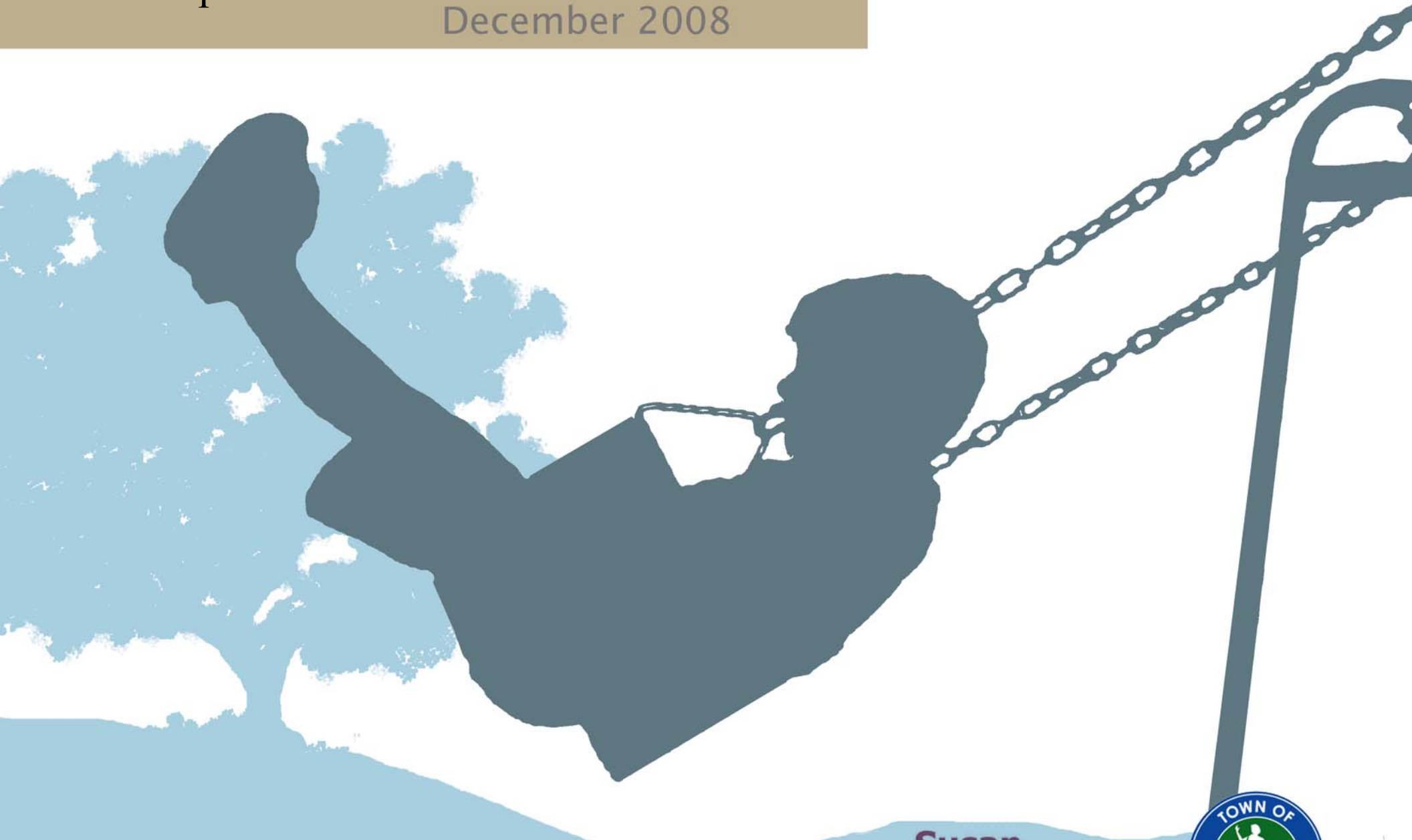


Chapel Hill Parks & Trails Assessment

December 2008



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Landscape Architecture, PLLC



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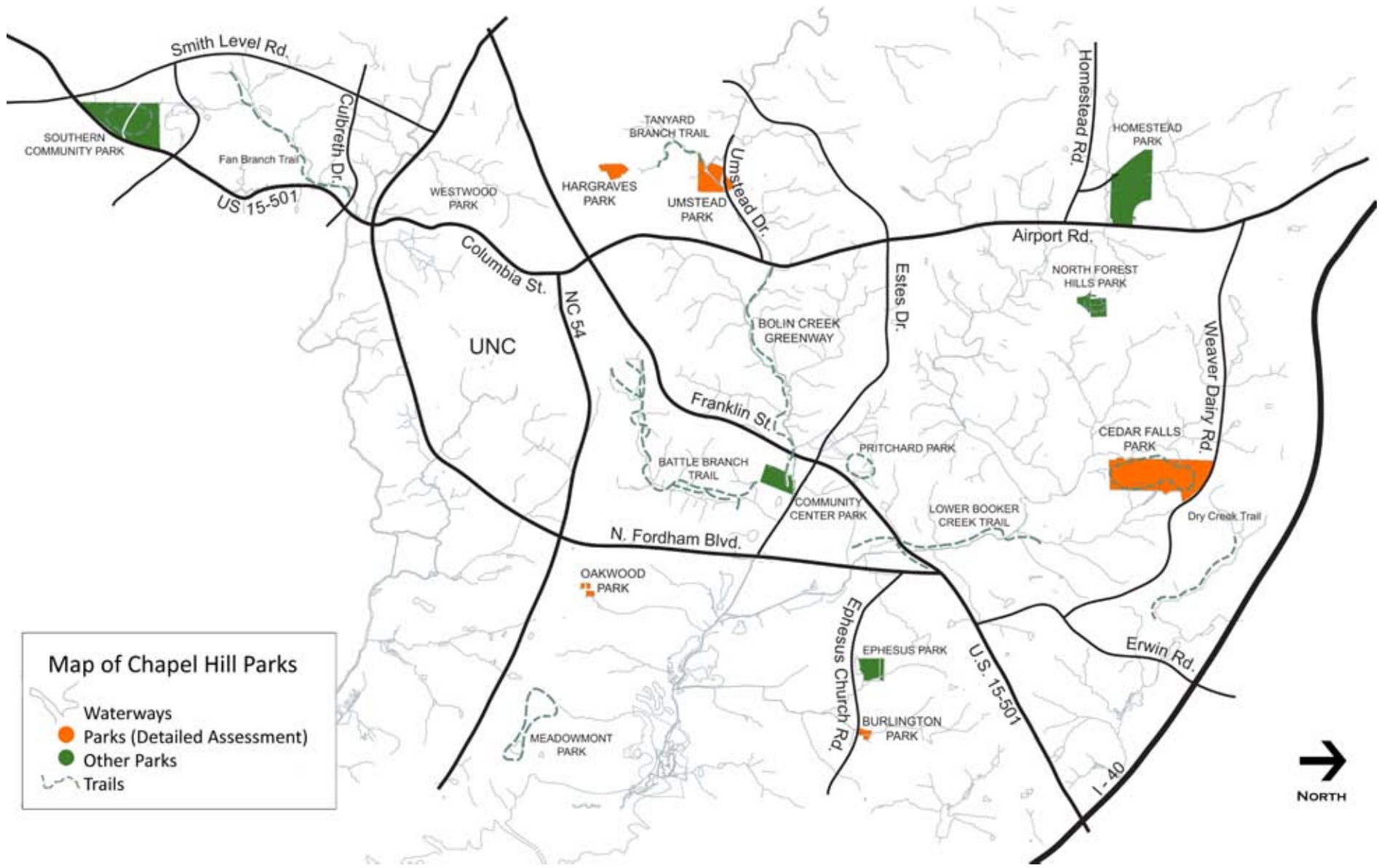
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Chapter One

Introduction

1.1 Project Overview

The Town of Chapel Hill has an extensive park and trail system that houses a variety of facilities and programs for residents and visitors. The Town of Chapel Hill is in the process of implementing the 2002 Parks and Recreation Master Plan, the 2006 Greenways Master Plan and the 2004 Bicycle and Pedestrian Action Plan. As recreational resources and facilities expand, the Town of Chapel Hill is assessing the existing facilities and re-evaluating current maintenance practices to improve the life and longevity of existing and future resources and facilities.

In the spring of 2008, the Town of Chapel Hill hired Susan Hatchell Landscape Architecture, PLLC (SHLA) to assess the Town of Chapel Hill's existing park and greenways for life safety issues, code violations, deferred maintenance tasks, and aesthetic improvements. After completing a detailed task list for five parks and one trail and completing a general recommendations list for the remaining seven parks and eleven trails, SHLA reviewed the existing maintenance practices of the Town and offered recommendations for improving the level of maintenance service. The lists, park and trail recommendations, and maintenance practice recommendations are presented in the following chapters.

1.2 Goals

The Chapel Hill Parks and Trails Assessment is based on the following goals:

- Identify and prioritize deficiencies, such as life safety issues, code violations, deferred maintenance issues, and aesthetic improvements
- Establish an estimated cost for each deficiency for capital improvement funding requests
- Identify gaps in current maintenance practices
- Guide the Town in the creation of an annual routine and remedial maintenance plan

1.3 Document Organization

Throughout the document, the phrase “detailed assessment” refers to the indepth review of the Town’s oldest five parks and one greenway facility. A chapter is devoted to describing the on-site observations at each of these six locations. A Deficiency List in an Excel spreadsheet format for each park and the greenway is located in Appendix C: Deficiency List by Park. The spreadsheet, referred to throughout the document as the “Deficiency List”, identifies specific tasks at each location, prioritizes the task, and offers an estimated cost for each task. The total cost to complete all deficiencies listed for each of the six locations is presented at the end of each spreadsheet.

The remaining seven parks and eleven trails are presented collectively in two chapters. Only general recommendations were made for these eighteen locations. Spreadsheets were not created for these parks and trails. However, a description of deficiencies at each park and trail is located in the related chapters.

In summary, Chapter One provides a brief overview of the document and presents the goals of the plan. Chapter Two defines the methodology used to produce the plan. Chapters Three through Ten describe each of the parks individually and itemize the tasks and cost estimates for five parks and one greenway. These chapters also discuss recommendations for each park individually. Chapter Eleven prioritizes recommendations for the overall park system. Chapter Twelve provides recommendations and strategies for an annual routine and remedial maintenance plan. Appendices are located at the end of this document and include the original scope of work; detailed descriptions of the spreadsheet codes and abbreviations; the deficiency list spreadsheet for the five parks and one greenway; a fold-out legend for definitions and abbreviations; and a list of routine and remedial maintenance tasks by facility, system, and fixture.

Chapel Hill Parks Maintenance Assessment

List of Facilities by Park

	PLAYGROUND	PLAYGROUND SURFACING	OPEN PLAY AREA	DOG PARK	PICNIC AREA	PICNIC SHELTER	RESTROOM	ATHLETIC FIELD	BASEBALL FIELD	BASKETBALL COURT	BOCCE BALL COURT	TENNIS COURT	VOLLEYBALL COURT	SKATE PARK	DISC GOLF COURSE	BATTING CAGE	INLINE HOCKEY COURT	PARKING LOT	WATER FEATURE
Burlington Park 1701 Ephesus Church Road	✓	SAND	✓		✓													✓ (1)	✓ S
Cedar Falls Park 501 Weaver Dairy Road		EWf	✓		✓		✓		✓ (4)			✓ (6)						✓ (1)	
Community Center Park 120 South Estes Drive	✓	EWf/PIP	✓							✓ (1)	✓ (1)		✓ (1)					✓ (1)	✓ S
Ephesus Park 1501 Ephesus Road					✓		✓					✓ (6)						✓ SH	
Hargraves Park 216 North Roberson Street	✓ (2)	EWf/PIP				✓ (1)			✓ (1)	✓ (1)		✓ (3)						✓ (4)	
Homestead Park 100 Northern Park Drive	✓	EWf		✓	✓	✓ (1)	✓	✓ (2)	✓ (2)	✓ (1)				✓		✓		✓ (2)	✓ S
Meadowmont Park 621 Meadowmont Lane			✓			✓ (1)		✓ (2)										✓ SH	✓ P
North Forest Hills Park 121 Collums Drive	✓	SAND	✓		✓	✓ (1)	✓			✓ (0.5)								✓ (1)	
Oakwood Park 20 Oakwood Drive	✓	SAND	✓									✓ (1)							
Southern Community Park 1300 US Hwy 15-501 South	✓	EWf	✓	✓	✓	✓ (2)	✓	✓ (3)		✓ (2)					✓		✓ (1)	✓ (2)	✓ S
Umstead Park 399 Umstead Road	✓	SAND	✓		✓	✓ (1)	✓			✓ (1)		✓ (1)	✓ (1)					✓ (1)	✓ S
Westwood Park 530 Dogwood Drive	✓	SAND																	

SAND = Sand EWf = Engineered Wood Fiber PIP = Poured In Place (x) = Quantity SH = Shared Parking P = Pond S = Stream

Chapter Two

Methodology

2.1 Overview

The Chapel Hill Parks and Trails Assessment consists of twelve parks and twelve trails located throughout the Town of Chapel Hill. The scope of work includes the assessment of playgrounds, safety surfacing, parking lots, athletic fields and courts, restroom buildings, picnic shelters, site furnishings, fencing, drainage and erosion issues, plumbing, mechanical, and electrical repairs and upgrades, and trails. The scope of work does not include major buildings, pools, sports lighting, or playground safety. The scope of work for this project which outlines all tasks, deliverables, and a delivery schedule can be found in Appendix A: Scope of Work.

The Town of Chapel Hill prioritized the five parks and one greenway are the oldest facilities and in need of the most upgrades. The Consultant Team completed a detailed assessment with a deficiency spreadsheet for those five parks and one greenway. The detailed assessments are discussed in Chapters Three through Eight.

The remaining parks and trails were generally assessed during a brief site visit. The observations and recommendations for the other parks and trails are presented in Chapters Nine and Ten.

2.2 Assessment Process

A consultant team led by Susan Hatchell Landscape Architecture, PLLC compiled this assessment to guide the Town of Chapel Hill in upgrading the existing park and trail facilities, as well as improve the standard maintenance practices for recreational facilities. The Consultant Team is comprised of the following members:

Site Work.....Susan Hatchell Landscape Architecture, PLLC
Architect.....Ellen Cassilly Architects
PME Engineer..Sud Associates, Inc.

GIS data for the Town was given to the team and compiled to

provide base mapping for site visits and approximate calculations. A spreadsheet was created to record all observations and was distributed to the Consultant Team.

On the day of the assessment, Burlington, Cedar Falls, Har- graves, Oakwood, and Umstead Parks, were thoroughly reviewed by the Consultant Team. The Team evaluated each of the following park facilities:

- Parking Lots
- Landscaping
- Concrete Slabs and Courts
- Turf Grass
- Irrigation Systems
- Utilities
- Signage
- Paths
- Picnic Shelters
- Restrooms
- Athletic Equipment such as goals, bleachers, score boards, etc.
- Fencing
- Playgrounds including equipment, edging, and surfacing
- Park furniture such as trash cans, benches, grills, tables

SHLA also assessed the Bolin Creek Greenway in detail during an additional site visit.

In addition to the five parks and one trail assessed in detail, SHLA also visited seven other parks and eleven other trails to make general recommendations based on field observations. All site observations occurred during daytime business hours, using non destructive methods of observation. All field visits were completed in late spring/early summer. Photographic and written documentation

was taken at each park and trail.

After all site visits were completed, a detailed list of deficiencies was recorded in a spreadsheet for five of the parks and one trail. Deficiencies were prioritized by the following categories:

1. Life Safety Issues

Issues related to public safety

2. ADA Code Compliance/Building Code Compliance

Issues not compliant with the North Carolina State Accessibility Code, Building Code, Electrical Code, Mechanical Code, Plumbing Code, City Ordinance, or AASHTO Lighting Standard

3. Deferred Maintenance

Facilities and equipment in danger of failing or that could impact use or operations

4. Aesthetic Improvements

Improvements to facilities, landscaping, structures, etc. to improve general aesthetics

Estimated costs for each line item are also listed in the spreadsheet. A detailed description of the codes, abbreviations, and formatting of the spreadsheet is discussed in the following section and in Appendix B: Spreadsheet Explanation. The Deficiency List can be found in Appendix C: Deficiency List by Park.

2.3 Spreadsheet Organization

In Appendix C: Deficiency List by Park, the first page is a summary of the estimated costs for each of the five parks and one greenway. This summary sheet provides a breakdown of the life safety, code, deferred maintenance, and aesthetic improvement totals for each park as well as the overall totals by park.

Following the summary sheet, a series of six spreadsheets

are presented to make up the Deficiency List. There is a spreadsheet for each of the five parks and one greenway. Each spreadsheet outlines all of the deficiencies found at that park. The spreadsheet is organized by priority beginning with life safety. A subtotal of each priority is located at the end of each priority section and also at the end of each park's spreadsheet. The estimated subtotal for construction costs is also listed at the end of each spreadsheet along with a mark-up for general conditions, mobilization, and a construction contingency.

2.4 Evaluation Components

To better understand the deficiencies listed in each of the spreadsheets, the following information should be referenced:

- Each park or trail's deficiency list is numbered independently for ease of reference, based on the consultant who observed or recommended the line item. Deficiencies starting at #001 are site related, deficiencies starting at #101 are architectural, deficiencies starting at #201 are electrical, deficiencies starting at #301 are mechanical or plumbing related.
- The approximate "location" of the deficiency is listed by facility, such as Ballfield #1, Parking Lot, or Playground Area.
- The "definition type" is an abbreviation for the type of work the deficiency is classified as, such as "fencing", "roofing", "paving", etc. Refer to the abbreviation list in Appendix D: Legend for Definitions and Abbreviations.
- "Prioritization level" and "deficiency type" define the seriousness of the deficiency, such as "1" is a Life Safety Issue, "2" is an ADA accessibility compliance or a Building Code compliance issue, "3" is a deferred maintenance item, and "4" is an aesthetic improvement.

- The “description” and “notes” columns give details about the deficiency.
- The “quantity” and “size” are related to the approximate measurements or type of materials needed to complete the recommendation.
- The “unit cost”, “unit”, and “estimated cost” give an approximate cost of repair, replacement, or addition of the deficiency listed. See Section 2.4: Cost Estimating.

A more detailed explanation for each column can be found in Appendix B: Spreadsheet Explanation. Codes and abbreviations are located in Appendix D: Legend for Definitions and Abbreviations.

2.5 Cost Estimating

The cost estimates provided in this document are based on material prices as of August 2008. All labor charges were calculated using two, four, or eight hour intervals to represent a quarter, half, or full day of work to complete each task. The number of workers required was multiplied by the number of hours and by an hourly base rate of \$75 per hour to offer a competitive price for labor. Because some tasks may be preformed individually, all work requiring a site visit for service began with a charge of at least \$150 plus the cost of materials. This cost assumes one worker for two hours, which is an average base fee for contractors, electricians, and plumbers.

The cost of each line item was estimated by the consultant responsible for assessing that particular facility type. Each line item recommendation is described to the greatest extent possible and is estimated based on that description.

Occasionally, alternative options are listed in the spreadsheet. The option recommended by the Consultant Team is included in the total cost at the end of each deficiency list. The alternative options are shown in grey text and are not included in the overall cost. Examples of alternative options include:

- Asphalt vs. concrete pavement
- Replacing galvanized chain-link fence vs. upgrading to vinyl coated chain-link fence
- Relocating existing site furnishings to new locations vs. replacing all site furnishings

The cost estimates should be used to assist in the preparation of budgets and should not be used for bidding purposes.

Items on the deficiency lists may be repaired or upgraded by a Town Department for a cost savings or by an outside consultant or contractor at the cost shown. The costs shown do not include fees for preparation of a site plan, stormwater analysis, design, construction administration, measured building drawings, survey, geotechnical investigation, soil or water quality testing, hazardous material identification or abatement, lighting studies, floodway modeling or calculations for civil, structural, or other engineering services.

2.6 Definitions

Throughout this document, a few key terms are heavily referenced to organize the recommendations presented for each park and trail, as well as the overall system. The terms “restoration” and “renovation” refer to the implementation type recommended for each park and trail. They are referred to heavily in Chapter 11: System Recommendations. The terms “routine” and “remedial” refer to types of maintenance practices. They are referred to heavily in Chapter 12: Maintenance Recommendations.

“Restoration” can be defined as the repair and replacement of facilities, fixtures, systems, and amenities as they currently exist, restoring them to a good or sound condition to assume the same function and remain in the same location. Restoration items are identified in the Deficiency List Spreadsheet. Examples include replenishing gravel or mulch, repairing sidewalks or fencing, and replacing light fixtures or play equipment. Restorations may require details, specifications, or construction coordination from a Landscape Architect.

“Renovation” can be defined as the replacement and modification of facilities, fixtures, systems, and amenities as redesigned to refresh and revive their use and assume a new function and/or location. A Master Plan or Renovation Plan is required to guide the implementation of renovations. Examples include the replacement and relocation of a playground or basketball court, the addition of a new open play area or picnic shelter, and the modification of a parking lot layout or the pedestrian circulation of a park. Renovations require a Master Plan or Renovation Plan as well as plans, such as construction drawings, details, specifications and construction coordination from a Landscape Architect.

“Routine Maintenance” can be defined as daily or weekly regularly scheduled activities such as trash removal, trimming of vegetation, replenishing engineered wood fiber, mowing lawns and athletic fields, mulching planting beds, replacing light bulbs, and painting lines on the ballfields. Routine maintenance tasks relate to the general upkeep against normal wear and tear of buildings, facilities, equipment, and furnishings.

“Remedial Maintenance” can be defined as the repair, replacement, or restoration of major facilities, furnishings, or fixtures that have been destroyed, damaged, or have exceeded their useful life. Remedial maintenance tasks are conducted less frequently than routine maintenance tasks and are scheduled on an as needed basis. Remedial maintenance tasks should be listed on the regular maintenance schedule and should be budgeted for the fiscal year in which the task is scheduled to be completed. Remedial maintenance tasks include repaving trails and parking lots, and replacing roofs. Remedial maintenance tasks are related to the correction of deficiencies primarily caused by age and the wear and tear of public use. Remedial maintenance tasks may also relate to the correction of deficiencies caused by vandalism, storm events, or changes of use.

Chapter Three

Burlington Park

Burlington Park is a five-acre park located in the eastern part of Chapel Hill. Located at 1701 Ephesus Church Road, the park contains a large playground area with sand safety surfacing, an open grass field, picnic areas with covered wooden picnic structures, and a natural trail with wooden bridges. A creek meanders through the park. The parking area is gravel with no defined ADA or standard parking spaces. See page 10 for a map of the site.



3.1 Assessment

The overall conditions of this park are poor. Since the park was built in the mid-1970's, the equipment and materials are now outdated. The facilities are not ADA accessible, and the level of maintenance is below average.

Playground

There are two playgrounds at the site. The area closest to the parking lot contains dated equipment with inadequate fall zones and depth of safety surfacing.

The second playground area contains a composite structure and a dated spring rocker. The safety surfacing is inadequate because the depth is incorrect and the fall zones are not sized properly.

Edging does not exist around either playground to contain the sand surfacing.

Parking Lot

The parking lot does not include any ADA accessible spaces or any defined standard parking spaces. The gravel surfacing has potholes and ruts throughout the lot. The entrance drive has a low spot, because the gravel has washed away from the top of the drainage pipe located across the entrance drive. The lot has decaying timber edging around the perimeter.

Open Play Area

The open play area is in fairly good condition, although the field is uneven and has some bare spots throughout.





ADA Accessibility

There are no designated ADA accessible parking spaces, routes, or site furnishings located in this park.

Vegetation

Vegetation is growing within the playground surfacing and around site furnishings, and bridges. There are dead branches and low overhanging tree limbs along the main paths of travel.

Site Furnishings

The park has benches, picnic tables and waste receptacles that are rusted, rotting, or in need of repair and are not ADA compliant. New picnic tables were delivered on the day of the Consultant Team's site visit. The covered wooden picnic structures remain, although they are rotting and in disrepair.

Structures

The park has two wooden bridges across the creek. Both bridges are rotting and the handrails are no longer attached to the main structure. The concrete foundations are crumbling.

3.2 Priorities

The following narrative outlines the major deficiencies for each priority. See Appendix C: Deficiency List by Park for a spreadsheet detailing all of the deficiencies.

Life Safety Issues

The bridge structures and foundations need to be removed and replaced. The overhanging limbs and dead branches need to be removed as well.

The dated playground equipment needs to be removed and replaced. The sand safety surfacing at both playgrounds needs to be removed and replaced with engineered wood fiber or poured in place surfacing. The new safety surfacing should be the correct depth and should accommodate the required fall zones for the play equipment.

Code Violations

There are no ADA accessible parking spaces, routes, or site furnishings throughout the park. Install ADA accessible parking with signs. Install an ADA accessible route from the parking lot to both playground areas and the athletic field. Install ADA accessible site furnishings along the accessible route.



Maintenance Issues

The gravel parking lot needs to have new gravel installed with metal edging or it needs to be paved. The parking lot should be enlarged to accommodate eight standard parking spaces.

Aesthetic Improvement

Replace the metal bollards with decorative bollards adjacent to the parking lot.

Two other improvements to this park would be to install new signs and new site furnishings. On the athletic field, fill in any low spots with topsoil and seed. Decorative plantings around the entrance and park sign would also be an improvement.

3.3 Recommendations

1. Perform the following immediate modifications to this park to address the life safety issues:
 - Remove or replace the play equipment.
 - Remove the small picnic shelter.
 - Remove the picnic area site furnishings.
 - Remove or close off the wooden bridge structures.
2. Restore or renovate the park.
 - a. Restore: Complete all of the deficiencies listed in Appendix C: Deficiency List by Park at a cost of \$262,237. This option is not recommended because the park needs new facilities and ADA upgrades. The organization of the park could be greatly improved for ADA accessibility and functionality if a master plan is prepared for the park.
 - b. Renovate: Prepare a master plan and construction documents for the renovation of this park. This option is recommended because a master plan would address the park's aging equipment and structures and provide new circulation patterns to make all of the park's facilities ADA accessible. The master plan should include an athletic field/open play, playground, trails, site amenities, lighting, parking lot, signs, and plantings. The construction budget for the renovations to this park would be approximately \$422,500.
3. Complete a stream restoration project to restore the creek. It is recommended that the Town discuss the restoration with the North Carolina Department of Natural Resources (NCDENR), the Orange County Stormwater Management Division of Water Quality, or another restoration program such as the Ecosystem Enhancement Program.



Burlington Park



1 The existing parking lot and entrance drive are gravel with wooden edging along the perimeter. The gravel needs to be replenished and the parking lot needs to be enlarged to accommodate new ADA accessible parking.



2 The stream is in need of restoration work since the stream banks are unstable and debris is clogging the natural channel.



3 The open field has bare areas in the lawn and needs to be aerated and reseeded.



4 The main playground area is divided into two spaces. The area shown above is newer and includes a composite play structure. The playground surfacing needs to be replaced and edging needs to be installed to define the area and contain the safety surfacing.



5 The older playground area has dated equipment with inadequate fall zones and safety surfacing. There are no ADA accessible routes to either play area.



6 The wooden bridges on the site should be replaced. The wood decking is splitting and rotting in some areas and the concrete supports are crumbling.

Chapter Four

Cedar Falls Park

Cedar Falls Park is an 84-acre park located in the northern part of Chapel Hill. Located at 501 Weaver Dairy Road, the park contains a large, new playground with engineered wood fiber safety surfacing, picnic areas, six tennis courts, four ballfields, and both paved and natural trails. The parking lot is a combination of asphalt, concrete, and gravel with defined ADA spaces. The parking lot also contains an area for recycling and accommodates a recycling drop-off for the local community. See page 18 for a map of the park.

All of the sports lighting at this park has been removed based on the assessment and recommendations of a sports field lighting study. The lighting study was independent from this assessment and is not included in this assessment.



4.1 Assessment

The overall condition of this park is fair. Since the park was built in the mid 1970's, the park has been expanded to increase the number of available facilities. The playground is in good condition. The tennis courts and picnic areas are in fair condition. However, the restroom building, ballfields, and parking lot are in poor condition, not fully accessible, and have outdated equipment and materials. Ballfield #1 is particularly overused, increasing the drainage problems that already exist. A renovation plan for the ballfields and parking lot is highly recommended.

Playground

The playground at Cedar Falls Park is a new facility with composite structures, wood edging, and engineered wood fiber mulch. The wood edging is not continuous around the playground area. The edging may not be sufficient to contain the required depth of the playground surfacing.

Picnic Area

The picnic area is nestled in the woods below the playground. None of the picnic tables or grills are ADA accessible because they are located on gravel or compacted soil surfacing and some of the grades exceed five percent.

Tennis Court

The tennis court surfacing was in good condition during the site visit, although a few spots were showing signs of wear. The courts were resurfaced during the summer of 2008. The surrounding galvanized chain-link fence is also in good condition. The route to the tennis courts does not meet ADA accessibility guidelines. The water fountain at the tennis court is not a high/low model and therefore is not ADA accessible.



Ballfields

The four ballfields are different sizes with different heights of galvanized chain-link fencing around the perimeter and at the backstop. The fencing is in fair condition. There are a few rails that should be replaced and the fabric is bowing in some areas. The fencing is showing signs of rusting. The backstops seem to be in the worst condition.

Each field has two players benches set at different heights and a scoreboard that is faded, splintering, and in some cases, falling over.

The bleachers at each ballfield are in good condition. The bleacher pads, however, are made of concrete block and are crum-

bling and failing at most of the fields. The routes to the ballfields and bleachers are not ADA compliant due to excessive slope, absence of handrails, and narrow walkway widths. There is no ADA accessible seating area adjacent to the bleachers.

All four ballfields have drainage problems because the skinned infields are graded to drain towards homeplate. At some of the fields, the outfield is also graded to drain towards homeplate. The storm drainage systems around the ballfields are clogged with debris, soil, and tree roots and are not draining water away from the area as intended.

Trails

The major paved asphalt trails are crumbling along the edges and around the seams and where they abut with other paved areas. All of the trails have vegetation growing over the edges as well as coming up through cracks. This vegetation will compromise the structural integrity of the trail over time.

The natural trails are comprised of compacted soil. Elements such as tree roots, rocks, and low over-hanging limbs are encroaching the trail corridor.

Parking Lot

The entrance drive and parking lot are comprised of areas of concrete, asphalt, and gravel. The parking lot has a shared use with the Orange County Solid Waste Recycling Program and recycling containers are located along one side of the parking lot.

Curbs throughout the park are made of either asphalt, concrete, or wood.

The parking lot striping has faded and there is a deficiency of the required number of ADA accessible parking spaces.

The parking lot surface is crumbling, uneven, cracking, and has large pot holes. The overall layout of the parking lot is not efficient because of the long entrance drives, the layout of the parking stalls, and the width of the islands.

Restroom Building

The restroom building is not ADA compliant for several reasons. The building is located more than 200 feet away from the ADA accessible parking. The route to the building exceeds 5% in slope and so it is not ADA accessible. The position and locations of the plumbing fixtures and accessories in both bathrooms are not ADA compliant. Also, the only water fountain is not ADA accessible because it is not a high/low model.



The roof drains and gutters are clogged and structural materials are rotting or rusting. The finished grade behind the building adjacent to the new ADA accessible ramp is not allowing water to drain away from the building's foundation. Mulch is covering a portion of the buildings exterior wall, which will continue to retain moisture against the wooden surface.

