



City of Santa Barbara

SOLAR ACCESS PACKET

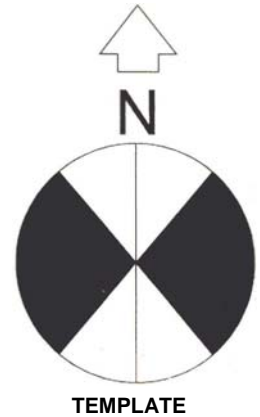
- Solar Access Height Limitations
- S.B. Municipal Code Sections Created or Amended by the Solar Access Ordinance: Ordinance #4426, Adopted 10/7/86
- Rules and Regulations Pertaining to the Protection and Enhancement of Solar Access in the City of Santa Barbara
- Solar Access Shadow Plan Preparation Instructions

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City of Santa Barbara

SOLAR ACCESS HEIGHT LIMITATIONS

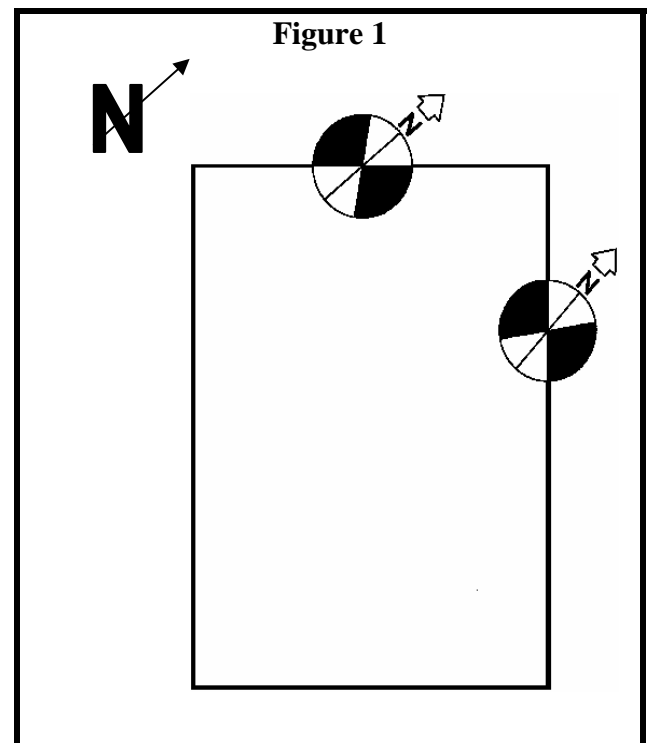


Use the following steps to determine whether your structure complies with the Solar Access Ordinance (SBMC Chapter 28.11). **This ordinance only applies in residential zones.** The purpose of the Solar Access Ordinance is to ensure that your building does not cast a significant shadow on your neighbor's 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.

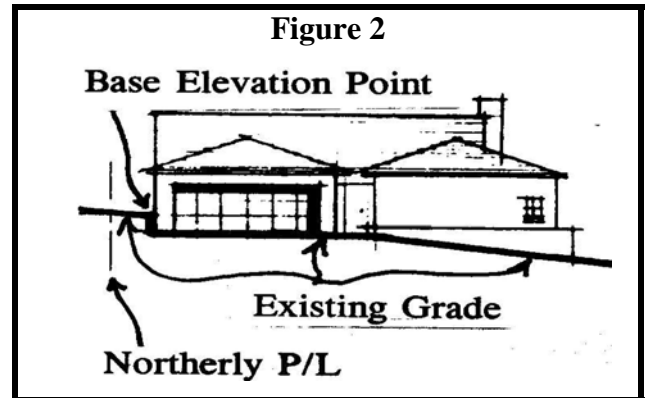
The sun shines from the south; therefore your building casts a shadow to the north. If your property is oriented towards one of the cardinal directions (North, South, East, or West), such as in the Outer State Street area, you will usually have one northerly neighbor. If your property is located in the downtown area, it is oriented approximately 45 degrees away from the cardinal directions (Northeast, Northwest, Southeast or Southwest), and you may have more than one northerly neighbor. 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.

