Lower Cape Fear Stewardship Development Program

Expanded Application Guidelines

This is a set of guidelines, not requirements, to expand upon, and clarify the criteria that will be used in determining whether a project will be awarded any of the following. **Please note that these criteria are intended to serve as guidelines only, and that it is not necessary to meet all the criteria. Not all categories will apply to most projects.** Stand-alone residences do not qualify.

Outstanding Stewardship is the highest level of distinction available in the Stewardship Development Program. This honor is only bestowed on projects that have achieved high marks in all applicable criteria. The project must be sufficiently complete and demonstrate accomplishment or financial commitment to accomplishment of project goals to receive Outstanding Stewardship status.

Significant Achievement is the next level of achievement. A project may not be eligible for Outstanding Stewardship for a variety of reasons. This is based on 1) level of project completion or 2) accomplishment of applicable criteria. If a project falls short on one or more criteria, the Selection Committee may elect to spotlight specific aspects of a project with a Significant Achievement Award.

Special Recognition shall be awarded if a project does not qualify for the Outstanding Stewardship or Significant Achievement Distinction, but the project does have element that the judges find to merit recognition for those characteristics. Projects that have an approved site plan but construction has yet to commence would fall under this level of award.

For each of the criteria, it is assumed that the project has met minimum standards imposed by code or ordinance. Staff can provide assistance with meeting the criteria.

Your entry will be evaluated on how well your development plan and site inventory has taken into account the following possible measures. Each applicant must agree to a site visit to evaluate the project, as well as agree to submit to periodic site visits subsequent to any award as deemed necessary by the Stewardship Development Coalition to evaluate that the project continues to meet the criteria on which an award is based.

A $25 non-refundable application fee must be submitted with each application to offset part of the cost of judging.

1) Site Inventory & Development Plan

Site Inventory

- ❑ Identify soil classes for water runoff infiltration
- ❑ Evaluate presence of wetlands, and if present include on site plan.
- ❑ Investigate the presence of floodplains, stream beds and riparian zones to design surface water management systems
- ❑ Delineate topography and current surface drainage patterns and features
- ❑ Evaluate the ground water systems
- ❑ Conduct a wildlife survey, unique habitat inventory, native vegetation and tree species inventory
- ❑ Identify cultural / historical resources on site plan if present
- ❑ Identify public infrastructure, such as public transit, road and street stubs from existing/proposed adjacent development, schools, etc.

Project Layout

- ❑ Provide a description to demonstrate that inventory plan was used in site layout; that the project was designed in careful consideration of natural features and constraints; and that extraordinary efforts were made to maintain the natural character of the site.
- ❑ Respond to needs for connectivity and multi-modal transportation:
    - Provide bus stops, connected bicycle and walking trails and pedestrian and bike access between neighborhoods, shopping facilities and schools in plan

2) Water Quality Protection

Construction Impacts / Erosion Control and Sediment Reduction

- ❑ Limit initial site grading to driveways and streets
- ❑ Maintain natural drainage patterns and incorporate into stormwater plan to the extent feasible
- ❑ Minimize the amount of impervious roadway and parking surface
- ❑ Prepare and follow site and grading plans to minimize filling, cutting and areas of soil compaction
- ❑ Reserve HSG Type A & B soils in-situ on the site, and utilize those soils for infiltration of runoff

Stormwater Management

For Streets:

- ❑ Install minimum required street width (as the maximum)
- ❑ Minimize cul-de-sac radii, use "doughnut" cul-de-sacs, or other alternatives, such as "T's"
- ❑ Use shared driveways with grassy strip design
- ❑ Utilize pervious paving materials for low flow traffic areas, driveways, and walkways

For Sidewalks:

- ❑ Install sidewalks on one side of street only where safety permits.
- ❑ Install sidewalks of minimum allowed width
- ❑ If possible, utilize pervious paving materials or other BMPs to reduce runoff from sidewalks and paths

For Buildings:

- ❑ Utilize multiple story design for houses and buildings
- ❑ Provide parking areas under buildings

For Stormwater Drainage Systems:

- ❑ Avoid use of curb and gutter where permitted
- ❑ Promote on-site infiltration, percolation and/or reuse of runoff by installing storm water Best Management Practices (BMPs) such as:
    - Cisterns and rain barrels
    - vegetated open swales with a permeable soil base
    - rain garden/bioretention areas
    - dry wells
    - vegetated buffers
    - infiltration trenches
    - vegetated roof systems
    - tree box filters
    - constructed wetlands
    - filter strips
    - pervious pavement and pavers
- ❑ Promote diffuse flow or runoff over the landscape in lieu of concentrated flow
- ❑ Direct flow from gutter downspouts to vegetated, stable areas
- ❑ Utilize detention practices such as check dams in conveyance channels

3) Green Building

Construction Materials and Site Design

- ❑ Use care with construction materials to minimize waste.
- ❑ Utilize job-site recycling dumpsters and recycle other materials not suitable
- ❑ Protect trees and other features from construction damage
- ❑ Make an effort to use building materials from "sustainable" sources, such as forest products certified by stewardship programs
- ❑ Design buildings that are more energy efficient, require fewer resources, and require less land disturbance
- ❑ Employ LEED rating system and LEED accredited design professional

Water Efficiency

- Install systems to use rainwater for landscape irrigation purposes
- Emphasize native plant species and xeriscaping to minimize need for irrigation water
- Install gray water system for flushing toilets or irrigation
- Install low flow fixtures, faucets and shower heads
- Install timer and moisture sensors on irrigation system

Energy Efficiency

- Employ passive solar design or integrate other renewable energy sources
- Construct buildings that are energy star rated.
- Use high efficiency heating and air conditioning systems.
- Use highest "R" rated insulation packages (thermal windows, attic, and floor insulation) or substituted unique building materials.
- Arrange building to optimize potential for solar orientation and access prevailing breezes
- Install solar panels for water heating, space heating and electricity generation.
- Integrate green roofs / roof gardens into project.

Indoor Environmental Quality

- Use low toxicity building and interior design materials
- Ensure proper ventilation
- Use daylighting and provide views
- Design for small area thermal controllability and comfort

4) Wetland Riparian Preservation / Restoration

- Preserve existing topography and natural features
- Maintain or enhance riparian buffers (Width = top of normal stream channel or approximate mean high tide line)
    - Install additional vegetation (use of indigenous, woody vegetation) in the buffer area
    - Plant absorptive ground cover under the woody canopy
- Utilize the natural floodplain (as a spread area for surface flow emanating from the developed area)
- Maintain or enhance the pre-developed stream or wetland character and function (i.e. natural stream meanders).
- Protect and/or enhance existing wetlands and vegetated buffer zones

5) Habitat Protection/Improvement

- Integrate the development with the natural landscape and design the lots consistent with local natural habitat patterns.
- Develop a management plan to preserve unique habitat identified in the Inventory Map
- Increase vegetated buffers around aquatic resources and enhance with vegetation conducive to wildlife
- Design storm water control features with native vegetation enhancements to benefit wildlife.
- Maintain the maximum contiguous woodland to provide the best bird habitat
- Create interconnecting greenways/wildlife corridors and connections.
    - Have alternatives to crossing busy roads (e.g. underpass)
    - Use fencing that will not impede wildlife access
- Construct a guided nature trail with bird feeding stations and nest boxes
- Promote backyard habitat program.