The Restroom Building has various Electrical Code and ordinance violations including broken or disconnected conduit, non compliant receptacles, and misaligned occupancy sensors.

The men's and women's bathrooms lack exhaust fans required by North Carolina Mechanical Code.

Lighting

The exterior lighting fixtures at the parking lot, walkways, and restroom building are not full cutoff types as required by the North Carolina Energy Code. The recommended full cutoff type lighting fixtures have less of a light spread than the existing open bottom and cobra head styles. A new lighting design will be needed with the selection of the new fixture type.

4.2 Priorities

The following narrative outlines the major deficiencies for each priority. See Appendix C: Deficiency List by Park for a spreadsheet detailing all of the deficiencies.

Life Safety Issues

Replace the timber retaining wall and asphalt walk adjacent to ballfield #1 and the parking lot along the route to East Chapel Hill High School. Limb up all branches along walks and trails. Replace the bleacher pads at all four ballfields.



Code Violations

Install ADA accessible parking, routes, and site furnishings throughout the park. Install ADA accessible routes to the playground, tennis courts, picnic area, restroom building and to ballfields #1 and #3. Reset players benches at all four ballfields. Install ADA accessible seating areas adjacent to all bleachers.

At the restroom building, install an ADA accessible water fountain and patch and paint the CMU wall. Widen the bathroom stalls and remove one stall in the women's bathroom to accommodate the required clear floor area for ADA accessibility. Add grab bars in each stall and reinstall the hand blowers to be ADA compliant. Replace the urinal in the men's bathroom.

Install an exhaust fan in the men's and women's bathroom per Mechanical Code and insulate the drain pipes under the sinks.

Rework the dislodged or loose conduit and cap uncapped openings in the electrical boxes at the restroom building. Also, replace quadruplex receptacles with in-use types.

Replace all light fixtures at the restroom building, along the walks, and at the parking lot with full cut off type fixtures.

Maintenance Issues

Remove existing concrete, asphalt, gravel, and timber edging in the parking lot and redesign the lot to better accommodate vehicles, pedestrians, and the recycling center. Repave the lot and the entrance drive. Resurface all trails.

Regrade the ballfields to drain correctly and prevent water from washing away the infield. Stabilize the slope behind ballfield #2 with a retaining wall and new bleacher pad. Regrade the area behind the restroom building to provide positive drainage away from the building. The finished grade should be two inches below the steel base plate.

At the restroom building, replace toilet and faucet in the women's bathroom and the urinal and faucet in the men's bathroom. Replace fluorescent light fixtures and realign the occupancy sensor in the men's bathroom. Unclog the roof drains and install protective covers over the baskets. Repair the wood framed wall around the mechanical room entrance and replace the metal door. Replace the rotten wood stud framing and T-111 siding. Replace the rotting plywood sheathing and recover the roof with tar and gravel roofing. Paint steel base plate and steel bearings.

Aesthetic Improvement

At each of the four ballfields, replace the galvanized chain-link fence fabric with vinyl coated fence fabric and replace the score boards. Reseed the fields.

At the tennis courts, replace the galvanized chain-link fence fabric with vinyl coated.

Two other improvements to this park would be to install new signs and new site furnishings. Remove all of the overgrown shrubs throughout the park and replace with low maintenance perennials.

4.3 Recommendations

1. Perform the following immediate modifications to this park to address life safety issues:

- Repair the retaining wall and walkway adjacent to ballfield #1.

2. Restore **and** renovate the park.

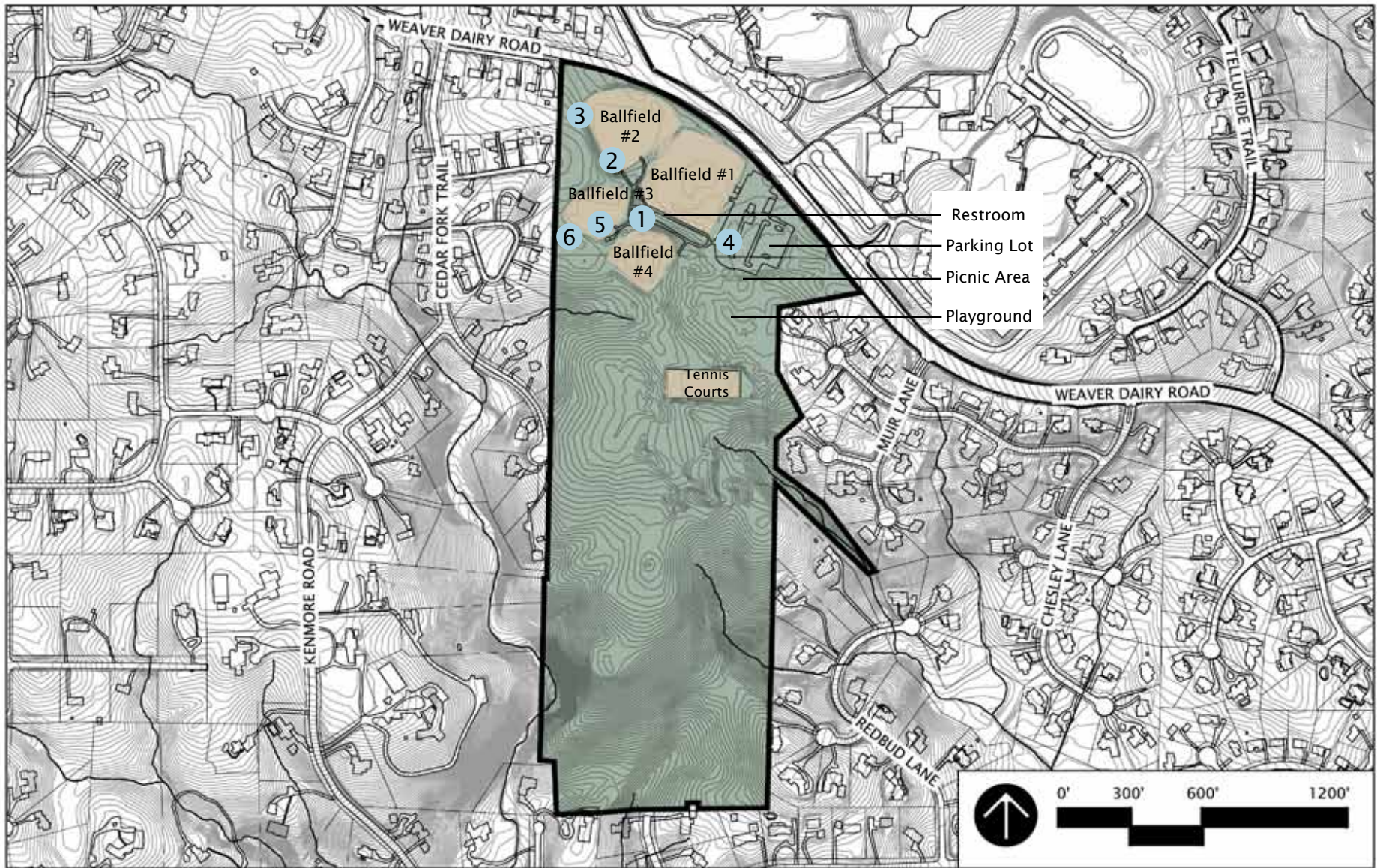
a. Restore: Complete all of the deficiencies related to the tennis courts, playground area, picnic areas, restroom building, and adjacent trails listed in Appendix C: Deficiency List by Park at a cost of approximately \$1,667,000.

b. Renovate: Hire a consultant to prepare a renovation plan and construction documents for the ballfields, parking lot, adjacent trails, site amenities, lighting, signs, and planting which also addresses:

- Pedestrian circulation and ADA accessibility
- Vehicular circulation for parking and recycling pick-up/drop-off
- Surface and storm drainage
- Field renovation including re-grading, fencing, irrigation, and lighting



A renovation plan will require a site survey, stormwater analysis, planting plans, irrigation plans, grading plans, sedimentation and erosion control plans, permitting, and planning review. Recommendations from the renovation plan should be coordinated with the recommendations of the sports lighting assessment. The construction budget for the renovations will be approximately \$1,833,000.



Cedar Falls Park



1 The restroom building has definite value and potential for public use, but requires renovations for compliance with ADA accessibility, Electrical Code, Mechanical Code, and Town ordinances. The building also requires increased maintenance.



2 Paved trails throughout the park are not ADA accessible. The entire storm drainage system at Cedar Falls Park needs to be evaluated and most likely renovated.



3 At each of the four ballfields, the adjacent players benches need to be reset at the correct height. The galvanized chain-link fence fabric should be replaced at the backstops, and all of the scoreboards need to be replaced.



4 The parking lot is made up of concrete, asphalt, and gravel surfacing. The entire parking lot should be demolished and redesigned to accommodate vehicular traffic for the park and the recycling center.



5 The ballfields need to be regraded to allow water to drain off of the infield and not towards home plate.



6 The concrete block walls supporting the bleachers at each of the ballfields are in need of replacement. The existing concrete pad for the bleachers is not adequately sized for pedestrian circulation and it does not accommodate an ADA accessible route or seating area adjacent to the bleachers.

Chapter Five

Hargraves Park

Hargraves Park is a ten-acre park located in western Chapel Hill. Located at 216 North Roberson Street, the park contains a tot lot for children ages two to five and a playground for children ages five to twelve with engineered wood fiber surfacing. There is also a picnic area, a picnic shelter, three tennis courts, a basketball court, and a ballfield. The park contains a combination of concrete sidewalks and asphalt trails, as well as four asphalt parking lots. See page 24 for a map of the site.

The park also contains a gymnasium and Community Center, as well as a locker room building for the pool. These three buildings and the pool were not included in this assessment.



5.1 Assessment

Overall this park is in good condition. Since the park was built in the 1940's, this park has had several renovations, additions, and upgrades. The park is heavily used. A main concern is the large and overgrown vegetation, which should be removed to increase visibility around and into the park.

Playground Areas

The playground areas contain new equipment, new poured-in-place surfacing, engineered wood fiber surfacing, and new vinyl coated chain-link fencing.

Picnic Area

The picnic area made up of individual picnic sites is located adjacent to the ballfield and gymnasium entrance. The area is not ADA accessible and does not include any ADA accessible site furnishings.

Picnic Shelter

The picnic shelter appears to be fairly new. However, the roof decking is pulling apart and sagging in some areas. The wooden support columns are set directly into the concrete pad and are not able to shrink and expand. The concrete pad has large cracks and also appears to be sinking.

Tennis Courts

The tennis courts are in fair condition with wearing only evident at the gates and along the edges of the court. The galvanized chain-link fence is in fair condition.

The surrounding drainage swales at the tennis courts are not directing water away from the edges of the courts. Concrete and soil swales that run along the side and back of the tennis courts are allowing water to undermine the sub-base of the court in several locations. The court surfacing is cracking at the edges and water is entering the court system between the layers of surfacing. The concrete swale is holding water, leaves, and debris.

The water fountain next to the tennis courts is not a high/low model and is not ADA accessible. The trail to the tennis court exceeds 5% in slope and is also not ADA accessible.

Basketball Court

The court is located between the gymnasium building and parking lot #3. The basketball court is in good condition, including the goals and bleachers. An ADA accessible route exists to the basketball court from parking lot #3. However, parking lot #3 does not have any ADA accessible parking and therefore does not provide an ADA accessible route to the basketball court, even though the grade and surfaces are ADA compliant.

Ballfield

The baseball field itself is in great condition although the players benches are set at varying heights. There is not an ADA accessible route to the ballfield or the bleachers and there is not an

ADA accessible seating area adjacent to the bleachers. The galvanized chain-link fence is in good condition. The backstop is more worn than the other fencing, but it is still in good condition.

The route from the sidewalk to the ballfield includes a set of timber steps that are not code compliant. The surface is also uneven.



Pool

The pool was not included in the Scope of Work for the Consultant Team although it was observed that new vinyl coated chain-link fence surrounds the perimeter of the pool area.

There is a very steep slope adjacent to the pool along the path around the backside of the gymnasium between the building and the pool. The slope is eroding and is a maintenance and safety concern.

Plantings

The park contains a variety of planting for slope stabilization and foundation plantings. Most of the existing vegetation is overgrown and presents a safety and security concern. The planted area in front of the Community Center does not have adequate lighting and obscures sections of the sidewalk. The planting along the steep banks adjacent to parking lot #4 is overgrown and weedy. Park users have been walking up this slope to enter the park from the bus stop in a more direct route that has become a worn earthen trail. Other areas throughout the park such as the area in front of parking lot #2 contain weedy lawn areas that need to be maintained.

Parking Lots

Of the four parking lots at this park, only two of the lots have ADA accessible parking, but these areas are not compliant due to lack of signage and the size of spaces. All of the parking lots are paved with asphalt, which is in poor condition and crumbling in some areas. Potholes exist throughout the parking lots, particularly in lots #2 and #4. The pavement stripping is faded at all of the parking lots.

Trails

The asphalt trail from Mitchell Lane to the gym needs replacement. All of the concrete trails are in good condition.

Lighting

The exterior lighting fixtures at the parking lot, walkways, and playground are not full cut off types as required by the Energy Code. The recommended full cut off type lighting fixtures typically have less of a light spread than the existing open bottom and cobra head style lights. A new lighting design will be needed with the selection of the new fixture type. The town should work with Duke Power to discuss options.

5.2 Priorities

The following narrative outlines the major deficiencies for each priority. See Appendix C: Deficiency List by Park for a spreadsheet detailing all of the deficiencies.

Life Safety Issues

Install a retaining wall along the walkway between the pool and the gymnasium to stabilize the slope. Replace the timber steps adjacent to the baseball field.

Code Violations

Install ADA accessible parking at four parking lots. Install ADA accessible routes and site furnishings throughout the park. Install ADA accessible routes to the tennis courts, picnic area, ballfield and all ADA accessible building entrances. Reset the players benches at all four ballfields. Install ADA accessible seating areas adjacent to the bleachers. Handrails should be code compliant at all steps.

Replace all light fixtures along the walks and at the parking lots with full cut off type fixtures. Replace the Schedule 40 PVC conduit on two of the light fixtures and add straps and guards. Trim all branches obstructing light output. Coordinate replacement efforts and future maintenance needs with Duke Power.

Maintenance Issues

Resurface all four parking lots with asphalt or gravel. Re-grade slope adjacent to parking lot #4 and add plantings to deter pedestrian traffic on the tree's roots.

Adjacent to the Community Center near the daycare, replace the drain with a larger sidewalk drain to capture stormwater. Add a drain inlet at the low area at the corner of the concrete walks. At the tennis courts, maintain swale to prevent debris from accumulating and trapping water.

At the picnic shelter, remove the roof and decking and install new cross members to support the roof. Repair corners of the concrete slab. Correct the sinking concrete slab by removing the partial southeast side and repairing the crack. Replace all damaged fascia board. Add auto shut-off timer controlled surface mounted CFL lights on the picnic shelter.

Aesthetic Improvement

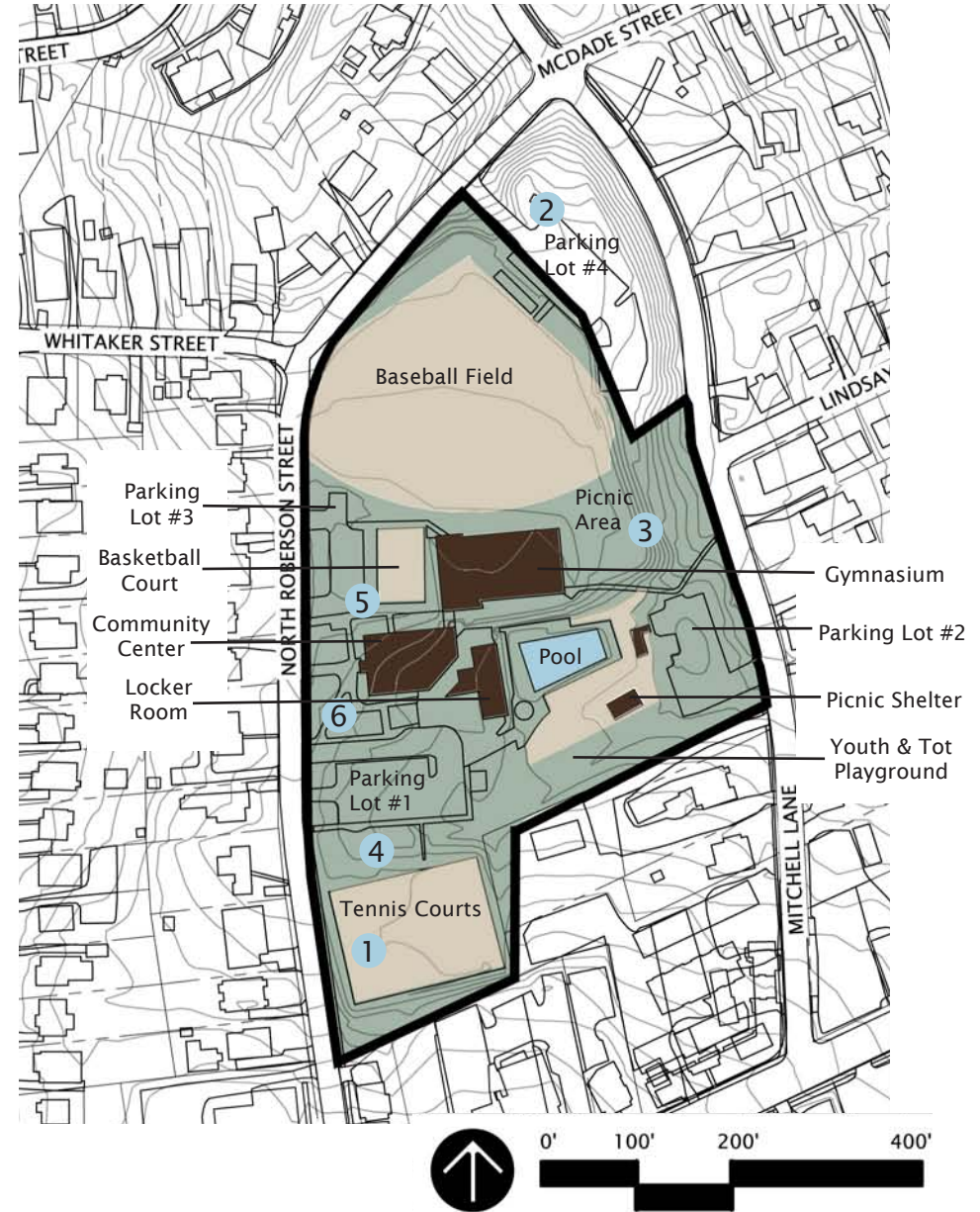
At the ballfield, tennis court, and basketball court, replace the galvanized chain-link fence fabric with vinyl coated fence fabric. Replace the score board at the ballfield. Resurface the tennis court and basketball court. Replace the basketball goals with adjustable height models.

Many of the existing shrubs are overgrown and need to be removed. Replace most of the existing planted areas with new shrubs, trees, and perennials to soften the expansive hardscape and provide seasonal interest. Add shade trees around the basketball court.

Two other improvements to this park would be to install new signs and new site furnishings.

5.3 Recommendations

1. Perform the following immediate modifications to this park to address life safety issues:
 - Remove overgrown vegetation around the buildings.
 - Close off the playground until safety surfacing is brought into compliance.
2. Restore or renovate the park.
 - a. Restore: Complete all of the deficiencies listed in Appendix C: Deficiency List by Park at a cost of \$946,700.00.





1 The swales adjacent to the tennis court need to be maintained on a regular basis. Shallow depth to bedrock prevents the swales from being replaced. The adjacent court is being undermined by the water caused by the build-up of debris.



2 The four parking lots throughout the park need to be repaved, restriped, and reorganized to accommodate the correct number and size of the required ADA accessible spaces. Parking lot #4, shown above, needs ADA accessible van parking.



3 The picnic area adjacent to the ballfield does not have an ADA accessible route or ADA accessible site furnishings. An ADA accessible route needs to be installed from the ADA accessible parking at parking lot #4 to the picnic area, with access to the basketball court and the gymnasium entrance.



4 The water fountain at the tennis courts needs to be replaced with an ADA accessible high/low model. The fountain also needs to be located along an ADA accessible walkway from parking lot #1 to the tennis courts. Currently, the route is not accessible because the slope exceeds 5%.



5 The basketball court will need to be resurfaced and restriped in the next few years. To reduce the amount of hardscape in this area and make the basketball court more climate friendly, shade trees should be installed between parking lot #3 and the basketball court.



6 The existing landscaping throughout the park is overgrown and needs to be removed. A planting plan should be prepared for the area in front of the Community Center, shown above, and for the steep slopes surrounding the park.

Chapter Six

Oakwood Park

Oakwood Park is a two-acre park located in eastern Chapel Hill. Located at 20 Oakwood Drive, the park consists of three parcels and contains a large playground with sand safety surfacing, a tennis court, an open grass field, and natural pathways. Parking is located on the adjacent streets of Oakwood Avenue and Berkley Road. See page 28 for a map of the site.

6.1 Assessment

Overall, this park is in poor condition. Since the park was built in the 1970's, the park facilities, equipment, and materials are outdated and not code compliant. This park would greatly benefit from a complete replacement of all equipment and materials. Lighting should be improved and coordinated with Duke Power. A master plan for this park is highly recommended.

Playground

The playground area consists of a swing, tire swing, composite pieces, zip line, and spring rockers. The equipment is for all different ages.

There is not an adequate depth of sand safety surfacing and the fall zones are incorrect for most of the equipment pieces. Weeds and vegetation are growing into the surfacing of the playground area.

The playground area is enclosed by a four foot galvanized chain-link fence which is in good condition. The benches in the playground area are set too low. The picnic tables are new. There are no ADA accessible routes into the playground, to the benches, or to the picnic tables.

Tennis Court

The court surface was replaced during the summer of 2008. The galvanized chain-link fence fabric is showing signs of wear.

The wooden bench in front of the tennis court is splintering and the metal is rusting. The vegetation along the edge of the tennis court may be uprooting the tennis court's sub-base and causing the fence to rust prematurely.

Open Play Field

The open play field has drainage issues and seems to be holding water in the lower areas. The grass area has dead patches throughout. There is no ADA accessible route to the field.

Trails

All trails throughout the park are natural surface or worn pathways in the grass. Sidewalks are not present around the edges of the three park parcels.

6.2 Priorities

The following narrative outlines the major deficiencies for each priority. See Appendix C: Deficiency List by Park for a spreadsheet detailing all of the deficiencies.

Life Safety Issues

Remove the dated playground equipment. Install engineered wood fiber or poured in place rubber surfacing at the playground.

Code Violations

Install ADA accessible routes and site furnishings throughout the park and around the perimeter. Install ADA accessible routes to the tennis court and playground area.

Maintenance Issues

Install a swale on the athletic field to provide positive drainage away from the field.

Aesthetic Improvement

At the tennis court and playground, replace the galvanized

chain-link fence fabric with vinyl coated fence fabric. Replace all play equipment and redesign the play area to provide activities for toddlers and youths.

The existing shrubs adjacent to the tennis court are overgrown and need to be removed. Add shade trees throughout the playground area.

Install a small picnic shelter at the playground area. Install a small gazebo on the wooded parcel across Berkley Road from the playground.

Two other improvements to this park would be to install new signs and new site furnishings.

6.3 Recommendations

1. Perform the following immediate modifications to this park to address life safety issues:
 - Close playground until safety surfacing is brought into compliance.
 - Remove rotting picnic tables and benches.
2. Restore or renovate the park.
 - a. Restore: Complete all of the deficiencies listed in Appendix C: Deficiency List by Park at a cost of \$238,484. This option is not recommended because the park needs new facilities and ADA upgrades.
 - b. Renovate: Prepare a master plan and construction documents for the renovation of this park including the playground, tennis court, athletic field, trails, sidewalks, site amenities, lighting, signs, and planting. The construction budget for renovations would be approximately \$250,000.





1 The existing open play field needs to be regraded with a swale added to divert water from the center of the field.



2 The playground equipment is dated and should be replaced. A new playground should be designed for this space with the possible addition of a picnic shelter.



3 The safety surfacing needs to be removed and replaced with engineered wood fiber or poured-in-place rubber surfacing. Edging should be installed to ensure adequate safety surfacing remains within the fall zone.



4 Older site furnishings should be replaced. New benches, waste receptacles and ADA accessible picnic tables need to be installed along an ADA accessible route.



5 The tennis court needs new vinyl coated chain-link fencing. The vegetation along the perimeter of the tennis court needs to be removed. An ADA accessible route should be installed from the sidewalk to the tennis court.

Chapter Seven

Umstead Park

Umstead Park is a 16-acre park located in western Chapel Hill. Located at 399 Umstead Drive, the park consists of two parcels and contains a large playground with sand safety surfacing, a large picnic shelter with restrooms, a small picnic shelter, picnic areas, a ball field, a tennis court, a basketball court and asphalt and natural trails with a wooden bridge. The parking lot is asphalt with designated ADA and standard spaces. See page 36 for a map of the site.

Bolin Creek meanders through the southern portion of Umstead Park. Some of the park facilities, such as the playground, picnic area, and small picnic shelter are located in the floodplain/floodway. An extension of the Bolin Creek Greenway is proposed to extend through Umstead Park. The two existing bridge structures were not evaluated during this assessment since the Bolin Creek Greenway extension will replace them. The Tanyard Branch Trail follows Bolin Creek and meanders through the woods in Umstead Park.



7.1 Assessment

Overall this park is in poor condition. The park, which was built in the 1960's with upgrades in the 1970's and 1990's, contains dated equipment and materials. Major equipment and structures are located in the floodway/floodplain. Recent flooding and damage from a hurricane strongly support the recommendation to remove equipment and structures out of the floodplain. Maintenance practices are not sufficient to repair storm damage and maintain the dated buildings and equipment. A master plan for this park is highly recommended.

Playground

The playground is located in the floodplain of Bolin Creek on the south side of Umstead Drive. Some of the equipment such as the spring rockers and swings are dated and past their useful life. The composite structure is showing signs of wear with areas of rust.

The playground surfacing is sand, but since the sand moves, it is not an adequate safety surface. Fall zones are not adequate for the swings and spring rockers. Vegetation is growing into the safety surfacing and the playground area. The route to the playground is not ADA accessible due to slope.

Picnic Shelter with Restroom

The picnic shelter with restrooms is located on the southern side of Umstead Drive. The restrooms appear to be newly renovated, but there is evidence of water damage inside at the base of the block walls. The drains through the building walls were closed off during the renovation. The lack of drains inside the building is preventing mop water from draining correctly allowing damage to occur to the walls and floors.

The water fountain adjacent to the building is missing. An ADA compliant high/low water fountain is required if the fountain is replaced.



Picnic Shelter

The existing picnic shelter located adjacent to the playground area in the floodplain is in poor condition. The structure is unstable because the wood is overspanned and not adequately anchored. The roofing is past its useful life. An abandoned steel post for a grill is protruding from the concrete pad and is a safety concern. An electrical box and meter are corroded and no longer being used. There is no ADA accessible route to the picnic shelter.

Picnic Area

The picnic area adjacent to the playground is in the floodplain. It contains dated site furnishings including picnic tables,

benches, and grills. There is no ADA accessible route to the picnic area and none of the site furnishings are ADA accessible.

Ballfield

The ballfield is located on the north side of Umstead Drive across the street from the parking lot. There is no ADA accessible route to the baseball field. The galvanized chain-link fence and backstop are rusting.

Tennis Court

The tennis court is located adjacent to the ballfield on the north side of Umstead Drive. It is covered with debris and is prone to flooding as it is set lower than the surrounding finished grade. The court surface is in poor condition and is very worn and covered with debris. The galvanized chain-link fence around the court is rusted and covered in vines. There is a great deal of poison ivy and weedy growth adjacent to the tennis courts. There is no ADA accessible route to the courts.

The courts are located on the far side of the park across Umstead Drive from the main parking lot. They are not easily accessible from the main parking lot or visible from any of the other park facilities. A small gravel pull-off parking lot is located adjacent to the courts, but is an unsafe place to drive in or out due to sight distance problems from the curve in the road.

Basketball Court

The basketball court is located adjacent to the parking lot on the southern side of Umstead Drive. The court is in good condition. However, the goals are not set at the correct height and the posts are not adjustable. The galvanized chain-link fence is not adequate to prevent players or balls from leaving the court and encroaching onto the main walkway. There is no ADA accessible route to the basketball court.

Lighting

The exterior lighting fixtures at the parking lot and along the walkways are not full cutoff types as required by the Energy Code. The recommended full cutoff type lighting fixtures have less of a light spread than the existing open bottom and cobra head styles. A new lighting design will be needed with the selection of the new fixture type. Coordination between the Town and Duke Power is necessary to replace fixtures and agree on future maintenance practices for the lighting.

7.2 Priorities

The following narrative outlines the major deficiencies for each priority. See Appendix C: Deficiency List by Park for a spreadsheet detailing all of the deficiencies.



Image of flood damage after Hurricane Hannah during the summer of 2008.
Photo courtesy of the Town of Chapel Hill.

Life Safety Issues

Remove the aging picnic tables, grills, and spring rockers in the picnic area adjacent to the Bolin Creek.

Remove and relocate the playground area out of the floodplain, including the double bay swings. Replace non-compliant safety surfacing with engineered wood fiber and install edging to maintain the correct height and fall zones.

At the picnic shelter, remove the abandoned steel pipe from the concrete.



Image of flood damage after Hurricane Hannah during the summer of 2008.
Photo courtesy of the Town of Chapel Hill.

Code Violations

Install ADA accessible parking at the parking lot. Install ADA accessible routes and site furnishings throughout the park. Install ADA accessible routes to the basketball court, picnic shelter with restroom, playground, small picnic shelter, baseball field, and tennis court. Provide an ADA accessible crosswalk across the parking lot and Umstead Drive.

At the baseball field, install a paved bleacher pad and an

ADA accessible seating area adjacent to the bleachers.

At the picnic shelter with restroom, install an ADA accessible grill and two ADA accessible water fountains. The water fountains should be different heights to accommodate persons who have trouble bending or stooping.

Have a structural engineer evaluate the small picnic shelter building. Replace the corroded and abandoned meter box.

Replace all light fixtures along the walks and at the parking lots with full cut off type fixtures. Replace the Schedule 40 PVC conduit on two of the light fixtures and add guards.

Maintenance Issues

Resurface the parking lot and trails with asphalt. Resurface the basketball court and tennis court. Install a new drainage system around the tennis court and remove all poisonous and overgrown vegetation.

Replace the galvanized chain-link fence surrounding the basketball court with vinyl coated fence. Extend the length of the fence to surround the court on two sides to prevent balls and players from encroaching on the accessible path of travel to the picnic shelter with restroom. Replace the basketball goals with adjustable models to accommodate future resurfacing.

At the picnic shelter with the restroom, reopen the through the wall drains to allow water to escape. Replace the signs on the doors for the men's and women's bathrooms. Replace the hinge pins on the ADA partition doors. Replace the two yellowing light fixtures.

At the small picnic shelter, replace the asphalt shingle roof

with new felt with metal drip edge flashing at the rakes and eaves.

Aesthetic Improvement

At the ballfield and tennis court, replace the galvanized chain-link fence fabric with vinyl coated fence fabric. Replace the score board at the ballfield. Replace the remaining playground equipment and relocate out of the floodplain. Install safety surfacing with the new equipment.

Replace most existing planting areas with new shrubs, trees, and perennials to soften the expansive hardscape and provide seasonal interest.

