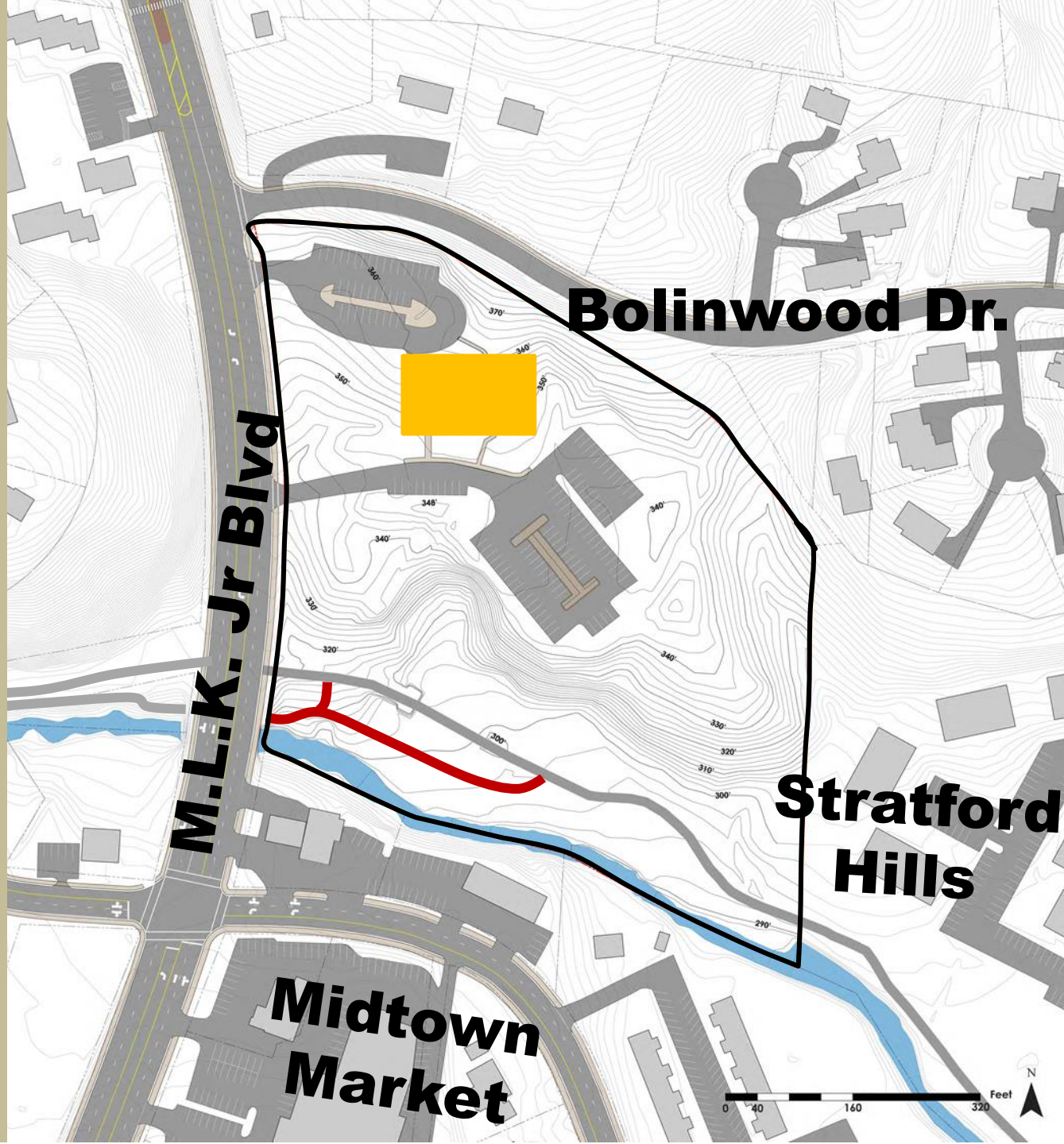
Consider Proceeding with Proposal to Begin Addressing Coal Ash Clean-up at the Police Station Property

