Wilkes Road Yard Waste Facility

Cumberland County

Permit Application

May 2011

CDM

5400 Glenwood Avenue, Suite 300
Raleigh, North Carolina 27612
tel: 919 787-5620
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May 25, 2011

Mr. Michael Scott
Composting and Land Application Branch Head
North Carolina Department of Environment and Natural Resources
Division of Waste Management
Solid Waste Section
401 Oberlin Road, Ste. 150
Raleigh, NC 27605

Subject: Cumberland County, North Carolina
Wilkes Road Yard Waste
Permit Renewal Application
CDM Project 2724-79596

Dear Mr. Scott:

Please find enclosed three (3) sets of the Permit Renewal Application for the above referenced project located off Wilkes Road in Fayetteville. The enclosed permit renewal application was prepared in accordance with the North Carolina Solid Waste Rules 15A NCAC 13B. 1400 for composting facilities to allow Cumberland County to compost yard waste.

If you have any questions or need any additional information regarding this permit renewal application, please do not hesitate to contact me at (919) 787-5620.

Very truly yours,

W. Michael Brinchek, P.E.
Project Manager
Camp Dresser & McKee

cc: Robert Howard Cumberland County
Martin Sanford, CDM

Cumberland County

North Carolina

Wilkes Road Yard Waste Facility
Permit Application

May 2011

NORTH CAROLINA PROFESSIONAL SEAL 028426 ENGINEER MICHAEL BRINCHEK

5/25/2011

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North Carolina Firm Licensure: F-0412

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Section 1
Introduction

1.1 Purpose

The purpose of this report is to provide Cumberland County North Carolina (County) with a manual to serve as an operations guide for the Wilkes Road Yard Waste Facility (Facility). The facility operates as a receiving, processing, composting and hauling facility for land clearing debris, yard waste, and wooden pallets. This plan has been prepared in accordance with Solid Waste Management Rule NCAC 13B .1400 and addresses the following:

- Facility Plan;
- Facility operations including
- Materials received and processed;
- Composting Activities;
- Equipment and Personnel utilized to process and handle incoming materials;
- Contingency plans; and
- Recordkeeping.

1.2 Facility Location

The Wilkes Road Yard Waste Facility is located off Wilkes Road (S.R. 1007) west of the intersection of Wilkes Road and N.C. Highway 87. The facility is sited on approximately 51 acres of Cumberland County property. Figure 1-1 shows the general location of the facility.

1.3 Facility History

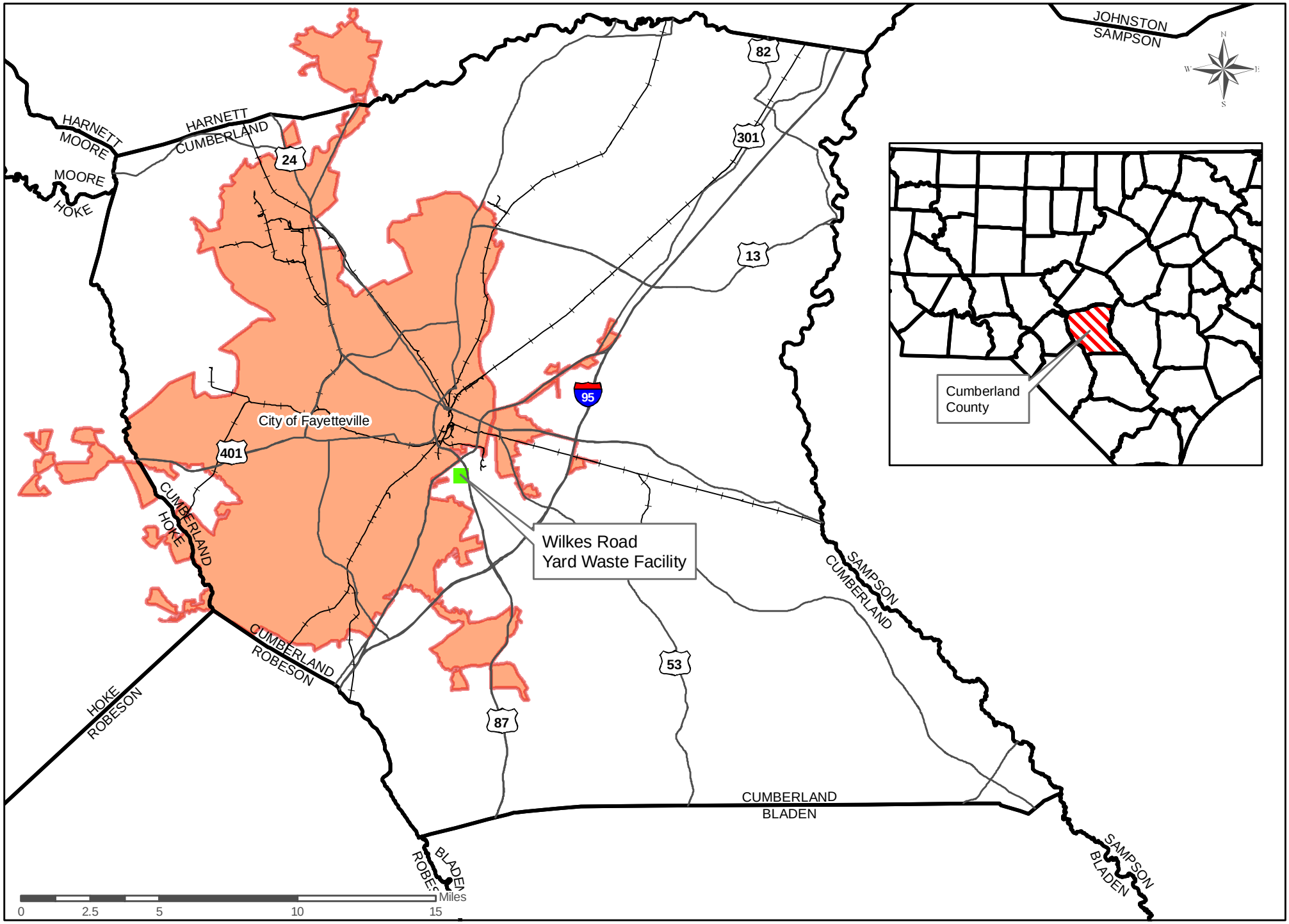
The facility was initially permitted on July 1, 1986, by the North Carolina Department of Environment and Natural Resources, Division of Waste Management, Solid Waste Section (NCDENR-SWS) under Permit No. 26-F, as a Land Clearing and Inert Debris (LCID) landfill. The 10 acre LCID Landfill was temporarily capped using a 1-foot-thick compacted soil cover in August of 1992 by the County. Camp Dresser & McKee (CDM) verified the thickness of the soil cover on July 5, 2005 at 42 locations. Following CDM's report, the County addressed the areas that did not meet the minimum 1-foot-thick. Subsequently, CDM re-verified and certified the cover thickness on September 26, 2005 as meeting the minimum 12-inch-thick cover requirement.

On September 9, 2010, CDM checked the thickness of the 12-inch soil cover and submitted the closure certification to NCDENR-SWS on September 24, 2010. The facility deeds documents were submitted on November 1, 2010, which completed the requirements for the closure of the

LCID landfill. Pertinent correspondences are provided as Appendix A. The current permit to operate (PTO) for the Wilkes Road Yard Waste Treatment and Processing facility (Permit No. 26-10) was issued on August 23, 2006 and includes a yard waste treatment and processing area, a household waste collection area and the LCID landfill. This permit amendment application covers the yard waste processing and composting operations.

1.4 Service Area

The facility currently serves all Cumberland County residents and commercial establishments. Cumberland County, approximately 658 square miles in size, includes the municipalities of Falcon, Fayetteville, Godwin, Hope Mills, Linden, Spring Lake, Stedman and Wade.



Road Railroad Wilkes Road Yard Waste Facility City of Fayetteville

Figure No. 1-1
Location Map

Section 2
Facility Plan

2.1 Introduction

This section provides the facility information required to meet the requirements of Rule 15 A NCAC 13B .1405. The information is presented in the same order as it appears in the Rules.

2.2 Aerial Photograph

An Aerial photo at a scale of 1 inch = 400 feet showing the area within ¼ mile of the proposed site boundaries is provided on the Aerial Map in Appendix B.

2.3 Zoning

requires that a letter from the unit of local government having jurisdiction over the site which states that the proposed use is allowed within the existing zoning and that any necessary approval or permit has been obtained. The Wilkes Road Yard facility is located within the Cumberland County jurisdiction. A Zoning Consistency Determination from the Cumberland County Zoning Department is provided in Appendix C.

2.4 Siting and Design Requirements

The following information is provided to comply with Paragraph 15A NCAC 13B .1404 of the North Carolina Solid Waste Management Rules.

2.4.1 Floodplain

The site is not located in a floodplain. A FEMA flood map is provided in Appendix D.

2.4.2 Siting and Design Requirements:

2.4.2.1 Residences

Paragraph .1404 (a) (3) requires a 200-foot minimum buffer between compost areas and residences and dwellings for Type 1 facilities. No residence or dwelling is located within 200 feet of the proposed composting area as shown on the Aerial Map in Appendix B.

2.4.2.2 Wells

Paragraph .1404 (a) (4) requires a 100-foot minimum buffer between compost areas and wells except for monitoring wells. No wells are located within 100 feet of the proposed composting area as shown on the Aerial Map in Appendix B.

2.4.2.3 Perennial Streams and Rivers

Paragraph .1404 (a) (5) requires a 50-foot minimum buffer between compost areas and perennial streams/rivers. No perennial stream/river is located within 100 feet of the proposed composting area as shown on the Aerial Map in Appendix B.

2.4.3 Location over Closeout Disposal Area

Composting activities will not be performed over the closed LCID landfill.

2.4.4 Location of Swales and Berms

Paragraph .1404 (a) (8) requires a 25-foot minimum distance between compost areas and swales or berms to allow for adequate access for firefighting. Sheet C-1 in Appendix E depicts the location of all swales and berms. A firefighter's certification is provided in Appendix K. The County will construct composting windrows maintaining a 25-foot minimum separation between the compost piles and the berms and swales.

2.4.5 Surface Water Requirements

2.4.5.1 Rule

Paragraph .1404 (a) (9) requires that a site shall meet the following surface water requirements:

(A) A site shall not cause a discharge of materials or fill materials into waters or wetlands of the state that is in violation of Section 404 of the Clean Water Act;

(B) A site shall not cause a discharge of pollutants into waters of the state that is in violation of the requirements of the National Pollutant Discharge Elimination System (NPDES), under Section 402 of the Clean Water Act; and

(C) A site shall not cause non-point source pollution of waters of the state that violates assigned water quality standards;

2.4.5.2 Compliance

The facility has an erosion and sedimentation control permit from the North Carolina Department of Environment and Natural Resources, Division of Land Resources, Land Quality Section (NCDENR-LQS). A copy of the certificate of plan approval and the approved plans are provided in Appendix F.

On July 22, 2009, Camp Dresser & McKee (CDM) submitted a post-construction stormwater permit application to the North Carolina Department of Environment and Natural Resources, Division of Water Quality (NCDENR-DWQ). On September 3, 2009, the NCDENR-DWQ replied stating that the site did not need a post-construction stormwater permit. A copy of the letter from NCDENR-DWQ is provided in Appendix G.

2.4.6 Groundwater Requirements

2.4.6.1 Rule

Paragraph .1404 (a) (10) requires that a site shall meet the following groundwater requirements:

(A) A site shall not contravene groundwater standards as established under 15A NCAC 2L;

(B) Portions of a site used for waste receipt and storage, active composting, and curing shall have a soil texture finer than loamy sand and the depth to the seasonal high water table shall be maintained at least 12 inches for a Type 1 or 2 facility and 24 inches for a Type 3 facility, unless a pad is provided;

(C) A pad shall be provided for portions of a Type 4 facility used for waste receiving and storage, active composting, and curing;

(D) A pad is not required for storage of finished product that is dried so as to pass the Paint Filter Liquids Test (EPA Method 9095), and for which the storage area is prepared in such a manner that water does not collect around the base of the stored material, and where the depth to the seasonal high water table is maintained at least 12 inches; and

(E) The linear coefficient of permeability of pads required in accordance with this Rule shall not be greater than 1 x 10(-7) centimeters per second. If natural soils are used, the liner must be at least 18 inches thick. 2.4.5.2 Compliance

2.4.6.2 Compliance

CDM performed an investigation at the site on May 24, 2011. Two test pits were dug depths of 2 feet in order to observe groundwater or indications of seasonal high groundwater. No groundwater was observed at a depth of 2 feet in either test pit, in addition, no indication of seasonal groundwater was observed within 1 foot of the surface. Based on CDM's observation, the soil texture finer than loamy sand and appeared to be indicative of the stiff clays associated with the Cape Fear Confining Unit. Field photographs are provided as Appendix H.

2.4.7 Design Requirements

2.4.7.1 Public Access

Incoming raw waste material enters the facility through the entrance gate point located near the west corner of the facility. All waste hauling vehicles entering the facility must be weighed at the scale where a full-time attendant verifies compliance with operation requirements. Upon removal of waste, the vehicle leaves the site through the exit gate. Unauthorized vehicle access into the facility is controlled by lockable gates at the entrance and the exit gates and a chain link fencing along the facility boundary.

2.4.7.2 Sedimentation Pollution Control

The Wilkes Road yard waste facility holds an erosion and sedimentation control permit from the North Carolina Department of Environment and Natural Resources, Division of Land Resources, Land Quality Section (NCDENR-LQS). A copy of the certificate of plan approval and the approved plans are provided in Appendix F. All erosion control features are currently in place and in good working condition. Silt fence is provided along the entrance road and around the active area as shown on the plan. Diversions berm and grass-lined ditches are also employed to divert water from the operational areas to the sediment traps. All traps are provided with baffles to prevent sediment and debris from leaving the site. There is a vegetative buffer comprised of tall trees around the working area that helps prevent transport of debris by wind. The County inspects all erosion control features, as required by the erosion and sedimentation control permit, weekly or after any significant rainfall event. Needed repaired are performed immediately. In addition, all operational areas are graded to prevent ponding of surface water and allow surface water runoff in a controlled manner. Grading is also performed as required to deter ruts from occurring around stockpiles.

2.4.7.3 Air Pollution Control

The Wilkes Road yard waste facility holds an air permit (number 09655R02) from the North Carolina Department of Environment and Natural Resources, Division of Air Quality (NCDENR-DAQ). The permit was issued on March 8, 2011 and will expire on February 29, 2016. A copy of the current permit is provided as Appendix I.

2.4.7.4 Odors Management

Odor results primarily from anaerobic conditions. The County will use unusual elevated temperature as early indicator of a pile that in anaerobic conditions. When a windrow is suspected as being in anaerobic conditions, the windrow will be aerated by turning. County staff will continuously monitor the windrows for strong odors. Additionally, the County will minimize the amount of time compost stays onsite to prevent odor problems.

2.5 Facility Information

2.5.1 Waste Types, Sources and Estimated Quantities to be composted

Currently, the facility receives on average approximately 300 tons of waste per day. During the periods of high demands such as emergency events, the facility is capable of receiving 1,000 tons of waste per day. Table 2-1 shows that between the periods of October 2009 and September 2010, an average of 286 tons of waste per day was received by the facility. The daily maximum within the 12-month period was 863 tons.

Table 2-1: Daily Tonnages of Incoming Waste and Number of Vehicles.

Month	Maximum of Daily Tonnages	Average of Daily Tonnages	Average Number of Vehicles per Day
Oct-09	424	217	71
Nov-09	835	304	90
Dec-09	477	240	74
Jan-10	777	310	73
Feb-10	426	226	55
Mar-10	571	193	94
Apr-10	863	360	139
May-10	578	325	122
Jun-10	420	287	97
Jul-10	682	341	88
Aug-10	596	312	85
Sep-10	588	311	81
Overall	**863**	**286**	**89**

The facility total capacity for both processed and unprocessed residential yard waste and debris and commercial yard waste and land clearing debris is approximately 25,000 cubic yards. Assuming unprocessed yard waste material and debris has an average specific weight of 300 pounds per cubic yards (lbs/cy) and processed yard waste material and debris has an average specific weight of 500 lbs/cy, the facility capacity for yard waste material and debris will vary approximately between 3,750 tons and 6,250 tons depending upon the proportions of processed and unprocessed material.

The facility capacity for wooden pallets is approximately 6,400 cubic yards. Assuming wooden pallets have a specific weight of 185 lbs/cy the facility capacity for wooden pallets is approximately 590 tons.

2.5.2 Composting Pad

No pad will be used for composting

2.6 Site Plan

A Site Plan is provided as Sheet C-1 in Appendix E.

