



# County Road Standards and Regulations

**Pend Oreille County**

**August 28, 2007**

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# Order of the Board of County Commissioners

RESOLUTION NO. 2007-41

# COPY

IN THE MATTER OF:  
**ADOPTING ROAD  
STANDARDS AND REGULATIONS**

**WHEREAS**, good engineering practice calls for the setting of standards for road construction, and

**WHEREAS**, such standards should be reviewed periodically to insure that they conform to current practices, and

**WHEREAS**, the Public Works Department has reviewed the Road Standards as adopted on January 9, 1995 by Resolution 95-3 by the Board of County Commissioners and has identified revisions for considerations, and

**WHEREAS**, the Public Works Department has reviewed the Development Regulations as adopted on August 28, 2007 by Ordinance 2007-2 by the Board of County Commissioners and has identified revisions in the current adopted Road Standards for consideration,

**WHEREAS**, the Public Works Department has requested comments from the general public and local engineering and surveying community and incorporated those comments as appropriate into the County Road Standards and Regulations, Attachment "A", and

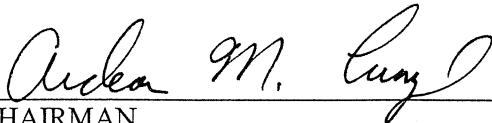
**WHEREAS**, regulations concerning the operation and maintenance of the county road system are contained in several ordinances and resolutions and it is in then public interest to combine these regulations and ordinances into a single, codified document dealing with county roads,


**WHEREAS**, the Board of County Commissioners has conducted a public hearing on August 28, 2007 at 9:00 AM and incorporated those comments as appropriate into the County Road Standards and Regulations, Attachment "A".

**NOW THEREFORE BE IT RESOLVED** that the Board of County Commissioners hereby adopts the Pend Oreille County Road Standards and Regulations effective September 1, 2007.


Dated at Newport, Washington, this 28th day of August, 2007

## PEND OREILLE COUNTY BOARD OF COUNTY COMMISSIONERS

  
\_\_\_\_\_  
CHAIRMAN

  
\_\_\_\_\_  
VICE-CHAIRMAN

  
\_\_\_\_\_  
MEMBER

ATTEST:   
\_\_\_\_\_  
Clerk of the Board

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# Chapter 1 General

## 1.010 Purpose

This Title of the Pend Oreille County Code was created to integrate the ordinances and resolutions used to regulate county roads into a single document. Subsequent revisions will be made as the County Road Regulations and Standards are updated in accordance with the provisions of State law.

## 1.020 Administration

The Board of County Commissioners shall designate a county Public Works Director who shall be responsible for the administration of this Title and related County road provisions.

## 1.030 Authority

The authority, responsibilities, and duties of the Public Works Director and his/her designee(s) shall include, but are not limited to:

Fulfill authority, duties and responsibilities of the County Engineer as provided for in State and local law.

Interpreting County ordinances, codes, resolutions and requirements and determining the applicability of this Title to projects and activities upon or within county roads.

Establishing and maintaining standards for the design and construction of county roads and all improvements within public right of ways within Pend Oreille County except for state highways, within incorporated towns and cities and upon reservations.

Establishing traffic regulations and installing and maintaining traffic signs and pavement markings as provided for in the traffic code.

Inspecting bridges on the county roads as provided for in State and local law.

Maintaining county roads on the county road system as provided for in State and local law.

## 1.040 Interpretations

Whenever the requirements of this Title are at variance with the requirements of any other lawfully adopted rules, regulations or ordinances the most restrictive or those imposing higher standards shall govern.

Any person may submit a written request to the Public Works Director for a formal interpretation of the provisions of this title. The request shall reference the specific Titles, Chapters or Sections in question and should include relevant background information and supporting documentation.

### **1.050 Severability**

If any provision of this Title or its application to any person or legal entity is held to be invalid, the remainder of this Title, or the application of this Title or the application of the provision to other persons or entities or circumstances shall not be affected.

# Chapter 2 Definitions

## 2.010 Introduction

For the purposes of this Title, words used in the present tense also include the future, words or phrases used in the singular also include the plural and words or phrases used in the plural also include the singular. The word “shall” means mandatory and not permissive. The word “should” means recommended but not mandatory. The word “may” means permissive but not required.

Any word not specifically defined in this Chapter shall have the meaning as defined by the following:

Other Titles of Pend Oreille Code

The Revised Code of Washington

The Washington Administrative Code

Publications of the Washington State Department of Transportation

Publications of the American Association of State Highway and Transportation Officials

Publications of the Institute of Transportation Engineers

Webster’s Dictionary

## 2.020 Definitions

The following definitions are applicable to this title:

**Construction engineer** is the responsible engineer for inspecting and testing for the road project.

**Construction surveyor** is the responsible surveyor for construction survey control and staking for the road project.

**County Engineer** is designated by the Board of County Commissioners as provided for in RCW 36.80

**County road** is a right-of-way over which the public has a legal right of passage, and over which an automobile can be driven and is not designated as a state highway and is outside the boundaries of a city or town or reservation. See also “established county road”.

**Design deviations** are major variances from required design levels or are below minimum AASTHO standards. Design deviations must be approved by the Board of County Commissioners after a public hearing.

**Design engineer** is the responsible engineer for preparing and sealing the road project plans and specifications.

**Design exceptions** are minor variance from desired or required design levels that do not reduce design elements below AASHTO minimum standards. They may be approved by the Public Works Director. Appeal is to a public hearing by the Board of County Commissioners.

**Driveway** is a private access way that provides vehicular access from a public or private road to up to three lots.

**Established county road** is a county road that has been incorporated in to the county road system via statutory authority, RCW 37.75.070, RCW 37.75.080, RCW 36.75.090, RCW 36.81, RCW 36.88, RCW 36.89 or RCW 58.17, and is maintained with public funds.

**Preliminary design report** lists the basic design parameters to be used in the design. It includes, but is not limited to, the road classification, design traffic volume, the terrain, adjacent land use, design speed, lane and shoulder widths, maximum grade, minimum radius, vicinity map, adjacent water bodies and wetlands that may be affected, and any special considerations that may affect the design. Prepared by the responsible design engineer and accepted by the County Engineer.

**Private road** is a privately owned and maintained access road provided for by a tract, easement or other legal means, typically serving three or more lots, parcels or tracts.

**Project plans and specifications** are the documents required to construct the project. Plans shall be formatted as required by these road standards. Prepared and sealed by the responsible design engineer and accepted by the County Engineer.

**Record drawings** document the work as constructed. Drawings shall be formatted as required by these road standards. The record drawings prepared and certified by the responsible construction engineer and accepted by the County Engineer.

## **2.030 Abbreviations and Acronyms**

The following abbreviations and acronyms are used in the title as defined here:

**AASHTO** is the American Association of State Transportation and Highway Officials.

**ADA** is the American Disabilities Act.

**BST** is Bituminous Surface Treatment.

**FHWA** is the Federal Highway Administration.

**HMA** is Hot Mix Asphalt.

**ITE** is the Institute of Transportation Engineers.

**SEPA** is the State Environmental Policy Act

WSDOT is the Washington State Department of Transportation.

## **2.040 References**

The following documents contain the road standards to be used for all county roads:

Pend Oreille County Road Standards

City and County Design Standards as contained in the WSDOT Local Agency Guidelines, latest edition

WSDOT Standard Specifications for Road, Bridge and Municipal Construction, latest edition

WSDOT Design Manual, latest edition

WSDOT Construction Manual, latest edition

WSDOT Highway Runoff Manual, latest edition

Stormwater Management Manual for Eastern Washington, Department of Ecology

AASHTO A Policy on Geometric Design of Highways and Streets, latest edition

AASHTO Guidelines for Geometric Design of Very Low-Volume Roads, latest edition

FHWA Manual of Uniform Traffic Control Devices as adopted for use on Washington highways, streets and roads in WAC 468-95

# Chapter 3 County Road Standards

## 3.010 Purpose

County roads provide for the diverse and changing needs of the traveling public. The purpose of these county road standards are to encourage standardization of road design elements for consistency and to ensure that motoring, bicycling, pedestrian and public safety needs are met.

