W.S.C.

SUPPLEMENTAL MATERIAL

ADDENDUM TO AGENDA COVER MEMO

DATE: **May 18, 2006** **Date of Addendum**
May 24, 2006 **Date of Work Session**

TO: **LANE COUNTY BOARD OF COMMISSIONERS**

FROM: Public Works Department/Land Management Division

PRESENTED BY: Bill Sage, Associate Planner

AGENDA ITEM TITLE: **Discussion with the Board of County Commissioners on the Review of Two Action Items in the Community Wildfire Protection Plan for Implementation of Fire Safety Standards in the Wildland-Urban Interface (WUI) of Rural Lane County.**

This Addendum serves as an executive summary of the information packet submitted on May 15th. The five attached documents are intended to clarify the proposed fire safety standards.

Attachments

Diagram "A" -- illustrates what the proposed "30-foot, structural defensible space" within a wooded area would look like if implemented. The proposed test on green bond paper was distributed in the Agenda Cover Memo as Attachment "C" -- *"30-foot Structural Defensible Space" March 3, 2006 (Coburg FD)*,

Diagram "B" – illustrates what "structural defensible space" and "ladder fuels" are intended to accomplish if implemented as proposed in Diagram "A" and Agenda Cover Memo - Attachment "C" -- *"30-foot Structural Defensible Space" March 3, 2006 (Coburg FD)*. Diagram "B" also includes specific excerpts from the Attachment "C" text to clarify the illustration.

Attachment "C" of the Agenda Cover Memo is reproduced again for the sake of convenience.

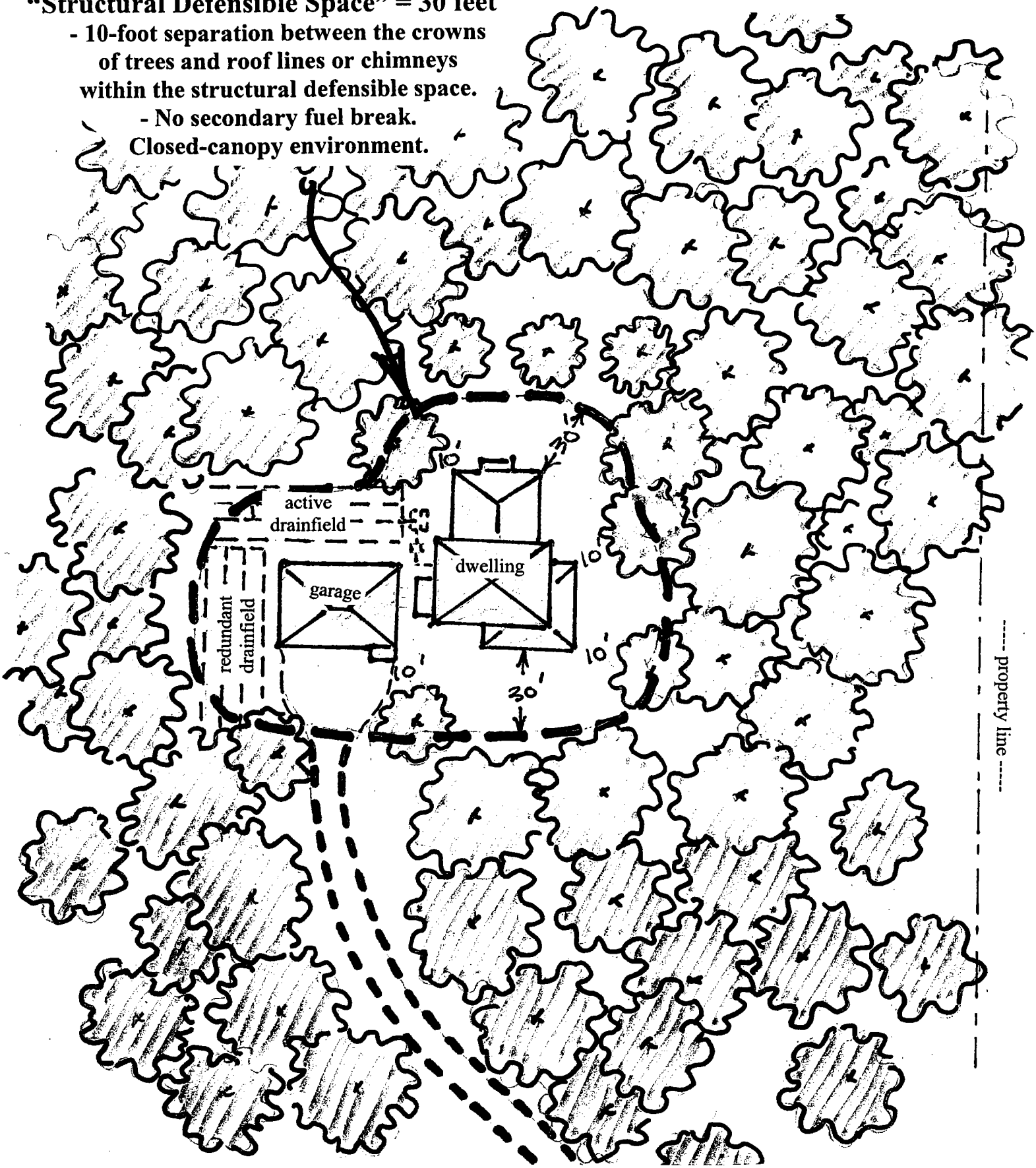
Diagram "D" – illustrates what the current Impacted Forest Land (F2) fuel breaks (30-foot defensible space and an additional 100-foot secondary fuel break) would look like within a wooded area. The proposed test on yellow bond paper was distributed in the Agenda Cover Memo as Attachment "B" -- *"Working Draft – as of January 23, 2006 wfs)*,

Attachment "E" includes two flow charts. **Chart 1** describes the process for "Determining structural defensible space and submittal of building permit under the provisions of LC 16.266 "structural defensible space" proposal. **Chart 2** describes the "Inspection process for structural defensible space and access driveway or road construction" proposal.

* * *

Diagram for Attachment "C" – "30-foot Structural Defensible Space"
March 3, 2006 (Coburg FD)

"Structural Defensible Space" = 30 feet
- 10-foot separation between the crowns of trees and roof lines or chimneys within the structural defensible space.
- No secondary fuel break.
Closed-canopy environment.



