CHAPTER 4

STREET, PATH AND BIKEWAY STANDARDS

4.1 GENERAL CONSIDERATIONS

The overall goal of this chapter is to encourage the uniform development of an integrated, fully accessible public transportation system that will facilitate present and future travel demand with minimal environmental impact to the community as a whole.

A. Development of properties on or tributary to substandard or unsafe roadways may, depending on the size and type of development, be cause for "off-site" improvements to the substandard or unsafe corridors, to include road drainage facilities. The Public Works Superintendent shall determine when such conditions exist. At a minimum "half street improvements" will be required as a condition of development in and along the entire property as it abuts City rights-of-way. The City shall determine what qualifies as "development".

B. This chapter provides minimum street design standards as well as minimum design standards for "stand alone" pedestrian and/or bike trails/paths. Higher design and construction standards may be warranted due to localized design and construction parameters.

C. Construction and design standards and specifications for streets are contained in the most recent edition of the document entitled "Pacific County Road Standards" and this chapter. All streets must be completed in accordance with these standards.

D. Curbs, gutters and sidewalks are required in the City's commercial zones. When required, curbs, gutters, and sidewalks must be constructed according to construction and design standards and specifications for curbs, gutters, and sidewalks contained in the most recent edition of the Pacific County Road Standards.

E. If a development accesses an existing street or is proposed at the end of an existing street that is not designed to accommodate the expected increase in traffic caused by the new development, then the developer must improve the existing street leading to the development up to the standards required for the expected increase in traffic. Residential developments of up to four units are exempt from this requirement.

F. In order to conform to minimum standards where developments abut an existing public road or private right-of-way, dedications may be required for extension of the existing public streets or new streets in order to provide continuity with the circulation system.

G. Easements must be provided for all public facilities and utilities including streets. Additional right-of-way may be required to be dedicated as a condition of development approval.

4.2 PUBLIC STREETS

A. The term "public street" includes a pre-existing public street as well as a street created by a subdivider that meets the public street standards of this Chapter and is dedicated for public use. The recording of a plat must dedicate the street.

4.3 PRIVATE STREETS

A. Community street requirements are usually best served by public streets, owned and maintained by the City, private streets may be appropriates in some instances.

B. Private streets and roads shall be approved only when they are:

1. Permanently established by right-of-way, tract or 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; and
2. Serving properties and development that is zoned R-3; and homeowner's association of the legal entity made up of all benefited property owners, under provisions of Section 15.74.145D of this ordinance; and
3. Designed and built to Pacific County Road Standard. Pavement width of all private street shall be 22 feet or more; radius of horizontal curves and vertical grade of private streets shall be based upon the topography of the site: any vertical grade in excess of fifteen (15) percent shall be approved by the City Engineer; design and construction of private streets shall be subject to the same City engineering inspection and approval as for public streets; modifications to these standards may be granted by the City Engineer if adequate consideration of the following factors is made during the plat review;

    i. Provision of off-street parking
    ii. Restriction of on-street parking
    iii. Provision of adequate clearance for emergency vehicles
    iv. Provision of clear vision at intersections
    v. Provision of alternative bicycle and/or pedestrian paths
    vi. Provision of adequate utility easements outside of street
    vii. Future street revision or extension is not planned, and

4. Provision is made for private streets to be open at all times for emergency and public service vehicles; an easement or other right of access shall be recorded which runs in favor of the City of Ilwaco; said right of access shall provide the right of ingress and egress for the City and its employees to carry out any lawful City purpose, including but not limited to fire, police, water, and sewer services; said easements shall also provide access

to all other urban service providers such as refuse haulers, television cable operators, electric utility providers, emergency medical services and others; and

5. Private streets shall not obstruct public street circulation; and
6. At least one of the following conditions exist:
    i. Existing abutting development precludes the construction of a public street, or
    ii. Topographic, geological and soil conditions make development of a public street undesirable, or
    iii. The streets are within a private community with a corporate or a functional identity, or
    iv. Neighborhood traffic circulation and lot access can be met more logically by private streets than by public streets, or
    v. Streets are a part of a planned unit development (PUD), or
    vi. Streets serve commercial facilities where no circulation continuity is necessary, or
    vii. The City Engineer and Fire Department determine that no other access is available and the private street is adequate.

C. Notice. The following statement is required on the face of any plat, short plat, site plan, or binding site plan containing a private street:

> "City of Ilwaco has no responsibility to improve or maintain private streets contained within or private streets providing access to the property described in this plat. Any private street shall remain a private street unless it is upgraded to public street standards including standards meeting ADA (Americans with Disabilities Act) requirements at the expense of the subdivider or adjoining lot owners to include hard surface paving and is accepted by the City for public ownership and maintenance."

D. Maintenance agreement. The City will not maintain roadways, signs or drainage improvements on private streets. A private maintenance covenant recorded with the County Auditor will be required for any private street. The covenant will set out the terms and conditions of responsibility for maintenance, maintenance methods, standards, distribution of expenses, remedies, for non-compliance with the terms of the agreement, right of use easements, and other considerations. The covenant shall be submitted to the City Engineer or his designee for approval prior to recording.

All private streets shall be maintained by the owners of the property served by them and kept in good repair at all times. In order to insure the continued good repair, a declaration of convent and requiring maintenance of the private street shall be recorded with the Pacific County Auditor's office concurrent with recording of the subdivision plat.

The covenants shall include the following terms:

1. The Covenant shall establish minimum annual assessments in amount adequate to defray costs of ordinary maintenance and procedures for approval of additional needed assessments.
2. The Covenant shall include a periodic maintenance schedule.
3. The covenants for maintenance shall be enforceable by any property owner served by the street.
4. The means shall be established for assessing maintenance and repair costs equitably to property owners served by the private street.
5. The covenants shall run with the land.
6. "Maintenance" shall include, but not be limited to street surfacing, shoulders, gates, signs, pavement markings, street lighting, storm drainage facilities and vegetation control.
7. The City shall have the right to inspect the condition of Private Street and if in the opinion of a licensed professional engineer, the condition of private streets have deteriorated to the level where improvements are needed, the City has the right to order that this work be done. If the property owners associated or the developer do not carry out said improvements in a timely manner, the City has the right to order the improvements.

