



City of Ojai
Community Development Department

Solar Access Packet

Solar Access Height Limitations

Ojai Municipal Code Section:

Sec. 10-2.405. Protection and enhancement of solar access

Created by the Solar Access Ordinance:

Ordinance #840, effective 06/13/14

Rules and Regulations Pertaining to the Protection and Enhancement of Solar Access in the City of Ojai

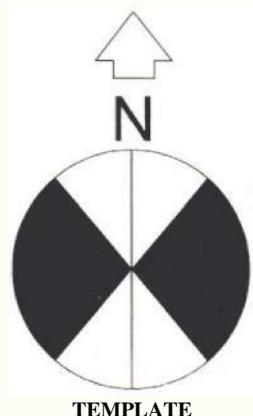
Solar Access Shadow Plan Preparation Instructions

This page intentionally left blank



City of Ojai

SOLAR ACCESS HEIGHT LIMITATIONS

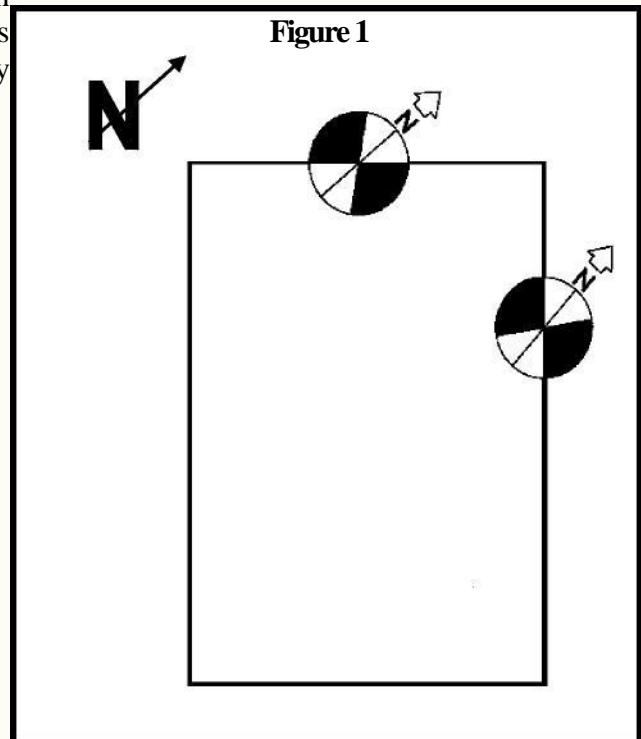


Use the following steps to determine whether your structure complies with the Solar Access Ordinance (OMC Sec. 10-2.405). **This ordinance only applies in residential zones, excluding the (VMU) zone.** The purpose of the Solar Access Ordinance is to ensure that your building does not cast a significant shadow on your neighbor's building. This is determined by projecting a shadow that your building would cast on December 21, the day when the sun is lowest in the sky, and your building casts its longest shadow.

The sun shines from the south; therefore your building casts a shadow to the north. If your property is oriented towards one of the cardinal directions (North, South, East, or West), you will usually have one northern neighbor. Otherwise, you may have more than one northern neighbor, and you may need to determine your height limitations with respect to more than one other parcel. The first step in applying the Solar Access Ordinance to your property is to find all of your northerly property lines.

1. The City defines the northerly lot lines as, "The property line which forms a generally north facing boundary of the lot, and which has a bearing greater than or equal to 40° from either true north or true south." This definition doesn't mean much to most people, so here is an easy way to find your northerly lot lines. First find True North. Then eliminate all lot lines which are obviously not on the northern edges of the property.

To determine exactly which of the remaining lot lines are northerly lot lines, use the template which is located on the upper right corner of this page. Place the center of the circle on one of the remaining lot lines. Point the north arrow towards True North. If the lot line in question runs through the black area, it is a northerly property line. In Figure 1, there are two northerly property lines.



2. Establish the “base elevation point” on the east or west elevation plans by finding the highest point of contact between the building and the ground (See Figure 2). On a flat lot, the base elevation point will be the ground. On a sloped lot, the base elevation point will be on the uphill side of the house. The east elevation shows the building as if you were viewing it with your back facing east. The west elevation shows as if you were viewing it with your back facing west.
3. Draw the vertical extension of the northerly property line by drawing a vertical line at the northerly property line. See Figure 3, part A.
4. Draw a horizontal line from the base elevation point to the vertical extension of the northerly property line that you drew in Step 3. See Figure 3, part B.
5. On the vertical extension of the northerly property line, mark off a height of either 12 or 18 feet above the base elevation, depending on the zone in which the building is proposed. See the following chart and Figure 4.

