

ORDINANCE NO. 866

AN ORDINANCE AMENDING PROVISIONS OF TITLE 16 OF THE CANBY MUNICIPAL CODE REGARDING SOLAR ACCESS PROTECTION REQUIREMENTS

WHEREAS, it is State and Federal policy to promote energy conservation and the use of renewable resources, and Oregon statutes authorize local governments to encourage, protect and provide solar access; and

WHEREAS, the Comprehensive Plan in the City of Canby promotes energy conservation and protection of solar energy access rights, and use of solar energy; and

WHEREAS, traditional property law principles do not protect solar energy access in the absence of a private agreement or public law that requires such protection. Existing land use laws in the City of Canby do not protect solar energy access. Private easements and incentives in those laws to encourage the use of solar energy have not resulted in significant protection of solar energy access; and

WHEREAS, without protection of solar access, many opportunities to use solar energy have been lost forever and will continue to be lost in the future; and

WHEREAS, twenty-two local governments and interested agencies, firms, organizations and individuals in the Portland-Vancouver Metropolitan Area have joined together with the goal of developing uniform land use ordinances to protect solar access throughout the area, and as of this date, eighteen local governments have adopted the Model Ordinance or a minor modification of same; and

WHEREAS, a detailed program of technical research and public involvement was conducted. The ordinances were drafted by consensus with broad and representative input from local governments and the private development community. The benefits of implementing the ordinances were determined to exceed the costs, and the ordinances were determined to comply with State and local laws and the eight design principles set forth early in the process; and

WHEREAS, representatives of the City of Canby participated in that process, and the Planning Commission has been briefed regularly about the project. The Planning Commission also has reviewed and considered the proposed solar ordinance and supporting data in a public hearing for which timely public notice was given as required by law. The Commission is in accord with the findings, conclusions, and recommendations of the project; and

WHEREAS, the Canby City Council held a briefing discussion on July 17, 1991 regarding the basics of a Solar Access Ordinance; and

WHEREAS, the Planning Commission, at its meeting of August 12, 1991 has recommended that the Canby City Council adopt the Solar Access Protection Ordinance based on its accompanying findings and conclusions; and

WHEREAS, the City Council, after review of the record before the Planning Commission, finds:

1. that the following amendments conform with the Comprehensive Plan of the City of Canby;
2. that there is a need for the amendments and that such changes best serve the public need for the City of Canby;
3. that the amendments will preserve and protect the health, safety, and welfare of the residents of the City of Canby; and
4. that the amendments conform to the statewide planning goals.

NOW, THEREFORE, THE CITY OF CANBY ORDAINS that Title 16 of the Canby Municipal Code is amended as follows:

Section 1. A new division, DIVISION IX. Solar Access Requirements, is created and Chapter 16.90, Solar Access Definitions; Chapter 16.95, Solar Access Standards for New Development; and Chapter 16.100, Solar Balance Point Standards, are added to such Division IX, as follows:

DIVISION IX. SOLAR ACCESS REQUIREMENTS

CHAPTER 16.90

SOLAR ACCESS DEFINITIONS

Sections:

- 16.90.010** Definitions
- 16.90.020** Figures

16.90.010 The definitions to be used in this section are in addition to Chapter 16.04 Definitions. In the case of similar or identical terminology, the definitions in this chapter shall govern for Division IX, Solar Access Requirements.

- A. Crown Cover:** The area within the drip line or perimeter of the foliage of a tree.
- B. Development:** Any short plat, partition, subdivision or planned unit development that is created under the City's land division or zoning regulations.
- C. Exempt tree or vegetation:** The full height and breadth of vegetation that the Planning Director has identified as "solar friendly" that are listed and kept on file in City Hall; and any vegetation listed on a plat map, a document recorded with the plat, or a solar access permit as exempt.
- D. Front lot line:** For purposes of the solar access regulations, a lot line abutting a street. For corner lots the front lot line is that with the narrowest frontage. When the lot line abutting a street is curved, the front lot line is the chord or straight line connecting the ends of the curve. For a flag lot, the front lot line is the shortest lot line adjoining the pole portion of the lot, excluding the unbuildable portion of the pole (see Figure 1).
- E. Non-exempt tree or vegetation:** Vegetation that is not exempt.
- F. Northern lot line:** The lot line that is the smallest angle from a line drawn east-west and intersecting the northernmost point of the lot, excluding the pole portion of a flag lot. If the

north line adjoins an undevelopable area other than a required yard area, the northern lot line shall be at the north edge of such undevelopable area. If two lot lines have an identical angle relative to a line drawn east-west, or if the northern lot line is less than 35 feet, then the northern lot line shall be a line 35 feet in length within the lot parallel with and at a maximum distance from the front lot line (see Figure 2).

G. North-south dimension: The length of a line beginning at the mid-point of the northern lot line and extending in a southerly direction perpendicular to the northern lot line until it reaches a property boundary (see Figure 3).

H. Protected solar building line: A line on a plat or map recorded with the plat that identifies the location on a lot where a point two feet above may not be shaded by structures or non-exempt trees (see Figure 10).

I. Shade: A shadow cast by the shade point of a structure or vegetation when the sun is at an altitude of 21.3 degrees and an azimuth ranging from 22.7 degrees east and west of true south.

J. Shade point: The part of a structure or non-exempt tree that casts the longest shadow onto the adjacent northern lot(s) when the sun is at an altitude of 21.3 degrees and an azimuth ranging from 22.7 degrees east and west of true south; except a shadow caused by a narrow object such as a mast or whip antenna, a dish antenna with a diameter of 3 feet or less, a chimney, utility pole, or wire. The height of the shade point shall be measured from the shade point to either the average elevation at the front lot line or the elevation at the midpoint of the front lot line. If the shade point is located at the north end of a ridgeline of a structure oriented within 45 degrees of a true north-south line, the shade point height computed according to the preceding sentence may be reduced by 3 feet . If a structure has a roof oriented within 45 degrees of a true east-west line with a pitch that is flatter than 5 feet (vertical) in 12 feet (horizontal) the shade point will be the eave of the roof. If such a roof has a pitch that is 5 feet in 12 feet or steeper, the shade point will be the peak of the roof (see Figures 4 and 5).

