

# **FRANCONIA PARK MASTER PLAN REVISION**



**Fairfax County Park Authority**

**DRAFT  
November 13, 2013**

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## **I. INTRODUCTION**

### **A. PURPOSE & PLAN DESCRIPTION**

The purpose of a Park Master Plan is to create a long-range vision for the park by determining the best uses, facilities, and resource management for a specific site. During the planning process, the park is evaluated in the context of the surrounding community and as one park of many within the Fairfax County park system. The approved master plan then serves as a long term decision making guide to be consulted before the initiation of any detailed planning, design/construction projects, resource management activities, or programming. By design, master plans are general in nature, which allows flexibility to accommodate changing park users' needs, as well as management practices. Park master plans are updated as necessary to reflect community and park changes over time.

Operational plans and growth projections are carefully considered in the master plan, however, the park master plan is not a guide to park operations. The park master plan is conceptual with facilities shown in general locations within the park. Many of these features will require additional, separate fiscal analysis, funding, space program analysis, design, and engineering.

For Franconia Park, this master plan represents a revision to the master plan approved in 1974. As with many park master plans of that era, the plan consists solely of a graphic conceptual plan representing the approved planned uses. The 1974 Master Plan, existing uses, use patterns, and public input were used to inform this master plan revision.

This master plan revision reflects knowledge gained through 40 years of park operations, research on resources in the park, as well as changes in community use patterns and preferences. This master plan revision seeks opportunities to best protect and manage the site's natural and cultural resources while capitalizing on efficient park services, program delivery in accordance with district parks status, the area history, ecology, as well as special features, such as the ball fields, garden plots, and forested area.

### **B. PLANNING PROCESS & PUBLIC INVOLVEMENT**

The Park Authority initiated the public Franconia Park Master Plan Revision process on July 16, 2013, with a public information meeting attended by approximately 40 community members. Public input centered on continuing to manage the park's environmental features, safety, traffic concerns, trail usage, site access, dog walking, athletic field lighting, maintenance, the need for permanent restrooms, retention and enhancing the garden plots, financial sustainability, as well as the general community value provided by the park. Consideration of public input, park needs, existing site conditions, natural and cultural resources, site management needs, as well as future detailed design issues form the basis of the draft master plan. This draft was published for public review and presented at a public comment meeting on TBD, 2014. The plan was revised based upon the public input and was approved by the Park Authority Board on TBD, 2014.

## II. PARK BACKGROUND

### A. LOCATION & GENERAL DESCRIPTION

Franconia Park is located in the Lee Supervisory District at 6432 Bowie Drive, in Springfield, and is classified as a district park. Located along the Capital Beltway (I-495), Franconia Park has over 62 acres of playing fields, garden plots, parking, trails, and forest. Park visitors access the park via two vehicular entrances and two pedestrian entrances.

### B. CONTEXT

Franconia Park is nestled amongst residential neighborhood with the Capital Beltway (I-495), forming Franconia Park’s northern boundary. The park is separated from the CSX/Metro Railroad by a narrow residential neighborhood and surrounded on its remaining borders by single family residential neighborhoods, most of which have been built since the 1970s.

Further to the south and west is Franconia Road and I-95, respectively (Figure 2).

Franconia Park is located in the Monticello Woods Community Planning Sector (S8) of the Springfield Planning District as described in the Fairfax County Comprehensive Plan. Surrounding land uses are planned, zoned, and developed with residential uses ranging from two to three units per acre. Franconia Park is in the R-2 and R-3 residential zoning districts that allow residential use at two to three dwelling units per acre as well as public facilities, such as parks and schools. Within three miles of Franconia Park, there are 26 schools; 58 County parks; and the Gerry Connolly Cross County Trail (Figure 3).



Figure 1: General Vicinity Map



Figure 2: 2009 Aerial Photo of Park and Surrounding Area

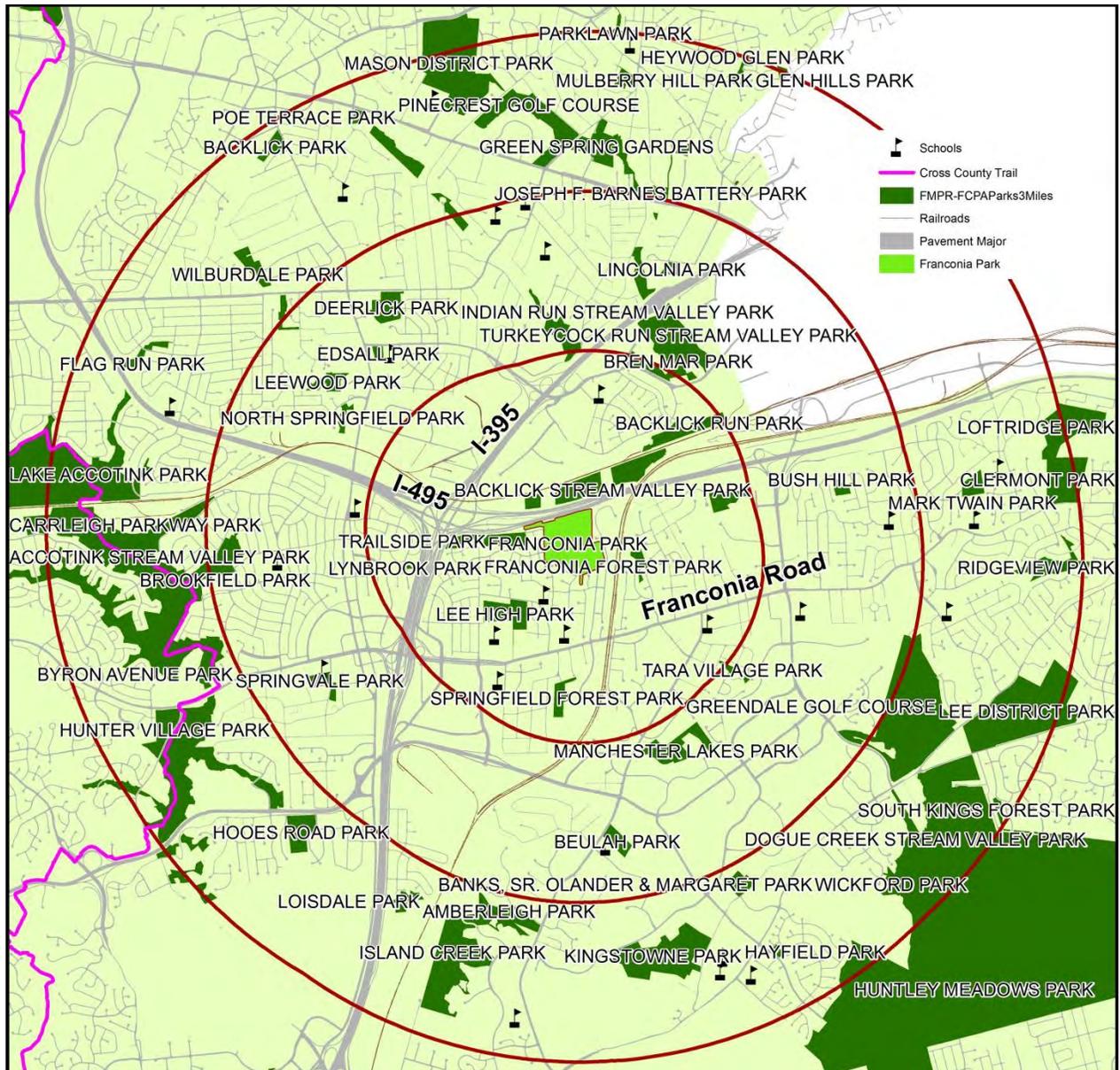


Figure 3: Park and School Facilities within Three Miles of Franconia Park

**C. ADMINISTRATIVE HISTORY**

Franconia Park consists of two parcels identified as parcel numbers 81-3 ((1)) 41 and 3 acquired for public park use by the Fairfax County Park Authority in 1974 and 1976, respectively (Figure 4).

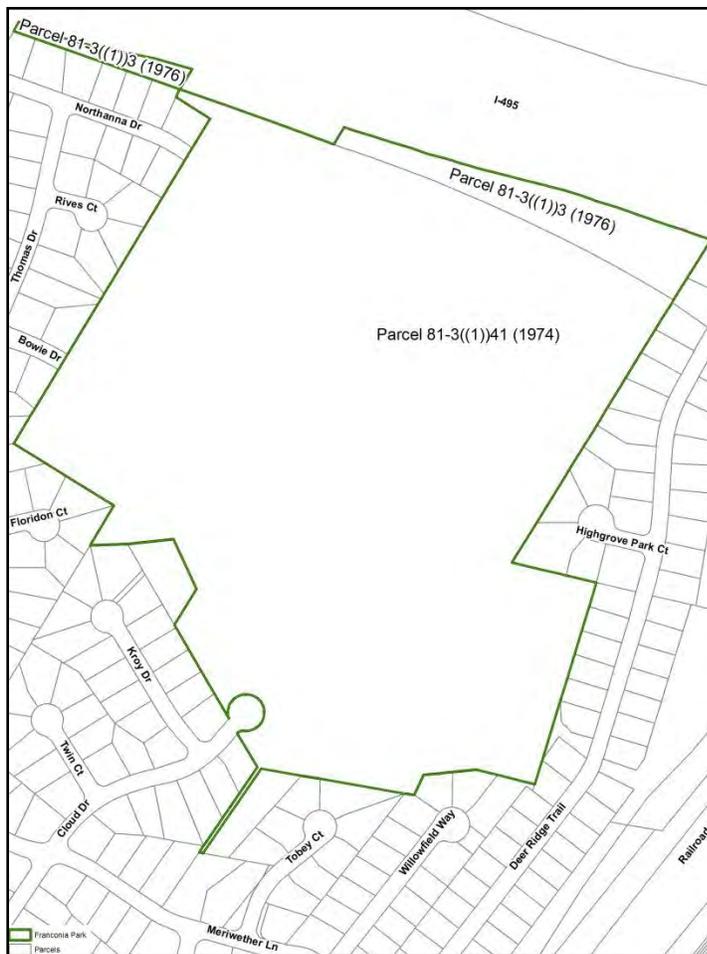


Figure 4: Parcel Map with Acquisition Dates

The original 1974 master plan graphic, which guided development of Franconia Park for 40 years depicts a variety of uses (Figure 5), including:

- Trails,
- Lighted Rectangle Fields (Labeled Football-Soccer),
- Lighted Diamond Fields (Labeled Softball-Little League),
- Sled Run,
- Picnic Area,
- Tot Lot,
- Playground (Labeled Apparatus Area),
- Open Play Area,
- Basketball (Multi-Use) Courts,
- Horse Shoe Pit,
- Shuffle Board,
- Concession Building with Meeting Rooms, Restrooms, & Locker room,
- Practice Tennis Wall,
- Tennis Courts,
- Archery,
- Parking.