"Road": access for two or more dwellings – **16**-foot gravel surface with 6-inches of rock; 2-foot clearing along each side of road; cleared to height of 13 ft 6-inches

"Driveway": access for only one dwelling – **12**-foot gravel surface with 6-inches of rock; 2-foot clearing along each side of road; cleared to height of 13 ft 6-inches

A

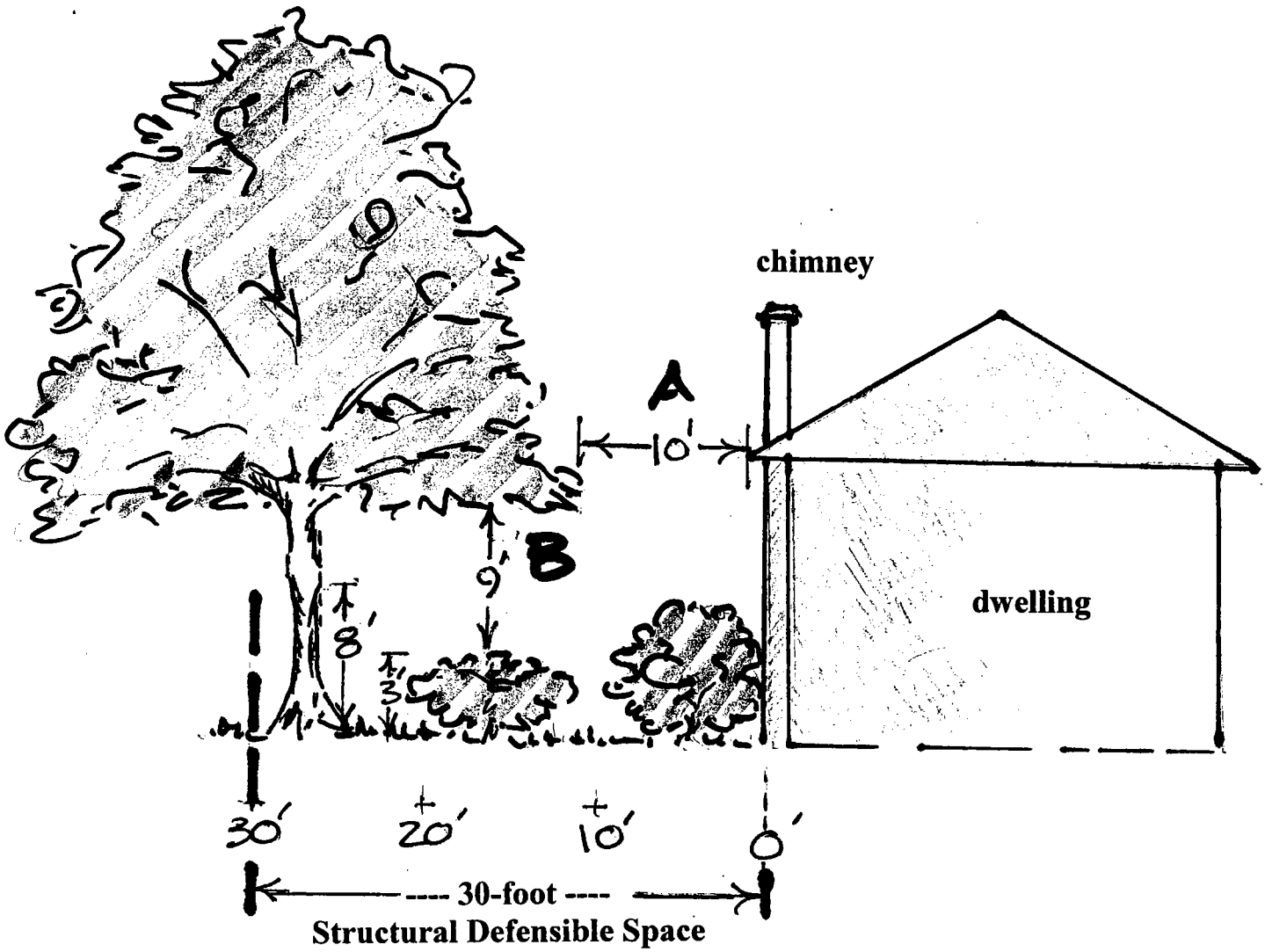
Diagram illustrating LC 16.266(6)(a) and (b)

"Structural Defensible Space" (definition)

"Defensible space" is an area either natural or manmade, where material capable of allowing a fire to spread unchecked has been treated, cleared, or modified to slow the rate of spread and intensity of a wildfire originating from or advancing to a structure and to create an area in which fire suppression operations may more safely occur.

"Ladder Fuels" (definition)

"Ladder fuels" means vegetation that serves as a link between grasses and tree tops. It means branches, leaves, needles, and other combustible vegetation that may allow a wildfire to spread from lower growing vegetation to higher growing vegetation.



Refer to highlighted sections of LC 16.266(6)(a) and (b) for a description of **A** and **B** above.

B

LC 16.266 (6) Structural Defensible Space and Secondary Fuel Breaks.

(a) Structural Defensible Space.

Property owners are required to create and maintain a structural defensible space which complies with LC 16.266(6)(a) for all new dwellings, manufactured dwellings, residential units, accessory structures, and additions of 50% or more of floor area to dwellings and accessory structures on land that is owned or controlled by the property owner within the Wildland-Urban Interface. The required defensible space for a new structure identified in LC 16.266(6)(a) shall be at least 30 feet, or to the property line, whichever is the shortest distance. The distance shall be measured horizontally along the slope and from the furthest extension of the structure, including attached carports, decks, or eaves. Alterations of existing vegetation and activities within the defensible space shall include:

A

(i) Remove any portion of a tree which extends to within 10 feet of the outlet of a structure's chimney or a stove pipe.

(ii) Maintain the portion of any tree which overhangs a dwelling, residential unit or residential accessory structure substantially free of dead plant material;

(iii) Accumulated leaves, needles, and other dead vegetation shall be removed from gutters.

(iv) Roofs. New dwellings and habitable structures shall be regulated by the State of Oregon Structural Specialty Code or the State of Oregon One and Two Family Specialty Code. Roofing for new dwellings, manufactured dwellings and residential units shall be asphalt shingles in accordance with Section 903, slate shingles in accordance with Section 904, metal roofing in accordance with Section 905, tile, clay or concrete shingles in accordance with Section 907, and other approved roofing which is deemed to be equivalent to Class C rated roof covering. Wood shingles and shake roofs are not permitted. When 50% or more of the roof covering of any one or two family dwelling, manufactured dwelling, or residential unit is repaired or replaced in one year, the roof covering shall be made to comply with this section.

(v) Chimneys. Chimneys serving fireplaces, barbecues, incinerators or decorative heating appliances in which solid or liquid fuel is used, shall be provided with a spark arrester. Spark arresters shall be constructed of woven or welded wire screening of 12 USA standard gauge wire (0.1046 inch)(2.66 mm) having openings not exceeding ½ inch (12.7 mm).

(vi) Maintain the area under decks substantially free of firewood, stored flammable building material, leaves, needles, and other similar flammable material; and

(vii) During times of the year when wildfire may be a threat, locate firewood, flammable building material, and other similar flammable material:

(A) At least 20 feet away from a structure; or

(B) In a fully enclosed space.

S

(b) Structural defensible space characteristics.

(i) The purpose of a structural defensible space is to:

(A) Create an area in which fire suppression operations may more safely occur; and

(B) Slow the rate of spread and the intensity of an advancing wildfire; and

(ii) A structural defensible space shall be a natural or a manmade area where material capable of allowing a wildfire to spread:

(A) Does not exist; or

(B) Has been cleared, modified, or treated in such a way that the rate of spread and the intensity of an advancing wildfire will be significantly reduced.

(iii) A structural defensible space shall be comprised of one or more of the following:

(A) An area of fire-resistive ground cover and vegetation. Examples include gardens, flower beds, clover, green grass, ivy, mulches, rock, succulent ground cover, or wildflowers. Suggestions for specific types of fire-resistive shrubbery vegetation that may reduce the risk from wildfire can be found in the OSU Extension Service publication *Fire-Resistant Plants for Oregon Home Landscapes,* which is available from Oregon Department of Forestry and Lane County Land Management Division.

