Land Development Handbook
Third Edition Project Pages

Dewberry Project: Fairfax, Virginia
Farrcroft Community
Fairfax, Virginia

A 70-acre neighborhood of 270 homes adjacent to the historic Old Town District of Fairfax, Virginia, the Farrcroft community plan was developed over a two-year review process with the city and community groups. The plan, which represents a modified neo-traditional design, promotes a pedestrian scale to the community streets. In addition to refurbishment of the original Farr Manor House and grounds for community use, the restoration of Daniel’s Run Stream Valley and preservation of the oak grove in Oak Park typify the sensitivity to the site’s historic and natural features, which was integral to the public master plan process. Over the next five years, the developer’s vision of a traditional, colonial community was permitted and constructed through a series of site plans further detailing the infrastructure improvements including the regional stormwater management wet pond with sediment forebay, extensive trail systems, frontage improvements along both Main Street and Old Lee Highway, entry monumentation enhancements including the three-span bridge, and traffic-calming features throughout. The first neighborhood of its kind in Fairfax, Farrcroft spurred further redevelopment efforts in the downtown core.
Brenman and Boothe Parks at Cameron Station
Alexandria, Virginia

Totaling 64 acres, Brenman and Boothe Parks bracket the ends of the former Cameron Station Military Complex in Alexandria. The complex was reconstructed as a major mixed-use, in-town community. The parks provide a high-profile recreational complex in the heart of the urban Alexandria community. Improvements include an extensive pathway network connecting proposed concessions/convenience facilities; pedestrian bridges; athletic fields; tennis, basketball, and volleyball courts; and an outdoor theater on the green. The park accommodates a regional bike path along the adjacent Backlick Run Stream.

The unique and complex challenge of this project was the transformation of a former 40-acre paved U.S. Army base with a stale stormwater management pond into a green urban park. Key aspects of the design include a tranquil pond with rolling slopes and pastoral views, meandering lakeside trails, and tournament-quality athletic facilities. The design team’s creativity, coupled with the input of community-minded citizens, resulted in two parks widely regarded as the crowning achievement in the successful redevelopment of the former military complex into new and beneficial community uses.
Located within Fredericksburg, Virginia, the 432-acre Idlewild was master-planned, designed, and constructed with the city’s rich heritage in mind. A major goal of the master plan was to promote a community organization, scale, and detail respectful of local tradition, history, and vernacular. The planned community of 785 residences is organized into three villages, each replete with pedestrian-scale streets and a series of parks. Major community open space, identified for dedication to the city, totals 151 acres; combined with 56 acres of community open space, this represents 48 percent of the total site. Major elements of the plan included a village green and adjacent convenience commercial and work-live residences, a broad community greenway leading from the lower stream valley to the historic Downman House ruins, an extensive stream valley trails network including dedication of the former rail line to the city’s “rails to trails” program, a 27-acre school site, and a 14-acre public use site. The 785 residences include 585 single-family detached homes and 200 townhomes.
The Greenbriar Community consists of 240 active-adult single-family homes, a community center, related amenities, and improvements, including access roadways, lighting, landscaping, utilities, and stormwater management facilities. The design effort spanned preliminary review, due diligence assessment, concept refinement, preliminary grading analysis, preliminary and final major subdivision documents, regulatory agency permitting, environmental impact statement (EIS) preparation, traffic impact study, sanitary sewer system design, and New Jersey Department of Environmental Protection stream encroachment permitting. Initial site design on this project was completed on a fast-track schedule with only approximately one month from completing the survey to submitting it for township planning and zoning review. Design efforts focused on landscaping and buffering—especially along the New Jersey turnpike property line—in order to promote community privacy while still creating an active, accessible recreation area, streetscaping, and community identity through design of the entryways and emphasis on the community center—the true heart of the neighborhood.
The redevelopment and expansion of Westfield Annapolis Mall included the addition of a 75,000-square-foot two-level anchor retail space and 224,182 square feet of additional retail space, totaling of 299,182 square feet of new gross floor area. Other improvements included in the redevelopment were two new, two-level parking structures, which tie into the second level of the existing anchor department stores, above the new retail.

In keeping with current trends in mall design, the exterior facade and open space was transformed to be more interactive at street level by improving the quality, safety, efficiency, and scale of the pedestrian-oriented streetscape. These changes were intended to improve mall and individual store access. Several pad sites were also built into the mall property to attract new accessory uses, not previously available at this location.
Swan Point is a resort development located in southern Charles County on the Potomac River. The project includes development of a hotel, redevelopment of an existing golf course and clubhouse, two marinas, and a residential component including luxury condo units, single-family detached and duplex units, and an active-adult component. The hotel and golf course provide a combination of services and amenities that are unique to this region, unmatched in their setting, design, and natural beauty.

This project presented a series of design challenges ranging from its environmentally sensitive location to its infrastructure requirements. The site includes both tidal and nontidal wetlands and several nesting areas for bald eagles and blue herons, both protected under federal regulations. Additionally, much of the site is within the Chesapeake Bay Critical Area and subject to enhanced stormwater management and buffer requirements. A low-impact development approach was used in the site design and stormwater management strategies, including vegetated swales and porous pavement.