Section 3
Operations Plan

3.1 Facility Description

The Wilkes Road Yard Waste Facility (Facility) operates as a receiving, processing, and hauling facility for land clearing debris, yard waste, and wooden pallets. The facility is owned by Cumberland County, North Carolina (County) and operated by the Cumberland County Solid Waste Management Department. The facility is comprised of the following units:

- A stockpile and processing area for residential yard waste and debris and commercial yard waste and land clearing debris;
- A stockpile and processing area for wooden pallets into red mulch;
- An overflow stockpile for raw residential yard waste and debris and commercial yard waste and land clearing debris;
- A yard waste composting area; and
- An equipment storage area and household drop-off area.

3.2 Facility Operations Responsibility

The Wilkes Road yard waste facility is owned by Cumberland County and operated by the Cumberland County Solid Waste Management Department. The person responsible for facility operations is:

Name: Robert Howard, Solid Waste Director

Address: 698 Ann Street Fayetteville, NC 28301

Telephone: 910-321-6830 Fax: 910-321-6840

3.3 Operating Personnel

The Facility currently utilizes a staff composed of 4 full time personnel and one temporary worker. The operating personnel include one site supervisor, one scale house attendant and three equipment operators.

3.4 Operating Procedures

The Wilkes Road receives yard waste, land clearing debris, yard waste, and wooden pallets for processing. Wooden pallets and tree stumps are separated from yard waste and ground to produce mulch. As required by North Carolina Solid Waste Management Rules, yard waste and mixed loads are ground and composted prior to being made accessible to the public.

3.4.1 Waste Acceptance Procedures

Commercial and residential haulers transporting raw waste materials enter the Facility off Wilkes Road and are directed to the scale house. The scale house attendant determines the weight of material to be unloaded and the associated fees and checks the load to determine if it is acceptable material. Acceptable material includes and clearing debris, yard waste, and wooden pallets. Haulers carrying materials that cannot be processed at the facility (unacceptable material) are instructed to haul the material to the Ann Street Landfill for disposal. "Unacceptable material" includes large quantity of household trash, construction demolition debris, recyclable material and household hazardous waste. Haulers with a small amount of household garbage or recyclable material are directed to the household trash area to dispose the waste into the roll-off bins. This service is offered as a convenience by the County to citizens.

3.4.2 Mulching Production

Tree stumps and wood pallets are grounded separately and made available to the public as mulch. Raw product is loaded into the mobile tub grinder by County personnel. A conveyor belt carries the grinded material into the power screen. The power screen separates the grinded material into fine grinded mulch, which is collected into a truck and stockpiled in the fine mulch stockpile area and rough grounded mulch. The tub grinder has a built-in color system, which may be used for the processing of wooden pallets to generate red mulch. Red mulch processing is performed occasionally using dye product.

Under normal operating conditions wooden pallets are stockpiled until a sufficient amount of raw materials are available for processing (approximately 500 cubic yards). Wooden pallets may remain unprocessed up to 60 days. Depending on market fluctuations and demand, processed red mulch may remain on-site up to 90 days.

3.4.3 Composting Procedures

Yard waste, land clearing debris and mixed waste are composted to a temperature not less than 131 deg. F for 3 days prior to being sold to the public. After the waste to be composted is ground, County personnel build windrows approximately 15 feet high. At each step of the windrow preparation process, soil and/or water is added to moist the windrow. Once the windrow is in place, County personnel monitor the pile temperature and record it on the "Compost Tracking form in Appendix J. After temperature records show evidence that the pile has reached the minimum 131 deg F for 3 consecutive days, the pile is turned using a garden fork or a shovel. In case of strong odors during the composting process, County personnel will turn the windrow to aerate the pile and prevent anaerobic decomposition. When evidence is established that the material has met the 131 degrees requirement for at least 3 days and the material has become earthy and black, the compost is ready and can be sold to the public.

Adjustments may be made to these steps as deemed necessary by the County to meet the minimum 131 deg F for 3 consecutive days.

3.5 Operating Equipments

The facility utilizes the following equipment on a daily basis:

- 1 Excavator

- 2 Dozers
- 1 Track Loader
- 1 Wheel Loader (6 cylinder)
- 1 Wheel Loader (3 cylinder)
- 1 5,000 Gallon Water Tanker
- 2 Tub Grinders
- 2 Power Screens

Under normal operation conditions, only one tub grinder and power screen is used. The second tub grinder serves as backup and may be used in case of mechanic failure of the first grinder or in case of an emergency situation.

3.6 Operating Hours

The facility is open from 8:00 am to 4:00 pm Monday through Saturday, except on County holidays. Materials processing is generally conducted during hours of operation. In response to an emergency event as described in Section 2.13, material processing may be extended as necessary to handle the additional materials until conditions return to normal.

3.7 Uses of Recycled Materials and Non- Recyclable Materials

The recycled materials at the facility consist of screened grinded material (fine mulch) from pallets and tree stumps, and compost from yard waste. The mulch and the compost are sold to commercial and residential haulers.

Non-recyclable materials generated by the facility including incidental trash and household wastes are disposed of in approved containers (roll-off bins) located at the household drop-off area and hauled at a minimum frequency of once every two days to the Ann Street Subtitle D Landfill for final disposal.

3.8 Facility Access Control

3.8.1 Access Road

The facility access road is mainly comprised of crushed stone paving roads maintained in good condition, which allows operations during wet weather conditions.

3.8.2 Signage

At the entrance gate of the facility, three signs are provided. The first sign displays the facility's name and permit number. The second sign displays the facility's operating hours. The third sign lists the days when the facility is closed (County holidays).

In addition to the signage, the scale house attendant and the other facility employees are available to provide instructions to waste haulers. As a general guidance to citizens, the County provides a handout identifying all county-owned waste management sites and accepted wastes for each site. The County's website also provides the same information.

3.8.3 Access Gate

Incoming raw waste material enters the facility through the entrance gate point located near the west corner of the facility. All waste hauling vehicles entering the facility must be weighed at the scale where a full-time attendant verifies compliance with operation requirements. The vehicle is directed to the clearing debris and yard waste or the mulch processing area depending on the load carried. Upon removal of waste, the vehicle leaves the site through the exit gate. A traffic pattern scheme is provided on Figure 2-1. Unauthorized vehicle access into the facility is controlled by lockable gates at the entrance and the exit gates and a chain link fencing along the facility boundary.

3.9 Contingency Plans

At times when major occurrences or incidents happen outside the control of the facility personnel, an operational contingency plan is enacted. Events enabling the application of a contingency plan are equipment failures, fire events, medical emergencies, or catastrophic events. The purpose of the contingency plan is to maintain a minimal level of operational efficiency during such periods.

3.9.1 Equipment Failures

In the case of equipment failures, the County utilizes in-house maintenance personnel and local supplier representatives. If the equipment downtime is significant, then equipment from the Ann Street Subtitle D Landfill can be borrowed to minimize downtime. The County has a spare tub grinder and screen onsite to be used in case of a mechanical failure. If both grinders fail at the same time, the County stores the incoming material at the overflow stockpile area until the equipment is repaired.

3.9.2 Dye Spill

In the event of a dye spill the County will discontinue dye operations. Impacted soils will be removed and temporarily disposed into a roll-off container and carried to the Subtitle D landfill for final disposal. The impacted area will be properly stabilized in accordance with NCDENR Sedimentation and Erosion Control guidelines. Following cleanup, the cause of the spill will be determined. In the event of a spill due to equipment malfunction, the equipment will be repaired.

3.9.3 Fire Events

In the event of a fire the standard procedure is for facility personnel to immediately contact the Cumberland County Fire Department via the County's 911 calling system. Once the local fire department is contacted, facility personnel respond to the situation using the water tanker and onsite hydrant, until the fire department arrives. See Appendix K for a copy of the Fire Marshall's Certification letter.

3.9.4 Medical Emergency

When medical emergencies occur, local emergency medical personnel are contacted via the Cumberland County 911 calling system and other emergency contact numbers. The standard procedure is to notify immediately the proper agencies and authorities of medical emergencies at this facility. There are emergency supplies located in the onsite first aid kit that are used for immediate response to these types of emergencies until medical personnel arrive.

3.9.5 Catastrophic Events

The County has operation plans in place to deal with catastrophic events that affect the increase of material disposed at the facility. For natural disasters, the County can accept up to 1,000 tons of acceptable waste material per day. Material not processed is temporarily placed in the overflow stockpile and is processed once operations return to normal.

Should a catastrophic event damage the working area, the facility will remain in operation under a revised plan; A staging area shall be created to facilitate the removal of debris and impediments from the normal work area to allow the facility personnel and equipment to eventually return to that area and resume daily activities as normal as possible.

3.10 Record Keeping

Facility personnel maintain computerized records for material inflow and cash and charges received by the facility. Total annual quantities are compiled and an annual report is prepared each year, on or before August 15, summarizing yearly quantities and activities and submitted to the NCDENR.

The County monitors temperature on regular basis. Temperatures are recorded on daily basis on the form provided in Appendix J and kept on file.

Appendix A

LCID Landfill Closure Documents

CDM
5400 Glenwood Avenue, Suite 300
Raleigh, North Carolina 27612
tel: 919 787-5620
fax: 919 781-5730

September 24, 2010

Ms. Elizabeth Werner
North Carolina Department of Environment and Natural Resources
Solid Waste Section
401 Oberlin Road, Ste. 150
Raleigh, NC 27605

Subject: Cumberland County, North Carolina
Wilkes Road Yard Waste Treatment and Processing Facility
Land Clearing/Inert Debris Landfill
Closure Certification

Dear Elizabeth:

As previously indicated in our correspondence to you on April 20, 2010 Cumberland County does not plan on re-opening the Wilkes Road Land Clearing/Inert Debris (LCID) Landfill – Permit No. 26-F. The 10-acre landfill was capped by the County using a 1-foot-thick compacted soil cover in August 1992 and has not been operated since. On August 23, 2006 the County received a Permit to Operate (PTO) through July 24, 2011 for the Wilkes Road Yard Waste Treatment and Processing Facility (Permit No. 26-10), which included the yard waste treatment and processing area, a household waste collection area and the previously permitted LCID landfill.

As a requirement of the County's Treatment and Processing Permit Application for the facility the County was required to verify the 1-foot-thick compacted soil cover over the LCID landfill in accordance with 15A NCAC 13B .0566 (5). CDM's verification of the minimum cover cap requirement was provided within Section 1.4 of the permit application. To confirm the 1-foot-thick compacted soil cover still met the minimum cover cap requirements, CDM field verified the conditions on September 9, 2010 by hand auguring 60 test pits approximately 50 to 75 feet apart as shown on the attached Figure 1. Based on our investigation the cover cap thickness was a minimum of 12 inches (one foot) in all 60 locations.

CDM

The intent of this letter is to provide certification meeting requirements 1 and 2 of your letter dated September 3, 2010. Within the next two weeks CDM, on behalf of the County will provide, under separate cover a copy of the deed for the LCID property. Upon submittal of this information, it is our understanding that the County will have met all requirements for closure of the LCID landfill and will be available to meet with Mr. Drew Hammonds to conduct a final inspection to determine compliance with the closure procedures. If you have any additional questions, please do not hesitate to call me at (919) 325-3500.

Regards,

W. Michael Brinchek, P.E.
Camp Dresser & McKee

NORTH CAROLINA PROFESSIONAL SEAL 022423 ENGINEER W. MICHAEL BRINCHEK

09.24.2010

Enclosures

cc: K. Hall, CCSWD
M. Sanford, CDM

Legend

- Sampling Point
- Yard Waste Facility
- Tax Parcels
- Roads

N

0 50 100 150 200 Feet

Figure 1

Cumberland County, NC
Wilkes Road
Yard Waste Facility
Closed LCID Landfill
Soil Depth Measurement

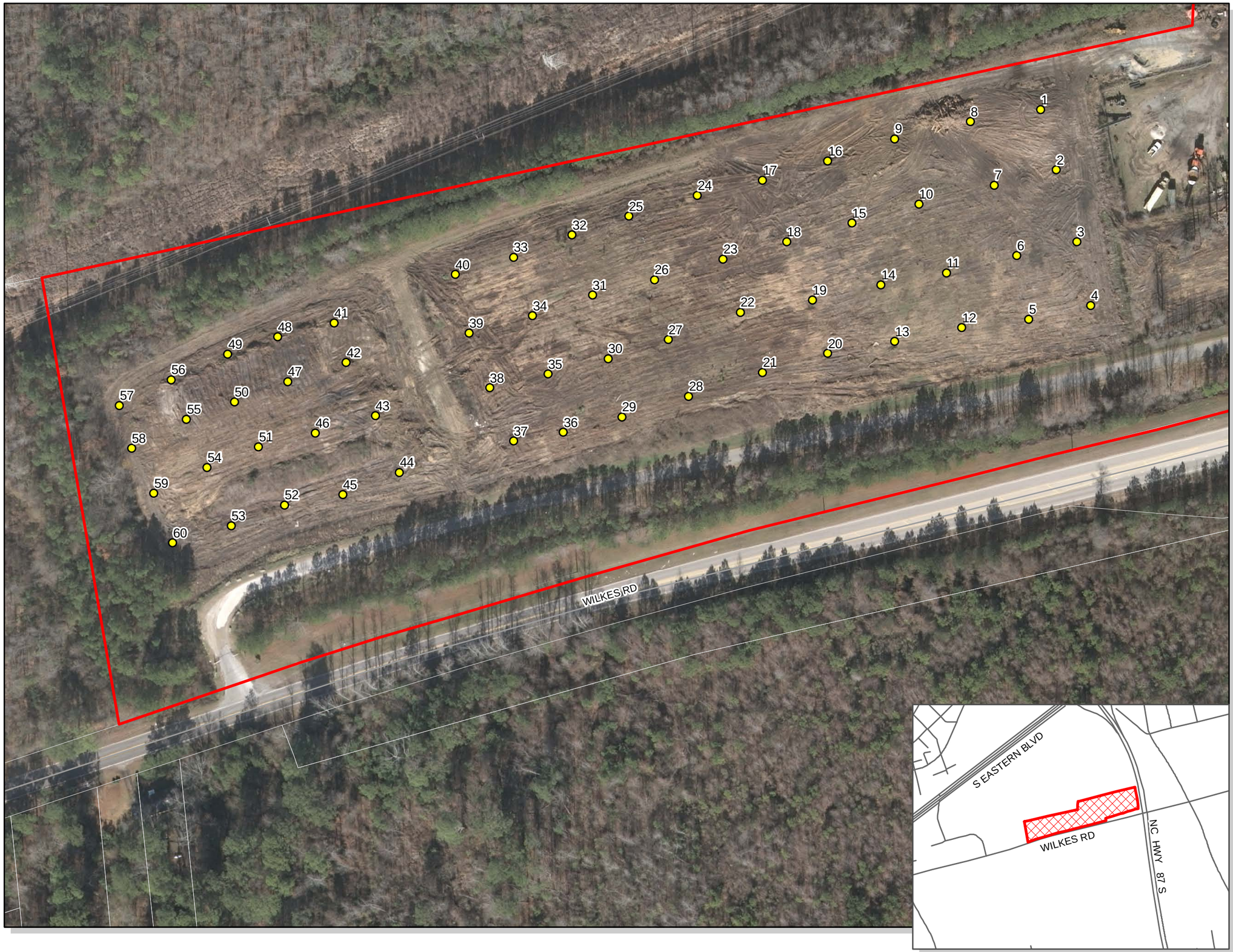


Table 1
Cumberland County, NC
Wilkes Road
Yard Waste Facility
Closed LCID Landfill
Soil Depth Measurement

Point ID	Depth	Pipe ID	Depth
1	>= 12 inch	31	>= 12 inch
2	>= 12 inch	32	>= 12 inch
3	>= 12 inch	33	>= 12 inch
4	>= 12 inch	34	>= 12 inch
5	>= 12 inch	35	>= 12 inch
6	>= 12 inch	36	>= 12 inch
7	>= 12 inch	37	>= 12 inch
8	>= 12 inch	38	>= 12 inch
9	>= 12 inch	39	>= 12 inch
10	>= 12 inch	40	>= 12 inch
11	>= 12 inch	41	>= 12 inch
12	>= 12 inch	42	>= 12 inch
13	>= 12 inch	43	>= 12 inch
14	>= 12 inch	44	>= 12 inch
15	>= 12 inch	45	>= 12 inch
16	>= 12 inch	46	>= 12 inch
17	>= 12 inch	47	>= 12 inch
18	>= 12 inch	48	>= 12 inch
19	>= 12 inch	49	>= 12 inch
20	>= 12 inch	50	>= 12 inch
21	>= 12 inch	51	>= 12 inch
22	>= 12 inch	52	>= 12 inch
23	>= 12 inch	53	>= 12 inch
24	>= 12 inch	54	>= 12 inch
25	>= 12 inch	55	>= 12 inch
26	>= 12 inch	56	>= 12 inch
27	>= 12 inch	57	>= 12 inch
28	>= 12 inch	58	>= 12 inch
29	>= 12 inch	59	>= 12 inch
30	>= 12 inch	60	>= 12 inch

5400 Glenwood Avenue, Suite 300
Raleigh, North Carolina 27612
tel: 919-325-3500
fax: 919-781-5730

November 1, 2010

Ms. Elizabeth Werner
North Carolina Department of Environment and Natural Resources
Solid Waste Section
401 Oberlin Road, Ste. 150
Raleigh, NC 27605

Subject: Cumberland County, North Carolina
Wilkes Road Yard Waste Treatment and Processing Facility
Land Clearing/Inert Debris Landfill
Property Deed

Dear Elizabeth:

CDM, on behalf of Cumberland County is providing herewith a copy of the Wilkes Road Property Deed, which includes the closed Wilkes Road Land Clearing/Inert Debris (LCID) Landfill – Permit No. 26-F. With submittal of this information, it is our understanding that the County has met all requirements for closure of the LCID landfill.