K. Shade reduction line: A line drawn parallel to the northern lot line that intersects the shade point (see Figure 6).

L. Shadow pattern: A graphic representation of an area that would be shaded by the shade point of a structure or vegetation when the sun is at an altitude of 21.3 degrees and an azimuth ranging between 22.7 degrees east and west of true south (see Figure 12).

M. Solar feature: A device or combination of devices or elements that does or will use

direct sunlight as a source of energy for such purposes as heating or cooling of a structure, heating or pumping of water, and generating electricity. Examples of a solar feature include a window or windows that contain(s) at least 20 square feet of glazing oriented within 45 degrees east and west of true south, a solar greenhouse, or a solar hot water heater. A solar feature may be used for purposes in addition to collecting solar energy, including but not limited to serving as a structural member or part of a roof, wall, or window. A south-facing wall without windows and without other features that use solar energy is not a solar feature for purposes of this ordinance.

N. Solar gain line: A line parallel to the northern property line(s) of the lot(s) south of and adjoining a given lot, including lots separated only by a street, that intersects the solar feature on that lot (see Figure 7).

O. South or South Facing: True south, or 20 degrees east of magnetic south.

P. Sunchart: One or more photographs that plot the position of the sun between 10:30 am and 1:30 pm on January 21, prepared pursuant to guidelines issued by the Planning Director. The sunchart shall show the southern skyline through a transparent grid on which is imposed solar altitude for a 45-degree and 30 minute northern latitude in 10-degree increments and solar azimuth from true south in 15-degree increments.

Q. Undevelopable area: An area that cannot be used practicably for a habitable structure, because of natural conditions, such as slopes exceeding 20% in a direction greater than 45 degrees east or west of true south, severe topographic relief, water bodies, or conditions that isolate one portion of a property from another portion so that access is not practicable to the unbuildable portion; or man-made conditions, such as existing development which isolates a portion of the site and prevents its further development; setbacks or development restrictions that prohibit development of a given area of a lot by law or private agreement; or existence or absence of easements or access rights that prevent development of a given area.

