



PRIVATE ROADS

Plans and Specifications

The plans and specifications shall furnish, but not limited to, the following:

Private road Type B and C: Design and plans shall be prepared by a professional engineer.

Exception: For Type C roads, this requirement may be waived where road modification is approved by the Fire Marshal.

General Information –

1. Vicinity map shall be provided in the first sheet of the plan set and show the project location in respect to the nearest major intersection.
2. Plans shall be prepared to scale and dimensioned. A north arrow shall be shown on each plan view.
3. Drawing scales shall be 1" = 20', 50', or 100' horizontally and 1" = 2', 4', 5', or 10' vertically.
4. Title sheet shall include a table of design elements used including:
 - a. Road classification
 - b. Design speed
 - c. Road grade.
 - d. Any additional information that the county deems necessary.
5. Index to drawings
6. Typical cross sections
7. Structural design methods shall be provided in accordance with the Cowlitz County "Guidance for Private Road Construction", or as directed by a professional engineer.
8. Note: All road development, including turnarounds and turn-outs, shall be located within the easement established for such use. For final plat approval: a survey plan with a road overlay prepared by a professional surveyor will be required.

Plan View – Plan views shall show the following:

1. Right of way, property, tract and easement lines.
2. Subdivision name, lot numbers, road names and other identifying labels.
3. Horizontal curve information and curb return data.
4. Road grade. Specify grade at 20' intervals (contour lines) or as necessary to express true grade along road development. Maximum grade: 15%. Grades greater than 12% shall be paved.
5. Existing and proposed utilities.
6. Location and size of drainage facilities.
7. Centerline stationing of all intersecting streets.
8. Intersections. The interior angle of intersecting streets centerlines shall be kept as near 90 degrees as possible, and in no case will it be less than 75 degrees.
9. Location and description of existing survey monuments, including section corner, quarter corners, donation land claims and others as appropriate.



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Profile view – Profile view shall show the following:

1. Vertical profile with vertical curve information and slope. Vertical curves shall be established by AASHTO Standards.
2. Road grade. Specify grade at 20' intervals (contour lines) or as necessary to express true grade along road development. Maximum grade: 15%. Grades greater than 12% shall be paved.
3. Road sections. Coordinate sections with road grade.
4. Show existing ground beyond existing roads if necessary.



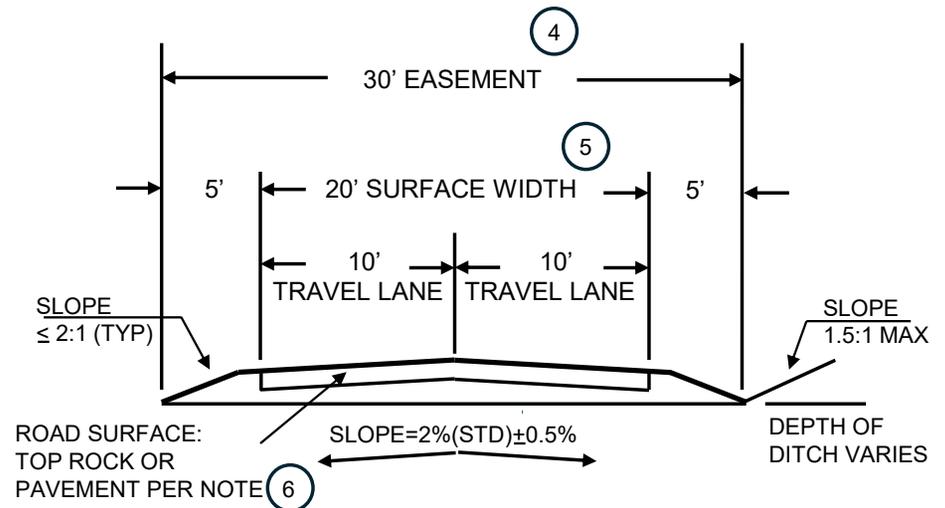
GUIDANCE FOR PRIVATE ROAD CONSTRUCTION

Road Type	Lot Threshold
B	10 - 19
C	5 - 9
D	Up to 4

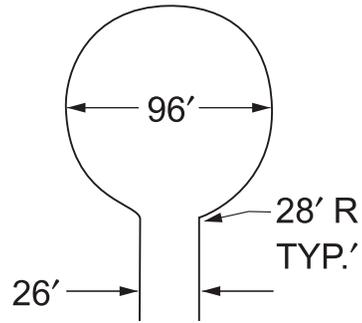
CONVENTIONAL CONSTRUCTION		
AASHTO SOIL TYPE	TOP ROCK	SUBBASE ROCK THICKNESS
A - 1	0.35'	0.00'
A - 2	0.35'	0.00'
A - 3	0.42'	0.00'
A - 4	0.50'	0.00'
A - 5	0.50'	0.55'
A - 6	0.50'	0.67'
A - 7	0.50'	0.80'

NOTES:

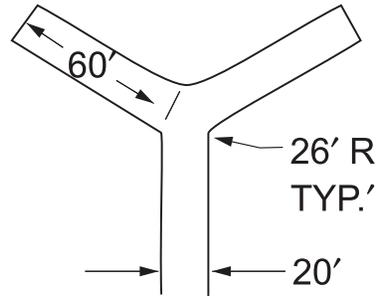
1. SUBGRADE REINFORCEMENT GEOTEXTILES (OR EQUIVALENT) SHALL BE INSTALLED OVER ALL A-6, A-7 SOILS PRIOR TO CONSTRUCTING THE BASE AND SURFACING.
2. THE SUBGRADE AND CRUSHED SURFACING MATERIALS SHALL BE COMPACTED PER WSDOT STANDARDS.
3. APPARATUS ACCESS ROADS SHALL BE CAPABLE OF SUPPORTING THE IMPOSED LOAD OF FIRE APPARATUS WEIGHING UP TO 75,000 POUNDS. IFC SEC D103.
4. EASEMENT WIDTH 30 FT MINIMUM. INCREASE MAY BE REQUIRED TO ACCOMMODATE GRADING. TYPE D ROADWAY 30 FT MINIMUM.
5. SURFACE WIDTH REDUCABLE TO 14' WHERE MODIFICATION IS APPROVED BY THE FIRE MARSHAL.
6. MAXIMUM ROAD GRADE: 15%. GRADE GREATER THAN 12% SHALL BE PAVED. (2 1/2" HOT MIX ASPHALT C SS 3/8" PG 58H-22)
7. TURNAROUND REQUIRED AT END OF ROAD GREATER THAN 150-FEET IN LENGTH AND AT INTERVALS OF 1000-FEET. IFC SEC D103.
8. VERTICAL CURVES SHALL BE ESTABLISHED BY AASHTO STANDARDS.
9. INTERSECTIONS. THE INTERIOR ANGEL AT INTERSECTING ROADS CENTERLINES SHALL BE KEPT AS NEAR 90 DEGREES AS POSSIBLE, AND IN NO CASE WILL IT BE LESS THAN 75 DEGREES.
10. TYPE B & C ROADWAYS NEED SURVEY AND CENTERLINE PROFILE SUBMITTED, FOR 10 OR MORE LOTS.
11. ROAD MAINTENANCE AGREEMENT RECOMMENDED.



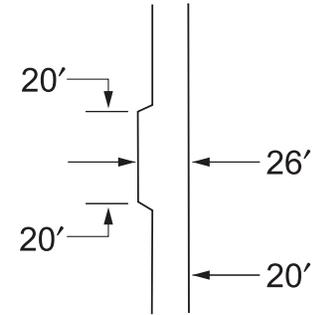
INTERNATIONAL FIRE CODE



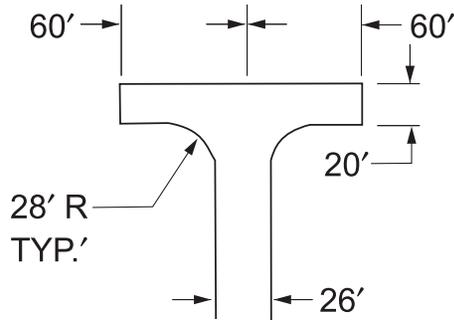
96' DIAMETER
CUL-DE-SAC



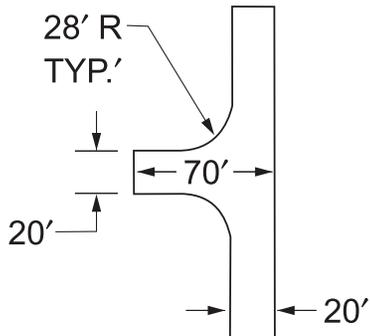
60-FOOT "Y"



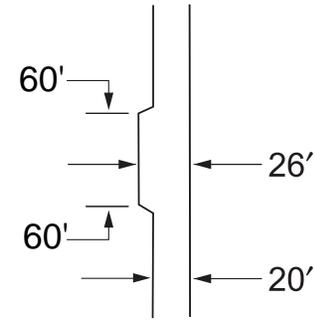
MINIMUM CLEARANCE
AROUND A FIRE
HYDRANT



120' HAMMERHEAD



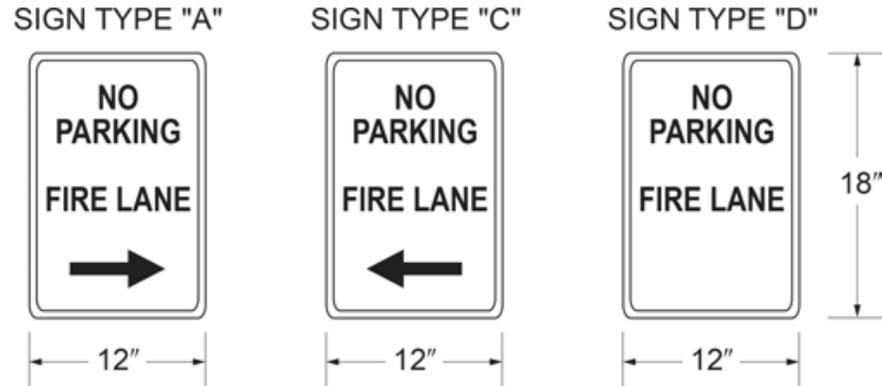
ACCEPTABLE ALTERNATIVE
TO 120' HAMMERHEAD



TURN-OUT
DIMENSIONS

DEAD END, FIRE APPARATUS ACCESS, TURNAROUND AND TURN-OUT EXAMPLES

**INTERNATIONAL FIRE CODE
FIRE APPARATUS ACCESS ROAD - SIGNS**



**FIGURE D103.6 FIRE LANE SIGNS
RED LETTERS ON WHITE REFLECTIVE BACKGROUND**

D103.6 Signs. Where required by the fire code official, fire apparatus access roads shall be marked with permanent “NO PARKING—FIRE LANE” signs complying with Figure D103.6. Signs shall have a minimum dimension of 12 inches (305 mm) wide by 18 inches (457 mm) high and have red letters on a white reflective background. Signs shall be posted on one or both sides of the fire apparatus road as required by Section D103.6.1 or D103.6.2

D103.6.1 Roads 20 to 26 feet in width. Fire lane signs as specified in Section D103.6 shall be posted on both sides of fire apparatus access roads that are 20 to 26 feet wide (6096 to 7925 mm).