

CHAPTER 7 – STREET ELEMENTS



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7.1 INTRODUCTION

The design of streets within the City shall generally conform to AASHTO and WSDOT standards unless modified herein.

Some street designs require technical criteria that are above the scope of these Standards and therefore are not covered. In these cases, design manuals from the above referenced agencies and references listed in Section 1.9 shall be used for a basis of design.

The standard plans referenced in this chapter are located in Chapter 11.

7.2 TERRAIN TYPES

Terrain type can be classified as flat, rolling or mountainous.

Flat terrain is the condition where roadway sight distances, as governed by both horizontal and vertical restrictions, are generally long or could be made to be so without construction difficulty or major expense. The slope of the existing terrain is from 0% to and including 5%.

Rolling terrain is that condition where the natural slope rises above and falls below street grade line consistently. Normal street alignment is restricted some by occasional steep slopes. The slope of the existing terrain is from 5% to and including 15%.

Mountainous terrain is that condition where longitudinal and transverse changes in the elevation of the ground with respect to a street are abrupt and where the roadbed is obtained by frequent benching or side hill excavation. The slope of the existing terrain exceeds 15%.

7.3 STREET TYPES

Streets within the City include public and private streets. Since community needs are usually best served by streets owned and maintained by the City, most projects are required to be accessed via public streets. Private streets may be appropriate for some local accesses in very limited usage.

For the purposes of these Street Standards, the following sections provide additional descriptions of streets.

7.3.1 PUBLIC STREETS

Public streets are owned and maintained by the City. All public streets in the City are classified using the Federal Functional Classification system, which provides a hierarchy, from principal arterials to local access streets, to accommodate existing and anticipated traffic. Street classifications can be found in the City of Spokane Valley Comprehensive Plan.

New public streets may be required by land actions or development permits pursuant to Chapter 2. Public streets, not private streets, shall be used to connect two public streets and shall be designed per Tables 7.1 through 7.3 and the Standard

Plans. Chapter 7 provides additional design criteria and requirements for public streets.

7.3.2 PRIVATE STREETS

Private streets are local access streets, privately owned and maintained. All new private streets shall be approved by the City.

Private streets shall be permitted when all of the following apply:

- a. Where connectivity to the public street system is not compromised;
- b. Where future through connection to public streets is not possible;
- c. The private street does not landlock present or planned parcels;
- d. The private street serves from two to nine single family dwelling lots;
- e. The private street provides direct access to a public street. Access to and from private streets shall be limited to properties immediately adjacent to the private street; and
- f. The private street is not used to connect two public streets.

Private streets shall be designed pursuant to Table 7.3.

The design of a private street shall discourage any through traffic of non-residents. Traffic calming measures may be utilized in the design of private streets. Private streets shall connect to City streets using a standard driveway approach but not a high volume approach.

A legally responsible owner or homeowners association shall be established and identified to maintain private streets and associated drainage facilities in perpetuity. A plat or short plat with private streets shall be required to provide an executed, recorded Private Street Maintenance Agreement and a Stormwater Easement and Maintenance Agreement that obligate future property owners to maintain the infrastructure in perpetuity (see Chapter 10 for requirements).

7.3.3 ALLEYS

Alleys are not typically required. However, certain projects may have the option or may be required to provide alley access by the City's Comprehensive Plan or by an adopted subarea plan.

Design of alleys typically follows the criteria for local streets. The following is a list of design standards that differ from local street elements:

- a. Alleys shall have a minimum width of 20 feet of asphalt pavement. If the alley is the only access point to the site, the alley width shall meet the width requirements for local access streets (See Table 7.3);
- b. Curb, gutters and sidewalks are not required, unless conditioned otherwise; and,
- c. The pavement area may have an inverted crown at centerline to convey stormwater into catch basins located at low points in the invert.

Alleys shall connect to a private or public street at each end. In cases where this is not feasible, adequate turnarounds shall be provided. Alleys may be located in the public rights-of-way or a private easement.

7.3.4 PRIVATE DRIVEWAYS

Private driveways provide vehicular access to one lot. Private driveways shall comply with the following:

- a. Private driveways longer than 75 feet but less than 150 feet in length shall meet the requirements for width and grade as private streets (See Table 7.3);
- b. Private driveways longer than 150 feet shall be engineered and meet the requirements for width, grade, and signing as private streets (See Table 7.3);
- c. Private driveways longer than 750 feet shall only be allowed when approved by the Fire Department.

Structures accessed by a private driveway and which are not visible from the public street shall post an address at the street. Addresses shall be permanent in nature and the numbers shall be a minimum of four inches tall, ½ inch stroke, and contrasting color to the background.

Driveways shall not extend off the end of an arm of the hammerhead turn-around.

7.4 HALF-STREET IMPROVEMENTS

A half-street is required as an interim facility. Half-street improvements are required for a property fronting a public street that is not currently built to City standards. Half-street construction may also be required for property that abuts future streets proposed in the City's Arterial or Local Street Plan.

When half-street improvements are required, the design of the half-street shall be consistent with the existing street classification or as dictated by the City's Six-year TIP or City Street Plans. This requires construction of more than half the street for safety and drainage reasons. Construction in these circumstances requires a minimum of one travel lane on the opposite side of the roadway and frontage improvements on the project side of the street. Dedication of additional right-of-way and border easements are required, unless the existing right-of-way and easement widths are sufficient to fit the improvements.

When half-street improvements are required, a minimum of 28 feet of pavement is required. Street improvements shall be designed to provide drainage for the constructed portion of the street. Provisions shall be made to allow for extension of the storm drainage system to the undeveloped portion of the street for future construction.

Transition tapers are required when the new edges of pavement do not match the existing edge of pavement. Tapers shall conform to Chapter 6 of the MUTCD.

All proposed utilities located within the half-street shall be installed during construction.

The unfinished side of the half-street shall be finished with a gravel shoulder, grassed ditch and/or side slope to ensure proper drainage, bank stability, and pedestrian and traffic safety (see Standard Plans).

When half-streets connect to an intersection, the intersection shall be designed and constructed for the full build-out of the street. The intersection design and construction shall extend for at least 75 feet from the street intersection.

7.5 STREET GEOMETRY

Factors contributing to the geometric conditions of a street are discussed in the following sections.

All public streets in a subdivision, including half-streets, shall be fully constructed to the plat boundaries. Pavement, gutter, curb and sidewalk shall be extended to allow future connections to occur.

7.5.1 DESIGN CRITERIA

Minimum and maximum geometric design elements are set forth in Tables 7.1 through 7.3. Any revision to a geometric element or traffic control on a State Highway requires WSDOT approval. For in-depth design information on the following criteria, refer to *AASHTO Green Book*, latest adopted edition.

