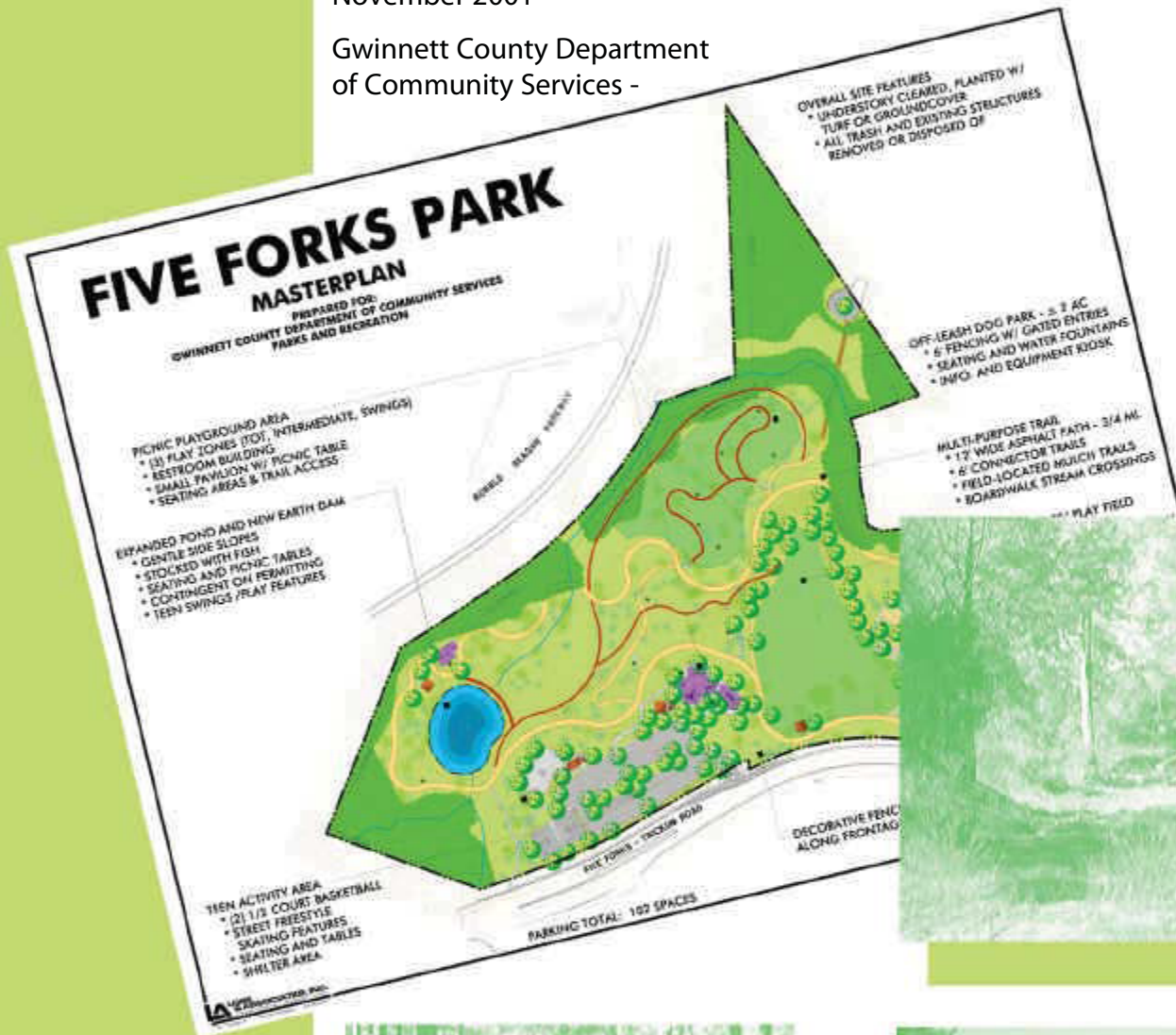


Ronald Reagan At Five Forks Park Master Plan

The final name for this park was provided after the conclusion of the master planning period. During the master planning phase, Five Forks Park was the working site name. All references below to Five Forks Park are for Ronald Reagan at Five Forks Park.

November 2001

Gwinnett County Department
of Community Services -



Prepared by

Lose & Associates, Inc.

Landscape Architecture

Architecture

Engineering



Five Forks Park Master Plan

November 2001

Gwinnett County Department of Community Services -
Parks and Recreation Division

2001 Gwinnett County Board of Commissioners:

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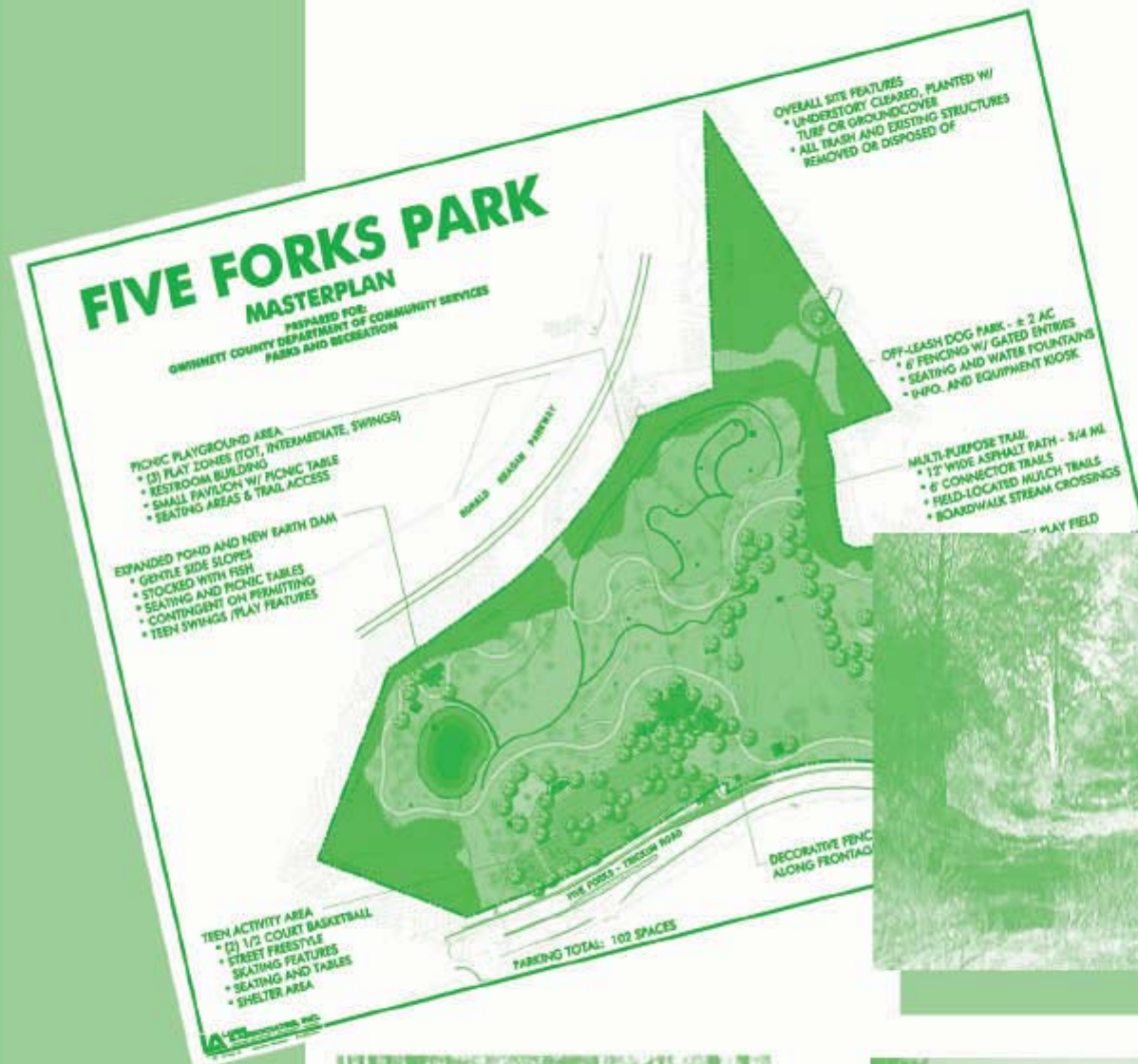
Executive Summary

Five Forks Park is a 24.6-acre passive community park planned in southeast Gwinnett County. This park is intended to support a wide variety of passive recreation opportunities that cater to all age groups. This facility will serve the neighborhoods surrounding the property, as well as visitors to the adjacent library.

The park will be the first community-sized passive recreation park in the Gwinnett County system. Although less than 25 acres in size, the proposed park will offer a complete spectrum of passive recreation opportunities. A wide cross-section of age and interest groups, including senior citizens, teens, mothers, fathers and dog owners, will have activities and features designed for their interests. Park visitors will have the opportunity to walk, run, or bike through a $\frac{3}{4}$ mile paved trail, or participate in informal sports in the free play field. Teens will have a play zone that includes two half-court basketball courts, a social “hang-out” area and a small freestyle skating arena. Smaller children will have playground structures and swings. Senior citizens will have a special zone with bocce, shuffleboard, horseshoes and a picnic social area.

Five Forks Park will provide Gwinnett County with a new standard by which it can serve its constituents and bring generations together for play and socialization.

Section I: Introduction

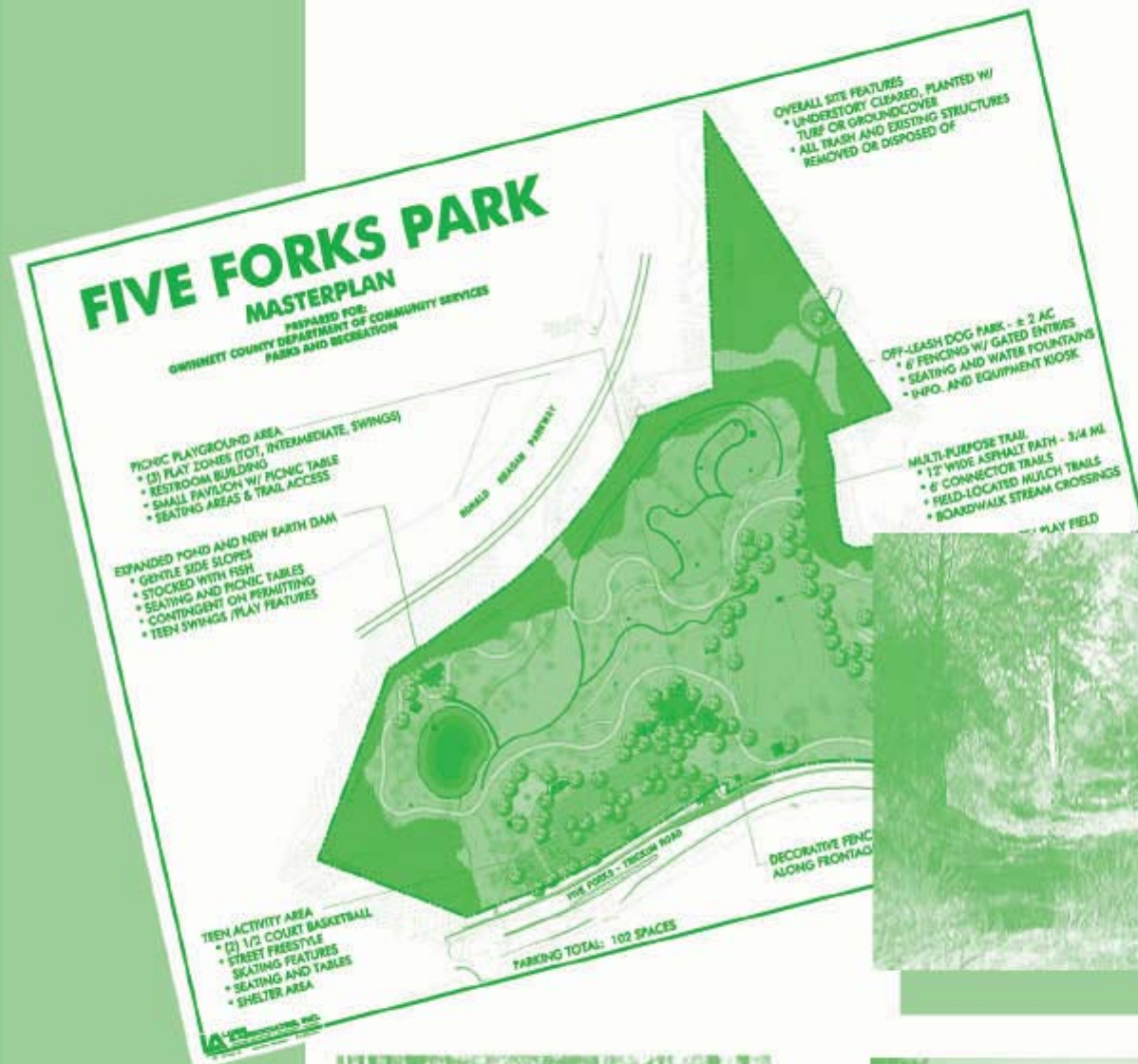


Introduction

Gwinnett County, Georgia is one of the fastest growing counties in the United States. The County's estimated population in 1995 was 437,000 and the projected population for 2010 is 711,000—an increase of over sixty percent in fifteen years. This anticipated growth is expected to make Gwinnett County the region's second most populous county. It is important to note that much of the County's population growth is expected to occur in Park District I (southern district)—the area in which Five Forks Park is proposed. This projected population increase will result in a significant strain upon existing park facilities in the southern district and Five Forks Park will provide the community park facility to be needed in the very near future.

In 1986, a Countywide Comprehensive Recreation Master Plan study was completed by EDAW and again in 1996 by Lose & Associates, Inc. According to the 1996 Master Plan, the Citizen's Steering Committee identified the acquisition and development of new community parks as the second highest priority for future improvements. Additionally, extensive public input identified a desire for expansion of cultural arts programs and facilities, nature trails and ball fields. The plan further recommended that community parks be developed with multi-purpose trails, teen facilities, playgrounds, picnic areas and open space. These program items represented five of the top six needs for park system development, responding directly to both the 1996 Recreation Master Plan and the community's expressed recreational needs and desires. The 2000 CIP Plan, produced by EDAW, called for the abandonment of the neighborhood school park classification, and suggested that the "special purpose park" classification fill the need for smaller parks in the County. To further define these small parks, a subcommittee of the 2000 CIP Citizens Steering Committee was formed. This subcommittee helped to define the Passive Community Park. (See Appendix F for the Passive Community Park position paper) Five Forks Park will help to fill the County's need for a smaller, passive park. The land was acquired for Five Forks Park using proceeds from the 2001 Gwinnett County Special Projects Sales Tax Program (SPLOST); Five Forks Park's construction will be funded using proceeds from the 2002 SPLOST.

Section II: Site Analysis



Site Analysis

Summary

The Five Forks Park site is located on approximately 24.6-acres in southeast Gwinnett County on Five Forks Trickum Road near Jimmy Carter Boulevard. (see Figure 1) The



Figure 1

site is bordered on the southwest by Ronald Reagan Parkway, a four lane divided highway which carries a significant amount of traffic at all times of the day. To the north, the site backs up to both the Bankston Creek Estates and Churchill Commons neighborhoods. There is an existing residential property to the south. The most logical location for entry to the park will be off of Five Forks Trickum Road, which serves as the site's eastern border.

The site's topography and soil varies greatly from one end to the other. The soil consists of everything from unconsolidated fill material in the front, to lowland fertile soil in the rear and against the unnamed stream that also serves as a physical border for much of the western

property line. The unnamed stream to the north provides a pristine visual element and is home to many different types of native plants and wildlife. The existing vegetation on site consists mainly of young pines, some hardwoods and thick understory shrubbery adjacent to the stream along the western-most border. There are scattered masses of large trees throughout the undisturbed portions of the site's interior. Some invasive species such as honeysuckle, privet, and kudzu line the lowland areas and some of the areas disturbed in the construction of Jimmy Carter Boulevard to the west of the site. In the southwest corner of the site, there is an existing 7500 SF pond that has potential to become a park feature. There are three homes along the frontage of Five Forks Trickum Road and one abandoned home in the southwest corner near the pond. The County has recently acquired these homes and plans to remove them to make way for the new park.

The following sections present a more detailed analysis of the site's climate, topography, vegetation, soils, subsurface conditions, hydrology and site constraints and opportunities.

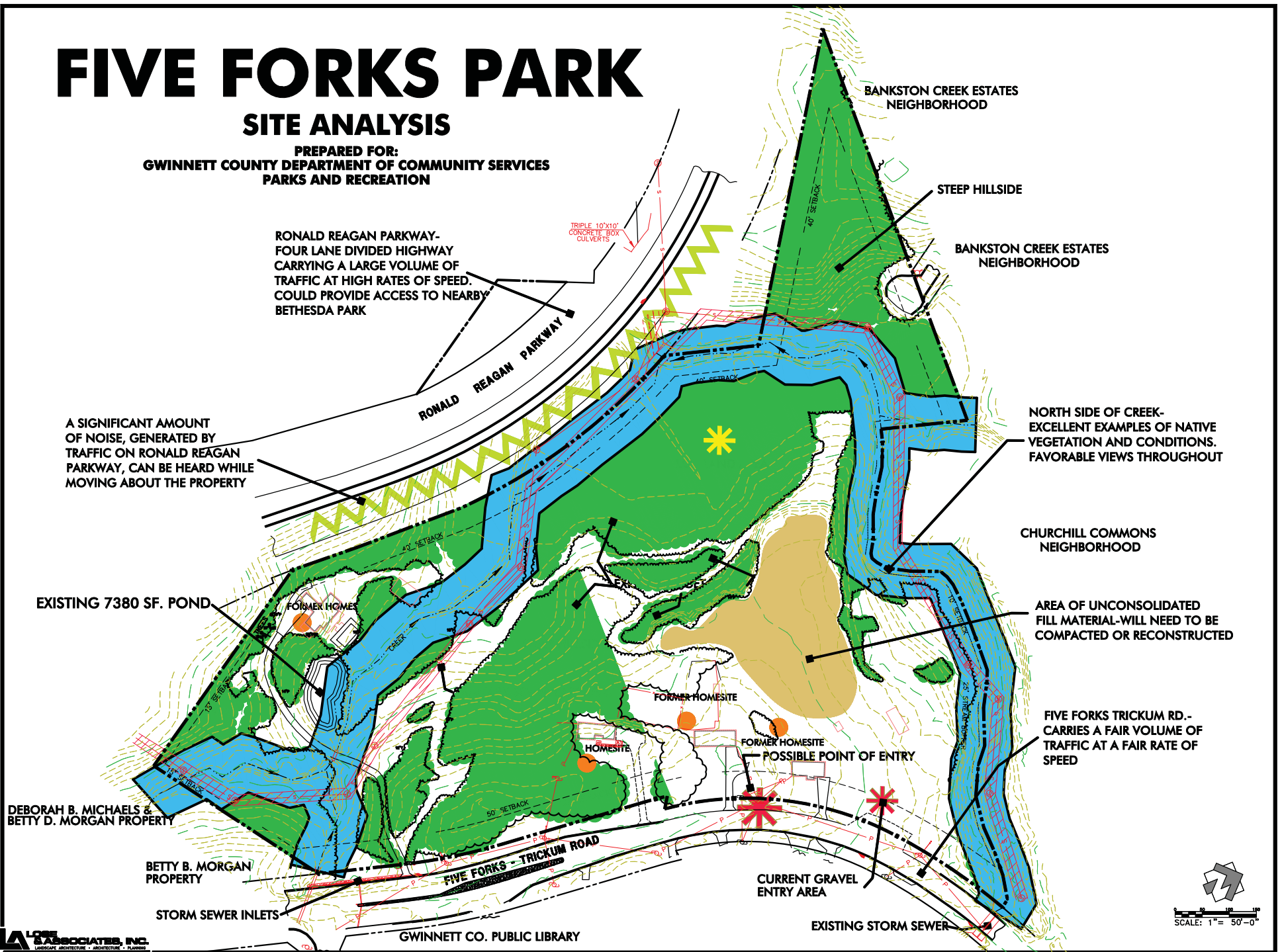
Climate

Gwinnett County has a humid, subtropical climate characterized by long, hot summers (average summer temperature 77°) and influenced by moist, tropical air from the Gulf of Mexico. Winters are cool and moderate (average temperature 44°) and significant cold spells generally last for only one or two days. Precipitation is heavy throughout the year and results mainly from afternoon thunderstorms. Total annual precipitation is slightly more than 50 inches (51.3 inches in 2000).

FIVE FORKS PARK

SITE ANALYSIS

PREPARED FOR:
GWINNETT COUNTY DEPARTMENT OF COMMUNITY SERVICES
PARKS AND RECREATION



Topography

In general terms, the park site has fairly shallow slopes, all draining to the two creeks on the property. The accompanying analysis (see Slope Analysis plan) illustrates areas of slope grouped into four categories:

- 0-2 percent (yellow)
2.79 acres or 11.3% of the developable site
- 2-5 percent (green)
5.62 acres or 22.7% of the developable site
- 5-8 percent (green)
4.20 acres or 17.0% of the developable site
- 8-12 percent (orange)
5.05 acres or 20.4% of the developable site
- over 10 percent (red)
7.07 acres or 28.6% of the developable site

The highest elevation on the site is 906.7' on the hilltop directly across from the exit of the library parking lot on Five Forks Trickum Road. The steepest slopes on the site are in the banks of the creek on the north and west ends of the site, and in the slopes off of the area of unconsolidated fill material in the north-center of the property.

Vegetation

Until the arrival of European settlers three hundred years ago, the Georgia area was predominantly forested. Agricultural and logging practices have cleared much of the land, although about 60 percent of the state remains under forest cover. The forest in the Piedmont region is mainly associations of oak and pine—the areas of the Five Forks Park site that have not been farmed are what could be termed a White Oak-Hickory forest. Refer to the Vegetation Inventory plan.

The sequential change in vegetation that has occurred on the Five Forks Park site was induced by human intervention. Most of the property on the north side of the unnamed tributary consists of forested land that has many young trees and evidence suggests that this land was cleared sometime after World War II. These young trees in the uplands make up a successional forest with many pines mixed with hardwoods.

The areas that previous homesites were located along Five Forks Trickum Road have some large oaks and cedars that were planted as landscaping around the houses. These trees are rather large and in very good condition and, if possible, will be retained for the park.

