

**REDLINED VERSION OF VIEW AND SOLAR ACCESS IMPACT SECTIONS OF 3-24-05 DRAFT 1-2
UNIT INTERIM RESIDENTIAL DESIGN REVIEW MANUAL SHOWING REVISIONS TO 10-13-04
DRAFT**

CRITERION 1: VIEWS

A project shall make a reasonable effort to maintain the most significant views from primary living spaces of existing residences of abutting lots and lots directly across the street (see Figure 1.1) on lots in close proximity to the project site. View protection is considered for views that are located within view corridors, subject to view protection limitations.

GUIDELINES:**1.1 DEFINITIONS**

A. "Significant views" are distant views of the following scenic sites, in order of priority:

1. Golden Gate Bridge, Bay Bridge, other bridges, downtown Oakland or San Francisco skyline;
2. A large portion of San Francisco Bay and/or San Pablo Bay;
3. A panoramic view of a major natural feature, such as the Oakland/Piedmont/Berkeley Hills, a large open hillside, Mount Tamalpais, Mount Diablo, Lake Merritt, etc or downtown Oakland;
4. A prominent structural landmark, such as the U.C. Berkeley Campanile, Mormon Temple, etc or other prominent structural landmark.

B. "Primary Living Spaces" include, in order of priority:

1. Main living room or family room;
2. Master bedroom;
3. View-oriented deck or patio;
4. Dining area or kitchen; or
5. If none of above, another bedroom having the only significant view.

C. "View Corridors" are sight lines from "primary living spaces" (1.1B) to "significant views" (1.1A) extending outward from the following designated viewpoints:

1. Rear elevations on down-slope lots at least one level (about 10 feet) above adjacent grade;
2. Front elevations on up-slope lots at least one level (about 10 feet) above the street pavement;
3. The front and rear 15 feet of upper level side-facing elevations, but only on cross-slope lots steeper than 20% and a change in elevation between abutting residences of at least 10 feet (about one story).

(See Figure 1.1C)

1.2 VIEW IMPACT EVALUATION

A. View protection will be considered for all existing residences abutting the project site or directly across the street (see Figure 1.2). View protection will also be considered for residences on lots within 300' of the project site in cases where the potential view impact is called to the City's attention.

AB. For purposes of the Manual, a "view impact" relates only to the potential view obstruction resulting from additions, alterations and/or new construction of one- and two-unit residences, and not from trees or other vegetation.

BC. If a significant view is wide angle or panoramic, then an obstruction of ten (10) degrees or more would usually be considered a view impact. If the view is instead toward a single object, such as the Golden Gate Bridge, then any level of obstruction may be considered a view impact.

CD. Sight lines toward a significant view begin at seated eye level (4' above floor level). Proposed roof lines should be a minimum of 2 feet below eye level but may need to be lower if significant distance separates the project and impacted building, due to the downward angle of views.

DE. Where more than one adjacent neighboring property has a view corridor over the project site, view protection priority will be given to the closer property(ies).

EF. Where an adjacent neighboring property has more than one view corridor over the project site, priority will be given to protecting the best available view as determined by the Guidelines.

FG. Story poles may be required, at staff's discretion, to adequately evaluate potential impacts on views.

1.3 VIEW PROTECTION LIMITATIONS-- REASONABLE EFFORTS

View protection techniques as described in Guideline 1.4 below are typically not required if any of the following apply:

- A. The project maintains the best views from adjacent neighboring properties but other views are reduced or blocked, or
- B. View protection techniques would result in lesser or lower quality views for the project than adjacent neighboring properties, or
- C. View protection techniques would result in a house significantly smaller in floor area or height than adjacent neighboring residences on similar lots, or a house less than two stories in height (except for small portions that may need to be limited to one story to preserve a view), or
- D. View protection techniques would require reducing the project's height more than 20 percent below the Zoning Regulator's maximum height limits (without a Variance or Conditional Use Permit), and/or reducing the buildable area as defined by the minimum front, side or rear setbacks more than 20 percent.

1.4 VIEW PROTECTION TECHNIQUES

On the following pages are common design techniques affecting a home's height, siting, massing, or depth in order to maintain views from neighboring properties. These techniques should be used at the early stages of design.