June 12, 2019

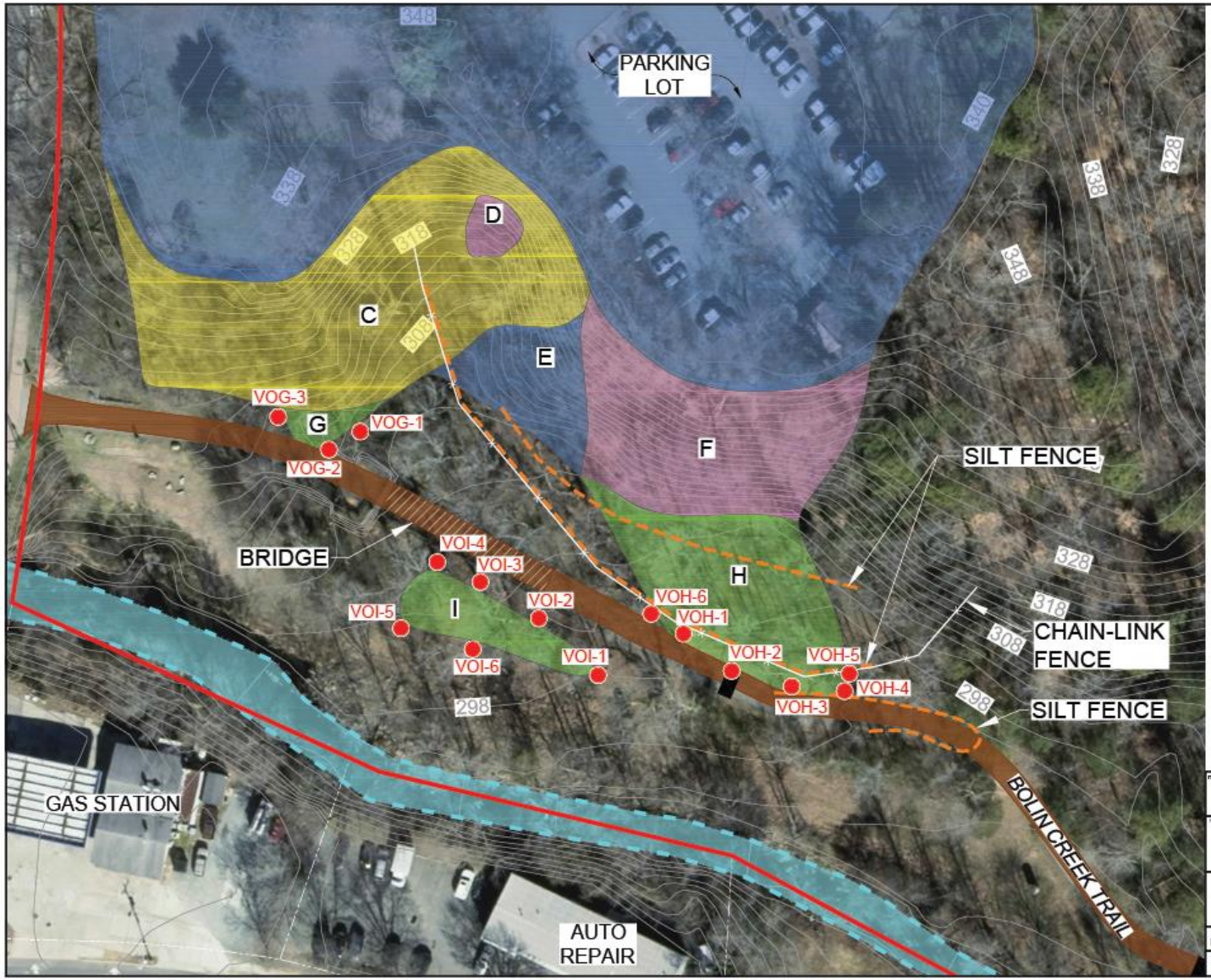
Police Station Property

828 Martin Luther King Jr Blvd

- Police Station
- New Bolin Creek Greenway Connection




TOWN OF CHAPEL HILL
Coal Ash Disposal Site
Remediation Project
TownofChapelHill.org/coal-ash



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 OBSERVED BY H&H
- STORMWATER CULVERT
- DEPOSITIONAL CCP AREA STAKES