Pend Oreille County is a small rural county. The roadway design elements should reflect the requirements of a small rural county with forested and mountainous terrain and development concentrated in valleys.

Pend Oreille County has developed and adopted road standards for the following purposes:

To set forth specific design criteria for developers and other private parties constructing or modifying county roads and facilities which require county licenses, permits or will be accepted into the county road system.

To establish uniform criteria to guide construction of new county roads and reconstruction, rehabilitation, restoration and modification of existing county roads.

The County encourages standardization of design elements where necessary for consistency and to assure the public motoring, bicycling and pedestrian needs are met. Considerations of these needs included, but are not limited to, safety, convenience, esthetics, drainage, environmental impact and economical maintenance. The county road standards also provide for the location and installation of utilities necessary to serve the public within the public right of way.

The county road standards are meant to provide guidance to the design professional while allowing flexibility to provide county roads to meet the diverse and changing needs of the traveling public.

The county road standards cannot provide for all situations and are not intended to substitute for sound engineering judgment. They are intended to provide guidance but do not substitute for competent work by design professionals. It is expected that registered professional land surveyors, engineers and architects will be utilized during the appropriate phases of each project. The county road standards are not intended to unreasonably limit innovative or creative efforts of the design professionals whose efforts may result in better quality, cost savings or both. Any departure from the county road standards, however, will be evaluated based on the likelihood that such variance will produce a compensating or comparable result, in every way adequate for the road user and the County.



### **3.020 Applicability**

These county road standards apply to new construction, reconstruction, rehabilitation, restoration and minor road improvement projects. These standards do not apply to road maintenance operations.

These standards cannot provide for all situations. They assist, but do not substitute for, competent work by design professionals. The decision to use and apply a particular design element at a particular location should be made on the basis an engineering analysis of the location. Considerations include safety, convenience, context, proper drainage and economical maintenance.

### **3.030 Authority**

The County Engineer is responsible for review and acceptance of all work performed in the public right of way. The design of all county roads must be accepted by the County Engineer prior to construction.

### **3.040 Economic Analyses**

Economic analysis is not strictly a design element. The concept of economic analysis is important during the design of county roads. The design engineer must apply economic analysis to each project and determine the best balance between desired design elements, the safety, convenience and mobility of the traveling public, the maintainability of the road and the life cycle costs of the project. The project costs should be considered in the design, review, approval and acceptance of the project, but shall not be the sole consideration.

### **3.050 Road Network Circulation**

The community transportation needs are generally best served with a network of roads that provides alternate routes and minimizes dead end roads. The purpose of this chapter is to establish minimum standards for designing a road network to meet current and future needs.

Plans will be reviewed for the provision of the best possible road circulation and for conformance with any adopted comprehensive plan, pedestrian and bicycle plan, sub-area plan, or other applicable plan. The road alignment may need to be re-aligned in order to foster the long range transportation objectives of the county.

Inclusion of permanent cul-de-sacs in non resource areas is discouraged and subdivision design should provide for loop access streets wherever feasible. To facilitate the best possible road, bicycle and pedestrian network circulation, the layout of roads should provide for continuation of existing roads in adjoining subdivisions. Where adjoining property is not subdivided, roads within the subdivision may be required to provide for extension to adjacent unplatted land.

### **3.060 Intersection Design**

Intersections shall be located to avoid steep profile grades and to ensure adequate approach sight distance. An intersection should not be located just beyond a short-crest vertical curve or on a sharp horizontal curve. The approach sight distance for each leg should be checked and back slopes flattened and horizontal and vertical curves should be lengthened as necessary to provide adequate approach sight distance.

Intersections should be designed with a corner radius that is adequate for a selected design vehicle, representing a larger vehicle that is anticipated to use the intersection with some frequency. The minimum edge of pavement or travel way radius for low volume, residential roads is 30 foot. Roads serving commercial or resource lands may require specific design for the appropriate design vehicle.

The grade on the approach legs to an intersection shall less than the maximum grade allowed. Approaches controlled by stop regulation shall not exceed a 2% grade for a minimum on one vehicle length.

Intersections shall be as near to right angle as practical and shall not be more than 15° from right angles. Intersections shall not have more than four approaches. The centerline of a road continuing across an intersection should be in alignment. There shall be a minimum of 125' of offset between adjacent intersection on access roads and a minimum of 250' offset between adjacent intersections on collector and arterial roads.

### **3.070 Cul-de-sacs**

A cul-de-sac should serve less than 25 residences or equivalent traffic loading. A bulb type turnaround should be provided, however another type of equivalent turnaround may be provided with engineering justification. The alternative shall provide for the design vehicle requirements, driveway approaches, snow storage and drainage.

The right of way shall have a minimum radius of 60' and a minimum surfaced radius of 45'. Surfacing and drainage requirements shall be the same as required for road entering the cul-de-sac.

A temporary cul-de-sac is used where there is foreseeable likelihood of extending the road to adjacent property or as part of a development phasing plan.

A temporary cul-de-sac shall meet the same standards as a permanent cul-de-sac except for:

1. The same right of way width as required for the road shall continue through the turnaround to the plat boundary. Temporary easements shall be provided for use of the area outside the right of way pending extension of the road.
2. Hard surface paving of the cul-de-sac may be ended at the beginning in the cul-de-sac and the cul-de-sac itself may be surfaced with crushed gravel top course.

3. The entire temporary cul-de-sac may be located beyond the plat boundary with the entire required area located on permanent easement.

Removal of the temporary cul-de-sac and construction of the road extension including surfacing shall be the responsibility of the developer who extends the road.

**3.080 Right of way required.**

The right of way shall be wide enough to include all features of the county road including, but not limited to, the roadway, bridges and structures, cut and fill slopes, roadside features, pedestrian and bicycle paths and snow storage. All roads shall have a minimum of 60’ of right of way width and may require additional width to accommodate all necessary features.

A minimum of a 25’ radius corner shall be provided at all road intersections.

**3.090 Half Roads Prohibited.**

Half road improvements are prohibited. A full width right of way shall be dedicated for all roads lying along the boundary of a subdivision or parcel and the road built to full design requirements, except that in areas where sidewalks or pathways are required on both sides, the sidewalk or pathway adjacent to the boundary may be deferred to future development.

**3.100 Design Traffic Characteristics**

Roads shall be designed for a specific traffic volume. The design volume should be the projected traffic volume 20 years after completion. Future traffic volumes should be estimated using the ITE Trip Generation manual, latest edition.

All geometric design features should be consistent with the design speed. Figure 3-1 contains the desired design speed for local access and collector roads. The County Engineer shall determine the design speed for arterial roads.

Type of Terrain	Design Speed for specified design volume (veh/day)		
	< 50	< 400	> 400
Level	30	40	50
Rolling	20	30	40
Mountainous	20	20	30

**Figure 3-1 Design Speeds for Local Access and Collector Roads**

### 3.110 Design Vehicle

The minimum design vehicles for all roads should be a single unit truck (SU) and a large school bus (S-BUS-40). Other design vehicles may be appropriate for roads other than low volume residential access roads. The County Engineer shall determine the appropriate design vehicle for other than low volume residential access streets.

### 3.120 Level of Service

The Level of Service for collectors and arterials shall be Level C as determined the Highway Capacity Manual, latest edition.

### 3.130 Alignment

The alignment should be designed to be as favorable as possible with the environmental impact, topography, terrain, design traffic volume, design speed and appearance. Sudden changes between curves of widely different radii or between long tangents and sharp curves should be avoided. The horizontal and vertical alignment should complement each other and should be considered in combination to achieve appropriate safety and capacity. The alignment for collectors and arterials should be smooth flowing.

#### Turns

The alignment of local access roads may include turns when sufficient sight distance is provided and long tangent approaches are avoided. Additional lane width may be required to provide for the increased track width of the design vehicles.

#### Horizontal Curves

The minimum radii for horizontal curves are controlled by the maximum superelevation rate of 4% as shown in Figure 3-2. Additional lane width may be required on short radius curves to provide for the increased track width of the design vehicles.