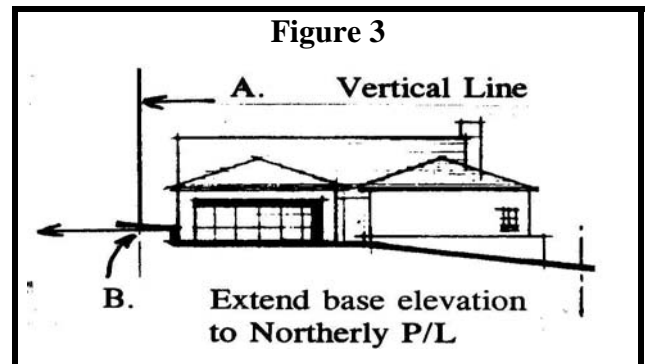
To determine exactly which of the remaining lot lines are northerly lot lines, use the template which is located on the upper right corner of this page. Place the center of the circle on one of the remaining lot lines. Point the north arrow towards True North. If the lot line in question runs through 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 your if you were viewing it with your back facing west.

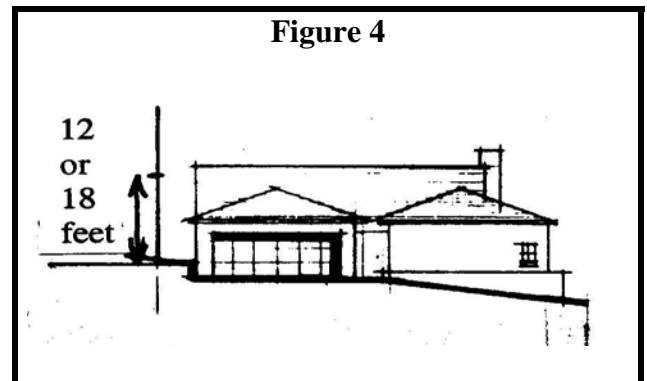


3. Draw the vertical extension of the northerly property line by drawing a vertical line at the northerly property line. See Figure 3, part A.
4. Draw a horizontal line from the base elevation point to the vertical extension of the northerly property line that you drew in Step 3. See Figure 3, part B.



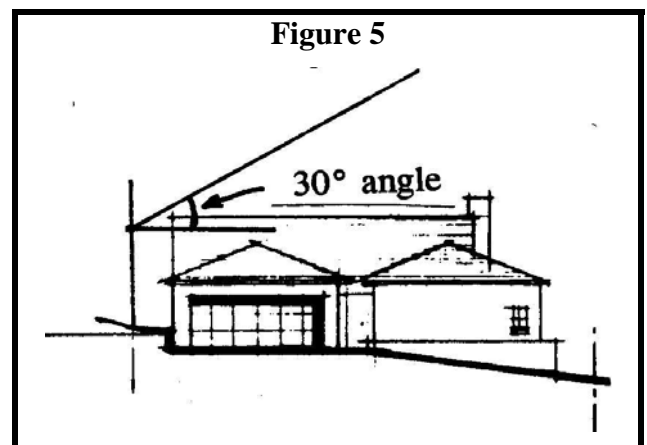
5. On the vertical extension of the northerly property line, mark off a height of either 12 or 18 feet above the base elevation, depending on the zone in which the building is proposed. See the following chart and Figure 4.

Zone	Length of vertical line
A, E, R-1, R-2	12 feet
R-3, R-4	18 feet



6. From the mark drawn on the vertical extension of the northerly property line in a pervious 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 SBMC Chapter 28.11 for more information.



City of Santa Barbara

SANTA BARBARA MUNICIPAL CODE SECTIONS CREATED OR AMENDED BY THE SOLAR ACCESS ORDINANCE: ORDINANCE #4426, ADOPTED 10/7/86

Chapter 28.11 PROTECTION AND ENHANCEMENT OF SOLAR ACCESS

28.11.010 Definitions.

For the purposes of this Chapter, the following words and phrases shall have the meaning indicated, unless the context or usage clearly requires a different meaning:

A. **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.

B. **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 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.

C. **PLAN VIEW.** A plot plan of the parcel which shows the horizontal dimensions of a parcel and each structure on the parcel.

