

Architectural Design and Construction Guidelines

For All Construction at Ecovillage of Loudoun County

VERSION HISTORY

Version	Approval Date	Changes
1.0	May 20, 2018	New Design and Construction Guidelines for EVCA as approved by the Board on May 20, 2018

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PURPOSE OF THE GUIDELINES

The primary purpose of the Architectural Design and Construction (AD&C) Guidelines for building at EcoVillage is to help residents, lot owners and potential owners understand and comply with:

- Design and Building Requirements Particular to EcoVillage of Loudoun County
- External Green Building Standards that Are Acceptable Here (LEED for Homes, EarthCraft House, Passive House Institute US)
- Building Process and Requirements

Furthermore, the purpose of both this document and meetings with the Architectural Design and Construction (AD&C) Committee is to provide assistance to owners, builders and potential owners in facilitating the building process.

The AD&C Committee reviews building plans and approves construction of all houses and other structures on both privately owned lots and common lands of the EcoVillage Community Association (EVCA). Improvements and exterior repairs to existing houses and structures are also governed by these Guidelines.

UNDERSTANDING ECOVILLAGE

Legally, EcoVillage of Loudoun County is a self-governing homeowners association. We are an intentional community that is committed to living sustainably and as good neighbors, while protecting and caring for our lands and the environment. These Guidelines serve to support and ensure our goals as an EcoVillage and intentional community.

Community: Buying a lot here means buying into the community. While we do not vet or preapprove buyers, we try to inform people as thoroughly as possible about the unique aspects of building and living here. The building process can begin only after the buyer has closed the sale and is the owner of record.

Homes: Our homes are energy efficient and employ sustainable materials, including those that are reclaimed or recycled. The utilization of new and innovative technologies to achieve improved energy performance, greater sustainability and carbon reduction is encouraged.

Yards and Lots: Lots at EcoVillage are individually owned, and owners are responsible for maintaining them. We promote the growth of native plants on our lots in support of pollinators and beneficial insects, but we avoid planting invasive species. Many of us enjoy adding favorite nonnative ornamentals to our landscapes.

Rural Hamlet Zoning: The lots at EcoVillage were established as Hamlet Lots with the EcoVillage Subdivision using the Rural Hamlet development option in the Revised 1993 Loudoun County Zoning Ordinance (hereinafter, “the Ordinance”). Section 2-106(B) of the AR-1 district regulations states: “For lots recorded prior to December 6, 2006 and developed under a hamlet subdivision, in accordance with the zoning ordinance in effect at the time of subdivision,

such lots shall follow the Rural Hamlet requirements, including uses, as set forth in this Ordinance.” Therefore, for EcoVillage, Section 5-702 of the Ordinance applies to the Hamlet Lots.

Common Lands: Through EVCA, we control and maintain our common lands (Parcel D), which we share and enjoy as a community. They are organically managed and planted only with native species. Our common lands are certified as a wildlife sanctuary by Audubon at Home and as a monarch waystation by Monarch Watch.

DEFINITIONS

Auxiliary Dwelling Unit (ADU) – This is a secondary house or apartment with its own kitchen, living area and separate entrance that shares the lot of a larger, primary house. The ADU may be attached to an existing house or garage, or it may be built as a stand-alone unit.

AD&C Committee – This is the Architectural Design and Construction Committee of EVCA.

AD&C Guidelines – This is the Architectural Design and Construction Guidelines.

Alternative Septic System – This refers to alternative treatment and dispersal systems as approved by the Commonwealth of Virginia.

Association – This is the EcoVillage Community Association (EVCA).

Auxiliary Structure (AS) – This refers to all structures on a lot that are neither primary nor auxiliary dwelling units.

Building – This is any human-built structure with a roof.

Buildable Area – This is any section of a lot or property that has been designated as a site on which controlled building may occur as shown on the Record Plat.

Builder or Contractor – This is a person (other than the Declarant) or business that builds dwelling units and structures and may also be in the business of constructing improvements.

Common Lands or Common Area – These terms refer to that portion of the property owned by the EcoVillage Community Association (EVCA) together with the improvements and facilities thereon owned by EVCA for the use and enjoyment of community members, and in some cases by non-members, subject to the terms of the Governing Documents. It is identified as Parcel D on the Record Plat. Reference to the common area refers to the common area at the relevant time.

Declaration – This refers to the Declaration of Covenants, Conditions, Easements and Restrictions for EcoVillage of Loudoun County.

Dwelling or Dwelling Unit – This is any building on the lot or property intended for residential use and occupancy.

Easements – Below is a list of all Easements for the EcoVillage Community Association.