Design Speed (mph)	Minimum Radius (ft)
20	86
30	250
40	533
50	926

**Figure 3-2 Minimum Horizontal Radius Curves**

## Vertical Alignment

Maximum grades for local access and collector roads are shown in Figure 3-3. The County Engineer shall determine the maximum grade for arterial roads. The maximum grade shall be reduced by 1% for each 15° of horizontal curvature.

Type of Terrain	Maximum Grade (%)
Level	6
Rolling	8
Mountainous	10

**Figure 3-3 Maximum Grades for Local Access and Collector Roads**

## Vertical Curves

Vertical curves shall be designed safety, comfort, appearance, drainage and safe stopping sight distance. The Design Engineer may use the methods in AASTHO “A Policy on Geometric Design of Highways and Streets” or use Figure 3-4 to determine minimum k value for local and collector roads.

Element	Terrain	Minimum k Value	
		Collector Road	Access Road
Crest Vertical Curve	Flat	110	30
	Rolling	60	30
	Mountainous	30	20
Sag Vertical Curve	Flat	90	40
	Rolling	60	40
	Mountainous	40	30

AASTHO methods may also be used

**Figure 3-4 Minimum k Values for Vertical Curves on Local and Collector Roads**

### 3.140 Combining Horizontal and Vertical Alignment

The combination of horizontal and vertical alignments closely influences the appearance and safety of a roadway. When alignments are properly coordinated, a roadway will be visually pleasing and safer to travel. Alignment coordination primarily applies to major roadways, but the basic principals are also important considerations for all roadways. Set forth below is a partial list of suggestions for combining horizontal and vertical alignment:

1. Consistency in the scale of horizontal and vertical elements should be maintained whenever possible. A series of short radius curves should be avoided in what is actually a long radius curve and small dips and humps should be avoided in what

is actually a uniform grade. The short elements should be replaced with a single longer curve.

2. The beginning and ending of horizontal and vertical alignment should not occur in the same location. The beginning of a horizontal curve should generally occur before the beginning of a vertical curve and be somewhat longer. This provides a gradual transition between alignments.
3. The beginning of a horizontal curve should not coincide with the top of a hill. This situation is visually deceptive and hazardous, as the change in horizontal alignment can not be seen by the driver.
4. Avoid dips in vertical alignment before beginning a horizontal curve. This will prevent the roadway from appearing disjointed.
5. Avoid “broken back” curves (two horizontal curves in the same direction separated by a short tangent), compound curves and reverse curves except for low volume residential access roads with a design speed of 25 MPH.
6. When an extremely long grade is necessary, it may be better to adjust the vertical alignment so the grade is steeper near the bottom of the hill and gradually lessens as it approaches the crest. Another alternative is to create an alignment with intervals of lesser grades.

### 3.150 Sight Distance

Sight distance should be meet minimum AASTHO standards. Minimum sight distance where crest vertical curves and horizontal curves occur together shall be increased to ensure that the horizontal curves are visible to approaching drivers.

### 3.160 Cross Section Elements

County roads shall be designed for a minimum of two lanes of traffic. Additional lanes, (travel lanes, turn lanes or climbing lanes) may be required when warranted to maintain capacity or to reduce traffic hazards.

#### Lane and shoulder width

The minimum lane and shoulder widths for local access roads are shown in Figure 3-5. Lane and shoulder width for collectors or arterials are as listed in the City and County Design Standards, or as determined by the County Engineer.

Design Traffic Volume, vehicles per day	Lane Width, ft.	Shoulder Width, ft.	Total Width for Two Lane Road, ft.
< 50	11	1	24
>= 50 and < 400	11	2	26
>= 400	12	3	30

**Figure 3-5 Minimum Lane and Shoulder Width**

## Cross Slope

Pavement cross slope should be adequate to provide proper drainage. The cross slope should be 2% for all surface types. The crown should be at centerline except in superelevation and superelevation runoff areas.

## Superelevation Rate

The maximum superelevation rate should be limited to 4%. For design speeds of 30MPH or less, superelevation rate may be reduced to 2%.

Superelevation runoff should conform to the WSDOT Design manual, Chapter 642 Superelevation. Figure 3-6 is derived from the Design Manual for the two 12 foot travel lanes pivoted on centerline. For cases not included in the Figure use the WSDOT Design Manual.

Design Speed (mph)	Superelevation Rate (%)	Basic Runoff Length (ft)	Length: normal crown to level (ft)	Length: level to PC (ft)	Length: PC to full super (ft)
20	2	30	30.0	21.0	9.0
	4	65	32.5	45.5	19.5
30	2	35	35.0	24.5	10.5
	4	75	37.5	52.5	22.5
40	4	85	42.5	59.5	25.5
50	4	95	47.5	66.5	28.5

**Figure 3-6 Typical Superelevation Runoffs for Pivot Point on Center Line**

### Fore slope and back slope

The minimum desirable fore slope is 4:1. A fore slope of 3:1 may be used if constraints exist. Steeper than 3:1 fore slopes require an analysis of whether safety barriers are necessary.

Back slopes shall not be steeper than maximum required for stability. Slopes greater than 2:1 require approval of the County Engineer.

### 3.170 Embankment

All earth and rock embankments shall be constructed in layers and hillside terraces in accordance with 2-03.3(14) of the Specifications. Method B compaction should be used for earth embankments.

### 3.180 Roadway Surfacing

All new and reconstructed roadway shall be constructed with a base and surface designed to provide a 20 year design life for the expected traffic volume and composition. The minimum surface treatment shall be either a Class A bituminous surface treatment followed by a class D bituminous surface treatment next construction season or a 2” minimum hot mix asphalt pavement.

The asphalt used for bituminous surface treatments should be MC-250, CSS-1, or HFE-150. The first application for Class A bituminous surface treatments shall be MC-250. MC-250 normally requires a minimum of ¼ percent anti-stripping additive. The aggregate for bituminous surface treatment shall be crushed cover stone as per section 9-03.4 of the WSDOT Specification. The County Engineer may approve alternative alternate materials.

Low volume, residential access roads constructed over good subgrade material may use the minimum pavement design shown in Figure 3.7

Material		Surfacing Type	
Element	WSDOT Specification	BST	HMA
Base	9.01.10 - Aggregate for Gravel Base, or 9.03.9(3) - Crushed Surfacing Base Course	9”	6”
Top Course	9.03.9(3) - Crushed Surfacing Top Course	3”	3”
Surface	5-02 BST, or 5-04 Hot Mix Asphalt	Class A and Class D BST	2” Commercial HMA

**Figure 3-7 Minimum Surfacing Requirements for Low Volume Residential Access Roads.**

The minimum material thickness as indicated is not sufficient if there is any evidence of instability in the sub-grade. This includes fine-grained or organic soils, free water or saturated soils, slides or uneven settlement. A specific pavement design shall be required if there are any of these characteristics, or the County Engineer, based on knowledge of the local conditions, determines a specific pavement design is needed. Remedial measures may include, but are not limited to, a stronger pavement section, over excavation of the top 2’ feet of sub-grade and replacing with more suitable material, strengthening the sub-grade by adding fractured aggregate, portland cement concrete, asphalt treated base, or other admixture, geotextile, drainage improvements a combination of measures.

The sub-grade shall have all vegetation, organic material, top soil and other debris removed and the top 6” of the cleared and prepared sub-grade compacted to 95% of the



maximum density prior to placing base and surface material. Maximum density and optimum moisture content shall be determined as per section 2-03(14)D of the WSDOT Specification.

### **3.190 Drainage**

The “Stormwater Management Manual for Eastern Washington” shall be used for guidance in the design of stormwater and drainage systems. The preferred method of storm water management is dispersal and direction to natural drainage channels through roadway ditches and culverts. Generally storm water should be directed to the natural drainage systems currently used.

#### **Culverts**

Drainage culverts shall be sized to meet expected flows in accordance with the WSDOT Highway Runoff Manual. The minimum size cross culvert shall be 18” in diameter. The ends should be beveled to match the ground slope. Culverts under driveway approaches should be a minimum of 12” in diameter.

#### **Ditches**

Drainage ditches shall be well-rounded and a minimum depth of 2’ from the edge of the roadway.

### **3.200 Erosion Control**

All slopes and drainage areas shall be designed with proper regard for desired natural ground cover and growth regeneration. All erodible surfaces shall be protected with appropriate best management practice measures. Hydroseeding of all erodible slopes is the minimum acceptable measure.

