BOARD OF COUNTY COMMISSIONERS
DOUGLAS COUNTY, WASHINGTON

Ordinance No. TLS 13-11-40B

Public Hearing Notice: TLS Res. 13-40A

Amendments to the Douglas County Code Title 12 Road Standards ) TRANSPORTATION AND LAND SERVICES

WHEREAS, Douglas County has adopted a Comprehensive Plan pursuant to the Growth Management Act (GMA), RCW Chapter 36.70A, which covers all unincorporated areas within Douglas County, through a series of planning area Comprehensive Plans which were found to be consistent with each other and with the adopted GMA plans of adjoining jurisdictions; and

WHEREAS, the Douglas County Planning Commission has transmitted a recommendation of approval to this Board regarding amendments to Douglas County Code Title 12; and

WHEREAS, notice of all public hearings and public meetings on this matter have been published according to law.

NOW, THEREFORE, the Board of County Commissioners hereby adopts the Findings of Fact and Conclusions as set forth in Exhibit A and incorporate them in this ordinance by this reference as though fully set forth herein.

BE IT FURTHER, hereby resolved and ordained that the Board of County Commissioners adopt the amendments to the Douglas County Code as set forth in Exhibit B.

This ordinance shall be effective immediately. Dated this 29th day of October 2013 in Waterville, Washington.

BOARD OF COUNTY COMMISSIONERS
DOUGLAS COUNTY, WASHINGTON

Steven D. Jenkins, Chair
Dale Snyder, Vice Chair
Ken Stanton, Member

ATTEST:

Dayna Prewitt, Clerk of the Board

Ordinance No. TLS 13-11-40B
EXHIBIT A

Findings of Fact:

1. On February 15, 2011 the Board of County Commissioners appointed citizens to a Road Standards Committee to provide recommendations to the Board of County Commissioners. The Board of County Commissioners then provided proposed amendments to Staff for presentation to the Planning Commission for consideration and action.

2. The proposed amendments include updates, corrections and clarifications, minor in nature, which will aid in the application of Title 12, Comprehensive Road Standards.

3. Douglas County has adopted a Comprehensive Plan pursuant to the Growth Management Act (GMA), RCW Chapter 36.70A, which covers all unincorporated areas outside of Urban Growth Areas within Douglas County.

4. RCW Chapters 36.70 and 36.70A authorize the adoption of development regulations.

5. The Douglas County Planning Commission is responsible for long range planning matters and providing implementation recommendations to assure compliance with the growth management act for unincorporated areas of Douglas County. These measures include updates and amendments to the comprehensive plan; development regulations, environmental regulations, and any other rules, actions or regulations deemed necessary to implement the Growth Management Act.

6. Amendments to the development regulations were sent to the Washington State Department of Commerce as part of the Douglas County 60-day review process.

7. Douglas County issued a Determination of Non-significance and Adoption of Existing Environmental Documents for proposed amendments to the Douglas County Code on August 1, 2013 pursuant to WAC 197-11.


9. The Douglas County Planning Commission conducted a duly advertised public hearing on October 9, 2013. The Planning Commission entered into the record the files on this amendment, accepted public testimony, and deliberated the merits of the proposal.

10. The Douglas County Planning Commission has reviewed the entire record including the goals and policies of the comprehensive plans and public testimony as it relates to the proposed development regulations.

Conclusions:

1. The procedural and substantive requirements of the State Environmental Policy Act have been satisfied.

2. The procedural requirements of RCW 36.70A have been satisfied.

3. The proposed amendments are consistent with the Douglas County Countywide Comprehensive Plan (February 28, 2012).
Chapter 12.28
ROAD USE RESTRICTIONS

Sections:


12.28.040 Clear View Triangle.
A. A clear view triangle shall be maintained for vision safety purposes on all corner lots, driveways, intersecting public/private roads and pedestrian trail systems. No fence, sign, utility structure, associated landscaping or any other sight obstruction between forty-two inches to eight feet in height above the existing road grade shall be placed or maintained within the triangle.

B. The clear view triangle at:

1. Road intersections shall meet the standards set forth in the Washington State Department of Transportation Design Manual 946-10 as administered by the county engineer.

2. A driveway or pedestrian access intersecting with a road right-of-way shall be determined by measuring fifteen feet along the road right-of-way and fifteen feet along the edges of the driveway beginning at the respective points of the intersection. The third side of each triangle shall be a line connecting the end points of the first two sides of each triangle.

C. The county engineer may require modification or removal of structures or landscaping located in required yards or the clear view triangle, if:

1. Such improvements prevent adequate sight distance to drivers at road intersections or when entering or leaving a driveway, and

2. No reasonable driveway relocation alternative for the affected lot is feasible.

(Ord. TLS 03-01-01B Exh. B (part))
Chapter 12.50
ROAD STANDARD GENERAL INFORMATION

Sections:
12.50.010 Purpose.
12.50.020 Scope and applicability.
12.50.030 Amendments.
12.50.040 Definitions and terms.
12.50.050 Exemptions.
12.50.060 Interpretation, enforcement and appeals.
12.50.070 Relationship to other county standards and requirements.
12.50.080 Reference design specifications.
12.50.090 Project acceptance.
12.50.100 Alternatives.
12.50.110 Performance assurance.
12.50.120 Violations and penalties.
12.50.130 Severability.
12.50.140 Fees.
12.50.150 Transportation system and frontage improvements.
12.50.160 Withdrawal of approval/acceptance.
12.50.170 Site maintenance.
12.50.180 Correspondence.

12.50.010 Purpose.
A. These minimum standards for development provide requirements for road and bridge design, construction and reconstruction. In establishing the minimum standards for development, the county engineer has sought to encourage standardization and internationality of road design elements. Considerations include safety, convenience, aesthetics, proper drainage, and maintenance. The minimum standards will be required unless determined by the County Engineer that improvements greater than the minimum standards are necessary. Determination shall be based upon analysis of application materials submitted including without limitation a Traffic Impact Analysis, Geotechnical Analysis or Environmental Review.

B. The county's permitting, certification or licensing activities require the adoption of standards to guide individuals and entities in the administrative process of procuring the necessary county approvals. The county must also have flexibility to carry out its general duty to provide streets, roads and highways for the diverse and changing needs of the traveling public. Accordingly, these standards are not intended to represent the legal standard by which the county's duty to the traveling public is to be measured.

C. The decision to use a particular road design element at a particular location should be made on the basis of an engineering analysis of the location. Thus, while this document provides minimum requirements for design, it is not a substitute for professional engineering judgment. It is the intent that the
provisions of these standards be international requirements for road and bridge design, but may not be appropriate for all locations and existing situations.

D. These standards cannot provide for all situations. They are intended to assist, but not substitute for, competent work by design professionals. It is expected that each professional bring to each project the best of their skills and abilities. These standards are also not intended to unreasonably limit any innovative or creative effort which could result in the more effective and appropriate combination of design, cost savings, or both. Any proposed departure from these standards will be judged on the likelihood that such a departure or variance will produce a compensating or comparable result, adequate in every way, for the road user and county resident. (Ord. TLS 09-11-49E (Exh. B) (part); Ord. TLS 07-04-30B Exh. B (part); Ord. TLS 04-02-30B Exh. A (part))

12.50.020 Scope and applicability.
A. Except as exempted in DCC Section 12.50.050, all requirements contained in these standards, together with any and all amendments thereto, shall apply to all road, bridge, and other new construction and reconstruction of county and private roads in unincorporated Douglas County or as may be required as a condition of development approval as defined in DCC Chapter 14.98 within Douglas County, and as far as practicable and feasible to the reconstruction of existing county and private roads in unincorporated Douglas County. These standards shall also apply to all public and private accesses, exempt private roads and driveways connecting to public roads; usage of unopened county rights-of-way; location and installation of new utilities; and pedestrian, bicycle and equestrian facilities. In cases of any ambiguity or dispute over interpretation or application of the provisions of these standards, the decision of the county engineer shall be final subjective to administrative appeal as set forth in DCC Section 14.12.010.

B. These standards apply to modifications of roadway features of existing facilities which are within the scope of reconstruction or capital improvement projects when so required by the county or to the extent they are expressly referred to in project plans and specifications.

C. These standards are applied as follows:

1. Mandatory standards are those considered most essential to the achievement of overall design objectives. Mandatory standards use the word “shall.”

2. Advisory standards allow some flexibility in application to accommodate design constraints or to be compatible with local conditions. Advisory standards use the word “should.”

3. All standards other than the mandatory and advisory, indicated with the word “may,” are permissive with no requirement intended.

D. If these standards are silent regarding a specific issue regarding the planning, design or construction of a road or bridge then the AASHTO Geometric Design of Highways and Streets, WSDOT Standard Plans and Specifications, WSDOT Construction Manual, and the WSDOT City and County Design
Standards as contained within the WSDOT Local Agency Guidelines shall provide guidance as to the requirements subject to approval by the county engineer.