Zone	Length of vertical line
R-1, R-O, R-O-1/2, R-O-1, R-O-2, R-O-4, R-2	12 feet
R-3, R-S	18 feet
VMU	Exempt

6. From the mark drawn on the vertical extension of the northerly property line in a previous step, draw a diagonal line towards the proposed building or structure. The diagonal line should be drawn at a 30° angle above horizontal. See Figure 5.
 - If the building is **below** the 30° line, it is **in compliance** with the solar height ordinance.
 - If the building is **above** the 30° line, it is **not in compliance** with the solar height ordinance

NOTE: There are exemptions to these requirements for certain architectural features and for certain circumstances. See OMC Sec. 10-2.405(c) for more information

Figure 2

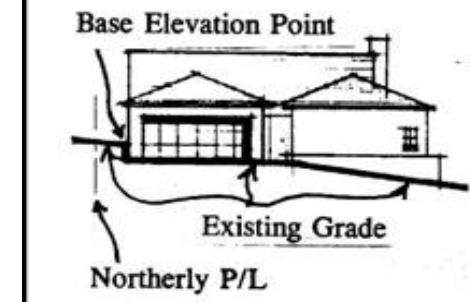


Figure 3

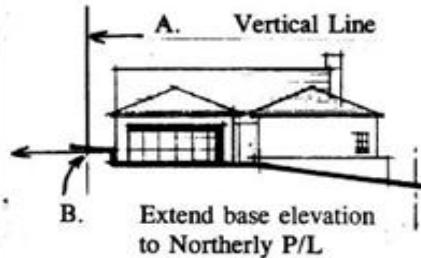


Figure 4

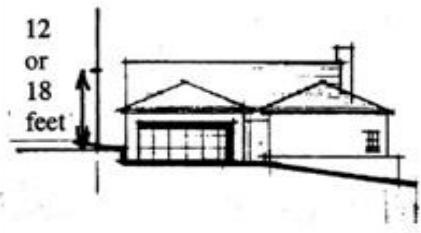
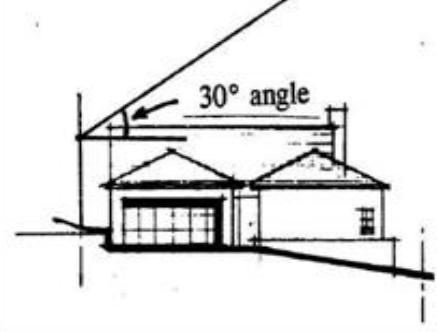


Figure 5





City of Ojai

CREATED BY THE SOLAR ACCESS ORDINANCE: ORDINANCE #840 EFFECTIVE 06/13/14

OMC Sec. 10-2.405. Protection and enhancement of solar access.

(a) *Definitions.* For the purposes of this section, the following words and phrases shall have the meaning indicated, unless the context or usage clearly requires a different meaning:

- (1) *Base elevation.* The elevation of the highest point of contact of a structure with the adjacent ground. For the purposes of this determination, all fences, covered and uncovered walkways, driveways, patio covers and other similar elements shall be considered separate structures.
- (2) *Northerly lot line.* Any lot line, of which there may be more than one per lot, that forms a generally north facing boundary of a lot and has a bearing greater than or equal to forty (40) degrees from either true north or true south. For curved lot lines, the bearing of the lot line at any point shall be the bearing of the tangent to the curve at that point.
- (3) *Plan view.* A plot plan of the parcel which shows the horizontal dimensions of a parcel and each structure on the parcel.
- (4) *Residential zone.* The zones described in Section 10-2.402.
- (5) *Shadow plan.* A plot plan which shows the extent of shading caused by a proposed structure and is in compliance with the rules and regulations approved pursuant to subsection (d).

