access required by subsection (G) of this section cannot be recorded because contiguous units of land created by the land division are under single ownership and at least one unit is landlocked, then the applicant may delay recording the easement. Prior to the issuance of any development permits, the applicant shall file with the Director a letter of intent promising to record the easement simultaneously with the conveyance of ownership of either unit.

(F) Unless otherwise provided in subsection (G) of this section, no person shall construct or install any principal use on any authorized unit of

land unless access is first provided in a manner consistent with this Development Code.

(G) A person may obtain development permits to authorized unit of land for which road access has not been provided in the manner described in this Development Code if one of the following conditions is found to exist:

(1) The proposal is only for repairs, enlargements, remodeling, modifications or the replacement of a lawfully existing residence (see the variance, set-back and non-conforming use provisions of this Development Code for related topics); or

(2) The proposal is only for the construction, placement or establishment of an accessory building, structure or use. The existing principal use shall have been lawfully located on the authorized units of land on or before the effective date of this Development Code.

(3) Among other uses which are included as accessory building, structure or uses, are medical hardship mobile homes, farm-relative dwellings, or accessory farm dwellings. Accessory building, structures, or uses are not principal buildings, structures, or uses and shall not necessarily require access improvements.

(H) Except as otherwise provided in this section, no person may obtain an access permit when the use for which the access is needed, requires, but has not yet received, a separate land use review or permit.

(I) The creation of access to land solely for those forestry, mining or agricultural uses allowed outright shall be exempt from planning review. However such access is governed by the Road Department and an access permit must be first obtained from the Road Department before access development is initiated.

[Adopted 98-002 §3 eff 3/4/98; amd 98-432 §2 eff 10/21/98]

935.020 Access requirements; level of use

(A) The creation of private roads, local access roads, easements of road access, flag-lots, and private driveways are subject to the minimum access requirements set forth in subsection (B).

(B) *Minimum access requirements.*

(1) One or two current or potential homesites shall be served by at least a 30-foot wide, recorded easement of road access, if required pursuant to LCC 935.015, with a minimum 12-foot wide travelway;

(2) Three, four, or five current homesites shall be served by a a 60-foot wide, reserved right-of-way with at least a 20-foot wide travelway. The required travelway width shall be determined by the County Engineer. Applicants having the potential for more than five parcels will be advised of the need for additional right-of-way and access improvements when that potential is exercised; and

(3) Six or more current homesites shall be served by a 60-foot wide, dedicated right-of-way with at least a 22-foot wide paved roadway having four-foot shoulders. The required roadway width shall be determined by the County Engineer.

(4) Local access roads shall be constructed to the highest level of improvement as set forth in subsection (B).

(5) A reduction in right-of-way width and roadway condition may be warranted when new residences are proposed to be served by a pre-existing access.

(6) If a reduction in right-of-way width and roadway condition is warranted under paragraph (5) of this subsection, the Director and the Roadmaster shall retain the authority to establish minimum access requirements according to the following criteria:

(a) The road or driveway was established and provided access to more than one residence prior to July 1, 1991.

(b) The access improvements proposed represent an incremental improvement over the existing circumstances.

(c) The proposed access is feasible and equitable, given the circumstances involved.

(d) The applicant shall provide the County a written waiver of liability for an access approved under the provisions of this section.

[Adopted 98-002 §3 eff 3/4/98; amd 98-432 §2 eff 10/21/98; amd 12-315 §9 eff 12/12/12; amd 24-273 §1 eff 08/20/24]

II. EASEMENTS

935.100 Easements of road access; requirements

(A) The applicant shall record an easement of road access for an authorized unit of land if the unit of land:

(1) does not have frontage on a public road; or

(2) has frontage on one of the above roads but to which access is provided by means other than road frontage.

(B) The deeds of the authorized unit of land encumbered by granting the easement and the deed of the authorized unit to which the access easement is granted shall reflect the existence of the easement described in subsection (A).

[Adopted 98-002 §3 eff 3/4/98; amd 98-432 §2 eff 10/21/98; amd 24-273 §1 eff 08/20/24]

935.110 Easement of road access; limitations

(A) Not more than seven easements of road access shall be allowed over the same easement line by the procedure described in this section.