Those specifically identified are:

Major Trees

*Black Walnut

*Eastern Red Cedar

*Hickories-Bitternut, Mockernut, Pignut and Shagbark

*Maples-Red and Sugar

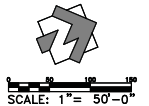
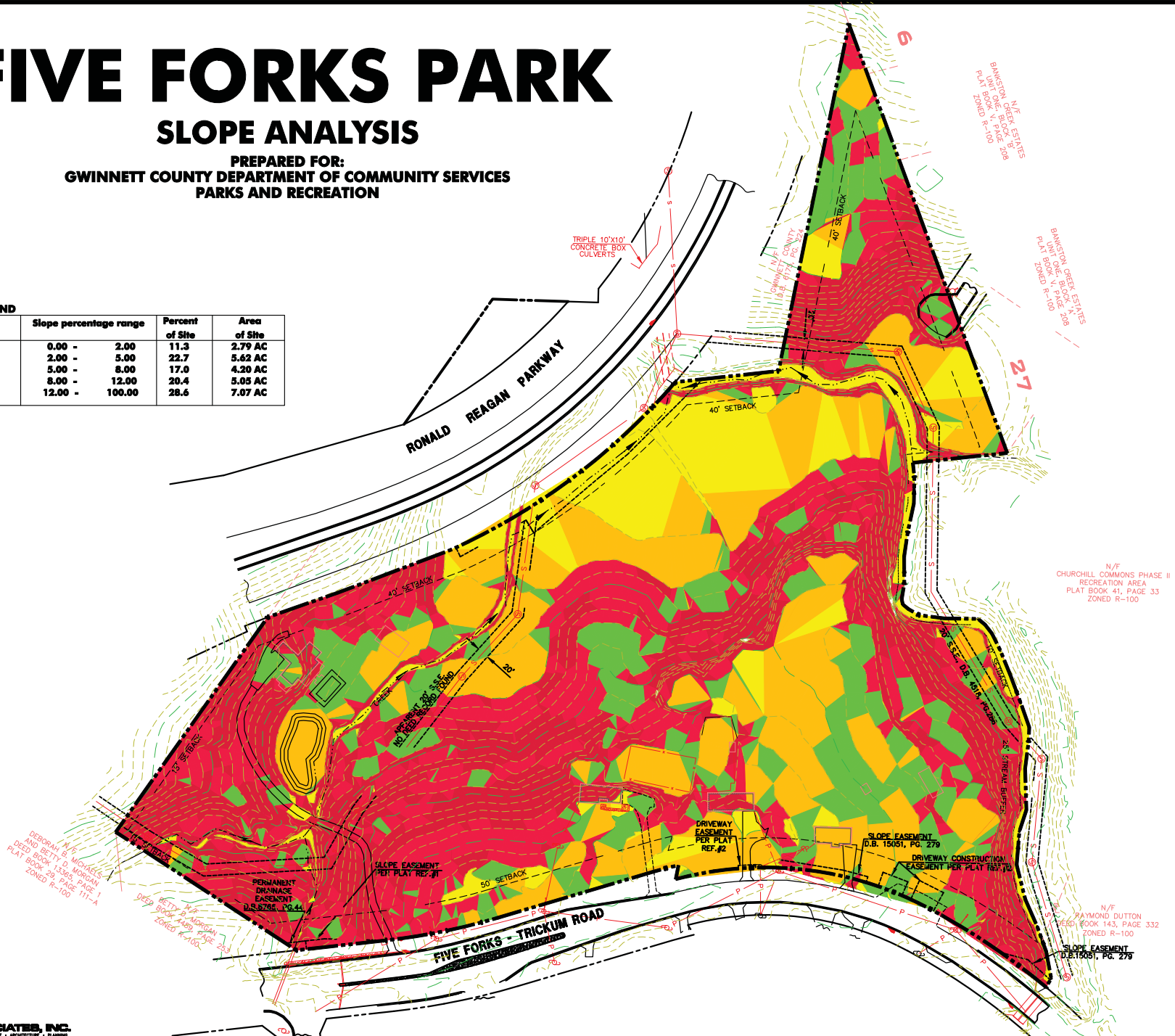
FIVE FORKS PARK

SLOPE ANALYSIS

PREPARED FOR:
GWINNETT COUNTY DEPARTMENT OF COMMUNITY SERVICES
PARKS AND RECREATION

LEGEND

Key	Slope percentage range	Percent of Site	Area of Site
Yellow	0.00 - 2.00	11.3	2.79 AC
Light Green	2.00 - 5.00	22.7	5.62 AC
Green	5.00 - 8.00	17.0	4.20 AC
Dark Green	8.00 - 12.00	20.4	5.05 AC
Red	12.00 - 100.00	28.6	7.07 AC



- *Oaks-Blackjack, Cherrybark, Chestnut, Chinkapin, Post, Scarlet, Shumard, Red and White
- *Pines-Loblolly, Shortleaf and Virginia
- *Sweetgum
- *Yellow-Poplar

Associated Trees, Shrubs and Vines:

- *Blueberry
- *Eastern Redbud
- *Flowering Dogwood
- *Native Azalea
- *Poison-Ivy
- *Sassafras

Herbaceous Plants:

- *Elephant's Foot

In addition to the plant material typical of Oak/Hickory forests, a different plant habitat was identified in the lowlands and floodplain areas of the site. These lowland areas are located in the floodplain of the unnamed creeks on the northern portion, and near a drainage creek on the western edge of the property. In these locations, the woods are spotted with larger climax trees and some areas of thick underbrush. The associated floodplain is covered with privet, thorny thicket, honeysuckle and other invasive plants along the edges of the creeks and at the edge of the floodplain woodland. The interior of this zone is open and shaded.

The north side of the unnamed tributary property adjacent to Tony Drive has also been forested within the last 20-30 years, and a 20-30' wide swath has been cleared for a sanitary sewer easement. These trees are planted on a relatively steep hillside and the understory is fairly thick, providing a natural screen from the adjacent homes.

Soils and Subsurface Conditions

In June of 2001, a subsurface exploration and engineering recommendations report was prepared and submitted to the County by Matrix Engineering Group, Inc. According to this report, eighteen (18) soil test borings were performed in the approximate location of the area of unconsolidated fill material. All borings were drilled to refusal or to 20 feet below the existing surface. (See Appendix D for subsurface exploration report.)

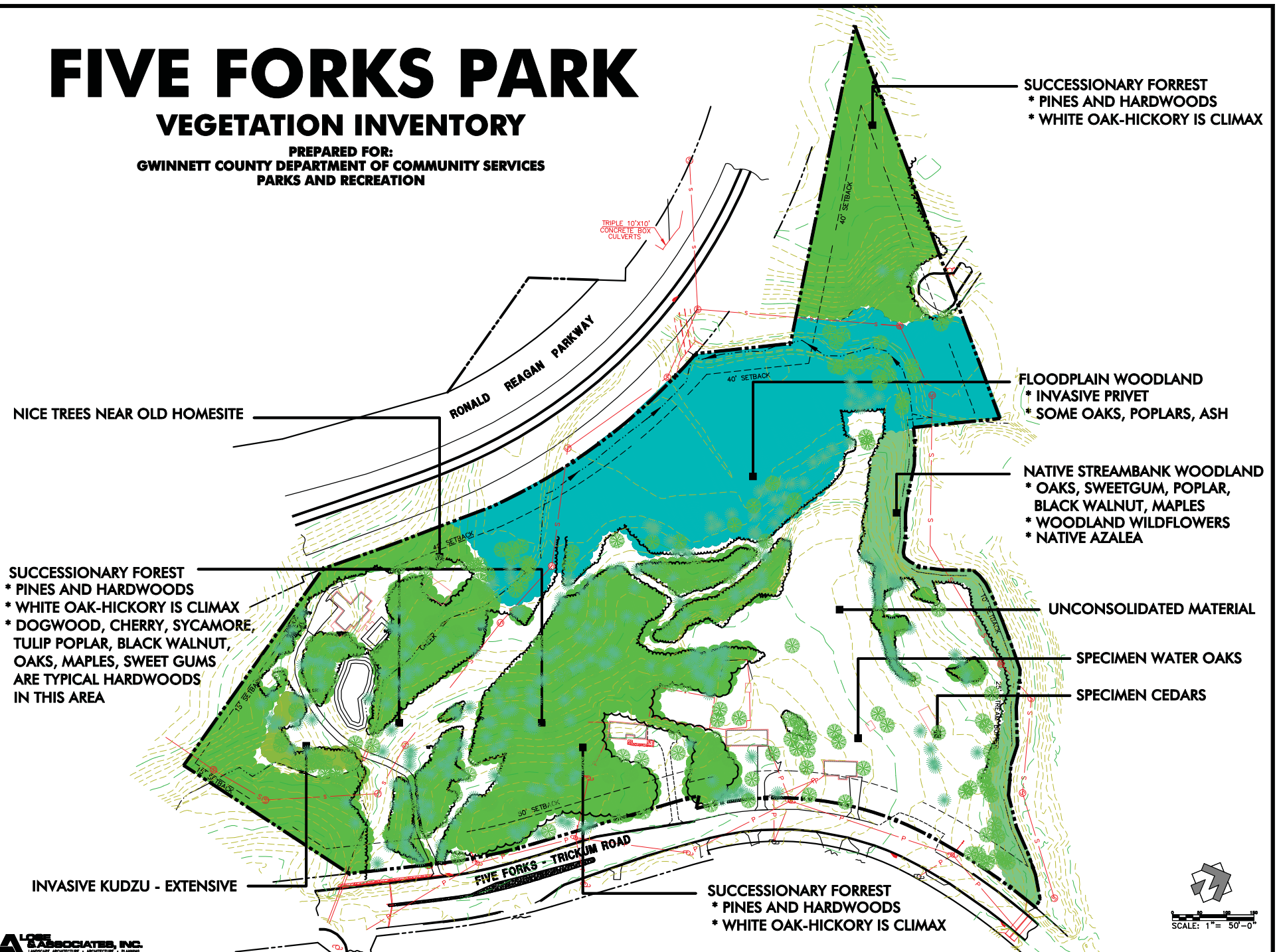
Matrix also interviewed the former property owner, Mr. James Moon, who indicated that his family had owned the property for approximately 66 years. The primary land use was for farming and agriculture. He also indicated that his son had used the property for storing and selling soil as fill. Mr. Moon added that his son had allowed dumping of construction debris, such as concrete and asphalt, as evidenced by the area of unconsolidated fill material.

According to the Matrix report, this area of unconsolidated fill material will not allow for substantial foundation or parking lot installations in this area. This fill material will

FIVE FORKS PARK

VEGETATION INVENTORY

PREPARED FOR:
GWINNETT COUNTY DEPARTMENT OF COMMUNITY SERVICES
PARKS AND RECREATION



need to be remediated by stripping as much as five feet of material and replacing it with engineered fill material that has been properly compacted in order to support slabs and foundations. Please note the recommendations in the subsurface exploration report in the appendix of this Master Plan.

The following soils were delineated from the U.S. Department of Agriculture Soil Conservation Service maps of Gwinnett County, Georgia dated 1966, and from the Update for the Soil Survey of Gwinnett County, Georgia, reprinted in 1990

- Cfs – Chewocla soils, frequently flooded, poorly drained
- Cos – Congaree soils, frequently flooded, poorly drained
- MCD – Masella clobby loam – 6-15% slopes
- MCF – Masella clobby loam – 15-45% slopes
- PgE2 – Pacolet sandy clay loam, well drained, 15-25% slope
- GeB2 – Gwinnett clay loam, well drained, 2-6% slope
- GeC2 – Gwinnett clay loam, well drained, 6-10% slope
- GeE2 – Gwinnett clay loam, well drained, 10-25% slope

All of the above soils, except the Cfs and Cos series soils, will be suitable for construction. See Soils Analysis plan graphic for location on the property.

The Cfs and Cos soils tend to be associated with wetlands, intermittent streambeds and flood plains. The areas where these types of soils are found will not be suitable for construction of any major recreation features, except for trail surfaces and boardwalks.

Hydrology

The 24.6-acre Five Forks Park site features two creeks, with one flowing north to south and one flowing east to west. One unnamed creek flows through the northern most border of the property. The other unnamed creek is in the south and western portion of the site; shallow, flat beds and moderate to steep side slopes characterize the creeks.

The analysis of soil borings taken by PSI indicated the presence of groundwater at several boring locations, most of which occur adjacent to the creek beds or the pond area. In these areas, high groundwater may be present. These lowland areas should be expected to receive soil stabilization and special attention to earthwork to ensure proper support of paved surfaces. Earthwork in the lowland areas must be designed to allow construction above ground-water levels to avoid overstressing weak alluvial soils.

Opportunities and Constraints

Both the natural and human-caused physical attributes of the site will influence the eventual park design. Therefore, it is considered critical to identify site opportunities and constraints prior to beginning the development of conceptual designs. By doing so, natural opportunities can be maximized and constraints can be minimized, or mitigated, as design alternatives are explored.

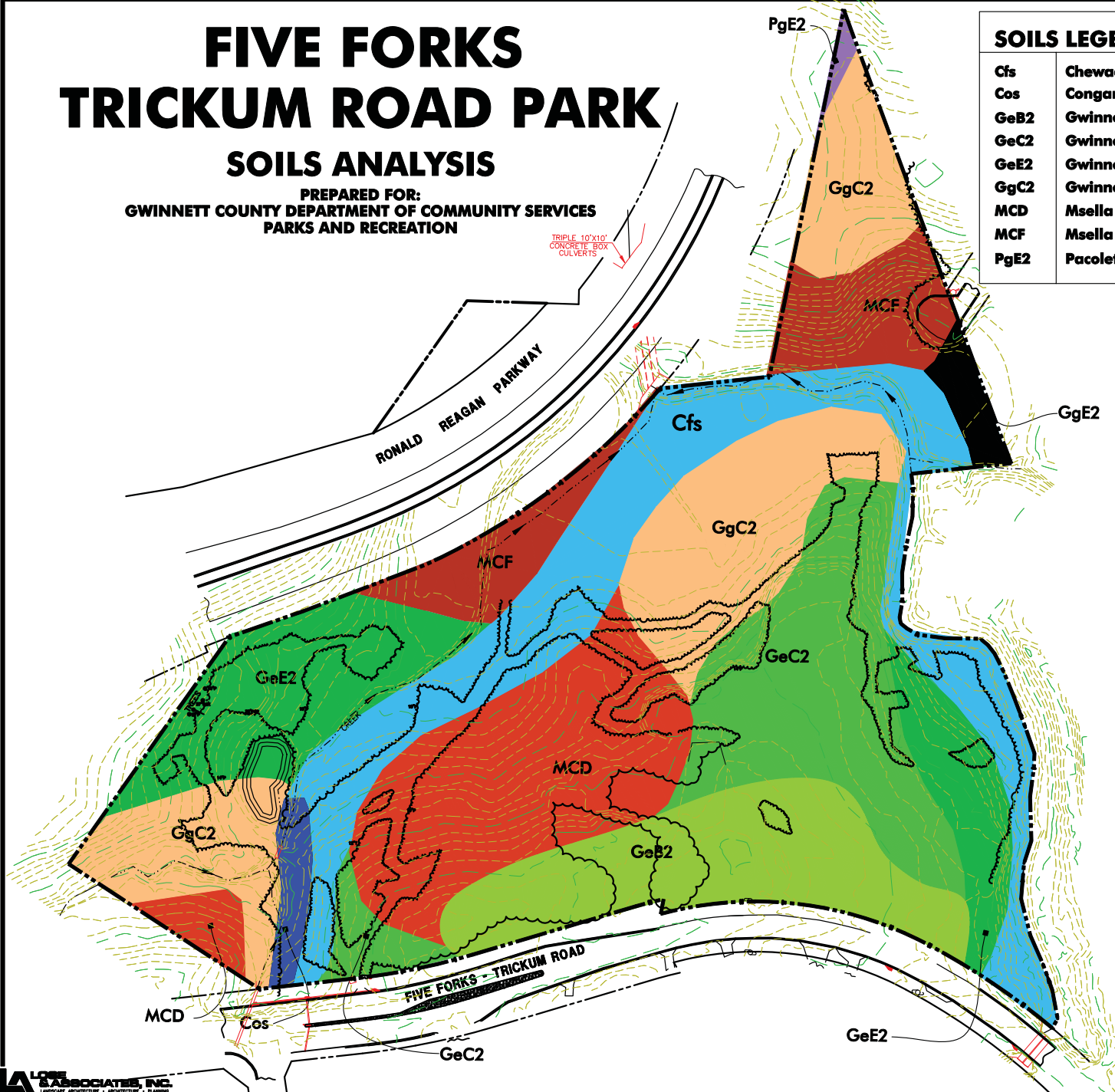
FIVE FORKS TRICKUM ROAD PARK

SOILS ANALYSIS

PREPARED FOR:
GWINNETT COUNTY DEPARTMENT OF COMMUNITY SERVICES
PARKS AND RECREATION

SOILS LEGEND

Cfs	Chewacla soils, frequently flooded
Cos	Congaree soils, frequently flooded
GeB2	Gwinnett clay loam, 2-6% slopes, eroded
GeC2	Gwinnett clay loam, 6-10% slopes, eroded
GeE2	Gwinnett clay loam, 10-25% slopes, eroded
GgC2	Gwinnett loam, 6-10% slopes, eroded
MCD	Msella clobby loam, 6-15% slopes
MCF	Msella clobby loam, 15-45% slopes
PgE2	Pacolet sandy clay loam, 15-25% slopes, eroded



Site Constraints

Potential Access

There are several likely points of access to Five Forks Park along Five Forks Trickum Road. Vehicular access from the property bordering Tony Drive will not be explored, due to the physical location in a residential neighborhood and the cost of constructing a roadway to the remainder of the park site. Five Forks Trickum Road is a road heavily traveled by commuter and local residential traffic, as well as traffic seeking access to nearby Ronald Reagan Parkway. Neighbors of the Five Forks Park property have requested that the design team propose park facilities and activity zones with safe buffer zones adjacent to this busy roadway corridor. Five Forks Trickum Road is, however, the point of access requested by the Citizen's Steering Committee. The Committee also requests that the frontage along Tony Drive not have vehicular access to the park so that the park does not increase vehicular traffic in this residential neighborhood.

The main park access point cannot be aligned with the library entry/exit drive due to the concrete median in Five Forks Trickum Road. A point at the apex of the curve in Five Forks Trickum Road was chosen, for safe ingress/egress and site distance purposes.

Unconsolidated Fill Material

A portion of the site, approximately 4.5 acres, has been used over the years as a dumping site for fill material from various construction/demolition jobs in the area. According to the PSI geotechnical field report, this material was not properly compacted or laid in lifts, as would be required if this were a situation where the property owner intended to construct anything structural over this portion of the site. Therefore, no buildings, parking lots, or water retention measures will be able to be constructed in this zone, unless the material is removed, replaced and compacted in lifts, per the recommendation of a licensed structural engineer.

Floodplain and Creek

A portion of the site is covered by floodplain, as indicated by both site observation and through research with FEMA mapping. The floodplain covers approximately 5.5 acres, of the entire site. This greatly reduces the overall developable zone for the site, and will reduce activities in this zone to features that will not impact earthwork and that can withstand the occasional flood situation. Due to the nature of the passive park by design, this should not impact the park's activities and programming.

Site Opportunities

Single Access

Although the potential access on Five Forks Trickum Road was previously described as a site constraint, it also offers an opportunity. By restricting ingress and egress to one location, security and control factors can be greatly enhanced. A single entry point is desired for the vehicular access to the parking lot.

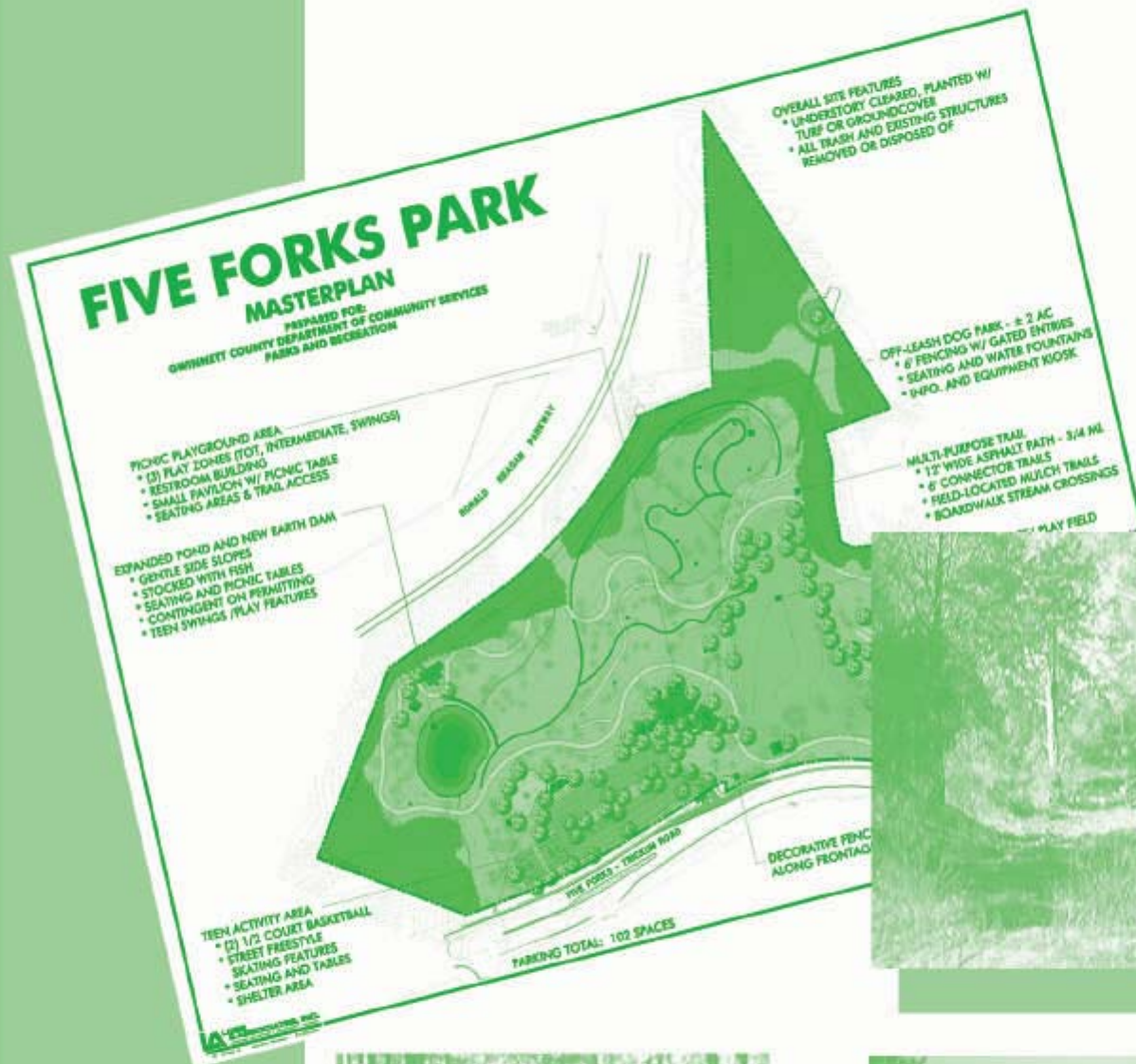
Pond

The Five Forks Park site has one small (7500 SF) pond in the southwest central portion of the site. If it is determined that the pond has excess capacity, or that its capacity can be increased, consideration can be given to raising the constant level of the pond to a depth sufficient to provide suitable habitat for fish, creating additional recreation opportunities.

Natural Resources

Although portions of the site will be disturbed by the proposed park development, natural areas will be preserved as much as possible. In particular, the floodplains associated with Five Forks Trickum Road and the unnamed tributaries will be largely untouched and will offer opportunities for walking trails through stands of native vegetation. A variety of passive recreational activities, including nature study, bird watching and photography, can occur in the shaded floodplain zones of the site. Native plants, particularly ferns and various wildflowers, can be retained throughout the site in lowlands or in thickly vegetated areas on the perimeter of the western portion of the site.

Section III: Public Input



Public Input

Specific program elements to be incorporated at Five Forks Park were arrived at via an open citizens' input meeting. At this meeting, Gwinnett County officials displayed the park property, gave a brief overview of the potential carrying capacity of the site and asked attendees for input. A survey form was distributed and Lose & Associates tabulated the completed forms. The results of this survey appear in Appendix C. In order of importance, the citizens designated the items shown below as their top 15 choices:

1. Multi-purpose Trail System
2. Nature Trails
3. Fishing Pond
4. Picnic Pavilion – with Restrooms and Grills
5. Retained Meadow and Woodland
6. Playgrounds
7. Irrigated Turf Field
8. Dog Park
9. Outdoor Senior Activities
10. Skate Park
11. Splash Ground
12. Sidewalks
13. Activity Building
14. Bethesda Park Connection
15. Basketball Courts

Also at this public meeting, citizens were asked to volunteer for a Steering Committee to help guide Lose & Associates and Gwinnett County officials in the decision-making process involved in the design and choice of features for Five Forks Park. The Citizens' Steering Committee, as selected from these volunteer applications, was later involved in the initial programming session. (See Appendix B.)

A few weeks after these discussions, the Lose & Associates Project Manager and the Principal Planner of the Gwinnett County Parks and Recreation Department conducted an all-day tour of relevant Gwinnett County park facilities. Both the design consultant and members of the Citizens' Steering Committee attended the tour. The purpose of the site visits was to identify current Gwinnett County park uses and design standards, and to share ideas related to the eventual program for Five Forks Park. Additionally, the tour provided an opportunity for the future users of the park to explore options and convey to the designers the elements that they felt were most desirable and appropriate for their needs.

