HILLSIDE DESIGN GUIDELINES

2014

A Manual of Sensitive Design Measures for Hillside Management Areas

2014 DRAFT FOR PUBLIC REVIEW

LOS ANGELES COUNTY DEPARTMENT OF REGIONAL PLANNING

320 WEST TEMPLE STREET
LOS ANGELES, CA 90012

3.24.14

HILLSIDE DESIGN GUIDELINES

A MANUAL OF SENSITIVE DESIGN MEASURES FOR HILLSIDE MANAGEMENT AREAS

Contents

OVERVIEW 2

PURPOSE 2

APPLICABILITY 2

SUBSTANTIAL COMPLIANCE 3

OTHER POLICIES AND STANDARDS 3

FACTORS AFFECTING RESIDENTIAL DENSITY 4

LAND DIVISIONS 4

SENSITIVE HILLSIDE DESIGN MEASURES 4

1. Site Planning 4
2. Grading and Facilities 6
3. Road Circulation 7
4. Building Design 8
5. Landscaping 9

APPENDICES 11

A. List of Design Exhibits 11
B. HMA Ordinance Process 12
C. HMA Ordinance Findings 13
D. Hillside Project Design Checklist 14
E. Open Space Types 17
F. List of Countywide Hillside Management Policies 18
G. Screening Plant Materials Table 19
H. Earth Tone Color Palette 20

REFERENCES 21

GLOSSARY 22

ACKNOWLEDGEMENTS 24

OVERVIEW

The policies of the Los Angeles Countywide General Plan (General Plan) seek to preserve significant natural features in hillside areas. The Hillside Design Guidelines (Guidelines) are intended to implement these policies by ensuring that hillside development projects use sensitive and creative engineering, architectural, and landscaping site design techniques. The Guidelines will also help ensure that hillside development projects are designed in a manner that satisfies the findings of the Hillside Management Areas Ordinance (Ordinance). To accomplish this, the Guidelines include over *60 specific and measurable design techniques* that can be applied to residential, commercial, industrial, and other kinds of projects. Below are a few project type examples:

- A subdivision of 20 single-family lots
- A 20,000 square-foot commercial office building with a parking lot
- A 150,000 square-foot warehouse building
- A three-acre equestrian center with 50 horse stables and outdoor training area
- A five-acre private camp site with a 10,000 square-foot retreat center
- A 10-acre vineyard with a 5,000 square-foot winery

Some design techniques may be more appropriate or feasible than others, depending on the type of project, location, size, complexity, and site constraints. The Guidelines have been created so that several design techniques can be used with any hillside project.

The Guidelines are a living document that can be periodically reviewed and updated as needed, based on innovations in design techniques and changes in development review processes.

PURPOSE

The purpose of the Guidelines and the Ordinance is to:

- *Preserve the physical integrity and scenic value of HMAs;*
- *Provide open space; and*
- *Enhance community character*.

These can be accomplished by locating development outside of HMAs, and, when development within HMAs cannot be avoided, locating development in the lowest and flattest portions of the HMAs, using sensitive hillside design techniques. By using these broad techniques, significant natural features can be preserved - primarily steep hillside terrain, hilltops and ridgelines; unique geologic features (such as rock outcroppings); and natural vegetation.

APPLICABILITY

These Guidelines apply to all projects that are subject to the Ordinance. The County formally defines an HMA as having 25% or greater natural slopes. Development within an HMA triggers the Ordinance requirements. When a project is determined to be subject to the Ordinance, *all areas of the project site* are subject to the Ordinance and not just those portions containing 25% or greater natural slopes. To determine if

a project is subject to the Ordinance, please consult the text of the Ordinance online at http://planning.lacounty.gov/ord/adopted.

The Guidelines are optional but encouraged for all other hillside projects not subject to the Ordinance. As stated earlier, HMAs have 25% or greater natural slopes; however, development on 24% or "lesser" slopes can have negative impacts on hillside terrain that could be minimized by following these Guidelines. Using the Guidelines on hillside developments not subject to the Guidelines helps minimize all hillside impacts and maintain compatibility across different projects, enhancing community character. Community members and others are also encouraged to use the Guidelines as a reference tool to study their own neighborhoods for areas that could benefit from the use of sensitive hillside design techniques.

SUBSTANTIAL COMPLIANCE

For projects subject to the Ordinance, Finding 4 requires that the project "substantially comply" with the Guidelines (See the findings in Appendix C. A design review checklist which may be used to determine substantial compliance is found in Appendix D). The Guidelines are divided into five major design categories containing a variety of sensitive hillside design measures (DMs). The five major categories are:

- Site Planning
- Grading and Facilities
- Road Circulation
- Building Design
- Landscaping

For substantial compliance with the Ordinance, projects must use the DMs contained in the Guidelines that can be reasonably implemented in the project design. Due to the variety, size and complexity of development projects, there is no set number of DMs that a project must utilize. Instead, the project applicant should work with County staff to determine the most appropriate DMs for the site. In situations where it is unclear whether a DM is being fully utilized, County staff will use its recommendation for whole or partial DM "credit" towards satisfying the Ordinance findings. The Hearing Officer or Commission is the authority in determining whether a project meets Ordinance findings. County staff will also work with project applicants to determine which DMs can be implemented as project conditions of approval.

