

**Name and Address Info Redacted**

## EDUCATION

BSA, Landscape Design and Urban Horticulture, 1982, University of Arkansas.

Graduate Studies in Landscape Architecture, 1983-1986, Louisiana State University.

## REGISTRATION

Professional Landscape Architect:

Oregon (# 298)

Washington (# 803)

## PROFESSIONAL AFFILIATIONS

American Society of Landscape Architects, Member, 1990

Oregon Recreation and Parks Association, Member

American Trails, Member

International Mountain Bicycling Association, Member

## Landscape Architect

A registered landscape architect with over 25 years of experience specializing in park and recreation master planning and design, trails design, transit-oriented development, and site specific design. Provided leadership and management for landscape architects, land-use planners, urban designers, environmental scientist and civil engineers while designing and managing diverse projects and clients worldwide. A proven practice builder who develops lasting client relationships that are based on effective communication and well-managed projects and is known for rigor in budget control and quality assurance from design through construction.

## PROFESSIONAL EXPERIENCE

December 2016 – Current, Parks Analyst / Project Manager, City of Lake Oswego Parks and Recreation

July, 2012 – December 2016, Principal Landscape Architect, Powers Landscape Architecture

April, 2007 – July, 2012, Principal Landscape Architect, Western Region, HDR Architecture, Inc. Multi-Discipline International Design Firm.

April, 2004 – April, 2007, Managing Principal, Seattle, Washington, EDAW, Inc. Landscape Architecture/Environmental International Design Firm.

June, 2000 – April, 2004, Discipline Leader Landscape Architecture, Portland, Oregon, DEA, Inc. Multi-Discipline Design Firm.

June, 1996 – June, 2000, Principal Landscape Architect, Portland, Oregon, CIDA, Inc. Multi-Discipline Design Firm.

November, 1992 – June, 1996, Principal / Owner, Portland, Oregon, Environmental Design Group. Landscape Architecture Design Firm.

October, 1988 – November, 1992, Landscape Architect, Little Rock, Arkansas, GreenTree Landscape Company. Landscape Architecture Design/Build Firm.

## PROJECT EXPERIENCE

### San Francisco Bay Trail & Intermodal Transit Center Hercules, California

The project consisted of an extension of the San Francisco Bay Trail and a proposed Intermodal Transit Center for regional rail and bus service. The project's objectives included improved regional transit connectivity that includes all modes, rail, bus, auto, and bicycle; improved public access to the bay front for pedestrians and cyclists; safety improvement along the railroad line; and a continuation of the regional bicycle and walking trails along San Pablo Bay and Refugio Creek. The project features adaptive coastal and woodland plantings and will meet LEED ND (Neighborhood Development) certification.

### The Tualatin River Greenway Shared Access Pathway Tualatin, Oregon

The Tualatin River Greenway Shared Access Pathway is a new three quarter mile section of paved trail along the Tualatin River that will allow shared access for bicycles and pedestrians. The pathway provides a missing link in the city's and region's extensive trail system. The 12 foot paved section will include interpretive signage and artwork along the trail, as well as an extensive boardwalk over sensitive lands. Cardno provided planning, landscape architecture, civil engineering, project management, construction services, and coordination of sub-consultants.

### Bel-Red Transportation Corridor Bellevue, Washington

A new multi-modal corridor in the Bel-Red Plan area, intended to provide an east-west thoroughfare with attractive urban design, innovative storm water management, and transit-oriented development. Key project features include context sensitive roadway design, connectivity to and integration of the planned Light Rail Transit facilities, urban design treatments, non-motorized facilities that include a regional bike path and a walkable corridor,

natural drainage features, water quality treatment, illumination, landscaping and irrigation, and the sustainable integration of three fish-bearing streams into the corridor design.