- Property: Lots 1-25, Conservancy Lots A, B, C and D

Deed of Open Space Easement: Open space easement over the entire property including private lots

Date: 2/26/00

Filing Number: Book 1771, Page 51f.

Brief Description: Presents development; preserves natural value

- Property: Planting Area on Exhibit A
Riparian Buffer Easement: Declaration of restrictive covenants
Date: 8/22/12
Filing Number: 64684
Brief Description: Planting area Exhibit A protection

EcoVillage – This term refers to our community, which is governed by the EcoVillage Community Association (EVCA).

EcoVillage of Loudoun County – This is the subdivision of Ecovillage according to the Declaration Site Plan.

EVCA – This is the EcoVillage Community Association. This is the official name of our community, which is governed by the EcoVillage Community Association Documents.

EV – This is the EcoVillage of Loudoun County.

External Green Building Standard – This term refers to building guidelines created and administered by an organization external to the EcoVillage Community Association (EVCA). The organization addresses the design, construction and evaluation of green buildings, and it provides third-party verification and certification. The current acceptable external green building standards are enumerated in the AD&C Guidelines, and these standards may be updated from time to time by the organization that administers the standard.

Footprint – This is the square footage of ground covered by structures built upon a lot.

Governing Documents – These are the EcoVillage Statement of Mission, Values, Goals and Objectives; the Declaration of Covenants, Conditions, Easements and Restrictions for EcoVillage of Loudoun County; the Articles of Incorporation of EcoVillage Community Association; the Bylaws of EcoVillage Community Association; Landscaping Guidelines; and these AD&C Guidelines; as such documents may be amended or replaced from time to time.

Guidelines – In this document, this term refers to the Architectural Design and Construction (AD&C) Guidelines of the EcoVillage Community Association (EVCA), as such document may be amended or replaced from time to time.

Improvements – These are human-made structures (including but not limited to buildings, dwelling units, landscape structures, streets, utilities, wires, drains, nutrient recycling systems, fences, ponds, trails, and landscaping) constructed, installed or planted under, in, on or over a lot or property.

LS – This is the Land Stewardship Committee of EVCA

Lot(s) – These terms refer to those parcels within the property shown as “Hamlet Lots” on the record plat as separately subdivided and numbered and lettered land parcels, and the improvements thereon, excluding common area.

Lot Owner or Owner – This is an individual or entity identified as a grantee in a deed of a lot, whether improved or unimproved.

Primary Dwelling Unit (PDU) – This is the primary house or residence on a lot.

Solar Envelope – This refers to the space extending from the south face of any solar collecting structure that must remain clear of obstructions, which would shadow those surfaces. This term is precisely defined in the Appendix.

Structure – This is anything constructed or erected with a fixed location on the ground.

DESIGN AND BUILDING REQUIREMENTS PARTICULAR TO ECOVILLAGE OF LOUDOUN COUNTY

1. REQUIREMENTS OF OWNER

Throughout the building process, the owner has responsibility for the following:

- Complying with the Architectural Design and Construction Guidelines for all construction at EcoVillage of Loudoun County.
- Ensuring that the house conforms to one of three external green building standards—LEED for Homes, EarthCraft House or Passive House Institute US, and providing proof of certification by the selected external green building standard.
- Ensuring that builder/contractor/designer has proof of certification if required by the external green building standard selected by the owner.
- Complying with all state and county building requirements.
- Obtaining all Loudoun County permits.
- Ensuring that builder/contractor used for any construction project has current Virginia contractor licenses and appropriate trade licenses.
- Ensuring that builder/contractor has current certificate of insurance with minimum insurance coverage and bonding.

2. COMPLIANCE

All structures must comply with all the requirements of the AD&C Guidelines in effect when construction began. Buildings covered under these Guidelines and requiring AD&C Committee approval include the following on both private and common lands of EVCA:

- Primary Dwelling Units (PDU)
- Auxiliary Dwelling Units (ADU)

- Auxiliary Structures (AS) as defined in the Revised 1993 Loudoun County Zoning Ordinance, primarily Sections 5-101 and 5-102. Auxiliary structures include but are not limited to the following examples: car structures, car pads, decks, patios, sheds, sidewalks, fences, retaining walls, signage, hot tubs, play structures, gazebos and chicken coops. For a representative listing, see Section 5-101 referenced above.
- Structures on EcoVillage Common Lands
- All Permanent Structures
- Additions and Exterior Alterations to Existing Structures
- Exterior Repairs using replacement materials that are not substantially the same as the original in color, size, composition and character
- Limitations on Home Based Occupation—The purpose of a dwelling unit is to serve as a home and residence. But a home occupation is allowed if it is clearly incidental and subordinate to the residential use of the dwelling unit. Not more than twenty-five (25) percent of the gross floor area of the primary dwelling unit nor twenty-five (25) percent of the gross floor area of the auxiliary dwelling unit is allowed for use in the conduct of a home occupation.