16.90.020 Figures

Figure 1

FRONT LOT LINE

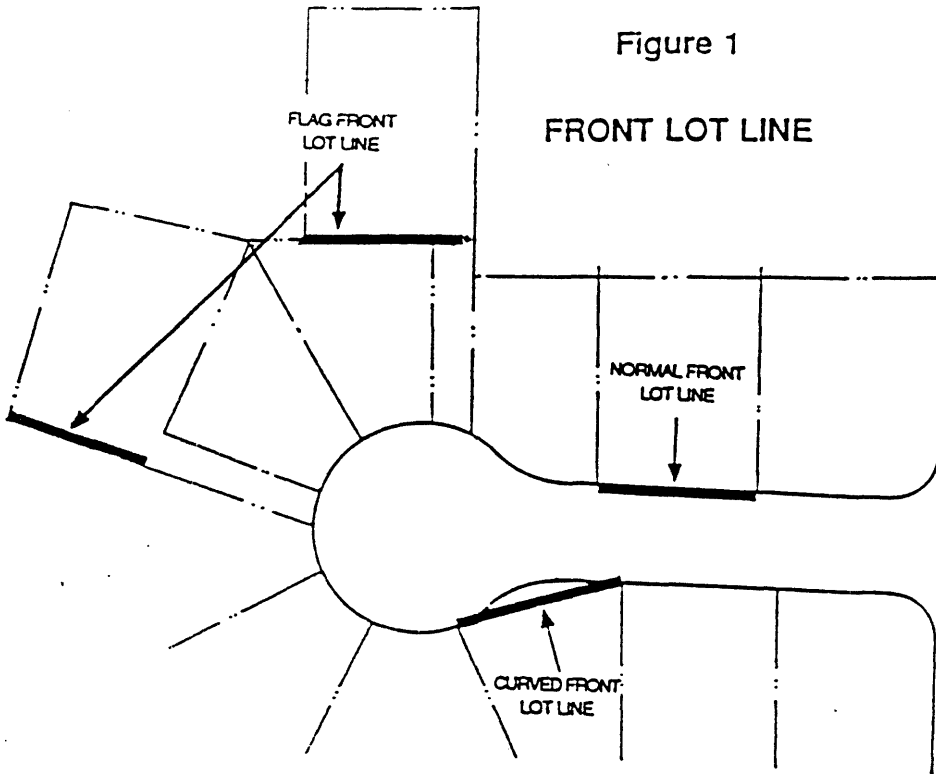


Figure 2

NORTHERN LOT LINE

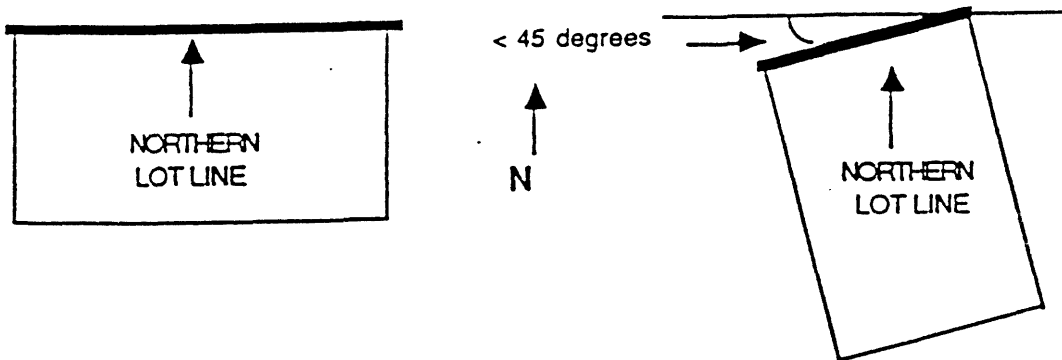


Figure 3

NORTH-SOUTH DIMENSION OF THE LOT

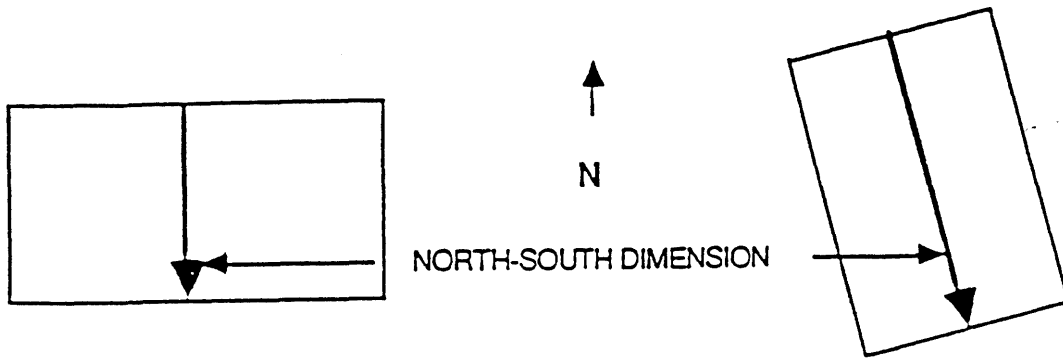


Figure 4

HEIGHT OF THE SHADE POINT OF THE STRUCTURE

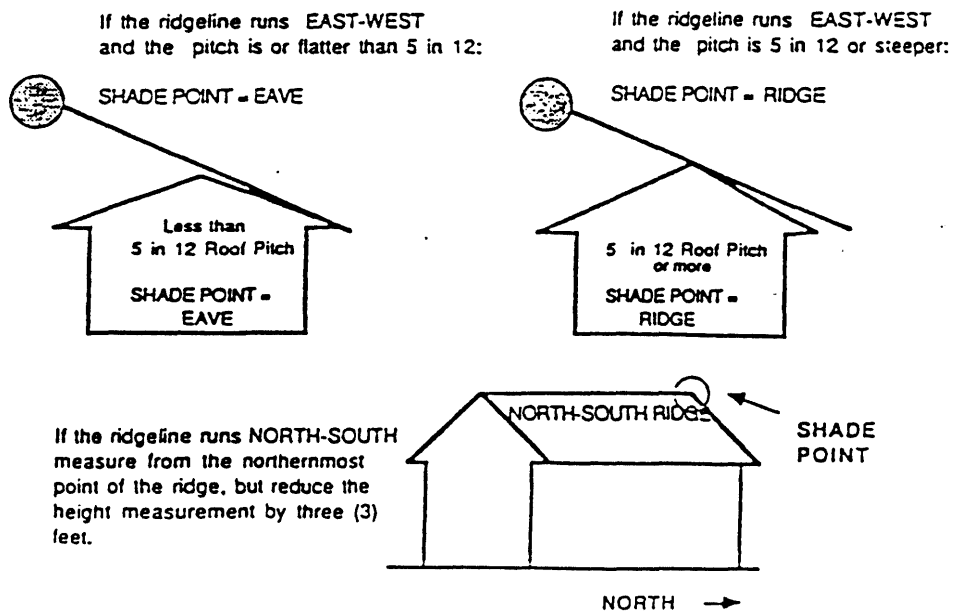


Figure 5

SHADE POINT HEIGHT

Measure to average grade at the front lot line.