Install new signs and new site furnishings.

7.3 Recommendations

1. Perform the following immediate modifications to this park to address life safety issues:
 - Remove or replace the play equipment.
 - Remove the small picnic shelter.
 - Remove rotting picnic tables and benches.
 - Remove exposed grill posts at picnic shelter and fill holes.
2. Evaluate the structural integrity of the picnic shelter with the restroom every five years.
3. Restore or renovate the park.
 - a. Restore: Complete all of the deficiencies listed in Appendix C: Deficiency List by Park at a cost of \$398,819.

This option is not recommended since most of the park is in the floodplain/floodway and the replacement of the existing equipment would require extensive reviews, survey, and flood modeling to relocate facilities out of the floodplain.

- b. Renovate: Prepare a master plan and construction documents for the renovation of this park. This option is recommended because a master plan would address the park's aging equipment and structures and accommodate pedestrian and vehicular circulation including ADA accessibility, connectivity between facilities and uses including the proposed extension of the Bolin Creek Greenway. A master plan is recommended to redesign the uses of the park and remove facilities from the floodplain/floodway.

The master plan should include the parking lot, playground, picnic areas, tennis courts, basketball court, ballfield, sidewalks, trails, site amenities, lighting, signs, and planting. The construction budget for the renovations will be approximately \$552,500.

4. Coordinate all design efforts with the planned extension of the Bolin Creek Greenway.



Umstead Park



1 To keep the tennis court in its current location, the entire court and fence should be demolished and replaced with a new court system and vinyl coated chain-link fence, set at a higher finished grade. The surrounding vegetation needs to be trimmed and all vines need to be removed from the area.



2 All vegetation should be removed from fence fabric, poles, and posts surrounding the ballfield and tennis courts.



3 ADA accessible routes need to be installed to all of the park facilities including the basketball court, picnic shelters, playground, baseball field, and tennis court. The route shown is between the picnic shelter with restroom and the playground. The slope exceeds 5% and vegetation is growing over and onto the walk.



4 The shelter building with the restroom does not have adequate interior drainage, because the wall drains have been closed off during recent renovations. Water is trapped in the building and damage is present on the block walls. Reopen drains and add one in each of the men's and women's bathrooms.



5 The playground is outdated and does not have an adequate depth of mulch or fall zones. It is recommended that a new playground be installed outside of the floodplain.



6 The picnic shelter is unstable and not adequately anchored. The structure should be removed from the floodplain.

Chapter Eight

Bolin Creek Greenway

The Bolin Creek Greenway is approximately one and one-half miles long. It runs generally north-south from Martin Luther King Jr. Boulevard/Highway 86 to the Chapel Hill Community Park off of Estes Drive. The multi-use trail is a ten (10) foot wide asphalt surface, changing to concrete for a short distance between the Bolinwood Drive and Elizabeth Street section. The trail meanders along Bolin Creek and an Orange Water and Sewer Authority (OWASA) easement crossing the creek and various drainages in three places. One bridge and two structures with wooden railings and decking over culverts is used for each of the drainage/creek crossings. See page 42 for a map of the site.

8.1 Assessment

Overall the greenway is in fair condition. Phase I, built in 1994 and Phase II, built in 1999, require a higher level of maintenance for storm drainage and general upkeep of the corridor.

Trail

The Bolin Creek Greenway trail is showing signs of wear. The asphalt is cracking in many places. There are portions of the asphalt trail that have been widened by the addition of asphalt strips on either side of the trail's surface. Those seams and other cracks along the trail are allowing weeds and vines to grow through the asphalt. Vegetation is growing over



the edges of the trail on both the asphalt and concrete sections.

Structures

The bridges along the corridor are in fair condition. Vegetation is growing all over the wood decking and railings at all three bridges. Portions of the wood decking and railings may be rotting.

Drainage pipes and culverts along the corridor are clogged and filled with sediment and debris.

The retaining wall that is stabilizing Bolin Creek under Franklin Street is covered in vegetation. Kudzu is a major problem near the underpass of Franklin Street. Aggressive vines should not be allowed to grow on the retaining wall.

8.2 Priorities

The following narrative outlines the major deficiencies for each priority. See Appendix C: Deficiency List by Park for a spreadsheet detailing all of the deficiencies.

Life Safety Issues

Remove the stumps and dead branches adjacent to the trail. Fill the low areas and seed.

Code Violations

There are no code violations at this facility. ADA accessible access to the greenway can be obtained from various places, including Chapel Hill Park.

Maintenance Issues

Edge the existing asphalt and concrete trail. Patch the concrete. Resurface the asphalt. Add pavement markings on the trail and the roadways.

Clean out drain pipes, culverts, and swales. Install a swale and

Fill eroded areas and plant drought and shade tolerant plugs. Clean up storm damage throughout the corridor. Remove or trim vegetation around the bridges, retaining walls, and fencing. Remove all vines, particularly kudzu.

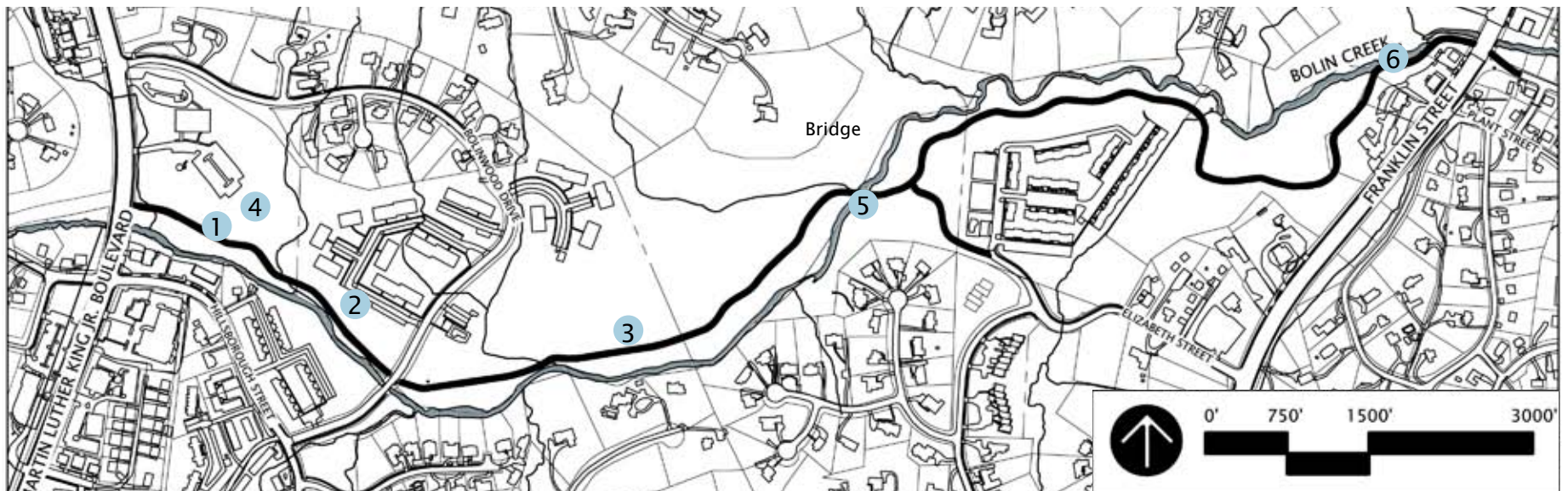
Repair and replace missing or damaged retaining wall block and caps. Replace the wooden structures including the bridge decking, railings, and fencing. Remove unused sign posts adjacent to the trail. Replace benches and waste receptacles adjacent to the bridges. Replace the bollards at all intersecting streets with lockable drop down bollards.

Aesthetic Improvement

Two other improvements to this facility would be to install new signs and new site furnishings. Decorative plantings around the signs and the addition of flowering trees along the corridor would also be an improvement.

1. Restore or renovate the trail.
 - a. Restore: Complete all of the deficiencies listed in Appendix C: Deficiency List by Park at a cost of \$696,500.
2. Evaluate the structural integrity of the bridges and the retaining wall along the corridor at 20 year intervals.

8.3 Recommendations



Bolin Creek Greenway



1 The length of the corridor has vegetation encroaching the edges of the trail's surface and causing the trail to crumble and crack. Sediment is also an issue due to clogged drainage pipes. The surface condition of the asphalt paving is fair, except for damaged areas such as the equipment damage shown above.



2 Clogged drainage pipes and culverts are increasing flood-related issues along this trail, including the deposits of sediment and leaf litter along the trail's surface.



3 The trail runs along a sewer easement adjacent to the Bolin Creek. A worn path adjacent to the trail is heavily used by runners and joggers.



4 Areas such as this pavement should be removed from the greenway corridor, particularly since it is in the floodway of Bolin Creek. Pavement such as this is not usable, increases the impervious surface within the floodway, and is not aesthetically pleasing.



5 Large ruts, holes from uprooted trees, and animal dens should be filled in along the trail corridor to prevent a potentially hazardous situation for trail users and maintenance vehicles.



6 Major drainage problems along trail corridors should be addressed by staff or by an outside contractor when storm water issues become a hazard. Major drainageways such as this one should be maintained.

Chapter Nine

Other Parks

9.1 Other Parks

After completing an in-depth assessment of five parks and one greenway, the Consultant Team conducted brief site visits to six other parks and eleven trail segments. This chapter describes general priorities and recommendations for the six parks, including a description of each park and specific facility recommendations.



9.2 Meadowmont Park

Meadowmont Park is a 68-acre park located in southeastern Chapel Hill. Constructed in 2004, the park contains an historic log building used for storage and an adjacent picnic shelter. The parking lot is a shared lot with the Rashkis Elementary School. Natural trails surround a pond located on the property. The Meadowmont Trail links the Meadowmont Neighborhood to this park.

Life Safety Issues

The timber wall that runs between the picnic shelter and the pond is failing and needs to be replaced. In addition, the dam should be inspected by an engineer and all debris should be removed from the dam immediately.

Code Violations

There are no ADA accessible routes to the picnic shelter due to the excessive slope of the existing walk. Install ADA accessible parking in the parking lot at the school, adjacent to the park. Install an ADA accessible route from the ADA accessible parking spaces to the picnic shelter and install ADA accessible site furnishings.

Maintenance Issues

The concrete around the building is crumbling. Replace the concrete walks and the sidewalk drain. The new walk should be less than 5% slope. A transition between the concrete walk and the natural trails should be installed to eliminate the eroded area at the end of the concrete walk. The nature trail could be improved with gravel or mulch surfacing.

The drainage around the picnic shelter could be improved. In conjunction with replacing the sidewalk drain, regrade the swale and seed with new grass.

Clean up fallen limbs and remove trash and other debris, throughout the park.

Aesthetic Improvement

Two other improvements to this facility would be to install new signs and new site furnishings. Fill in any low spots on lawn areas with topsoil and seed. Install ornamental plantings to frame views of the pond.

Recommendations

1. Perform the following immediate modifications to this park to address life safety issues:
 - Repair the retaining wall adjacent to the picnic shelter.
2. Evaluate the structural integrity of the dam.

3. Restore the park.
 - a. Complete all of the deficiencies listed in the previous description to restore this park including the ballfields, picnic shelter, trails, parking lot, site amenities, lighting, signs, and planting.

9.3 Ephesus Park

Ephesus Park is a 10-acre park located in eastern Chapel Hill. Originally built in the 1970's, the park contains six tennis courts, a restroom building, and a picnic area. The parking lot is asphalt with no designated ADA accessible spaces. Natural trails meander throughout the woods.

It is highly recommended that a master plan be completed for this park to address circulation, use, and connectivity issues. If additional property is acquired by the Town, it should be included in the master planning process for this park to expand the function and available facilities.



Life Safety Issues

The telephone box was observed to be broken, exposing wires. The telephone box needs to be replaced and locked.

At the picnic area, abandoned grill posts and concrete pads should be removed. The concrete pads are not the correct size to support the existing picnic tables and they pose a trip hazard. The concrete pads should be removed or additional concrete should be poured to create an ADA accessible seating area.

The drain inlet between the parking lot and the restroom building is a major hazard, because the concrete supports are cracking. Also, the opening between the cap and the ground is very wide and could be a hazard to younger park users.

Code Violations

There are no designated ADA accessible parking spaces in the parking lot. Install ADA accessible parking spaces in the parking lot with correct signs and striping.

There are no ADA accessible routes to the park's facilities or site furnishings due to excessive slope and improper surfacing, although the park does have ADA compliant picnic tables. ADA accessible routes should be installed from the ADA accessible parking spaces to the tennis courts, restroom building, and picnic area. Install all of the site furnishings including benches, waste receptacles, picnic tables, and grills along an accessible route as required to be ADA compliant. Replace the water fountain with a high/low model and install it along an accessible route. Include paved areas for the ADA compliant picnic tables, benches, and water fountain.

Improve all lighting throughout the park including the parking lot, pathway, and egress lighting around the restroom building.

Maintenance Issues

Prune shrubs and trees as needed throughout the planting areas to maintain their original shape and remove dead branches. Remove overgrown plantings and replace according to a newly designed planting plan. Replace timber edging around all planting beds with new timber or another type of edging material.

Replace the stairs from the parking lot to the tennis courts. Include a five foot landing at the top and bottom of the steps as required by code to allow space to open the gate. Replace all timber walls adjacent to the steps.

Fill the low area between the parking lot and the natural trails to remove ruts and fill low spots. Install mulch or gravel on the natural trails throughout the park.

In conjunction with the ADA accessible parking, patch and resurface the asphalt parking lot and entrance drive and restripe the parking spaces. Provide asphalt or concrete curbing if necessary to direct water flow. Replace cracked or crumbling concrete pavement around the restroom building. Caulk the space between the concrete pavement and the building edge.

At the picnic area, replenish gravel and add new edging. Replace the steps in the picnic area, in conjunction with the ADA accessible route to the picnic area and the new placement of site furnishings. Pine needles and leaves should be removed from the gravel at the picnic area.

The existing tennis court system is worn and should be patched and resurfaced. Replace galvanized chain-link fence with vinyl coated chain-link fence.

Aesthetic Improvements

To improve the appearance of this park, it is recommended that the interior and exterior of the restroom building be painted, plantings be installed around the electrical boxes, and the underbrush be removed around the picnic area. The trash and debris need to be removed including the lens cover and the extra

court surfacing adjacent to the picnic area. In addition, all planting beds and the trees adjacent to the entrance drive should be mulched to keep weeds down and to retain moisture.

Two other improvements to this facility would be to install new signs and new site furnishings. Fill in any low spots with topsoil and seed.

Recommendations

1. Perform the following immediate modifications to this park to address life safety issues:
 - Remove exposed concrete pads and grill posts throughout the picnic area and fill holes.
 - Remove overgrown vegetation at entrance.
 - Repair the drain inlet.
 - Call appropriate utility company to repair the broken box on the restroom building.
2. Renovate the park.
 - a. Prepare a master plan and construction documents for the renovation of this park including the tennis courts, picnic area, restroom building, parking lot, site amenities, lighting, signs, and planting.

9.4 Community Center Park

Community Center Park is a 6-acre facility located in southeastern Chapel Hill. This park was built in the 1970's. The Community Center was completed in 1980. Other additions were added in the 1990's. The park contains a playground, a bocce ball court, basketball court, a rose garden, and sculptural pieces. The parking lot is asphalt and the majority of the trails are asphalt and concrete. This park is a trailhead for the Bolin Creek Greenway and the Battle Branch Trail. Parking is inadequate for the number of users.



Life Safety Issues

At the playground, the poured in place rubber surfacing and engineered wood fiber are not at correct depths. Replenish or reinstall to match the depth required by the play equipment, manufacturer, and CPSC guidelines.

The transition between the poured in place surfacing and the engineered wood fiber is not a level transition. The difference in slope between the engineered wood fiber and the poured in place surfacing is causing the poured in place surfacing to crack and break off at the transition joint, exposing the concrete sub-base. Replace the concrete sub-base beneath the poured in place or extend the concrete at all transition areas. The poured in place surfacing and the concrete sub-base should gently slope under the engineered wood fiber and not end abruptly at the engineered wood fiber. This will prevent cracking of the poured in place surfacing at transition areas.

Replenish the existing engineered wood fiber mulch. Remove the buried concrete debris adjacent to the playground on the hillside that is partially exposed. Replace the wooden playground edging and retaining wall. Replace the exposed steel pins in the edging at the playground as the pins are a major safety concern.

A drain inlet in the parking lot is in danger of collapsing. Remove and replace drainage inlet to prevent vehicles from driving over the structure and causing additional damage to the surrounding pavement.

Code Violations

Install a striped crosswalk across the entrance drive and parking lot that extends from the walkway from the playground into the parking area.

Improve all lighting throughout the park including parking lot, pathway, and egress lighting around buildings.

Maintenance Issues

Resurface the asphalt parking lot and entrance drive. Edge all existing trails to prevent vegetation from growing onto the surface. Repair asphalt curbing around the parking lot where it is crumbling or missing. Upgrading from asphalt to concrete curb and gutter around the parking lot is highly recommended to improve drainage. Clean debris and engineered wood fiber off of all trail surfaces.

Throughout the park, remove all dead vegetation and fallen trees. Edge all planting beds and mulch. Clean out drainage pipes. At the low area adjacent to the playground, install a drain inlet and tie it into the existing drainage system to remove water from the lawn.

At the basketball court, raise the surface and regrade the court to prevent standing water. Grade the adjacent soil away from the court. Edge the court to prevent encroachment from vegetation.

Aesthetic Improvement

To improve the appearance of this park, mulch worn or bare areas around art installations, the path between the parking lot and the adjacent development, and all of the planting beds.

Two other improvements to this facility would be to install new signs and new site furnishings. Fill in any low spots throughout the lawn areas with topsoil and seed.

Recommendations

1. Perform the following immediate modifications to this park to address life safety issues:
 - Close off the playground until safety surfacing is brought into compliance.
 - Remove the concrete debris and rock on the hillside adjacent to the playground.
 - Remove the exposed metal pins in the edging around the playground area.
 - Repair the drain inlet in the parking lot.
2. Restore the park.
 - a. Complete all of the deficiencies listed in the previous description to restore this park including the playground, basketball court, bocce ball court, parking lot, trails, site amenities, lighting, signs, and planting.

9.5 North Forest Hills Park

North Forest Hills Park is an 10-acre park located in northern Chapel Hill. Constructed in the 1990's, the park contains a playground area with picnic tables, a picnic shelter with restrooms, a half basketball court, and an open field. The parking lot and trails are asphalt.

Life Safety Issues

The playground area does not have the sufficient depth of safety surfacing or adequate area for fall zones. The playground equipment is rusty and has black mold growing on it. Paint is chipping and exposed areas are beginning to discolor and rust. The caps on the playground equipment are loose. The sand surfacing has vegetation growing throughout. Replace the playground equipment, surfacing, and edging.

The shrubs at the entrance to the park are overgrown and could be a safety and security issue. Trim or remove the large evergreen shrubs between the parking lot and the playground. The concrete pads and the abandoned grill posts in the picnic area adjacent to the playground need to be removed, since they are a tripping hazard and are no longer in use.

Code

The number of ADA accessible parking spaces are not sufficient for the size of this parking lot. Install ADA accessible parking spaces in the parking lot with correct signs and striping.

There are no ADA accessible routes to the basketball court or the open field. Install ADA accessible routes from the ADA accessible parking spaces to the basketball court and the open field. Install all of the site furnishings including benches, waste receptacles, picnic tables, and grills along an accessible route as required to be ADA compliant. Replace the water fountain with a high/low model and install along an accessible route. Include paved areas for the ADA compliant picnic tables, benches, and water fountain.



Improve all lighting throughout the park including the parking lot, pathway, and egress lighting around buildings.

Maintenance Issues

In conjunction with the ADA accessible parking, patch and resurface the asphalt parking lot and entrance drive and restripe the parking spaces. Provide an asphalt swale if necessary to direct water flow around the parking lot. Replace pavement around the restroom building that is cracked or crumbling. Caulk space between the pavement and the building.

Patch and resurface all asphalt trails. Edge the asphalt trails and remove adjacent shrubs, trees, and vines that are uprooting the trail. Fill in low areas and reseed. Mulch or gravel the natural trails in the wooded areas. Backfill and seed along the trails where the adjacent soil has washed away.

The hillside behind the basketball court has ruts and is eroding on the court leaving sediment deposits. Fill and grade the hillside and seed. Also, the half basketball court needs new surfacing and striping.

Trim shrubs and trees throughout the planting areas. Remove overgrown plantings and replace according to a new planting plan. Mulch planting areas to prevent weeds and retain moisture. Edge all planting beds.

The slope adjacent to the picnic shelter with restrooms is eroding. Install stone to prevent erosion along the back of the building. Rehang the doors to prevent undercutting of the pavement at the entrance to the restrooms. Clean out drains in both bathrooms and install a sidewalk drain inlet outside of both bathroom doors to prevent water and sediment from entering the bathrooms. Replace the door to the hosebib. Replace the outdated light fixtures in the restrooms.

Aesthetic Improvements

To improve the appearance of this park, it is recommended that the building's interior and exterior surfaces be power washed and painted and that the ruts in the planted or lawn areas be filled and seeded.

The plumbing fixtures should be replaced due to their age and appearance.

Two other improvements to this facility would be to install new signs and new site furnishings.

Recommendations

1. Perform the following immediate modifications to this park to address life safety issues:
 - Close the playground until safety surfacing is brought into compliance.
 - Remove overgrown shrubs at the entrance to the park.
 - Remove exposed concrete pads and grill posts throughout the picnic area.
 - Remove rotting picnic tables and benches.
 - Remove overgrown vegetation at park entrance and around tennis courts.
2. Renovate the park.
 - a. Prepare a master plan and construction documents for the renovation of this park including the athletic field, basketball court, playground, parking lots, picnic areas, picnic shelter/restroom, trails, site amenities, lighting, signs, and planting.

9.6 Homestead Park

Homestead Park is a 41-acre park located in northern Chapel Hill. Built in 1999, the park contains two ballfields, two athletic fields, a basketball court, playground, picnic shelter with restroom,



picnic area, two parking lots, and a dog park. There is a large recreation center under construction on the property. The parking lots are asphalt with designated ADA accessible spaces. The trails are a combination of asphalt and gravel.

Life Safety Issues

The engineered wood fiber at the playground is not at a sufficient depth to accommodate the fall heights of the equipment. Replenish the engineered wood fiber to meet the depth required for the play equipment, manufacturer, and CPSC guidelines. Extend the concrete subbase for the poured in place surfacing at transition joints between the poured in place surfacing and the engineered wood fiber. The concrete subbase should gently slope under the engineered wood fiber mulch to prevent cracking of the poured in place surfacing at transition areas.

Adjacent to the athletic fields there is an equipment storage box that is not locked. Provide a lock for the box that is accessible with a master key.

Throughout the park, remove branches and over hanging tree limbs. Remove all stumps from the planting beds and natural areas adjacent to the trails.

Code Violations

The existing routes are not accessible due to excessive slope and the type of surfacing. Install ADA accessible routes from the ADA accessible parking spaces to the playground, the picnic shelter with restrooms, picnic area, athletic fields, ballfields, and dog park.

Relocate or install new site furnishings including bleachers, benches, waste receptacles, bike racks, players benches, picnic tables, and grills along an accessible route as required to be ADA compliant. Replace the water fountains with high/low models and install them along accessible routes. Include paved areas for the ADA compliant bleachers, picnic tables, benches, players benches, bike racks, and water fountains.

Secure and lock the electrical box adjacent to the soccer fields. The box is not properly fastened to the building and since it is not locked, the controls could be tampered with.

Maintenance Issues

Patch and resurface the asphalt parking lots and restripe the spaces. Patch and resurface the entrance drives. Provide new curbing if necessary to direct water flow. Replace the broken wooden bollard at the main parking lot.

At the picnic shelter with restrooms, replace the pavement that is cracked or crumbling and caulk the space between the pavement and the building. Remove debris from the roof. Replace the dated plumbing fixtures and accessories in both bathrooms.

Patch and resurface all asphalt trails. Raise areas of the trail where the surface is prone to flooding or deposits of sediment. The existing trails are cracking and vegetation is encroaching the edges of the pavement. Edge the asphalt trails and remove adjacent

shrubs, trees, and vines that are uprooting the trail. Fill any low areas and seed. Replenish gravel around the picnic area and install edging to retain the gravel surfacing and prevent it from washing away. Backfill and reseed along the trails where the adjacent soil has washed away. The timber steps found throughout the park need to be replaced.

Regrade and reseed the ballfields and athletic fields. Replace the galvanized chain-link fencing with vinyl coated chain-link fencing.

At the basketball court, replace the concrete segmental retaining wall caps and repair the retaining wall. The basketball court needs to be resurfaced with new paint striping. The adjacent shrubs should be trimmed. The court surface needs to be cleaned of debris and to remove encroaching vegetation. Install a ground cover to prevent the slope from eroding adjacent to the steps at the basketball court.

Trim shrubs and trees throughout the planting areas. Remove overgrown plantings and replace with new according to a planting plan. Mulch planting areas to prevent weeds and retain moisture for optimum plant growth. Edge all planting beds.

At the dog park, remove all leaf debris adjacent to the fence at the lower side of the dog park area. Trim all vegetation around the rocks and benches in the dog park. Remove vines from the fencing. Replace the existing galvanized chain-link fence with vinyl coated chain-link fence.

Pipes and swales throughout the park are clogged and surrounded by weeds and debris. Clean out all pipes and drains. Regrade swales as necessary and replace rip-rap if needed.

Aesthetic Improvements

To improve the appearance of this park, it is recommended that the picnic shelter with restroom building's interior and exterior surfaces be power washed and painted and the ruts throughout the

park be filled and seeded. All metal surfaces including handrails and bridges should be sanded, primed, and painted. The planting beds adjacent to the ballfields should be replaced with new material, mulch, and edging.

Two other improvements to this facility would be to install new signs and new site furnishings.

Recommendations

1. Perform the following immediate modifications to this park to address life safety issues:
 - Close playground until safety surfacing is brought into compliance.
 - Lock equipment storage box adjacent to the soccer fields.
 - Remove branches and overhanging tree limbs adjacent to the trails and sidewalks and cut down stumps to be flush with the finished grade.
2. Restore the park.
 - a. Complete all of the deficiencies listed in the previous description to restore this park including the athletic fields, basketball court, ballfields, playgrounds, parking lots, dog parks, picnic areas, picnic shelter/restroom, trails, sidewalks, site amenities, lighting, signs, and planting.

9.7 Westwood Park

Westwood Park is a one-acre park located in central Chapel Hill. Constructed in the 1970's, the park has a playground area with sand safety surfacing. Parking is available on the street.

Life Safety Issues

The playground area does not have sufficient depth of safety surfacing or area for fall zones. Replace playground equipment, surfacing, and edging. Trim overhanging vegetation and remove dead branches from the area around the playground.



Recommendations

1. Perform the following immediate modifications to this park to address life safety issues:
 - Remove or replace the existing play equipment.
2. Renovate the park.
 - a. Prepare a master plan and construction documents for the renovation of this park including the playground, trails, sidewalks, site amenities, lighting, signs, and planting.

Code Violations

There are no accessible routes into this park from the adjacent streets. Install an ADA accessible route from the street to the playground. Include access to an ADA accessible bench along the route. The steps into the park are rotting, overgrown with vegetation, and are not code compliant. Install a new set of steps into the park from Dogwood Avenue and replace the handrails.

Maintenance Issues

Clean up debris and leaf litter throughout the walkways and playground area.

Aesthetic Improvements

Two other improvements to this facility would be to install new signs and new site furnishings. Install decorative fencing along Dogwood Avenue to deter yard waste dumping and define the park.



9.8 Overall Assessment and Priorities

Six of the park assessments included in this chapter have very similar life safety and aesthetic issues, code violations, and deferred maintenance tasks. The following observations were generally made at six of the parks:

Parking Lots

There is one parking lot each at Ephesus, North Forest Hills, and Community Center Parks. Homestead Park has two parking lots. Meadowmont has a shared parking lot with the Rashkis Elementary School. Westwood Park has only on-street parking.

Parking lots were generally paved with asphalt. Cracks were found throughout the parking lots. Vegetation encroachment was a problem along the edges of the pavement. Striping of the parking spaces was faded. Some of the ADA accessible parking areas were not compliant due to lack of signs for van accessibility, insufficient number of spaces, and dimension of the spaces and access aisles. All ADA accessible parking should not exceed 2% in cross slope.

ADA Accessibility

ADA accessible parking spaces were not code complaint. There were generally no ADA accessible routes from designated ADA accessible parking to the park's facilities. Routes were not ADA accessible due to excessive slope, pavement condition, and surfacing material. Site furnishings were generally inaccessible due to height, size, and clearance requirements. Site furnishings were not located along an accessible route.

Water fountains were often not located along an accessible route with the required clear floor area. Water fountains were also not typically a high/low model, which is required for ADA compliance.



Vegetation

Vegetation is encroaching the playground surfacing, site furnishings, and trail and parking lot pavement. Fallen limbs and branches were found throughout the parks. Low overhanging branches were found along a few of the trails.

Plantings

The existing planting areas were generally overgrown. Some shrubs were partially dead or misshapen. Other shrubs were overgrown and encroaching other shrubs and perennials. The timber raised planting beds were often rotting or missing altogether. There was little or no mulch in the planting beds to keep weeds down and retain moisture.

Site Furnishings

The parks had a variety of benches, waste receptacles, picnic tables, grills, and water fountains that were rusted, rotting, in need of repair, or not ADA complaint. Site furnishings were also not located along an ADA accessible route. A cohesive site amenity palette would greatly improve aesthetics throughout all parks.

Structures

Bridges were found at Homestead Park and appeared to be in good condition.

Picnic Shelters and Restroom Buildings

A picnic shelter is located at Meadowmont Park. Picnic shelters with restroom facilities were found at North Forest Hill and Homestead Parks. A restroom building with storage is located at Ephesus Park. Most of the roofs appear to be old and all roofs had leaf litter accumulating on them. Concrete slabs were typically cracked and vegetation encroachment was an issue around the perimeter of the slab. Drainage was an issue around several of the buildings as well.

Overall, roofs were found to be in fair condition. Ventilation, plumbing, and lighting fixtures may not be code complaint. See each park for recommendations by building.

Play Areas

Community Center, North Forest Hills, Homestead, and Westwood Parks have playground areas. The equipment is dated and some of the posts, slides, and panels were observed to have black mold growing on them. The metal portions of the playground are rusting.

Safety surfacing is primarily sand at North Forest Hills and Westwood Parks. Weeds were growing up through the sand and there was no defined edging at either location. The sand was not the correct depth and fall zones were not sufficiently sized.

Safety surfacing for the play area at Homestead Park is engineered wood fiber. Safety surfacing at Community Center Park is engineered wood fiber and poured-in-place surfacing. The engineered wood fiber and the poured-in-place rubber surfacing was not the correct depth for safety surfacing at either location.

Ballfields

Ballfields are located at Homestead Park. Ballfields appeared to be in good condition. Galvanized chain-link fencing, players benches, and bleachers also appeared to be in good condition. However, these amenities often did not comply with ADA code.

Athletic Fields

Athletic fields are located at Homestead Park. The fields and the surrounding galvanized chain-link fencing appeared to be in good condition.



Tennis Courts

Tennis courts are located at Ephesus Park. The tennis court surface appeared to be worn and the surrounding galvanized chain-link fence fabric was bowing. These courts are scheduled to be resurfaced in 2010.