If you have any additional questions, please do not hesitate to call me at (919) 325-3500.

Regards,

W. Michael Brinchek, P.E.
Camp Dresser & McKee

Enclosures

cc: K. Hall, CCSWD
M. Sanford, CDM

Attachment – Wilkes Road Property Deed

BOOK 3056 PAGE 667

Excise Tax None

Recording Time, Book and Page

Tax Lot No. ..... Parcel Identifier No. .....

Verified by ..... County on the ..... day of ....., 19....

by .....

Mail after recording to REID, LEWIS & DEESE, ATTORNEYS AT LAW

P. O. Drawer 1358, Fayetteville, North Carolina 28302

This instrument was prepared by RICHARD M. LEWIS, JR.

Brief description for the Index 50.57 acres, N/S Wilkes Rd. and W/S N.C. 87

NORTH CAROLINA GENERAL WARRANTY DEED

THIS DEED made this 6th day of March, 19 85, by and between

GRANTOR	GRANTEE
CUMBERLAND REDEVELOPMENT COMMISSION	COUNTY OF CUMBERLAND P. O. Drawer 1829 Fayetteville, NC 28302

Enter in appropriate block for each party: name, address, and, if appropriate, character of entity, e.g. corporation or partnership.

The designation Grantor and Grantee as used herein shall include said parties, their heirs, successors, and assigns, and shall include singular, plural, masculine, feminine or neuter as required by context.

WITNESSETH, that the Grantor, for a valuable consideration paid by the Grantee, the receipt of which is hereby acknowledged, has and by these presents does grant, bargain, sell and convey unto the Grantee in fee simple, all that certain lot or parcel of land situated in the City of Fayetteville, Cross Creek Township, Cumberland County, North Carolina and more particularly described as follows:

BEGINNING at a concrete monument in the western margin of N. C. 87 (150 foot wide right-of-way), said concrete monument being located at the northern end of a site easement at the intersection with the northern margin of Wilkes Road (60 foot wide right-of-way), and proceeding thence for a first call from the western margin of N. C. 87, South 27 degrees 21 minutes West 51.82 feet to a concrete monument located in the northern margin of Wilkes Road, the southern end of said site easement; thence along the northern margin of Wilkes Road, South 79 degrees 12 minutes West 1284.42 feet to a point approximately in the middle of N. C. S. R. 2211 (60 foot wide right-of-way) where it intersects Wilkes Road; thence continuing along the northern margin of Wilkes Road, South 79 degrees 06 minutes West 1041.10 feet to a point located approximately in the middle of N. C. S. R. 2302 (60 foot wide right-of-way) where it intersects the northern margin of Wilkes Road; thence continuing along the northern margin of Wilkes Road with the following calls and distances: South 79 degrees 22 minutes West 862.28 feet; South 78 degrees 15 minutes West 100.27 feet; South 77 degrees 24 minutes West 100.19 feet; thence South 76 degrees 15 minutes West 100.32 feet; thence South 74 degrees 59 minutes West 100.32 feet; thence South 74 degrees 41 minutes West 70.11 feet; thence South 74 degrees 46 minutes West 228.04 feet to a concrete monument; thence leaving Wilkes Road, North 10 degrees 54 minutes West 518.04 feet to a concrete monument located in the Carolina Tel. and Tel. and CP&L 100 foot wide easement; thence North 79 degrees 09 minutes East 1357.53 feet to a concrete monument; thence North 03

degrees 05 minutes East 145.64 feet to a concrete monument located in said 100 foot wide easement; thence North 79 degrees 32 minutes East 2388.49 feet to a concrete monument located in the western margin of N. C. 87; thence along the western margin of N. C. 87, South 24 degrees 29 minutes East 583.17 feet to the point and place of beginning and containing 50.57 acres, more or less.

The above description is taken from a map prepared by Moorman, Little & Kizer, Inc., dated December, 1980, and entitled "Wilkes Road Community Development Program Area for Cumberland Redevelopment Commission".

The property is conveyed subject to all covenants, restrictions and stipulations as set forth in the attached document entitled "Community Development Block Grant Program, Urban Renewal Plan for Wilkes Road Community Development Program, Cumberland County, North Carolina, November, 1976, Revised September, 1977", the same being covenants attaching to and running with the land, and which shall remain in full force and effect for a period of 30 years from November, 1976.

The property hereinabove described was acquired by Grantor by instrument recorded in .....

A map showing the above described property is recorded in Plat Book ..... page .....

TO HAVE AND TO HOLD the aforesaid lot or parcel of land and all privileges and appurtenances thereto belonging to the Grantee in fee simple.

And the Grantor covenants with the Grantee, that Grantor is seized of the premises in fee simple, has the right to convey the same in fee simple, that title is marketable and free and clear of all encumbrances, and that Grantor will warrant and defend the title against the lawful claims of all persons whomsoever except for the exceptions hereinafter stated. Title to the property hereinabove described is subject to the following exceptions:

This Deed is made subject to Rights-of-Way and Easements as appear of record.

IN WITNESS WHEREOF, the Grantor has hereunto set his hand and seal, or if corporate, has caused this instrument to be signed in its corporate name by its duly authorized officers and its seal to be hereunto affixed by authority of its Board of Directors, the day and year first above written.

CUMBERLAND REDEVELOPMENT COMMISSION
(Corporate Name)

By: Stellus Mathis
Chairman ~~President~~

ATTEST: Richard Serra
Executive Secretary (Corporate Seal)

USE BLACK INK ONLY

.....(SEAL)
.....(SEAL)
.....(SEAL)
.....(SEAL)

.....
(Corporate Name)

By: .....
.....President

ATTEST:
.....
..... Secretary (Corporate Seal)

USE BLACK INK ONLY

.....(SEAL)
.....(SEAL)
.....(SEAL)
.....(SEAL)

BOOK 3056 PAGE 669

STATE OF NORTH CAROLINA CUMBERLAND COUNTY

Before me, David R. Kimbel, a Notary Public within and for the State and County aforesaid, personally appeared Shelton Norris and Richard Herrera, with whom I am personally acquainted and who upon their several oaths acknowledged themselves to be the Chairman and Secretary, respectively, of the Cumberland Redevelopment Commission, the within named bargainor, a corporation, and that they as such Chairman and Secretary, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing the name of the corporation by the said Shelton Norris as such Chairman and attesting the same by said Richard Herrera as such Secretary.

WITNESS my hand and official seal at Office in the State and County aforesaid on this the 19th day of March, 19 85.

Notary Public

My Commission Expires

July 19, 1988

Use Black Ink

I, a Notary Public of the County and State aforesaid, certify that ..... personally came before me this day and acknowledged that .... he is ..... Secretary of ..... a North Carolina corporation, and that by authority duly given and as the act of the corporation, the foregoing instrument was signed in its name by its ..... President, sealed with its corporate seal and attested by ..... as its ..... Secretary.

Witness my hand and official stamp or seal, this ..... day of ....., 19.....

My commission expires: ....Notary Public

SEAL - STAMP

Use Black Ink

NORTH CAROLINA, ...County.

I, a Notary Public of the County and State aforesaid, certify that ..... personally came before me this day and acknowledged that .... he is ..... Secretary of ..... a North Carolina corporation, and that by authority duly given and as the act of the corporation, the foregoing instrument was signed in its name by its ..... President, sealed with its corporate seal and attested by ..... as its ..... Secretary.

Witness my hand and official stamp or seal, this ..... day of ....., 19.....

My commission expires: ....Notary Public

The foregoing Certificate of

NORTH CAROLINA, CUMBERLAND COUNTY

The foregoing or annexed certificate of David R. Kimbel

Notary Public/~~Notaries Public~~ is/are certified to be correct.

This instrument was presented for registration and recorded in this Office at Book 3056 Page 669

This 19 day of March, 1985 at 2:20 O'clock M.

George E. Tatum
Register of Deeds

By Juanita L. Williams
Deputy Register of Deeds

NO REVENUE

N.C. Bar Assoc. Form No. 3A © 1977

COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAM
URBAN RENEWAL PLAN FOR WILKES ROAD COMMUNITY DEVELOPMENT PROGRAM
Cumberland County, North Carolina

November, 1976
Revised September, 1977

Table of Contents

This Urban Renewal Plan relates to a blighted area known as Wilkes Road Community Development Program Area (hereinafter referred to as the "CDP"), located in Cumberland County, North Carolina (hereinafter referred to as the "County") and undertaken by the Cumberland Redevelopment Commission (hereinafter referred to as the "Local Public Agency" or "LPA") in accordance with and in furtherance of the objectives of the North Carolina Redevelopment Law (General Statutes of North Carolina, Section 160A-500, et seq., as amended). The Urban Renewal Plan also constitutes the Redevelopment Plan for the area.

The text, pages 1 through 9, which comprises a part of the Urban Renewal Plan includes the following:

SUBJECT	PAGE
A. Description of Program Area Community Development	2
B. Statement of Redevelopment Plan Objectives	2
C. General Land Use Plan	2--3
D. Urban Renewal Techniques to be Used to Achieve Plan Objectives	3
E. Land Disposition Supplement	3--6
F. Other Provisions Necessary to Meet State and Local Requirements	6--9
G. Provisions for Amending Plan	9

MAPS

Existing Land Use and Community Development Program Area Boundary Map
Land Use Map--Community Development Program Area
Land Acquisition Map--Community Development Program Area
Existing Zoning Map--Community Development Program Area
Proposed Zoning Map--Community Development Program Area
Preliminary Site Plan--Community Development Program Area

EXHIBITS

A. Boundary Description

Urban Renewal Plan

A. Description of Community Development Program Area

See attached Exhibit A entitled "Boundary Description Wilkes Road Community Development Program"

See map entitled "Existing Land Use and Community Development Program Area Boundary Map" which identifies boundaries of Community Development Program Area.

B. Statement of Redevelopment Plan Objectives

The Community Development Program "CDP" Area was selected with the objective of replacing a blighted area with an area designated for public reuse. There is a high incidence of blight within the "CDP" Area consisting of both structural and environmental deterioration. Structures warranting clearance will be removed as will those considered economically infeasible of rehabilitation and others requiring acquisition for planning reasons.

The intent of this urban renewal plan is to assemble a public reuse area which will provide open space for conservation and park purposes as well as to provide right-of-way for a major highway connector.

The intent is to further the County's efforts in the removal of blight and to create space for public reuse commensurate with the County's comprehensive plan objectives.

C. General Land Use Plan

1. Land Use Map

The map entitled "Land Use Map--Community Development Program Area" indicates the proposed location of land uses and circulation routes for the "CDP" area. This plan has been prepared in conformance with appropriate elements of the County's General Plan.

2. Description of Each Predominant Land Use Category

The only use of land planned for the redeveloped "CDP" area is public land reuse. Specific controls that will determine the use are included in Section E, Land Disposition Supplement, below.

3. Planning Criteria or Standards

a. The General Plan elements of Cumberland County serve as the guide for the development of planning criteria and standards. The intent is for the planning criteria and standards to allow for the maximum flexibility that is consistent with sound planning principles. The only use planned for the "CDP" area is the public reuse described above in Section B, and further detailed in Section E.

b. No other public improvements or facilities are contemplated for the "CDP" area other than the ones reflected on the "Land Use Map--Community Development Program Area".

D. Urban Renewal Techniques to be Used to Achieve Plan Objectives.

Within the "CDP" area all structures will be acquired and cleared.

1. Rehabilitation.

Not applicable.

2. Acquisition and Clearance.

The public reuse contemplated precludes any treatment other than clearance. Land will be acquired to meet the following objectives:

a. Remove substandard conditions.
b. Provide land for public reuse including right-of-way for a major highway connector.

The "LPA" will purchase all properties as designated on the "Land Acquisition Map--Community Development Program Area".

3. Temporary Project Improvements and Facilities

The "LPA" may utilize for conservation and park purposes the land reserved for highway right-of-way until such time as the highway is constructed.

E. Land Disposition Supplement

Community Development Program Area Land Use Map

Thoroughfares, other highways, and proposed land uses are shown on the "Land Use Map--Community Development Program Area". In conformity with the Land Use Plan and the Thoroughfare Plan for the City, the Urban Renewal Plan provides that the "CDP" will be

developed for public reuses.

The "LPA" will purchase all properties so designated on the "Land Acquisition Map--Community Development Program Area". The area will be cleared.

1. Land Use Designation and Standards.

Any sale, lease, retention, or dedication for public purposes of land in the "CDP" shall be subject to the restrictions which follow. In addition to the controls of the plan here set forth, the provisions of the City's Zoning Ordinance as amended will control. In all cases, the more restrictive control will govern the minimum standards.

Parcels designated for redevelopment on the "Land Use Map--Community Development Program Area" shall be used for public purposes having the following restrictions.

a. Parcels P-1 and P-3 shall be restricted to conservation and park purposes. Structures on each parcel shall be restricted to a Comfort Station--Maintenance Building and Picnic Shelters. The minimum required setback from any highway right-of-way or any property line shall be one hundred fifty feet (150) feet. The maximum building height shall be fifteen (15) feet. The maximum lot coverage for structures shall be two (2) percent.

Off-street parking for park purposes is a permitted use.

Parcel P-2 shall be reserved for highway right-of-way with an interim use for conservation and park purposes.

2. Circulation.

Wilkes Road will serve the "CDP" area. In conformance with the Thoroughfare Plan additional highway right-of-way will be reserved.

3. Redevelopers Obligations.

Disposition of the land comprising the "CDP" area will be on the basis of affording maximum opportunity, consistent with the sound needs of the County as a whole, for the redevelopment of such area. The land will be disposed of by sale, lease, retention, or dedication to public bodies for redevelopment by them in accordance with the provisions of this Urban Renewal Plan and their contract with the "LPA".

The "LPA" in disposing of the land in the "CDP" area to be redeveloped by public parties will, in its contracts and deeds or other instruments with such parties, include such terms

and conditions as in the judgment of the "LPA" will be necessary or advisable to insure redevelopment of the "CDP" area and its use thereafter in accordance with this Urban Renewal Plan, and to prevent a recurrence of conditions of blight in the area.

Such provisions will be contained in such contracts, deeds, or other instruments irrespective of whether or not they duplicate in whole of in part requirements of existing or proposed zoning ordinances or other local laws or regulations with respect to the "CDP" area, so that such obligations may operate independently of such zoning and other laws or regulations. In all instances, the improvements to be constructed in the "CDP" area will be constructed in accordance with applicable zoning ordinance provisions and regulations and other codes and ordinances; the requirements of this Urban Renewal Plan; and such other requirements as may be set forth in the contracts between the "LPA" and the developers.

Such contracts, deeds, or other instruments, in addition to including such other terms and conditions as the "LPA" finds desirable in order to implement and effectuate the objectives of this Urban Renewal Plan, will obligate the purchasers of the land in the area and their successors in interest to:

a. Devote the parcels owned by them to and only to the uses specified in this Urban Renewal Plan;

b. Diligently prosecute the construction of the improvements agreed upon in the disposition contract and to begin and complete such improvements within a reasonable time as determined in the contract (this obligation, however, will not be made applicable to mortagees and their successors in interest);

c. Make no changes in such improvements after completion of the construction that are not in conformity with this Urban Renewal Plan.

d. Not to assign contract rights or to resell or otherwise transfer the land (or interest therein) purchased by them, prior to the completion of the improvements thereof without the approval of the "LPA" and except on basis satisfactory to the "LPA"; and not to speculate in or with respect to such land.

e. Not to effect or execute any agreement, lease, conveyance or other instrument whereby any parcels in the "CDP" area owned by them are restricted upon the basis of race, religion, color, or national origin in the sale, lease, or occupancy thereof. (This obligation is to be effective without limitation as to time, regardless of any termina-

tion date provided with respect to any other provisions of this Urban Renewal Plan.)

A certificate of completion will be issued to the redeveloper upon completion of the improvements in accordance with the plan and contract.