E. Street signs. Private street signs with street designations shall be provided by the developer at the intersection of Private Street with private and public streets. Such signs shall meet the specifications of Pacific county Road Standards and, in the case of intersections with public streets, shall be located within the public right-of-way or within a separate maintenance easement. Road signs shall be included in the maintenance agreement.

F. Inspection. Private streets will be subject to the same inspection schedule as public streets.

G. Developer maintenance obligation. The developer of a residential plat shall be responsible to insure the maintenance of the private street for a period of two (2) years from the date of recording of the plat or short plat. Thereafter, the developer's maintenance responsibility will depend upon the number of lots under the developer's continuing ownership, as stated in the recorded maintenance agreement.

4.4 STREETS

A. All street design and construction must provide for the maximum traffic loading and capacity conditions anticipated based upon existing land use and zoning. The width and grade of the pavement must conform to specific standards set forth herein for safety and uniformity.

B. The design of streets and roads shall depend upon their type and usage. If a street is dedicated to public use, the street must be classified as provided in Table 4-1. Classification will be based on the following considerations:

1. The projected volume of traffic to be carried by the street, stated in terms of the number of trips per day;
2. The number of dwelling units to be served by the street may be used as an indicator of the number of trips but is not conclusive;
3. Whenever a subdivision street continues an existing street that used to end outside the subdivision, the classification of the street will be based upon the street in its entirety, both within and outside of the subdivision.
4. The classification of streets must comply with the most current edition of the Pacific county Roads Standards. Table 4-1 includes road or right-of-way classifications based on the anticipated Average Daily Traffic (ADT) in ten years.

Table 4-1
Street Classification
(Pacific County Road Standards)

Average Daily Trips (ADT)	Street Classification
2000+	Major Collector
400 - 2000	Minor Collector
0 - 400	Access Collector
NA	Private Road

C. Except where these standards provide otherwise, design detail, construction workmanship, and materials shall be in accordance with the current edition of the Washington State Department of Transportation (WSDOT) and American Public Works Association (APWA) Standard Specifications for Road, Bridge, and Municipal Construction and the WSDOT/APWA Standards for Road and Bridge Construction.

D. All subdivisions and site plans must provide direct access to at least one existing improved and publicly-dedicated street.

E. The layout of streets shall provide for the continuation of existing arterial streets in adjoining subdivisions or of their proper projection when adjoining property is not subdivided. Local access streets, which serve primarily to provide access to abutting property, shall be designed to discourage through traffic.

F. The maximum length of residential blocks should be six hundred (600) feet, and minimum length should be three hundred (300 feet), unless existing conditions make this requirement impractical in the judgment of the City Council.

G. Streets must be laid out so that the lengths, widths, and shapes of blocks adequately address the following:
   1. Provision of adequate building sites suitable to the type of use contemplated:
   2. The zoning requirements are able to be met on future building permits:
   3. The limitations and opportunities of the topography;

4. The needs for convenient access, circulation, control and safety of vehicular and pedestrian traffic are considered.

H. Lots to be created must comply with the following requirements:
   1. Every lot must have access to allow emergency vehicles to enter and exit, as well as, for all those likely to need to desire access to the property in its intended use;
   2. Lot lines must be at right angles to street lines or radial to curvilinear streets, unless a variation will result in a better street or lot plan in the opinion of the decision-making body:
   3. Dimensions of corner lots must be large enough to allow for front yard setbacks off both streets; and
   4. Corner lots must be graded to provide sufficient sight clearance at intersections.
   5. If a driveway connects to a City street, the property owner shall maintain the driveway to where it connects with the City street pavement. All driveways to be constructed connecting to the City street must obtain a permit, must be designed and constructed to City standards. All driveway construction connecting to the City street will be inspected by City staff.

I. Proposed streets should extend to the boundary lines of the proposed subdivision in order to provide for the future development of adjacent tracts, unless prevented by natural or man-made conditions, or unless an extension is determined to be unnecessary or undesirable by the City. The resulting dead-end street shall be provided with a temporary cul-de-sac. The temporary cul-de-sac shall be appropriately signed as "temporary" and further paved, to include furnishing and installing concrete curbs, gutters and sidewalks and constructed to City standards. Temporary dead-end streets in excess of six hundred (600) feet will not be allowed unless no other practicable alternative is available.

J. The street system (in residential subdivisions and short subdivisions) shall be laid out with a minimum number of intersections with other arterial streets. Arterials shall not intersect with other arterials at intervals closer than one thousand three hundred twenty feet and no streets shall intersect at intervals closer than one hundred twenty five feet, unless, in the judgment of the Public Works Superintendent, an exception to this rule would be in the public interest and welfare.

K. Streets shall be laid out so as to intersect as nearly as possible at right angles, and in any event, no street shall intersect with any other street at an angle of less than sixty degrees, without specific written City approval.

L. Access roadways or driveways must be located to provide the following minimum sight distances:

Existing Speed Limit	Sight Distance
50*	450'
40	320'
30	200'

*This value shall be used for major and minor collectors regardless of existing speed limit unless prior approval is obtained from the City Engineer.

M. Maintenance of approach roads/driveways shall be the responsibility of the owner whose property they serve.

N. No approach road/driveway shall be constructed in such a manner that restricts existing drainage or constitutes a hazard to a street lighting standard, utility pole, traffic control device, fire hydrant or other public facility. Relocation shall be arranged through the appropriate agency and the cost shall be borne by the developer.

