Development Consulting Services, Inc.
1401 Aversboro Road, Suite 206
Garner, North Carolina 27529
Ph. (919) 625-0411

December 18, 2007

Chatham County Public Works Department
Environmental Resources Division
P.O. Box 1550
Pittsboro, N.C. 27312

Attention: Mr. Fred Royal, P.E.

RE: Parker Springs Subdivision
Environmental Impact Assessment-Stormwater

Parker Springs Subdivision is proposed to be located on 87 acres. It will have approximately 6300 lf of streets and 50 residential lots. The width of the streets will be 20 feet and each lot should not exceed 6300 s.f. of impervious area. Therefore, the total build out impervious will be approximately 12%. Due to the low build out impervious area that the project is expected to have, it does not fall under any County and/or State stormwater management requirements. The project, nevertheless is specifically designed to limit environmental impacts in a number of different ways (including stormwater management), as summarized below.

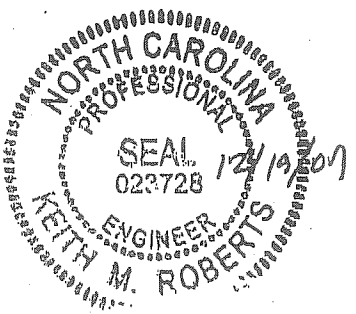
By having low density, the project should not have any detrimental impacts due to stormwater. The project would be classified in stormwater terms, based on construction methods, as a Low Impact Development (LID). In addition, the street locations were relocated three or four times at the direction of our environmental consultant in order to avoid areas of environmental interest. Additionally, the streets are designed with ditch sections and not curb-and-gutter in order to avoid concentrated flows. Furthermore, the developer volunteered to protect a 100' undisturbed buffer on Parkers Creek when only a 50' buffer was required by the Chatham County ordinances.

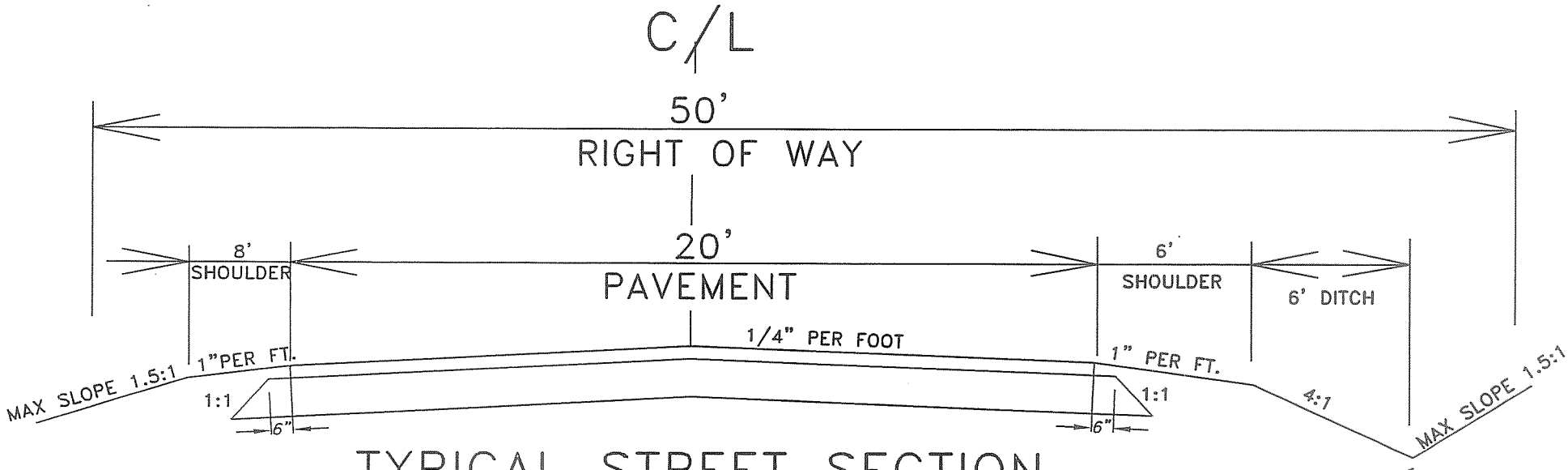
We asked for and received permission from the NC DOT to design the streets in a way that allows us to follow the natural contours of the property and therefore minimizes the amount of coverage that we have over the culverts at crossings which, in turn, limits the amount of earth fill that would have to be placed in these areas. We also designed our discharge points in a way to ensure pipe flows would be minimized and sheet flow utilized.

Thank you for letting us assist you in your evaluation of the project. If you need additional information or have any questions concerning this letter please do not hesitate to contact us.

Development Consulting Services, Inc.

Keith M. Roberts, P.E.
NC Reg. No. 23728





TYPICAL STREET SECTION

V-DITCH

2' MIN. DITCH DEPTH

Mitchell Environmental, P.A.

December 17, 2007

Mr. Fred Royal
Chatham County Public Works Department
Environmental Resources Division
P. O. Box 1550
Pittsboro, NC 27312

Re: Parker Springs Subdivision, Environmental Impact Assessment Comments

Dear Mr. Royal:

Please find responses to your December 6, 2007 comments regarding the Parker Springs Environmental Impact Assessment.

1. NCDWQ Stream Identification Forms for Sites A, B, C, E, and Parkers Creek are attached.
2. Avoidance and minimization is explained in item VII of the Pre-construction Notification application. Measures include the layout of the subdivision to cross only three of the six stream channels identified. The road crossings are designed to be perpendicular to the channel at an area of least impact needed for fill. All stream culverts will be installed slightly below the stream bottom grade so as not to impede movement of aquatic life. Total stream impacts are 284 linear feet for the three crossings. Approximately 1,454 linear feet of perennial stream channels and adjacent forested buffers will be preserved and protected. The appropriate USACE Nationwide Permit and associated NCDWQ Water Quality Certification have been obtained.
3. Total jurisdictional wetlands on the property are 0.28 acres. Wetland impacts include only one small area (0.009 ac). The remaining will be protected within stream side buffers or restrictive covenants. The jurisdictional determination was approved along with the Nationwide Permit application (attached).
6. All waste water will be treated through subsurface septic systems approved by the Chatham County Health Department. Clearing will be limited to the minimum needed for installation of these systems.

Sincerely,

Scott Mitchell, PE, LSS

PO Box 341 Fuquay-Varina, North Carolina 27526
Office: 919-557-4682 Fax: 919-557-4683

Impact Area A

North Carolina Division of Water Quality – Stream Identification Form; Version 3.1

Date: 10/23/07	**Project:** Parker Springs	**Latitude:** 35.7564	
Evaluator: P. Colwell	**Site:** Stream A	**Longitude:** 79.0817	
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30* 21	**County:** Chatham	**Other** *e.g. Quad Name:* Farrington	

A. Geomorphology (Subtotal = 14.5)

	Absent	Weak	Moderate	Strong
1[a]. Continuous bed and bank	0	1	(2)	3
2. Sinuosity	0	(1)	2	3
3. In-channel structure: riffle-pool sequence	0	(1)	2	3
4. Soil texture or stream substrate sorting	0	1	(2)	3
5. Active/relic floodplain	0	(1)	2	3
6. Depositional bars or benches	0	(1)	2	3
7. Braided channel	(0)	1	2	3
8. Recent alluvial deposits	0	(1)	2	3
9[a] Natural levees	(0)	1	2	3
10. Headcuts	0	1	2	(3)
11. Grade controls	0	0.5	(1)	1.5
12. Natural valley or drainageway	0	0.5	1	(1.5)
13. Second or greater order channel on existing USGS or NRCS map or other documented evidence.	No = (0)		Yes = 3	