### **3.210 Roadside Improvements**

Provision of adequate clear zone on county roads is an important safety feature. Low volume rural county roads have been identified as having, as a group, significantly higher collision and collision severity rates as compared to other type of highways, roads and streets. However, it is recognized that on low volume roads, especially below 150 ADT, serious accidents are rare occurrences. The costs of providing fore slope, clear zone and traffic barrier to meet the design standards commonly used on more traveled ways may be cost prohibitive.

#### **Clear Zone**

A clear zone of 10 ft from the edge of traveled way is desirable for local access roads with a design speed of less than 40mph. The clear zone local access roads with a design speed of 40 mph and greater should use the clear zone as determined in the WSDOT Design Manual.

The design clear zone for collectors and arterials shall be in accordance with the City and County Design Standards, Chapter 42 of the WSDOT Local Agency Guidelines Manual.

### **Traffic Barriers and Guardrail**

The design engineer must determine the justification, location and type of construction for traffic barriers and guardrails whose use would be appropriate for the function, design speed and anticipated traffic volume.

The design engineer should review all locations where the fore slope exceeds 3:1 for the need for traffic barriers or guardrail.

### **3.230 Traffic Control Devices**

The design plan shall include all necessary and warranted traffic signs and pavement markings. Road name signs at all intersections are required. Stop signs for all collector and arterial intersections are also required. All traffic signs are governed by the Washington Model Traffic Code and the Manual of Uniform Traffic Control Devices as adopted under WAC 468.95. All traffic signs and pavement markers shall be authorized by the Public Works Director. Certain regulations also require approval by the Board of County Commissioners.

### **3.230 Bridges and Structures**

Bridges and structures shall be designed and constructed to meet the minimum requirements set forth in AASHTO "Standard Specifications for Highway Bridges," latest edition. All new bridges shall be designed to carry an AASTHO HS 25-44 live load or greater.

Bridges and structures shall be designed to carry the full width and configuration of the road being served. The minimum overhead vertical clearance for the traveled way shall be 16.5 ft. Vertical clearance above a walkway or sidewalk is 8 feet.

### **3.240 Bicycle Facilities**

The local roadway may be sufficient to accommodate bicycle traffic. Where special bicycle facilities are desired, they should be in accordance with the AASHTO Guide for the Development of Bicycle Facilities.

### **3.250 Sidewalks**

Sidewalks are generally not included with rural county roads. Where sidewalks are desired, they should be a minimum of 60" in clear width or 36 inch in clear width with a 60 inch by 60 inch clear passing spaces at 200-foot minimum intervals. The surface should be firm, stable and slip resistant. The cross slope shall be a maximum of 2%. The running slope must be consistent with the slope established by the roadway when

adjacent to the roadway, or the running slope must conform to ADA guidance when separate from the roadway. Sidewalks must be separated from vehicle ways by curbs or other barriers. Truncated dome detectable warnings conforming to ADA guidelines shall be used at all intersections and crosswalk locations.

## Chapter 4 Drafting Standards

### 4.010 Purpose

The purpose of the chapter is to minimum acceptable drafting standards for county road projects.

### 4.020 Plan Elements

The plan set shall have the following elements:

1. Plan sheet size shall be 24" by 36". The layout shall reducible by 50% to 11' by 17" sheets. Graphics, text and all features shall be legible on the half-size prints.
2. Detail sheets intended to be included with specification or reports shall be 8 1/2" by 11" is size.
3. The plan set shall have a cover sheet that contains a vicinity map, project name, county road name, county road number, mileposts, and all required signature and acceptance blocks.
4. A title block shall be included on all sheets. The title block shall be located on the extreme lower right corner, the right side margin, or along the bottom edge of the sheet. The project name, road name, road number and mile posts, sheet number shall be included in the title block. The responsible engineer and engineering firm name shall also be included. The title block must also have sufficient space to show the nature, date and approval of all revisions.
5. Plan and profile plans shall be to 1" = 50' horizontally and 1" = 5' vertically. Detail and site plans shall be scaled as required to meet their purpose.
6. Typical cross section(s) shall show the roadway and shoulder widths, surfacing structure, fore and back slopes, ditch depth.
7. The plan view shall include, but not limited to the following:
  - a. edge of roadway
  - b. top of cut and toe of slope
  - c. existing and proposed right of way lines, easements
  - d. approaches
  - e. survey lines and stations
  - f. existing and proposed utilities and structures
  - g. all topographic features within the right of way limits and as necessary beyond the right of way lines
  - h. centerline alignment including tangents and station and elevation of all curves including complete curve data
  - i. survey tie lines
  - j. match lines between consecutive sheets
  - k. north arrow.
8. The drainage plan shall include station and critical elevation of all drainage structures including culvert type and size.
9. The profile plan shall include, but is not limited to the following:
  - a. original ground line

- b. design grade
  - c. station of all grade breaks, distance and grade between VPI's
  - d. vertical curves including station and elevation of VPI, VPC, VPT, low or high point, length and K.
  - e. superelevation data.
10. Traffic signs may be shown on the plan view if no pavement markings are required or on a separate signing and striping plan if pavement markings are required. Traffic sign information required include, but is not limited to, the following:
- a. Station, side of road and facing
  - b. Sign code
  - c. Sign size
  - d. Sign message
  - e. Sign post data
11. Pavement markings, where required shall be shown on a separate plan. Pavement marking information required includes, but is not limited to, the following:
- a. Pavement longitudinal stripe type and color
  - b. Pavement longitudinal stripe transverse location, beginning and ending station
  - c. Stop bar and crosswalk width and station
  - d. Pavement stencil type, station and transverse location

#### **4.030 Plan Submittals**

The applicant shall submit a minimum of two papers sets of plans for review. A redlined set will be returned to the applicant with the review comments. The applicant shall submit one original set of the final accepted plans on mylar for signature by the County Engineer.

## **Chapter 5 Acceptance of County Road Improvements**

### **5.010 Introduction**

The County shall rely on the applicant's engineer to certify and approve the road plans, specification and calculations of the county road project as meeting county road standards and to inspect, test and certify the road work as to conformance to the approved plans and specifications and to county road standards. The County Engineer's review and acceptance of road plans, specifications, calculations and road work shall not relieve the applicant or the applicant's engineer from any liability related to portions of the design and work not in conformance to these county road standards and applicable local and state law or do not follow good engineering practice.

The County Engineer will review the project plans, specifications, calculations and documentation prepared by the applicant's engineer for accuracy and completeness. The documents will either be accepted or returned for revision. The project shall be subject to review and inspection fees as set forth in the current Public Works fee schedule.

Project acceptance occurs in three phases: the pre-design report, the project plans and specifications and the final project acceptance. The acceptance of the pre-design report and the project plans and specifications occur when the County Engineer signs the respective document. Final acceptance occurs when the Board of County Commissioners formally accepts the project.

Acceptance of the preliminary design report is limited to one year after date accepted by the County Engineer. Acceptance of the plans and specifications is limited to three years after the date accepted by the County Engineer. The County Engineer may grant a single extension limited to one year for acceptance of the preliminary design report, plans and specifications.

### **5.020 Preliminary Design Report**

The preliminary design report documents the critical design parameters required to design the project. The design engineer shall prepare and sign the preliminary design report on the form provided by the County Engineer. The form must be accepted by the County Engineer before it is used in design.

### **5.030 Road Survey Report**

Surveys shall conform to all applicable state and local regulations. Prior to any construction, a surveyor shall conduct a thorough search for all survey monuments. The surveyors report shall include all measurements made to tie the proposed work to existing monuments. A copy of the references shall be provided to the County Engineer. All found or set property pins adjacent to the work shall be documented.

The survey report shall document the road right of way and provide ties to the planned road centerline. The road centerline shall be documented with the bearing and length of all tangents and complete curve data. All centerline intersections of the proposed road with existing and new roadways shall be located. Coordinates of the project beginning, project end, road intersections and other significant points shall be provided. Temporary control points and bench marks shall be provided and documented as necessary to control the work.