O. Whenever possible, proposed intersections along one side of a street must coincide with existing or proposed intersections on the opposite side of such street. In any event, where a centerline offset (jog) must occur at an intersection, the distance between centerlines of the intersecting streets must be evaluated and designed according to accepted traffic safety standards.

Q. Street profile grade should conform closely to the natural contour of the land. Streets must be designed to facilitate drainage and stormwater runoff, and street grades must conform as closely as practicable to the original topography.

R. The maximum grade at any point on a street must not exceed fifteen percent (15%) unless no other practicable alternative is available. However, in no case may streets be constructed with grades that create a substantial danger to the public safety in the professional opinion of the City Engineer.

T. The developer is required to retain a licensed geotechnical engineer to make soils tests and to provide engineering recommendations for design of the sub-base and roadway sections based on "in place" soils, depth of "free draining" structural materials, projected pavement loadings, roadway classification, average daily traffic volume, etc.

U. In special circumstances, as may be specifically approved or required by the City Council, due to local conditions and/or geometric restrictions, paving widths or improvement standards may be required which are different than those specifically listed herein.

V. The location and alignment of streets shall generally conform to existing streets and to the City's official street naming policy or ordinance except where, in the opinion of the Public Works Superintendent, topography or some physical features eliminate the possibility of connecting these streets in the future. The County's E-911 Coordinator and the City Council shall approve all street names.

X. The design of any proposed street that intersects with a state highway shall be submitted to WSDOT for approval. Improvements to the state highway are to be the sole responsibility of the developer.

Y. Street jogs with centerline offsets less than one hundred twenty-five feet are prohibited.

Z. In some existing plats in the City a street is being used as a driveway because all of the lots created at the time that the area was platted have not yet been built. In these situations the property owner using the street as a driveway must improve it to City street standards and then dedicate the street to the City.

AA. Intersecting streets shall be laid out so that blocks between street lines are not more than one thousand three hundred twenty feet in length, except where in the opinion of the Public Works Superintendent extraordinary conditions justify a departure from the maximum.

BB. Streets shall conform to all requirements of the latest edition of the Uniform Fire Code adopted by the City.

CC. All street construction plans shall be submitted to the City and shall include the following required information:

1. Plan and profile;
2. Street name;
3. Centerline bearings;
4. Centerline/baseline stationing;
5. Centerline elevations every fifty feet;
6. Gutterline elevations every fifty feet if not standard crown;
7. Slope shall be in percent;
8. Transverse slope: Two percent standard crown (to be used unless approved/required by City;
9. Longitudinal slope - see design standard table;
10. Horizontal and vertical curves shall be required when a change of centerline grade occurs greater than one percent:
    a. Fifty feet minimum length;
    b. Elevations required at twenty five feet stations and at the P.C., P.I., P.T. and low point or high point;
11. Longitudinal gutterline slope - see design standard table;
12. Pavement cross sections per City standard detail;
13. Accurate locations of monuments at all centerline intersections, cul-de-sacs, P.C.'s, P.T.'s, and P.R.C's;
14. Length and width of sidewalks and driveways;
15. The location of all existing fire hydrant within 300 feet of the project shall be indicated;
16. Curb and gutter;
17. Wheelchair ramps;
18. Illumination. (Illumination not required to be shown on same street as on plan/profile, but approval at location of miscellaneous utilities (i.e., gas, power, CATV, cable) as required. Plan shall be submitted to City Engineer for approval prior to installation.)

a. Luminaries - location, material, height and wattage.
b. Service cabinet - location and material.
c. Conduits and wire - location, material size and depth.
d. Junction boxes - location and material;

19. Channelization and Signing:
    a. Lane markers - location and type.
    b. Pavement markings - location and type.
    c. Signs - location and type.
20. Grades (slopes).
    a. Arterials, eight percent maximum.
    b. Allow an average maximum grade on all other streets as follows: eight percent maximum with the following exceptions: A grade of up to twelve over a distance not to exceed three hundred feet and a maximum grade of fifteen percent for a distance not to exceed seventy-five feet.
    c. Grades of pedestrian ways or crosswalks shall not be more than eight percent (unless otherwise approved in writing by the Public Works Superintendent).

DD. All vertically aligned profile grade changes shall be connected with a vertical curve which shall have a minimum sight distance of one thousand feet on arterials, five hundred feet on collector streets and three hundred feet on all other streets.

EE. At street intersections, property line corners shall be rounded by an arc, the minimum radii of which shall be fifteen feet for alleys, twenty-five feet for local access streets and 30 feet for all other street classifications. In business districts, a chord may be substituted for such arc if specifically approved by the Public Works Superintendent.

FF. Street intersections with centerline offsets of less than three hundred feet shall not be allowed.

GG. All topsoil, organic, and structurally unsuitable soils shall be removed from beneath the proposed street section as located between the outside edges of sidewalks.

HH. All new utility systems such as power, cable TV and telephone shall be buried, except where topography or site conditions prohibit reasonable installation. Design and installation of the system shall be done by the franchised utility company. Design shall be submitted to the Public Works Superintendent for review and approval prior to installation.

II. Street lighting shall be provided in accordance with Pacific County PUD standards.

JJ. Any project of sixteen dwelling units or more, accessing off of an arterial road requires a center turn lane and right hand turn lanes.

KK. Roads are to be saw cut before permanent patch is made or new AC pavement is installed abutting the existing road.

LL. The General Notes numbered 1 through 6, as shown and further referenced herein, shall be included or referenced on any plans submitted to the City for construction approval dealing with street design.