[a] Man-made ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 2)

Drought

14. Groundwater flow/discharge	(0)	1	2	3
15. Water in channel and > 48 hrs since rain, **or** Water in channel – dry or growing season	(0)	1	2	3
16. Leaflitter	1.5	1	(0.5)	0
17. Sediment on plants or debris	0	(0.5)	1	1.5
18. Organic debris lines or piles (Wrack lines)	0	0.5	(1)	1.5
19. Hydric soils (redoximorphic features) present?	No = (0)		Yes = 1.5	

C. Biology (Subtotal = 4.5)

20[b]. Fibrous roots in channel	3	(2)	1	0
21[b]. Rooted plants in channel	3	(2)	1	0
22. Crayfish	(0)	0.5	1	1.5
23. Bivalves	(0)	1	2	3
24. Fish	(0)	0.5	1	1.5
25. Amphibians	(0)	0.5	1	1.5
26. Macrobenthos (note diversity and abundance)	(0)	0.5	1	1.5
27. Filamentous algae; periphyton	(0)	1	2	3
28. Iron oxidizing bacteria/fungus.	(0)	0.5	1	1.5
29[b]. Wetland plants in streambed	FAC = (0.5); FACW = 0.75; OBL = 1.5 SAV = 2.0; Other = 0			

[b] Items 20 and 21 focus on the presence of upland plants, Item 29 focuses on the presence of aquatic or wetland plants.

Notes: (use back side of this form for additional notes.)

No flow - Exceptional Drought

Sketch:

North Carolina Division of Water Quality – Stream Identification Form; Version 3.1

Date: 10/23/07	**Project:** Parker Springs	**Latitude:**
Evaluator: P. Colwell	**Site:** Stream B	**Longitude:**
Total Points: 24.25 *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30*	**County:** Chatham	**Other** *e.g. Quad Name:* Farmington

A. Geomorphology (Subtotal = 11)

	Absent	Weak	Moderate	Strong
1[a]. Continuous bed and bank	0	1	(2)	3
2. Sinuosity	0	(1)	2	3
3. In-channel structure: riffle-pool sequence	(0)	1	2	3
4. Soil texture or stream substrate sorting	0	(1)	2	3
5. Active/relic floodplain	0	1	(2)	3
6. Depositional bars or benches	(0)	1	2	3
7. Braided channel	0	(1)	2	3
8. Recent alluvial deposits	0	(1)	2	3
9[a] Natural levees	(0)	1	2	3
10. Headcuts	0	(1)	2	3
11. Grade controls	0	(0.5)	1	1.5
12. Natural valley or drainageway	0	0.5	1	(1.5)
13. Second or greater order channel on existing USGS or NRCS map or other documented evidence.	No = (0)		Yes = 3	

[a] Man-made ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 9)

14. Groundwater flow/discharge	0	1	2	(3)
15. Water in channel and > 48 hrs since rain, **or** Water in channel – dry or growing season	0	1	2	(3)
16. Leaflitter	1.5	1	(0.5)	0
17. Sediment on plants or debris	0	(0.5)	1	1.5
18. Organic debris lines or piles (Wrack lines)	0	(0.5)	1	1.5
19. Hydric soils (redoximorphic features) present?	No = 0		Yes = (1.5)	

C. Biology (Subtotal = 4.25)

20[b]. Fibrous roots in channel	3	2	(1)	0
21[b]. Rooted plants in channel	3	2	(1)	0
22. Crayfish	(0)	0.5	1	1.5
23. Bivalves	(0)	1	2	3
24. Fish	(0)	0.5	1	1.5
25. Amphibians	0	0.5	(1)	1.5
26. Macrobenthos (note diversity and abundance)	0	(0.5)	1	1.5
27. Filamentous algae; periphyton	(0)	1	2	3
28. Iron oxidizing bacteria/fungus.	(0)	0.5	1	1.5
29[b]. Wetland plants in streambed	FAC = 0.5; FACW = (0.75); OBL = 1.5 SAV = 2.0; Other = 0			

[b] Items 20 and 21 focus on the presence of upland plants, Item 29 focuses on the presence of aquatic or wetland plants.

Notes: (use back side of this form for additional notes.)

Flow originates from spring head.

Sketch:

North Carolina Division of Water Quality – Stream Identification Form; Version 3.1

Date: 10/23/07	Project: Parker Springs	Latitude: 35.7564	
Evaluator: P. Colwell	Site: Stream C	Longitude: 79.0817	
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30* 19.5	County: Chatham	Other *e.g. Quad Name:* Farrington	

A. Geomorphology (Subtotal = 13)

	Absent	Weak	Moderate	Strong
1[a]. Continuous bed and bank	0	1	2	(3)
2. Sinuosity	0	(1)	2	3
3. In-channel structure: riffle-pool sequence	0	(1)	2	3
4. Soil texture or stream substrate sorting	0	1	(2)	3
5. Active/relic floodplain	0	(1)	2	3
6. Depositional bars or benches	0	(1)	2	3
7. Braided channel	(0)	1	2	3
8. Recent alluvial deposits	0	(1)	2	3
9[a] Natural levees	(0)	1	2	3
10. Headcuts	0	(1)	2	3
11. Grade controls	0	(0.5)	1	1.5
12. Natural valley or drainageway	0	0.5	1	(1.5)
13. Second or greater order channel on existing USGS or NRCS map or other documented evidence.	No = (0)		Yes = 3	

[a] Man-made ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 1.5)

14. Groundwater flow/discharge	(0)	1	2	3	Drought
15. Water in channel and > 48 hrs since rain, or Water in channel – dry or growing season	(0)	1	2	3	
16. Leaflitter	1.5	(1)	0.5	0	
17. Sediment on plants or debris	(0)	0.5	1	1.5	
18. Organic debris lines or piles (Wrack lines)	0	(0.5)	1	1.5	
19. Hydric soils (redoximorphic features) present?	No = (0)		Yes = 1.5		

C. Biology (Subtotal = 5)

20[b]. Fibrous roots in channel	3	(2)	1	0
21[b]. Rooted plants in channel	(3)	2	1	0
22. Crayfish	(0)	0.5	1	1.5
23. Bivalves	(0)	1	2	3
24. Fish	(0)	0.5	1	1.5
25. Amphibians	(0)	0.5	1	1.5
26. Macrobenthos (note diversity and abundance)	(0)	0.5	1	1.5
27. Filamentous algae; periphyton	(0)	1	2	3
28. Iron oxidizing bacteria/fungus.	(0)	0.5	1	1.5
29[b]. Wetland plants in streambed	FAC = 0.5; FACW = 0.75; OBL = 1.5 SAV = 2.0; Other = 0			

[b] Items 20 and 21 focus on the presence of upland plants, Item 29 focuses on the presence of aquatic or wetland plants.

Notes: (use back side of this form for additional notes.)