Figure 5: 1974 Master Plan

Existing facilities include a portion of the planned trail system, two unlit diamond fields, two rectangle fields (one with lights and synthetic turf), part of the parking shown on the plan. Unplanned, but regularly used, features include garden plots, a plant nursery, two open areas used as a small sided practice fields, a grassy slope used for sledding, and

temporary toilets also exist within the park. Planned, but unbuilt, facilities approved with the original 1974 Master Plan include, two lighted diamond fields, two overlay rectangle fields with athletic field lighting, designated sled run, picnic area, tot lot, playground, open play area, basketball courts, horseshoe pit, shuffle board, practice tennis wall, tennis courts, archery, concession building with meeting rooms, restrooms, locker room, as well as the remaining trails and parking.

Over the past 39 years, visitation to the park has grown as the county has developed. Visitors of all ages now expect a dynamic, modern park experience, which requires flexibility and quality park facilities. A revised master plan will help Franconia Park continue to evolve to meet the needs and interests of County residents, while ensuring protection of the park's important resources for future generations.

#### **D. PARK CLASSIFICATION**

Park classifications provide a categorical framework for parks within the County park system. In this system, five classifications address land area, available amenities and the extent of the geographic area the park is intended to serve.

Franconia Park is classified as a district park. As described in the Fairfax County Comprehensive Plan, Policy Plan, Parks and Recreation section, district parks serve larger geographic areas of the County, providing a diverse variety of recreation facilities as well as park experiences that typically involve an individual or group for a time period of up to a half day and may attract spectators. District parks may be located in most areas of the County, with service areas ranging from three to six miles. Size is typically 50 to 150 acres. Parking must be provided, while other support amenities such as lighting and restrooms are also appropriate. Generally, facilities in these parks are larger in number and scale than at Local Parks, supporting longer visits. The extent of development will depend on actual site conditions, such as topography, amount of developable acreage, and access. Lighted facilities and extended hours of operation are the norm.

Typical recreation activities at district parks may include, but are not limited to, golf, skating, skateboarding, picnicking, classes, camps, child play, off leash dog exercising, cultural events, performing arts, sports play, and activities in RECenters. Additionally, woodlands, open space, trails, and open play areas are highly desirable features. Sensitive environmental areas and cultural resource sites within the parks will be managed as Natural or Cultural Resource Areas.

#### **E. PARK & RECREATION NEEDS**

Within three miles of Franconia Park are 58 County parks, 47 of which provide recreational facilities, such as trails, playgrounds, picnic areas, and athletic fields (Table 1). Some parks offer distinctive features such as Lee District Park and RECenter, Hidden Pond Nature Center, Green Spring Gardens, Lake Accotink Park, as well as Greendale Golf Course.

PARK NAME	CONCESSIONS	MINI GOLF	GOLF	TRAILS	AMPHITHEAT	CAROUSEL	PICNIC AREA	OPEN PLAY AREA	PLAYGROUND	TOT LOT	RECTANGLE FIELD	GRASSED DIAMOND	SKINNED DIAMOND	VOLLEYBALL	TENNIS	BASKETBALL	RECENTER	GARDEN PLOTS	HISTORIC FEATURE	NATURE CENTER	DOG PARK	BOAT RENTAL	BOAT LAUNCH
ACCOTINK STREAM VALLEY PARK				Y															Y				
AMBERLEIGH PARK				Y				Y											Y				
BACKLICK PARK				Y			Y		Y						2	1							
BACKLICK RUN PARK																							
BACKLICK STREAM VALLEY PARK																							
BANKS, SR. OLANDER & MARGARET PARK																							
BEULAH PARK				Y									2										
BREN MAR PARK				Y			Y	Y	Y			1											
BROOKFIELD PARK				Y			Y		Y							1							
BUSH HILL PARK				Y																			
BYRON AVENUE PARK				Y							2	5											
CARRLEIGH PARKWAY PARK				Y																			
CLERMONT PARK												2	2						Y				
DEERLICK PARK				Y											1				Y				
DOGUE CREEK STREAM VALLEY PARK																							
EDSALL PARK							Y	Y	Y	Y													
FLAG RUN PARK								Y															
FRANCONIA FOREST PARK																							
FRANCONIA PARK				Y							3	2						Y	Y				
GLEN HILLS PARK				Y					Y														
GREEN SPRING GARDENS				Y				Y											Y				
GREENDALE GOLF COURSE	Y		Y																Y				
HAYFIELD PARK								Y	Y	Y									Y				
HEYWOOD GLEN PARK																							
HOOES ROAD PARK							Y	Y			3	1			4	2							
HUNTER VILLAGE PARK				Y																			
HUNTLEY MEADOWS PARK				Y			Y												Y	Y			
INDIAN RUN STREAM VALLEY PARK				Y															Y				
ISLAND CREEK PARK				Y																			
JOSEPH F. BARNES BATTERY PARK																							
KINGSTOWNE PARK				Y			Y																
LAKE ACCOTINK PARK	Y	Y		Y		Y	Y	Y	Y				1					Y				Y	Y
LEE DISTRICT PARK	Y			Y	Y	Y	Y	Y	Y	Y	3	3			4	5	Y	Y					
LEE HIGH PARK				Y			Y	Y	Y			2			2								
LEEWOOD PARK				Y				Y															
LINCOLNIA PARK				Y			Y	Y	Y	Y						1							
LOFTRIDGE PARK				Y																			
LOISDALE PARK				Y			Y	Y	Y						2	1			Y				
LYNBROOK PARK																							
MANCHESTER LAKES PARK				Y				Y	Y														
MARK TWAIN PARK				Y			Y	Y															
MASON DISTRICT PARK	Y			Y	Y		Y	Y	Y	Y	2	1	1		6	2		Y		Y			
MONTICELLO WOODS PARK				Y																			
MULBERRY HILL PARK																							
NORTH SPRINGFIELD PARK																							
PARKLAWN PARK				Y			Y			Y		1											
PINECREST GOLF COURSE	Y		Y																Y				
POE TERRACE PARK																			Y				
RIDGEVIEW PARK				Y			Y	Y	Y														
SOUTH KINGS FOREST PARK																							
SPRINGFIELD FOREST PARK				Y			Y		Y	Y					1								
SPRINGVALE PARK				Y			Y	Y	Y						2								
SUMMERS CEMETERY				Y															Y				
TARA VILLAGE PARK								Y															
TRAILSIDE PARK												4											
TURKEYCOCK RUN STREAM VALLEY PARK				Y																			
WICKFORD PARK				Y			Y		Y							1							
WILBURDALE PARK							Y	Y	Y	Y		1				1							

Table 1: Parks and Recreation Facilities within 3 Miles of Franconia Park

The need for park and recreation facilities is determined through long range planning efforts involving a variety of stakeholders. Recreation needs are generally met through the provision of park facilities. A Needs Assessment is conducted every ten years and provides guidance for parkland and facility needs. As part of the Needs Assessment process, the Park Authority tracks inventory of facilities, examines industry trends, surveys county citizen recreation demand, and compares itself with peer jurisdictions to determine park facility needs. In addition, the Park Authority Board adopted countywide population-based service level standards for parkland and park facilities. Table 2 reflects projected local serving park facility needs in the Springfield Planning District in which Franconia Park is located.

Evaluation of park recreation facility service levels use planning district geography established in the County Comprehensive Plan. As shown in Table 2, Springfield Planning District, which covers part of the Lee Supervisory District including the Franconia area, has a deficit of public playgrounds and athletic facilities (fields and courts). Most parks in the district have few opportunities available where these needs can be addressed. School facilities and private facilities in homeowner common areas supplement the public inventory for trails, playgrounds, fields, and courts.

59,133	2010 population – Springfield Planning District			
65,381	2020 population projection			
Facility	Service Level Standard (as per the Fairfax County Comprehensive Plan)	2010 Existing Facilities	2020 Needed Facilities	2020 Projected (Deficit)/ Surplus
Rectangle Fields	1 per 2,700 people	21.7	24.2	(2.5)
Adult Baseball Fields	1 per 24,000 people	3.0	2.7	0.3
Adult Softball Fields	1 per 22,000 people	1.5	3.0	(1.5)
Youth Baseball Fields	1 per 7,200 people	19.0	9.1	9.9
Youth Softball Fields	1 per 8,800 people	1.5	7.4	(5.9)
Basketball Courts	1 per 2,100 people	8.0	31.1	(23.1)
Playgrounds	1 per 2,800 people	16.0	23.4	(7.4)
Neighborhood Dog Parks	1 per 86,000 people	0.0	0.8	(0.8)
Neighborhood Skate Parks	1 per 106,000 people	0.0	0.6	(0.6)

Table 2: Springfield Planning District 2020 Facility Needs Analysis

In addition, the Great Parks, Great Communities Comprehensive Park System Plan adopted by the Park Authority Board on June 22, 2011, includes several specific recommendations for improvements in the Springfield Planning District. This three year planning process included extensive public comment on the draft Plan that was reflected in the final adopted Plan. Recommendations relating to Franconia Park include the following:

- Connect Trailside, Monticello Woods and Franconia Parks
- Consider linking the native plant nursery run in partnership with Earth Sangha at Franconia Park through a gardening interpretive theme including Green Spring Gardens and other horticultural parks;

- Amend the master plan for Franconia Park to evaluate the suitability of existing temporary or planned, but unbuilt, facilities;
- Renovate the existing parking lot and access road at Franconia Park.
- Partner with Earth Sangha at Franconia Park to manage nearby meadow and woods to prevent invasive species seed production; and
- Expand non-native invasive plant management and habitat restoration on parkland by implementing the Non-Native Invasive Plant Prioritization Plan and Assessment.
- Consider expanding and enhancing tree cover by planting trees at appropriate locations within Franconia, Backlick Stream Valley, and Hooes Road Parks.

