# City of Sunnyvale

## Notice and Agenda - Final

## Planning Commission

**Monday, July 11, 2016** **7:00 PM** **Council Chambers, City Hall, 456 W. Olive Ave., Sunnyvale, CA 94086**

**7 P.M. STUDY SESSION**

**1 Call to Order in the Council Chambers**

**2 Roll Call**

**3 Study Session**

**A** 16-0697

**File #:** 2014-7373
**Location**: 871 E. Fremont Ave. (Butcher Property)
**Zoning:** R-3/ECR (Medium Density Residential/Precise Plan for El Camino Real)
**Proposed Project:**
Overview of the status of the Butcher's Corner project and conceptual project revisions.
**Applicant / Owner:** De Anza Properties
**Project Planner:** Noren Caliva-Lepe, (408) 730-7659, ncaliva-lepe@sunnyvale.ca.gov

**4 Public Comment on Study Session Agenda Items**

**5 Adjourn Study Session**

**8 P.M. PLANNING COMMISSION MEETING**

**CALL TO ORDER**

*Call to Order in the Council Chambers*

**SALUTE TO THE FLAG**

**ROLL CALL**

**ORAL COMMUNICATIONS**

*This category provides an opportunity for members of the public to address the commission on items not listed on the agenda and is limited to 15 minutes (may be*

*extended or continued after the public hearings/general business section of the agenda at the discretion of the Chair) with a maximum of up to three minutes per speaker. Please note the Brown Act (Open Meeting Law) does not allow commissioners to take action on an item not listed on the agenda. If you wish to address the commission, please complete a speaker card and give it to the Recording Secretary. Individuals are limited to one appearance during this section.*

## CONSENT CALENDAR

**1.A** 16-0696 Approve Planning Commission Meeting Minutes of June 27, 2016

## PUBLIC HEARINGS/GENERAL BUSINESS

**2** 16-0560

**File #:** 2016-7234
**Location:** 657-661 Vanderbilt Drive (APNs 202-07-001 through 202-07-002), 1188-1197 East Vanderbilt Court (202-07-003 through 202-07-008),1190-1199 West Vanderbilt Court (202-07-009 through 202-07-014 ), 1176-1198 Hollenbeck (202-07-015 through 202-07-021), 1156-1168 Regia (202-07-22 through 202-07-028), 1154 -1170 Ribier (202-07-029 through 202-07-036), 662 Torrington (202-07-037) 1153-1193 Sesame (202-07-038 through 202-07-045)
**Zoning:** R-1
**Proposed Project:** Introduction of Ordinance to Rezone 45 contiguous single family home lots from R-1 (Low Density Residential) to R-1/S (Low Density Residential/Single-Story)
**Applicant / Owner:** John Sullivan (plus multiple owners)
**Environmental Review:** The Ordinance being considered is categorically exempt from review pursuant to CEQA Guidelines Section 15305 (minor alteration in land use) and Section 15061(b)(3) (a general rule that CEQA only applies to projects that have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the action may have a significant effect on the environment, the activity is not subject to CEQA).

**Project Planner:** Gerri Caruso (408) 730-7591, gcaruso@sunnyvale.ca.gov

**3** 16-0376 Forward a recommendation to the City Council to Introduce an Ordinance to Amend Chapter 19.56 (Alternative Energy Systems) of the Sunnyvale Municipal Code related to the Solar Access Requirements Study Issue (2016-7279), and Find that the Action is Exempt from CEQA.

**4** 16-0702 **Selection of Chair**

**5** 16-0703 **Selection of Vice Chair**

**6** 16-0704 **Selection of Seats**

**STANDING ITEM: CONSIDERATION OF POTENTIAL STUDY ISSUES**

**NON-AGENDA ITEMS AND COMMENTS**

**-Commissioner Comments**

**-Staff Comments**

**ADJOURNMENT**

*Any agenda related writings or documents distributed to members of the Planning Commission regarding any open session item on this agenda will be made available for public inspection in the Planning Division office located at 456 W. Olive Ave., Sunnyvale CA 94086 during normal business hours, and in the Council Chambers on the evening of the Planning Commission meeting pursuant to Government Code §54957.5.*

*Agenda information is available by contacting The Planning Division at (408) 730-7440. Agendas and associated reports are also available on the City's website at sunnyvale.ca.gov or at the Sunnyvale Public Library, 665 W. Olive Ave., Sunnyvale, 72 hours before the meeting.*

*Planning a presentation for a Planning Commission meeting?*
*To help you prepare and deliver your public comments, please review the "Making Public Comments During City Council or Planning Commission Meetings" document available at Presentations.inSunnyvale.com.*

*PLEASE TAKE NOTICE that if you file a lawsuit challenging any final decision on any public hearing item listed in this agenda, the issues in the lawsuit may be limited to the issues which were raised at the public hearing or presented in writing to the City at or before the public hearing.*

*PLEASE TAKE FURTHER NOTICE that Code of Civil Procedure section 1094.6 imposes a 90-day deadline for the filing of any lawsuit challenging final action on an agenda item which is subject to Code of Civil Procedure section 1094.5.*

*Pursuant to the Americans with Disabilities Act, if you need special assistance in this meeting, please contact the Planning Division at (408) 730-7440. Notification of 48 hours prior to the meeting will enable the City to make reasonable arrangements to ensure accessibility to this meeting. (29 CFR 35.106 ADA Title II)*

# City of Sunnyvale

## Meeting Minutes - Draft
## Planning Commission

**Monday, June 27, 2016** **8:00 PM** **Council Chambers, City Hall, 456 W. Olive Ave., Sunnyvale, CA 94086**

**STUDY SESSION CANCELLED**

**8 P.M. PLANNING COMMISSION MEETING**

**CALL TO ORDER**

Chair Melton called the meeting to order in the Council Chambers.

**SALUTE TO THE FLAG**

Chair Melton led the salute to the flag.

**ROLL CALL**

**Present:** 7 - Chair Russell Melton
Vice Chair Sue Harrison
Commissioner Ken Olevson
Commissioner Larry Klein
Commissioner Ken Rheaume
Commissioner David Simons
Commissioner Carol Weiss

**SPECIAL PRESENTATION**

**Planning Commissioner Recognition of Service**

Mayor Glenn Hendricks noted that Chair Melton and Commissioner Klein have completed terms of service on, and were both reappointed to, the Planning Commission. Mayor Hendricks presented certificates of appreciation to Chair Melton and Commissioner Klein for their service and thanked all the Commissioners for the time and energy put forth while serving on the Planning Commission.

**ORAL COMMUNICATIONS**

None.

**CONSENT CALENDAR**

Planning Officer Miner noted that item 1.C includes a staff recommendation for continuance of the item to a date certain of July 11, 2016.

MOTION: Commissioner Klein moved and Vice Chair Harrison seconded the motion to approve the Consent Calendar with item 1.C continued to July 11, 2016.

The motion carried by the following vote:

**Yes:** 7 - Chair Melton
Vice Chair Harrison
Commissioner Olevson
Commissioner Klein
Commissioner Rheaume
Commissioner Simons
Commissioner Weiss

**No:** 0

**1.A** 16-0651 Approve Planning Commission Meeting Minutes of June 13, 2016

**1.B** 16-0674 **RECOMMEND CONTINUANCE TO AUGUST 22, 2016**
**File #:** 2015-7382
**Location**: 250 E. Java Drive (APN: 110-33-030)
**Zoning:** Moffett Park Specific Plan Transit Oriented Development (MP-TOD)
**Proposed Project:**
**SPECIAL DEVELOPMENT PERMIT:** to redevelop a site for a new 5-story hotel with 180 guest rooms and 6,893 square foot of ground floor retail.
**Applicant / Owner:** Peninsular Investments / Peninsular Investments, Inc.
**Environmental Review:** Mitigated Negative Declaration
**Project Planner:** Margaret Netto, Project Planner, (408) 730-7628, mnetto@sunnyvale.ca.gov
**NOTE:** *The applicant has requested a continuance to an August 2016 date.*

**1.C** 16-0672 Requested continuance to a date certain regarding a recommendation to the City Council to adopt an Ordinance to Amend Chapter 19.56 (Alternative Energy Systems) of the Sunnyvale Municipal Code related to the Solar Access Requirements Study Issue (2016-7279).

## PUBLIC HEARINGS/GENERAL BUSINESS

**2** 16-0656 **File #:** 2012-8003
**Location**: Lawrence Station Area

**Applicant**: City of Sunnyvale
**Proposed Project:**
**OVERVIEW AND PUBLIC COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT REPORT AND DRAFT LAWRENCE STATION AREA PLAN**
**Project Planner:** Andrew Miner, (408) 730-7707, aminer@sunnyvale.ca.gov

Planning Officer Andrew Miner stated that the purpose of this public hearing is to provide an opportunity for the public to give comments on the adequacy of the Draft Environmental Impact Report (DEIR) for the Lawrence Station Area Plan (LSAP) and the Draft LSAP and not to consider the project so no action is required of the Planning Commission.

Pat Angell, with Michael Baker International, provided an overview of the DEIR.

Planning Officer Miner discussed the incentives that would allow property owners to redevelop their properties to the maximum density within the plan area.

Chair Melton opened the Public Hearing.

Maria Hamilton said the City needs to evaluate resource allocation, such as for water, to support the demands of this and future plans.

Don Tran, speaking on behalf of the Silicon Valley Leadership Group (SVLG), said the group encourages increasing the minimum residential housing density to 40 dwelling units per acre for all areas within a half mile of the station and added that the ideal amount would be 50. He said the group encourages a balanced percentage of Below Market Rate (BMR) units, and that the plan includes an estimated 420 square feet for each employee but that the industry average is 200 square feet, which is a discrepancy that could lead to a jobs-to-housing imbalance.

Rick Rodgers, Sunnyvale resident, referred to the increase in development near Wolfe/Evelyn and Wolfe/Central and asked how the City expects to accommodate the increase in traffic that these projects will bring.

Jack Miller, Sunnyvale resident, said he prefers all businesses and mixed use developments be constructed north of the Caltrain station and that south of the train tracks the City should preserve existing neighborhoods with residential homes only. He said a City park is needed in the area south of the tracks and that speed humps are needed to reduce drag racing on Aster Avenue.

Ray Crump, Sunnyvale resident, said multiple intersections on Lawrence are

operating at the LOS F rating and cannot accommodate large nearby developments, and noted that on page 3.4-12 the document discusses a westbound left turn from Reed onto northbound Lawrence, which is actually eastbound. He suggested asking developers for community benefits to accelerate needed improvements to accommodate plans.

Craig Lee, Sunnyvale resident, said 70 percent of the Lawrence Station Area is already developed and discussed his concern with the increased traffic new development would bring.

Adina Levin, with Friends of CalTrain, said the group supports the concept of flexible mixed use development near the transit station, and that the numbers of the Transportation Demand Management plan seem inconsistent, particularly the 20-to-35 percent car trip reduction and auto mode share reduction from 95 to 90 percent. She noted the EIR states internal trips are less than two miles, but bike mode share is less than two percent and that if internal trips are less than two miles it is a good opportunity to use bikes. She said the Alternatives in the DEIR regarding housing are discussed as something having a negative impact on housing which is difficult to understand, and added that she echoes what Mr. Tran said about the potential jobs-housing imbalance and supports the increase in affordable housing.

Stan Messmer, Santa Clara resident, said it is not safe to walk down Aster Avenue, that many developments in the area were built not too long ago, and that residents do not need another large development in the area. He asked where the water will come from to support new developments, discussed his concern with the increased traffic and said residents of new developments will not take CalTrain.

Chair Melton closed the Public Hearing.

Planning Officer Miner noted that submitting comments in writing is the best mode for receiving responses in the Final EIR, and that the LSAP will be considered by the Planning Commission in September and the City Council in October.

Commissioner Klein confirmed with Planning Officer Miner that the deadline to submit written comments is Tuesday, July 5.

Commissioner Weiss said she would like to see examples of where flexible mixed use developments have been used successfully, especially if there is an economic downturn that could have a severe impact. She noted that the LSAP conceptualizes the Corn Palace area as a park on one page and as low and low-medium density

residential on another and she requested clarification on what is proposed for that area. She said the document should expand the discussion of increased housing for seniors in Sunnyvale which could see a housing shift if seniors in single family homes moved and transportation was provided by an organization like Outreach as seniors are not likely to use bicycles. She said Alternatives 2 and 3 did not seem different with regard to negative impacts and she would like more information on why staff prefers Alternative 3.

Chair Melton said he has no comments on the DEIR, but with regard to the draft LSAP he asked what the boundary area of the adopted plan will be, particularly on the southwest corner where the radius appears to bisect several parcels. He said he is pleased to see the priority list of incentives and would like to see it given a stress test that looks at such questions as whether a developer would find it economically compelling to provide an access road for a potential density bonus of ten units per acre. He said he would also like to see a stress test of all potential development bonuses for affordable housing, through the state and other programs, added together and what they might equal for development in this area.

Commissioner Simons said he would like to make sure the document states it is in accordance with VTA bicycle and pedestrian design guidelines. He said senior housing near transportation has been examined in the past and that if it will be investigated again it should be noted that a lot of seniors moving from single family homes in the southern part of Sunnyvale will not be selling their homes and renting, rather, they will be buying, and those ownership opportunities may not be available to them. He said regarding the comments from the SVLG representative about the amount of square footage required per employee, he would like to know what impact those numbers would have on the different alternatives that include office.

Planning Officer Miner noted that the plan only applies on the south side of the train tracks to the Peninsular building and the corner of Reed, Lawrence and Willow, that the rest is already developed and there are no development opportunities for those areas.

Chair Melton closed this agenda item.

**STANDING ITEM: CONSIDERATION OF POTENTIAL STUDY ISSUES**

Chair Melton suggested a study issue to allow smaller accessory living units on smaller sized lots.

Planning Officer Miner said it is an action item for implementing the Housing Element.

## NON-AGENDA ITEMS AND COMMENTS

**-Commissioner Comments**

None.

**-Staff Comments**

Planning Officer Miner discussed upcoming and recently heard Planning-related City Council items, and noted that there are many projects moving forward and in an effort to balance the agendas in relation to City Council, he asked if the Planning Commissioners would be amenable to starting meetings earlier, which would require a change of Council Policy, or to adding special meetings.

Vice Chair Harrison said she is in favor of starting meetings earlier and having special meetings.

Commissioner Klein said he is interested in special meetings starting at 7:00 p.m., and that getting staff reports out sooner would be beneficial.

Planning Officer Miner said adding special meetings would make it least likely for reports to be released sooner and his goal is to start the meetings an hour earlier.

Commissioner Olevson said starting the study sessions at 6:00 p.m. and public hearings at 7:00 p.m. would be beneficial so meetings do not go beyond midnight, and he emphasized getting reports out sooner to the Commissioners. He said if materials from the builder are received four weeks before a meeting, the materials can be given to the Commission earlier. He said much of what is asked at the meetings is clarification on the staff report and that if those questions are answered before the meeting then additional Conditions of Approval would not be asked for and the meeting would go faster. He said special meetings should be scheduled only as necessary.

