



## Item Overview

Item #: 3., File #: [19-0470], Version: 1

Meeting Date: 5/15/2019

### Discuss Budget Proposal for Interim Measures to Begin Addressing Coal Ash Clean-up and Monitoring.

**Staff:**

John Richardson, Community Resilience Officer  
Vencelin Harris, Emergency Management Coordinator  
Laura Selmer, Program Coordinator

**Department:**

Manager’s Office  
Fire Department  
Manager’s Office

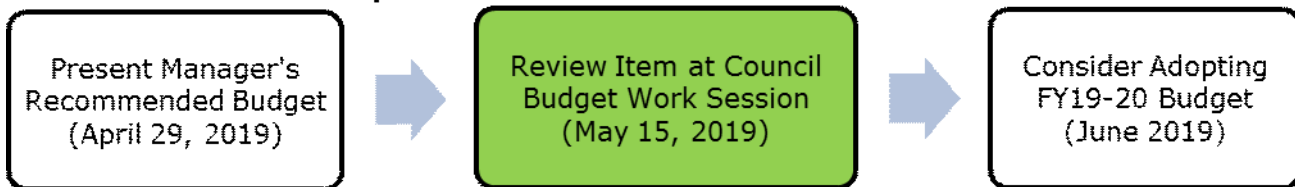
☆ **Recommendation(s):**

That the Council receive the staff report and consultant’s presentation.

**Overview:** The purpose of this item is to provide the Council with additional information about steps that can be taken to begin addressing the coal materials at the police station property at 828 Martin Luther King Jr. Blvd. The Manager’s recommended budget includes \$315,000 to clean up, manage and continue monitoring coal combustion products (CCPs) in the area of the police station property closest to Bolin Creek. This budget item represents a near-term investment to begin addressing CCPs closest to the creek and to maximize safety for people using the Bolin Creek Greenway. The Town’s work with a toxicologist and recent testing of the area have led to additional near-term options for consideration. A detailed description of each option is presented in the attached staff report. Depending on the future goals for the property, we will know how much of the contaminated materials must be removed and what the appropriate long-term remediation steps should be.

**Fiscal Impact/Resources:** The proposed budget item for interim remedial measures is \$315,000.

**Where is this item in its process?**



**Council Goals:**

<input type="checkbox"/>		Create a Place for Everyone	<input type="checkbox"/>		Develop Good Places, New Spaces
<input type="checkbox"/>		Support Community Prosperity	<input checked="" type="checkbox"/>		Nurture Our Community
<input checked="" type="checkbox"/>		Facilitate Getting Around	<input type="checkbox"/>		Grow Town and Gown Collaboration

**Attachments:**

- Staff Report

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**The Agenda will reflect the text below and/or the motion text will be used during the meeting.**

PRESENTER: John Richardson, Community Resilience Officer  
David Duncklee, President/Senior Hydrogeologist, Duncklee & Dunham, Inc.

RECOMMENDATION: That the Council receive the staff and consultant's presentation.

# Staff Report

## I. Project Background

The timeline below provides an overview of how the private property was used before the Town purchased it, as well as the activities the Town has taken more recently to investigate current conditions in coordination with the North Carolina Department of Environmental Quality (DEQ). The history of the site prior to Town ownership was pieced together by the Town's Environmental Engineer, Hart & Hickman.

Timeline	Description
1950s to early 1960s	Property initially used as a borrow pit – an area where material was dug up for use at other locations, usually for construction
Mid-1960s to mid-1970s	Property then used as a fill site where construction debris was deposited; coal combustion products (CCPs) were later placed on top of the construction debris for structural fill
Early 1980s	Town acquires property and builds a police station that is still in use today
2013	As part of a process to explore a new home for the police department, Town conducts a site assessment and begins working with DEQ to investigate and share information about the condition of the property
2015 - 2017	Town works with Environmental Engineering consultant and DEQ to complete Phase 1 and Phase 2 remedial site investigations to understand CCP locations and amounts
2018	Town explores remedial cost options and possible future uses for the property; Council asks staff to work with a toxicologist to assess the risks associated with a range of remediation options and future uses.
2019	Town hires Duncklee & Dunham to perform a Human Health and Ecological Risk Assessment; this work includes a review of the information and data gathered to date, as well as additional sampling and a review of all proposed remediation options. A report will be issued in July.