D. **RESIDENTIAL ZONE.** An A-1, A-2, E-1, E-2, E-3, R-1, R-2, R-3 or R-4 zone as defined in Title 28 of the Santa Barbara Municipal Code.

E. **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 Section 28.11.040 of this Chapter.

F. **SOLAR ACCESS.** The ability of a location to receive direct sunlight as provided by the height limitations of Section 28.11.020 of this Chapter. (Ord. 4426, 1986.)

28.11.020 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 (i) eighteen (18) feet in an R-3 or R-4 zone or twelve (12) feet in all other residential zones and (ii) fifty-eight percent (58%) of the shortest distance from that point to the nearest northerly lot line as measured horizontally on the plan view of the structure. Any height limitation imposed by this Section shall be in addition to any other height limitation imposed in the Charter or this Code, such that the more restrictive height limitation shall apply. (Ord. 4426, 1986.)

28.11.030 Exemptions.

The following shall be exempt from the height limitations of Section 28.11.020:

A. Any portion of a structure in existence, or for which a valid building permit was issued, prior to the effective date of the ordinance first enacting this Chapter.

B. Any portion of a structure which received Preliminary Approval by the Architectural Board of Review prior to the effective date of the ordinance first enacting this Chapter.

C. Any flagpole, antenna, ornamental spire, chimney, or other building element less than four (4) feet along each horizontal dimension.

D. A utility pole and line.

E. Any portion of a structure for which a shadow plan is prepared and submitted by the applicant demonstrating that shadows cast by that portion of the structure at 9:00 a.m., noon, and 3:00 p.m., Pacific Standard Time on December 21 will:

1. Not exceed the boundaries of a simultaneous shadow cast by a legally existing structure, or by a hill or other topographical feature other than trees or other vegetation; or
2. Not shade that portion of any adjacent residentially zoned lot which is occupied by a dwelling or which could legally and without modification of required yards be occupied in the future by a dwelling; or
3. Fall entirely within the boundaries of an existing covered or uncovered paved off street parking area, or paved driveway leading thereto. (Ord. 4426, 1986.)

28.11.040 Rules and Regulations.

The Community Development Director may promulgate and administer rules and regulations necessary for the administration and interpretation of this Chapter, subject to approval by the City Council. (Ord. 4426, 1986.)

Chapter 28.15 A-1, A-2, E-1, E-2, E-3 and R-1 One-Family Residence Zones

28.15.050 Building Height.

No building in these zones shall exceed a height of thirty feet (30') nor exceed the height limitations imposed for the protection and enhancement of solar access by Chapter 28.11 of this Code. (Ord. 4426, 1986; Ord. 3710, 1974; Ord. 3540, 1972.)

Chapter 28.18 R-2 TWO-FAMILY RESIDENCE ZONE

28.18.050 Building Height.

No building in the R-2 Zone shall exceed a height of thirty feet (30') nor exceed the height limitations imposed for the protection and enhancement of solar access by Chapter 28.11 of this Code. (Ord. 4426, 1986; Ord. 3710, 1974; Ord. 3587, 1973.)

Chapter 28.21 R-3 LIMITED MULTIPLE-FAMILY RESIDENCE ZONE AND R-4 HOTEL-MOTEL-MULTIPLE RESIDENCE ZONE

28.21.050 Building Height.

Three (3) stories, which three (3) stories combined shall not exceed (i) forty-five feet (45') nor (ii) exceed the height limitations imposed for the protection and enhancement of solar access by Chapter 28.11 of this Code. (Ord. 4426, 1986; Ord. 3710, 1974; Ord. 2585, 1957.)

Chapter 28.92 VARIANCES, MODIFICATIONS AND ZONE CHANGES

28.92.110 Modifications.

Modifications may be granted by the Planning Commission or Staff Hearing Officer as follows:

A. **BY THE PLANNING COMMISSION.** The Planning Commission may permit the following:

1. **Parking.** A modification or waiver of the parking or loading requirements where, in the particular instance, the modification will not be inconsistent with the purposes and intent of this Title and will not cause an increase in the demand for parking space or loading space in the immediate area.