(B) An area of single specimens or isolated groupings of ornamental shrubbery, native trees, or other plants, provided they are:

aa. Maintained substantially free of dead plant material;

B

bb. Maintained free of ladder fuel. The ladder fuel trim zone is three times the shrub height. To remove ladder fuels, either remove overhanging tree limbs within the trim zone or remove/reduce the height of the shrub;

cc. Arranged and maintained in such a way that minimizes the possibility a wildfire can spread to adjacent vegetation; and

dd. Maturing trees may be retained and planting of new trees is permitted within the defensible space provided the horizontal distance between crowns of adjacent non-hardwood trees such as cedars, firs, and pine, and overhead electrical facilities or unmodified fuel is not less than 10 feet. "Tree crowns" include the primary and secondary branches growing out from the main stem, together with twigs and foliage. "Distance between crowns" shall be the measured from the extension of the foliage of one tree to the foliage of another tree. Clusters of five or fewer maturing trees can be considered as one crown if they are tightly clustered (entwined) and a 10-foot horizontal distance around the periphery of the combined "cluster crown" and other nearby non-hardwood trees is maintained.

ee. In compliance with the intent of subsections LC 16.266(6)(b)(i) and (ii).

(C) An area of dry grass which is maintained to an average height of less than four inches.

(D) An area of cut grass, leaves, needles, twigs, and other similar flammable materials provided such materials do not create a continuous fuel bed and are in compliance with the intent of LC 16.266(6)(b)(i) and (ii).

16.266 Lane Code 16.266

WILDLAND-URBAN INTERFACE COMBINING ZONE (/WUI-RCP)
RURAL COMPREHENSIVE PLAN

(1) Purpose
(2) Applicability
  (a) New dwellings and residential units.
  (b) Replacement of existing dwellings and residential units. Construction of residential accessory structures. Additions to existing dwellings and residential accessory structures.
  (c) Exemptions for structures.
(3) Definitions
(4) Process and General Standards
  (a) Submittal of building permit
  (b) Wildfire Risk Classification Rating
  (c) Risk Classification Rating Certification
  (d) Site Development Plan
  (e) Approval of Structural Defensible Space and preliminary access road/driveway design
  (f) Approval of Secondary Fuel Break and final access road/driveway construction
  (g) Maintenance of fire safety standards in perpetuity
  (h) Compliance
  (i) Fire Protection District
  (j) Fire Protection Plan
(5) Setbacks
(6) Structural Defensible Space and Secondary Fuel Break
  (a) Structural Defensible Space
  (b) Structural Defensible Space Characteristics
  (c) Secondary Fuel Break
  (d) Road and Driveway Defensible Space
  (e) Water Storage Defensible Space
  (f) Exceptions to Structural Defensible Space and Secondary Fuel Break Standards
    (i) Class I Stream Riparian Regulations
    (ii) National Wetlands Inventory
    (iii) Coastal Resource Management Plan Combining Zones
    (iv) Willamette Greenway
(7) Road and Driveway Standards
  (a) Non-applicability to commercial farm and forest activities and uses

(b) Route of access
(c) Road standards
(d) Driveway standards
(e) Dead-end private driveways and roads
    (i) Hammerhead Turnarounds
    (ii) Cul-de-sac Turnarounds
(f) Bridges and culverts
(g) Road and driveway grade
(h) Road naming and addressing
(i) Turn outs

(8) Modifications and Alternatives
(a) Building Official authority
(b) Risk assessment – Fire Hazard Maps

16.266 Wildland-Urban Interface Combining Zone (/WUI, RCP).

(1) Purpose. The purposes of the Wildland–Urban Interface Combining Zone (/WUI-RCP) are:

(a) To implement the policies of the Lane County Rural Comprehensive Plan and the goals, objectives and action items of the Lane County Community Wildfire Protection Plan (July 2005);

(b) To provide a defensible space and fuels reduction zones around structures to minimize or mitigate a wildfire hazard or risk to life, property, communities, and private and public resource lands within the Wildland-Urban Interface (WUI) of rural Lane County.

(c) It is recognized that owners have a variety of objectives to achieve while applying the standards, including objectives related to aesthetics, dust barriers, fish and wildlife habitat, gardening, soil stabilization, sound barriers, and visual barriers. It is the intent of the standards to allow owners to meet such objectives, provided there is no compromise of the standards needed to mitigate wildfire hazards or risks.

(d) The standards are considered to be minimum measures which are intended to improve the survivability of structures during a wildfire, but which will not guarantee survivability.

(2) Applicability.

(a) The Structural Defensible Space and Secondary Fuel Break standards of LC 16.266(6) and the Road and Driveway Standards of LC 16.266(7) shall apply to all new dwellings and residential units within the Wildland-Urban Interface (WUI) designated for protection in the Rural Comprehensive Plan, in the zoning districts identified in Table 1 below.

Table 1

Zone Name	Chapter
Nonimpacted Forest Lands Zone (F-1, RCP)	LC 16.210
Impacted Forest Lands Zone (F-2, RCP)	LC 16.211
Exclusive Farm Use Zone (E-RCP)	LC 16.212
Natural Resource Zone (NR-RCP)	LC 16.213
Marginal Lands Zone (ML-RCP)	LC 16.214
Park and Recreation Zone (PR-RCP)	LC 16.215
Rural Residential Lands Zone (RR-RCP)	LC 16.231
Destination Resort Zone (DR-RCP)	LC 16.232
Rural Residential Zone (RR, RCP)	LC 16.290
Rural Commercial Zone (RC, RCP)	LC 16.291
Rural Industrial Zone (RI, RCP)	LC 16.292
Rural Public Facilities Zone (RPF, RCP)	LC 16.294
Rural Park and Recreation Zone (RPR, RCP)	LC 16.295

(b) The Structural Defensible Space and Secondary Fuel Break standards of LC 16.266(6) shall apply to the replacement of lawfully existing dwellings and residential units, construction of new residential accessory structures, and to additions to existing

dwellings, residential units, and residential accessory structures that exceed 50% of the existing floor area of the structure being modified.

(c) Lawfully established dwellings, manufactured dwellings, residential units and residential accessory structures existing on _____, the date of effectiveness of Lane Code 16.266, are exempt from compliance with LC 16.266 fire safety standards.

The following new structures within the WUI combining zone are also exempted from LC 16.266 fire safety standards:

(i) Residential accessory structures not exceeding 200 square feet in floor area.

(ii) Agricultural buildings.

(iii) Forest-related structures accessory to the production of tree stock or the processing of forest products.

The following agricultural uses within the WUI combining zone are exempted from LC 16.266(6) requirements to establish a defensible space and secondary fuel break:

(iv) Land cultivated in agricultural crops or products including but not limited to horticultural specialties (berry, nut, or fruit orchards), Christmas tree plantations, vineyards, and nurseries including greenhouses.

(3) Definitions. For the purposes of this LC 16.266 the following definitions shall apply.

(a) "Agricultural buildings" means a structure located on a farm and used in the operation of the farm for:

(i) Storage, maintenance or repair of farm machinery and equipment;

(ii) The raising, harvesting and selling of crops;

(iii) The feeding, breeding, management and sale of, or the produce of, livestock, poultry, fur-bearing animals or honeybees;

(iv) Dairying and the sale of dairy products;

(v) Any other agricultural or horticultural use or animal husbandry, or any combination thereof, including the preparation and storage of the produce raised on the farm for human use and animal use and disposal by marketing or otherwise; or

(vi) An equine facility used by the farm owner or public for:

(A) Stabling or training equines; or

(B) Riding lessons and training clinics.