Program Development

After the site tour, Lose & Associates presented the site analysis (see Section 2) and began program development discussions with the Citizens' Steering Committee. The following specific recommendations are based on the public input list and from discussions with the Citizens' Steering Committee:

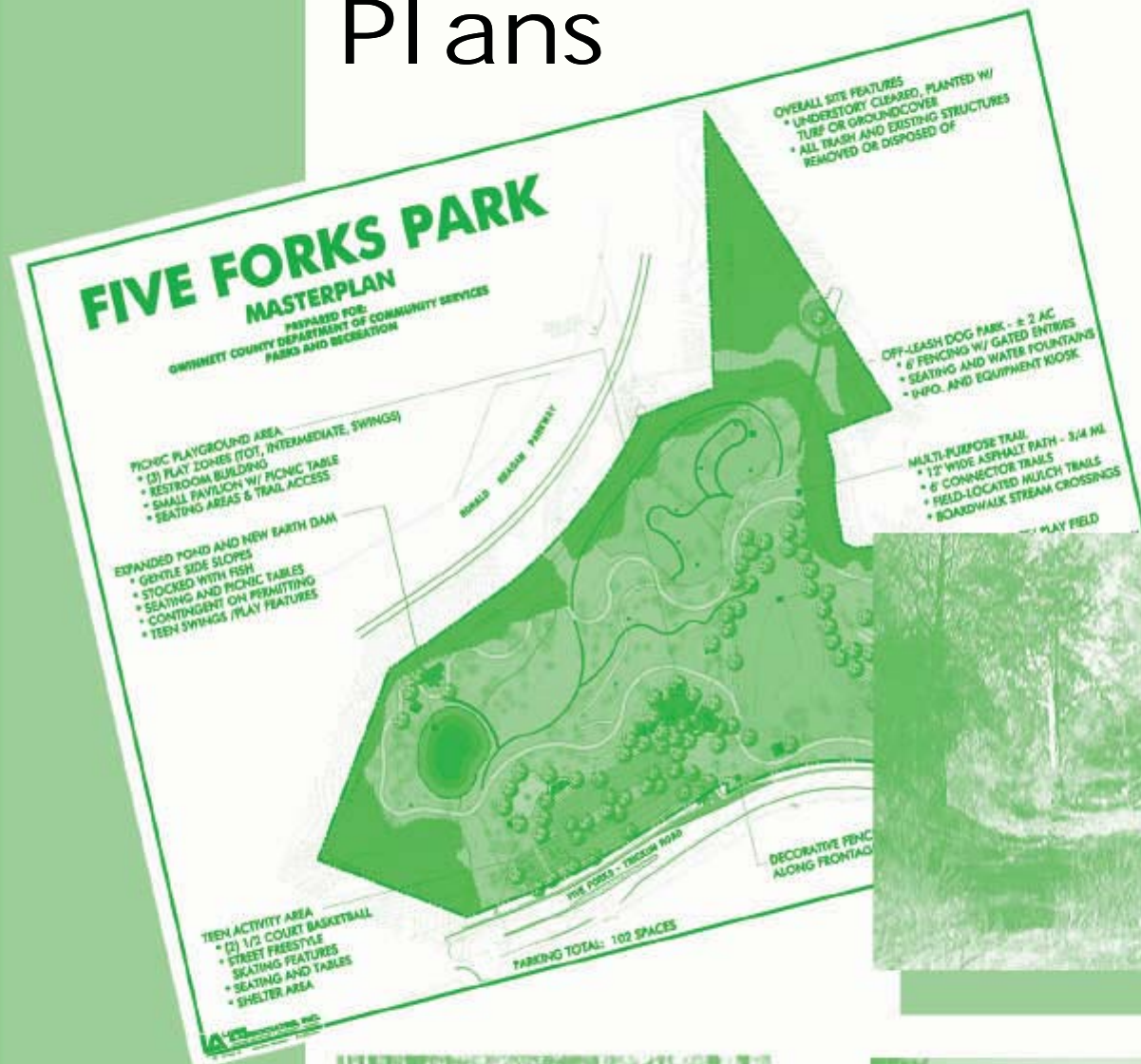
Program elements to be included in the conceptual park plans for Five Forks Park:

- Multi-purpose trail – including a measured portion and connecting pathways
- Open lawn space – graded smooth and irrigated
- Mulch trails – to connect with the multi-purpose trail
- Freestyle skate plaza – include some “street” features in a specific zone designated for skating
- Picnic pavilion – smaller than the current county standard
 - The Citizen’s committee had the following concerns for a larger, potentially rentable pavilion at Five Forks Park:
 - Parking could fill to capacity at the time of one pavilion rental
 - Did not want to encourage unsustainable usage of the park property
- Restroom building – stand alone county standard
- Playground – to include swings, play structures and “spinning” elements
- Pond expansion with gently sloping banks
- Outdoor senior activity area – seating zones, bocce area, possibly some chess/checkers tables
- Basketball – ½ court

Additional Citizens’ Steering Committee input:

- ADA accessibility issues and accessibility for senior citizens
- Pedestrian access to the park from surrounding neighborhoods
- Pond should have the potential for future fishing use

Section IV: Alternative Conceptual Master Plans



Alternative Conceptual Master Plans

Following the meetings and site visits; the consultants presented three conceptual master plan drawings to the Citizens' Steering Committee. Comments and suggestions generated by meeting attendees are listed below.

Final Program

Based on all meeting discussion and input, the following program list was developed and will be incorporated in each of three alternate conceptual designs for the site:

- Multi-purpose trail – including a measured portion and connecting pathways
- Open lawn space – graded smooth and irrigated
- Mulch trails – to connect with the multi-purpose trail
- Freestyle skate plaza – “street” features in a specific zone designated for skating
- Picnic pavilion – smaller County standard – 30' diameter
- Restroom building – stand-alone County standard
- Playground – to include swings, play structures and “spinning” elements – shaded, if possible
- Pond expansion with gently sloping banks
- Outdoor senior activity area – seating zones, bocce area, possibly some chess/checkers tables under a small shelter structure
- Basketball court – possibly a ½ court to be included on one or two concepts
- Dog park - approximately 1-acre in size or larger

Additional Citizens' Steering Committee input:

- ADA accessibility issues and accessibility for senior citizens
- Pedestrian access to the park from surrounding neighborhoods
- Pond should have the potential for future fishing use

Concept One

Access and Circulation

The main park drive enters from Five Forks Trickum Road and immediately enters a looped parking lot with spaces for approximately 100 vehicles. The looped parking lot is situated in a relatively flat space that was occupied by two residences on the property. The entry drive is situated on the curve in Five Forks Trickum Road, offering excellent vision to the left and right out of the park. This appears to be the safest location for an access point.

Multi-Purpose Trails

A 12' wide paved pathway will connect all park components. This 12' wide trail is 3/4 mile in length and loops the entire property. Spur trails connect this loop to each activity area, as well as create a shorter loop approximately ½ the length of the larger loop.

FIVE FORKS PARK

CONCEPT ONE

PREPARED FOR:
GWINNETT COUNTY DEPARTMENT OF COMMUNITY SERVICES
PARKS AND RECREATION

OVERALL SITE FEATURES

- * UNDERSTORY CLEARED, PLANTED W/ TURF OR GROUNDCOVER
- * ALL TRASH AND EXISTING STRUCTURES REMOVED OR DISPOSED OF

PICNIC PLAYGROUND AREA

- * (4) PLAY ZONES (TOT, INTER., TEEN, SWINGS)
- * RESTROOM BUILDING
- * SMALL PAVILIONS W/ PICNIC TABLE
- * SEATING AREAS & TRAIL ACCESS

TEEN ACTIVITY AREA

- * BASKETBALL COURT
- * STREET FREESTYLE SKATING FEATURES
- * SEATING AND PICNIC TABLES
- * SHELTER AREA

EXPANDED POND AND NEW EARTH DAM

- * GENTLE SIDE SLOPES
- * STOCKED WITH FISH
- * SEATING AND PICNIC TABLES

REMOVE KUDZU

OFF-LEASH DOG PARK

- * ± 1 AC FENCED W/ GATES
- * SEATING AND WATER FOUNTAINS

RONALD REAGAN PARKWAY

FIVE FORKS - TRICKUM ROAD

TRIPLE 10"x10" CONCRETE BOX CULVERTS

MULTI-PURPOSE TRAIL

- * 12' WIDE ASPHALT PATH - 3/4 MI.
- * 6' CONNECTOR TRAILS
- * FIELD-LOCATED MULCH TRAILS
- * BOARDWALK STREAM CROSSINGS

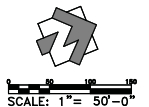
OPEN SPACE/ PLAY FIELD

- * IRRIGATED TURF
- * GENTLE SIDE SLOPES

SENIORS ACTIVITY AREA

- * (2) BOCCE COURTS
- * (2) SHUFFLEBOARD COURTS
- * (2) HORSESHOE PITS
- * SHADE STRUCTURE W/ SEATING AREAS

PARKING TOTAL: 100 SPACES



9.5.01

A spur trail also leads to Five Forks Trickum Road, so that surrounding neighborhoods may have safe pedestrian access to the park via the proposed sidewalk along this roadway.

Teen Area

This area is located south of the picnic/playground area and features a ½ court basketball, a freestyle skating zone with “street” features and a small shade structure and seating area for teens to socialize. These features will be formed of concrete and steel, and will have ramp features, drop features, seatwalls, box features and rail features. A paved pathway will allow access into the freestyle skating zone.

Seniors Activity Area

The Seniors Activity Area includes outdoor activities and leisure-type features that cater to the senior citizen population. This activity zone is located on the northernmost end of the property, adjacent to the open space/play field. There are six activities associated with this zone: two bocce courts, two shuffleboard courts, two horseshoe pits, a picnic zone, a porch-style swing and a shade structure with game board tables. The bocce courts will be constructed of concrete and crushed seashells, similar to the style of bocce courts currently being constructed on the west coast. The shuffleboard courts will be constructed of concrete with painted regulation markings. The horseshoe pits will be constructed of mulch and gravel, with a concrete walkway surrounding. The porch-style swing will be set to overlook the creek and bocce court. A shade structure will house picnic tables and game tables for checkers or chess.

Picnic/Playground Area

The picnic/playground area features two 20'X20' open-air pavilions with bench picnic tables, a large playground zone, bike racks, a water fountain and trash receptacles.

A small restroom structure is adjacent to the picnic/playground area, to the north. The restroom's entry area faces the parking lot and includes two toilets in the women's restroom, and one urinal and one toilet in the men's restroom. A drinking fountain will be placed adjacent to this building.

The playground portions of this facility will cater to children of different age groups, and will also feature swings for both older and younger kids. One large playground will have features oriented toward children 2-5 years of age, while another large structure will be oriented for children 5-12 years of age. A set of four swings, two with children's seats and two with adult seats, will be located near the playground equipment, but at a proper distance. The safety surface will comply with the latest safety and ADA standards.

Open Space/Play Field

Situated on the portion of the property that is the current location for most of the unconsolidated fill material, this space will be re-graded and irrigated. This space will allow for park visitors to play pick-up games of football, space to run and throw a Frisbee or to fly a kite, and a place to sit in the sun and read a book. The unconsolidated fill material will be smoothed and the side slope sculpted to a 3:1 minimum slope.

The entire area will then be seeded with a turf grass that will be a good base for outdoor running activities. An irrigation system will help to insure that this turf will thrive.

Forest Management

A majority of the property is wooded, providing a shaded canopy, but the understory is also very thick on most of the site. Gwinnett County has contracted for a tree survey to be conducted and will provide the design team with an inventory of all trees larger than 10" in caliper. This information will guide the selective clearing of the smaller trees and understory plants on the property. However, not all of the understory on the property will be cleared or thinned.

The center of the property will be selectively cleared of the shrubby understory and smaller trees, leaving a traditional "old park" feel. The ground plain will be seeded with grasses and/or groundcovers to protect the ground surface from erosion.

The perimeter of the property will remain as is, with a thicker understory and trees of all sizes. Some invasive plants will be removed, and all trash and debris will be hauled off-site. This thicker screen at the perimeter of the site will create a visual barrier to the property, and provide park-goers with a sense that they are recreating in part of a larger space.

Some areas of the property will need to be completely cleared of trees and understory to make room for parking lots and other activity zones on the property.

Dog Park Area

The dog park feature is located along Five Forks Trickum Road and to the south of the teen activity area. A dog park is a fenced zone within Five Forks Park that will allow people and their dogs to play together without the restriction of leashes. This feature also allows the dogs and their owners to socialize together. The dog park at Five Forks Trickum Road will feature 6' chain-link fencing enclosing nearly 2 acres of the property. The dog park will be subdivided into two play zones by a 4' chain link fence with a gate. The entry points into the dog park will have a vestibule-style feature so that owners can place and remove leashes from their dogs while within fenced confines. Larger trees will remain in this area to provide shade cover, and there will be several benches and tables at which owners can sit and socialize.

Pond Area

The existing 7500 SF pond on the property will be expanded to greater than ½ acre. This pond will have gentle side slopes to allow bank fishing and to offer a safe entry/exit point should someone accidentally fall into the water.

Concept Two

Access and Circulation

The looped parking lot for Concept Two is situated on the southern portion of the property, directly across from the Five Forks Library. The entry drive is also situated

FIVE FORKS PARK

CONCEPT TWO

PREPARED FOR:
GWINNETT COUNTY DEPARTMENT OF COMMUNITY SERVICES
PARKS AND RECREATION

OVERALL SITE FEATURES

- * UNDERSTORY CLEARED, PLANTED W/ TURF OR GROUND COVER
- * ALL TRASH AND EXISTING STRUCTURES REMOVED OR DISPOSED OF

PICNIC PLAYGROUND AREA

- * (4) PLAY ZONES (TOT, INTER., TEEN, SWINGS)
- * RESTROOM BUILDING
- * SMALL PAVILIONS W/ PICNIC TABLE
- * SEATING AREAS & TRAIL ACCESS

EXPANDED POND AND NEW EARTH DAM

- * GENTLE SIDE SLOPES
- * STOCKED WITH FISH
- * SEATING AND PICNIC TABLES

RONALD REAGAN PARKWAY

TRIPLE 10"x10" CONCRETE BOX CULVERTS

SENIORS ACTIVITY AREA

- * (2) BOCCE COURTS
- * (2) SHUFFLEBOARD COURTS
- * (2) HORSESHOE PITS
- * SHADE STRUCTURE W/ SEATING AREAS

MULTI-PURPOSE TRAIL

- * 12' WIDE ASPHALT PATH - 3/4 MI.
- * 6' CONNECTOR TRAILS
- * FIELD-LOCATED MULCH TRAILS
- * BOARDWALK STREAM CROSSINGS

OPEN SPACE/ PLAY FIELD

- * IRRIGATED, SODDED
- * GENTLE SIDE SLOPES

TEEN ACTIVITY AREA

- * BASKETBALL COURT
- * STREET FREESTYLE SKATING FEATURES
- * SEATING AND TABLES
- * SHELTER AREA

OFF-LEASH DOG PARK

- * ± 1 AC FENCED W/ GATES
- * SEATING AND WATER FOUNTAINS

PARKING TOTAL: 100 SPACES

FIVE FORKS - TRICKUM ROAD



SCALE: 1" = 50'-0"

9.5.01

on the curve in Five Forks Trickum Road, offering excellent vision to the left and right out of the park.

Multi-Purpose Trails

The Multi-purpose trail is similar to the system in Concept One. The trail system will consist of a single perimeter loop with smaller connecting trails to feed to the various activity zones. The mulch trail system will weave through trees, connecting to the paved trail system at various locations throughout the site.

Teen Area

Concept Two's teen area is located south of the open space/playfield and north west of the parking lot.

Seniors Activity Area

In Concept two, the seniors activity zone is located just southwest of the parking lot, overlooking the picnic/playground and pond area.

Picnic/Playground Area

The picnic/playground area features two 20'X20' open-air pavilions with bench picnic tables, a large playground zone, bike racks, a water fountain and trash receptacles.

A small restroom structure is located between the seniors activity area and the teen activity area, adjacent to the parking lot.

Open Space/Play Field

This feature is almost 50% larger than the field depicted in Concept One, and also features a smooth play surface with irrigated turf.

Forest Management

As in Concepts One, the wooded areas in the center of the property will be thinned and the thickly wooded areas surrounding the property will be retained as is, selectively removing invasive plants and trash.

Dog Park Area

The dog park is located along Five Forks Trickum Road and to the east of the teen activity area, between the multi-purpose perimeter trail and Five Forks Trickum Road.

Concept Three

Access and Circulation

The main park drive enters from Five Forks Trickum Road and immediately enters a parking lot with spaces for approximately 100 vehicles. The parking lot is linear and is situated across a majority of the site frontage.

Multi-Purpose Trails

The Multi-purpose trail is similar to the system in Concepts One and Two. The trail system will consist of a single perimeter loop with smaller connecting trails to feed to the various activity zones. The mulch trail system will weave through trees, connecting to the paved trail system at various locations throughout the site.

FIVE FORKS PARK

CONCEPT THREE

PREPARED FOR:
GWINNETT COUNTY DEPARTMENT OF COMMUNITY SERVICES
PARKS AND RECREATION

OVERALL SITE FEATURES

- * UNDERSTORY CLEARED, PLANTED W/ TURF OR GROUNDCOVER
- * ALL TRASH AND EXISTING STRUCTURES REMOVED OR DISPOSED OF

PICNIC PLAYGROUND AREA

- * (4) PLAY ZONES (TOT, INTER., TEEN, SWINGS)
- * RESTROOM BUILDING
- * SMALL PAVILIONS W/ PICNIC TABLE
- * SEATING AREAS & TRAIL ACCESS

EXPANDED POND AND NEW EARTH DAM

- * SHALLOW SIDE SLOPES
- * STOCKED WITH FISH
- * SEATING AND PICNIC TABLES
- * SWINGS AND SMALL PAVILION

RONALD REAGAN PARKWAY

TRIPLE 10"x10' CONCRETE BOX CULVERTS

40' SETBACK

40' SETBACK

SENIORS ACTIVITY AREA

- * (2) BOCCE COURTS
- * (2) SHUFFLEBOARD COURTS
- * (2) HORSESHOE PITS
- * SHADE STRUCTURE W/ SEATING AREAS

MULTI-PURPOSE TRAIL

- * 12' WIDE ASPHALT PATH - 3/4 MI.
- * 6' CONNECTOR TRAILS
- * FIELD-LOCATED MULCH TRAILS
- * BOARDWALK STREAM CROSSINGS

OPEN SPACE/ PLAY FIELD

- * IRRIGATED TURF
- * SHALLOW SIDE SLOPES

TEEN ACTIVITY AREA

- * BASKETBALL COURT
- * STREET FREESTYLE SKATING FEATURES
- * SEATING AND PICNIC TABLES
- * SHELTER AREA

FIVE FORKS - TRICKUM ROAD

OFF-LEASH DOG PARK

- * ± 1 AC FENCED W/ GATES
- * SEATING AND WATER FOUNTAINS

PARKING TOTAL: 100 SPACES



SCALE: 1" = 50'-0"

9.5.01

Teen Area

This activity zone is located south of the parking lot and the picnic/playground area.

Seniors Activity Area

In Concept Three, the seniors activity zone is located at the terminus of the boardwalk leading from Tony Drive, adjacent to the open space/playfield. This location provides the seniors with the most secluded option of the three concepts.

Picnic/Playground Area

A small restroom structure is adjacent to the picnic/playground area, to the north. The restroom's entry area faces the parking lot and includes two toilets in the women's restroom, and one urinal and one toilet in the men's restroom. A drinking fountain will be placed adjacent to this building.

Open Space/Play Field

This feature is similar in size and in the same location as Concept Two.

Dog Park Area

The dog park is located along Five Forks Trickum Road and to the south of the open space play field.

Pond/Picnic Area

This activity area features a small picnic shelter and a small playground area that will feature swings and a playground structure. The pond is expanded in size, similar to Concepts One and Two.

Forest Management

As in Concepts One and Two, the wooded areas in the center of the property will be thinned and the thickly wooded areas surrounding the property will be retained as is, selectively removing invasive plants and trash.

Program Refinement

Following development of the alternate concepts, the consultants presented the plans to the Citizens' Steering Committee and to the Gwinnett County Parks and Recreation staff. Representatives of each offered the following comments to be incorporated into the Preliminary Master Plan graphic presentation:

- Multi-purpose trail – 12' wide, $\frac{3}{4}$ mile measured portion; 6' wide connecting pathways and 8' wide interior loop cut-through to allow $\frac{1}{2}$ mile measured portion. No trail shall cross the roadway. The trail shall have 4 bench seats and one adult "porch-style" swing dispersed along the length of the trail. The bench seating will be mounted on concrete pads connected to the asphalt trail.
- Open lawn space – graded relatively smooth and irrigated. A 6' wide concrete trail will surround the irrigated space and large (4" diameter) trees at the perimeter of the trail to provide shade.

- Mulch trails – to connect with the multi-purpose trail.
- Freestyle skate plaza – include some “street” features in a specific zone designated for skating – to be placed near parking. A small shade structure will be associated with the plaza. Maximum size for this feature will be 5,000 square feet, or roughly half the size of the Pinckneyville Park example.
- Picnic pavilion – approximately 20’X20’ structure located near the playground area. Also include a 20’X20’ picnic shelter and tables near the pond. Each of these pavilions will have three bench-style picnic tables and one trash receptacle.
- Picnic tables (table-style) – install in patio space areas at the playground area, teen area and the seniors area.
- Restroom building – stand-alone County standard – to be located between the playground area and the senior activity zone.
- Playground – to include swings (adult and child-size), tot lot and intermediate kid elements. Some teen elements (10-plus elements from Kompan) will be installed in a small playground near the teen area. A set of two large swings will be located in the vicinity of the pond.
- Pond expansion with gently sloping banks – 3:1 maximum to the water’s edge and 5:1 as the slopes enter the water for a distance. Create “shelves” and incorporate depth to support aquaculture. Provide earth dam with aesthetically sensitive spillway structure.
- Outdoor senior activity area – seating zones, bocce area, possibly some chess/checkers tables. Located north of the open play space, with views to the creek. A small shade structure with an “adult” swing will be associated with this activity zone. Also include a grill adjacent to the shade structure and picnic tables.
- Basketball courts – Two, ½ courts to be located adjacent to “teen area” and visible from roadway. This feature will be proximate, but not adjacent to the skate plaza/teen area.
- Parking lot - will accommodate 100 vehicles and will be interspersed with trees to “break up” the expanse of pavement.
- Include in the final Master Plan text – suggest a sound barrier be installed at Ronald Reagan Parkway. This will hopefully help to eliminate traffic noise in the park.

Hybrid Concept Plan

Based on the review and discussion of the conceptual plans and specific features of each, it was decided that the Preliminary Master Plan should be based primarily on Concepts Two and Three and should include the following program elements:

- Multi-purpose trail – 12’ wide, ¾ mile measured portion; 6’ wide connecting pathways and 8’ wide interior loop cut-through to allow ½ mile measured portion. No trail shall cross the roadway.
- Open lawn space – graded relatively smooth and irrigated. A 6’-wide concrete trail will surround the irrigated space and large (4” diameter) trees at the perimeter of the trail to provide shade.
- Mulch trails – to connect with the multi-purpose trail.
- Freestyle skate plaza – include some “street” features in a specific zone designated for skating – to be placed near parking. A small shade structure will be associated with the plaza. Maximum size for this feature will be 5,000 square feet, or roughly half the size of the Pinckneyville Park example.