6) Vegetation Protection / Enhancement

- Protect native vegetation and maximize the use of native vegetation in landscaping plan.
- Eradicate invasive exotic plant species
- Develop and implement tree preservation plan to minimize tree loss and damage.
- Preserve site's existing trees and vegetation (i.e. minimize clearing of native vegetation, underdeveloped land, forests, wetlands, etc) to only areas needed for construction of lots and common amenities
- Create vegetative buffers that enhance view without removing large woody species
- Develop a forest tree management plan to maintain healthy tree cover

7) Natural Project Amenities

- Protect portions of the site with outstanding landscape views
- Create communal opportunities for all residents to enjoy view and/or access to water
- Build the amenities to be consistent with the landscape character
    - Minimize visual impact of driveways, off street parking, garage and carports
    - Preserve views and privacy of others
    - Choose finishes that blend with or compliment landscape
- Include passive recreation opportunities that emphasize natural amenities.
- Protect the historical and cultural resources identified on the Inventory Map and include in open space plan.

8) Long-term Management and Maintenance

- Formally record conservation easements for the preserved areas:
    - wetland, riparian buffers and flood plains
    - areas with unique biological communities
- Develop a management plan for preserved, created or restored habitats and incorporate the plan into the by-laws of any homeowners association or similar organization that will be charged with this management
- Provide buffers between areas dominated by human activities and wildlife areas. If necessary, limit people to a well-defined trail
- Include in the by-laws and/or rules the ability of the managing agency to:
    - Provide measures to prevent attracting nuisance animals (geese, raccoons, etc.)
    - Prevent domestic pets from roaming freely
    - Provide designated areas where people can exercise their pets
    - Develop a pet waste management policy
- Provide financial assurance that homeowners association, or other entity charged with the management of the natural and cultural features of the development has funds sufficient to facilitate the management of the resources and the maintenance of the facilities
- Construct the by-laws to ensure access by the general public to nature trails, historical, archaeological, and cultural sites.

9) Community Outreach / Education

Pre-construction Options ~ *Developer Responsibilities*

- Create an environmental stewardship mission statement for the development
- Involve neighboring landowners in the site inventory and project design
- Explain the benefits of low impact development on the surrounding owners
- Involve cooperative opportunities to resolve community problems, such as traffic, drainage, wildlife, and water quality
- Provide interpretive signage or information for historical and cultural resources.

Construction ~ *Developer Responsibilities*

- Post mission statement at the main entrance to the development
- Publicize the environmental benefits of this stewardship project (e.g., protection of natural space, wildlife and habitat protection, water quality)
- Incorporate environmental benefits in marketing literature
- Actively participate with builders in siting and landscaping on individual lots
- Install pet waste stations and educational signage about the natural and cultural features and/or best management practices on site
- Provide interpretive facilities that assist in educating residents and visitors about the natural and cultural features of the site
- Develop a program to inform purchasers/residents and encourage development and maintenance with information on:

- Stormwater BMPs
- Wildlife conservation, the use of native plants that have value for wildlife
- Possible volunteer help, and cost share programs that provide financial and technical assistance

Active sales period ~ *Developer / Marketing Agent Responsibilities*

- Distribute specific environmental information to potential buyers and builders
- Publicize the financial and community benefits of low impact development:
  - Visual attractiveness of the development
  - Quality of life benefits from active and passive open space, wildlife protection, surface water management, and maximum tree cover
  - Short-term cost savings to developer from low impact development
  - Benefits to homeowners from energy and water operating efficiencies
  - Reduced long-term costs to society from low impact development
- Emphasize the natural environment features in the "Parade of Homes" competitions and/or neighborhood/community meetings or special events

10) Re-use/Revitalization of Existing Site

- Conduct an environmental assessment and design project to preserve, integrate and enhance :
  - Outstanding specimen trees and native vegetation
  - Existing storm water management features and drainage patterns
  - Role of the site in the natural and physical systems of the surrounding properties
- In the site design, evaluate the following:
  - Service needs and blending with existing community and developments such as small, first order shops to minimize need for automobile travel;
  - Creating public transit opportunities; and
  - Ways to re-establish or augment the functioning of natural systems, such as covered swales and streambeds or filled wetlands?
- Determine if the architectural details are compatible with the surrounding built environment.
- Mitigate known environmental problems, e.g. subsurface storage tanks
- Re-use existing materials in order to minimize waste or recycle construction site waste