Noncompliance can result in significant penalties. See item #18 in this section for details.

3. AESTHETICS

All structures must be of a size and use that is consistent with the standards of the community. All structures and site improvements must be designed in styles, shapes, sizes, massing and colors to be of good proportions, well balanced, and appropriate to residential architecture in general and specifically to be compatible with the style and character of existing EcoVillage structures.

Specific requirements:

- Adjacent detached houses must not use the same color scheme.
- Roofs of dwellings must have a gable style design and maximize the solar collection area.

4. EXTERNAL GREEN BUILDING STANDARDS

a) Accepted External Green Building Standards

All new primary dwelling units (PDU) and auxiliary dwelling units (ADU) must be designed and built in accordance with one of three external green building standards. The standards are:

- LEED for Homes at Minimum of Silver Level (U.S. Green Building Council)

- EarthCraft House at Minimum of Gold Level (EarthCraft)
- Passive House (Passive House Institute US)

The version of the standard that is current at the date of final design approval must be employed throughout construction and certification. Existing houses may be modified in compliance with these standards rather than the AD&C Guidelines under which they were constructed.

b) Building to Another External Green Building Standard

Building to another external green building standard requires approval by the AD&C Committee. Any person wanting to build to another external green building standard must submit, and cover the cost for, a comparison and contrast analysis of the standard with our AD&C Guidelines, as was done by Green Insight with the three accepted external green building standards. This analysis must include the specific elements used by Green Insight in its comparison and contrast analysis in 2014. The analysis must also identify items in the external green building standard that are not in the AD&C Guidelines and any that are in conflict with the Guidelines. The AD&C Committee is the sole judge of the acceptability of building to another external green building standard and must grant approval before it can be used for building at EcoVillage.

5. BUILDING SIZE, FOOTPRINT, LOCATION AND OTHER REQUIREMENTS

- Location of Dwellings and Structures:** Primary dwelling units, auxiliary dwelling units and auxiliary structures must be constructed in the buildable area of the lot as defined by the Revised 1993 Loudoun County Zoning Ordinance and clearly indicated on the approved plat and with the setbacks defined in the Rural Hamlet Option, Section 5-702 of that Ordinance. Dwellings and structures must be permanent structures and comply with EcoVillage building requirements.
- Solar Envelope:** Structures must not infringe upon the solar envelope of an existing solar collection area of another dwelling unit or upon the buildable area of an undeveloped lot as defined by this document (See Appendix). The owner and his/her designer will demonstrate compliance with this requirement to the AD&C Committee during the final design phase.
- Footprint:** Total combined footprint for all structures on a lot must not exceed 10 percent of the lot area as shown on the approved plat. Structures include all dwelling units and auxiliary structures. Examples of auxiliary structures are parking structures, car pads, decks, patios, sidewalks and fences.
- Site Preparation:** Site clearing of trees and plants on both the buildable and non-buildable areas of a lot cannot begin until final approval is obtained in writing of the final design plan and site plan. The site plan will identify which trees are to be removed. Limited and selective tree cutting for purposes of a survey or

site planning does not require AD&C Committee approval.

- e) **Parking Structures and Driveways:** Parking structures and driveways are allowed at every home and must be permanent structures. Parking structures include but are not limited to the following examples: garages, car pads, and carports. These structures, except for garages, need to be constructed in such a way as to minimize visual impact with mature vegetative planting or structural screening. An attached garage with or without conditioned living space is considered part of a primary dwelling unit. A detached garage is considered an auxiliary structure. And a detached garage with conditioned living space is considered an auxiliary dwelling unit.
- f) **Order of Construction:** Auxiliary dwelling units and auxiliary structures cannot be built before the primary dwelling unit but may be built concurrent with it.
- g) **Size Guidelines:** The chart below provides size requirements.

Chart 1: Size Guidelines

	Primary Dwelling Unit (PDU)		Auxiliary Dwelling Unit (ADU)		Auxiliary Structures (AS)	
	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum
Conditioned Space Size	1,100 square feet	3,300 square feet	500 square feet	70% of PDU size	n/a	n/a
Footprint	1,100 square feet	Combined area of all structures is not to exceed 10% of the lot area	None	Combined area of all structures is not to exceed 10% of the lot area	None	Combined area of all structures is not to exceed 10% of the lot area
Height	None	35 feet	None	35 feet	None	15 feet
Levels Above Ground	1	2	1	2	None	1

Other requirements:

- Any auxiliary structure that has conditioned living space is considered an auxiliary dwelling unit (ADU).
- Most auxiliary structures are subject to the Loudoun County zoning ordinance.
- All auxiliary structures must be permanent structures.