[Staff maintains a project web page](#)<sup>1</sup> for more information about project activities, reports and communication.

<sup>1</sup> <https://www.townofchapelhill.org/town-hall/news-events/current-issues/coal-ash-disposal-site-remediation-project>

## II. Possible Interim Measures

We anticipate that a new Municipal Services Center will house the Town's police department within the next 2-3 years. Permanent remediation measures can be implemented on the current police station site once the police department is relocated to a different property and a future use for the site is identified.

In the meantime, the Town's consultants have identified the near-term measures described below as steps we can take to address CCPs on the lower portion of the property (the land closest to Bolin Creek). Our consultants estimate that with proper monitoring and maintenance, these measures can last for at least 3-5 years.

### *a) Soil Removal and Replacement*

Remove deposits of contaminated soil in the areas next to the trail and the creek (see green areas on map below). This work includes the removal of approximately 6-12" of contaminated soil to a facility that is permitted to receive these materials. Clean soil would then be brought in to replace the amount that was removed.

### *b) Additional Silt Fencing for Erosion Control*

Add additional silt fencing to help control erosion from the embankment. Monitor and repair as needed. Currently, there are two layers of silt fencing on the site – one at the base of the embankment and another at the base of a black chain link fence that separates the Bolin Creek Greenway from the embankment.

### *c) Additional Signage along Trail and Existing Fence*

For the portion of the Bolin Creek Greenway that runs through the property, place additional signs at both ends of the trail segment—and along the existing fence that separates the trail from the embankment—to help keep recreational users on the path while clean-up, management and ongoing sampling activities occur. We are also exploring the possibility of placing large stones on either side of the trail to deter people from leaving the path.

### *d) Polling of Trail Users for Frequency and Duration Information*

Conduct a survey of greenway users to acquire new site-specific data for how often and how long someone visits the portion of the trail located on the police station property. This data, in combination with the latest rounds of sampling from the site, will be used to update the risk calculations for the property that were last developed in 2016. Prior to the current risk assessment, staff worked with DEQ to determine how the trail could be used today and how construction of the bridge underpass and trail connection could proceed.

*e) Post-Construction Sampling*

After the measures above have been implemented, take additional samples of the soil removal/replacement areas to verify that no additional contaminants have been deposited from the embankment.

*f) Embankment Stabilization*

Add matting, clean soil and grow new vegetation on the areas of the embankment where CCPs are currently exposed (see the pink areas on the map below). The goal of this measure is to reduce the likelihood of CCP erosion and further contamination of the soils next to the trail and the creek.

Due to the steep slope of the embankment, our consultants also believe there is a possibility that the work to cover and stabilize the area could worsen its condition and increase levels of erosion. For this reason, we have included embankment stabilization in the list of measures and would propose to evaluate this technique by first testing a small area. Our consultants tell us that the final results of the risk assessment may also help inform whether a measure like this will be important to test.

### **III. Additional Information and Next Steps**

At the meeting on May 15<sup>th</sup>, the Town's consultants will present additional information about the following topics:

- Findings from the data gap assessment
- Comparison to 2016 Risk Evaluation by DEQ
- Opening the bridge underpass/trail connection for the Bolin Creek Greenway
- Which interim measures are necessary to keep the trail open
- Other risk considerations
- Proposed next steps