Commissioner Rheaume said he prefers starting at 7:00 p.m. as 6:00 p.m. will not work for him. He said he questions the need for study sessions and said some of the material covered at study sessions could be read online.

Commissioner Simons said he supports moving the meeting up an hour but is opposed to doing so and still having extremely long meetings. He said five or six hour meetings result in the loss of members of the public who want to speak about items and big projects getting little consideration at the end of the night. He said the largest projects could be heard during special meetings, if necessary.

Chair Melton said he is okay with an earlier start time and discussed with Senior Assistant City Attorney Rebecca Moon the original rationale behind the 8:00 p.m. start time. Senior Assistant City Attorney Moon said if the Planning Commission is interested in taking this item to the City Council to amend the policy it should be put on the agenda for a vote to make the recommendation to City Council. Chair Melton requested it be put on the agenda for the meeting of July 11, 2016.

Planning Officer Miner said he will keep the Commission informed on items coming down the pipeline.

Chair Melton said he is looking for maximum community participation and benefit which happens when Commissioners have clear minds and it is not too late. He said having three consecutive meetings at the end of the year may benefit the community.

Planning Officer Miner said the Peery Park Specific Plan items are projected to come at the end of the year.

Chair Melton suggested talking to the City Council about an applicant rescheduling fee.

Senior Assistant City Attorney Moon announced that there are two upcoming meetings related to the Town Center project.

Commissioner Rheaume said maybe some projects can wait for consideration until the beginning of year, and that other options to consider are a guideline for when to start and end meetings or limiting meetings to four items.

Planning Officer Miner said the recognition of service event will be held in the West Conference Room after adjournment.

## ADJOURNMENT

Chair Melton adjouned the meeting at 9:15 p.m.

# City of Sunnyvale

## Agenda Item

**16-0560** **Agenda Date:** 7/11/2016

# REPORT TO PLANNING COMMISSION

## SUBJECT

**File #:** 2016-7234
**Location:** 657-661 Vanderbilt Drive (APNs 202-07-001 through 202-07-002)**,** 1188-1197 East Vanderbilt Court (202-07-003 through 202-07-008)**,**1190-1199 West Vanderbilt Court (202-07-009 through 202-07-014 ), 1176-1198 Hollenbeck (202-07-015 through 202-07-021), 1156-1168 Regia (202-07-22 through 202-07-028), 1154 -1170 Ribier (202-07-029 through 202-07-036), 662 Torrington (202-07-037) 1153-1193 Sesame (202-07-038 through 202-07-045)
**Zoning:** R-1
**Proposed Project:** Introduction of Ordinance to Rezone 45 contiguous single family home lots from R-1 (Low Density Residential) to R-1/S (Low Density Residential/Single-Story)
**Applicant / Owner:** John Sullivan (plus multiple owners)
**Environmental Review:** The Ordinance being considered is categorically exempt from review pursuant to CEQA Guidelines Section 15305 (minor alteration in land use) and Section 15061(b)(3) (a general rule that CEQA only applies to projects that have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the action may have a significant effect on the environment, the activity is not subject to CEQA).

**Project Planner:** Gerri Caruso (408) 730-7591, gcaruso@sunnyvale.ca.gov

## REPORT IN BRIEF

**General Plan:** Residential Low Density

**Existing Site Conditions:** A cohesive residential neighborhood block consisting of 45 single story homes, one existing two-story home and one approved design review for one new two-story home.

**Surrounding Land Uses**

North: Single family homes across Torrington Drive
South: Single family homes across Vanderbilt Drive
East: Single family homes across Sesame Drive
West: Single family homes across Hollenbeck Avenue

**Issues:** Preservation of a single-family neighborhood of predominantly single-story Eichler homes.

**Staff Recommendation:** Planning Commission recommend to City Council: introduce an ordinance and approve the rezoning.

## BACKGROUND

The application has been submitted by 39 property owners (86 percent) in the 45-lot project area. As indicated on the vicinity and noticing map, the project area consists of the entire block bounded by Torrington Drive on the north side, Sesame Drive on the east side, Vanderbilt Drive on the south side, Hollenbeck Avenue on the west side and includes Regia Court, Ribier Court, West Vanderbilt

Court and East Vanderbilt Court (Attachment 2). A list of all the properties included is in Attachment 3. A project description letter from the applicant is in Attachment 4.

The request is to modify the current R-1 zoning designation (Low Density Residential) by combining it with an "S" single-story zoning designation for R-1/S. This would limit the existing single family homes in the project area to one story and 45 percent Floor Area Ratio (FAR). Other City site development standards and density would remain the same. The proposed district consists of 45 single-story homes, one existing two-story home and one approved design review for a new two-story home.

A draft ordinance with the proposed district map is in Attachment 5 and the recommended finding for the rezoning is in Attachment 6.

This application represents the fifth Single-Story combining district application to be considered by the City since the enabling zoning code changes became effective January 1, 2001. The existing single-story districts include:

- 54 Eichler homes on Wright Avenue, Edmonton Avenue and La Salle Drive on July 31, 2001
- 25 homes on Bobolink Circle and Bobwhite Avenue on June 11, 2002
- 116 Eichler homes located between Fremont Avenue and Ticonderoga Drive and between Pome Avenue and Mary Avenue on May 15, 2007
- 36 Eichler homes on Dartshire Way and Devonshire Way on April 19, 2016

The City Council is scheduled to consider this item on August 9, 2016.

## EXISTING POLICY

**Sunnyvale Municipal Code 19.26.200**

The intent of the Council's action creating the Single-Story Combining District was to "modify the site development regulations of the R-0, R-1, and R-2 residential zoning districts to preserve and maintain single-family neighborhoods of predominantly single-story character."

## ENVIRONMENTAL REVIEW

The action being considered is categorically exempt from review under the California Environmental Quality Act (CEQA) pursuant to CEQA Guideline Section 15305 as it is a minor alteration in land use in an area with an average slope of less than 20% and will not result in any changes in land use of density. In addition, the Ordinance is exempt under the general rule that CEQA only applies to projects that have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the action may have a significant effect on the environment, the activity is not subject to CEQA. (Section 15061(b)(3)).

## DISCUSSION

The action under consideration is a rezoning to add a Single-Story combining district to an existing R-1single-family neighborhood. The following items must be met in order to consider an application for a Single-Story combining district:

1. The zoning for the underlying district must be R-0, R-1 or R-2;
2. The application must be signed by at least 55 percent of the property owners in the proposed

district;
3. The proposed district must be clearly delineated in the application and must consist of at least 20 homes;
4. At least 75 percent of the homes in the proposed district must be one-story; and
5. To the extent feasible, the proposed district shall follow a recognizable feature such as a street, stream, or tract boundary.

If adopted, the single-story combining district will remain in effect unless district owners initiate a similar application process to request that it be removed.

The proposed application meets all of the code requirements and is in an R-1 neighborhood. By using the City's GIS system and County Assessor information, staff has confirmed that 39 (86 percent) of the property owners have joined this application. The proposed boundaries follow logical street boundaries creating a solid residential block. There is only one existing two-story home in the neighborhood (1196 East Vanderbilt Court) and one recently approved Design Review for a new two-story home (1169 Sesame Drive) which are 4% of homes in the proposed district.

A letter was sent to the property owners in the proposed district providing them with a detailed outline of the new development limits for a single-story district (Attachment 6). The following development regulations will apply:

Single Story Limit

- There will be a limit of one habitable floor (story). Habitable areas are interiors conditioned for human occupancy (e.g. meet standards for heat, insulation, light and minimum ceiling heights).
- Lofts, mezzanines and similar areas will be prohibited as well as attics that meet habitable standards.

Building Height Limit

- The maximum building height will be 17 feet (currently 30 feet).

Maximum Gross Floor Area

- The maximum floor area ratio (FAR) of each home will be 45 percent, the same for any one story home in the R-1 zoning district.
- No future home additions beyond 45 percent FAR will be permitted unless a Variance is granted.

A basement is not considered a story unless it extends more than two feet above the ground; it would then be counted towards the floor area limit.

Legal Non-Conforming Homes

- Existing legally constructed homes that exceed 45 percent FAR or 17 feet in height will be considered legal and non-conforming if the properties are rezoned.
- Legal non-conforming homes can be maintained and repaired subject to City building permits as long as the non-conformity is not increased.

Existing Two-Story Homes

- Existing two-story homes that were legally constructed with City building permits will be considered legal and non-conforming.
- Existing second stories cannot be expanded or increased in height but can be maintained and repaired subject to City building permits.
- Additions can be made to the first floor; however, the FAR of the entire home will be limited to 45 percent.
- The approved Design Review for a two-story home at 1169 Sesame Drive must be vested by securing a building permit within two years of the approval date on May 16, 2016.

Neighborhood Density

- The proposed single-story rezoning area is an R-1 single-family zone where only one dwelling units is allowed per lot. The new zoning designation will be R-1/S. The area will remain a single-family area with only one dwelling unit allowed on each lot. Accessory dwelling units are allowed on lots over 9,000 square feet, but must also meet the single story limitation.

Eichler Design Guidelines

- The area proposed for rezoning is an Eichler neighborhood and is therefore subject to the adopted Sunnyvale Eichler Design Guidelines.

By rezoning the proposed district to R-1/S, no impacts are expected to immediate surrounding properties or those in the vicinity of the proposed district.

## FISCAL IMPACT

There is no development related to this application. No fiscal impacts other than normal fees and taxes associated with owning a single-family home are expected.

## PUBLIC CONTACT

Public contact was made through posting of the Planning Commission agenda on the City's official-notice bulletin board, on the City's website, and the availability of the agenda and report in the Office of the City Clerk. 101 notices were sent to the project area and surrounding property owners. The block was posted with hearing notices. A neighborhood information meeting was conducted by staff on June 23, 2016 at the Community Center for the 45 property owners in the proposed single-story district. Six people attended the meeting. Four attendees were from the project area, and two were from other neighborhoods interested in the single-story rezoning process. An information letter outlining the restrictions of the Single-Story Combining District was sent to the property owners in the proposed district so that those who did not attend the information meeting would have complete information (Attachment 7).

## ALTERNATIVES

Recommend to City Council:

1. Find the project exempt from CEQA pursuant to CEQA Guidelines Section 15305 and 15061b)(3).
2. Introduce an Ordinance to Rezone 45 contiguous single family home lots from R-1 (Low Density Residential) to R-1/S (Low Density Residential/Single-Story).
3. Deny the rezone.

## STAFF RECOMMENDATION

Recommend to City Council: Alternatives 1 and 2: 1) Find the project exempt from the California Environmental Quality Act (CEQA) pursuant to CEQA Guidelines Section 15305 and 15061b)(3); and, 2) Introduce an Ordinance to Rezone 45 contiguous single family home lots from R-1 (Low Density Residential) to R-1/S (Low Density Residential/Single-Story).

Prepared by: Gerri Caruso, Principal Planner
Reviewed by: Andrew Miner, Planning Officer
Reviewed by: Trudi Ryan, Director of Community Development
Reviewed by: Kent Steffens, Assistant City Manager
Approved by: Deanna J. Santana, City Manager

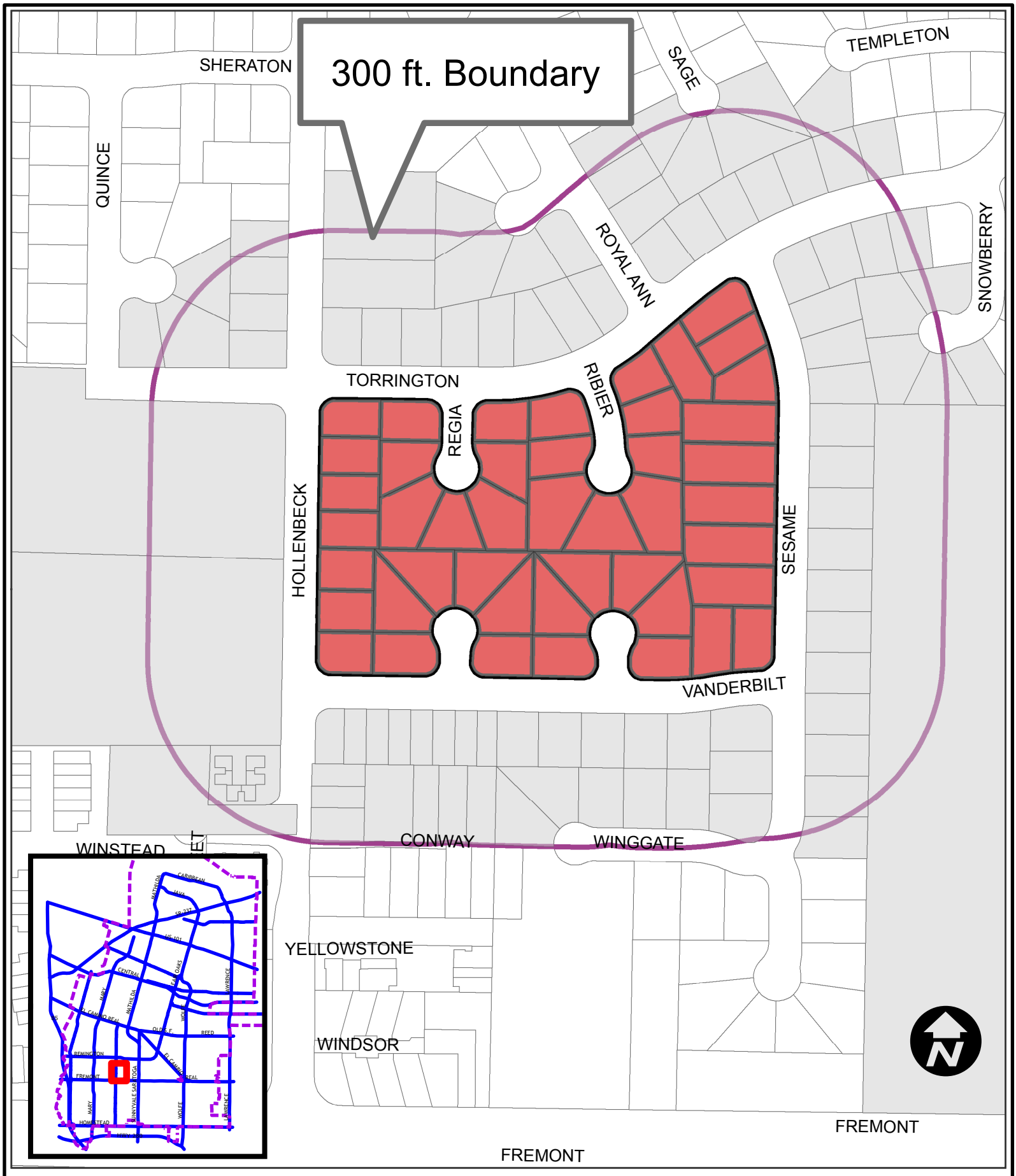
**ATTACHMENTS**

1. *Not Used*
2. Vicinity and Noticing Map
3. List of addresses and APNs within the proposed district
4. Applicant's letter
5. Draft Ordinance
6. Recommended Finding
7. Letter from City to property owners in proposed district