"Agricultural building" does not include:

(i) A dwelling;

(ii) A structure used for a purpose other than growing plants in which 10 or more persons are present at any one time;

(iii) A structure regulated by the State Fire Marshall pursuant to ORS Chapter 476.

(b) "Defensible space" is an area either natural or manmade, where material capable of allowing a fire to spread unchecked has been treated, cleared, or modified to slow the

rate of spread and intensity of a wildfire originating from or advancing to a structure and to create an area in which fire suppression operations may more safely occur.

(c) "Development site" refers to the specific location on a lot, parcel, or piece of land where development is intended to occur and also includes the defensible space and secondary fuel break surrounding the proposed building site.

(d) "Driveway" means a way of access used for only one dwelling or manufactured dwelling.

(e) "Fire-resistive vegetation" refers to vegetation that will not produce flame lengths in excess of 12 inches.

(f) "Ladder fuels" means vegetation that serves as a link between grasses and tree tops. It means branches, leaves, needles, and other combustible vegetation that may allow a wildfire to spread from lower growing vegetation to higher growing vegetation.

(g) "Public road" shall be as defined in LC 15.010.

(h) "Residential accessory structure" includes structures incidental, appropriate and subordinate to a residence including garages, shops, guest houses, etc.

(i) "Residential units " includes multiple-family dwelling, duplex, family day care facility, residential care facility, lodge, hotel, motel, rental cabin or condominium.

(j) "Road" means a way of access used for more than one dwelling, manufactured dwelling, or residential accessory structure.

(k) "Secondary fuel break" is a fuel break immediately adjacent to primary fuel breaks, for the distance necessary to comply with the total fuel break distance specified.

(l) "Vertical construction" includes any aspect of construction except the following actions performed in conformance with the approved construction plans:

(i) Excavation of the development site,

(ii) Construction of the access road or driveway,

(iii) Setting of construction forms prior to the pouring of footings, stem walls or a monolithic slab.

(m) "Wildland-Urban Interface" is the zone where structures and other human development meets or intermingles with undeveloped wildland fuels or other natural features. In Lane County these areas are identified on the Community Wildfire Protection Plan Wildland Urban Interface Map.

(4) Process and General Standards

(a) Prior to review of the fire protection site plan, the applicant shall submit the application form required by the Building Official and pay the fee as established by order of the Board of County Commissioners.

(b) The Building Official shall determine the severity of a wildfire hazard as determined by the risk classification rating of the proposed development site. The classification rating of the proposed development site shall be:

(i) Determined by the classification process set forth in ORS 477.031 to 477.052 and 477.057 if completed for the proposed development site; or in the absence of this classification,

(ii) Determined by the risk assessment rating as listed in the Lane County Community Wildfire Protection Plan (CWPP). The risk assessment rating for all unincorporated areas are depicted on a series of five assessment area maps entitled "CWPP Assessment Areas".

The WUI Area Fire Hazard Maps shall be adopted by the Board of County Commissioners. The WUI Area Fire Hazard Maps shall indicate the general location of areas of low, moderate and high susceptibility to the threat of wildfire. These maps shall be based on the best available risk assessment information and may be amended by the Planning Director after consultation with the applicable Fire Protection District or Oregon Department of Forestry based upon the receipt of corrected, updated or refined data or upon the revision of studies upon which the maps were initially based.

(c) Risk Classification Rating Certification. The risk classification predicting the severity of a wildfire hazard may be determined by the Fire Chief or his/her appointed representative of the applicable Fire Protection District, or the Fire Chief or appointed representative of another Fire Protection District or the Oregon Department of Forestry pursuant to a mutual aid agreement. Risk classification for a proposed development site located outside a fire protection district may be determined by a representative of the Oregon Department of Forestry. Prior to the submittal of a building permit application, the property owner shall secure written certification from the appropriate fire protection professional that an inspection of the development site has occurred. The certification shall include the following:

(i) A signed and dated certification checklist from the appropriate fire protection professional indicating the hazard rating for the proposed development site including the dimensions of the required defensible space based upon the determined hazard rating, topography, natural vegetation, wildfire weather hazard factor (aspect) and other important factors; and

(ii) A site development plan that conforms to the standards set forth in LC16.266 (4)(d)(i)-(ix) that has been signed and dated by the appropriate fire protection professional. The plot plan shall clearly identify the specific development site that has been reviewed under certification checklist.

(d) Site Development Plan. Prior to issuance of a building permit for the construction of a new dwelling, manufactured dwelling, replacement dwelling, accessory structure, or addition to a dwelling or other structure within the Wildland-Urban Interface (WUI), the property owner shall secure approval from the Building Official for a Site Development Plan clearly showing the following:

(i) Location of the access point of the private road or driveway with the right-of-way of a public road;

(ii) Route of the proposed road or driveway from the public road to the development site addressing the standards of LC 16.266(7), and depicting all sections of the road

rate of spread and intensity of a wildfire originating from or advancing to a structure and to create an area in which fire suppression operations may more safely occur.

(c) "Development site" refers to the specific location on a lot, parcel, or piece of land where development is intended to occur and also includes the defensible space and secondary fuel break surrounding the proposed building site.

(d) "Driveway" means a way of access used for only one dwelling or manufactured dwelling.

(e) "Fire-resistive vegetation" refers to vegetation that will not produce flame lengths in excess of 12 inches.

(f) "Ladder fuels" means vegetation that serves as a link between grasses and tree tops. It means branches, leaves, needles, and other combustible vegetation that may allow a wildfire to spread from lower growing vegetation to higher growing vegetation.

(g) "Public road" shall be as defined in LC 15.010.

(h) "Residential accessory structure" includes structures incidental, appropriate and subordinate to a residence including garages, shops, guest houses, etc.

(i) "Residential units " includes multiple-family dwelling, duplex, family day care facility, residential care facility, lodge, hotel, motel, rental cabin or condominium.

(j) "Road" means a way of access used for more than one dwelling, manufactured dwelling, or residential accessory structure.

(k) "Secondary fuel break" is a fuel break immediately adjacent to primary fuel breaks, for the distance necessary to comply with the total fuel break distance specified.

(l) "Vertical construction" includes any aspect of construction except the following actions performed in conformance with the approved construction plans:

(i) Excavation of the development site,

(ii) Construction of the access road or driveway,

(iii) Setting of construction forms prior to the pouring of footings, stem walls or a monolithic slab.

(m) "Wildland-Urban Interface" is the zone where structures and other human development meets or intermingles with undeveloped wildland fuels or other natural features. In Lane County these areas are identified on the Community Wildfire Protection Plan Wildland Urban Interface Map.

(4) Process and General Standards

(a) Prior to review of the fire protection site plan, the applicant shall submit the application form required by the Building Official and pay the fee as established by order of the Board of County Commissioners.

(b) The Building Official shall determine the severity of a wildfire hazard as determined by the risk classification rating of the proposed development site. The classification rating of the proposed development site shall be:

(i) Determined by the classification process set forth in ORS 477.031 to 477.052 and 477.057 if completed for the proposed development site; or in the absence of this classification,

(ii) Determined by the risk assessment rating as listed in the Lane County Community Wildfire Protection Plan (CWPP). The risk assessment rating for all unincorporated areas are depicted on a series of five assessment area maps entitled "CWPP Assessment Areas".