OTHER POLICIES AND STANDARDS

In addition to meeting Ordinance findings, hillside projects must also be evaluated by other factors such as General Plan policies, Healthy Design standards, and California Environmental Quality Act criteria. These factors could influence which DMs to use within a project. Projects are encouraged to use DMs that satisfy Ordinance findings in addition to these other factors. Lastly, hillside projects are to be reviewed by Regional Planning and all affected County departments, including Public Works, Fire, Parks and Recreation, and Public Health; and respective requirements may apply that affect project design.

FACTORS AFFECTING RESIDENTIAL DENSITY

Sensitive hillside design techniques can be used to achieve a better project design while still maintaining a desired number of dwelling units. The General Plan land use designation ("plan category") establishes the appropriate residential density range for a project, including the density maximum. However, there are a number of other factors that can affect the project's density, such as:

- Land division standards (minimum lot size, lot width, street frontage and access)
- Zoning designation (minimum lot size/lot area per dwelling unit)
- Zoning standards (building setbacks, maximum lot coverage)
- Other site constraints (such high fire hazard zones and wildlife habitat areas)
- Open space and parking requirements
- Public easements and dedications (such as for utilities)
- Community compatibility and neighbor concerns

Many factors can affect the number of dwelling units that may be feasibly developed. A good design can balance many of these factors while still achieving density goals. However, the final decision on the appropriate density will rest with the hearing body after a careful consideration of staff's recommendation, public testimony, the applicant's request, and the particular aspects of each project.

LAND DIVISIONS

Past development patterns within the unincorporated County suggest that the largest hillside projects involve land divisions. Land divisions often have large amounts of grading along with the creation of new infrastructure and landscaping. While it should be expected that more DMs will be applicable to land divisions, quantity should not be confused with quality. Smaller land divisions and non-land division projects should be evaluated not only by the number of DMs utilized but by how effectively they are used to achieve a sensitive hillside design.

SENSITIVE HILLSIDE DESIGN MEASURES

1. Site Planning

Conserve land area and form, link open spaces, and promote a more attractive pattern of development that complements the hillside terrain.

1.1. Locate 50% or more of the project's buildings and developable lots within 500 feet (ft.) of existing sewer, water and roadway infrastructure.

1.2. Locate at least 50% of the development footprint on the flattest portions of the site[1] (i.e., those areas having slopes of less than 25%).

[1] "Site" referred to in the Design Measures means the "project site" or "subject property."

1.3. Utilize all previously graded or disturbed areas on the site for new development to the greatest extent possible, before developing new areas, such that new development within undisturbed areas is reduced.

1.4. For new land divisions, contain at least 75% of developable lots within blocks that have a perimeter of ¼ mile (1,320 ft.) or less, measured from the roadway centerline. *(Note: The purpose of this design measure is to avoid unattractive "superblocks" of development on the hillside and instead use smaller block sizes that are more distinguishable from each other and can better fit in with the natural topography.)*

1.5. For new land divisions, where lot clustering is allowed and compatible with community character, reduce all single-family lot sizes to 15,000 square feet (sf.) or less.

1.6. For new land divisions, utilize a variety of small, medium and large lot sizes (such as 5,000, 10,000 and 20,000 sf.) in such a manner that it will produce different building layouts and sizes.

1.7. Differentiate pad elevations by 2 to 6 ft. throughout the site by street (or common driveway), by block and/or by lot.

1.8. Place the narrow side of the lot (or building pad) such that it allows the building façade to face the roadway.

1.9. Utilize terraced building pads in select areas within the site on slopes that exceed 50%.

1.10. Preserve the most prominent and unique slopes, hilltops and ridgelines[2] on the site for recreational uses within dedicated (or common) open space areas.

1.11. Exceed the minimum Ordinance open space acreage requirements by 10% or more.

1.12. Preserve contiguous undisturbed open space throughout the site, utilizing segments of land that are at least 150 ft. wide.

1.13. Utilize at least 25% of the overall project's disturbed (improved) open space for recreational purposes.

1.14. Locate and design improved open space as a buffer (recommended at least 50 ft. wide) between undisturbed open space and development.

1.15. Create scenic vista points at prominent locations such as hilltops and ridgelines, providing amenities[3] at the points and making them accessible to the public.

1.16. Provide private (connector) trails that link together all of the project's open space areas (1 acre or larger) and connect to any onsite or offsite public trails.

1.17. For new land division blocks of development that exceed 800 ft. between intersections, design mid-block thru-paths that connect to intervening streets or open space areas, and make the paths accessible to the public.

---

[2] When ridgelines are mapped "significant ridgelines" by the County, the stricter regulations applicable to those ridgelines shall apply and staff shall determine whether it is appropriate to give credit for this Design Measure.

[3] Such as decks, seating arrangements, overhead cover (trellis or gazebo), landscaping and shade trees, and information signs for landmarks or points of interest.

3.24.14

1.18. Use other innovative site planning techniques not listed in this section that promote the overall design Objective.

2. Grading and Facilities

Avoid mass landform alteration, preserve the physical shape of the hillside, and maintain pleasant views.

2.1. For projects with more than 100,000 cubic yards of onsite earthwork, avoid any mass cut and fill grading that would result a 25 ft. or greater elevation change from the existing natural grade to the finished manufactured grade anywhere over the site.