### **III. EXISTING CONDITIONS**

The existing site conditions determine the opportunities and challenges located within the park, such as soil types and steep slopes, which affect or limit suitability for construction of park facilities. Using the existing conditions data allows for more focused planning and development.

#### **A. NATURAL RESOURCES**

##### 1. Soils

Soil characteristics can have major implications on site suitability for certain uses. As classified by the Natural Resources Conservation Service (NRCS) of the United States Department of Agriculture (USDA), Franconia Park is comprised of a mix of nine soils found throughout the park. Kingstowne sandy clay loam is the most common soil type within the park (Figure 6). A description of these soils and their problematic characteristics can be found in Appendix 1.

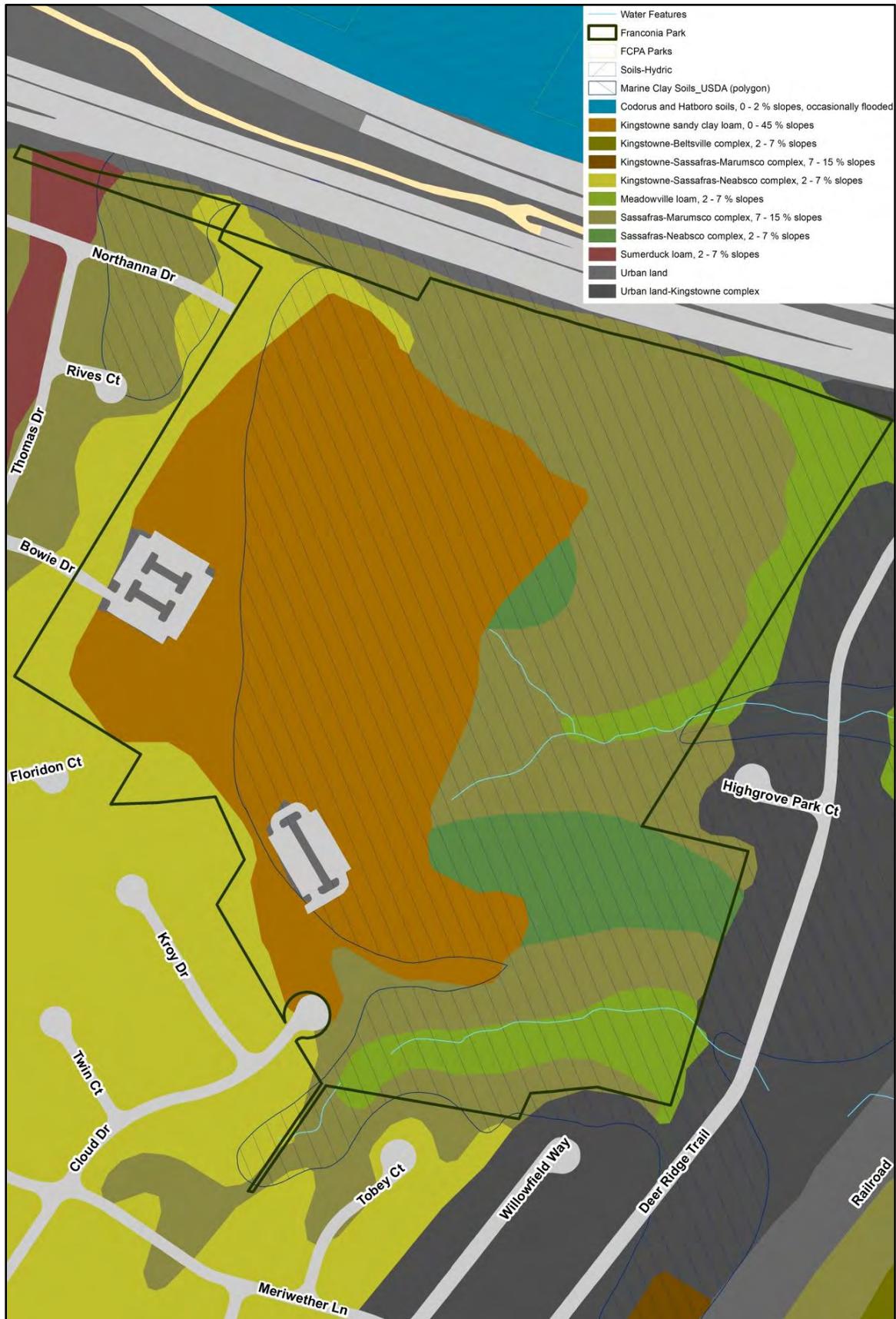


Figure 6: Geology and Soils Map

## 2. Topography

The topography of Franconia Park varies greatly by section. The developed portions of the park, having been cleared and graded to form a flat to gently sloping plateau. This includes the athletic fields, garden plots, plant nursery, and parking areas. To the west and northeast of this plateau are small ridges formed by grading of this landform, which is flanked to the south west by a small ridge. The rest of the park's topography slopes downward from this plateau.

The north and southeastern portions of the park that remain forested are quite steep, including two perennial stream drainages and associated steep slopes. Part of this slope is on the north side drains toward the Capital Beltway, while the east side faces toward the adjacent community. The eastern slope features two small stream channels that flank the eastern arm of the plateau (Figure 7). In many of the hilly places, including in the stream channels, short but very steep slopes that frequently exceed 15 are present, making them highly erodible and unsuitable for development (Figure 8).