Basketball Courts

Basketball courts are located at Homestead, North Forest Hills, and Community Center Parks. The basketball courts were either asphalt or concrete. The surfaces appeared to be in fair condition. The court striping was faded.

Trails

Trails are found at all six parks and constructed of asphalt, concrete, gravel, or compacted soil. Similar to the assessment of the eleven trails in Chapter 10, the trails found throughout the parks were compromised by encroaching vegetation, tree roots, and drainage problems.

Paved trails were generally cracked and uneven in some places caused by tree roots or clogged drainage pipes.

Natural trails, including gravel trails, were impacted by large tree roots and low-overhanging limbs. Gravel was generally displaced.

The trails did not have a smooth transition between different surfacing materials and there are areas where trail surfacing has washed away.

Drainage

Almost all of the storm drains were clogged with debris and tree roots. Many of the drain pipes were buried halfway below the ground. Storm drains were found to have crumbling concrete supports and in some cases, such as at Community Center Park and

Ephesus Park, were considered life safety issues. Swales were overgrown and no longer draining properly. Debris, such as branches, leaves, and weeds were found in swales and drainageways throughout all of the parks.

9.9 Overall Recommendations

The Consultant Team recommends the following actions be taken to correct life safety hazards and code violations, improve maintenance practices and upgrade the park's aesthetic appeal.

- Replace drain inlets that are a life safety concern, due to the age of the structure, structural stability, and the opening width, such as the ones located in the parking lot of the Chapel Hill Park and the one located between the entrance drive and the restroom building at Ephesus Park.
- Clean out or replace all drains and pipes. Clean out and regrade swales.
- Install ADA accessible parking, install accessible routes from the parking lot to each facility, and install accessible site furnishings along an accessible route at all of the parks.
- Replace all water fountains with an ADA accessible high/low model.
- Replace concrete paving and replace or resurface asphalt paving that is cracked or damaged, uneven, or crumbling for all trails, parking lots, and entrance drives.
- Replenish gravel surfacing that has been displaced on all parking lots, entrance drives, and trails. Include metal edging to designate the boundaries of the gravel surface.
- Install mulch surfacing along natural trails that are prone to erosion or have uneven surfaces.
- Install topsoil, paving, or gravel between trails to maintain a smooth transition from paved to natural corridors and eliminate washed out areas.
- Remove overgrown shrubs and replace with new according

to a planting plan. Trim other shrubs and trees to maintain a sight line between park facilities.

- Remove and replace all edging that is rotting or missing, including around planting beds and playgrounds.
- Replace aging playground equipment and safety surfacing.
- Resurface tennis and basketball courts. Restripe court lines. Replace all basketball goals that are not adjustable heights. All goals should be adjustable heights to accommodate resurfacing of the court.
- Powerwash and paint all building facilities, including equipment storage areas, picnic shelter, and restroom buildings.
- Evaluate and replace all plumbing and lighting fixtures in the restroom buildings that do not meet code, are damaged, or are not functioning properly.
- Improve lighting throughout all parks by hiring a consultant to perform a lighting study for parking lot, walkway, and egress lighting.
- Replace roofing and any damaged wood, gutters, and flashing on all buildings.
- Improve ventilation in all restroom buildings as per code requirements.
- Replace galvanized chain-link fencing with vinyl coated chain-link fencing around all fields, courts, playgrounds, and along park boundaries.
- Clean up trash and debris throughout parks.
- Reseed lawn areas.
- Regrade and reseed/sod ballfields and athletic fields.
- Replace all site furnishings including picnic tables, benches, waste receptacles, water fountains, players benches, and bleachers.
- Install new signs throughout all parks.

Chapter Ten

Other Trails

10.1 Other Trails

After completing an in-depth assessment of five parks and one greenway trail, the Consultant Team conducted brief site visits to seven other parks and eleven trails. This chapter describes general priorities and recommendations for the other eleven trails that were not a part of the main assessment as well as a brief description of each trail corridor.

10.2 Fan Branch (1.2 miles)

The Fan Branch Trail is a paved corridor along the Fan Branch of Prince Creek between Culbreth Road (*Mt. Carmel Church Road*) and Scroggs Elementary with connections to neighborhoods, including Southern Village. The trail is a 10' wide asphalt trail and was built in 1996.

10.3 Lower Booker Creek (0.85 miles)

The Lower Booker Creek Trail is a paved corridor along Booker Creek between Booker Creek Road and Linear Park (Linear Park was not included in this assessment) with access to neighborhoods, the Eastgate Shopping Center and Franklin Street. The trail is a 10' wide asphalt trail and was built in 2002.



10.4 Meadowmont (0.1 mile)

The Meadowmont Trail is a paved corridor between Simerville Road and the Rashkis Elementary School linking the privately maintained Meadowmont Trail to the School and Meadowmont Park. The trail is a 10' wide asphalt trail and was built in 2004.

10.5 Battle Branch (1.5 mile)

The Battle Branch Trail is a natural corridor between the Chapel Hill Community Center/Bolin Creek Greenway and the University of North Carolina Chapel Hill campus with linkages to adjacent neighborhoods and alternative pathways that loop back onto the main trail. The trail is approximately an 8' wide natural surface trail and was built in 1989.

10.6 Dry Creek (1.0 mile)

The Dry Creek Trail is a natural corridor along Dry Creek connecting the East Chapel Hill High School with the Silver Creek and Springcrest Neighborhoods. The trail is approximately a 5' wide natural trail and was built in 2001.

10.7 Tanyard Branch (0.4 mile)

The Tanyard Branch Trail is a natural corridor meandering through the wooded floodplain along the Tanyard Branch of Bolin Creek in Umstead Park connecting to the Northside neighborhood. The trail is approximately a 6' wide natural surface trail and was built in 1986.

10.8 Cedar Falls (1.0 mile)

The Cedar Falls Trail is a natural corridor meandering in the woods through Cedar Falls Park connecting the park to Weaver Dairy Road with a crossing to East Chapel Hill High School and to Honeysuckle Road with access to the adjacent neighborhoods. The trail is approximately a 6' wide natural surface trail and was built during the 1970's.

10.9 Southern Community (1.0 mile)

The Southern Community Trail is a natural corridor meandering through the woods between Dogwood Acres Drive and the dog



parks at Southern Community Park and Scroggs Elementary School. The trail was built in 1997.

10.10 North Forest Hills (0.5 mile)

The North Forest Hills Trail is a natural surface corridor meandering through the woods to connect the basketball court and the open play field. The trail was built around 2000.

10.11 Pritchard Park Loop (1.0 mile)

The Pritchard Park Trail Loop is a natural surface corridor looping around the Pritchard Park property and the Chapel Hill Public Library. The trail was built in 2003.

10.12 Meadowmont (0.75 mile natural)

The Meadowmont Natural Trail is a natural surface corridor looping around the pond at Meadowmont Park. The trail is approximately a 5' wide natural surface trail. The trail was built in 2006.



10.13 Overall Assessment

After review of eleven paved and natural trail corridors, the following issues were observed:

- Paved trails were generally constructed of asphalt and included cracked paving, upheaval caused by tree roots, and encroachment from vegetation.
- Natural trails were generally made of compacted soil and had tree roots, large ruts or low spots, and uneven surfaces.
- The encroachment of vegetation was an issue at all trails, including low overhanging branches, weeds in the pavement or around site furnishings, encroaching vegetation and debris along the trail and trail edge.

10.14 Overall Recommendations

The Consultant Team recommends the following actions be taken to upgrade the facilities, repair damaged trail corridors

and improve the aesthetics of the trail system to create a safe and enjoyable resource for residents of Chapel Hill:

- Repair or replace concrete and asphalt paving that is cracked or damaged, uneven, or crumbling.
- Install mulch or compacted gravel fines along the worn paths to define the surface and prevent erosion.
- Clean out or replace all drains and pipes. Clean out and regrade swales.
- Clean up trash and debris.
- Fill low areas and seed.
- Replace all site furnishings including benches and waste receptacles.
- Install new signs to identify each trail and trailhead, as well as distance and difficulty level. Trail signs should coordinate with park signs.

Paved Trails and Greenways Recommendations

(Bolin Creek Greenway, Fan Branch, Lower Booker Creek, Meadowmont)

1. Coordinate the restoration of these trail and greenway facilities including pavement, markings, site amenities, lighting, signs, and planting.

Natural Trails Recommendations

(Battle Branch, Dry Creek, Tanyard Branch, Cedar Falls, Southern Community, North Forest Hills, Pritchard Park, and Meadowmont)

1. Coordinate the restoration of these trail facilities including clearing, erosion control, signs, and planting.

Chapter Eleven

System Recommendations

11.1 Overview

The Town of Chapel Hill's park system is in need of immediate repairs due to deferred maintenance and age of facilities. It is recommended that the Town obtain funding as soon as possible to make the necessary repairs and replacements outlined in this chapter. This chapter identifies implementation guidelines and phasing options to achieve the recommendations.

At the end of this chapter, immediate modifications are also identified. These modifications are "low cost" solutions to temporarily eliminate all of the potentially hazardous conditions at the parks until funding is available to fully pursue one of the phasing options. The temporary modifications are recommended to be completed by Town staff as soon as possible to minimize liability exposure for the Town.

The cost to repair all of the deficiencies identified by the Consultant Team as listed in the Deficiency List Spreadsheet (Appendix C) is approximately \$4,088,200. It is not feasible to repair all park facilities as they are currently listed due to environmental constraints, regulations and zoning, changes of use, and age of the facilities. Some of these facilities should be reconfigured, relocated, or eliminated, which likely would involve a Master Plan or Renovation Plan. Chapters 3-8 identify the specific park issues that prevent the facilities from being repaired as they currently exist.

11.2 Current Park and Trail System

Overall, the current park and trail system is in poor condition due to the age of facilities, lack of maintenance, and the lack of conformity of site amenities, fixtures, signs, and lighting.

The majority of the park facilities were designed and constructed in the 1970's. As the park system expanded and needs changed, new facilities were added at some of the parks in the

1980's and 1990's, resulting in some layouts that lack connectivity and disrupts functionality.

Parking lots, trails, and sidewalks are generally in poor condition. Most paved surfaces are cracking or crumbling and gravel has been displaced. Some playground equipment is outdated and in poor condition. Safety surfacing and fall zones are not adequately sized at most of the parks. All engineered wood fiber needs to be replenished to the correct depth. Some restroom buildings and picnic shelters are in poor condition and require extensive renovations or structural reviews. Most of the fixtures and electrical and mechanical systems are in need of upgrades and repairs. The baseball and soccer fields are in fair condition. The athletic fields and open play areas are in fair condition, but would greatly benefit from regrading and reseeding. The athletic courts such as basketball and tennis, while in only fair to good condition, are in the best condition of all park facilities.

The park and trail system does not have a uniform package of site amenities, furnishings, fixtures or signs. The existing site furnishings range from excellent to poor condition. New picnic tables were added at most of the parks. Some entrance signs are in need of replacement. Directional signs do not exist at all parks and where they do exist, they could be greatly improved. Regulatory signage is not always installed properly and in some instances, such as ADA accessible parking spaces, the signs are missing or not code compliant.

11.3 Implementation Type Defined

In this chapter, the terms restoration and renovation have distinct definitions that are heavily referenced.

Restoration can be defined as the repair and replacement of facilities, fixtures, systems, and amenities as they currently exist, restoring them to a good or sound condition to assume the same function and remain in the same location. Restoration items are identified in the Deficiency List Spreadsheet. Examples include replenishing gravel or mulch, repairing sidewalks or fencing, and replacing light fixtures or play equipment. Restorations may require details, specifications, or construction coordination from a Landscape Architect.

Renovation can be defined as the replacement and modification of facilities, fixtures, systems, and amenities as redesigned to refresh and revive their use and assume a new function and/or location. A Master Plan or Renovation Plan is required to guide the implementation of renovations. Examples include the replacement and relocation of a playground or basketball court, the addition of a new open play area or picnic shelter, and the modification of a parking lot layout or the pedestrian circulation of a park. Renovations require a Master Plan or Renovation Plan as well as construction drawings, details, specifications and construction coordination from a Landscape Architect.

11.4 Overall System Implementation Recommendations

The following list identifies the following actions required to implement the Consultant Team’s recommendations and elevate the Town’s park and trail system to a higher standard of excellence:

1. Complete all of the temporary modifications listed in 11.7: Temporary Modifications.
2. Obtain funding to complete the park and trail system restorations and renovations.
3. Create a Master Plan for Burlington, Ephesus, North Forest Hills, Oakwood, and Westwood and a Renovation Plan for Cedar Falls Park.

4. Hire a Structural Engineer to review the dam at Meadowmont Park and the bridges at Umstead Park.
5. Complete a stream restoration at Burlington Park.
6. Prepare design guidelines for cohesive site amenities and furnishings including benches, waste receptacles, pet waste stations, water fountains, bleachers, picnic tables, grills, bollards, and athletic accessories.
7. Develop a cohesive sign system, including entrance signs, directional signs, and regulatory signs.
8. Coordinate the restoration of Cedar Falls (partial), Community Center, Hargraves, Homestead, and Meadowmont Parks.
9. Coordinate the renovation of Burlington, Cedar Falls (partial), Ephesus, North Forest Hills, Oakwood, Umstead, and Westwood Parks.
10. Implement the maintenance recommendations outlined in Chapter 12.

11.5 Park and Trail Implementation Recommendations

The following recommendations are based on the individual park and trail recommendations outlined in Chapters 3-10. The parks are listed in alphabetical order.

Burlington Park - Chapter 3

1. Perform the following immediate modifications to this park to address the life safety issues:
 - Remove or replace the play equipment.
 - Remove the small picnic shelter.
 - Remove the picnic area site furnishings.
 - Remove or close off the wooden bridge structures.

2. Prepare a master plan for the renovation of this park including an athletic field/open play, playground, trails, site amenities, lighting, parking lot, signs, and plantings.
3. Design and prepare construction documents for the renovation of this park.
4. Complete a stream restoration.

Cedar Falls Park - Chapter 4

1. Perform the following immediate modifications to this park to address life safety issues:
 - Repair the retaining wall and walkway adjacent to ballfield #1.
2. Develop a renovation plan for this park that addresses ballfields, parking lot, adjacent trails, site amenities, lighting, signs, and planting.
3. Coordinate the restoration of this park including the playground, picnic area, tennis courts, restroom building, and adjacent trails and to design and prepare the construction documents for the renovations of this park.

Community Center Park - Chapter 9

1. Perform the following immediate modifications to this park to address life safety issues:
 - Close off the playground until safety surfacing is brought into compliance.
 - Remove the concrete debris and rock on the hillside adjacent to the playground.
 - Remove the exposed metal pins in the edging around the playground area.
 - Repair the drain inlet in the parking lot.

2. Coordinate the restoration of this park including the playground, basketball court, bocce ball court, parking lot, trails, site amenities, lighting, signs, and planting.

Ephesus Park - Chapter 9

1. Perform the following immediate modifications to this park to address life safety issues:
 - Remove exposed concrete pads and grill posts throughout the picnic area and fill holes.
 - Remove overgrown vegetation at entrance and around tennis courts.
 - Repair the drain inlet.
 - Call appropriate utility company to repair the broken box on the restroom building.
2. Develop a master plan for the renovation of this park including the tennis courts, picnic area, restroom building, parking lot, site amenities, lighting, signs, and planting.
3. Design and prepare construction documents for the renovation of this park.

Hargraves Park - Chapter 5

1. Perform the following immediate modifications to this park to address life safety issues:
 - Remove overgrown vegetation around the buildings.
 - Close off the playground until safety surfacing is brought into compliance.
2. Coordinate the restoration of this park including the tennis court, basketball court, ballfield, playgrounds, parking lots, trails, sidewalks, site amenities, lighting, signs, and planting.

Homestead Park - Chapter 9

1. Perform the following immediate modifications to this park to address life safety issues:
 - Close playground until safety surfacing is brought into compliance.
 - Lock equipment storage box adjacent to the soccer fields.
 - Remove branches and overhanging tree limbs adjacent to the trails and sidewalks and cut down stumps to be flush with the finished grade.
2. Coordinate the restoration of this park including the athletic fields, basketball court, ballfields, playgrounds, parking lots, dog parks, picnic areas, picnic shelter/restroom, trails, sidewalks, site amenities, lighting, signs, and planting.

Meadowmont Park - Chapter 9

1. Perform the following immediate modifications to this park to address life safety issues:
 - Repair the retaining wall adjacent to the picnic shelter.
2. Evaluate the structural integrity of the dam.
3. Coordinate the restoration of this park including the ballfields, picnic shelter, trails, parking lot, site amenities, lighting, signs, and planting.

North Forest Hills Park - Chapter 9

1. Perform the following immediate modifications to this park to address life safety issues:
 - Close the playground until safety surfacing is brought into compliance.
 - Remove overgrown shrubs at the entrance to the park.

- Remove exposed concrete pads and grill posts throughout the picnic area.
- Remove rotting picnic tables and benches.

2. Develop a master plan for the renovation of this park including the athletic field, basketball court, playground, parking lots, picnic areas, picnic shelter/restroom, trails, site amenities, lighting, signs, and planting.
3. Design and prepare construction documents for the renovation of this park.

Oakwood Park - Chapter 6

1. Perform the following immediate modifications to this park to address life safety issues:
 - Close playground until safety surfacing is brought into compliance.
 - Remove rotting picnic tables and benches.
2. Develop a master plan for the renovation of this park including the playground, tennis court, athletic field, trails, sidewalks, site amenities, lighting, signs, and planting.
3. Design and prepare construction documents for the renovation of this park.

Umstead Park - Chapter 7

1. Perform the following immediate modifications to this park to address life safety issues:
 - Remove or replace the play equipment.
 - Remove the small picnic shelter.
 - Remove or replace bleachers.
 - Remove or close off wooden bridge structures.
 - Remove rotting picnic tables and benches.
 - Remove exposed grill posts at picnic shelter and fill holes.

2. Evaluate the structural integrity of the picnic shelter/ restroom due to water damage.
3. Develop a master plan for the renovation of this park including the parking lot, playground, picnic areas, tennis courts, basketball court, ballfield, sidewalks, trails, site amenities, lighting, signs, and planting.
4. Design and prepare construction documents for the renovation of this park.

Westwood Park - Chapter 9

1. Perform the following immediate modifications to this park to address life safety issues:
 - Remove or replace the existing play equipment.
2. Develop a master plan for the renovation of this park including the playground, trails, sidewalks, site amenities, lighting, signs, and planting.
3. Design and prepare construction documents for the renovation of this park.

Paved Trails and Greenways - Chapter 8 and 10

(Bolin Creek Greenway, Fan Branch, Lower Booker Creek, Meadowmont)

1. Coordinate the restoration of these trail and greenway facilities including pavement, markings, site amenities, lighting, signs, and planting.

Natural Trails - Chapter 10

(Battle Branch, Dry Creek, Tanyard Branch, Cedar Falls, Southern Community, North Forest Hills, Pritchard Park, and Meadowmont)

1. Coordinate the restoration of these trail facilities including clearing, erosion control, signs, and planting.

11.6 Phasing Recommendations

The following phasing options are recommended with the assumption that the funding to complete all of the restorations and renovations for the eleven parks and eleven trails will not be immediately available or will not all be available at one time. Until funding can be secured to implement one of the following phasing options, the immediate modifications to the parks and trails as listed in section 11.7 should be completed by the Town as soon as possible to limit the Town’s exposure to liability.

Because a detailed cost estimate and deficiency list was not prepared for the Other Parks and Other Trails (Chapters 11 and 12) the following phasing options only include the five parks and one greenway that are discussed in detail in Chapters 3-8 and itemized by park in the Deficiency List Spreadsheet (Appendix C).

The Consultant Team investigated numerous options for phasing, but did not recommend all of them due to economy of scale, the level of impact, the excessive management or oversight required, and the impracticality of construction. Two phasing options are presented.

- Option 1: All park restorations and renovations to be completed by location for a total of six phases from highest to lowest priority.
- Option 2: All park restorations to be completed as one phase and all park renovations to be completed as the second phase for a total of two phases.

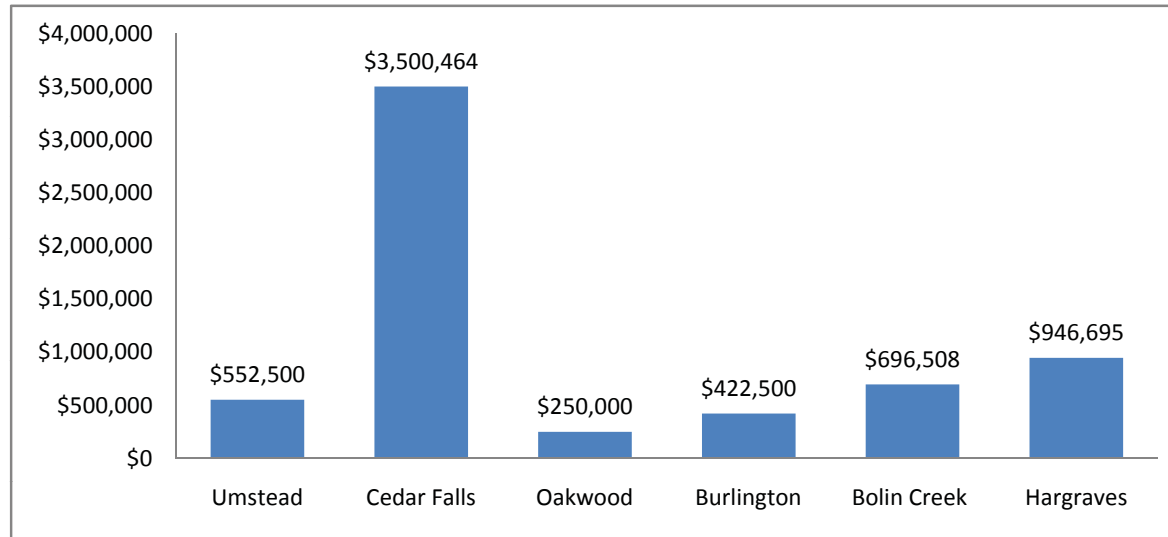
The costs for the following options are estimates for construction costs only and do not include design, engineering, or surveying fees, hazardous material identification or abatement, permitting costs, reviews or submittals. For more information see Spreadsheet Explanation (Appendix B).

Option 1: Phasing by Park Location

This option outlines six phases for implementation based on the six locations of the parks and greenway. The six phases presented in this option are organized from highest to lowest priority. It is recommended that all phases be completed over time as funding becomes available to implement each phase. The phase should include all recommendations for each park as presented in 11.5: Park and Trail Implementation Recommendations. The total cost to complete this option is \$6,967,000. The costs represent estimated construction costs only.

Phase #1-Umstead Park	\$552,500
Phase #2-Cedar Falls Park	\$3,500,500
Phase #3-Oakwood Park	\$250,000
Phase #4-Burlington Park	\$422,500
Phase #5-Bolin Creek Greenway	\$696,500
Phase #6-Hargraves Park	\$946,700

Option 1: Phasing by Park Location



Option 2: Phasing by Implementation Type

This option outlines two phases for implementation based on the two definitions for implementation, “restoration” and “renovation.” The two phases presented in this option are equal in priority. It is recommended that both phases be completed over time as funding becomes available. The phase should include all recommendations for each park as presented in 11.5: Park and Trail Implementation Recommendations. The total cost to complete this option is \$6,967,000. The costs represent estimated construction costs only.

Phase #1-Restorations

The following restorations should be completed as described in the Deficiency List Spreadsheet (Appendix C):

- A. Cedar Falls Park including the playground, picnic area, tennis courts, restroom building, and adjacent trails. \$1,667,000

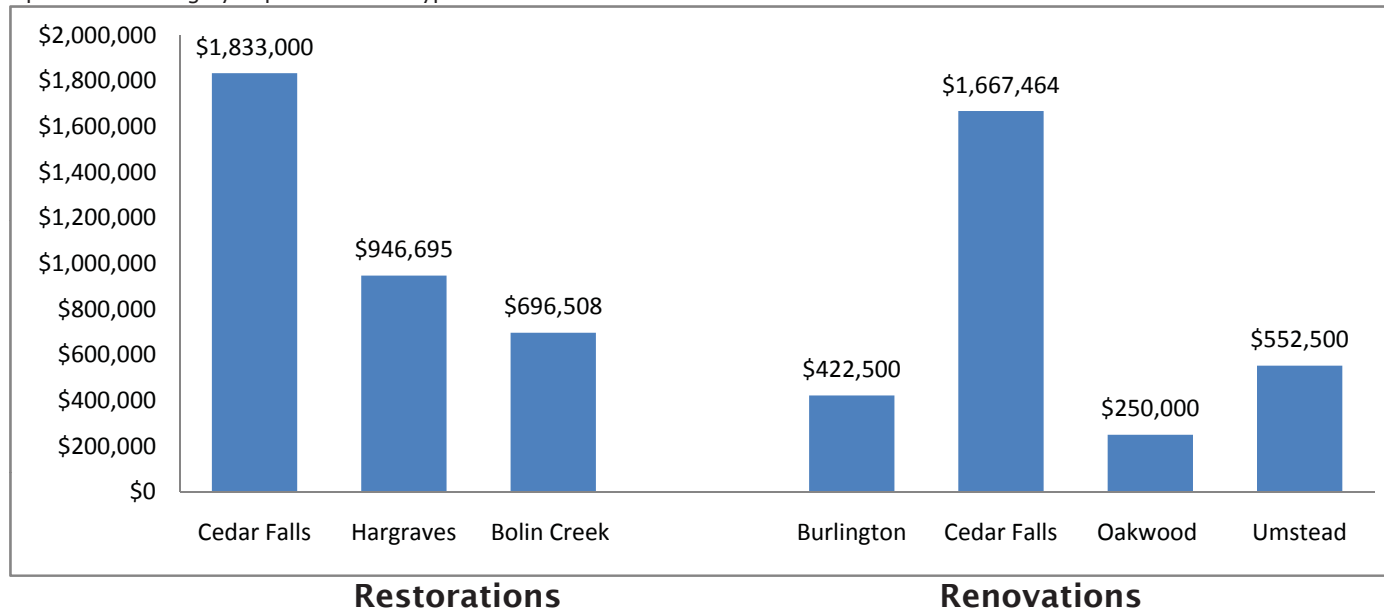
- B. Hargraves Park including the tennis court, basketball court, ballfield, playgrounds, parking lots, trails, sidewalks, site amenities, lighting, signs, and planting. \$946,700
- C. Bolin Creek Greenway including the pavement, markings, site amenities, lighting, signs, and planting. \$696,500

Phase #2-Renovations

The following renovations should be completed as described below:

- A. Burlington Park - Master Plan to address pedestrian and vehicular circulation patterns, including an athletic field/open play, playground, trails, site amenities, lighting, parking lot, signs, and plantings. All facilities need to be ADA accessible. \$422,500

Option 2: Phasing by Implementation Type



- B. Cedar Falls Park - Renovation Plan to address the surface and storm drainage, pedestrian and vehicular circulation, layout and connectivity for the parking lot and baseball fields, adjacent trails, site amenities, lighting, signs, and plantings. All facilities need to be ADA compliant. \$1,833,000.
- C. Oakwood Park - Master Plan to address the pedestrian circulation patterns and layout and connectivity for the playground, tennis court, athletic field, trails, sidewalks, site amenities, lighting, signs, and plantings. All facilities need to be ADA accessible. \$250,000
- D. Umstead Park - Master Plan to address pedestrian and vehicular circulation patterns, underutilized facilities, floodplain and environmental constraints, and layout, connectivity, and function for the parking lot, playground, picnic areas, tennis court, basketball court, ballfield, trails, sidewalks, site amenities, lighting, signs, and plantings. All facilities need to be ADA accessible. \$552,500

11.7 Temporary Modifications for Life Safety Issues

As an immediate response to the life safety and code related items of the Deficiency List Spreadsheet (Appendix C), the following tasks are recommended to be completed immediately until funding is available to complete one of the phasing options. Recommendations for immediate modifications include complete removal, restricted access, or immediate upgrade or replacement of the facility, structure, or fixture to prevent serious injury to park or trail users. This will significantly reduce the Town's liability for the life safety issues and code violations that exist at all of the parks. The total cost to complete this option could be absorbed by the Town's maintenance departments.

The following list addresses all of the life safety issues noted at the five parks and one greenway, which are presented in the Deficiency List Spreadsheet (Appendix C) as well as the issues listed for the other six parks and eleven greenways presented in Chapters 9 and 10. The immediate modifications are organized by facility type:

#1 Structures

- Remove or close off the wooden bridge structures at Burlington Park.
- Fence off the retaining wall and asphalt/concrete walk adjacent to ballfield #1 at Cedar Falls Park and between the pool and gymnasium at Hargraves Park.
- Fence off the retaining wall adjacent to the picnic shelter at Meadowmont Park.
- Call appropriate utility company to repair the broken box on the restroom building at Ephesus Park.
- Install a lock on the large equipment box adjacent to the athletic fields at Homestead Park.

#2 Playground

- Close playgrounds until safety surfacing is brought into compliance at Community Center, North Forest Hills, Hargraves, Homestead, and Oakwood Parks.
- Remove or replace play equipment at Burlington, Umstead, and Westwood Parks.
- Remove exposed metal pins in the edging adjacent to the playground at Community Center Park.
- Remove the concrete debris and rock on the hillside adjacent to the playground at Community Center Park.

#3 Trails

- Remove the timber steps adjacent to the ballfield at Hargraves Park.

#4 Drainage

- Repair the drain inlets at Community Center and Ephesus Parks.

#5 Site Work

- Remove concrete/asphalt debris from the playground at Community Center Park and the picnic area at Ephesus and North Forest Hills Parks.
- Repair the retaining wall at Cedar Falls Park.

#6 Site Furnishings

- Remove abandoned grill posts and fill holes with concrete at Ephesus, North Forest Hills, and Umstead Parks.

#7 Vegetation

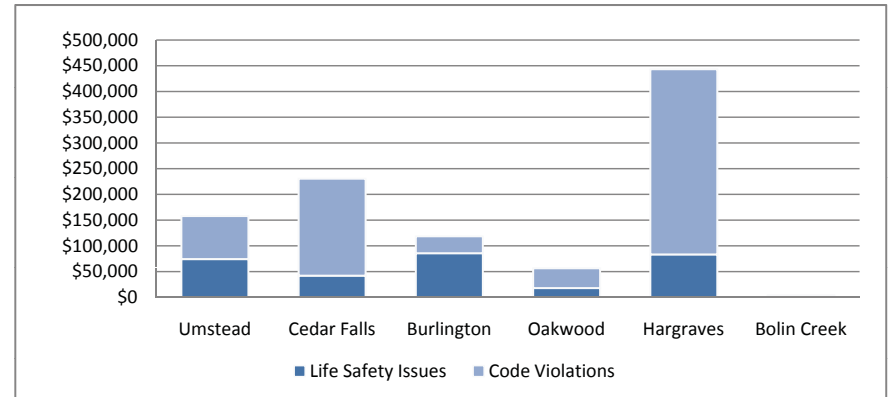
- Limb up all branches to at least seven feet (7') on ALL walks and trails and two feet (2') on each side.
- Remove overgrown vegetation that is a security concern at Ephesus, Hargraves, and North Forest Hills Parks.
- Remove stumps or cut down lower and fill low areas along the Bolin Creek Greenway.