TABLE 7.1 ARTERIAL STREET DESIGN CRITERIA

MINIMUM DESIGN ELEMENTS	TERRAIN TYPE	URBAN ARTERIAL SYSTEM				URBAN COLLECTOR SYSTEM	
		Principal		Minor		Collector	
Classification		Principal		Minor		Collector	
Design Speed (mph)	Flat	40		40		35	
	Rolling	40		35		35	
	Mountainous	35		30		35	
Minimum Horizontal Curve Radius ^{1,3} (ft)	Section Type	Crown		Crown		Crown	
		2%	3%	2%	3%	2%	3%
	Flat	765	820	765	820	510	545
	Rolling	765	820	510	545	510	545
Mountainous	510	545	330	350	510	545	
Minimum Tangent Length ² (ft)	All	150		150		100	
Maximum Superelevation (%) ³	All	4		4		Not allowed	
Maximum Grade (%) ⁴	All	6		8		8	
Acceptable Range Cross-slope (%)	All	2-3		2-3		2-3	
Minimum Crest Vertical Curves ⁵ (K)	Flat	45		45		30	
	Rolling	45		30		30	
	Mountainous	30		20		30	
Minimum Sag Vertical Curves ⁵ (K)	Flat	65		65		50	
	Rolling	65		50		50	
	Mountainous	50		40		50	

1. Minimum horizontal curves reflect a crown section. For superelevated sections, the horizontal curve radius shall be re-calculated using AASHTO – Geometric Design of Highway and Speeds. Radius measured to centerline.
2. Minimum tangent required at intersections and between curves.
3. Horizontal curves may be adjusted if a super-elevated section is proposed - use AASHTO – Geometric Design of Highway and Streets.
4. Maximum grades may be exceeded for short distances subject to approval by the City "(+ 2%)".
5. Length in feet per percent of algebraic grade difference (K value). $L = K \times \text{Algebraic difference in grade}$. K Shall not exceed 167.

**TABLE 7.2 ARTERIAL STREET DESIGN CRITERIA
MINIMUM WIDTHS**

TYPE		URBAN ARTERIAL SYSTEM		URBAN COLLECTOR SYSTEM	
		Principal	Minor	Collector	Collector
Classification		Principal		Minor	Collector
Curb & Gutter Required		Yes		Yes	Yes
Edge Type		Curb	Shoulder ¹	Curb	Curb
Painted Center/Left-turn lanes ²		12	12	12	12
Inside lanes (feet)		12	12	12	12
Intermediate lanes (feet)		12	12	12	12
Outside lanes ³ (feet)		12	12	12	12
Minimum Sidewalk (feet)		6	6	6	(5 to 6) ⁴
Minimum Intersection return radii (ft) ⁵		50	50	40	30
Minimum Asphalt Width (feet) ⁶	2 lanes			44 ⁷	40 ³
	3 lanes	44 or 46	--	44 or 46	--
	4 lanes	56	64	56	--
	5 lanes	68 or 70	78	68 or 70	--
	6 lanes	80	102	--	--
	7 lanes	92 or 94	--	--	--

1. Shoulder section only when approved by the City.
2. Where raised median islands are required, the center lane or left-turn lane shall be fourteen feet in width.
3. Traveled lanes of a two-lane road are shown as outside lanes. If the street is a shared roadway as designated in the Comprehensive Plan, the outside lane shall be 14 feet minimum. For streets with a bike lane as designated in the Comprehensive Plan, increase the lane width by 5 feet 8 inches to allow for a 5-foot bike lane and 8-inch stripe.
4. Minimum sidewalk width is six feet if it is adjacent to the curb and/or if located in a commercial zone.
5. Return radii at face of curb.
6. When asphalt width varies, the larger width is for a raised median.
7. Parking lanes included.

TABLE 7.3 ACCESS STREET DESIGN CRITERIA

DESIGN ELEMENTS	TERRAIN TYPE	INDUSTRIAL/ COMMERCIAL	LOCAL ACCESS		PRIVATE STREET	ALLEY
			200+	< 200		
ADT		All	200+	< 200	All	All
Curb & Gutter Required	All	Yes	Yes	Yes	No	No
Design Speed (mph)	Flat Rolling Mountainous	35 30 25	30 30 25	25 25 20	20 20 20	20 20 20
Minimum Horizontal Curve Radius (ft) ¹	Flat Rolling Mountainous	545 350 210	350 350 210	210 210 110	110 110 110	110 110 110
Minimum Tangent Length (ft) at intersections	All	100	25	25	25	25
Maximum Superelevation Rate (%)	All	Not allowed	Not allowed	Not allowed	2	2
Maximum Grade (%) ²	All	8	8	8	10	8
Acceptable Range Cross slope (%)	All	2 to 3	2 to 3	2 to 3	2 to 3	2 to 3
Minimum Crest Vertical Curves (K) ³	Flat Rolling Mountainous	40 30 20	20 20 15	15 15 10	10 10 10	10 10 10
Minimum Sag Vertical Curves (K) ³	Flat Rolling Mountainous	50 40 30	40 40 30	30 30 20	20 20 20	20 20 20
Minimum Sidewalk Width (ft) ⁴	All	6	5	5	Not required	Not required
Min. Asphalt Width (ft) ⁵	All	40	30	28 ⁶	(20-26) ^{7,8,9}	(20-30) ¹⁰
Minimum Intersection return radii at face of curb (ft)	All	30	30	30	30	30

1. Minimum horizontal curves reflect a crown section with a cross-slope of 3 percent. Other section types should be calculated using AASHTO – Geometric Design of Highway and Speeds. Radius measured to centerline.
2. Maximum grades may be exceeded for short distances subject to approval by the City (+2%).
3. Length in feet per percent of algebraic grade difference (K value). $L = K \times \text{Algebraic difference in grade}$. K shall not exceed 167.
4. Minimum sidewalk width is six feet if it is adjacent to the curb and/or if located in a commercial zone.
5. Asphalt width does not include curb and/or gutter section.
6. “No Parking” signs shall be posted on one side of the street.
7. A minimum 10-foot maintenance and utility easement shall be provided on at least one side of the private street.
8. Asphalt width based on the length of the street: up to 500 feet = 20 feet; over 500 feet = 26 feet. The minimum width is 26 feet around a fire hydrant when a fire hydrant is located on the private street, regardless of the street length, per Appendix D of the IFC. 9. Streets 20 to 26 feet wide shall be posted on both sides as a fire lane and with No Parking signs. Pavement widths greater than 26 shall be posted on side of the

street as a fire lane and with No Parking signs. If curb is provided, the curb to curb width can be used to determine if a “No Parking” sign is required.

10. If the alley is the only access point to the site, the alley width is 30 feet unless the ADT is less than 200, then the width is 28 ft.

7.5.2 RIGHT-OF-WAY

The public right-of-way shall extend at a minimum to two feet behind the curb for projects with separated sidewalk. When the sidewalk is adjacent to the curb, the right-of-way shall extend two feet behind the sidewalk. Right-of-way requirements may vary within a street corridor. The required right-of-way width depends on the required street elements, including number of lanes, on-street parking, bike lanes, medians, turn lanes, roadside swales, pedestrian buffer strips and above and below ground utilities. Right-of-way shall be conveyed to the City on a recorded plat or by a right-of-way dedication.

7.5.3 BORDER EASEMENT

Border easements shall be granted to the City on a recorded plat or by a recorded easement. Border easements shall extend from the right-of-way line to the back of sidewalk or the back of public facilities when located behind the sidewalk, whichever is greater. The border easement shall run the total length of the street on both sides.

Fences shall not be constructed inside the border easement. The border easement area shall be kept clear of other objects that may obstruct a driver’s view. The sidewalk shall be open for use of pedestrian traffic at all times.