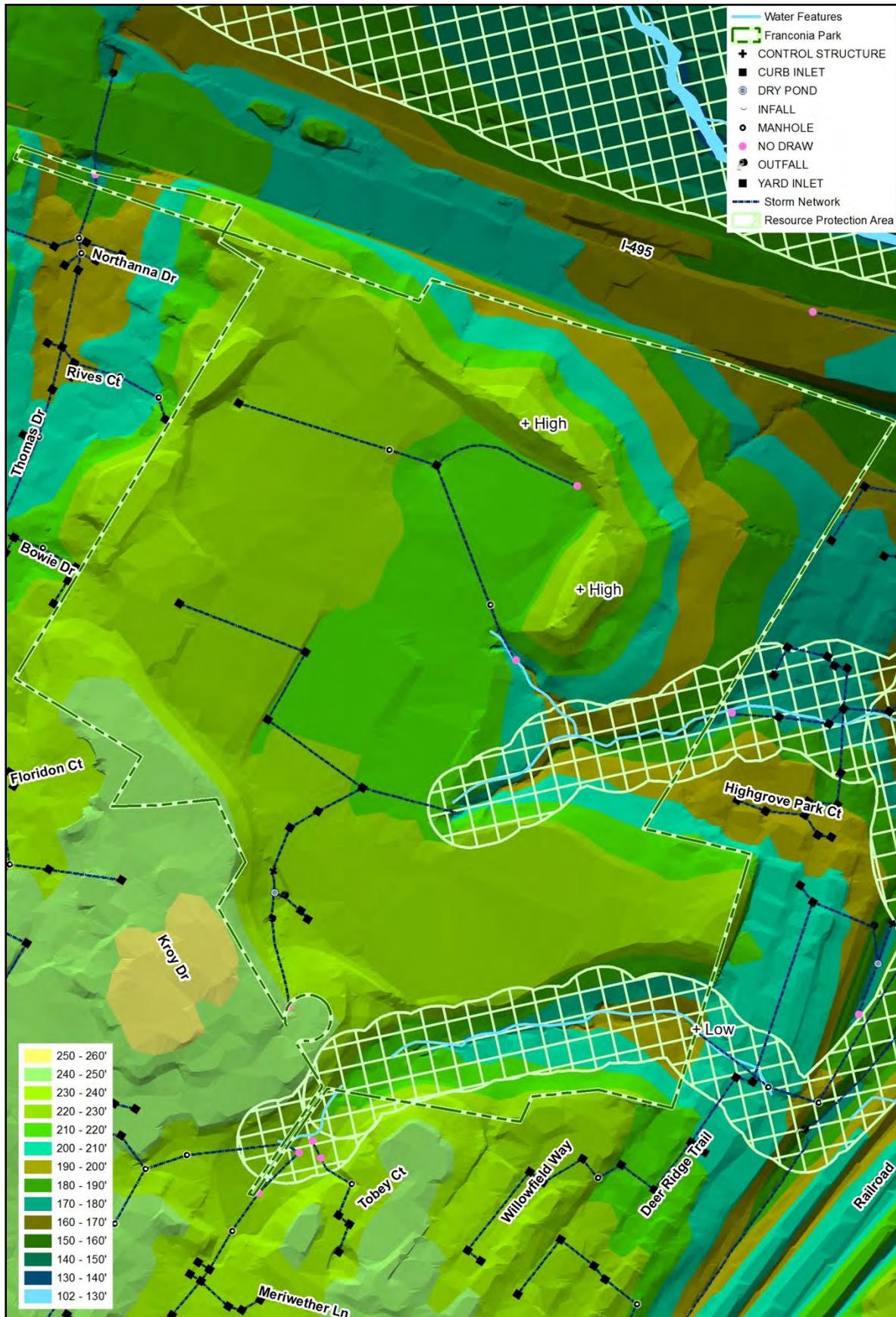


Figure 7: Topography, Hydrology, & Resource Protection Areas (RPA) Map

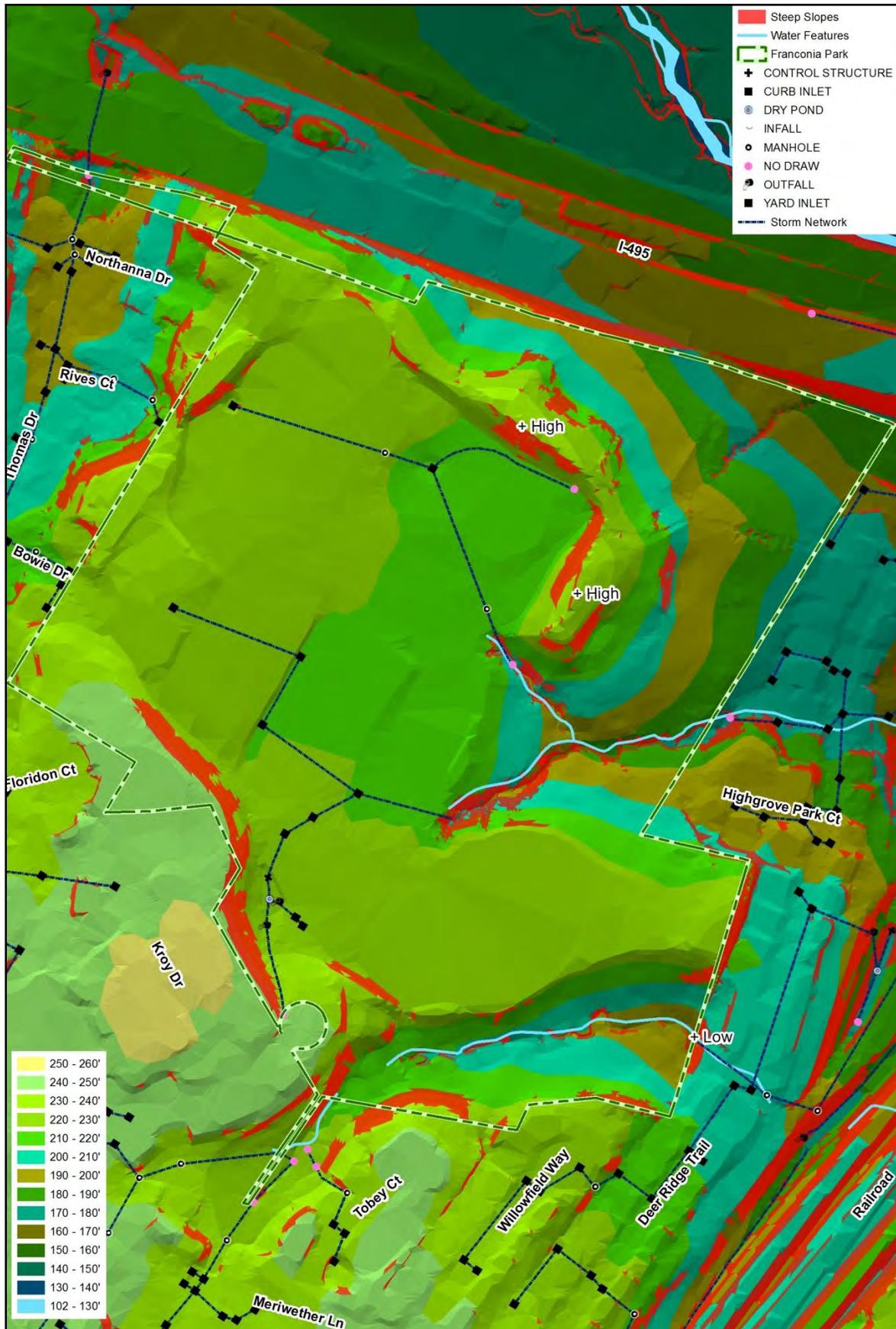


Figure 8: Steep Slopes Map

### 3. Hydrology

Franconia Park falls entirely within the Backlick Run Branch of the Cameron Run watershed, which drains to the Potomac River, and ultimately to the Chesapeake Bay. The entire Cameron Run watershed is highly impacted by dense suburban development that occurred prior to modern stormwater planning. As part of the Cameron Run Watershed Management Plan (approved in 2007), a GAP (Good, Average, Poor) analysis was performed to determine the health of the watershed, which ultimately *“emphasized the importance of parks for conserving species within the watershed. Without these refuges, some species may be lost from the watershed. Most parks within the watershed are managed for recreation rather than biodiversity; therefore, the potential for increasing biodiversity protection within the watershed is great.”* Franconia Park is a valuable natural resource within Fairfax County as it contains the headwaters of two small streams, with their associated Chesapeake Bay Preservation Ordinance designated Resource Protection Areas (RPAs). The Cameron Run Watershed Management Plan also recommends the implementation of Low Impact Development (LID) techniques to benefit stormwater management in the park, for example, to construct bioretention areas in islands of parking lots, and increase tree canopy cover.

Resource Protection Areas (RPAs) are designated corridors of environmentally sensitive land alongside the shorelines of streams, rivers, or other water bodies that drain into the Potomac River and eventually into the Chesapeake Bay. In a vegetated or forested condition, RPAs protect water quality, filter pollutants out of stormwater runoff, reduce the volume of stormwater runoff, prevent erosion, and perform other important biological and ecological functions. Mandated by the State of Virginia Chesapeake Bay Preservation Act, protection of Fairfax County’s RPAs began in 1993 with the enactment of the Fairfax County Chesapeake Bay Preservation Ordinance, which regulates the kinds of development that can occur in these important, environmentally sensitive areas.

Within the park, stream degradation is evident from run-off from park and neighboring impervious surfaces such as roofs, driveways, roadways, and parking lots leads to flashy conditions that incise stream channels. Due to Franconia Park’s important location as a headwater within the Backlick Run Branch of the Cameron Run Watershed, it has been identified by Fairfax County Stormwater Planning, in the Department of Public Works and Environmental Services (DPWES) as the site for two proposed stormwater management projects, that are projected to occur between 2007 and 2016 dependent on funding:

- Franconia Park Low Impact Development (LID), project number CA9829, as described on page 6-27 of the Cameron Run Watershed Management Plan. This project will construct bio retention areas in islands of both parking lots, with tree box filters; plant trees between soccer fields and other locations to provide shade; repair stream bank erosion as well as down cutting. Facility maintenance and renovation is an ongoing process with proposed retrofits, or similar stormwater improvements that should be incorporated into site improvement plans. Benefits from this project will provide stormwater quantity controls that will improve stream stability, in stream habitat, and reduce erosion, while providing an opportunity for public education.

- Thomas (Drive) SWM Pond Retrofit, project number CA9104, as described on page 6-37 of the Cameron Run Watershed Management Plan. This project will expand an existing storm water management (SWM) pond control structure to provide additional storage capacity. The benefits include providing enhanced stormwater quantity controls.

#### 4. Natural Communities - Plants & Animals

Natural communities are ecological groupings of co-existing, interacting species, considered together with the physical environment, and associated processes. Through much of the county's early history, agriculture was a key pursuit, leading to the clearing of many acres for farmland, including what became Franconia Park. Farming had ceased on the northern portion of what is now Franconia Park prior to 1900, with successional forest growing in by 1937, while farming continued on the southern portion until the 1950s (Figures 9). Today, approximately 35 acres, over 50 percent, of Franconia Park are wooded areas. Within the wooded area on the eastern side of the park surrounding the streams are two good quality forest stands. Forested areas of lesser quality are adjacent as shown in Figure 10.



Figure 9: 1937 Aerial Photo of Franconia Park.

The northern high quality forest stand contains a high diversity of native trees, shrubs, and herbs including chestnut oak (*Quercus montana*), American beech (*Fagus grandifolia*), flowering dogwood (*Cornus florida*), maple-leaf viburnum (*Viburnum acerifolium*), strawberry bush (*Euonymus americanus*), sassafras (*Sassafras albidum*), jack-in-the-pulpit (*Arisaema triphyllum*), New York fern (*Thelypteris noveboracensis*), grape fern (*Botrychium dissectum*), as well as may-apple (*Podophyllum peltatum*). There is also visible regeneration of native tree species such as ash, oak, and hickory, indicating lower browse pressure from white-tailed deer than in many other parks in Fairfax County. This area also is relatively free of non-native invasive species due to limited ground disturbance. Prohibiting off-trail visitation, controlling non-native invasive species, and ensuring that deer browse remains minimal are critical to preserving this forest type.

The southern high quality forest stand also contains a quality stand of native species as well as one of the finest and last remaining examples of a globally rare natural community, harboring three plant species that are now considered rare in Fairfax County. Contained within this RPZ is a small wetland protected within the RPA along the stream, which is of high natural resource significance, since wetlands provide numerous benefits to the watershed including storage of water, recharge of ground water, and water purification. Wetlands provide habitat not only for wetland dependent species but upland mammals as well. Within this forested wetland, vegetation is predominantly broad-leaved deciduous trees and shrubs, with other wetland plants. Surface water is present for extended periods, reflecting seasonal flooding. The vegetation of this community is remarkably intact and free from disturbance, including non-native invasive species. Controlling non-native invasive species and ensuring that deer browse remains minimal are critical to preserving this forest type. This forest stand should remain undisturbed, with visitation restricted.

The two high quality forested areas are separated by an area predominantly covered in coniferous trees which have grown up on gravely fill, to the east of the garden plots. This area is of low habitat quality, showing the impact of poor quality soil, drought, strong winds, and non-native vegetation.



Figure 10: Franconia Park Primary Vegetation Type on 2012 Orthophoto

The forested areas between the beltway and the ball fields, as well as north of the high quality forest, is a strip of lower quality forest, impacted by non-native invasive species including Oriental bittersweet (*Celastrus orbiculatus*), Japanese honeysuckle (*Lonicera japonica*), and wineberry (*Rubus phoenicolasius*). This section closest to the Capital Beltway also endures significant noise pollution due to high traffic volume. Around the edges of the ball fields and park borders, the treed areas of the park are generally more disturbed with a higher proportion of non-native invasive species such as Japanese honeysuckle (*Lonicera japonica*), as well as Oriental bittersweet (*Celastrus orbiculatus*). The dominance of non-native species and high levels of disturbance along I-495, and park boundaries indicate that these areas would be considered a low priority for invasive species management under a scenario of limited resources. While not particularly diverse or biologically significant, this area provides a buffer between the park and its neighbors.

A formal wildlife survey has not been conducted for Franconia Park but the park is likely to support typical species of suburban woodlots including migratory songbirds, reptiles, amphibians, and small mammals. Several typical species of suburban woodlots have been observed, including squirrels, fox, snakes, rabbits, hawks, and geese, all which are typical of the region and tolerate park use by visitors. White-tailed deer are present in the park but browse levels were not as high as observed in other areas of Fairfax County. Additionally, less common bird species such as Rusty Blackbirds, Wood Thrush, and Eastern Towhee have been observed in the park.