FIVE FORKS PARK

HYBRID CONCEPT

PREPARED FOR:
GWINNETT COUNTY DEPARTMENT OF COMMUNITY SERVICES
PARKS AND RECREATION

OVERALL SITE FEATURES

- * UNDERSTORY CLEARED, PLANTED W/ TURF OR GROUND COVER
- * ALL TRASH AND EXISTING STRUCTURES REMOVED OR DISPOSED OF

PICNIC PLAYGROUND AREA

- * (4) PLAY ZONES (TOT, INTER., TEEN, SWINGS)
- * RESTROOM BUILDING
- * SMALL PAVILIONS W/ PICNIC TABLE
- * SEATING AREAS & TRAIL ACCESS

EXPANDED POND AND NEW EARTH DAM

- * GENTLE SIDE SLOPES
- * STOCKED WITH FISH
- * SEATING AND PICNIC TABLES

TEEN ACTIVITY AREA

- * BASKETBALL COURT
- * STREET FREESTYLE SKATING FEATURES
- * SEATING AND TABLES
- * SHELTER AREA

OFF-LEASH DOG PARK

- * ± 1.5 AC FENCED W/ GATES
- * SEATING AND WATER FOUNTAINS

MULTI-PURPOSE TRAIL

- * 12' WIDE ASPHALT PATH - 3/4 MI.
- * 6' CONNECTOR TRAILS
- * FIELD-LOCATED MULCH TRAILS
- * BOARDWALK STREAM CROSSINGS

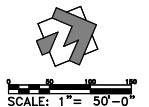
OPEN SPACE/ PLAY FIELD

- * IRRIGATED TURF
- * GENTLE SIDE SLOPES

SENIORS ACTIVITY AREA

- * (2) BOCCE COURTS
- * (2) SHUFFLEBOARD COURTS
- * (2) HORSESHOE PITS
- * SHADE STRUCTURE W/ SEATING AREAS

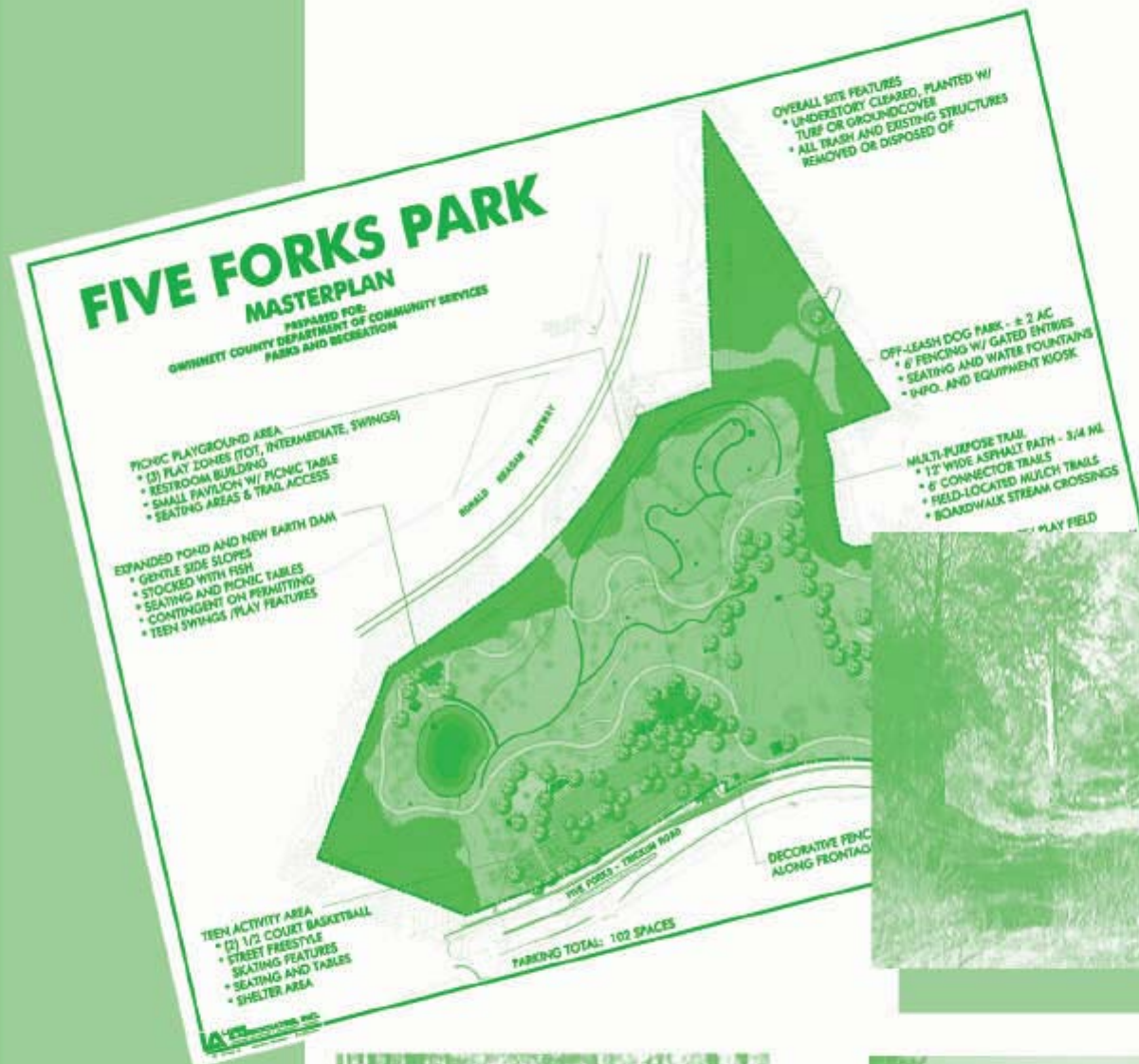
PARKING TOTAL: 100 SPACES



9.10.01

- Picnic pavilion – approximately 20'X20' structure located near the playground area. Also include a 20'X20' picnic shelter and tables near the pond. Each of these pavilions will have three bench-style picnic tables and one trash receptacle.
 - Dog park – surrounded by fencing, located in the “floodplain zone” in the northwest of the site. This “floodplain zone” was re-visited by the Design team, and it was determined that this area was probably less frequently-flooded than previously anticipated. The adjacent streams have deeply-cut channels and steep banks, and will more than likely hold all but the runoff from a very large storm event. In addition, older aerial photography was researched, and revealed that this portion of the property had been pastureland within the last 30 years.
 - Picnic tables (table-style) – install in patio space areas at the playground, teen and seniors area.
 - Restroom building – stand-alone County standard
 - Playground – to include swings (adult and child-size), tot lot and intermediate kid elements. Some teen elements (10-plus elements from Kompan) will be installed in a small playground near the teen area. A set of two large swings will be located in the vicinity of the pond.
 - Pond expansion with gently sloping banks – 3:1 maximum to the water's edge and 5:1 as the slopes enter the water for a distance. Create “shelves” and incorporate depth to support aquaculture. Provide earth dam with aesthetically sensitive spillway structure.
 - Outdoor senior activity area – seating zones, bocce area, possibly some chess/ checkers tables. Located north of the open play space, with views to the creek. A small shade structure with an “adult” swing will be associated with this activity zone. Also include a grill adjacent to the shade structure and picnic tables.
 - Basketball court –½ court to be located adjacent to “teen area” and visible from roadway. This feature will be proximate, but not directly adjacent to the skate plaza/teen area.
 - Parking lot - will accommodate 100 vehicles, and will be interspersed with trees to “break up” the expanse of pavement.
 - Include in the final Master Plan text – suggest a sound barrier be installed at Ronald Reagan Parkway. This will hopefully help to eliminate traffic noise in the park.
- These refining comments were incorporated into a hybrid concept plan to graphically present the combined features of Concept Two and Three. A hybrid concept graphic (See Hybrid Concept Plan) was mailed to Committee members to help them visualize the concept that would be explored in the Preliminary Master Plan. (See Appendix E for committee member letter).

Section V: Preliminary Master Plan



Preliminary Master Plan

All comments from the conceptual drawings were then combined and a preliminary Master Plan was developed. (See Preliminary Master Plan)

The Citizens' Steering Committee met with County staff and the consultants on September 25, 2001 to review the preliminary Master Plan. Discussion comments and suggestions are included in the following program:

- Multi-purpose trail – 12' wide, $\frac{3}{4}$ mile measured portion; 6' wide connecting pathways and 8' wide interior loop cut-through to allow $\frac{1}{2}$ mile measured portion. No trail shall cross the roadway. The trail shall have 4 bench seats and one adult "porch-style" swing dispersed along the length of the trail. The bench seating will be mounted on concrete pads connected to the asphalt trail. There will be 4 picnic tables placed along the trail, two of which shall have grills.
- Open lawn space – graded relatively smooth and irrigated. A 6' wide concrete trail will surround the irrigated space and large (4" diameter) trees at the perimeter of the trail to provide shade.
- Mulch trails – to connect with the multi-purpose trail and provide a more woodland, natural experience.
- Freestyle skate plaza – include some "street" features in a specific zone designated for skating – to be placed near parking. A small shade structure (16'X20') will be associated with the plaza. Maximum size for this feature will be 5,000 square feet, or roughly half the size of the Pinckneyville Park example.
- Picnic pavilion – approximately 20'X20' structure located near the playground area. Also include a 20'X20' picnic shelter and tables near the pond. Each of these pavilions will have three bench-style picnic tables and one trash receptacle. Grills will be placed adjacent to the picnic shelters.
- Picnic tables (table-style) – install in patio space areas at the playground, teen and seniors area.
- Restroom building – stand-alone County standard – to be located between the playground area and the senior activity zone.
- Playground – to include swings (adult and child-size), tot lot and intermediate kid elements. A set of two large swings will be located in the vicinity of the pond. A teen playground area is located between the basketball court and the freestyle skate zone. This playground features a swing and a teen playground structure – similar to the "10-Plus" features by Kompan.
- Dog park – nearly two acres to be completely surrounded by chain-link fencing. A fence to provide two zones at nearly one acre per, will divide the acreage. Entry to the dog park will be through one of two double-gated entries that will act as vestibules for the owner to un-leash the dog before entering the off-leash area. A mulch trail will be field-located through the spaces, with 4 picnic tables and 2 benches dispersed throughout the area. A water fountain with a refillable doggie dish will be provided near one of the entry points. Trash receptacles will be provided at each entry, as well as a separate receptacle in each section for "doggie waste" disposal.
- Pond expansion with gently sloping banks – 3:1 maximum to the water's edge and 5:1 as the slopes enter the water for a distance. Create "shelves" and incorporate

FIVE FORKS PARK

PRELIMINARY MASTERPLAN

PREPARED FOR:
GWINNETT COUNTY DEPARTMENT OF COMMUNITY SERVICES
PARKS AND RECREATION

OVERALL SITE FEATURES

- * UNDERSTORY CLEARED, PLANTED W/ TURF OR GROUNDCOVER
- * ALL TRASH AND EXISTING STRUCTURES REMOVED OR DISPOSED OF

PICNIC PLAYGROUND AREA

- * (3) PLAY ZONES (TOT, INTERMEDIATE, SWINGS)
- * RESTROOM BUILDING
- * SMALL PAVILIONS W/ PICNIC TABLE
- * SEATING AREAS & TRAIL ACCESS

EXPANDED POND AND NEW EARTH DAM

- * GENTLE SIDE SLOPES
- * STOCKED WITH FISH
- * SEATING AND PICNIC TABLES
- * CONTINGENT ON PERMITTING

RONALD REAGAN PARKWAY

OFF-LEASH DOG PARK

- * \pm 2 AC FENCED W/ GATES
- * SEATING AND WATER FOUNTAINS

MULTI-PURPOSE TRAIL

- * 12' WIDE ASPHALT PATH - 3/4 MI.
- * 6' CONNECTOR TRAILS
- * FIELD-LOCATED MULCH TRAILS
- * BOARDWALK STREAM CROSSINGS

OPEN SPACE/ PLAY FIELD

- * IRRIGATED TURF
- * GENTLE SIDE SLOPES
- * PAVED PERIMETER WALKWAY

SENIORS ACTIVITY AREA

- * (2) BOCCE COURTS
- * (2) SHUFFLEBOARD COURTS
- * (2) HORSESHOE PITS
- * SHADE STRUCTURE W/ SEATING AREAS

TEEN ACTIVITY AREA

- * 1/2 COURT BASKETBALL
- * STREET FREESTYLE SKATING FEATURES
- * SEATING AND TABLES
- * SHELTER AREA
- * TEEN PLAYGROUND/ SWINGS

FIVE FORKS - TRICKUM ROAD

4' HIGH FENCING
ALONG FRONT OF PROPERTY

PARKING TOTAL: 106 SPACES



SCALE: 1" = 50'-0"

9/25/01

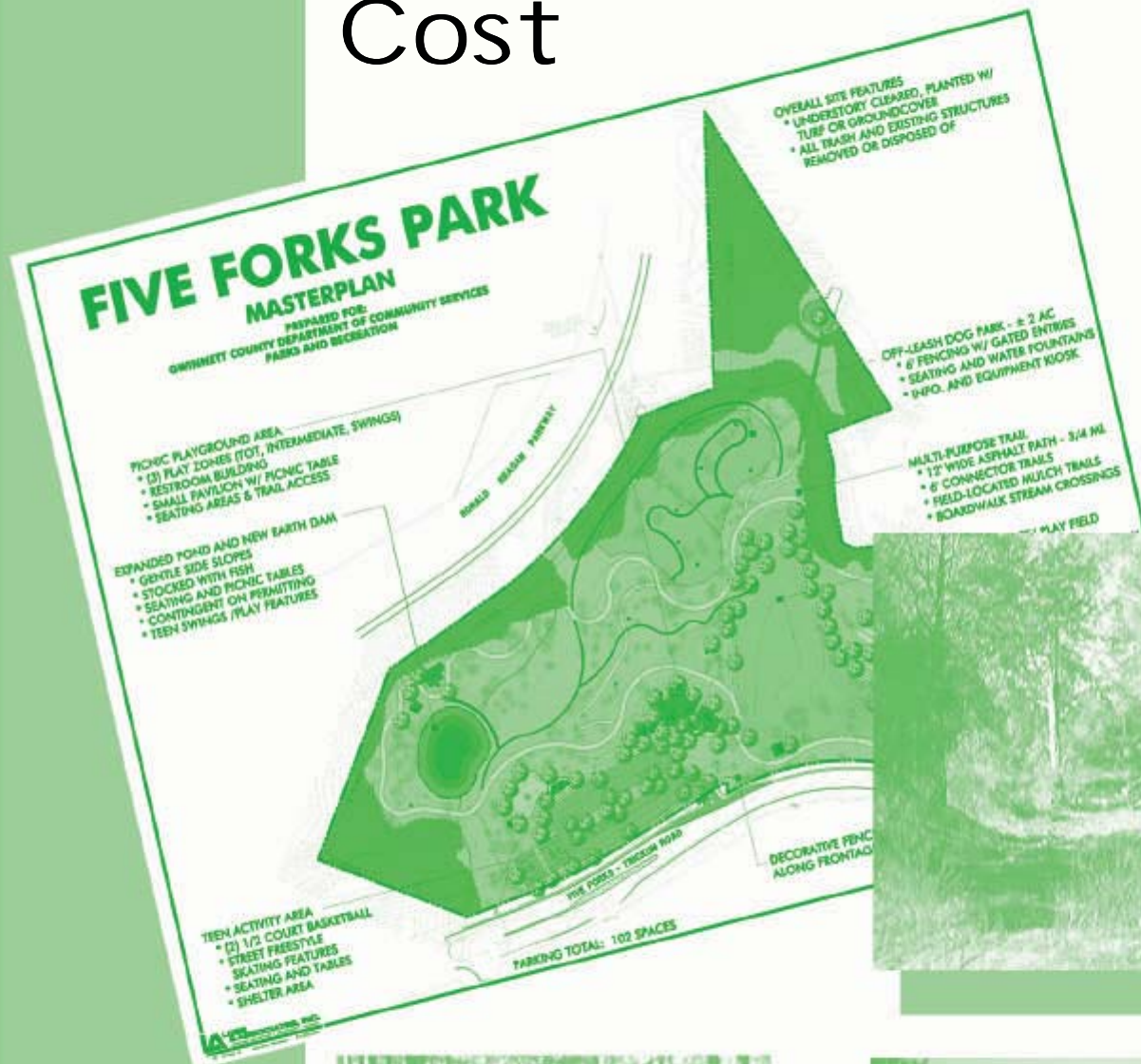
depth to support aquaculture. Provide earth dam with aesthetically sensitive spillway structure. (This feature is contingent on permitting.)

- Outdoor senior activity area – seating zones, bocce area, possibly some chess/checkers tables. Located north of the open play space, with views to the creek. A small shade structure (16'X20') and an “adult porch-style” swing will be associated with this activity zone. Also include a grill adjacent to the shade structure and picnic tables.
- Basketball court – One ½ court to be located adjacent to “teen area” and visible from roadway. This feature will be proximate, but not adjacent to the skate plaza/teen area.
- Parking lot - will accommodate 100 vehicles and will be interspersed with trees to “break up” the expanse of pavement. The tree plantings in and around the parking lot will conform to Gwinnett County development standards.
- The County should suggest to DOT officials that a sound barrier be installed at Ronald Reagan Parkway. This will hopefully help to eliminate traffic noise in the park. The barrier should be a concrete wall that lines the roadway, similar to others used throughout Gwinnett County.
- Add a decorative security fence along the property line adjacent to Five Forks Trickum Road.

After the presentation of the Preliminary plan was made to both the Citizen's Steering Committee and to the Gwinnett County Recreation Staff, the following revisions were requested for the Final Master Plan:

- Refine the multi-purpose trail length to a total distance of ¾ mile.
- Add a second ½ court basketball, and design a physical separation between the two courts to discourage a full court game.
- Relocate the teen playground zone to the pond/picnic area.
- Make the dog park perimeter fencing 6' in height.
- Relocate the restroom structure away from the playground and parking lot for security reasons. Install motion sensors inside, wired to a light on the roof of the rest room structure to alert passers-by and authorities that the facility is occupied. These suggestions were made by Gwinnett County Parks staff, in response to a CPTED (Crime Prevention Through Environmental Design) training seminar.

Section VI: Final Master Plan and Opinion of Probable Cost



Final Master Plan and Opinion of Probable Cost

In general terms, the final Master Plan (Refer to fold-out Master plan graphic) is a refinement of the elements and layout incorporated in the preliminary Master Plan in addition to the requested revisions.

Access and Circulation

The main park drive enters from Five Forks Trickum Road and immediately enters a loop parking lot with spaces for 102 vehicles.

Teen Area

The teen area program remains virtually unchanged from the preliminary Master Plan. The area has a facility with ½ court basketball on two courts. These courts are located near Five Forks Trickum Road, in a space that will be highly visible from the road and the parking lot. A four-foot high wall will act as a base for the court's fencing for approximately 125 linear feet. This wall will be constructed of stone or split-faced concrete block and will act as a deterrent for individuals to use vehicle headlights to light up the basketball courts at nighttime. Both courts will be fenced with 10' fencing and feature one entry/exit gate. The courts will be separated by a sidewalk and seatwalls for spectators and individuals waiting to play a game. These seatwalls will not allow full court basketball games to be played.

West of the basketball courts and the parking lot, the freestyle skating zone will possess "street" features. These will be formed of concrete and steel, and will have ramp, drop, seatwall, box and rail features, and will be situated at an elevation four feet lower than the parking lot and adjacent plaza area. A ramp will allow access into the freestyle skating zone. The picnic plaza area is separated from the freestyle skating zone by a stone or block retaining wall and handrail. A 16'X20' shelter and six picnic tables with bike racks, trash receptacles and drinking fountain will be placed in this upper level plaza.

An additional teen feature is located adjacent to the pond picnic area. This zone features a teen playground zone which will feature a swing sized for young adults and a small playground feature similar to those in the "10-plus" line by Kompan. These activity structures are designed for young teens, and feature social seating areas and more challenging athletic-type play zones.

Seniors Activity Area

The Seniors Activity Area includes outdoor activities and leisure-type features that cater to the senior citizen population. This activity zone is located on the northernmost end of the property, adjacent to the open space/play field. There are six activities associated with this zone: two bocce courts, two shuffleboard courts, two horseshoe pits, a picnic zone, a porch-style swing and a shade structure with game board tables. The bocce courts will be constructed of concrete and crushed seashells, similar to the style of bocce courts currently being constructed on the west coast. The shuffleboard courts

FIVE FORKS PARK

MASTERPLAN

PREPARED FOR:
GWINNETT COUNTY DEPARTMENT OF COMMUNITY SERVICES
PARKS AND RECREATION

OVERALL SITE FEATURES

- * SITE ACREAGE = 24.61
- * UNDERSTORY CLEARED, PLANTED W/ TURF OR GROUND COVER
- * ALL TRASH AND EXISTING STRUCTURES REMOVED OR DISPOSED OF

PICNIC PLAYGROUND AREA

- * (3) PLAY ZONES (TOT, INTERMEDIATE, SWINGS)
- * RESTROOM BUILDING
- * SMALL PAVILION W/ PICNIC TABLE
- * SEATING AREAS & TRAIL ACCESS

EXPANDED POND AND NEW EARTH DAM

- * GENTLE SIDE SLOPES
- * STOCKED WITH FISH
- * SEATING AND PICNIC TABLES
- * CONTINGENT ON PERMITTING
- * TEEN SWINGS /PLAY FEATURES

TEEN ACTIVITY AREA

- * (2) 1/2 COURT BASKETBALL
- * STREET FREESTYLE SKATING FEATURES
- * SEATING AND TABLES
- * SHELTER AREA

OFF-LEASH DOG PARK - ± 2 AC

- * 6' FENCING W/ GATED ENTRIES
- * SEATING AND WATER FOUNTAINS
- * INFO. AND EQUIPMENT KIOSK

MULTI-PURPOSE TRAIL

- * 12' WIDE ASPHALT PATH - 3/4 MI.
- * 6' CONNECTOR TRAILS
- * FIELD-LOCATED MULCH TRAILS
- * BOARDWALK STREAM CROSSINGS

OPEN SPACE/ PLAY FIELD

- * IRRIGATED TURF
- * PAVED PERIMETER WALKWAY

SENIORS ACTIVITY AREA

- * (2) BOCCE COURTS
- * (2) SHUFFLEBOARD COURTS
- * (2) HORSESHOE PITS
- * SHADE STRUCTURE W/ SEATING AREAS

DECORATIVE FENCING
ALONG FRONTAGE OF PROPERTY

PARKING TOTAL: 102 SPACES

RONALD REAGAN PARKWAY

FIVE FORKS - TRICKUM ROAD

TRIPLE 10"x10"
CONCRETE BOX
CULVERTS

will be constructed of concrete with painted regulation markings. The horseshoe pits will be constructed of mulch and gravel, with a concrete walkway surrounding. The porch-style swing will be set to overlook the creek and bocce court. A shade structure will house picnic tables and game tables for checkers or chess.

Forest Management

A majority of the property is wooded, providing a shaded canopy, but the understory is also very thick on most of the site. Gwinnett County has contracted for a tree survey to be conducted and will provide the design team with an inventory of all trees larger than 10" in caliper. This information will guide the selective clearing of the smaller trees and understory plants on the property. However, not all of the understory on the property will be cleared or thinned.

The center of the property will be selectively cleared of the shrubby understory and smaller trees, leaving a traditional "old park" feel. The ground plain will be seeded with grasses and/or groundcovers to protect the ground surface from erosion.

The perimeter of the property will remain as is, with a thicker understory and trees of all sizes. Some invasive plants will be removed, and all trash and debris will be hauled off-site. This thicker screen at the perimeter of the site will create a visual barrier to the property, and provide park-goers with a sense that they are recreating in part of a larger space.

Some areas of the property will need to be completely cleared of trees and understory to make room for parking lots and other activity zones on the property.

Dog Park Area

A dog park is a fenced zone that allows people and their dogs to play together without the restriction of leashes. This area also allows the dogs and their owners to socialize together. The dog park at Five Forks Park will feature 6' chain-link fencing enclosing nearly 2 acres of the property. The dog park will be subdivided into two play zones by a 4' chain link fence with a gate.

The following lists sample rules recommended by the American Kennel Club for an off-leash dog park:

- Owners are legally and financially responsible for their dogs and any injuries caused by them.
- Puppies and dogs must be properly licensed, inoculated and healthy.
- Animals should wear a collar and ID tags at all times.
- Owners must clean up after their dogs and themselves.
- Dogs showing aggression towards people or other animals will be removed from the park. Animals who exhibit a history of aggressive behavior will not be permitted.
- Puppies using the park must be at least four months old.
- No more than two dogs per handler will be allowed.
- Owners should not leave their dogs unattended or allowed out of sight. If young children are present in the dog park, they too should be under constant supervision.

- Dogs in heat will not be allowed inside the park.
- Do not bring food into the dog park.
- Owners must carry a leash at all times. Dogs should be leashed before entering and prior to leaving the dog park's fenced boundary.
- Violators will be subject to removal from the park and suspension of park privileges.

Pond/Picnic Area

Contingent on permitting, the existing 7500 SF pond on the property will be expanded to greater than ½ acre. This pond will have gentle side slopes to allow bank fishing and offer a safe entry/exit point should someone fall into the pond.

Picnic/Playground Area

The picnic/playground area features a 20'X20' open-air pavilion with bench picnic tables, a playground zone, bike racks, a water fountain and trash receptacles. Parking at these facilities is shared with the remainder of the parking on-site.