Coal Combustion Products (CCPs) Location and Cover Evaluation Map







# **Discuss Budget Proposal for Interim Measures to Begin Addressing Coal Ash Clean-up and Monitoring**

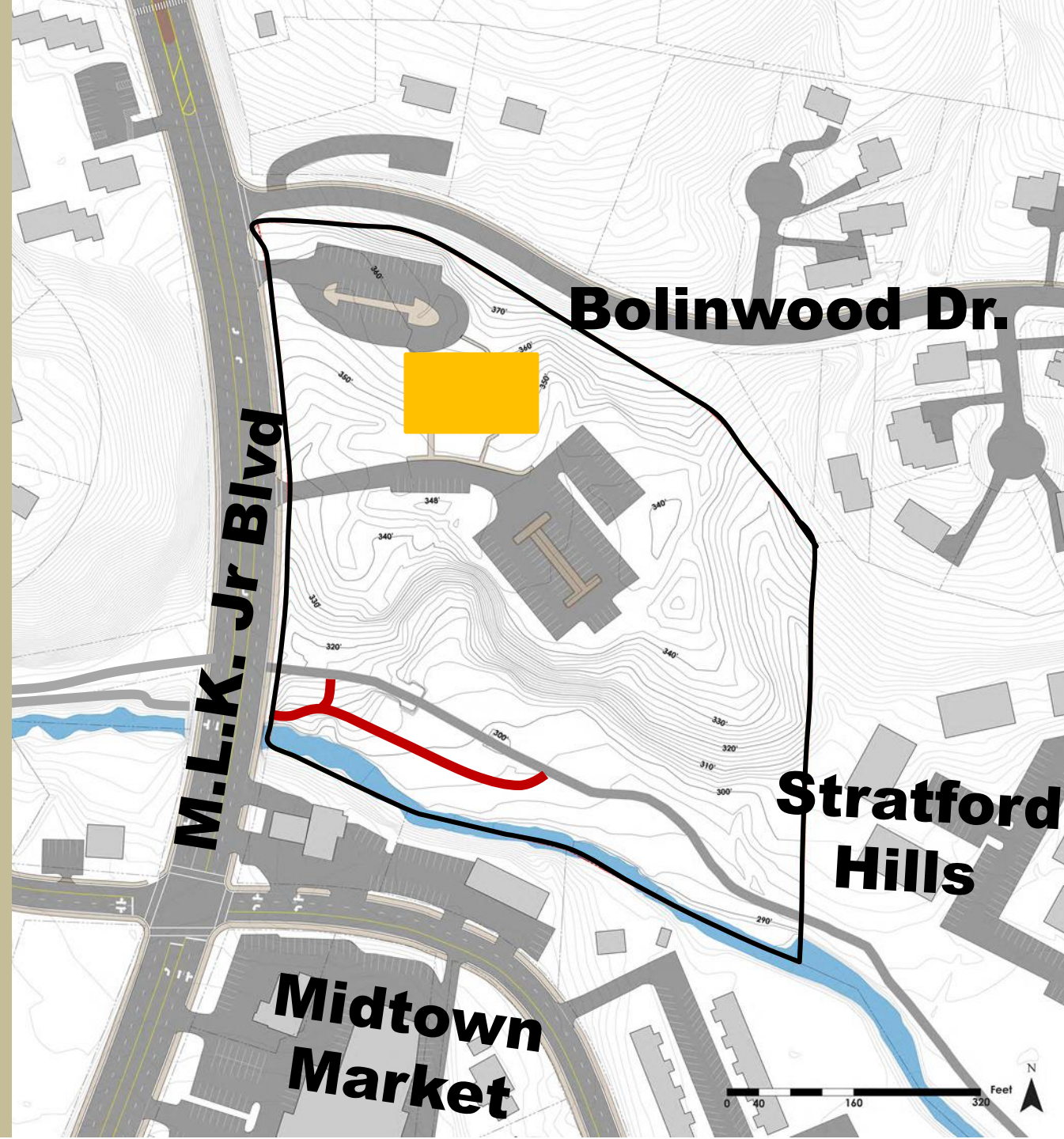
**May 15, 2019**



# Police Station Property

828 Martin Luther King Jr Blvd

-  Police Station
-  New Bolin Creek Greenway Connection





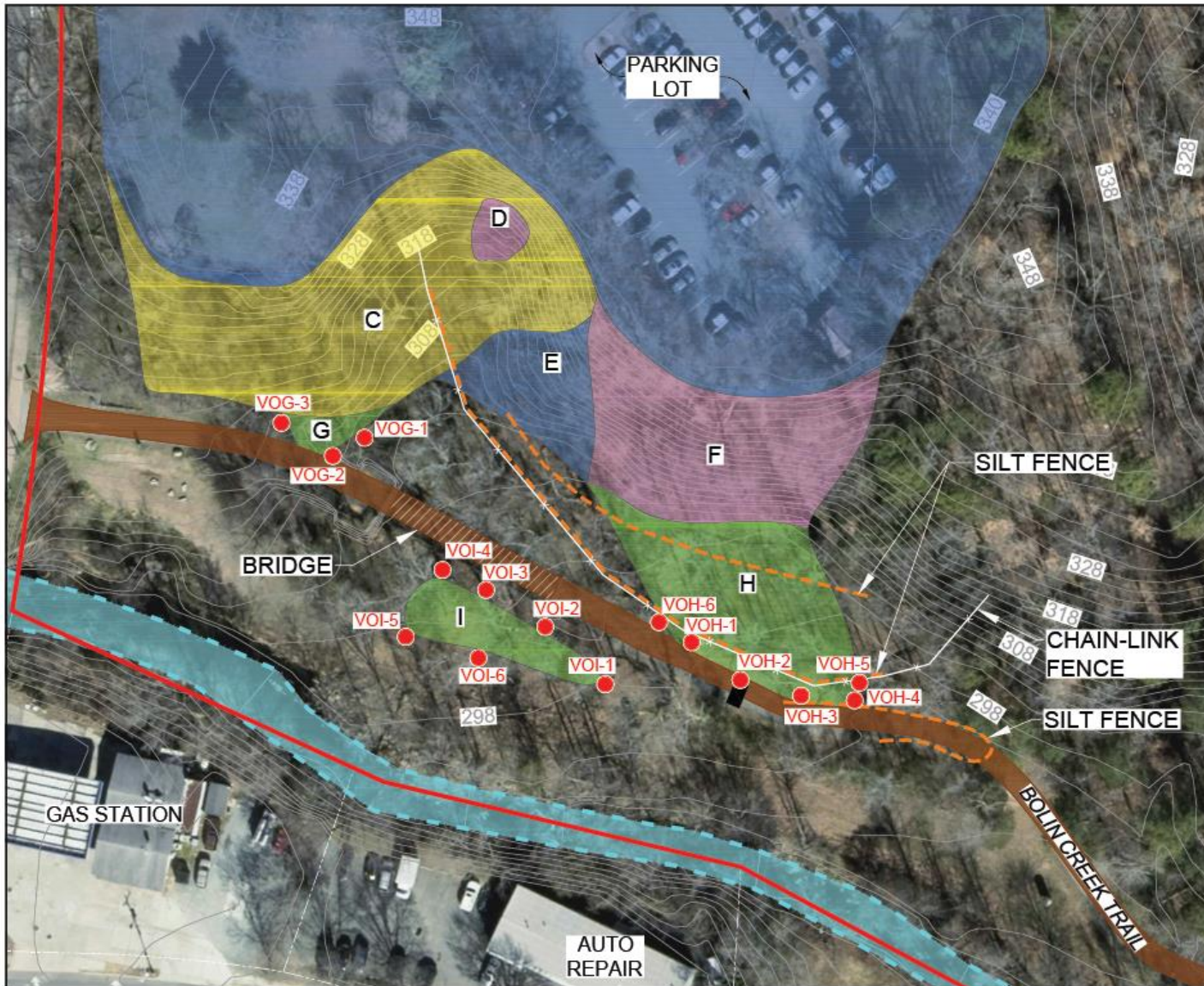
BIKE  
WAY  
SLOW IN FOREST  
→






# Coal Ash Disposal Site Remediation Project

[TownofChapelHill.org/coal-ash](http://TownofChapelHill.org/coal-ash)



**LEGEND**

- SITE PROPERTY BOUNDARY
- BOLIN CREEK
- 10' TOPOGRAPHIC CONTOUR ELEVATION (FT MSL)
- FENCE LINE (APPROXIMATE LOCATION)
- SILT FENCE (APPROXIMATE LOCATION)
- CCP UNDER > 2 FT COVER
- CCP UNDER < 2 FT COVER
- CCP EXPOSED AT GROUND SURFACE
- CCP DEPOSITIONAL LAYER OBSERVED BY H&H
- STORMWATER CULVERT
- DEPOSITIONAL CCP AREA STAKES