## **B. CULTURAL RESOURCES**

Identification, protection, and interpretation of cultural resources is specifically highlighted within the Park Authority's mission statement as well as supported by several park policies. To achieve these goals, consideration of cultural resources is a necessary master plan component. During the master plan process, the planning team reviewed the available information and investigated the park itself, to determine what, if any remnants from the past existed within the park. Little cultural heritage evidence was found on site, however, Franconia Park fits within the cultural history of Fairfax County. A summary of the periods of human habitation in Fairfax County is provided in Appendix 2.

However, as with the rest of Fairfax County, by the 1970's farmland and forest was giving way to suburban development. With the beltway completed, the Virginia Department of Transportation transferred the parcel containing their staging area to Fairfax County in 1974. This was followed by another land exchange in 1976, bringing the park to its current configuration. Today, very little of the county retains any agrarian character, having become a major suburban center.

To date, no datable archaeological deposits have been located in Franconia Park. The deposits that have been identified consist primarily of the waste from stone tool production. This portion of Fairfax County contains localized areas of quartz outcropping, which Native Americans across the entire span of prehistory utilized to harvest raw material.

Franconia Park has not been subjected to comprehensive, systematic cultural resources identification-level survey. Relic hunters have reported finding Civil War artifacts in the general vicinity of Franconia Park relating to Union Cavalry camping near the waterways. The Fairfax County Civil War Sites Inventory recognizes the park as sensitive with the potential of containing other artifacts from this time, and a military camp dating to the period of the Spanish-American War is suspected in the general vicinity of Franconia Park. No other historic cultural resources have been identified within park boundaries. Since, the western half of Franconia Park has been developed for recreational use, that portion is considered highly disturbed and unlikely to contain intact archaeological resources. However, the eastern, undeveloped, forested portion of the park may contain pre-historic or historic archaeological resources.

## **C. EXISTING INFRASTRUCTURE**

### **1. Utilities**

Utility services extend from Cloud Drive to park lighting systems, and water spigots for the gardens plots. No sewer connections exist within the park, though public sewer serves the surrounding communities. A small stormwater pond exists near the southern parking lot that serves the adjacent neighborhood to the south. Two storm drain systems collect runoff from the park and storm pond drain into the northern stream on the eastern side of the park (Figure 14).

### **2. Vehicular Access**

Two separate entrances provide vehicular access to different parts of the park. The west vehicular entrance is located at the end of Bowie Drive, just off Thomas Drive, culminating in a parking lot with 98 spaces, including four that are Americans with Disabilities Act (ADA) compliant. The southern entrance to Franconia Park is located at the end of Cloud Drive culminating in a 75 space parking lot, which includes three ADA compliant parking spaces. An unpaved maintenance road extends from this parking lot, providing access to the garden plots with limited parking. Both park entrances have gates, which are locked when the park is closed. Both entrances are posted with park identification and rules signs.

### **3. Pedestrian Access & Trails**

Franconia Park contains a few short segments of paved trail running between the entrances and ball fields, as well as a mowed path around the eastern ball fields. Trail entrances to the park are located at the two vehicle entrances, and at the end of Northanna Drive at the northwest end of the park (Figure 11). There is evidence of pedestrians and wildlife using an undefined route across the north wooded area of the park from the north end of the Deer Ridge Trail community. Other evidence suggests numerous unsanctioned entrances that originate from neighbors' yards.

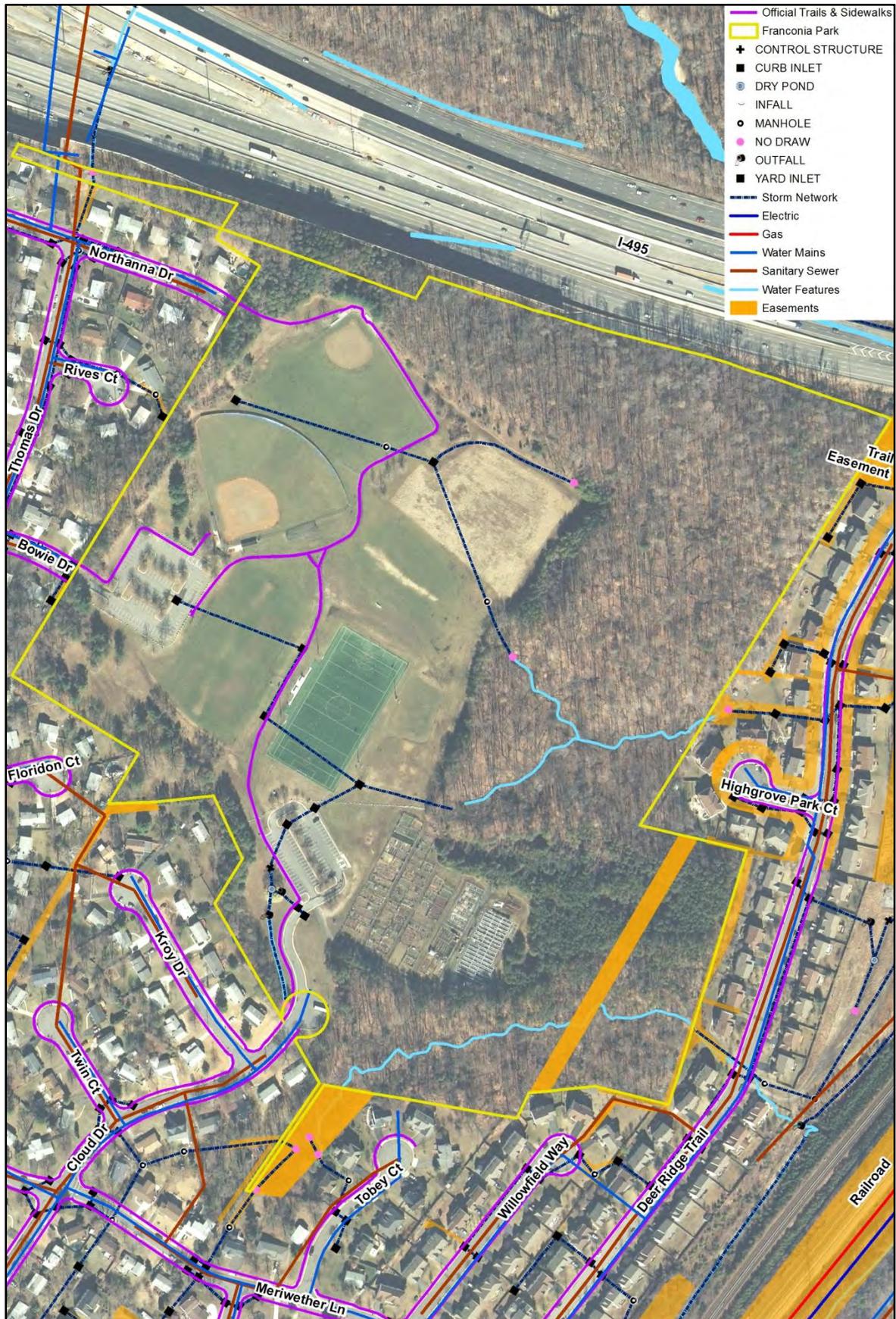


Figure 11: Trails, Major Utilities, and Easements

## **D. EXISTING USES & OPERATIONS**

Over the past 40 years, Franconia Park has grown to become a heavily used park serving a diverse population. Visitors arrive by car, bus, bike, skateboard, and on foot to attend programs, camps, sporting events, practice, exercise, walk their dogs, garden, picnic, or enjoy the outdoors. The park's key assets are its athletic fields, garden plots, open space, and trails. Playing sports, gardening, picnicking, dog walking and walking in the park are very popular to surrounding neighbors as well as the broader community. Since its inception, park patronage has steadily grown and shows no sign of slowing down. Facilities that support the many activities in the park include vehicle and pedestrian entrances, circulation networks, parking lots, garden plots, and athletic fields. Natural areas in the park are primarily forested areas that provide buffers to neighbors and the Capital Beltway.

The park's increased popularity presents challenges to current operations as well as a need for added facilities. Park use on peak visitation days and for special events can result in traffic backups overflow parking into the surrounding neighborhood as well as bottlenecks within the park. To address these conditions, parking and circulation expansions and improvements are needed.

Fiscal sustainability within the park system is also a key consideration for supporting park operations. Opportunities to expand the rentals of garden plots, picnic shelters, program playing fields, and flexible spaces can boost park revenues to support park operations.

Fairfax County Public Schools and several athletic leagues are primary users of Franconia Park. These users as well as staff have identified that the existing fields do not adequately address these needs for number of fields and ability to play after dark.

Franconia Park is unstaffed with maintenance provided by Park Operations Area 3 staff that maintains parks within a wide district. Typical regular maintenance includes activities such as mowing, removing leaves, emptying trash, painting, snow removal, field maintenance, and other similar tasks. Periodic maintenance tasks include facility and equipment inspections; facility preparation; plumbing repairs, cleanup; limbing up of trees; tree removal; and repairing pavement as needed. Area 3 staff also responds to any park operation or maintenance issues brought to their attention.

## **IV. PARK ASPIRATIONS**

### **A. PARK PURPOSE**

Park purpose statements provide a framework for planning and decision-making. As described in the Fairfax County Comprehensive Plan, Policy Plan, Parks and Recreation section, the purpose of district parks, such as Franconia Park, is to serve larger geographic areas of the County, provide a diverse variety of recreation facilities, while protecting sensitive environmental and cultural resources within the park.

### **B. VISITOR EXPERIENCE**

Franconia Park offers a visitor experience similar to that of other district parks within the county, through a combination of sport facilities, garden plots, with trails and open space along a wooded area. This visitor experience has evolved over the years as its

popularity and visitation have increased. For individual and group visitors, Franconia Park provides a diverse variety of recreation facilities with opportunities to interact with other users and experience the athletic fields, forest, wildlife, and trails in a park experience that typically lasts for up to a half day.

Both scheduled and casual enjoyment of the park's facilities and open space is part of the visitor experience. Recreation at Franconia Park includes use of the trail network, field sports, gardening, and picnicking.

The park is unstaffed and supports the visitor experience in a number of ways, through complimentary facilities and supporting features. The future overall visitor experience will generally remain consistent with these aims. New and updated infrastructure, amenities, uses, and facilities consistent with the park's growing popularity as well as community needs will be the focus of changes in this master plan.