The site required installation of a new 0.3 million-gallon-per-day capacity enhanced nutrient removal wastewater treatment plant that has future capacity. Upgrades to the existing potable water system were also required to serve the new development.
Village Place is a mixed-use village center focusing on a traditional small-town main street design. The development plan provides a framework for incremental development of a variety of complementary buildings and spaces to create a rich venue in which to shop, live, and work. The concept relies on a traditional street grid with Main Street at its center, anchored on the south by a hotel and on the north by a ceremonial roundabout. The 65-acre center provides 475 dwelling units and 650,000 square feet of retail/employment and lodging uses.

Village Place
Gainesville, Virginia
Janelia Farm Research Campus
Loudoun County, Virginia

Located in rural Loudoun County, the Janelia Farm Research Campus embraced a low-impact development approach in its transformation of the 681-acre site. Maintaining over 600 acres as woods and meadows and developing only 60 acres, this project included extensive landscape architectural services for both the greenroof and site landscape; site, civil, and surveying services from utility design to plan permitting; and construction phase services—all critical to the success of a fast-track design-build project.

The campus includes a 450,000-square-foot research/laboratory building known as the Landscape Building due to its unique setting within the hillside sloping toward the Potomac River. The campus includes supporting housing consisting of a 100-room “hotel” connected to the Landscape Building via an underground pedestrian tunnel, and 56 individual long-term housing units. The renovation of a historic home overlooking the campus and the Potomac River is the site’s main focal point.

The greenroof planting design incorporates an international meadow prairie theme along with hardscape design and detailing for the 24 rooftop gardens. This 180,000-square-foot greenroof is the second largest in the United States. Additional design features included full site hardscape inclusive of granite and bluestone plazas and walks, woodland, lakeside, and meadow trails, along with aquascape plantings around the two lakes, which serve as a key site amenity and a necessary stormwater management water quality feature due to the proximity to the Potomac River.
A joint venture between Danville and Pittsylvania County, the new Cyber Park brings to this Southside community amenities not previously available to local and potential businesses. The new park has also stimulated economic growth in a community that has been greatly impacted by the downturn of textile and tobacco industries.

The master plan and subsequent design of the 300-acre park, including infrastructure and utilities, and programming services for a proposed 90,000-square-foot higher education center named the Institute for Advanced Learning & Technology, the cornerstone facility in the park, presented unique design considerations related to a high-tech, state-of-the-art commercial development. Situated at the corner of a major interchange, the park features broadband network access to attract high-tech industry and to support the institute. A conduit ductbank circling the park contains all telecommunication and electric lines. This design provides underground protection and a common location for all underground conductors as well as increased flexibility to add additional cabling without excavating new trenches. Restrictive covenants and landscaping plans were developed to ensure the aesthetics of the park reflect the nature of its intended occupants. A multiple server access provider (MSAP) facility houses the infrastructure that allows the park’s residents to utilize their choice of communication providers.
The City of Dallas Police Department had long since outgrown its 1918 headquarters building. A comprehensive needs assessment determined that a new 352,000-square-foot building was needed to meet the police department’s program needs. The city selected a brownfield site in a neglected section of Dallas on the fringe of the central business district in order to spur new development along an undeveloped corridor of blocks between the downtown proper and the site of the new police headquarters.

Beyond being a brownfield redevelopment project, the new police headquarters embraced sustainable design principles and became the first LEED® Silver building for the city of Dallas. The city configured the project site of 4.3 acres by obtaining a tract of property for the building site and then vacated one block of an adjacent public street into a private drive for enhanced security. An underutilized three-story parking garage across the street from the project site was leased by the city to meet the parking requirement of the headquarters facility. This reduced the development impact on the site, allowing more open space for public areas. The project site also took advantage of the proximity to a light rail mass transit station, one block away, for greater public access and to offer convenience and commuting options for employees. Bike racks and showers, preferred parking for carpools/vanpools, restoration of native landscaping, and 100 percent reuse of stormwater for irrigation were also achieved.
Greenbelt Station, Maryland Route 193
Greenbelt, Maryland

Greenbelt Station is a redeveloped quarry. It extends from Greenbelt Road (Maryland Route 193) up to the Capital Beltway (I-495) and is divided into two main areas: the south core extends from Greenbelt Road to the Narragansett Stream crossing. The north core extends from the stream crossing to the Capital Beltway and contains the Greenbelt Metro Station. This large mixed-use, transit-oriented development proposes 2250 residential units, a 300-room hotel, 1.2 million square feet of retail, and 1.2 million gross square feet of office floor area.

In conjunction with the proposed development, value engineering was required for a major connection to the Capital Beltway at the Greenbelt Metro Station, including the design of and permitting for 4400 linear feet of roadway widening and associated improvements, two major intersections, traffic control systems, retaining walls, landscaping, and utility relocations. The Branchville Bridge, an overpass directly adjacent to the site, was considered a signature site feature and was designed to enhance the overall Greenbelt Station development. As part of the project, the design team fostered an agreement between the developer and Prince George’s County to mitigate all environmental impacts of the widened roadway in a major county stream restoration project within the project’s watershed.