#### **Albany Multi-Modal Transportation Center**

##### **Albany, Oregon**

This project involved renovation of vintage passenger train station buildings, construction of new passenger loading platform, development of a new office building supporting the site, development of multi-modal transportation services around the train station. Additional services included site design, landscaping, and irrigation plans. In addition, improvements were made to adjacent roadway access and pathways and a new pedestrian bridge was added. Urban design components incorporated to improve the site included enhanced circulation for vehicles, bicycles, and pedestrians.

#### **SR 520 Bridge Replacement and HOV Project**

##### **Seattle, Washington**

The limits of the SR 520 Bridge Replacement and HOV Project cover the SR 520 corridor from I-5, in the Roanoke neighborhood, to 108th Avenue Northeast in Bellevue, near I-405. The highway will be completely rebuilt from I-5 to 108th Avenue Northeast in Bellevue. Both the Portage Bay and Evergreen Point bridges will be replaced; bridges that carry local streets over SR 520 will also be rebuilt. Roadway geometrics are assumed to meet current highway standards, except in the Seattle area where the shoulder widths may be reduced. Five landscaped lids that could exceed 600 feet in length will be constructed across SR 520 to help reconnect communities now separated by the corridor. New pedestrian and bicycle trails are proposed along the corridor. The tunnel southbound I-5 to SR 520 ramp will be extended beneath the HOV ramps to I-5. A tunnel and two lids will be located in Seattle—the tunnel extending the southbound I-5 to SR 520 ramp, one lid between 10th Avenue East and Delmar Drive East, and one lid at Montlake Boulevard. Three lids will be located on the Eastside of Lake Washington, at Evergreen Point Road, at 84th Avenue Northeast, and at 92nd Avenue Northeast.

#### **Auburn Environmental Park Master Plan / Auburn, Washington**

The Auburn Environmental Park was an innovative attempt to combine the benefits of wetland restoration and enhancement, aquatic and terrestrial habitat restoration, recreational and educational opportunities, storm water detention, water quality improvement, and bicycle and pedestrian connectivity in an approximately 120-acre regional park for the City of Auburn, Washington. Led the development and design of a concept and feasibility study that addressed habitat, water quality, visual resources, passive recreation and education, flood control, and economic development. The scope of work included working closely with the Mayor's office to review existing relevant data and studies, assess site opportunities and constraints, develop multiple design concepts and select a preferred alternative. In addition the team quantified impacts, assessed federal, state, and local permitting requirements, provided cost estimating, identified funding sources, and facilitated public input.

#### **Oneonta Gorge Trailhead Historic Restoration / Columbia River Gorge, Oregon**

Project included restoration of historic features at Oneonta Gorge, a new parking area and pedestrian access; structural repairs to the original Oneonta Gorge Creek bridge; provided interpretation of the historic and natural features of the site; restored and enhanced other highway structures which included pavement, curbing, gutter, and stairs; opened the Oneonta historic highway tunnel for pedestrian use as a pathway to and from the new parking area.

#### **Poison Creek Day Use Area / Lake Cascade, Idaho**

Provided conceptual master planning and design services for the proposed redevelopment of an existing State Park campground and boat launch located on the west side of Lake Cascade 90 miles north of Boise, Idaho. The updated facility was designed, constructed, and operated for State Parks under a long-term lease agreement. The new day use area contained a marina, improved boat launch, fuel dock, a boat storage structure, concession building, beach grill, swim area and beach, interpretive viewpoints, and spine trail linking the elements of the site and connecting to a regional trail system. A majority of the existing tree canopy was preserved and riparian areas along the shoreline protected and enhanced. The elements of the site were arranged so that motorized boat activities occurred on the southern portion of the site and non-motorized boat and beach-related activities occurred to the north.

**Frenchman's Bar Regional Park / Vancouver, Washington**

Frenchman's Bar Regional Park was located in a rural setting on the north shore of the Columbia River, within the City of Vancouver, Washington. The master plan established a long-range vision for the 330-acre site that balanced public recreation opportunities and preservation of the natural environment and wildlife habitats, unique to the Vancouver Lake lowlands. Final design included an equestrian trail, RV and tent campsites, yurts, new roadway, restroom/shower facilities, park shelters, children's zero depth water play area, fish cleaning stations, and related infrastructure.