E. For the purpose of these standards, the defined "administrator" shall be the county engineer. (Ord. TLS 09-11-49E (Exh. B) (part); Ord. TLS 07-04-30B Exh. B (part); Ord. TLS 04-02-30B Exh. A (part))

12.50.030 Amendments.
A. These standards may be amended from time to time in accordance with DCC Chapter 14.32.

B. All requests for amendments or revisions to these standards from other county departments, other agencies or other outside parties shall be provided to the county engineer for evaluation. Such requests shall be in writing and shall provide such supporting information as may be required by the county engineer. (Ord. TLS 09-11-49E (Exh. B) (part); Ord. TLS 07-04-30B Exh. B (part); Ord. TLS 04-02-30B Exh. A (part))

12.50.040 Definitions and terms.
Unless otherwise defined or redefined within these standards, all definitions and terms used in these standards are contained in DCC Chapter 14.98. (Ord. TLS 09-11-49E (Exh. B) (part); Ord. TLS 07-04-30B Exh. B (part); Ord. TLS 04-02-30B Exh. A (part))

12.50.050 Exemptions.
These standards shall not govern the following:

A. Road and associated work done on roads which are under the authority, ownership or responsibility of other governmental agencies. In such cases, the standards of the other governmental agency shall apply.

B. Road maintenance work within county road rights-of-way performed by county forces or by contract.

C. RESERVED Road maintenance work on private roads that does not affect the prior approved geometrics or adversely affect the safe passage of vehicles on the private road.

D. Temporary road repairs made on an emergency basis.

E. Resurfacing and restoration ("2-R") projects.

F. New road construction or reconstruction within urban growth boundaries where the county and a city or town have entered into an interlocal agreement to use the city’s or town’s road standards.

G. Private roads, except that portion of the exempt private road which accesses and is located within a county right-of-way. An access permit shall be required for all new and revised accesses to a county road per DCC Chapter 12.24. The standards within Figure 4-1 shall be the minimum standards applicable to intersections of exempt private roads to county roads. (Ord. TLS 09-11-49E (Exh. B) (part); Ord. TLS 07-04-30B Exh. B (part); Ord. TLS 04-02-30B Exh. A (part))
12.50.060 Interpretation, enforcement and appeals.

A. Interpretation and enforcement of these standards shall be the responsibility of the county engineer or designated representative.

B. Failure to comply with these standards will be cause for withholding or withdrawing acceptance of plans or drawings, withholding of bond, final inspection approval or occupancy certificates and/or other penalties as provided for in DCC Chapter 14.92. For the purposes of DCC Chapter 14.92, the “director” shall mean the county engineer or designated representative.

C. All appeals of any decision by the county engineer in his/her administration, interpretation or enforcement of these standards shall be in writing and within fourteen days of the decision. The written appeal, including the recommendations and analyses of the county engineer, shall be made to the Douglas County hearing examiner in accordance with DCC Section 14.12.010. (Ord. TLS 09-11-49E (Exh. B) (part): Ord. TLS 04-02-30B Exh. A (part))

12.50.070 Relationship to other county standards and requirements.

Other Douglas County plans, standards and requirements for which these standards are intended to be consistent with are:

A. Douglas County Code, as amended, particularly DCC Titles 12, 14, 15, 17, 16, 19 and 20.


12.50.080 Reference design specifications.

Except where these standards provide otherwise, design detail, construction materials and workmanship shall be in accordance with the following publications:


C. WSDOT Local Agency Guidelines, current edition, including the City and County Design Standards for the Construction of Urban and Rural Arterials and Collectors.
D. AASHTO “A Policy on Geometric Design of Highways and Streets,” current edition, also known as the “Green Book.”


F. USDOT “Manual on Uniform Traffic Control Devices,” current edition as adopted, including amendments, by the Washington State Department of Transportation, henceforth referenced as the “MUTCD.”


12.50.090 Project acceptance.

A. The county engineer shall rely upon the certification and approval of the road and drainage plans and calculations by the applicant’s engineer for approval of the project. The county engineer’s acceptance of the plans shall not relieve the applicant or the applicant’s engineer from any liability related to portions of the design that are not in conformance with these standards nor do not follow good engineering practice.

B. Upon receipt of the project plans and calculations, the county engineer will review the work of the applicant’s engineer for accuracy and completeness. The plans and calculations will either be accepted by the county or returned for revisions. All revisions are subject to hourly review fees as set forth in the current fee schedule. Project acceptance occurs when the county engineer signs the plans and review fees are paid.

C. (Reserved)

D. The acceptance of plans shall be valid for a period of three years from the date of approval by the county engineer. Construction in accordance with the approved plans must be completed within this period. If not completed within this period, the plans shall be resubmitted to the county engineer for review and any revisions or modifications necessary to meet the standards in effect at the time of resubmittal shall be made. Resubmittal fees equal to new application fees shall be paid before the plans can be reviewed and approved by the county.

E. A traffic impact analysis shall only be valid for a period of five years from the date of approval of the development. If the project is not completed within this time period, the traffic impact analysis shall be updated and resubmitted to the county engineer for review and concurrence prior to project acceptance. Resubmittal fees equal to new application fees shall be paid before the updated analysis is reviewed and approved by the county.

F. Requests for modifications made during the construction of a project that are not in conflict with the preliminary plat approval conditions shall be approved by the county engineer and county fire marshal, when applicable, prior to any changes being made in the field.

G. Depending upon the nature of the modifications and in all cases where there is a conflict with the preliminary plat approval conditions, approval of the Douglas County hearing examiner will also be required as provided for in DCC Title 14. (Ord. TLS 09-11-49E (Exh. B) (part); Ord. TLS 04-02-30B Exh. A (part))

12.50.100 Alternatives.

A. These standards represent reasonable approaches based on past experience in Douglas County and other jurisdictions. These standards indicate the appropriate practice under most conditions.

B. Engineering design is an endeavor that examines alternative solutions to real world situations and accordingly these standards are not provided to hamper the introduction of new ideas. It is fully expected that creative engineering will continue to take place. Situations will present themselves where alternatives
may be preferred to allow conformance with existing conditions, to overcome adverse topography or to allow for more affordable solutions without adversely affecting safety, maintainability or aesthetics. These standards are intended to provide predictability yet still allow for the flexibility necessary for innovation.

C. Alternatives to these standards shall be proposed, evaluated and accepted, prior to application submittal, at the preapplication meeting and evaluated and accepted prior to the application submittal.

D. The alternative request shall be in writing, submitted to the county engineer, and address the following points:

1. Specifically outline the reason for the alternative request.

2. Specify the chapter and section for which the alternative is requested.

3. Provide supporting evidence demonstrating that an alternative from these standards is based on sound engineering judgment that the requirements for safety, function, appearance, fire protection and maintainability are fully met and complies with the Douglas County Comprehensive Plan and appropriate sub-area plan if applicable.

4. The above information shall be used by the county engineer in evaluating requests for the use of alternatives to these standards. Alternative requests that conflict with the International Fire Code as adopted by Douglas County shall also require written concurrence from the county fire marshal.

5. Any alternative proposal which achieves the standard but at an equal or greater value. (Ord. TLS 09-11-49E (Exh. B) (part); Ord. TLS 04-02-30B Exh. A (part))

12.50.110 Performance assurance.

A. Construction Performance.

1. In lieu of the completion of any required improvements prior to approval of a final plat, short plat, or other land use action the county engineer may accept a performance guarantee in an amount and with satisfactory surety and conditions providing for and securing to Douglas County the actual design, construction and installation of such improvements within a period specified by the county engineer. The county engineer will enforce the guarantee through appropriate legal and equitable remedies. If a surety bond is provided, the amount of the bond shall not be less than one hundred twenty-five percent of the estimated design and construction cost as reviewed and concurred in by the county engineer. See DCC Chapter 14.90 for specific instructions.

2. The amount of the performance guarantee may be reduced during construction, as determined by the county engineer and based upon the amount of progress payments. At no time will the performance guarantee amount be reduced to less than thirty percent of the original amount or five thousand dollars, whichever is greater.
3. Once a performance assurance is approved by the county, building permits or any additional permits required by the county may be issued prior to completion and approval of all road, drainage and utility construction. Building permits will only be issued if the roads are determined to be usable unless otherwise exempted by the fire marshal.

4. Prior to beginning construction activities within existing right-of-way, a permit to perform work in the right-of-way shall be secured. Restoration sureties may be required by the county engineer in the manner provided for in this section.

B. Maintenance Performance.

1. The developer shall warrant all portions of construction work done in the right-of-way for a period of eighteen months after completion or acceptance, whichever is later, against defective workmanship and materials. The developer shall keep the roads and public improvements in good order and repair during the eighteen-month period.

2. This warranty shall be secured with a form of collateral acceptable to the county engineer in conformance with the requirements of DCC Chapter 14.50. The amount of this collateral shall be fifteen percent of the original estimated or final design and construction cost as reviewed and concurred in by the county engineer or five thousand dollars, whichever is greater.