It is intended by this Urban Renewal Plan that the "LPA" be a beneficiary of all such covenants and obligations and that it (in addition to other appropriate public agencies) shall be entitled to represent the interest and to act on behalf of the "LPA" and the County in enforcing such and any other covenants and obligations as to the redevelopment and continued uses of the "CDP" area in accordance with this Urban Renewal Plan.

4. Duration of Controls

The controls and restrictions provided by this Urban Renewal Plan shall be in force and effect from the date of approval of this Urban Renewal Plan by the Chairman of the County Commissioners and the County Commissioners of Cumberland County and shall remain in effect until December 31, 1996.

P. Other Provisions Necessary to Meet State and Local Requirements

1. Preliminary Site Plan

The "Preliminary Site Plan--Community Development Program Area" indicates a tentative scheme for the redevelopment of the "CDP" area. This scheme will be modified according to more detailed planning by the redevelopers, but all proposed development will be subject to the land use designations and standards contained in this plan.

2. Proposed Changes in Zoning

The "CDP" area is unzoned as shown on the "Existing Zoning Map--Community Development Program Area". The area is proposed as a Conservancy District as shown on the "Proposed Zoning Map--Community Development Program Area".

3. Estimated Cost and Method of Financing

The Second Program Year is estimated to have a net program cost of $240,000. Second Program Year activities include acquisition, demolition, relocation, planning and administration. The United States Government will contribut 100% of the net cost of the Second Program Year including relocation, or $240,000.

Method of financing is as follows: During the execution period of the Second Program Year, the "LPA" will obtain working capital from Entitlement Funds dispersed as needed under a letter of credit from the United States Government. A harmonious management of program execution will enable the "LPA", the United States, and the County to interact in such a manner as to expeditiously fulfill the Second Program Year activities. In order to facilitate Second Program Year activities, the County, if it so desires, may contribute funds or non-cash grant-in-aid. The County's Contribution is limited to what it legally can do within the framework of the law. The County is, however, specifically empowered under Section 160A-519, General Statutes of North Carolina, to provide the type of local grant-in-aid here contemplated. And by Section 160A-520, it may provide cash funds.

4. Method of Relocating Families and Individuals from Urban Renewal Area

The "LPA" has, in compliance with State and Federal law, a feasible method for the relocation of families and individuals to be displaced from the Second Program Year Area, and there are being provided in areas not generally less desirable in regard to public utilities and public and commercial facilities, at rents or prices within the financial means of the families or individuals displaced, as many units of decent, safe and sanitary dwellings as there are families and individuals to be displaced from the Second Program Year Area. Such units will be reasonably accessible to their places of employment.

Every family and individual displaced by the program, who is eligible for admission will, in accordance with Federal and State law, be given priority in vacancies or turnover in existing or new public housing. All possible relocation services will be extended to single persons and to non-residential establishments displaced by the program action.

The "LPA" considers a dwelling unit to be "standard housing" and to be decent, safe and sanitary where (a) it is in compliance with the County's building, housing, fire and sanitary codes; (b) it is in good repair and is weathertight, with no leakage or dampness; (c) it has no health, fire nor safety hazards within the structure or in the immediate vicinity; (d) it has safe running water, a private flush toilet, and a bathroom with tub or shower with hot and cold running water, all within the dwelling unit; (e) it has permanent, reasonably efficient kitchen facilities, including sink, cooking stove connections, shelves and storage space for food and utensils;

(f) it has facilities for washing and drying clothes; (g) it is large enough to accommodate the family without overcrowding; (h) it is equipped with adequate heating facilities or has flue connections for adequate heating equipment, is adequately ventilated by at least one openable window in every room and is screened, or screens are available; (i) it is safely and adequately wired for electricity; and (j) it is located in a neighborhood which is free from nuisances, is supplied with the community facilities of a standard neighborhood, and is reasonably accessible to transportation, schools, churches and stores.

It is intended that all dwellings into which Second Program Year Area displacees relocate will be inspected by the "LPA's" relocation staff. If the dwellings are not found to be decent, safe and sanitary, the move will be considered as temporary relocation only, and the "LPA" will then undertake to offer such displacees an opportunity to move into suitable standard housing. Families and individuals who move without notifying the "LPA" of their new address will be traced and similarly followed up.

Temporary relocation may be carried out where necessary in dwellings acquired in the Second Program Year Area and managed by the "LPA" or in other available dwellings within the County. Any dwellings used for temporary accommodations will be maintained in a minimum habitable condition, wind and weather tight.

The Executive Director of the "LPA" will be in charge of the relocation activity, and will maintain contact with the displacees, look after applications for public housing, locate suitable standard housing available in the community and will extend every assistance within the "LPA's" power in the relocation of families and individuals of the Second Program Year Area.

No family or individual will be required to move from any home in the Second Program Year Area unless they have opportunity to obtain suitable standard housing. As property is acquired, the occupants will be advised in writing and by personal interview in regard to their relocation, and information will be furnished as to suitable accommodations available. A file will be maintained by the "LPA" listing available dwellings evaluated through inspection by the relocation staff.

The relocation method is intended to remove any necessity to resort to eviction proceedings, which would be a last resort only if a family or individual completely fails to cooperate with the "LPA" or rejects relocation service or accommodations available without reason, or maintains a nuisance, or fails to recognize its obligation for rent due. It is contemplated that relocation will follow acquisition in an orderly manner, giving families and individuals sufficient time to choose a new home and prepare to relocate and that acquired property will not be operated and managed longer than necessary except for unforeseen circumstances.

In the opinion of the County Board of Commissioners, relocation of all families and individuals in the Second Program Year Area in accordance with State and Federal relocation requirements will be feasible.

G. Provisions for Amending Plan

The Urban Renewal Plan may be modified at any time by the "LPA" provided, if modified after the lease, or sale of property in the Urban Renewal area, the modification must be consented to by the redeveloper or redevelopers of such property, or his successor or their successors in interest, affected by the proposed modifications. Where the proposed modification will substantially change the Urban Renewal Plan as previously approved by the governing body, the modification must similarly be approved by the governing body of the County of Cumberland and the U. S. Department of Housing and Urban Development.

Revised December 31, 1976
Exhibit A

BOUNDARY DESCRIPTION
WILKES ROAD COMMUNITY DEVELOPMENT PROGRAM
CUMBERLAND COUNTY, N. C.

BEGINNING at a point located at the intersection of the centerline of highway N.C. 87 and the intersection of the southern right-of-way line of Wilkes Road projected; thence northerly approximately 690 feet along the centerline of highway N.C. 87 to a point located at the intersection of the centerline of highway N.C. 87 and a property line projected; thence westerly approximately 2481 feet along a property line projected and property lines to a property corner; thence southerly approximately 175 feet along a property line to a property corner; thence westerly approximately 1335 feet along a property line to a point located at the intersection of a property line projected and the property line; thence southerly approximately 568 feet along a property line projected and a property line and across Wilkes Road to a point located at the intersection of a property line projected and the southern right-of-way line of Wilkes Road; thence easterly approximately 4073 feet along the southern right-of-way line of Wilkes Road and the southern right-of-way line of Wilkes Road projected to the point of BEGINNING.

Appendix B

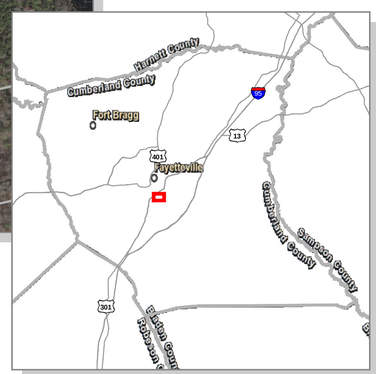
Aerial Photo

FIGURE 1-3
AERIAL MAP
WILKES ROAD YARD WASTE FACILITY

CUMBERLAND COUNTY
NORTH CAROLINA

Legend

- Water Service
- Stream
- 50 Ft Compositing Area Buffer
- 100 Ft Compositing Area Buffer
- 200 Ft Compositing Area Buffer
- Paved Road
- Expressway
- Site Road
- Trail
- Property Lines
- Approx LCID Landfill (Closed)
- Existing Structure
- Composting Area



1 inch = 200 feet

200 100 0 200 400 600 800 1,000 Feet

50 25 0 50 100 150 200 250 Meters

CDM
5400 Glenwood Avenue, Suite 300
Raleigh, North Carolina, 27612

Appendix C

Zoning Consistency Determination

Zoning Consistency Determination

RECEIVED
FEB 07 2011
DENR –FAYETTEVILLE REGIONAL OFFICE

Facility Name	Wilkes Road Landfill
Facility Street Address	779 Wilkes Road
Facility City	Fayetteville
Description of Process	The Wilkes Road Landfill is a closed LCID landfill, which operates as a receiving, processing and hauling facility for land clearing debris, yard waste, and wooden pallets.
SIC/NAICS Code	4953/562212
Facility Contact	Robert Howard, Solid Waste Director
Phone Number	910-321-6830
Mailing Address	698 Ann Street,
Mailing City, State Zip	Fayetteville, NC, 28301

Based on the information given above:

- [x] I have received a copy of the air permit application (draft or final) AND...
- [ ] There are no applicable zoning ordinances for this facility at this time
- [x] The proposed operation IS consistent with applicable zoning ordinances
- [ ] The proposed operation IS NOT consistent with applicable zoning ordinances (please include a copy of the rules in the package sent to the air quality office)
- [ ] The determination is pending further information and can not be made at this time
- [ ] Other:

Agency	Cumberland Co. Planning + Inspections Dept.
Name of Designated Official	Kenneth Sykes
Title of Designated Official	Code Enforcement Coordinator
Signature	Kenneth Sykes
Date	2/7/11

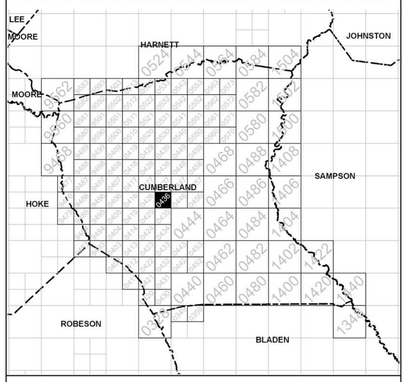
Please forward to the facility mailing address listed above and the air quality office at the appropriate address as checked on the back of this form.

Courtesy of the Small Business Environmental Assistance Program
toll free at 1-877-623-6748 or on the web at www.envhelp.org/sb

Appendix D

FEMA flood map

STATE OF NORTH CAROLINA FIRM PANEL LOCATOR DIAGRAM



DATUM INFORMATION

The **projection** used in the preparation of this map was the North Carolina State Plane (FIPSZONE 3200). The **horizontal datum** was the North American Datum of 1983, GRS80 ellipsoid. Differences in datum, ellipsoid, projection, or Universal Transverse Mercator zones used in the production of FIRMS for adjacent jurisdictions may result in slight positional differences in map features across jurisdictional boundaries. These differences do not affect the accuracy of this FIRM. All coordinates on this map are in U.S. Survey Feet, where
1 U.S. Survey Foot = 1200/3937 Meters.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988 (NAVD 88). These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. An average offset between NAVD 88 and the National Geodetic Vertical Datum of 1929 (NGVD 29) has been computed for each North Carolina county. This offset was then applied to the NGVD 29 flood elevations that were not revised during the creation of this statewide format FIRM. The offsets for each county shown on this FIRM panel are shown in the vertical datum offset table below. Where a county boundary and a flooding source with unrevised NGVD 29 flood elevations are coincident, an individual offset has been calculated and applied during the creation of this statewide format FIRM. See Section 6.1 of the accompanying Flood Insurance Study report to obtain further information on the conversion of elevations between NAVD 88 and NGVD 29. To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the North Carolina Geodetic Survey at the address shown below. You may also contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242**, or visit its website at http://www.ngs.noaa.gov.

North Carolina Geodetic Survey
121 West Jones Street
Raleigh, NC 27601
(919) 733-3836
http://www.ncgs.state.nc.us

County Average Vertical Datum Offset Table

County	Vertical Datum Offset (ft)
CUMBERLAND	-0.87

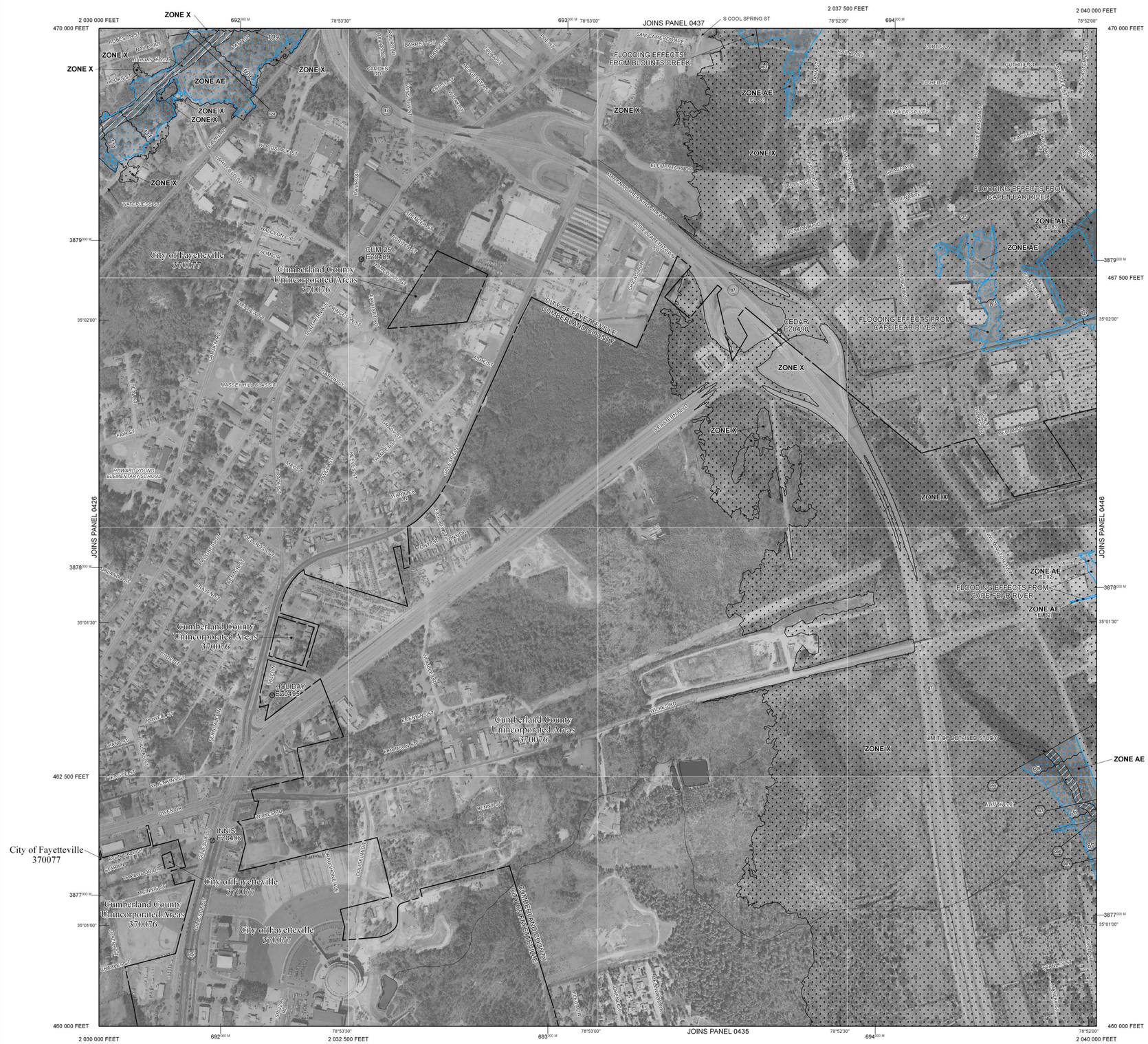
Example: NAVD 88 = NGVD 29 + (-0.87)

All streams listed in the **Flood Hazard Data Table** below were studied by detailed methods using field survey. Other flood hazard data shown on this map may have been derived using either a coastal analysis or limited detailed Riverine analysis. More information on the flooding sources studied by these analyses is contained in the Flood Insurance Study report.

FLOOD HAZARD DATA TABLE

Cross Section	Stream Station[1]	Flood Discharge (cfs)	1% Annual Chance (100-year) Water-Surface Elevation (feet NAVD 88)	Floodway Width (feet) Left/Right Distance From the Center of Stream to Encroachment Boundary (Looking Downstream) or Total Floodway Width
BLOUNTS CREEK				
063	6325	NA	88.5	150
128	12,760	NA	109.1	100
MILL CREEK				
081	8,100	NA	85.7	100
086	8,600	NA	85.7	120
087	8,720	NA	85.7	120
095	9,450	NA	85.8	120

[1] Feet above mouth



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevation determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Areas to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

1% annual chance floodplain boundary
0.2% annual chance floodplain boundary
Floodway boundary
Zone D boundary
CBRS and OPA boundary
Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.