The WUI Area Fire Hazard Maps shall be adopted by the Board of County Commissioners. The WUI Area Fire Hazard Maps shall indicate the general location of areas of low, moderate and high susceptibility to the threat of wildfire. These maps shall be based on the best available risk assessment information and may be amended by the Planning Director after consultation with the applicable Fire Protection District or Oregon Department of Forestry based upon the receipt of corrected, updated or refined data or upon the revision of studies upon which the maps were initially based.

(c) Risk Classification Rating Certification. The risk classification predicting the severity of a wildfire hazard may be determined by the Fire Chief or his/her appointed representative of the applicable Fire Protection District, or the Fire Chief or appointed representative of another Fire Protection District or the Oregon Department of Forestry pursuant to a mutual aid agreement. Risk classification for a proposed development site located outside a fire protection district may be determined by a representative of the Oregon Department of Forestry. Prior to the submittal of a building permit application, the property owner shall secure written certification from the appropriate fire protection professional that an inspection of the development site has occurred. The certification shall include the following:

(i) A signed and dated certification checklist from the appropriate fire protection professional indicating the hazard rating for the proposed development site including the dimensions of the required defensible space based upon the determined hazard rating, topography, natural vegetation, wildfire weather hazard factor (aspect) and other important factors; and

(ii) A site development plan that conforms to the standards set forth in LC16.266 (4)(d)(i)-(ix) that has been signed and dated by the appropriate fire protection professional. The plot plan shall clearly identify the specific development site that has been reviewed under certification checklist.

(d) Site Development Plan. Prior to issuance of a building permit for the construction of a new dwelling, manufactured dwelling, replacement dwelling, accessory structure, or addition to a dwelling or other structure within the Wildland-Urban Interface (WUI), the property owner shall secure approval from the Building Official for a Site Development Plan clearly showing the following:

(i) Location of the access point of the private road or driveway with the right-of-way of a public road;

(ii) Route of the proposed road or driveway from the public road to the development site addressing the standards of LC 16.266(7), and depicting all sections of the road

or driveway with grades over 12 percent. Any sections with grades in excess of 12 percent shall require prior approval of a modification pursuant to LC 16.266(8)(a);

(iii) Location of the proposed dwelling or structures with dimensions to at least two property lines and all property lines within 100 feet of the perimeter of the proposed structures;

(iv) Location of the proposed defensible space and secondary fuel break around the proposed structures in compliance with the standards of LC 16.266(6);

(v) Location of any existing structures and interior roads or driveways on the subject property;

(vi) Location of the proposed subsurface sewage sanitation system and proposed well site or other domestic water source;

(vii) Location of trees and vegetation within the defensible space and secondary fuel break that will remain after the defensible space and fuel break have been established;

(viii) Location of any Class I Streams designated for riparian protection by the Rural Comprehensive Plan or delineated wetlands designated for protection on National Wetland Inventory (NWI) maps;

(ix) Photographs of the location of the proposed dwelling or structure and the vegetated area surrounding proposed defensible space and secondary fuel breaks.

(e) Prior to any vertical construction pursuant to an issued building permit within the Wildland-Urban Interface, the property owner shall secure approval from the Building Official that:

(i) The removal of slash, snags, ground fuels, ladder fuels, dead trees and thinning of live trees within the defensible space are in compliance with LC 16.266(6)(a); and

(ii) The route and grade of the access road and/or driveway complies with LC 16.266(7).

(f) Prior to approval for final inspection of the dwelling or structure and certificate of occupancy by the Building Official, the property owner shall:

(i) Secure approval for completion of the secondary fuel break in compliance with LC 16.266(6)(b) standards; and

(ii) Secure final approval for construction of the road and/or driveway in compliance with LC 16.266(7) standards.

(g) All defensible space, secondary fuel break, road and driveway, and water system standards of LC 16.266 shall be maintained in perpetuity on an annual basis prior to fire seasons for as long as the structure or use remains on the property.

(h) Failure to maintain the fire safety standards of LC 16.266 shall be subject to enforcement by the Lane County Building Official and/or Compliance Officer.

(i) Fire Protection District. The proposed development site shall be located upon a lot or parcel within a fire protection district or shall be provided with residential fire

protection as evidenced by a contract with a fire protection district (FPD) recorded in Lane County Deeds and Records.

(i) If the proposed development site is not within a FPD, the applicant shall provide evidence that the applicant has submitted a written request for a services contract with the nearest FPD or to be annexed into the FPD boundaries.

(ii) If the FPD determines that inclusion within a FPD or contracting for residential fire protection is impracticable, the Building Official shall require that the property owner implement and maintain a Fire Protection Plan as an alternative means for protecting the dwelling, manufactured dwelling, or residential unit from fire hazards, consistent with Lane County.

(j) Fire Protection Plan. When the Building Official determines a Fire Protection Plan is required, that Plan shall include the following:

(i) Implementation and maintenance in perpetuity of a 30-foot wide defensible space surrounding the perimeter of the dwelling or manufactured dwelling in compliance with the standards in LC 16.266(6)(a), and an additional 50-foot wide secondary fuel break in compliance with LC 16.266(6)(b).

(ii) An external fire protection system to mitigate the threat to the dwelling or accessory structures by a wildfire or the threat to the forest resource base from a fire originating on the parcel, in compliance with the following standards:

(A) Provide a minimum of two all-weather, one-inch valve, fire hydrants and two fire hose reels with sufficient length of fire suppression hose at each hydrant to reach around fifty percent of the exterior of the dwelling and residential accessory structures. The hose reels shall be installed along the perimeter of the defensible space. The minimum fire hose interior diameter shall be one-inch;

(B) Provide a fire nozzle with each fire hose with multiple settings to allow stream, spray and fog applications of water on the exterior of the structures and landscape;

(C) Provide and annually maintain a water supply and pumping system connected to the fire hydrants in compliance with the following minimum requirements: a swimming pool, pond, lake or similar body of water that at all times contains a minimum of 4,000 gallons of water; or a stream that has a continuous year-round flow of at least one cubic foot per second; or a 1,500-gallon storage tank, e.g., concrete septic tank connected to an operating groundwater well for refilling; or a high-yield groundwater well with a minimum yield of 30 gallons per minute for one hour; and a pump system capable of maintaining 80 psi line pressure to the two fire hydrants. If the water supply and pump system are connected to the domestic water supply, the property owner shall install an anti-backflow device approved by the Building Official to avoid contamination of the domestic water system.

(D) The property owner shall provide verification from the Water Resources Department that any permits or registrations required for water diversions

have been obtained or that such permits or registrations are not required under state law for the use; and

(E) Road or driveway access to within 10 feet of the water supply shall be provided for pumping units. The road or driveway access shall accommodate the turnaround of fire fighting equipment during the fire season.

(F) Permanent signs shall be posted along the access route to indicate the location of the emergency water source.

(5) Setbacks. New dwellings or manufactured dwellings, residential units and accessory structures shall be at least 30 feet away from any ravine, ridge or slope greater than 40 percent.

(6) Structural Defensible Space and Secondary Fuel Breaks.

(a) Structural Defensible Space.