**5.040 Design Exceptions and Deviations**

Design exceptions and deviations should be submitted to the County Engineer as soon as possible. The request shall document the required standard, the proposed change, justification for the change and identify all impacts of the change. Design exceptions are approved by the Public Works Director with appeal to the Board of County Commissioners. Design Deviations are approved by the Board of County Commissioners after a public hearing. All design exceptions and deviations shall be approved by the Public Works Director and Board of County Commissioners, respectively, prior to acceptance of the project plans and specifications by the County Engineer.

**5.050 Plans and Specifications**

The applicant’s engineer shall submit project plans, specifications and calculations for acceptance by the County Engineer. The plans, specifications, reports and calculations shall be signed, sealed and dated by the design engineer. The cover sheet of the plan set, specifications and all calculations shall bear the certification by the design engineer that reads:

The design of the road improvements shown in this plan set, specifications and calculations were prepared by [me or under my direct supervision] in accordance with the requirements of the Pend Oreille County Road Standards. All design exceptions and deviations have been approved by Pend Oreille County. I approve these plans for construction.

Name of Engineer \_\_\_\_\_

Name of Firm \_\_\_\_\_

Date \_\_\_\_\_

This design of road improvements is accepted by Pend Oreille County as meeting County Road Standards. Acceptance by the County shall not relieve the engineer who has prepared this report of responsibility for errors and omissions. Acceptance of the design is limited to three years after the date below.

County Engineer \_\_\_\_\_

Date \_\_\_\_\_

### **5.070 Waiver of Plans and Specifications**

The County Engineer may waive project plans or specifications or both if the Standard Plans, County Supplemental Specifications and the Standard Specifications are adequate in every manner to properly construct the work.

### **5.080 Project Inspection**

The applicant's construction engineer shall be responsible to ensure that construction of county roads and appurtenances is according to the accepted project plans and specifications, County Supplemental Provisions, the Standard Specifications and the WSDOT Construction Manual. County forces may make random visits to public road construction sites, as deemed necessary. Random visits are to ensure a quality construction inspection process and do not express or imply approval or disapproval of the work. The County Engineer shall have access to all construction inspection and testing records and reports.

Construction records include, but are not limited to, daily inspector's reports, correspondence, manufacturer's certifications, material test reports and the project engineer's journal.

The applicant's engineer shall submit all construction change orders that propose changes to the accepted plans and specifications to both the design engineer and the County Engineer for approval and acceptance, respectively.

The applicant's engineer shall schedule a final inspection by the County Engineer prior to acceptance by the county. Deficiencies found shall be corrected and the final inspection repeated until all deficiencies have been corrected.

### **5.090 Construction Staking**

The construction staking requirements are contained in the County Supplemental Specifications contained herein. The County Engineer may approve alternative survey control methods upon recommendation of the construction engineer and the construction surveyor that are adequate in every manner to properly construct the work.

### **5.100 Record Drawings**

During construction, the applicant's construction surveyor and construction engineer shall record any change in the plans.

All substantive differences shall be noted on the approved plans and shall be labeled Record Drawings. Changes shall be made in contrasting colors. Revised and added notes shall be clouded and dimensions corrected by crossing out and adding the correct dimensions. The following statement shall be added on Record Drawings and stamped



and signed by the applicant's surveyor and/or construction engineer certifying the Record Drawings:

I have reviewed the construction and to my knowledge find it in substantial conformance with the approved certified plans and specifications except as noted.

Name of (Engineer or Surveyor) \_\_\_\_\_

Name of Firm \_\_\_\_\_

Date \_\_\_\_\_

The record drawings and construction documentation for road improvement project are accepted by Pend Oreille County. Acceptance by the County shall not relieve the engineer who has prepared these record drawings of responsibility for errors and omissions.

County Engineer \_\_\_\_\_

Date \_\_\_\_\_

### **5.110 Final Acceptance**

The applicant shall complete the road project in an acceptable manner or achieve substantial completion in an acceptable manner and post a performance surety, receive acceptance of the record drawings, and post an acceptable warranty surety before final acceptance of the road project.

The construction engineer shall supply the complete bound set of original construction records in for the road project prior to final acceptance.

The Public Works Director shall schedule acceptance of the work by the Board of County Commissioners. At the time of acceptance of the work into the County system, the County will assume all responsibility for road maintenance and operation. Prior to acceptance by the Board, the applicant is responsible for all road maintenance and operation.

### **5.120 Performance Surety**

The applicant is not required to post a performance surety prior to final acceptance of the project. However, the Public Works Director will only recommend final acceptance if the following conditions are met:

1. Construction of the project is completed.
2. The County Engineer has accepted the project certification package.
3. The applicant posts the required warranty surety.

Pend Oreille County may grant provisional acceptance of the project if the following conditions are met:

1. Construction of the project is substantially completed.
2. The County Engineer has accepted the portion of work completed.
3. The applicant posts a warranty surety for the portion of the work completed.
4. The applicant provides a performance surety in the amount of 125% of the County Engineer estimates to complete the project or \$10,000, which ever is greater.

### **5.130 Warranty Surety**

The applicant shall post a warranty surety for a two year period after final acceptance of road improvements within or serving County rights of way with the Public Works Director.

The warranty surety shall conform to the following:

1. The surety for improvements within public rights-of-way shall remain in effect for two years from the date of Final Acceptance by the Board of County Commissioners.
2. The warranty shall be for an amount of 20% of the construction costs or \$10,000, whichever is greater. The Public Works Director, at his/her discretion may reduce the warranty surety amount for project values at less than \$20,000. For approved of non-standard facilities, the Public Works Director may require additional surety up to 100% of the estimated replacement cost of the non-standard facility.
3. The warranty surety shall guarantee against defects in road construction performed within the County right-of-way and drainage facilities as determined by the County Engineer.

The release of warranty surety for improvements within public-right-way shall take place two years from the date of the establishment of the roads by the Board of County Commissioners. Thirty days prior to expiration of the warranty surety, the applicant shall retain a professional engineer to inspect the improvements. Any deficiencies must be repaired prior to surety release. If the inspection is not conducted or the deficiencies are not repaired, the warranty surety shall be renewed by sponsor until the inspection is conducted and needed repair completed.

### **5.140 Phased Construction**

Complex projects may be constructed in phases. Prior to approval of phased construction, the applicant shall submit a phasing plan acceptable to the Public Works Director and Planning Director, if applicable. The phasing plan shall identify which required improvements, both private and public, are required to be completed with each phase. Each phase shall be logical, functional and complete. Facilities intended to serve all phases of the project shall not be deferred until the later phases of construction.

## **Chapter 6 Supplemental Specifications**

### **6.010 Introduction**

Pend Oreille County adopts the WSDOT 2006 Standard Specifications for Road, Bridge and Municipal Construction for use on county roads and bridges. The County also adopts the following Supplemental Specifications. The Supplemental Specifications supersede any conflicting provisions of the Standard Specifications.

### **6.020 Pend Oreille County Supplemental Specifications**

#### **DIVISION 1 GENERAL REQUIREMENTS**

##### **1-01.3 Definitions**

This Section is supplemented with the following:

All references in the Standard Specifications to the terms “State”, “Department of Transportation”, “Washington State Transportation Commission”, “Commission”, “Secretary of Transportation”, “Secretary”, “Headquarters”, and “State Treasurer” shall be revised to read “Pend Oreille County”.

All references to “State Materials Laboratory” shall be revised to read “Pend Oreille County designated location”.

All references to “Engineer” shall be revised to read “Design Engineer,” “Construction Engineer” or “County Engineer” as determined by the County Engineer.

The venue of all causes of action arising from the advertisement, award, execution, and performance of the contract shall be in the Superior Court of Pend Oreille County.

##### **1-05 CONTROL OF WORK**

##### **1-05.4 Conformity with and Deviations from Plans and Stakes**

Section 1-05.4 is supplemented with the following:

###### **Surveying - Roadway**

The Construction Surveyor shall be responsible for setting, maintaining, and resetting all alignment stakes, slope stakes, and grades necessary for the construction of the roadbed, drainage, surfacing, paving, channelization and pavement marking, illumination and signals, guardrails and barriers, and signing. Calculations, surveying, and measuring

required for setting and maintaining the necessary lines and grades shall be the Construction Surveyor Engineer's responsibility.