The border easements may be used by the utility companies. Utility and other easements can cross the border easement but cannot be entirely located within the border easement.

7.5.4 GRADE

Minimum longitudinal grade shall be 0.5% for streets with concrete gutters and shouldered roads. The minimum longitudinal grade shall be 0.8% for streets with asphalt gutters. Maximum allowable grade shall be pursuant to Tables 7.1 and 7.3.

7.5.5 CROSS SLOPE

All new streets shall be constructed with a center crown, with the cross slope per Tables 7.1 and 7.3. When widening an existing street, the cross slope may range between 2 and 4.5%.

The cross slope of the higher priority street shall be extended through the intersection. The grade of the cross street shall be adjusted to meet the cross slope of the higher priority street.

When two streets with the same classification meet, the street with the higher ADT shall be selected to act as the higher priority street. The slope of the other street shall be adjusted as required above.

7.5.6 HORIZONTAL CURVES

Curve radii shall be as large as possible; the minimum radii shall be used only where necessary. The minimum allowable centerline radii for horizontal curves shall be pursuant to Tables 7.1 and 7.3. Angle points are not allowed. All changes in direction shall be made using horizontal curves.

Reverse and compound curves should only be used when a single radius curve will not work. For driver safety, compound curves shall have a ratio no greater than 1.5 where the value of the larger radius is divided by the smaller radius.

Whenever two streets intersect, a tangent length (measured from the nearest gutter flowline of the intersected street to the point of curvature in the intersecting street) shall be provided for a safe sight distance and traffic operation. The angle of departure from perpendicular shall not exceed 15 degrees for the length of the tangent. The minimum required tangent length shall be pursuant to Tables 7.1 and 7.3.

For driver safety, horizontal curves shall not begin near the top of a crest vertical curve or the bottom of a sag vertical curve.

Connection with existing streets shall be made to match the existing alignment grade of the existing improvements. The centerline, flowline, and existing ground lines of all streets (except cul-de-sacs) shall be continued for 100 feet beyond the proposed construction.

7.5.7 VERTICAL CURVES

The minimum vertical curve length for public and private local access streets is 50 feet and 100 feet for arterials. A vertical curve is required when the grade break is 1% or greater.

The following guidelines shall be followed when designing a profile:

- a. The grade line shall be smooth flowing;
- b. The roller coaster type profile should be avoided;
- c. A broken-back grade line (successive vertical curves in the same direction) generally shall be avoided;
- d. The grade through intersections on streets shall not exceed 6%;
- e. A sag vertical or flat grade is desirable in advance of such features as channelization and ramp takeoffs in order to provide good visibility;
- f. The approach at street intersections shall be pursuant to Table 7.4;
- g. When superelevation is allowed, transitions shall be designed pursuant to the *WSDOT Design Manual* or *AASHTO Policy on Geometric Design of Highways and Streets*. The pivot point should be located at the centerline. The gutter profile along the grade break shall be evaluated for stormwater conveyance. Vertical curves and grades created by and along the transition shall conform to these standards; and,

- h. Vertical curves should be avoided at the intersection with streets or approaches.

7.5.8 STREET SURFACING REQUIREMENTS

All travelways shall be paved, including public and private streets, alleys, and private driveways. Paving requirements are specified in Chapter 8.

7.5.9 CURB AND GUTTER

Type B curb and gutter shall be used for all public streets.

When the existing curb is not continuous along the street frontage, the Applicant shall construct curb and/or gutter to provide continuity.

7.5.10 LANDSCAPE STRIP AND SWALES

A grass strip shall be provided between the curb and the sidewalk for all public streets, providing a buffer for pedestrians. The width of the grass strip shall be as follows:

- a. Seven feet wide if the grass strip is not used for drainage. In this case, drainage facilities shall be located in a separate tract. Commercial and industrial projects may place drainage facilities within a drainage easement granted to the City; or,
- b. Ten feet wide if a continuous roadside swale is provided within the strip. Planting shall conform to Section 7.8.9 of the Spokane Regional Stormwater Manual and SVMC Title 22.

Drainage facilities receiving stormwater from public streets shall be located within the rights-of-way, within a border easement parallel to the street, or within a drainage tract. Drainage facilities receiving stormwater from private streets or engineered driveways shall be located within a drainage easement parallel to the street or a drainage tract.

7.5.11 TURNAROUNDS

All dead-end streets shall have a turnaround that meets the City and Fire Department requirements.

A turnaround is required when:

- a. The length is 150 feet or more for all types of travelways. The length is measured from the street intersection (SI) to the terminus of the travelway; or,
- b. A public street is longer than the depth of one lot.

Proposed dead-end streets shall be connected to existing streets that terminate at the project boundary where possible, unless it can be demonstrated that such connections would lead to a substantial rerouting of through-traffic onto the street.

Non-motorized paths to adjacent arterials or public facilities, such as schools and parks, shall be provided at the dead-end of the street to shorten walking distances. This shall require right-of-way dedication and/or easements.

7.5.11.1 Temporary Turnarounds

Temporary turnarounds shall be approved by the City and are allowed only when there is the possibility for extending the street to connect adjacent parcels or other streets.

For public streets, the temporary turnaround shall be placed within an easement. Curb, gutter, and sidewalk shall be provided to the locations specified in standard plans. The plan shall include language indicating that the easement is to be vacated when the street is extended across the adjacent parcel. For private streets, the turnaround shall be part of the access easement and not part of the driveway approach. It is the responsibility of the Applicant to verify that setback requirements are satisfied for the lots with the turnaround.

A sign shall be posted at the back of the temporary turnaround stating that the street is planned to be extended in the future (Standard Plan R-142).

7.5.11.2 Permanent Turnarounds

Permanent cul-de-sacs shall be provided for approved dead-end public streets (see Standard Plan R-130). For private streets and driveways, cul-de-sacs are the preferred turnaround; hammerheads or other turnaround types (Standard Plan R-133) shall only be allowed for private streets when approved by the City and the Fire Department. A permanent dead-end street is only allowed when connection to adjacent properties and/or other streets is not needed or possible.

Permanent cul-de-sacs shall be constructed with curb, gutter, sidewalk and swales. The grade of the cul-de-sac bulb shall be a minimum 1% at all places along the gutter lines. As topography permits, drainage shall be directed away from the bulb.

7.5.12 BIKEWAYS

The minimum design standards for bikeways shall be per AAHSTO *Guide for the Development of Bicycle Facilities*. Typically, bikeways are shared with other transportation modes, although they may be provided exclusively for bicycle use. Types of bicycle facilities and planned bicycle facilities within the City can be found in Chapter 3 of the City of Spokane Valley Comprehensive Plan.

7.5.13 INTERSECTIONS

7.5.13.1 General Design

Street intersections shall be laid out so the streets intersect as nearly as possible at right angles. If a right angle is not possible, the skew shall not vary more than 15 degrees from a right angle. Opposite street legs shall lie on a straight line, whenever possible.

For safe design, the following shall be avoided:

- a. Intersections with more than four intersecting streets;
- b. “Y” type intersections where streets meet at acute angles; and,
- c. Intersections adjacent to bridges, horizontal curves, and vertical curves and other sight obstructions.

When a private street intersects a public street, the private street shall be stop-controlled. A private street is prohibited as the fourth leg of the intersection at existing tee intersections.