Sketch:

North Carolina Division of Water Quality – Stream Identification Form; Version 3.1

Date: 10/23/07	Project: Parker Springs	Latitude: 35.7564	
Evaluator: P. Colwell	Site: Stream E	Longitude: 79.0817	
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30*	County: Chatham	Other *e.g. Quad Name:* Farrington	

A. Geomorphology (Subtotal = 11.5)

	Absent	Weak	Moderate	Strong
1[a]. Continuous bed and bank	0	1	2	(3)
2. Sinuosity	0	(1)	2	3
3. In-channel structure: riffle-pool sequence	0	(1)	2	3
4. Soil texture or stream substrate sorting	0	1	(2)	3
5. Active/relic floodplain	0	(1)	2	3
6. Depositional bars or benches	0	(1)	2	3
7. Braided channel	(0)	1	2	3
8. Recent alluvial deposits	0	(1)	2	3
9[a] Natural levees	(0)	1	2	3
10. Headcuts	(0)	1	2	3
11. Grade controls	0	(0.5)	1	1.5
12. Natural valley or drainageway	0	0.5	(1)	1.5
13. Second or greater order channel on existing USGS or NRCS map or other documented evidence.	No = (0)		Yes = 3	

[a] Man-made ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 2)

14. Groundwater flow/discharge	(0)	1	2	3	Drought
15. Water in channel and > 48 hrs since rain, or Water in channel – dry or growing season	(0)	1	2	3	
16. Leaflitter	1.5	(1)	0.5	0	
17. Sediment on plants or debris	(0)	0.5	1	1.5	
18. Organic debris lines or piles (Wrack lines)	0	0.5	(1)	1.5	
19. Hydric soils (redoximorphic features) present?	No = (0)		Yes = 1.5		

C. Biology (Subtotal = 5)

20[b]. Fibrous roots in channel	3	(2)	1	0
21[b]. Rooted plants in channel	(3)	2	1	0
22. Crayfish	(0)	0.5	1	1.5
23. Bivalves	(0)	1	2	3
24. Fish	(0)	0.5	1	1.5
25. Amphibians	(0)	0.5	1	1.5
26. Macrobenthos (note diversity and abundance)	(0)	0.5	1	1.5
27. Filamentous algae; periphyton	(0)	1	2	3
28. Iron oxidizing bacteria/fungus.	(0)	0.5	1	1.5
29[b]. Wetland plants in streambed	FAC = 0.5; FACW = 0.75; OBL = 1.5 SAV = 2.0; Other = 0			

[b] Items 20 and 21 focus on the presence of upland plants, Item 29 focuses on the presence of aquatic or wetland plants.

Notes: (use back side of this form for additional notes.)

Sketch:

Impact Area 3

North Carolina Division of Water Quality – Stream Identification Form; Version 3.1

Date: 10/23/07	Project: Parker Springs	Latitude: 35.7564
Evaluator:	Site: Parkers Creek	Longitude: 79.0817
Total Points: 38.5 *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30*	County: Chatham	Other e.g. Quad Name: Farrington

A. Geomorphology (Subtotal = 25)	Absent	Weak	Moderate	Strong
1[a]. Continuous bed and bank	0	1	2	(3)
2. Sinuosity	0	1	(2)	3
3. In-channel structure: riffle-pool sequence	0	1	2	(3)
4. Soil texture or stream substrate sorting	0	1	2	(3)
5. Active/relic floodplain	0	1	(2)	3
6. Depositional bars or benches	0	1	2	(3)
7. Braided channel	0	(1)	2	3
8. Recent alluvial deposits	0	1	(2)	3
9[a] Natural levees	(0)	1	2	3
10. Headcuts	(0)	1	2	3
11. Grade controls	0	0.5	1	(1.5)
12. Natural valley or drainageway	0	0.5	1	(1.5)
13. Second or greater order channel on existing USGS or NRCS map or other documented evidence.	No = 0		Yes = (3)	

[a] Man-made ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 5.5)				
14. Groundwater flow/discharge	0	(1)	2	3
15. Water in channel and > 48 hrs since rain, **or** Water in channel -- dry or growing season	0	(1)	2	3
16. Leaflitter	1.5	1	(0.5)	0
17. Sediment on plants or debris	0	(0.5)	(1)	1.5
18. Organic debris lines or piles (Wrack lines)	0	0.5	1	(1.5)
19. Hydric soils (redoximorphic features) present?	No = (0)		Yes = 1.5	

Exceptional Drought

C. Biology (Subtotal = 8)				
20[b]. Fibrous roots in channel	(3)	2	1	0
21[b]. Rooted plants in channel	(3)	2	1	0
22. Crayfish	0	(0.5)	1	1.5
23. Bivalves	(0)	1	2	3
24. Fish	0	(0.5)	1	1.5
25. Amphibians	0	(0.5)	1	1.5
26. Macrobenthos (note diversity and abundance)	0	(0.5)	1	1.5
27. Filamentous algae; periphyton	(0)	1	2	3
28. Iron oxidizing bacteria/fungus.	(0)	0.5	1	1.5
29[b]. Wetland plants in streambed	FAC = 0.5; FACW = 0.75; OBL = 1.5 SAV = 2.0; Other = 0			

[b] Items 20 and 21 focus on the presence of upland plants, Item 29 focuses on the presence of aquatic or wetland plants.

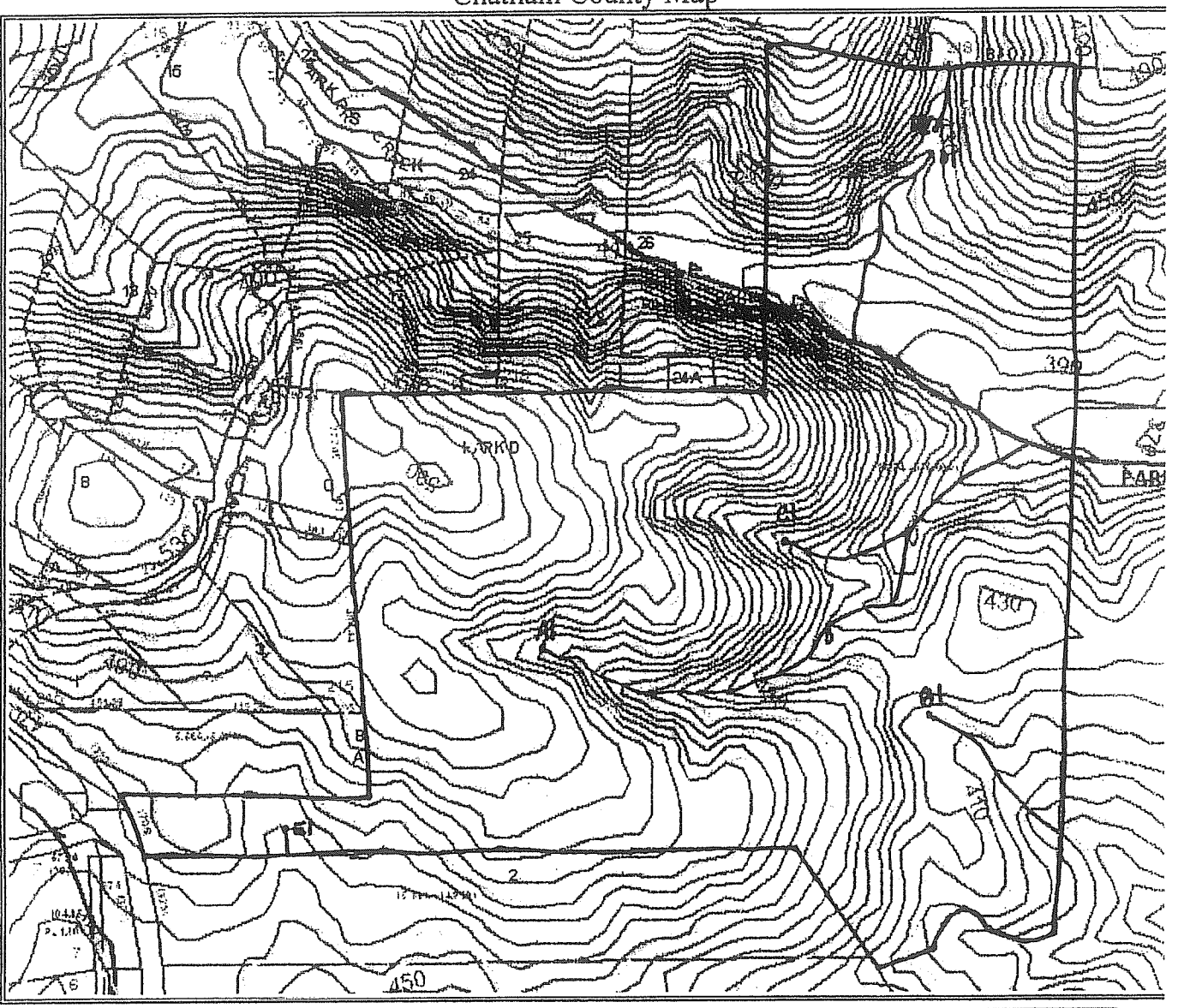
Notes: (use back side of this form for additional notes.)