ATTACHMENT 1

*NOT USED*

**ATTACHMENT 2**




2016-7234
657-661 Vanderbilt Dr, 1188-1197 East Vanderbilt Ct,1190-1199 W Vanderbilt Ct, 1176-1198 Hollenbeck Ave, 1156-1168 Regia Ct, 1154 -1170 Ribier, 662 Torrington Dr ,1153-1193 Sesame Dr
Proposed Single-Story Overlay District

0 70 140 280 Feet

**2016-7234 Single Story Rezoning**

| APN | SiteNumber | SiteStreet | Land Sq Ft | Building Sq Ft | Garage Sq Ft | FAR | Transfer Date |
|---|---|---|---|---|---|---|---|
| 20207001 | 657 | Vanderbilt | 8352 | 2070 | 264 | 28% | 06/12/02 |
| 20207002 | 661 | Vanderbilt | 8784 | 1952 | 501 | 28% | 01/12/15 |
| 20207003 | 1196 | Vanderbilt | 7300 | 2780 | 550 | 46% | 01/23/04 |
| 20207004 | 1192 | Vanderbilt | 9215 | 1866 | 550 | 26% | 11/30/12 |
| 20207005 | 1188 | Vanderbilt | 8000 | 1948 | 334 | 29% | 02/03/11 |
| 20207006 | 1189 | Vanderbilt | 7700 | 2620 | 550 | 41% | 08/16/01 |
| 20207007 | 1193 | Vanderbilt | 9800 | 1948 | 334 | 23% | 04/04/95 |
| 20207008 | 1197 | Vanderbilt | 7500 | 1952 | 501 | 33% | 04/16/13 |
| 20207009 | 1198 | Vanderbilt | 7500 | 1952 | 501 | 33% | 06/01/11 |
| 20207010 | 1194 | Vanderbilt | 9800 | 1866 | 550 | 25% | 09/02/93 |
| 20207011 | 1190 | Vanderbilt | 9800 | 1948 | 334 | 23% | 03/14/05 |
| 20207012 | 1191 | Vanderbilt | 9800 | 1866 | 550 | 25% | 10/31/97 |
| 20207013 | 1195 | Vanderbilt | 9800 | 2066 | 550 | 27% | 04/28/06 |
| 20207014 | 1199 | Vanderbilt | 7125 | 1948 | 334 | 32% | 04/07/06 |
| 20207015 | 1198 | Hollenbeck | 7725 | 1948 | 334 | 30% | 06/26/14 |
| 20207016 | 1196 | Hollenbeck | 7622 | 1952 | 501 | 32% | 05/06/93 |
| 20207017 | 1194 | Hollenbeck | 7622 | 1948 | 334 | 30% | 02/01/99 |
| 20207018 | 1192 | Hollenbeck | 7215 | 1755 | 399 | 30% | 09/05/14 |
| 20207019 | 1186 | Hollenbeck | 7215 | 1661 | 260 | 27% | 09/04/14 |
| 20207020 | 1180 | Hollenbeck | 7215 | 1755 | 399 | 30% | 11/06/14 |
| 20207021 | 1176 | Hollenbeck | 7215 | 1755 | 399 | 30% | 10/23/95 |
| 20207022 | 1157 | Regia | 7242 | 1994 | 260 | 31% | 12/14/00 |
| 20207023 | 1161 | Regia | 7070 | 1813 | 399 | 31% | 09/15/10 |
| 20207024 | 1165 | Regia | 11160 | 1748 | 299 | 18% | 08/20/99 |
| 20207025 | 1168 | Regia | 8400 | 1660 | 299 | 23% | 05/31/00 |
| 20207026 | 1164 | Regia | 9975 | 1941 | 260 | 22% | 01/29/14 |
| 20207027 | 1160 | Regia | 7344 | 2154 | 0 | 29% | 07/13/04 |
| 20207028 | 1156 | Regia | 7548 | 1660 | 299 | 26% | 08/10/95 |
| 20207029 | 1157 | Ribier | 7300 | 1661 | 260 | 26% | 06/18/15 |
| 20207030 | 1161 | Ribier | 6700 | 1660 | 299 | 29% | 12/19/07 |
| 20207031 | 1165 | Ribier | 10800 | 2375 | 260 | 24% | 06/16/04 |
| 20207032 | 1170 | Ribier | 9894 | 1661 | 260 | 19% | 01/08/13 |
| 20207033 | 1166 | Ribier | 12350 | 2624 | 260 | 23% | 10/06/06 |
| 20207034 | 1162 | Ribier | 7752 | 1966 | 299 | 29% | 09/21/12 |
| 20207035 | 1158 | Ribier | 7616 | 1921 | 705 | 34% | 11/19/99 |
| 20207036 | 1154 | Ribier | 5828 | 1300 | 480 | 31% | 09/26/14 |
| 20207037 | 662 | Torrington | 8370 | 1755 | 399 | 26% | 05/19/09 |
| 20207038 | 1153 | Sesame | 7500 | 1770 | 399 | 29% | 11/24/15 |
| 20207039 | 1157 | Sesame | 7371 | 1755 | 399 | 29% | 06/21/07 |
| 20207040 | 1161 | Sesame | 10545 | 1660 | 299 | 19% | 04/29/10 |
| 20207041 | 1169 | Sesame | 11304 | 1952 | 501 | 22% | 03/27/15 |
| 20207042 | 1175 | Sesame | 11304 | 1952 | 501 | 22% | 03/24/15 |
| 20207043 | 1181 | Sesame | 11304 | 1957 | 519 | 22% | 02/08/16 |
| 20207044 | 1189 | Sesame | 11232 | 1948 | 334 | 20% | 10/19/90 |
| 20207045 | 1193 | Sesame | 10800 | 1952 | 501 | 23% | 07/07/08 |
| 20209011 | 673 | Torrington | 8127 | 1755 | 399 | 27% | 01/23/06 |
| 20209012 | 677 | Torrington | 9288 | 1624 | 480 | 23% | 02/18/11 |

Approved or Existing Two-Story Home

John Sullivan
[redacted]
Sunnyvale, CA 94087

March 21, 2016

The Planning Commission
City of Sunnyvale
456 W Olive Avenue
Sunnyvale, CA 94086

Dear Commissioners:

Enclosed please find a Rezoning Application for a Residential Single Story Combining District (SSCD) for an area consisting of 45 Eichler homes as outlined on the attached map. The proposed district is bound by: Torrington Drive, Sesame Drive, Vanderbilt Drive and Hollenbeck Avenue.

We initially contacted homeowners via survey and, based on positive feedback, an organizing committee was formed to move ahead with the application process. A packet including maps and a copy of the City zoning code was mailed to all 45 houses in the proposed area.

Many residents expressed their concerns about preserving the unique design of our single story Eichler neighborhood, as well as protecting the privacy of their homes and yards. Our completed application includes 38 signatures, which represents 84.4% agreement.

Eichler and his team of talented architects designed well-planned homes that take advantage of indoor/outdoor living in residential tract developments. In Joseph Eichler's own words:

> *"There are other builders who efficiently produce well-built houses and sell at a fair profit. The purchaser of one of these will get a good value. We believe our houses go beyond this because much more thought and care go into them. Nothing is spent for frills or gimmicks. Beauty is achieved by the architect's skill in designing details, his blend of materials and proper proportions, and above all, the exercise of good taste. In short, we produce a work of art that has gained international reputation."*
> -- *Eichler Homes* by Jerry Ditto, Lanning Stern

Thank you for your consideration.

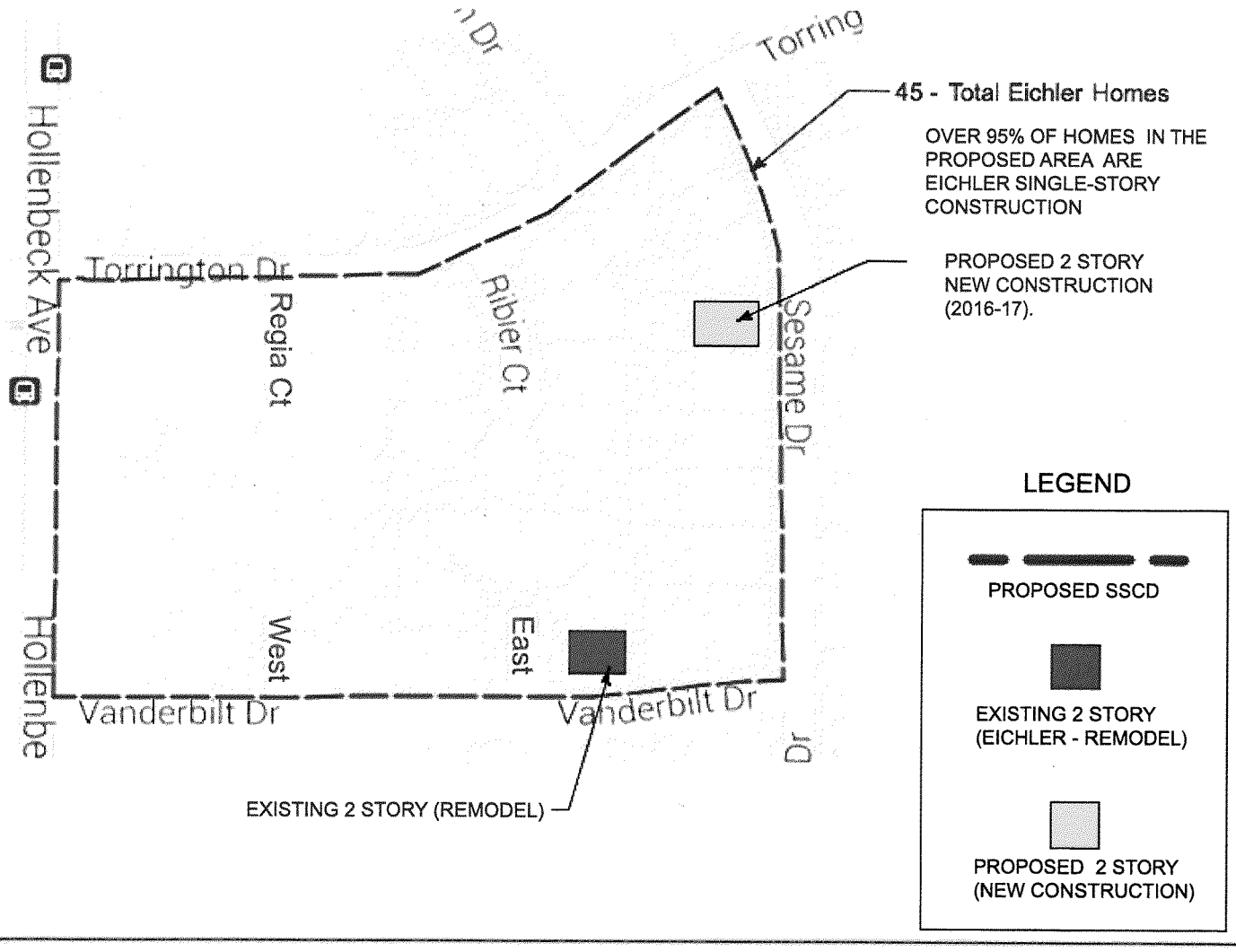
John Sullivan

JJS 160321a

# EICHLER SINGLE-STORY COMBINING DISTRICT - PETITION MAP

## Hollenbeck Ave -Torrington Dr - Sesame Dr - Vanderbilt Dr

RED DOTTED LINE: PROPOSED DEFINED AREA FOR SSCD



DRAFT 6/13/16 eM

**ORDINANCE NO. _____**

**AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF SUNNYVALE AMENDING THE PRECISE ZONING PLAN, ZONING DISTRICTS MAP, TO REZONE CERTAIN PROPERTIES LOCATED BETWEEN TORRINGTON DRIVE, SESAME DRIVE, VANDERBILT DRIVE AND HOLLENBECK AVENUE FROM R-1 (LOW DENSITY RESIDENTIAL) ZONING DISTRICT TO R-1/S (LOW DENSITY RESIDENTIAL/SINGLE-STORY) ZONING DISTRICT**

THE CITY COUNCIL OF THE CITY OF SUNNYVALE DOES ORDAIN AS FOLLOWS:

SECTION 1. AMENDMENT OF PRECISE ZONING PLAN. The Precise Zoning Plan, Zoning Districts Map, City of Sunnyvale (Section 19.16.050 of the Sunnyvale Municipal Code) hereby is amended to rezone certain 45 contiguous properties located at 657-661 Vanderbilt Drive (Assessor Parcel Numbers 202-07- through 202-07-), 1188-1197 East Vanderbilt Court (202-07-003 through 202-07-008), 1190-1199 West Vanderbilt Court (202-07-009 through 202-07-014 ), 1176-1198 Hollenbeck (202-07-015 through 202-07-021), 1156-1168 Regia (202-07-22 through 202-07-028), 1154 -1170 Ribier (202-07-029 through 202-07-036), 662 Torrington (202-07-037) 1153-1193 Sesame (202-07-038 through 202-07-045) to the R-1/S (Low Density Residential/Single-Story) Zoning District. The location of the property is set forth on the scale drawing attached as Exhibit A.

SECTION 2. CEQA - EXEMPTION. The City Council finds, pursuant to Title 14 of the California Code of Regulations, Section 15305, that this ordinance is exempt from the requirements of the California Environmental Quality Act (CEQA) in that it is a minor alteration in land use in an area with an average slope of less than 20% and will not result in any changes in land use of density. In addition, the Council finds that this ordinance is exempt pursuant to Section 15061(b)(3) in that it is not a Project which has the potential for causing a significant effect on the environment. The Council therefore directs that the Planning Division may file a Notice of Exemption with the Santa Clara County Clerk in accordance with the Sunnyvale Guidelines for the implementation of CEQA adopted by Resolution No. 118-04.

SECTION 3. EFFECTIVE DATE. This ordinance shall be in full force and effect thirty (30) days from and after the date of its adoption.

SECTION 4. PUBLICATION. The City Clerk is directed to cause copies of this ordinance to be posted in three (3) prominent places in the City of Sunnyvale and to cause publication once in The Sun, the official newspaper for publication of legal notices of the City of Sunnyvale, of a notice setting forth the date of adoption, the title of this ordinance, and a list of places where copies of this ordinance are posted, within fifteen (15) days after adoption of this ordinance.

Introduced at a regular meeting of the City Council held on _____, and adopted as an ordinance of the City of Sunnyvale at a regular meeting of the City Council held on _____, by the following vote:

AYES:
NOES:
ABSTAIN:
ABSENT:
RECUSAL:

ATTEST: APPROVED:

_____ _____
City Clerk Mayor
Date of Attestation: _____

(SEAL)

APPROVED AS TO FORM:

_____
City Attorney

**Finding Rezoning:** The city council may approve a general plan or zoning amendment upon finding that the amendment, as proposed, changed or modified is deemed to be in the public interest. (SMC 19.92.080)

The proposed rezoning for the use of the Single-Story combining district is in the public interest as it would achieve the preservation of a predominantly R-0, single-story residential neighborhood where the property owners in the proposed district desire a single-story character. The intent of the Council's action creating the Single-Story combining district was to modify the site development regulations of the R-0, R-1, and R-2 residential zoning districts to preserve and maintain single-family neighborhoods of predominantly single-story character.