**Timberlake Farms RV Park & Campground Master Plan / Home Valley, Washington**

Project manager/landscape architect for Timberlake Farms RV park and Campsite, located on 21.8 acres in Home Valley, Washington in the Columbia River Gorge. He provided master planning services for the site including roadway layout, RV campsite layout, tent campsite layout, and trail layout. In addition he located a 35' x 35' picnic shelter, restroom/shower facility, dump station, and septic field. My team prepared land use applications and provided an environmental assessment and associated permit applications.

**Clark's Dismal Nitch- Lewis & Clark National Historic Park / Washington**

Teamed with Perkins + Will Architecture on a Master Plan for the redesign of a WSDOT safety rest stop and interpretive park near the mouth of the Columbia River along SR 401. The Dismal Nitch Rest Area was located within a unit of the Lewis & Clark National Historical Park and was a gateway to the other 13 units of the National Park for those visitors traveling south on SR 401 in Washington State. The design team developed the Master Plan for the park to commemorate Lewis & Clark history and tribal, cultural, and natural history, while providing for the programmatic needs of a WSDOT safety rest area. The proposed design included the upgrade and modernization of the rest area, improvement of vehicular access, provision of site interpretive features including an abstract re-creation of the Dismal Nitch, trails, viewpoints, restoration of natural areas with native plants, innovative storm water management, and site features such as decorative fencing and furnishings appropriate for a National Park setting. This project involved working with a number of different government agencies to incorporate their varying needs and desires in the design of this unique park.

**Merced Wild and Scenic River Management Plan / Yosemite National Park**

Provided high-level planning and consulting services with site analysis for three sites, a public, two-day charrette, and draft site plan alternatives which consisted of one preferred site solution and three conceptual alternates.

**Narrowgate Community Planning / Tacoma Washington**

In an effort to improve community relations, supported WSDOT in facilitating the preparation of a future land use plan for a 10 acre parcel of land at the gateway. An innovative master plan concept for a former construction site in Gig Harbor, Washington was developed. Led the project from conceptual master plan through design charrette process with stakeholders, including representatives from adjacent homeowners associations, WSDOT, Pierce County Parks, City of Gig Harbor, and local and state politicians. He also facilitated the public process and development of the concept plan through the synthesis of the information gathered at the open house/charrette. Final concept plan for the 7.5 acre park and 2.5 acre storm water facility were provided.

**Bend Parks, Recreations, Open Space Comprehensive Master Plan / Bend, Oregon**

Developed a park recreation and open space comprehensive plan for the Bend Metro Park and Recreation District based on findings from a community needs assessment. The initial phase included facilitating community meetings and focus groups, conducting a statistically valid citizen survey, collecting an extensive park inventory, preparing and analyzing the life cycle costs of maintaining existing facilities, and developing target levels of service for facilities, programs, and services. The second phase of the project included creating a six-year capital improvement and implementation plan, developing park standards and principles, recommending policy changes, and coordinating the Plan and City of Bend's General Plan and Development Code.

**Columbia City Parks System Master Plan / Columbia City, Oregon**

This project required development of the City's first Parks Master Plan, which was designed for a twenty-year planning period. Services included public facilitation of community meetings, resident survey, inventory of existing and potential park sites, and design of a trail system connecting existing and future trails. As part of the planning process, priorities were set for future park development, including cost estimates for the improvements and potential funding sources.

#### **Scappoose Parks System Master Plan / Scappoose, Oregon**

This project involved the development of a parks system Master Plan that included a survey questionnaire to gather input from residents, public facilitation of community meetings, inventory and analysis of existing parks and potential sites for acquisition, and design of a trail system connecting the Columbia River to an existing thirty-mile trail by converting an abandoned railroad to a trailway. The project also required identification of funding sources and projected costs for park development.