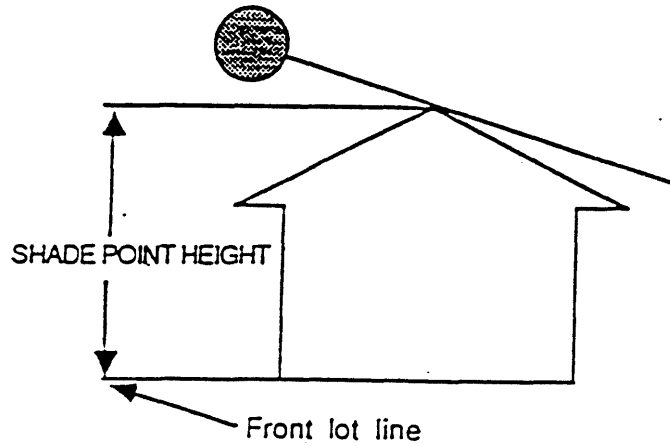


Figure 6

SHADE REDUCTION LINE

Shade Reduction Line
measured to Shade Point
from Northern Lot Line

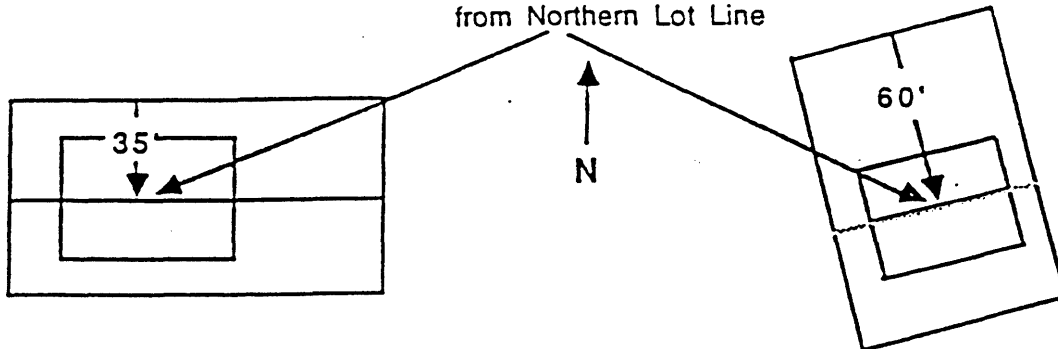


Figure 7

SOLAR GAIN LINE

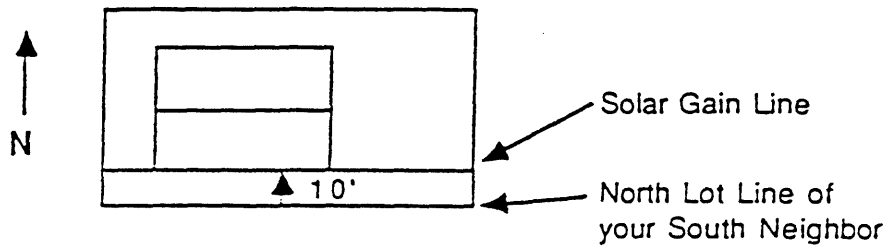
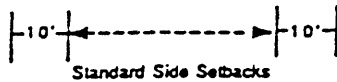
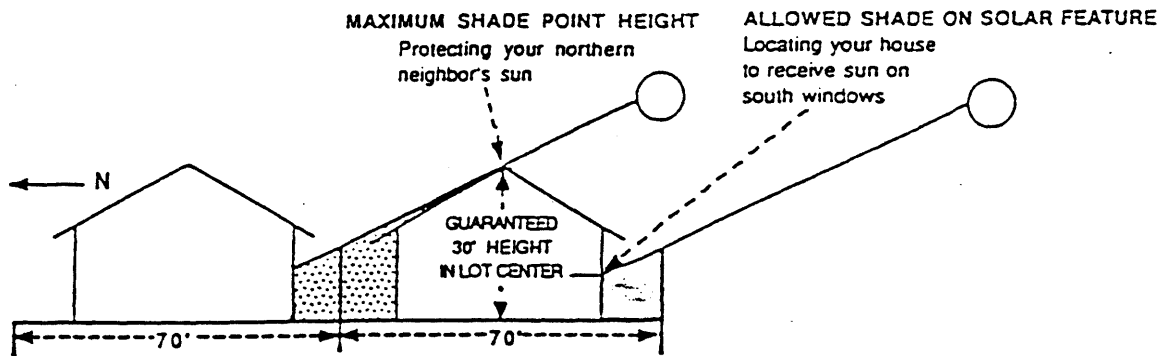
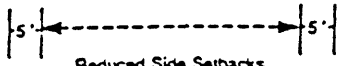


Figure 8

SOLAR BALANCE POINT STANDARD



Standard Side Setbacks



Reduced Side Setbacks

SETBACK ADJUSTMENTS IF NEEDED TO MEET SOLAR STANDARDS

Figure 9

SOLAR LOT OPTION 1: BASIC REQUIREMENTS

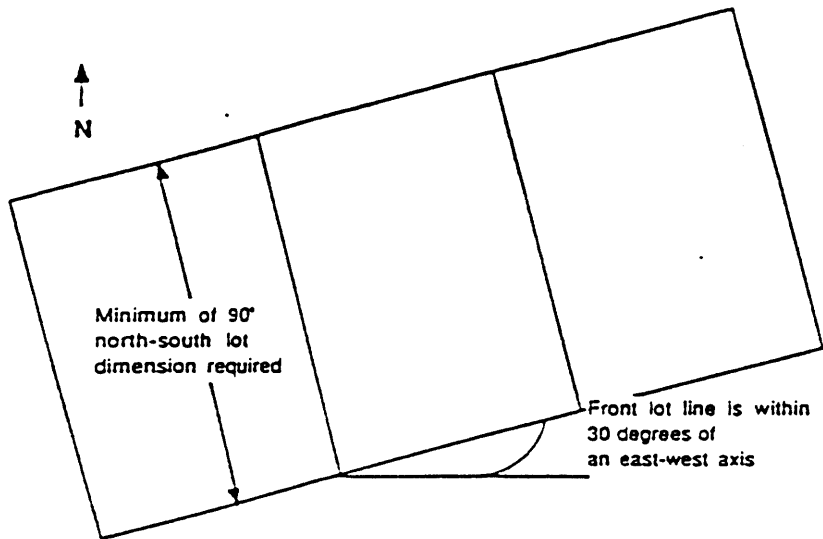


Figure 10

SOLAR LOT OPTION 2: PROTECTED SOLAR BUILDING LINE

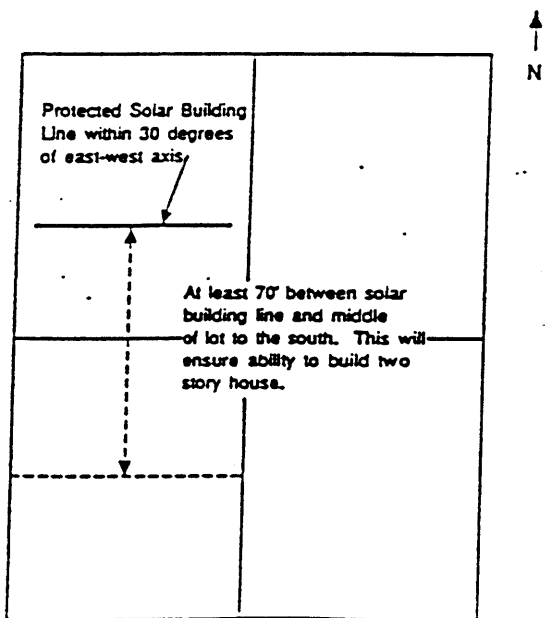
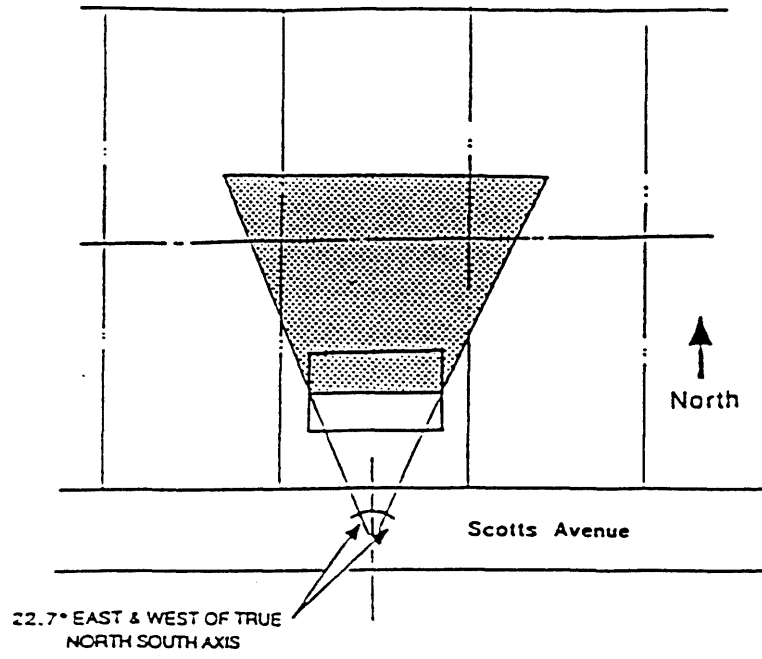