June 10, 2016

**Re: City of Sunnyvale Rezoning Application 2016-7234 – Requesting a residential single-story zoning designation for the entire block of 45 contiguous properties bound by Hollenbeck Avenue on the west, Torrington Drive on the north, Sesame Drive on the east and Vanderbilt Drive on the south.**

Dear Property Owner:

An application has been filed to change the zoning for your home to limit it to a single story. If approved, the zoning will be changed from R-1 (Low Density Residential) to R-1/S (Low Density Residential-Single Story).

This application was not initiated by the City. It has been initiated by 87% of property owners in the proposed single-story district. If adopted by the Sunnyvale City Council this revised zoning will apply to the entire block described above, including existing and approved 2-story homes, regardless if you were party to the application.

The proposed zoning change will not be in effect until it is considered and approved at public hearings by both the Sunnyvale Planning Commission on July 11, 2016 and the City Council on August 9, 2016. You will be mailed a separate notice of the hearing dates. If the rezoning is approved the following is an outline of the proposed changes and how it will affect the use of your property:

**Neighborhood Density**

- The proposed R-1/S area will remain a single-family zoning district. One dwelling unit is allowed per lot.

**Single Story Limit**

- There will be a limit of one habitable floor (story). Habitable areas are interiors conditioned for human occupancy (e.g. meet standards for heat, insulation, light and minimum ceiling heights).
- Lofts, mezzanines and similar areas will be prohibited as well as attics that meet habitable standards.

**Building Height Limit**

- The maximum building height will be 17 feet (currently 30 feet).
- Any proposed building height exceeding 17 feet will require approval of a Variance by the City. A Variance can only be granted due to specific hardships. Variances require a public hearing and can be denied. Notice of Variance hearings will be provided to surrounding property owners.

**Maximum Gross Floor Area**

- The maximum floor area ratio (FAR) of each home will be limited to 45%. FAR is the ratio of building square feet/lot area. Example - a 4,500 s.f. home on a 10,000 s.f. lot = 45% FAR.
- No future home additions or new homes beyond 45% FAR will be permitted unless a Variance is granted.
- Although a basement is not considered a story, a basement that extends more than two feet above the ground will be counted towards the maximum 45% FAR.

**Legal Non-Conforming Homes**

- Existing homes that are already two stories or existing homes that exceed 45% FAR or 17 feet in height will be considered legal and non-conforming if they were constructed with City permits.
- No changes are required to legal and non-conforming homes as a result of the single-story rezoning if they were legally constructed with City building permits.
- Legal non-conforming homes can be maintained and repaired subject to City building permit requirements.

**Existing Two-Story Homes**

- Existing two-story homes that were legally constructed with City building permits will be considered legal and non-conforming.
- Existing two-story homes do not need to be modified if the single-story zoning is approved.
- Existing second stories cannot be expanded or increased in height but can be maintained and repaired subject to City building permit requirements.
- Additions can be made to the first floor up to the maximum 45% FAR for the entire home.

**Eichler Design Guidelines**

- The area proposed for rezoning is an Eichler neighborhood. New additions, architectural changes and new homes are subject to the adopted Sunnyvale Eichler Design Guidelines.

If you have any questions about the proposed R-1/S zoning change and how it affects your property or how the public hearing process will occur, please contact me at (408) 730-7591 or gcaruso@sunnyvale.ca.gov. I will be happy to clarify this information and answer any questions.

Regards,

Gerri Caruso
Principal Planner

# City of Sunnyvale

## Agenda Item

**16-0376** **Agenda Date:** 7/11/2016

## REPORT TO PLANNING COMMISSION

### SUBJECT
Forward a recommendation to the City Council to Introduce an Ordinance to Amend Chapter 19.56 (Alternative Energy Systems) of the Sunnyvale Municipal Code related to the Solar Access Requirements Study Issue (2016-7279), and Find that the Action is Exempt from CEQA.

### REPORT IN BRIEF
On October 26, 2015, following the approval of a solar access variance, the Planning Commission sponsored this study issue (**Attachment 2)** to evaluate the current practice of solar access requirements and regulation of solar shading on adjacent parcels.

As stated in the study issue paper, this study is intended to determine whether the threshold for determining solar access regulations should be based on an analysis on December 21st (shortest day of the year) or consider a broader criteria such as a 365-day solar cycle analysis. The purpose of the study was to:

- Examine whether the current regulations are effective for all types of development and improvements being made to properties;
- Look at solar access for an entire parcel, not just roof-top solar access;
- Examine whether certain areas of the City should have different solar access requirements;
- Consider whether shading standards should vary between residential and non-residential buildings.

Sunnyvale is one of only a few cities that regulate solar access. Solar collection systems have both direct and indirect benefits to the City. They contribute to the City meeting the emissions reductions goals enumerated in the Sunnyvale Climate Action Plan (CAP) while also moving community members away from dependence on non-renewable sources of energy.

This report provides options for solar access regulations, describing the pros and cons for each option. Staff recommends that the Planning Commission make the recommendation to the City Council to adopt an ordinance (**Attachment 3**) to amend Chapter 19.56 (Alternative Energy Systems) of the Sunnyvale Municipal Code to amend the solar access requirements to a solar cycle vs. only on the shortest day of the year. This approach would clarify the existing regulation, provide options in determining the potential shading impact that new construction would have on an adjacent parcel, and allow for continued consistency with the Sunnyvale Climate Action Plan's policies on alternative energy.

### BACKGROUND
Current Solar Access Requirements

In December 1985, the Planning Commission recommended that the City Council adopt standards

regulating access to solar energy by establishing the concept of a solar envelope. At the 1985 Planning Commission hearing, staff stated that the proposed Ordinance was, “mainly intended for single-family areas where the construction of two-story homes may shade adjacent structures and thus prohibit their neighbors from installing effective solar panels**.”** However, the Ordinance as written applied to all zones in the City, including commercial and industrial. The City Council adopted the Ordinance on January 7, 1986.

The current solar access requirements were adopted when most solar energy systems were used for thermal water heating. The siting and effectiveness of solar hot water installations generally needed to be located on top of the structure where they would be utilized to minimize heat loss during transmission of the heated water. Hot water solar installations collect energy mainly when there is sufficient direct solar availability; the consumer uses the collected energy on-site. Solar hot water systems do not have capacity to store energy for future use. In Sunnyvale, solar hot water systems are mostly used for domestic hot water and for heating the water for swimming pools.

In contrast, current photovoltaic (PV) energy systems collect energy anytime solar access is available (even on cloudy days) and are able to collect more energy than the daily needed amount of the use or building where the system is located. Excess energy is collected and sold back to the utility company to be bought back by the user when needed (called Net Metering). This approach allows constant supply of energy to be available regardless of shading or cloud cover that may be present on certain days of the year. The change in solar system technology and usage means the need is not as absolute for direct and constant solar access at every day throughout the year. Some PV systems also store the energy for future use by charging on-site batteries.

The ordinance adopted in 1986 describes a solar cycle as an entire year, but the language in the Report to the City Council that accompanied the Ordinance focused the analysis on the solar access condition at the shortest day of the year with the lowest sun angle. After the Council adopted the solar energy ordinance in 1986, staff prepared a worksheet describing the use of the shortest day of the year on how to calculate solar shading, representing the extent of solar shading under the worst-case conditions. This approach has created confusion about why the solar cycle was included in the ordinance. Further, the worksheet appears to be intended for use primarily with single-family residential buildings and separate guidance for multi-family residential and nonresidential development was not created.

Current Solar Access Conditions

Development patterns, buildings heights, proximity of buildings to each other, and solar technology have changed since 1986. While the current standards are still effective for residential uses, they create difficulties for use in redeveloping areas, such as El Camino Real and Downtown. For example, as non-residential properties along El Camino Real redevelop with multiple story buildings, properties on the north side of the proposed buildings are likely to be shaded. But once the older, shorter building redevelops, the solar shading issue no longer exists. This situation makes it more difficult to implement the plan with newer multiple-story buildings due to solar shading issues. To address this issue, the Downtown Specific Plan (DSP) zoning exempts properties in the DSP from the solar access requirements.

On October 12 and 26, 2015, the Planning Commission considered variance applications to the solar access requirements for two separate projects involving redevelopment of two sites into separate five -story hotels on El Camino Real.  Analysis of these sites showed that the hotels would inhibit solar

access to the roof of the adjacent properties beyond the allowable level of 10 percent at 9 a.m. and 3 p.m. on December 21st (the current standard of). None of the adjacent structures would be shaded more than 10 percent throughout the solar cycle

On October 26, 2015, following these two variance requests, the Planning Commission sponsored the study issue regarding Solar Access Requirements (see **Attachment 2**) and it was ranked first by the City Council for the Community Development Department's 2016 Study Issues.

The City Council is scheduled to consider this item on August 9, 2016.

## EXISTING POLICY

### SUNNYVALE CLIMATE ACTION PLAN

Local Renewable Energy Policy

*Action EP-2.1* - Require new homes and businesses and major remodels to be "solar ready" by pre-wiring for solar water heating and solar electricity.

*Action EP-2.3* - Prevent buildings and additions from shading more than 10% of roofs of other structures.

### COUNCIL POLICY MANUAL

**Policy 3.5.1 Energy** (see **Attachment 4** for complete policy)

It is the purpose of this Energy Policy to:

- Promote economic development
- Maintain a healthy environment
- Maximize limited natural resources
- Encourage alternative forms of transportation
- Encourage cost reduction in City operations

### Sunnyvale Municipal Code

**Alternative Energy Systems (Chapter 19.56)**

19.12.200 (16) "Solar cycle" means a year-long interval, beginning at twelve noon, Pacific Standard Time, December 21st, in any calendar year, and ending at twelve noon, Pacific Standard Time, December 21st of the subsequent calendar year.

19.56.020 - Solar Energy Systems - Impairment of Solar Access by Structures

(a) No building permit shall be issued for any construction that would interfere with solar access to the rooftop of any structure or to any preexisting solar collector on nearby property. Solar access means the blocking or reducing exposure to sun more than 10% daily from 9 a.m. to 3 p.m. throughout any solar cycle.

### California State Law

There have been several state laws passed relative to solar access (titles are listed below); summaries of these laws can be found in **Attachment 8.**

- Voluntary Solar Easement Rights
- Solar Easements in Conjunction with the Subdivision Map Act
- Solar Rights Act for Installation of Solar Energy Systems
- Local Government Review Authority of Solar Applications

- Protection of Solar Systems from Vegetative Shading
- Solar Garden Regulations

## ENVIRONMENTAL REVIEW

The action being considered does not constitute a "project" within the meaning of the California Environmental Quality Act ("CEQA") pursuant to CEQA Guidelines section 15378(a) as it has no potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment. In addition, the action is exempt from CEQA pursuant to CEQA Guidelines section 15305, minor alterations in land use limitations in which do not result in any changes in land use or density.

Projects that are subject to the requirements of the amended chapters will be evaluated pursuant to CEQA on an individual basis.

## DISCUSSION

### Overview

Solar access protection laws recognize the importance of guaranteeing consumers the financial value of solar access on their property for already installed solar systems and potential future systems. Shading from nearby structures or foliage can significantly impact the financial value of a solar collector system through lost energy production. Conserving energy and improving energy efficiency in the built environment is a priority for the City, and includes shifting energy consumption that cannot be reduced through energy efficiency away from traditional electricity and natural gas to renewable energy sources. Solar collection systems are one way the City of Sunnyvale can reduce greenhouse gas emission and encourage the transition from traditional electricity production and natural gas sources to on-site renewable sources.

Chapter 19.56 (Alternative Energy Systems) of the Sunnyvale Municipal Code is intended to protect the rooftop of structures or existing active solar collectors from interference of solar access. Solar Access means the blocking or reducing exposure to the sun to an extent greater than 10 percent daily during the hours between 9 a.m. to 3 p.m. throughout any solar cycle. The City has historically implemented this code using the definition that shading of solar access can be no more than 10 percent at 9 a.m. and 3 p.m. on the shortest day of the year, December 21$^{st}$.

Subsequent to the adoption of the current ordinance, staff has received applications for approximately 13 variances to solar access requirements. From 1989 to 1999, the applications were only for properties within low-density and medium-low density zoning districts and resulted in a few denials. More recently (2000-2016), the variance applications have shifted to non-residential uses. As of July 2016, there are three pending solar access variance applications, two related to commercial and office development proposals and one related to a single-family second story addition. The need for the variance is based on interpretation of the code using the shortest day of the year, December 21$^{st}$ at 9 a.m. and 3 p.m.

The proposed study is to make a more precise definition of the context of solar shading (shortest day of the year or a yearly average) and to find a fair balance between the interest in allowing older buildings and properties to redevelop in accordance with City plans and in protecting solar access to lower scale buildings.

**Calculation of Solar Access**

There are several factors to consider when selecting an appropriate solar access requirement:

- **Time at Which Solar Shading is Measured**
  - Since the location of the sun in relation to a property varies over the course of the day (and over the course of the year) it is important to remember that shading is most extreme at the beginning and end of the of the daylight hours and is even more extreme in winter where the sun is lower in the sky at the beginning and end of the day. A shading threshold calculated on the shortest day of year is what has been used by Sunnyvale and appears to be the most common approach found in other cities ordinances.
  - While solar access varies extensively day by day, the electricity provided to the grid by solar systems in California are metered over the course of an entire year not a single day. To gain a better sense of what shading threshold is appropriate, staff contacted local solar PV installers. In general, these local providers indicated that solar access on the area of the property available for installation should be 85% or greater in the entire annual solar cycle (or no more than 15% shading).
- **Prescriptive vs Discretionary**
  - While most solar access ordinances have specific shading thresholds established, it is possible to allow for a discretionary approach where staff analyzes potential shading issues for each development in coordination with a solar expert to decide whether solar access can be optimized and development can still occur.
- **Rooftop Protections vs Whole Property Protections**
  - Solar shading requirements can be applied to building rooftops or on the property as a whole. In general, analyzing shading effects on an existing rooftop is more restrictive, although this is dependent on the location of the shaded structure on the neighboring property and its relationship to the proposed project. Additionally, in medium and high density residential zoning districts it is more likely that existing older structures will be re-developed and at similar heights to adjacent residential uses as compared with single-family and low-medium density developments where the difference between one and two stories could potentially create shading on adjacent structures.

**Other Cities**

Staff researched how other cities regulate solar access and generally found no jurisdictions near Sunnyvale have ordinances specific to solar shading to protect solar access from adjacent structures. The City Attorney's office reached out to colleagues statewide but did not get any responses, probably because relatively few cities regulate solar access.