2.2. Use contoured grading lines that match or closely match the existing topography, generally avoiding lines that trace 45 to 90 degrees against the natural contour.

2.3. Utilize undulating banks for graded slopes in order to maintain the natural pattern of the topography to the greatest extent feasible.

2.4. Design the project's longer graded horizontal slope surfaces and slope increments (typically 300 or more ft. in length) to be variable in terms of height and spacing, in order to replicate natural topographical patterns.

2.5. Locate water tanks and other similar types of structures that are 20 or more ft. tall so that their highest point is at least 50 ft. below the crest of the highest hilltop or ridgeline located within 500 ft. on or off the site.

2.6. Locate visually intrusive structures (such as water tanks) so that they are hidden from public views, placing them behind hills, buildings, landscaping, existing trees or other more appropriate and attractive screening objects.

2.7. Avoid enclosing or surrounding new buildings with berms and block walls. Instead, locate and design the buildings in accordance with the other site planning, road circulation, building and landscaping design measures contained in these Guidelines.

2.8. Design drainage facilities as multi-purpose site features[4] that are attractively landscaped, conserve water, improve water quality, and provide opportunity for recreational activity. *(Note: These features may be counted towards required open space acreage if designed to the County's satisfaction. However, they should not encourage additional grading impacts but rather should be located in areas already designated for improvement such as park sites, roadsides, or previously-graded flat areas.)*

2.9. Build retaining walls to be less than six ft. in exposed height, and terrace the walls where appropriate and in a manner that does not substantially increase visual impacts.

2.10. Use earth-tone colors and materials[5] for exposed hardscape surfaces such as block walls, retaining walls, drainage terraces and storm gutters.

[4] Subject to the approval of Los Angeles County Public Works.
[5] Subject to the approval of Los Angeles County Regional Planning.
3.24.14

2.11. Use more attractive designs and materials for any walls or fencing used to enclose public facilities (such as debris and retention basins), especially when such facilities are in highly-visible locations and/or are designed as "multi-purpose" site features. *(Note: Safety and security shall be maintained for the facilities when using a more attractive wall or fence design.)*

2.12. Use other innovative grading and public facility design techniques not mentioned in this section that promote the overall design Objective.

3. Road Circulation

Preserve the physical shape of the hillside, maintain good connectivity, and provide scenic roadway views.

3.1. Provide at least 2 points of paved roadway access[6] to a County highway (major or secondary) for any project (or portion of development) greater than 50 dwelling units and 10 acres in size. *(Note: This practice should only be considered when the second road connection will not require a substantial amount of additional grading; special consideration may be given when connecting to an adjacent community or providing access to community services such as schools and parks.)*

3.2. Locate and design new roadways to follow the existing natural slope contours, avoiding mass landform alteration and excessive grading.[7]

3.3. Utilize private drives instead of public streets on 50% or more of the project road circulation system to allow slightly higher gradients (up to 15%) that result in less grading and better conformance to natural slope contours.

3.4. Use undulating patterns and varying grades[8] for roadway segments exceeding 1,000 ft. in length.

3.5. Connect roadways to form blocks wherever feasible (2,000 sf. or less block perimeter), such that at least 75% of the development footprint (to include public facilities) is contained within blocks. *(Note: The purpose of this is to provide good access and connectivity for safety reasons, and to use roadways to buffer development from natural vegetated areas.)*

3.6. Use cul-de-sacs in limited instances, such as where road connections would require grading into 50% or greater slopes or grading into 25% or greater slopes for a distance of more than 500 ft.

3.7. Provide unpaved trail or paved pedestrian path thru-connections for all cul-de-sacs. *(Note: Fee-dedicated strips are recommended instead of easements on private lots.)*

3.8. Utilize "edge" (single-loaded) roads along at least 50% of the development perimeter, in areas with steep hillside terrain, and to buffer development from undisturbed open space.

3.9. Place all new roadways and paved driveways at least 100 ft. below the crest of the tallest hilltop or ridgeline located onsite, or offsite within 500 ft. of the project boundary.

---

[6] May be a private roadway or fire lane but shall be un-gated, accessible by the public, and of sufficient width to meet Los Angeles County Fire Department requirements.

[7] Subject to the sight distance, signing, striping and marking requirements of Los Angeles County Public Works.

[8] Subject to the maximum allowed street grade requirements of Los Angeles County Public Works.

3.24.14

3.10. Design "split" roadways or landscaped medians to preserve unique or important natural features (such as oak trees or rock outcroppings).

3.11. Use bridge design techniques that are attractive, maximize the preservation of natural watercourses, and allow easy wildlife migration beneath the bridge (minimum 6 ft. of vertical and horizontal clearance recommended).

3.12. Use private drives instead of public roadways when it will result in narrower roadway widths that create less grading. *(Note: Private drives should conform to the Los Angeles County Private Drives and Traffic Calming Manual, and should not eliminate sidewalks or reduce sidewalk connections throughout the development.)*

3.13. Use other innovative roadway circulation design techniques not mentioned in this section that promote the overall design Objective.

4. Building Design

Promote more attractive views through building siting and orientation, and use of building materials and colors that complement natural hillside features.

4.1. Place structures and/or limit their height so that their rooflines are equal to or below the elevation of the roadway grade of the development above.