Property owners are required to create and maintain a structural defensible space which complies with LC 16.266(6)(a) for all new dwellings, manufactured dwellings, residential units, accessory structures, and additions of 50% or more of floor area to dwellings and accessory structures on land that is owned or controlled by the property owner within the Wildland-Urban Interface. The required defensible space for a new structure identified in LC 16.266(6)(a) shall be at least 30 feet, or to the property line, whichever is the shortest distance. The distance shall be measured horizontally along the slope and from the furthest extension of the structure, including attached carports, decks, or eaves. Alterations of existing vegetation and activities within the defensible space shall include:

(i) Remove any portion of a tree which extends to within 10 feet of the outlet of a structure's chimney or a stove pipe.

(ii) Maintain the portion of any tree which overhangs a dwelling, residential unit or residential accessory structure substantially free of dead plant material;

(iii) Accumulated leaves, needles, and other dead vegetation shall be removed from gutters.

(iv) Roofs. New dwellings and habitable structures shall be regulated by the State of Oregon Structural Specialty Code or the State of Oregon One and Two Family Specialty Code. Roofing for new dwellings, manufactured dwellings and residential units shall be asphalt shingles in accordance with Section 903, slate shingles in accordance with Section 904, metal roofing in accordance with Section 905, tile, clay or concrete shingles in accordance with Section 907, and other approved roofing which is deemed to be equivalent to Class C rated roof covering. Wood shingles and shake roofs are not permitted. When 50% or more of the roof covering of any one or two family dwelling, manufactured dwelling, or residential unit is repaired or replaced in one year, the roof covering shall be made to comply with this section.

(v) Chimneys. Chimneys serving fireplaces, barbecues, incinerators or decorative heating appliances in which solid or liquid fuel is used, shall be provided with a spark arrester. Spark arresters shall be constructed of woven or welded wire

screening of 12 USA standard gauge wire (0.1046 inch)(2.66 mm) having openings not exceeding ½ inch (12.7 mm).

(vi) Maintain the area under decks substantially free of firewood, stored flammable building material, leaves, needles, and other similar flammable material; and

(vii) During times of the year when wildfire may be a threat, locate firewood, flammable building material, and other similar flammable material:

(A) At least 20 feet away from a structure; or

(B) In a fully enclosed space.

(b) Structural defensible space characteristics.

(i) The purpose of a structural defensible space is to:

(A) Create an area in which fire suppression operations may more safely occur; and

(B) Slow the rate of spread and the intensity of an advancing wildfire; and

(ii) A structural defensible space shall be a natural or a manmade area where material capable of allowing a wildfire to spread:

(A) Does not exist; or

(B) Has been cleared, modified, or treated in such a way that the rate of spread and the intensity of an advancing wildfire will be significantly reduced.

(iii) A structural defensible space shall be comprised of one or more of the following:

(A) An area of fire-resistive ground cover and vegetation. Examples include gardens, flower beds, clover, green grass, ivy, mulches, rock, succulent ground cover, or wildflowers. Suggestions for specific types of fire-resistive shrubbery vegetation that may reduce the risk from wildfire can be found in the OSU Extension Service publication *Fire-Resistant Plants for Oregon Home Landscapes,* which is available from Oregon Department of Forestry and Lane County Land Management Division.

(B) An area of single specimens or isolated groupings of ornamental shrubbery, native trees, or other plants, provided they are:

aa. Maintained substantially free of dead plant material;

bb. Maintained free of ladder fuel. The ladder fuel trim zone is three times the shrub height. To remove ladder fuels, either remove overhanging tree limbs within the trim zone or remove/reduce the height of the shrub;

cc. Arranged and maintained in such a way that minimizes the possibility a wildfire can spread to adjacent vegetation; and

dd. Maturing trees may be retained and planting of new trees is permitted within the defensible space provided the horizontal distance between

crowns of adjacent non-hardwood trees such as cedars, firs, and pine, and overhead electrical facilities or unmodified fuel is not less than 10 feet. "Tree crowns" include the primary and secondary branches growing out from the main stem, together with twigs and foliage. "Distance between crowns" shall be the measured from the extension of the foliage of one tree to the foliage of another tree. Clusters of five or fewer maturing trees can be considered as one crown if they are tightly clustered (entwined) and a 10-foot horizontal distance around the periphery of the combined "cluster crown" and other nearby non-hardwood trees is maintained.

ee. In compliance with the intent of subsections LC 16.266(6)(b)(i) and (ii).

(C) An area of dry grass which is maintained to an average height of less than four inches.

(D) An area of cut grass, leaves, needles, twigs, and other similar flammable materials provided such materials do not create a continuous fuel bed and are in compliance with the intent of LC 16.266(6)(b)(i) and (ii).

(c) Secondary Fuel Break.

Property owners in moderate and high risk classification areas are required to create and maintain a secondary fuel break which complies with LC 16.266(6)(c), for all new dwellings, manufactured dwellings, residential units, accessory structures, and additions of 50% or more of floor area to dwellings and accessory structures on land that is owned or controlled by the property owner within the Wildland-Urban Interface. The required secondary fuel break for a structure identified in LC 16.266(6)(c) above shall be as specified in *Table 2* below, or to the property line, whichever is the shortest distance. The distance shall be measured horizontally along the slope and from the furthest extension of the structure, including attached carports, decks, or eaves.

Table 2

Defensible Space and Secondary Fuel Break		
Fire Risk Classification Rating	Structural Defensible Space	Secondary Fuel Break
Low	30 feet	----
Moderate	30 feet	30 feet
High	30 feet	50 feet

The applicable secondary fuel break distance shall be determined by fire risk classification using either method set forth in 16.266(4)(b) or 16.266(4)(c).

A secondary fuel break shall be comprised of single specimens or isolated grouping of ornamental shrubbery, native trees, or other plants, provided they are:

(i) Maintained substantially free of dead plant material;

(ii) Maintained free of ladder fuel. The ladder fuel trim zone is three times the shrub height. To remove ladder fuels, either remove tree limbs within the trim zone or remove/reduce the height of the shrub;

(iii) Arranged and maintained in such a way that minimizes the possibility a wildfire can spread to adjacent vegetation.

(d) Road or Driveway Defensible Space.

Property owners are required to create and maintain a defensible space adjacent to roads or driveways providing access to new dwellings, manufactured dwellings, residential units, accessory structures, and additions of 50% or more of floor area to dwellings and accessory structures on land that is owned or controlled by the property owner within the Wildland-Urban Interface.

(i) Road defensible space (road providing access to two or more residential uses).

The required road defensible space shall be at least 10 feet from the centerline of a driveway (20 feet total) or to the property line, whichever is the shortest distance. The distance shall be measured from the center line of the road. Including the driving surface, a fuel break shall result in an open area which is not less than 13 feet 6 inches in height and 20 feet in width with two feet of cleared area on both shoulders parallel to the 16-foot gravel, travel surface or to the property line, whichever is the shortest distance.

(ii) Driveway defensible space (driveway providing access to one new residential use).

The required driveway defensible space shall be at least 8 feet from the centerline of a driveway (16 feet total) or to the property line, whichever is the shortest distance. The distance shall be measured from the center line of the driveway. Including the driving surface, a fuel break shall result in an open area which is not less than 13 feet 6 inches in height and 16 feet in width with two feet of cleared area on both shoulders parallel to the 12-foot gravel, travel surface or to the property line, whichever is the shortest distance.

(e) Water Storage Defensible Space.