6. ALTERNATIVE SEPTIC SYSTEMS

At EcoVillage, we have alternative treatment and dispersal systems as approved by the Commonwealth of Virginia.

EVCA requires that Alternative Septic Systems must be used. All lots at EcoVillage have approved drain fields clearly shown on the plat for the EcoVillage of Loudoun County. Many different brands of approved systems can use the septic drain fields in place. In Virginia, places that require alternative septic systems must meet national standards NSF/ANSI Standard 40 and 245 to be installed. The county provides a guidance sheet that is available.

7. UTILITIES

Supply lines for electricity and telephone are underground and available at each lot. All utility lines connecting houses to supply must be placed underground.

Owners choosing to install propane tanks must install an underground tank with buried lines. Propane tanks require AD&C Committee approval.

8. MECHANICAL EQUIPMENT AND OUTDOOR NOISE

- a) **Outdoor Equipment:** All permanently installed outdoor equipment must not be visible or heard from outside of building structures. This includes but is not limited to HVAC equipment and outdoor generators. Septic system pumps are exempt from this requirement.
- b) **Supplemental Heating:** Supplemental-heating appliances must demonstrate compliance with the strictest EPA emissions rules and performance standards. Supplemental heating provides auxiliary heat only and must not be used to provide the main source of heat for a house.

9. CONSTRUCTION AND LANDSCAPE NOISE

Outdoor construction and landscape work must only be done between the hours of 7 am and sundown.

10. DARK SKY PRESERVATION

Full light cutoff for all outdoor lighting is required. Outdoor lighting must comply with the outdoor lighting guidelines of the International Dark-Sky Association (IDA). An exception exists for temporary decorative lighting for a maximum of the respective holiday season, and these lights are not to be left on all night.

11. DAMAGE

Any person responsible for damage to the common lands, including infrastructure, will bear the cost of such repair and restoration to its original condition.

12. ALLOWED AND PROHIBITED SUBSTANCES

The National List of Allowed and Prohibited Substances of the USDA National Organic Program (NOP) must be followed for the control of weeds, pests and other purposes on both common lands and on privately owned lots.

For the control of termites, carpenter ants, rodents and other pest infestations of dwellings, pesticides are allowed. Botanical products are to be used if effective.

13. TOXIC AND/OR ENVIRONMENTALLY HAZARDOUS MATERIALS

Toxic and/or environmentally hazardous materials required during any construction period or for any other reason are subject to the requirements of the Consolidated List of Lists of the Environmental Protection Agency (EPA). Their use must also adhere to the compliance information below:

- Compliance information for the Emergency Planning and Community Right-to-Know Act (EPCRA) as published in the Code of Federal Regulations (CFR), 40 CFR parts 355, 370, and 372.
- Compliance information for the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) as published in 40 CFR part 302.
- Compliance information for the Clean Air Act (CAA) section 112(r) as published in 40 CFR part 68.

Toxic and environmentally hazardous materials that are allowed by the EPA must only be used on impervious surfaces where any spills must be contained. They must be disposed of appropriately as a hazardous material.

14. CONSTRUCTION WASTE MANAGEMENT

- a) Construction waste must not be disposed of at EcoVillage trash or recycling areas, and it must not be burned or buried at EcoVillage.
- b) Builder must demonstrate that 75 percent of all construction waste is diverted from landfill.
- c) Concrete trucks must be washed out only in the trash-shed parking lot into a standard washout basin. For acceptable examples see Caltrans Storm Water Quality Handbooks, Section 8 on Concrete Waste Management WM-8. See Appendix for diagrams.

15. PROHIBITED MATERIALS

The AD&C Committee has determined that some commonly used construction materials are not in conformity with green standards. These include the following items, which are prohibited:

- Vinyl and aluminum siding
- Asphalt paving materials, including recycled asphalt
- Asbestos building materials

16. ITEMS NOT REQUIRING APPROVAL

- Interior repairs of any type
- Any exterior repairs using replacement materials that are substantially the same as the original in color, size, composition and character
- Outdoor decorative elements, including planters, lawn furniture, small sculptures, birdhouses and the like
- Clotheslines, but they must not be placed in the front yard
- Antennas and satellite or Internet dishes according to the Telecommunications Act of 1996

17. DEVIATIONS AND REDESIGN

Any substantial deviations from the final approved design must be reported to and approved by the AD&C Committee. If deviations are observed and not reported, the Committee may order a halt to construction until new approvals are obtained. Approval will be communicated in writing within 15 days of resolution of a disputed deviation. The Committee is the sole judge of whether a deviation during construction is substantial and requires action.