4.2. Utilize terraced (split-level) or "cantilevered" building designs wherever feasible on 25% or greater slopes. *(Note: Split-level homes should have a second floor exterior that is visibly set-back from the first floor exterior so that a terraced profile can be seen from the public view.)*

4.3. Use a variety of house, garage and other building placements that better responds to the hillside terrain and created a more interesting and attractive streetscape.

4.4. Limit building heights to 2 stories (or 25 ft.) when sited on 25% or greater slopes or when the building pad elevation is located less than 50 ft. below the crest of the nearest hilltop or ridgeline located within a linear distance of 500 ft.

4.5. Use a wider variety of architectural treatments and materials[9] for the facades and exteriors of buildings that are located in highly-visible areas on the site (such as main entryways, higher elevations, and isolated lots or building pads surrounded by open space).

4.6. Use pitched roofs (at least 1.5:1) and shingles for new residences.[10]

4.7. Utilize architectural design techniques to screen rooftop mechanical equipment from public view.

4.8. Design building exteriors with stonework and/or woodwork that matches rock and tree varieties found in visible locations on the site or in the surrounding community within a distance of 1 mile.

[9] Such as metal, stone, wood, brick, plaster, and concrete.
[10] Subject to approval by the Los Angeles County Fire Department.
3.24.14

4.9. For business signs, use wood construction materials and painted lettering/logos, avoiding the use of metal and plastic, and with 18 sf. or less total sign surface area (10 sf. for blade signs) per business establishment.

4.10. Design monument signs to be constructed with wood, stone, brick and/or decorative concrete, and to be no more than 6 ft. in height. *(Note: The placement of all monument signs shall accommodate an adequate line of sight to the adjacent roadway.)*

4.11. Limit all signs so that they project upward no higher than the roofline of the building (or nearest adjacent building), and do not disrupt sightlines to the horizon.

4.12. Illuminate signs from the exterior, with downward-projecting, hooded light fixtures that minimize light trespass.

4.13. Use other innovative building design techniques not mentioned in this section that promote the overall design Objective.

5. Landscaping

Preserve existing vegetation, conserve water and provide more attractive and comfortable settings within the developed areas of the hillside project.

5.1. Retain and incorporate 50% or more of existing onsite trees and woodlands (particularly native and drought-tolerant species, and oak woodlands) into the overall project landscaping plan[11].

5.2. Avoid all healthy[12] oak tree encroachments and removals through the sensitive location and design of development.

5.3. Landscape all graded slopes and improved open spaces in an attractive manner that accomplishes at least 2 or more of the following beyond a State or County-required minimum (whichever is more restrictive): a) restores habitat; b) conserves water or improves water quality; c) provides shade for pedestrians and bicyclists; d) enhances slope stability (must landscape all slopes ≥ 5 ft. high); e) increases fire protection; f) provides recreational opportunities.

5.4. Utilize native and drought-tolerant trees, shrubs and ground cover over all exposed graded areas.

5.5. Landscape at least 50% of all graded slopes and improved open spaces at a minimum ratio of 1 new shrub per 100 sf. and 1 new tree per 800 sf.

5.6. Vary the height, placement and color of appropriate landscaping materials throughout the site.

5.7. Use a wide variety of local and non-invasive plant species within the project's improved open space areas, matching or exceeding the variety found onsite and listed in the project's plant surveys and biota reports.

5.8. Plant new native and drought-tolerant trees and shrubs of a sufficient interval, size and height to screen hardscape surfaces and unadorned features such as garage doors and block walls.

[11] May require consultation with the County biologist prior to conceptual landscaping plan approval.
[12] As determined by a qualified arborist. Only applies to oaks that are the minimum ordinance size or larger.
3.24.14

5.9. Use plant materials and irrigation systems that, combined, conserve water 20% or more beyond State and County requirements.

5.10. Reapply the graded topsoil to manufactured slopes and improved open space areas.

5.11. Use other innovative landscaping design techniques not mentioned in this section that promote the overall design Objective.

APPENDICES

A. List of Design Exhibits

Design exhibits are necessary to evaluate the proposed development in accordance with County policies, code requirements and case processing procedures. Some projects may not need to provide all exhibits listed below, but rather on an as-needed basis at the discretion of County staff when applicable.

- Site Plan (Exhibit "A") – A plan that shows existing contour intervals (10 ft. or less), existing development and proposed development, to include lots, structures, roadways, driveways, grading and building pads. Should also depict roadway and retaining wall cross sections.

- Site Profile – A scaled drawing that shows a cross-section view of the site from one edge to the other, showing the location of all development in the hillside and the overall extent of hillside encroachment and landform alteration. *(Note: More than one cross section may be required in order to accurately assess hillside impacts.)*

- Block Elevation – (For land divisions or larger multi-unit developments as applicable) A drawing that shows a row of multiple house (or other building) elevations as they would appear to the public from a lower vantage point on or adjacent to the site. May also include depictions of landscape screening.

- Landscape Plan – A color plan that shows all proposed landscaped areas, to include plant materials and any pedestrian and aesthetic features such as walkways, recreation equipment, fountains, gardens, etc. Should also depict existing vegetation that will be preserved, as well as oak or other mitigation trees (if known).