513	Base Flood Elevation line and value; elevation in feet*
(EL 987)	Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988

012	Cross section line
23 — 23	Transect line
97°07'30", 32°22'30"	Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
4275000 M	1000-meter Universal Transverse Mercator grid ticks, zone 17
1 477 500 FEET	2500-foot grid values: North Carolina State Plane coordinate system (FIPSZONE 3200, State Plane NAD 83 feet)
BM5510	North Carolina Geodetic Survey bench mark (see explanation in the Datum Information section of this FIRM panel)
BM5510	National Geodetic Survey bench mark (see explanation in the Datum Information section of this FIRM panel)
M1.5	River Mile

GRID NORTH
MAP SCALE 1" = 500' (1 : 6,000)
FEET: 250 0 250 500 750 1,000
METERS: 150 0 150 300

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0436J

FIRM
FLOOD INSURANCE RATE MAP
NORTH CAROLINA

PANEL 0436
(SEE LOCATOR DIAGRAM OR MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	CID No.	PANEL	SUFFIX
CUMBERLAND COUNTY	370076	0436	J
FAYETTEVILLE, CITY OF	370077	0436	J

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

EFFECTIVE DATE
JANUARY 5, 2007

MAP NUMBER
3720043600J

State of North Carolina
Federal Emergency Management Agency

NORTH CAROLINA Cooperating Technical State
FEMA'S COOPERATING TECHNICAL PARTNER

This digital Flood Insurance Rate Map (FIRM) was produced through a unique cooperative partnership between the State of North Carolina and the Federal Emergency Management Agency (FEMA). The State of North Carolina has implemented a long term approach of floodplain management to decrease the costs associated with flooding. This is demonstrated by the State's commitment to map floodplain areas at the local level. As a part of this effort, the state of North Carolina has joined in a Cooperating Technical State agreement with FEMA to produce and maintain this digital FIRM.

www.ncfloodmaps.com

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles, Floodway Data, Limited Detailed Flood Hazard Data, and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Boundaries of **regulatory floodways** shown on the FIRM for flooding sources studied by detailed methods were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data for flooding sources studied by detailed methods as well as **non-encroachment widths** for flooding sources studied by limited detailed methods are provided in the Flood Insurance Study (FIS) report for this jurisdiction. The FIS report also provides instructions for determining a floodway using non-encroachment widths for flooding sources studied by limited detailed methods.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 4.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures in this jurisdiction.

Base map information and geospatial data used to develop this FIRM were obtained from various organizations, including the participating local community(ies), state and federal agencies, and/or other sources. The primary base for this FIRM is aerial imagery acquired by Cumberland County. The time period of collection for the imagery is 2001. Information and geospatial data supplied by the local community(ies) that met FEMA base map specifications were considered the preferred source for development of the base map. See geospatial metadata for the associated digital FIRM for additional information about base map preparation.

Base map features shown on this map, such as **corporate limits**, are based on the most up-to-date data available at the time of publication. **Changes in the corporate limits may have occurred since this map was published**. Map users should consult the appropriate community official or website to verify current conditions of jurisdictional boundaries and base map features. This map may contain roads that were not considered in the hydraulic analysis of streams where no new hydraulic model was created during the production of this statewide format FIRM.

This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels, community map repository addresses, and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

If you have **questions about this map**, or questions concerning the National Flood Insurance Program in general, please call **1 – 877 – FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov.

An accompanying Flood Insurance Study report, Letter of Map Revision (LOMR) or Letter of Map Amendment (LOMA) revising portions of this panel, and digital versions of this FIRM may be available. Visit the **North Carolina Floodplain Mapping Program** website at http://www.ncfloodmaps.com, or contact the **FEMA Map Service Center** at 1-800-358-9616 for information on all related products associated with this FIRM. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at http://www.msc.fema.gov.

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index or visit http://www.ncfloodmaps.com.

EFFECTIVE DATE OF FLOOD INSURANCE RATE MAP PANEL
JANUARY 5, 2007

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to statewide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

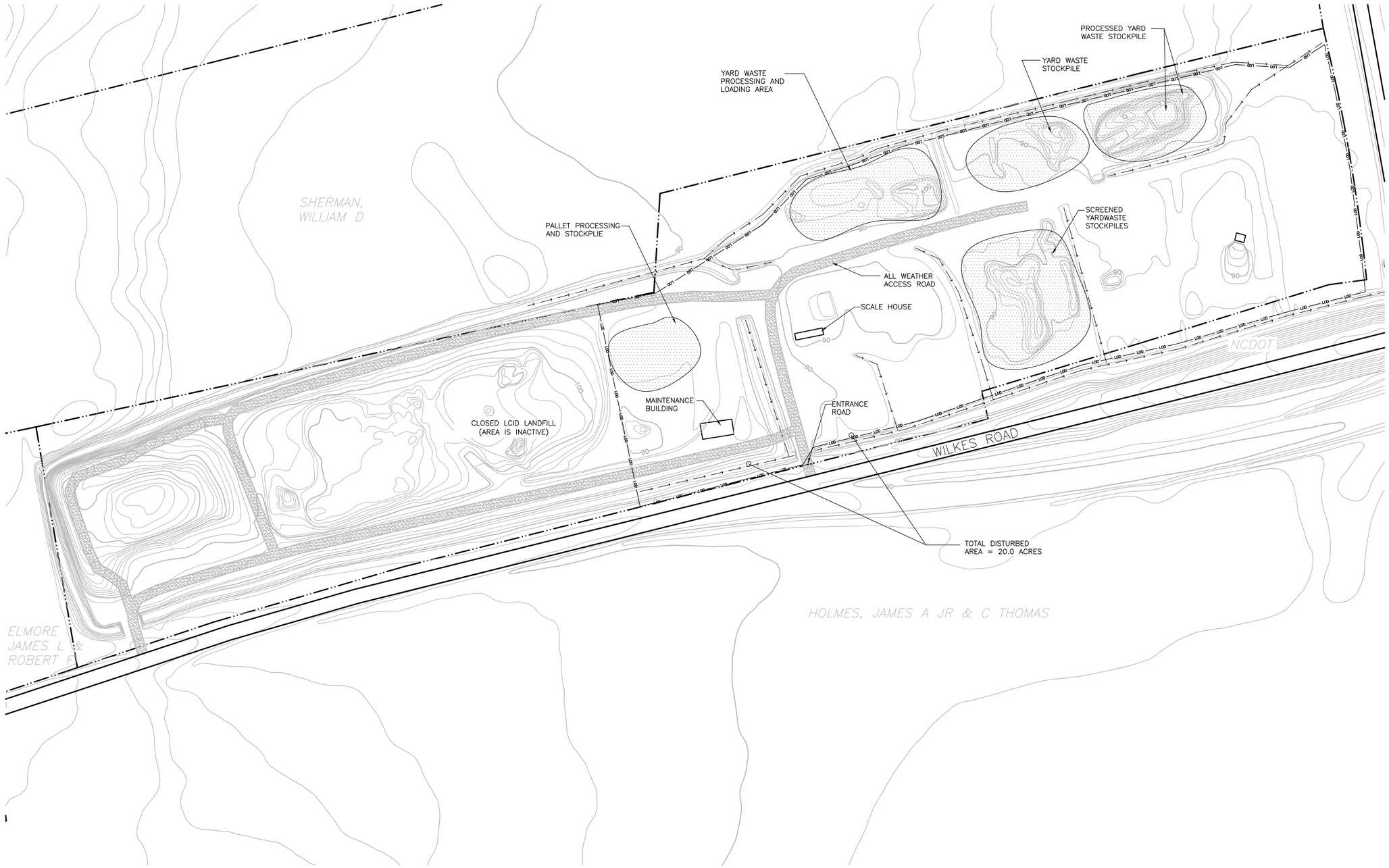
To determine if flood insurance is available in this community, contact your insurance agent, the North Carolina Division of Emergency Management or the National Flood Insurance Program at the following phone numbers or websites:

NC Division of Emergency Management
(919) 715-8000 http://www.nccrimecontrol.org/nfip

National Flood Insurance Program
1-800-638-6620 http://www.fema.gov/nfip

Appendix E

Site Plan



N

1" = 100'

50 0 100

LEGEND

EXISTING DRAINAGE SWALE

LIMITS OF DISTURBANCE

PROPERTY LINE

NOTE:

1. TOPOGRAPHIC INFORMATOIN WAS TAKEN FROM CUMBERLAND COUNTY GIS DATABASE AND MAY NOT REPRESENT CURRENT FIELD CONDITIONS. PRIOR TO BEGINNING ANY WORK, FIELD CONDITIONS SHOULD BE VERIFIED.

2. TOTAL DISTURBED AREA = 20.0 ACRES

REV. NO.	DATE	DRWN	CHKD	REMARKS
2	06/05/09	WPS	WMB	REVISIONS PER NCDENR COMMENTS RECEIVED ON 06-04-09
1	06/01/09	WPS	WMB	REVISIONS PER NCDENR COMMENTS RECEIVED ON 05/18/09

DESIGNED BY: P. STOUT
DRAWN BY: P. STOUT
SHEET CHK'D BY: M. BRINCHEK
CROSS CHK'D BY: M. BRINCHEK
APPROVED BY: M. BRINCHEK
DATE: JUNE 2009

CDM
Camp Dresser & McKee,
5400 Glenwood Avenue, Suite 300
Raleigh, NC 27612
Tel: (919) 787-5620
consulting • engineering • construction • operations

CUMBERLAND COUNTY,
NORTH CAROLINA

WILKES ROAD TREATMENT AND PROCESSING FACILITY
EROSION AND SEDIMENT CONTROL PLAN

EXISTING CONDITIONS PLAN

PROJECT NO. 2724-68483
FILE NAME: C-1.DWG

SHEET NO.
C-1

Appendix F

Erosion & Sedimentation Control Plan

CERTIFICATE OF PLAN APPROVAL

The posting of this certificate certifies that an erosion and sedimentation control plan has been approved for this project by the North Carolina Department of Environment and Natural Resources in accordance with North Carolina General Statute 113A – 57 (4) and 113A – 54 (d) (4) and North Carolina Administrative Code, Title 15A, Chapter 4B.0107 (c). This certificate must be posted at the primary entrance of the job site before construction begins and until establishment of permanent groundcover as required by North Carolina Administrative Code, Title 15A, Chapter 4B.0127 (b).

Wilkes Road Yard Waste Facility – Cumberland County

Project Name and Location

June 11, 2009

Date of Plan Approval

NCDENR

Regional Engineer

CUMBERLAND COUNTY - WILKES ROAD TREATMENT AND PROCESSING FACILITY

CUMBERLAND COUNTY, NORTH CAROLINA

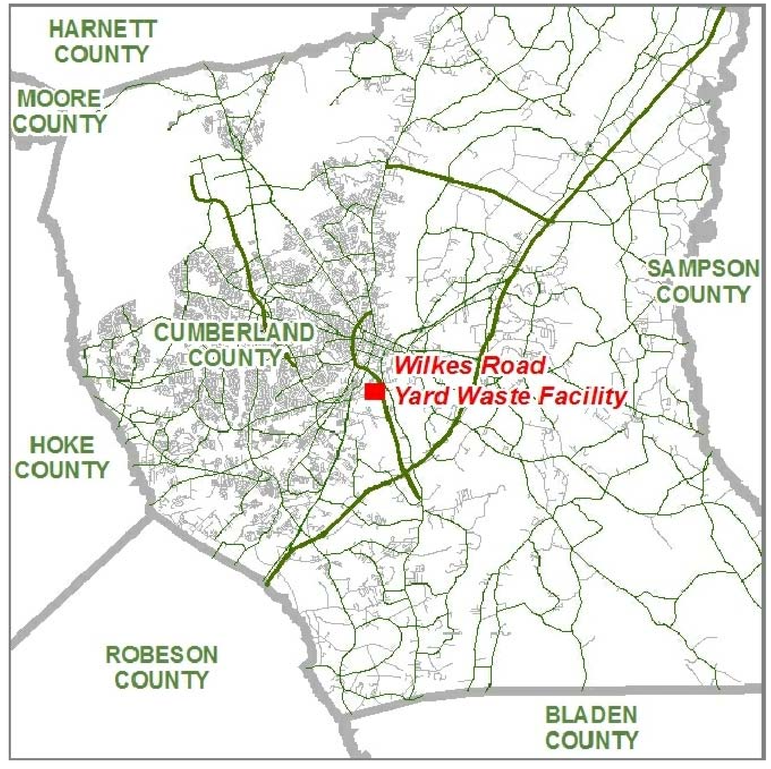
WILKES ROAD TREATMENT AND PROCESSING FACILITY

PERMIT DRAWINGS

JUNE 2009

INDEX OF DRAWINGS

SHEET NO.	TITLE
COVER	COVER SHEET
C-1	EXISTING CONDITIONS
C-2	EROSION & SEDIMENT CONTROL PLAN
CD-1	EROSION & SEDIMENT CONTROL DETAILS (1 OF 2)
CD-2	EROSION & SEDIMENT CONTROL DETAILS (1 OF 2)



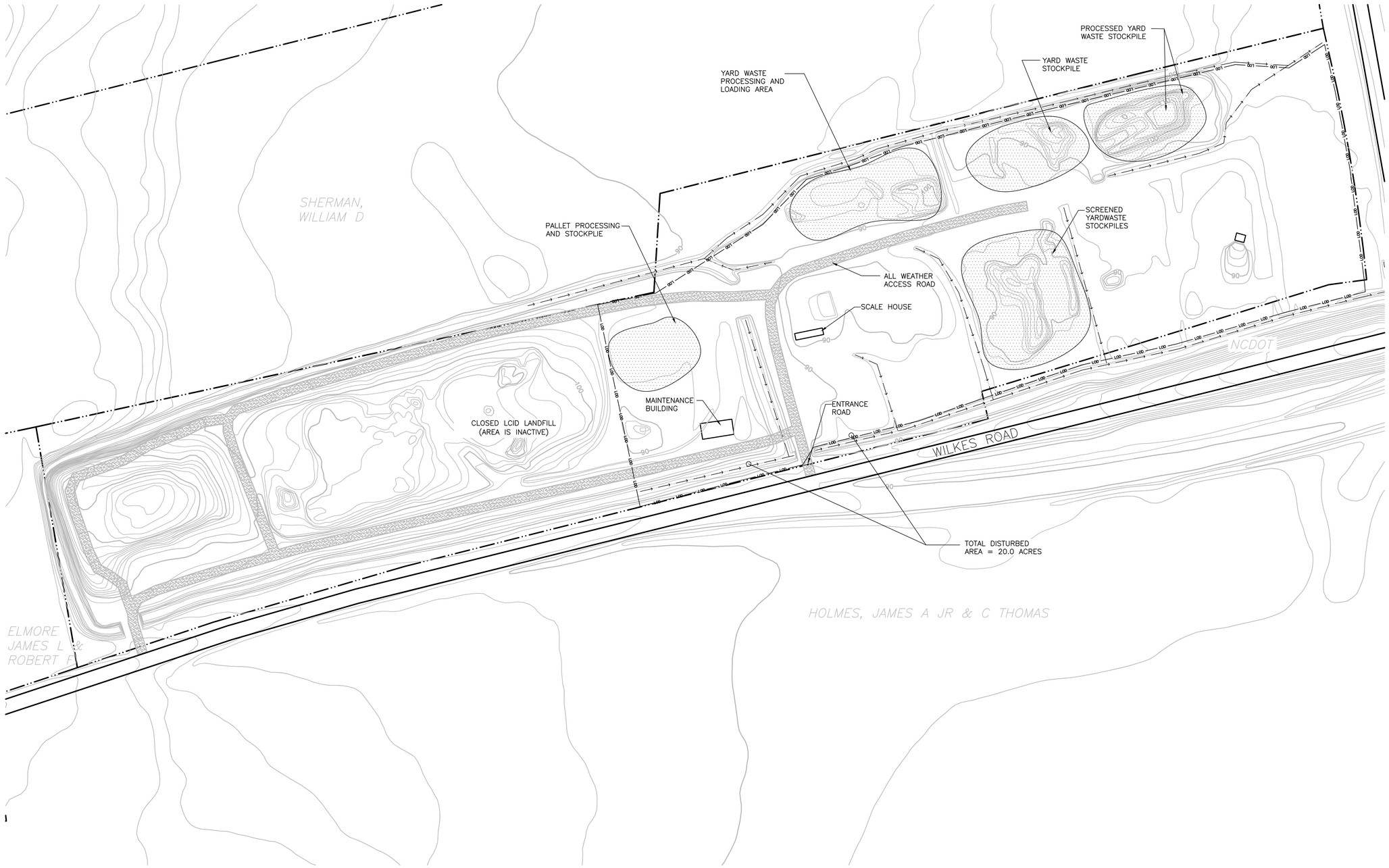
LOCATION PLAN

CDM Camp Dresser & McKee

consulting engineering construction operations

5400 Glenwood Avenue, Suite 300
Raleigh, North Carolina 27612
Tel: (919) 787-5620 Fax: (919) 781-5730

07/14/09 9:14:27 AM L:\WILKES ROAD\DWG\COVER.DWG



N

1" = 100'

50 0 100

LEGEND

EXISTING DRAINAGE SWALE

LIMITS OF DISTURBANCE

PROPERTY LINE

NOTE:

1. TOPOGRAPHIC INFORMATOIN WAS TAKEN FROM CUMBERLAND COUNTY GIS DATABASE AND MAY NOT REPRESENT CURRENT FIELD CONDITIONS. PRIOR TO BEGINNING ANY WORK, FIELD CONDITIONS SHOULD BE VERIFIED.