18. PENALTIES

The AD&C Committee will consider each case of noncompliance based on the circumstances. A finding of noncompliance and recommended fine will be forwarded by the AD&C Committee for adjudication to the Covenant Compliance Committee, which will determine the penalty. The maximum fine for noncompliance with the external green building standard and/or Design and Building Requirements Particular to EcoVillage of Loudoun County must not exceed 10 percent of the mortgage appraised value of the home at completion.

19. OTHER ITEMS

For any item not addressed in the AD&C Guidelines, the owner must request a written determination from the AD&C Committee. For exceptions or for items not covered by the Guidelines, the Committee must consider and determine the overall environmental impact and benefit and will then make a decision on a case-by-case basis.

When AD&C Committee members request any action by the Committee, they must recuse themselves from participating in the decision.

The AD&C Committee is responsible for interpretation of the AD&C Guidelines.

BUILDING PROCESS AND REQUIREMENTS

OVERVIEW

The AD&C Committee, in accordance with the Declaration Section 7.2.B, reviews and approves submitted designs and plans for homes and all structures by interpreting and implementing the AD&C Guidelines. The Committee is also responsible for updating and implementing policies, procedures and these Guidelines. It is the primary point of contact for owners, designers, builders and others who need direction or clarification about building here.

Certain forms and reviews are required at appropriate points in the building process (detailed below). The Committee bases its reviews on its interpretation of the Declaration and the AD&C Guidelines for each design and plan submitted. The Committee also considers the architectural characteristics and compatibility of each new design in relation to existing houses and structures at EcoVillage. The AD&C Committee has final authority in determining all design and plan approvals.

HOUSES

Building a custom house at EcoVillage is different as there is no one standard house plan, no preselected designer or architect, and no required contractor. Instead, there is a set of Guidelines (this document) that provides certain choices in designing and building a house.

Because our houses have different requirements than those of most developments, it is important that the owner be involved from the start of the process. Ultimately, the owner is responsible for the design and house conforming to the AD&C Guidelines. At the end of this process, the house must be certified according to the owner's chosen external green building standard.

SUMMARY OF BUILDING PROCESS

The chart below provides a summary of the building process and requirements.

Chart 2: Summary of Building Process and Requirements

Step	Documents	Responsibility	Response
Lot Purchase	Disclosure Packet to Owner	EVCA Finance Committee	None
Preliminary Design Plan	Preliminary Design Plan & Supporting Documents	Owner	Written Approval – 30 Days of AD&C Committee Meeting to Consider Plan
Final Design Plan	Final Design Plan & Supporting Documents	Owner	Written Approval – 15 days of AD&C Committee Meeting to Consider Plan
Additional Plans	Construction Waste Management Plan and Construction Staging Plan	Owner	Written Approval – 15 days of AD&C Committee Meeting to Consider Plan
<p>Note: All above plans need to be submitted with the appropriate “Application for Approval” form (in Appendix). The AD&C Committee provides a written response of approval or denial for each plan.</p>			
Notifications	30 Days Notice Before Construction Begins to AD&C Committee and Abutters	Owner	None
Approvals and Certifications	<ul style="list-style-type: none"> • Preliminary Design Plan • Final Design Plan • Construction Waste Management Plan • Construction Staging Plan • Certification by External Green Building Standard • Loudoun County Certificate of Occupancy 	Owner	Copies of Approvals and Certifications Kept on File by EVCA

STEPS TO FOLLOW

The steps in this section provide details of the building process and requirements. These steps must be followed for all structures, including additions and external remodeling of existing houses. The AD&C Committee at its discretion may abbreviate the process for certain structures and exterior repairs.

STEP 1. LOT PURCHASE

The building approval process cannot begin until the buyer has closed the sale and has become the owner of record. At or before closing, the Finance Committee of the EcoVillage Community Association (EVCA) will provide the new purchaser with a complete set of EcoVillage documents called a “Disclosure Packet.” It includes these AD&C Guidelines to help facilitate the design and building of a home. When informed of the purchase, the AD&C Committee will contact the purchaser and endeavor to set up an initial meeting to discuss the building process.

STEP 2. DESIGN PLANS FOR ALL STRUCTURES

The second step focuses on the design plans, for which there are two components:

- Preliminary Design—This is the conceptual design plan.
- Final Design—This is the final design plan from which the structure will be built and includes the site plan and other requirements. It is submitted after approval of the preliminary design plan.

