



Soil & Environmental Consultants, PA

8412 Falls of Neuse Road, Suite 104, Raleigh, NC 27615 • Phone: (919) 846-5900 • Fax: (919) 846-9467
sandec.com

December 1, 2015
S&EC Project No.: 12319.W2

To: Wake County Board of Education
Attn: Betty L. Parker
1429 Rock Quarry Road, Suite 116
Raleigh, NC 27610

Re: Wetland Delineation & Stream Buffer Determination
E-50 School Site
Little Drive, Research Triangle Park, Wake County, NC

Mrs. Parker:

On September 29, 2015, S&EC personnel completed the detailed wetland delineation and stream buffer determination on the E-50 School site located on Little Drive, in Research Triangle Park, Wake County, NC. You will find the attached report detailing our findings. Maps that further document the wetland and stream related site characteristics are also attached.

We have confirmed our stream buffer determinations with the County and have attached a copy of their report. The next step in the wetland and stream verification process is to submit a Jurisdictional Determination Request to the U.S. Army Corps of Engineers (USACE) to verify our delineation. This will occur once site conditions allow and as authorized by you and the property owner.

Please contact S&EC if you have any questions related to wetland and stream regulations or if you need clarification of the attached report.

Sincerely,
SOIL & ENVIRONMENTAL CONSULTANTS, PA

Bob Zarzecki

Wetlands Department Manager

Attachments:

- 1) Wetland Delineation Report
- 2) USGS site vicinity map
- 3) NRCS Soil Survey
- 4) Wetland & Stream Sketch Map
- 5) Wake County Stream Report



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DETAILED WETLAND DELINEATION & STREAM BUFFER DETERMINATION FOR THE E-50 SCHOOL SITE

On September 29, 2015, S&EC personnel completed a detailed wetland delineation and stream buffer determination on the E-50 School site (± 30 acres). The site is located south of Little Drive and North of Parkside Valley Drive in RTP, Wake County, N.C. Figure 1 and Figure 2 show the location of the site on a USGS topographic quadrangle and NRCS County Soil Survey, respectively.

EXECUTIVE SUMMARY

We have determined that streams generally account for the jurisdictional waters observed on the site. The attached wetland sketch map depicts the approximate locations of streams identified during our evaluation. We have confirmed our stream buffer determinations with the County. See attached County report. Please refer to the sketch map and the results and recommendations section below for more detailed information. S&EC will submit a Jurisdictional Determination Request (JD Request) to the U.S. Army Corps of Engineers (USACE) to verify our delineation as site conditions allow and as authorized by the client and owner.

SCOPE OF WORK

The detailed wetland delineation consisted of traversing the property to examine soils, vegetation, and hydrology across the site in search of areas that meet the criteria for jurisdictional wetlands as described by the procedures set forth in the Corps of Engineers Wetlands Delineation Manual (January 1987 – Final Report) and Regional Supplement. Areas on the site with positive indicators of hydric soils, evidence of wetland hydrology, and presence of hydrophytic vegetation were noted on the wetland sketch map. Proof of wetland hydrology would be the existence of hydric soils with oxidized root channels in the upper 12 inches of the soil profile, water borne deposits, drift lines, scour marks, drainage patterns, regional indicators of soil saturation, etc. Surface waters such as intermittent and perennial stream channels, ponds, and lakes, which are also subject to regulation by the US Army Corps of Engineers (USACE) as waters of the US, were also identified. These surface waters may also be referred to as jurisdictional waters to indicate that they are within the jurisdiction of the USACE. It is important to note that wetlands are also classified as waters of the US and regulated by the USACE under authority of the Clean Water Act (33 USC 1344).

RESULTS & RECOMMENDATIONS

The results of the detailed wetlands delineation and stream buffer determination are discussed below.