(b) *Height limitation.* The maximum elevation of each point on a structure in a residential zone as measured from the base elevation shall not exceed the sum of: (1) eighteen (18') feet in an R-3 and R-S zone or twelve (12') feet in all other residential zones; (2) plus the additional height allowed above the base height by a line starting at the top of the base height allowance and drawn 30 degrees from horizontal toward the structure at a point directly over the nearest northerly lot line as measured horizontally on the plan view (east or west building elevations) of the structure. Any height limitation imposed by this section shall be in addition to any other height limitation imposed in Section 10-2.404, such that the more restrictive height limitation shall apply except as provided in subsection (c), Exemptions.

(c) *Exemptions.* The following shall be exempt from the height limitations of subsection (b):

- (1) Any portion of a structure in existence, for which a valid building permit was issued prior to January 1, 2015.
- (2) Any portion of a structure which received planning approval prior to January 1, 2015.
- (3) Any flagpole, antenna, ornamental spire, chimney, or other building element less than four (4') feet long each horizontal dimension.
- (4) Any utility pole and line.
- (5) Any portion of a structure for which a shadow plan is prepared and submitted by the applicant demonstrating that shadows cast by the portion of the structure at 9:00 a.m., noon, and 3:00 p.m. Pacific Standard Time on December 21st will:
 - (A) Not exceed the boundaries of a simultaneous shadow cast by a legally existing structure, or by an hill or other topographical feature other than trees or other vegetation; or
 - (B) Not shade that portion of any adjacent residentially-zoned lot which is occupied by a dwelling or covered parking area or which could legally and without modification of the required setbacks be occupied in the future by a dwelling or covered parking area.
- (6) Any single-story residential building whose base elevation is less than fifteen (15) feet.
- (7) Any residential building in a neighborhood for which a neighborhood plan or specific plan has been approved, if that neighborhood plan or specific plan includes solar access provisions specific to that neighborhood.
- (8) Any residential building on a lot exceeding twenty thousand (20,000) square feet for which the Planning Commission has granted a CUP granting greater heights after making the following findings:
 - (A) The building will not shade that portion of any adjacent residentially-zoned lot which is occupied by a dwelling; and
 - (B) The characteristics of the adjacent residentially zoned lot or lots to the north are such that solar access for future dwellings is not unreasonably limited.

(d) *Rules and regulations.*

- (1) The City Council may, by resolution, promulgate rules and regulations for the administration and interpretation of this section.
- (2) The City Council may, by resolution, promulgate rules and regulations for modification of the solar access height limitations where the modification is necessary to prevent unreasonable restriction.

(§ 3, Ord. 840, eff. June 13, 2014)



City of Ojai

GUIDELINES PERTAINING TO THE PROTECTION AND ENHANCEMENT OF SOLAR ACCESS

1. Authority

These rules and regulations are promulgated and approved pursuant to Ojai Municipal Code Section 10-2.405.

2. Policy for Protection and Enhancement of Solar Access

a. **GOALS.** It is the goal of the City of Ojai to promote the use of renewable energy resources, including solar energy. Since the present and future applications of solar energy are well suited to the needs of the residential sector, the City Council adopted Ordinance No. 840. The intent of the ordinance is to:

- i. Establish height limitations for structures constructed hereafter in a residential zone so as to provide a balance between solar rights and development rights. The Municipal Code contains a formula that allows the maximum building height to increase in relation to the distance from a northerly lot line (OMC §10-2.405).
- ii. Allow the Community Development Department to establish guidelines regarding administration and interpretation of the Municipal Code Sections related to solar access, subject to City Council approval.

It is not the intent of the ordinance to reduce the allowable number of units on any lot, nor to discourage the development of affordable housing. It is not the intent of the ordinance to establish height limitations on vegetation, because existing state law on this subject is considered adequate for the time being. Neither is it the intent of the ordinance to consider shadows cast by vegetation as a permanent shading source. Therefore, a structure shall not be granted relief from the height limitations on the grounds that its shadow fall within those cast by existing vegetation.

b. **IMPLEMENTATION.** The Community Development Director shall implement Ordinance No. 840 through:

- i. Enforcing the height limitation contained in OMC §10-2.405; and
- ii. Facilitating the granting of appropriate modifications.