(B) Easements of road access shall be a minimum of 30 feet in width.

(C) The easement alignment shall coincide with the functional road access serving the development site.

[Adopted 98-002 §3 eff 3/4/98]

935.120 Road-related easements; setbacks

Minimum yard setbacks for development of structures along a road-related easement shall be a distance that is not less than 75% of the width of the road-related easement, but not greater than 30 feet, and in no case less than 15 feet. For example:

Easement width	Setback
10 ft.	15 ft.
20 ft.	15 ft.
30 ft.	22½ ft.
40 ft.	30 ft.
50 ft.	30 ft.

[Adopted 98-002 §3 eff 3/4/98]

935.130 Easement of road access; application procedure

(A) Applications for easements of road access shall be filed with the Department on an approved form and shall be complete and accurate to the best of the applicant’s knowledge.

(B) A site plan detailing the route of the easement of road access and the property to be served by the easement shall accompany the application.

(C) A copy of the proposed easement of road access shall accompany the application.

(D) The applicant shall provide any supplemental information as required by the Director.

(E) If the application is not complete, the Director shall not accept the application until such time as the required information is submitted by the applicant. If the application is complete, the Director shall accept the request for review purposes. See LCC Chapter 921 (Administration of the Land Development Code).

[Adopted 98-002 §3 eff 3/4/98; amd 24-273 §1 eff 08/20/24]

935.140 Easement of road access, notice

Notice of the application shall be mailed to all agencies, special districts and property owners as specified by LCC Chapter 921 (Administration of the Land Development Code).

[Adopted 98-002 §3 eff 3/4/98]

935.150 Decision criteria; easement of road access

(A) A request for easement of road access recognition may be approved if, on the basis of the application, investigation, testimony and evidence submitted, findings and conclusions show that all of the following decision criteria can be met:

(1) The proposed placement of the easement of road access shall not pose a traffic hazard, taking into consideration the number of nearby access points and geographic conditions of the property; and

(2) The easement of road access is the only reasonable method of providing access to the parcel;

(B) An exception to LCC 935.110 (B) may be taken if, on the basis of the application, investi-

gation, testimony and evidence submitted, findings and conclusions show that all of the following exist:

(1) That exceptional and extraordinary circumstances or conditions exist;

(2) That an unnecessary and severe hardship would result from a strict interpretation and enforcement of the specified regulations if the easement of road access is not recognized and;

(3) That recognition of the easement of road access, at the substandard width, would not be detrimental to the public health, safety or welfare nor materially injurious to properties or improvements in the vicinity.

(C) If findings can be made based upon all of the criteria, recognition of the easement of road access may be granted. If findings cannot be made based upon all the criteria, recognition of the easement of road access shall not be granted.

(D) Except as provided in subsection (E) of this section, easements granted pursuant to this Chapter shall be perpetual and non-exclusive.

(E) An easement may be granted for temporary access.

[Adopted 98-002 §3 eff 3/4/98; amd 98-432 §2 eff 10/21/98]

935.160 Deed covenants

Deed covenants and conditions shall be incorporated into the chain of title for all properties created by a partition or served by an easement recognition that:

(A) Identify the road as a private road or a local access road that is not part of the county-maintained road network; and

(B) Assign monetary responsibility for road or bridge maintenance and dust control to land-owners of property served by said access.

(C) A copy of the deed or other document of legal conveyance with the attached covenants and conditions relating to access shall be provided to the Department. The covenants and restrictions, written in a manner that runs with the title to the land, shall be recorded with the County Clerk before development permits for a primary use of the land involved may be accepted.

[Adopted 98-002 §3 eff 3/4/98; amd 24-273 §1 eff 08/20/24]

935.170 Flag-lot requirements

(A) In addition to other requirements, the creation of flag-lots is subject to the following requirements:

(B)

(1) Only one flag strip is allowed for each flag-lot;

(2) The flag strip must be not less than 30 feet in width and not more than 60 feet in width (See LCC Chapter 920, Appendix 1, Figure 4);

(3) The flag-lot must be at least the minimum acreage of the applicable zone, excluding the flag strip; and

(4) Not more than two flag strips serving respective flag-lots may abut each other.