Wetlands and Jurisdictional Waters:

We have determined that jurisdictional waters (i.e., streams and wetlands) exist on the site. Please refer to the attached “Wetland Sketch Map” for specific flag numbers and approximate locations. Three (3) jurisdictional streams were observed during the site evaluation; the approximate locations of each are illustrated on the attached wetland sketch map. Streams identified on-site are described below:

- Stream “A” (Unnamed Tributary - UT to Kit Creek) flows on property from the south and flows off property to the west. This stream will likely be considered a perennial stream by the USACE.
- Stream “B” (UT to Kit Creek) flows on property from the east and flows into feature A. This stream will likely be considered an intermittent stream by the USACE.
- Stream “C” (UT to Kit Creek) begins at flag “S01 Start Channel” and flows into feature B. This stream would likely be considered an intermittent stream by the USACE.

Surface waters on this site flow into Kit Creek in the Cape Fear River Basin, which has been classified in “Classification and NC DWQ Standards Applicable to Surface Waters and Wetlands of North Carolina” as WS-IV; NSW.

No jurisdictional wetlands were found to exist on the property. Some marginal areas were found to lack the necessary hydric soils or hydrology to be classified as a jurisdictional wetland.

S&EC will submit a JD Request to the USACE to verify our delineation as site conditions allow and as authorized by the client and owner.

Wake County Buffers:

The surface waters potentially subject to the Wake County Riparian Buffers include Streams “A”, “B” & drainage “D”. No other surface waters are indicated on either the USGS topographic or Wake County Soil Survey maps. Stream “C” is not shown on the maps and as such is not subject to the County stream buffers. S&EC met with County staff on October 19, 2015 and confirmed our findings that drainage “D” is ephemeral and not subject to the County stream buffers. The County’s report is attached.

The following table presents the assigned label (i.e. A, B, C, D) for each feature on the site. Information is also presented regarding the classification of each feature on the USGS Topographic Quadrangle and NRCS County Soil Survey. In addition, the on-site determination as confirmed by the County is presented and the applicable stream buffer width. The riparian buffer is measured from the top of bank, landward on each side of the stream.

Table 1: Surface water features, classifications, and riparian buffer widths.

Feature	Classification on USGS	Classification on Soil Survey	On-site Determination	Origin	Buffer Width
A	intermittent	perennial	perennial	n/a	50'
B	Not Shown	intermittent	intermittent	n/a	50'
C	Not shown	Not shown	Not shown	S01	0
D	Not shown	Intermittent	Ephemeral	n/a	0

Regulations

A general list of regulations that apply to jurisdictional wetlands and waters present on the site are discussed below. Please be aware that other local, state, and federal regulations not included in this list may also apply. S&EC personnel are available to discuss these regulations as they apply to your project.

Wake County Buffers:

As part of the Stormwater Control, Management, and Water Course Buffer Regulations of Wake County, North Carolina, Wake County has adopted riparian buffer requirements. These regulations include the establishment of 50 foot wide riparian buffers directly adjacent to surface waters within Wake County's Planning Jurisdiction, excluding wetlands. Surface waters shall be considered to be present if the feature is shown on the most recent version of the USDA Soil Survey of Wake County, North Carolina or the most recent version of the 7.5-minute USGS topographic quadrangle. Where conflicts between field conditions and Wake County Soil Survey and USGS maps exist, appeals may be made to the North Carolina Division of Water Resources / Water Quality Programs (DWR/WQP) if the site is in the Neuse River Basin, or directly to the Wake County Department of Environmental Services – Erosion, Flood & Stormwater Division for sites in the Cape Fear River Basin

Wetland Permitting:

The current Nationwide Permits were issued by the USACE on March 19, 2012. The USACE Wilmington District issued revised Regional Conditions for the 2012 Nationwide Permits. We recommend you forward a conceptual site plan to our office for review by one of our permitting specialist, who can best advise you of the specific permitting needs as you progress through the planning process.

Generally, wetland impact permits are issued on a per-project basis as determined by the USACE. The USACE has determined that impacts on parcels sub-divided from larger tracts are sometimes considered to be cumulative to existing impacts for the large tract. If this is the case, then thresholds for notification may not apply to your project and impacts to streams/wetlands must be considered in light of existing permits.