The minimum return radii shall be pursuant to Tables 7.2 and 7.3.

7.5.13.2 Approach Length

The street approach area is where vehicles store while waiting to enter an intersection, and shall be designed with a nearly flat grade. For public or private streets, the street approach area at an intersection shall have a downgrade approaching the intersection of no greater than 2%. An upgrade approaching the intersection shall be no steeper than 4%. The minimum length of the street approach area, measured from the intersected street’s edge of curb face, or traveled way where curbs are not present, pursuant to Table 7.4.

TABLE 7.4 MINIMUM STREET APPROACH LENGTH

Average Daily Traffic (ADT) of Higher Priority Road	Minimum Road Approach Length (feet) (2% Maximum Downgrade and 4% Maximum Upgrade)	
	Local Access Streets & Private Roads	Collector Arterials
ADT < 1000	25	50
1000 < ADT < 5,000	50	75
5,000 < ADT < 7,000	75	100
7,000 < ADT < 9,000	75	analysis required

7.5.13.3 Intersection spacing

Arterial spacing shall be per the adopted Arterial Plan.

Local access streets and private streets shall be located at the minimum spacing specified in Table 7.5.

TABLE 7.5 - MINIMUM INTERSECTION SPACING FOR LOCAL ACCESS STREETS

MINOR STREET	MAJOR STREET			
	PRINCIPAL ARTERIAL SEPARATION	MINOR ARTERIAL SEPARATION	COLLECTOR SEPARATION	LOCAL ACCESS SEPARATION
LOCAL ACCESS & PRIVATE STREETS	660 feet	330 feet	330 feet	150 feet

1. Minimum intersection spacing is measured from centerline to centerline.

7.5.14 STREET LAYOUT

The internal local residential street network for a subdivision should be designed to discourage regional through-traffic. Subdivisions shall be planned in a manner that minimizes the number of local street accesses to arterials and collectors.

Street configuration shall conform to the following:

- a. Blocks lengths shall not exceed 600 feet except as provided in the zoning regulations for estate lots, unless unique characteristics associated with the land such as creeks, woods, or parks justify a longer length;
- b. Public streets, private streets, and driveways shall not be located closer than two feet from any point from an interior property line. The only exceptions to this rule are for public streets which shall extend to the plat boundaries to allow for future connection and for half-streets;
- c. Horizontal alignment within intersection area. The horizontal approach to an intersection shall be tangent for a minimum length pursuant to Tables 7.1 and 7.3. Longer tangents are highly desirable. The tangent distance is measured from the curb line of one street to the first point of curvature on the intersecting street;
- d. Residential developments with greater than 30 single family dwelling units shall have a minimum of two street accesses that

meet the Fire Department separation requirement to ensure adequate emergency access; and,

- e. Multi-family developments with greater than 100 dwelling units shall have a minimum of two street accesses.

7.5.15 SURVEY MONUMENTS

7.5.15.1 General Requirements

Surveys shall conform to all applicable state and SVMC requirements (SVMC Title 20).

Prior to any construction or maintenance activities within City rights-of-way, a Surveyor shall conduct a thorough search for all survey monuments. Any found monuments shall be referenced pursuant to state law and SVMC. A copy of the references shall be filed in the office of the County Engineer. The Surveyor shall comply with WAC chapter 332-120. If monuments are found to be at risk by construction or maintenance activities, an approved copy of the Application Permit filed with the Washington State Department of Natural Resources (DNR) shall be provided to the City.

7.5.15.2 Monumentation

- a. The responsible Surveyor shall set permanent monuments pursuant to the Standard Plans with his/her registration number as follows:
 - i. For placing new or replacement of section corners, quarter corners, closing corners, witness corners, and meander corners that have been disturbed or destroyed, the minimum acceptable monument is a ¾-inch inside diameter iron pipe or a #5 (5/8-inch) steel reinforcing rod, 24 inches in length. The monument and cap shall be marked in conformance with state laws and regulations. Any of these corners in paved roads shall be covered by a cast iron monument case and lid.
 - ii. For placing new or replacement of disturbed road intersection points on arterials, the minimum acceptable monument is a ½-inch inside diameter iron pipe or a #5 (5/8 inch) steel reinforcing rod, 24 inches in length. These monuments shall be covered by a standard cast iron monument case and lid.
 - iii. For placing new or replacement of disturbed road centerline angle points, curve points and road intersection points (not identified above), the minimum acceptable monument is a ½-inch inside diameter iron pipe or a #5 (5/8-inch) steel reinforcing rod, 24 inches in length.
 - iv. For placing new or replacement of all permanent monuments not covered above, the minimum acceptable monument is a

- ½-inch inside diameter iron pipe or a #4 (½-inch) steel reinforcing rod, 18 inches in length.
- v. If it is impossible to set the above monuments, the City may approve an alternative monumentation method.
- b. For each monument being set or established, the responsible Surveyor shall:
- i. Identify at least three reference points. The reference points may consist of, in order of preference, cross on curbs, bearing trees or accessories, nearby property corners or an alternate as approved by the City. A completed DNR permit shall be filed with the DNR with a copy supplied to the City.
 - ii. Show on a Record of Survey, Subdivision, Short subdivision or Binding Site Plan sufficient information to comply with RCW 58.09.120. A filed copy of said Record of Survey, Subdivision, Short Subdivision or Binding Site Plan shall be supplied to the City as needed.

7.5.15.3 Horizontal Control Network

A horizontal control network previously established by the Spokane County Engineer shall be the mapping base for all surveys performed under these Street Standards. Intersections shall also be located and referenced to the current control network as established by the Spokane County GPS control project and that coordinate system. Refer to the SVMC Title 20.40 for additional information.

All survey work done within the City boundaries shall conform to the degree of accuracy required under applicable state laws and professional standards. Adequate supplemental information may be required by the City to ensure accuracy.

7.5.15.4 Temporary Bench Mark

The Surveyor shall provide a temporary bench mark along the roadway every 1,000 feet. These temporary bench marks shall be based on the datum plane approved by the City. Refer to the SVMC Title 20.20 for additional information. If requested by the City, the Surveyor shall submit field notes or a sealed statement, ensuring work according to third order accuracy. Refer to Washington State Department of Transportation Standards (*Highway Surveying Manual M22-97*) for additional information.

7.5.16 TRAFFIC CONTROL DEVICES

The City has adopted the Washington State MUTCD as a guideline for traffic control devices, including pavement marking and signing.

The Applicant shall be responsible for providing and installing all required traffic control devices, including but not limited to street name signs, regulatory

signs (including stop and no parking), warning signs, barricades, crosswalk markings, and bicycle/pedestrian signs.

“No Parking” signs shall be posted on both sides of the street for curb-to-curb widths up to 26 feet, and on one side of the street for curb to curb widths greater than 26 feet and up to 32 feet. If the street has no curb, the pavement width shall be used to determine if “No Parking” signs are required. For private streets and private driveways, a minimum of one “No Parking – Fire Lane” sign shall be installed every 100 feet of frontage or as required by the Fire Department. “No Parking” signs on public streets shall be installed when required by these Street Standards at a separation as required by the City and the Fire Department.

7.6 ROADSIDE ELEMENTS

7.6.1 SIDEWALKS

Sidewalks are required on public streets along both sides for all street classifications.