In general, the process of designing and building runs smoother when the architect or designer and the builder or contractor are on board from the start and participate in the scheduled meetings along with the lot owner.

Design Approval Process: The lot owner must submit these design plans and the designated EcoVillage “Application for Approval” forms to the AD&C Committee. Within 15 days of receiving a submitted application, the Committee will contact the owner to schedule a meeting about the design.

Construction: Before any construction can commence, written approvals must be secured from the AD&C Committee for the Final Design Plan and also for the Additional Plans in Step 3.

a) Preliminary Design Plan and Approval

The first step in this process is the submission of a Preliminary Design Plan. Before any design commences, the

owner needs to obtain a copy of the approved plat, showing the location of the buildable area of the lot and the location of the well and approved septic drain fields.

The owner must submit a Preliminary Design Plan to the AD&C Committee that includes:

- Floor plans and elevations (including rough dimensions and square footage of conditioned space)
- Outline of the materials and major systems to be used
- General location and orientation of the house on the lot
- Identification of external green building standard to follow for construction
- Landscaping - This is understood to be all landscaping undertaken. All landscaping must follow the Eco-Village Landscaping Guidelines and the applicable sections of the chosen external green building standard. The Land Stewardship and Facilities Maintenance (LS/FM) Committee is responsible for overseeing and monitoring compliance with the Landscaping Guidelines except during any construction period. During a construction period, the AD&C Committee is responsible for ensuring that all landscaping complies with both the AD&C Guidelines and the Landscaping Guidelines.
- "Application for Approval of Preliminary Design Plan" (In Appendix)

These need not be construction grade plans but must be clear enough to function as the basis for discussion and approval. Within 15 days of receiving the Preliminary Design Plan, the Committee will contact the owner to schedule a meeting to review it.

Meeting with Owner: The owner and/or designated representative(s) should be present to meet with the AD&C Committee to review the documents and discuss the preliminary design plan.

Subsequent Committee Meeting: The AD&C Committee will subsequently meet to consider the preliminary design plan and will issue either an approval or denial of the plan.

- Approval: If the design plan is approved, the Committee will communicate this in writing to the owner within 30 days of the meeting. Once approved, the owner may proceed to the final design step.
- Denial: If the design plan is denied, the Committee will communicate this in writing to the owner within 30 days of the meeting. All reasons for denial and recommended modifications will be stated. To move forward, the owner must resubmit a modified preliminary design plan for the Committee's approval. Once approved, the owner may proceed to the final design step.

Approval of the preliminary design plan does not constitute authorization to begin construction.

b) Final Design Plan and Approval

After the AD&C Committee has approved the preliminary design plan, the owner and builder need to begin the work of bringing the design into conformity with the following:

- Chosen external green building standard
- Virginia Uniform Statewide Building Code
- All Loudoun County building, zoning, and health regulations
- Design and Building Requirements Particular to EcoVillage of Loudoun County

Each of the external green building standards has very specific requirements regarding designers, consultants, raters and builders. Each organization governing these standards has documents to assist in designing and explaining the steps in the process with which the owner/builder must comply.

The owner must submit a Final Design Plan to the AD&C Committee that includes:

- Construction grade plans
- Site plan (Include Site Preparation, Section 5.d, Building Size, Footprint, Location and Other Requirements)
- Septic plan
- Initial construction landscape plan
- “Application for Approval of Final Design Plan” (In Appendix)

Within 15 days of receiving the Final Design Plan, the Committee will contact the owner to schedule a meeting to review it.

Meeting with Owner: The owner and designer and/or builder should be present to meet with the AD&C Committee to review the documents and discuss the final design plan. The following conditions must be met for approval of the final design plan:

- Documents reveal substantial conformity with the preliminary design plan
- Documentation of compliance with the external green building standard by a required third-party reviewer
- Compliance with Design and Building Requirements Particular to EcoVillage of Loudoun County

Subsequent Committee Meeting: The AD&C Committee will subsequently meet to consider the final design plan and will issue either an approval or denial of the plan.

- **Approval:** If the design plan is approved, the Committee will communicate this in writing to the owner within 15 days of the meeting. Once approved, the owner may then apply for all necessary Loudoun County permits, including grading, construction, zoning, health and such others as may be required. The Committee will also appoint a primary liaison person, who will be the assigned channel for communication between the Committee and the owner and/or builder during the building process. If the liaison person is not available, then communication is with the Committee chair and/or secretary.
- **Denial:** If significant and substantial deviations are observed, the Committee will have to consider these changes and may deny the application. All reasons for denial will be communicated in writing to the owner within 15 days of the meeting. To move forward, the owner must resubmit a modified final design plan for the Committee's approval.

