Lower Cape Fear Stewardship Development Award Winners

Outstanding Recognition

320 Chestnut – Wilmington, NC

320 Chestnut included the renovation and reuse of New Hanover County's 45,000 square foot, six-story office building at 320 Chestnut Street. The building previously sat dormant for five years because a plumbing system flooded the interior. Reuse of the building necessitated asbestos abatement, total renovation of the building interior, new mechanical, plumbing and electrical systems, new fire sprinkler system, replacement of all exterior glazing and replacement of the elevators.

Many sustainable design ideas were employed on this project. The GC was able to recycle all demolished masonry, concrete, gypsum, copper, metals and wood pallets. Low to zero VOC paints, adhesives and coatings were used to improve indoor air quality along with low emission resilient floorings. Office spaces have operable windows for natural daylighting and opportunity for fresh air.

The project was also a historic restoration effort as well. The existing blue exterior porcelain panels below the windows were cleaned and remain in place. Any aluminum wrap, such as that on a column, window or canopy, was removed, re-anodized and reinstalled. The existing polished precast around the street level storefront was repaired as needed, as was the existing brick on the upper levels of the façade. Marble panels from the ground floor elevator lobby were salvaged and reinstalled. As much original terrazzo as possible was protected during demolition and construction efforts on the ground floor.

A highlight of the renovation included the installation of two new green roofs to offset stormwater runoff and enhance the quality of the workplace. The main roof features a garden terrace for employees and is accessed through an existing mechanical penthouse which was partially renovated into a breakroom. The new green roofs reduce the amount of water discharged into the stormwater system. These areas must be saturated before it will send any water to the roof drains so a typical rainfall event will generate minimal runoff.

Demarest Landing – Ogden, NC

Demarest Landing was completed in 1999 and created an example, for the first time in the region, of development techniques utilized in Traditional Neighborhood Design.

The Demarest Landing neighborhood was limited to 46 home sites on 32 acres. Rear service lane ally home sites and street parallel parking were incorporated into neighborhood planning. Premiere waterfront and interior natural land features were preserved for meaningful common park spaces rather than selling the most desirable neighborhood areas as home sites. These park spaces focused neighborhood parks as "outdoor rooms" embracing residents to engage and respect living in a natural, sensitive environment to be shared and protected by all residents promoting a "sense of place" in the natural environment.

Design criteria was exceeded to promote a precedent with the 100-year storm water design, tree preservation, indigenous landscapes, interconnected neighborhood plan with a sidewalk network, parks program and preservation of the Howe Creek view corridor by limiting the assignment and length of docks along the shoreline. All existing topography and natural site features were maintained through the neighborhood, inventory, land planning, site infrastructure, horizontal construction, amenity improvements and home construction process.

The Property Owners Hand Book and Design Review Guidelines established became the tools to educate future residents, builders and realtors about the uniqueness of the neighborhood and the required process to inventory, design and carefully build in harmony with the land. Every home built for a resident experienced careful review of the home sites existing inventoried forest, drainage patterns, relationship to other properties, conservation areas, parks, streets and placement on the individual home site to minimize impacts to the existing forest and adjacent natural habitats.

Live Oak Bank II – Wilmington, NC

Designed for integration into its environment, this 56,000 sf office building captures views from every workspace, preserving as much of the undisturbed site as possible while seeking to provide a superior workplace environment for all employees. The slender canted building takes advantage of optimal daylighting and passive solar design. Features include an employee restaurant which serves organic and locally-sourced foods, an amenity lake, integrated technology, open workspaces with natural light and expansive views, onsite walking trails and a dog park.

The building expands the existing Live Oak Bank campus, maintaining the owner's goal to preserve the longleaf pines and live oaks growing on the previously undeveloped site with facilities which "sit lightly on the land". Because natural light and views for every employee were key design goals, the slender building form is angled to capture northern light and views of the lake. The distinction between inside and outside is softened by shaded terraces, active walkways and decks through the courtyard, balconies and a cypress exterior which will gently weather over time and further integrate the building into its site. River rock, placed to catch rainwater as it spills from the building's roof helps to prevent erosion at the base of the walls and serves as a preliminary filtration system.

The site includes multiple pedestrian paths of various materials including brick pavers, ipe decking and mulch which further helps to reduce runoff from the site. The brick pavers provide accessible entrances from the parking lot and exits from the building. The ipe decks curve throughout the courtyard to connect employees to the outdoor decks and between the two office wings. Mulch paths serve as walking/running trails throughout the entire site and around the pond. These paths also connect to the Gary Shell Cross-City Trail. Bike racks are used often by employees who take advantage of the City's multi-use path.