No flow, water only in a few pools – Exceptional Drought

Sketch:

~ = [redacted] Streams (Intermittent and Perennial)

Chatham County Map



Disclaimer: This map is prepared for the inventory of real property found within this jurisdiction and is compiled from recorded deeds, plats, and other public records and data. Users of this map are hereby notified that the aforementioned public primary information sources should be consulted for verification of the information contained on this map. The County and the mapping companies assume no legal responsibilities for the information contained on this map.	Map Scale 1 Inch = 433 feet Grid based on the North Carolina State Plane Coordinate System, 1983 North American Datum.	N

North Carolina Environmental
Management Commission
Division Of Water Quality
For Cape Fear Basin [redacted]
Date Sept. 7, 2007
Reviewed By ZM

Mitchell Environmental, P.A.

October 25, 2007

Mr. Monte Mathews
US Army Corps of Engineers
6508 Falls of Neuse Road
Suite 120
Raleigh, North Carolina 27615

Ms. Lia Myott
DWQ – 401 Oversite/Express Review Program
2321 Crabtree Boulevard
Suite 250
Raleigh, North Carolina 27604

Re: Parker Springs Subdivision (*Chatham County – Cape Fear River Basin*)
Pre-Construction Notification Application

Dear Mr. Matthews Ms. Myott:

Attached is a complete PCN Application package and Jurisdictional Determination for the proposed Parker Springs Subdivision. Parker Springs Subdivision is located 1.3 miles north of US 64 on Mt. Gilead Church Road in Chatham County (*PIN 9773-60-6982.000*). The 87 acre tract will be developed into a low density residential subdivision for 50, single-family homes.

Proposed impacts to jurisdictional areas of this site include three road crossings on three different stream channels and one small wetland seep as shown on the attached maps. Stream impacts total 284 linear feet and wetland impacts are only 0.009 acres. Impacts to jurisdictional areas have been minimized to the maximum extent practicable. The road system has been designed to cross each channel at a perpendicular angle and located so as to minimize the amount of fill needed to cross the stream valleys. Considerations also had to be made to avoid suitable areas for septic fields and connections to adjacent properties. Mitigation for proposed impacts that require mitigation will be provided through payment to the NCEEP. A NCEEP mitigation responsibility acceptance letter is attached for your review.

Do not hesitate to call me if you have any questions or concerns regarding the attached PCN application or if you need any additional information. Thank you.

Sincerely,

Scott Mitchell, PE, LSS

PO Box 341 Fuquay-Varina, North Carolina 27526
Office: 919-557-4682 Fax: 919-557-4683 Mobile: 919-669-0329

Office Use Only: Form Version March 05

USACE Action ID No. _____ **DWQ No.** _____

(If any particular item is not applicable to this project, please enter "Not Applicable" or "N/A".)

I. Processing

1. Check all of the approval(s) requested for this project:
   - ☒ Section 404 Permit
   - ☐ Section 10 Permit
   - ☐ 401 Water Quality Certification
   - ☐ Riparian or Watershed Buffer Rules
   - ☐ Isolated Wetland Permit from DWQ
   - ☒ Express 401 Water Quality Certification

2. Nationwide, Regional or General Permit Number(s) Requested: Nationwide Permit #29

3. If this notification is solely a courtesy copy because written approval for the 401 Certification is not required, check here: ☐

4. If payment into the North Carolina Ecosystem Enhancement Program (NCEEP) is proposed for mitigation of impacts, attach the acceptance letter from NCEEP, complete section VIII, and check here: ☒

5. If your project is located in any of North Carolina's twenty coastal counties (listed on page 4), and the project is within a North Carolina Division of Coastal Management Area of Environmental Concern (see the top of page 2 for further details), check here: ☐

II. Applicant Information

1. Owner/Applicant Information
   Name: Rusty Ammons
   Mailing Address: Parker Springs LLC
   318 West Millbrook Road
   Raleigh, N.C. 27609
   Telephone Number: 919 848 2212 Fax Number: 919 844 9755
   E-mail Address: rammons@nc.rr.com

2. Agent/Consultant Information (A signed and dated copy of the Agent Authorization letter must be attached if the Agent has signatory authority for the owner/applicant.)
   Name: Scott Mitchell
   Company Affiliation: Mitchell Environmental PA
   Mailing Address: 602 East Academy St. Suite 102
   Fuquay Varina, N.C. 27526
   Telephone Number: 919 557 4682 Fax Number: 919 577 4683
   E-mail Address: bsmenvironmental@earthlink.net

III. Project Information

Attach a **vicinity map** clearly showing the location of the property with respect to local landmarks such as towns, rivers, and roads. Also provide a detailed **site plan** showing property boundaries and development plans in relation to surrounding properties. Both the vicinity map and site plan must include a scale and north arrow. The specific footprints of all buildings, impervious surfaces, or other facilities must be included. If possible, the maps and plans should include the appropriate USGS Topographic Quad Map and NRCS Soil Survey with the property boundaries outlined. Plan drawings, or other maps may be included at the applicant's discretion, so long as the property is clearly defined. For administrative and distribution purposes, the USACE requires information to be submitted on sheets no larger than 11 by 17-inch format; however, DWQ may accept paperwork of any size. DWQ prefers full-size construction drawings rather than a sequential sheet version of the full-size plans. If full-size plans are reduced to a small scale such that the final version is illegible, the applicant will be informed that the project has been placed on hold until decipherable maps are provided.

1. Name of project: Parker Springs Subdivision

2. T.I.P. Project Number or State Project Number (NCDOT Only): _____

3. Property Identification Number (Tax PIN): 9773-60-6982.000

4. Location
   County: Chatham Nearest Town: Pittsboro
   Subdivision name (include phase/lot number): Parker Springs
   Directions to site (include road numbers/names, landmarks, etc.): Take 64 west approximately 20 miles from U.S. 1/ 64 interchange. Turn right on Mt. Gilead Church Rd. travel approximately 1.3 miles. The site is located on the right immediately before The Haw River Baptist Church across from Silverberry Rd

5. Site coordinates (For linear projects, such as a road or utility line, attach a sheet that separately lists the coordinates for each crossing of a distinct waterbody.)
   Decimal Degrees (6 digits minimum): 35.7564 °N 79.0817 °W

6. Property size (acres): 87

7. Name of nearest receiving body of water: Parkers Creek, WS-IV, B;NSW, 16-41-8-(1)

8. River Basin: Cape Fear 03030002
   (Note – this must be one of North Carolina's seventeen designated major river basins. The River Basin map is available at http://h2o.enr.state.nc.us/admin/maps/.)

9. Describe the existing conditions on the site and general land use in the vicinity of the project at the time of this application: The site has been partially cleared using a hydroaxe. Remaining areas on the property are forested. Land use in the area is mostly forest with some areas of single family residential and churches.

10. Describe the overall project in detail, including the type of equipment to be used: The proposed project is to construct a low density residential subdivision . The equipment used will consist of various excavators, compactors, backhoes and other earth moving equipment.