Detailed survey records shall be maintained, including a description of the work performed on each shift, the methods utilized, and the control points used. The record shall be adequate to allow the survey to be reproduced. A copy of each day's record shall be available for review by the County Engineer.

The meaning of words and terms used in this provision shall be as listed in "Definitions of Surveying and Associated Terms" current edition, published by the American Congress on Surveying and Mapping and the American Society of Civil Engineers.

The survey work shall include but not be limited to the following:

Verify the primary horizontal and vertical control and expand into secondary control by adding stakes and hubs as well as additional survey control needed for the project. Provide descriptions of secondary control to the Contracting Agency.

Establish the centerlines of all alignments, by placing hubs, stakes, or marks on centerline or on offsets to centerline at all curve points (PCs, PTs, and PIs) and at points on the alignments spaced no further than 50 feet.

Establish clearing limits, placing stakes at all angle points and at intermediate points not more than 50 feet apart.

Establish grading limits, placing slope stakes at centerline increments not more than 50 feet apart. Establish offset reference to all slope stakes.

Establish the horizontal and vertical location of all drainage features, placing offset stakes to all drainage structures and to pipes at a horizontal interval not greater than 25 feet.

Establish roadbed and surfacing elevations by placing stakes at the top of subgrade and at the top of each course of surfacing. Subgrade and surfacing stakes shall be set at horizontal intervals not greater than 50 feet in tangent sections, 25 feet in curve sections with a radius less than 300 feet, and at 10-foot intervals in intersection radii with a radius less than 10 feet. Transversely, stakes shall be placed at all locations where the roadway slope changes and at additional points such that the transverse spacing of stakes is not more than 12 feet.

Establish intermediate elevation benchmarks as needed to check work throughout the project.

Provide references for paving pins at 25-foot intervals or provide simultaneous surveying to establish location and elevation of paving pins as they are being placed.

For all other types of construction included in this provision, (including but not limited to channelization and pavement marking, illumination and signals, guardrails and barriers, and signing) provide staking and layout as necessary to adequately locate, construct, and check the specific construction activity.

The Construction Surveyor shall provide the County Engineer copies of any calculations and staking data when requested by the County Engineer.

The Construction Surveyor shall ensure a surveying accuracy within the following tolerances:

Element	Vertical	Horizontal
Slope stakes	±0.02 feet	±0.1 feet
Sub-grade grade stakes (Set 0.04 feet below grade)	-0.04 feet low +0.0 feet high	±0.2 feet(parallel to alignment) ±0.1 feet(normal to alignment)
Stationing on roadway	N/A	±0.1 feet
Roadway paving pins for surfacing or paving	±0.04 feet	±0.2 feet (parallel to alignment) ±0.1 feet (normal to alignment)

The County Engineer may spot-check the Construction Surveyor’s surveying. These spot-checks will not change the requirements for normal checking by the Construction Surveyor nor relieve the Construction Surveyor of responsibility for the accuracy of the stakes.

When staking roadway alignment and stationing, the Construction Surveyor shall perform independent checks from different secondary control to ensure that the points staked are within the specified survey accuracy tolerances.

Stakes shall be marked in accordance with Standard Plan H-14. When stakes are needed that are not described in the Plans, then those stakes shall be marked as directed by the Construction Engineer.

**DIVISION 8 MISCELLANEOUS CONSTRUCTION**

**8-21 PERMANENT SIGNING**

**8-21.3 Construction Requirements**

**8-21.3(2) Placement of Signs**

Section 8-21.3(2) is supplemented with the following:

U-channel sign posts shall be installed at the correct angle to provide the correct sign angle. The U-channel shall face on-coming traffic. At intersections the U-channel shall

face the direction the primary sign faces or the closest on-coming traffic or as directed by the Engineer.

### **8-21.3(9) Sign Structures**

Section 8-21.3(9) is supplemented with the following:

Sign posts for permanent signing shall be U-channel sign posts.

## **DIVISION 9 MATERIALS**

### **9-28 SIGNING MATERIAL AND FABRICATION**

#### **9.28.1 General**

Section 9.28.1, paragraph 1, sentence 2 and sentence 3 are deleted.

Section 9.28.1, paragraph 3 is revised to read as follows:

All permanent signs shall be constructed entirely of Type II reflective sheeting or as noted on the Plans.

#### **9-28.6 Destination Sign Messages**

Section 9-28.6 is supplemented with the following:

The road name (D3-1) and private road name (D3-3) signs shall be double-faced with the legend on both sides. The advance road name (D3-2) signs are single-faced.

The legend for private D3-1, D3-2 and D3-3 signs shall conform to the general layout shown in the street sign plans included in the county standard plans.

#### **9-28.11 Hardware**

Section 9-28.11 is supplemented with the following:

The street sign shall be mounted on top of the U-channel post with an appropriate aluminum mounting bracket. The mounting shall use pressure set screws to hold the street name sign. Additional street name sign shall be mounted to the first sign with an aluminum crosspiece of similar design.

#### **9-28.14 Sign Support Structures**

##### **9-28.14(4) U-Channel Sign Post**

Section 9-28.14(4) is added as follows:

U-channel sign posts shall meet the requirements of ASTM A 29, weigh a minimum of 2 pounds per foot and have a green baked enamel finish. U-channel sign posts shall be break-away in design.

# Chapter 7 Traffic Impact Studies

## 7.010 Introduction

Traffic impact studies may be required as part of the project review process. The purpose of the traffic impact study is to provide information and detail about the expected traffic impacts of the project and potential traffic mitigations for the SEPA determination, public review, the land use decision process, and/or to provide information to complete design of a road project.

The traffic study shall be performed by a professional engineer, licensed in the State of Washington. The traffic study scope and final report shall be accepted by the County Engineer.

The specific scoping by the County Engineer may range from an in-depth analysis of site generated level-of-service impacts to an engineering review of traffic safety issues.

## 7.020 Traffic Impact Study Levels.

### Level 1 Traffic Impact Study Level

Level 1 traffic impact study is an engineering study having sufficient depth and breadth to identify all traffic impacts of the project and project mitigation measures. The study shall include existing traffic conditions and an analysis of future traffic conditions with and without the project. Proposed traffic mitigation measures shall be analyzed. The analysis shall follow appropriate traffic engineering procedures and practice. The report shall be sealed by the responsible engineer.

### Level 2 Traffic Impact Study Level

The County Engineer may determine that for large or complex projects or for projects that may significantly impact the adjacent community the traffic study shall be a level 2 study. A level 2 traffic impact study meets the same requirements as a level 1 study and includes the public participation process in 7.030.

## 7.030 Exemptions

A project is exempt from traffic impact study requirements if one or more of the following conditions are met:

- The project is categorical exempt from SEPA process and the underlying land use action is not discretionary.
- The project is projected to generate less than 50 trips during peak traffic hour.
- The project is exempt from Level 2 traffic impact study if the project is projected to generate less than 100 trips during peak traffic hour.



The County Engineer will project the traffic generation for the purpose of determining exemptions to the traffic study requirements. The applicant may provide trip generation and distribution letter from a qualified professional engineer to assist the County Engineer in determining whether a project is exempted from traffic impact studies.

### **7.030 Public Participation**

Two public meeting shall be held within the project study area. All costs associated with the public meetings shall be the responsibility of the developer/consultant.

A public scoping meeting shall be conducted by the developer/consultant to allow public input to the scope of the project. Neighborhood traffic issues discovered in scoping meeting will be brought forward and addressed in the final report.

The second public meeting shall be after the traffic study work is complete and is intended to brief the surrounding neighborhood on the traffic study results

Notice of date, time, place and purpose of the public meetings shall be as provided under Development Regulations xx.14.140 Public Notice Requirements

### **7.040 Scoping**

A scoping meeting should be scheduled with the Pend Oreille County Public Works Department prior to starting field work for the study. The general requirements of the study will be discussed. It shall be the responsibility of the developer/consultant to initiate and coordinate the scoping meeting. A joint meeting with all reviewing agencies is recommended, but not required.