4.5 GENERAL NOTES (STREET CONSTRUCTION)

1. All workmanship and materials shall be in accordance with current Developer Standards and current amendments hereto, and current WSDOT/APWA Standard Specifications for Road, Bridge, and Municipal Construction and any current amendments thereto, amended as per City Standards.
2. The contractor shall be responsible for all traffic control in accordance with the MUTCD manual. Prior to disruption of any traffic, traffic control plans shall be prepared and submitted to the City for possible approval. No work shall commence until all approved traffic control is in place. Work shall cease when traffic control fails to meet minimum requirements.
3. All curb and gutter, street grades, sidewalk grades, and any other vertical and/or horizontal alignment shall be staked by engineering or surveying firm capable of performing such work. Such firms shall be currently licensed in the State of Washington to perform such work.
4. Where new asphalt joins existing, the existing asphalt shall be cut to a neat vertical edge and tacked with Asphalt Emulsion type CSS-1 in accordance with the standard specifications. The new asphalt shall be feathered back over existing to provide for a seal at the saw cut location and the joint sealed with grade AR-4000W paving asphalt. A sand blanket shall be applied to the surface to minimize "tracking" of same.
5. Compaction of subgrade, rock, and asphalt shall be in accordance with the WSDOT Standard Specifications.
6. Form and subgrade inspection by the City is required before pouring concrete. A minimum forty-eight hours' notice is required to be provided to the Public Works Superintendent for form inspection.

See Section 4.19 for testing and sampling frequencies.

4.6 DESIGN STANDARDS

A. Pavement and right-of-way width depends upon the street classification. The table of Minimum Street Design Standards, Table 4-2, show the minimum widths allowed. Street widths shall be measured from face of vertical curb to face of vertical curb on streets with cement concrete curb and gutter, and from edge of

pavement to edge of pavement on streets "approved" by the City without concrete vertical curb and gutter.

Table 4-2
Minimum Roadway Dimension

Classification	Average Daily Trips	Right-of-Way Width (feet)	Street Width (feet)	Lane Width (feet)	Shoulder Width[1] (feet)
Collector - Access	0-400	60	22	11	3
Collector - Minor	400-2000	60	22	11	6
Collector - Major	2,000 +	60	24	12	8
Private Road	NA	Note 2	12	NA	2

1- Minimum shoulder width if curb and gutter are not provided.
2- Right-of-way as required to construct and maintain roadway facility, plus provisions for any utilities unless utilities provided for by separate easement outside roadway easement, but not less than forty (40) feet.

4.7 STREET NAMES

A. The developer must secure the approval of the City Council regarding the naming of streets; such approval shall not be unreasonably withheld. This should be done at the time the preliminary plat is submitted and again upon approval of the final plat. A private road will be designated "Lane". The Public Works Superintendent will insure that the name assigned to a new street is consistent with policies of the City and the County Emergency Management Director.

B. An address number will be assigned to all new buildings at the time the building permit is issued. It is then the owner's responsibility to see that the house numbers are placed clearly and visibly at the main entrance to the property or at the principal place of ingress.

4.8 SIGNING

A. The developer is responsible for furnishing and providing all temporary and permanent traffic control signs. Traffic control signing shall comply with the provisions as established by the U.S. Department of Transportation Manual on Uniform Traffic Control devices (MUTCD). Street designation signs, including poles and hardware, shall be furnished and installed by the developer. Street designation signs shall display street names or grid numbers as applicable.

4.9 RIGHT-OF-WAY

A. Right-of-way is determined by the functional classification of street. Arterials, collectors, and local access streets shall have a right-of-way width of not less than 60 feet. Private roads shall have a right-of-way not less than 40 feet. Private road right-of-way may need to be greater than 40 feet to accommodate utility easements. See Minimum Roadway Dimensions (Table 4-2) for specific additional information.

B. Additional roadside easements will be required to facilitate future roadway widening at the discretion of the City or as a condition of development approval. In order to conform to minimum standards where developments abut an existing public road or private right-of-way, dedications may be required for extension of existing public roads or new roads to provide continuity with the circulation system.

C. Right-of-way requirements may be increased if additional lanes, pockets, transit lanes, bus loading zones, operational speed, bike lanes, utilities, schools or other factors are proposed and/or required by the City.

D. Right-of-way shall be conveyed to the City on a recorded plat or by a right-of-way dedication deed. All costs of same to be borne by the property owner/developer.

4.10 STREET FRONTAGE IMPROVEMENTS

A. All industrial, commercial, or residential development or redevelopment shall install street frontage improvements at the time of construction. Such improvements shall generally include concrete curb and gutter, concrete sidewalk, street storm drainage, street lighting system, utility relocation, landscaping and irrigation, undergrounding aerial utilities and street pavement widening all per these Standards. Plans shall be prepared and signed by a registered engineer currently licensed in the State of Washington.

B. All frontage improvements shall be made across the full frontage of the property.

C. All frontage improvements shall provide for a smooth transition to neighboring property.

D. Exceptions:

1. When the proponent requests that the City Council evaluate if the required frontage improvements cannot be reasonably performed due to unique conditions, the city council will consider a request from the proponent that an “equal” and voluntary monetary amount be deposited with the City and retained by the City for such use per applicable State law. The equivalent

cost shall be approved by the city and include design, administration, and construction costs.

2. When improvements cannot be reasonably accomplished in a timely manner a recorded agreement (performance bond or equal) on forms provided by the City shall be completed which provide for these improvements to be installed at a later date by the proponent.

4.11 CUL-DE-SAC

A. A cul-de-sac is required on all dead end access road serving two (2) or more parcels, or an approved turn around for driveway access roads in excess of three hundred (300') feet.

1. Minimum right-of-way diameter is ninety (90') feet for cul-de-sacs.
2. Minimum pavement width for cul-de-sacs is seventy (70') feet in diameter.
3. There shall be no islands in the center of any cul-de-sac without specific approval of the City.