3. This warranty collateral shall be submitted concurrently with a request for release of the construction performance guarantee and the eighteen-month warranty period shall commence on the date of said release of the guarantee. The warranty collateral shall not be drawn upon. This warranty collateral will be held eighteen months by Douglas County and will cover all improvements associated with the road system and its related drainage facilities.

4. During the course of the warranty period, periodic inspections will be conducted by the county engineer or his/her representative. If deficiencies are observed, other than normal deterioration, they shall be brought to the attention of the developer for his/her action. At the end of the eighteen-month period, the county engineer shall conduct a final inspection of the improvements and determine all work and an estimate of the cost necessary to restore the roadway, drainage facilities and any other improvements to their original design condition and provide said information to the developer. The developer shall have the option to perform all necessary restoration within a reasonable time as may be negotiated with the county engineer. Should any or all of the restoration not be satisfactorily accomplished by the developer, the county engineer will arrange for the accomplishment of the repairs. This restoration amount shall be deducted from the warranty collateral and the balance returned to the developer with an itemized list of all deductions; if the cost of the restoration work done by the county exceeds the amount of the warranty collateral, the developer shall be billed by the county for the balance including an itemized statement of all work performed.
5. Maintenance guarantees will not be required when the required construction performance guarantee is one thousand dollars or less. (Ord. TLS 09-11-49E (Exh. B) (part); Ord. TLS 04-02-30B Exh. A (part))

12.50.120 Violations and penalties.
A. Failure to comply with these standards shall be cause for withholding or withdrawing approval of plans, forfeiture of financial security or nonacceptance of the work by the county.

B. Violation of any provisions of these standards by any person, firm or corporation shall be pursued and resolved in the same manner as any violation of Douglas County Code as provided for in DCC Chapter 14.92.

C. Notwithstanding the existence or use of any other remedy, the director or county engineer may seek legal or equitable relief to enjoin any acts or practices and abate any conditions that constitute or will constitute a violation of these standards or other regulations herein adopted. (Ord. TLS 09-11-49E (Exh. B) (part); Ord. TLS 04-02-30B Exh. A (part))

12.50.130 Severability.
If any part of these standards or its application to any person is, for any reason, declared invalid, illegal, or unconstitutional, in whole or in part, by any court or agency of competent jurisdiction, said decision shall not affect the validity of the remaining portions thereof. (Ord. TLS 09-11-49E (Exh. B) (part); Ord. TLS 04-02-30B Exh. A (part))

12.50.140 Fees.
Fees shall be assessed in accordance with the current development fee schedule as approved by the Douglas County board of county commissioners. (Ord. TLS 09-11-49E (Exh. B) (part); Ord. TLS 04-02-30B Exh. A (part))

12.50.150 Transportation system and frontage improvements.
Frontage improvements are required for all improvement and development projects that have frontage on a public road that does not meet current standards. The transportation system and frontage improvements shall be in place, paid or be secured by means of an approved deferred improvement agreement no later than time of final plat approval or certificate of occupancy, whichever occurs first, for that development or phase. If the improvements are not listed on the county transportation improvement plan, they shall be installed prior to final plat approval.

A. Transportation Improvements—Off Site. Off-site transportation improvements such as road widening, additional right-of-way, paving, geometric improvements, additional lanes, traffic control devices, bridge and drainage structure modifications, pedestrian facilities, bike paths and intersection improvements away from the development shall be required where identified by a traffic impact analysis or otherwise be determined to be necessary as part of the development review process.
The Douglas County department of transportation and land services will also review the right-of-way status of abutting and adjoining county roads to determine if additional right-of-way is needed to meet the current road standards as set forth in these standards.

All such required off-site improvements must be completed or other financing arrangements made as approved by the county prior to final development approval. Alternate financing methods such as use of road benefit assessment reimbursement areas as set forth in DCC Chapter 12.45 may be used.

B. Frontage Improvements—General Requirements.

1. Frontage improvements may be required for all improvement and development projects that have frontage on a public road. Frontage improvements shall consist of, but not be limited to, dedication of right-of-way, road widening, turn lanes, traffic signals, bus stop pads, bus shelter pads, passenger shelters, bus pullouts, pedestrian facilities, bike paths where designated in the current county comprehensive plan and safety and drainage improvements, including all tributary runoff.

2. Frontage improvements, including the dedication of right-of-way, shall be installed at the time of development unless otherwise approved by the county.

3. The developer shall coordinate the design and construction with the county and Link Transit when frontage improvements include bus stop pads, shelter pads and bus shelters. Prescription of a passenger shelter shall also incorporate the condition that the shelter meets Link Transit's standard passenger shelter specifications.

C. Exceptions. The county engineer may approve an alternative as set out in subsection D of this section to the installation of frontage improvements, not including dedication of right-of-way, if one or more of the following conditions apply:

1. The design grade and alignment of the abutting roads cannot be determined at the time of construction of the development.

2. The installation of frontage improvements required for the development would create or intensify a hazard to public safety.

3. The installation of frontage improvements required for the development could be more safely, efficiently, and effectively implemented if done concurrently with the installation of improvements required for other developments along the same road frontage.

4. The county engineer may defer road frontage improvements for county roads for family farm support divisions as defined in DCC Section 18.16.220(B). The deferral of improvements shall be executed in accordance with the provisions contained in this chapter and shall be conditioned upon
the deferred frontage improvements being constructed along the entire parent parcel of the family farm support division upon further division or commercial or industrial development of any of the lots, parcels or remainder parcel created. Dedication of right-of-way shall not be deferred.

D. Deferral of Improvements. Any deferred frontage improvement shall be secured for installation at a later date by an agreement and covenant between the county and the property owner whereby the property owner agrees to two methods of installation of the deferred frontage improvements. This agreement and covenant shall be executed before the issuance of any improvement and development permits. The county engineer shall select which method to enforce against the property owner at the time when the deferred frontage improvements are required to be installed. Three Two methods the property owner shall agree to are:

1. Commitment to Participate in an Improvement District. The property owner shall execute and record an agreement with the county and covenant running with the land that ensures the participation of the subject property owner in any local improvement district (Chapter 35.43 RCW), road improvement district (Chapter 36.88 RCW), or transportation benefit district (Chapter 36.73 RCW) formed for the construction of such frontage improvements. Said document shall be in a form acceptable to the county prosecuting attorney’s office and shall be effective for a period not exceeding ten years from the date of recording. This document shall bind the owner and its designees, heirs, transferees, donees, and/or successors in interest.

2. Agreement to Participate in Improvement Project. The property owner shall execute and record an agreement with the county and covenant running with the land that ensures the participation of the subject property owner in an improvement project not supported by an improvement district that encompasses the said deferred frontage improvements by paying their share thereof. Such share shall be equal to the county’s costs for installing the deferred frontage improvements. The county shall provide a nonbinding total cost estimate to the property owner at the time the agreement is entered into including a disclaimer that the total cost of the project at the time of construction may vary due to inflation, changes in design standards or other governmental laws and regulations. A contract shall be developed at the time the improvement project is developed outlining the level of participation by the subject property owner in said project and the manner in which payment is to be made; provided, that the financial responsibility of the subject property owner shall not exceed the cost of said deferred frontage improvements at the time of the improvement project. Such an agreement and covenant shall bind the owner and its assignees, heirs, transferees, donees, and/or successors in interest. The agreement and covenant document shall be effective for a period of ten years from the date of recording.

3. Voluntary Payments. See RCW 82.02.020. (Ord. 10-04-09B; Ord. TLS 09-11-49E (Exh. B) (part); Ord. TLS 04-02-30B Exh. A (part))
12.50.160 Withdrawal of approval/acceptance.
At the discretion of the county engineer, errors and omissions in the approved/accepted plans or information used as a basis for such approvals/acceptances may constitute grounds for withdrawal of any approvals/acceptances and/or stoppage of any or all permitted work. It shall be the responsibility of the applicant to show cause why such work should continue, and make such changes in plans that may be required by the county before the plans are re-approved. (Ord. TLS 09-11-49E (Exh. B) (part); Ord. TLS 04-02-30B Exh. A (part))

12.50.170 Site maintenance.
A. The applicant shall schedule and control the work to comply with all applicable provisions of county development regulations and applicable state and federal laws and regulations to prevent any hazards to public safety, health and welfare.

B. On existing roads, two-way traffic and all existing lanes of traffic shall be maintained at all times unless detour and/or traffic control plans have been approved in advance by the county engineer.

C. Roads shall be kept free of dirt and debris.

D. Pedestrian and bicycle facilities shall be kept free of obstructions.

E. Pedestrian and vehicular access to occupied buildings shall be maintained except where written approval from the building owner has been obtained.

F. Drainage facilities shall be maintained and fully functional and stormwater, erosion, and sedimentation control devices shall be maintained and fully functional.