- Fuel Modification Plan – A specific type of landscape plan that shows all fuel modification zone boundaries, distances between boundaries, and types of vegetation, as required by the Los Angeles County Fire Department. (Please refer to the Fire Department's separate guidelines when creating this plan.)

- Open Space Exhibit – A simplified site plan showing all proposed lots, roadways and grading only; also depicts, numbers and labels the restricted-use areas and separate lots to be preserved as OS; distinguishes between different types of OS and provides a legend that describes each type of OS; and provides a table listing the approximate acreage of the individual OS types and the quantity and percentage of improved (disturbed) and undisturbed OS within each lot, and for the overall project.

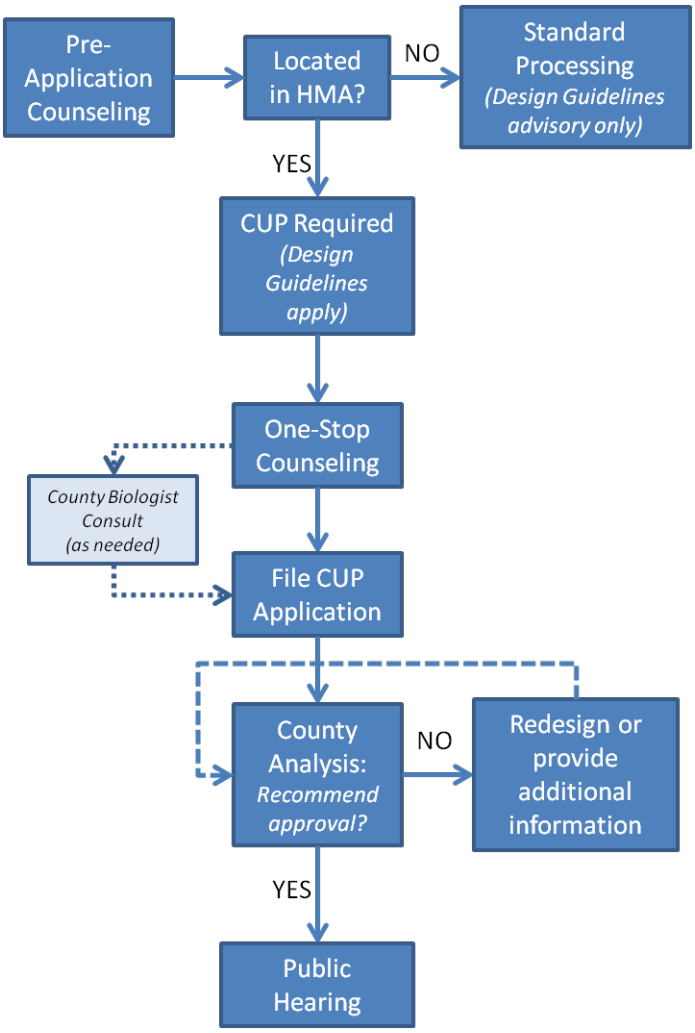
- Slope Map – A complete site plan (road and retaining wall cross sections excluded) that depicts the three different slope ranges (<25%, 25-49%, and ≥50%) according to a color scheme of green – yellow – red, respectively.

- Buildout Simulation – A color exhibit that shows how new development would impact existing hillside views. It typically depicts a "before" and "after" perspective view of the hillside(s), and includes realistic or semi-realistic photos or renderings of the actual buildings and landscaping that will be used in the development, showing how they will affect the hillside views.

- Viewshed Analysis – A site plan or cross section showing the specific degree angle of view from one or more vantage points on the site. The "sight-line" is drawn from the point of view (POV) to some object of observation (such as a road intersection or ridge-top) depicted at some distance from the POV on or off-site. The sight line will show any intervening features that may block the line of sight.

B. HMA Ordinance Process

The below process flowchart is for basic information only. Please consult with Regional Planning staff for a more detailed explanation of the entire process.



3.24.14

C. HMA Ordinance Findings

HMA CUP BURDEN OF PROOF
(Section 22.56.215 of the Los Angeles County Zoning Code)
For each item, on a separate sheet, please describe in detail how the project satisfies the specific Finding. Provide an explanation of how the project meets each hillside CUP Finding. (Note: The project must also satisfy the standard CUP Findings contained in Section 22.56.090.)

Finding 1: That the proposed development preserves the physical integrity of HMAs to the best extent feasible, resulting in the least amount of impact to hillside resources, by:

A. Locating development outside of HMAs to the extent feasible;
B. Locating development in the portions of HMAs with the fewest hillside constraints; and
C. Using sensitive hillside design techniques.

Finding 2: That the proposed development preserves the scenic value of HMAs to the greatest extent feasible, resulting in the least amount of impact to on-site and offsite scenic views of slopes and ridgelines as well as views of other unique, site-specific aesthetic features of the hillside, by:

A. Locating development outside of HMAs to the extent feasible;
B. Locating development in the portions of HMAs with the fewest hillside constraints; and
C. Using sensitive hillside design techniques.

Finding 3: That the proposed development is compatible with community character, and provides required open space compatible with the characteristics of the development site and the surrounding area. Where modified:

A. For development in a rural land use designation, a greater percentage of improved open space is necessary for public safety or is aesthetically superior;
B. For streets within natural open space area, such street is necessary to ensure adequate circulation or access; or
C. For ownership and maintenance by a home owner's or property owner's association, dedication or a conservation easement as provided in the Ordinance is infeasible.