N

APPROXIMATE
0 50 100
SCALE IN FEET

FIGURE

SITE MAP - EXISTING CONDITIONS

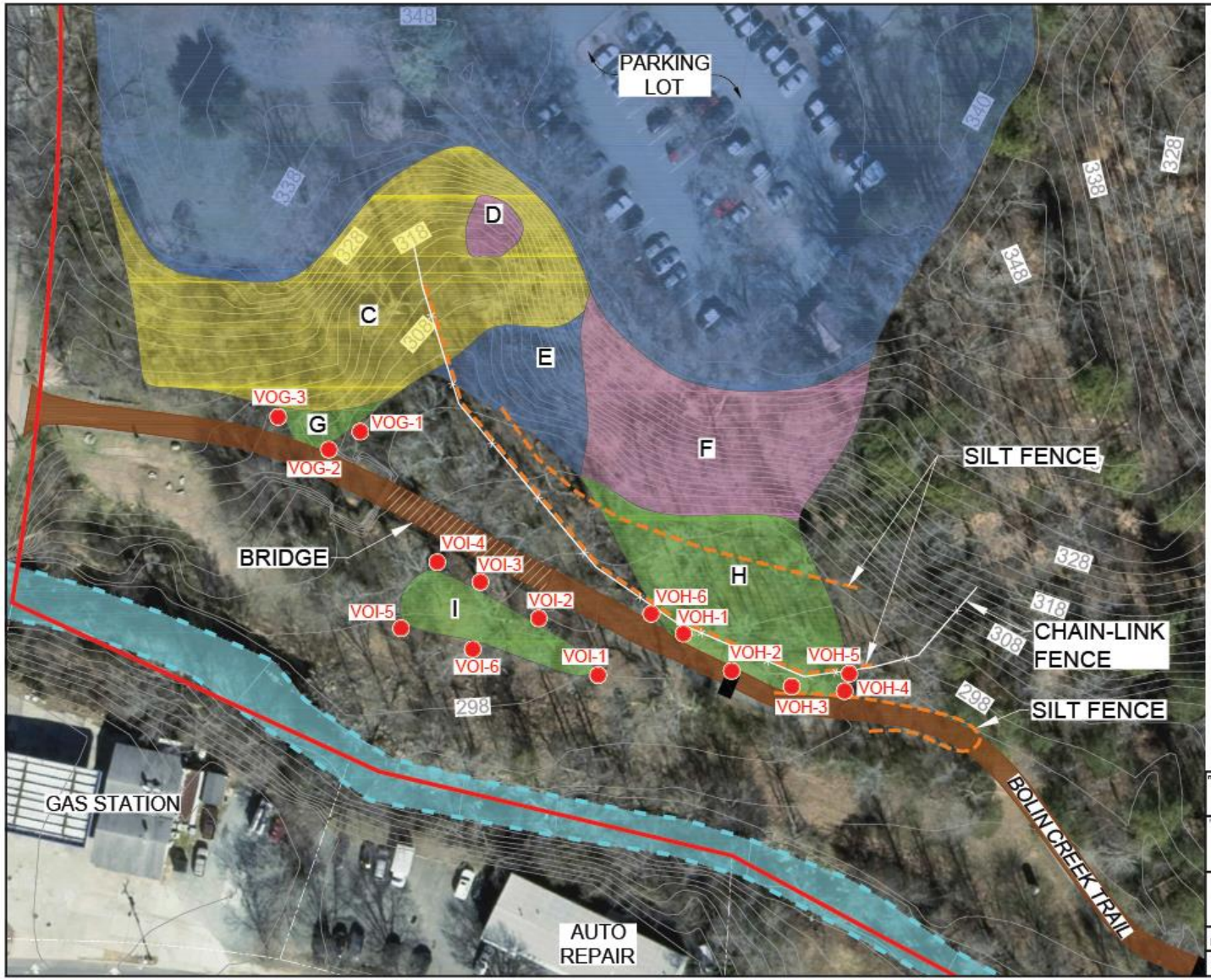
PROJECT

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 28203
704-586-0007(p) 704-586-0373(f)
License # C-1269 / #C-245 Geology

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


D
E
F
H
I
318
308
348
338
328
298
VOG-1
VOI-4
VOI-3
VOI-2
VOI-1
VOI-6
VOH-6
VOH-1
VOH-2
VOH-3
VOH-4
VOH-5
SILT FENCE
CHAIN-LINK FENCE
SILT FENCE
BOLIN CREEK TRAIL
AUTO



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JOB NO. TCH-003	FIGURE NO. 1

SITE MAP - PROPOSED TRAIL LOCATION

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JOB NO. TCH-003	FIGURE NO. 2

Summary

- Anticipate Police Station relocation within a few years
- $246,000 – begin clean-up and continue managing and monitoring coal materials in the area closest to Bolin Creek
- Measures estimated to last 3-5 years

Recommendations

- Proceed with the recommended interim remedial measures outlined in the staff report and consultant's presentation
- Take action by approving the revised recommended project budget ($246,000) as part of the FY20 budget