The search was broadened to beyond Santa Clara County; a handful of jurisdictions in the state and country have solar regulations that were relevant to the study; however, none were found that regulated access in a similar fashion as the City of Sunnyvale. The regulations are described in more detail in **Attachment 9, along with links to the full text of each.**

**Options to Consider**

There are several different ways to address the solar access issue, including the following:

***Option A (Staff Recommendation):***

Amend the code to follow the year long solar-cycle approach

1. This option requires minimal changes to the zoning code, but would result in a change of

practice in how solar access requirements are evaluated by establishing the following steps for solar access review: Require applicants to demonstrate the percent of shading on adjacent roofs on the shortest day of the year (December 21st). If shading does not exceed 10% of the roof, no further solar shading review is necessary.

2. If the shading study determines there is more than 10% shading on December 21st, a more detailed evaluation must be prepared to show the amount of shading over a solar cycle (365 days).
3. If it can be shown that the adjacent property is not shaded by more than 10% throughout the solar cycle, no further study is required.
4. If shading exceeds 10% throughout the solar cycle the project must be redesigned to show compliance with the code. Alternatively an applicant could pursue other measures (such as solar easements) or a Variance must be approved to allow the project to move forward.

This option codifies the practice that has been used since the regulations were adopted in 1986, and clarifies the use of the solar cycle to evaluate shading.

**Pros:**

- Calculation of solar access as described in this option may provide a more accurate depiction of the solar access needs of a property.
- It would be consistent with the methods for calculation used by many solar installers and net metering policies of California investor owned utilities.
- Evaluation in this manner may provide a better balance between the rights to solar access and property rights.
- Retain consistency with the policies in the Sunnyvale Climate Action Plan.
- Clarifies the process by adding specific language to the ordinance on the requirements for solar shading analysis.
- Most applicants can use the existing solar shading analysis because the majority of projects do not shade an adjacent roof more than 10% on the shortest day of the year. A solar-cycle analysis would likely be required for few applications.

**Cons:**

- The year-round calculation of shading is more complex than the method currently in process. Single-day shading calculations are completed by most architects, but year-round analysis may require on-site modeling using an electronic device, such as a Solar Pathfinder.
- Use of this threshold may require applicants that cannot meet the shortest day of the year threshold to retain a qualified solar consultant to complete the solar cycle analysis.
- Overall solar access may be decreased to some extent by changing the standard way of analyzing solar access.

***Option B:***

***Retain shortest day threshold for single-family residential zoned properties***

This option would maintain the same thresholds and procedures as Option A for low and low-medium density residential zoning districts which consist of mainly single-family and duplex-style housing units (i.e. less than 14 units per acre: R-1, R-0, R-1.5, R-1.7 and R-2 zoning districts), but allows the year-long solar cycle to be used for medium and higher density residential and non-residential properties.

In this option, shading of the low and low-medium density zoning districts would be based on the shading analysis performed at 9 a.m. and 3 p.m. on December 21st and not the solar cycle. The application of this regulation would be based on the adjacent property's zoning designation so a commercial parcel that was adjacent to a low-density residentially zoned parcel would calculate shading based on the regulations required for the low-density residential parcel.

**Pros:**

- For medium density and higher residential zoning districts, the pros would be similar to those listed above in Option A.
- For low and low-medium density zoning districts, retention of an easy approach to calculating solar shading.

**Cons:**

- For medium density and higher residential zoning districts, the cons would be similar to those listed above in Option A.
- It could be confusing to have two sets of standards.

***Option C: Other Options to Consider***

The following options were considered but not recommended (additional details can be found in **Attachment 5).**

- Evaluate Shading in accordance with Option A for Low-Density and Low-Medium Density Residential Zoning Districts but Determine an Appropriate Percentage of the Site that could be Shaded for Other Zoning Districts.
- Evaluate Shading on December 21st only and Average the Results between 9 a.m. and 3 p.m. or Increase the Allowable Percentage of Neighboring Rooftop to be Shaded.
- Evaluate Shading in accordance with Option A for Low-Density and Low-Medium Density Residential Zoning Districts and have no Solar Access Requirements for other Zoning Districts.

***Option D: Maintain the Status Quo***

This option would maintain the existing method used by staff to determine compliance with the solar access requirements. If this option is selected, it would be important to clarify the practice and regulation by amending the ordinance to remove the reference to a solar cycle. The Planning brochure on Solar Access and Shadow Analysis reflects the current practice (**Attachment 7)**.

**Pros:**

- This method can be interpreted to be consistent with the Sunnyvale Climate Action Plan.
- The calculation required for single day analysis of shading at two time points is simpler than some other thresholds.
- Does not affect the majority of new construction applications.

**Cons:**

- This threshold may be unnecessarily strict, not providing fair balance with interests of neighboring property owners and solar access needs.
- May lead to further confusion and questions on the meaning of this ordinance.
- May result in more variance requests, which typically can be interpreted as an unrealistic code

requirement.

## FISCAL IMPACT

The proposed modifications to the Sunnyvale Municipal Code associated with the solar access requirements study issue would have no fiscal impacts.

## PUBLIC CONTACT

Public contact regarding this item was made through the following ways:

1. Posting the Agenda for Planning Commission on the City's official-notice bulletin board outside City Hall and by making the agenda and report available at the Sunnyvale Public Library and on the City's website;
2. Publication in the *Sun* newspaper, at least 10 days prior to the hearing;
3. E-mail notification of the hearing dates sent to all interested parties and neighborhood associations; and
4. One community outreach meeting held to discuss the study issue on April 7, 2016.

### Planning Commission Study Session

A study session with the Planning Commission was held on March 28, 2016 with all seven of the commissioners in attendance. The Commission was interested in simplifying the solar shading analysis process as much as possible, while maintaining its effectiveness in promoting alternative energy systems. In addition to the solar access requirements as described in the Study Issue Paper ( **Attachment 2**), the Planning Commissioners also discussed a topic that went beyond the original scope of this study issue, solar rights and rights to sunlight in respect to individual property rights. In an effort to address this comment, a memo from the Office of the City Attorney is included ( **Attachment 6)** to further explain this concept.

A few members of the public also attended the study session and spoke about their interest in preserving the right of property owners to solar access and alternative energy systems. One member of the public also mentioned an interest in allowing for advancements in solar technology.

### Community Outreach Meeting

Staff conducted an outreach meeting on April 7, 2016. Two people attended the meeting, one from the development community and one community member.

The individual from the development community re-iterated interest that the solar access ordinance be modified to allow for some additional flexibility, and with analysis requirements that are clear and relatively easy to complete.

The community member shared a concern that modifications to the solar ordinance may unfairly limit solar access and that analyzing shading percentage over the course of the year rather than the shortest day would not be consistent with current practices and may not protect solar access rights. In addition, the community member stated that the City should look at solar rights generally for an entire property (or based on use) while also evaluating a best and fair alternative for implementing Sunnyvale Municipal Code Chapter 19.56.

## ALTERNATIVES

Recommend to City Council:

1. Introduce an Ordinance to Amend Chapter 19.56 (Alternative Energy Systems) of the

Sunnyvale Municipal Code that allows solar access to be calculated based on a full 365 day solar cycle.

2. Introduce and ordinance with modifications to the staff recommendation.
3. Do not amend Chapter 19.56 (Alternative Energy Systems) of the Sunnyvale Municipal Code and make no changes to the current standard of practice for solar access requirement evaluation.

## RECOMMENDATION

Recommend to the City Council Alternative 1: to introduce an Ordinance to Amend Chapter 19.56 (Alternative Energy Systems) of the Sunnyvale Municipal Code that allows solar access to be calculated based on a full 365 day solar cycle.

The recommended modifications to the Sunnyvale Municipal Code will help clarify the existing solar access requirements and also provide more flexibility to balance property owners' solar access, for the purpose of PV installation, with property owners' rights (e.g. the potential to build to heights allowed in the Sunnyvale Municipal Code).

Prepared by: Amber Blizinski, Principal Planner
Reviewed by: Andrew Miner, Planning Officer
Reviewed by: Trudi Ryan, Director, Community Development
Reviewed by: Kent Steffens, Assistant City Manager
Approved by: Deanna J. Santana, City Manager

## ATTACHMENTS

1. *Not Used (for use with Report to Council)*
2. Study Issue Paper
3. Draft Ordinance
4. Full Text of Council Policy 3.5.1 (Energy)
5. Information on Other Options to Consider
6. City Attorney Office Memo Regarding Solar Access Rights
7. Solar Access and Shadow Analysis Handout
8. Summary of California State Laws Related to Solar Access
9. Other Jurisdiction's Solar Access Regulations

This attachment number reserved for use with Report to Council.

# City of Sunnyvale

## Agenda Item

**15-0989** **Agenda Date:** 1/29/2016

**2016 COUNCIL STUDY ISSUE**

**NUMBER**
CDD 16-13

**TITLE** Solar Access Requirements

**BACKGROUND**
**Lead Department**: Community Development
Support Department(s): Environmental Services

**Sponsor(s)**:
City Manager

**History**:
1 year ago: N/A
2 years ago: N/A

**SCOPE OF THE STUDY**
**What are the key elements of the study?**
Solar access requirements were adopted in 1986 when most solar energy systems were thermal water heating. Solar hot water installations were primarily located on the roofs of buildings-close to the location the hot water would be used. Advances in solar technology now allow greater flexibility in locating solar facilities on a property. The study would examine whether the current regulations are still appropriate or if modifications to the regulations are desirable. The study would look at solar access to the entire parcel and not just the roof-top solar access. The study would examine whether additional areas of the City should have no solar access or different solar access requirements. The types of structures being shaded might also suggest different standards, such as shading of residential or non-residential buildings. The study could also look at whether solar easements or other compensating requirements are possible or appropriate.

**What precipitated this study?**
Recently, the Planning Commission has considered variance applications for solar access associated with multi-story buildings along El Camino Real. In two cases the proposal for a 5-floor hotel building created shadow on the roof of adjacent small one-story buildings in excess of allowable shading. In one case there was additional shadow on the outdoor use (miniature golf). The Planning Commission also expressed that the criteria for solar shading should be reevaluated, i.e. whether the maximum amount of solar shading should apply to the winter solstice (shorter day of the year) or consider a broader criteria such as a year-round average. There are pending applications in other areas of the City with similar issues where the zoning code allows or incentivizes taller buildings to meet the vision for that area, creating tension between the two standards. The Downtown Specific Plan area has a blanket exemption from the solar access requirements. Plans for the Peery Park Specific Plan,

Lawrence Station Area Plan and update to the Precise Plan for El Camino Real are opportunities to craft regulations specific to those areas.

**Planned Completion Year:** 2016

## FISCAL IMPACT

**Cost to Conduct Study**

Level of staff effort required: Moderate/Minor

Amount of funding above current budget required: $ 0

Funding Source: N/A

Explanation of Cost: N/A

**Cost to Implement Study Results**

Some cost to implement

Explanation of Cost: Depending on what new regulations are adopted there would be a range of costs for training of staff. These costs could be offset with development application fees.

## EXPECTED PARTICIPATION IN THE PROCESS

Council-approved work plan: No
Council Study Session: No
Reviewed by Boards/Commissions: Planning Commission, Sustainability Commission

## STAFF RECOMMENDATION

**Position**: Support

**Explanation**: Staff finds this issue a priority based on the type of applications that are currently pending. If ranked high, the study could be completed early in 2016 to provide potentially alternative solar access requirements for pending applications.

Prepared By: Trudi Ryan, Director, Community Development
Reviewed By: Hanson Hom, Assistant City Manager
Reviewed By: Kent Steffens, Assistant City Manager
Approved By: Deanna J. Santana, City Manager

**ORDINANCE NO. _____**

**AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF SUNNYVALE TO AMEND SECTION 19.56.020 OF CHAPTER 19.56 (ALTERNATIVE ENERGY SYSTEMS) OF TITLE 19 (ZONING) OF THE SUNNYVALE MUNICIPAL CODE RELATING TO IMPAIRMENT OF SOLAR ACCESS BY STRUCTURES**

THE CITY COUNCIL OF THE CITY OF SUNNYVALE DOES ORDAIN AS FOLLOWS:

SECTION 1. SECTION 19.56.020 AMENDED. Section 19.56.020 of Chapter 19.56 (Alternative Energy Systems) of Title 19 (Zoning) of the Sunnyvale Municipal Code is hereby amended to read as follows:

**19.56.020. Solar energy systems—Impairment of solar access by structures.**

(a) No building permit shall be issued for any construction, the effect of which when completed would be to interfere with solar access to the rooftops of ~~any~~ the sum of all permitted structures on an adjacent property or to any preexisting active solar collector on ~~nearby~~ an adjacent property. Solar access means the absence of shadows blocking or reducing exposure to the sun to an extent greater than ten percent daily during the hours between nine a.m. to three p.m., Pacific Standard Time, throughout any solar cycle. Nothing contained herein shall require modification to any structure, the shade pattern of which would impair solar access to rooftops or active solar collectors established later in time.

(b) Applications for new construction above the first level of any structure shall include the following solar shading analysis by a qualified professional:

(1) The solar shading analysis shall show the extent to which the proposed construction will shade adjacent rooftops and solar collectors at nine a.m. and three p.m. Pacific Standard Time on December 21st.

(2) If the above solar shading analysis shows a conflict with solar access greater than ten percent, the applicant shall provide an additional analysis which calculates the extent to which the proposed construction will shade adjacent rooftops and solar collectors between nine a.m. to three p.m. Pacific Standard Time throughout the entire 365-day solar cycle. If the analysis shows a cumulative shadowing effect of less than ten percent total over the course of the 365-day solar cycle, the application shall be deemed to be in compliance with this section.

(~~b~~c) [Renumbered; text unchanged]

SECTION 2. CEQA - EXEMPTION. The City Council finds, pursuant to Title 14 of the California Code of Regulations, Section 15061(b)(3), that this ordinance is exempt from the requirements of the California Environmental Quality Act (CEQA) in that it is not a Project which has the potential for causing a significant effect on the environment.

SECTION 3. CONSTITUTIONALITY; SEVERABILITY. If any section, subsection, sentence, clause or phrase of this ordinance is for any reason held to be invalid, such decision or decisions shall not affect the validity of the remaining portions of this ordinance. The City Council hereby declares that it would have passed this ordinance, and each section, subsection, sentence, clause and phrase thereof irrespective of the fact that any one or more sections, subsections, sentences, clauses or phrases be declared invalid.

SECTION 4. EFFECTIVE DATE. This ordinance shall be in full force and effect thirty (30) days from and after the date of its adoption.

SECTION 5. POSTING AND PUBLICATION. The City Clerk is directed to cause copies of this ordinance to be posted in three (3) prominent places in the City of Sunnyvale and to cause publication once in The Sun, the official publication of legal notices of the City of Sunnyvale, of a notice setting forth the date of adoption, the title of this ordinance, and a list of places where copies of this ordinance are posted, within fifteen (15) days after adoption of this ordinance.