The playground portions of this facility will cater to children of different age groups, and will have swings for both older and younger kids. One large playground will have features oriented toward children 2-5 years of age, while another large structure will be oriented for children 5-12 years of age. Several stand-alone items, such as spinning and bouncing activities, and seating will also be placed within the safety surface zone that makes up the playground. A set of four swings, two with children's seats and two with adult seats, will be located near the playground equipment, but at a proper distance. The safety surface area totals 6,730 s.f., and will be comprised of engineered mulch or a rubberized surface, per the latest safety and ADA standards.

Restroom Building

A small restroom structure resides north of the picnic/playground area, almost midway between this facility and the senior activity area. The restroom's entry area faces Five Forks Trickum Road and includes two toilets in the women's restroom, and one urinal and one toilet in the men's restroom. A security feature associated with the restroom building will include a motion sensor inside the public access areas of the building, which will trigger a roof-mounted light when the facility is occupied. This will easily inform County park staff and any passing police patrol that the restroom building is in use. This will also trigger the interior lights and act as an energy-saving feature. The drinking fountain will be placed adjacent to this building.

Open Space/Playfield

Situated on the portion of the property that is the current location for most of the unconsolidated fill material, this two-acre (2.04 AC) space will be re-graded and irrigated. The open area will provide park visitors with a place to play pick-up games of football, space to run and throw a Frisbee or fly a kite, as well as a place to sit in the sun and read a book. The fill material will be smoothed and the side slope sculpted to a 2:1 minimum slope. The entire area will then be seeded with a turf grass that will be a good base for outdoor running activities. An irrigation system will help to insure that this turf will survive the hot summers, a measure that will also help the County maintenance staff.

The 2:1 side slopes will be planted with evergreens and hardwoods, as well as ground covers to help stabilize the banks. Trees will be left out of some portions of the slope to allow for views into the dog park and to the boardwalk. This is a safety feature that will make the park a little more open at these locations, adding to the sense of security within the park.

A 6' wide concrete walkway surrounds the playfield, providing a relatively flat walking loop. Trees of greater than 3" caliper will line this walkway to provide shade cover for walkers and joggers.

Multi-Purpose Trail System

The plan calls for a 12' wide paved pathway that connects all park components. A 12' wide trail, 3/4 mile in length, loops the entire property. Spur trails connect this loop to each activity area, as well as creating a shorter loop that is approximately 1/2 the length of the larger loop. A spur trail also leads to Five Forks Trickum Road, so that surrounding neighborhoods may have safe pedestrian access to the park via the proposed sidewalk along this roadway. The trail system also includes mulched nature trails that wind into the floodplain area and the forested areas in the center of the property, offering a more intimate contact with nature.

Prioritization

The Citizens' Steering Committee recommended the Master Plan to the Recreation Authority on October 17, 2001, with the suggestion that the park be designed in a single phase, while the dog park portion of the plan be bid out as an "add alternate" in the construction phase of the project. This will allow for the entire park to be designed and detailed in construction drawings, and allow for the addition of the dog park in the event that construction bids are lower than anticipated.

Final Opinion of Probable Cost

A detailed opinion of probable cost is included at the end of this section of the Five Forks Trickum Road Master Plan report. Budgeting costs figures, including a 10% contingency, and phasing break down are described in the Opinion of Probable Cost, Appendix A.

Sources Consulted

Benyus, Janine T. The Field Guide to Wildlife Habitats of the Eastern United States. New York: Fireside Books, 1989.

Niering, William A. and Nancy C. Olmstead. The Audubon Society Field Guide to North American Wildflowers. New York: Alfred A. Knopf, 1999.

Matrix Engineering Group, Inc. "Subsurface Exploration and Engineering Recommendations – Proposed Passive Park Fill Area Five Forks Trickum Road Site." 2001.

United States Department of Agriculture, Soil Conservation Service. An Update for The Soil Survey of Gwinnett County, Georgia. Athens, Georgia, 1988.

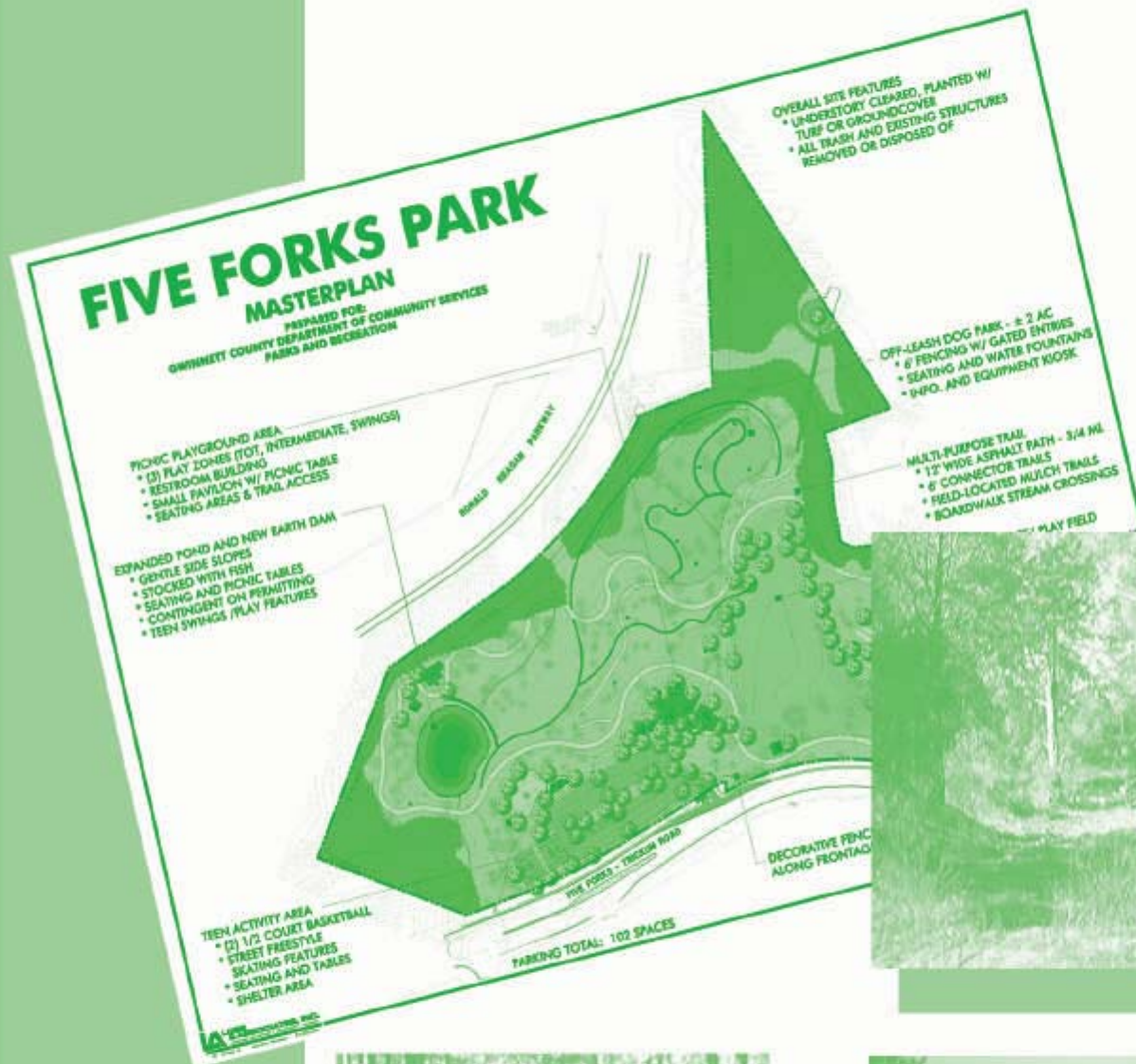
Maps Consulted

Department of the Interior, United States Geological Survey. Lawrenceville, Georgia Quadrangle, 7.5 Minute Series (Topographic).

Hayes, James, and Associates, Composite Plat for Gwinnett County Department of Community Services for The Passive Park Area on Five Forks Trickum Road. June 22, 2001. AutoCADD 14 format digital file.

GIS provided by Gwinnett County, Department of Community Services, Planning Development and Special Operations. (Digital format.)

Appendices





Appendix A

Five Forks Park

Opinion of Probable Cost- 10/26/01

Master Plan

Phase I				
Item	Qty.	Unit	Cost	Total Cost
Demolition				
Vegetation Clear & Grub	150000	sf	\$ 0.06	\$ 9,000
Selective Vegetation Clear & Grub	280000	sf	\$ 0.07	\$ 19,600
			subtotal	\$ 28,600
Grading				
Grading (approximate volume)	20150	cy	\$ 4.00	\$ 80,600
Tree Protection & Erosion Control (Fence & Bales)	1	ls	\$ 6,000.00	\$ 6,000
Erosion Control Mat	15000	sf	\$ 0.15	\$ 2,250
			subtotal	\$ 88,850
Site Work				
Construction sign	1	ls	\$ 400.00	\$ 400
Entry sign	1	ls	\$ 5,000.00	\$ 5,000
Pond spillway structure	1	ls	\$ 15,000.00	\$ 15,000
Rip-Rap (Outflows, Bridge Abutments, Etc.)	300	sy	\$ 35.00	\$ 10,500
15" ADS Pipe	370	lf	\$ 30.00	\$ 11,100
60" ADS Pipe	50	lf	\$ 120.00	\$ 6,000
Area Drain	2	ea	\$ 1,500.00	\$ 3,000
ADS Headwall	3	ea	\$ 550.00	\$ 1,650
Asphalt Roadway (2" Asphalt & 6" Base)	38000	sf	\$ 1.60	\$ 60,800
Concrete wheel stops	74	ea	\$ 7.00	\$ 518
Concrete Curb & Gutter for roadway (Includes Courses, & 6" Aggr.)	1000	lf	\$ 9.00	\$ 9,000
Decorative Aluminum fencing along Five Forks Trickum Road	1100	lf	\$ 22.50	\$ 24,750
Chain Link Fencing (6') for southern property line	400	lf	\$ 13.50	\$ 5,400
Concrete Curb & Gutter (120 l.f.) for Tony Drive "Circle" w/ Asphalt removal	1	ls	\$ 1,750.00	\$ 1,750
			subtotal	\$ 154,868
Picnic/Playground Area				
Restroom Building	1	ls	\$ 100,000.00	\$ 100,000
Concrete plaza and sidewalks	3500	sf	\$ 2.50	\$ 8,750
Waste Receptacle	2	ea	\$ 450.00	\$ 900
Playground Structure - tot zone	1	ls	\$ 38,000.00	\$ 38,000
Playground Structure - intermediate zone	1	ls	\$ 48,000.00	\$ 48,000
Playground Structure - swings zone	1	ls	\$ 7,000.00	\$ 7,000
Picnic Shelter - 20X20	1	ea	\$ 45,000.00	\$ 45,000
Picnic Tables	5	ea	\$ 500.00	\$ 2,500
Bike Racks	2	ea	\$ 150.00	\$ 300
Grills	4	ea	\$ 450.00	\$ 1,800
Water Fountain	1	ea	\$ 2,000.00	\$ 2,000
Emergency phone kiosk	1	ea	\$ 3,900.00	\$ 3,900
			subtotal	\$ 258,150
Teen Area - Skate Facility/ Basketball				
Concrete plaza and sidewalks	1500	sf	\$ 2.50	\$ 3,750
Concrete pavers - plaza	550	sf	\$ 3.50	\$ 1,925
Freestyle Skating Arena	5500	sf	\$ 10.00	\$ 55,000
Waste Receptacle	3	ea	\$ 450.00	\$ 1,350

Park Rules Signage	1	ea	\$ 600.00	\$ 600
Traffic-Parking Signage	4	ea	\$ 225.00	\$ 900
Picnic Tables	6	ea	\$ 500.00	\$ 3,000
Bike Racks	3	ea	\$ 150.00	\$ 450
Water Fountain	1	ea	\$ 2,000.00	\$ 2,000
Shade Shelter - 16X20	1	ea	\$ 25,000.00	\$ 25,000
Seat Wall	60	lf	\$ 38.00	\$ 2,280
Basketball 1/2 Court - incl fencing, equip.	2	ls	\$ 8,000.00	\$ 16,000
Wall - 4' tall at parking lot adjacent to basketball	100	lf	\$ 60.00	\$ 6,000
Retaining Wall	125	lf	\$ 50.00	\$ 6,250
			subtotal	\$ 124,505
Pond Picnic Area				
Concrete plaza and sidewalks	1000	sf	\$ 2.50	\$ 2,500
Waste Receptacle	1	ea	\$ 450.00	\$ 450
Picnic Shelter - 20X20	1	ea	\$ 45,000.00	\$ 45,000
Picnic Tables	6	ea	\$ 500.00	\$ 3,000
Bike Racks	1	ea	\$ 150.00	\$ 150
Benches	2	ea	\$ 400.00	\$ 800
Porch Swing	1	ea	\$ 750.00	\$ 750
Swings/ teen playground structure area	1	ls	\$ 15,000.00	\$ 15,000
Grills	1	ea	\$ 450.00	\$ 450
			subtotal	\$ 68,100
Irrigated Lawn Area				
Seeding for lawn turfgrass	90000	sf	\$ 0.05	\$ 4,500
Irrigation system	1	ea	\$ 12,000.00	\$ 12,000
			subtotal	\$ 16,500
Senior Activity Area				
Concrete sidewalks	2350	sf	\$ 2.50	\$ 5,875
Concrete pavers - plaza	500	sf	\$ 3.50	\$ 1,750
Bocce Court - 2 playing areas	1	ls	\$ 7,500.00	\$ 7,500
Shuffleboard - 2 playing areas	1	ls	\$ 5,000.00	\$ 5,000
Horseshoes - 2 playing areas	1	ls	\$ 2,000.00	\$ 2,000
Porch Swing	1	ls	\$ 750.00	\$ 750
Park Rules Signage	1	ea	\$ 500.00	\$ 500
Picnic Tables	4	ea	\$ 750.00	\$ 3,000
Shade Shelter - 16X20	1	ea	\$ 25,000.00	\$ 25,000
Bike Racks	1	ea	\$ 150.00	\$ 150
Water Fountain	1	ea	\$ 2,000.00	\$ 2,000
Grills	2	ea	\$ 450.00	\$ 900
Emergency phone kiosk	1	ea	\$ 3,900.00	\$ 3,900
Seat Wall	35	lf	\$ 40.00	\$ 1,400
			subtotal	\$ 59,725
Off-Leash Dog Park				
Fencing - 6' height w/ gates, etc	1470	lf	\$ 13.50	\$ 19,845
Water Fountain w/ doggie dish filler	1	ea	\$ 2,000.00	\$ 2,000
Seeding for turfgrass	90000	sf	\$ 0.04	\$ 3,600
Benches	4	ea	\$ 400.00	\$ 1,600
Info Kiosk w/ bag dispenser	1	ls	\$ 1,000.00	\$ 1,000
			subtotal	\$ 28,045
Trail System				
12' wide main loop trail - asphalt	3960	lf	\$ 19.00	\$ 75,240
8' wide minor loop trail - asphalt	800	lf	\$ 13.00	\$ 10,400
5' wide connector trail - concrete	1000	lf	\$ 12.00	\$ 12,000
8' wide boardwalk	290	lf	\$ 145.00	\$ 42,050
5' wide sidewalk - concrete (Trickum Rd)	1220	lf	\$ 11.00	\$ 13,420
Benches	4	ea	\$ 400.00	\$ 1,600
Porch Swing	1	ea	\$ 750.00	\$ 750
4' wide nature trail - mulch	3000	lf	\$ 1.50	\$ 4,500
Removable bollards	4	ea	\$ 125.00	\$ 500
			subtotal	\$ 160,460

Landscape				
Landscape (Srubs, groundcovers, mulch)	1	ls	\$ 38,000.00	\$ 38,000
Trees - 4" Cal.	40	ea	\$ 400.00	\$ 16,000
Trees - 2" Cal.	55	ea	\$ 275.00	\$ 15,125
Evergreen screen for southern property line	1	ls	\$ 3,000.00	\$ 3,000
Seeding for Erosion Control Mat	15000	sf	\$ 0.05	\$ 750
Seeding for understory of cleared site areas	280000	sf	\$ 0.04	\$ 11,200
			subtotal	\$ 84,075
Electrical				
Site Electrical	1	ls	\$ 20,000.00	\$ 20,000
			subtotal	\$ 20,000
Site Utilities - Water				
Water meter	1	ea	\$ 1,250.00	\$ 1,250
6" Ductile Iron Pipe	220	lf	\$ 22.00	\$ 4,840
3" PVC water service line	1400	lf	\$ 10.00	\$ 14,000
Fire Hydrants	1	ea	\$ 2,000.00	\$ 2,000
Fittings, attachments, etc. (15% total)	1	ls	\$ 3,313.50	\$ 3,314
			subtotal	\$ 25,404
Site Utilities - Sewer				
4" sewer service	390	ls	\$ 18.00	\$ 7,020
Clean outs	4	ea	\$ 150.00	\$ 600
Fittings, attachments, etc. (15% total)	1	ls	\$ 90.00	\$ 90
			subtotal	\$ 7,710
			GRAND SUBTOTAL	\$ 1,124,992
Mobilization, Fees, Bonds, Etc. (10% total)	1	ls	\$ 112,499.15	\$ 112,499
			TOTAL -This Phase	\$ 1,237,491
Architectural and Engineering Cost = 6.5%				\$ 80,437
Program Management = 5.5%				\$ 68,062
Total Park Cost - all inclusive				\$ 1,385,990
			w/ 10% contingency	\$ 1,524,588



Appendix B

Five Forks Park Master Plan - Steering Committee Roster - July 25, 2001

* Tammie Barthen
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Community Planner, Parks and Recreation Project
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30045, (770) 822-8864, Fax. (770) 822-8893
E-mail: schudere@co.gwinnett.ga.us



Appendix C

FIVE FORKS PARK MASTER PLAN-- Interest Survey

Program or Facility	Total # of Mentions	First Priority	Second Priority	Third Priority	Fourth Priority	Fifth Priority	Rank
Multi-Purpose Trail	52	35	8	5	1	1	1
Nature Trails - not paved	40	8	13	7	5	1	2
Fishing Pond	39	2	8	15	6	3	3
Picnic Pavilion - Restrooms/Grills	29	0	6	9	5	7	4
Retained Meadow and Woodland	26	3	3	5	12	1	5
Playgrounds	22	1	6	3	9	1	6
Irrigated Turf Fields	16	2	3	1	0	1	7
Dog Park	13	0	0	2	0	0	8
Outdoor Senior Activities	10	0	0	1	1	9	9
Skate Park	5	1	0	0	1	3	10
Splash Ground	3	0	0	0	1	2	11
Sidewalks	3	1	0	0	0	1	11
Activity Building	2	0	0	0	2	0	12
Bethesda Park connection	2	1	0	0	0	0	12
Basketball Courts	1	0	0	0	0	0	13
Sand Volleyball Courts	1	0	0	0	0	0	13
Horseshoe Pits	1	0	0	0	0	0	13
BBQ Pits	1	0	0	0	0	0	13
Butterfly Garden	1	0	0	0	1	0	13
Bridge/Boardwalk across creek	1	0	1	0	0	0	13
Gardening Plots (10'x10')	1	0	1	0	0	0	13
Library	1	0	0	1	0	0	13
Ice Pond	1	0	0	0	0	1	13
Non-Fishing Pond	1	0	0	0	1	0	13
Tennis Courts	0	0	0	0	0	0	14
Disc Golf	0	0	0	0	0	0	14

Community Concerns:

Community Concerns:	Total # of Mentions	Rank
Security/lighting	21	1
Leaving the land natural with trees, etc.	18	2
Traffic	14	3
Becoming Teen hangout/gang related	11	4
Easy access to the park	6	5
Parking	5	6
Do not allow to become commercial	4	7
Maintenance of park, restrooms, etc.	3	8
No sports fields	3	8
Noise	3	8
No dog park	2	9
Adequate restrooms	2	9
Separate playground for toddlers from older kids	1	10
Separate bike path from joggers/walking	1	10



Appendix D

SUBSURFACE EXPLORATION AND ENGINEERING
RECOMMENDATIONS

PROPOSED PASSIVE PARK FILL AREA
FIVE FORKS TRICKUM ROAD SITE

GWINNETT COUNTY, GEORGIA

Submitted to

*Kimley-Horn and Associates, Inc.
3169 Holcomb Bridge Road, Suite 600
Norcross, Georgia 30071*

PROJECT NUMBER: MEG 97140.18
June 08, 2001



MATRIX ENGINEERING GROUP, INC.
Geotechnical, Environmental, and Construction Materials Consultants

June 8, 2001

Mr. Brant Aden
Kimley-Horn and Associates, Inc.
3169 Holcomb Bridge Road, Suite 600
Norcross, Georgia 30071

Re: *Subsurface Exploration and Engineering Evaluation
Proposed Passive Park Fill Area
Five Forks Trickum Road, Gwinnett County, Georgia
Matrix Engineering Group Project Number 97140.18*

Dear Mr. Aden:

Matrix Engineering Group, Inc. has completed the authorized Subsurface Exploration for the proposed Passive Park Fill Area on Five Forks Trickum Road in Gwinnett County, Georgia. The scope of this work was to perform a total of eighteen (18) soil test borings in accordance with ASTM D 1586 and provide the findings and recommendations regarding the geotechnical aspects of the proposed development.

This report describes our investigative procedures and presents our findings, conclusions and engineering recommendations.

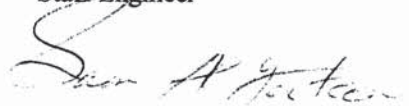
Matrix Engineering Group, Inc. appreciates the opportunity to have served Kimley-Horn and Associates, Inc. and Gwinnett County Parks & Recreation and looks forward to our continued association. If you have any questions or need further assistance, please do not hesitate to call.

Very truly yours,

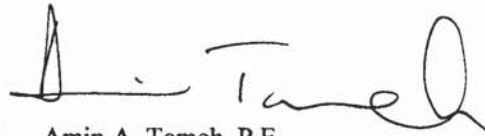
MATRIX ENGINEERING GROUP, INC.



Elias Boghos
Staff Engineer



Sam Al-Yateem, P.E.
Senior Geotechnical Engineer
Principal



Amin A. Tomeh, P.E.
Senior Engineer
Principal

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EXECUTIVE SUMMARY

A subsurface exploration was performed at the proposed Passive Park Fill Area on Five Forks Trickum Road in Gwinnett County, Georgia. The objective of this exploration was to evaluate the subsurface soil conditions and provide general recommendations for site development. The following summarizes our findings and recommendations. For detailed information and discussions, refer to the appropriate section in the body of this report.

The subject site is approximately 4 acres within the proposed development. The property is bound by Five Forks Trickum Road from the east, a creek from the north, and Ronald Regan Parkway from the west and other residential properties from the south.

A total of eighteen (18) soil testing borings were performed in accordance with ASTM D 1586 at the approximate locations shown on Figure 1 provided in the Appendix. The test borings encountered approximately two to four inches of topsoil. Beneath the topsoil layer, the test borings encountered man-made fill soils consisting of silty-sand and clay with rock fragments, root, asphalt, and some decomposed organics. The soil then changes to residual stiff to very stiff clayey silt and sandy silt, beneath the silty soil medium dense to dense coarse to fine sand with rock fragments and some mica was encountered at all of the test locations. Partially Weathered Rock (PWR) was encountered beneath the residual soils up to the auger refusal depth. The PWR depth ranged from 3 feet to 11 feet below the existing grades. Auger refusal was encountered within a few feet of the partially weathered rock elevations in most locations. Refer to Table 1, test boring records and Figures 2 to 5 (Cross Sections A-A to D-D) for detailed information.

Based on the findings, we recommend that the subgrade preparation should be performed by stripping of the topsoil layer, removal of existing structures and/or construction debris, unsuitable existing fills, and soft soils. After the unsuitable materials are removed, the suitability of the exposed subgrades in all areas should be confirmed by proofrolling. The proofrolling should be performed by a loaded tandem-wheeled dump truck with minimum weight of 20 tons. Any material that deflects excessively or ruts under the loaded truck should be densified or removed and replaced with well-compacted materials. Since obstructions, man-made fills, and shallow PWR was encountered within the suspect fill area, we strongly recommend that a test pit program be performed in order to verify the findings and conclusions provided herein.