(5) Not more than two flag strips may abut each other at any point;

(6) The minimum distance between non-abutting flag strips is 100 feet.

[Adopted 98-002 §3 eff 3/4/98; amd 24-273 §1 eff 08/20/24]

III. CONSTRUCTION STANDARDS

935.200 Minimum construction standards for access

(A) Construction of the access must comply with the minimum improvement standards set forth in subsection (B) before development permits for a primary use of the land may be issued. Additional improvements are required for an access serving more than two development sites. Any variance to these standards is subject to review and comment by the appropriate Rural Fire District and the Roadmaster.

(B) *Minimum improvement standards.*

(1) The all-weather access must be built and maintained to the minimum access requirements of LCC 935.020 and shall be at least 12 feet in width and consist of a minimum of six inches of crushed rock or crushed aggregate on subgrade geotextile fabric. An acceptable alternative base for the roadbed is six inches of 6" minus rock topped with a minimum of six inches of 1" minus crushed rock or 1" minus crushed gravel. The access route, including any culverts and bridges,

must be capable of supporting gross vehicle weights (GVW) of 75,000 pounds. The County reserves the right to require written verification of compliance with the GVW standard from an Oregon registered professional engineer.

(2) The access will be provided with an unobstructed vertical clearance of at least 13 feet six inches and an unobstructed horizontal clearance of 20 feet and a minimum inside curve radius of 28 feet and a minimum outside curve radius of 48 feet.

(3) At least one intervisible turnout every 400 feet, or as otherwise determined by the County Engineer, shall be provided in any access way less than 20 feet wide. The turnout shall provide a passage space at least 20 feet wide and 40 feet long.

(4) Roadside ditches shall be provided to accommodate stormwater if appropriate or if deemed necessary by the County Engineer.

(5) Dead-end access ways over 150 feet in length shall provide and maintain a cleared turnaround, with a minimum inside turning radius of 28 feet and a minimum outside turning radius of 48 feet or an acceptable alternative as specified in Oregon Fire Code.

(6) Grades, as measured between any two points on the access road, shall not exceed 10 percent, except that if grades exceed 10 percent but are equal to or less than 12 percent, the access road shall be paved. If grades exceed 12 percent, further conditions may be imposed as specified by the Oregon Fire Code, but in no event shall grades exceed 15 percent.

(7) Driveways shall be marked with the resident's rural address unless the residence is visible from the roadway and the address is clearly visible on the residence. Letters or numbers shall be a minimum of three inches in height and constructed of reflective material.

[Adopted 98-002 §3 eff 3/4/98; amd 98-432 §2 eff 10/21/98; amd 24-273 §1 eff 08/20/24]

935.250 Local access road improvements

(A) Applications for recognition of an easement to connect to a local access road, or for a partition in which a local access road is being

created, shall be subject to the minimum road improvement standards in LCC 935.200.

(B) The County Engineer will inspect the local access road and determine what improvements are needed to accommodate the proposed development.

(C) The County Engineer shall determine the area (length and width) of the road right-of-way which will be improved.

(D) An easement to connect to and extend a local access road shall be subject to the local access road minimum improvement standards in LCC 935.200 (B) or (C).

(E) When a local access road is being proposed, the applicant shall deed the road right-of-way within the development to Linn County for road purposes. The executed deed shall be submitted to the County Road Department.

(F) Upon receipt of the executed deed, the Board, together with the Roadmaster, shall decide whether or not to accept the road as a local access road into the Linn County road records.

[Adopted 98-002 §3 eff 3/4/98; amd 24-273 §1 eff 08/20/24]

IV. SPECIAL ACCESS REQUIREMENTS

935.300 Barrier strips

(A) Public barrier strips.

(1) Access on or across a public barrier strip is prohibited unless

(a) an easement is granted by the Board,

(b) a plan for development of adjacent lands is approved by the county, or

(c) adjacent right-of-way is accepted by the County for the continuation or widening of the road.