  
 APPROXIMATE  
 0 50 100  
 SCALE IN FEET

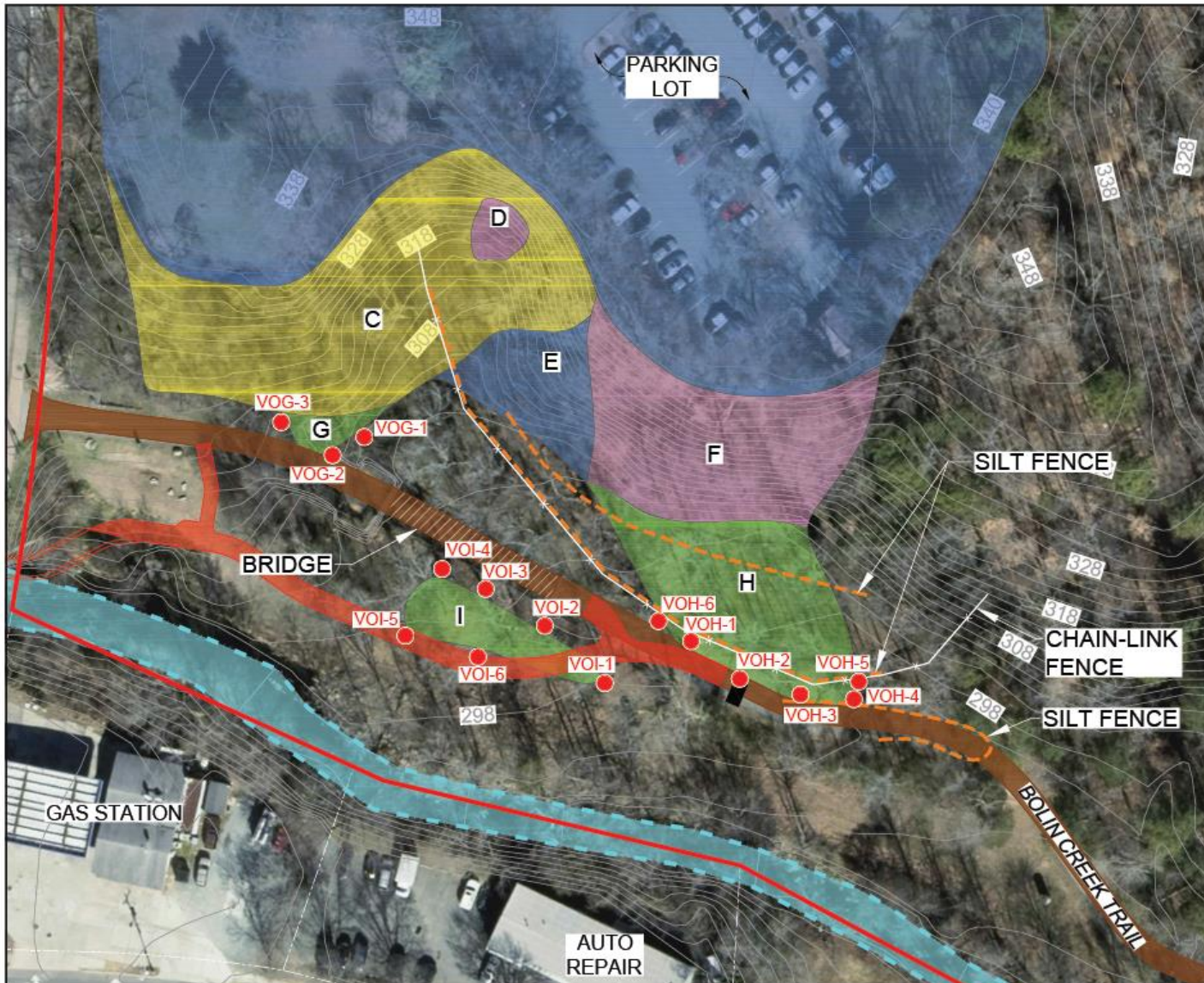
**SITE MAP - EXISTING CONDITIONS**

**TOWN OF CHAPEL HILL**  
 828 MARTIN LUTHER KING JR. BOULEVARD  
 CHAPEL HILL, NORTH CAROLINA

**hart hickman**  
 SMARTER ENVIRONMENTAL SOLUTIONS  
 2923 South Tryon Street, Suite 100  
 Charlotte, North Carolina 28205  
 704-586-0007(p) 704-586-0375(f)  
 License # C-1269 / #C-245 Geology


DATE: 5-10-19	REVISION NO. 0
JOB NO. TCH-003	FIGURE NO. 1


WMA Master Project/own of Chapel Hill (TCH) VCH-003 - Pelican Station/PA - B. Wood/Project/PA/own of Chapel Hill, NC 27514/Map FIG. 1, 5/10/2019 5:26:13 PM