Figure 11

SHADOW PATTERN



CHAPTER 16.95

SOLAR ACCESS STANDARDS FOR NEW DEVELOPMENT

Sections:

- 16.95.010 Purpose**
- 16.95.020 Applicability**
- 16.95.030 Design Standard**
- 16.95.040 Exemptions from Design Standard**
- 16.95.050 Adjustment to Design Standard**
- 16.95.060 Protection from Future shade**
- 16.95.070 Application**
- 16.95.080 Process**

16.95.010 Purpose. The purposes of the solar access ordinance for new development are to ensure that land is divided so that structures can be oriented to maximize solar access and to minimize shade on adjoining properties from structures and trees.

16.95.020 Applicability. The solar design standard in Section 16.95.030 shall apply to applications for a development to create lots in the R-1, R-1.5, and R-2 zones and for single family detached dwellings in any zone, except to the extent the approval authority finds that the applicant has shown one or more of the conditions listed in Sections 16.95.040 and 16.95.050 exist, and exemptions or adjustments provided for therein are warranted.

16.95.030 Design Standard. At least 80 percent of the lots in a development subject to this ordinance shall comply with one or more of the options in this section; provided, a development may, but is not required to, use the options in subsections 16.95.030B or 16.95.030C to comply with section 16.95.030.

A. Basic Requirement (see Figure 9). A lot complies with Section 16.95.030 if it:

1. Has a north-south dimension of 90 feet or more; and
2. Has a front lot line that is oriented within 30 degrees of a true east-west axis.

B. Protected Solar Building Line Option (see Figure 10). In the alternative, a lot complies with Section 16.95.030 if a solar building line is used to protect solar access as follows:

1. A protected solar building line is designated on the plat or in documents recorded with the plat; and

2. The protected solar building line is oriented within 30 degrees of a true east-west axis; and

3. There is at least 70 feet between the protected solar building line and the middle of the north-south dimension of the lot to the south, measured along a line perpendicular to the protected solar building line; and

4. There is at least 45 feet between the protected solar building line and the northern edge of the buildable area of the lot, or habitable structures are situated so that at least 80 per cent of their south-facing wall will not be shaded by structures or non-exempt vegetation.

C. Performance Option. In the alternative, a lot complies with Section 16.95.030 if:

1. Habitable structures built on that lot will have their long axis oriented within 30 degrees of a true east-west axis, and at least 80% of their ground floor south wall will be protected from shade by structures and non-exempt trees using appropriate deed restrictions; or

2. Habitable structures built on that lot will orient at least 32% of their glazing and at least 500 square feet of their roof area to faces within 30 degrees east or west of true south, and that glazing and roof areas are protected from shade by structures and non-exempt trees using appropriate deed restrictions.

16.95.040 Exemptions from Design Standard. A development is exempt from Section 16.95.030 if the Planning Commission finds the applicant has shown that one or more of the following conditions apply to the site. A development is partially exempt from Section 16.95.030 to the extent the Planning Commission finds the applicant has shown that one or more of the following conditions apply to a corresponding portion of the site. If a partial exemption is granted for a given development, the remainder of the development shall comply with Section 16.95.030.

A. Slopes. The site, or a portion of the site for which the exemption is sought, is sloped 20 per cent or more in a direction greater than 45 degrees east or west of true south, based on a topographic survey by a licensed professional land surveyor or USGS or other officially recognized topographic information.

B. Off-site shade. The site, or a portion of the site for which the exemption is sought, is within the shadow pattern of off-site features, such as but not limited to structures, topography, or non-exempt vegetation, which will remain after development occurs on the site from which the shade is originating.

1. Shade from an existing or approved off-site dwelling in a single family residential zone and from topographic features is assumed to remain after development of the site.

2. Shade from an off-site structure in a zone other than a single family residential zone is assumed to be the shadow pattern of the existing or approved development thereon or the shadow pattern that would result from the largest structure allowed at the closest setback on adjoining land, whether or not that structure now exists.

3. Shade from off-site vegetation is assumed to remain after development of the site if: the trees that cause it are situated in a required setback; or they are part of a developed area, public park, or legally reserved open space; or they are in or separated from the developable remainder of a parcel by an undevelopable area or feature; or they are part of landscaping required pursuant to local law.

4. Shade from other off-site sources is assumed to be shade that exists or that will be cast by development for which applicable local permits have been approved on the date a complete application for the development is filed.

C. On-site shade. The site, or a portion of the site for which the exemption is requested, is:

1. Within the shadow pattern of on-site features such as, but not limited to structures and topography which will remain after the development occurs; or

2. Contains non-exempt trees at least 30 feet tall and more than 6 inches in diameter measured 4 feet above the ground which have a crown cover over at least 80% of the site, or the relevant portion. The applicant can show such crown cover exists using a scaled survey or an aerial photograph. If granted, the exemption shall be approved subject to the condition that the applicant preserve at least 50% of the crown cover that causes the shade that warrants the exemption. The applicant shall file a note on the plat or other documents in the Office of the County Recorder binding the applicant to comply with this requirement. The City shall be made a party to any covenant or restriction created to enforce any provision of this ordinance. The covenant or restriction shall not be amended without written City approval.