Introduced at a regular meeting of the City Council held on _____, and adopted as an ordinance of the City of Sunnyvale at a regular meeting of the City Council held on _____, by the following vote:

AYES:
NOES:
ABSTAIN:
ABSENT:
RECUSAL:

ATTEST: APPROVED:

_____ _____
City Clerk Mayor
Date of Attestation: _____

(SEAL)

APPROVED AS TO FORM:

_____
City Attorney

# Policy 3.5.1 Energy

**POLICY PURPOSE:**

The City of Sunnyvale finds that the preservation of natural resources through the use of energy efficient activities is of great importance to the citizens and businesses of Sunnyvale. It is the purpose of this Energy Policy to:

- Promote economic development
- Maintain a healthy environment
- Maximize limited natural resources
- Encourage alternative forms of transportation
- Encourage cost reduction in City operations

**POLICY STATEMENT:**

It is the policy of the City of Sunnyvale that the City will:

- Minimize energy consumption in City operations
- Promote the development of alternative energy resources and support the enhancement of existing technologies
- Provide for efficient vehicular movement on City streets
- Promote alternative modes of transportation to the single-occupant gasoline powered automobile such as mass transit, carpooling, bicycling and walking
- Use energy efficient street light and traffic signal systems
- Reduce energy consumption through Land Use and Community Design Policies
- Utilize alternative energy sources at the Sunnyvale Water Pollution Control Plant
- Support installation of cost-effective energy efficiency measures in municipally owned buildings and facilities
- Support Federal, State, and other Local agency energy-related legislation when consistent with this policy
- Support efforts to provide affordable, reliable, diverse, safe, and environmentally acceptable power to the citizens and businesses of Sunnyvale

(Adopted: RTC 00-317 (12/19/2000); (Clerical/clarity update, Policy Update Project 7/2005))

Lead Department: Department of Public Works

## Solar Access Requirements Study Issue
## Information on the Other Options to Consider

### *Evaluate Shading in accordance with Option A for Low-Density and Low-Medium Density Residential Zoning Districts but Determine an Appropriate Percentage of the Site that could be Shaded for Other Zoning Districts*

This option has the same thresholds and procedures as Option A for low and low-medium density residential zoning districts, but would acknowledge that it is generally easier to place solar collection systems on carports, parking lots, open space, shade structures and other surfaces within the other zoning districts due to larger lot sizes. Therefore, it may be more appropriate to come up with a percentage of the overall lot size to remain free from shading instead of a portion of the roof structures.

In this case and in any other option involving separate standards for lower density residential zoning districts and all other zoning districts the requirement in effect would be based on the zoning designation of the shaded parcel, not the zoning designation of the development parcel. This would mean that commercial properties adjacent to lower density residential zoning districts would follow the requirements of the district the parcel was having the shading effect on.

This option would essentially remove the existing buildings on an adjacent site from the equation by basing the solar access requirement on the effect that the new development has on the adjacent site as a whole. This option would also alleviate the problem that new development has on adjacent existing sites that may be redeveloped in the near future.

Using this threshold concept, the ordinance could be modified to create a two-step process similar to the one described in Option A in that no new construction would be allowed to shade more than a certain percentage of the total neighboring property, including rooftops and other surface area, measured across a solar cycle. The procedure for analysis could be as follows:

1. A solar access analysis drawing would be required with any application involving a two-story (or higher) development—on a single day, December 21$^{st}$, at 9 a.m. and 3 p.m.
2. If the above-stated analysis indicates shading would exceed the allowed percentage on December 21$^{st}$ at 9 a.m. and 3 p.m., the applicant would either have to re-design their proposed development project or they would need to submit the results of an on-site 365 day solar cycle study performed by a qualified professional. In this case, if the project is found to shade less than the allowed percentage of the adjacent property, the solar access requirement would be met.

As this would be a new standard and one that has not been guided by any research or other regulations, it would require further assessment to determine what the appropriate

percentage would be for the site. It would require retaining a consultant to do analysis on a few recent development projects to come up with an appropriate percentage.

***Evaluate Shading on December 21st only but Average the Results between 9 a.m. and 3 p.m. or Increase the Allowable Percentage of Neighboring Rooftop to be Shaded.***

This option would retain the same procedures as the status quo, but may increase the threshold of allowable shading from 10% to 15% or 20% on December 21st between 9 a.m. and 3 p.m.

Analysis would need to be done at every hour between 9 a.m. and 3 p.m. and the results would then be averaged to create the percentage of solar shading on adjacent structures. This option would codify the current process as it relates to the date on which solar shading analysis is conducted and expand the process by studying the effects of the shading throughout the entire day on December 21st to create more information about solar access on that day.

***Evaluate Shading in accordance with Option A for Low-Density and Low-Medium Density Residential Zoning Districts but have no Solar Access Requirements for other Zoning Districts.***

This option has the same thresholds and procedures as Option A for low and low-medium density residential zoning districts but would not require shading analysis for other zoning districts or areas covered by a specific or area plan.

In this option, shading of an adjacent site would be regulated by the maximum building standards (lot coverage, floor area, etc.) instead of using a percentage of the site or roof structures as a threshold. Similar to Option B, the regulation would apply based on the adjacent property so a commercial parcel that was adjacent to a low-density residentially zoned parcel would use provide shading requirements as required for the low-density residential parcel.

# Office of the City Attorney
# Memorandum

**TO:** Amber Blizinski
Principal Planner

**FROM:** REBECCA MOON
Sr. Assistant City Attorney

**SUBJECT:** **SOLAR ACCESS**

**DATE:** June 30, 2016

## OVERVIEW OF SOLAR RIGHTS IN CALIFORNIA

Somewhat surprisingly, American law does not recognize any general right to prevent a property owner from blocking a neighbor's access sunlight.[1] Property rights were historically viewed as extending to the limits of the sky, which gave property owners an essentially unrestricted right to build vertically. In addition, economic development of property was favored over neighbors' interests in preserving access to sunlight and air.[2]

In reaction to these legal principles, which sometimes had harsh results, many local governments enacted legislation to ensure that property owners cannot exercise their development rights in ways that have a detrimental impact on neighbors. The primary legislative tools to preserve access to sunlight and air include zoning, setbacks, and building height limitations. These laws are enacted through a city's police power and are constitutional as long as the restrictions are reasonably related to the public interest and do not deprive a property owner of all economic use of their property.[3]

Solar easements are another legal tool sometimes used to ensure that solar energy systems will have access to sunlight. A solar easement gives one property owner the right to prevent another property owner from building a structure or allowing landscaping that causes excess shade. Because solar easements are an agreement between private parties, they can go beyond the development restrictions imposed by the city's zoning code. Once created and recorded, the easement is binding on future owners of the property. A major limitation is that solar easements

[1] "As a general rule, a landowner has no natural right to air, light or an unobstructed view and the law is reluctant to imply such a right." *Pacifica Homeowners' Assn. v. Wesley Palms Retirement Community* (1986) 178 Cal.App.3d 1147, 1152.
[2] In an article about solar access laws over a century ago, the *New York Times,* July 7, 1878, p.6, argued that "encouragement of building is more needed than restrictions upon it".
[3] *Associated Home Builders etc., Inc. v. City of Livermore* (1976) 18 Cal.3d 582, 604.

**ATTACHMENT 6**

have to be privately negotiated and purchased. Also, enforcement options are generally limited to filing a private lawsuit.

Some cities have adopted ordinances that require developers to convey and record solar easements for each parcel at the time a property is subdivided. (Gov. Code Section 66475.3.) These ordinances, however, only apply to future construction. As a result, they tend to have the greatest impact in cities where there are still significant tracts of undeveloped land. In cities that are largely built out, appropriate building height and setback requirements coupled with local solar access ordinances are a more effective way to preserve solar access for most residents.

During the 1970's, the state of California enacted two laws designed to encourage use of solar energy by protecting access to sunlight. The Solar Rights Act requires HOAs and local government agencies to allow the installation of solar energy systems (Civil Code 714). The Act also authorizes (but does not require) the creation of solar easements (Civil Code 801.5) and requires local government agencies to adopt streamlined permitting processes for solar energy systems (Gov. Code 65850.5).

The Solar Shade Control Act (Pub. Res. Code 25980 et seq.) provides limited protection to owners of solar energy systems from shading caused by trees and shrubs on adjacent properties. The law prevents a property owner from allowing trees or shrubs to shade an existing solar energy system installed on a neighboring property, provided the shading trees or shrubs were planted after the solar collecting device was installed. The Solar Shade Control Act only applies to vegetation, not structures.

Sunnyvale is one of only a handful of cities nationwide that have adopted ordinances to prevent shading of solar systems. Ashland, Oregon, and Boulder, Colorado (which are often cited as model ordinances), allow the owner of a solar collection system to apply for a "solar permit" that prevents neighboring property owners from allowing vegetation to shade existing solar collectors. Ashland and Boulder also use the concept of a "solar fence" to limit shading from new construction. If properly drafted, solar access ordinances can have essentially the same impact as privately-negotiated solar easements. A downside, however, is that solar access laws may be perceived as unfairly restricting development, particularly on properties with unusual site characteristics.

# SOLAR ACCESS AND SHADOW ANALYSIS

ILLUSTRATIONS OF HOW TO COMPLETE AN ANALYSIS
As required by SMC 19.56 and the Community Development Director

## BACKGROUND

The City of Sunnyvale has a solar Access Ordinance which is intended to preserve the ability of residents to add functional solar panels to their roof. For this reason, each new second story addition needs to be analyzed to determine the extent of projected shadow on neighboring roofs.

The Sunnyvale Municipal Code (SMC) states that no new construction may shade more then 10% of the area of a neighboring roof on the shortest day of the year, December 21st, from 9 a.m. to 3 p.m. It also states that no new construction may shade any part of an existing solar collector. Please keep that in mind when designing your second story. The complete Solar Access Ordinance is located in Chapter 19.56 of the SMC, and can be obtained at the One-Stop counter or online at http://Sunnyvaleplanning.com

The following five pages provide step by step illustrations of how to complete the analysis. This method requires only a scale and a protractor. Please contact the Planning Division if you have any questions.

## KEY TERMS

The sun's position is defined by two angles: the **altitude angle** and the **azimuth angle**.

**Altitude Angle** - the angle measured from the horizon up to the sun. For example, when the sun is on the horizon, the altitude angle is 0˚. When the sun is directly overhead, the angle is 90˚.

**Azimuth Angle** -The angle measured from the position of the city to the "true" or geographic north.

**Shortest Day of the Year = On December 21St**
The azimuth angle of Sunnyvale, California at 9:00 a.m. is 137˚ east from north. At 3:00 p.m., Sunnyvale's azimuth angle is 137˚ west from north.

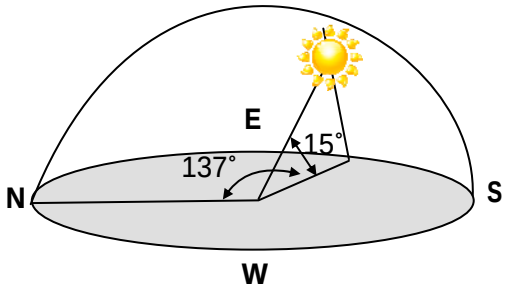
The altitude angle of Sunnyvale California at 9:00 a.m. and 3:00 p.m. is 15˚.

## INSTRUCTIONS

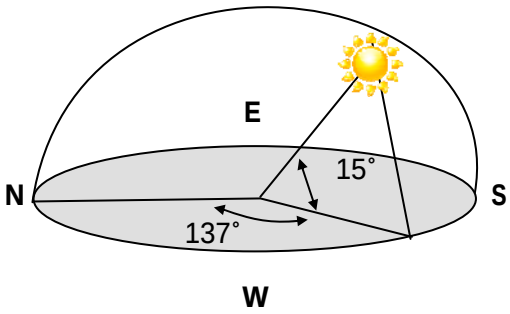
Refer to pages 2 through 7 for directions and illustrations.

*SUN ANGLES:*

*DECEMBER 21ST*
*9:00 A.M.*

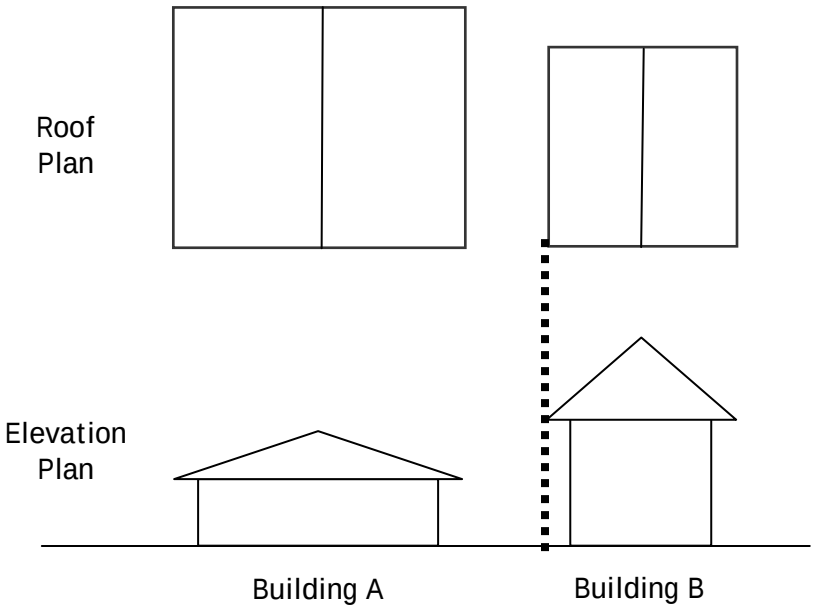



*DECEMBER 21ST*
*3:00 P.M.*



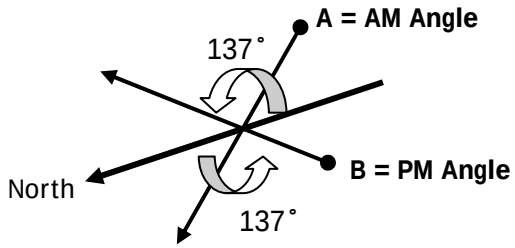
## INSTRUCTIONS FOR CALCULATING THE MAXIMUM SHADOW AT 3:00 PM

**Step 1**



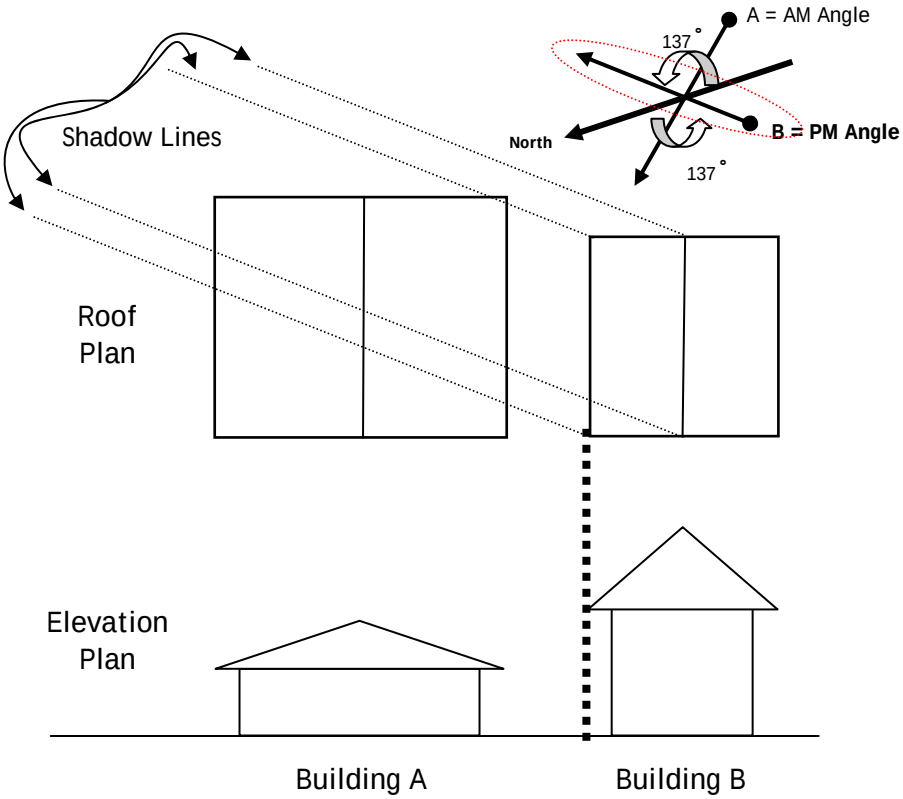

1. Draw elevations of the proposed structure and the affected building. Next draw a roof plan directly above the elevation making sure each roof plan aligns with the elevation. These drawings must be placed on the same plan and drawn to the same scale (min. 1:1/8). The roof plans must line up with the elevation drawings (see dotted line lining up the roofs on Building B).