When approved by the City, the sidewalk may be eliminated on one side of the street if topography or safety prohibits construction. The Applicant shall demonstrate that pedestrian needs are still satisfied. Additionally, sidewalk may not be required on a local access street fronting the project if all of the following are true:

- a. The project is in a low-pedestrian zone (zones R-1, R-2, R-3, I-2);
- b. There are no other sidewalks within its block; and,
- c. Any part of the project is more than one mile radially away from an activity center (which includes but is not limited to parks, schools, large employment centers, religious institutions).

The width of sidewalks shall be pursuant to Tables 7.2 and 7.3. Wider sidewalk may be required to provide corridor continuity. At no location shall a sidewalk provide an unobstructed path of less than the required width.

Wider sidewalk may be required at bus stops to allow bus riders a place to stand without hindering pedestrian movements or handicap access.

When the existing sidewalk is not continuous along the street frontage, the Applicant shall construct sidewalk along the frontage of the project to provide continuity.

The thickness of the sidewalk shall be pursuant to Standard Plan R-103.

Meandering sidewalks may be approved by the City. The design of meandering sidewalks shall address obstructions, including mailbox mountings, street trees, fire hydrants, power poles, driveways, swales and street signs, without deviation from the required design width. Additional right-of-way (or easement) may be required to accommodate the obstructions or the meander of the sidewalk.

7.6.2 PEDESTRIAN RAMPS

Pedestrian ramps shall be provided at all pedestrian crossings having vertical curb sections and shall be pursuant to the Standard Plans. Every pedestrian ramp shall have at least one receiving ramp. This may require construction of “island” landing ramps. In special conditions, pedestrian ramps shall also be provided to enable passage across curbed radius return access points. Pedestrian ramps shall have detectable warning patterns formed with manufactured truncated domes in yellow. Pedestrian ramps shall meet all ADA guidelines.

7.6.3 SIDE SLOPES

Typical slopes for embankments should be 3:1 or flatter. The steepest slope for embankment or excavation shall be 2:1. Refer to Chapter 5 for additional requirements.

On shouldered streets, a minimum space of five feet shall be provided between the catch point of the side slope and the right-of-way line for the installation of utility poles, fences, sloped rounding, etc. Depending on site conditions, this may require additional right-of-way, retaining walls, or other requirements. The maximum slope of this space shall be 3:1.

Slope easements shall be granted to the City when required by terrain or design features.

7.6.4 CLEAR ZONE

Clear zone is defined as a relatively flat area void of fixed objects or obstructions beyond the edge of the traveled way that allows drivers to stop safely or regain control of a vehicle that leaves the traveled way. This area may consist of a shoulder, a recoverable slope, a non-recoverable slope, and/or a clean run-out area. The desired minimum width is dependent upon traffic volumes, traffic speeds, side slopes, and the street geometry.

A recoverable slope is a slope on which a motorist may retain or regain control of a vehicle by slowing or stopping. Slopes flatter than 4:1 are generally considered recoverable.

A non-recoverable slope is considered to be traversable but on which an errant vehicle continues to bottom. Embankment slopes between 3:1 and 4:1 may be considered traversable but non-recoverable if they are smooth and free of fixed objects.

A clear run-out area is the area at the top of a non-recoverable slope available for safe use by an errant vehicle. Slopes steeper than 3:1 are not considered traversable and are not considered part of the clear zone.

For streets with Type B or Type A curb, the following is required:

- a. Sidewalk adjacent to the curb - Rigid objects shall be placed two feet behind the sidewalk;

- b. Separated sidewalk - Rigid objects shall be no closer than two feet from the back of the curb;
- c. No sidewalk - Rigid objects shall be no closer than two feet from the back of the curb;
- d. Speed limit 40 mph or less - The clear zone distance is two feet behind the back of the curb.

For all other pavement edges and design speeds, clear zone requirements per AASHTO’s “A Policy on Geometric Design of Highways and Streets” shall be used.

7.6.5 SIGHT DISTANCE

Sight distance is defined as the length of roadway that is entirely visible to the driver. All roads, intersections, and access points shall be designed to provide adequate sight distance for all normal driving situations and are required to conform to AASHTO’s “A Policy on Geometric Design of Highways and Streets.”.

Stopping sight distance shall be calculated for vehicle crest curves and horizontal curves. The stopping sight distance shall not be less than the distances specified in Table 7.6. These values should be adjusted for grades 3% or greater, more than two lanes, skewed intersections, intersections near vertical or horizontal curves, or for design vehicles other than passenger cars.

TABLE 7.6 MINIMUM STOPPING SIGHT DISTANCE

Design Speed (mph)	Stopping Sight Distance (feet)
20	115
25	155
30	200
35	250
40	305
50	425
55	495

Table 7.7 states the required sight distance for different types of intersections and approaches. These values shall be adjusted for grades with slopes of 3% or greater, number of lanes greater than two, for design vehicles other than passenger cars, using the procedures in the AASHTO design guidelines. For intersections or approaches located near horizontal or vertical curves, the City may require the 85th-percentile speed be used in the sight distance analysis. Sight distance triangles shall be shown in the civil plans for all new intersections and all projects with new

driveway approaches. Sight distance shall be continuous. Non-engineered driveways on local access streets are exempt from this requirement. Sight distance triangles shall be developed by an Engineer with traffic engineering experience developing intersection sight distance triangles.

Fire hydrants shall be visible for at least 50 feet in either direction. A sight distance triangle shall be shown at the location of each fire hydrant in the civil plans and lot plans.

The area within the sight distance triangle shall be free from any sight-obscuring objects pursuant to AASHTO design guidelines. Sight-obscuring objects include but are not limited to buildings, parked vehicles, signs, fences, and landscaping. The City may remove, at the expense of the property owner, any vegetation or objects which obstruct sight distance because such obstructions are hazardous to the life, health, and safety of the public.

The sight distance triangle shall be located completely within an easement or right-of-way, if required by the City. The property owner shall be responsible for removing any objects that become a sight hazard. If an easement is not practical, the City may require additional right-of-way as a condition of development approval to ensure proper maintenance.

TABLE 7.7 MINIMUM INTERSECTION & APPROACH SIGHT DISTANCES

CASE TYPE	THROUGH STREET TYPE	THROUGH STREET SPEED LIMIT (MPH)	DISTANCE FROM TRAVELWAY (FT)	SIGHT DISTANCE ¹ (FT)
Case A – Uncontrolled	Local access or lower classification	20	90 ²	90
		25	115 ²	115
Case B – Signal, Stop Control, Commercial Approach & engineered driveways	Any	25	15 ³	280
		30		335
		35		390

1. These values should be adjusted for grades 3% or greater, more than two lanes, skewed intersections, or for design vehicles other than passenger cars.
2. Distance back from center of intersection.
3. Use Figure 7-2.

The following types of intersection and accesses are covered in Table 7.7. Other intersection types shall be analyzed pursuant to Chapter 9 of AASHTO *Green Book*.

- a. Case A can be used to analyze uncontrolled intersections which are intersections not controlled by a stop sign, traffic signal or yield sign. They are usually located on streets that carry low volumes and have a 25 mph

speed limit. Figure 7-1 shows the sight distance triangle for this type of intersection.