11.8 Permanent Modifications for Life Safety Issues and Code Violations

In addition to the previous temporary modifications, permanent changes to the following life safety and code violations need to be addressed as soon as funding becomes available. The deficiencies identified as “Life Safety” issues and “Code Violations” in the Deficiency List Spreadsheet are considered the highest priority items. If the Town does not have the funding available to complete all of the deficiencies and recommendations as outlined in Option 1 or 2, the life safety and code related issues should be addressed immediately to eliminate the risks associated with these items. The following list presents the life safety items and code violations from the Deficiency List Spreadsheet (Appendix C) by park. The total cost to complete all life safety and code deficiencies at the five parks and one greenway will cost approximately \$971,790.00.

This option outlines six phases for implementation based on the six locations of the parks and greenway. The six phases

presented in this option are organized from highest to lowest priority. It is recommended that all phases be completed over time as funding becomes available to implement each phase. The costs represent estimated construction costs only.



Phase #1-Umstead Park

Life Safety Issues \$71,540

- Remove and relocate the wooden picnic tables, grill, and spring rockers from the low area adjacent to the creek.
- Remove and relocate the double bay swings.
- Remove the existing sand surfacing and replace with engineered wood fiber and edging to define the required fall zones at a new location.
- Replace existing bleachers.
- Remove steel pipe from the concrete floor at the small picnic shelter and fill in holes with concrete.

Code Violations \$80,490

- Install ADA accessible parking, ADA accessible routes, and ADA accessible site furnishings.
- Have a structural engineer evaluate the picnic shelter.
- Replace light fixtures.
- Replace Schedule 40 PVC conduit and add guard up to ten feet (10') in height.
- Replace corroded box and meter.

Phase #1 Total.....\$152,030

Phase #2 -Cedar Falls Park

Life Safety Issues \$40,500

- Demolish existing asphalt trail and retaining wall adjacent to ballfield #1 and replace with new asphalt trail and segmental retaining wall system.
- Limb up all branches to a height of at least seven feet (7') and two feet (2') on either side.

Code Violations \$181,200

- Replace water fountains.
- Install ADA accessible parking, ADA accessible routes, and ADA accessible site furnishings.
- Install paved pads for the bleachers, relocate the bleachers along an ADA accessible route, and provide ADA accessible seating areas.
- Install a smooth transition between the accessible walk and the engineered wood fiber mulch at the playground.
- Remodel the bathrooms to be ADA compliant.
- Install ADA compliant bathroom furnishings, accessories, and fixtures.
- Install exhaust fans in the bathrooms.
- Insulate drain pipes under the sink.

- Rework dislodged conduit and replace receptacle covers.
- Replace light fixtures at restrooms, walkways and parking lot

Phase #2 Total.....\$221,700

Phase #3 -Burlington Park

Life Safety Issues \$82,400

- Remove fallen branches and trees that are overhanging the playground and walkways. Limb up all branches to a height of at least seven (7) feet and two (2) feet on either side.
- Replace existing pedestrian bridges with prefabricated wood structures.
- Remove and replace existing spring rockers at the playground.
- Remove and replace existing swings.
- Remove existing sand surfacing and install engineered wood fiber with edging at the playground to define the required fall zones.

Code Violations \$31,500

- Install ADA accessible parking, ADA accessible routes, and ADA accessible site furnishings.
- Replace light fixtures.

Phase #3 Total.....\$113,900

Phase #4 -Oakwood Park

Life Safety Issues \$17,300

- Remove and replace existing playground equipment.
- Remove and replace existing wooden bench.
- Remove and replace existing backstop.
- Remove existing sand surfacing and install engineered wood fiber with edging at the playground to define the required fall zones.

Code Violations \$37,000
 · Install ADA accessible routes and ADA accessible site furnishings.

Phase #4 Total.....\$54,300

Phase #5 -Hargraves Park

Life Safety Issues \$80,300
 · Install a segmental retaining wall along the bank between the gym and the pool.
 · Replace existing timber steps adjacent to the baseball field along North Roberson Street with concrete steps and add handrail per code.

Code Violations \$330,600
 · Install ADA accessible parking, ADA accessible routes, and ADA accessible site furnishings.
 · Replace handrails to be code complaint.
 · Replace metal ramp and steps to be code compliant.
 · Replace light fixtures.
 · Replace Schedule 40 PVC electrical conduit on pole, add straps to secure it, and install guard up to ten feet (10') in height.
 · Trim all branches that are obstructing lights.

Phase #5 Total.....\$410,900

Phase #6 -Bolin Creek Greenway

Life Safety Issues \$3,750
 · Remove stumps or cut down lower and fill low areas adjacent to the trail and bridges.

Phase #6 Total.....\$3,750

11.9 Summary

The Town of Chapel Hill should focus efforts on financing the Master Plan of Burlington, Ephesus, North Forest Hill, Oakwood, and Westwood Parks and the Renovation Plan of Cedar Falls Park.

Life Safety Issues and Code Violations at Cedar Falls, Hargraves, Homestead, and Meadowmont Parks also need to be addressed immediately. As additional funding becomes available, the Town should continue to address the deferred maintenance items and aesthetic improvements for these parks.

Option 1 is the recommended approach to implementing the restorations and renovations at all of the park facilities. Funding should be obtained to begin with the Master Plan of Umstead Park as well as address the Temporary Modifications outlined in this chapter.

Chapter Twelve

Maintenance Recommendations

12.1 Overview

The Town of Chapel Hill’s park system has numerous deficiencies as listed in the Deficiency List Spreadsheet (Appendix C.) These types of deficiencies could be prevented in the future with improved maintenance practices.

After reviewing and comparing the Town’s current maintenance practices to other communities that are known for their high level of park facilities and maintenance, the action items listed in this chapter are highly recommended.

Overall, the Town of Chapel Hill’s maintenance system and practices are fair.

12.2 Current Maintenance System and Practices

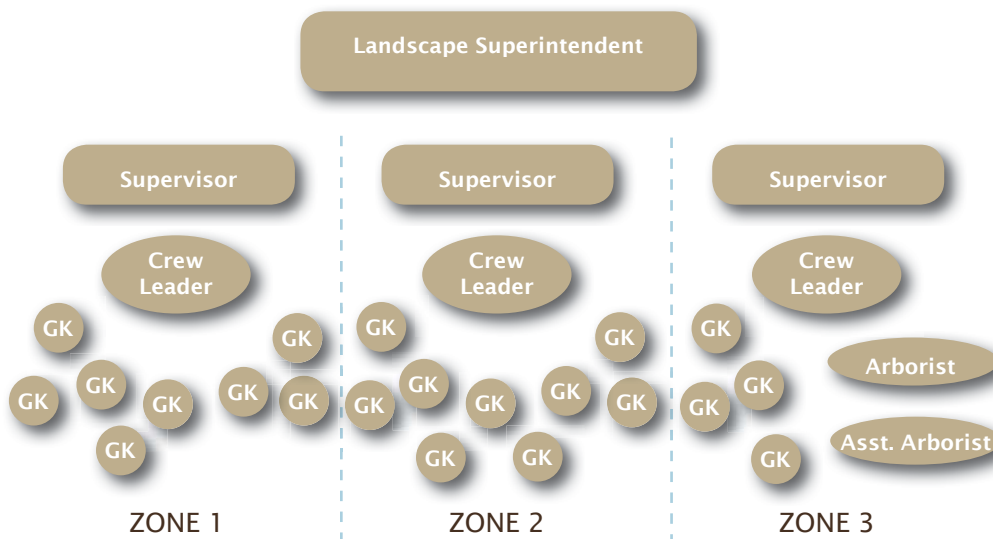
The Town of Chapel Hill’s Landscape Services and Parks Maintenance Division is housed within the Parks and Recreation Department. It was moved from the Public Works Department in February 2008. The Division currently maintains 885 acres of Town property, including all park and greenway facilities, Town Hall, Town Office Buildings and Operation Center Campus, the Police Division, five Fire Stations, 13 public housing units, three cemeteries, and five park and ride lots. With the completion of Southern Community Park, an additional 72 acres have been added. The Town also maintains various roadway medians and roadway right of ways including Highways 86 and 54 corridors and Fordham Blvd.

The operating budget for the Landscape Division is \$2,137,948 annually. Approximately 40% of that budget is devoted to the park system. The remaining budget is dedicated to other Town properties, such as the cemeteries, right of ways, and public housing facilities.

The Division’s current model of hierarchy is comprised of a Superintendent, three supervisors, an arborist, an assistant arborist, a horticulturist, and twenty-three grounds keepers (GK).

The Landscape Division bases the current maintenance schedule on a “Zone Maintenance” concept which allows the same field crews to complete all required maintenance tasks at the same locations.

Zone 1 includes three cemeteries, thirteen public housing units, five park and ride lots, three fire stations, the Fordham Boulevard median, and Highways 86 and 54 corridors.



Zone 2 includes two fire stations, the Town Operations Center, ten Town office buildings, and all of the Town parks. Zone 2 maintains 336 acres, of which 28 acres are parks.

Zone 3 includes right of way mowing, the Merritt Pasture, and the Arborist Program.

The Landscape Division has an arborist program for the Town. The Arborist and Assistant Arborist work at all facilities on an as-needed basis. The remaining staff generally complete tasks according to the following non-documented schedule:

Daily

- Litter removal/pick-up service
- Clean and service restrooms

Twice weekly

- Mow bermuda soccer fields
- Remove leaves with a leaf blower

Weekly

- Mow fescue baseball fields
- Supervisor walks through parks

Two weeks

- Mow all other fields (excluding fescue), including edging and trimming
- Supervisor walks trails and performs maintenance as needed

As Needed

- Line baseball fields (scheduled according to events)
- Tree work
- Spray fields
- Till sand playground surfacing and rake out grass

- Replenish gravel (by Streets Department-scheduled during their two times per year roadway replenishing)
- Replace basketball, soccer, and tennis nets

Seasonal

- Mulch planted areas closest to buildings (December through February)
- Granular fertilizer applied four times per year during summer to Bermuda grass
- Overseeding in September (based on priorities and budget for fescue lawns and fields)

12.3 Comparison of Current Maintenance Practices to Other Municipalities

The North Carolina State University Recreation Resources Service issued an Executive Report for 2006-2007 entitled the North Carolina Municipal and County Parks and Recreation Services Study, which identified various park and recreation departments throughout the state of North Carolina. The information in this study was collected and tabulated by Dallis Tucker, Ph.D. As reported in the Executive Report, the average per capita expenditures for the Piedmont Region were a median of \$83.08. Chapel Hill's per capita expenditures are approximately \$41.50, which is 50% lower than the regional average. Park systems that were comparable in size and population to the Town of Chapel Hill reported that an average of 0.92 to 2.75 maintenance staff members were dedicated to each of their parks based on the park size. Chapel Hill has 16 parks with only nine (9) maintenance staff dedicated to maintaining those parks. Chapel Hill dedicates an average of approximately 0.60 maintenance staff to each park, which is considerably lower than the regional average. The remaining maintenance staff are dedicated to other Town owned properties such as cemeteries or right of ways.

As a specific comparison, other North Carolina communities that are known for their high level of park facilities and maintenance

practices are the cities of Raleigh and Greensboro. Raleigh and Greensboro have large park and recreation departments and have been included in this comparison to illustrate the efficiency of their maintenance staff and annual operating budget as compared to a smaller community such as the Town of Chapel Hill. The information in the following two paragraphs was obtained directly from the City of Raleigh's and the City of Greensboro's Parks and Recreation Departments.

The City of Raleigh maintains approximately 8,000 acres of parkland including the Capital Area Greenway System with 175 staff. Of the 8,000 acres, only 5,600 acres are considered developed parkland. The City divides maintenance staff between five divisions; parks, urban forestry, highway/right of way, greenway, and cemeteries. The operating fiscal budget for the parks division is \$8.4 million. The parks division is subdivided into six maintenance districts, each with a specific level and frequency of maintenance tasks. Five of the districts maintain 500 acres of parkland with eight groundskeepers and one supervisor.

The City of Greensboro maintains over 35,000 acres of land and over 4,000 acres of developed parkland, not including the watershed areas. The City has 76 staff for park maintenance. Nearly 60 of these staff members are dedicated to a park facility such as a regional park, garden, historical site, or cemetery. The other 17 staff members include a section manager, two supervisors, and four crews that focus on minor construction projects and playground inspections for the remaining park and trail facilities. The operating fiscal budget for park maintenance is not comparable to the City of Raleigh's because not all maintenance services are covered under this budget. Some routine maintenance tasks, such as mowing, are performed by other City departments and absorbed by their operating budgets. The Park Maintenance Department's operating fiscal budget is approximately \$6 million and includes programming supplies and other services.

The per capita expenditures for the Cities of Raleigh and Greensboro are \$92.00 and \$81.00, respectively. The per capita expenditures for the Town of Chapel Hill are \$40.00, which is 46% less than the average of Raleigh and Greensboro.

The Town of Chapel Hill has nearly half the total per capita expenditures when compared to communities with similar size populations. Based on these comparisons, the Town of Chapel Hill does not have an adequate level of funding specifically budgeted towards park maintenance. Funding for additional staff members, higher salaries, training, and equipment is needed in order to raise the Town's maintenance standard to the average in North Carolina.

12.4 Routine & Remedial Maintenance Defined

In this chapter, the terms "routine maintenance" and "remedial maintenance" are heavily referenced and the following definitions are referred to in the next sections.

Routine Maintenance can be defined as daily or weekly regularly scheduled activities such as trash removal, trimming of vegetation, replenishing engineered wood fiber, mowing lawns and athletic fields, mulching planting beds, replacing light bulbs, and painting lines on the ballfields. Routine maintenance tasks relate to the general upkeep against normal wear and tear of buildings, facilities, equipment, and furnishings.

Remedial Maintenance can be defined as the repair, replacement, or restoration of major facilities, furnishings, or fixtures that have been destroyed, damaged, or have exceeded their useful life. Remedial maintenance tasks are conducted less frequently than routine maintenance tasks and are scheduled on an as needed basis. Remedial maintenance tasks should be listed on the regular maintenance schedule and should be budgeted for the fiscal year in which the task is scheduled to be completed. Remedial maintenance tasks include repaving trails and parking

lots, and replacing roofs. Remedial maintenance tasks are related to the correction of deficiencies primarily caused by age and the wear and tear of public use. Remedial maintenance tasks may also relate to the correction of deficiencies caused by vandalism, storm events, or changes of use.

12.5 Recommended Annual Maintenance Plan

To assist in the creation of an annual routine and remedial maintenance plan for the Town of Chapel Hill, a spreadsheet, located in Routine and Remedial Maintenance Tasks (Appendix E), outlines the lifespans and routine and remedial maintenance tasks associated with each facility, structure, fixture, or furnishing listed in this document. The list is not exhaustive and should be updated as new facilities are opened and as site furnishings and fixtures are replaced. The warranty and maintenance plan associated with new equipment, systems, and fixtures should also be added to the Town's maintenance plan.

The annual routine and remedial maintenance plan should be a digital document outlining the schedule for each task, the staff assigned, the date completed, and any other comments associated with the task. This maintenance plan should be an evolving document, updated and adjusted as necessary to reflect the realistic accomplishments of maintenance staff and future goals. The maintenance plan should include the following at a minimum:

Routine Maintenance

Daily or Weekly

- Re-paint infield lines on baseball field.
- Clean, scrape, and edge existing concrete and asphalt sidewalks and trails to extend the life span and aesthetic appearance of walkways.

- Clean, scrape, sweep, and edge existing tennis and basketball court surfacing systems to prevent staining and damage to the top coat as well as crumbling pavement. This will extend the life span and aesthetic appearance of the court system.
- Clean, scrape, and caulk gaps between concrete/asphalt pavements and building foundations.
- Trim vegetation and remove vines from all athletic fencing to prevent rust and deterioration, which will extend the life span of the fence.
- Trim existing vegetation to maintain views into the park and maintain a clearance of two feet (2') off of either side of walkways and at least seven feet (7') clearance overhead.
- Mow lawns/trim edges.
- Rake/blow leaves.
- Insect and pest control.

Routine Maintenance

Semi-annually or as required per a supervisor's inspection

- Fertilize athletic fields, lawns, planting beds, and ornamental trees.
- Pull, spray, or apply pre-emergent granules to control weeds.
- Overseed or reseed lawn areas throughout the entire park.
- Fill in low and eroded areas of fields and open play spaces with topsoil and reseed.

- Edge existing planting beds that are not defined by metal or concrete edging.
- Mulch beds.
- Replenish engineered wood fiber at playgrounds to required depth.
- Repair and maintain playground edging along the required fall zones.
- Perform a quarterly evaluation of playground and surfacing for compliance with the latest ASTM and CPSC guidelines.
- Mulch natural trails to maintain pathway and prevent low spots.
- Patch potholes in parking lots and trails.
- Re-paint parking lot striping.
- Paint/repair site furnishings.
- Clean out storm drains.
- Check all park signs and repair or replace as needed.
- Oil hinges and locks on gates, doors, etc.
- Replace light bulbs with energy efficient varieties.
- Power wash buildings, walkways, fences, and equipment.
- Building Services should clean the gutters and roofs of buildings, clean/caulk windows and doors, and paint interior and exterior surfaces of the buildings.

- Update crime prevention measures, law and regulation enforcement, search and rescue, and user education.

Remedial Maintenance

Remedial maintenance is required less often than routine maintenance and will require a supervisors inspection.

- Reseed lawn areas throughout the entire park.
- Replace engineered wood fiber at playgrounds to required depth.
- Replace poured-in-place surfacing at playgrounds. Include subsurface drainage and stone, pipe, and geotextile fabric per code.
- Re-paint court lines on tennis, basketball, and bocce courts.
- Clean, patch, resurface/replace existing asphalt walks, ramps, steps.
- Clean, patch, and replace existing concrete walks, ramps, steps.
- Resurface or replace tennis courts.
- Resurface or replace basketball courts.
- Repair or replace fence fabric at the tennis courts, baseball fields, basketball courts, playgrounds, etc., replace baseball backstop fence fabric, fence posts, caps, and rails.
- Replace wood fencing.
- Replace metal edging.
- Replace wood/timber edging.

- Replenish gravel walks.
- Replace timber steps.
- Replace wooden bridge structures.
- Resurface or replace asphalt parking lots.
- Repair or replace concrete parking lots.
- Replace ADA accessible signs.
- Regrade swales and replace riprap.
- Replace site furnishings/goals/equipment.
- Building Services should replace roofing, gutters, downspouts, and plumbing fixtures.

12.6 Overall System Maintenance Recommendations

The following four action items are highly recommended to improve the Town of Chapel Hill's current maintenance practices:

Action 1: Create a written maintenance plan.

- Create a written routine maintenance plan including a detailed schedule identifying each task, the location, frequency, and crew assigned. Update quarterly or as new facilities open to document the ratio of staff personnel to the acreage/miles of facilities maintained. Schedule should reflect the changing needs of the park system based on the season, events, and programming. Schedule should also include quarterly inspections to detail the park and create a check list of items that need to be addressed. This check list should be similar to the Itemized Maintenance Tasks

Spreadsheet found in Routine and Remedial Maintenance tasks (Appendix E) of this document.

This plan should also incorporate the tasks associated with other Town-owned properties that the Landscape Division is responsible for maintaining, such as Town Hall, fire stations, the police station, public housing units, roadway right of ways, etc.

Current Practice: Basic maintenance tasks are performed as outlined under Current Maintenance System. There is no written task list or schedule.

- Create a written remedial maintenance plan with an estimated timeline for repair or replacement of equipment, structures, surfaces, systems, etc. Add new materials and equipment based on the user manual and warranties associated with each project as new recreational facilities are developed. Provide an estimated cost for the remedial maintenance task to begin shaping future operations and maintenance budgets. Identify the entity responsible for completing the task such as a specific Town Department or private contractor.

This plan should also incorporate the tasks associated with other Town-owned properties that the Landscape Division is responsible for maintaining, such as Town Hall, fire stations, the police station, public housing units, roadway right of ways, etc.

Current Practice: Facilities are replaced on an as needed basis. There is no written inventory or schedule.

- Conduct monthly or quarterly inspections. Inspections should be conducted at all park and trail facilities

by Supervisors to identify and address the following:

- Potential hazards or life safety issues
- Possible code violations
- Aesthetic issues
- Usability issues
- Criminal activities
- Deteriorating equipment or facilities

A detailed checklist should be produced and filled out during each inspection to monitor facilities and record observations.

Current Practice: Monthly inspections are currently conducted by supervisors. A checklist to make observations and identify problems is not used.

- Re-evaluate the existing structure of the Landscape Division to redistribute tasks and duties and to make the system more efficient and accountable. Assign one person to oversee and coordinate the Routine and Remedial Maintenance Program.

Current Practice: The Town is scheduled to re-evaluate the Landscape Division and make improvements based on this assessment report.

Action 2: Develop a Parks Maintenance Manual and provide a training program to support it.

- Develop a Maintenance Manual to outline each routine maintenance task and identify Town standards and procedures.

Current Practice: The Town does not currently have a Maintenance Manual.

- Develop a training and certification program for the Town to provide job instruction for field crews with acceptable practices and procedures.

Current Practice: The Town offers internal training for the use of chainsaws, forklifts, bucket trucks, and other equipment. Some staff also hold additional training certifications such as a Commercial Driver's License, Pesticide Applicator License, playground inspections certifications, etc. Most staff positions do not require any formal training, but may require related job experience. Other training, classes, or certifications are available and encouraged for staff through Town programs or other out-sourced programs.

- Utilize the American Academy for Park and Recreation Administration's and the National Recreation and Park Association's resources, such as the Agency Accreditation Program through the Commission for Accreditation of Park and Recreation Agencies (CAPRA) for maintenance guidance.

This program follows a series of standards and procedures that would engage the entire parks and recreation department, committees, and other related departments or organizations in a self-evaluation and assessment of current effectiveness and efficiency. The assessment is a 24-month process resulting in a self-assessment workbook to be reviewed by a Commission approved visitation team. The team also completes a site evaluation. After meeting with the parks and recreation department, the team will complete a report based on the department's ability to meet the standards set forth for this process. Based on the results of the overall process, the Commission will "accredit", "accredit with conditions", "defer decision", or "not accredit" the Town. Once accreditation status is reached, the Town will undergo

a similar evaluation process every five years to maintain the required standards and procedures. The cost is based on the annual operating budget of the Town.

Current Practice: The Town is not currently accredited with this program and is not fully utilizing the American Academy for Park and Recreation Administration or the National Recreation and Park Association's resources.

- Require programs for supervisors to attend a Maintenance Management School such as the two-year Certificate Program provided by the North Carolina Recreation and Park Association (NCRPA).

The Maintenance Management School has three curriculum levels, First Year, Second Year, and Graduate. The cost of this program is \$449 per curriculum. The first year curriculum discusses professional techniques of maintenance management. The second year curriculum discusses a broader level of maintenance management and teaches specific skills to implement more effective operations. The second year also requires the development of an effective maintenance plan. The graduate curriculum targets current maintenance practice issues and involves small group interaction to expand communication and problem solving skills.

Current Practice: Town staff has participated in this program in the past and plans to continue to participate as funding is available.

Action 3: Implement a Parks and Trails Safety and User Response Program

- Establish a parks and trails safety and maintenance committee with representatives from participating departments, organizations, or agencies. Include representation from Public Works, Streets Department, Parks and Recreation, Greenway Commission, the Parks and Recreation Commission, and the Police Department. This committee should meet quarterly to discuss overlapping routine and remedial maintenance tasks, budgets for the upcoming fiscal year, safety and security issues or risks, prioritize goals, and address major issues and concerns. The goal of this committee is to facilitate the cooperation and coordination of the people who operate and maintain park and trail facilities.

If vandalism and crime become an on-going problem within the parks, consider hiring an evening security guard in addition to the police patrols. This will provide the presence of enforcement and will allow someone to lock all doors and gates, patrol the grounds, provide a community presence, etc. Continue to work with Internal Services and the Police Department to track vandalism but also develop a Geographic Information Systems (GIS) database for all incidents including vandalism, accidents, incidents, etc. The GIS database should track specific locations of criminal activity and accidents as well as the circumstances related to the incident.

Current Practice: Vandalism and graffiti are reported to police. Accidents require the completion of an incident report form. Most issues are documented with photographs. The Town works with Internal Services within the Public

Works Department and the Police Department to establish patterns. There is not a GIS database for tracking or mapping incidents.

- Develop a Town-wide email and voicemail service to report problems, accidents, issues, hazards or offer suggestions. Neighbors and visitors of the parks and greenways can be the Town's eyes and ears between routine inspections. This would provide a confidential way for the citizens to report illegal uses or problems.

Current Practice: Facility users call around to various departments until they identify whom they need to report the issue. The Parks and Recreation Department also has an email address on the website to report problems or make suggestions. Members of the Park and Recreation Commission provide feedback from park users and members of the Greenways Commission identifies short and long term issues.

Action 4: Obtain Additional Funding to Improve Maintenance Practices and Park Facilities

- Seek funding to create a written maintenance plan and maintenance manual. Although this could be performed by the Town, additional funding for a consultant or for additional staff will be required.

Current Practice: Funding is not currently available.

- Seek funding to improve staff training. This includes continuing education courses to maintain licensees and certifications. This also includes utilizing the Commission for Accreditation Program and the Maintenance Management School.

Current Practice: Continuing education courses are encouraged, but funding is not always available. Funding is not currently available for the Accreditation Program or the Maintenance Management School.

- Evaluate staff salaries and benefits every other year and adjust as needed to meet comparable municipalities' Park and Recreation Departments.

Current Practice: Salaries are evaluated less frequently than every other year.

- Seek funding to provide the recommendations listed in Chapter 11: System Recommendations. This includes the restorations at Cedar Falls (partial), Community Center, Hargraves, Homestead, and Meadowmont Parks, the Master Plan and renovations at Burlington, Ephesus, North Forest Hills, Oakwood, and Westwood Parks, and the Restoration Plan at Cedar Falls Park (partial).

Current Practice: Funding is not currently available.

- Evaluate existing equipment and maintenance resources. Compare available equipment and resources to other municipalities and adjust as necessary to improve efficiency and increase productivity.

Current Practice: Equipment was not evaluated during this assessment of the Town's maintenance practices.

- Evaluate the need for a security guard after determining if crime is an on-going issue based on the database and input from police and other sources. A security guard could supplement the Town's Police Department and provide a reassuring presence in the community.

Current Practice: Police patrol and neighborhood organizations are the main sources of reporting criminal activity. Funding is not currently available to hire a security guard.

12.7 Park Maintenance Recommendations

It is recommended that the following routine and remedial maintenance tasks be completed to maintain the appearance of the parks after the previous recommendations are completed:

- A Maintenance Supervisor should conduct monthly inspections of all parks to record any issues.

In addition to the Town's current routine maintenance tasks, such as mowing the lawns, removing trash, and furnishing the restrooms, regularly scheduled routine maintenance tasks should be expanded to include:

- Edge the sides and clean all paved surfaces, including parking lots, entrance drives, trails, and concrete slabs.
- Trimming and removing vegetation from the parks such as downed tree limbs, uprooted trees, low overhanging branches, and brier vines and shrubs to maintain a two foot clearance from trails, courts, fencing, and site furnishings and at least a seven foot clearance overhead.
- Clean out all drain pipes and inlets.
- Sweep all building roofs.
- Weed planting beds and spread mulch. Trim shrubs and remove any dead or dying vegetation from planted areas.
- Powerwash buildings, fencing, metal and wood fixtures.

The following remedial maintenance tasks should be scheduled as needed according to the Supervisor's monthly inspection and in accordance with the estimated useful life of the product or surface:

- Replace concrete, resurface or replace asphalt, replenish gravel, or replenish mulch surfaces.
- Replace playground equipment, site furnishings, athletic goals, light fixtures, and plumbing fixtures.
- Replace or replenish playground safety surfacing to code.
- Replace roofing, gutters, and downspouts.
- Paint buildings, metal, and wood fixtures.
- Overseed lawn areas.
- Regrade, reseed or sod athletic fields and ballfields.
- Resurface basketball and tennis courts.
- Re-stripe lines on parking lots, athletic fields, courts, and trails.

12.8 Trail Maintenance Recommendations

It is recommended that the following routine and remedial maintenance tasks be completed to maintain the appearance of the trails after the previous recommendations are completed:

- A Maintenance Supervisor should conduct monthly or quarterly inspections of all corridors to record any issues.

In addition to mowing the lawns and removing trash regularly scheduled routine maintenance tasks should include:

- Edge the sides and clean all paved surfaces. Remove vegetation that is growing in the cracks of the trail. Seal cracks.
- Trimming and removing vegetation such as downed tree limbs, uprooted trees, low overhanging branches, and brier vines and shrubs to maintain a two foot (2') clearance from trail edges and at least a seven foot (7') clearance overhead.
- Fill potholes, around roots, and low areas in natural trails to prevent tripping hazards.
- Clean out all drain pipes and inlets.
- Weed planting beds and spread mulch. Trim shrubs and remove any dead or dying vegetation from planted areas.
- Powerwash fencing, metal, pavement, and wood fixtures.

The following remedial maintenance tasks should be scheduled as needed according to the Supervisor's monthly inspection and in accordance with the estimated useful life of the product or surface:

- Replace concrete, resurface or replace asphalt, replenish gravel, or replenish mulch surfaces.
- Paint metal and wood fixtures.
- Seed lawn areas.

- Re-stripe lines on trails.
- Crowning of natural trails to drain water.

12.9 Summary

The Town of Chapel Hill's current maintenance practices are not sufficient to keep up with the aging facilities. As itemized in the Deficiency List, there are over \$3,715,353 in deferred maintenance tasks.

The Town of Chapel Hill's Landscape Services and Parks Maintenance Division needs additional funding for salaries, equipment, and training to improve the level of maintenance in their parks. Organizational guidelines and itemized routine and remedial maintenance plans need to be implemented to help efficiency within the Division as well. Additional funding, specifically allocated for park and trail maintenance is also needed as illustrated by the comparison to communities of similar size.

Appendix A

Scope of Work

Appendix A

Scope of Work

Exhibit A

Chapel Hill Parks Maintenance Assessment
March 20, 2008

Without limiting the other provisions of this Agreement, it is agreed that the Architect shall provide the following services.

Susan Hatchell Landscape Architecture, PLLC is pleased to submit our fee proposal to provide professional services for five park sites and one greenway. The scope of the project will include landscape architectural, architectural, and mechanical/electrical/plumbing engineering assessment services. Our proposal is based on a specific scope of work and process contained in this document as follows:

A-1 Project Scope

The project involves assessing the existing visible conditions with a team of Landscape Architects, Architects, and PME Engineers at the following parks and greenway facilities:

- Burlington Park
- Cedar Falls Park
- Hargraves Park
- Oakwood Park
- Umstead Park
- Bolin Creek Greenway

Task A: Project Preparation

- Mobilize the Consultant Team.
- Meet with The Town of Chapel Hill to finalize the scope of work and schedule and discuss the assessment process.
- Prepare a spreadsheet system to evaluate each park and greenway.

- Compile base mapping for site visits from GIS information supplied by the Town of Chapel Hill.