3. Compliance with Height Limitations

- a. **HEIGHT LIMITATIONS.** The allowable height of any point on a structure in a residential zone is set forth in §10-2.405 of the Ojai Municipal Code. The Community Development Director may, at any time prior to or during construction, require calculations demonstrating compliance with such limitations. The height limitations is related to the distance from a northerly lot line, which is defined so as to include any lot line facing within 40 degrees of north. The intention of this definition is to include both the northwest and northeast lot line on a lot that is oriented 45 degrees away from the cardinal points of the compass. This is considered necessary so as to provide protection to southeast and southwest facing walls and roof areas.
- b. **BASE ELEVATION.** The elevation of the highest point of contact of a structure with the adjacent ground. For the purposes of this determination, all fences, covered and uncovered walkways, driveways, patio covers and other similar elements shall be considered separate structures.
- c. **SHADOW DIAGRAMS.**
 - i. In order to obtain an exemption based on OMC §10-2.405(c)(5), the applicant must submit an acceptable shadow diagram including the following information:
 - (1) A true north arrow;
 - (2) Topographical features of the proposed site and any adjacent northerly lots, and existing improvements thereon;
 - (3) Plan view and exterior elevation view of the proposed structure showing the location of all northerly property lines on both;
 - (4) Diagrams of the shadows cast at 9:00 a.m., Noon, and 3:00 p.m. Pacific Standard Time on December 21 by the portion of the structure being considered for an exemption.
 - (5) Any other information deemed necessary by the Community Development Director.
 - ii. The shadow diagram may be included on the site plan or may be a separate diagram.
 - iii. The Community Development Director shall provide a sample shadow diagram as a part of the informational materials prepared to implement OMC §10-2.405.

4. Modification of Solar Access Height Limitations

- a. MUNICIPAL CODE REFERENCE. Ojai Municipal Code §10-2.405 allows modification of the solar access height limitations to be granted where the modification is necessary to prevent an unreasonable restriction.
- b. CRITERIA FOR DETERMINATION OF UNREASONABLE RESTRICTION.
 - i. MAINTAINING ALLOWABLE NUMBER OF DWELLING UNITS. In the event that the solar access height limitations result in a reduction in the otherwise allowable number of dwelling units in a residential structure or development, including density bonus, such situation may be considered an unreasonable restriction if all of the following criteria apply:
 - (1) Every feasible effort has been made for the proposed development or structure to comply with the solar access height limitations established by OMC §10-2.405, and the development or structure is determined to be unable to achieve the otherwise allowable number of dwelling units without violating such height limitations; and
 - (2) The proposed infringement on solar access is the minimum necessary to permit the allowable number of units on the property.

Applicants desiring a modification on the basis of such criteria shall provide documentation demonstrating that the above criteria are met and demonstrating the reason that the non-complying portion of the structure or development cannot be relocated or redesigned so as to be in compliance.

- ii. AFFORDABLE HOUSING. An affordable housing density bonus development containing dwelling units meeting the affordability criteria of the General Plan Housing Element and which is subject to City monitoring of rent or resale price levels for a minimum of ten years shall receive special consideration in the granting of modifications of the solar access height limitations. If compliance with such limitations will result in significant additional costs for the construction phase of development, this additional cost may be considered an unreasonable restriction and may be considered a density bonus concession. An applicant desiring modification based on these criteria shall provide adequate documentation showing the extent of the extra costs associated with compliance and demonstrating that the proposed infringement on solar access is the minimum necessary to prevent significant extra construction costs.
- iii. CONSIDERATION OF SECOND STORY ADDITIONS. In cases of second story additions to dwellings in residential zones, a modification of the solar access height limitations may be granted on the basis of an unreasonable restriction such that the height limitation would be the same as that specified

for all residential zones by OMC §10-2.405 providing that all of the following criteria apply:

- (1) All portions of the proposed addition which will violate the solar access height limitations, except for roof overhangs of up to two (2) feet, are entirely within the perimeter of a structure which was constructed or was issued a building permit prior to 6/13/2014 the effective date of the ordinance first enacting OMC §10-2.405.
- (2) The horizontal dimensions of the proposed addition, excluding roof overhangs, as measured parallel to all northerly lot lines of the lot upon which it is proposed, do not exceed twenty five (25) feet, except that portions of the addition that comply with the solar access height limitations shall be exempt from the provisions of this sentence.
- (3) All portions of the addition which violate the solar access height limitations have been designed so as to cast no shadow at 9:00 a.m., Noon, and 3:00 p.m. PST on December 21 on any solar collector in existence, or for which a building permit has been issued. For the purposes of this subsection, a solar collector shall be any device which is designed primarily to collect solar energy and which contains an area of twenty four (24) square feet or more.
- (4) The amount of direct sunlight on all south facing windows on any adjacent lot at 9:00 a.m., Noon, and at 3:00 p.m. PST on December 21 following construction of the proposed addition will be greater than or equal to the amount of such sunlight in the event that the maximum addition in compliance with the solar access height limitations were to be constructed. The effect of shade caused by existing vegetation shall not be a consideration in this determination. For the purposes of this subsection, south facing windows shall include any window in a dwelling which faces 45 degrees or less from true south and which separates heated from non-heated space.