#### **Shoreline Parks, Recreation, and Open Space Master Plan / Shoreline, Washington**

Provided assessment of current and future needs of Shoreline's park and recreation system, developed an extensive inventory of park land, facilities, and programs and determined life cycle costs associated with maintaining existing facilities. Also identified and established changes to Levels of Service, developed a six-year action plan and capital improvement plan, participated in community outreach.

#### **Fairgrounds Community Park / Clark County, Washington**

Fairgrounds Community Park is one of five major community parks developed by Vancouver-Clark Parks and Recreation for Clark County. The 29-acre park accommodates community-based activities and provides a balance of passive and active park uses, all while preserving and enhancing the site's natural resources. The entry focuses the attention of visitors across a large, irrigated lawn adjacent to a 5-acre forest. The preservation of the forest and the large trees situated in the expansive lawn was a guiding factor in the layout of the park. The design incorporated other site constraints, including an existing wetlands and a riparian corridor in close proximity of the site.

#### **Mountain Gate Fishing Access Park / Mono County, California**

In order to enhance recreational fishing and the riparian corridor along the West Walker River, Mono County worked with the team on the Mountain Gate Fishing Project to take a 2005 preliminary conceptual plan and refine it enough to use it to make initial contact with appropriate permitting agencies. The refined conceptual plan outlined creation of a public recreation area along the river including riparian restoration, recreational fishing opportunities, nature trails, a drive in loop road to access a parking area, restroom, day-use area with picnic facilities and restoration of an historic river side channel and associated native riparian/wetland habitat. The team provided project management, data collection, limited hydrologic analysis, limited hydraulic analysis, limited biological analysis, site concept development and preliminary permitting agency contact services to Mono County. Elements of the site concept will be a restored sustainable side channel through the existing floodplain terrace and preliminary site improvements for recreation and operation of the site.

#### **Camp Rivendale at Jenkins Estate Master Plan / Aloha, Oregon**

This project involved master planning services through design review documents for a day camp for disabled children. Services included a site master plan, architecture of proposed lodge, shelter, and bathrooms and preliminary civil engineering. Additionally, Mr. Powers was involved with the design of playground and play structures, layout of proposed pedestrian pathways, sports field, preliminary cost estimate, feasibility study, preliminary landscape design, public meeting facilitation of interested groups during design process, and presentation of final master plan to Tualatin Hills Parks and Recreation District Parks Board to obtain approval.

#### **Illinois River Forks State Park / Cave Junction, Oregon**

Provided a feasibility study for Illinois River Forks State Park located 1-mile south of Cave Junction, Oregon. The study included the provision of the park's entrance and expansion of the current day-use area into an overnight facility for both traditional tent campers and recreational vehicle users. In addition, an infrastructure redesign which included the upgrade of site utilities and new restrooms were provided. The pedestrian and motor-vehicle circulation plan was updated and reconfigured to create an easy flow of direction for the increased vehicle traffic into the park and connect the State Park access road with HWY 199. The path will increase the safety for pedestrians and eliminate the need for a sidewalk around the corner of the entrance. In addition, to an enhanced circulation plan, new wayfinding and signage was designed to mark clear entrances, locations, and paths throughout the park. A native plant palette was included in the landscape plan. The landscaping, park signage, and newly configured park entrance demarcates the entrance for motorists and potential park visitors, and creates an efficient flow of pedestrian and vehicular traffic.

**City Park Lake / Baton Rouge, Louisiana**

This study was conducted to provide design recommendations for future development and management of recreational resources at City Park Lake. A questionnaire was developed to obtain user profile of the recreational user, and to acquire specific user preferences. This data was statistically evaluated and analyzed. Conclusions and recommendations were then determined. Major findings from this study included a user profile including elements such as age, sex, race, number of visits to the site per week, types of activities participated in, reasons for participating in recreational activities, and types of facilities and improvements needed at the site. Design guidelines and recommendations for future development and management of recreational resources at City Park Lake were developed from this information.