2. **Yards, Lot Area, and Floor Area.** A modification of yard, lot and floor area regulations where the modification is consistent with the purposes and intent of this Title, and is necessary to (i) secure an appropriate improvement on a lot, (ii) prevent unreasonable hardship, (iii) promote uniformity of improvement, or (iv) the modification is necessary to construct a housing development which is affordable to very low-, low-, moderate- or middle-income households.

3. **Fences, Screens, Walls, and Hedges.** A modification of fence, screen, wall and hedge regulations where the modification is necessary to secure an appropriate improvement on a lot and is consistent with the purposes and intent of this Title.

4. **Solar Access.** A modification of height limitations imposed by Section 28.11.020 to protect and enhance solar access where the modification is necessary to prevent an unreasonable restriction. The Rules and Regulations approved pursuant to Section 28.11.040 shall contain criteria for use in making a finding of unreasonable restriction.

5. **Building Height.** A modification of building height limitations for existing buildings or structures that exceed the current building height limit, to allow the exterior of the portion of the building or structure that exceeds the building height limit to be improved or upgraded, provided that the improvements increase neither the height nor the floor area of any portion of the building or structure that exceeds the building height limit, except as otherwise allowed in the Code.

6. **Net Floor Area (Floor to Lot Area Ratio).** A modification of the net floor area standard imposed by Section 28.15.083 to allow a development that would otherwise be precluded by operation of Subsection 28.15.083.D where the Planning Commission makes all of the following findings:

a. Not less than five (5) members of the Single Family Design Board or six (6) members of the Historic Landmarks Commission (on projects referred to the Commission pursuant to Section 22.69.030) have voted in support of the modification following a concept review of the project;

b. The subject lot has a physical condition (such as the location, surroundings, topography, or the size of the lot relative to other lots in the neighborhood) that does not generally exist on other lots in the neighborhood; and

c. The physical condition of the lot allows the project to be compatible with existing development within the neighborhood that complies with the net floor area standard.

B. BY THE STAFF HEARING OFFICER. The Staff Hearing Officer may permit modifications in accordance with subsections 1., 2., 3., 4., and 5. above, if the Staff Hearing Officer finds that:

1. The requested modification is not part of the approval of a tentative subdivision map, conditional use permit, development plan, site plan, plot plan, or any other matter which requires approval of the Planning Commission; and

2. If granted, the modification would not significantly affect persons or property owners other than those entitled to notice. (Ord. 5416, 2007; Ord. 5380, 2005.)



City of Santa Barbara

RULES AND REGULATIONS PERTAINING TO THE PROTECTION AND ENHANCEMENT OF SOLAR ACCESS IN THE CITY OF SANTA BARBARA

ADOPTED OCTOBER 7, 1986

AMENDED MARCH 31, 1998

(Attachment to Resolution 98-027)

1. **Authority**

These rules and regulations are promulgated and approved pursuant to Santa Barbara Municipal Code Section 28.11.040.

2. **Policy for Protection and Enhancement of Solar Access**

a. **GOALS.** It is the goal of the City 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. 4426 on October 7, 1986. 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 (SBMC §28.11.020).
- ii. Allow the Community Development Department to establish rules and regulations 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. **POLICY.** The Community Development Director shall pursue a policy of:

- i. Enforcing the height limitation contained in SBMC §28.11.20; 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 §28.11.020 of the Santa Barbara 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. **NATURAL GRADE.** In determining the base elevation for use in calculating allowable building height, the natural grade shall be used to determine the “highest point of contact of the structure with the adjacent ground.”
- c. **SHADOW DIAGRAMS.**
 - i. In order to obtain an exemption based on SBMC §28.11.030.D, 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 SBMC Chapter 28.11.

4. Modification of Solar Access Height Limitations

- a. **MUNICIPAL CODE REFERENCE.** Santa Barbara Municipal Code §28.92.110.A.4 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 SBMC §28.11.020, 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.** A development which includes 25% or more dwelling units meeting the affordability criteria of the Community Development Department 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.