**Step 2**



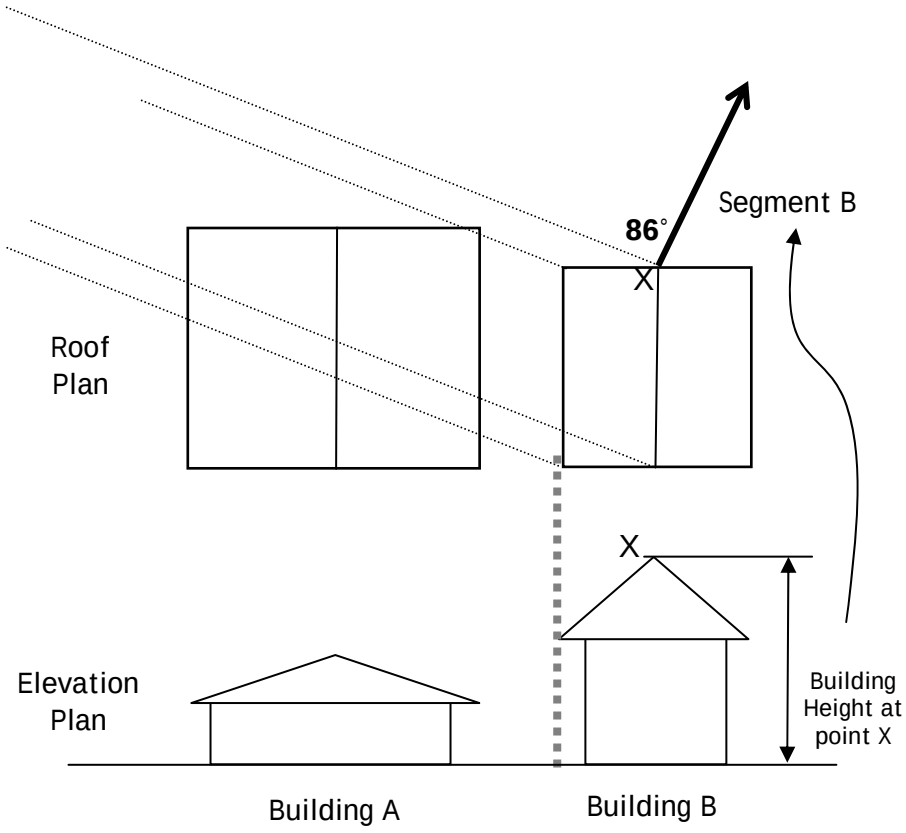

2. Identify the north direction and draw two 137˚ angles from the north direction (see points A and B). These lines demonstrate the sun angles at 9 a.m. and 3 p.m. on December 21st, (the shortest day of the year).

**Step 3**



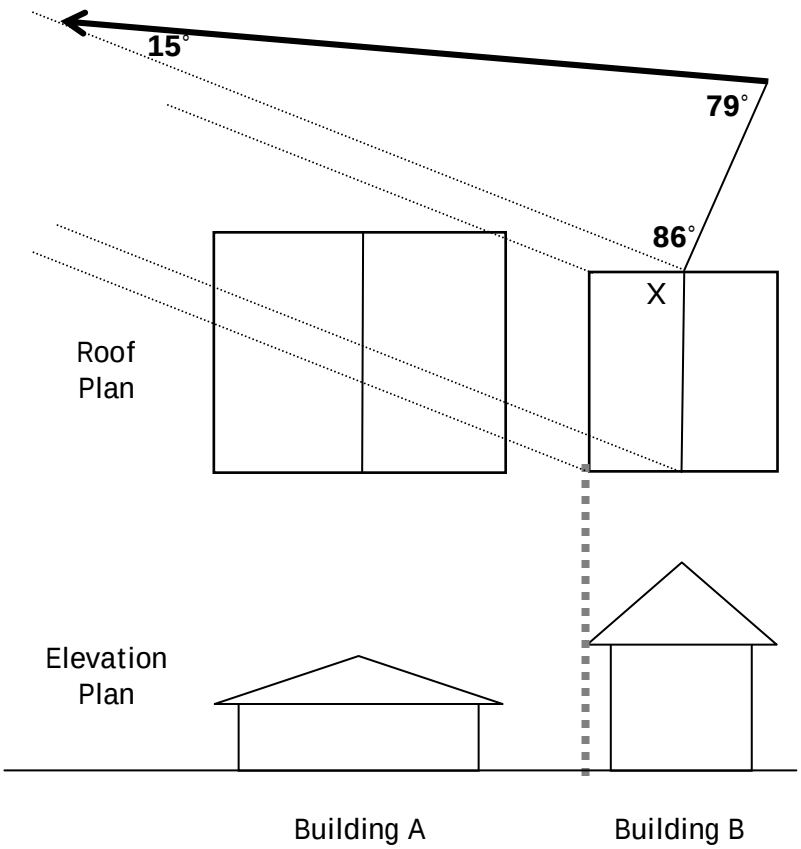

3. Draw **shadow lines** parallel to the PM angle from each edge of the roof plan. These lines show how the sun will be angled across the roofs.

**Step 4**



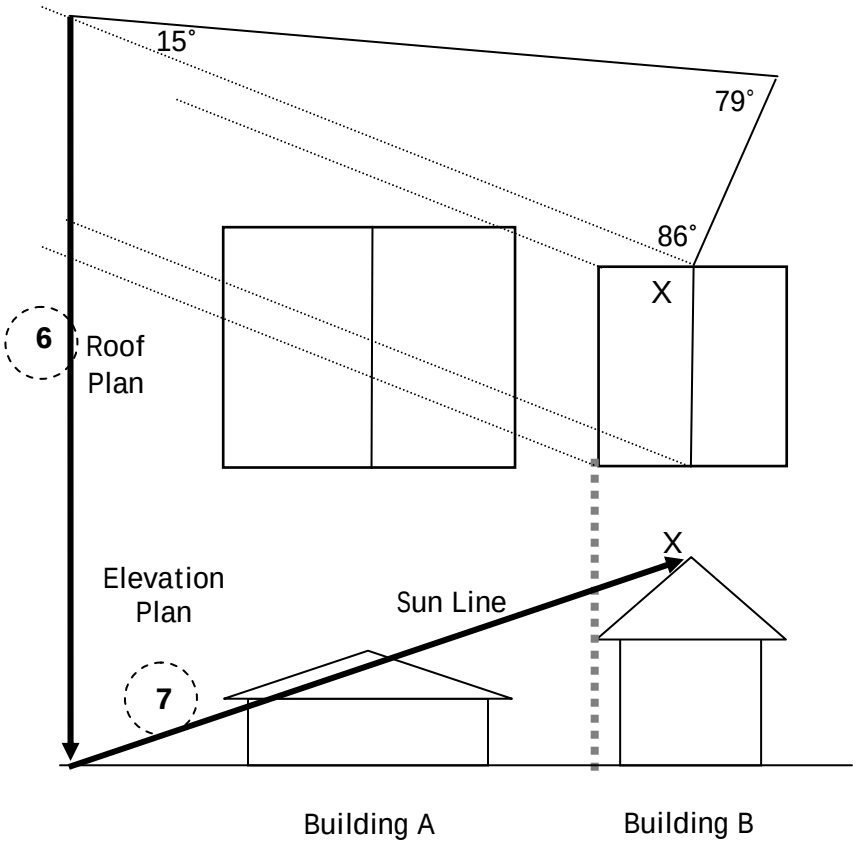

4. Choose one edge on the roof plan of Building B to draw the altitude angle. For this illustration, point X was used, but any roof edge may be used successfully. Draw a line segment ("**Segment B**") at an 86˚ angle to the shadow line at Point X (this will be parallel to the AM angle). The length of Segment B should be equal to the building height at point X, where Segment B is drawn.

**Step 5**




5. Draw a 79˚ angle from the end of Segment B. Find the point at which this new line intersects the shadow line. This creates a 15˚ angle – the altitude angle of the sun.

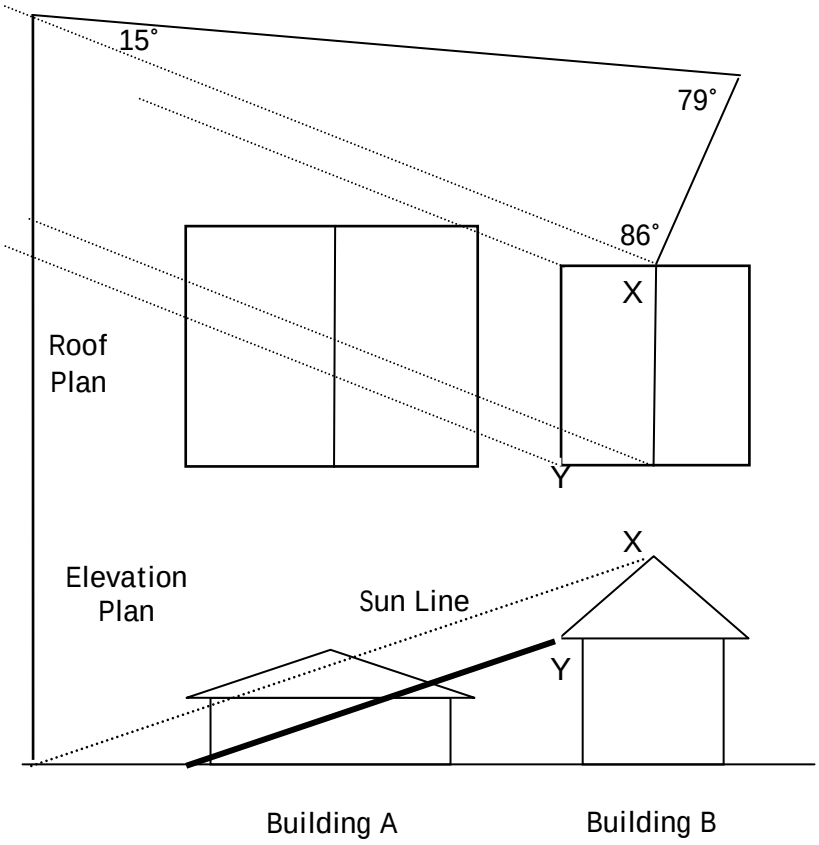
**Steps 6 and 7**




6. Draw a line from this point straight down to the grade on the elevation plan.

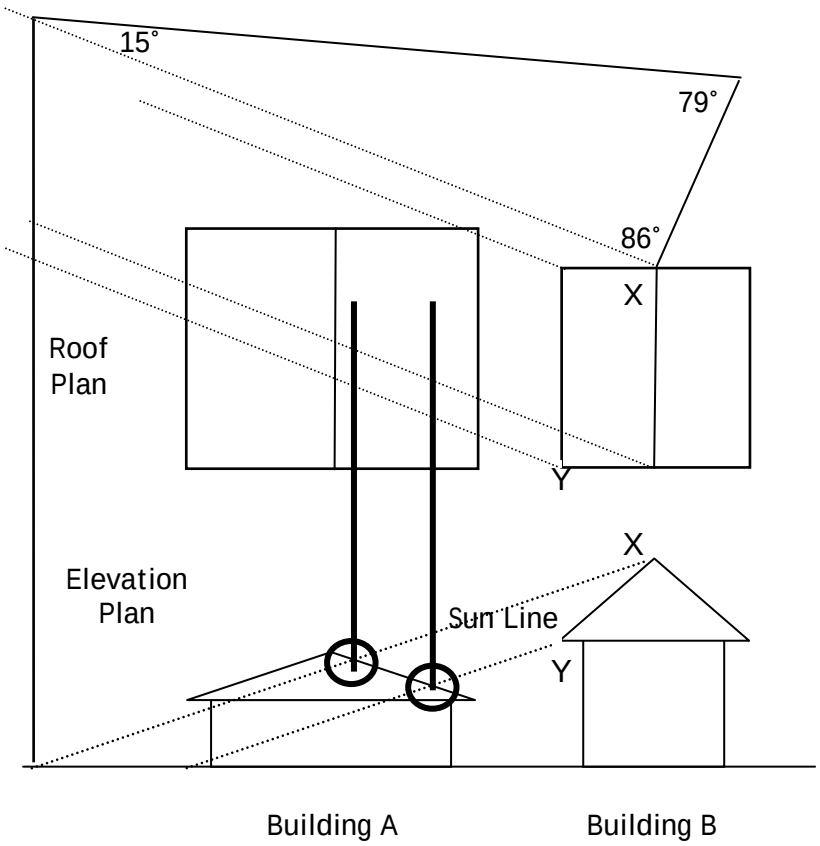
7. Connect the corresponding roof point on your elevation (Point X) with this new point on the ground. This line shows the angle of the sun across the roofs. This will be referred to as the "**Sun Line**."