2. TOTAL DISTURBED AREA = 20.0 ACRES

REV. NO.	DATE	DRWN	CHKD	REMARKS
2	06/05/09	WPS	WMB	REVISIONS PER NCDENR COMMENTS RECEIVED ON 06-04-09
1	06/01/09	WPS	WMB	REVISIONS PER NCDENR COMMENTS RECEIVED ON 05/18/09

DESIGNED BY: P. STOUT
DRAWN BY: P. STOUT
SHEET CHK'D BY: M. BRINCHEK
CROSS CHK'D BY: M. BRINCHEK
APPROVED BY: M. BRINCHEK
DATE: JUNE 2009

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CUMBERLAND COUNTY,
NORTH CAROLINA

WILKES ROAD TREATMENT AND PROCESSING FACILITY
EROSION AND SEDIMENT CONTROL PLAN

EXISTING CONDITIONS PLAN

PROJECT NO. 2724-68483
FILE NAME: C-1.DWG

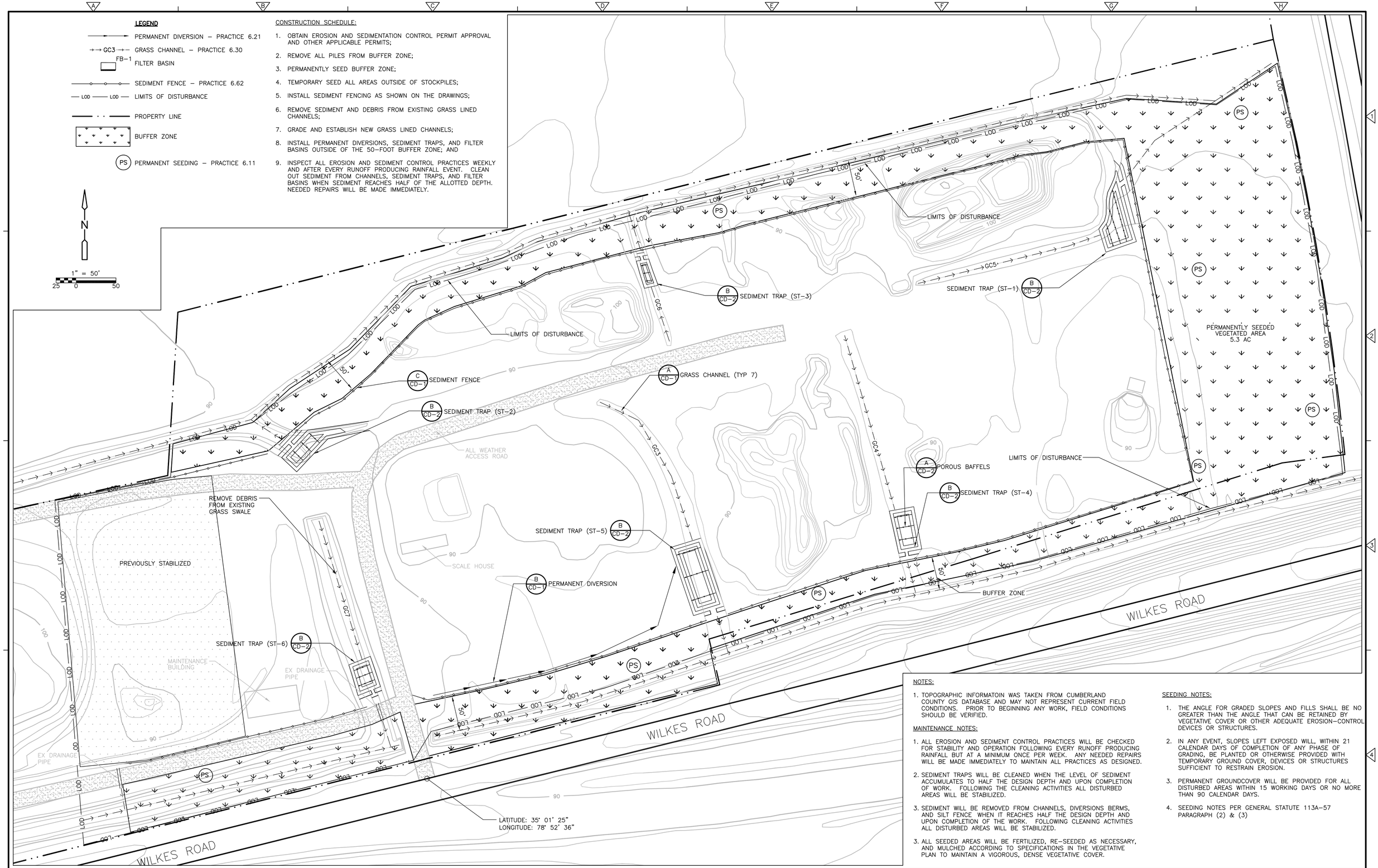
SHEET NO.
C-1

LEGEND

- PERMANENT DIVERSION – PRACTICE 6.21
- GC3 – GRASS CHANNEL – PRACTICE 6.30
- FB–1 – FILTER BASIN
- SEDIMENT FENCE – PRACTICE 6.62
- LOD – LIMITS OF DISTURBANCE
- PROPERTY LINE
- BUFFER ZONE
- PS – PERMANENT SEEDING – PRACTICE 6.11

CONSTRUCTION SCHEDULE:

1. OBTAIN EROSION AND SEDIMENTATION CONTROL PERMIT APPROVAL AND OTHER APPLICABLE PERMITS;
2. REMOVE ALL PILES FROM BUFFER ZONE;
3. PERMANENTLY SEED BUFFER ZONE;
4. TEMPORARY SEED ALL AREAS OUTSIDE OF STOCKPILES;
5. INSTALL SEDIMENT FENCING AS SHOWN ON THE DRAWINGS;
6. REMOVE SEDIMENT AND DEBRIS FROM EXISTING GRASS LINED CHANNELS;
7. GRADE AND ESTABLISH NEW GRASS LINED CHANNELS;
8. INSTALL PERMANENT DIVERSIONS, SEDIMENT TRAPS, AND FILTER BASINS OUTSIDE OF THE 50–FOOT BUFFER ZONE; AND
9. INSPECT ALL EROSION AND SEDIMENT CONTROL PRACTICES WEEKLY AND AFTER EVERY RUNOFF PRODUCING RAINFALL EVENT. CLEAN OUT SEDIMENT FROM CHANNELS, SEDIMENT TRAPS, AND FILTER BASINS WHEN SEDIMENT REACHES HALF OF THE ALLOTTED DEPTH. NEEDED REPAIRS WILL BE MADE IMMEDIATELY.



NOTES:

1. TOPOGRAPHIC INFORMATOIN WAS TAKEN FROM CUMBERLAND COUNTY GIS DATABASE AND MAY NOT REPRESENT CURRENT FIELD CONDITIONS. PRIOR TO BEGINNING ANY WORK, FIELD CONDITIONS SHOULD BE VERIFIED.

MAINTENANCE NOTES:

1. ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF PRODUCING RAINFALL BUT AT A MINIMUM ONCE PER WEEK. ANY NEEDED REPAIRS WILL BE MADE IMMEDIATELY TO MAINTAIN ALL PRACTICES AS DESIGNED.
2. SEDIMENT TRAPS WILL BE CLEANED WHEN THE LEVEL OF SEDIMENT ACCUMULATES TO HALF THE DESIGN DEPTH AND UPON COMPLETION OF WORK. FOLLOWING THE CLEANING ACTIVITIES ALL DISTURBED AREAS WILL BE STABILIZED.
3. SEDIMENT WILL BE REMOVED FROM CHANNELS, DIVERSIONS BERMS, AND SILT FENCE WHEN IT REACHES HALF THE DESIGN DEPTH AND UPON COMPLETION OF THE WORK. FOLLOWING CLEANING ACTIVITIES ALL DISTURBED AREAS WILL BE STABILIZED.
3. ALL SEEDED AREAS WILL BE FERTILIZED, RE–SEEDED AS NECESSARY, AND MULCHED ACCORDING TO SPECIFICATIONS IN THE VEGETATIVE PLAN TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER.

SEEDING NOTES:

1. THE ANGLE FOR GRADED SLOPES AND FILLS SHALL BE NO GREATER THAN THE ANGLE THAT CAN BE RETAINED BY VEGETATIVE COVER OR OTHER ADEQUATE EROSION–CONTROL DEVICES OR STRUCTURES.
2. IN ANY EVENT, SLOPES LEFT EXPOSED WILL, WITHIN 21 CALENDAR DAYS OF COMPLETION OF ANY PHASE OF GRADING, BE PLANTED OR OTHERWISE PROVIDED WITH TEMPORARY GROUND COVER, DEVICES OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION.
3. PERMANENT GROUNDCOVER WILL BE PROVIDED FOR ALL DISTURBED AREAS WITHIN 15 WORKING DAYS OR NO MORE THAN 90 CALENDAR DAYS.
4. SEEDING NOTES PER GENERAL STATUTE 113A–57 PARAGRAPH (2) & (3)

REV. NO.	DATE	DRWN	CHKD	REMARKS
1	06/05/09	WPS	WMB	REVISIONS PER NCDENR COMMENTS RECEIVED ON 06–04–09
1	06/01/09	WPS	WMB	REVISIONS PER NCDENR ESC COMMENTS RECEIVED ON 05–18–09

DESIGNED BY: P. STOUT
DRAWN BY: P. STOUT
SHEET CHK'D BY: M. BRINCHEK
CROSS CHK'D BY: M. BRINCHEK
APPROVED BY: M. BRINCHEK
DATE: JUNE 2009

CDM
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CUMBERLAND COUNTY,
NORTH CAROLINA

WILKES ROAD TREATMENT AND PROCESSING FACILITY
EROSION AND SEDIMENT CONTROL PLAN

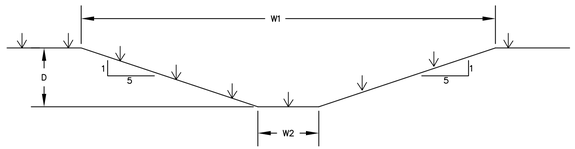
EROSION & SEDIMENT CONTROL PLAN

PROJECT NO. 2724–68483
FILE NAME: C–2.DWG

SHEET NO.
C-2

NOTES:

1. CHANNELS ARE TO BE LINED WITH NORTH AMERICAN GREEN MATTING (SEE CHANNEL SCHEDULE) OR APPROVED EQUIVALENT.
2. NETTING AND MATTING PRODUCTS SHOULD BE INSTALLED ACCORDING TO MANUFACTURER'S GUIDELINES.



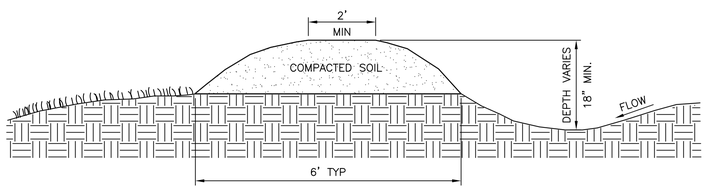
CHANNEL SCHEDULE				
CHANNEL ID	PROTECTION TYPE	W1 (FT)	W2 (FT)	D (FT)
GC1	DS-75	12	3	1.5
GC3	DS-75	13.5	3	1.75
GC4	DS-75	15	6	1.5
GC5	DS-75	12	3	1.5
GC6	DS-75	12	3	1.5
GC7	DS-75	12	3	1.5

SECTION

GRASS CHANNEL

DETAIL A / C-2

NTS

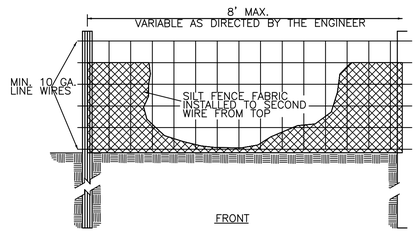


SECTION

PERMANENT DIVERSION

DETAIL B / C-2

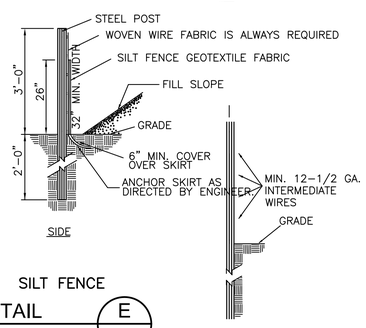
NTS



FRONT

NOTES:

1. END OF SILT FENCE SHOULD BE TURNED UPHILL SEE N.C. STATE DENR PRACTICE STANDARDS & SPECIFICATIONS SEDIMENT FENCE SET FOR CONDITIONS WHERE PRACTICE APPLIES; PLANNING CONSIDERATIONS & DESIGN CRITERIA. (HOWEVER FLOW SHALL NOT RUN PARALLEL WITH THE TOE OF THE FENCE).
2. FOR REPAIR OF SILT FENCE FAILURES, USE No. 57 WASHED STONE. IN EACH CASE THE SILT FENCE IS TO BE PROPERLY ENTRENCHED & THE STONE SHALL BE AT A MINIMUM OF 16" ABOVE GRADE AT THE DIRECTION OF FLOW & BETWEEN 60 – 45 DEGREES.



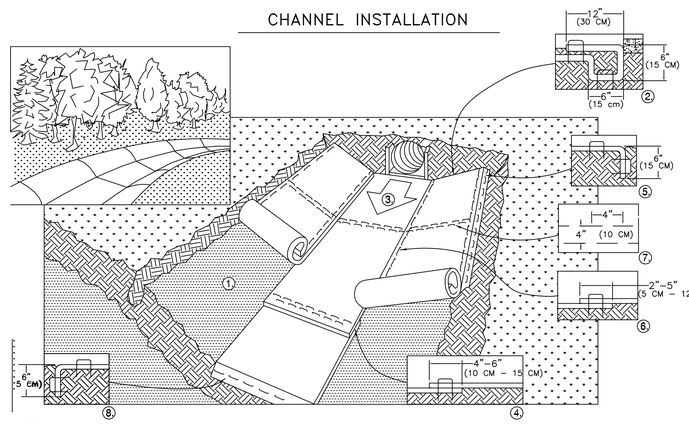
SIDE

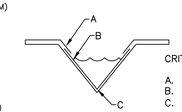
SILT FENCE

DETAIL E / C-2

NTS

CHANNEL INSTALLATION



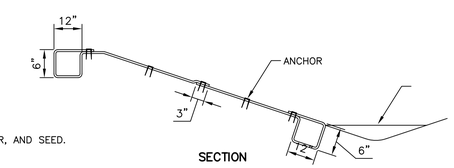


CRITICAL POINTS:

A. OVERLAPS AND SEAMS
B. PROJECTED WATER LINE
C. CHANNEL BOTTOM/SIDE SLOPE VERTICES.

NOTE:
* HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.

** IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY ANCHOR THE RECP's.

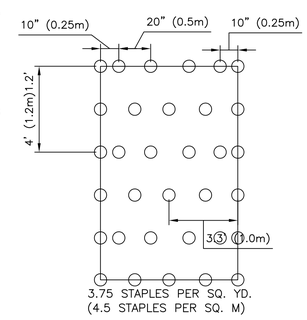


SECTION

NOTES:

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING APPLICATION OF LIME, FERTILIZER, AND SEED.
2. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION OF NATURAL FIBER MATTING BASED ON CHANNEL SLOPE.
3. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE RECP's IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30 CM) OF RECP's EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH.. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP's BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) ACROSS THE WIDTH OF THE RECP's.
4. ROLL CENTER RECP's IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM (TM), STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
5. PLACE CONSECUTIVE RECP's END OVER END (SHINGLE STYLE) WITH A 4' – 6" (10 CM – 15 CM) OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10 CM) APART AND 4" (10 CM) ON CENTER TO SECURE RECP's.
6. FULL LENGTH EDGE OF RECP's AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" 30 CM) APART IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
7. ADJACENT RECP's MUST BE OVERLAPPED APPROXIMATELY 2" – 5" (5 CM – 12.5 CM) (DEPENDING ON RECP's TYPE) AND STAPLED.
8. IN HIGH FLOW CHANNEL APPLICATIONS A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT (9 M – 12 M) INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10 CM) APART AND 4" (10 CM) ON CENTER OVER THE ENTIRE WIDTH OF THE CHANNEL.
9. THE TERMINAL END OF THE RECP'S MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

NOTE: * IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTH GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY ANCHOR THE RECP's.