B. Proposed streets should extend to the boundary lines of the proposed subdivision in order to provide for the future development of adjacent tracts, unless prevented by natural or man-made conditions, or unless an extension is determined to be unnecessary or undesirable by the City. The resulting dead-end street shall be provided with a temporary cul-de-sac. The temporary cul-de-sac shall be appropriately signed as "temporary" and further paved, to include furnishing and installing concrete curbs, gutters and sidewalks and constructed to City standards. Temporary dead-end streets in excess of six hundred (600) feet will not be allowed unless no other practicable alternative is available.

C. There shall be no islands in the center of any cul-de-sac without specific approval of the City.

4.12 TEMPORARY DEAD ENDS

Where a street is temporarily dead ended, turn around provisions must be provided where the road serves more than one lot. A turn around may be a hammerhead as shown in the Miscellaneous Detail Section of these Standards only if pre-approved by the local fire marshal and the City Council.

4.13 INTERSECTIONS

A. Traffic control will be as specified in the Manual on Uniform Traffic Control Devices (MUTCD) or as may be specifically modified by the Public Works Superintendent as a result of appropriate traffic engineering studies.

B. Street intersections shall be laid out so as to intersect as nearly as possible at right angles. Sharp angled intersections shall be avoided. No two streets may intersect at less than sixty (60) degrees.

C. Not more than two streets may intersect at any one point.

D. Whenever possible, proposed intersections along one side of a street must coincide with existing or proposed intersections on the opposite side of such street. In any event, where a centerline offset (jog) must occur at an intersection, the distance between centerlines of the intersecting streets must be evaluated and designed according to accepted traffic safety standards.

E. Spacing between adjacent intersecting streets, whether crossing or "T" should be as follows:

When highest classification involved is:	Minimum centerline offset should be:
Major Arterial	350 feet
Minor Arterial	300 feet
Collector Street	300 feet
Local Access Street	150 feet

F. When different class streets intersect, the higher standard shall apply on curb radii. Deviations to this may be allowed at the discretion of the Public Works Superintendent.

G. On sloping approaches at an intersection, landings shall be provided with grade not to exceed one foot difference in elevation for a distance of 30 feet approaching any arterial or collector or 20 feet approaching a local access street, measured from nearest right-of-way line (extended) of intersecting street.

4.14 DRIVEWAYS

A. Driveway details are located in the Pacific County Road Standards

B. Residential driveways are those serving less than five (5) single family dwelling units. All others shall be considered commercial.

C. Residential driveways minimum width is fourteen (14'). Commercial driveways minimum width is twenty-eight (28') feet.

D. An access plan shall be submitted for all proposed development for review by the City Engineer. The following guidelines shall be followed for developments using a city road for access from individual lots.

E. Design Standard:

Major Collectors. Internal collection of traffic will be achieved whenever possible. The number of access points shall be a function of traffic

volume on the major collector, but generally then shall not exceed one (1) access point per nine hundred (900') feet of frontage.
Minor Collectors. The same general guidelines apply as major collectors. The maximum number of access points shall be one (1) access point per seven hundred (700') feet.
Local Access. Internal collection of traffic desirable. Individual driveways will be allowed for roads with 150 ADT or less including projected traffic from development. For roadways with 150 to 400 ADT, individual driveways may be allowed. Roadways with 400 to 10000 ADT will meet the provisions of minor collectors. Roadways with greater than 1,000 ADT will meet the provisions of major collectors.

F. Access roadways or driveways will be located to provide the following minimum sight distance:

Major and Minor Collectors	450 feet
Local Access (40 mph)	320 feet
Local Access (30 mph or less)	200 feet

G. Driveways and accesses will approach the City street at ninety degrees (90^{o}) or as close as possible. In no case will an approach angel of sixty degrees (60^{o}) or less be permitted.

H. All abandoned driveway areas on the same frontage shall be removed and the curbing and sidewalk or shoulder and ditch section shall be properly restored, at the Property Owner's expense.

I. All driveway approaches shall be constructed of Portland Concrete Cement, and shall be at least 6-inches thick, over a 4-inch crushed surfacing (5/8" minus) top course. Driveways shall be subject to the same testing and inspection requirements as curb, gutter, and sidewalk construction.]

J. Driveways may be constructed of cast in place or precast concrete paving blocks to reduce impervious area as approved by the Public Works Superintendent.

K. Grade breaks, including the tie to the roadway, shall be constructed as smooth vertical curves. The maximum change in driveway grade shall be 8 percent within any 10 feet of distance on a crest and 12 percent within any 10 feet of distance in a sag vertical curve. The grades of all driveway approaches are to be approved by the City.

L. No commercial or industrial type driveway shall be constructed, if reasonably possible, where backing onto the sidewalk or street is required.

M. No driveway aprons shall extend into the street further than the face of the curb.

N. Generally, the two edges of each driveway shall be parallel.

O. Every driveway must provide access to a garage, carport, parking area or other structure on private or public property requiring the entrance of vehicles. No public curb shall be cut unless a driveway is installed.

P. Maintenance of driveway approaches shall be the responsibility of the owners whose property they serve.

Q. A driveway permit shall be required. No person shall begin work on the construction, alteration, repair or removal of any driveway or the paving of any parking strip on and/or adjacent to any street, alley or other public place in the City without first obtaining a permit from the City. Exceptions to permit acquisition requirements may be granted at the discretion of the Public Works Superintendent and/or Building Official.

R. No driveway shall be located as to create a hazard to pedestrians, bicyclists or motorists or to invite or compel illegal or unsafe traffic movements.

S. No driveway shall be constructed in such a manner as to be a hazard to any existing street lighting standard, utility pole, and traffic regulating device or fire hydrant. The cost of relocating any such street structure when necessary to do so shall be paid by the abutting property owner. The relocation of any street structure shall be allowed with the specific written approval of the Owner of the structure involved.

T. Except as otherwise provided, the width of any residential driveway shall not exceed twenty-four feet (exclusive of the radii of the returns). The maximum width for any commercial driveway shall be sixty feet. The Public Works Superintendent may authorize additional residential driveway widths for three-car garages or for access driveways necessary for off-street parking or recreational vehicles.