D. Completion of phased subdivision. The site is part of a phased subdivision none of which was subject to the Solar Access Ordinance for New Development, and the site and the remainder of the unplatted portion of the phased subdivision contain no more than 20 percent of the lots in all phases of the subdivision.

16.95.050 Adjustments to Design Standard. The Planning Commission shall reduce the percentage of lots that must comply with Section 16.94.030 to the minimum extent necessary if it finds the applicant has shown it would cause or is subject to one or more of the following conditions.

A. Adverse impacts on density and cost or amenities.

1. If the design standard in Section 16.95.030 A is applied, either the resulting density is less than that proposed, or on-site site development costs (e.g. grading, water, storm drainage and sanitary systems, and road) and solar related off-site site development costs are at least 5% more per lot than if the standard is not applied. The following conditions, among others, could constrain the design of a development in such a way that compliance with Section 16.95.030A would reduce density or increase per lot costs in this manner. The applicant shall show which if any of these or other similar site characteristics apply in an application for a development.

a. The portion of the site for which the adjustment is sought has a natural grade that is sloped 10 per cent or more and is oriented greater than 45 degrees east or west of true south based on a topographic survey of the site by a professional land surveyor or USGS or other officially recognized topographic information.

b. There is a significant natural feature on the site, identified as such in the comprehensive plan or development ordinance, that prevents given streets or lots from being oriented for solar access, and it will exist after the site is developed.

c. Existing road patterns must be continued through the site or must terminate on-site to comply with applicable road standards or public road plans in a way that prevents given streets or lots in the development from being oriented for solar access.

d. An existing public easement or right-of-way prevents given streets or lots in the development from being oriented for solar access.

2. If the design standard in Section 16.95.030(A) applies to a given lot or lots, significant development amenities that would otherwise benefit the lot(s) will be lost or impaired. Evidence that a significant diminution in the market value of the lot(s) would result from having the lot(s) comply with Section 16.95.030A is relevant to whether a significant development amenity is lost or impaired.

B. Impacts of existing shade. The shadow pattern from non-exempt trees cover over at least 80% of the lot and at least 50% of the shadow pattern will remain after development of the lot. The applicant can show the shadow pattern using a scaled survey of non-exempt trees on the site or using an aerial photograph.

1. Shade from non-exempt trees is assumed to remain if: the trees are situated in a required setback; or they are part of an existing or proposed park, open space, or recreational amenity; or they are separated from the developable remainder of their parcel by an undevelopable area or feature; or they are part of landscaping required pursuant to local law; and they do not need to be removed for a driveway or other development.

2. Also, to the extent the shade is caused by on-site trees or off-site trees on land owned by the applicant, it is assumed to remain if the applicant files in the office of the County Recorder a covenant binding the applicant to retain the trees causing the shade on the affected lots.

16.95.060 Protection from Future Shade. Structures and non-exempt vegetation must comply with the Solar Balance Point provisions in Chapter 16.100 on all lots in a development subject to the Solar Access Ordinance for New Development, including lots for which exemptions or adjustments to the Solar Access Ordinance for New Development have been granted.

The applicant shall file a note on the plat or other documents in the office of the County Recorder binding the applicant and subsequent purchasers to comply with the future shade protection standards in Section 16.95.060. The City shall be made a party of any covenant or restriction created to enforce any provision of this ordinance. The covenant or restriction shall not be amended without written City approval.

16.95.070 Application. An application for approval of a development subject to this ordinance shall include:

A. Maps and text sufficient to show the development complies with the solar design standard of Section 16.95.030, except for lots for which an exemption or adjustment from Section 16.95.030 is requested, including at least:

1. The north-south lot dimension and front lot line orientation of each proposed lot.

2. Protected solar building lines and relevant building site restrictions, if applicable.
3. For the purpose of identifying trees exempt from Section 16.95.060, a map showing existing trees at least 30 feet tall and over 6 inches diameter at a point 4 feet above grade, indicating their height, diameter and species, and stating that they are to be retained and are exempt.
4. Copies of all private restrictions relating to solar access.

B. If an exemption or adjustment to Section 16.95.030 is requested, maps and text sufficient to show that given lots or areas in the development comply with the standards for such an exemption or adjustment in Section 16.95.040 or 16.95.050, respectively.

16.95.080 Process.

Compliance with Chapter 16.95 shall be determined by the approval authority in conjunction with an application for a major or minor partition (Chapter 16.60) or subdivision (Chapter 16.62 and 16.64).

CHAPTER 16.100

SOLAR BALANCE POINT STANDARDS

Sections:

16.100.010	Purpose
16.100.020	Applicability
16.100.030	Solar Site Plan Required
16.100.040	Maximum Shade Point Height Standard
16.100.050	Exemption from the Maximum Shade Point Height Standard
16.100.060	Adjustments to the Maximum Shade Point Height Standard
16.100.070	Analysis of Allowed Shade on Solar Feature
16.100.080	Solar Balance Point
16.100.090	Yard Setback Adjustment
16.100.100	Review Process

16.100.010. Purpose. The purposes of this ordinance are to promote the use of solar energy, to minimize shading of structures by structures and accessory structures, and, where applicable, to minimize shading of structures by trees. Decisions related to this ordinance are intended to be ministerial.

16.100.020. Applicability. This ordinance applies to an application for a building permit for all structures in the R-1, R-1.5, and R-2 zones and all single family detached structures in any zone, except to the extent the approval authority finds the applicant has shown that one or more of the conditions listed in sections 16.100.050 or 16.100.060 exists, and exemptions or adjustments provided for there are warranted. In addition, non-exempt vegetation planted on lots subject to the provisions of Section 16.92.060 of the Solar Access Ordinance for New Development shall comply with the shade point height standards as provided in sections 16.100.040 and 16.100.050 of this chapter.