### **7.050 Traffic Study Report**

The means by which the work of the traffic study is conveyed to others is through the traffic study report. The traffic study report should stand on its own merits. There should be sufficient information and detail to allow the reader to follow the study step by step. The report should be factually based, written from an impartial viewpoint and report all aspects of the traffic study work. The report should be written such that the lay person, someone not familiar with traffic studies, will be able to understand and follow the process, findings and recommendations. Technical information may be presented in report appendices or supplements.

### **7.060 Traffic Study Acceptance**

The traffic study will be reviewed and accepted by the County Engineer. The acceptance will be based on the study having sufficient depth and breadth to identify all traffic impacts, the analysis followed appropriate traffic engineering procedures and practice

and all proposed traffic mitigations conform to Pend Oreille County policies and standards.

# **Chapter 8 County Road Approaches**

## **8.010 Purpose**

County road approaches may adversely impact the operation and maintenance of the county road system. The purpose of this chapter is to provide a means to reduce or eliminate adverse impacts.

## **8.020 County Road Approaches**

The installation new driveway approaches to county roads shall conform with the provisions of Ordinance 74-99 as it now exists or is subsequently amended and all related County standards, provided that the Public Works Director shall be responsible for the administration of these standards and shall establish such written procedures as may be necessary to implement them.

# **Chapter 9 Public Road Access Required**

## **9.010 Introduction**

The importance of providing good access to the public road network for the health, welfare and safety of the public cannot be overemphasized. The effectiveness of providing school, mail delivery and other service deliveries, utility services, and most importantly, emergency services such as police, fire and emergency medical is dependent of good access to the public road network.

## **9.020 Public Road Access Required**

All property parcels created hereafter shall have legal access to the public road system. Parcels created by subdivision, binding site plan, cluster subdivision, planned unit development, master planned resort or other master planning means shall either directly access a public road right of way or a private road as provided for herein. Parcels created by other segregation may provide access via a permanent access easement across other parcel(s).

## **9.030 Access easements**

Access easements shall permit construction of a road meeting the requirements of a fire apparatus access road, International Fire Code. An access easement serving two parcels may be a minimum of 20 feet in width. An access easement serving more than two parcels shall be a minimum of 60 feet in width.

# **Chapter 10 County Road Improvements Required**

## **10.010 Purpose**

Land development, as it occurs, may adversely impact the existing county road system. The purpose of this chapter is to provide a means to reduce or eliminate adverse impacts.

## **10.020 Responsibility to Provide County Roadway Improvements.**

Any land development which will impact the service level, safety, structural integrity, or operational efficiency of abutting or serving county roadways or is required by other county code, ordinance, resolution or permit, or is required by any other means, shall improve those roadways in accordance with the current county standards.

Frontage improvements are required for all improvements and development projects that have frontage on a county road that does not meet current standards.

## **10.030 Exemption**

The following land development activities are exempt from the responsibility to improve existing county roads:

1. Construction of a single family dwelling unit
2. Construction of auxiliary dwelling unit
3. Construction of accessory buildings for existing residential uses
4. Land segregation that creates one additional lot, except for right of way dedication
5. Development, management and harvesting of timber, agricultural, wetland and wildlife restoration, and other open space uses
6. Construction of un-staffed utility facilities
7. Other uses that do not increase existing trip generation

## **10.040 Improvement of Internal Roads**

Any land development that contains new or existing internal roads shall construct or improve those roadways to current county road standards.

## **10.050 Frontage Improvements**

Any land development abutting and impacting existing roads shall improve the frontage of those roads to current county road standards. The extent of frontage improvements to county roads serving a development shall be based on an assessment of the impacts of the proposed land development by the County Engineer. The assessment will be based on factors including, but not limited to, functional classification, safety and level of service. The County Engineer may require a traffic impact study as part of the assessment. The

assessment may limit frontage improvements to improvement of the county road to centerline and/or shoulder improvements.

The minimum frontage improvement shall be dedication of right of way to provide current standards from centerline.

### **10.060 Offsite Improvements**

The extent of the offsite improvements to county roads serving a development shall be based on an assessment of the impacts of the proposed land development by the County Engineer. The assessment will be based on factors including, but not limited to, functional classification, safety and level of service. The County Engineer may require a traffic impact study as part of the assessment.

### **10.070 Deferral of Required Improvements**

The County Engineer may approve deferral of required road improvements 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 required improvements required for the development would create or intensify a hazard to public safety.
3. The installation of required improvements required for development could be more safely, efficiently and effectively implemented is done concurrently with the installation of county road improvements required for other developments along the same road or done concurrently with another road project or maintenance activity.

Dedication of right of way shall not be deferred.

Deferral of required improvements shall be limited to onsite paving, frontage improvements, and offsite improvements.

Any deferred road improvements shall be secured for installation at a later date by an agreement and recorded covenant between the county and the property owner whereby the property owner agrees to two methods of installation of the deferred road improvements. This agreement and covenant shall be executed before the issuance of improvement and development permits. The public works director shall select which method to enforce against the property owner at the time when the deferred improvements are required to be installed. The two methods the property owner shall agree to are as follows:

1. Commitment to Participate in a Road 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 land owner in any road improvement district (RCW 36.88) formed for the construction of such improvements. Said document shall be in a form acceptable to the county prosecutor be shall be effective for a period not to 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 an 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 land owner in an improvement project not supported by a road improvement district that encompasses the said deferred road improvements by paying their share thereof. Such share shall be equal to the county's costs for installing the deferred improvements. The county shall provide a non-binding 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 time of the 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 the improvement 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 the required road improvement. Such an agreement and covenant shall bind the owner and its designees, heirs, transferees, donees, and/or successors in interest. The agreement and covenant shall be effective for a period of ten years from the date of recording.

# **Chapter 11 Road Improvement Districts**

## **11.010 Introduction**

County road improvements proposed to be financed and constructed by the road improvement district process shall be subject to the provisions of State law and the requirement of this chapter

## **11.020 High Risk Road Improvement Districts**

The Board of County commissioners may determine that a proposed road improvement district is high risk after considering the project potential costs and benefits, the percentage of property owned by the proponent(s) of the project, the marketability of the proposed bonds and other factors. The principal proponent(s) shall provide adequate security in an amount and form approved by the Board to guarantee the payment of the engineering and administrative costs incurred by the county for the preparation of the road improvement district, in the event the district fails or any the project is not completed.

## **11.030 County Participation**

The Board of County Commissioners may, at their discretion, participate in the funding of road improvement district. The financial participation by the County shall be limited to the additional costs for increasing the road features or providing additional features beyond those normally associated with a road improvement project of the type proposed.

## **11.040 Assessment Foreclosure**

All liens acquired by the county hereunder shall be foreclosed by the appropriate county officers in the same manner and subject to the same rights of redemption provided by state law.



# Chapter 12 Private Roads

## 12.010 Introduction

While community road requirements are usually best served by public roads, owned and maintained by the county or other public agency, private roads may be appropriate for some rural access roads

## 12.020 Private Road Requirements

Private roads may be approved by the Board of County Commissioners after recommendations from the Public Works Director and from the County Planning Commission when they meet the following requirements:

1. Permanently established by sixty-foot easement providing legal access to each affected lot, dwelling unit, or business and sufficient to accommodate required improvements, to include provisions for future use by adjacent property owners when applicable;
2. Constructed to Pend Oreille County road standards including paving of all roadways except for short cul-de-sacs less than 750 feet in length or short loop roads less than 1500 feet serving a maximum of four single family dwelling units or equivalent;
3. Short cul-de-sacs less than 750 feet in length or short loop roads less than 1500 feet serving a maximum of four single family dwelling units or equivalent may be served with a gravel surfaced road constructed to Pend Oreille County road standards.
4. Accessible at all times for emergency and public service vehicle use;
5. Not obstructing, or part of, the present or future public circulation plan developed in processes such as the Pend Oreille Comprehensive Plan, applicable sub area plan, or capital improvement plan;
6. Will not result in land locking of present or future parcels;
7. Do not serve designated public accesses or other public facilities;
8. Are not needed as public roads;
9. Not connecting two public roads;
10. Serve a maximum of four single family dwelling units or equivalent with a maximum length of 750 feet if a cul-de-sac or 1500 feet if a loop road unless the development is a binding site plan, cluster subdivision, planned unit development or other form of master planned development;
11. Maintained by the developer for a minimum of two years then by a capable homeowner's association or other single legal entity made up of all benefited property owners, under provisions of an acceptable and recorded "Private Road Maintenance Agreement";
12. Clearly described on the face of the plat, short plat, or other development authorization and clearly signed at the road location as a private road, for the maintenance of which Pend Oreille County is not responsible and a disclosure statement of the same is filed with the county auditor.