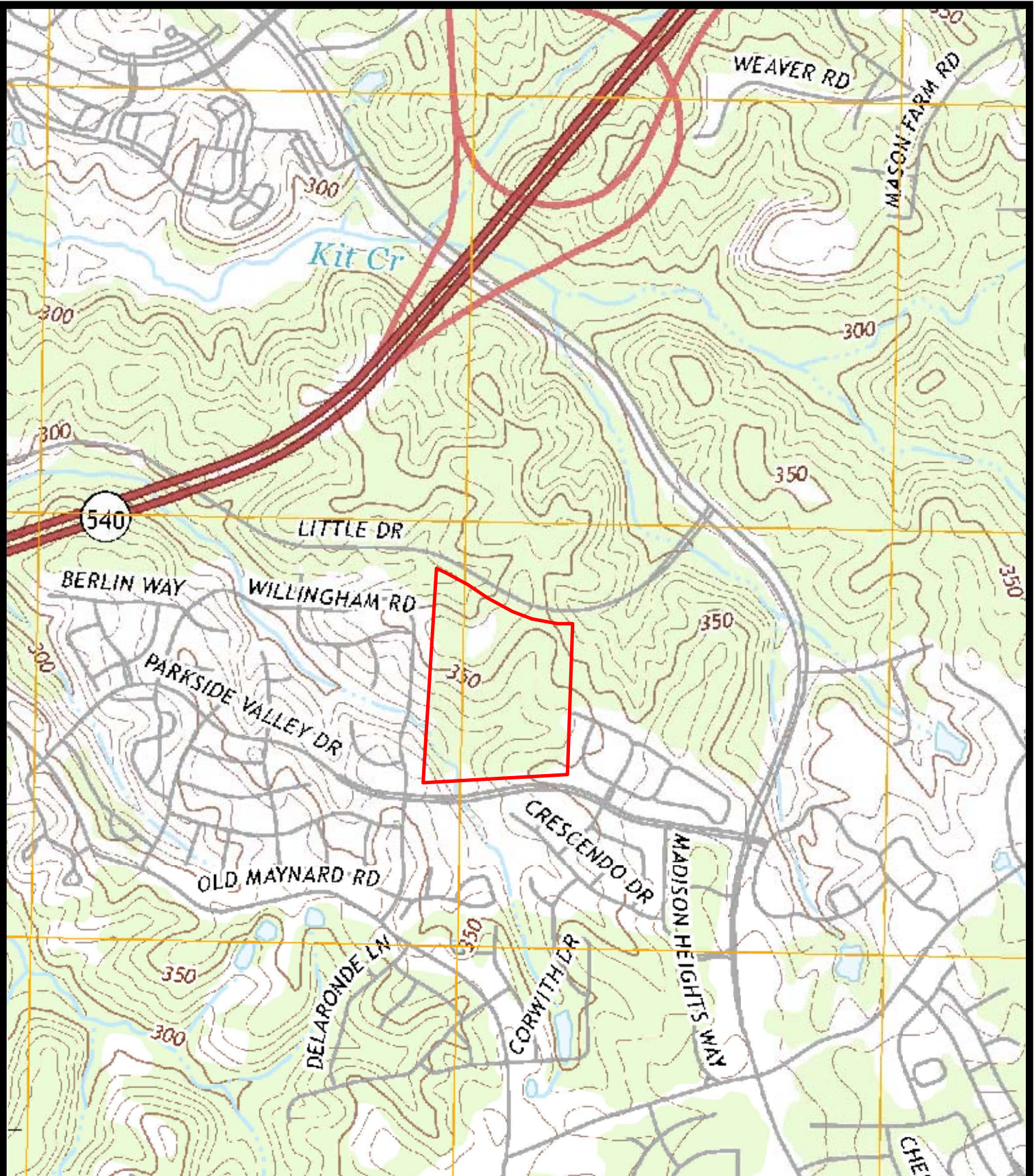
Limitations

Our evaluations, conclusions, and recommendations are based on project and site information available to us at the time of this report and may require modification if there are any changes in

the project or site conditions, or if additional data about the project or site becomes available in the future. This report is intended for use by Wake County Public School System (WCPSS) / Wake County Board of Education on this project. These findings are not intended or recommended to be suitable for reuse on extensions of the project or on any other project. Reuse on extensions of this project or on any other project shall be done only after written verification or adaptation by SOIL & ENVIRONMENTAL CONSULTANTS, PA, for the specific purpose intended.