16.100.030. Solar Site Plan Required. An applicant for a building permit for a structure subject to this ordinance shall submit a site plan that shows:

- A. The maximum shade point height allowed under section 16.100.040;
- B. If the maximum shade point height is adjusted pursuant to section 16.100.040, the average elevation of the rear property line ;
- C. The location of the shade point, its height relative to the average elevation of the front lot line or the elevation at the midpoint of the front lot line, and its orientation relative to true south; and, if applicable,
- D. The solar balance point for the structure as provided in section 16.100.080.

16.100.040. Maximum Shade Point Height Standard. The height of the shade point shall comply with either subsection A or B below.

A. Basic Requirement.

- 1. The height of the shade point shall be less than or equal to the height specified in Table A or computed using the following formula. The height of the shade point shall be measured from the shade point to either the average elevation at the front lot line or the elevation at the midpoint of the front lot line. If necessary interpolate between the 5 foot dimensions listed in Table A.

$$H = \frac{(2 \times \text{SRL}) - N + 150}{5}$$

Where:

- H = the maximum allowed height of the shade point (see Figures 4 and 5);
- SRL = shade reduction line (the distance between the shade point and the northern lot line, see Figure 6); and
- N = the north-south lot dimension, provided that a north-south lot dimension more than 90 feet shall use a value of 90 feet for this section.

- 2. Provided, the maximum allowed height of the shade point may be increased one foot above the amount calculated using the formula or Table A for each foot that the average grade at the rear property line exceeds the average grade at the front property line

TABLE A
MAXIMUM PERMITTED SHADE POINT HEIGHT (In Feet)

Distance to Shade Reduc- ion Line from northern lot line (in feet)	North-south lot dimension (in feet)													
	100+	95	90	85	80	75	70	65	60	55	50	45	40	
70	40	40	40	41	42	43	44							
65	38	38	38	39	40	41	42	43						
60	36	36	36	37	38	39	40	41	42					
55	34	34	34	35	36	37	38	39	40	41				
50	32	32	32	33	34	35	36	37	38	39	40			
40	28	28	28	29	30	31	32	33	34	35	36	37	38	
35	26	26	26	27	28	29	30	31	32	33	34	35	36	
30	24	24	24	25	26	27	28	29	30	31	32	33	34	
25	22	22	22	23	24	25	26	27	28	29	30	21	32	
20	20	20	20	21	22	23	24	25	26	27	28	29	30	
15	18	18	18	19	20	21	22	23	24	25	26	27	28	
10	16	16	16	17	18	19	20	21	22	23	24	25	26	
5	14	14	14	15	16	17	18	19	20	21	22	23	24	

B. Performance Option. The proposed structure, or applicable non-exempt vegetation, will shade not more than 20 per cent of the south-facing glazing of existing habitable structure(s), or, where applicable, the proposed structure or non-exempt vegetation comply with Section 16.95.030(B) and (C) of the Solar Access Ordinance for New Development. If Section 16.95.030(B), Protected Solar Building Line, is used, non-exempt trees and the shade point of structures shall be set back from the protected solar building line 2.5 feet for every 1 foot of height of the structure or of the mature height of non-exempt vegetation over 2 feet.

16.100.050. Exemption from the Maximum Shade Point Height Standard. The City Planner shall exempt a proposed structure or non-exempt vegetation from sections 16.100.030 and 16.100.040 of this chapter if the applicant shows that one or more of the conditions in this section exist, based on plot plans or plats, corner elevations or other topographical data, shadow patterns, suncharts or photographs, or other substantial evidence submitted by the applicant.

A. Pre-existing shade. The structure or applicable non-exempt vegetation will shade an area that is shaded by one or more of the following:

1. An existing or approved building or structure;
2. A topographic feature; or
3. A non-exempt tree that will remain after development of the site. It is assumed a tree will remain after development if it: is situated in a building setback required by local law; is part of a developed area or landscaping required by local law, a public park or landscape strip, or legally reserved open space; is in or separated from the developable remainder of a parcel by an undevelopable area or feature; or is on the applicant's property and not affected by the development. A duly executed covenant also can be used to preserve trees causing such shade.

B. Slope. The site has an average slope that exceeds 20 percent in a direction greater than 45 degrees east or west of true south based on a topographic survey by a licensed professional land surveyor or USGS or other officially recognized topographic information.

C. Insignificant benefit. The proposed structure or non-exempt vegetation shades one or more of the following:

1. An undevelopable area;
2. The wall of an unheated space, such as a typical garage;
3. Less than 20 square feet of south-facing glazing; or
4. An undeveloped lot, other than a lot that was subject to the Solar Access Ordinance for New Development, where:
 - a. There are at least four single family detached or attached homes within 250 feet of the lot within the same subdivision or a phase of the subdivision; and
 - b. A majority of the homes identified in subsection 4.a. above have an average of less than 20 square feet of south-facing glazing.

D. Public Improvement. The proposed structure is a publicly owned improvement.

16.100.060. Adjustments to the Maximum Shade Point Height Standard. The City Planner shall increase the maximum permitted height of the shade point determined using section 16.100.040 to the extent it finds the applicant has shown one or more of the following conditions exist, based on plot plans or plats, corner elevations or other topographical data, shadow patterns, suncharts or photographs, or other substantial evidence submitted by the applicant.

A. Physical conditions. Physical conditions preclude development of the site in a manner that complies with section 16.100.040, due to such things as a lot size less than 3000 square feet, unstable or wet soils, or a drainage way, public or private easement, or right of way.

B. Conflict between the Maximum Shade Point Height and Allowed Shade on the Solar Feature Standards. A proposed structure may be sited to meet the solar balance point standard described in section 16.100.080 or be sited as near to the solar balance point as allowed by section 16.100.080, if:

1. When the proposed structure is sited to meet the maximum shade point height standard determined using section 16.100.040, its solar feature will potentially be shaded as determined using section 16.100.070; and
2. The application includes a form provided for that purpose by the City that:
 - a. Releases the applicant from complying with section 16.100.040 and agrees that the proposed structure may shade an area otherwise protected by section 16.100.040.
 - b. Releases the City from liability for damages resulting from the adjustment; and
 - c. Is signed by the owner(s) of the properties that would be shaded by the proposed structure more than allowed by the provisions of section 16.100.040.
3. Before the City issues a permit for a proposed structure for which an adjustment has been granted pursuant to section 16.100.060 B, the applicant shall file the form provided for in subsection B.2 above in the office of the county recorder with the deeds to the affected properties.