We recommend that the foundations be constructed within the residual soil. An allowable soil bearing capacity of 3,000 pounds per square foot (psf) can be used for design of the foundations constructed on the residual soils. We recommend that a minimum of five feet is excavated and replaced with properly compacted soils for support of slabs and foundations at all other areas. We strongly recommend that once the layout of the buildings is determined, the foundation/slab areas be thoroughly inspected to ensure that the bearing capacity and subgrades are approved by a geotechnical engineer prior to the construction of the foundations and slabs.

We recommend that foundation inspection be performed utilizing dynamic cone penetrometer equipment in accordance with ASTM STP 399. A recommended foundation inspection criterion is provided in Section 6.2 of this report.

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Executive Summary

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Table 1: Summary of Test Borings, Fill, PWR depth and Auger Refusal Depth.

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Test Boring Records

1.0 INTRODUCTION{PRIVATE }

MATRIX ENGINEERING GROUP, INC. has completed the authorized Subsurface Exploration for the proposed Gwinnett County Passive Park in Gwinnett County, Georgia. This work was performed in accordance with our proposal number ME20226-1 dated September 5, 2000 and revised on November 2, 2000. The objective of this work was to explore the subsurface conditions and provide the findings and recommendations regarding the geotechnical aspects of the proposed development.

We understand that the proposed development will include a community park based with potential construction of lightweight one-story structures and associated driveways and parking areas.

A total of eighteen (18) soil test borings and offset borings were performed at the subject site. The test locations are shown on Figure 1 provided in the Appendix. The test borings were located in the field by Matrix Engineering Group representatives using tape measurements and relying on existing features (i.e. existing roads, improvements, and site features). The test locations should be considered approximate unless surveyed and provided to us for incorporation in our final report.

2.0 EXPLORATION AND TESTING PROGRAM{PRIVATE }

2.1 Field Exploration

The field exploration was performed in general accordance with ASTM D 1586-83 standards. Borings were advanced by augering through soils with continuous flights of hollow-stem augers. The augers also act as a casing for the borehole to prevent collapse. At regular intervals, soil samples were obtained through the center of the auger with a standard 1.4-inch I.D., 2-inch O.D., split-tube sampler. The sampler is first seated six inches to penetrate any loose cuttings, and then driven an additional foot with blows of a 140-pound hammer falling 30 inches. The number of hammer blows required to drive the sampler the final foot is recorded and is designated as the Standard Penetration Resistance. The penetration resistance, when properly evaluated, is an index of the soil strength, consistency and ability to support foundations.

The samples were classified in the field in general accordance with ASTM D 2488-93 (Visual-Manual Procedure for Description of Soils). Representative portions of the soil samples were placed in glass jars and transported to the laboratory where they were examined to verify the field classifications. Soil descriptions and penetration resistance values are presented graphically on the Test Boring Records presented in Appendix A of this report.

2.2 Laboratory Testing

All soil samples recovered from the field were transported to the laboratory for verification and storage. The soil classifications are described in the Test Boring Records. The soil samples are kept in sealed glass jars and will be stored for a period of 60 days and then disposed off unless otherwise instructed by the owner or the engineer.

3.0 SITE DESCRIPTION AND GENERAL SITE GEOLOGY

3.1 Site Reconnaissance

The subject site is bound by Five Forks Trickum Road from the east, a creek from the north and Ronald Regan Parkway from the west. The area, where suspect fill is located is behind two existing brick buildings that are located along Five Forks Trickum Road.

During our site visit, the previous landowner, Mr. James Moon, was interviewed in order to obtain relevant information regarding the land use of the property. Based on the interview, Mr. Moon indicated that his family owned the property for approximately 66 years. The primary land use was for farming and agriculture. He also indicated that his son used the property for storing and selling soil as fill. Mr. Moon added that his son allowed construction debris dumping of concrete and asphalt as was evident during our site visit. He indicated that only a few truckloads of deleterious materials and residential debris was dumped in this area. Mr. Moon indicated that the site was investigated in the past by Metropolitan Land Development & Investment Corporation. He stated that test pits and soil borings were performed in the fill area.

Metropolitan Land Development & Investment was contacted in order to obtain any available information. Mr. Norman J. Nash, Vice President of Metropolitan indicated that his firm performed test pits in the fill area and found that shallow rock was present within the top five feet at the eastern areas of the site. Mr. Norman did not generate any report of the findings and did not comment on the content of the fill.

3.2 General Site Geology

The subject site is located in the Piedmont Geologic Province, which contains the oldest rock formations in the Southeastern United States. The parent rocks in the region are primarily comprised of the unconsolidated mass of quartz, feldspar, mica, and a wide variety of dark minerals such as hornblende and amphibole.

The local geology in Gwinnett County, (according to the Geologic Map of Georgia) consists of the granite gneiss, which includes diorite and injected gneiss that underlies about 65 percent of the county. The rest of the county is underlain by Brevard Schist, which occupies a narrow area of 2 to 3 miles wide in most places, but near Suwannee it widens to about 5 miles. The biotite gneiss and schist form a triangular pattern from Lawrenceville southwestward.

The proportion of felsic and mafic minerals in these parent rocks, as well as of quartz that is very resistant to weathering, limits the amount of clay in the soils. Therefore these soils are sandy and have faint horizons, and in small, scattered areas hard rock is exposed.

Chemical decomposition initially occurs along the boundaries of individual mineral crystals. As a result, partially weathered rock has the appearance of a dense sand (SM, SP). With further weathering, the individual crystals other than quartz are attacked and the mass becomes a

micaceous silty sand (SM) or micaceous sandy silt (ML). In this stage, the original banding of the parent rock is apparent, but the original crystalline structure is not observed. Reflecting the composition of the original rock, mica flakes, rather than the quartz grains, often comprise the majority of the sand-size particles. Finally, in the more advanced stages of chemical weathering, the material is changed into a red or reddish-brown silty clay (CL or CH) or clayey silt (ML or MH). Depending on the quartz content, a sandy fraction will be present. In this weathered stage, the banding and crystalline structure of the parent rocks is lost.

4.0 GENERAL SUBSURFACE CONDITIONS

The subsurface conditions were characterized by visual examination of the soil obtained from the split-spoon sampler and observation of the auger cutting during the drilling operation in general accordance with ASTM D2488-93 and ASTM D2487-93. The depth of the borings ranged from 3 foot to 30 feet below the existing surface. Based on our observations and test boring records, the conditions at the subject site can be characterized as follows:

4.1 Topsoil and Surface Layer

Topsoil layer at the test locations ranged from 2 to 4 inches primarily consisted of dark brown and gray clayey sand and with roots and decomposed organics. Rock boulders, concrete and asphalt pavements pieces were scattered within the investigated area as well as construction debris consisting of wood panels, roof gutters, and other deleterious matter.

4.2 Man-Made Fill

Man-made fill was encountered at all of the test boring locations. The fill consisted primarily of a mixture of silt-sand and clays with rock fragments, roots, asphalt pavement pieces and some decomposed organics. Fill depth on the order of 2.5 to 3.5 feet was encountered on the northern areas and a maximum depth of 8.5 feet on the western and southern boundaries of the explored area. The fill could be deeper, where obstructions have been encountered at shallower depth such as test boring B2, B3 and B4. Spoon refusal was encountered at these locations due to the presence of large boulders or bedrock. The depth of fill at each location is illustrated in cross-sections A-A to D-D provided in the Appendix. The consistency of the fill was soft to hard with blow counts ranging from 4 blows per foot (bpf) to 40 bpf.

4.3 Residual Material

Residual soils are those which have weathered in place from the parent rock. The top few feet of the residual soils consisted primarily of stiff to very stiff inorganic clayey silt and sandy silt (ML). Beneath the clayey soils stiff to hard clayey silt and sandy silt (ML) and silty sand (SM) were encountered. The transition between the clayey soils and silty soils is not clearly identifiable. Beneath the silty soils medium dense to dense coarse to fine sand (SM) with rock fragments and varying degrees of mica was encountered at all of the test locations. The consistency of the

residual soil was loose to dense, but generally medium dense, with blow counts ranging from 9 bpf to 67 bpf.

4.4 Partially Weathered Rock and Bedrock

Partially weathered rock was encountered as a transition zone between the overlying residual soils and the relatively sound, continuous rock. Partially weathered rock is a regionally used term for residual material with a Standard Penetration Resistance of 100 or more, but which can be penetrated by the soil drilling equipment. Partially weathered rock was encountered at several test locations at depths ranging from 3.0 feet at test boring B4 to 11 feet at test boring B6 below the existing ground surface. Mechanical auger refusal is normally associated with presence of boulders, dense partially weathered rock and/or bedrock. Several soil test borings were offset due to the presence of shallow auger refusal. The offset locations were drilled within 10 feet from the planned test locations. The partially weathered rock when sampled consisted of very dense gray and white silty coarse to fine sand with rock fragments, and mica.

The upper and lower boundaries of the partially weathered rock zone may be poorly defined. In many cases the zone may be overlain by very dense residual soils similar in many respects to partially weathered rock. Lenses of moderately hard or hard rock often exist within the partially weathered rock zone. These lenses may cause refusal to soil drilling methods prior to encountering relatively sound, continuous rock.

Bedrock is typically underlies the partially weathered rock. The depth of the bedrock, Rock Quality Designation (RQD), classification, and its continuity is obtained through rock coring procedures. Rock coring was not in the scope of this study.

4.6 Groundwater

Groundwater measurements were taken during the drilling operation and at least 24 hours after the drilling. Groundwater was not encountered at any of the test boring locations.

Groundwater levels tend to fluctuate with seasonal and longer-term climatic conditions. Fluctuation on the order of 4 to 8 feet is common in the Atlanta area.

5.0 FINDINGS AND RECOMMENDATIONS

The following recommendations are based on the information furnished to us, the data obtained from the subsurface exploration, and our past experience with similar projects. They were prepared in general accordance with established and accepted professional geotechnical engineering practice in this region. Our recommendations do not reflect any variations that would likely exist between the pre-designated borings or unexplored areas. No other warranty is expressed or implied. Matrix Engineering Group, Inc. is not responsible for conclusions, opinions, or recommendations made by others based on this report.

The proposed foundation elevations and the subgrade elevations are not known at the time of writing this report. Therefore, we recommend that once the final design is complete that Matrix Engineering Group is given the opportunity to review its recommendations in light of the new design information and modify its recommendations, if necessary.

5.1 Excavation Considerations

The excavation within this project may include the existing fills, residual materials, partially weathered rock, and rock. Consequently, several different excavation methods may be required. Our experience indicates that the fill and residual soils can generally be removed with conventional earth moving equipment, provided that proper groundwater control is maintained. Groundwater was not encountered at any of the test locations, therefore, we do not anticipate that special groundwater measures would be required within the explored areas.

As indicated in the test boring records and as illustrated in the cross section profiles, Figures 2 through 5, partially weathered rock was encountered at shallow depths ranging from 3 feet to 11 feet below the existing elevations. Minor amounts of partially weathered rock can generally be removed by large front-end loaders, large hydraulic trackhoes, or heavy tractor drawn rippers (such as D-8 Caterpillar). However, more extensive depths of partially weathered rock normally require blasting or rock drilling for removal. Blasting will also be required in these areas where rock exists above the proposed grades.

5.2 Subgrade Preparation and Slab-On-Grade Construction

The proposed finished elevations were not provided to us at the time of writing this report. Subgrade preparation should be performed by stripping of the topsoil layer, removal of existing structures and/or construction debris, unsuitable existing fills, and soft soils. Underground utility lines, or other items, such as septic tanks, or trash pits that may be encountered during the grading operation should be treated on an individual basis.

After the unsuitable materials are removed, the suitability of the exposed subgrades in all areas should be confirmed by proofrolling. The proofrolling should be performed by a loaded tandem-wheeled dump truck with minimum weight of 20 tons. Any material that deflects excessively or ruts under the loaded truck should be densified or removed and replaced with well-compacted materials. The proofrolling should be observed by a geotechnical engineer or other qualified inspector. Structural Fill procedures are provided in Section 6.1 of this report.

5.3 Foundations

Portions of the fill area appear to be suitable for construction of light structures utilizing shallow foundations, such as conventional spread footings or strip footings, provided that the subgrades and structural fills are performed in accordance with our recommendations provided in this report.

Since residual soils were encountered within the top four feet in the central areas and the southeastern areas (test borings B7, B8, B9, B10, B12, B13, and B14). We recommend that the foundations be constructed within the residual soils. An allowable soil bearing capacity of 3,000 pounds per square foot (psf) can be used for design of the foundations constructed on the residual soils. We recommend that a minimum of five feet be excavated and replaced with properly compacted soils for support of slabs and foundations at all other areas. We strongly recommend that once the layout of the buildings have been determined, the foundation/slab areas be thoroughly inspected to ensure that bearing capacity and subgrades are approved by a geotechnical engineer prior to the construction of the foundations and slabs.

Minimum footing dimensions of 18 and 24 inches should be used for wall and spread footings, respectively, to prevent shear failure, and should be a minimum 12 inches below subgrade elevations to minimize the effects of frost and heave.

Due to the presence of loose soils within the top few, we recommend that once the final design elevations of the foundations and the subgrades are determined, Matrix Engineering Group, Inc. review its recommendations in light of the design information. Remedial measures might be necessary, should the loose soils are located within the influence zone of the building foundation loads. We recommend that foundation inspection be performed utilizing dynamic cone penetrometer equipment in accordance with ASTM STP 399. A recommended foundation inspection criterion is provided in Section 6.2 of this report.

5.4 Slopes{PRIVATE }

Common practice in this region has been to limit temporary slopes to 2.0(H) to 1.0(V) or flatter. Due to the presence of inconsistent man-made fills up to 8 feet below the existing grade, we recommend that slope within the fill be a minimum of 2.0(H) to 1.0(V) or flatter in order to avoid slope failures. The residual soils at this site will tolerate a maximum temporary slope of 1.5(H) to 1.0(V). The soils in this area may contain fissures, foliation planes and other discontinuities that could cause sloughing or possibly a slope failure, even on relatively flat slopes. Therefore, the excavation for the slopes should be monitored by a geotechnical engineer to ensure that soil conditions are similar to those we have encountered. Potential planes of weakness will be more visible at depth as the excavation proceeds. If weak conditions are evident the engineer can then recommend any necessary remedial actions.

Vertical cut that exceeds five feet should be braced or shored as required by OSHA regulations for safety. If any excavation, including a utility trench, is extended to a depth of more than twenty feet, it will be necessary to have the slopes designed by a professional engineer.

6.0 CONSTRUCTION RECOMMENDATIONS

6.1 Structural Fill

The residual soils present at the subject site appear to be suitable for use as a structural fill. Structural fill should be compacted in accordance with the following criteria:

1. Adequate laboratory proctor density tests should be performed on representative samples of the proposed fill materials to provide data necessary for the quality control. The moisture content at the time of compaction should be within 3 percentage points of the optimum moisture content. In addition, we recommend that the fill soils be free of organics and relatively non-plastic with plasticity indices less than 20.
2. Suitable fill material should be placed in thin lifts (lift thickness depends on type of equipment used, but generally lifts of 8 inches loose measurement are recommended). The soils should be compacted by mechanical means such as sheepsfoot rollers.
3. We recommend that the fill be compacted to a minimum of 95% of the Standard Proctor Maximum Dry Density (ASTM Specifications D 698). The top two feet under pavements should be compacted to a minimum of 98% of the Standard Proctor Test.
4. An experienced soil engineering inspector should take adequate density tests throughout the fill placement operation to ensure that the specified compaction is being achieved.

6.2 Construction Inspection and Testing

During construction, it is advisable that Matrix Engineering Group inspect the site preparation and foundation construction work in order to ensure that our recommended procedures are followed. The placement of any compacted fill should be inspected and tested. The utilization of acceptable on-site borrow materials as well as adequate off-site selected fill must be verified.

Table 1: Summary of Test Borings, Fill , PWR depth, and Auger Refusal Depth.

Test Boring	Fill Depth (Feet)	Partially Weathered Rock Depth (Feet)	Auger Refusal Depth (Feet)	Remarks
B-1	3.5	7.0	7.5	4 offset attempts were made within 10' radius. Average penetration was 3 feet.
B-2	3.5	N/E	3.0	4 offset attempts were made within 10' foot radius. Average Penetration was 2.5 feet.
B-3	2.5	3.5	3.5	2 offset attempts were made within 10' radius. Auger refusal was at 3.5 feet.
B-4	2.5	2.5	5	4 offset attempts were made within 10' radius. Auger refusal was at 2.5 feet.
B-5	7.0	7.0		Boring Terminated at 20 feet BGS.
B-6	8.0	N/E		Boring Terminated at 20 feet BGS.
B-7	3.5	8.5	10.0	
B-8	3.0	3.0	4.5	2 offset attempts were made within 10' radius. Auger refusal was at 3 feet BGS.
B-9	3.0	N/E	7.0	
B-10	3.5	18.0		Boring Terminated at 20 feet BGS.
B-11	8.0	N/E		Boring Terminated at 20 feet BGS.
B-12	4.0	8.0	12.0	
B-13	1.5	8.0	12.0	
B-14	2.0	8.0	8.0	Spoon Refusal at 8.0 feet.
B-15	6.0	N/E		Boring Terminated at 20 feet BGS.
B-16	4.5	11.0	13.0	
B-17	8.0	N/E		Boring Terminated at 20 feet BGS.
B-18	8.5	8.5	15.0	

N/E: Not Encountered

BGS: Below Ground Surface

PWR: Partially Weather Rock

APPENDIX A

Figure 1: Soil Test Boring Locations Plan

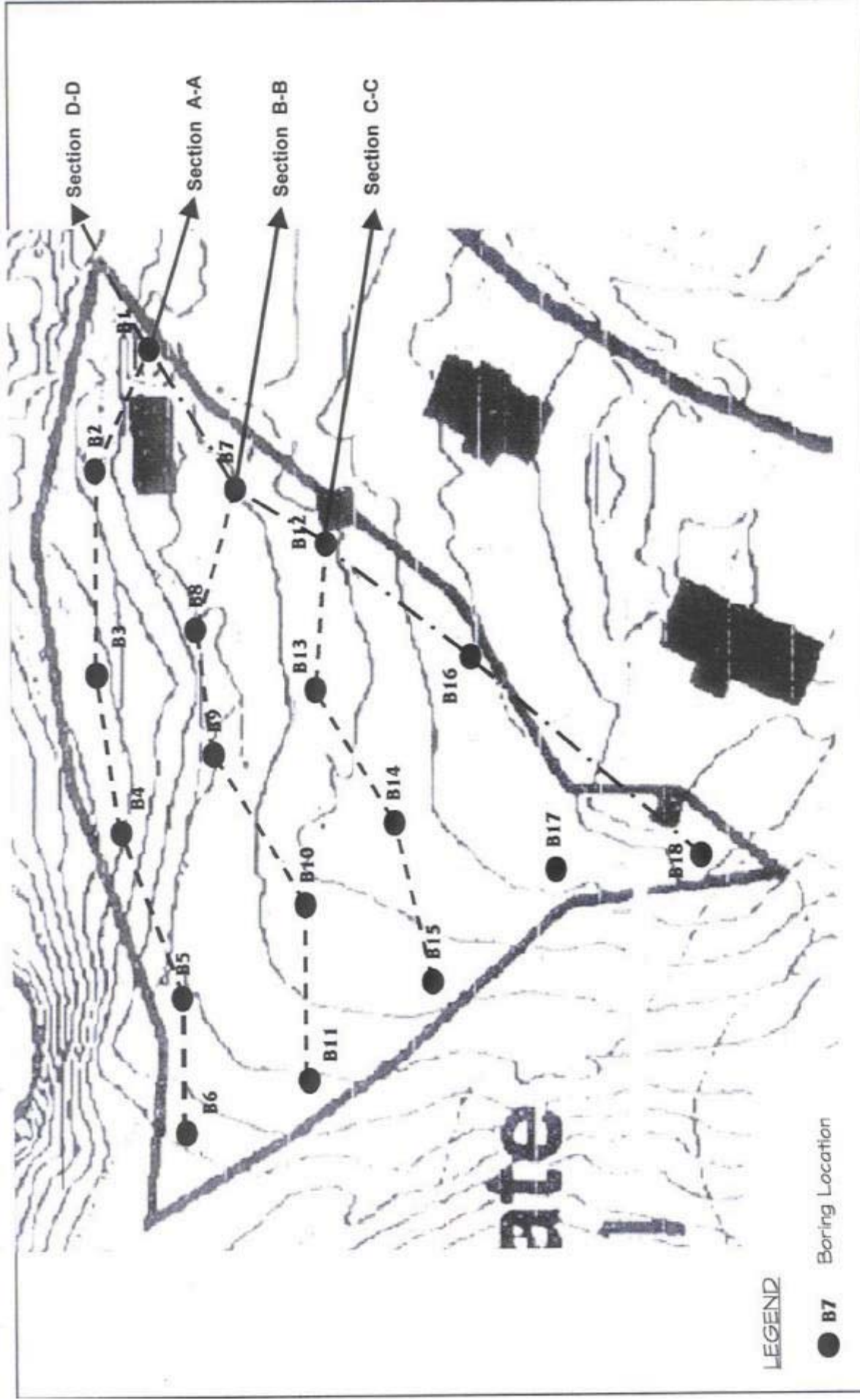
Figure 2: Cross-Section A-A Profile


Figure 3: Cross-Section B-B Profile

Figure 4: Cross-Section C-C Profile

Figure 5: Cross-Section D-D Profile

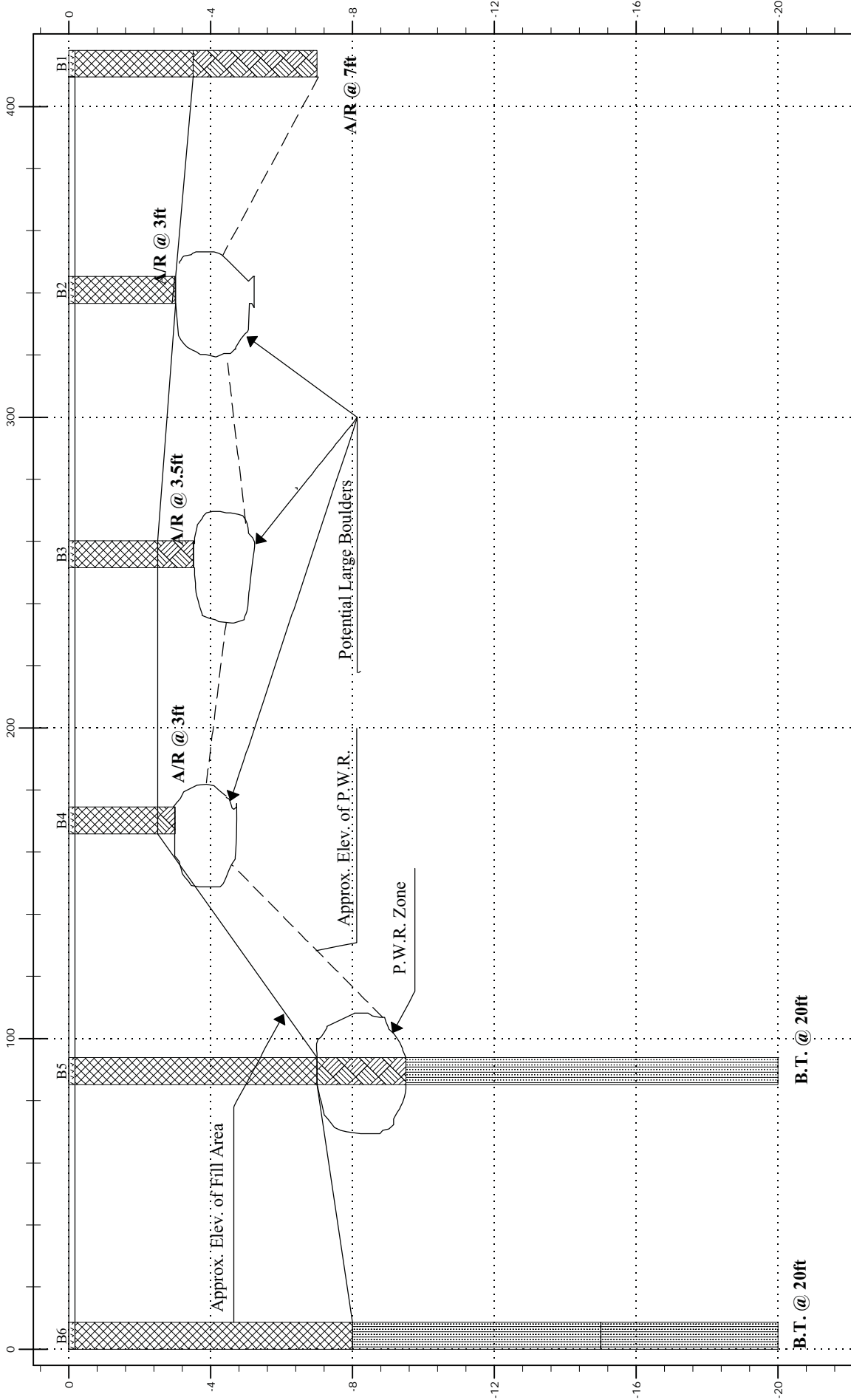
Test Boring Records



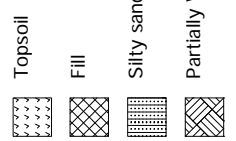
 MATRIX ENGINEERING GROUP, INC. NORCROSS, GEORGIA		TITLE Approximate test Boring Location Gwinnett Co. Proposed Passive Park Fill Area Five Forks Trickum Road Gwinnett County, Georgia	
CLIENT Kimley-Horn and Associates, Inc.	DATE 6/8/01	SCALE Not to Scale	PROJECT NUMBER 971401B
DRAWN EB	REVIEWED SA	FIGURE 1	