U. The total width of all driveways for any one ownership on a street shall not exceed thirty percent of that ownership along the street. Any driveway which has become abandoned or unused through a change of the conditions for which it was originally intended or which for any other reason has become unnecessary, shall be closed and the owner shall replace any such driveway curb-cut with a standard curb according to the City's standards.

V. The length of any driveway shall not exceed one hundred fifty feet, without approval of the Public Works Superintendent.

W. There shall not be more than two driveways on one street for any one ownership except where a single ownership is developed into more than one unit of operation, each unit sufficient in itself to meet the requirements of off-street parking and loading as required by the zoning ordinance and where the necessity

for separate access to the street is evident. In such cases, there shall not be more than two driveways on the street for any one unit of operation.

X. Driveway slopes or grades shall not exceed eight percent unless otherwise authorized/approved by the Public Works Superintendent in writing. The Public Works Superintendent will consider authorizing driveway slopes exceeding eight percent, up to a maximum of twelve percent, if it is determined that:

1. The driveway is the only economically and environmentally reasonable alternative.
2. The driveway will not present a traffic, pedestrian, bicycle or safety hazard.
3. The police and fire chief concur in allowing the increased driveway slope.
4. The public health, safety and general welfare will not be adversely affected.

Y. No driveway may access any street within 75 feet (measured along the street) of any other street access on either side.

Z. No driveway access shall be allowed onto an arterial street within 150 feet of the nearest right-of-way line of an intersecting street. No driveway shall be located within 20 feet of a crosswalk.

AA. Within the limitations set forth above, access to arterial streets within the City shall be limited to one driveway for each tract of property separately owned, except that automobile service stations may be allowed two driveways as further stated herein.

BB. Driveways giving direct access onto arterials may be denied if alternate access is available. Deviations of these standards may be permitted by the Public Works Superintendent.

CC. Parking lot circulation and signing needs shall be met on site. The public right-of-way shall not be utilized as part of a parking lot flow.

DD. Road approaches and/or ingress and egress tapers may be required in industrial and commercially zoned areas as directed by the Public Works Superintendent.

4.14 SURFACING REQUIREMENTS

A. All streets in the City of Ilwaco will be paved with either Asphalt Concrete or Cement Concrete, in strict compliance with these standards.

B. The pavement design shall meet the requirements in the latest publication of the AASHTO Guide for Design of Pavement Structures. The pavement section shall be designed and stamped by an engineer currently licensed in the State of Washington.

C. One soil sample per each 500 LF of centerline with 3 minimum per project representative of the roadway subgrade shall be taken by the Developer and delivered to a City approved soils lab in order to determine a statistical representation of the existing soil conditions.

D. Soil tests shall be performed by an engineering firm specializing in soils analysis and currently licensed in the State of Washington.

E. The soils report, signed and stamped by a soils engineer licensed by the State of Washington, shall be based on actual soils tests and submitted with the plans. All depths indicated are a minimum compacted depth.

F. Construction of streets paved with Asphalt Concrete shall conform to Section 5-04 of the Washington State DOT Standard Specifications. Pavement material will be HMA Cl. ½" PG 58-22 asphalt concrete and be constructed at least two (2) inches thick (minimum compacted thickness) over the prepared crushed surface, top course, or asphalt treated base. Mechanical spreading and finishing will be as described in Section 5-04.3(9) of the Standard Specifications. Compaction will be performed by the equipment and methods presented in Section 5-04.3(10) of the Standard Specifications, and Surface Smoothness shall satisfy the requirement of Section 5-04.3(13) of the Standard Specifications.

G. Cement concrete streets will be constructed as specified in Section 5-05 of the Standard Specifications.

H. Permanent pavement patching will be performed as described in the pavement repair detail listed herein, and in compliance with Section 5-04 of the Standard Specifications. All fill material will be placed in lifts no thicker than six inches and mechanically compacted to 95 percent of standard density, as described in Section 2-03 of the Standard Specifications and to the satisfaction of the Public Works Superintendent.

4.15 TEMPORARY STREET PATCHING

A. Temporary restoration of trenches shall be accomplished by using 2" HMA Cl. ½" PG 58-22 Asphalt Concrete Pavement when available or 4" medium-curing (MC-250) liquid asphalt (cold mix), 3" Asphalt Treated Base (ATB), or steel plates suitable for H-20 traffic loading conditions. Steel plates shall be provided with a cold mix "lip" to accommodate a smooth transition from pavement to steel plate.

B. ATB used for temporary restoration may be dumped directly into the trench, bladed and rolled. After rolling, the trench must be filled flush with asphalt concrete pavement to provide a smooth riding surface.

C. All temporary patches shall be maintained by the contractor until such time as the permanent pavement patch is in place. All temporary patch materials shall be loaded and hauled to waste by the Developer, in compliance with applicable governmental regulations.

D. If the contractor is unable to maintain a patch for whatever reason, the City will patch it at actual cost plus overhead and materials. The property owner/developer/permittee shall be invoiced for any City expenses incurred to comply with this Contractor requirement.

4.16 TRENCH BACKFILL AND RESTORATION

A. All trench and pavement cuts shall be made by saw cuts or roller cut if approved by the Public Works Superintendent. The cuts shall be a minimum of 1 foot outside the trench width.

B. All trenching shall be backfilled with gravel base, Class B, or crushed surfacing materials conforming to Section 4 of the WSDOT Standard Specifications. The trench shall be compacted to 95 percent maximum density, as described in Section 2-03 of the WSDOT Standard Specifications. The City will be the sole judge of approving materials to be utilized for backfill. Typically, crushed rock (5/8-inch minus) or control density fill (CDF) shall be placed and compacted in the trench sections for all right angle (±) street crossings.