An applicant desiring modification based on this criterium 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 other than R-3, 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 R-3 and R-4 zones by SBMC Section 28.11.020 providing that all of the following criteria apply:

- (1) All portions of the proposed addition which will violate the solar access height limitations for zones other than R-3 and R-4, 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 the effective date of the ordinance first enacting SBMC Chapter 28.11.
- (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 for zones other than R-3 and R-4 shall be exempt from the provisions of this sentence.
- (3) All portions of the addition which violate the solar access height limitations for zones other than R-3 and R-4 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 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 these criteria are met.

iv. **TWO AND THREE STORY STRUCTURES IN THE CENTRAL BUSINESS DISTRICT.** A modification may be granted to applicants proposing to construct a two (2) or three (3) story structure on property zoned R-3 or R-4 and located in the Central Business District pursuant to SBMC §28.92.110.A.4 provided the following:

- (1) The property has less than the required 60 feet of frontage on a public street;
- (2) All portions of the structure which exceed the requirements of the solar access height limitations for zones R-3 and R-4 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.
- (3) The amount of direct sunlight reaching all south facing windows of any structure on an adjacent lot at 9:00 a.m., Noon, and at 3:00 p.m. PST on December 21 following construction of the proposed third story will be greater than or equal to the amount of such sunlight in the event that the maximum development in compliance with the solar access height limitations were to be constructed. The effect of shade caused by 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 acceptable to the Community Development director, including but not limited to shadow diagrams as described in Section 3, Paragraph C above, demonstrating that these criteria are met.

For the purposes of this Resolution, the Central Business District (CBD) shall be defined as the area bounded by Garden Street on the northeast, De La Vina Street on the southwest, Arrellaga Street to the northwest and U.S. Highway 101 to the southeast.

5. Modification of Required Yards to Promote the Use of Solar Energy

- a. **MUNICIPAL CODE REFERENCE.** Santa Barbara Municipal Code Section 28.92.110.A.2 allows a modification of required yard size where the modification is consistent with the purposes and intent of the Zoning Ordinance (SBMC Title 28) and is necessary to:
 - i. Secure an appropriate improvement on a lot,
 - ii. Prevent unreasonable hardship, or
 - iii. Promote uniformity of improvement.

- b. CRITERIA FOR MODIFICATIONS OF REQUIRED YARDS TO PROMOTE THE USE OF SOLAR ENERGY. The construction of a dwelling or a solar energy collection and/or storage device within a required yard may be considered an appropriate improvement on a lot and the basis for a modification of required yards as follows:
- i. A modification may be granted for up to a 50% reduction in a required yard dimension for the purpose of locating a dwelling to achieve better solar access, provided that all of the following criteria are met:
 - (1) The portion of the required yard that is reduced as a result of the modification will be added to the required yard space elsewhere on the lot; and
 - (2) The proposed structure is designed so as to utilize the solar energy provided by the improved solar access.Applicants for such modifications shall provide adequate documentation demonstrating that the above criteria are met.
 - ii. A modification for up to 50% reduction of a required yard dimension may be granted for the purpose of installing a solar energy collection and/or storage device, provided that all of the following criteria are met:
 - (1) The device is primarily for use in collecting and/or storing solar energy; and
 - (2) The device or structure will not provide additional habitable floor space.Applicants for such modifications shall provide adequate documentation demonstrating that the above criteria are met.
 - iii. In cases where construction is proposed on two adjacent lots at the same time, a zero lot line modification may be granted for the purposes of improving solar access. In such cases, a required interior may be eliminated so as to allow the joining of structures along a common lot line provided that all of the following criteria are met:
 - (1) Both structures are applied for and approved concurrently;
 - (2) The opposite required yards on both lots are increased by the amount eliminated such that there will be no increase in the buildable area on either lot; and
 - (3) The applicant demonstrates the advantages gained for improved solar access.
- c. POLICY STATEMENT IN SUPPORT 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.