*Deliverable: Base mapping for site visits
Spreadsheet to record field observations*

Task B: Site Visits and Research

- Conduct a meeting with the Town's Departments (Planning, Public Works, Transportation, etc.) to familiarize the Consultant Team with the procedures, submittals, applications, and permits that will be required to implement a general list of possible renovations.
- Conduct site visits* (one day only) with Robert Minick, Superintendent of Landscape Services, or a designated Town employee to observe and record the conditions of five parks and one greenway such as the following
 - Parking Lots
 - Landscaping
 - Slabs and Courts
 - Turf Grass
 - Irrigation Systems
 - Utilities
 - Signage
 - Paths
 - Picnic Shelters
 - Restrooms
 - Athletic Equipment such as goals, bleachers, scoreboards, etc.
 - Fencing
 - Playgrounds such as equipment, edging, and surfacing
 - Park furniture such as trash cans, benches, grills, tables
- Conduct site visits to seven other parks and 11 greenways

(one day only) in Chapel Hill. This evaluation will only provide a general overview of the maintenance issues and deficiencies and will not provide a list of each at these parks and greenways.

- Photographs and field notes will be recorded during each site visit

Task C: Evaluation Report

- Identify deficiencies at each park using the following categories:
 - Safety Issues
 - Environmental Degradation
 - ADA compliance
 - Aesthetics
 - Potential failure of structures and utilities
 - List of facilities that have reached or exceeded their useful life.
- Compose a written report to identify the general findings from the site visits, provide recommendations for improvement, and outline a basic routine and remedial maintenance plan for the Town.
- Incorporate each disciplines recommendations and cost estimates into a spreadsheet which subtotals the approximate cost to complete all recommended items.
- Provide a draft copy of the Assessment Report to the Town for review.

Deliverable: Draft Assessment Report

Task D: Revisions and Final Submittal

- Revise the document per the Town's comments.
- Provide a final version of the Assessment Report to the Town
- Meet with the Town for a final discussion on how to proceed with the recommendations of the report.

Deliverable: Final Assessment Report

* Field observations are based on visible, above ground components and do not include:

- Underground utilities
- Opening manholes to review existing sewer lines
- Determining the location of underground wiring, pipes, etc.
- Opening panels or equipment for examination

A-2 Tentative Schedule

The following schedule is an estimate of major milestones:

April 4, 2008 - Consultant Team Notice to Proceed

May 2008 - Analysis and evaluation phase

June 2008 - Plan preparation and Draft delivery

July 2008 - Revisions and Final delivery

A-3 Additional Services

The following list identifies all tasks that will be considered additional services based on the previous scope of work.

- Surveying, Geotechnical Investigations, Measured Building Drawings, Hazardous Materials Testing, Lighting Studies, Floodway Modeling, etc.
- Determining fees associated with the implementation of each park as related to the permitting, testing, surveying, reviews, and submittals
- Sports lighting assessments
- Calculations for stormwater sewer loads, run-off, impervious areas, nutrient levels, etc.
- Calculations for sizing bioretention basins or detention basins
- Testing to verify equipment performance
- Additional site visits (only one site visit is included in the basic services fee. Additional site visits (If access is not available to all of the buildings or changes to the site's conditions

occur before the Consultant Team's recommendations are implemented will require additional fees.)

- Additional meetings not included in the previous scope of work
- Additional revisions to the Assessment Report (Base bid only includes one set of reasonable revisions and a final submittal. Additional text, studies, implementation plans, alternative recommendations, spreadsheet re-sorts or re-prioritizations, etc. are considered additional services.)
- Bioretention and stormwater basins

Appendix B

Spreadsheet Explanation

Appendix B

Spreadsheet Explanation

Spreadsheet Explanation

The deficiencies spreadsheets located in Appendix C: Deficiency List by Park have been sorted and tabulated based on the 'Prioritization Level' column and therefore are not listed consecutively by number. Subtotals for each priority listing are provided in the spreadsheets and an overall total cost for all priorities is provided at the end of the list. A summary for all of the estimated costs is located at the end of the spreadsheet.

To better understand the content listed in each spreadsheet, the following information should be referenced:

(Numbering System)

Under the '#' column, the deficiencies are numbered as they were observed on site by the each discipline. The numbering system is as follows:

Site work observations recorded and estimated by Susan Hatchell Landscape Architecture, PLLC are numbered beginning at 001.

Architectural observations recorded and estimated by Ellen Cassilly Architects are numbered beginning at 101.

Electrical observations recorded and estimated by SUD Associates Inc. are numbered beginning at 201.

Mechanical and plumbing observations recorded and estimated by SUD Associates Inc. are numbered beginning at 301.

Location

The approximate location where each deficiency was observed is recorded in the "Location" column. The list of locations includes playground, ballfield, tennis court, parking lot, or restroom building. At parks where more than one type of facility were present such as the four ballfields at Cedar Falls, the fields were numbered

based on the signs located on the site and all numbers and locations correspond to the maps shown in Chapter Three through Chapter Eight.

Definition Types

Under the 'Definition Type' column, the Consultant Team has developed a list of definition types for each line item found in the deficiencies list spreadsheets. The definitions are outlined as follows:

Architectural

- BF Building Furnishings
- EB Exterior Building
- IB Interior Building
- RO Roof
- F Flooring
- P Painting

Plumbing

- IP Interior Plumbing
- EP Exterior Plumbing (water fountains, hose bibs, etc.)

Mechanical

- M Mechanical

Electrical

- EL Exterior Lighting (on Building)
- IL Interior Lighting
- SL Site Lighting (parking lots or sports lighting)
- EE Exterior Electrical
- IE Interior Electrical

Site Work

- F Fence
- HR Handrail
- LS Landscape (vegetation, mulch, planting, trimming, mowing, etc.)

SW	Site Work (grading, seeding, S+E, drainage)
PA	Paving (Parking Lots, Walkways, Steps, Ramps, etc)
PE	Play Equipment
S	Surfacing (playground, tennis, basketball)
SF	Site Furnishings
ST	Structures (wall, bridge, etc.)

Prioritization Level and Deficiency Type

Under these columns, the following criteria was used by the Consultant Team to rank each deficiency in terms of highest priority:

- 1 - Life Safety
- 2 - Code Compliance
Includes ADA Accessibility Code Violation, Building Code Violation, Electrical Code Violation, Mechanical Code Violation, or Ordinance Violation.
- 3 - Deferred Maintenance
- 4 - Aesthetic Improvements

Description

Under the 'Description' column, the Consultant Team has written a narrative to discuss the deficiency observed and recommended a solution. The 'Notes' column was used to supply additional information or side notes for the deficiency.

Quantity and Size

Under these columns, the quantity and size, as related to the recommendations for the deficiency, are presented to offer an explanation for the estimated cost.

Unit Cost of Materials and Unit Column

The "Unit Cost of Materials" column offers an estimated price of the materials needed for the deficiency as of August 2008. The unit cost does not include labor, freight, or other additional costs

that may be represented in the 'Estimated Cost' column. The unit cost for materials multiplied by the quantity or size does not equal the estimated cost.

The cost is based on the measurement provided in the "unit" column. For example, the estimated cost to repave asphalt is \$1.00 per linear foot (lf). If "lump sum" is presented in the unit column, then a variety of factors or a rounded number were used in the 'Estimated Cost' column. A complete list of all abbreviations used in the spreadsheets can be found in Appendix D: Legend for Definitions and Abbreviations.

Estimated Cost

The 'Estimated Cost' column reflects the cost estimate provided by the Consultant Team based on the measurements found in the "Quantity" and "Size" columns and based on the unit price shown in the "Unit Cost" column. Additional charges for labor, freight, or installation were included on items such as site furnishings. Multiplying the 'Unit Price for Materials' column and the 'Quantity' or 'Size' columns together does not equal the estimated cost column.

In the instance of a lump sum fee, the Consultant Team calculated many variables into the determination of that cost. The costs only reflect the recommendations, quantities, and sizes for each deficiency as estimated for 2008 prices. Inflation was not calculated into any of the line items.

Notes

The 'Notes' column provides a narrative that should be read in conjunction with the 'Description' column. The narrative in the 'Notes' column contains supplemental information to the 'Description' column including additional or supplemental information.

Color Coordination

All line items that have been highlighted in a tan color are alternative options. These options are not included in the total

costs subtotaled by priority or the total cost projected at the end of the spreadsheets.

Alternatives were given for items such as the playground surfacing, site furnishings, and fencing.

Appendix C

Deficiency List by Park

Summary Sheet

Chapel Hill Parks Maintenance Assessment

Summary of all Deficiencies listed in the Spreadsheets by park

	Burlington Park	Cedar Falls Park	Hargraves Park	Oakwood Park	Umstead Park	Bolin Creek Greenway	Subtotal
#1 Life Safety Issue Subtotal	\$65,940	\$32,400	\$64,250	\$13,830	\$57,230	\$3,000	\$236,650
#2 Code Violation Subtotal	\$25,226	\$144,933	\$264,456	\$29,585	\$64,392	\$0	\$528,592
#3 Deferred Maintenance Issue Subtotal	\$27,675	\$445,474	\$72,642	\$2,000	\$127,662	\$322,275	\$997,728
#4 Aesthetic Improvements Subtotal	\$82,880	\$279,200	\$326,879	\$138,035	\$57,500	\$210,500	\$1,094,994
Subtotal	\$201,721	\$902,007	\$728,227	\$183,450	\$306,784	\$535,775	\$2,857,964
5% Mobilization	\$10,086.05	\$45,100.35	\$36,411.35	\$9,172.48	\$15,339.20	\$26,788.75	\$142,898.18
10% Contingency	\$20,172.10	\$90,200.70	\$72,822.70	\$18,344.95	\$30,678.40	\$53,577.50	\$285,796.35
15% Overhead and Profit	\$30,258.15	\$135,301.05	\$109,234.05	\$27,517.43	\$46,017.60	\$80,366.25	\$428,694.53
Total	\$262,237	\$1,172,609	\$946,695	\$238,484	\$398,819	\$696,508	\$3,715,353

Burlington Park

Chapel Hill Parks Maintenance Assessment

Address: Ephesus Church Road

Size: 5 acres

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
004	Park	LA	1	Life Safety	Remove fallen branches and trees that are overhanging the playground areas and the walkways.	8 hours	-	\$75	per hour	\$600	Overhanging branches should also be limbed up to at least eight (8) feet in height.
005	Park	PA	1	Life Safety	Replace existing pedestrian bridges with prefabricated wood structures.	Two (2)	Approx. 20' x 6', each	\$8900 plus freight and tax	each	\$28,480	Existing bridges do not have adequate sub structures, handrails, or tread surface. Price includes design, delivery, and installation by manufacturer.
009	Playground	PE	1	Life Safety	Remove existing spring rockers throughout park.	Two (2)	-	-	lump sum	\$600	Dated equipment with inadequate fall zones
010	Playground	PE	1	Life Safety	Remove and replace existing swings.	Two (2)	One-Bay	\$3,300	each	\$12,360	Dated equipment with inadequate fall zones
011	Playground	PS	1	Life Safety	Install engineered wood fiber surfacing throughout the playground areas. Install timber edging to define the playground area.	-	6450 sf	\$40	cy	\$23,900	Currently a mix of sand and gravel surfacing
LIFE SAFETY SUBTOTAL										\$65,940	

Burlington Park

Chapel Hill Parks Maintenance Assessment

Address: Ephesus Church Road

Size: 5 acres

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
001	Parking Lot	PA	2	ADA Accessibility Code Violation	Install ADA accessible parking in the existing parking lot adjacent to the accessible route. Pave dedicated ADA accessible space and aisle and provide pavement markings and signage for ADA compliance.	Paving and pavement markings for one (1) ADA accessible van space and one (1) ADA access aisle. One (1) ADA van accessible sign and one (1) ADA accessible standard sign.	16' x 20'	-	lump sum	\$2,050	Park has no designated ADA accessible parking.
008	Park	SF	2	ADA Accessibility Code Violation	Relocate the ADA accessible picnic table along an accessible route. Install a paved pad for the picnic table to improve access.	One (1) with labor to move table	130 sf	-	lump sum	\$640	
201	Parking Lot	EL	2	Ordinance Violation	Replace 'Cobra Dropped Lens' Semi Cut Off type Parking Lot Lights with Full-Cutoff type fixture on existing pole.	One (1)	175W MH	\$500	each	\$500	Coordinate with Duke Power.
006a	Park	PA	2	ADA Accessibility Code Violation	Install a concrete accessible route from the ADA accessible parking to the playground area.	Approx. 170 lf	5' wide	\$4.50	sf	\$4,766	
006b	Park	PA	2	ADA Accessibility Code Violation	Install an asphalt accessible route from the ADA accessible parking to the playground area.	Approx. 170 lf	5' wide	\$24	sy	\$3,221	
007a	Park	PA	2	ADA Accessibility Code Violation	Install a concrete accessible route from the playground area, along the perimeter of the athletic field, to the ADA accessible parking.	Approx. 150 lf	5' wide	\$4.50	sf	\$6,950	
007b	Park	PA	2	ADA Accessibility Code Violation	Install an asphalt accessible route from the playground area, along the perimeter of the athletic field, to the ADA accessible parking.	Approx. 150 lf	5' wide	\$24	sy	\$4,765	
013a	Playground	SF	2	ADA Accessibility Code Violation	Remove existing site furnishings and reinstall along an accessible route. Install paved areas around benches, including a space for ADA accessible seating. Install gravel around the grill.	Two (2) benches, one (1) grill, two (2) waste receptacles	standard	-	lump sum	\$2,000	

Burlington Park

Chapel Hill Parks Maintenance Assessment

Address: Ephesus Church Road

Size: 5 acres

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
013 b	Playground	SF	2	ADA Accessibility Code Violation	Remove and replace existing site furnishings and relocate along an accessible route. Install paved areas around benches, including a space for ADA accessible seating. Install gravel around the grill.	Two (2) benches, one (1) grill, two (2) waste receptacles	standard	\$750-\$1500	each	\$10,320	
CODE VIOLATION SUBTOTAL										\$25,226	
002 A	Parking Lot	PA	3	Deferred Maintenance	Pave existing gravel parking lot and entrance drive with asphalt. Increase the footprint of the parking lot to accommodate eight (8) standard parking spaces. Provide pavement striping to designate each parking space. Regrade entrance drive at the intersection of Ephesus Church Road. Replace existing timber edging with concrete edging around the perimeter of the parking lot.	Eight (8) standard parking spaces, approx. 9' x 18'	6050 sf	\$24	sy	\$27,675	Grading required. Large dip in the driveway at the entrance to the park creates a safety hazard.
002 B	Parking Lot	PA	3	Deferred Maintenance	Reinstall gravel in existing gravel parking lot and entrance drive. Increase the footprint of the parking lot to accommodate eight (8) standard parking spaces. Install wheel stops to designate each parking space. Regrade entrance drive at the intersection of Ephesus Church Road. Replace existing timber edging with metal edging around the perimeter of the parking lot.	Eight (8) standard parking spaces, approx. 9' x 18'	6050 sf	\$10.40	sy	\$9,420	Grading required. Large dip in the driveway at the entrance to the park creates a safety hazard.
DEFERRED MAINTENANCE SUBTOTAL										\$27,675	
003	Parking Lot	PA	4	Aesthetic Improvement	Replace existing metal bollards adjacent to the ADA accessible parking. Ensure the required 48" clearance between the bollards along the accessible route into the park.	Three (3)	standard	\$600	each	\$2,880	Existing bollards are dated and the paint is chipping. The center bollard is leaning over and needs to be replaced.

Burlington Park

Chapel Hill Parks Maintenance Assessment

Address: Ephesus Church Road

Size: 5 acres

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
012	Playground	PE	4	Aesthetic Improvement	Remove all playground equipment not previously mentioned as a life safety issue. Install a large composite piece for youths (age 5-12) and a small composite piece for tots (age 2-5).	One (1) large composite structure and one (one) small composite structure	-	-	lump sum	\$80,000	
AESTHETIC IMPROVEMENTS SUBTOTAL										\$82,880	

Total cost to complete deficiency list	\$201,721
5% Mobilization	\$10,086
10% Contingency	\$20,172
15% Overhead and Profit	\$30,258
Total Cost	\$262,237

Life Safety Issue Subtotal	\$65,940
Code Violation Subtotal	\$25,226
Deferred Maintenance Issue Subtotal	\$27,675
Aesthetic Improvements Subtotal	\$82,880
Total Cost	\$201,721

Cedar Falls Park

Chapel Hill Parks Maintenance Assessment

Address: 501 Weaver Dairy Road

Size: 64 acres

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
004	Trail to School (Adjacent to ballfield)	PA	1	Life Safety	Demolish existing asphalt trail and retaining wall adjacent to ballfield #1 and replace with new asphalt trail and segmental retaining wall system.	Approx. 350 lf	7' wide trail	asphalt = \$24 sy wall = \$25 lf	-	\$30,000	Asphalt trail is being compromised by the failing retaining wall.
005	Trail to School	LS	1	Life Safety	Limb up all branches to at least eight (8) feet in height.	32 hours	-	\$75	per hour	\$2,400	
LIFE SAFETY SUBTOTAL										\$32,400	
002	Parking Lot	PA	2	ADA Accessibility Code	Install ADA accessible parking spaces, access aisles and signage.		74' x 20'	-	lump sum	\$6,261	
007 a	Parking Lot	PA	2	ADA Accessibility Code	Install a concrete accessible route/walk from the edge of the trail (#004) to the playground in the lawn area between the parking lot and the ball field.	365 lf	5' wide	\$4.50	sf	\$10,095	Currently there are no pedestrian connections between trails. Current path of travel crosses the parking lot with no defined pedestrian circulation to notify motorists of the pedestrian crossing.
007 b	Parking Lot	PA	2	ADA Accessibility Code	Install an asphalt accessible route/walk from the edge of the trail (#004) to the playground in the lawn area between the parking lot and the ball field.	365 lf	5' wide	\$24	sy	\$6,805	Currently there are no pedestrian connections between trails. Current path of travel crosses the parking lot with no defined pedestrian circulation to notify motorists of the pedestrian crossing.
010	Ballfield #2	SF	2	ADA Accessibility Code	Reset players benches so the seat is between 17" and 19" from the ground.	Two (2) benches	standard	-	lump sum	\$150	

Cedar Falls Park

Chapel Hill Parks Maintenance Assessment

Address: 501 Weaver Dairy Road

Size: 64 acres

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
011	Ballfield #2	PA	2	ADA Accessibility Code	Install a paved pad for bleachers and include an ADA accessible seating area adjacent to the bleachers. Saw-cut paving and replace concrete steps and handrails adjacent to the bleacher area.	Approx. 700 sf of concrete	8' wide	-	lump sum	\$20,472	Coordinate with the retaining wall installation, Item #009. Wall supporting the bleacher pad should tie into the retaining wall. Steps should tie into existing walk.
015	Ballfield #3	SF	2	ADA Accessibility Code	Reset players benches so the seat is between 17" and 19" from the ground.	Two (2) benches	standard	-	lump sum	\$150	
016	Ballfield #3	PA	2	ADA Accessibility Code	Install a paved pad for bleachers and include an ADA accessible seating area adjacent to the bleachers.	-	520 sf	\$4.50	sf	\$1,600	Tie into ADA accessible route to the ballfield
020	Ballfield #4	SF	2	ADA Accessibility Code	Reset players benches so the seat is between 17" and 19" from the ground.	Two (2) benches	standard	-	lump sum	\$150	
021	Ballfield #4	PA	2	ADA Accessibility Code	Install a paved pad for bleachers and include an ADA accessible seating area adjacent to the bleachers.	-	700 sf	\$4.50	sf	\$4,820	
025	Ballfield #1	SF	2	ADA Accessibility Code	Reset players benches so the seat is between 17" and 19" from the ground.	Two (2) benches	standard	-	lump sum	\$150	
026	Ballfield #1	PA	2	ADA Accessibility Code	Install a paved pad and segmental retaining wall for bleachers and include an ADA accessible seating area adjacent to the bleachers.	-	900 sf	concrete= \$4.50, wall = \$25	sf	\$9,000	Grading required. Coordinate with accessible route improvements.
031 a	Picnic Area	PA	2	ADA Accessibility Code	Install a concrete accessible walk from the main walkway between the parking lot to the tennis courts to one (1) picnic table. Pave over existing gravel.	25 lf	4' wide	\$4.50	sf	\$450	One of two (2) picnic tables required to be accessible.
031 b	Picnic Area	PA	2	ADA Accessibility Code	Install an asphalt accessible walk from the main walkway between the parking lot and the tennis courts to one (1) picnic table. Pave over existing gravel.	25lf	4' wide	\$24	sy	\$288	One of two (2) picnic tables are required to be accessible.

Cedar Falls Park

Chapel Hill Parks Maintenance Assessment

Address: 501 Weaver Dairy Road

Size: 64 acres

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
032 a	Playground	PA	2	ADA Accessibility Code	Install a concrete accessible walk from the main walkway between the parking lot to the tennis courts to one (1) picnic table and one (1) bench adjacent to the playground. Provide a paved pad at the picnic table and the bench. Pave over compacted soil. Slope cannot exceed 5%.	100 lf	5' wide	\$4.50	sf	\$2,331	One of (2) picnic tables are required to be accessible. Grading is required.
032 b	Playground	PA	2	ADA Accessibility Code	Install an asphalt accessible walk from the main walkway between the parking lot to the tennis courts to one (1) picnic table and one (1) bench adjacent to the playground. Provide a paved pad at the picnic table and the bench. Pave over compacted soil. Slope cannot exceed 5%.	100 lf	5' wide	\$24.00	sy	\$1,425	One of (2) picnic tables required to be accessible. Grading is required.
033 a	Playground	PA	2	ADA Accessibility Code	Demolish the existing walkway between the parking lot and the tennis courts that runs adjacent to the playground. Regrade the walk to ensure ADA compliance. Pave the walkway with concrete and tie into all intersecting existing walks. Slope cannot exceed 5%.	820 lf	12' wide	\$4.50	sf	\$50,454	Grading required. Note: a water line runs adjacent to the playground, parallel to the main walkway.
033 b	Playground	PA	2	ADA Accessibility Code	Demolish the existing walkway between the parking lot and the tennis courts that runs adjacent to the playground. Regrade the walk to ensure ADA compliance. Pave the walkway with asphalt and tie into all intersecting existing walks. Slope cannot exceed 5%.	820 lf	12' wide	\$24	sy	\$32,454	Grading required. Note: a water line runs adjacent to the playground, parallel to the main walkway.

Cedar Falls Park

Chapel Hill Parks Maintenance Assessment

Address: 501 Weaver Dairy Road

Size: 64 acres

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
034 a	Playground	S	2	ADA Accessibility Code	Install a concrete transition between the walk and the engineered wood fiber mulch for access. Extend the existing timber edging around the entire playground area to contain the engineered wood fiber mulch and delineate the extent of the required fall zones.	40 lf	4' wide	\$4.50	sf	\$2,470	Note: a water line runs adjacent to the playground, parallel to the main walkway.
034 b	Playground	PS	2	ADA Accessibility Code	Install an asphalt transition between the walk and the engineered wood fiber mulch for access. Extend the existing timber edging around the entire playground area to contain the engineered wood fiber mulch and delineate the extent of the required fall zones.	40 lf	4' wide	\$24.00	sy	\$2,182	Note: a water line runs adjacent to the playground, parallel to the main walkway.
036 a	Tennis Court	PA	2	ADA Accessibility Code	Install a concrete accessible route from the main walk into the tennis courts. Include an asphalt paved pad for a bench with ADA accessible seating adjacent to the bench.	23 lf	5' wide	\$4.50	sf	\$590.00	In conjunction with Item #037.
036 b	Tennis Court	PA	2	ADA Accessibility Code	Install an asphalt accessible route from the main walk into the tennis courts. Include a concrete paved pad for a bench with ADA accessible seating adjacent to the bench.	23 lf	5' wide	\$24.00	sy	\$385.00	In conjunction with Item #037.
035	Playground and Picnic Areas	SF	2	ADA Accessibility Code	Replace existing picnic tables with ADA compliant picnic tables.	Two (2) ADA compliant picnic tables	standard	\$2,000	each	\$6,400	In conjunction with accessible route to tables and paved pads.
037	Tennis Court	SF	2	ADA Accessibility Code	Replace the existing benches adjacent to the tennis courts. Install an ADA compliant bench on the paved pad.	Two (2) benches	standard	\$1,500	each	\$4,800	In conjunction with Item #036.
101	Restroom	IB	2	ADA violation	Men's and women's ADA toilet stalls do not comply with ADA Accessibility Code. Widen each with 24" wide solid surface partition panel and add a 36" wide grab bar over back of the water closets.	Two (2)	24"x60" partition panels, 36" grab bars	\$30 /man hr.	2 workers for 2 days = 32 hours	\$960	General Contractor to coordinate work with Plumbing, Items #302-307. May be possible to salvage and reuse the adjacent partitions being removed.

Cedar Falls Park

Chapel Hill Parks Maintenance Assessment

Address: 501 Weaver Dairy Road

Size: 64 acres

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
102	Restroom	IB	2	ADA violation	Men's and women's hand blowers do not comply with ADA Accessibility Code for clearance. Relocate each on the wall opposite the lavatories. Patch and paint CMU wall.	Two (2)		\$30 /man hr.	1 worker for 2 hours	\$60	General Contractor to coordinate with Electrical work.
103	Restroom	IB	2	ADA violation	Men's bathroom - Urinal fixture does not comply with ADA Accessibility Code. Remove existing and provide compliant urinal. Patch and paint CMU wall.	One (1)		\$30 /man hr.	1 worker for 4 hours	\$120	General Contractor to coordinate work with Plumbing, Item #307.
104	Restroom	IB	2	ADA violation	Women's bathroom - Remove one toilet stall adjacent to ADA toilet stall. Patch and finish CMU wall and concrete floor.	-	-	-	lump sum	\$400	General Contractor to coordinate work with Plumbing, Items #302-307.
105	Restroom	EB	2	ADA violation	Drinking fountain does not comply with ADA Accessibility Code for fixture type. Remove existing and provide a high/low model per plumbing scope. Patch and paint CMU wall.	-	-	-	lump sum	\$100	General Contractor to coordinate work with Plumbing, Item #301.
201	Restroom	IE	2	Electrical Code Violation	Rework dislodged or loose conduit and cap uncapped openings in boxes.	Five (5)	up to 3/4"	\$75.00	each	\$375	
202	Restroom	EE	2	Electrical Code Violation	Replace Quadruplex Receptacles with in-use cover types.	Two (2)	-	\$75.00	each	\$150	
205	Restroom	EL	2	Ordinance Violation	Replace wall pack type fixture with full cut off type at next maintenance interval.	One (1)	175W MH	\$500.00	each	\$500	
206	Walkways/ Parking Lot	EL	2	Ordinance Violation	Replace 'Open Bottom' type walkway and parking lot lights with full cut off type fixture on existing pole.	Eleven (11)	175W MH	\$500.00	each	\$5,500	Coordinate with Duke Energy.
207	Parking Lot	EL	2	Ordinance Violation	Replace 'Cobra Dropped Lens' semi cut off type parking lot lights with full-cut off type fixture on existing pole.	Three (3)	175W MH	\$500.00	each	\$1,500	Coordinate with Duke Energy.
208	Walkway	EL	2	Deferred Maintenance	Add full cut off fixture on 25' wood pole, including grounding, raceway and wiring for far end baseball field access past Restroom Building.	Two (2)	-	\$2,500.00	each	\$5,000	Coordinate with Duke Energy.

Cedar Falls Park

Chapel Hill Parks Maintenance Assessment

Address: 501 Weaver Dairy Road

Size: 64 acres

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
301	Restroom	EP	2	ADA Accessibility Code Violation	Replace existing water fountain with high/low model.	One (1) water fountain	-	-	Lump Sum	\$4,130.00	Existing fountain does not meet required dual height spout requirement.
302	Restroom	M	2	Mechanical Code Violation	Install exhaust fan in bathrooms.	One (1) exhaust fan + 100' of 12x12 duct work to include lovers and wall penetrations and installation	Total CFM required 500	-	Lump Sum	\$4,000.00	No exhaust air from restrooms or storage room.
303	Restroom	IP	2	ADA Accessibility Code Violation	Drain pipes and water pipes under sink not insulated.	Insulation for Pipes for 4 Sinks and installation	-	-	Lump Sum	\$500.00	Pipes under counter are required to be insulated
307	Restroom	IP	2	ADA Accessibility Code Violation	Urinal not installed to height required to be accessible. Flush valve allows too much water when pushed.	One (1) new urinal adjacent waste and cold water piping as required for height change and installation	-	-	Lump Sum	\$1,500.00	Consider replacing urinal with waterless urinal instead of a standard urinal.
CODE VIOLATION SUBTOTAL										\$144,933	
001a	Parking Lot	PA	3	Deferred Maintenance	Demolish existing pavement and curb, including bus stop area. Redesign existing parking lot layout. Pave the main parking spaces and entrance drive with concrete and install gravel in the overflow areas. Stripe paved areas to designate standard parking spaces and circulation patterns. Replace timber edging with concrete curb. Install wheel stops in gravel areas to designate parking spaces. Install concrete curb cuts at all trail/walkway intersections.	148 standard parking spaces, approx. 9' x18'	85800 sf	reinforced concrete = \$9.00 sf, gravel = \$10.40, concrete curb = \$25 lf	sy	\$679,912	Parking lot should be redesigned to accommodate 148 standard parking spaces with 60' between center islands. Recycling area should maintain a turning radius of at least 33 feet.