Where a significant view is impacted by a proposed design, one or more of the following techniques may be required for mitigation.

CRITERION 2: SOLAR ACCESS

A project shall make a reasonable effort to minimize solar access impacts on actively used outdoor or indoor areas of abutting residential properties.

GUIDELINES:

2.1 DEFINITIONS

A. An "actively used outdoor area" is a gathering space with a seating area, a sunning area, a pool/fountain, planters, or other similar amenities.

B. An "actively used indoor area" is a room typically used for entertainment functions, such as living rooms, dining rooms, kitchens, family rooms, etc. They exclude bedrooms and bathrooms.

B/C. A "solar access impact" exists when more than 50% of an "actively used indoor area's" exterior walls facing the project or when more than 50% of an "actively used outdoor area" is are either:

- i. In shadow created by the project structure as determined by a shadow study for the spring/fall equinox during at least two of the following three times of day: 9:00 a.m., Noon, and 3:00 p.m. (See Figure 2.1.)

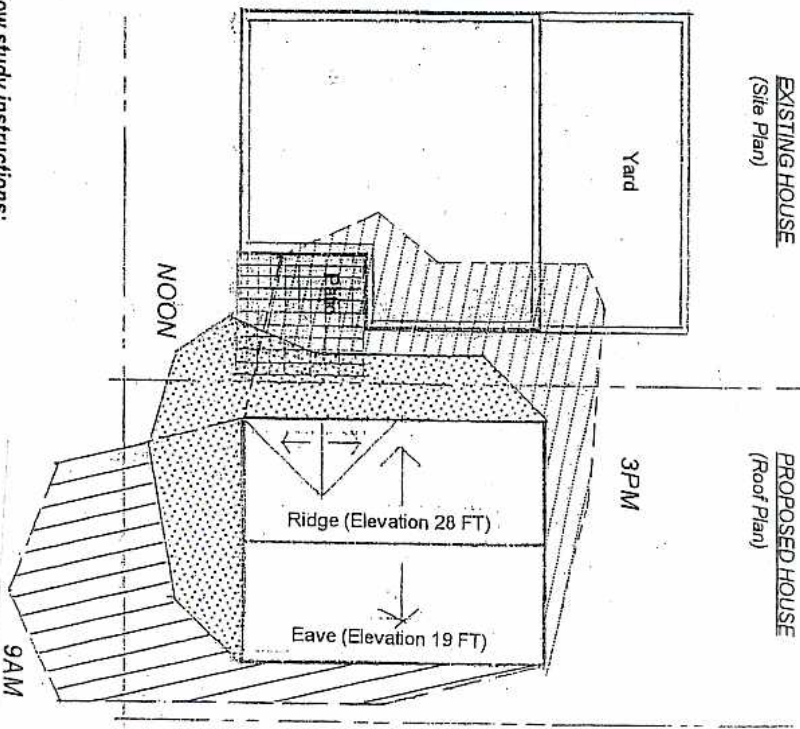
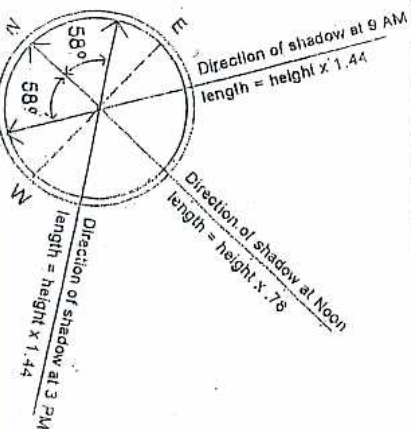
OR

- ii. Beneath an inclined plane extending downwards at a 45 degree angle from the top of the proposed structure's northeast to northwest facing sides and roofs. (See Figure 2.2.)

When available from either the project sponsor or other interested party and determined to be accurate by City staff, method "i" above will be used; otherwise method "ii" will be used.

Note: Method (i) uses the hours between 9 a.m. and 3 p.m. because this period has the greatest solar gain.