### **C. MANAGEMENT OBJECTIVES**

In order to achieve the park's purpose, the following objectives, compiled from the Park Authority's mission statement, will guide actions and strategies for dealing with management issues:

- Franconia Park will be managed to provide a green space for public enjoyment and outdoor recreation.
- Park users should have universal access to park facilities when access is possible and feasible. This includes accessibility facilities and accessible connections between different areas of the park.
- Protection and appreciation of natural resources are integral to the Franconia Park experience. Every effort should be made to balance the stewardship of these resources with active recreation needs.

### **V. CONCEPTUAL DEVELOPMENT PLAN**

Based on the research, site analysis, and data presented in this document, the Conceptual Development Plan (CDP) consists of two parts that comprise the detailed master plan. The first portion includes the plan text, which describes future park uses and facilities. This section also discusses design concerns that will need to be considered when the CDP is implemented. The second part of the CDP is a graphic depiction of the recommended uses and their general locations (Figure 12). These two parts of the CDP should be used together to understand the full extent of the recommendations.

When all or part of the CDP are funded for implementation, detailed site design, resource condition studies, and engineering will be conducted as needed to refine design details. CDPs are general in nature so actual facility locations may shift based on future site engineering and resource studies.

### **A. VEHICULAR ACCESS, CIRCULATION, & PARKING**

Vehicular access to the park will remain from the two existing entrances located at Cloud and Bowie Drives. To better accommodate vehicles within the park, both onsite parking lots should be expanded. Traffic control features such as signage, gates, and bollards, can be used at these entrance locations to control park traffic. These access

areas need to facilitate safe pedestrian circulation since they also serve pedestrians and as drop off points. Visitors get their first impression of the park at these points, so visual elements should be in keeping with the park's character and include facilities that support visitor orientation, such as kiosks, park identification, directional, regulatory, as well as event signage. Other amenities such as benches, trashcans, parking, lighting, and landscaping features are also appropriate at the entrances. A service road from the Cloud Drive parking lot provides access to the garden plots so that the garden plot tenants can transport material and tools.

Additional parking is needed to support existing and added features in the park. The existing parking lots are to remain, but should be improved and expanded. Additional parking is planned in two locations as shown on the CDP. Expansion of the Cloud Drive parking lot will support additional vehicles on the south side of the park. The Bowie Drive parking lot to the south should also be expanded as shown on the CDP. Additionally, parallel parking is planned within the park boundaries along the Cloud Drive entrance road. Garden plot tenants typically park along the garden plot access roads.



## **B. TRAIL NETWORK & ACCESS**

The planned trail network throughout Franconia Park is shown on the CDP. The network will include existing trails linked to new trails and entrances, including a loop trail for improved circulation. Additional improvements include linking neighborhood connections that provide access on the east side of the park. The trails support a variety of uses including walking, dog walking, socializing, nature observation, running, as well as biking. Trail access is provided at the vehicular entrances and the pedestrian entrances as shown on the CDP. Visitor orientation is important to provide at these points, including informational kiosks, benches, trashcans, park identification, regulation, and way finding signage. All services and routes in Franconia Park should be fully accessible, as feasible.

An opportunity exists to connect Franconia Park with nearby parks including Monticello Woods and Trailside Park located to the west. While a network of sidewalks and social trails exist, they are not all maintained trails. The pedestrian connections should be enhanced from Franconia Park west along Northanna Drive, through Monticello Woods Park to Trailside Park (Figure 13).



Figure 13: Trail Connections to Local Parks

## **C. RESOURCE PROTECTION ZONES**

Two separate areas within the park totaling 21.2 acres are designated as Resource Protection Zones (RPZs), to protect natural habitats, geological features, hydrological features, and/or cultural areas they contain. These RPZs contain high quality and valuable forest communities and emergent wetlands, including the headwaters for the streams within the park. Such natural communities support multiple flora and fauna species that co-exist and rely on these natural features. These wetlands are of high natural resource significance, providing numerous benefits to the watershed including storage of water, recharge of ground water, and water purification. Wetlands provide habitat not only for wetland dependent species, but upland mammals as well. Protecting the integrity of these forested blocks is critical to the health of the streams within them, and should remain undisturbed.

These areas should be preserved as much as possible in a natural state without disturbance. Currently no trails are planned in these RPZs and off trail use is prohibited for all visitors and their pets due to the sensitivity of the natural communities, steepness of the terrain, as well as the significant natural and cultural sites. No other trails will be constructed except for those shown on the CDP. The potential for historic discoveries in these areas is moderate, so appropriate subsurface archaeological investigation should be conducted prior to any ground disturbing activities within these zones, to minimize potential impacts to important archeological sites. Limited off trail activity will be permitted for resource management activities along with programs scheduled and supervised by Park Authority naturalists that are compatible with resource management goals.

The whitetail deer population in Fairfax County has increased to unsustainable levels that threaten the ecology and long-term regeneration of most natural communities within the park system. The impacts of deer browse are three-fold. First, the deer eat the vegetative mast produced each year (acorns), thereby reducing the number of seeds available to generate new growth. Second, deer browse all vegetation lower than six feet, which includes most of the native seedlings that do become established. Third, the deer favor native plant species over non-native invasive plant species, thereby encouraging non-native growth by eliminating the native vegetation's ability to compete. Therefore, continued management of the deer population towards sustainable levels is of utmost importance to maintaining the natural communities of Franconia Park.

#### **D. PICNIC AREAS/SHELTER**

A picnic area with a shelter should be centrally located between the parking lot, ball fields, and playground to provide a central location. The shelter should support groups of up to 120 and be available to groups through a permit to support sport activities, outdoor classroom programming, family gatherings, and group events. Another small picnic area should be provided adjacent to the eastern field and parking lot. Grills should be provided, where appropriate. Picnic shelters should provide both electric and water access, so restrooms can be provided within the structure. Inclusion of a fire pit/ fireplace and lighting would make the facility more desirable for rentals, and a storage space should also be considered.

#### **E. ATHLETIC FIELDS**

This master plan seeks to increase capacity of the athletic fields to serve the increasing field demand. The 1974 approved master plan envisioned four lighted and four unlit athletic fields including six fields in an overlay condition. Capacity expansion is achieved by adding new fields and improving existing fields through addition of synthetic turf with lights as well as achieving field sizes that meet multiple sport regulation sizes. Tight orientation of the fields shown on the CDP helps to maximize utilization of the site while seeking to limit the impacts to other uses and resource protection zones.

#### **F. PLAYGROUND**

A playground was approved in the 1974 Master Plan and should be located to compliment the picnic area pavilion, fitness stations, playing fields, and open play area, enhancing opportunities for family-oriented activities. This location provides easy access for families with children using more than one facility at the same time. Playground features should be appropriate to a wide range of ages. The space could

accommodate climbing features appropriate for a range of ages; however, this plan also envisions the opportunity to consider a broader range of play facilities that might explore music or environmental education or simply shape the landform to create interesting play environments for children. Playground features may be determined with community input when funding becomes available. Multiple points of entry to the play area are reflected on the CDP; however, at least one point of access must be provided from the primary hardscape trail for accessibility purposes. Landscape design should consider the benefits of providing shade to this portion of the site.

### **G. OPEN PLAY AREA**

A large open grass field will be retained to provide an open play area for unstructured play, informal uses, and outdoor enjoyment. Usage of this area would promote more informal forms of recreation such as Frisbee throwing, tossing a ball, or kite flying. This space can also be used as a small community gathering space.

### **H. OFF LEASH DOG AREA (OLDA)**

Off leash dog areas have become one of the most popular park features. The following features are desirable to the extent, they are feasible: A preferred size of 0.5 to 1 acre or larger is recommended for an off-leash dog area at Franconia Park. Surfacing should consist of crushed stonedust with less than a 4% slope to reduce maintenance issues. It could have two sections, one for small dogs, and one for large dogs or one large area. The general capacity is one dog for every 700 square feet within the OLDA fence. The OLDA is to be enclosed in 5' high, black vinyl coated fencing with a double gated portal entrance. A 12' wide maintenance access gate is required as well. Shade and access to water should be made available in the OLDA. An information kiosk with OLDA rules, contact information, and other pertinent information should be posted near the entrance. A minimum of two benches, two doggy bag dispenser boxes, and trashcans should be provided.

OLDAs are created as a partnership between the Park Authority and a sponsor group who is responsible for investing in the development. Sponsors serve as the agency's liaison between facility users, local residents, animal control officials, and the police department. They monitor the facilities; publicize and communicate OLDA regulations; and report maintenance needs.

### **I. SKATE SPOT**

A small skate activity area is planned near the west parking lot, providing opportunities for informal skating. This area is intended to be a small, unstaffed facility serving 12-15 year old users. The addition of this facility allows an opportunity to address some of the recreation needs of the age group within a relatively small footprint. This skate spot introduces an activity to serve younger teens in the area within safe walking distance from home. Placed in this location, the skate spot will be highly visible to maximize security. The size of the hardscape should be large enough to permit placement of each feature to provide sufficient landing space as each particular skate element may require, while preserving space for passing skaters. This facility should be built of the most durable materials available to minimize injuries and maintenance requirements.

## **J. OUTDOOR FITNESS STATIONS**

Similar to indoor fitness equipment, outdoor fitness equipment can serve adult fitness needs as well as support social interactions and athletic training. These features have proven to increase physical activity by park visitors as well as encouraging more frequent park visits. Grouping facilities in one, visible location enhances safety and accessibility to other park features. These elements are often used by active adults, teams to warm up before play, by family members during practice, or parents while watching children on other facilities, such as the playground. A fitness zone requires only a small development footprint and, therefore, minimal ground disturbance. The location shown on the CDP are generally associated with other recreation features and easily accessible from internal walking trails or the parking lot. Further design and equipment features consideration will be needed to determine the best placement of these features.

## **K. GARDEN PLOTS**

Franconia Park contains one of the county's first community gardens, with individual plots rented on an annual basis. Access and parking for the garden plots is provided by a service road from the south parking lot. A long standing waiting list for garden plots attests to the demand. Expanded garden plots are included on the CDP north of the existing plots adjacent to the playing fields. The plots should be fenced with access to water, and have a vehicle travel way for limited use by gardeners. Garden plot agreements are required and managed by the Park Authority. An opportunity may exist with this expansion to explore other community garden models that may differ from the individual garden plot model.