CONCLUSION

The wetland and stream delineation for the E-50 School Property was completed by S&EC on September 29, 2015. This site contains jurisdictional streams that may require preconstruction authorization for impacts, depending on the size and nature of the impact (i.e. road construction, lot fill, stormwater pond construction, etc.). The County has confirmed the stream buffers. S&EC will proceed with the submittal of a JD Request to the USACE as site conditions allow and as authorized by the client.



Project Number: 12319.W2
 Project Manager: BZ
 Scale: 1" = 1000'
 Date: 9/25/15

Map Title:
 Figure 1 - USGS Map
 E-50
 Wake County, NC
 Source: Wake County GIS
 Cary Quad

0 1,000 2,000
 Feet

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Project Number: 12319.W2

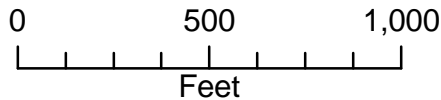
Project Manager: BZ

Scale: 1" = 500'

Date: 9/25/15

Map Title:
 Figure 2 - Soil Survey Map
 E-50
 Wake County, NC

Source: Wake County GIS
 Soil Survey sheet 35 & 36



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Delineation performed by B. Zarzecki (September 2015)
 Stream A = perennial stream subject to buffers
 Stream B = intermittent stream subject to buffers
 Stream C = intermittent stream; starts at flag "S01 Start Channel"; not on maps; not subject to buffers
 (as determined by County)
 Drainage D = ephemeral; not jurisdictional; not subject to buffers (as determined by County)

Project Number: 12319.W2
 Project Manager: BZ
 Scale: 1" = 250'
 Date: 9/25/15

Map Title:
 Figure 3 - Sketch Map
 E-50
 Wake County, NC
 Source: Wake County GIS
 NC One map

0 250 500
Feet

N

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Environmental Services

TEL 919 856 7400
FAX 919 743 4772

Water Quality Division
336 Fayetteville Street • Raleigh, NC 27602
www.wakegov.com

October 20, 2015

Soil & Environmental Consultants, PA
North Quarter Office Park
8412 Falls of Neuse Road, Suite 104
Raleigh, NC 27615
Attn: Bob Zarzecki

WC-15-006

Wake County

Project Name: Little Drive – Proposed School Site

Location/Directions: Research Triangle Foundation, Lat 35.8451 Long -78.8633

Subject Stream: UT to Kit Creek

Date of Determination: 10/19/15

Feature	Not Subject	Subject	Start@	Stop@	Soil Survey	USGS Topo
D	√				√	

Explanation: The feature(s) listed above has or have been located on the Soil Survey of Wake County, North Carolina or the most recent copy of the USGS Topographic map at a 1:24,000 scale. Each feature that is checked “Not Subject” has been determined not to be a stream or is not present on the property. Features that are checked “Subject” have been located on the property and possess characteristics that qualify it to be a stream. There may be other streams located on your property that do not show up on the maps referenced above but, still may be considered jurisdictional according to the US Army Corps of Engineers and/or to the Division of Water Quality.

This on-site determination shall expire five (5) years from the date of this letter. Landowners or affected parties that dispute a determination made by the DWQ or Delegated Local Authority may request a determination by the Director. An appeal request must be made within sixty (60) days of date of this letter or from the date the affected party (including downstream and/or adjacent owners) is notified of this letter. A request for a determination by the Director shall be referred to the Director in writing c/o Karen Higgins, DWQ Wetlands/401 Unit, 1617 Mail Service Center, Raleigh, NC 27699-1617.