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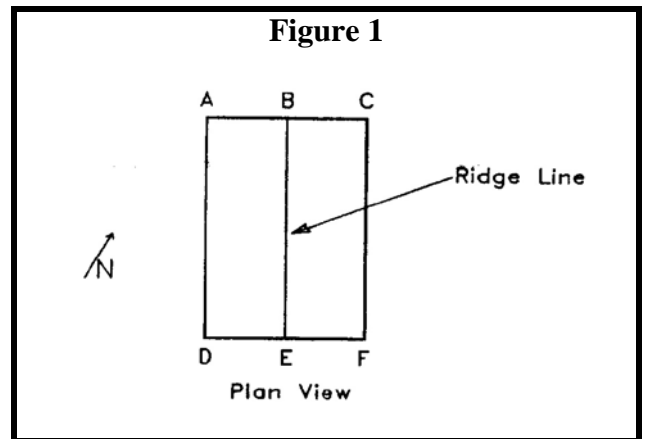


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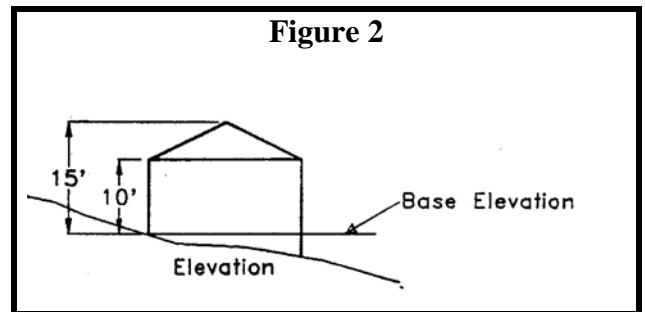
SOLAR ACCESS SHADOW DIAGRAM PREPARATION INSTRUCTIONS

If your building does not meet the Solar Access Height limitations (SBMC §28.11.020), 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 §28.11.030.E.

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).



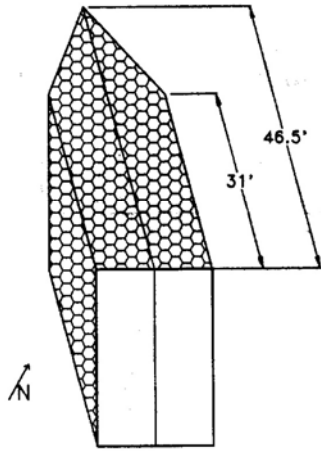
2. Determine the height of each of these points above the adjacent property where shadows will be cast. (For simplicity you may assume that the property shown in Figure 2 is flat and at the same elevation as the "Base Elevation" of your structure as defined in SBMC 28.11.010.)



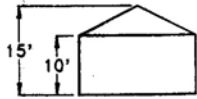
3. Use the following chart to determine the direction and length of shadows for the particular time of day in question.

	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

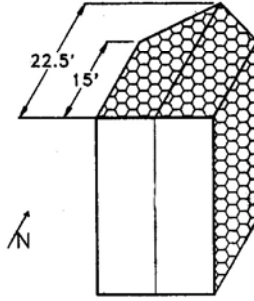
Draw lines accordingly on the site plan. Connect the ends of the shadow lines to create a shadow pattern for the structure. The prominent shadow casting portions of the proposed structure, such as ridge lines, eaves and parapets are shown on the diagrams below.



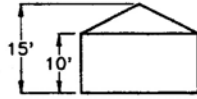
Plan View



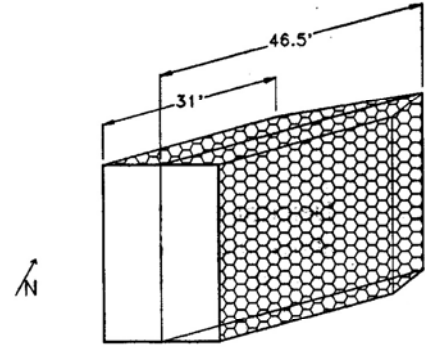
Elevation



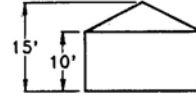
Plan View



Elevation



Plan View



Elevation