G. On-site grading shall be done in a manner to minimize off-site erosion and siltation in conformance with all statutory requirements, permits and approved plans. (Ord. TLS 09-11-49E (Exh. B) (part); Ord. TLS 04-02-30B Exh. A (part))

12.50.180 Correspondence.
All correspondence, including letters, reports, and plans, shall be clearly labeled with the county project number as assigned by the department. Submittals or correspondence without this identification number will not be accepted and will not be reviewed. (Ord. TLS 09-11-49E (Exh. B) (part); Ord. TLS 04-02-30B Exh. A (part))
Chapter 12.52
DESIGN CRITERIA FOR ROADS AND STREETS

Sections:
12.52.010 Scope.
12.52.020 General requirements.
12.52.030 General design principles for new roads.
12.52.040 Design requirements—New and reconstructed roads.
12.52.050 Stormwater management.
12.52.060 New utilities.
12.52.070 Connections to existing utilities.

12.52.010 Scope.
The purpose of this chapter is to present criteria for the design of roads and streets within Douglas County, including roads that primarily serve residential neighborhoods. It is to be used by developers and their engineers in the design of public and private roads, exempt private roads and streets for which approval by the county engineer is required. Design of roads and streets within Urbanized Areas surrounding an incorporated City or Town for which adoption of Road Standards has taken place shall comply with said standards. (Ord. TLS 09-11-49E (Exh. B) (part); Ord. TLS 07-04-30B Exh. B (part); Ord. TLS 04-02-30B Exh. A (part))

12.52.020 General requirements.

A. Minimum Standards. The provisions stipulated in this section are required minimum standards and shall be considered applicable to all parts of these specifications including any supplements and revisions. All construction within the public right-of-way shall be designed by or under the direct supervision of a registered professional engineer licensed to practice in the state of Washington. All drawings and support data submitted to the county for approval must bear his/her seal. The signature of the registered professional engineer will only be required on the approved final plans and supporting data.

The design criteria, as presented, are intended to aid in preparation of plans and specifications and include minimum standards where applicable. These design criteria are considered minimum and a complete design will usually require more than is presented in this document. As with any design criteria, occasions may arise where the minimum standards are either inappropriate or cannot be justified economically and an equal but alternative solution may be proposed. A written request for each alternative shall be directed to the county engineer and shall conform to criteria in DCC Section 12.50.100, Alternatives.

B. Application to Private Roads. Although community road requirements are usually best served by public roads owned and maintained by the county, private roads may be appropriate for some local access roads for either residential or commercial/industrial property. These standards provide suggested design criteria to assure adequate access for normal and emergency vehicles.
Private roads are permitted as follows only when all of the following conditions are met:

1. Permanently established by tract or easement providing legal access to each affected lot, dwelling unit, or business and sufficient to accommodate required improvements, to include provision for future use by adjacent property owners when applicable.

2. All new or revised accesses onto a county road require an approved access permit as per the procedures in DCC Chapter 12.24. Dimensions, slopes and details for all external private roads at the connection to a county road shall, at a minimum, meet the standards included on Figure 4-1. Constructed to Douglas County road standards as set forth herein.

3. Accessible at all times for emergency and public service vehicle use.

4. Not obstructing, or part of, the present or future public neighborhood circulation or arterial plan developed in processes such as the Douglas County Comprehensive Plan, applicable community plan, or capital improvement plan.

5. Designed by a licensed professional engineer for an average daily traffic count (AADT) based upon the traffic generation associated with the projected use of the road of one hundred sixty or less vehicles per day utilizing current ITE guidelines. New private roads directly accessing a county road that will generate more than one hundred sixty AADT will be permitted only by approval by the county hearing examiner and will be required to meet the appropriate county road rural or urban road standards contained herein (see Figures 3-2 through 3-8). There is no maximum AADT provision if a new development is served by an extension of, or spur off, an existing private road; however, should such existing private road be less than the standards considering the current and proposed AADT, the new development may be denied unless a lower level of improvement has been approved by the county hearing examiner upon recommendation by the county engineer or the applicant assumes responsibility for bringing the existing private road serving the new development up to these standards.

6. Maintained in accordance with these standards by a capable and legally responsible owner, homeowner's association or other legal entity made up of all benefited property owners. A written road maintenance agreement addressing the rights and responsibilities of all benefited property owners shall be approved by the department prior to final approval of the land development. Said road maintenance agreement shall be recorded with the county and shall become a covenant with the affected properties. The term "benefited property owners" shall include the owners of record of all properties with frontage, including access rights, on the private road or otherwise have legal access, whether constructed or not, to the private road.

7. Clearly described as a private road not maintained by the county on the face of the plat, short plat or other development authorization.

8. Clearly signed at the road location as a private road.
9. Designed and constructed in accordance with Chapter 5 and Appendix D of the International Fire Code published by the International Code Council (ICC) as the same now exists or may hereafter be amended.

10. Engineer of record shall provide certification that the private road has been designed and constructed in accordance with standards for emergency services as specified by the Fire Marshal.

C. Application to Exempt Private Roads. Although community road requirements are usually best served by public roads owned and maintained by the county, exempt private roads may be appropriate for some local access roads. Exempt private roads are exempt from county review for compliance with the comprehensive road standards.

Exempt private roads shall permitted only when all of the following conditions are met:

1. All new or revised accesses onto a county road require an approved access permit as per the procedures in DCC Chapter 12.24 Approaches to County Roads. New exempt private roads directly accessing a county road that will generate more than one hundred sixty AADT will be permitted only by approval by the county hearing examiner upon recommendation by the county engineer.

2. Dimensions, slopes and details for all exempt private roads at the connection to a county road shall at a minimum meet the standards included on Figure 4-1.

3. Clearly signed at the road location as a private road.

4. Clearly described as an exempt private road, not maintained by the county: (Ord. TLS 09-11-49E (Exh. B) (part); Ord. TLS 07-04-30B Exh. B (part); Ord. TLS 04-02-30B Exh. A (part))

12.52.030 General design principles for new roads.

A. Road Network Circulation. The importance of good road network circulation for the health, welfare and safety of the public cannot be overemphasized. Poor circulation adds unnecessary miles to pedestrian and trail systems, school bus routes, mail delivery and other service deliveries, utility services and, most importantly, emergency services such as police and fire. Through good road network circulation, the public will have better emergency access and police and fire safety will be enhanced.

1. Plans will be reviewed for the provision of the best possible road and pedestrian network circulation and for conformance with any adopted comprehensive plan. The road alignment may necessitate re-alignment in order to foster the long-range transportation objectives of the county. This includes greater scrutiny to provide continuity of pedestrian and other trail systems related to the proposed road network. The inclusion of permanent cul-de-sacs is strongly discouraged as they inhibit road and pedestrian network circulation (see DCC Section 12.52.040(L) for specific requirements) and are not consistent with the county comprehensive plan.
Cul-de-sacs may be permitted provided they do not impede overall county circulation and don't conflict with comprehensive transportation plans and include provisions to serve adjacent undeveloped/under-accessed properties.

2. To facilitate the best possible road and pedestrian network circulation, if it is determined by the county engineer, after making an individualized determination, that the layout of roads are to provide for the continuation of existing roads in adjoining subdivisions, then the roads shall be constructed prior to final plat approval. When adjoining property is not subdivided, the county engineer shall determine whether roads in the proposed plat are to provide access to such unplatted property. The location for access to unplatted property shall be placed such that the objectives in these standards can be achieved. Reserve easement strips may be required to prevent unauthorized access until such time as the connecting roads are constructed.

3. If the roads are to remain private, the above still applies except a separate tract or easement will be shown on the final plat map and they will not be dedicated to the public. Specific information in the recorded covenants regarding the use of this easement will be required.

4. Unless otherwise approved, all lots within major subdivisions shall be accessed by means of an internal road network. This network may be public or private but not a mixture of both. Access easements or multi-dwelling driveways may at times be necessary to access difficult to reach areas in order to maximize efficiency and density, in lieu of public or private roads shall not be permitted.

B. On-Site Principles. An integral part of an overall traffic study relates to basic site planning principles. An integrated on-site roadway system should deliver vehicles from the external roadway system in a manner easily understood by typical drivers and that maximizes efficiency, accommodates anticipated traffic patterns and ensures public safety.

1. Alignment. Connecting street centerlines deflecting from each other more than ten degrees shall be connected by a curve the radius of which shall be approved by the county engineer. Street intersections shall be as nearly at right angles as is practicable, and street jogs having offsets of less than one hundred twenty-five feet shall be avoided.

2. Internal Vehicular Circulation. Internal circulation is the means by which vehicular traffic is delivered between entry points and parking areas, pick-up/drop-off points, and service areas, and should be planned to accommodate appropriate future traffic volumes.

3. Subdivision Boundary Streets. A street lying along the boundary of a subdivision may be dedicated with less than the width required by these standards if it is practicable to require the dedication of the remaining portion of such width when the adjoining property is subdivided. In such case there is required a reserve easement strip one foot wide along such street for the purpose of withholding access to the unsubdivided property from such street until a street is constructed to the full width required. The procedure shall also apply in the case of any street that dead-ends at the boundary of a subdivision.
4. Access Points. Roads and lots shall be laid out to provide individual lot access onto an internal roadway system, hence via the internal roadway system to the existing public road system. Direct access to a perimeter road shall be allowed for local access roads but is not permitted onto collectors and arterials except by a case by case review, normally be denied except for direct access onto a designated local access road.