Finding 4: That the proposed development is in substantial compliance with the Hillside Design Guidelines.

D. Hillside Project Design Checklist

Use this checklist to evaluate a hillside development project. This checklist is intended as a summary only and does not replace the full text contained in the Hillside Design Guidelines. Please carefully read the full text of the Guidelines before completing.

HILLSIDE PROJECT DESIGN CHECKLIST			Date: Project Number:		
	Design Measure	**Description**	**Shown on plans**	**Does not apply**	**Notes** *(Provide information such as: which design measures are key to the project; which are only partially satisfied; and which will be satisfied through conditions of approval.)*
SITE PLANNING	1.1	Locate development near existing infrastructure	☐	☐	
	1.2	Locate development in flattest areas	☐	☐	
	1.3	Utilize previously graded or disturbed areas	☐	☐	
	1.4	Create smaller development blocks	☐	☐	
	1.5	Reduce lot sizes to <15,000 sf.	☐	☐	
	1.6	Vary lot sizes	☐	☐	
	1.7	Vary pad elevations	☐	☐	
	1.8	Place the narrow side of the lot or building facing the street	☐	☐	
	1.9	Utilize terraced building pads	☐	☐	
	1.10	Preserve hillside features for recreation	☐	☐	
	1.11	Exceed minimum OS requirements by ≥10%	☐	☐	
	1.12	Preserve contiguous undisturbed OS	☐	☐	
	1.13	Utilize ≥25% of improved OS for recreation	☐	☐	
	1.14	Provide OS buffers	☐	☐	
	1.15	Create scenic vista points	☐	☐	
	1.16	Provide private (connector) trails	☐	☐	
	1.17	Design mid-block thru-paths	☐	☐	
	1.18	Use other innovative site planning techniques	☐	☐	
GRADING AND FACILITIES	2.1	Avoid mass cut/fill grading with great elevation change	☐	☐	
	2.2	Use contoured cut/fill grading lines	☐	☐	
	2.3	Utilize undulating banks for graded slopes	☐	☐	
	2.4	Design variable horizontal slopes	☐	☐	