The campus plan minimizes the amount of paving on the site and camouflages the parking as much as possible into the existing forest. Pervious concrete pavement is utilized at the parking spaces and is colored to match the natural color of pine straw to blend in with the forest floor. Curb and gutter was used in only a few areas with the majority of the parking lot having a flush transition between parking and landscaping.

Moores Creek National Battlefield – Currie, NC

Moores Creek National Battlefield is not only the location to one of the country's most pivotal battles of the Revolutionary War, but it is now serving as a model for innovative stormwater and water quality programs. The park has developed many initiatives focused on education, water quality and stormwater runoff.

Active reuse of stormwater is one of the main focal points for the projects at Moores Creek National Battlefield. Rainwater collected from the rooftop of the restrooms is collected in large cisterns adjacent to the buildings. The water is then reused for flushing toilets and power washing buildings and sidewalks. The facility also contains dual flush toilets, waterless urinals and low flow sensor sinks. Water that cannot be collected in the cisterns is diverted to nearby rain gardens where native plants have been placed to aid in eliminating pollutants and create an educational space with beautiful natural plant species.

In addition to reusing stormwater collected on site, the park has implemented a park-wide strategy to limit and reduce water consumption. Along with the rainwater harvesting systems and efficient plumbing fixtures, xeriscaping raingardens reduce total water consumption. Water consumption in the park has been reduced by 25% due to these practices.

A historical site such as this must also find a way to really interact with visitors by providing a truly immersive and authentic experience. Over the past five years, the park has embarked on a project to restore the surrounding forest to conditions found during the American Revolution. Long leaf pine and natural grass restoration has been done on-site to return the park to pre-settlement conditions. Over 10,000 long leaf pine seedlings and over 1,500 wire grass plantings have been completed, along with prescribed burns, to return the park to its natural condition.

Moores Creek National Battlefield stands as a testament to not only the history of the region, but as a shining example of community stewardship. The projects undertaken show a clear concern for the environment and community that every student, tourist and resident of the area can appreciate.

NCCF Fred & Alice Stanback Coastal Education Center –Wrightsville Beach, NC

The North Carolina Coastal Federation Fred & Alice Stanback Coastal Education Center is prominently located in the Wrightsville Beach Historic Square and is housed in the historic Palmgren-O'Quinn house. The classic beach cottage, built in 1948, is listed as a historic home by the Wrightsville Beach Historic Preservation Commission.

The cottage was saved from demolition and transported around Harbor Island by barge and over land by truck to its current location where it was renovated to fit the needs of the Coastal Federation, the requirements of the state of North Carolina, the Town of Wrightsville Beach and the Historic Preservation Commission. By relocating the structure, the Federation was able to preserve a piece of the Town's cultural heritage and avoid the impacts of new development by repurposing 3,000 square feet of the original 4,000 square foot structure.

During the renovation phase of the project, the North Carolina Coastal Federation prioritized the use of low-impact development practices to reduce stormwater runoff on the property. These measures include rain barrels, re-routed downspouts, native plant rain gardens, pollinator gardens and pervious surfaces, which infiltrate or re-use all of the rainwater generated from the Center. The low impact development projects on the property serve as demonstrations and teaching tools for residents, engineers, landscaping professionals and visitors about methods to improve water quality and habitat by implementing Best Management Practices (BMPs) in their own homes and communities.

The house is oriented to maximize natural lighting. Low flow toilets are installed in the two bathrooms to reduce the amount of water used by the staff and visitors. During the renovation stage of the project, low VOC paints were used on the building's interior to decrease the project's impact on air quality. During demolition of the ground floor and renovation of the relocated dwelling, every effort

was made to save and use as much of the ground floor materials as possible and allowable under current regulations. To that end, door, framing, wood, insulation, glass block windows, cabinets, shelving, countertops and existing windows were saved and re-used during the renovation process.

NHC Cape Fear Museum Park – Wilmington, NC

Using Parks Bond funding approved by residents of Wilmington and New Hanover County, Cape Fear Museum removed a parking lot and installed an urban garden. The park is adjacent to the Cape Fear Museum and will be free to visitors from dawn to dusk.

This new green space features hands-on exhibits, native and adaptive plants, historic objects, and graphic text panels that all encourage family-friendly exploration. The site features many unique offerings through the use of many native plants, the central public art sculpture, weather instruments, the "ghost forest" and the watercraft artifacts.

With the removal of the parking lot, there was an overall reduction in impervious surface. Through the installation of a rain garden, water quality leaving the site was improved by reducing the quantities of oils, suspended solids and other substances reaching the stormwater inlet and piping. The rain garden also increases infiltration and helps cleanse the water reaching the ground water table.