Applicants desiring a modification of the solar access height limitations based on these criteria shall provide adequate documentation, including but not limited to shadow diagrams as described in Section 3, Paragraph C above, demonstrating that the criteria are met.

5. Policy Statement in Favor of Solar Energy.

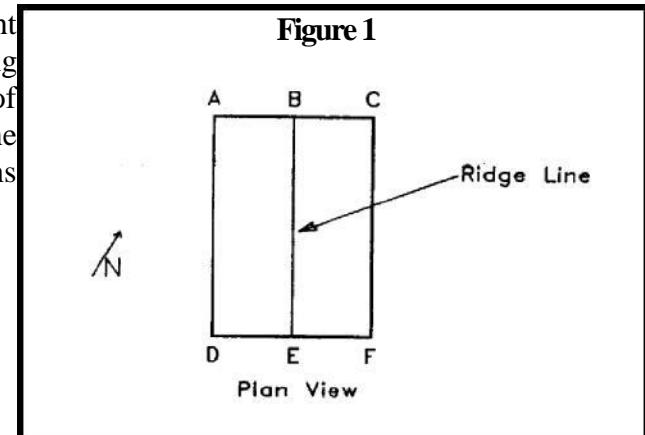
As a part of the City's support for the use of solar energy, applications for such modifications shall be given special consideration and regarded favorably as long as the modifications would not substantially impair other purposes and intents of the Zoning Ordinance. Permits for new solar installations shall receive permit application, processing and tracking priority consistent with State law governing such permits.



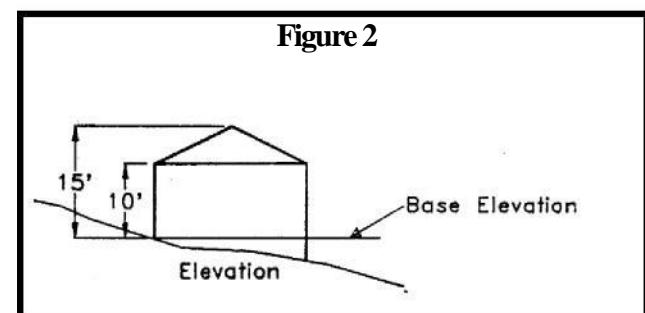
City of Ojai SOLAR ACCESS SHADOW DIAGRAM PREPARATION INSTRUCTIONS

If your building does not meet the Solar Access Height limitations (OMC §10-2.405(b)), use the following procedure to prepare a shadow diagram for the hours of 9:00 a.m., Noon & 3:00 p.m. on December 21 to determine whether your structure qualifies for one of the exemptions contained in Section §10-2.405(c).

1. On the site plan, locate the prominent shadow casting portions of the proposed structure, such as ridge lines, eaves, and parapets. (Points A, B, C, D, E, and F in Figure 1).



2. Determine the height of each of these points above the adjacent property where shadows will be cast. (For simplicity you may assume that the property shown in Figure 2 is flat and at the same elevation as the "Base Elevation" of your structure as defined in OMC §10-2.405(a)(1))
3. Use the following chart to determine the direction and length of shadows for the particular time of day in question.



	TIME OF DAY, DECEMBER 21 (WINTER SOLSTICE)		
	9:00 a.m.	Noon	3:00 p.m.
Direction of Shadow	Northwest (N 45 W)	North	Northeast (N 45 E)
Length of Shadow	3.1 times height	1.5 times height	3.1 times height

Draw lines accordingly on the site plan. Connect the ends of the shadow lines to create a shadow pattern for the structure. The prominent shadow casting portions of the proposed structure, such as ridge lines, eves and parapets are shown on the diagrams below.