ELEVATION IN FEET

ELEVATION IN FEET



Strata symbols



Plan View



MATRIX ENGINEERING GROUP, INC.
GENERALIZED SOIL PROFILE

HORIZONTAL SCALE: 1"=100'	DRAWN BY/APPROVED BY	DATE DRAWN
VERTICAL SCALE: 1"=4'	EB/SA	12/10/01

Gwinnett Co. Proposed Passive Park Fill Area

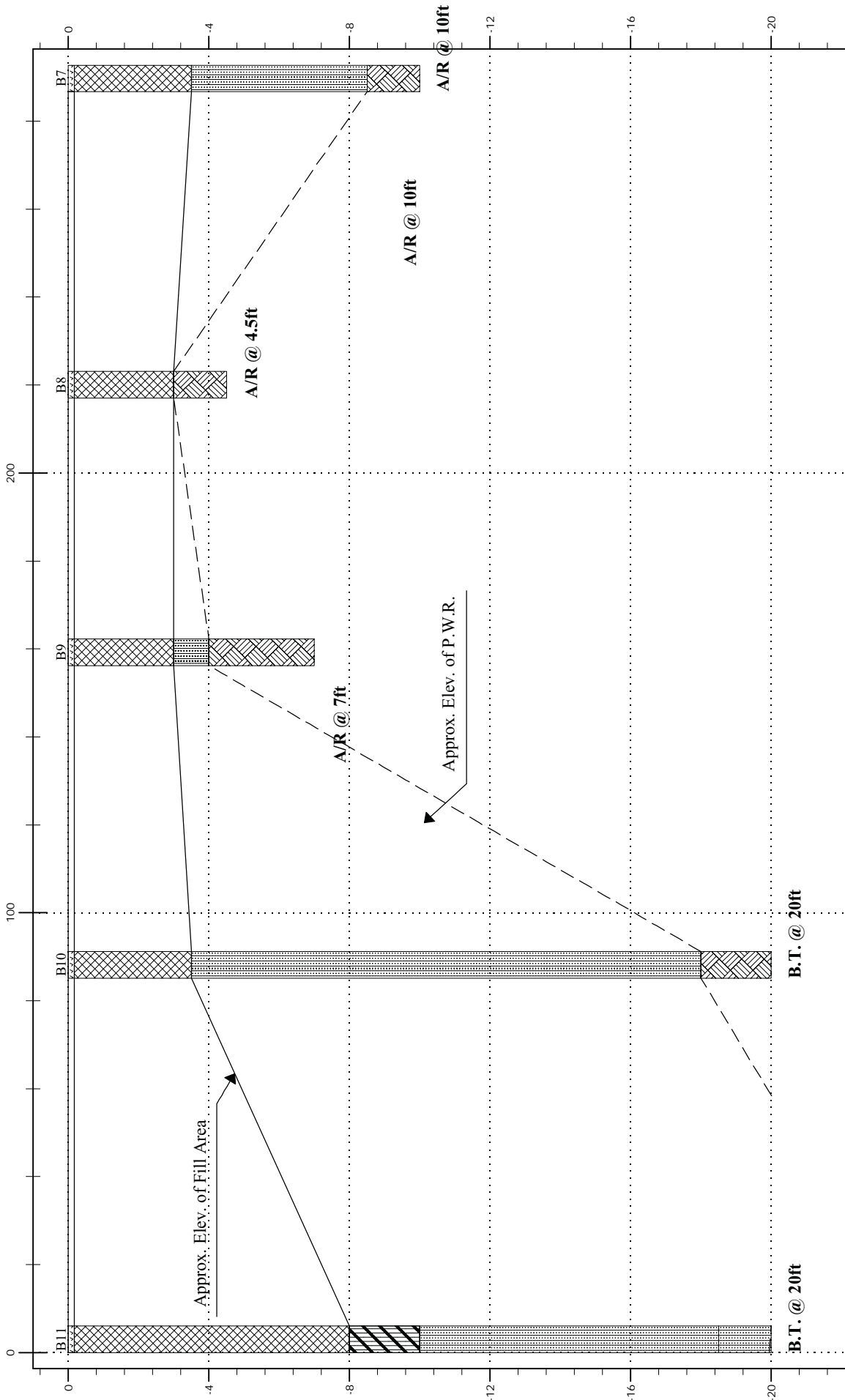
Cross-Section A-A

PROJECT NO. 97140.18

FIGURE NUMBER
2

ELEVATION IN FEET

ELEVATION IN FEET

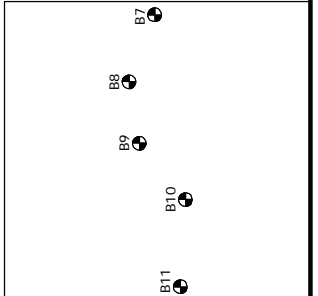


Partially Weathered Rock

Strata symbols

- Topsoil
- Fill
- Silty low plasticity clay
- Silty sand

Plan View



MATRIX ENGINEERING GROUP, INC.
GENERALIZED SOIL PROFILE

HORIZONTAL SCALE: 1"=100' (proportional)
VERTICAL SCALE: 1"=4'
DRAWN BY/APPROVED BY: EB/SA
DATE DRAWN: 12/10/01

Gwinnett Co. Proposed Passive Park Fill Area
Cross-Section B-B

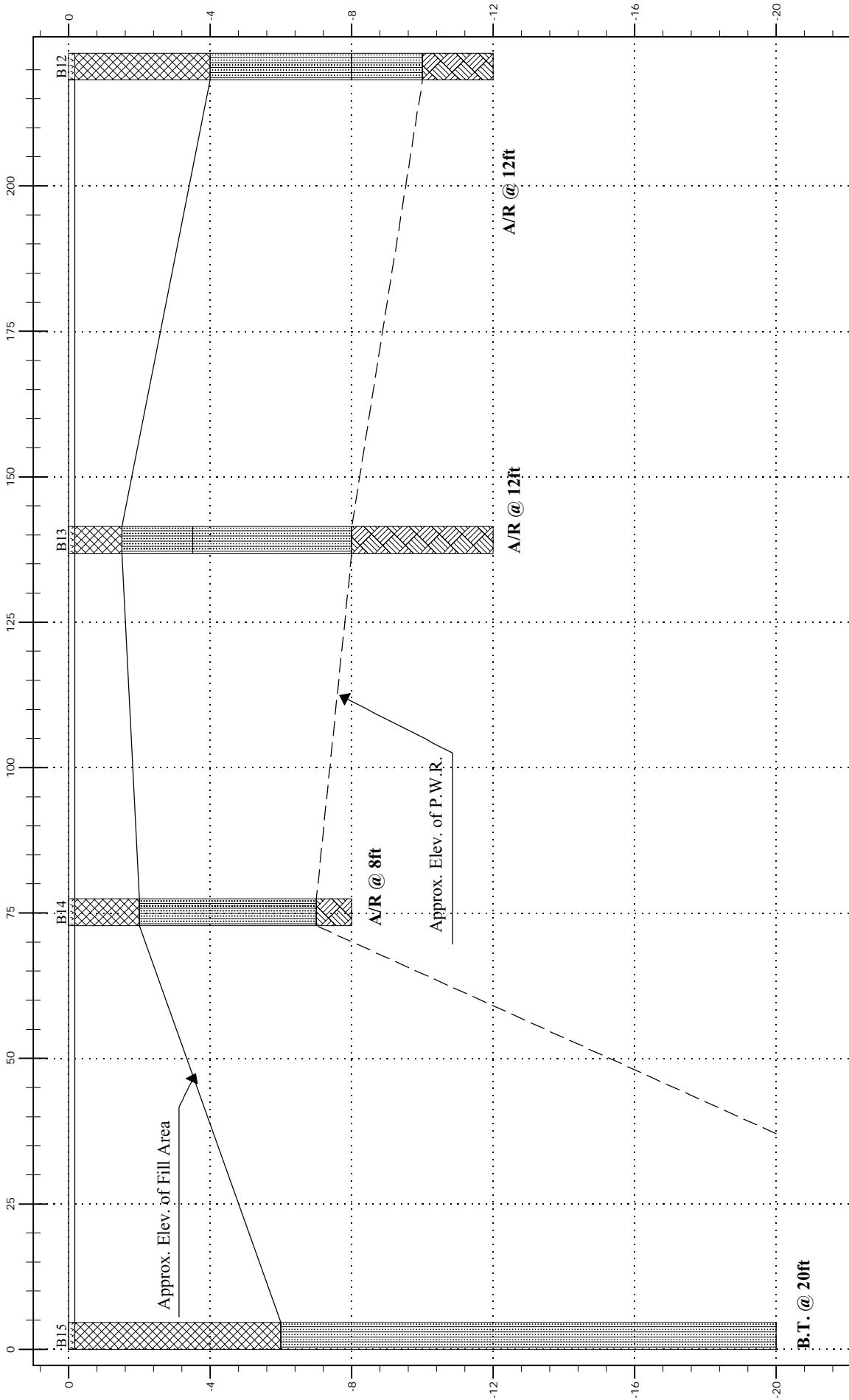
PROJECT NO. 97140.18

FIGURE NUMBER

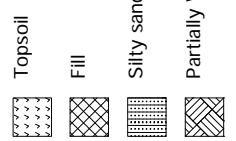
3

ELEVATION IN FEET

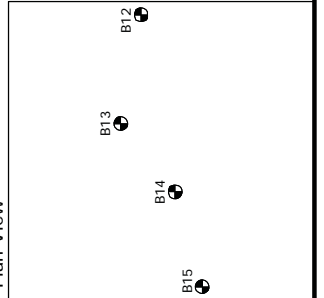
ELEVATION IN FEET



Strata symbols



Plan View



MATRIX ENGINEERING GROUP, INC.
GENERALIZED SOIL PROFILE

HORIZONTAL SCALE: 1"=100' (proportional)
VERTICAL SCALE: 1"=4'
DRAWN BY/APPROVED BY: EB/SA
DATE DRAWN: 12/10/01

Gwinnett Co. Proposed Passive Park Fill Area
Cross-Section C-C

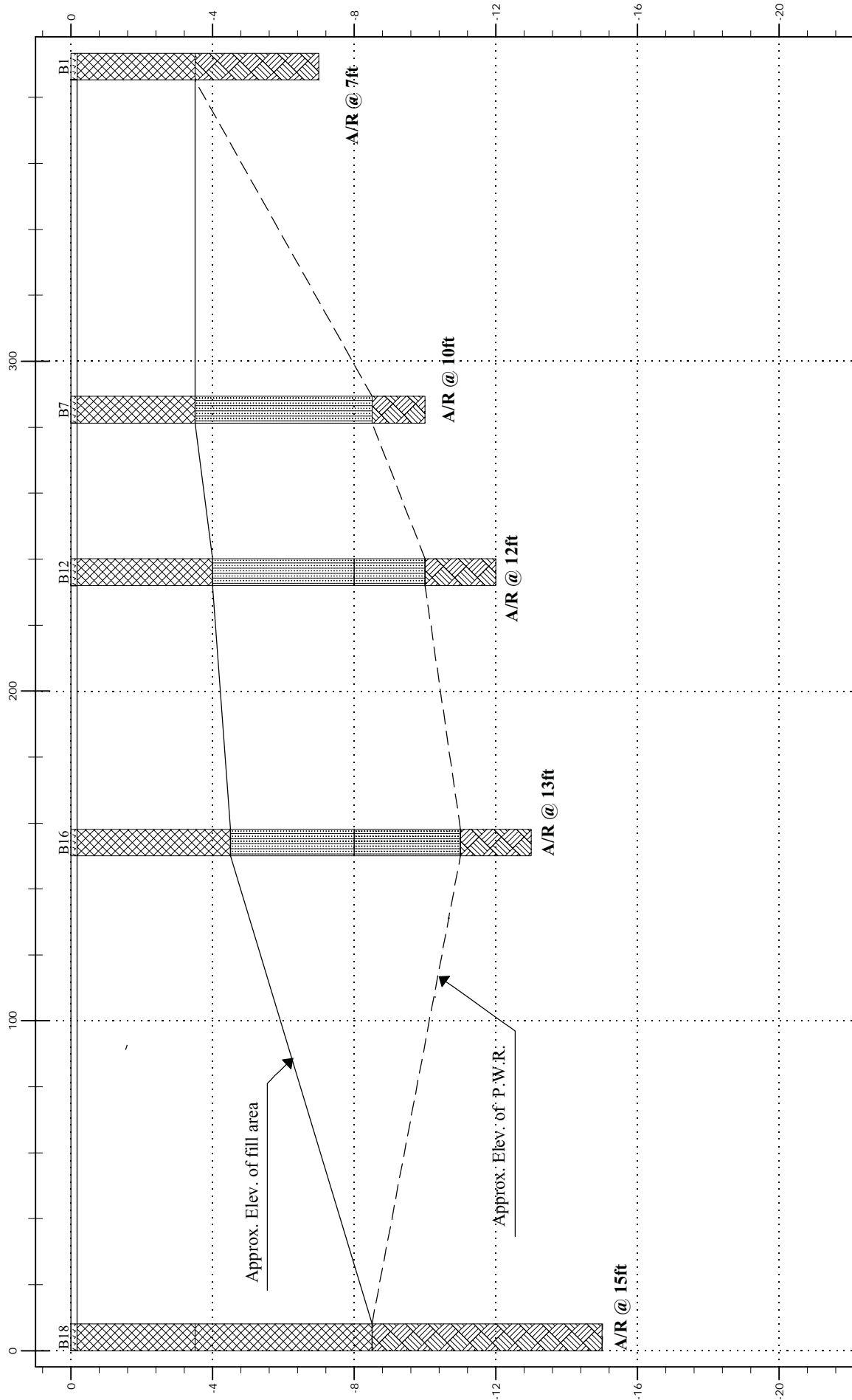
PROJECT NO. 97140.18

FIGURE NUMBER

4

ELEVATION IN FEET

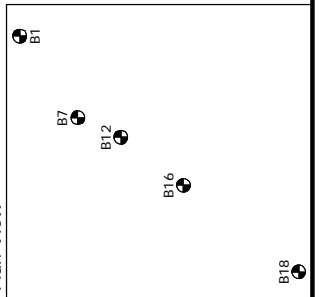
ELEVATION IN FEET



Strata symbols

- Topsoil
- Fill
- Partially Weathered Rock
- Silty sand

Plan View



MATRIX ENGINEERING GROUP, INC.

GENERALIZED SOIL PROFILE

HORIZONTAL SCALE: 1"=100'	DRAWN BY/APPROVED BY	DATE DRAWN
VERTICAL SCALE: 1"=4'	EB/SA	12/10/01

Gwinnett Co. Proposed Passive Park Fill Area

PROJECT NO. 97140.18

FIGURE NUMBER

5

CORRELATION OF STANDARD PENETRATION RESISTANCE
WITH RELATIVE COMPACTNESS AND CONSISTENCY

SAND & GRAVEL

NO. OF BLOWS, N

RELATIVE COMPACTNESS

0 - 4	Very Loose
5 - 10	Loose
11 - 30	Medium Dense
31 - 50	Dense
Over 50	Very Dense

SILT & CLAY

NO. OF BLOWS, N

RELATIVE COMPACTNESS

0 - 1	Very Soft
2 - 4	Soft
5 - 8	Firm
9 - 15	Stiff
16 - 30	Very Stiff
31 - 50	Hard
Over 50	Very Hard

DRILLING SYMBOLS



Water Table Level after 24 Hours



Water Table Level at the Time of Drilling



Standard Penetration Test

50/2" Number of Blows (50) to Drive the Spoon a Number of Inches (2")

DRILLING PROCEDURES

SOIL SAMPLING AND STANDARD PENETRATION TESTING ARE PERFORMED IN ACCORDANCE WITH ASTM D1586-84 (RE-APPROVED IN 1992). THE STANDARD PENETRATION RESISTANCE (N) REPRESENTS THE NUMBER OF BLOWS OF A 140-LB HAMMER FALLING 30 INCHES ON A 2.0 INCH O.D. 1.4 INCH I.D. SPLIT SPOON SAMPLER TO DRIVE IT ONE FOOT. THE SAMPLES OBTAINED FROM THE SPLIT SPOON SAMPLER ARE CLASSIFIED IN THE FIELD IN ACCORDANCE WITH ASTM D2488-93 (VISUAL MANUAL PROCEDURE FOR DESCRIPTION OF SOILS).

MATRIX ENGINEERING GROUP



MATRIX ENGINEERING GROUP, INC.

Geotechnical, Environmental, and Construction Materials Consultants

DRILL HOLE LOG








BORING NO. B1

PROJECT: Gwinnett Co. Proposed Passive Park Fill Area PROJECT NO.: 97140.18
CLIENT: Kimley-Horn and Associates, Inc. DATE: 6/4/01
LOCATION: Refer to Figure 1 ELEVATION: _____
DRILLER: Lanier environmental inc. LOGGED BY: Elias Boghos
DRILLING METHOD: ASTM D1586
DEPTH TO - WATER> INITIAL: ∅ AFTER 24 HOURS: ∅ CAVING> C

File: Gwinnett Co

Date Printed: 12/10/01

This information pertains only to this boring and should not be interpreted as being indicative of the site.

ELEVATION (feet)	DEPTH (feet)	Description	SOIL TYPE	SOIL SYMBOL	SAMPLERS	TEST RESULTS					N-Value				
						Natural Moisture Content (%) - Δ									
						Penetration -									
						10	20	30	40	50					
	0	Top soil Fill, Firm, light brown Sandy Silty CLAY with asphalt and some root.	VC									6			
	2														
	4	Residual, P.W.R. Sampled as tan Micaceous Silty coarse to fine SAND with rock fragments.	SM								50/5				
	6														
	8	Auger Refusal @ 7ft													
	10														
	12														
	14														
	16														
	18														
	20														
	22														
	24														
	26														

Four offsets were attempted, All borings encountered A/R @ 3ft BGS



MATRIX ENGINEERING GROUP, INC.

Geotechnical, Environmental, and Construction Materials Consultants

DRILL HOLE LOG



BORING NO. B2

PROJECT: Gwinnett Co. Proposed Passive Park Fill Area PROJECT NO.: 97140.18
CLIENT: Kimley-Horn and Associates, Inc. DATE: 6/4/01
LOCATION: Refer to Figure 1 ELEVATION: _____
DRILLER: Lanier environmental inc. LOGGED BY: Elias Boghos
DRILLING METHOD: ASTM D1586
DEPTH TO - WATER> INITIAL: ∇ _____ AFTER 24 HOURS: ∇ _____ CAVING> C _____

File: Gwinnett Co

Date Printed: 12/10/01

This information pertains only to this boring and should not be interpreted as being indicative of the site.

ELEVATION (feet)	DEPTH (feet)	Description	SOIL TYPE	SOIL SYMBOL	SAMPLERS	TEST RESULTS					N-Value
						Natural Moisture Content (%) - Δ Penetration -					
						10	20	30	40	50	
	0	Top soil	SM								10
	2	Fill, Loose, brown and tan Silty Coarse to fine SAND, with Rock fragments.									
	4	Auger Refusal @ 3ft									
	6										
	8										
	10										
	12										
	14										
	16										
	18										
	20										
	22										
	24										
	26										

Four offsets were made and all borings encountered A/R @ 2.5 ft BGS



MATRIX ENGINEERING GROUP, INC.

Geotechnical, Environmental, and Construction Materials Consultants

DRILL HOLE LOG





BORING NO. B3

PROJECT: Gwinnett Co. Proposed Passive Park Fill Area PROJECT NO.: 97140.18
CLIENT: Kimley-Horn and Associates, Inc. DATE: 6/4/01
LOCATION: Refer to Figure 1 ELEVATION: _____
DRILLER: Lanier environmental inc. LOGGED BY: Elias Boghos
DRILLING METHOD: ASTM D1586
DEPTH TO - WATER> INITIAL: ∅ AFTER 24 HOURS: ∅ CAVING> C

File: Gwinnett Co

Date Printed: 12/10/01

This information pertains only to this boring and should not be interpreted as being indicative of the site.

ELEVATION (feet)	DEPTH (feet)	Description	SOIL TYPE	SOIL SYMBOL	SAMPLERS	TEST RESULTS					N-Value		
						Natural Moisture Content (%) - Δ							
						Penetration -							
						10	20	30	40	50			
	0	Top soil	CL-ML			●						5	
	2	Fill, Firm, brown Silty CLAY with Sand - wet.											
	4	Residual, P.W.R. No sample recovered, However Soil consisted of yellow Silty coarse to fine SAND based on the Auger cuttings.	SM								●	50/0	
	6	Spoon Refusal @ 3.5ft Auger Refusal @ 3.5ft											
	8												
	10												
	12												
	14												
	16												
	18												
	20												
	22												
	24												
	26												

Two offsets were attempted, All borings encountered A/R @ 3.5ft BGS



MATRIX ENGINEERING GROUP, INC.

Geotechnical, Environmental, and Construction Materials Consultants

DRILL HOLE LOG

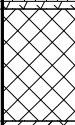

BORING NO. B4

PROJECT: Gwinnett Co. Proposed Passive Park Fill Area PROJECT NO.: 97140.18
CLIENT: Kimley-Horn and Associates, Inc. DATE: 6/4/01
LOCATION: Refer to Figure 1 ELEVATION: _____
DRILLER: Lanier environmental inc. LOGGED BY: Elias Boghos
DRILLING METHOD: ASTM D1586
DEPTH TO - WATER> INITIAL: ∅ AFTER 24 HOURS: ∅ CAVING> C

File: Gwinnett Co

Date Printed: 12/10/01

This information pertains only to this boring and should not be interpreted as being indicative of the site.