Other sustainable initiatives included recycling existing materials, such as brick pavers and granite blocks, for reuse in the new park. Also, project demolition was minimized as much as possible and the maritime pavilion was repurposed and outfitted with LED lighting. Native plant species were featured throughout the park and no traditional irrigation system was installed, though there are plans to install a cistern to be used for irrigation purposes.

Live Oaks and shrubs along Eighth Street were protected and remain. While there was no existing habitat on site, the park has already created some habitat and food sources that were not present before. This works in parallel with the "What's in Your Backyard" education program which discusses backyard habitats.

Significant Achievement

UNCW Student Recreation Center Expansion – Wilmington, NC

UNCW's Student Recreation Center is a state-of-the-art facility that utilizes many green building practices designed to enhance both the student's experience and reduce the impact of the building's footprint on the university community.

The expansion of the Student Recreation Center employed green building strategies during the construction phase. This included the reduction of construction site waste and the use of recycling dumpsters. Seventy-five percent of demolition and construction waste was diverted from the landfill. Sustainable building materials and LEED were at the forefront of the design. The expansion was constructed to LEED Silver Certification standards. This includes the installation of low flow fixtures, faucets, and shower heads.

Passive solar design and other renewable energy sources are used, even an exercise bike that generates electricity while in use. Solar panels are used to maintain the minimum temperature of the leisure pool. Energy Star appliances are used throughout the building and students are encouraged to minimize waste with new features, such as water bottle re-filling stations. Compact fluorescent flood lights and energy efficient ceiling fans are used in the fitness center. Other features include accessible recycling bins throughout the facility, occupancy sensors in bathrooms, energy efficient Dyson hand dryers, low-flow foam soap, and a climbing wall made from recycled rubber.

As with any university, student involvement is needed to engage and encourage future stewards of the community. Students were involved in the creation of a sustainability website. The website promotes sustainability and projects around the UNCW campus. The sustainability program identifies policies and creates a mission statement and pledge for students. Students are asked to pledge the following: "I pledge to become an integral participant in the Sustainable UNCW program. I will consider the environmental, social and economic impact of my daily decisions and make every effort to reduce my ecological footprint. I will also share my individual sustainability efforts with others at UNCW." The dedication and practices of UNCW's sustainability efforts in the construction of the Student Recreation Center expansion could create a whole new generation of stewards of the community.

UNCW Seahawk Crossing – Wilmington, NC

UNCW's "Seahawk Crossing" provides much needed living space for students while promoting an environmentally friendly design that enhances quality of life for the student community. The site consists of four residential buildings that are built to LEED (Leadership in Energy & Environmental Design) Silver Certification standards.

Site developers and UNCW desired to make Seahawk Crossing as sustainable as possible. As students become more concerned about their impact on the environment, the university strived to incorporate that mindset into the residence halls. The sustainable aspects of Seahawk Crossing included the following:

1. All toilets, faucets and showers utilize low-flow plumbing.
2. Pervious pavement to reduce runoff and pollutants.
3. ENERGY STAR ™ applicants in all dorm rooms.
4. Underground infiltration system to minimize groundwater runoff.
5. Accessible recycling stations for students.
6. Low VOC carpet and construction materials.

The residence halls also utilize the abundance of natural light. Passive solar design allows for a more energy efficient living space. Combined with energy efficient (Energy Star) appliances, the environmental impacts and energy usage of the residence halls are greatly reduced.

UNCW is engaging students in demonstrating the benefits of low impact development. A website was created to demonstrate the benefits of low impact design to mitigate impacts on traffic, drainage, wildlife and water quality. The project serves as a model to both students and the community for innovative, low impact design that could be a standard for years to come. By reaching out to students, UNCW is helping to create future stewards of the community.

Special Recognition

Compass Pointe

Compass Pointe originally received Planned Unit Development (PUD) approval in 2008 for 5,897 units as a conventional mix of single family, townhome and multifamily residences complimented with a vacation resort themed amenity program. The approved open space allocation of 250 acres exceeded the required minimum of 15% and was complimented with an associated contiguous 37.48 acre tract, unaffiliated with the PUD approval, for a future commercial component.

From 2008 to 2012 the development realized the construction of: the east entrance on Route 74, Compass Pointe East Wynd; the initial sculpting of a linear 80' – 100' wide stormwater network creating water related home sites; development of 200 plus home sites and the building and sales of 150 +/- patio home style residences by the developer. Compass Pointe received the designation as an Audubon International Gold Signature Community by retaining a 70 acre sanctuary within the land holding.