Alternatives to these requirements must be approved by the Board of County Commissioners through a variance request.

#### **12.040 Gates on Private Roads**

Gates on private roads may be approved by the Board of County Commissioners at their discretion. Gates shall be located sufficiently far from the public roads to provide adequate queuing storage off the public right of way. The design shall incorporate a turn around to allow vehicles to turn around before the gate rather than backing onto the public right of way. The gate shall also conform to provisions of the International Fire Code for emergency access.

#### **12.040 Conversion of Private Roads to Established County Roads.**

Conversion of private roads to established county roads is done only at the discretion of the Board of County Commissioners under statutory authority of state law.

Pend Oreille County will not accept private roads for maintenance as county roads until such roads are dedicated to the public and are brought into conformance with the county road standards applicable at the date of establishment petition. This requirement will include the hard surface paving of any road originally surfaced with gravel. Pend Oreille County is not responsible or liable for any and all costs incurred to improve the road related to changes in county road standards between original acceptance as a private road and date of establishment petition, changes in governmental laws and regulations, repair, damage or other factors.

#### **12.040 Fire Department Access**

All private roads shall meet requirements of Fire Apparatus Access Roads, International Fire Code.

## Chapter 13 Maintenance of County Roads

### 13.010 Introduction

Pend Oreille County maintains the established county road system. It is necessary to establish the basic rules governing county road maintenance as provided for in State and County law.

### 13.020 Establishment of County Roads

The Board of County Commissioners may declare a county road established for expenditure of county funds for road maintenance under statutory authority, RCW 37.75.070, RCW 37.75.080, RCW 36.75.090, RCW 36.81, RCW 36.88, RCW 36.89 or RCW 58.17. County roads not established by the Board of County Commissioners shall not be maintained with county funds.

Whenever directed by the Board or required by statute, the Public Works Director shall make report as required by RCW 36.01.050. The report shall also include conformance of the road to the County Road Standards.

County roads shall be improved to county road standards including all approved design exceptions and design deviations prior to establishment, except for those roads established under statutes RCW 36.75.070 and RCW 36.75.090.

### 13.030 County Road Maintenance Levels

The Public Works Director shall establish maintenance levels for each road in the county road system as follows:

- |                |  |
|----------------|--|
| Level Zero (0) | Road is not an established county road and does not receive county maintenance. Road may be maintained by other public agencies or by private parties.   |
| Level One (1)  | These roads make up the primary county road system. Roads in this category receive year around, frequent maintenance activities including, but not limited to: <ol style="list-style-type: none"><li>First priority in snow and ice control and emergency repairs</li><li>High priority for preventive and routine maintenance</li><li>High priority for funding of replacement, rehabilitation and reconstruction activity</li><li>Will not be considered for primitive road status</li></ol> |

- Level Two (2). Roads in this category receive year around, periodic maintenance activities after Level One road activities have been substantially carried out; including, but not limited to:
- a. Second priority in snow and ice control and emergency repairs
  - b. Secondary priority for preventive and routine maintenance
  - c. Secondary priority for funding of replacement, rehabilitation and reconstruction activity
  - d. May be considered for primitive road status

- Level Three (3). Roads in this category receive infrequent and periodic maintenance activities after higher level road activities have been substantially carried out; including, but not limited to:
- a. Lowest priority in snow and ice control and emergency repairs
  - b. Lowest priority for preventive and routine maintenance
  - c. May be considered for primitive road status

- Level Four (4). Roads in this category receive infrequent and periodic maintenance activities after higher level road activities have been substantially carried out; including, but not limited to:
- a. No snow and ice control and emergency repairs only when found impassable, as conditions permit
  - b. No preventive and routine maintenance
  - c. May be considered for primitive road status

The Public Works Director will evaluate county roads for the proper maintenance level based on the following criteria:

Number of full time occupied residences served by the road  
Number of part time occupied residences served by the road  
Designation as a school bus route or mail route  
Average daily traffic count  
Percentage of trucks  
Pavement/surface type  
Freight and Goods Mobility Classification  
Federal Functional Classification  
Eligibility for primitive road status  
Present roadway conditions  
Other factors as deemed reasonable and prudent

The maintenance level will be recorded in the county road log.

### **13.040 Work on Rights of Way**

Anyone working on the public right of way is required to obtain a permit from the Public Works Director prior to beginning work. The Public Works Director shall be responsible for the administration of these standards and shall establish such written procedures as may be necessary to implement them.

All work within public right of ways shall conform to the county road standards.

### **13.050 Adopt a County Road**

The adopt-a-road program is intended to provide a means of picking up litter through volunteer organizations. The adopt-a-road program shall conform with the provisions of Resolution 95-27 as it now exists or is subsequently amended and all related County standards, provided that the Public Works Director shall be responsible for the administration of these standards and shall establish such written procedures as may be necessary to implement them.

### **13.060 Cattle Guards**

Cattle guards are installed in four range allotments administered by the Colville National Forest. Cattle guards shall conform with the provisions of Resolution 06-69 as it now exists or is subsequently amended and all related County standards, provided that the Public Works Director shall be responsible for the administration of these standards and shall establish such written procedures as may be necessary to implement them.

# **Chapter 14 Accommodation of Utilities**

## **14.010 Introduction**

Utilities often use the county road right of way to provide essential services. It is necessary to accommodate utilities within the road right of way while at the same time protect and preserve the function of the public right of way to provide safe and efficient transportation services.

## **14.020 Accommodation of Utilities**

The installation or relocation of all utilities in the County right of way shall conform with the provisions of Resolution 93-44 as it now exists or is subsequently amended and all related County standards, provided that the Public Works Director shall be responsible for the administration of these standards and shall establish such written procedures as may be necessary to implement them.

# **Chapter 15 Snow and Ice Control**

## **15.010 Introduction**

Snow and ice conditions impact the ability of the county road network to provide transportation and emergency services. It is necessary to prioritize the level and type of response by the County Road Department to snow and ice conditions.

## **15.020 Snow and Ice Control Plan**

The Public Works Director will prepare a plan implementing provisions of this policy. The factors used to prioritize may include, but are not limited to functional classification, school and mail routes, traffic volume, and maintenance level.

## **15.030 Vehicle Weight Restrictions**

Pend Oreille County may prohibit or restrict vehicle operations or vehicle weight whenever any county road, by reason of rain, snow, climatic or other condition, will be seriously damaged or destroyed unless the operation of vehicles thereon is prohibited or restricted. The load limitations shall conform with the provisions of Resolution 97-8 as it now exists or is subsequently amended and all related County standards, provided that the Public Works Director shall be responsible for the administration of these standards and shall establish such written procedures as may be necessary to implement them.

# **Chapter 16 Model Traffic Ordinance**

## **16.010 Introduction**

The public health, safety, welfare and convenience are best served by providing a uniform traffic ordinance for use throughout the State.

## **16.060 Adoption of Washington Model Traffic Ordinance.**

Pursuant to RCW 36.32.110 and RCW 46.90, the Washington Model Traffic Ordinance, as set forth in Chapter 308-330 WAC is hereby adopted by reference as the traffic code (ordinance) of Pend Oreille County.



# **Chapter 17 Road Naming and Addressing**

## **17.010 Introduction**

The public health, safety, welfare and convenience and delivery of police, fire, ambulance and other emergency services will be enhanced by providing uniformity in the naming and addressing of ways-of-travel.

## **17.020 Road Naming and Addressing.**

All new addresses shall be signed, and all roads serving two or more properties or dwellings shall be named, in accordance with the provisions of Ordinance 2002-4 and Resolution 06-34 or as subsequently amended, provided that the Public Works Director shall be responsible for the administration of these standards and shall establish such written procedures as may be necessary to implement them.