ELEVATION (feet)	DEPTH (feet)	Description	SOIL TYPE	SOIL SYMBOL	SAMPLERS	TEST RESULTS					N-Value	
						Natural Moisture Content (%) - Δ						
						Penetration - ●						
						10	20	30	40	50		
	0	Top soil	CL-ML			●						7
	2	Fill, Firm, light brown, Silty CLAY with Rock fragments, Moist.										
	4	Residual, P.W.R. No sample recovered, However Soil consisted of yellow Silty coarse to fine SAND based on the Auger cuttings.	SM									
		Auger Refusal @ 3ft										
	6											
	8											
	10											
	12											
	14											
	16											
	18											
	20											
	22											
	24											
	26											

Four offsets were attempted, All borings encountered A/R @ 2.5ft BGS



PROJECT: <u>Gwinnett Co. Proposed Passive Park Fill Area</u>	PROJECT NO.: <u>97140.18</u>
CLIENT: <u>Kimley-Horn and Associates, Inc.</u>	DATE: <u>6/4/01</u>
LOCATION: <u>Refer to Figure 1</u>	ELEVATION: _____
DRILLER: <u>Lanier environmental inc.</u>	LOGGED BY: <u>Elias Boghos</u>
DRILLING METHOD: <u>ASTM D1586</u>	
DEPTH TO - WATER> INITIAL: <u>☹</u>	AFTER 24 HOURS: <u>☹</u>
	CAVING > <u>☹</u>

File: Gwinnett Co Date Printed: 12/10/01

ELEVATION (feet)	DEPTH (feet)	Description	SOIL TYPE	SOIL SYMBOL	SAMPLERS	TEST RESULTS	N-Value
						Natural Moisture Content (%) - Δ _n	
						Penetration -	
						10 20 30 40 50	
	0	Top soil					
	2	Fill, Firm to soft, Dark brown and tan Silty CLAY with Wood pieces.	CL-ML	[Cross-hatched pattern]	[Sampling symbol at 1 ft depth]	•	7
	4					•	4
	6						
	8	Residual, P.W.R. Very dense yellow and white Silty coarse to fine SAND and decomposed organics	SM	[Diagonal hatching pattern]	[Sampling symbol at 7 ft depth]	•	50/1
	10	Medium dense, light brown Micaceous Silty coarse to fine SAND	SM	[Vertical dotted pattern]			
	12						
	14					•	30
	16						
	18						
	20					•	15
	22	Boring Terminated @ 20ft					
	24						
	26						



PROJECT: <u>Gwinnett Co. Proposed Passive Park Fill Area</u>	PROJECT NO.: <u>97140.18</u>
CLIENT: <u>Kimley-Horn and Associates, Inc.</u>	DATE: <u>6/4/01</u>
LOCATION: <u>Refer to Figure 1</u>	ELEVATION: _____
DRILLER: <u>Lanier environmental inc.</u>	LOGGED BY: <u>Elias Boghos</u>
DRILLING METHOD: <u>ASTM D1586</u>	
DEPTH TO - WATER> INITIAL: <u>☹</u> _____ AFTER 24 HOURS: <u>☹</u> _____ CAVING> <u>C</u> _____	

DRILLER: Lanier environmental inc. LOGGED BY: Elias Boghos
 DRILLING METHOD: ASTM D1586
 DEPTH TO - WATER> INITIAL: ☼ AFTER 24 HOURS: ☼ CAVING> C

Date Printed: 12/10/01

ELEVATION (feet)	DEPTH (feet)	Description	SOIL TYPE	SOIL SYMBOL	SAMPLERS	TEST RESULTS					N-Value			
						Natural Moisture Content (%) - Δ								
						Penetration -								
						10	20	30	40	50				
	0	Top soil	SM											
	2	Fill, Medium dense, Gray, Silty coarse to fine SAND with Asphalt pieces, rock fragments and decomposed organic.					●						17	
	4						●						4	
	6													
	8													
	10	Residual, Medium dense, light brown to brown Micaceous Silty coarse to fine SAND	SM					●				22		
	12													
	14								●					13
	16	Medium dense, Olive Silty coarse to fine SAND with Rock particles.	SM											
	18													
	20						●							17
	22	Boring Terminated @ 20ft												
	24													
	26													



BORING NO. B7

PROJECT: <u>Gwinnett Co. Proposed Passive Park Fill Area</u>	PROJECT NO.: <u>97140.18</u>
CLIENT: <u>Kimley-Horn and Associates, Inc.</u>	DATE: <u>6/4/01</u>
LOCATION: <u>Refer to Figure 1</u>	ELEVATION: _____
DRILLER: <u>Lanier environmental inc.</u>	LOGGED BY: <u>Elias Boghos</u>
DRILLING METHOD: <u>ASTM D1586</u>	
DEPTH TO - WATER> INITIAL: <u>☞</u> _____	AFTER 24 HOURS: <u>☛</u> _____
	CAVING> <u>C</u> _____

Date Printed: 12/10/01

[illegible]

This information pertains only to this boring and should not be interpreted as being indicative of the site.



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Geotechnical, Environmental, and Construction Materials Consultants

DRILL HOLE LOG





BORING NO. B8

PROJECT: Gwinnett Co. Proposed Passive Park Fill Area PROJECT NO.: 97140.18
CLIENT: Kimley-Horn and Associates, Inc. DATE: 6/4/01
LOCATION: Refer to Figure 1 ELEVATION: _____
DRILLER: Lanier environmental inc. LOGGED BY: Elias Boghos
DRILLING METHOD: ASTM D1586
DEPTH TO - WATER> INITIAL: ∅ AFTER 24 HOURS: ∅ CAVING> C

File: Gwinnett Co

Date Printed: 12/10/01

This information pertains only to this boring and should not be interpreted as being indicative of the site.

ELEVATION (feet)	DEPTH (feet)	Description	SOIL TYPE	SOIL SYMBOL	SAMPLERS	TEST RESULTS					N-Value	
						Natural Moisture Content (%) - Δ						
						Penetration -						
						10	20	30	40	50		
	0	Top soil	SM								40	
		Fill, Hard, Brown, Sandy SILT with Quartzite fragments.										
	2											
	4	Residual, P.W.R. Dark gray sampled as yellow and white Silty coarse to fine SAND .	SM								50/1	
		Auger Refusal @ 4.5ft										
	6											
	8											
	10											
	12											
	14											
	16											
	18											
	20											
	22											
	24											
	26											

Two offsets were made and A.R. were encountered @ 3 ft.



MATRIX ENGINEERING GROUP, INC.

Geotechnical, Environmental, and Construction Materials Consultants

DRILL HOLE LOG






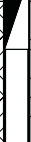
BORING NO. B9

PROJECT: Gwinnett Co. Proposed Passive Park Fill Area PROJECT NO.: 97140.18
CLIENT: Kimley-Horn and Associates, Inc. DATE: 6/4/01
LOCATION: Refer to Figure 1 ELEVATION: _____
DRILLER: Lanier environmental inc. LOGGED BY: Elias Boghos
DRILLING METHOD: ASTM D1586
DEPTH TO - WATER> INITIAL: ∅ AFTER 24 HOURS: ∅ CAVING> C

File: Gwinnett Co

Date Printed: 12/10/01

This information pertains only to this boring and should not be interpreted as being indicative of the site.

ELEVATION (feet)	DEPTH (feet)	Description	SOIL TYPE	SOIL SYMBOL	SAMPLERS	TEST RESULTS					N-Value
						Natural Moisture Content (%) - Δ Penetration - \bullet					
						10	20	30	40	50	
	0	Top soil	SM				\bullet				14
	2	Fill, stiff, Brown Sandy SILT with Quartzite fragments.									
	4	Residual, Medium dense Olive Silty coarse to fine SAND	SM				\bullet				21
		P.W.R. sampled as Olive Silty coarse to fine SAND .	SM								
	6										
	8	Auger Refusal @ 7ft									
	10										
	12										
	14										
	16										
	18										
	20										
	22										
	24										
	26										

Two offsets were made and A.R. were encountered @ 3 ft.



BORING NO. B10

PROJECT: <u>Gwinnett Co. Proposed Passive Park Fill Area</u>	PROJECT NO.: <u>97140.18</u>
CLIENT: <u>Kimley-Horn and Associates, Inc.</u>	DATE: <u>6/4/01</u>
LOCATION: <u>Refer to Figure 1</u>	ELEVATION: _____
DRILLER: <u>Lanier environmental inc.</u>	LOGGED BY: <u>Elias Boghos</u>
DRILLING METHOD: <u>ASTM D1586</u>	
DEPTH TO - WATER> INITIAL: <u>☞</u> _____	AFTER 24 HOURS: <u>☛</u> _____
	CAVING> <u>☞</u> _____

Date Printed: 12/10/01

ELEVATION (feet)	DEPTH (feet)	Description	SOIL TYPE	SOIL SYMBOL	SAMPLERS	TEST RESULTS		N-Value
						Natural Moisture Content (%) - ●	Penetration - Δ	
	0	Top soil						
	2	Fill, Very stiff, Light Brown and tan, Sandy SILT.	SM	[Cross-hatched symbol]	[Sampler icon]	● at ~18%		16
	4	Residual, dense, light brown and tan, Micaceous, Silty coarse to fine SAND.	SM	[Dotted symbol]	[Sampler icon]	● at ~30%		32
	6							
	8							
	10						Δ at 67	67
	12							
	14						● at ~45%	45
	16							
	18							
	20	P.W.R. Sampled as Orange and white, Silty coarse to fine SAND with Rock fragments.	SM	[Diagonal hatched symbol]	[Sampler icon]	● at ~50%		50/6
	22	Boring Terminated @ 20ft						
	24							
	26							

This information pertains only to this boring and should not be interpreted as being indicative of the site.



BORING NO. B11

PROJECT: <u>Gwinnett Co. Proposed Passive Park Fill Area</u>	PROJECT NO.: <u>97140.18</u>
CLIENT: <u>Kimley-Horn and Associates, Inc.</u>	DATE: <u>6/4/01</u>
LOCATION: <u>Refer to Figure 1</u>	ELEVATION: _____
DRILLER: <u>Lanier environmental inc.</u>	LOGGED BY: <u>Elias Boghos</u>
DRILLING METHOD: <u>ASTM D1586</u>	
DEPTH TO - WATER> INITIAL: <u>☼</u> _____	AFTER 24 HOURS: <u>☼</u> _____
CAVING > <u>C</u> _____	

Date Printed: 12/10/01

ELEVATION (feet)	DEPTH (feet)	Description	SOIL TYPE	SOIL SYMBOL	SAMPLERS	TEST RESULTS	N-Value
						Natural Moisture Content (%) - Δ _p	
						Penetration - 10 20 30 40 50	
	0						
	2	Top soil Fill, Very stiff, Red,Dark Brown and tan CLAY with Concrete pieces, wood pieces and decomposed organics, excessively wet.	CL	[Cross-hatched symbol]	[Sampler icon]	•	21
	4				[Sampler icon]	•	4
	6						
	8						
	10	Residual, Very stiff, Red, Silty CLAY with Mica.	CL-ML	[Diagonal hatched symbol]	[Sampler icon]	•	28
	12						
	14				[Sampler icon]	•	15
	16						
	18						
	20	Loose, Dark brown and some Black specks Micaceous, Silty SAND with MnO particles	SM	[Dotted symbol]	[Sampler icon]	•	9
	22	Boring Terminated @ 20ft					
	24						
	26						

This information pertains only to this boring and should not be interpreted as being indicative of the site.



BORING NO. B12

PROJECT: <u>Gwinnett Co. Proposed Passive Park Fill Area</u>	PROJECT NO.: <u>97140.18</u>
CLIENT: <u>Kimley-Horn and Associates, Inc.</u>	DATE: <u>6/4/01</u>
LOCATION: <u>Refer to Figure 1</u>	ELEVATION: _____
DRILLER: <u>Lanier environmental inc.</u>	LOGGED BY: <u>Elias Boghos</u>
DRILLING METHOD: <u>ASTM D1586</u>	
DEPTH TO - WATER> INITIAL: <u>☼</u> _____	AFTER 24 HOURS: <u>☼</u> _____
CAVING > <u>C</u> _____	

Date Printed: 12/10/01

[illegible]

This information pertains only to this boring and should not be interpreted as being indicative of the site.



BORING NO. B13

PROJECT: <u>Gwinnett Co. Proposed Passive Park Fill Area</u>	PROJECT NO.: <u>97140.18</u>
CLIENT: <u>Kimley-Horn and Associates, Inc.</u>	DATE: <u>6/4/01</u>
LOCATION: <u>Refer to Figure 1</u>	ELEVATION: _____
DRILLER: <u>Lanier environmental inc.</u>	LOGGED BY: <u>Elias Boghos</u>
DRILLING METHOD: <u>ASTM D1586</u>	
DEPTH TO - WATER> INITIAL: <u>☞</u> _____	AFTER 24 HOURS: <u>☛</u> _____
	CAVING> <u>☞</u> _____

Date Printed: 12/10/01

ELEVATION (feet)	DEPTH (feet)	Description	SOIL TYPE	SOIL SYMBOL	SAMPLERS	NATURAL MOISTURE CONTENT (%) - Δ	N-Value
						Penetration - 10 20 30 40 50	
	0	Top soil					
	2	Fill, Firm, Brown with black, Silty CLAY with Rock fragments.	CL-ML	[Cross-hatched]	[Solid Black]	•	6
	4	Residual, Medium dense, Mottled (Light Brown,black and Orange) Silty coarse to fine SAND with Quartz and Rock fragments. Hard, Brown, Sandy SILT with Mica.	SM	[Dotted]			
	8	P.W.R. Brown, coarse to fine SAND with Rock fragments.	SW	[Diagonal Lines / \]	[Solid Black]	•	20
	12	Auger Refused @ 12ft					50/6
	14						
	16						
	18						
	20						
	22						
	24						
	26						

This information pertains only to this boring and should not be interpreted as being indicative of the site.



BORING NO. B14

PROJECT: <u>Gwinnett Co. Proposed Passive Park Fill Area</u>	PROJECT NO.: <u>97140.18</u>
CLIENT: <u>Kimley-Horn and Associates, Inc.</u>	DATE: <u>6/4/01</u>
LOCATION: <u>Refer to Figure 1</u>	ELEVATION: _____
DRILLER: <u>Lanier environmental inc.</u>	LOGGED BY: <u>Elias Boghos</u>
DRILLING METHOD: <u>ASTM D1586</u>	
DEPTH TO - WATER> INITIAL: <u>☼</u> _____	AFTER 24 HOURS: <u>☼</u> _____
CAVING > <u>C</u> _____	

Date Printed: 12/10/01

[illegible]

This information pertains only to this boring and should not be interpreted as being indicative of the site.



BORING NO. B15

PROJECT: <u>Gwinnett Co. Proposed Passive Park Fill Area</u>	PROJECT NO.: <u>97140.18</u>
CLIENT: <u>Kimley-Horn and Associates, Inc.</u>	DATE: <u>6/4/01</u>
LOCATION: <u>Refer to Figure 1</u>	ELEVATION: _____
DRILLER: <u>Lanier environmental inc.</u>	LOGGED BY: <u>Elias Boghos</u>
DRILLING METHOD: <u>ASTM D1586</u>	
DEPTH TO - WATER> INITIAL: <u>☼</u> _____ AFTER 24 HOURS: <u>☼</u> _____ CAVING > <u>C</u> _____	

Date Printed: 12/10/01

[illegible]

This information pertains only to this boring and should not be interpreted as being indicative of the site.



BORING NO. B16

PROJECT: <u>Gwinnett Co. Proposed Passive Park Fill Area</u>	PROJECT NO.: <u>97140.18</u>
CLIENT: <u>Kimley-Horn and Associates, Inc.</u>	DATE: <u>6/4/01</u>
LOCATION: <u>Refer to Figure 1</u>	ELEVATION: _____
DRILLER: <u>Lanier environmental inc.</u>	LOGGED BY: <u>Elias Boghos</u>
DRILLING METHOD: <u>ASTM D1586</u>	
DEPTH TO - WATER> INITIAL: <u>☼</u> _____	AFTER 24 HOURS: <u>☼</u> _____
CAVING > <u>C</u> _____	

Date Printed: 12/10/01

[illegible]

This information pertains only to this boring and should not be interpreted as being indicative of the site.



PROJECT: <u>Gwinnett Co. Proposed Passive Park Fill Area</u>	PROJECT NO.: <u>97140.18</u>
CLIENT: <u>Kimley-Horn and Associates, Inc.</u>	DATE: <u>6/4/01</u>
LOCATION: <u>Refer to Figure 1</u>	ELEVATION: _____
DRILLER: <u>Lanier environmental inc.</u>	LOGGED BY: <u>Elias Boghos</u>
DRILLING METHOD: <u>ASTM D1586</u>	
DEPTH TO - WATER> INITIAL: <u>☹</u>	AFTER 24 HOURS: <u>☹</u>
	CAVING > <u>☹</u>

File: Gwinnett Co Date Printed: 12/10/01

[illegible]



BORING NO. B18

PROJECT: <u>Gwinnett Co. Proposed Passive Park Fill Area</u>	PROJECT NO.: <u>97140.18</u>
CLIENT: <u>Kimley-Horn and Associates, Inc.</u>	DATE: <u>6/4/01</u>
LOCATION: <u>Refer to Figure 1</u>	ELEVATION: _____
DRILLER: <u>Lanier environmental inc.</u>	LOGGED BY: <u>Elias Boghos</u>
DRILLING METHOD: <u>ASTM D1586</u>	
DEPTH TO - WATER> INITIAL: <u>☼</u> _____	AFTER 24 HOURS: <u>☼</u> _____
CAVING > <u>C</u> _____	

Date Printed: 12/10/01

[illegible]

This information pertains only to this boring and should not be interpreted as being indicative of the site.



Appendix E



Gwinnett County
Department of Community Services
Parks and Recreation Project Administration
(770) 822-8840
Fax: (770) 822-8893

September 18, 2001

Five Forks Park Steering Committee

Dear Committee Member,

Thanks to all who assisted in the review of the alternative conceptual plans. I have attached a memorandum from Lose & Associates with a summary listing of the Committee's comments on the conceptual plans for your review.

On September 11th, the alternative conceptual plans were presented to Parks and Recreation Staff for their review and comments. The Steering Committee's recommendations were presented as a point of departure for staff consideration. The Committee comments were appreciated but Staff requested additional refinements.

First, Staff requested that the basketball facility be separated from the other teen elements and placed along Five Forks Trickum Road to enhance surveillance opportunities. Staff noted that we have experienced basketball users using vehicular headlights to play ball after normal park closing hours, and therefore requested that this park be configured in a way that would not allow that to happen.

Second, Staff noted that the area for the Dog Park was minimal, and wished we could find a way to increase its size.

Planning staff and Lose & Associates reexamined the site and the conceptual plans to find ways to improve the plan by incorporating these comments. We have attached a "Hybrid Concept" plan that incorporates both Steering Committee and Staff comments. The principal recreation elements are placed as the Committee recommended. A mulch trail is included, the pond is expanded and a .75 mile multi-purpose trail does not cross a vehicular road.

Additionally, to address Staff comments, the basketball facility location was revised and the Dog Park moved into a previously unoccupied zone of the park. Further review of the stream floodplain zone between the primary stream and Five Forks Trickum showed that the area had been used as pasture in recent history. The pasture fences are still intact, and older aerial photography shows that most of the zone was in grass as little as 25 years ago. The streams flanking this zone are deeply incised, indicating that this area will remain above all but the heaviest rain events, and even if flooded, will cause little damage to an

area designated for use as a Dog Park. Moving the Dog Park to this zone will then allow us to increase the size of the turf open space shown between the Picnic Playground Area and the Seniors' Activity Area.

The "Hybrid Plan" does not show in detail all of the requested refinements because it's conceptual graphic style does not allow for the illustration of smaller details. The Preliminary Master Plan graphic will include a more detailed view of the site and should be scrutinized by the Committee to make sure that Committee's comments have been included in graphic or narrative form. We will meet at 7:00 p.m. on Tuesday, September 25, 2001, in Conference Room B of the second floor Conference Center at GJAC to review the Preliminary Master Plan.

Thank you for your participation in this planning process and please call (770) 822-8864 or email (schudere@co.gwinnett.ga.us) if you have any questions or comments.

Sincerely,

Rex Lee Schuder, ASLA
Principal Community Planner

c. P. Hoskins, G. Guess

Attachments



Appendix F

PASSIVE COMMUNITY PARKS

Position Paper – Approved by the Gwinnett County Recreation Authority - August 15, 2000

The Gwinnett County Parks and Recreation 2000 Capital Improvements Plan encourages the County to acquire smaller park properties in those densely populated and under served areas of the County in which larger Community Park size parcels (120-140 acres) are unavailable. The “Park Cluster” concept encourages the acquisition of one or more smaller parcels in densely developed service gap zones to ensure that some park services are provided to all areas of the County.

To meet the anticipated primary needs of the intended users on a smaller sized site requires that a new category of park type be added to the kinds currently constructed by Gwinnett County. At this time, we construct and manage three principal park types: Regional Open Space Parks, Community Parks and Special Purpose Parks.

Regional Open Space Parks are typically several hundred acres in size, and are therefore an inappropriate model for a much smaller park.

Community Parks always include one or more organized sports field complex with an associated need to provide ballfield lighting and hundreds of ballfield related parking spaces. The acreage needed to accommodate such sports field complexes would so dominate a smaller park site that there would be little space left to provide facilities for the general public’s daily use. Additionally, the impact on park neighbors of placing sports field lighting within a densely developed existing residential area would be significant. The 1996 Gwinnett County Parks and Recreation Master Plan states that between 120 and 140 acres of land are needed to provide for the needs of both organized sports plus the open space and typical recreation needs of the general public. Obviously, then, a twenty to forty acre park cannot do both. Therefore, the typical program of a Community Park must be significantly altered to provide for general recreation and open space needs on a small site.

Special Purpose Parks typically occupy small sites. They may be dedicated to a single sports program (Harmony Grove Soccer Complex, Lillian Webb Field, Cemetery Field) or the site might be dominated by a single building and its associated parking (Singleton Road Activity Building, Collins Hill Aquatic Center). As these sites are focused on satisfying one primary recreation need, and as they typically develop most of their available acreage to satisfy that need, this type of park is not a proper model for satisfying a more varied mix of general park facility and open space needs.

Therefore, we propose the adoption of a fourth park type called Passive Community Parks. Such a park would not have sports field complexes run by Youth Associations with ballfield lights and hundreds of supporting parking spaces. We would not site Tennis or Basketball Complexes (as opposed to single or paired courts) in Passive Community Parks. Additionally, Passive Community Parks would not be the place where we would site large Community Centers and Aquatics Centers, with their associated hundreds of parking spaces. Passive Community Parks would fit on properties smaller than needed for our current standard Community Park but would require a minimum of twenty contiguous acres to accommodate any significant range of passive recreation opportunities. The County should strive to create sidewalk, bike trail and pedestrian trail connections between Passive Community Parks, surrounding neighborhoods and significant bikeways and greenways.

Instead, we propose a park program for these parks which will satisfy a broad variety of recreation needs for the complete cross section of age groups while simultaneously insuring that no more than 25% to 33% of any given site is developed with impermeable surfaces (parking, paved trails, sports courts, rooftops, sidewalks). This strategy will ensure that most of the park is left in some combination of Pond, Turf, Meadow or Woodland.

By **Pond**, we mean a body of water sufficiently large and deep to support a variety of aquatic life forms. Unlike the engineered look of “detention ponds” we propose that our park ponds would have curvaceous edges with gently sloping pond banks designed so that children can safely walk and fish the entire perimeter of the pond without fear of sliding into the water.

By **Turf**, we mean a graded area with irrigated and well-maintained turf grass that enables sustainable use for informal, non-organized sports and free play.

By **Meadow**, we mean an area with mildly rolling topography with grass (non-irrigated and mown higher) suitable for free play (picnicking, kite flying, Frisbee tossing).

By **Woodland** we mean retained existing woods, newly reforested areas or some combination of both.

The park program for the developed portions of the Passive Community Park would have some mix of the following recreation facilities:

Activity Building and its associated parking (does not require permanent assigned staff) in lieu of Community Center.

Perimeter paved Multi-Purpose Trail (for walking, jogging, biking and skating) with mileage markers and optional Exercise Stations.

Outdoor Seniors Activities (Horseshoe Pits, Pavilion with permanent Checker/Chess tables, etc.)

Nature Trails through areas of scenic or natural beauty.

Irrigated Turf Fields for informal sports and non-irrigated **Meadows** for free play.

Tennis, Basketball and Sand Volleyball Courts (two of each maximum).

Fishing Pond.

Picnic Pavilions with dedicated parking, free standing **Restroom Building**, and **Grills**.

Playgrounds with separate zones and equipment (multiple play structures and swings) designed to serve children from toddler to pre-teen ages.

“Splash Ground” aquatic play structure (does not require lifeguards) in lieu of Aquatic Center.

Skate Park and **Disk Golf** facilities to serve teens and pre-teens.

Dog Park (2-3 acre fenced area with: pooper scoopers, trash cans, paved double check entrance gate area, paved watering/hosing zone, signage, dedicated parking, optional Dog Agility Course if larger space is available).

Retained **Meadow** and **Woodland** to provide shade plus variety of scenery and topography for the routes of both the multi-purpose and nature trails.

The facilities/activities listed above are intended to serve as a guide for planning Passive Community Parks. The specific mix of facilities would be determined through each site’s master planning process with community input.