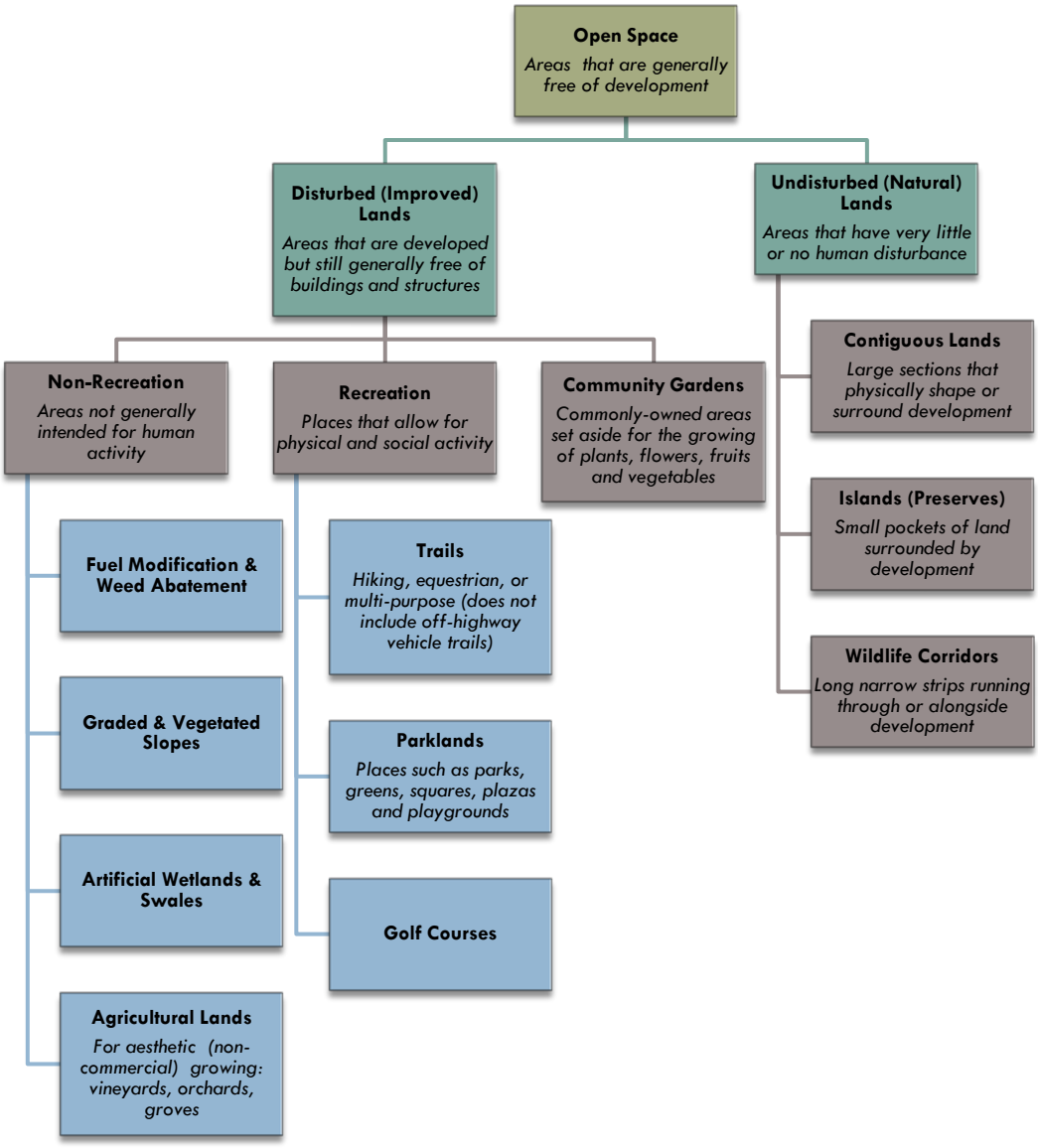
3.24.14

	2.5	Locate public facilities (lower height)	☐	☐	
	2.6	Locate public facilities (screening)	☐	☐	
	2.7	Avoid berms and block walls	☐	☐	
	2.8	Design multi-purpose drainage facilities	☐	☐	
	2.9	Build retaining walls <6 ft./terrace	☐	☐	
	2.10	Use earth-tone colors and materials	☐	☐	
	2.11	Use attractive fence design & materials	☐	☐	
	2.12	Use other innovative grading/facility techniques	☐	☐	
ROAD CIRCULATION	3.1	Provide at least 2 points of paved access	☐	☐	
	3.2	Locate/design roadways to follow natural contours	☐	☐	
	3.3	Use private drives for hillside preservation	☐	☐	
	3.4	Use undulating patterns and varying grades	☐	☐	
	3.5	Connect roadways to form blocks	☐	☐	
	3.6	Use cul-de-sacs in limited instances	☐	☐	
	3.7	Provide trail/path connections for all cul-de-sacs	☐	☐	
	3.8	Utilize “edge” (single-loaded) roads	☐	☐	
	3.9	Locate roadways >100 ft. below hilltops/ridges	☐	☐	
	3.10	Design split roadways/landscaped medians	☐	☐	
	3.11	Use bridge design techniques for preservation/migration	☐	☐	
	3.12	Use private drives instead of public roadways for less grading	☐	☐	
	3.13	Use other innovative road circulation techniques	☐	☐	
BUILDING DESIGN	4.1	Place/limit structures so that rooflines don’t protrude	☐	☐	
	4.2	Utilize terraced (split-level) building designs	☐	☐	
	4.3	Vary building setbacks and orientation	☐	☐	
	4.4	Limit building height to two stories (25 ft.)	☐	☐	
	4.5	Vary façade treatments and materials	☐	☐	
	4.6	Use pitched roofs and shingles	☐	☐	
	4.7	Utilize architectural screening techniques	☐	☐	

3.24.14

	4.8	Design with stonework/woodwork	☐	☐	
	4.9	Use smaller business signs with natural materials	☐	☐	
	4.10	Use smaller monument signs with natural materials	☐	☐	
	4.11	Limit sign height/view projection	☐	☐	
	4.12	Illuminate signs from exterior/reduce light trespass	☐	☐	
	4.13	Use other innovative building design techniques	☐	☐	
LANDSCAPING	5.1	Retain and use ≥50% onsite trees	☐	☐	
	5.2	Avoid all oak tree encroachments and removals	☐	☐	
	5.3	Landscape all graded slopes/ improved OS beyond requirements	☐	☐	
	5.4	Completely hide all exposed graded surfaces	☐	☐	
	5.5	Landscape ≥50% at listed shrub/tree ratios	☐	☐	
	5.6	Vary the height/placement/color of landscaping	☐	☐	
	5.7	Use native/non-invasive species	☐	☐	
	5.8	Plant trees/shrubs to screen hardscape	☐	☐	
	5.9	Use water-efficient plants/irrigation ≥20% beyond requirements	☐	☐	
	5.10	Reapply graded topsoil to manufactured slopes/improved OS	☐	☐	
	5.11	Use other innovative landscape design techniques	☐	☐	
		TOTAL (67)	__	__	

E. Open Space Types



F. List of Countywide Hillside Management Policies

[TO BE ADDED]

G. Screening Plant Materials Table

[**TO BE ADDED**] *A table that lists and describes various species of plants suitable for canopy shape (screening ability). All species listed on the table are examples only and to be selected on a site-specific basis.*

H. Earth Tone Color Palette

[TO BE ADDED] *Visual examples of materials with earth-tone colors to be selected on a site-specific basis.*

REFERENCES

- 1980 Los Angeles Countywide General Plan
- 1980 Los Angeles County Hillside Design Guidelines
- Title 21, Los Angeles County Code (Subdivision Ordinance)
- Title 22, Los Angeles County Code (Zoning Ordinance)
- 2009 LA County Private Drives and Traffic Calming Manual
- 2011 Invasive and Flammable Plant List (http://planning.lacounty.gov/green)
- Drought Tolerant Plant List (http://planning.lacounty.gov/green)

GLOSSARY

Berm – A graded, "rounded" slope at the top of a hill that helps to screen a development feature from view. Development features that are "bermed" are typically screened or partially screened from public views.

Building Pad – A portion of a site graded flat and level to contain a new building (such as a home) and in some cases accessory structures (such as a garage, guest house or horse stable).