**Clatsop County Design Standards / Clatsop County, Oregon**

This project successfully developed a range of park, recreation and signage projects throughout Clatsop County. The design team facilitated advisory committee meetings, completed materials research and developed product standards and details for park system built elements. Services also included recreation management recommendations for maintenance and operations.

**Hillendale Park Improvement / Oregon City, Oregon**

This project involved design of sports fields for a neighborhood park including softball field, two soccer fields, pathways, parking lot, site lighting, wetland enhancement, landscape plan, and irrigation plan. The project required permits from Division of State Lands and Corps of Engineers to perform grading in a wetland, land use planning application processing, landscape architecture, civil engineering, wetland permitting, coordination of surveying, cost estimates, and construction administration.

**McMillan Park Recreational Facility Improvements / Washington County, Oregon**

This project involved design through construction documents for tennis courts. Services included renovation and reconstruction of tennis courts, grading and drainage at the sites, landscape design, cost estimates, bid documents, bidding services, contractor selection, construction administration, and presentation of proposed improvements to Tualatin Hills Parks and Recreation District Board of Directors for approvals.

**Mountainview Park Facility Improvements / Washington County, Oregon**

This project involved design through construction documents for tennis courts. Services included renovation and reconstruction of tennis courts, grading and drainage at the sites, landscape design, cost estimates, bid documents, bidding services, contractor selection, construction administration, and presentation of proposed improvements to Tualatin Hills Parks and Recreation District Board of Directors for approvals.

**Ridgecrest Park Recreation Facility Improvements / Washington County, Oregon**

This project involved design through construction documents for tennis courts. Services included renovation and reconstruction of tennis courts, grading and drainage at the sites, landscape design, cost estimates, bid documents, bidding services, contractor selection, construction administration, and presentation of proposed improvements to Tualatin Hills Parks and Recreation District Board of Directors for approvals.

**Summercrest Park Recreation Facility Improvements / Washington County, Oregon**

This project involved design through construction documents for tennis courts. Services included renovation and reconstruction of tennis courts, grading and drainage at the sites, landscape design, cost estimates, bid documents, bidding services, contractor selection, construction administration, and presentation of proposed improvements to Tualatin Hills Parks and Recreation District Board of Directors for approvals.

**Downtown Revitalization Plan****Talent, Oregon**

Provided project management and design for a downtown streetscape plan that addressed transportation issues, the pedestrian environment, and visual issues. Major design considerations included traffic and pedestrian circulation, parking needs, bicycle lanes, pedestrian safety, street improvements, and landscape design. Additional services included public facilitation and preliminary cost estimates.

**Downtown Revitalization Plan  
Sheridan, Oregon**

This streetscape design addressed transportation and visual issues for vehicular and pedestrian traffic. The project issues included traffic and pedestrian circulation, parking, safety, and access. Additional services included public facilitation of community meetings, landscape design, hardscape design, site amenities plan, and preliminary cost estimate. Was the principal-in-charge and landscape architect for this project.

**Downtown Revitalization Plan  
Cave Junction, Oregon**

Led the team for a downtown revitalization plan that provided improvements for both vehicles and pedestrians. Project services included public facilitation, coordination of public stakeholders, street design, paving and hardscape design, lighting and utility design, site amenities plan, landscape plan, irrigation plan, and cost estimates. In addition, realignment and entry design to an adjacent state park, Illinois River Forks State Park, was a part of this project.

**Downtown Revitalization Plan  
Falls City, Oregon**

This project involved design of North Main Street to develop a more pedestrian-friendly streetscape. The physical improvements included traffic calming features, textured crosswalks, angled parking, and pedestrian "bumpouts". Additional services include design for curbs, gutters, sidewalks, street furniture layout, pedestrian scale period lighting plan, landscape plan, public facilitation of the community meetings, cost estimates, construction documents and construction administration.