11. Explain the purpose of the proposed work: The project proposes three road crossings for access to home sites.

IV. Prior Project History

If jurisdictional determinations and/or permits have been requested and/or obtained for this project (including all prior phases of the same subdivision) in the past, please explain. Include the USACE Action ID Number, DWQ Project Number, application date, and date permits and certifications were issued or withdrawn. Provide photocopies of previously issued permits, certifications or other useful information. Describe previously approved wetland, stream and buffer impacts, along with associated mitigation (where applicable). If this is a NCDOT project, list and describe permits issued for prior segments of the same T.I.P. project, along with construction schedules. Site visits by the USACE (August 16, 2007) and NCDWQ (September 7, 2007) have been made to confirm jurisdictional delineations.

V. Future Project Plans

Are any future permit requests anticipated for this project? If so, describe the anticipated work, and provide justification for the exclusion of this work from the current application.
No

VI. Proposed Impacts to Waters of the United States/Waters of the State

It is the applicant's (or agent's) responsibility to determine, delineate and map all impacts to wetlands, open water, and stream channels associated with the project. Each impact must be listed separately in the tables below (e.g., culvert installation should be listed separately from riprap dissipater pads). Be sure to indicate if an impact is temporary. All proposed impacts, permanent and temporary, must be listed, and must be labeled and clearly identifiable on an accompanying site plan. All wetlands and waters, and all streams (intermittent and perennial) should be shown on a delineation map, whether or not impacts are proposed to these systems. Wetland and stream evaluation and delineation forms should be included as appropriate. Photographs may be included at the applicant's discretion. If this proposed impact is strictly for wetland or stream mitigation, list and describe the impact in Section VIII below. If additional space is needed for listing or description, please attach a separate sheet.

1. Provide a written description of the proposed impacts: Three road crossings are proposed across three different stream channels (one perennial and two intermittent). The crossings will impact 284 linear feet of jurisdictional channels and 0.009 acres of jurisdictional wetlands.

2. Individually list wetland impacts. Types of impacts include, but are not limited to mechanized clearing, grading, fill, excavation, flooding, ditching/drainage, etc. For dams, separately list impacts due to both structure and flooding.

Wetland Impact Site Number (indicate on map)	Type of Impact	Type of Wetland (e.g., forested, marsh, herbaceous, bog, etc.)	Located within 100-year Floodplain (yes/no)	Distance to Nearest Stream (linear feet)	Area of Impact (acres)
Site A	Fill for road	Seep	Yes	0	0.009
Total Wetland Impact (acres)					0.009

3. List the total acreage (estimated) of all existing wetlands on the property: 0.28

4. Individually list all intermittent and perennial stream impacts. Be sure to identify temporary impacts. Stream impacts include, but are not limited to placement of fill or culverts, dam construction, flooding, relocation, stabilization activities (e.g., cement walls, rip-rap, crib walls, gabions, etc.), excavation, ditching/straightening, etc. If stream relocation is proposed, plans and profiles showing the linear footprint for both the original and relocated streams must be included. To calculate acreage, multiply length X width, then divide by 43,560.

Stream Impact Number (indicate on map)	Stream Name	Type of Impact	Perennial or Intermittent?	Average Stream Width Before Impact	Impact Length (linear feet)	Area of Impact (acres)
Site A	U.T. to Parkers Creek	Culvert for road crossing	Intermittent	2	115	0.005
Site B	Parkers Creek	Culvert for road crossing	Perennial	10	128	0.029
Site C	U.T. to Parkers Creek	Culvert for road crossing	Intermittent	2	41	0.002
Total Stream Impact (by length and acreage)					284	0.036

5. Individually list all open water impacts (including lakes, ponds, estuaries, sounds, Atlantic Ocean and any other water of the U.S.). Open water impacts include, but are not limited to fill, excavation, dredging, flooding, drainage, bulkheads, etc.

Open Water Impact Site Number (indicate on map)	Name of Waterbody (if applicable)	Type of Impact	Type of Waterbody (lake, pond, estuary, sound, bay, ocean, etc.)	Area of Impact (acres)
NONE				
Total Open Water Impact (acres)				

6. List the cumulative impact to all Waters of the U.S. resulting from the project:

Stream Impact (acres):	0.036
Wetland Impact (acres):	0.009
Open Water Impact (acres):	0
Total Impact to Waters of the U.S. (acres)	0.045
Total Stream Impact (linear feet):	284

7. Isolated Waters

Do any isolated waters exist on the property? ☒ Yes ☐ No

Describe all impacts to isolated waters, and include the type of water (wetland or stream) and the size of the proposed impact (acres or linear feet). Please note that this section only applies to waters that have specifically been determined to be isolated by the USACE.

Stream H was determined to be isolated from Stream G due to the lack of a defined channel. The road crossing at Site C was designed to cross between the two channels but will impact 28 linear feet of Stream H.

8. Pond Creation

If construction of a pond is proposed, associated wetland and stream impacts should be included above in the wetland and stream impact sections. Also, the proposed pond should be described here and illustrated on any maps included with this application.

Pond to be created in (check all that apply): ☐ uplands ☐ stream ☐ wetlands

Describe the method of construction (e.g., dam/embankment, excavation, installation of draw-down valve or spillway, etc.):_____

Proposed use or purpose of pond (e.g., livestock watering, irrigation, aesthetic, trout pond, local stormwater requirement, etc.):_____

Current land use in the vicinity of the pond:_____

Size of watershed draining to pond:_____ Expected pond surface area:_____

VII. Impact Justification (Avoidance and Minimization)

Specifically describe measures taken to avoid the proposed impacts. It may be useful to provide information related to site constraints such as topography, building ordinances, accessibility, and financial viability of the project. The applicant may attach drawings of alternative, lower-impact site layouts, and explain why these design options were not feasible. Also discuss how impacts were minimized once the desired site plan was developed. If applicable, discuss construction techniques to be followed during construction to reduce impacts._____

Road alignments were designed to minimize the number of stream crossings and to cross streams at a perpendicular angle and where the least amount of fill would be required. Considerations also had to be made to avoid suitable areas for septic fields and for connections to adjacent properties. Only one small wetland will be impacted. Chatham County also requires a 50ft wide riparian buffer which has been allowed for in the project design and will provide further water quality protection. All stream culverts will be installed slightly below the stream bottom grade so as not to impede movement of aquatic life.

VIII. Mitigation

DWQ - In accordance with 15A NCAC 2H .0500, mitigation may be required by the NC Division of Water Quality for projects involving greater than or equal to one acre of impacts to freshwater wetlands or greater than or equal to 150 linear feet of total impacts to perennial streams.

USACE – In accordance with the Final Notice of Issuance and Modification of Nationwide Permits, published in the Federal Register on January 15, 2002, mitigation will be required when necessary to ensure that adverse effects to the aquatic environment are minimal. Factors including size and type of proposed impact and function and relative value of the impacted aquatic resource will be considered in determining acceptability of appropriate and practicable mitigation as proposed. Examples of mitigation that may be appropriate and practicable include, but are not limited to: reducing the size of the project; establishing and maintaining wetland and/or upland vegetated buffers to protect open waters such as streams; and replacing losses of aquatic resource functions and values by creating, restoring, enhancing, or preserving similar functions and values, preferable in the same watershed.

If mitigation is required for this project, a copy of the mitigation plan must be attached in order for USACE or DWQ to consider the application complete for processing. Any application lacking a required mitigation plan or NCEEP concurrence shall be placed on hold as incomplete. An applicant may also choose to review the current guidelines for stream restoration in DWQ's Draft Technical Guide for Stream Work in North Carolina, available at http://h2o.enr.state.nc.us/ncwetlands/strmgide.html.