5. Parking. Parking shall be provided to meet site-generated demands and be consistent with DCC Title 20 and other planning department policies.

12.52.040 Design requirements—New and reconstructed roads.

The following minimum design standards shall apply to all new and reconstructed roadway. Exhibits showing the basic cross-section requirements for the various road classifications are shown in Figures 3-21 through 3-8 at the end of this chapter.

A. Road Base and Surfacing Requirements. The following road surfacing requirements shall apply to all new and reconstructed roads.

1. Surfacing. The minimum road surfacing requirements for various traffic volumes and locations are shown in Table 3-1:

<table>
<thead>
<tr>
<th>Location</th>
<th>Figure</th>
<th>Traffic Volume (AADT)</th>
<th>Road Surface Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural—Private</td>
<td>3-1, 3-2, 3-3</td>
<td>Up-to-160 Over-160</td>
<td>Crushed Surf. Top Course BST-Class-A</td>
</tr>
<tr>
<td>Rural—Public</td>
<td>3-2, 3-3, 3-4, 3-5, 3-6</td>
<td>Up to 400 Over 400</td>
<td>ACP/HMA' ACP/HMA</td>
</tr>
<tr>
<td>Urban—Private</td>
<td>3-7, 3-8</td>
<td>All</td>
<td>ACP/HMA or PCC</td>
</tr>
<tr>
<td>Urban—Public</td>
<td>3-7, 3-8</td>
<td>All</td>
<td>ACP/HMA or PCC</td>
</tr>
</tbody>
</table>

1 BST Class A will be allowed for local access roads up to 400 AADT. All other classes require ACP/HMA.
2. Structural Sections—Public Roads.

a. Design Procedure. A roadway section structural design procedure shall be performed for all new and reconstructed public roads. The design life for all roads shall be twenty years with a growth factor as determined by the county engineer. The design procedure shall be approved by the county engineer and shall consider the following design elements:

i. Design Load—HS 20-44.

ii. Total Design Life Traffic Loading. An estimate of the number and types of loadings the roadway will carry for the design life. This estimate of loading shall be determined using a procedure accepted by the county engineer and be expressed in eighteen KIP equivalent single axle loads (ESALs).

iii. Subgrade Support. One or more representative values for the stiffness of the native material on which the road will be built. These values shall be established by a procedure accepted by the county engineer and be expressed as resilient modulus.

iv. Analysis. A procedure for establishing the roadway structural section for a given traffic loading and resilient modulus. This procedure shall be approved by the county engineer.

b. Construction Requirements. All structural sections including surfacing shall use materials meeting the specifications of and be constructed in accordance with the WSDOT Standard Specifications. Minimum compaction requirements shall be ninety-one percent for hot mix asphalt (asphalt concrete pavement) and ninety-five percent for crushed surfacing and base courses. See DCC Chapter 12.55 for details and further guidance.

3. RESERVED Structural Section—Private Roads. Private roads with a projected AADT under one hundred sixty do not require roadway section structural design; however, the requirement for minimum thickness will apply. Private roads with a projected AADT under one hundred sixty that are constructed without a roadway structural design will not be eligible for future inclusion into the county road system without further structural analysis as may be directed by the county engineer.


a. In all cases, the minimum roadway structural section shall be as shown on Figures 3-21 through 3-8 at the end of this chapter.

b. Many areas of Douglas County have soils excessively susceptible to frost heave. The applicant or applicant’s engineer shall consult with the county engineer’s office as to those locations with known frost heave problems or with soils likely to generate excessive frost heave. These locations may require additional base thickness.
B. Design Speed. Design speeds for urban and rural roads and streets shall be as shown in Table 3-2:

### Table 3-2: Design Speeds

<table>
<thead>
<tr>
<th>Location/AADT</th>
<th>Figure</th>
<th>Flat</th>
<th>Rolling</th>
<th>Mount.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban—Private</td>
<td>3-7</td>
<td>25</td>
<td>25</td>
<td>20</td>
</tr>
<tr>
<td>Urban—Local access</td>
<td>3-7</td>
<td>25</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Urban—Collector</td>
<td>3-8</td>
<td>35</td>
<td>30</td>
<td>25</td>
</tr>
<tr>
<td>Urban—Arterial</td>
<td>3-8</td>
<td>45</td>
<td>45</td>
<td>45</td>
</tr>
<tr>
<td>Rural—Private (400 or less)</td>
<td>3-1</td>
<td>40</td>
<td>30</td>
<td>25</td>
</tr>
<tr>
<td>Rural—Local access 400 and less</td>
<td>3-2</td>
<td>50</td>
<td>40</td>
<td>25</td>
</tr>
<tr>
<td>Rural—Local access over 400</td>
<td>3-3</td>
<td>50</td>
<td>40</td>
<td>30</td>
</tr>
<tr>
<td>Rural—Collector 400 and less</td>
<td>3-4</td>
<td>50</td>
<td>40</td>
<td>30</td>
</tr>
<tr>
<td>Rural—Collector 401 to 2,000</td>
<td>3-5</td>
<td>60</td>
<td>50</td>
<td>40</td>
</tr>
<tr>
<td>Rural—Collector and arterial over 2,000</td>
<td>3-6</td>
<td>60</td>
<td>50</td>
<td>40</td>
</tr>
</tbody>
</table>

1. Private urban shall meet the urban local access standard.

2. Private rural over four hundred AADT shall meet the rural local access standard.

See DCC Section 12.51.020(E) for terrain definitions.

| Refer to AASHTO Green Book for specific design data.
C. Right-of-Way. The basic minimum rights-of-way for all roads are shown in Figures 3-2 through 3-8 at the end of this chapter. Additional right-of-way shall be required to accommodate other road features such as additional lanes, planter strips and transit stops. Construction and maintenance easements may be allowed for cut and fill slopes.

D. Lane, Shoulder and Roadway Width. Basic lane, shoulder and total roadway and surfacing minimum width requirements are shown in Figures 3-2 through 3-8. Minimum widths are based on a combination of roadway classification and traffic volume (AADT).

Urban roadway sections (Figures 3-7a and 3-7b) assume parking on both sides. Applicants proposing utilization of no parking and parking one side alternates shall propose the alternate section to the county engineer for review in accordance with DCC Section 12.50.100.

Urban collectors and arterial sections (Figure 3-8) do not include provisions to accommodate parking.

Rural and private roadway sections do not include additional width for parking. When parking space is required, additional width will be required. Additional width may also be required to accommodate removal and storage of snow.

Where truck traffic exceeds fifteen percent of the projected AADT, twelve-foot lanes will be required for all rural roadway classifications.

E. Ditch Slopes. The slope from edge of shoulder to bottom of ditch shall be four to one for all ditch roadway sections, except that three to one will be allowed for rural private roads under one hundred sixty AADT. See DCC Section 12.57.020 for cut and fill slope requirements.

F. Sight Distance. All new roads and streets shall be designed to achieve the following sight distances:


G. Superelevation. Superelevation shall normally be applied to all new or reconstructed roads and streets. The maximum superelevation for roads with a design speed of thirty-five mph or greater shall not exceed six percent and for roads with a design speed under thirty-five mph shall not exceed four percent; provided, however, that the combination of superelevation and road gradient shall not exceed twelve percent at any point on the roadway surface.

H. Horizontal Alignment (Curvature). The minimum curve radius for all new or reconstructed rural highways and higher speed urban roads shall not be less than the rounded radius values in the AASHTO Green Book, current edition, using a maximum superelevation rate of six percent for design speeds of
thirty-five mph or greater and a maximum superelevation rate of four percent for design speeds under thirty-five mph.

Low speed urban streets (design speed of thirty mph or less) may use the minimum curve radii as set forth in the AASHTO Green Book, current edition, based on a maximum superelevation rate of four percent. Lesser curve radii may be used only with the permission of the county engineer.

I. Vertical Alignment.

1. Maximum Grades. The maximum and minimum grades for each roadway classification are shown in Figures 3-21 through 3-8.

2. Vertical Curves. Sag vertical curves shall be designed in accordance with the AASHTO Green Book, “Design Controls for Sag Vertical Curves—Open Road Conditions,” and “Design Controls for Sag Vertical Curves.”

Crest vertical curves shall be designed in accordance with the AASHTO Green Book, “Design Controls for Crest Vertical Curves—Open Road Conditions,” “Design Controls for Stopping Sight Distance and for Crest Vertical Curves,” “Design Controls for Crest Vertical Curves Based on Passing Sight Distance.”

J. Vertical Clearance. The minimum vertical clearance for all roadways under structures such as overpasses shall be sixteen and one-half feet.