**Bremerton Transportation Center Access Improvements Visual Quality Study  
Bremerton, Washington**

The purpose of this project is to enhance Downtown Bremerton transportation efficiency to and from the Bremerton Transportation Center. The City and its partners have recognized the need to remove Washington Avenue as the primary egress route of ferry traffic from BTC because this path bisects the downtown core and creates heavy congestion, and compromises pedestrian and bicyclist safety. The Downtown Pedestrian/Bremerton Transportation Center (BTC) Access Improvements Project was proposed to be located in Kitsap County, in downtown Bremerton, Washington. The project limits are from intersection of Burwell Street to Naval Avenue to the Bremerton Transportation Center. These project limits are broken into two sections serving two different, but interrelated purposes.

**Seattle Seahawks Football Training Complex / Renton, Washington**

Provided landscape and hardscape services as part of the consultant team led by Crawford Architects for a new headquarters and training facility in Renton, WA for the Seattle Seahawks. The site, once home to a timber mill and wood treatment plant, was located on 20 acres between Lake Washington and I-405. The site contained a 150,000 square foot building with a full size synthetic turf football field and Seahawks headquarters offices. Three natural grass football fields and one additional synthetic field were located adjacent to the building along the shores of the lake. The site team was responsible for the design of the landscape and hardscape portions of the site with the vision of creating a site that was ecologically sustainable and aesthetically striking. Design materials used, and character of the hardscape and landscape were consistent with the architecture and sensitive to the context of the Pacific Northwest. A native plant palette was proposed in landscape areas that included typical planting beds, bioretention swales in the parking lot, and a shoreline riparian restoration.

**East Capitol Campus, Phase IV and V  
Olympia, Washington**

Led the team in the preparation and organization of construction documents and construction administration of a 12-acre landscaped plaza that sat above two massive parking garages and a bisecting street that lie beneath a main portion of the Washington State East Capitol campus. The new design replaced large open area brick pavement with an expanse of green lawns and public gathering spaces. The components of the new plaza integrated a historic Olmsted legacy that exists on the adjacent West Capitol campus with the existing structural configuration of the structure beneath. Office buildings were linked by new walkways while landscape features and major tree plantings extended the geometry of the original Olmsted plan. The new design for Phase 5 included the restoration of a historic Halprin fountain and the integration of a Korean War Veteran's memorial.

### **University of Oregon Lewis Integrative Science Building Eugene, Oregon**

The Lewis Integrated Science Building is a new 4-story + basement laboratory research facility situated on the University of Oregon Campus. The facility connects at multiple levels with existing science buildings. The site is located near the entrance to the campus and includes open green space and vital pedestrian connections. Site design focused on close collaboration with the projects joint technical and design architectural team to integrate the facility within the existing science complex. Given a site defined as Campus Open Space by the Campus Master Plan, an exercise in master plan amendment with the Campus Planning Committee was performed. The site posed challenges in drainage and grading, existing heritage tree preservation, interface with existing structures and substructures, and pedestrian, service and emergency circulation. In order to achieve Oregon States SEED requirement for all public buildings (LEED silver equivalent), the site design integrated sustainable materials with storm water catchment and filtration features marking the primary entry plazas.

### **Todd Beamer High School Sports Facilities Design / Federal Way, WA**

Was involved early on in the site suitability study phase and conceptual drawing production for a new 37.67-acre high school to accommodate 1,300 students. Working closely with the architect, led the landscape design team providing the design and layout of the entire campus including building location, ingress/egress, parking lot layout, mass grading, courtyard siting, sports field layout, landscape and irrigation, and wetland protection. The design incorporated many valuable characteristics of the existing site such as undulating hills with prairie grasses, several large wetlands, native vegetation at the perimeter of the property lines, and a salmon-sensitive creek near the existing wetlands. The site plan was developed in such a way as to not disturb the wetlands or their buffers. A native plant palette was proposed to provide dense screening at the property perimeters. The team provided complete design services for five passive staff and student plaza spaces, all the sports fields, and pedestrian/vehicular circulation that included traffic calming measures. Wetland buffer enhancement including grading and planting was designed for three constructed wetlands. Provided construction administration for this project.