Water storage and structural pumping facilities shall be provided with a defensible space which complies with LC 16.266(6)(f) of not less than 30 feet clear of such facilities. Persons owning, controlling, operating or maintaining water storage and pumping systems requiring this defensible space are responsible for maintaining the defensible space on the property owned, leased or controlled by said person. Portions of trees that extend within 10 feet of combustible portions of water storage and pumping facilities shall be removed.

(f) Exceptions to the Defensible Space and Secondary Fuel Break Standards.

(i) Class I Stream Riparian Regulations.

(A) Only the minimal removal or alteration of vegetation within the Riparian Setback Area is allowed to establish a Structural Defensible Space. The removal shall not exceed the limitations of LC 16.253(2)(a) and (b).

(B) Secondary Fuel Breaks are not required in the Riparian Setback Area.

(ii) Wetlands. No vegetation removal or disturbance of topography shall occur within a jurisdictional wetlands site in the National Wetland Inventory for purposes of establishing a Structural Defensible Space or Secondary Fuel Break, without the prior approval of the Oregon Department of State Lands.

(iii) Coastal Resource Management Plan. For development within a zone listed in *Table 3*, below, the more restrictive protection standards for alteration or removal of vegetation or disturbance of topography shall prevail over the fire safety standards of LC 16.266.

(A) Structural Defensible Space. Vegetation removal and alteration to establish a Defensible Space shall not exceed the vegetation removal/alteration limits of the Site and Development Requirements of the zones listed in *Table 3*, below.

(B) Secondary Fuel Breaks. Secondary Fuel Breaks are not required in the Site and Development Requirements setback areas of the zones listed in *Table 3*, below.

Table 3

Zone Name	Chapter
Natural Estuary Zone (NE-RCP)	LC 16.234
Conservation Estuary Zone (CE-RCP)	LC 16.235
Development Estuary Zone (DE-RCP)	LC 16.236
Significant Natural Shorelands Combining Zone (/SN-RCP)	LC 16.237
Prime Wildlife Shorelands Combining Zone (/PW-RCP)	LC 16.238
Residential Development Shorelands Combining Zone (/RD-RCP)	LC 16.240
Shorelands Mixed Development Combining Zone (/MD-RCP)	LC 16.241

(iv) Willamette Greenway.

(A) Only the minimal removal or alteration of vegetation within the Willamette Greenway is allowed to establish a Structural Defensible Space.

(B) Secondary Fuel Breaks are not required in the Willamette Greenway.

(7) Road and Driveway Standards

(a) Private driveways, roads or bridges accessing only small woodlot or commercial forest practices or farm uses are not subject to compliance with these fire safety design standards for roads and driveways.

(b) The route of access for fire fighting equipment, from the public road to a new dwelling or residential unit shall comply with the standards specified in LC 16.266(7).

(c) Roads shall have unobstructed widths of at least 20 feet including:

(i) Travel surfaces with widths of at least 16 feet constructed with gravel to a depth sufficient to provide access for fire fighting vehicles with a minimum depth of at least six-inches or with paving having a crushed base equivalent to six inches of gravel;

(ii) An unobstructed area two feet in width at right angles with each side of the constructed surface;

(iii) Inside curve radii of at least 50 feet; and

(iv) A vertical clearance of at least 13 feet 6 inches.

(v) Access points within public road right-of-ways shall have approach widths, aprons, and culverts in compliance with Lane County Public Works facility permit requirements.

(d) Driveways shall have unobstructed widths of at least 16 feet including:

(i) Travel surfaces with widths of at least 12 feet with at least six inches of gravel or with paving having a crushed base equivalent to six inches of gravel;

(ii) An unobstructed area two feet in width at right angles with each side of the constructed surface;

(iii) Inside curve radii of at least 50 feet; and

(iv) A vertical clearance of at least 13 feet 6 inches.

(e) Dead-end driveways and roads not maintained by Lane County shall meet these standards for turnarounds. Any dead-end road 150 feet or longer shall include a turnaround at the terminus. Long driveways or roads shall have additional turnarounds spaced at intervals of not less than 500 feet. Turnarounds shall comply with these design and construction standards:

(i) Hammerhead Turnarounds. Hammerhead turnarounds (for emergency vehicles to drive into and back out of to reverse their direction on the road) shall intersect the road/driveway as near as possible at a 90 degree angle with a 30-foot radius and extend from the road/driveway at that angle for a distance of at least 36 feet in both directions (72 feet total across the "T"). Other alternatives are available with prior approval of the design by the Building Official after consultation with the applicable Fire Protection District. They shall be constructed to the standards for driveways in LC 16.266(7)(d) above.

(ii) Cul-de-sac Turnarounds.

(A) Cul-de-sacs shall have a turn-around width with a radius of at least 45 feet and an improved surface with a radius of at least 36 feet. They shall be constructed to the standards for driveways in LC 16.266(7)(d) above; and

(B) No cul-de-sac or hammerhead turnaround shall be allowed to cross any slope which will allow chimney-effect draws unless the dangerous effects of the chimney-effect draws have been mitigated by the location of the road and, where necessary, by the creation of permanent fire breaks around the road.

(f) Bridges and culverts shall be constructed to sustain a minimum gross vehicle weight of 50,000 lbs. and to maintain a minimum 16-foot road width surface or a minimum 12-foot driveway surface. The Building Official may allow a single-span bridge utilizing a converted railroad flatcar as an alternative to the road and driveway surface width requirements, subject to verification from an engineer licensed in the State of Oregon that the structure will comply with the minimum gross weight standard of 50,000 lbs. Vehicle load limits shall be posted at both entrances to a bridge.

(g) Road and driveway grades shall not exceed 12 percent except for short distances when topographic conditions make lesser grades impractical. In such instances, grades up to 16 percent may be allowed for spans not to exceed 100 feet. An applicant must submit information from a Fire Protection District or engineer licensed in the State of Oregon demonstrating that road and driveway grades in excess of 12 percent are adequate for the fire fighting equipment of the agency providing fire protection to access the use or structure(s) and water supply.

(h) Roads shall be named and addressed in compliance with LC 15.305 through 15.335.