- b. Case B can be used to analyze street approaches controlled by stop signs or a signal, commercial approaches and alleys. Figure 7-2 shows the sight distance triangle for Case B.

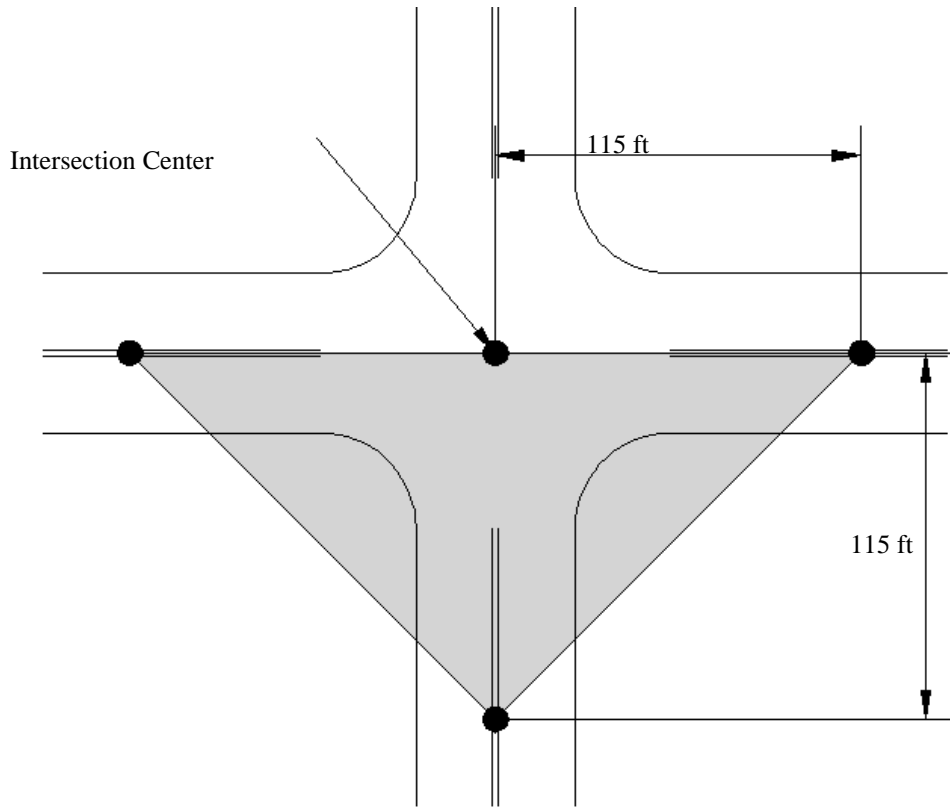


FIGURE 7-1 SIGHT DISTANCE TRIANGLE FOR CASE A

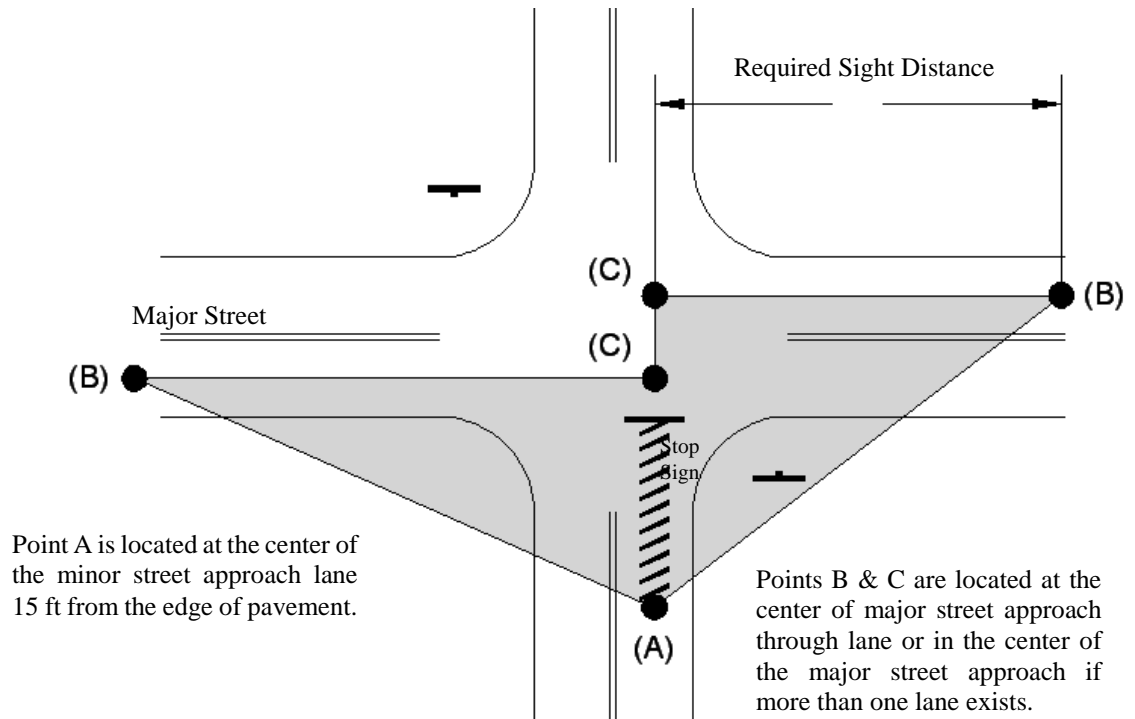


FIGURE 7-2 SIGHT DISTANCE TRIANGLE FOR CASE B

7.7 MISCELLANEOUS FEATURES

7.7.1 STREET NAMES

The City and the Fire Department review proposed street names to conform to established names within the County grid to expedite property identification by emergency services. Street names shall also comply with the US Postal Services addressing standards. Street name designations shall be as follows:

- a. All north-south streets shall be called Streets;
- b. All east-west streets shall be called Avenues;
- c. Streets in large subdivisions that do not have a definite directional course shall be called Drives;
- d. A permanent dead-end or cul-de-sac street shall be called a Court;
- e. A street that lies diagonally to the east-west, north-south grid system and is an arterial or collector street shall be called a Boulevard;
- f. A street that has its ingress and egress on the same street shall be called a Circle; and,
- g. A private street shall be called a Lane.

7.7.2 MAILBOXES

Mailbox installation and placement shall comply with AASHTO and US Postal Services guidelines. Mailboxes should not be placed in sight triangles or in clear zones.

7.7.3 GUARDRAIL

Evaluation of embankments for guardrail installations shall be pursuant to Chapter 710 of the *WSDOT Design Manual*.

Guardrail installations shall conform to *WSDOT/APWA Plan C-1, Beam Guardrail Type 1*. End anchors shall conform to *WSDOT/APWA Plan C-6, Beam Guardrail Anchor Type 1*.

7.7.4 BOLLARDS

Points of access shall be closed by a line of bollards when necessary to deny vehicle access to an easement, tract, or trail (except for maintenance or emergency vehicles). Bollards shall be wrapped with reflective tape. Closure shall include one or more fixed bollards on each side of the traveled way and removable, locking bollards across the traveled way. Spacing shall provide one bollard on centerline of the trail and other bollards at a maximum spacing of three feet to preclude vehicular access.