## **L. PLANT NURSERY**

A native plant nursery is operated under a successful cooperative agreement with Earth Sangha, and is located adjacent to the garden plots. This nursery provides a benefit to the county and other local jurisdictions by providing native plants grown from local genotypes for environmental restoration projects, including Fairfax County parks. The need for expansion of the nursery in the future would be beneficial. Therefore, an area for expansion is planned to the east of the existing nursery as shown on the CDP in an area that will not impact any significant natural areas.

## **M. OVERLOOK SEATING AREA**

A contoured area along the trail on the rise, overlooking the ball fields provides potential for an overlook seating area. The space provides a quiet place to enjoy the serenity of the park, view nature, or watch games on the rectangle fields. This area should be improved with benches, a trashcan, and shade trees to enhance the quiet, contemplative space.

## **N. VENDOR PAD**

Concessions to serve park patrons are important to enhance the park experience. A double sized vendor pad is planned adjacent to the south parking lot to support the food truck program or other concessions.

**O. FLEXIBLE PROGRAM SPACE**

A flexible program space is planned for the area east of the plant nursery. This heavily disturbed area was a deposit site for debris and coarse stone during the construction of I-495. This area is not conducive to the growth of quality vegetation.

The area is intended to provide space for programming activities that do not need a full time dedicated space, and only require limited or temporary facilities such as community gatherings, camps, classes, and art programs. Other uses may include events such as reenactments, performances, or archery. To increase flexibility, no large permanent seating or other structures are allowed.

**P. SITE FURNISHINGS**

To support park users, visitor amenities such as picnic facilities, pavilions, trails, trailheads, benches, trashcans, as well as interpretive, regulatory, and directional signage are suitable outdoor uses that should be provided in appropriate locations throughout the park except in the RPZs. Minimize the number and collocate signs to preserve the natural setting as well as prevent impacts to important resources.

**Q. STORMWATER MANAGEMENT**

Construction of stormwater management facilities may be necessary to address water quality and quantity detention associated with the addition of park facilities. To the extent feasible, Low Impact Development (LID) methods should be used for stormwater management, potentially in the form of pervious pavers, innovative roof systems, rain gardens, and/or bio-retention areas.

**R. VEGETATIVE BUFFER**

The existing stand of trees along the western border of the park are intended to remain as a buffer to provide screening between neighboring homes and the park uses. Existing vegetation may be supplemented with a mix of canopy and understory trees, with shrub layers, along with invasive plant management to provide sustainable buffering and screening.

**S. VEGETATIVE RESTORATION**

The existing landscape and vegetation is highly impacted by activities such as disposal of yard waste (leaves, branches), competition from non-native invasive plant species, and deer browse, which is preventing regeneration of native forest species. Natural resource management practices will have to be adaptive and realistic while focusing on restoring the disturbed landscape. Necessary Countywide practices include non-native invasive plant control; deer herd culling (to bring herd numbers within the ecological carrying capacity); and restoration planting once deer herd numbers and non-native invasive plant species are in check. Encroachments such as the disposal of yard waste and other debris should be eliminated.

The Cameron Run Watershed Management Plan adopted by

**1974 MASTER PLAN ELEMENTS**

- (2) Diamond Fields
- (3) Rectangle Fields
- (2) Parking Lots
- Trail Segment
- Pedestrian Entrance
- Open Play Area
- Additional Parking (Unbuilt)*
- Tennis Courts (Unbuilt)*
- Tennis Practice Courts (Unbuilt)*
- Archery (Unbuilt)*
- Concession Building (Unbuilt)*
- Shuffleboard (Unbuilt)*
- Horseshoes (Unbuilt)*
- Multiuse Courts (Unbuilt)*
- Tot Lot & Playground (Unbuilt)*
- Picnic Area (Unbuilt)*
- Sled Run (Unbuilt)*
- Lighted Diamond Fields (Unbuilt)*
- Overlay Rectangle (Unbuilt)*
- Loop Trail (Unbuilt)*

**2014 MASTER PLAN NEW & REVISED ELEMENTS**

- Resource Protection Zones
- Off Leash Dog Area
- Fitness Stations
- Skate Spot
- Overlook Seating Area
- Vendor Pad
- Flex Program Space
- Revegetation
- Playground
- Upgrade Playing Fields
- Expand Garden Plots
- Expand Plant Nursery
- Expanded Parking

**Unbuilt 1974 Plan Elements Removed**

- Tennis Courts & Practice Wall
- Concession Building
- Shuffleboard and Horseshoes
- Multiuse Courts
- Sled Run
- Overlay Diamond Fields
- Overlay Rectangle Field

the Board of Supervisors recommends planting more trees within the open areas of the park, stating, “Construct bioretention areas in islands of both parking lots; plant trees between soccer fields and other locations... stormwater improvements should be incorporated into site improvement plans”. This tree planting effort has multiple benefits including addressing community environmental concerns, providing shade, filtering air pollution, reduced mowed areas, supporting wildlife, reduce water runoff, as well as providing visual interest. All trees to be planted should be of locally-common native species.

## **VII. DESIGN CONCERNS**

Implementation of the master plan will require that detailed design plans be prepared and submitted for approval prior to development by applicable governing agencies. These plans will be reviewed for applicable county, state, as well as federal codes and requirements, in effect at that time. These reviews ensure that the proposed facilities meet all applicable standards for traffic, parking, size, safety, stormwater management, environmental protection, and zoning with review by the respective agencies. To ensure that these plans meet the latest development standards, and to responsibly manage the costs associated with creating engineered designs, plans are created during the design phase that precedes construction, after funding has been appropriated. When site design, plan submittal, and development occur, the following concerns should be considered:

To ensure that important park resources are not further disturbed, facilities are intentionally located in areas of the park that have been recently disturbed by human activity. Distributing active uses within these areas allows for improved programming, circulation, and distribution through the site, greater protection, and less disturbance in the Resource Protection Zones (RPZs).

### **A. UNIVERSAL ACCESSIBILITY**

Park elements and facilities should comply with the Americans with Disabilities Act (ADA) wherever possible and feasible. This includes facilities and connections between different areas of the park, as per standards in effect at the time of construction.

### **B. PEDESTRIAN IMPROVEMENTS**

Provide safe pedestrian walkways adjacent to the entrance roads and parking areas, using pervious paving, where feasible.

### **C. SOILS & SLOPES**

Existing soils have various construction limitations, including: steep slopes, low strength, shrink swell potential, tendencies to cave, shallow bedrock, frequent high water tables, susceptibility to frost action or rutting. These attributes can be detrimental to locating buildings, playgrounds, or other structures that require footings, buried utilities, and stormwater facilities. A geotech study may be needed to determine the necessary geotechnical engineering and facility designs including the ultimate suitable locations.

#### **D. CULTURAL & NATURAL RESOURCE PROTECTION**

Franconia Park has a variety of important natural and cultural resources. To ensure that important park resources are not disturbed, facilities are intentionally located in developed or disturbed areas of the park. Distributing uses within these areas allows for improved programming, circulation, and distribution through the site. This results in greater protection, and fewer disturbances in the Resource Protection Zones (RPZs).

Protecting natural and cultural resources should be a primary consideration in any development. In many cases, these resources are not specifically marked to help ensure their protection. For this reason, resource management staff should be consulted before any ground disturbing activities occur within the park to ensure no impacts to resources will occur.

#### **E. VEHICULAR ACCESS & CIRCULATION**

Neighborhood concerns about park generated traffic were expressed during the master plan process. Planned entrance and circulation improvements are intended to reduce neighborhood impacts and allow for future growth in park visitation. As new facilities are designed and built, coordination with County and State transportation officials should occur.

As with any other public or private development, the Park Authority will meet all applicable county, state, and federal codes and requirements in effect at that time of development. These reviews ensure that the proposed facilities address potential impacts and meet all applicable standards for traffic, parking, safety, stormwater management, environmental protection, as well as zoning with review by the respective agencies.

#### **F. UTILITIES**

Aging utility lines to the park may not provide sufficient service to the park. These conditions should be considered during the design of new facilities. Rerouting or providing underground utilities should be considered. Careful coordination should be planned for utility work. Work in utility easement areas on parkland should be conducted by permit and monitored.

#### **G. PHASING**

Major park development is generally planned and funded through the Capital Improvement Program that is budgeted over a five year period. New facilities shown in the master plan are likely to be constructed in phases as funding becomes available. To facilitate any of the conceived uses, adequate park infrastructure, parking, stormwater management, and ADA access (within reason for a park setting), will be required preceding the implementation of these plan elements. A prioritized phasing plan should be created to guide future funding and development.

#### **H. FISCAL SUSTAINABILITY**

Economic realities require that public park funding be supplemented by revenue generated by park offerings, sponsorships, donations, and volunteerism. Fiscal sustainability within the park system and at Franconia Park is an essential component for the master plan implementation. The demand for facilities at Franconia Park

continues to grow and should be viewed as an opportunity to support the park within the framework of the Park Authority’s mission. The master plan revision envisions enhanced and expanded facilities necessary to support programming growth, update obsolete facilities, as well as protect resources that define Franconia Park. The park fiscal sustainability model should be used in conjunction with this master plan revision to strategically chart the park’s future. Enhanced fiscal sustainability will allow Franconia Park to address critical maintenance, operational, and stewardship needs by providing latitude in decisions as well as funding options. Together these plans will serve both the public and the Park Authority by providing a greater opportunity for fiscal sustainability while managing the inevitable needs for capitalized repairs and replacements.



## APPENDIX 1: SOILS TYPES AND CHARACTERISTICS

### a. Kingstowne

Soils of the Kingstowne series are dense, very deep, and well drained. Kingstowne soils are found on the tops of hills, shoulders, and backslopes. They are acidic, moderate strength soil, with a depth of 40 inches or greater to seasonably high water table. Surface runoff is very high to moderate, with moderate to very slow hydraulic conductivity (permeability). These soils have low to moderate shrink-swell potential, but are affected by frost action, with moderately unstable excavation walls. Due to these attributes, Kingstowne soils have very limited suitability, for local roads, or streets, landscaping and fairways (due to density). They have somewhat limited suitability for building structures, shallow excavations, campsites, picnic areas, playgrounds, or excavated ponds. These soils have a slight potential for erosion with a moderate rutting hazard, from natural surface trails, roads, or staging areas, making them suitable for these uses.