K. Design Vehicle. The physical characteristics of vehicles and the proportions of various sized vehicles using the road system are positive controls in geometric design. For road design purposes, three general classes of vehicles have been selected: passenger cars, trucks and buses/recreational vehicles. The passenger car class includes compacts and subcompacts plus all light vehicles and light delivery trucks (vans and pickups). The truck class includes single-unit trucks, truck tractor-semitrailer combinations, and trucks or truck tractors with semitrailers in combination with full trailers. Buses/recreational vehicles include single-unit buses, articulated buses, school buses, motor homes, and passenger cars or motor homes pulling trailers or boats. In addition, where provision is made for bicycles on a road, the bicycle should also be considered a design vehicle.

The dimensions for the design vehicles representing vehicles are provided in the AASHTO Green Book. In the design of any road facility, the largest design vehicle likely to use that facility with considerable frequency or a design vehicle with special characteristics that must be taken into account in dimensioning the facility is used to determine the design of such critical features as radii at intersections and radii of turning roadways.

Unless unusual sized vehicles must be accommodated, the typical design vehicle used for design of roads shall be of the following classes:
### Table 3-3: Design Vehicles

<table>
<thead>
<tr>
<th>Roadway Class</th>
<th>Design Vehicles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural and urban arterials and rural collectors</td>
<td>Large school bus (S-BUS40)/Intermediate semitrailer (WB-50)</td>
</tr>
<tr>
<td>Urban collectors</td>
<td>Large school bus (S-BUS40)/Single-unit truck (SU)</td>
</tr>
<tr>
<td>Rural and urban local access</td>
<td>Large school bus (S-BUS40)/Single-unit truck (SU)</td>
</tr>
<tr>
<td>Private</td>
<td>Single-unit truck (SU)/Passenger car (P)</td>
</tr>
</tbody>
</table>

¹Refer to AASHTO Green Book for specific design data.

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L. Cul-de-Sacs and Dead-End Roads. All dead end roads shall terminate with a cul-de-sac. Cul-de-sacs are permitted provided they do not impede general network circulation. Permanent cul-de-sacs and dead-end roads are not normally permitted within new developments. Permanent cul-de-sacs will only be permitted where the applicant can (1) demonstrate that the his/her design does provides an acceptable level of network circulation considering the terrain and adjacent existing roadway network, and (2) demonstrate that the prohibition of cul-de-sacs will place an unreasonable economic impact on the applicant.

Where permitted, the following requirements shall apply:

1. RESERVED. Permanent road ends of one hundred fifty feet or less in length (measured from the edge of traveled way of the intersecting road to the end of the road) shall have a minimum right-of-way and roadway section as specified in Figures 3-1 through 3-8 and do require an access easement turnaround.

2. Permanent road ends less than between one hundred fifty and six hundred feet in length (measured from the edge of traveled way of the intersecting road to the beginning of the cul-de-sac) shall have a minimum right-of-way and roadway section as specified in Figures 3-2 through 3-8 and be provided with a cul-de-sac as shown in Figure 3-9 at the end of this chapter.
3. Permanent road ends in excess of six hundred feet are discouraged but may be allowed in cases where lots are large and/or difficult terrain exists, provided, the number of single-family lots served by the road does not exceed twenty or the projected AADT generated from the properties served by the road does not exceed two hundred. The roadway shall have a minimum right-of-way and roadway section as specified in Figures 3-21 through 3-8 and be provided with a cul-de-sac as shown in Figure 3-9 at the end of this chapter.

4. The maximum gradient in any direction and at any point within a cul-de-sac shall not exceed four percent.

M. Intersections. All intersections shall be designed in accordance with Chapter 9, "Intersections," in the AASHTO Green Book or Chapter 910, "Intersections at Grade," in the current edition of the WSDOT "Design Manual M22-01," which requires plus or minus four percent for fifty feet. All intersections with a state highway shall require approval from the WSDOT.

Corner lots, located at road intersections, shall be rounded with a minimum twenty-foot radius adjacent to roads with sixty-foot or more rights-of-way and twenty-five-foot radius adjacent to roads with less than sixty-foot rights-of-way.

N. Boundary (Half) Roads. Boundary or half roads may be permitted to be dedicated with less than the width required by these standards if the county determines that it is practicable to require the remaining portion of such width when the adjoining property is subdivided. Boundary or half roads with widths less than those required by these standards are not allowed adjacent to public parkland or properties owned by public school districts.

Frontage along the property boundary requires dedication of right of way. Road improvements to provide a minimum of 24-feet of roadway shall be provided and include associated curb, gutter and sidewalk. Boundary or half roads may be permitted to be dedicated with less than the width required if the county determines that it is practicable to require the remaining portion of such width when adjoining property is subdivided. Boundary or half roads with widths less than those required by these standards are not allowed adjacent to public parkland or properties owned by public school districts.

O. Transit Stops and Pull-Outs. Property owners and/or developers of proposed developments or other types of land uses located within the Link Transit service area and which generate two hundred average daily or twenty peak hour vehicle trips, as determined by the county engineer, shall negotiate with the public transit authority the improvements that would enhance the area for public transit. Improvements may include bus shelters, pullouts, transit stops, and/or other necessary facilities to offset transportation system impacts of the development and shall be analyzed as part of a traffic impact analysis prepared in accordance with DCC Chapter 20.30.

P. Railroad Grade Crossings. All proposed railroad crossings on public right-of-way must be submitted to the county engineer prior to being processed through the railroad and the utilities and transportation
commission for approval. Additional railroad crossings, especially across main line track, will not be allowed if alternative access is available.

Where additional railroad crossings are allowed, they shall be designed in accordance with the AASHTO Green Book, "Railroad-Highway Grade Crossings."

Q. Curb and Gutter.

1. Cement concrete curb and gutter shall be utilized for street edges on all public streets under the following conditions:
   a. In areas where urban road standards are to be used.
   b. On frontages with commercial usage.

2. Rolled edge, thickened edge or mountable curbs are not permitted as a substitute for curbs and gutters except on private roads, and may only be used in rural areas when approved by the county engineer.

3. On all sections constructed with curb and gutter, a closed drainage system consisting of catch basins, storm sewer pipes and manholes shall be required unless alternative and appropriately designed methods of collecting and dispersing stormwater such as bio-infiltration swales and drywells are provided.

4. Curb and gutter shall be constructed in accordance with WSDOT Standard Plans.

R. Sidewalks.

1. Sidewalks shall be provided on both sides of all arterials, collectors, local access roads and commercial streets in urban areas. Sidewalks shall be required on only one side of the road on all perimeter arterial and major and minor collectors or half roads of a development being constructed under urban standards.

2. Alternatives to subsection (R)(1) of this section may be approved under the provisions of DCC Section 12.50.190. Typical conditions that may warrant approval of an alternative or waiver of the requirements include existing streets where it would be unduly difficult or impractical to construct sidewalks due to grade or steep slope problems or in developments where the basic design allows for an off-road walkway system; provided, that said walkway is an improved surface and provision for maintenance is guaranteed.

3. Sidewalks shall be constructed with Portland Cement Concrete. Sidewalks shall be at least five feet in width and four inches in thickness for urban local access streets. Urban collector and urban arterial sidewalks shall be at least six (6) feet in width. When adjacent to school property and in commercial areas, the sidewalks shall be at least eight (8) feet in width. Sidewalk configurations
shall be in accordance with the WSDOT Design Manual and the WSDOT Standard Plans except for sidewalk width. All sidewalk ramps and features shall be ADA compliant.

12.52.050 Stormwater Management

A. All project submittals shall be in compliance with the provisions of DCC Chapter 20.34 and 20.36 “Stormwater Drainage”. In addition, all drainage facilities within current or future County right of way must be of the type and nature that can be easily maintained by the County. This typically includes as a minimum 12-inch diameter storm sewer pipe and standard catch basins and manholes for curb and gutter roadway sections. All other facilities such as French drains, curtain drains, drywells and stormwater detention ponds shall be installed outside the County’s right of way and be maintained by the applicant or homeowner’s association. See also Chapter 12.55.050 “Plan Elements”, Item J “Standard Plan Notes” for catch basin and grate requirements.

B. All cross culverts and ditch channelizations shall be first evaluated for the presence of fish and, should it be determined by the County that the culvert or channelization be designed to accommodate fish passage including stream bed and/or stream bank enhancement, the culvert or channelization shall be constructed to meet current Washington State Department of Fish and Wildlife standards.

C. Stormwater facilities shall also be designed to accommodate the stormwater from the addition of frontage improvements including tributary area. In locations where future development is expected at a higher elevation and adjacent to the proposed development, the storm sewer pipe shall be extended and deadheaded at the development property line to ease future system connection.

D. Projects requesting stormwater management fee credit from the County for the stormwater facilities as provided for in DCC Chapter 19.40, “Surface and Storm Water Management Utility Code” shall be required to provide the County with a Project Engineer’s Certification of the facilities prior to release of the financial security. The financial security shall not be released until all facilities are completed and repaired as per the approved plans.