Cedar Falls Park

Chapel Hill Parks Maintenance Assessment

Address: 501 Weaver Dairy Road

Size: 64 acres

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
001 b	Parking Lot	PA	3	Deferred Maintenance	Demolish existing pavement and curb, including bus stop area. Redesign existing parking lot layout. Pave the main parking spaces and entrance drive with asphalt. Install 8" reinforced concrete in the recycling areas.	148 standard parking spaces, approx. 9' x18'	85800 sf	reinforced concrete = \$9.00 sf, asphalt = \$24 sy	sy	\$393,131	Concrete is recommended for recycling area only. Parking lot should be redesigned to accommodate 148 standard parking spaces with 60' between center islands. Recycling area should maintain a turning radius of at least 33 feet.
006	Trail to School	PA	3	Deferred Maintenance	Resurface the existing trail from the parking lot to the property line adjacent to the school. Repave areas that have been cut and removed for utility installation/repair. Regrade and reinstall the trail where grades exceed 5%.	485 lf	7' wide	\$1.00	sf	\$4,740	Grading required. Regrade the trail at the curve where the slope exceeds 5%. Raise the surface of the trail at the low points to provide positive drainage off of the trail's surface.
009	Ballfield #2	PA	3	Deferred Maintenance	Install a segmental retaining wall behind the bleachers extending towards third base and running into grade. Add topsoil and reseed the disturbed and eroded areas.	50 lf	-	\$30	sf	\$4,275	Coordinate with bleacher pad replacement, Item #012. Wall supporting bleacher pad should tie into the retaining wall.
013	Ballfield #1	SF	3	Deferred Maintenance	Replace existing score board.	One (1)	-	\$3,200	each	\$5,600	
018	Ballfield #2	SF	3	Deferred Maintenance	Replace existing score board.	One (1)	-	\$3,200	each	\$5,600	
023	Ballfield #3	SF	3	Deferred Maintenance	Replace existing score board.	One (1)	-	\$3,200	each	\$5,600	
028	Ballfield #4	SF	3	Deferred Maintenance	Replace existing score board.	One (1)	-	\$3,200	each	\$5,600	
106	Restroom	EB	3	Deferred Maintenance	Repair wood framed wall around mechanical entrance. Remove, repair, and replace metal door and frame. Remove rotten wood stud framing and T-111 siding. Provide new to match.	-	4'-0" x 8'-0"	-	lump sum	\$1,200	Repair base of wall as required, possible 18'-0" x 2'-0" wood framed wall and T-111 siding. Door repair includes patching old hardware holes, removing rust and dents, and painting.
107	Restroom	EB	3	Deferred Maintenance	Grading at the rear and east side of the building does not provide adequate positive drainage. Regrade from building to ramp at rear and walkway at right side of building.	-	20'-0" x 20'-0" surface area	-	lump sum	\$3,600	

Cedar Falls Park

Chapel Hill Parks Maintenance Assessment

Address: 501 Weaver Dairy Road

Size: 64 acres

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
108	Restroom	RO	3	Deferred Maintenance	Space frame roof - Plywood sheathing and pressure treated. 2x4 nailers are showing signs of rot. Remove rotten materials and provide new to match. Recover with tar and gravel roofing.	-	Triangular flat roof area 550 sf.(+/-)	-	lump sum	\$2,880	
109	Restroom	RO	3	Deferred Maintenance	Conventional flat roof -the roof drains are clogged, basket covers missing, and ballast washed away. Clear drains and provide basket covers. Provide concrete splash block below drain spouts from above. Re-seal around drains with tar and ballast.	Two (2) roof drain covers and one (1) concrete splash block. Reseal area 64 sf.	6" drains	-	lump sum	\$800	
110	Restroom	EB	3	Deferred Maintenance	Clean, prep, and paint steel base plate and regrade surrounding area to 2" min. below plate when regrading for positive drainage.	One (1)	10" sq. plate	-	lump sum	\$100	
111	Restroom	EB	3	Deferred Maintenance	Rusting evident on steel bearing plates. Clean, prep, and paint steel bearing plates atop columns supporting space frame roof.	Three (3)	10" sq. plate	-	lump sum	\$200	
203	Restroom	IL	3	Deferred Maintenance	Replace linear fluorescent fixtures (Inefficient T12 Lamps and Magnetic Ballasts) with strip light with T8 lamps and efficient electronic ballasts.	Four (4)	-	\$200.00	each	\$800	
204	Restroom	IE	3	Deferred Maintenance	Realign occupancy sensor in men's toilet room: Detects occupancy too late.	One (1)	-	\$50.00	each	\$200	
304	Restroom	IP	3	Deferred Maintenance	Women's bathroom-first stall toilet has hairline crack in base. Replace with new.	One (1) new tank toilet	-	-	Lump Sum	\$2,600.00	Should be replaced before it becomes a safety issue.
305	Restroom	IP	3	Deferred Maintenance	Women's bathroom sink faucet does not work. Replace with new.	One (1) new faucet	-	-	Lump Sum	\$524.00	Fixture is broken.
306	Restroom	IP	3	Deferred Maintenance	Men's bathroom sink faucet turns off as soon as the button is released. Replace with new.	One (1) new faucet	-	-	Lump Sum	\$524.00	Fixture is broken.

Cedar Falls Park

Chapel Hill Parks Maintenance Assessment

Address: 501 Weaver Dairy Road

Size: 64 acres

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
308	Restroom/ Storage Room	IP	3	Deferred Maintenance	Remove 120 electric hot water heater no longer used.	One (1)-120 gal HW Tank and cap associated lines remove power to CB panel x man-hours	120 gallon	-	Lump Sum	\$2,000.00	Hot water is no longer supplied to the bathrooms.
309	Restroom/ Storage Room	IP	3	Deferred Maintenance	Remove Well-X-Trol tank well system no longer used.	1000 gal expansion tank and cap and create bypass any water lines if required connected to system x man-hours.	-	-	Lump Sum	\$4,000.00	Well system is not in use and pump has been removed from well.
310	Restroom roof	EP	3	Deferred Maintenance	Roof drains clogged and covers over baskets missing	man-hours + 2 protective covers	-	-	Lump Sum	\$1,500.00	Clean 2 roof drains and lines replace protective covers.
					DEFERRED MAINTENANCE SUBTOTAL					\$445,474	
003	Parking Lot	LS	4	Aesthetic Improvement	Remove existing vegetation (except trees in good condition) and replace with new according to a planting plan.	varies	varies	-	lump sum	\$35,000	New vegetation should be low growing to provide views into the park and between the parking areas.
008 a	Ballfield #2	F	4	Aesthetic Improvement	Replace existing galvanized chain-link fence fabric. Replace the missing gate in the outfield. Replace backstop and apron. Replace one (1) post and reset (14) posts.	1150 lf	avg. 8' high with backstop and apron	-	lump sum	\$22,920	
008 b	Ballfield #2	F	4	Aesthetic Improvement	Replace existing galvanized chain-link fence with vinyl coated chain-link fence. Replace the missing gate in the outfield.	1150 lf	avg. 8' high with backstop and apron	-	lump sum	\$35,000	
014 a	Ballfield #3	F	4	Aesthetic Improvement	Replace existing galvanized chain-link fence fabric. Replace the missing gate in the outfield.	735 lf and one (1) gate	avg. 8' high with backstop and apron	-	lump sum	\$14,385	
014 b	Ballfield #3	F	4	Aesthetic Improvement	Replace existing galvanized chain-link fence with vinyl coated chain-link fence.	735 lf, including posts, rails, gates, and fabric	avg. 8' high with backstop and apron	-	lump sum	\$23,000	

Cedar Falls Park

Chapel Hill Parks Maintenance Assessment

Address: 501 Weaver Dairy Road

Size: 64 acres

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
019 a	Ballfield #4	F	4	Aesthetic Improvement	Replace existing galvanized chain-link fence fabric. Replace post in outfield. Reset maintenance gate and center post.	715 lf and one (1) post	avg. 8' high with backstop and apron	-	lump sum	\$13,355	
019 b	Ballfield #4	F	4	Aesthetic Improvement	Replace existing galvanized chain-link fence with vinyl coated chain-link fence. Replace the missing gate in the outfield.	715 lf, including posts, rails, gates, and fabric	avg. 8' high with backstop and apron	-	lump sum	\$22,000	
024 a	Ballfield #1	F	4	Aesthetic Improvement	Replace existing galvanized chain-link fence fabric. Replace fence posts in outfield along timber retaining wall. Rehang maintenance gate and reset center post. Rehang gate at third base. Replace 30 lf of top rail, 10 lf of mid rail, and 80 lf of bottom rail.	1375 lf, including posts, rails, and gate	avg. 8' high with backstop and apron	-	lump sum	\$28,000	
024 b	Ballfield #1	F	4	Aesthetic Improvement	Replace existing galvanized chain-link fence with vinyl coated chain-link fence. Replace the missing gate in the outfield.	1375 lf, including posts, rails, gates, and fabric	avg. 8' high with backstop and apron	-	lump sum	\$41,250	

Cedar Falls Park

Chapel Hill Parks Maintenance Assessment

Address: 501 Weaver Dairy Road

Size: 64 acres

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
029 a	Tennis Court	F	4	Aesthetic Improvement	Replace existing galvanized chain-link fence fabric. Rehang two (2) gates and replace all hardware.	835 lf	8' high	-	lump sum	\$15,600	
029 b	Tennis Court	F	4	Aesthetic Improvement	Replace existing galvanized chain-link fence with vinyl coated chain-link fence. Replace all gates.	835 lf, including posts, rails, gates, and fabric	8' high	-	lump sum	\$25,000	
030	Tennis Court	PA	4	Aesthetic Improvement	Resurface existing tennis courts.	six (6) courts	35,530 sf	\$6,500	each	\$39,000	Tennis courts are in fair condition. Wearing of the court surface is occurring along the perimeter and at the gates.
038 a	Throughout the Park	SF	4	Aesthetic Improvement	Replace all site furnishings throughout the park, not previously listed. Install along an accessible route.	(22) waste receptacles, three (3) benches, four (4) picnic tables	standard	varies	each	\$58,950	
038 b	Throughout the Park	SF	4	Aesthetic Improvement	Reinstall existing site furnishings (benches, waste receptacles, and picnic tables) along an accessible route.	-	-	-	lump sum	\$6,000	
AESTHETIC IMPROVEMENTS SUBTOTAL										\$279,200	

Total cost to complete deficiency list	\$902,007
5% Mobilization	\$45,100
10% Contingency	\$90,201
15% Overhead and Profit	\$135,301
Total Cost	\$1,172,609

Life Safety Issue Subtotal	\$32,400
Code Violation Subtotal	\$144,933
Deferred Maintenance Issue Subtotal	\$445,474
Aesthetic Improvements Subtotal	\$279,200
Total Cost	\$902,007

Hargraves Park

Chapel Hill Parks Maintenance Assessment

Address: 216 North Roberson Street

Size: 10 acres

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
022	Gymnasium	PA	1	Life Safety	Install a segmental retaining wall along the bank between the gymnasium and the pool. Retaining wall can be tiered to eliminate the need for a handrail.	120 lf	8' high	\$25.00	sf	\$55,000	
045	Baseball Field	PA	1	Life Safety	Replace existing timber steps adjacent to the baseball field along North Roberson Street with concrete steps.	80 lf	-	\$115.00	lf	\$9,250	
LIFE SAFETY SUBTOTAL										\$64,250	
002	Parking Lot #1	PA	2	ADA Accessibility Code	Install ADA accessible parking spaces, access aisles and signage.		24' x 20'	-	lump sum	\$2,400	
004	Parking Lot #2	PA	2	ADA Accessibility Code	Install ADA accessible parking spaces, access aisles and signage.		16' x 20'	-	lump sum	\$1,625	

Hargraves Park

Chapel Hill Parks Maintenance Assessment

Address: 216 North Roberson Street

Size: 10 acres

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
006	Parking Lot #3	PA	2	ADA Accessibility Code	Install ADA accessible parking spaces, access aisles and signage.	Paving and pavement markings for one (1) ADA accessible van space and one (1) ADA access van aisle, and one (1) standard ADA space. One (1) ADA van accessible sign and two (2) ADA accessible standard signs.	24' x 20'	-	lump sum	\$2,400	
008	Parking Lot #4	PA	2	ADA Accessibility Code	Install ADA accessible parking spaces, access aisles and signage.	Paving and pavement markings for one (1) ADA accessible van space and one (1) ADA access van aisle, and one (1) standard ADA space. One (1) ADA van accessible sign and two (2) ADA accessible standard signs.	24' x 20'	-	lump sum	\$2,400	
009 a	Baseball Field	PA	2	ADA Accessibility Code	Install a concrete ADA accessible route from parking lot #3 to the bleachers at the baseball field.	102 lf	6' wide	\$4.50	sf	\$3,342	
009 b	Baseball Field	PA	2	ADA Accessibility Code	Install an asphalt ADA accessible route from parking lot #3 to the bleachers at the baseball field.	102 lf	6' wide	\$24.00	sy	\$2,220	
011	Picnic Area	SF	2	ADA Accessibility Code	Install an ADA accessible picnic table at the picnic area. Locate the picnic table along an accessible route.	One (1)	standard	\$2,000.00	each	\$3,200	
014	Baseball Field	SF	2	ADA Accessibility Code	Reset players benches so the seat is between 17" and 19" from the ground.	Two (2) benches	standard	-	lump sum	\$150	

Hargraves Park

Chapel Hill Parks Maintenance Assessment

Address: 216 North Roberson Street

Size: 10 acres

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
016	Baseball Field	PA	2	ADA Accessibility Code	Install a concrete pad for bleachers and include an ADA accessible seating area adjacent to the bleachers.	-	22' x 31' or 682 sf	\$4.50	sf	\$3,650	
019 a	Gymnasium	PA	2	ADA Accessibility Code	Install a concrete accessible route from the on-road sidewalk at North Roberson Street to the entrance to the gymnasium.	200 lf	6' wide	\$4.50	sf	\$6,569	
019 b	Gymnasium	PA	2	ADA Accessibility Code	Install an asphalt accessible route from the on-road sidewalk at North Roberson Street to the entrance to the gymnasium.	200 lf	6' wide	\$24.00	sy	\$4,410	
020 a	Picnic Area	PA	2	ADA Accessibility Code	Install a concrete ADA accessible route from the gymnasium entrance to the picnic area. Route should connect to the walk extending from parking lot #3. Include a paved pad for an ADA accessible picnic table adjacent to the walk.	80 lf	6' wide	\$4.50	sf	\$2,665	
020 b	Picnic Area	PA	2	ADA Accessibility Code	Install an asphalt ADA accessible route from the gymnasium entrance to the picnic area. Route should connect to the walk extending from parking lot #3. Include a paved pad for an ADA accessible picnic table adjacent to the walk.	80 lf	6' wide	\$24.00	sy	\$1,990	
024	Gymnasium	HR	2	ADA Accessibility Code	Replace handrail along steps at the gymnasium entrance adjacent to the pool. Handrail should extend 12" plus the depth of the tread from the bottom of the steps and be between 34"-38" in height.	25 lf	standard	\$55.00	lf	\$1,625	
025	Community Center Building	PA	2	ADA Accessibility Code	Replace the prefabricated metal steps at the entrance to the Community Center Building. Steps should have a riser height of 7" or less and be consistent for all steps within the run. A clear floor landing area of at least 5' should be located at the top and bottom of each run of steps.	One (1) unit with compliant landing	Approx. 5' in height and 10' in width	-	lump sum	\$15,900	Steps have a rise greater than 7" and the rise is not consistent for the run of steps.

Hargraves Park

Chapel Hill Parks Maintenance Assessment

Address: 216 North Roberson Street

Size: 10 acres

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
026	Community Center Building	PA	2	ADA Accessibility Code	Replace the prefabricated metal ramp at the entrance to the Community Center building. Ramp should have a clear floor landing area of at least 5' and a 2% slope located at the top and bottom. Replace handrail.	One (1) unit with compliant landing	Approx. 3' in height and 6' in width	-	lump sum	\$12,000	The clear floor landing area at the top of the ramp is less than 5'. Handrails are also not compliant.
032 a	Tennis Court	PA	2	ADA Accessibility Code	Install a concrete ADA accessible route to the tennis courts from parking lot #1.	120 lf	5' wide	\$4.50	sf	\$3,660	Grading will be required. The incorporation of a ramp and/or switchbacks will help to accommodate the grade. A 5' landing at 2% max. is required in front of the gate.
032 b	Tennis Court	PA	2	ADA Accessibility Code	Install an asphalt ADA accessible route to the tennis courts from parking lot #1.	120 lf	5' wide	\$24.00	sy	\$2,570	Grading will be required. The incorporation of a ramp and/or switchbacks will help to accommodate the grade. A 5' landing at 2% max. is required in front of the gate.
035 a	Throughout Park	SF	2	ADA Accessibility Code	Reinstall site furnishings (benches, waste receptacles, and picnic tables) along an accessible route.	-	-	-	lump sum	\$2,500	
035 b	Throughout Park	SF	2	ADA Accessibility Code	Replace existing benches and waste receptacles with new fixtures to maintain consistency throughout all parks.	Six (6) benches, 14 waste receptacles, and two (2) large bleachers	standard	\$1,000-\$4,500	lump sum	\$52,700	Site furnishings are in good condition.
038 a	Parking Lot #2	PA	2	ADA Accessibility Code	Install a concrete accessible route into the park from the sidewalk at Mitchell Lane to parking lot #2. Route should connect to the existing walk into the park that runs adjacent to the picnic shelter and the playground.	150 lf	6' wide	\$4.50	sf	\$4,920	Grading will be required. Current path exceeds 5% slope.
038 b	Parking Lot #2	PA	2	ADA Accessibility Code	Install an asphalt accessible route into the park from the sidewalk at Mitchell Lane to parking lot #2. Route should connect to the existing walk into the park that runs adjacent to the picnic shelter and the playground.	150 lf	6' wide	\$24.00	sy	\$3,270	Grading will be required. Current path exceeds 5% slope.
040	Community Center Building	PA	2	ADA Accessibility Code	Replace existing concrete sidewalk adjacent to the Community Center Building.	-	23,355 sf	\$4.50	sf	\$121,350	

Hargraves Park

Chapel Hill Parks Maintenance Assessment

Address: 216 North Roberson Street

Size: 10 acres

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
201	Walkways/ Parking Lot	EL	2	Ordinance Violation	Replace 'Open Bottom', 'Magnuliter Flood' type and 'Cobra Dropped Lens' semi cut off type parking lot lights with full cut off type fixtures on existing poles.	10	175W MH	\$500.00	each	\$5,000	Coordinate with Duke Power.
202	Walkways	EL	2	National Electrical Code Violation	Replace Schedule 40 PVC conduit on pole , add straps and guards up to 10' AFG.	Two (2)	30'x2"Ø	\$250.00	each	\$500	Coordinate with Duke Power.
203	Walkways	EL	2	National Electrical Code Violation	Trim branches obstructing light output.	Two (2)		\$200.00	each	\$400	
204	Walkways	EL	2	AASHTO Lighting Standard GL-6 Violation	Remove 'Magnuliter Flood' type walkway lights and replace with full cut off type walkway lights on path between parking lots and at playground for recommended lighting levels of 0.3fc and uniformity avg:min of 6:1 including grounding, raceway and wiring.	Nine (9)	175W MH on 12' fiberglass poles	\$2,000.00	each	\$18,000	Coordinate with Duke Power.
CODE VIOLATION SUBTOTAL										\$264,456	
001	Parking Lot #1	PA	3	Deferred Maintenance	Repave existing asphalt parking lot and entrance drive. Include pavement markings to designate standard parking spaces.	38 spaces	120,700 sf	\$1.00	sf	\$12,670	Existing parking lot is in fair condition. Drive is starting to show signs of wear and cracking.
003	Parking Lot #2	PA	3	Deferred Maintenance	Repave existing asphalt parking lot and entrance drive. Include pavement markings to designate standard parking spaces.	11 spaces	4,910 sf	\$1.00	sf	\$5,510	
005	Parking Lot #3	PA	3	Deferred Maintenance	Repave existing asphalt parking lot and entrance drive. Include pavement markings to designate standard parking spaces.	33 spaces	13,129 sf	\$1.00	sf	\$14,350	
007	Parking Lot #4	PA	3	Deferred Maintenance	Repave existing asphalt parking lot and entrance drive. Include pavement markings to designate standard parking spaces.	46 spaces	7,436	\$1.00	sf	\$8,040	
012	Parking Lot #3	LS	3	Deferred Maintenance	Regrade the slope between the parking lot and the baseball field to eliminate the walkway. Install low growing evergreen shrubs to stabilize the slope and deter people from walking.	65 lf	3'-4' rise	-	lump sum	\$2,200	

Hargraves Park

Chapel Hill Parks Maintenance Assessment

Address: 216 North Roberson Street

Size: 10 acres

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
027	Community Center Building	SW	3	Deferred Maintenance	Install a new drain inlet at the corner of the daycare center building. Remove the existing sidewalk drain at the base of the steps and replace with a larger drain. Install a new drain inlet in lawn area. Tie into existing system.	Approx. 50 lf of drain and two (2) drains	-	-	lump sum	\$15,000	
037	Maintenance entrance from parking lot #2	PA	3	Deferred Maintenance	Install permeable paving at the maintenance gate entrance to eliminate ruts caused by maintenance vehicles.	35 lf	10' wide	\$5.75	sf	\$2,922	
101	Picnic Shelter	EB	3	Deferred Maintenance	Concrete slab on grade has a large crack over entire length and major settling at the southwest corner. Slab was poorly installed and its surface is deteriorating. Immediate remediation of settling southeast slab section is needed. Remove partial slab section and repair cracking.	-	27 l.f. conc. crack repair and 9'-6" x 6'-0" x 5" conc. slab w/ broom finish	-	lump sum	\$3,200	
102	Picnic Shelter	EB	3	Deferred Maintenance	Replace damaged painted pressure treated 2x6 fascia board at southeast end.	One (1)	8 l.f.	-	lump sum	\$150	
103	Picnic Shelter	EB	3	Deferred Maintenance	Tongue and groove roof decking appears to be over-spanned. Observed sagging between beams and joints slipping apart. Remove roofing and decking, and provide new cross members.	P.T. 2x8's @ 24" o.c. on simpson hangers ≤10'-0" span	2.5:12 slope 18'-6" x 32'-0" area in plan	-	lump sum	\$6,000	Remove and reuse existing T&G decking
104	Picnic Shelter	EB	3	Deferred Maintenance	Repair corners of slab around four (4) wood columns of structure. Remove concrete slab, provide compacted fill around base of column, and connect new concrete pour to existing.	Four (4)	12" x 12" x 5" concrete slab on grade with 4 dowels	-	lump sum	\$1,600	
205	Picnic Shelter	EL	3	Deferred Maintenance	Add auto shut-off timer controlled surface mounted CFL lights at picnic shelter.	Two (2)	12"x12", 2x42W CFL	\$500.00	each	\$1,000	
DEFERRED MAINTENANCE SUBTOTAL										\$72,642	
018	Baseball Field	SF	4	Aesthetic Improvement	Replace existing score board.	One (1)	-	\$3,200	each	\$5,600	
023	Gymnasium	LS	4	Aesthetic Improvement	Install trees and shrubs along the retaining wall(s) according to a planting plan.	-	3360 sf	-	lump sum	\$10,000	

Hargraves Park

Chapel Hill Parks Maintenance Assessment

Address: 216 North Roberson Street

Size: 10 acres

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
028	West side of the park	LS	4	Aesthetic Improvement	Remove existing landscaping and replace with new according to a planting plan.	-	5640 sf	-	lump sum	\$100,000	Current vegetation is overgrown and may provide a security concern.
030	Tennis Court	PA	4	Aesthetic Improvement	Resurface existing tennis courts.	Three (3) courts	19,570 sf	\$6,500.00	each	\$19,500	Tennis courts are in fair condition. Wearing of the court surface is occurring along the perimeter and at the gates.
039	Parking Lot #2	LS	4	Aesthetic Improvement	Remove existing vegetation and install trees and shrubs in the area between parking lot #2 and Mitchell Lane according to a planting plan.	-	4340 sf	-	lump sum	\$15,000	
041	Basketball Court	PA	4	Aesthetic Improvement	Resurface the existing basketball court.	One (1)	3952 sf	\$6,500.00	each	\$6,500	Existing court is in fair condition.
042	Basketball Court	SF	4	Aesthetic Improvement	Replace the basketball goals.	Two (2) goals	standard	\$2,200.00	each	\$5,600	
044	Basketball Court	LS	4	Aesthetic Improvement	Install shade trees around the basketball court.	Ten (10) trees	canopy	\$500.00	each	\$5,850	
010 a	Picnic Area	PA	4	Functional Improvement	Install a concrete walkway from parking lot #3 through the picnic area to the gymnasium entrance.	165 lf	6' wide	\$4.50	sf	\$5,385	Utilize the new steps and the worn footpath.
010 b	Picnic Area	PA	4	Functional Improvement	Install an asphalt walkway from parking lot #3 through the picnic area to the gymnasium entrance.	165 lf	6' wide	\$24.00	sy	\$3,570	Utilize the new steps and the worn footpath.
013 a	Northeast/east side of the park	LS	4	Aesthetic Improvement	Remove existing landscaping and install new, based on a planting plan.	-	39,700 sf	-	lump sum	\$50,000	
013 b	Northeast/east side of the park	LS	4	Aesthetic Improvement	Remove existing landscaping and install new, based on a planting plan. Include steps and gravel walkways to improve circulation patterns.	-	39,700 sf	-	lump sum	\$65,000	Foot paths need to be improved.
015 a	Baseball Field	F	4	Aesthetic Improvement	Replace existing galvanized chain-link fence fabric.	880 lf	avg 8' high with backstop and apron	-	lump sum	\$16,720	
015 b	Baseball Field	F	4	Aesthetic Improvement	Replace existing galvanized chain-link fence with vinyl coated chain-link fence.	880 lf	avg 8' high with backstop and apron	-	lump sum	\$40,000	

Hargraves Park

Chapel Hill Parks Maintenance Assessment

Address: 216 North Roberson Street

Size: 10 acres

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
021	Gymnasium	PA	4	Aesthetic Improvement	Provide access to the gymnasium for emergency vehicles utilizing the space between the baseball field and the gymnasium entrance. Route should utilize parking lot along North Roberson Street. Permeable pavers should be installed in the existing lawn to extend the route from parking lot #3 to the building.	175 lf	10' wide	\$5.75	sf	\$12,190	Pavers will also eliminate ruts from delivery and maintenance vehicles accessing the ballfield.
029 a	Tennis Court	F	4	Aesthetic Improvement	Replace existing galvanized chain-link fence fabric. Install a bottom rail around the court. Replace all gates.	565 lf, bottom rail, and gates	8' high	-	lump sum	\$11,040	
029 b	Tennis Court	F	4	Aesthetic Improvement	Replace existing galvanized chain-link fence with vinyl coated chain-link fence. Install a bottom rail around the court.	565 lf, rails, posts, and gates	8' high	-	lump sum	\$19,000	
033 a	Playground	S	4	Aesthetic Improvement	Add 3"-4" of engineered wood fiber.	3960 sf	3" - 4" deep	\$40.00	cy	\$1,480	
033 b	Playground	S	4	Aesthetic Improvement	Remove existing engineered wood fiber and install poured-in-place playground surfacing at both play areas.	3960 sf	-	\$14.00	sf	\$73,040	
043 a	Basketball Court	F	4	Aesthetic Improvement	Replace existing galvanized chain-link fence fabric.	258 lf	8' high	-	lump sum	\$4,128	
043 b	Basketball Court	F	4	Aesthetic Improvement	Replace existing galvanized chain link fence with vinyl coated chain-link fence.	258 lf	8' high	-	lump sum	\$15,774	
AESTHETIC IMPROVEMENTS SUBTOTAL										\$326,879	

Total cost to complete deficiency list

\$728,227

Life Safety Issue Subtotal	\$64,250
Code Violation Subtotal	\$264,456
Deferred Maintenance Issue Subtotal	\$72,642
Aesthetic Improvements Subtotal	\$326,879
Total Cost	\$728,227

5% Mobilization	\$36,411
10% Contingency	\$72,823
15% Overhead and Profit	\$109,234
Total Cost	\$946,695

Oakwood Park

Chapel Hill Parks Maintenance Assessment

Address: 20 Oakwood Drive

Size: 2 acres

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
004	Playground	PE	1	Life Safety	Remove existing playground equipment (tire swing, triple-bay swing, and the zip line)	Three large pieces of equipment	varies	-	lump sum	\$2,400	Oudated and non-compliant
010	Open Space	SF	1	Life Safety	Remove existing wooden bench from the corner of Oakwood Drive and Berkley Road.	2 hours of labor	-	\$75.00	per hour	\$150	Bench is rotting.
017	Athletic Field	F	1	Life Safety	Remove existing backstop.	-	30 lf	-	lump sum	\$180	Rusty and falling over.
006 a	Playground	PS	1	Life Safety	Remove existing sand playground surfacing and install engineered wood fiber, stone, and edging.	180 cy	4865 sf	\$40	cy	\$11,100	In conjunction with installation of new playground equipment, Item #005.
006 b	Playground	PS	1	Life Safety	Remove existing sand playground surfacing and install poured-in-place playground surfacing.	-	4865 sf	\$14	sf	\$89,710	In conjunction with installation of new playground equipment, Item #005.
LIFE SAFETY SUBTOTAL										\$13,830	
001	Perimeter of Park	PA	2	ADA Accessibility Code	Install a concrete sidewalk around the exterior perimeter of the park, along Oakwood Drive and Berkley Road, on all three parcels.	650 lf	5' wide	\$4.50	sf	\$16,245	Tie into existing sidewalk along Berkley Road. The sidewalk along the tennis court may require relocation of the existing power pole and fire hydrant. Coordination with utility company and public works is required. In conjunction with the fence replacement, Item #013.
003	Perimeter of Park	PA	2	ADA Accessibility Code	Install curb cuts at the corner of each intersection.	3 curb cuts	standard	\$500	each	\$1,500	Coordinate with sidewalk installation, Item #001.

Oakwood Park

Chapel Hill Parks Maintenance Assessment

Address: 20 Oakwood Drive

Size: 2 acres

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
018	Tennis Court	PA	2	ADA Accessibility Code	Install a concrete accessible route/walk from the sidewalk at the street to the tennis court.	10 lf	5' wide	\$4.50	sf	\$306	
002 a	Park	PA	2	ADA Accessibility Code	Install a concrete accessible route from the sidewalk at the street through the gate into the playground, providing accessibility throughout the site and connecting to the sidewalk at the other gate.	105 lf	5' wide	\$4.50	sf	\$2,933.50	
002 b	Park	PA	2	ADA Accessibility Code	Install an asphalt accessible route from the sidewalk at the street through the gate into the playground, providing accessibility throughout the site and connecting to the sidewalk at the other gate.	105 lf	5' wide	\$24.00	sy	\$1,987	
011 a	Throughout park	SF	2	ADA Accessibility Code	Remove existing waste receptacles and ADA complaint picnic tables and reinstall along an accessible route.	-	-	-	lump sum	\$600	
011 b	Throughout park	SF	2	ADA Accessibility Code	Remove existing site furnishings and replace with new (these are new items). Install along an accessible route.	Three (3) waste receptacles and one (1) picnic table	standard	\$1000-\$2000	each	\$8,600	
CODE VIOLATION SUBTOTAL										\$29,585	
020	Athletic Field	SW	3	Deferred Maintenance	Improve the existing swale on the north side of the athletic field by regrading and reseeding. Install a new swale along the athletic field adjacent to the tennis court to prevent drainage problems and erosion.	-	300 lf	-	lump sum	\$2,000	
DEFERRED MAINTENANCE SUBTOTAL										\$2,000	

Oakwood Park

Chapel Hill Parks Maintenance Assessment

Address: 20 Oakwood Drive

Size: 2 acres

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
005	Playground	PE	4	Aesthetic Improvement	Remove and replace existing composite structures to create a large, more uniform, and cohesive play atmosphere.	Remove 2 large composites and install new equipment.	varies		lump sum	\$60,000	In conjunction with removal of other equipment, Item #004 and installation of poured in place surfacing, Item #006.
007	Playground	SF	4	Aesthetic Improvement	Install a small picnic shelter adjacent to the playground.	One (1)	18' x 18'	\$7,020	each	\$10,074	
009	Tennis Court	SF	4	Aesthetic Improvement	Remove existing bench and install a new bench along an accessible route on a concrete pad. Include a paved ADA seating area adjacent to each bench.	One (1) bench and six (6) sy of concrete	-	\$1,500	each	\$2,712	
012	Vacant wooded parcel	SF	4	Aesthetic Improvement	Install a gazebo, benches, waste receptacle, shrubs and perennials on the underutilized parcel of land.	One (1) gazebo, two (2) benches, one (1) waste receptacle, and a variety of perennials	standard	-	lump sum	\$16,000.00	
015	Playground	LS	4	Aesthetic Improvement	Install shade trees adjacent to the playground area.	Six (6) trees	3" cal.	\$300	each	\$3,000	A native oak variety is preferred.
016	Tennis Court	LS	4	Aesthetic Improvement	Remove existing shrubs adjacent to the tennis courts along Berkley Road.	16 hours	-	\$75	per hour	\$1,200	
008 a	Playground	SF	4	Aesthetic Improvement	Remove and reinstall existing benches along an accessible route on a concrete pad. Include a paved ADA seating area adjacent to each bench.	Two (2)	-	\$4.50	sf	\$924	
013 a	Playground	F	4	Aesthetic Improvement	Replace existing galvanized chain-link fence fabric around the perimeter of the playground.	572 lf	4' high	-	lump sum	\$8,050	In conjunction with the sidewalk installation, Item #001.