(2) In processing an application dependent upon crossing a barrier strip, the Director shall first receive an indication from the Board that an easement would be granted.

(B) Private barrier strips. Barrier strips in private ownership shall require similar treatment except that the easement agreement shall be secured from the private landowner.

[Adopted 98-002 §3 eff 3/4/98]

935.310 Stubbed roads with a cul-de-sac; standards

The creation of a stubbed road terminating in a cul-de-sac must meet all the following standards.

(A) The stubbed road shall:

(1) not be more than 1,320 feet in length; and

(2) have only one outlet for vehicular traffic.

(B) The terminating cul-de-sac shall:

(1) have an end radius of not less than 45 feet; and

(2) not be extended to access future subdivisions or development on adjacent lands without first being reviewed and approved by the County.

[Adopted 98-002 §3 eff 3/4/98]

935.320 Grading permit; access

A grading permit granted pursuant to LCC 921.530 may be required for actions under this Chapter.

[Adopted 98-002 §3 eff 3/4/98]

935.330 Rural Resource Zone access improvement standards

(A) Except as provided in LCC 935.015 (I), the access improvement standards in LCC 935.020 are applicable to all principal uses permitted in the RRZ.

[Adopted §3 eff 6/30/97; amd 98-432 §2 eff 10/21/98]

935.340 County road creation, not through subdividing

(A) The creation of a county road shall conform to the requirements set forth in LCC Chapter 926 (Subdividing Code).

(B) Notwithstanding subsection (A), the Department may approve the creation of a road to be established by deed without full compliance with the applicable regulations, provided that the establishment of the road is initiated by the Board and that one of the following conditions exists:

(1) The Board finds the creation of the road is essential for the purpose of general traffic circulation; or

(2) The Board finds the creation of the road is necessary for access to existing authorized units of land created prior to March 4, 1998.

(3) Roads, not in a subdivision, but established by dedication, shall be improved to the standards in LCC 935.200 as a condition of being accepted for public use.

(C) Exceptions for road improvements may be made in situations where roadways have existed by usage or by easement (whether conforming or not) which served properties that have been created and recorded with Linn County prior to March 22, 1972.

[Adopted 98-002 §3 eff 3/4/98]

935.350 Agreement for improvements

(A) The developer shall improve or agree to improve lands dedicated for roads, alleys, pedestrian ways, drainage channels, easements of road access and other rights-of-way as a condition preceding the acceptance and approval of a partition plat involving the creation of access.

(B) Prior to approval of the partition plat, the developer shall

(1) install all required improvements and repair existing roads and other public facilities damaged in the development of the partition, or

(2) execute and file with the Board an agreement between the developer and the county specifying the period within which all the required improvements and repairs shall be completed.

(a) The agreement shall require a performance security for the improvements and repairs meeting the requirements of LCC 933.110.

(b) The agreement shall provide that if all of the required work is not completed within the time frame specified, or within any mutually approved extensions, the county may complete the work and recover the full cost and expense thereof from the developer pursuant to LCC 921.920. If a written request for a reasonable time extension is requested by the developer and is received by the Board 30 calendar days prior to

the expiration of the agreement, the Board may approve the request. Absent an approved extension, the Board may collect costs as provided in LCC 933.110.

[Adopted 98-002 §3 eff 3/4/98; amd 98-432 §2 eff 10/21/98]

935.360 Performance security

To assure full and faithful performance of the agreement required by LCC 935.350 (B) (2), the developer shall comply with LCC 933.110.