E. The maximum spacing on surface drainage courses between inlets or catch basins shall normally be 150 feet on road grades less than 1.0% and 200 feet on grades from 1.0% to 3.0%. When the road grade is greater than 3.0%, the maximum spacing shall be 300 feet. Additional catch basins may be required to confine drainage to the gutter and prevent road drainage from sheet flowing across roadways or intersections. The applicant shall locate any additional catch basins or make other drainage system improvements to insure that any road drainage does not encroach more than one-half the traveled way lane width nor exceed one-half the curb height during a rainfall design event of 2 inches in 90 minutes the design storm as specified in Douglas County Code 20.34. Maximum spacing on main storm sewers between access structures, whether catch basins or manholes, shall be 300 feet.

F. All materials used shall conform to the requirements of the Standard Specifications.
2.52.060 New Utilities

A. Location of Utilities – Underground

1. Underground utilities to be installed within the right-of-way on new roads (or on roads where existing topography, utilities or storm drains are not in conflict), shall be located as shown in Figures 3-10 and 3-11. Where existing utilities or storm drains are in place, new utilities shall conform to these standards as nearly as practicable and yet be compatible with the existing installations. Utilities to be installed outside the road right-of-way shall be installed within a designated utility easement and shall meet the installation requirements of the utility.

2. Gravity systems, whether sanitary or storm drainage, shall have precedence over other systems in planning and installation except where a non-gravity system has already been installed under previous approved permit and subject to applicable provisions of such permits or franchises.

3. Individual water service lines shall:
   a. Be placed with minimum 36-inch cover from finished grade, ditch bottom or natural ground.
   b. Use road right-of-way only as necessary to make side connections.
   c. For any one connection, not extend more than 60 feet along or through the right-of-way, or the minimum width of the existing right-of-way.
   d. Water meter boxes, when placed or re-placed, shall be located on the right-of-way line immediately adjacent to the property being served, unless otherwise approved by the County Engineer. Meter box locations within the right-of-way may be approved by the County Engineer based on site conditions that make routine service access difficult or impractical.

4. Sanitary Sewers:
   a. In the case of individual sanitary sewer service lines which are force mains the pipe shall:
      (1). Be minimum two inches I.D., or as required by the utility to maintain internal scouring velocity.
      (2). If nonmetallic, contain wire or other acceptable proximity detection features; or be placed in a cast iron or other acceptable metal casing.
      (3). Be placed with minimum three-foot cover from finished grade, ditch bottom or natural ground, within 10 degrees of perpendicular to road centerline, and extend to right-of-way line.
b. Sanitary and water lines shall be separated in accordance with good engineering practice such as the Criteria for Sewage Work Design, Washington Department of Ecology, latest edition.

5. Service Connections – all
Mains and service connections to all lots shall be completed prior to placing of surface materials.

6. Materials and Installation – all
All underground utilities shall utilize materials and be installed in conformance with the requirements of the particular utility standards.

B. Location of Utilities – Above Ground

1. All poles, transformer cases, and other above ground utility appurtenances shall be located to avoid becoming a roadside obstacle. See Chapter 12.57.080 for further guidance.

2. Above ground utilities located within intersections shall be placed so as to avoid conflict with placement of curb ramps

12.52.070 Connections to Existing Utilities

Typically, new utility installations, both underground and overhead, constructed in conjunction with land development require a connection to existing utilities. Where such connections must utilize existing county right of way, the connection must be performed in accordance with the County’s Accommodation of Utilities on County Road Right of Way, DCC Chapter 12.20.
Chapter 12.53
DRIVEWAYS, ACCESS EASEMENT, PEDESTRIAN FACILITIES, WALKS AND TRAILS

Sections:

12.53.010 Driveways and access easement.
12.53.020 Pedestrian facilities (urban areas).
12.53.030 Walkways, bikeways and trails.
12.53.040 School access.
12.53.050 Alleys.

12.53.010 Driveways and access easement.

A. General.

1. (Reserved)

2. Dimensions, slopes and details for all driveway and access easements connecting to a county road shall be as indicated on Figure 4-1. Driveways entering roads with curb and gutter shall meet the requirements contained within WSDOT Standard Plans as approved by the county engineer.

3. All new or revised driveways and accesses onto a county road (including temporary or construction accesses) require an approved access permit as per the procedures in DCC Chapter 12.24, Approaches to County Roads.

B. Conditions for Approval of New Driveways and Access Easements.

1. Driveways directly providing access onto arterials and collectors shall be denied if alternate access is available. Access onto arterials and collectors may be permitted where no other alternative is available and is approved by the county engineer.

2. Where property has frontage on more than one roadway, driveways and accesses shall be limited to the lowest volume roadway.

3. Driveways and access easements shall have a minimum separation from each other of one hundred feet in rural areas outside of subdivisions.

4. Circular driveways shall have a minimum separation of one hundred feet.

5. In urban areas, driveways and access easements shall be located along the lot line furthest from the intersection on corner lots, should be located not less than one hundred fifty feet from the nearest intersecting road as measured from the property corner.

6. RESERVED - In areas zoned residential, the minimum separation of individual parcel driveways or accesses, as measured from the centerlines of the driveways or accesses, shall not exceed one-
half of the sum of the accessed parcel frontage and each of the adjacent parcel frontages. Joint usage driveways may be required where sufficient spacing is not available.

7. Only one driveway per single residential or commercial unit will be permitted unless the applicant can demonstrate that additional driveways or accesses are needed due to the amount of traffic generated by the project, traffic distribution patterns, impacts to the county road system or public safety and there is sufficient space to accommodate the additional driveway or access. Joint usage driveways are encouraged.

8. All abandoned driveways shall be removed and restored by the applicant or agent. All abandoned driveways shall be removed and as necessary: curb, gutter and sidewalk shall be restored by the applicant.

9. Maintenance of driveways and approaches (and associated culverts where required) onto a county road shall be the responsibility of the property owner, applicant.

C. Standards.

1. Common to All Driveways and Access Easements.

   a. Clear View Triangle. In addition to providing sufficient sight distances as required in subsection (C)(1)(c) of this section, a clear view triangle as described in DCC Section 12.28.040 shall be maintained for vision safety purposes.

   b. Alignment. All driveways and access easements shall intersect the main roadway at an angle between seventy-five and one hundred five degrees, with ninety degrees being preferable.

   c. Sight Distance. Sufficient sight distances for vehicles to safely enter onto a public road or street as well as for other vehicles on the road or street to avoid accidents with entering or exiting vehicles is required for all driveways and access points. For all driveways and access easements, stopping sight distance in accordance with the current WSDOT Design Manual/AASHTO-Green Book is required as follows:
To calculate sight distance for existing roads serving a proposed driveway or access, first convert the posted speed to an operating speed as per Table 4-1:

<table>
<thead>
<tr>
<th>Posted Speed</th>
<th>Add for Operating Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-mph</td>
<td>0</td>
</tr>
<tr>
<td>25-mph</td>
<td>0</td>
</tr>
<tr>
<td>30-mph</td>
<td>5 mph</td>
</tr>
<tr>
<td>35-mph</td>
<td>8 mph</td>
</tr>
<tr>
<td>40 mph</td>
<td>10 mph</td>
</tr>
<tr>
<td>45 mph and above</td>
<td>10 mph</td>
</tr>
</tbody>
</table>
Secondly, use the operating speed and determine the minimum stopping sight distances from Table 4-2 (based on an approaching vehicle driver's eye height of three and one-half feet and an object at the driveway of two feet).

<table>
<thead>
<tr>
<th>Operating Speed (mph)</th>
<th>Minimum Stopping Sight Distance (ft.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>115</td>
</tr>
<tr>
<td>25</td>
<td>155</td>
</tr>
<tr>
<td>30</td>
<td>200</td>
</tr>
<tr>
<td>35</td>
<td>250</td>
</tr>
<tr>
<td>40</td>
<td>305</td>
</tr>
<tr>
<td>45</td>
<td>360</td>
</tr>
<tr>
<td>50</td>
<td>425</td>
</tr>
<tr>
<td>55</td>
<td>495</td>
</tr>
<tr>
<td>60</td>
<td>670</td>
</tr>
</tbody>
</table>

The grade of the road can also affect the minimum sight distance required. The following Table 4-3 provides the increase for downgrade and the decrease for upgrade modifiers.

<table>
<thead>
<tr>
<th>Operating Speed (mph)</th>
<th>Increase (ft.) for downgrades</th>
<th>Decrease (ft.) for upgrades</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3%</td>
<td>6%</td>
</tr>
<tr>
<td>20 to 30</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>31 to 40</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td>41 to 50</td>
<td>30</td>
<td>70</td>
</tr>
<tr>
<td>51 to 60</td>
<td>60</td>
<td>140</td>
</tr>
</tbody>
</table>
Situations with sight distances less than those specified in the WSDOT Design Manual the above must be approved by the county engineer. In these cases, the applicant may also be required to obtain the services of a professional traffic engineer to assess the situation and provide written justification for lesser sight distances.

Sight distances shall be measured from a point ten feet back of the edge of shoulder or back of sidewalk each way along the edge of the traveled-way of the main roadway as shown in the figure below.