1. Provide a brief description of the proposed mitigation plan. The description should provide as much information as possible, including, but not limited to: site location (attach directions and/or map, if offsite), affected stream and river basin, type and amount (acreage/linear feet) of mitigation proposed (restoration, enhancement, creation, or preservation), a plan view, preservation mechanism (e.g., deed restrictions, conservation easement, etc.), and a description of the current site conditions and proposed method of construction. Please attach a separate sheet if more space is needed.
   The owner proposes mitigation through payment into the NC Ecosystem Enhancement Program Fund.

2. Mitigation may also be made by payment into the North Carolina Ecosystem Enhancement Program (NCEEP). Please note it is the applicant's responsibility to contact the NCEEP at (919) 715-0476 to determine availability, and written approval from the NCEEP indicating that they are will to accept payment for the mitigation must be attached to this form. For additional information regarding the application process for the NCEEP, check the NCEEP website at http://h2o.enr.state.nc.us/wrp/index.htm. If use of the NCEEP is proposed, please check the appropriate box on page five and provide the following information:

   Amount of stream mitigation requested (linear feet): 284
   Amount of buffer mitigation requested (square feet): _____
   Amount of Riparian wetland mitigation requested (acres): 0.009
   Amount of Non-riparian wetland mitigation requested (acres): _____
   Amount of Coastal wetland mitigation requested (acres): _____

IX. Environmental Documentation (required by DWQ)

1. Does the project involve an expenditure of public (federal/state/local) funds or the use of public (federal/state) land? Yes ☐ No ☒

2. If yes, does the project require preparation of an environmental document pursuant to the requirements of the National or North Carolina Environmental Policy Act (NEPA/SEPA)? Note: If you are not sure whether a NEPA/SEPA document is required, call the SEPA coordinator at (919) 733-5083 to review current thresholds for environmental documentation. Yes ☐ No ☐

3. If yes, has the document review been finalized by the State Clearinghouse? If so, please attach a copy of the NEPA or SEPA final approval letter. Yes ☐ No ☐

X. Proposed Impacts on Riparian and Watershed Buffers (required by DWQ)

It is the applicant's (or agent's) responsibility to determine, delineate and map all impacts to required state and local buffers associated with the project. The applicant must also provide justification for these impacts in Section VII above. All proposed impacts must be listed herein, and must be clearly identifiable on the accompanying site plan. All buffers must be shown on a map, whether or not impacts are proposed to the buffers. Correspondence from the DWQ Regional Office may be included as appropriate. Photographs may also be included at the applicant's discretion.

1. Will the project impact protected riparian buffers identified within 15A NCAC 2B .0233 (Neuse), 15A NCAC 2B .0259 (Tar-Pamlico), 15A NCAC 02B .0243 (Catawba) 15A NCAC 2B .0250 (Randleman Rules and Water Supply Buffer Requirements), or other (please identify_____)? Yes ☐ No ☐

2. If "yes", identify the square feet and acreage of impact to each zone of the riparian buffers. If buffer mitigation is required calculate the required amount of mitigation by applying the buffer multipliers.

Zone*	Impact (square feet)	Multiplier	Required Mitigation
Total			

* Zone 1 extends out 30 feet perpendicular from the top of the near bank of channel; Zone 2 extends an additional 20 feet from the edge of Zone 1.

3. If buffer mitigation is required, please discuss what type of mitigation is proposed (i.e., Donation of Property, Riparian Buffer Restoration / Enhancement, or Payment into the Riparian Buffer Restoration Fund). Please attach all appropriate information as identified within 15A NCAC 2B .0242 or .0244, or .0260. _____

_____

_____

XI. Stormwater (required by DWQ)

Describe impervious acreage (existing and proposed) versus total acreage on the site. Discuss stormwater controls proposed in order to protect surface waters and wetlands downstream from the property. If percent impervious surface exceeds 20%, please provide calculations demonstrating total proposed impervious level.
Total acreage is 87 ac, estimated impervious surface is 11.4 ac

XII. Sewage Disposal (required by DWQ)

Clearly detail the ultimate treatment methods and disposition (non-discharge or discharge) of wastewater generated from the proposed project, or available capacity of the subject facility.
Waste water will be disposed of through the use of off-site septic systems

XIII. Violations (required by DWQ)

Is this site in violation of DWQ Wetland Rules (15A NCAC 2H .0500) or any Buffer Rules?
Yes ☐ No ☒

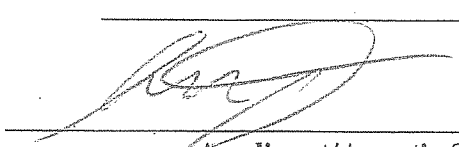
Is this an after-the-fact permit application? Yes ☐ No ☒

XIV. Cumulative Impacts (required by DWQ)

Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality? Yes ☐ No ☒
If yes, please submit a qualitative or quantitative cumulative impact analysis in accordance with the most recent North Carolina Division of Water Quality policy posted on our website at http://h2o.enr.state.nc.us/ncwetlands. If no, please provide a short narrative description:

XV. Other Circumstances (Optional):

It is the applicant's responsibility to submit the application sufficiently in advance of desired construction dates to allow processing time for these permits. However, an applicant may choose to list constraints associated with construction or sequencing that may impose limits on work schedules (e.g., draw-down schedules for lakes, dates associated with Endangered and Threatened Species, accessibility problems, or other issues outside of the applicant's control).
A review of databases for archeological and historical resources and protected species revealed no occurrences on or near the property.