3.75 STAPLES PER SQ. YD.
(4.5 STAPLES PER SQ. M)

PLAN

NATURAL FIBER MATTING

DETAIL F

REV. NO.	DATE	DRWN	CHKD	REMARKS
1	06/01/09	WPS	WMB	REVISIONS PER NCDENR ESC COMMENTS SUBMITTED 05-18-09

DESIGNED BY: P. STOUT
DRAWN BY: P. STOUT
SHEET CHK'D BY: M. BRINCHEK
CROSS CHK'D BY: M. BRINCHEK
APPROVED BY: M. BRINCHEK
DATE: JUNE 2009

CDM
Camp Dresser & McKee,
5400 Glenwood Avenue, Suite 300
Raleigh, NC 27612
Tel: (919) 787-5620
consulting • engineering • construction • operations

CUMBERLAND COUNTY,
NORTH CAROLINA

WILKES ROAD TREATMENT AND PROCESSING FACILITY
EROSION AND SEDIMENT CONTROL PLAN

EROSION & SEDIMENT CONTROL DETAILS

PROJECT NO. 2724-68483
FILE NAME: CD-1.DWG

SHEET NO.
CD-1

DEFINITION:

> TEMPORARY SEEDING: PLANTING RAPID–GROWING ANNUAL GRASSES, SMALL GRAINS, OR LEGUMES TO PROVIDE INITIAL, TEMPORARY COVER FOR EROSION CONTROL ON DISTURBED AREAS.

> PERMANENT SEEDING: CONTROLLING RUNOFF AND EROSION ON DISTURBED AREAS BY ESTABLISHING PERENNIAL VEGETATIVE COVER WITH SEED.

PURPOSE:

> TEMPORARY SEEDING: TO TEMPORARILY STABILIZE DENUDED AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE FOR A PERIOD OF MORE THAN 21 WORKING DAYS. TEMPORARY SEEDING CONTROLS RUNOFF AND EROSION UNTIL PERMANENT VEGETATION CAN BE ESTABLISHED.
> PERMANENT SEEDING: TO REDUCE EROSION AND DECREASE SEDIMENT YIELD FROM DISTURBED AREAS, AND TO PERMANENTLY STABILIZE SUCH AREAS IN A MANNER THAT IS ECONOMICAL, ADAPTS TO SITE CONDITIONS, AND ALLOWS SELECTION OF THE MOST APPROPRIATE PLANT MATERIALS.

CONDITIONS WHERE PRACTICE APPLIES:

> TEMPORARY SEEDING: ON ANY CLEARED, UNVEGETATED, OR SPARSELY VEGETATED SOIL SURFACE WHERE VEGETATION COVER IS NEEDED FOR LESS THAN 1 YEAR. APPLICATIONS OF THIS PRACTICE INCLUDE DIVERSIONS, DAMS, TEMPORARY SEDIMENT BASINS, TEMPORARY ROAD BANKS, AND TOPSOIL STOCKPILES.
> PERMANENT SEEDING:

  > FINE–GRADED AREAS ON WHICH PERMANENT, LONG–LIVED VEGETATIVE COVER IS THE MOST PRACTICAL OR OR MOST EFFECTIVE METHOD OF STABILIZING THE SOIL. PERMANENT SEEDING MAY ALSO BE USED ON ROUGH–GRADED AREAS TAHT WILL NOT BE BROUGHT TO FINAL GRADE FOR A YEAR OR MORE.
  > AREAS TO BE STABILIZED WITH PERMANENT VEGETATION MUST BE SEEDED OR PLANTED WITHIN 15 WORKING DAYS OR 90 CALENDAR DAYS AFTER FINAL GRADE IS REACHED, UNLESS TEMPORARY STABILIZATION IS APPLIED.

SPECIFICATIONS:

> SEEDBED REQUIREMENTS:

ESTABLISHMENT OF VEGETATION SHOULD NOT BE ATTEMPTED ON SITES THAT ARE UNSUITABLE DUE TO INAPPROPRIATE SOIL TEXTURE, POOR DRAINAGE, CONCENTRATED OVERLAND FLOW, OR STEEPNESS OF SLOPE UNTIL MEASURES HAVE BEEN TAKEN TO CORRECT THESE PROBLEMS.

TO MAINTAIN A GOOD STAND OF VEGETATION, THE SOIL MUST MEET CERTAIN MINIMUM REQUIREMENTS AS A GROWTH MEDIUM. THE EXISTING SOIL SHOULD HAVE THESE CRITERIA:

> ENOUGH FINE–GRAINED (SILT AND CLAY) MATERIAL TO MAINTAIN ADEQUATE MOISTURE AND NUTRIENT SUPPLY (AVAILABLE WATER CAPACITY OF AT LEAST .05 INCHES WATER TO 1 INCH OF SOIL).
> SUFFICIENT PORE SPACE TO PERMIT ROOT PENETRATION.
> SUFFICIENT DEPTH OF SOIL TO PROVIDE AN ADEQUATE ROOT ZONE. THE DEPTH TO ROCK OR IMPERMEABLE LAYERS SUCH AS HARDPANS SHOULD BE 12 INCHES OR MORE, EXCEPT ON SLOPES STEEPER THAN 2:1 WHERE THE ADDITION OF SOIL IS NOT FEASIBLE.
> A FAVORABLE PH RANGE FOR PLANT GROWTH, USUALLY 6.0 TO 6.5.
> FREE FROM LARGE ROOTS, BRANCHES, STONES, LARGE CLODS OF EARTH, OR TRASH OF ANY KIND. CLODS AND STONES MAY BE LEFT ON SLOPES STEEPER THAN 3:1 IF THEY ARE TO BE HYDROSEEDED.

IF ANY OF THE ABOVE CRITERIA ARE NOT MET (I.E., IF EXISTING SOIL IS TOO COARSE, DENSE, SHALLOW OR ACIDIC TO FOSTER VEGETATION), SPECIAL AMENDMENTS ARE REQUIRED. THE SOIL CONDITIONERS DESCRIBED BELOW MAY BE BENEFICIAL OR, PREFERABLY, TOPSOIL MAY BE APPLIED.

> SEEDBED PREPARATION:

INSTALL NECESSARY MECHANICAL EROSION AND SEDIMENTATION CONTROL PRACTICES BEFORE SEEDING, AND COMPLETE GRADING ACCORDING TO THE APPROVED PLAN.

LIME AND FERTILIZER NEEDS SHOULD BE DETERMINED BY SOIL TESTS. SOIL TESTING IS PERFORMED FREE OF CHARGE BY THE NORTH CAROLINA DEPARTMENT OF AGRICULTURE SOIL TESTING LABORATORY.

WHEN SOIL TESTS ARE NOT AVAILABLE, FOLLOW RATES SUGGESTED IN THE SEEDING SPECIFICATIONS SHOWN BELOW:

> GROUND AGRICULTURAL LIMESTONE:
  LIGHT–TEXTURED, SANDY SOILS: 1 TO 1½ TONS/ACRE
  HEAVY–TEXTURED, CLAYEY SOILS: 2 TO 3 TONS/ACRE
> FERTILIZER:
  GRASSES: 800 TO 1200 LB/ACRE OF 10–10–10 OR EQUIVALENT
  GRASS–LEGUME MIXTURES: 800 TO 1200 LB/ACRE OF 5–10–10 OR EQUIVALENT

APPLY LIME AND FERTILIZER EVENLY AND INCORPORATE INTO THE TOP 4 TO 6 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. OPERATE MACHINERY ON THE CONTOUR. WHEN USING A HYDROSEEDER, APPLY LIME AND FERTILIZER TO A ROUGH, LOOSE SURFACE.

ROUGHEN SURFACES PRIOR TO SEEDING.

COMPLETE SEEDBED PREPARATION BY BREAKING UP LARGE CLODS AND RAKING INTO A SMOOTH, UNIFORM SURFACE (SLOPES LESS THAN 3:1). FILL IN OR LEVEL DEPRESSIONS THAT CAN COLLECT WATER. BROADCAST SEED INTO A FRESHLY LOOSENED SEEDBED THAT HAS NOT BEEN SEALED BY RAINFALL.

> SEEDING:

SEEDING DATES GIVEN IN THE SEEDING MIXTURE SPECIFICATIONS ARE DESIGNATED AS "BEST" OR "POSSIBLE". SEEDINGS PROPERLY CARRIED OUT WITHIN THE "BEST" DATES HAVE A HIGH PROBABILITY OF SUCCESS. IT IS ALSO POSSIBLE TO HAVE SATISFACTORY ESTABLISHMENT WHEN SEEDING OUTSIDE THESE DATES. HOWEVER, AS YOU DEVIATE FROM THEM, THE PROBABILITY OF FAILURE INCREASES RAPIDLY. SEEDING ON THE LAST DATE SHOWN UNDER "POSSIBLE" MAY REDUCE CHANGES OF SUCCESS BY 30 TO 50 PERCENT. ALWAYS TAKE THIS INTO ACCOUNT IN SCHEDULING LAND–DISTURBING ACTIVITIES.

USE CERTIFIED SEED FOR PERMANENT SEEDING WHENEVER POSSIBLE. CERTIFIED SEED IS INSPECTED BY THE NORTH CAROLINA CROP IMPROVEMENT ASSOCIATION. IT MEETS PUBLISHED NORTH CAROLINA STANDARDS AND SHOULD BEAR AN OFFICIAL "CERTIFIED SEED" LABEL.

LABELING OF NON–CERTIFIED SEED IS ALSO REQUIRED BY LAW. LABELS CONTAIN IMPORTANT INFORMATION ON SEED PURITY, GERMINATION, AND PRESENCE OF WOOD SEEDS. SEEDS MUST MEET STATE STANDARDS FOR CONTENT OF NOXIOUS WEEDS. DO NO ACCEPT SEED CONTAINING "PROHIBITED" NOXIOUS WEED SEED.

INOCULATE LEGUME SEED WITH THE RHIZOBIUM BACTERIA APPROPRIATE TO THE SPECIES OF LEGUME.

APPLY SEED UNIFORMLY WITH A CYCLONE SEEDER, DROP–TYPE SPREADER, DRILL, CULTIPACKER SEEDER, OR HYDROSEEDER ON A FIRM, FRIABLE SEEDBED.

WHEN USING A DRILL OR CULTIPACKER SEEDER, PLANT SMALL GRAINS NO MORE THAN 1 INCH DEEP, GRASSES AND LEGUMES NO MORE THAN 1/2 INCH. EQUIPMENT SHOULD BE CALIBRATED IN THE FIELD FOR THE DESIRED SEEDING RATE.

WHEN USING BROADCAST–SEEDING METHODS, SUBDIVIDE THE AREA INTO WORKABLE SECTIONS AND DETERMINE THE AMOUNT OF SEED NEEDED FOR EACH SECTION. APPLY ONE–HALF THE SEED WHILE MOVING BACK AND FORTH ACROSS THE AREA, MAKING A UNIFORM PATTERN: THEN APPLY THE SECOND HALF IN THE SAME WAY, BUT MOVING AT RIGHT ANGLES TO THE FIRST PASS.

MULCH ALL PLANTINGS IMMEDIATELY AFTER SEEDING.

> HYDROSEEDING:

SURFACE ROUGHENING IS PARTICULARLY IMPORTANT WHEN HYDROSEEDING, AS A ROUGHENED SLOPE WILL PROVIDE SOME NATURAL COVERAGE FOR LIME, FERTILIZER, AND SEED. THE SURFACE SHOULD NOT BE COMPACTED OR SMOOTH. FINE SEEDBED PREPARATION IS NOT NECESSARY FOR HYDROSEEDING OPERATIONS: LARGE CLODS, STONES, AND IRREGULARITIES PROVIDE CAVITIES IN WHICH SEEDS CAN LODGE.

RATE OF WOOD FIBER (CELLULOSE) APPLICATION SHOULD BE AT LEAST 2–3 TONS 4000 TO 6000 LB/ACRE.

APPLY LEGUME INOCULANTS AT FOUR TIMES THE RECOMMENDED RATE WHEN ADDING INOCULANT TO A HYDROSEEDER SLURRY.

IF A MACHINERY BREAKDOWN OF ½ TO 2 HOURS OCCURS, ADD 50 PERCENT MORE SEED TO THE TANK, BASED ON THE PROPORTION OF THE SLURRY REMAINING. THIS SHOULD COMPENSATE FOR DAMAGE TO SEED. BEYOND 2 HOURS, A FULL RATE OF NEW SEED MAY BE NECESSARY.

LIME IS NOT NORMALLY APPLIED WITH A HYDRAULIC SEEDER BECAUSE IT IS ABRASIVE. IT CAN BE BLOWN ONTO STEEP SLOPES IN DRY FORM.

WHEN APPLYING HYDROSEED THE TOWER OR TANK METHOD SHALL BE USED. BELOW ARE THE SEQUENCE OF APPLICATION FOR BOTH METHODS:

WHEN USING THE TANK METHOD THE FIRST APPLICATION SHOULD BE WITH ⅔ MULCH, ALL SEED AND FERTILIZER AND THE SECOND APPLICATION SHOULD BE WITH ⅓ MULCH ONLY.

WHEN USING THE TOWER METHOD THE SECOND APPLICATION SHOULD BE WITH ⅓ MULCH ONLY IN ONE DIRECTION AND THE FIRST APPLICATION SHOULD BE WITH ⅔ MULCH, ALL SEED AND FERTILIZER IN ONE DIRECTION.

> MAINTENANCE:

GENERALLY, A STAND OF VEGETATION CANNOT BE DETERMINED TO BE FULLY ESTABLISHED UNTIL SOIL COVER HAS BEEN MAINTAINED FOR ONE FULL YEAR FROM PLANTING, INSPECT SEEDED AREAS FOR FAILURE AND MAKE NECESSARY REPAIRS AND RESEEDINGS WITHIN THE SAME SEASON, IF POSSIBLE.

RESEEDING: IF A STAND HAS INADEQUATE COVER, REEVALUATE CHOICE OF PLANT MATERIALS AND QUANTITIES OF LIME AND FERTILIZER. REESTABLISH THE STAND AFTER SEEDBED PREPARATION OR OVERSEED THE STAND. CONSIDER SEEDING TEMPORARY, ANNUAL SPECIES IF THE TIME OF YEAR IS NOT APPROPRIATE FOR PERMANENT SEEDING.

IF VEGETATION FAILS TO GROW, SOIL MUST BE TESTED TO DETERMINE IF ACIDITY OR NUTRIENT IMBALANCE IS RESPONSIBLE.

FERTILIZATION: ON THE TYPICAL DISTURBED SITE, FULL ESTABLISHMENT USUALLY REQUIRES REFERTILIZATION IN THE SECOND GROWING SEASON. FINE TURF REQUIRES ANNUAL MAINTENANCE FERTILIZATION. USE SOIL TESTS IF POSSIBLE OR FOLLOW THE GUIDELINES GIVEN FOR THE SPECIFIC SEEDING MIXTURE.

> TEMPORARY SEEDING SPECIFICATIONS*:

> SEEDING MIXTURES AND DATES:

FALL (AUG. 15 TO DEC. 30)	RATE (LB/ACRE)
RYE (GRAIN)	120

LATE WINTER TO EARLY SPRING (JAN. 1 TO MAY 1)	RATE (LB/ACRE)
RYE (GRAIN)	120
KOBE LESPEDEZA	50

NOTE: OMIT ANNUAL LESPEDEZA WHEN DURATION OF TEMPORARY COVER IS NOT TO EXTEND BEYOND JULY.

SUMMER (MAY 1 TO AUG. 15)	RATE (LB/ACRE)
GERMAN MILLET	40

> SOIL AMENDMENTS:

1. FOLLOW RECOMMENDATIONS OF SOIL TESTS; OR
2. APPLY 2000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LB/ACRE 10–10–10 FERTILIZER.

> MULCH:

APPLY 4,000 LB/ACRE STRAW. ANCHOR MULCH BY TACKING WITH ASPHALT, ROVING OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

> MAINTENANCE:

REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

* REF: 6.10 A, B & C, NC EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, 2006

> PERMANENT SEEDING SPECIFICATIONS*:

> SEEDING MIXTURES:

	RATE (LB/ACRE)
TALL FESCUE	80
SERICEA LESPEDEZA	20
KOBE LESPEDEZA	10

NURSE PLANTS:
1. FROM MAY 1 AND AUG. 15, ADD 10 LB/ACRE GERMAN MILLET OR 15 LB/ACRE SUDANGRASS.
2. PRIOR TO MAY 1 OR AFTER AUG. 15, ADD 40 LB/ACRE RYE (GRAIN).