Fire access roads shall not be blocked in this manner without the approval of the Fire Department. Reflective tape and safety striping shall be placed on bollards. Bollards shall be placed 10 feet from the paved edge of roadway.

7.7.5 ROADWAY BARRICADES

Temporary and permanent barricades shall conform to the MUTCD. Type III barricades (see Standard Plan R-142) shall be used at the end of a local access street terminating abruptly without cul-de-sac bulb or on temporarily stubbed off streets. Each such barricade shall be used together with an end-of-road marker and signed future street extension.

7.7.6 ENTRANCE GATES

Entrance gates are prohibited on public streets. Use of entrance gates on private streets requires prior approval by the City and the Fire Department. Minimum gate opening width shall be 20 feet. Proposed gates shall be clearly shown on the street plans.

If a center island is used as part of an entrance gate feature, a minimum 14-foot wide lane between face of curb and center island shall be provided. The center island shall not extend past the end of the gate when it is fully opened.

Gated streets require a queuing area to allow vehicles to exit the connecting street prior to the gate. The queuing length shall be a minimum of 35 feet plus the gate width. Parking shall be prohibited within the queuing area, on either side of the street, for a distance equal to the queuing length. Signage for the "No Parking Zone" shall be placed on both sides of the gate.

Gates shall be required to have a Fire Department emergency access device installed and maintained:

- a. A Knox key switch shall be installed on gates that provide access to 20 lots or less; or,
- b. An Opticom gate activation device shall be provided for subdivisions with more than 20 lots.

7.8 APPROACH DESIGN CRITERIA

The following section contains design criteria for intersections and driveway approaches. These are minimum requirements and may be modified if traffic volumes (existing and/or projected), topography, design speed, design vehicle requirements, drainage, and other conditions, both existing and projected indicate a more stringent criterion is necessary. The City may require additional provisions to ensure public safety.

All access points to and from City streets, including intersections and driveways shall be approved by the City prior to construction and require an approach permit.

7.8.1 APPLICABILITY

These requirements apply to all new or altered intersection and driveway approaches to City streets.

7.8.2 ACCESS LIMITATIONS

- a. While no property is denied access to City streets, direct street access is not guaranteed. When direct access is denied, properties may be required to:
 - i. Access the street through an alley;
 - ii. Share a single driveway approach with two or more contiguous properties; or,
 - iii. Restrict access with a right-in/right-out approach for properties located on arterials and with no available alternate access. Additionally, these properties may be required to construct street improvements to preclude left turning traffic.
- b. Properties shall be restricted to one access point on arterials and two access points on local access streets. Engineering may grant one additional arterial access point provided that:
 - i. Minimum spacing requirements between access points are met with any driveway approaches;
 - ii. The applicant demonstrates that additional access points will result in an improvement to safety or traffic flow both on-site and off-site; and,
 - iii. One of the following situations exists:
 1. The PM peak hour volume exceeds 100 PM peak hour vehicles on both directions; or,
 2. Traffic volumes using one driveway would exceed the capacity of a stop sign controlled intersection during the PM peak hour; or,
 3. The ADT using one driveway would exceed 1,000 vehicles both directions.
- c. When a property has frontage on two or more streets, and spacing requirements on the major street cannot be met, the driveway approach shall be located on the street with the lowest classification unless safety considerations dictate otherwise.
- d. For a development that combines more than one underlying lot, these requirements, including the number and spacing of access points, shall apply to the development as a whole, not to each underlying lot.
- e. For all Binding Site Plans, excluding industrial zones, shared access shall be required between the lots. The shared access shall include parking lot travel lane connections or shared driveway approach. If the Applicant adequately demonstrates a site design or building use limitation for installation of the travel lanes or shared approach on the existing property, exceptions to this requirement may be administratively granted. Exceptions may be approved if:
 - i. The City finds that the lack of shared access does not negatively impact the present or future function and safety of the parking lot circulation, ingress/egress, or roadway network; and,

- ii. The City finds that the lots required to share access have allowable incompatible uses; and,
 - iii. The property does not have a feasible alternative site design solution.
- f. Driveways shall not be allowed where horizontal or vertical curves prevent the roadway from having continuous stopping sight distance or adequate intersection sight distance to safely accommodate the movements in and out of the driveway.

7.8.3 GENERAL DESIGN

Approaches shall be constructed to avoid interference with existing drainage inlets, culverts, lighting, utility poles, traffic regulating devices, fire hydrants, or other facilities. The Applicant shall be responsible for the cost of relocating any of the above. The agency holding authority for the particular structure shall decide how the facility will be relocated, which may require approval of the City.

If at the time of construction the fronting street does not have full width pavement or curb and gutter, a rural driveway approach may be used with the approach starting at the edge of the existing pavement (see the Standard Plans).

Approaches shall not restrict or impound drainage flow in the street. For shouldered streets with ditches, stormwater shall be conveyed under the driveway with a culvert. The minimum culvert size shall be 12 inches. For curbed roads, stormwater shall be conveyed using a culvert or an inverted approach pursuant to the Standard Plans.

If an existing approach is to be altered or abandoned, the unused portion of the original approach shall be removed and replaced with curb, gutter and sidewalk matching that which is adjacent.

Redevelopment projects shall be required to modify or eliminate any existing driveway approach that does not conform to these standards.

7.8.4 DRIVEWAY APPROACH HORIZONTAL AND VERTICAL GRADE

Approaches shall align perpendicular to the street. The angle of intersection to the street shall not be less than 75 degrees. The angle may be reduced to 45 degrees for right-in/right-out driveways where the entering and exiting lanes are separated by a raised “pork chop” island.

The vertical grade of approaches shall not exceed 8 percent within the right-of-way and shall be designed to preclude vehicles dragging when entering or exiting the site. Vertical grades shall not exceed 10% within 10 feet of the right-of-way.

7.8.5 APPROACH WIDTHS

The total approach width shall not be greater than 50% of total lot frontage width.

When approaches are constructed different than that shown on the construction plans, the design engineer shall verify that any impacted street and stormwater facilities still meet the design requirements. If the facilities are inadequate,

measures shall be taken to bring the facilities into compliance prior to their acceptance. Driveway approaches shall be designed pursuant to the Standard Plans.

7.8.5.1 Commercial/Industrial

High volume driveway approaches may be required or permitted when all of the following conditions are present:

- a. The access is located along an arterial;
- b. Access volumes indicate a need for a radii curb return where the ADT exceeds 500 or where speed change lanes would be required;
- c. The access is designed to restrict turning movements, requiring the installation of an access island or center median;
- d. The roadway has no curb and gutter;
- e. The access serves an industrial property, or provides for commercial deliveries, where large truck movements are required; and,
- f. A traffic engineering analysis submitted by the applicant determines that a radii access is necessary to ensure adequate traffic safety and operation.

7.8.6 DRIVEWAY APPROACH ON-SITE LAYOUT

Approaches shall provide access to an off-street parking area located on private property. The driveway shall be of sufficient length so a vehicle in the driveway does not project into the right-of-way, sidewalk, or pathway. Approaches and on-site parking shall be designed such that vehicle-backing maneuvers will not occur into the street/public right-of-way, impede pedestrian access to sidewalk or vehicles in the public street. Driveway approaches shall be designed to allow the largest typical vehicle using the approach (i.e. tractor trailers at large warehouses, delivery trucks at mini marts, etc.) to enter and exit the site without encroaching into opposing traffic.