### **White River High School Master Plan and Sports Facilities Design / Buckley, Washington**

Provided landscape and irrigation design for a new high school. The project involved designing an athletic field that included an eight-lane, 400-meter track that would also accommodate field events. Other athletic facilities included baseball and softball fields, tennis courts, and physical education and practice fields. As part of the design team, worked very closely with the project architect and other consultants and provided construction administration for this project.

### **North Slope Facility Siting Master Plan Prudhoe Bay, Alaska**

Led a team of landscape architects, planners, public facilitation specialist, architects, and engineers in a two year master planning process for the oil and gas industry holdings on the North Slope of Alaska. The team provided master planning and site planning services for the fifteen major production facilities, camps, and related support services with a goal of providing safer facilities for production staff to perform their jobs.

### **U.S. Embassy Quito, Ecuador**

Adapted Standard Embassy Design protocols to the new site for the US Embassy in Quito, Ecuador, a new 20-acre embassy campus being developed by a design-build project team. The design team developed site representational spaces, pedestrian and vehicular circulation, and landscape responding to local conditions. Additional activities include maximizing sustainable site and building programs through the application of LEED criteria, and coordination with local design professionals to procure materials and plants suitable to the site.

### **Shinsegae Commercial Development Busan, South Korea**

Provided landscape architecture services for a conceptual master plan for a 3-block area of Centum City to inform a new retail, office, and entertainment development in Busan, Korea. The 12.6 million-sf Centum City created an international business hub and a destination to attract domestic and foreign tourists. Just as Centum City was a link between Busan and its beautiful natural surroundings, the landscape concept weaved together the linear and organic forms of architecture and nature.

**Cleveland Clinic Abu Dhabi  
Abu Dhabi, United Arab Emirates**

Lead site designer and principal landscape architect for a new two million square foot hospital and clinic. This project was developed on a 20 acre parcel of land on Al Sowa Island. Was responsible for creation of extensive open space, water features, grand pedestrian arrival areas, circulation, land use planning and approvals, and landscape architecture as well as managing all site civil engineering and engineering of the central utility plant and parking structure. Constructed entirely on structure, innovative sustainable techniques were utilized in this project, including extensive green roofs, healing gardens, grey water collection and re-use, efficient drip irrigation, and drought resistant plant material. This project also included extensive interior landscapes and a pedestrian promenade.

**Zhangjiang Hi-Tech Sustainable Campus Master Plan  
Shanghai, China**

Assisted a multi-disciplinary design team in an effort to draft a set of recommendations for a planned 600 acre sustainable high-tech park, intended to be LEED certified. Bruce's team reviewed the existing master plan and proposed a wide range of plan revisions that would improve the development's sustainability on a number of levels. The overarching goal was the creation of a place of timeless beauty, enduring economic feasibility, vibrant commercial and social activities, and the preservation of the natural environment. The master plan would ensure that this could be achieved through time-tested as well as innovative design. Proposed solutions included innovations in transit, energy and water conservation, generation and re-use, and place specific urban design. The development patterns and techniques would produce long lasting buildings and infrastructure that use land and natural resources efficiently and provide for a walkable environment.

**Zhangjiang Hi-Tech Sustainable Site Design Phase IV  
Shanghai, China**

A twenty acre campus featuring an office building and exhibition hall with hotel and retail uses on structure, the site required a system of circulation to insure safe vehicular and pedestrian circulation and access. With temporary closure of the primary drop-off that serves both buildings, a central plaza was created for large outdoor events. Plazas at each entry were established to direct pedestrians to the primary access points as well as create gathering and passive use areas. With the goal of Platinum LEED-NC certification, several sustainability measures were integrated into the site design, including a geothermal transfer pond that also served as a reservoir for graywater, greenroofing as much area as possible, solar and wind generating site elements, and the use of pervious pavements and locally sourced materials.