Constraints, Hillside – Topographic features such as slopes, hilltops, and ridgelines that may contain hazards and, when developed, cause noticeable alteration of the topographic feature and its views.

Cut – See "Excavation" below.

Design Measure (DM) - Any of the individual numbered items (such as "1.1" or "3.8") contained in these Guidelines that provide a specific standard for measuring the sensitivity of a hillside design.

Development – The construction or expansion of any structure or impervious surface, such as hardscape; construction or expansion of any street, or highway, or other access road; construction or expansion of any infrastructure, such as pipes, water and sewerage lines, drainage facilities, telephone lines, and electrical power transmission and distribution lines; grading, such as cut, fill, or combination thereof, including off-site grading; removal of any native vegetation, including fuel modification; subdivisions; and lot line adjustments.

Development Footprint – The total surface area of the project site in which "Development" (defined above) is contained.

Earth Tone Color – A color that draws from a palette of browns, tans, grays, greens, and reds, and which is muted and flat in emulation of the natural colors found in dirt, rocks, and vegetation.

Edge Road – A roadway located on the outer boundaries of a development that acts as a buffer between development and undisturbed areas of the site or adjacent undeveloped areas off the site.

Excavation – The removal of earth materials by unnatural means, resulting in a lowering of the existing grade.

Fill – The deposition of earth materials by unnatural means, resulting in a rise in the existing grade.

Grade – The vertical location of the ground surface. Also see "Grade, Finished" and "Grade, Natural" below.

Grade, Finished – The grade of the site at the conclusion of all grading efforts.

Grade, Natural – The grade prior to all grading efforts.

Hillside – A portion of sloping terrain that is visually distinguished by a vertical rise or climb from a flat base of land (the "toe" of the slope), and generally ends in a crest or apex that forms a hilltop or ridgeline.

Hillside Management Area (HMA) – As defined in the Ordinance, any hillside with a 25% or greater natural slope.

Infrastructure – See Public Facilities.

Landscaping – Generally, plants (i.e., trees, shrubs and organic ground cover material such as grass or bark mulch) and associated decorative/hardscape elements such as walkways, fountains, ponds, gravel and rocks.

Open Space (OS) – Site areas generally free of buildings and pavement, and preserved in a natural state or otherwise improved for recreation, small-scale community agriculture/gardens, safety or aesthetic purposes.

Ordinance – The Hillside Management Areas Ordinance as adopted in Title 22 of the Los Angeles County Code.

Parkland(s) – A type of improved recreation open space available for public or common use, such as parks, greens, squares, plazas and playgrounds.

Plant Materials Table – The LA County Plant Materials Table, located in the Appendix.

Preserve – In the context of these Guidelines, a preserve is an undisturbed open space area that is completely surrounded by development. Preserves typically contain sensitive plant and/or animal species.

Public Facilities – Infrastructure (except for "Roadways," which are defined separately below) such as water tanks, drainage basins, debris basins, and water treatment plants that serve the project and/or surrounding community and that may be maintained by the County or a separate entity (such as a homeowners association).

Public Use – A portion of the site, which may be maintained by the County or a separate entity (such as a homeowners association), that allows access to the general public in accordance with posted rules and procedures.

Roadway – A type of infrastructure that may be any of the following: Public highways, streets and alleys; private and future streets; private streets; private drives; private driveway and fire lanes (when serving 5 or more lots or dwelling units); and common driveways 20 ft. or more in paved width (when serving 5 or more lots or dwelling units).

Slope – An inclined ground surface, the inclination of which is expressed as a ratio of horizontal distance to vertical distance.

Structure – Anything built or erected which requires a fixed location on the ground, or is attached to something having a fixed location on the ground, such as a wall, building, porch, deck, swimming pool or carport.

Terraced Pad/Building – A single contiguous pad or building that has two or more distinct grades, one higher than the other, and is designed to fit "into" the hillside such that less vertical (cut) grading and landform alteration results.

Wildlife Corridor – A narrow stretch of contiguous undisturbed open space that is typically 50 to 250 feet wide, and predominantly for wildlife travel adjacent to or through the project site from one end to another. Smaller portions within the corridor may be disturbed, such as for utility pads or trails.

ACKNOWLEDGEMENTS

The Los Angeles County Regional Planning Commission
Esther L. Valadez, 1st Supervisorial District, Chair
David W. Louie, 2nd Supervisorial District, Chair
Laura Shell, 3rd Supervisorial District, Vice Chair
Curt Pedersen, 4th Supervisorial District
Pat Modugno, 5th Supervisorial District

The Department of Regional Planning
Richard J. Bruckner, Director
Mark Child, Acting Deputy Director

HMA Team
Mitch Glaser
Larry Jaramillo
Annie Lin
Brianna Menke
Nooshin Paidar
Jodie Sackett
Susan Tae

GIS Support
Dan Hoffman

Engineering Panel
Mark Sikand, Sikand Engineering Associates
Matt Heideman, Psomas
Matt Dubiel, Department of Public Works
Mitch Miller, Department of Public Works
Andy Narag, Department of Public Works

Layout & Editing
Jodie Sackett

Graphics
Jennifer Lee
Jodie Sackett

Cover Photo: Angeles National Forest
http://metamorphiqblogs.wordpress.com/2008/11/03/angeles-national-forest/

Special Thanks
Harold V. Helsley