[Adopted 98-002 §3 eff 3/4/98; amd 98-432 §2 eff 10/21/98]

Statutory References and Other Authorities:

ORS 197; 203; 215

Legislative History of Chapter 935:

Adopted 98-002 §3 eff 3/4/98

Amendments to 98-002

#1 98-432 eff 10/21/98

#2 99-121 §16 eff 6/30/99

#3 12-315 §9 eff 12/12/12

#4 24-273 §1 eff 08/20/24

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APPENDIX A TO LCC CHAPTER 935

**REQUIREMENTS FOR ROAD IMPROVEMENTS WITHIN SUBDIVISIONS
AND OTHER ROADS PROPOSED AS PART OF PARTITIONING TO BECOME PART OF THE COUNTY-
MAINTAINED ROAD SYSTEM**

Summary of Primary Points

935.900 GENERAL PROVISIONS

- (A) Plats, plans and specifications to be reviewed and approved by the road department.
- (B) Advising road department prior to start of actual construction and road department option to call a pre-construction conference.
- (C) Technical specifications.
- (D) Liability.
- (E) Acceptance of the project by the road department and acceptance as a county road by the Board of Commissioners.
- (F) Road department's inspection.
- (G) Changes approved by the road department.
- (H) Responsibilities of applicant.

935.910 ENGINEERING

- (A) Plans and specifications.
- (B) Right-of-way monumentation.
- (C) Construction control staking.

935.920 DESIGN STANDARDS

- (A) Traffic Projections.
 - (B) Roadway Design Features.
 - (C) Drainage Structures.
 - (1) Roadway culverts.
 - (2) Driveway culverts.
 - (3) Bridges.
 - (D) Intersection Design.
 - (E) Roadway Cross Section.
 - (1) Grading.
 - (a) Slopes.
 - (b) Surface tolerance.
 - (c) Fills.
 - (d) Clearing and grubbing.
 - (2) Gravel base and finish course.
 - (a) Compaction.
 - (b) Placement.
 - (3) Pavement.
 - (a) Asphaltic concrete placement.
 - (b) Shoulders.
 - (4) Materials and workmanship.
 - (F) Signing and Striping Design.
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935.900 General provisions

(A) Approval of Partition Plats, Subdivision Plats and Road Improvement Plans:

(1) Partition plats requiring access review and preliminary subdivision plats shall have road department approval for road and drainage features prior to consideration by the Department.

(2) Final subdivision plats shall be signed by the road department prior to approval by the Department.

(3) Plans and specifications for partition and subdivision roads and road improvement projects shall be approved by the road department under the provisions of these requirements and the road standards and related drawings which are available at the Linn County Road Department.

(B) Construction:

(1) The road department shall be advised by the developer or the developer's agent a minimum of five days prior to start of actual construction work.

(2) The road department may call a pre-construction conference, if in their opinion, it is in the public interest to do so. This meeting shall be attended by the developer or the developer's agent, the contractor, and the contractor's superintendent.

(C) Technical Specifications:

(1) The technical specifications which are applicable are:

(a) *Oregon State Highway Division Standard Specifications for Highway Construction* (current edition).

(b) *Manual on Uniform Traffic Control Devices for Streets and Highways* (current edition).

(2) It is understood that when the terms “State of Oregon,” “State Transportation Commission,” “Division,” and “Engineer” are used in such specifications they shall refer to the County of Linn, the Linn County Road Department and the Linn County Engineer, respectively.

(D) Laws to be Observed:

(1) The developer and the contractor, or contractors, shall at all times observe and comply with all federal, state and local laws, ordinance and regulations.

(2) The developer shall be responsible for the acts of his employees and contractors.

(3) The developer and/or owner or owners shall indemnify and save harmless Linn County, its officers, employees and agents against any claims or liability arising from any and all construction activities.

(E) Acceptance of Projects:

(1) Acceptance of the construction shall be by the road department after completion of all phases of the work, in substantial conformity to governing plans and specifications.

(2) Acceptance of the completed work as part of the county road system may be by the Board of Commissioners upon recommendation of the road department.

(F) Inspection of Work:

(1) Requests to the road department for inspection of individual phases or final acceptance of the work shall be given a minimum of 24 hours in advance of the scheduled inspection.

(2) The road department may, at any time, inspect phases of the work to verify compliance with plans and specifications.

(G) Changes:

(1) Changes in plans shall be submitted to the road department for approval prior to proceeding with work under the change.

(2) Verbal requests for approval by the developer or the developer’s agent and/or approvals by the road department shall be confirmed in writing within three working days.