C. If the existing material is determined by the City to be suitable for backfill, the contractor may use the native material except that the top 12 inches of the trench section shall be 5/8-inch minus crushed rock or other structurally suitable material as approved by the City Inspector or Engineer. Exceptions may be granted by the City based on site evaluation of excavated materials. All trench backfill materials shall be compacted to 95% density.

D. Backfill compaction shall be performed in 6 inch lifts, unless otherwise approved by the City.

E. Replacement of the asphalt concrete or Portland concrete cement shall match existing asphalt concrete or Portland concrete cement depth, except asphalt shall be a minimum compacted thickness of 2 inches and concrete cement shall be a minimum compacted thickness of 6 inches.

F. Tack shall be applied to the existing pavement and edge of cut and shall be emulsified asphalt grade CSS-1 as specified in Section 9-02.1(6) of the WSDOT Standard Specifications. Tack coat shall be applied as specified in Section 5-04 of the WSDOT Standard Specifications.

G. Asphalt concrete HMA CL. ½" PG 58-22 shall be placed on the prepared surface by an approved paving machine and shall be in accordance with the applicable requirements of Section 5-04 of the WSDOT Standard Specifications, except that longitudinal joints between successive layers of asphalt concrete shall be displaced laterally a minimum of 12 inches unless otherwise approved by the City. Fine and coarse aggregate for asphalt concrete shall be in accordance with Section 9-03.8 of the WSDOT Standard Specifications. Asphalt concrete over 2 inches thick shall be placed and compacted in equal lifts not to exceed 2 inches each.

H. All street surfaces, walks or driveways within the street trenching areas affected by the trenching shall be feathered and shimmed to an extent that provides a smooth-riding connection and expeditious drainage flow for the newly paved surface. Shimming and feathering as required by the City Inspector shall be accomplished by raking out the oversized aggregates from the Class B mix as appropriate.

I. Surface smoothness shall be per Section 5-04.3(13) of the WSDOT Standard Specifications. The paving shall be corrected by removal and repaving of the trench only.

J. All joints shall be sealed using paving asphalt AR4000W.

K. When trenching within the roadway shoulder(s), the shoulder shall be restored to its original or better condition.

L. The final patch shall be completed as soon as possible and shall be completed within 30 days after first opening the trench. This time frame may be adjusted if delays are caused by inclement paving weather, or other adverse conditions that may exist. However, delaying of final repair is allowable only subject to the Public Works Superintendent's approval. The Public Works Superintendent may deem it necessary to complete the work within the 30 days' time frame and not

allow any time extension. If this occurs, the Contractor shall perform the necessary work as required by the City.

4.17 SURVEY STAKING

A. All surveying and staking shall be performed by an engineering or surveying firm employed by the Developer and capable of performing such work. The engineer or surveyor performing and directing such work shall be currently licensed by the State of Washington to perform said task.

B. A pre-construction meeting shall be held with the City prior to commencing staking. All construction staking shall be inspected by the City prior to construction.

C. The minimum staking of streets shall be as follows:

1. Stake centerline alignment every 25 feet (50 feet in tangent sections) with cuts and/or fills to subgrade.
2. Stake top of ballast and top of crushed surfacing at centerline and edge of pavement every 25 feet.
3. Stake top back of curb at a consistent offset for vertical and horizontal alignment.

4.18 MATERIAL AND CONSTRUCTION TESTING

A. Testing shall be required at the developer's or contractor's expense. The testing shall be ordered by the developer or contractor and the chosen testing lab shall be preapproved by the City. Testing shall be done on all materials and construction as specified in the WSDOT Standard Specifications and with frequency as specified herein.

B. In addition, the City shall be notified before each phase that street construction commences (i.e., staking, grading, subgrade, ballast, base, top course, and surfacing).

4.19 SIDEWALKS, CURBS AND GUTTERS

A. Curbs, gutters, and sidewalks are required in the City's commercial zones. When required , curbs, gutters, and sidewalks must be constructed in accordance with these design standards and the latest ADA and WSDOT/APWA Standard Specifications.

B. Plans for the construction of sidewalks, curbs and gutters will be submitted as part of the street plans when applicable.

C. Sidewalks shall be constructed of Portland Cement Concrete, 4 inches thick (6-inch thick at driveway sections) per Section 8-14 of WSDOT Standard Specifications. When the sidewalk, curb and gutter are contiguous, the width of the sidewalk shall be measured from back of curb to back of sidewalk.

D. Sidewalks will be constructed on a compacted gravel base (Class B) or 5/8-inch minus crushed rock of suitable thickness to provide a firm and unyielding base. Sidewalks will be constructed of Portland Cement Concrete as described in Section 8-14 of the WSDOT Standard Specifications and be designed and constructed in compliance with those details as shown herein. Typically, in commercially zoned areas the sidewalks shall abut the curb. The City Council may vary sidewalk dimensional characteristics and location to meet localized or existing conditions.

E. Sidewalks shall be at least 4" thick. Those sections of a sidewalk which serve as a driveway shall be at least 6" thick. :

F. The sidewalks will be divided into five foot lengths by contraction joints and expansion joints will be at intervals of no more than 15 feet. Joints shall be filled with an asphalt mastic material.

G. Sidewalk width may vary from a minimum of 5 feet to 10 feet in width at the discretion of the City Council in commercial corridors or match existing widths if greater than 10 feet wide.

K. The design and construction of all sidewalks, curbs, gutters and walkways shall meet or exceed minimum standards.

L. The design of all sidewalks shall provide for a gradual taper rather than an abrupt transition between sidewalks of different widths or alignments.