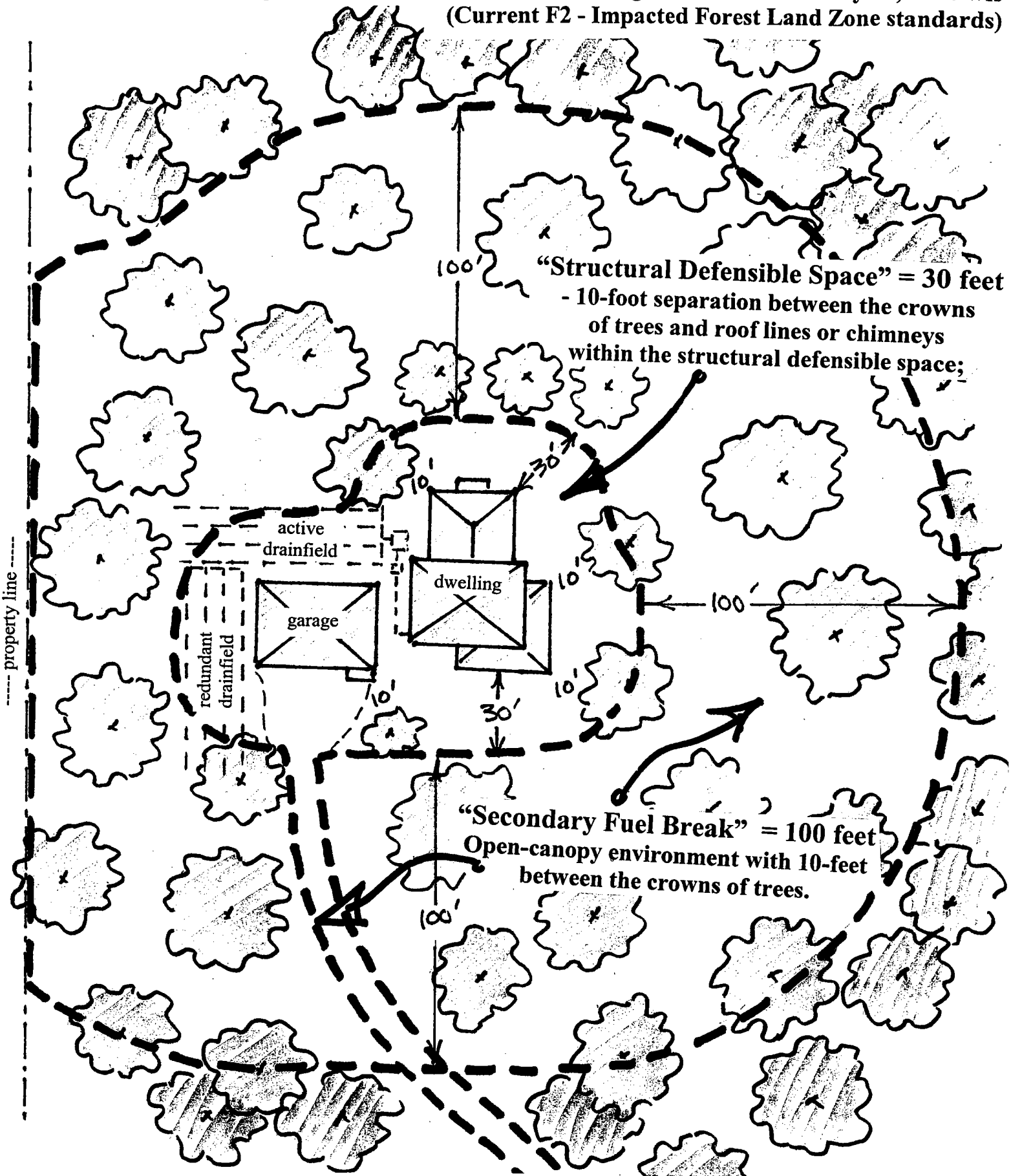
(i) Driveways in excess of 500 feet shall provide for a 50-foot long and eight-foot wide passage spaces (turn outs) with six inches in depth of gravel and at maximum intervals of 500 feet. Shorter or longer intervals between turnouts may be authorized by the Building Official after consultation with the applicable Fire Protection District or Oregon Department of Forestry where the Building Official inspects the road and determines that topography, vegetation, corners or turns obstruct visibility.

(8) Modifications and Alternatives.

(a) Wherever there are practical difficulties involved in carrying out the provisions of LC 16.266(6) or (7), the Building Official, after consultation with and approval of the applicable Fire Protection District and/or Oregon Department of Forestry, shall have the authority to grant modifications for individual cases, provided the Building Official shall first find that special siting circumstances make the strict letter of this code impractical and the modification granted is the minimum deviation from the required standard as is practicable under the circumstances. The circumstances and action granting the modification shall be entered in the building permit files of Lane County Land Management Division.

(b) The determination that a development site is classified as Low, Medium, or High fire hazard area may be modified by the Planning Director or by the appropriate Fire Protection District or the Oregon Department of Forestry as outlined in 16.266(4)(c). The modification shall be based on objective evidence that supports a finding that the development site is within a different fire hazard area than shown on the adopted Fire Hazard Map.

Diagram for Attachment "B" – Working draft – as of January 23, 2006 wfs
(Current F2 - Impacted Forest Land Zone standards)



"Road": access for two or more dwellings – **16**-foot gravel surface with 6-inches of rock; 2-foot clearing along each side of road; cleared to height of 13 ft 6-inches

"Driveway": access for only one dwelling – **12**-foot gravel surface with 6-inches of rock; 2-foot clearing along each side of road; cleared to height of 13 ft 6-inches

D

Determining structural defensible space and submittal of building permit under the provisions of LC 16.266 "structural defensible space" proposal.

Property owner contemplates constructing a dwelling or accessory structure on land

Property owner contacts LMD

1. Discusses building permit process and reviews land use issues with planner by telephone; and
2. Receives information packet by mail for all applicable combining zone requirements including wetlands, Willamette Greenway, floodplain, coastal overlays, riparian and WUI fire safety standards (LC 16.266).

or

1. Discusses building permit process and reviews land use issues with planner on duty at LMD service counter; and
2. Receives information packet for all applicable combining zoning requirements including wetlands, Willamette Greenway, floodplain, coastal overlays, riparian and WUI fire safety standards (LC 16.266).

Option #1: LC 16.266(4)(c)

Property owner contacts local fire protection district and makes an appointment with the FPD chief to conduct a site visit with the owner/contractor to review the proposed site and access route;

or

Option #2: LC 16.266(4)(b)(i)-(ii)

Property owner receives the CWPP risk assessment rating from LMD-GIS for either low, medium or high fire hazard and elects to implement the standard without additional review.

LC 16.266(4)(d)(i)-(ix)

Property owner or contractor prepares fire protection site plan (plot plan) with FPD determination of defensible space or CWPP fire hazard rating.

Property owner contacts LMD to schedule PASO meeting to review building permit including plot plan (fire protection site plan).

LC 16.266(4), (6) and (7)

LMD issues building permit with requirement to implement the fire protection standards.

E

Inspection process for structural defensible space and access driveway or road construction.

Property owner receives approved building permit including fire protection site plan.

LC 16.266(4)(c)

Property owner and contractor construct access driveway and apply base rock to the route in compliance with **LC 16.266(6)(d)** and (7) driveway standards and prepares structural defensible space in compliance with standards of **LC 16.266(6)(a)**.

Contractor excavates development site and sets foundation forms in preparation of building inspector's initial inspection prior to pouring monolithic slabs, footings or stem walls.

LC 16.266(4)(e)

Property owner/contractor calls LMD and schedules initial building inspection of construction forms in conjunction with defensible space and preliminary road/driveway inspections.

LMD building inspector conducts initial inspection of the construction forms for compliance with Oregon Specialty Code and inspection/approval of defensible space and access route (base rock, grade, width and depth, turnouts and turn-arounds). Approval of forms is contingent on approval of fire protection standards of **LC 16.266(6)(a)** and **LC 16.266(7)**.

Once property owner/contractor has secured approval for the defensible space and preliminary approval for the road and/or driveway, the construction of the dwelling or accessory structure would move forward through the normal building inspection process until the project is ready for final inspections and a certification for occupancy.

Prior to scheduling the final inspection for the completion of the dwelling or accessory structure, the property owner and/or contractor are required to (1) implement a secondary fuel break, if required, around the defensible space **[LC 16.266(6)(c)]**, and complete the final aspects of the driveway or road construction in compliance with **LC 16.266(7)**.

LC 16.266(4)(f)

Property owner or contractor calls LMD building program and schedules inspections of the secondary fuel break , access route, and final inspection of the structure per the building permit.

LMD building inspector conducts final inspections.