Ownership of the development changed in 2012 and completion of the first amenity facility, "The Grand Lanai" was accomplished, design development of an additional 350 +/- home sites were achieved, construction of the 18 hole golf course commenced and cooperation with the construction of the new I-40 corridor provided the opportunity to create a thirty acre lake adjacent to "The Grand Lanai" and just completed "Wellness Center".

In 2014 the developer engaged Scott Stewart, RLA, ASLA as development advisor and design consultant to revisit the original design. Since the community was still in the early stages of development a redesign was feasible and would have a significant impact on the pattern, fabric, character and micro/macro scale of the community's natural and built environments with a focus on responsible, fiscally sound planning aligned with the lands natural topography and features.

The new masterplan has reduced streets and sidewalks by 20-25% reducing the impervious coverage, incorporated landscape islands into cul-de-sac's and limited the sidewalk network to one side of the street, unless the street is within a "TND" neighborhood which has less of an impact due to reduced footprints. The previous built patterns utilized conventional curb & gutter while the new master plan is incorporating a hybrid with the use of "ribbon curb" or "flat curb" in areas to sheet flow stormwater into vegetated filtration areas. The utilization of existing and constructed vegetated swales is practiced with vegetated buffers and natural soils infiltration is utilized when applicable.

Construction site wastes are now minimized with concrete, brick, wood and plastics being utilized on site, delivered to reclamation sites or contracted with a recycling company. Landscape materials are being revisited to ensure indigenous materials are utilized to minimize the need for watering and encouragement of current technologies such as solar panels for home building are promoted.

Stewardship Champion Award

The Stewardship Champion Award recognizes exceptional individuals or organizations that exemplify extraordinary vision, innovation, leadership and action for the environment in the Cape Fear Region.

Brunswick County Habitat for Humanity

When the Coastal Federation approached Brunswick County Habitat for Humanity about the idea of installing environmentally friendly landscaping on new and existing Habitat homes, they graciously welcomed the idea. Habitat's volunteer landscape coordinator, Linda Rudick eagerly partnered with the federation, Brunswick County Cooperative Extension, Winding River Garden Club, Coastal Garden Club, UNCW students and members of the U.S. Coast Guard to build and plant rain gardens and install rain barrels at several Brunswick County homes.

"Habitat homes traditionally are energy efficient, conserve water and have healthy indoor environments, because we us laminate floors and low VOC paints," says Habitat's executive director Dee Antonio. "It's only natural that we move to the outdoors with efficiency and conservation."

In addition to serving as a great example of low impact development the Habitat for Humanity effort has helped to educate neighbors and the community by showing how easy and cost-effective these techniques can be. Through this partnership, they have demonstrated that a home is more than just a building; it is part of a larger community that must be sustained and cared for—inside and out.

Scott Stewart

Scott Stewart has been a career landscape architect for 38 years. Scott is also a Real Estate Developer, Real Estate Broker and Commercial General Contractor. In 1993, after being introduced to the "Traditional Neighborhood Design" (TND) New Urbanism movement in 1989, Scott moved to Wilmington, N.C. The Cape Fear Region has been a direct beneficiary of Scott's "passion in action" of promoting and implementing TND models as the "precedent new model" for alternate, future growth. Since 1994, as an owner/developer, Scott has designed/developed four TND neighborhoods: Demarest Landing, Demarest Village, Tidal Reach and Devaun Park collectively creating: 383 single family lots, 222 multifamily units, 220,000 sq. ft. commercial space and a 46 slip marina.

The Demarest neighborhoods became the southeast regions first example of "Smart Growth" and "Low Impact Development" (LID) endorsed by the North Carolina Governor's Task Force for "Smart Growth "in 2000. Demarest Landing and Demarest Village in Wilmington, N.C., together with the Devaun Park development program in Calabash, N.C. under Scott's leadership, were among the first to receive the Lower Cape Fear Stewardship Awards for "Significant Achievement's" in 2006 for land planning, storm water management with creative, precedent design programs.

He received the NC Coastal Federation "First LID Pioneer" award in 2014, Calabash "First Stewardship Award" in 2011, City of Wilmington "Tree Preservation Award" in 2003; and recognition for contributing to the Calabash "Main Street Revitalization" in 2005, to assist Calabash to grow responsibly over the past 17 years, including the first "Calabash Community Park" that was completed in 2012. He also received the 2005 "Central Business District Streetscape Appreciation Award" 1998-2005 from the Town of Calabash, NC.

He is currently, the advisor, Landscape Architect, and General Contractor of the Compass Pointe - Brunswick, LLC for Compass Pointe in Leland, N. C. He is working to incorporate TND design features and low impact development into the master planning and development of the remaining 2,200 acres, 1,808 units, 555,825 sq. ft. of commercial space and 18 hole golf course.