Background Information

- 10.24 Acre site to the east of Martin Luther King Jr. Boulevard – north of Bolin Creek
- Site was a borrow pit then a fill site in 1950's to 1970's
- Fill materials including coal combustion products (CCPs) were placed along the southern portion of the site
- Town acquired the site in 1980
- Police Department building and parking lots built over CCP waste
- An area along Bolin Creek to the south is now a recreational path for residents to walk, bike, or run

Recent Efforts

- Data Gap Assessment
  - Collect data after the recent storms
  - Use in new risk assessment calculations
- Update Risk Assessment Calculations
  - Dr. Kenneth Rudo, Former NCDEQ Toxicologist
  - Findings used to evaluate feasibility of using protective measures while police station is relocated
- Interim Measures Evaluation

Recent Analytical Testing Results

- Have Recent Storms / Flooding Effected Coal Ash Contaminant Migration?
  - Collected 52 samples for laboratory testing: 28 soil, 10 surface water, 8 sediment, and 6 groundwater
  - Of 28 soil samples: 16 from soil 2-6” deep in soil drainage pathways, 6 from the CCP waste, and 6 background
  - *Testing results do not show significant differences in the results from before or after the storms*

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 – Maintain Existing Fence
  c) Polling of Users
  d) Additional Silt Fencing
  e) Limit Embankment Disturbance
  f) Periodic Inspections and Sampling
- Post-Construction Sampling and Update Risk Assessment

Proposed Next Steps

- Complete Underpass
- Signage on Path / Poll Users
- Update Risk Assessment Report in Late July
- Interim Measures
- Post-Interim Measures Soil Testing
- Report Following Interim Measures to Finalize Risk Assessment and Include Ecological Risk Assessment

Proposed Next Steps

- Place more signs to keep trail users on the path
- Implement interim remedial measures to remove contamination closest to creek
- Complete Bolin Creek trail connector
- Conduct periodic inspections/sampling
- Perform post-construction sampling
- Generate report to update risk assessment and include ecological risk assessment
- Communicate regularly with the Council and community about the activities listed above

Proposed Project Budget: $246,000

Questions?

Additional Slides Below are to help with Q&A on as needed basis

USEPA / DWM HHRA Default Receptors and Exposure Parameters

Default Receptor	Residential		Non-Residential Worker ("Occupational")	Construction Worker	Recreation		Trespasser
Contributing Age Groups	Child Component	Adult Component	Adult	Adult	Child Component	Adult Component	Adolescent (6-16 yrs of age)
Exposure Parameter	**Value**	**Value**	**Value**	**Value**	**Value**	**Value**	**Value**
Lifetime (LT) (years)	70	70	70	70	70	70	70
Body Weight (BW) (kg)	15	80	80	80	15	80	45
Exposure Duration (ED) (yr)	6	20	25	1			
Exposure Frequency (EF) (d/yr)	350	350	250	250	195	195	90
Exposure Time (ET) (hr)	24	24	8	8	2	2	2
Skin Surface Area - Soil Exposure (SA_s) (cm2)	2373	6032	3527	3527	2373	6032	6032
Soil Adherence Factor (AF) (mg/cm^2)	0.2	0.07	0.12	0.3	0.2	0.07	0.2
Soil Ingestion Rate (IRS) (mg/day)	200	100	100	330	200	100	200
Skin Surface Area - Water Exposure (SA_w) (cm2)	6365	19652	19652		6365	19652	19652
Water Ingestion Rate (IRW) (L/d)	0.78	2.5	0.83		0.12	0.071	0.071
Water Exposure Time (ET_{event}) (hr/event)	0.54	0.71	0.67		2	2	2
Water Event Frequency (EV) (events/day)	1	1	1		1	1	1
Working Weeks (EW) (wk/yr)				50			
Averaging Time (AT) (days/yr)					365	365	365
Exposure Duration 0-2 (ED) (yr)					2	0	
Exposure Duration 2-6 (ED) (yr)					4	0	
Exposure Duration 16-26 (ED) (yr)					0	10	10

(Source: February 2018 USEPA Superfund Program Regional Screening Levels)

Health Risk Assessment Summary – 2016-17 and April, 2019 Sampling Data

- Risk assessment based on “Worst Case Scenario”
- Risk assessment utilized USEPA / NC DEQ default parameters in the absence of detailed information on specific user exposure data
- Recreational User – Elevated non-cancer risks from soil exposure
- Adolescent Exposure Adjacent to and in Bolin Creek – No elevated health risks
- Future Construction Worker – Elevated non-cancer risks from soil exposure
- Groundwater Contamination – Elevated cancer and non-cancer risks – no evident human exposure to groundwater known at this time