This project required multiple services including topographic and property surveys, right-of-way plat preparation, roadway and storm drain design, floodplain studies, stormwater management design, erosion and sediment control, traffic signal plans, maintenance of traffic plans, signing and pavement marking plans, landscaping plans, retaining wall and bridge structural plans, construction specifications, cost estimates, and permitting.
The city of New Haven proposed expansion of the Sound School at City Point adjacent to New Haven Harbor, a prime Long Island Sound location. The project included the reuse and transformation of the existing sewage treatment plant foundations into an expanded Regional Vocational Aquaculture Center that linked new construction with the existing Sound School located adjacent to the harbor.

Improvements included renovation of 24,000 square feet of existing buildings, the addition of a new 42,000-square-foot building, hazardous waste remediation, wetland restoration, parking improvements, and street improvements incorporating sidewalks, landscaping, and ornamental lighting. Associated with the work are several marine structures including a new 150-foot-long pier, construction of a walkway over an abandoned outfall sewer, a new all-tide boat launch, a rail-mounted boat launch and evaluation, and repair of an existing sheet pile cofferdam bulkhead.

The project began with a value engineering study balancing a wish list program against an established budget. Ultimately, the building contained classrooms, vocational shops, and laboratories. Working closely with an array of specialty consultants to accommodate a unique development program and special equipment needs, the design team was responsible for architecture; civil, structural, mechanical, electrical, geotechnical, and marine engineering; surveying, soil testing and borings; cost estimating; and value engineering.
This Hampton Campus of the Northern Virginia Community College went through a master planning effort as part of the campus expansion. Because of its location under military flight paths, strict limitations were placed on potential building sites and heights that had to be maintained. The master planning effort also integrated additional site elements related to improved campus circulation and open-space utilization including:

- Entry gathering spots that accommodate outdoor monumental sculpture, seating/gathering spaces, and unique landscape elements
- Enhanced pedestrian circulation and outdoor gathering spaces
- Plans for a new academic student services building
- Academic buildings for science and related curriculum
- Focal points for the campus such as a clock tower centrally located on campus
- Vehicular redirection and relocation to minimize the interaction between pedestrians and traffic
- Development of multiple locations for multilevel structured parking facilities
- Additional space for academic conferences adjacent to the current workforce training center
- Creation of major campus entry elements easily seen from the access roadway and the interstate
The Vantage at Merrifield Town Center
Merrifield Community, Virginia

The 7.5-acre Merrifield Town Center property is located in the heart of the redeveloping Merrifield Community of Fairfax County and a half mile from a metro station. The flanking five-story buildings, connected via an elevated pedestrian bridge, frame the reconstruction of Strawberry Lane. Upper levels include additional retail/office space and 270 residential condominiums with rooftop open-space amenities such as intensive greenroofs, a swimming pool, and a trellis. The total building program includes 105,500 gross square feet of retail, 327,500 gross square feet of residential space, and parking for approximately 1000 vehicles. The buildings' east facade enhances Gallows Road with pedestrian walks and street-level retail. Development along the western edge provides for the transition to the developing Merrifield Town Center and includes an urban park replete with a water feature. As the first phase of redevelopment in this area, Merrifield Town Center sets the urban design precedent for continued expansion in this burgeoning community.
Dewberry services:

- Anti-terrorism/force protection (AT/FP)
- Architectural design
- Catastrophic disaster planning
- Commissioning
- Construction engineering and administration
- Construction management
- Cultural and natural resources
- Design-build
- Disaster response and recovery
- Environmental services
- Facilities asset management
- Fire protection engineering
- Geotechnical engineering
- GIS/IT and mapping
- Hazard engineering/flood mapping
- Healthcare engineering
- Homeland security/emergency management
  - planning, training, and exercises
- Hydraulics and hydrology
- Interior planning and design
- Land development
- Landscape architecture
- Mechanical, electrical, and plumbing engineering
- Military master planning
- NEPA documentation
- Planning, permitting, and design
- Post-disaster housing inspections
- Program management
- Security/technology design
- Site/civil engineering
- Stormwater management
- Stream restoration
- Structural engineering
- Surveying
- Sustainable design
- Technology services
- Telecommunications engineering
- Transportation and traffic engineering
- Water resources engineering
- Water/wastewater engineering
- Zoning/entitlement analysis

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- Centex Homes—Village Place
- Rafael Vinoly Architects, PC—Janelia Farm Research Campus
- City of Danville and Pittsylvania County—Cyber Park
- City of Dallas—Jack Evans Police Headquarters
- GB Development—Greenbelt Station, Maryland Route 193
- City of New Haven Board of Education—Sound School Regional Vocational Aquaculture Center
- Northern Virginia Community Colleges—Thomas Nelson Community College
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