If you dispute the Director’s determination you may file a petition for an administrative hearing. You must file the petition with the Office of Administrative Hearings within sixty (60) days of the receipt of this notice of decision. A petition is considered filed when it is received in the Office of Administrative

Hearings during normal office hours. The Office of Administrative Hearings accepts filings Monday through Friday between the hours of 8:00 am and 5:00 pm, except for official state holidays. To request a hearing, send the original and one (1) copy of the petition to the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, NC 27699-6714. The petition may also be faxed to the attention of the Office of Administrative Hearings at (919) 733-3478, provided the original and one (1) copy of the document is received by the Office of Administrative Hearings within five (5) days following the date of the fax transmission. A copy of the petition must also be served to the Department of Natural Resources, c/o Lacy Presnell, General Counsel, 1601 Mail Service Center, Raleigh, NC 27699-1601.

This determination is final and binding unless, as detailed above, you ask for a hearing or appeal within sixty (60) days.

The owner/future owners should notify the Division of Water Quality (including any other Local, State, and Federal Agencies) of this decision concerning any future correspondences regarding the subject property (stated above). This project may require a Section 404/401 Permit for the proposed activity. Any inquiries should be directed to the Division of Water Quality (Central Office) at (919)-807-6301, and the US Army Corp of Engineers (Raleigh Regulatory Field Office) at (919)-554-4884.

If you have any questions regarding this determination, please contact me at (919) 856-7541.

Respectfully,



Betsy Pearce, CFM, CPSWQ
Environmental Engineer / Consultant

cc: 401 & Buffer Permitting Unit, 1617 Mail Service Center, Raleigh, NC 27699-1617
WC File Copy



Environmental Services

TEL 919 856 7400
FAX 919 743 4772

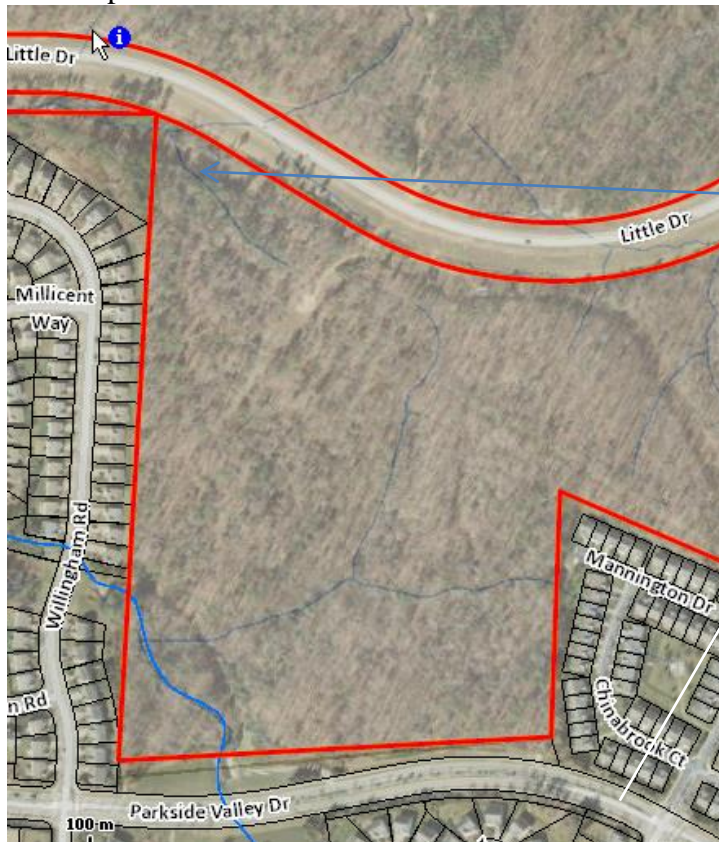
Water Quality Division
336 Fayetteville Street • Raleigh, NC 27602
www.wakegov.com

NRCS Sheet 35



Stream not subject

Site Map – Wake GIS



Stream not subject on highlighted parcel