M. A form and subgrade inspection by the City is required before any sidewalks are poured.

N. Monolithic pour of curb, gutter and sidewalk is not allowed.

O. Driveway requirements are covered in Section 4.14.

P. Cement concrete curb and gutter shall be used for all street edges unless otherwise approved by the Public Works Superintendent. All curbs and gutters shall be constructed of Class "B" Cement Concrete in accordance with Section 6-02 of WSDOT Standard Specifications. Curbs shall be of the vertical face type. No rolled curb and gutter profile will be allowed without specific approval of the

Public Works Superintendent. If rolled curbs are approved, all sidewalks within the Plat shall be a minimum 5 inches thick.

Q. Extruded curb and gutter per WSDOT Standard Specifications is allowed only with the specific approval of the Public Works Superintendent.

R. Form and subgrade inspection by the City are required before curb and gutter are poured.

S. Forms, wood or steel, shall be staked securely in place, true to line and grade.

T. Sufficient support shall be given to the form to prevent movement in any direction, resulting from the weight of the concrete or the concrete placement. Forms shall not be set until the subgrade has been compacted within one inch of the established grade. Forms shall be clean and well-oiled prior to setting in place. When set, the top of the form shall not depart from grade more than one-eighth (1/8) inch when checked with a ten-foot straightedge. The alignment shall not vary more than one-fourth (1/4) inch in ten (10) feet. Immediately prior to placing the concrete, forms shall be carefully inspected for proper grading, alignment and rigid construction. Adjustments and repairs as needed shall be completed before placing concrete.

U. The subgrade shall be properly compacted and brought to specified grade before placing concrete. The subgrade shall be thoroughly dampened immediately prior to the placement of the concrete. Concrete shall be spaded and tamped thoroughly into the forms to provide a dense, compacted concrete free of rock pockets. The exposed surfaces shall be floated, finished and brushed longitudinally with a fiber hair brush approved by the City's inspector and/or engineer.

V. The face form of the curb shall be stripped at such time in the early curing as will enable inspection and correction of all irregularities that appear thereon.

W. Forms shall not be removed until the concrete has set sufficiently to retain its true shape. The face of the curb shall be trawled with a tool cut to the exact section of the curb and at the same time maintain the shape, grade and alignment of the curb. The exposed surface of the curb shall be brushed with a fiber hair brush.

X. White pigmented or transparent curing compounds shall be applied to all exposed surfaces immediately after finishing. Transparent curing compounds shall contain a color dye of sufficient strength to render the film distinctly visible on the concrete for a minimum period of four (4) hours after application.

Y. When the curb section is to be placed separately, the surface of the gutter directly underneath the curb section shall be covered with a protective cover to protect that

area from the curing agent when the gutter is sprayed. This cover must remain in place until the curb is placed. Care shall be taken in the placing of this cover to prevent the steel dowels from puncturing the cover.

Z. If, at any time during the curing period any of the forms are removed, a coat of curing compound shall be applied immediately to the exposed surface. The curing compound shall be applied in sufficient quantity to obscure the natural color of the concrete. Additional coats shall be applied if the City Inspector determines that the coverage is not adequate. The concrete shall be cured for the minimum period of 72 hours' time set forth in Section 8-04 of the Standard Specifications.

AA. Joints shall be constructed in the manner and at the locations shown in Details SW-1 and SW-2. They shall be cleaned and edged as shown on the drawings. All expansion and contraction joints shall extend entirely through the curb section above the pavement surface. Joint filler in the curb shall be normal to the pavement and in full and constant contact with pavement joint filler.

BB. High visibility handicap ramps shall be constructed as integral parts of all sidewalks in accordance with the current standards of applicable state law.

CC. Sidewalks shall be constructed to provide for high visibility handicap ramps in accordance with the current standards of applicable state law. Details provided herein are minimum and subject to change. It is the Developer's responsibility to verify current ADA requirements and install same per current standards even if City has approved of construction drawings with non-compliant ADA requirements.

DD. Handicap Ramps shall be constructed of Portland Cement Concrete. Form and subgrade inspection by the City are required before handicap ramps are poured.

EE. All surveying and staking shall be performed by an engineer or surveying firm employed by the Developer and capable of performing such work. The engineering or surveyor directing and/or performing such work shall be currently licensed by the State of Washington to perform said task.

FF. A preconstruction meeting shall be held with the City prior to commencing staking. All construction staking shall be inspected by the City prior to construction.

GG. Stake top back of curb at a consistent offset for vertical and horizontal alignment every 25 feet (50 feet in tangent sections).

HH. Testing shall be required at the developer's or contractor's expense on all materials and construction as specified in the WSDOT Standard Specifications.

II. At a minimum, one slump test and 2 test cylinders shall be taken once per day. All other testing frequencies shall be as specified in the Testing and Sampling Table in Section 4B.18.

JJ. City shall be notified before each phase of sidewalk, curb, and gutter construction commences.

4.20 ILLUMINATION

A. Illumination shall be required unless otherwise directed by the City Council. All illumination shall be in compliance with the requirements specified by the Pacific County PUD. The style shall be compatible with the structural grade aluminum poles and luminaires presently existing on south First Avenue and Howerton Boulevard. Light pollution shall be avoided.

4.21 SIGNALIZATION

A. Signalization will be required if warranted as determined by an existing study and/or transportation study performed by the Developer at the request of the City. The developer shall pay the entire cost of signalization if signalization is warranted.

4.22 PARKING LOTS

A. A building permit is required prior to surfacing any unsurfaced designated parking area.

B. Storm water detention shall be provided and shall follow the criteria as set forth in Chapter 5 of these standards.

C. Four sets of plans and specifications shall be required to be submitted for review and approval by the City with respect to storm drainage discharge and on site retention or detention, matching street and/or sidewalk grades, access locations, parking layout, and to check for future street improvement conformity and City zoning regulations.

D. Parking lot surfacing materials shall satisfy the requirement for a permanent all-weather surface. Asphalt concrete pavement and cement concrete pavement satisfy this requirement and are approved materials. Gravel surfaces are not acceptable. Other surface material types may be approved by the City on a case by case basis.