FIGURE 2.1: SHADOW STUDY ILLUSTRATION
 Example of Shadow Study



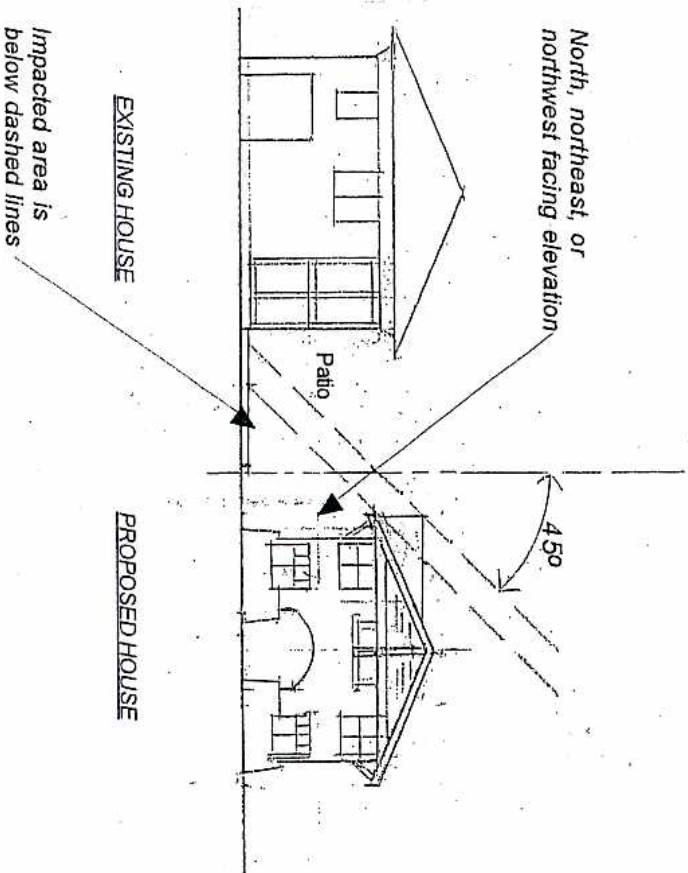
Shadow study instructions:

- 1) Draw roof plan of proposed house & footprint of adjacent house. Indicate height of proposed ridges and eaves, and of neighbor's decks and/or patios. Draw a north arrow.
- 2) Draw lines from ridges and eaves in a direction 58 degrees to the right of north (for shadows at 9 a.m.).
- 3) Determine the length of each shadow by multiplying the distance between the ridges/eaves and the decks/patios by 1.44.
- 4) Connect the points where shadows have the greatest length to show the outline of the 9 a.m. shadow on the ground.
- 5) Repeat steps 2, 3, and 4 for noon and 3 p.m. For noon, draw lines directly north. For 3 p.m. use a direction 83 degrees to the left of north. For the length of the shadow at noon, multiply the height by .78; for 3 p.m. multiply by 1.44.

Note: Date from Architectural Graphic Standards

FIGURE 2.2: 45 DEGREE SOLAR INCLINE PLANE

Example shows same house as in Figure 2.1



45 degree solar incline plane instructions:

- 1) Draw proposed house and adjacent house in elevation.
- 2) Draw lines at a 45 degree angle projecting down from eaves, gables, ridges, etc.
- 3) Calculate the percentage of the outdoor area impacted by shadows. (For multiple roof forms, as in this example, transfer the shadow line to the plan drawing before calculating this percentage.)

Note: Any shadow cannot cover more than 50 percent of an active outdoor area.

2.2 SOLAR ACCESS IMPACT MITIGATION MEASURES

Where a solar access impact is identified, mitigation measures may be required to preserve solar access. These measures are the same as those for view impacts in Section 1.4 above and include adjustments to building wall or roof height, siting, massing and similar measures.

However, mitigation measures will not be required for the situations listed in Section 2.3 below.

2.3 SOLAR ACCESS IMPACTS NOT REQUIRING MITIGATION

The following solar access impacts do not require mitigation:

- A. Shadows cast by fences, landscaping, or one-story structures.
- B. When mitigation would restrict the property's development as described in Section 1.3 for view impacts (View Protection Limitations—Reasonable Efforts).