**Step 8**




8. Draw lines from other major roof points, such as Y, on Building B that are parallel to the "Sun Line."

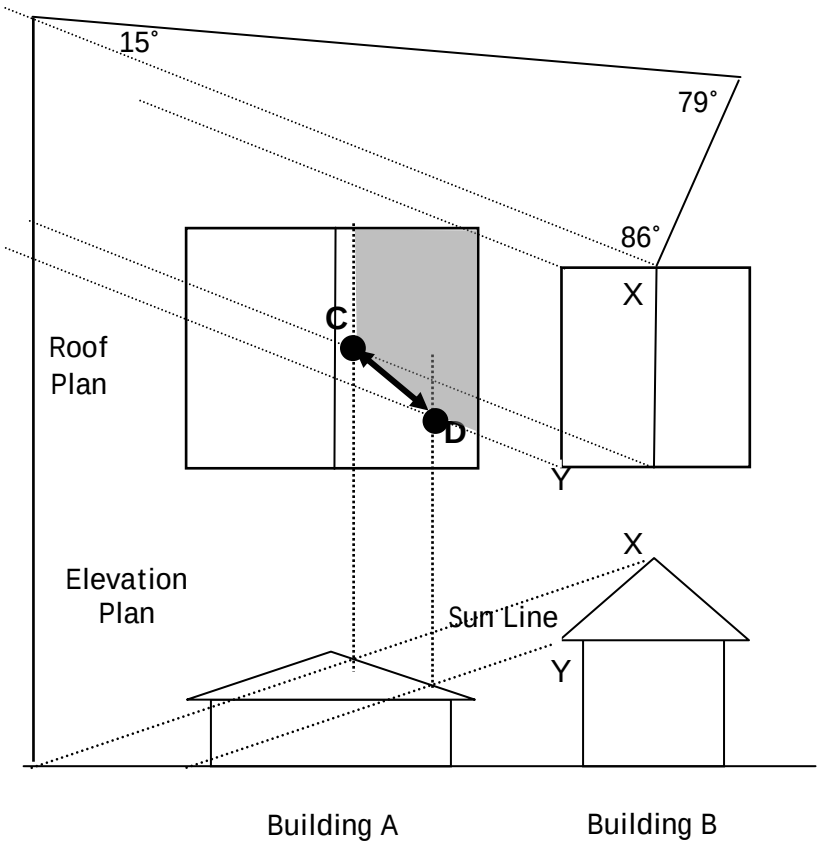
**Steps 9 and 10**




9. On the elevation drawing, find the points at which the shadow lines intersect with the roof on Building A. These are circled on the elevations.

10. Draw these lines straight up through the roof plan.

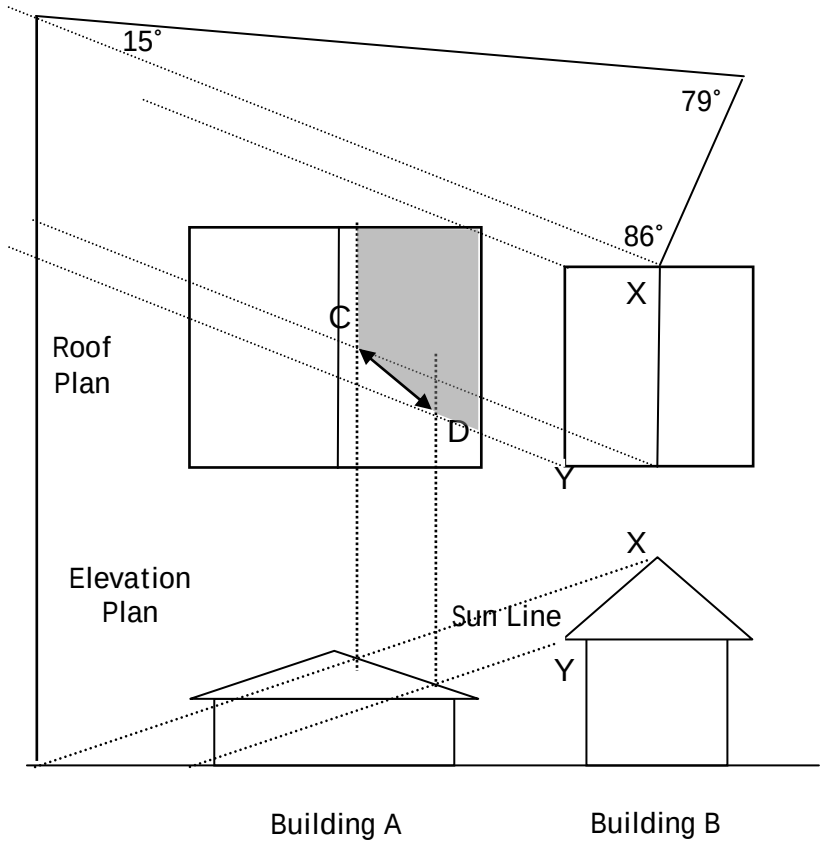
**Step 11**




11. Locate where the two sets of the lines intersect on the roof plan of Building A. Shade in the corresponding amount of shadow on the roof plan. The diagonal line was drawn between points C and D to reflect the shadow of the roof form between the top of the ridge and the lower edge of the roof.

    Calculate the area shaded as a percentage of the total roof area of Building A for the PM analysis.

**Completed PM Solar Analysis**



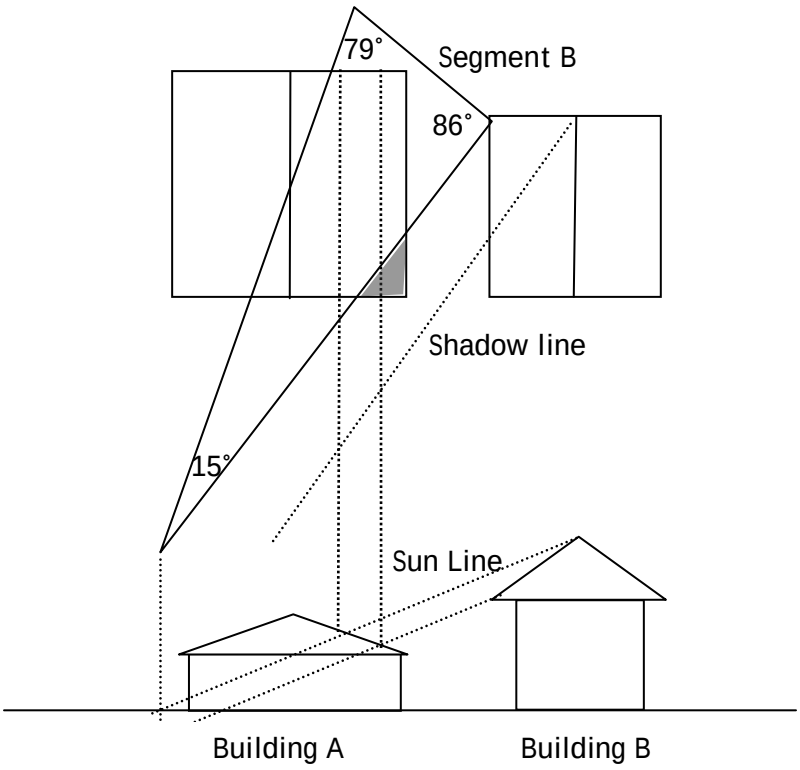

PM = Shaded Area ÷ by Roof Area

11. This is what a completed PM Solar Analysis looks like. It should include all the angles and line used to arrive at the shadow area.

12. Repeat steps 3-11 and refer to Example 1 below.

Submit the analysis for both the AM and PM to the Planning Division with your Planning Application.

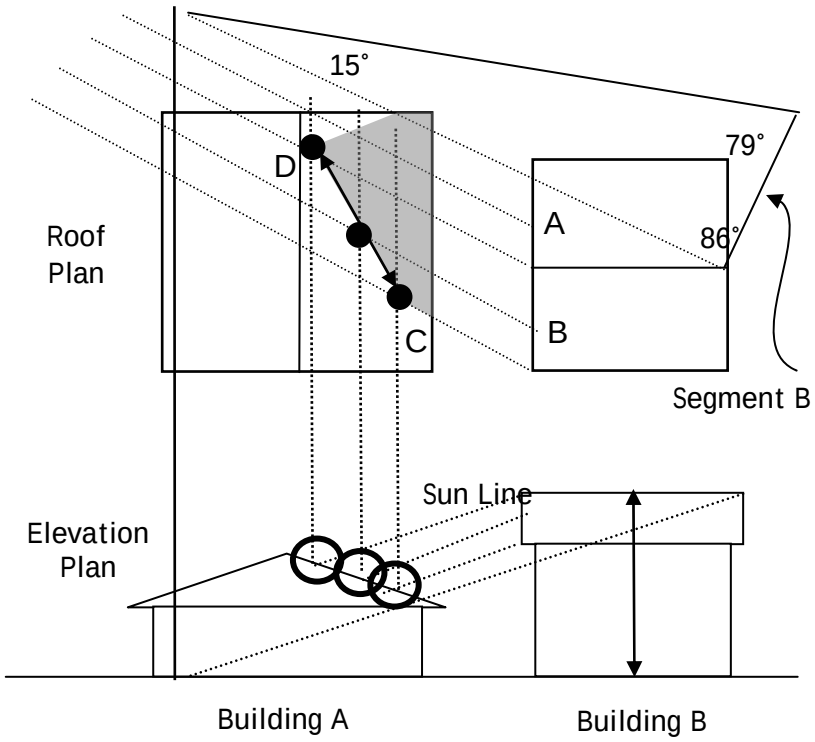
**Example AM Solar Analysis**




**Example 1**
**AM Solar Analysis**

Perform steps 3-11 for the AM analysis. Use the AM line for step 3 and the PM line in step 4 to determine the shadows for the AM Analysis.

**Example PM Solar Analysis**




**Example 2**
**PM Solar Analysis with Different Roof Form**

In this example the gable roof form of Building B is perpendicular to Building A. Note how a shadow line was drawn from the midpoint of each gable, points A and B. This helps determine how the angled roof affects the shadow lines. A diagonal line was drawn from point C to point D to reflect the changing roof height from the lower edge to the top ridge.

## Summary of California State Law Related to Solar Access

### Voluntary solar easements
Civil Code 801.5
Ensures that neighbors may voluntarily sign easements to guarantee the right to receive sunlight for active or passive solar energy systems.

### Subdivision Map Act—Solar Easements
Gov. Code 66475.3
Allows local governments to pass ordinances to require solar easements in subdivision projects.

### Solar Rights Act
Civil Code 714
Prohibits any covenant, restriction or condition contained in any deed or other contractual restriction to limit the installation or use of a solar energy system on any property.

### Local Government Review of Solar Applications
Gov. Code 65850.5 and Health and Safety Code 17959.1
Law limits local governments to non-discretionary review of applications to install solar energy systems. Additionally, the law limits review to whether the solar system meets health and safety requirements, and expressly prohibits review for aesthetic purposes.

### SB 1399--Protection from Vegetative Shading
Public Resources Code Sections 25981, 25982, 25984, and 25985
Code sections provide limited protections against shading from vegetation on adjacent properties. Specifically, the law prohibits adjacent property owners to allow new trees or shrubs to grow so as to cast a shadow that covers more than 10 percent of the solar system's absorption area between 10 a.m. and 2 p.m. SB 1399 of 2008 amended the previous code to exempt trees and shrubs planted prior to the installation of a solar system. Also exempted are trees and shrubs that are subject to a local ordinance, or the replacement of trees or shrubs that had been growing prior to the installation of the solar device.

### SB-43--Solar Gardens
Section 2831 of the California the Public Utilities Code
Establishes the Green Tariff Shared Renewables Program, which requires that IOU utilities (including Pacific Gas and Electric) implement programs enabling ratepayers to participate directly in off-site electrical generation facilities that use eligible renewable energy resources, consistent with certain legislative findings and statements of intent.

# Solar Access Requirements Study Issue
# Information on Other Jurisdiction's Solar Access Ordinances and Links to each of the Related Ordinances

**Cities of Boulder & Fort Collins, Colorado and Ashland, Oregon**

- These jurisdictions apply a Solar Fence concept to define allowable shading. From the Ashland, OR ordinance, the solar fence concept can be described as:
  - The goal is to assure that no structure casts a shadow across the northern property line greater than that, which would be cast by a 6 foot tall fence located at the northerly property line.
    - The time of year used to determine the shadow length is during the winter solstice, at 12 noon on December 21.
    - The angle of the sun above the horizon at that time is about 24° (*appropriate for Ashland Oregon*).

**City of Clackamas, Oregon**

A point is identified on a lot where a point two feet above may not be shaded by structures based on the sun's altitude and azimuth. The calculation is based from the point of the shading structure that casts the longest shadow at that altitude and azimuth.

**State of Wisconsin**

Wisconsin state law allows municipalities to grant solar access permits to property owners who have existing (or proposed) solar collectors. The law requires neighboring property owners to be notified of the pending permit before it can be granted. Impacted neighbors are able to request a hearing to adequately review the merits of the permit.

- If granted, the permit protects the solar collectors from shading between 9 a.m. and 3 p.m. year-round.

**Cities of Sebastopol and San Luis Obispo, California**

- Both of these cities have codified a state law that allows local jurisdictions to require the creation of solar easements when approving subdivision projects.
  - San Luis Obispo's ordinance differs from Sebastopol's to specify that the solar easement only protects solar access between 10 a.m. and 2 p.m. on the winter solstice.
  - Sunnyvale has similar language on this topic in Sunnyvale Municipal Code SectionChapter 19.56.030 (Attachment 65).

**West Hollywood, California**

West Hollywood prohibits construction of any structure that interferes with an existing (functioning) solar collector system unless the applicant pays for the relocation of their neighbor's solar collector system.

**Note:** Several of the programs listed above (Ashland, Clackamas, Wisconsin) could significantly increase required building setbacks. These systems may be more

appropriate where minimum lot sizes are 10,000 to 20,000 square feet, or more.

**Links to the full Text of the Above-Mentioned Ordinances**

1. City of Boulder, CO Solar Access Ordinance: https://www2.municode.com/library/co/boulder/codes/municipal_code?nodeId=TIT9LAUSCO_CH9DEST_9-9-17SOAC
2. City of Fort Collins, CO Solar Access, Orientation, Shading Ordinance: https://www2.municode.com/library/co/fort_collins/codes/land_use?nodeId=ART3GEDEST_DIV3.2SIPLDEST_3.2.3SOACORSH
3. City of Ashland, OR Solar Access Ordinance: http://my.solarroadmap.com/userfiles/Resource-Section_Solar-Access-Ashland-Municipal-Code.pdf
4. City of Clackamas, OR Solar Access Permit Ordinance: http://www.clackamas.us/planning/documents/zdo/ZDO1019.pdf
5. State of Wisconsin State Solar Policy Website: http://www.seia.org/state-solar-policy/wisconsin
6. City of Sebastopol, CA Zoning Ordinance – Section 16.36.060 Dedication of Solar Easements: http://ci.sebastopol.ca.us/sites/default/files/rmansour/zoning_ordinance_related_land_use_ordinances_adopted_january_2016.pdf
7. City of San Luis Obispo, CA Easements for Solar Access Ordinance: http://www.codepublishing.com/CA/SanLuisObispo/#!/SanLuisObispo16/SanLuisObispo1618.html#16.18.170
8. City of West Hollywood, CA Solar Access and Solar Equipment Ordinance: http://qcode.us/codes/westhollywood/view.php?topic=19-19_3-19_20-19_20_170&frames=off