**LEGEND**

- SITE PROPERTY BOUNDARY
- BOLIN CREEK
- 101 TOPOGRAPHIC CONTOUR ELEVATION (FT MSL)
- FENCE LINE (APPROXIMATE LOCATION)
- - - SILT FENCE (APPROXIMATE LOCATION)
- CCP UNDER > 2 FT COVER
- CCP UNDER < 2 FT COVER
- CCP EXPOSED AT GROUND SURFACE
- CCP DEPOSITIONAL LAYER
- STORMWATER CULVERT
- DEPOSITIONAL CCP AREA STAKES
- PROPOSED TRAIL

  
 APPROXIMATE  
 0 50 100  
 SCALE IN FEET

<b>SITE MAP - PROPOSED TRAIL LOCATION</b>	
TOWN OF CHAPEL HILL 828 MARTIN LUTHER KING JR. BOULEVARD CHAPEL HILL, NORTH CAROLINA	
 <span style="font-size: small;">2525 South Tryon Street, Suite 100 Chapel Hill, North Carolina 27515 704-586-0007 (p) 704-586-0373 (f) License # C-1269 / #C-245 Geology</span>	
DATE: 5-10-19	REVISION NO. 0
JOB NO. TCH-003	FIGURE NO. 2

P:\M\Master Projects\Town of Chapel Hill (TCH)\TCH-003 - Public Stations\PH 8 18 West\Figures\Figures\_3, 10, 15.dwg, FIG. 2, 5/10/2019 5:40:23 PM, hickman

# Options for Consideration

- \$315,000 Investment:
  - Begin clean-up and continue managing and monitoring coal materials in the area closest to Bolin Creek;
  - Maximize safety for people using the Bolin Creek Greenway
- Anticipate Police Station relocation within 2-3 years
- Measures estimated to last 3-5 years

# Bolin Creek Trail Risk Assessment

By:

David L. Duncklee, P.G.

Kenneth M. Rudo, Ph.D.



**DUNCKLEE & DUNHAM**  
ENVIRONMENTAL GEOLOGISTS & ENGINEERS

HYDROGEOLOGY • ENGINEERING • BROWNFIELDS • REMEDIATION

# Our Work Scope

- Human Health Risk Assessment
  - Toxicologist
  - Data Gap Sampling (April)
  - Interim Measures Evaluation
  - Trail Construction Project
- Ecological Risk Assessment
- Report



# Comparison to NCDEQ Risk Evaluation

- NCDEQ used different calculator tool in 2016
- We used new NCDEQ Risk Calculator Tool
  - EPA risk data changed slightly
  - Tested additional coal ash samples, higher levels of contaminants found than in 2014 data set
  - Six metals higher, arsenic and manganese the most prominent
- We used more conservative default assumptions across the board
- We used new data set collected after recent storms





# Key Findings, So Far

- 52 Additional Samples Collected
- Using Worst Case Scenarios, Evaluated Risk for 17 Contaminant Pathways
- Found Elevated Risk with 2 Current Pathways:
  - Future Construction Worker – Arsenic and Manganese non-cancer risks from soil
  - Recreational User – Arsenic non-cancer risks from soil exposure
- No cancer risks exceeded NCDEQ or USEPA criteria
- No increased risk for adolescent exposures along or in Bolin Creek



# Completing the Greenway Project and Opening the Bridge Underpass



- Manage Risk to Construction Workers with Proper Training
- There is Currently Risk To Trail Users By Crossing Martin Luther King, Jr. Blvd.



# Interim Measures to Keep Trail Open

- These Measures Control Risk to Recreational Users of Greenway Trail
  - a) Surficial Soil Removal / Backfill
  - b) Additional Signage Along Trail
  - c) Polling of Users
  - d) Additional Silt Fencing
  - e) Limit Embankment Disturbance
  - f) Periodic Inspections and Sampling
- Post-Construction Sampling and Update Risk Assessment



# Next Steps

- Complete Underpass
- Signage on Path
- Interim Measures
- Post-Construction Sampling
- Report to Update Risk Assessment and Include Ecological Risk Assessment



# Questions?