STEP 3. PLANS FOR CONSTRUCTION WASTE MANAGEMENT

Construction waste management begins with the purchase of a lot.

Before construction can begin, the builder must submit the following plans for approval to the AD&C Committee:

- Construction Waste Management Plan and designated "Application for Approval" (In Appendix)
- Construction Materials and Equipment Staging Plan and designated "Application for Approval" (In Appendix)

Within 15 days of receiving these plans, the Committee will contact the builder to schedule a meeting to review them.

Construction Waste Management Plan: The waste management plan can be the same plan submitted to the designated external green building standard, if one is required. The builder must follow this plan in responsibly disposing of all site-generated waste from a construction project.

Construction Materials and Equipment Staging Plan: A construction materials and equipment staging plan must also be submitted before arrival of any materials and before any site preparation begins. It can be superimposed upon the site plan to show where materials are to be stored including storage structures, any temporary driveways, gravel pads, and parking of equipment both during active construction and at night and on weekends.

Construction Waste Recycling: The builder must maximize recycling of construction materials.

Additional Construction Waste Requirements: See section 14.c

Committee Meeting: The builder is encouraged to attend the scheduled meeting to review both plans. The approval or denial will be communicated to the owner within 15 days of this meeting. If denied, the reasons for the denial will be clearly stated and the owner must resubmit the plans.

STEP 4. CONSTRUCTION PERIOD

Written Approvals: Before construction can commence, written approvals by the AD&C Committee are required for the following plans:

- Final Design Plan (Includes site plan)
- Construction Waste Management Plan
- Construction Materials and Equipment Staging Plan

Notifications:

- The owner and/or builder must notify the AD&C Committee 30 days before construction begins.
- The owner also must inform abutters when construction is expected to begin.

Construction Site Upkeep: The construction site will be managed and organized to maintain safety and to minimize negative environmental impact. At the end of each workday, all debris will be contained and the site will be left clean and tidy.

Communication: Throughout the construction period, the builder must communicate any unanticipated conditions or changes to the AD&C Committee.

Walk-Through: The AD&C Committee has the right to request a walk-through of the project at any time, subject to a mutually agreed timeframe.

Documents and Reports: Copies of all intermediate inspection reports from certified raters, designers, or other persons required by the chosen external green building standard must be forwarded in a timely manner to the AD&C Committee, up to and including the final inspection and certificate of compliance with the standard. Also, the Loudoun County Certificate of Occupancy must be copied and forwarded.

CERTIFICATION

After completion of a house or other structure, it must be certified by the approved selected external green building standard.

LIMITS ON APPROVALS

The following limits govern all approvals:

1. After meeting with a lot owner about a preliminary or final design plan, the AD&C Committee will subsequently meet to consider the design. If the owner does not receive a written response postmarked or emailed within 30 days of this subsequent meeting, the owner may presume approval.
2. All approvals or denials by the AD&C Committee will be made in writing and sent to the lot owner or designated representative.
3. All approvals issued by the AD&C Committee are independent of any governmental agency, inspector, standard-issuing body or HERS rater approvals.
4. All approved construction must start within one year of construction loan approval date and maintain steady progress in construction. After obtaining the building permits, construction must be completed within 18 months.
5. For all projects in which construction is not begun within two years of AD&C Committee approval, the final design must be resubmitted for approval. No additional preliminary approval is needed if intending to build as initially approved. New designs will need to begin the process again.
6. Projects on which construction ceases for more than three months must be resubmitted for approval.
7. Clearly demonstrated deviations from approved documents will result in a written notification to the owner or designated representative and may result in withdrawal of approval.
8. Any approval of a project (preliminary design plan or final design plan) is not transferable with the sale of the property without the written consent of the AD&C Committee.

LIMITS OF LIABILITY

The Association and the AD&C Committee will not assume any liability for the owner's responsibilities, which include:

1. Performance and quality of work of any contractor or subcontractor.
2. Compliance with all laws, codes and ordinances of any governmental agency or body.

3. Determination of environmental restrictions, drainage and grading requirements and all surface and subsurface soil conditions.
4. Determination of structural, mechanical, electrical, and all other technical aspects of a proposed design that can only be determined by professionals engaged for that purpose.
5. Accuracy of any stakeouts and surveys.

AMENDING AND UPDATING THE AD&C GUIDELINES

The AD&C Committee recommends any needed changes and updates of the AD&C Guidelines to the EVCA Board of Directors, and advises the Board of the reasons for the recommended changes. The process to approve changes to the Guidelines follows the requirements of the Declaration and EVCA Bylaws.