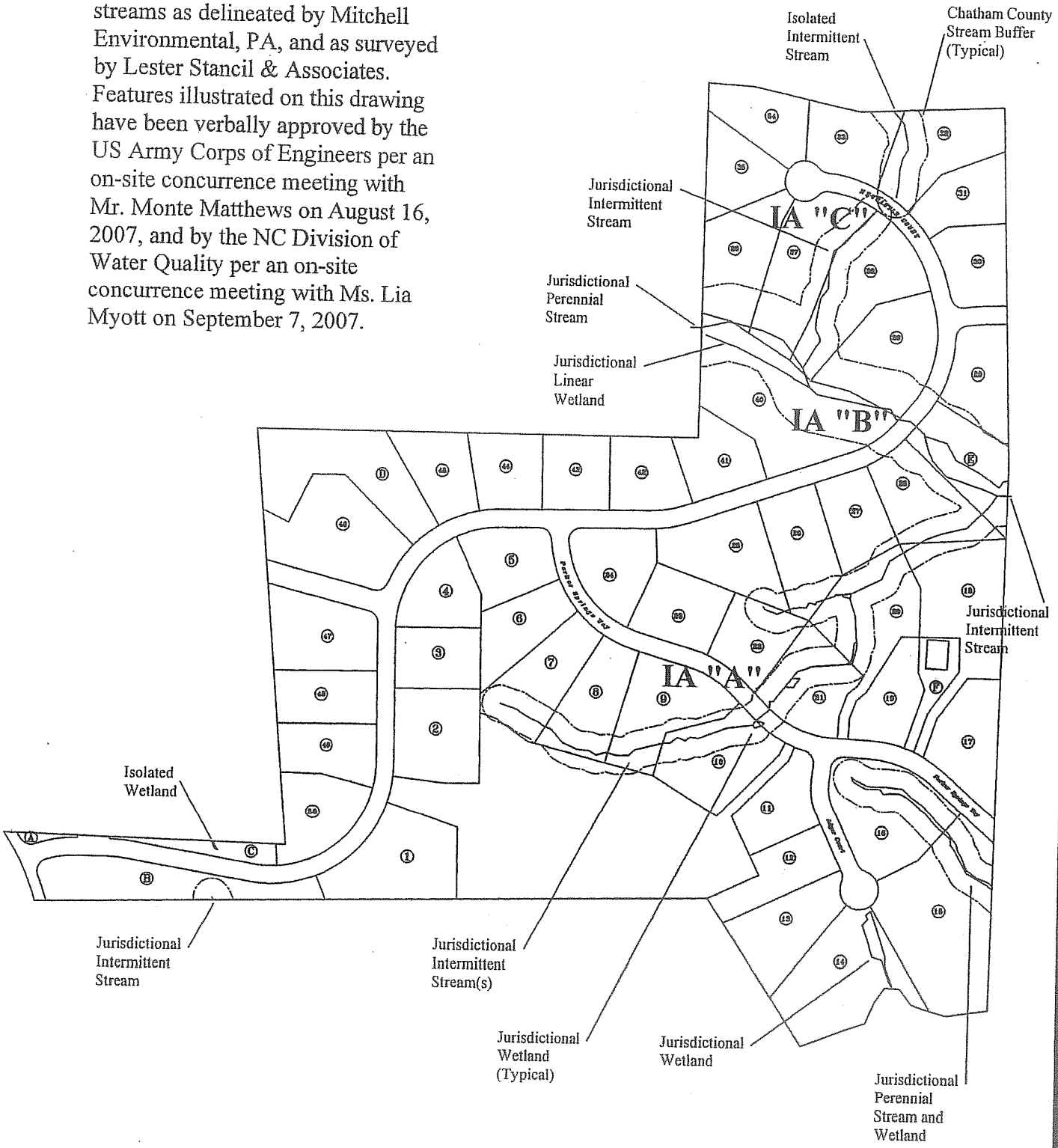


10-25-2007

Applicant/Agent's Signature **Date**

(Agent's signature is valid only if an authorization letter from the applicant is provided.)

This drawing illustrates wetlands and streams as delineated by Mitchell Environmental, PA, and as surveyed by Lester Stancil & Associates. Features illustrated on this drawing have been verbally approved by the US Army Corps of Engineers per an on-site concurrence meeting with Mr. Monte Matthews on August 16, 2007, and by the NC Division of Water Quality per an on-site concurrence meeting with Ms. Lia Myott on September 7, 2007.



MITCHELL ENVIRONMENTAL, P.A.
P.O. BOX 341
FUQUAY VARINA, NC 27526
OFFICE: 919-557-4682
FAX: 919-557-4683

PREPARED FOR: Parker Springs, LLC
318 West Millbrook Road
Raleigh, North Carolina 27609

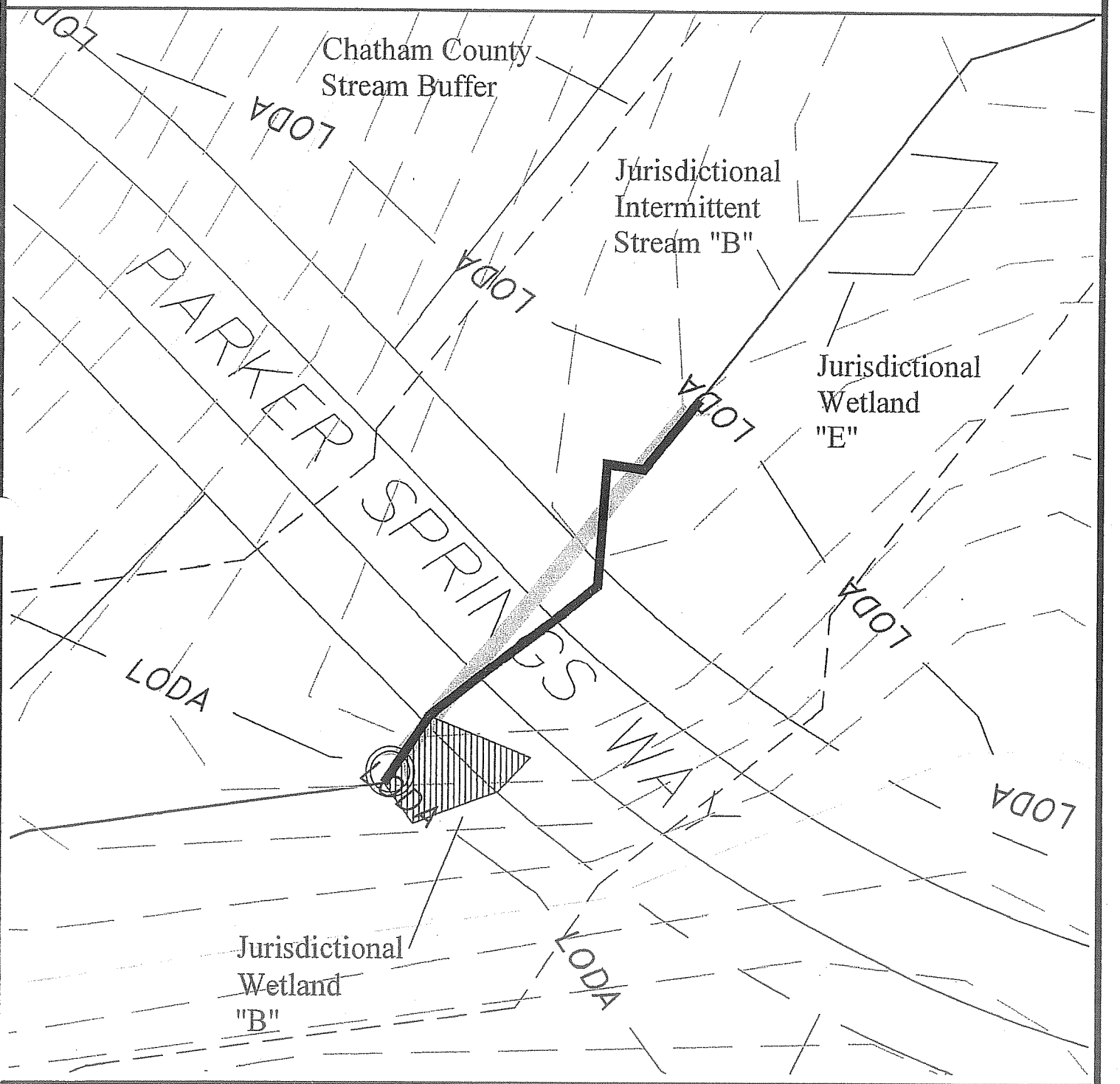
DATE: October 29, 2007 | SCALE: 1" = 400'

ENVIRONMENTAL SCIENTIST CONTACT:
SCOTT MITCHELL, PE, LSS

PARKER SPRINGS S/D
CHATHAM COUNTY
IMPACT AREA LOCATIONS

Proposed Impacts for Impact Area "A":
Streams = 115 lf (*Stream "B"*)
Wetlands = 381 sf or 0.0087 ac (*Wetland "B"*)

* LODA = Limits of Disturbed Area



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318 West Millbrook Road
Raleigh, North Carolina 27609