Whenever possible, the site should be designed for counterclockwise circulation of large trucks as left turns and left-hand backing maneuvers are easier and safer since the driver's position is on the left hand of the vehicle. All parking, loading and maneuvering of trucks shall be conducted on private property.

7.8.6.1 Driveway Stacking Length for Multi-use Properties

Driveway stacking length for multi-use properties is the distance between the right-of-way and the near side of the first intersecting interior aisle or parking space. The driveway stacking length for multi-use properties shall be as follows:

- a. 20 feet for parking lots with less than 50 spaces;
- b. 50 feet for parking lots with up to 200 spaces; and,
- c. 80 feet for parking lots with over 200 spaces.

7.8.6.2 Driveway Stacking Length for Single-use Properties

Driveway stacking length for single-use properties is the distance between the right-of-way and the proposed uses. The minimum length for driveway stacking for drive-thru windows shall be as follows:

- a. 150 feet for drive-in banks and drive-thru restaurants;
- b. 50 feet for automated tellers (ATM) and drive-in cleaners and repair services;
- c. 75 feet for automated car wash and espresso stands; and,
- d. 100 feet for controlled access parking.

The City may require a traffic study to determine the stacking and queuing requirements for such uses that include, but are not limited to, service stations, drive-thru restaurants, drive-in banking, etc.

The City may require sites with internal traffic congestion to design approaches with long throat lengths to provide extra storage to avoid impacting City streets.

7.8.7 CORNER CLEARANCE FROM INTERSECTIONS

The following sections provide minimum corner clearances. Greater corner clearances may be required at the discretion of the City based on existing or proposed conditions at the intersection. In general, full access driveways are not allowed within the functional intersection boundary, which can be minimally defined by the length of the turn pockets, but may extend further from the intersection.

Where the driveway location does not meet minimum City criteria, or where a safe driveway location cannot be found, the City may require reasonable mitigation measures to provide for as safe a driveway as feasible.

7.8.7.1 Single Family Residential

Residential driveway approaches may not be located closer than 15 feet from the point of curvature of a curb return.

7.8.7.2 Commercial/Industrial

Commercial driveway approaches may not be located closer than 75 feet from the point of curvature of a curb return.

7.8.8 DRIVEWAY APPROACH SPACING - SAME SIDE OF STREET

Table 7.8 provides the minimum distance allowed between the centerlines of adjacent driveway approaches. The distance is measured from centerline to centerline of each approach.

TABLE 7.8 - DRIVEWAY APPROACH SPACING

STREET CLASSIFICATION	DESIRABLE CONDITIONS SEPARATION (FT)	LIMITING CONDITIONS SEPARATION (FT)
Collector	70	50
Minor Arterial	90	60
Principal Arterial	120	80

Desirable conditions shall be applied when sufficient space or street frontage is available. If sufficient space or street frontage for desirable conditions is not available, then lesser distances, down to, but not less than the requirement for limiting conditions, may be applied.

7.8.9 DRIVEWAY APPROACH METHODS OF MEASUREMENTS

Driveway throat width is measured perpendicular to the centerline of the driveway between lines defined by the radii, whether or not that occurs inside the property lines and is physically marked with curbing.

Driveway throat length is measured along the centerline of the driveway from the back edge of the driveway apron and the nearest vehicle aisle or circulation road.

Dimensions in this section refer to distances from (or along) face of curb. In the absence of a curb, the measurement is considered to be from (or along) the edge of pavement.

Driveway angles are measured between the driveway centerline and centerline of the roadway.

7.8.10 RESTRICTED ACCESS DRIVEWAYS

Restricted access approaches do not allow left-hand turns out of or into the driveway approach. Development or redevelopment of properties, where the required setback from an intersection cannot be achieved in any direction and without other ways to access the site, may be required to use a restricted access driveway. In some cases a raised median may be required down the street centerline.

Restricted access approaches shall only be allowed when approved by the City. The existence of other approaches in the vicinity that do not meet standards is not grounds for allowing further substandard approaches.

7.8.11 ALIGNMENT OF CROSS-STREET DRIVEWAY APPROACHES

Driveways should be placed directly opposite from each other whenever possible. If this is not possible and adequate left-turn storage capacity is not available in

advance of each driveway, combining of driveways on the same side of the street may be required.

The requirement above shall not apply if the street to be accessed has a permanent median and/or traffic control device that prevents any cross-street movement of traffic or if the City determines that adhering to said requirement would be unsafe.

7.8.12 SIGNALIZED DRIVEWAY APPROACHES

If the Traffic Impact Analysis determines that there is or will be a need to signalize proposed access points, then proposed access points shall be aligned directly opposite any existing or proposed access points or T-intersection across the street.

Where driveways are to be signalized, a minimum spacing of 1,320 feet to any other signalized intersection should be maintained or shall be spaced as approved by the City. Roundabouts may be considered as an alternative option by the City.

7.8.13 APPROACHES ON STATE HIGHWAYS

This section contains specific access standards for state highways within the City limits, which are classified as managed access facilities. Managed access is based on the premise that access rights of a property owner are subordinate to the public's right and interest in a safe and efficient highway system.

Pursuant to chapter 47.50 RCW, the City adopts by reference, the provisions of chapter 468-52 WAC, as adopted or amended, in order to regulate and control vehicular access and connection points of ingress to and egress from, the State Highway System within the incorporated areas of the City. State Routes (SR) within the City include SR-27 (Pines Road) and SR-290 (Trent Avenue). The current access classifications for SR-27 and SR-290 are shown in Table 7.9.

TABLE 7.9 STATE ROUTES CLASSIFICATIONS

STATE ROUTE	BEGINNING MILEPOST	ENDING MILEPOST	APPROXIMATE LOCATION	CURRENT ACCESS CLASSIFICATION
27	83.14	84.61	14TH TO CITY LIMITS	M2
27	84.61	86.49	14 TH TO ~NORA	M5
27	86.72	87.70	MONTGOMERY TO 290	M5
290	4.31	6.35	FANCHER TO ARGONNE	M5
290	6.35	10.29	ARGONNE TO PROGRESS	M4
290	10.29	12.84	PROGRESS TO CITY LIMITS	M2

7.9 TRAFFIC CALMING

Traffic calming devices improve neighborhood livability by reducing the speed and impact of vehicular traffic on residential streets.

7.9.1 NEW DEVELOPMENT

The internal local access street layout shall be designed to discourage through, high-speed traffic or shall incorporate traffic calming devices in the design. The Applicant may utilize one or more of the traffic calming devices. Proposed devices shall be reviewed and approved by the City at the time of preliminary design review.

Traffic calming devices shall be installed at the expense of the Applicant.

7.9.2 EXISTING DEVELOPMENT

Traffic calming devices are prohibited on arterials. On collectors and local access streets, traffic calming devices are only allowed when warranted by an engineering study and approved by the City.

The installation of devices shall be neighborhood-funded.

7.9.3 TRAFFIC CALMING DEVICES

Currently, the only traffic calming device allowed by the City is the Traffic Circle (see Standard Plan T-101). Alternative devices recommended by the Applicant’s Engineer may be permitted with City approval.