Coordination between the AD&C Committee and Land Stewardship Committee is needed if changes or updates are made to sections addressing a topic that is in both sets of Guidelines. Approval by the Board needs to be done with the same language in both sets of Guidelines (AD&C Guidelines and Landscaping Guidelines).

APPENDIX

1. SOLAR ENVELOPE

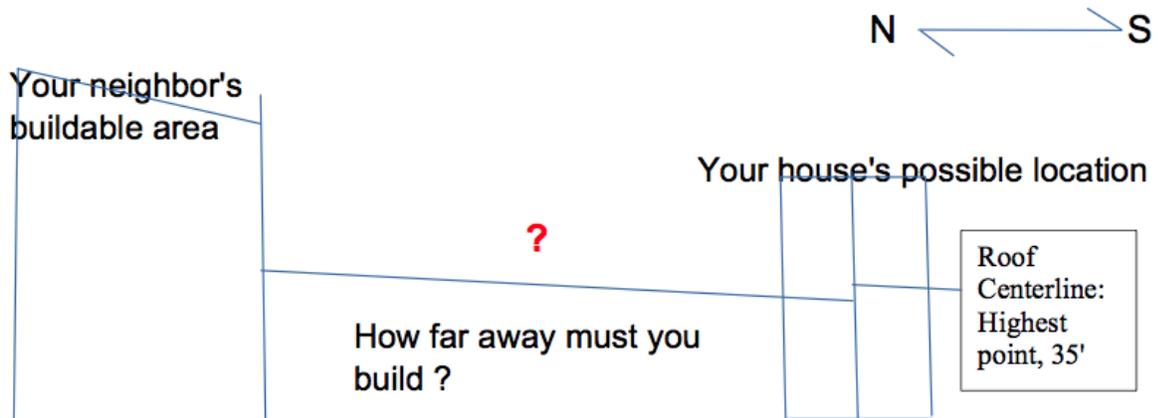
The Solar Envelope at EcoVillage is defined as that area bounded by:

- a) a plane stretching from the bottom edge of any solar collection surface and extending into space at 32 degree altitude.
- b) a plane extending from the northeasternmost edge of any solar collection surface continuing along a true compass heading of 120 degrees.
- c) a plane extending from the northwesternmost edge of any solar collection surface continuing along a true compass heading of 240 degrees.
- d) a plane extending vertically from the top edge of the topmost solar collection surface .

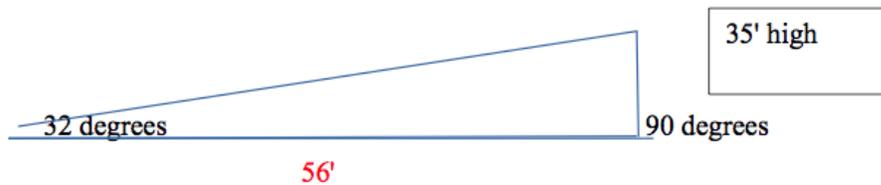
For purposes of this definition solar collection surface refers to any thermal or photovoltaic solar collector, window, or trombe wall or the like. For undeveloped lots, the build-able area shall not be infringed by shadows.”

An Example:

To apply this to site planning, let's take a simple example. Say your house is to be sited on your lot, to the south of a neighboring lot and the ground is flat. You want to build a two-story house, so the maximum height above the ground is 35' at the peak of your roof. The Solar Envelope requires that you not cast your shadow on the buildable area (or solar collection surfaces of a built house) so that you do not block his/her access to the sun below 32 degrees altitude.. You need to know how far away you must build.



This is just a triangle problem from Geometry (or trig, if you know it); from the side it looks like this



Using a simple trig calculator (many online) you find you must build 56' from your neighbor's buildable area.

But remember, that is from the center of your roof. Let's assume your house is 24' deep; there's 12' just to the edge of your house. Assuming the road is 30' wide, the required setbacks on both sides are 6' minimum; so, you'd have to build into your lot 8 feet. That should be possible. If you wanted to be closer, you could lower your roofline or build your house deeper into the ground. Also, this assumes flat ground. If the ground rises say just 3 feet, you would need to be only 51' away.¹

1 These calculations are based upon receiving 6 hours of solar gain between the equinoxes, a standard assumed by most architects for maximal possible solar irradiation.

2. FORMS FOR OWNER TO SUBMIT TO AD&C COMMITTEE:

- Application for Approval of Preliminary Design Plan
- Application for Approval of Final Design Plan
- Application for Approval of Construction Waste Management Plan
- Application for Approval of Construction Materials and Equipment Staging Plan
- Application for Approval of Abbreviated Process

3. FORMS FROM AD&C COMMITTEE

- Walk-Through Checklist of Design and Building Requirements Particular to EcoVillage of Loudoun County