16.100.070. Analysis of Allowed Shade on Solar Feature

A. An applicant may, but is not required to, perform the calculations in or comply with the standards of section 16.100.070.

B. Applicants are encouraged to design and site a proposed habitable structure so that the lowest height of any solar feature(s) will not be shaded by buildings or non-exempt trees on lot(s) to the south. The applicant should complete the following calculation procedure to determine if solar feature(s) of the proposed structure will be shaded. To start, the applicant should choose which of the following sources of shade originating from adjacent lot(s) to the south to use to calculate the maximum shade height at the north property line:

1. Existing structure(s) or non-exempt trees; or

2. The maximum shade that can be cast from future buildings or non-exempt trees, based on Table C. If the lot(s) to the south can be further divided, then the north-south dimension is assumed to be the minimum lot width required for a new lot in that zone.

C. The height of the lowest point of any solar feature of the proposed structure is calculated with respect to either the average elevation or the elevation at the midpoint of the front lot line of the lot to the south.

D. The applicant can determine the height of the shadow that may be cast upon the applicant's solar feature by the source of shade selected in subsection B by using the following formula or Table B.

$$\text{SFSH} = \text{SH} - (\text{SGL}/2.5)$$

Where:

SFSH = the allowed shadow height on the solar feature (see Figure 8)

SH = the height of the shade at the northern lot line of lot(s) to the south as determined in Subsection B

SGL = the solar gain line (the distance from the solar feature to the northern lot line of adjacent lot(s) to the south, see Figure 7)

TABLE B
MAXIMUM PERMITTED HEIGHT OF SHADOW AT SOLAR FEATURE (feet)

Distance from Solar Gain Line to Lot Line (in feet)	Allowed Shade Height at Northern Lot Line of Adjacent Lot(s) to the South (feet)											
	22	21	20	19	18	17	16	15	14	13	12	
50	2	1										
45	4	3	2	1								
40	6	5	4	3	2	1						
35	8	7	6	5	4	3	2	1				
30	10	9	8	7	6	5	4	3	2	1		
25	12	11	10	9	8	7	6	5	4	3	2	
20	14	13	12	11	10	9	8	7	6	5	4	
15	16	15	14	13	12	11	10	9	8	7	6	
10	18	17	16	15	14	13	12	11	10	9	8	
5	20	19	18	17	16	15	14	13	12	11	10	

Table C may be used to determine (SH) in the above formula.

TABLE C

North-south lot dimension of adjacent lot(s) to the south	100	95	90	85	80	75	70	65	60	55	50	45	40
Allowed shade height at the property line of adjacent lot(s) to south	12	12	12	13	14	15	16	17	18	19	20	21	22

E. If the allowed shade height on the solar feature calculated in subsection D is higher than the lowest height of the solar feature calculated in subsection C, the applicant shall be encouraged to consider changes to the house design or location which would make it practical to locate the solar feature so that it will not be shaded in the future.

16.100.080. Solar Balance Point. If a structure does not comply with the maximum shade point height standard in section 16.100.040 and the allowed shade on a solar feature standard in Section 16.100.070, then the solar balance point of the lot shall be calculated (see Figure 8). The solar balance point is the location on the lot where a structure would be an equal distance between the locations required by the maximum shade point height standard and the allowed shade on a solar feature standard.

16.100.090. Yard Setback Adjustment. The City shall grant an adjustment to the side, front and/or rear yard setback requirement(s) as indicated below if necessary to build a proposed structure so it complies with either the shade point height standard in section 18.100.040, the allowed shade on a solar feature standard in section 16.100.070, or the solar balance point standard in section 16.100.080 as provided herein (see Figure 8). This adjustment is not intended to encourage reductions in available solar access or unnecessary modification of setback requirements, and shall apply only if necessary for a structure to comply with the applicable provisions of this chapter.

A. R-1 Zone:

1. A front yard setback may be reduced to not less than *19* feet on the side with the driveway and 12 feet in other locations.
2. A rear yard setback may be reduced to not less than *10* feet.
3. A side yard setback may be reduced to not less than *5* feet.

B. R-1.5 Zone:


1. A front yard setback may be reduced to not less than *19* feet on the side with the driveway and 12 feet in other locations.
2. A rear yard setback may be reduced to not less than *10* feet.
3. A side yard setback may be reduced to not less than *5* feet.

C. R-2 Zone:

1. A front yard setback may be reduced to not less than *19* feet on the side with the driveway and 12 feet in other locations.
2. A rear yard setback may be reduced to not less than *10* feet.
3. A side yard setback may be reduced to not less than *5* feet.

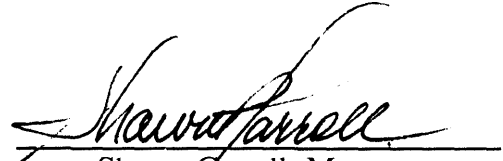
16.100.100. Review process. Compliance with Chapter 16.100 shall be determined by the City Planner in conjunction with an application for a building permit.


SUBMITTED to the Council and read the first time at a regular meeting thereof on Wednesday, December 4, 1991, ordered posted as provided by the Canby City Charter and scheduled for second reading and action of the Canby City Council at a regular meeting thereof on Wednesday, December 18, 1991, commencing at the hour of 7:30 p.m., in the Council Meeting Chambers at Canby City Hall in Canby, Oregon.


Marilyn K. Perkett
City Recorder

ENACTED by the Canby City Council at a regular meeting thereof on December 18, 1991 by the following vote:

YEAS 6 NAYS 0


Shawn Carroll, Mayor

ATTEST:

Marilyn K. Perkett, City Recorder