(H) Any supervision or control exercised by Linn County, the Linn County Board of Commissioners, the Linn County Road Department or other county officers, agents, contractors or em-

ployees shall in no way relieve the developer of any duty or responsibility to the general public nor shall such supervision or control relieve the developer of any liability for any loss, damage or injury to persons or property sustained by reason of construction, maintenance repair, operation or use of the facility or in the reconstruction, relocation or removal of same.

[Adopted 98-002 §3 eff 3/4/98]

935.910 Engineering

(A) Plans and Specifications:

(1) After partition or preliminary subdivision plat approval by the Department and a minimum of 14 days prior to advertising for bids, detailed construction plans and specifications shall be submitted for approval to the road department.

(2) Before final approval and acceptance of the project is granted, a set of as-built plans shall be submitted signed by an engineer registered in the State of Oregon.

(3) All plans shall be on plan-profile transparency paper, sheet size 24" x 36."

(4) The scale shall be 1" = 50' or 1" = 100'.

(5) All plans shall show details of construction, including but not necessarily limited to:

- (a) Culvert size and location.
- (b) Width of right-of-way.
- (c) Width of roadway.
- (d) Location of underground utilities.
- (e) Right-of-way monuments.
- (f) Bearing of tangents.
- (g) Profile of finish grade with grades and points of vertical curvature.
- (h) Horizontal curve data.
- (i) Centerline stationing.
- (j) Initial and terminal points of road.
- (k) Ties to Donation Land Claim (DLC) or section corners. Location and dimension of all structures within the right-of-way.

(B) Right-Of-Way Monumentation:

(1) Monuments shall be placed on the right-of-way lines on both sides of the road.

(2) Monuments shall be iron rods, ½" minimum diameter and 30" long.

(3) Monuments shall be placed at the following places:

(a) Initial and terminal points of the road.

(b) Points of horizontal curvature, tangency and angle points.

(c) On tangents at a maximum distance of 1,320 feet.

(d) At the intersection of the rights-of-way of public roads, state highways, railroads and private roads.

(C) Construction Control Staking:

(1) Construction control stakes shall be placed to control the following phases of work:

(2) Subgrade and ditch line.

(3) Base course, if required.

(4) Leveling course.

(D) Staking shall be performed in such a manner that the stakes will be easily understood by construction personnel and stakes shall be preserved until completion of that stage of the work which they control.

[Adopted 98-002 §3 eff 3/4/98]

935.920 Design standards

(A) Design year — traffic design year shall be 10 years in the future.

(B) Design features for roadways shall be in accordance with standards developed and maintained by the County Road Department and available through that office.

(C) Drainage Structures:

(1) *Roadway culverts.*

(a) Design size shall be based on a ten-year flood frequency for minor structures of less than 48" or equivalent. Design size for major structures (48" diameter or larger) shall be based on a 25-year flood frequency.

(b) Design and specifications shall assure the following practices:

(i) Pipe shall be fully and uniformly supported.

(ii) All pipe sections shall be firmly jointed together.

(iii) Pipe shall be laid true to line and grade with the bell, groove and socket ends upstream.

(iv) Culvert shall extend a minimum of one foot past the toe of the embankment slope on each side.

(v) Where necessary, slope protection shall be provided to prevent scour and erosion of the embankment.

(c) A permanent easement onto private property shall be provided where necessary to provide for drainage and prevent damage.

(d) Where a culvert is high in a large fill, a down drain installation shall be used to conduct the water down the face of the fill and eliminate erosion.

(e) Cross-culvert shall have a 18-inch minimum inside diameter and support H20 S16 loading.

(i) *Driveway culverts.*

Design features:

(I) 12-inch minimum diameter.

(II) Lengths:

1) Minimum 21 feet.

2) Greater than 30 feet

in length shall require adequate provisions for cleaning.

(III) Flow line of culvert shall be at the elevation of the ditch bottom.

(IV) Driveway elevation at road ditch line shall be 0.2 feet below the elevation of the edge of the pavement.

(ii) *Bridges.*

(I) Hydraulic design based on a 25-year flood frequency.

(II) Structure design criteria:

1) Dead load: 4" thickness of asphaltic concrete (100 p.s.f. min.).