Oakwood Park

Chapel Hill Parks Maintenance Assessment

Address: 20 Oakwood Drive

Size: 2 acres

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
013 b	Playground	F	4	Aesthetic Improvement	Remove and replace existing galvanized chain-link fencing with vinyl coated chain-link fencing around the perimeter of the playground.	572 lf	4' high	-	lump sum	\$19,725	In conjunction with the sidewalk installation, Item #001.
013 c	Playground	F	4	Aesthetic Improvement	Remove and replace existing galvanized chain-link fencing with decorative fencing around the perimeter of the playground.	572 lf	4' high	-	lump sum	\$25,000	In conjunction with the sidewalk installation, Item #001.
014 a	Tennis Court	F	4	Aesthetic Improvement	Replace existing galvanized chain-link fence fabric around the perimeter of the tennis court.	370 lf	10' high	-	lump sum	\$6,825	
014 b	Tennis Court	F	4	Aesthetic Improvement	Remove and replace existing galvanized chain-link fencing with vinyl coated chain-link fencing around the perimeter of the tennis court.	370 lf	10' high	-	lump sum	\$19,125	
					AESTHETIC IMPROVEMENTS SUBTOTAL					\$138,035	

Total cost to complete deficiency list \$183,450

Life Safety Issue Subtotal	\$13,830
Code Violation Subtotal	\$29,585
Deferred Maintenance Issue Subtotal	\$2,000
Aesthetic Improvements Subtotal	\$138,035
Total Cost	\$183,450

5% Mobilization	\$9,172
10% Contingency	\$18,345
15% Overhead and Profit	\$27,517
Total Cost	\$238,484

Umstead Park

Chapel Hill Parks Maintenance Assessment

Address: 399 Umstead Road

Size: 16 acres

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
015	Playground	PE/SF	1	Life Safety	Remove the wooden picnic tables, grill, and spring rockers from the low area adjacent to the creek.	-	-	-	lump sum	\$1,050	
016	Playground	PE	1	Life Safety	Replace the existing double bay swings.	One (1)	standard	\$3,200	each	\$5,780	Existing swings are aged and obsolete. In conjunction with playground surfacing replacement, Item #018.
018	Playground	PS	1	Life Safety	Remove existing sand playground surfacing and replace with engineered wood fiber.	-	9705 sf	\$40	cy	\$42,900	In conjunction with playground replacements, Items #016 and #017.
026	Baseball Field	SF	1	Life Safety	Replace existing bleachers.	One (1)	standard	\$4,500	each	\$7,350	
105	Picnic Shelter	EB	1	Deferred Maintenance	The steel pipe embedded in concrete slab is a safety hazard and should be removed. Cut 2" pipe at base, grind down and fill with grout flush with top of slab.	-	-	-	lump sum	\$150	
					LIFE SAFETY SUBTOTAL					\$57,230	
002	Parking Lot	PA	2	ADA Accessibility Code	Install ADA accessible parking spaces, access aisles and signage.						
						Paving and pavement markings for one (1) ADA accessible van space, one (1) ADA access aisle, one (1) standard ADA accessible space. One (1) ADA van accessible sign and two (2) ADA accessible standard sign.	24' x 20'	-	lump sum	\$2,400	In conjunction with asphalt resurfacing, Item #001.
012	Picnic Shelter/ Restroom	SF	2	ADA Accessibility Code	Remove and replace existing grill with an ADA compliant grill.	One (1)	standard	\$750	each	\$1,350	
013	Picnic Shelter/ Restroom	SF	2	ADA Accessibility	Reinstall existing ADA compliant picnic tables along an accessible route.	Two (2) hours	-	\$75	per hour	\$150	
019	Small Picnic Shelter	SF	2	ADA Accessibility Code	Install an ADA accessible picnic table along an accessible route. Install a grill to be ADA compliant.	One (1) ADA picnic table and one (1) grill.	standard	\$750-\$2000	each	\$4,400	

Umstead Park

Chapel Hill Parks Maintenance Assessment

Address: 399 Umstead Road

Size: 16 acres

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
020	Parking Lot	PA	2	ADA Accessibility Code	Install a concrete ADA accessible route from the parking lot to the crosswalk. Include pavement markings on the parking lot to delineate the pedestrian flow of traffic.	Approx. 28 lf	5' wide	\$4.50	sf	\$1,900	
104	Picnic Shelter	RO	2	Building Code	The roof framing has detailing which is of questionable stability. Some members appear to be over spanned and/or inadequately anchored and braced. Have structure evaluated by a licensed structural engineer.	-	-	-	lump sum	\$500	
202	Walkways/ Parking Lot	EL	2	Ordinance Violation	Replace 'Open Bottom' type Walkway and 'Cobra Dropped Lens' semi cut off type parking lot lights with full cut off type fixture on existing pole.	Nine (9)	175W MH	\$500.00	each	\$4,500	
203	Walkways	EL	2	Code Violation	Replace Schedule 40 PVC conduit on pole and add guard up to 10' AFG.	Three(3)	30"x2"Ø	\$250.00	each	\$750	
204	Picnic Shelter	EE	2	Code Violation	Replace corroded abandoned box and meter.	One (1)	6"x6"	\$500.00	each	\$500	
301	Picnic Shelter/ Restroom	EP	2	ADA Accessibility Code Violation	Replace existing water fountain with two separate water fountains mounted at different heights as required by ADA.	Two (2) water fountains, installed	-	\$4,200	each	\$8,400	Existing fountain is missing. Does not meet required dual height spout requirement.
003 a	Picnic Shelter/ Restroom	PA	2	ADA Accessibility Code	Install a concrete ADA accessible route from the parking lot to the picnic shelter.	Approx. 150 lf	6.5' wide	\$4.50	sf	\$5,762	Grade should not exceed 5%.
003 b	Picnic Shelter/ Restroom	PA	2	ADA Accessibility Code	Install an asphalt ADA accessible route from the parking lot to the picnic shelter.	Approx. 150 lf	6.5' wide	\$24.00	sy	\$4,014	Grade should not exceed 5%.
004 a	Basketball Court	PA	2	ADA Accessibility Code	Install a concrete ADA accessible route from the parking lot to the basketball court. Include a paved pad for a bench with an ADA accessible seating area.	Approx. 23 lf for walk and 6 sy of pad	5' wide	\$4.50	sf	\$690	
004 b	Basketball Court	PA	2	ADA Accessibility Code	Install an asphalt ADA accessible route from the parking lot to the basketball court. Include a paved pad for a bench with an ADA accessible seating area.	Approx. 23 lf for walk and 6 sy of pad	5' wide	\$24	sy	\$485	

Umstead Park

Chapel Hill Parks Maintenance Assessment

Address: 399 Umstead Road

Size: 16 acres

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
007 a	Playground	PA	2	ADA Accessibility Code	Install a concrete ADA accessible route from the parking lot to the playground.	Approx. 365 lf	6' wide	\$4.50	sf	\$14,650	
007 b	Playground	PA	2	ADA Accessibility Code	Install an asphalt ADA accessible route from the parking lot to the playground.	Approx. 365 lf	6' wide	\$24.00	sy	\$10,675	
010 a	Small Picnic Shelter	PA	2	ADA Accessibility Code	Install a concrete ADA accessible route from the playground to the second picnic shelter.	80 lf	6' wide	\$4.50	sf	\$2,670	Tie into existing walkway.
010 b	Small Picnic Shelter	PA	2	ADA Accessibility Code	Install an asphalt ADA accessible route from the playground to the second picnic shelter.	80 lf	6' wide	\$24	sy	\$1,830	Tie into existing walkway.
021 a	Baseball Field	PA	2	ADA Accessibility Code	Install a concrete accessible route from the crosswalk to the baseball field. Remove existing timber steps and replace with a ramp. Switchbacks may be required.	Approx. 275 lf	5' wide	\$4.50	sf	\$14,000	Grading will be required. Sidewalk drains will be necessary.
021 b	Baseball Field	PA	2	ADA Accessibility Code	Install an asphalt accessible route from the crosswalk to the baseball field. Remove existing timber steps and replace with a ramp. Switchbacks may be required.	Approx. 275 lf	5' wide	\$24	sy	\$11,475	Grading will be required. Sidewalk drains will be necessary.
022 a	Tennis Court	PA	2	ADA Accessibility Code	Install a concrete accessible route from the baseball field to the tennis court.	Approx. 150 lf	5' wide	\$4.50	sf	\$4,300	Grading will be required. Sidewalk drains will be necessary. Item not required if Town chooses to demolish the tennis court.
022 b	Tennis Court	PA	2	ADA Accessibility Code	Install an asphalt accessible route from the baseball field to the tennis court.	Approx. 150 lf	5' wide	\$24	sy	\$2,975	Grading will be required. Sidewalk drains will be necessary. Item not required if Town chooses to demolish the tennis court.
025 a	Baseball Field	PA	2	ADA Accessibility Code	Install a concrete paved pad for bleachers and include an ADA accessible seating area adjacent to the bleachers.	-	325 sf	-	lump sum	\$1,770	
025 b	Baseball Field	PA	2	ADA Accessibility Code	Install an asphalt paved pad for bleachers and include an ADA accessible seating area adjacent to the bleachers.	-	325 sf	-	lump sum	\$1,175	
CODE VIOLATION SUBTOTAL										\$64,392	

Umstead Park

Chapel Hill Parks Maintenance Assessment

Address: 399 Umstead Road

Size: 16 acres

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
001	Parking Lot	PA	3	Deferred Maintenance	Resurface existing asphalt parking lot and entrance drive.	(46) standard parking spaces, approx. 9' x 18'	20,125 sf	\$1.00	sf	\$21,325	In conjunction with ADA accessible spaces, Item #002.
006	Basketball Court	SF	3	Deferred Maintenance	Replace non-adjustable basketball goals.	Two (2)	standard	\$2,200	each	\$5,600	
009	Small Picnic Shelter	PA	3	Deferred Maintenance	Remove excess paving past the second picnic shelter. Grade and reseed.	-	1547 sf	-	lump sum	\$10,015	
011	Basketball Court	PA	3	Deferred Maintenance	Resurface existing basketball court.	One (1) court	3044 sf	3600	each	\$3,600	Existing basketball court is in fair condition.
027	Baseball Field	SF	3	Deferred Maintenance	Replace existing scoreboard.	One (1)	-	\$3,200	each	\$5,600	
101	Picnic Shelter/ Restroom	EB	3	Deferred Maintenance	Water damage is apparent at the base of exterior block walls. Original through the wall drains have been closed. These should be reopened and one should be added to the door side of the column in men's and women's rooms.	24 existing 2 to be provided	-	-	lump sum	\$300	
102	Picnic Shelter/ Restroom	EB	3	Deferred Maintenance	Provide new men's and women's restroom signage to replace existing damaged signs.	2	standard	-	lump sum	\$150	
103	Picnic Shelter/ Restroom	BF	3	Deferred Maintenance	The ADA partition doors in both men's and women's restrooms do not latch, due to a bent hinge pins. Replace hinge pin with new to match.	2	-	-	lump sum	\$150	
106	Picnic Shelter	RO	3	Deferred Maintenance	Remove existing asphalt shingle roofing and provide new over felt with metal drip edge flashing at rakes and eaves.	-	-	-	lump sum	\$2,000	In conjunction with Item #104.
201	Picnic Shelter/ Restroom	EL	3	Deferred Maintenance	Replace 12"x12" surface mounted fixture due to yellowing of Polycarb. Lens and dirt depreciation.	Two (2)	175W MH	\$200.00	each	\$400	
005 a	Basketball Court	F	3	Deferred Maintenance	Replace existing galvanized chain-link fence fabric. Increase the length of the fence to provide enclosure to the court.	250 lf		-	lump sum	\$3,250	

Umstead Park

Chapel Hill Parks Maintenance Assessment

Address: 399 Umstead Road

Size: 16 acres

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
005 b	Basketball Court	F	3	Deferred Maintenance	Replace existing galvanized chain-link fence with vinyl coated chain-link fence. Increase the length of the fence to provide enclosure to the court.	250 lf		-	lump sum	\$6,000	
008 a	Throughout park	PA	3	Deferred Maintenance	Resurface existing asphalt trails.	Approx. 515 lf	varies	\$1.00	sf	\$7,550	
008 b	Throughout park	PA	3	Deferred Maintenance	Demolish existing asphalt trails and reinstall concrete trails.	Approx. 515 lf	varies	\$4.50	sf	\$26,261	
023 A	Tennis Court	PA/F/SW	3	Deferred Maintenance	Resurface existing tennis court. Replace existing galvanized chain-link fence with vinyl coated chain-link fence. Install a drainage system to divert water	One (1) court	7269 sf	-	lump sum	\$56,480	
023 B	Tennis Court	PA/F/SW	3	Deferred Maintenance	Demolish existing tennis court, including court surfacing, fencing, and lights. Grade area to drain and seed.	One (1) court	7269 sf	-	lump sum	\$64,972	
DEFERRED MAINTENANCE SUBTOTAL										\$127,662	
014	Parking Lot	LS	4	Aesthetic Improvement	Install shade trees and flowering shrubs around the perimeter of the parking lot.	Approx. (15) Trees and (40) shrubs	varies	-	lump sum	\$15,000	

Umstead Park

Chapel Hill Parks Maintenance Assessment

Address: 399 Umstead Road

Size: 16 acres

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
017	Playground	PE	4	Aesthetic Improvement	Relocate existing playground composite structure out of the floodway.						Existing composite play structure is in good condition. In conjunction with playground surfacing replacement, Item #018.
024 a	Baseball Field	F	4	Aesthetic Improvement	Replace existing galvanized chain-link fence fabric. Increase the length of the fence to provide enclosure around the entire field.	825 lf	outfield fence is 4' high, with backstop and apron.	-	lump sum	\$10,725	
024 b	Baseball Field	F	4	Aesthetic Improvement	Replace existing galvanized chain-link fence with vinyl coated chain-link fence. Increase the length of the fence to provide enclosure around the entire field.	825 lf	outfield fence is 4' high, with backstop and apron.	-	lump sum	\$42,500	
					AESTHETIC IMPROVEMENTS SUBTOTAL					\$57,500	

Total cost to complete deficiency list \$306,784

Life Safety Issue Subtotal	\$57,230
Code Violation Subtotal	\$64,392
Deferred Maintenance Issue Subtotal	\$127,662
Aesthetic Improvements Subtotal	\$57,500
Total Cost	\$306,784

5% Mobilization	\$15,339
10% Contingency	\$30,678
15% Overhead and Profit	\$46,018
Total Cost	\$398,819

Bolin Creek Greenway
Chapel Hill Parks Maintenance Assessment

Address:

Size: 1.5 miles

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
026	lower section (between the spur to Elizabeth Street and Dickerson Court)	LS	1	Life Safety	Remove stumps and fill low areas.	-	-	-	lump sum	\$3,000	
LIFE SAFETY SUBTOTAL										\$3,000	
001	Bolin Creek Greenway (Between Martin Luther King Jr. Boulevard and Chapel Hill Park, including the spur to Elizabeth Street)	PA	3	Deferred Maintenance	Edge along existing asphalt trail, remove all vegetation including between cracks and joints in the asphalt. Resurface asphalt. Install pavement markings.	Approx. 8,000 lf	10-12' wide	-	lump sum	\$102,000	Resurfacing should cover the entire width of the trail, including visible seams, as well as the patches, ruts, and scrapes caused by vehicles and heavy equipment. Areas where the pavement is heaving should be repaired.
003	north section (Between Martin Luther King Jr. Boulevard and Bolinwood Drive)	SW	3	Deferred Maintenance	Clean out drainage pipe.	One (1)	30 lf	-	lump sum	\$600	
004	north section (Between Martin Luther King Jr. Boulevard and Bolinwood Drive)	ST	3	Deferred Maintenance	Replace retaining wall blocks and caps adjacent to the bridge.	-	-	-	lump sum	\$725	Damaged or missing.
005	north section (Between Martin Luther King Jr. Boulevard and Bolinwood Drive)	ST	3	Deferred Maintenance	Replace bridge decking and railings.	-	10' wide	-	lump sum	\$15,000	Recommended that a structural engineer review the bridge.

Bolin Creek Greenway
Chapel Hill Parks Maintenance Assessment

Address:

Size: 1.5 miles

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
006	north section (Between Martin Luther King Jr. Boulevard and Bolinwood Drive)	LS	3	Deferred Maintenance	Trim vegetation around the bridge, retaining walls, and fencing. Remove vines.	64 hours	-	\$25	per hour	\$4,800	
007	north section (Between Martin Luther King Jr. Boulevard and Bolinwood Drive)	SF	3	Deferred Maintenance	Remove unused sign post adjacent to the trail.	-	-	-	lump sum	\$150	
008	north section (Between Martin Luther King Jr. Boulevard and Bolinwood Drive)	SF	3	Deferred Maintenance	Replace bench and waste receptacle adjacent to the bridge.	One (1) bench and one (1) waste receptacle	standard	-	each	\$4,300	Install along an accessible route.
009	Bolin Creek Greenway (Between Martin Luther King Jr. Boulevard and Chapel Hill Park, including the spur to Elizabeth Street)	SF	3	Deferred Maintenance	Replace bollards at all intersecting streets with lockable dropdown bollards.	Five (5)	-	\$1,150	each	\$9,200	
010	middle section (Between Bolinwood Drive and spur to Elizabeth Street)	SW	3	Deferred Maintenance	Clean out three culverts under the wood decking.	Three (3) culverts	-	-	lump sum	\$1,200	

Bolin Creek Greenway
Chapel Hill Parks Maintenance Assessment

Address:

Size: 1.5 miles

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
011	middle section (Between Bolinwood Drive and spur to Elizabeth Street)	SW	3	Deferred Maintenance	Clean out drainage pipe.	One (1) pipe	-	-	lump sum	\$600	
012	middle section (Between Bolinwood Drive and spur to Elizabeth Street)	PA	3	Deferred Maintenance	Patch concrete section of trail.	1320 lf	10' wide	-	lump sum	\$67,000	Replacement of the concrete may be needed in the future.
013	middle section (Between Bolinwood Drive and spur to Elizabeth Street)	SW	3	Deferred Maintenance	Fill low areas between the creek and the trail and reseed.	-	Approx. 2400 sf	-	lump sum	\$2,500	Particularly the areas where equipment was recently towed out.
014	middle section (Between Bolinwood Drive and spur to Elizabeth Street)	ST	3	Deferred Maintenance	Replace bridge decking and railings.	-	10' wide	-	lump sum	\$18,000	Double trunk tree is adjacent to this bridge. Have a Structural Engineer review the bridge.
015	middle section (Between Bolinwood Drive and spur to Elizabeth Street)	ST	3	Deferred Maintenance	Repair concrete block wall adjacent to the bridge.	-	-	-	lump sum	\$725	
016	middle section (Between Bolinwood Drive and spur to Elizabeth Street)	LA	3	Deferred Maintenance	Remove the tree with the double trunk, vines, and other vegetation around the bridge.	-	-	-	lump sum	\$2,400	Tree is scheduled for partial removal by the Town, along with 15 other trees.
017	spur to Elizabeth Street	SF	3	Deferred Maintenance	Remove unused sign posts adjacent to the trail.	-	-	-	lump sum	\$150	

Bolin Creek Greenway
Chapel Hill Parks Maintenance Assessment

Address:

Size: 1.5 miles

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
018	spur to Elizabeth Street	ST	3	Deferred Maintenance	Repair retaining wall. Replace damaged block and missing caps.	-	-	-	lump sum	\$725	
019	spur to Elizabeth Street	LS	3	Deferred Maintenance	Clean up storm damage on the sewer easement adjacent to the spur to Elizabeth Street. Remove dead and uprooted vegetation, add topsoil and seed.	-	-	-	lump sum	\$5,300	
021	lower section (between the spur to Elizabeth Street and Dickerson Court)	SW	3	Deferred Maintenance	Regrade the open lawn areas to drain water away from the trail and fill in low spots. Reseed.	-	-	-	lump sum	\$3,500	
022	lower section (between the spur to Elizabeth Street and Dickerson Court)	LS	3	Deferred Maintenance	Remove dead and uprooted trees adjacent to the trail in the wooded area.	Approx. 30 trees	-	-	lump sum	\$12,000	
023	lower section (between the spur to Elizabeth Street and Dickerson Court)	SW	3	Deferred Maintenance	Clean out two drainage pipes and swale.	Two (2) pipes and one (1) swale	-	-	lump sum	\$3,000	
025	lower section (between the spur to Elizabeth Street and Dickerson Court)	SW	3	Deferred Maintenance	Install a concrete swale and drain pipe to direct water and run-off from the development along Franklin Street to Bolin Creek. Minimize the erosion on the hillside by filling low or severely eroded areas and planting shade tolerant plugs along the bank.	-	-	-	lump sum	\$12,000	

Bolin Creek Greenway
Chapel Hill Parks Maintenance Assessment

Address:

Size: 1.5 miles

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
028	lower section (between the spur to Elizabeth Street and Dickerson Court)	F	3	Deferred Maintenance	Replace wooden railing along the curvilinear section of trail.	Approx. 650 lf	-	-	-	\$30,000	
029	lower section (between the spur to Elizabeth Street and Dickerson Court)	LS	3	Deferred Maintenance	Remove all kudzu along the trail corridor.	-	-	-	lump sum	\$7,200	
030	lower section (between the spur to Elizabeth Street and Dickerson Court)	LS	3	Deferred Maintenance	Remove all vegetation from the retaining wall stabilizing the creek bank at the underpass of Franklin Street.	-	-	-	lump sum	\$12,000	Have a Structural Engineer evaluate the retaining wall.
032	Community Center Park	PA	3	Deferred Maintenance	Edge along existing asphalt trail, remove all encroaching vegetation including between cracks and joints in the asphalt, and resurface.	Approx. 500 lf	10-12' wide	-	lump sum	\$7,200	
DEFERRED MAINTENANCE SUBTOTAL										\$322,275	
020	Bolin Creek Greenway (Between Martin Luther King Jr. Boulevard and Chapel Hill Park, including the spur to Elizabeth Street)	SF	4	Aesthetic Improvement	Replace signage along the Bolin Creek Greenway corridor.	-	-	-	lump sum	\$25,000	

Bolin Creek Greenway
Chapel Hill Parks Maintenance Assessment

Address:

Size: 1.5 miles

#	Location	Definition Type	Prioritization Level	Deficiency Type	Description	Quantity	Size	Unit Cost for Materials	Unit	Estimated Cost	Notes
024	lower section (between the spur to Elizabeth Street and Dickerson Court)	PA	4	Aesthetic Improvement	Install timber steps from the trail up to the coffee shop on Franklin Street.	Approx. 200 timber steps	10' wide	\$50.00	If	\$150,000	
027	lower section (between the spur to Elizabeth Street and Dickerson Court)	PA	4	Aesthetic Improvement	Install timber steps along the trails from Franklin Street to the greenway.	Approx. 150 steps	6' wide	\$30	If	\$30,000	
031	on-road at Dickerson Court	PA	4	Aesthetic Improvement	Stripe asphalt roadway as a designated multi-use trail.	Length of the corridor	-	-	lump sum	\$5,500	
					AESTHETIC IMPROVEMENTS SUBTOTAL					\$210,500	

						Total cost to complete deficiency list	\$535,775
Life Safety Issue Subtotal		\$3,000				5% Mobilization	\$26,789
Code Violation Subtotal		\$0				10% Contingency	\$53,578
Deferred Maintenance Issue Subtotal		\$322,275				15% Overhead and Profit	\$80,366
Aesthetic Improvements Subtotal		\$210,500				Total Cost	\$696,508
Total Cost		\$535,775					

Appendix D

Legend for Definitions and Abbreviations

General Abbreviations

∅	Phase	CPSC	Consumer Product Safety Commission	LED	Light Emitting Diode
A	Amp	CY	Cubic Yards	lbf	Pounds of Force
AC	Alternating Current	Dx	Direct Expansion	lf	Linear Feet
ADA	American's with Disabilities Act	Em	Emergency	MCB	Minor Circuit Breaker
ADAAG	ADA Accessibility Guidelines for Buildings and Facilities	FSORAG	Forest Service Outdoor Recreation Accessibility Guidelines	NEC	North Carolina Electrical Code
AFG	Above Finished Grade	GFI	Ground Fault Interruptors	NEMA	National Electrical Manufacturers Association
AHU	Air Handling Unit	GFCI	Ground Fault Current Interruption	OSO	On Site Observation
ASTM	American Society for Testing and Materials	gwb	Gypsum Wallboard	PVC	Polyvinyl Chloride
BST	Bituminous Surface Treatment	HID	High Intensity Discharge	sch	Schedule
CB	Circuit Breaker	HPS	High Pressure Sodium	sf	Square Feet
CFL	Compact Fluorescent Lamp	IC	Insulated Contact	stat	Thermostat
CFM	Cubic Feet per Minute	J-box	Junction Box	t + g	Tongue and Groove
		Lav	Lavatory	V	Volt
				VCT	Vinyl Composite Tile
				WC	Water Closet

Legend

	Alternative Option
	Priority Subtotal

Numbers

SHLA (Site Work) entries begin at 001
 ECA (Architecture) entries begin at 101
 SUD (Electrical) entries begin at 201
 SUD (Mechanical/Plumbing) entries begin at 301

Definition Type

Architectural		Plumbing	
EB	Exterior Building	IP	Interior Plumbing
IB	Interior Building	EP	Exterior Plumbing
BF	Building Furnishings		
RO	Roof		
Electrical		Site Work	
EL	Exterior Lighting	F	Fence
IL	Interior Lighting	HR	Handrails
SL	Site Lighting	LS	Landscape
EE	Exterior Electrical	PA	Paving
IE	Interior Electrical	PE	Play Equipment
		S	Surfacing
Mechanical		SF	Site Furnishings
M	Mechanical	SW	Site Work

Deficiency Type

ADA Accessibility Code Violation
 Building Code Violation
 Electrical Code Violation
 Mechanical Code Violation
 Deferred Maintenance
 Aesthetic Improvements

Prioritization Level

- 1 Life Safety
- 2 Code (ADA, Building, Electrical, Mechanical)
- 3 Deferred Maintenance
- 4 Aesthetic Improvements

Appendix E
Routine & Remedial Maintenance
Tasks by Facility, System, & Fixture

	Type	Life Span	Routine Requirements	Remedial Requirements
Trail Facilities	Asphalt	10-12 years	Repair potholes and cracks, clean scrape & edge	Clean, patch, resurface/replace every 20-25 years
	Concrete	20 years+	Clean, scrape, edge & re-caulk joints as necessary bi-annually	Clean, patch and replace every 50 years
	Compacted fines	10-12 years	Repair low areas or cracks	Replace every 20 years or as needed
	Gravel	5-8 years	Rake surface to smooth unevenness, moisten as required monthly	Replenish/Replace every 15 years or as needed
	Timber			Replace as needed
	Mulch	1-3 years	Spread on trails	Replace as needed
	Metal Edging			Replace as needed
	Steel Bridges	100+ year life span	Annual inspection should be completed every year by a structural engineer	Replace as needed
	Wood Bridges	50+ year life span	Annual inspection should be completed every year by a structural engineer	Replace as needed
	General Trail Maintenance	N/A	Sweep trails, dust control, remove litter & debris	
Parking Lots	Asphalt	10-12 years	Repair potholes and cracks	Replace & Resurface
	Concrete	20 years +	Repair potholes and cracks	Replace & Patch
	Gravel	5-8 years	Repair potholes	Replenish
	Pavement Markings	1-2 years		Repaint striping
	Vegetation	N/A	Trim for views into the park & maintain clearance of 2' off either side and 8' clearance overhead	
	General Parking Lot Maintenance	N/A	Dust control, remove litter & debris, and remove vegetation & sediment	

	Type	Life Span	Routine Requirements	Remedial Requirements
Sport Facilities	Court Surfacing	5-7 years	Clean, clear debris	Resurface every 5 years
	Asphalt Sub-base	15-25 years	Patch cracks as necessary	Replace every 15-20 years
	Vinyl Coated Fence Fabric	15 years	Knuckle down & retie	Replace as needed
	Paint for Baseball Diamond		Paint infield lines	
	Paint for Court Surfaces	5-7 years	Clean, clear debris	Repaint when resurfaced
Buildings	Building Foundation/Asphalt		Clean, scrape & caulk	
	Concrete	20 + years	Clean, scrape & caulk	
	Gutters		Clean and remove debris	Paint as needed
	Roof	20+ years	Clean and remove debris	Patch as needed. Replace every 20 years or as roof warranty suggests
	Windows		Clean & Caulk	
	Doors		Clean & Caulk	
	Plumbing Fixtures	25 + years	Clean, service, and unclog as needed	Replace insulation as needed. Replace fixtures as needed.
	Locks			Replace as needed
	Building Interior		Clean	Paint
Building Exterior		Clean and power wash	Paint	
Building Systems	7+ years	Clean, replace filters, and service as needed	Replace as needed or as warranty recommends	
Lighting Fixtures		Clean and replace light bulbs	Replace as needed	
Vegetation	Lawn	N/A	Mow & weedwack edges, fertilize, rake/blow leaves, weed control	Overseed
	Planting Beds	N/A	Edge and mulch	

	Type	Life Span	Routine Requirements	Remedial Requirements
Playground	Engineered Wood Fiber	5-6 years	Fluff every 6 months with a tiller, replenish every 2-3 years	Replace all engineered wood fiber every 10 years
	Playground Equipment	10 years (industry standard)	Check structures for any dangerous conditions such as sharp edges, objects, protruding or loose bolts, rust, or mold growth. Clean equipment and replace any damaged or broken pieces	Replace as needed
	Poured-in-place surfacing	8-10 years (3 year warranty)	Visual inspection every 6 months. Clean debris & sediment from surface	Patch or replace as needed
Drainage	Low areas/eroded		Fill & reseed	
	Drainage Pipes		Clean out	
	Swales			Regrade & Replace rip rap
Fencing	Vinyl Coated or Galvanized Fence Fabric	15 years	Knuckle down & re-tie. Trim vegetation & remove vines from fencing, inspect for rust, dents, security breaching	Replace fabric as needed.
	Backstop	15 years		Replace fabric, posts, rails, and apron as needed.
	Fencing System	15-20+ years	Trim vegetation & remove vines from fencing, inspect for rust, dents, & security breaching	Replace fence posts, caps & rails as needed.
	Wood	30 year warranty	Inspect for rot, decay, and insect damage.	Seal and stain as needed. Replace wood fencing as needed
	Aluminum	15-25 years +	Replace bent or broken posts as needed	

	Type	Life Span	Routine Requirements	Remedial Requirements
Retaining Walls	Brick	25+ years	Power wash facing and caps bi-annually, inspect for and remove marring/graffiti, check for loose bricks.	Remorter as necessary. Replace as needed.
	Concrete	25+ years	Power wash facing and caps bi-annually, inspect for and remove marring/graffiti as needed, check for loose blocks.	Remorter as necessary. Replace as needed.
	Timber	10+ years	Inspect for rot, decay, and insect damage	Replace as needed.
Roads	Asphalt	10-12 years	Repair potholes & cracks, sweep monthly	Clean, patch, resurface & replace.
	Concrete	20 years	Clean monthly	Replace every 20 years.
	General Maintenance	N/A	Dust control, remove litter & debris, and remove vegetation & sediment	
Other	Signs		Update	Replace ADA accessible signs.
	Site furnishings	Varies	Clean and check for rust	Repaint/refinish as necessary. Replace as needed.