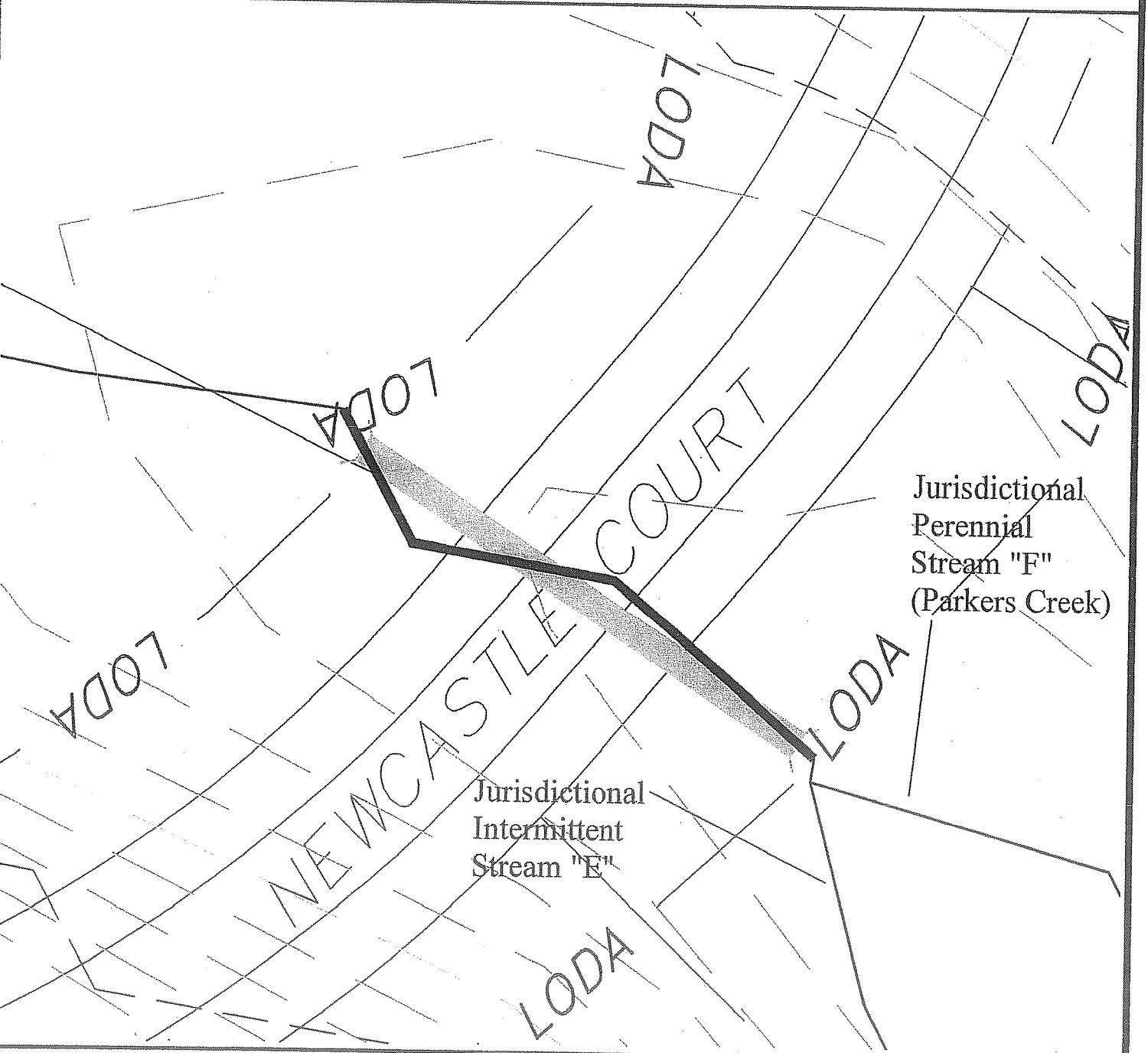
DATE: October 29, 2007 | SCALE: 1" = 30'

ENVIRONMENTAL SCIENTIST CONTACT:
SCOTT MITCHELL, PE, LSS

PARKER SPRINGS S/D
CHATHAM COUNTY
IMPACT AREA "A"

Proposed Impacts for Impact Area "B"
Streams = 128 lf (Stream "F", Parkers Creek)
Wetlands = None

* LODA = Limits of Disturbed Area



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PARKER SPRINGS S/D
CHATHAM COUNTY

IMPACT AREA "B"

Proposed Impacts for Impact Area "C"

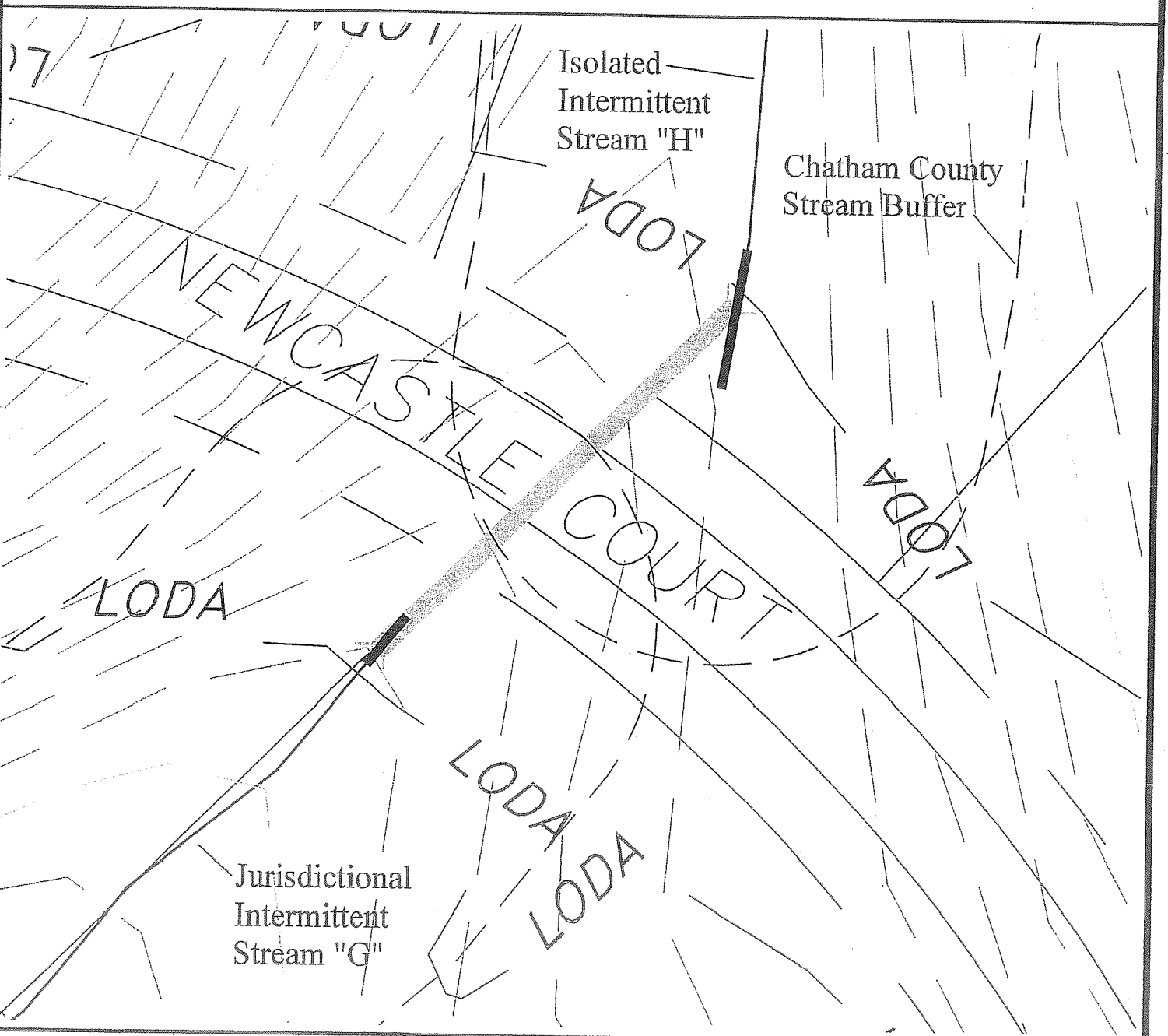
Streams:

404/401 Stream = 13 lf

Isolated Stream = 28 lf

Wetlands = None

* LODA = Limits of Disturbed Area



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CHATHAM COUNTY
IMPACT AREA "C"