2) Live load — H20 S16 loading.

3) The stream channel shall be cleaned of all debris and obstructions within the limits of the right-of-way.

4) Channel changes when made shall be done in such a manner that scour and erosion shall not occur.

5) Slope protection to be provided as required under “culverts” above.

6) Provisions shall be made to conduct deck surface drainage away from the structure. Deck drains discharging directly into a stream are not allowed.

7) Guardrails, signs and markings shall be provided in conformity with standard practices.

8) Each individual bridge design shall be subject to the approval of the road department.

(D) Intersection Design:

(1) There shall be not less than 200 feet between centerlines on staggered “T” intersections where centerlines have an angle at intersections of less than 45 degrees.

(2) Not less than 125 feet between centerlines on intersections of larger angles.

(3) Access points shall not be closer than 150' from a road intersection unless otherwise approved by the Linn County Road Department.

(E) Roadway Cross Section:

(1) Grading.

(a) Steepness of slopes:

(i) Fill 1½ : 1 maximum.

(ii) Cut 1 to 1 maximum.

(b) Subgrade to be graded to within 0.2 foot of design grade.

(c) Fills:

(i) Compaction. Top three feet, 95 percent of relative maximum density; remainder 90 percent of relative maximum density as set forth in the standard specifications.

(ii) Material containing excessive moisture will be dried to suitable moisture content before placement.

(iii) Rocks in the top two feet of fill are limited to a maximum of eight inches.

(iv) Fills are to be placed in approximately horizontal layers not to exceed eight inches in compacted thickness. Each layer to be compacted to specified density as in (1) above.

(v) Excess or unsuitable material from cuts may be wasted along fills and in low spots along the right-of-way as follows:

(I) Drainage ditches shall not be plugged.

(II) Culverts shall be extended as required to accommodate the enlarged fill.

(III) Waste areas shall be smoothed to provide a neat finished appearance, compacted to a stable condition and shall be designed so as not to collect surface water.

(IV) Clearing and Grubbing:

1) All trees, stumps, brush and other vegetation within the limits of the subgrade and drainage ditches shall be removed.

2) All clearing debris shall be disposed of as follows:

- No stumps, logs or other debris shall be left within the right-of-way.
- Large rocks and stones shall be disposed of outside the roadbed to the satisfaction of the road department.

(2) *Gravel Base and Finish Course.*

(a) Compaction: 95 percent maximum density as called for in the standard specifications.

(b) Placement:

(i) Placement shall be done in such a manner to avoid segregation.

(ii) Placement shall be done so as to avoid mixing subgrade material with base.

(iii) Base to be placed in layers not to exceed a compacted thickness of six inch maximum.

(iv) Base shall be placed to within 0.04 foot, plus or minus of design grade.

(3) *Pavement.*

(a) Asphaltic Concrete Placement:
(i) To be placed within 0.04 foot of design grade.

(ii) Variation of surface not to exceed ¼ inch in 10 feet each way.

(iii) Lifts to be controlled per county standard drawing.

(b) Shoulders:

(i) Major arterials and secondary arterials shall have paved shoulders.

(ii) The shoulders on designated bicycle routes or pedestrian walkways shall be paved.

(iii) Paving of shoulders, when required, shall be paved with asphaltic concrete to a minimum depth of two inches.

(4) *Materials and workmanship* shall conform to requirements of the standard specifications.

(F) Signing and Striping Design:

(1) All signs and striping shall conform to the manual on Uniform Traffic Control Devices (current edition), and shall be a complete installation, including naming on all roads.

(2) The road shall have the necessary signs as required for traffic safety.

(3) The road surface shall be striped as follows:

(a) Centerline.

(b) No passing strips.

(c) Stop bars.

(d) Crosswalks where the volume of pedestrian traffic warrants.

(e) Turning lane markings.

(f) Such other markings as may be deemed necessary by the road department.

(4) A complete plan shall be submitted for approval by the road department.

(5) The requirements of this section may be waived for the developer at the option of the road department.

[Adopted 98-002 §3 eff 3/4/98]

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