![Sight Distance Diagram]

* Not to exceed 18 ft from the edge of traveled way

d. Drainage. Approaches shall be constructed in such a manner as to minimize the runoff from a driveway or other access easement onto the main road.

All approaches at points where there is an existing roadside ditch shall be constructed with a culvert pipe meeting the specifications of the county engineer.

e. Surfacing Within Right-of-Way. That portion of a driveway or access easement connecting to a paved public road that is within the right-of-way of the public road shall be surfaced with a minimum of two and one-half inches of compacted asphalt concrete pavement or equivalent surfacing material to the road.

f. Maintenance. Maintenance of all driveways and access easements including approaches to public roads shall be the responsibility of the owner(s).

2. Driveways and Joint Usage Driveways. Urban or rural driveways and joint usage driveways serving two or fewer lots have no minimum width or surfacing requirements beyond requirements of subsection (C)(1) of this section. The minimum width of an access easement serving two or fewer lots is twenty feet.

3. Access Easements. Property accesses serving four or more lots and more than one hundred fifty feet in length as measured from the connecting road near side right-of-way line to the farthest exterior wall of an occupied unit are access easements. Unless an alternate approved emergency vehicle access is provided, access easements shall also serve as an emergency vehicle access. Access easements are privately owned and maintained by the property owners being served and
are not the responsibility of the county. Access easements shall have the following requirements and detailed on Figure 4-3:

a. The minimum width of the tract or for an access easement serving four (4) three or more lots shall be thirty feet.

b. The base and surfacing shall provide a minimum traveled way of twelve feet with turnouts one every three hundred to five hundred feet, depending on line of sight, for fifty feet in length of twenty feet in width and be designed and constructed as an all-weather road. A hammerhead or cul-de-sac needs to be provided for turnaround. The minimum base and surfacing shall be six inches of compacted gravel base, crushed surfacing base course or crushed surfacing top course. A twenty-foot-wide clear zone will be provided full length for access easement.

c. Suitable drainage in the form of ditches and cross culverts shall be provided along the full length of the access easement. Any bridges or drainage structures shall meet the requirements of DCC Chapter 12.55.

d. Access easements serving three (3) or more lots shall be via private road meeting the standards of the County Fire Marshal, including Chapter 5 and Appendix D of the International Fire Code published by the International Code Council (ICC) as the same now exists or may hereafter be amended. The length of an access easement within an urban growth area shall not exceed four hundred fifty feet, excluding the turnaround unless otherwise approved by the County Fire Marshal, and shall not serve more than four lots. Access easement to more than four lots within an urban growth area shall be via an urban local access county or private road meeting the requirements of this chapter as included in these standards.

e. Access easements outside of an urban growth area shall not serve more than eight lots or parcels. Access easement to more than eight lots outside an urban growth area shall be via a rural local access county or private road meeting the requirements of this chapter as included in these standards.

f. The minimum centerline radius of curvature shall not be less than forty-five feet; provided, however, if an approved alternate emergency vehicle access is provided, the minimum centerline radius of curvature shall not be less than thirty feet.

g. The maximum grade shall be ten percent for gravel surfacing and twelve percent for paved portions.

h. The minimum clear vertical distance shall not be less than thirteen feet, six inches.

i. All dead-end access easements greater than one hundred fifty feet in length shall be improved with an approved turnaround for emergency vehicles such as a cul-de-sac or
12.53.020 Pedestrian facilities (urban areas).
Sidewalks are required on both sides of urban streets. See DCC Section 12.52.040(R) for details and exceptions. (Ord. TLS 09-11-49E (Exh. B) (part); Ord. TLS 04-02-30B Exh. A (part))

12.53.030 Walkways, bikeways and trails.
Walkways, bikeways and trails shall be required as identified in the applicable comprehensive plan or separate nonmotorized transportation plan.

Nonmotorized transportation includes travel by bicyclists, pedestrians, and equestrians. Sections 1020 and 1025 of the WSDOT Design Manual will be followed for design of bicycle paths, trails and other nonmotorized transportation. (Ord. TLS 09-11-49E (Exh. B) (part); Ord. TLS 04-02-30B Exh. A (part))

12.53.040 School access.
Sidewalks for school access shall be provided in accordance with the safe walking plans as developed by individual schools and school districts. In addition, walking paths or sidewalks will be required in new plats to facilitate access to schools. (Ord. TLS 09-11-49E (Exh. B) (part); Ord. TLS 04-02-30B Exh. A (part))

12.53.050 Alleys.
Where provided, every alley at the rear of a lot shall have a minimum width of twenty feet. Structural and surfacing requirements shall be the same as the adjoining streets. No dead-end alley or alley with sharp changes in direction shall be permitted. (Ord. TLS 09-11-49E (Exh. B) (part); Ord. TLS 04-02-30B Exh. A (part))
Chapter 12.57
ROADSIDE FEATURES

Sections:

12.57.020 Side slopes.
12.57.070 Guardrail.
12.57.100 Roadway illumination.

12.57.020 Side slopes.
A. Side slopes shall generally be constructed no steeper than two to one on both fill slopes and cut slopes; however, side slopes on private roads may be as steep as one and three-quarters to one. Steeper slopes may be approved by the county engineer upon showing that steeper slopes, based on soils analysis, will be stable.

B. Side slopes shall be stabilized by grass sod, hydroseeding, or by planting or surfacing materials acceptable to the county engineer. Hydroseeding mix shall be submitted to the county for approval prior to application. Certification of application rates and methods shall be provided. A maintenance performance bond shall be provided until such time as the vegetation has been established to the satisfaction of the county.

C. Side slopes may also require flattening to accommodate utility placement.

D. Cut slopes may require terracing depending upon the total slope height and the nature of the material being cut. Cut slopes higher than fifteen feet will require a soils analysis to determine if terracing will be required.

E. Side slopes and on-site grading shall comply with Douglas County Code grading and excavation standards. (Ord. TLS 09-11-49E (Exh. B) (part); Ord. TLS 04-02-30B Exh. A (part))

12.57.070 Guardrail.

A. Evaluation of embankments for guardrail installations shall be in accordance with Chapter 7.10 of the WSDOT Design Manual or the AASHTO Roadside Design Guide.

B. Guardrail installations shall conform to WSDOT Design Manual and Standard Plans, Beam-Guardrail Type 1 and Guardrail Placement. End anchors shall conform to WSDOT Standard Plan: Beam-Guardrail Anchor-Type 1. (Ord. TLS 09-11-49E (Exh. B) (part); Ord. TLS 04-02-30B Exh. A (part))
12.57.100 Roadway illumination.

Roadway illumination is not normally required as part of a project unless a project road falls within the urban growth area surrounding a city that requires street lighting. If illumination is required, the following provisions shall apply:

A. Street lighting system designs are to be prepared by a licensed engineer experienced with lighting design. Calculations should include illuminaire spacing, illumination levels, line losses, power sources and other necessary details for the electrical and physical installation of the street lighting system.

B. The following illumination levels shall be met based on the urban roadway classification:

<table>
<thead>
<tr>
<th>Urban Classification</th>
<th>Horizontal Foot Candles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal arterials</td>
<td>1.5 FC</td>
</tr>
<tr>
<td>Minor and collector arterials</td>
<td>1.0 FC</td>
</tr>
<tr>
<td>Local commercial/industrial</td>
<td>1.0 FC</td>
</tr>
<tr>
<td>Local access</td>
<td>At intersections or street ends</td>
</tr>
</tbody>
</table>

C. Other Considerations.

1. All street lights shall be on two-hundred forty volt, single phase systems. The exact location of the power source should be indicated together with the remaining capacity of that circuit. System continuity and extension should be considered.

2. Contractor cabinets equipped with electrical meters, time clocks, circuit breakers, and other required components are required on commercial installations as per WSDOT Standards of five or more street lights.

3. All street lighting, wiring, and service connectors shall be located underground except in residential areas where existing power distribution poles exist.

4. Particular attention shall be given to locating luminaries near intersections, at all street ends and at pedestrian, bicycle, and/or equestrian crossings.

5. Mounting height shall be a maximum of thirty feet (30) for all luminaries.

6. In lieu of a street light, at the end of the cul-de-sac, permanent driveway pedestal lighting provided by all lots accessing the cul-de-sac may be substituted; provided, that it is noted on the face of the plat.
7. Street-lighting shall meet the Douglas County PUD (DCPUD) standards for nonmetered lights. These standards include 150w, 200w, or 400w HPS fixtures, for unmetered services. DCPUD shall take over ownership of unmetered lights and wires. The applicant/developer shall be responsible for charges for connection of the street lights to the transformer or hand hole. Refer to DCPUD Standard Details A-01 and A-02. Illumination will be provided when required by an incorporated city or the Washington State Department of Transportation. Widening of collectors with existing illumination will require illumination designed to current construction practices. Illumination intensity and uniformity shall conform to the incorporated city or the Washington State Department of Transportation standards. Luminaire fixtures shall be consistent with the local electrical utility entity.

(Ord. TLS 09-11-49E (Exh. B) (part); Ord. TLS 04-02-30B Exh. A (part))