### b. Marine clay

Marine clay soils are very deep, poorly drained, with slow permeability and low runoff. These soils occur on nearly level or gently sloping plains and slightly convex summits, with a shallow depth to saturated zone. Marine clay has a high shrink-swell potential, low bearing strength, and can cause slope instability, resulting in landslides. Due to these attributes, marine clay have very limited suitability, for local roads, streets, building structures, shallow excavations, embankments, or playgrounds. This is an overlay area, where the main soil type should be referenced as well.

### c. Marumsco

Marumsco soils are very deep and range from moderately well to poorly drained, with slow permeability and runoff. Marumsco are on level to gently sloping terrain. Marumsco are very acidic, low strength soil, with a shallow depth to saturated zone, seepage with bottom layer, and high shrink-swell potential. They are affected by frost action, with unstable excavation walls and caving cut banks. Sassafras-Marumsco complex soils are categorized as “Unstable”, since they are susceptible to instability on natural slopes. A potential exists for slope movement to be accelerated by construction activities. Slope stability analyses must be performed using acceptable engineering methods prior to development. Due to these attributes, Marumsco soils have very limited suitability for building structures, local roads or streets, shallow excavations, embankments, excavated ponds, campsites, or playgrounds. They have somewhat limited suitability for landscaping, fairways, picnic areas. These soils have a severe potential for erosion from natural surface trails, roads, or staging areas, with a severe rutting hazard, making them only moderately suitable for these uses.

### d. Meadowville

Soils of the Meadowville series are very deep and moderately well to well drained. Permeability is moderate to moderately rapid with slow to moderate runoff. Meadowville soils are on undulating to rolling uplands, occurring around the heads of drainage ways, in saddles, depressions, on concave or slightly convex slopes. Meadowville soils are an acidic, low strength soil, with a shallow depth to saturated

zone, seepage with bottom layer, and shrink-swell potential. They are affected by frost action, with unstable excavation walls and caving cut banks. Due to these attributes, Meadowville soils have very limited suitability for excavations, septic tank absorption fields, or excavated ponds. They have somewhat limited suitability for building structures, local roads, or streets. These soils have a slight potential for erosion from natural surface trails, roads, or staging areas, with a severe rutting hazard, making them only moderately suitable for these uses. Uses are unlimited for landscaping, campsites, trails, picnic areas, and playgrounds.

e. Neabsco

Soils of the Neabsco series are very deep, moderately well to well drained, with very slow permeability, and slow to moderate runoff. They occur on broad drainage divides with gentle to moderate slopes. Neabsco soils are strongly acidic, droughty, low strength soil, with a shallow depth to hardpan and saturated zone, with seepage in the lower layer. They are highly affected by frost action, with unstable excavation walls, and caving cut banks. Due to these attributes, Neabsco soils have very limited suitability for building structures, local roads or streets, shallow excavations, embankments, excavated ponds, lawns, fairways, landscaping, campsites, picnic areas, and playgrounds. These soils have a moderate potential for erosion from natural surface trails, roads, or staging areas, with a moderate to severe rutting hazard, making them only moderately suitable for these uses.

f. Sassafras

Sassafras soils are very deep, ranging from poorly drained to well drained. Permeability is moderate high to high with negligible to moderate runoff. Sassafras soils are found in plains, uplands, and agricultural fields, on flat to very steep slopes. Sassafras soils are a strongly acidic, very low strength soil, with a shallow depth to saturated zone, and seepage with bottom layer. They are affected by frost action, with unstable excavation walls and caving cut banks. Sassafras-Marumsc complex soils are categorized as “Unstable”, since they are susceptible to instability on natural slopes. A potential exists for slope movement to be accelerated by construction activities. Slope stability analyses must be performed using acceptable engineering methods prior to development. Due to these attributes, Sassafras soils have very limited suitability for excavations, excavated ponds, and playgrounds (slope dependent). They have somewhat limited suitability depending on slope, for building structures, local roads or streets, landscaping, fairways campsites, paved trails, and picnic areas. Care should be used when considering placing of facilities on these soils when the slope is greater than 2 percent. These soils have a moderate to severe potential for erosion from natural surface trails, roads, or staging areas, with a moderate rutting hazard, making them only moderately suitable for these uses, depending on slope.

g. Sumerduck

Soils of the Sumerduck series are very deep, ranging from moderately well to poorly drained, with moderately slow permeability, and negligible to medium runoff potential. Sumerduck soils are often found in drainage ways with slopes of 0 to 8 percent that are subject to frequent, extremely brief, flash floods, with little deposition. They are acidic, low strength soils with a moderately high shrink-swell

potential, potentially hydric with a shallow depth to high water, seepage, are affected by frost action, with moderately unstable excavation walls, and caving cut banks. Due to these attributes, Sumerduck soils have very limited suitability for local roads or streets. They have somewhat limited suitability for building structures, shallow excavations, campsites, picnic areas, playgrounds, embankments, or excavated ponds. These soils have a moderate potential for erosion with a severe rutting hazard, from natural surface trails, roads, or staging areas, making them moderately suitable for these uses. They are suitable for lawns, landscaping, fairways, and paved paths.

h. Urban Land

Soil classified as Urban Land consists entirely of human disturbed soil on land that has been developed or altered, including “made land” such as “cut or fill”. Specifically, disturbed soils are soils that have been mixed, graded, compacted, or altered, as well as man-made surfaces such as asphalt pavement, concrete, rooftop, or other impervious surface. Urban Land-Disturbed soil complexes usually exist in dense developments as well as less dense, primarily residential areas of the county where significant soil disturbance exists, but undisturbed natural soils are still present in back and front yards. In some conditions, urban land can have a very low infiltration rate, causing all precipitation landing on it to runoff.

## APPENDIX 2: FAIRFAX COUNTY CULTURAL RESOURCE CONTEXT

### 1. Native American Prehistory (Prior to ca. AD 1650)

Native American settlement in Fairfax County, including the area of Franconia Park, is comprised of three general periods, reflecting changes in the materials used by Native Americans that indicate shifts in how prehistoric peoples satisfied subsistence needs and organized social structures. These time periods are as follows:

- Paleo-Indian period. The initial occupation of Fairfax County by Native Americans is classified at the Paleo-Indian period from approximately 16,000 B.P. to ca. 10,000 B.P. It was characterized by a cold, moist climate resulting in flourishing grasses and evergreen vegetation. Native American life was characterized by small nomadic bands displaying a heavy emphasis on hunting supplemented by general foraging. Evidence of human habitation from this time period includes stone fluted points, scrapers, flake tools, wedges, and hammer stones.
- Archaic period. While life way still characterized by nomadic hunting bands, environmental changes ensuing from a progressively warming climate, resulted in increased reliance on and diversification in gathering during the Archaic period from ca. 10,000 B.P. to 1000 B.P. This period is characterized by advancements discernible in the archaeological record by the appearance of atlatl stones, axes, pestles & mortars, progressing to soapstone vessels; shell ornaments; bone needles, fish hooks; and copper artifacts. Increased appearances of ground and nutting stones reflects the greater emphasis on gathered items to meet dietary needs.
- Woodland period. The advent of floral domestication, horticulture, and later agriculture, mark the shift to the Woodland period ca. 1000 B.P. to A.D. 1650. During the Early to Middle Woodland periods, characterized by a climate shift from hot and dry to a cooler, moist climate, Native Americans intensified hunting and gathering activities while beginning experimentation with cultigens. The first clay pottery appears during this time, reflecting increasingly sedentary settlement patterns. Changes in the design of stone projectile points, reflect the introduction of bow and arrow technology. Reliance in cultigens, in particular corn, beans, and squash, marks the shift into the Late Woodland, along with a shift to the current local climate. The adoption of agriculture resulted in an intense population increase allowing for the formation of villages with development of complex social and political organization. When European colonists arrived in the seventeenth century, Native American cultures formed in tribes, each possibly occupying several villages. Tribal alliances and intertribal rivalries, often reflecting distinct cultural differences such as language and belief systems, had also developed.

### 2. Historic (ca. AD 1650 – Present)

European, specifically English, settlement in Northern Virginia was extremely sparse throughout most of the seventeenth century. During this period, the area that would become Fairfax County was frontier land. Colonization increased during the late seventeenth and early eighteenth century with the European population of Northern Virginia dramatically increased, with the entire Virginia colony developed on a tobacco-based economy. Colonists favored tobacco cultivation over manufacturing enterprises,

often becoming reliant on importation rather than production of basic goods. The extremely labor-intensive tobacco crop resulted in the widespread use of European indentured servants during the late-seventeenth and early eighteenth centuries. While the need for labor steadily increased, the economy in England improved, resulting in diminished willingness of young English men and women to accept terms of indenture, resulting in the Virginia Colony turning to African slaves to meet the labor demands.

The County of Fairfax was officially formed in 1742, out of the northern portion of Prince William County, which itself had been carved out of Stafford County. Beginning in the mid-eighteenth century, planters increasingly diversified crops, in particular with the additions of wheat and corn, rather than relying on tobacco monoculture. Although tobacco cultivation and dependence on slave labor remained central components of the regional economy, their importance had diminished by the American Revolution.

Located along the Potomac River and containing several of the heights overlooking Washington D.C., Fairfax County was of immense strategic interest during the Civil War. It was also the last line of defense between the Union capital city and the rebel Confederate territories. As a result, thousands of Union soldiers were stationed in Fairfax and the county witnessed intense war-related activity, including a large military encampment in the vicinity of Franconia.

After the Civil War, Fairfax County returned to a primarily agrarian nature. Through the late-nineteenth and early twentieth century, Fairfax was a major dairy production region. As discussed above, farming had ceased on the northern portion of what is now Franconia Park prior to 1900, with successional forest growing in by 1937, while farming continued on the southern portion until the 1950s. The onset of the Second World War and subsequent Cold War dramatically altered the character of the county. The massive increase in the size of the federal government during this period resulted in an influx of employees and their families into the region, resulting in the development of suburban centers to meet the housing demand along with the associated transportation infrastructure. These events directly impacted what is now Franconia, which was used as a staging and deposit area during construction of the Capital Beltway I-495, resulting in much of the flat area occupied by the parks facilities today.