> SEEDING DATES

	BEST	POSSIBLE
FALL	AUG. 25 TO SEPT. 15	AUG. 20 TO OCT. 25
LATE WINTER	FEB. 15 TO MAR. 21	FEB. 1 TO APR. 15

NOTE: FALL IS BEST FOR TALL FESCUE AND LATE WINTER IS BEST FOR LESPEZEDA. OVERSEEDING OF KOBE LESPEZEDA OVER FALL–SEEDED TALL FESCUE IS VERY EFFECTIVE.

> SOIL AMENDMENTS:

1. FOLLOW RECOMMENDATIONS OF SOIL TESTS; OR
2. APPLY 4000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 1000 LB/ACRE 10–10–10 FERTILIZER.

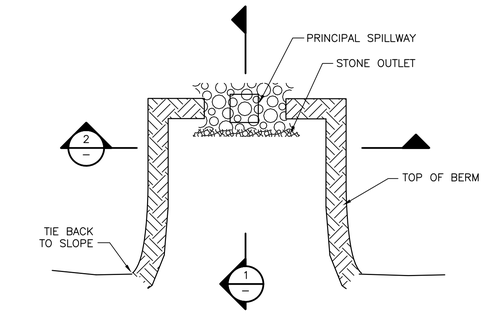
> MULCH:

APPLY 4000 LB/ACRE GRAIN STRAW OR EQUIVALENT COVER OF ANOTHER SUITABLE MULCHING MATERIAL. ANCHOR MULCH BY TACKING WITH ASPHALT, ROVING OR NETTING. NETTING IS THE PREFERRED ANCHORING METHOD ON STEEP SLOPES.

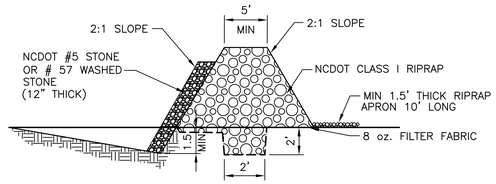
> MAINTENANCE:

REFERTILIZE IN THE SECOND YEAR UNLESS GROWTH IS ADEQUATE. MAY BE MOWED ONCE OR TWICE A YEAR, BUT MOWING IS NOT NECESSARY. RESEED, REFERTILIZE, AND REMULCH DAMAGED AREAS IMMEDIATELY.

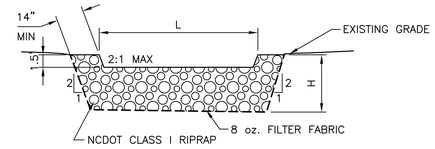
* REF: 6.11L, NC EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, 2006



PLAN



SECTION 1
NTS

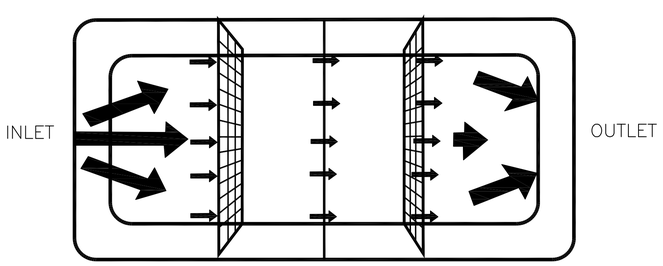


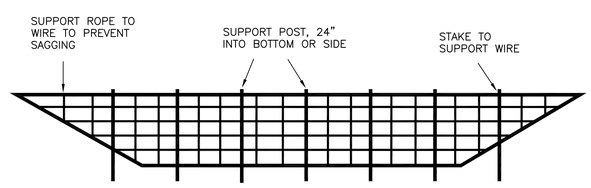
SECTION 2
NTS

TEMPORARY SEDIMENT TRAPS

SED TRAP NO.	MAX DRAINAGE AREA (AC)	L x W (APPROX. DIM. REFER TO C–2 FOR SED. TRAP GRADING)	MINIMUM STORAGE VOLUME (FT^3)	SURFACE AREA (FT^2)	WEIR WIDTH (FT)	EMBANKMENT HEIGHT (FT)	NO POROUS BAFFLES
ST–1	5	80' x 40'	4,320	2,473	6.0	4.0	3
ST–2	5	60' x 30'	1,440	2,238	4.0	4.0	3
ST–3	5	40' x 20'	1,080	586	4.0	3.0	3
ST–4	5	60' x 30'	4,320	1,636	6.0	4.0	3
ST–5	5	80' x 40'	12,240	3,609	8.0	6.0	3
ST–6	5	40' x 30'	2,250	1,186	4.0	4.0	3

TEMPORARY SEDIMENT TRAP
DETAIL B
NTS C–2





POROUS BAFFLE IN SEDIMENT TRAP
DETAIL A
NTS –

REV. NO.	DATE	DRWN	CHKD	REMARKS
2	06/05/09	WPS	WMB	REVISIONS PER NCDENR ESC COMMENTS RECEIVED ON 06–04–09
1	06/01/09	WPS	WMB	REVISIONS PER NCDENR ESC COMMENTS RECEIVED ON 05–18–09

DESIGNED BY: P. STOUT
DRAWN BY: P. STOUT
SHEET CHK'D BY: M. BRINCHEK
CROSS CHK'D BY: M. BRINCHEK
APPROVED BY: M. BRINCHEK
DATE: JUNE 2009

CDM
Camp Dresser & McKee,
5400 Glenwood Avenue, Suite 300
Raleigh, NC 27612
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consulting • engineering • construction • operations

CUMBERLAND COUNTY,
NORTH CAROLINA
WILKES ROAD TREATMENT AND PROCESSING FACILITY
EROSION AND SEDIMENT CONTROL PLAN

EROSION & SEDIMENT CONTROL DETAILS

PROJECT NO. 2724–68483
FILE NAME: CD–2.DWG
SHEET NO.
CD-2

Appendix G

Post-Construction Stormwater Permit

NCDENR
North Carolina Department of Environment and Natural Resources
Division of Water Quality

Beverly Eaves Perdue
Governor

Coleen H. Sullins
Director

Dee Freeman
Secretary

September 3, 2009

Mr. Michael Brinchek
Camp Dresser & McKee
5400 Glenwood Avenue, Suite 300
Raleigh, NC 27612

Subject: Phase II Post-Construction Stormwater Permit Application Return
Cumberland County – Wilkes Road Yard Waste Facility
Application Return #1223
Cumberland County

Dear Mr. Brinchek:

The Division of Water Quality received your Stormwater Management Permit Application for the subject project on August 1, 2009. After a preliminary review, it was determined that the site does not need a post construction because the site is existing and is not adding any impervious area.

If you have any questions concerning this matter, please contact me at (919) 807-6368 or brian.lowther@ncmail.net.

Sincerely,

Brian Lowther
DWQ Stormwater Permitting Unit

RECEIVED
SEP 09 2009
CDM / RAL OFFICE

cc: Fayetteville Regional Office
SPU files

Wetlands and Stormwater Branch
1617 Mail Service Center, Raleigh, North Carolina 27699-1617
Location: 512 N. Salisbury St. Raleigh, North Carolina 27604
Phone: 919-807-6300 \ FAX: 919-807-6494 \ Customer Service: 1-877-623-6748
Internet: www.ncwaterquality.org

An Equal Opportunity \ Affirmative Action Employer

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Appendix H

Seasonal-high Groundwater Level

May 24, 2011

Appendix I

Air Quality Permit

NCDENR

North Carolina Department of Environment and Natural Resources

DIVISION OF AIR QUALITY

Michael F. Easley, Governor

William G. Ross Jr., Secretary
B. Keith Overcash, P.E., Director

August 27, 2007

Mr. James Martin
County Manager
Wilkes Road Landfill
117 Dick Street, Room 512
Fayetteville, NC 28301

Post-it® Fax Note 7671	Date 1/28/09 # of pages ▶ 8
To Mike Brinchek	From Karen
Co./Dept.	Co. CCSWM
Phone #	Phone #
Fax # 919-781-5730	Fax #

Subject: Air Permit No. 09655R01
Wilkes Road Landfill
Fayetteville, Cumberland County, North Carolina
Fee Class: Synthetic Minor
Site Number: 06/26/00219

Dear Mr. Martin:

In accordance with your completed application received July 26, 2007, we are forwarding herewith Permit No. 09655R01 to Wilkes Road Landfill, Fayetteville, Cumberland County, North Carolina for the construction and operation of air emissions sources or air cleaning devices and appurtenances. Please note the records retention requirements are contained in General Condition 2 of the General Conditions and Limitations.

If any parts, requirements, or limitations contained in this permit are unacceptable to you, you have the right to request a formal adjudicatory hearing within 30 days following receipt of this permit, identifying the specific issues to be contested. Such a request will stay the effectiveness of the entire permit. This hearing request must be in the form of a written petition, conforming to G.S. 150B-23 of the North Carolina General Statutes, and filed with the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, NC 27699-6714. The form for requesting a formal adjudicatory hearing may be obtained upon request from the Office of Administrative Hearings. Unless a request for a hearing is made pursuant to G.S. 150B-23, this air permit shall be final and binding.

You may request modification of your air permit through informal means pursuant to G.S. 150B-22. This request must be submitted in writing to the Director and must identify the specific provisions or issues for which the modification is sought. Please note that the permit will become final and binding regardless of a request for informal modification unless a request for a hearing is also made under G.S. 150B-23.

Unless exempted by a condition of this permit or the regulations, construction of new air pollution sources or air cleaning devices, or modifications to the sources or air cleaning devices described in this permit must be covered under a permit issued by the Division of Air Quality prior to construction. Failure to do so is a violation of G.S. 143-215.108 and may subject the Permittee to civil or criminal penalties as described in G.S. 143-215.114A and 143-215.114B.

This permit shall be effective from August 27, 2007 until May 31, 2011, is nontransferable to future owners and operators, and shall be subject to the conditions and limitations as specified therein.

Changes have been made to the permit stipulations. The Permittee is responsible for carefully reading the entire permit and evaluating the requirements of each permit stipulation. The Permittee shall comply with all terms, conditions, requirements, limitations and restrictions set forth in this permit. Noncompliance with any permit condition is grounds for enforcement action, for permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application. Should you have any questions concerning this matter, please contact Robert Kennedy at (910) 433-3300.

Sincerely,

Steven F. Vozzo
Regional Air Quality Supervisor

rpk
Enclosures

c: Central Files
Fayetteville Regional Office
Robert Howard, 698 Ann Street, Fayetteville, NC 28301

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

DIVISION OF AIR QUALITY

AIR PERMIT NO. 09655R01

Issue Date: August 27, 2007
Expiration Date: May 31, 2011

Effective Date: August 27, 2007
Replaces Permit: 09655R00

To construct and operate air emission source(s) and/or air cleaning device(s), and for the discharge of the associated air contaminants into the atmosphere in accordance with the provisions of Article 21B of Chapter 143, General Statutes of North Carolina (NCGS) as amended, and other applicable Laws, Rules and Regulations,

Wilkes Road Landfill
779 Wilkes Road
Fayetteville, Cumberland County, North Carolina
Fee Class: Synthetic Minor
Site Number: 06/26/00219

(the Permittee) is hereby authorized to construct and operate the air emissions sources and/or air cleaning devices and appurtenances described below:

	Emission Source ID	Emission Source Description	Control System ID	Control System Description
125	ES-1	Morbark 1500 tub grinder powered by an 800 hP diesel engine	N/A	N/A
126	ES-2	Morbark 1500 tub grinder powered by a 1050 hP diesel engine with an engine control module	N/A	N/A

in accordance with the completed application 2600219.07A received July 26, 2007 including any plans, specifications, previous applications, and other supporting data, all of which are filed with the Department of Environment and Natural Resources, Division of Air Quality (DAQ) and are incorporated as part of this permit.

This permit is subject to the following specified conditions and limitations including any TESTING, REPORTING, OR MONITORING REQUIREMENTS:

A. SPECIFIC CONDITIONS AND LIMITATIONS

1. Any air emission sources or control devices authorized to construct and operate above must be operated and maintained in accordance with the provisions contained herein. The

Permittee shall comply with applicable Environmental Management Commission Regulations, including Title 15A North Carolina Administrative Code (NCAC), Subchapter 2D .0202, 2D .0515, 2D .0521, 2D .0535, 2D .1806 and 2Q .0315.

2. EMISSION INVENTORY REQUIREMENT - At least 90 days prior to the expiration date of this permit, the Permittee shall submit the air pollution emission inventory report in accordance with 15A NCAC 2D .0202, pursuant to N.C. General Statute 143 215.65. The report shall be submitted to the Regional Supervisor, DAQ. The report shall document air pollutants emitted for the 2009 calendar year. The Regional Office will send information on how to submit the emissions inventory, along with a reminder to renew your permit, about six months prior to your permit expiration. If you do not receive this information, please contact the Regional Supervisor, DAQ.

3. PARTICULATE CONTROL REQUIREMENT - As required by 15A NCAC 2D .0515 "Particulates from Miscellaneous Industrial Processes," particulate matter emissions from the emission sources shall not exceed allowable emission rates. The allowable emission rates are, as defined in 15A NCAC 2D .0515, a function of the process weight rate and shall be determined by the following equation(s), where P is the process throughput rate in tons per hour (tons/hr) and E is the allowable emission rate in pounds per hour (lbs/hr).

$$E = 4.10 * (P)^{0.67} \quad \text{for } P <= 30 \text{ tons/hr, or}$$

$$E = 55 * (P)^{0.11} - 40 \quad \text{for } P > 30 \text{ tons/hr}$$

4. VISIBLE EMISSIONS CONTROL REQUIREMENT - As required by 15A NCAC 2D .0521 "Control of Visible Emissions," visible emissions from the emission sources, manufactured after July 1, 1971, shall not be more than 20 percent opacity when averaged over a six-minute period, except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. However, sources which must comply with 15A NCAC 2D .0524 "New Source Performance Standards" or .1110 "National Emission Standards for Hazardous Air Pollutants" must comply with applicable visible emissions requirements contained therein.

5. NOTIFICATION REQUIREMENT - As required by 15A NCAC 2D .0535, the Permittee of a source of excess emissions that last for more than four hours and that results from a malfunction, a breakdown of process or control equipment or any other abnormal conditions, shall:

   a. Notify the Director or his designee of any such occurrence by 9:00 a.m. Eastern time of the Division's next business day of becoming aware of the occurrence and describe:

      i. the name and location of the facility,

      ii. the nature and cause of the malfunction or breakdown,

      iii. the time when the malfunction or breakdown is first observed,

      iv. the expected duration, and

v. an estimated rate of emissions.

b. Notify the Director or his designee immediately when the corrective measures have been accomplished.

This reporting requirement does not allow the operation of the facility in excess of Environmental Management Commission Regulations.

6. CONTROL AND PROHIBITION OF ODOROUS EMISSIONS - As required by 15A NCAC 2D .1806 "Control and Prohibition of Odorous Emissions" the Permittee shall not operate the facility without implementing management practices or installing and operating odor control equipment sufficient to prevent odorous emissions from the facility from causing or contributing to objectionable odors beyond the facility's boundary.

7. LIMITATION TO AVOID 15A NCAC 2Q .0501 - Pursuant to 15A NCAC 2Q .0315 "Synthetic Minor Facilities," to avoid the applicability of 15A NCAC 2Q .0501 "Purpose of Section and Requirement for a Permit," as requested by the Permittee, facility-wide emissions shall be less than the following:

Pollutant	Emission Limit (Tons per consecutive 12-month period)
NOx	100

a. Operations Restrictions - To ensure emissions do not exceed the limitations above, the following restrictions shall apply:

i. The combined hours of operation of tub grinders ES-1 and ES-2 shall be less than 11,000 hours per consecutive 12-month period.

b. Recordkeeping Requirements

i. The Permittee shall record monthly and total annually the following:

A. The hours of operation of each tub grinder, ES-1 and ES-2, in a logbook. The hours of operation shall be determined by the use of a device, such as a run hour meter.

c. Reporting Requirements - Within 30 days after each calendar year, regardless of the actual emissions, the Permittee shall submit the following:

i. emissions and/or operational data listed below. The data should include monthly and 12 month totals for the previous 12 month period.

A. The hours of operation of each tub grinder, ES-1 and ES-2.

B. GENERAL CONDITIONS AND LIMITATIONS

1. TWO COPIES OF ALL DOCUMENTS, REPORTS, TEST DATA, MONITORING DATA, NOTIFICATIONS, REQUESTS FOR RENEWAL, AND ANY OTHER INFORMATION REQUIRED BY THIS PERMIT shall be submitted to the:

   Regional Air Quality Supervisor
   North Carolina Division of Air Quality
   Fayetteville Regional Office
   Systel Building
   225 Green Street, Suite 714
   Fayetteville, NC 28301-5094
   (910) 433-3300

2. RECORDS RETENTION REQUIREMENT - Any records required by the conditions of this permit shall be kept on site and made available to DAQ personnel for inspection upon request. These records shall be maintained in a form suitable and readily available for expeditious inspection and review. These records must be kept on site for a minimum of 2 years, unless another time period is otherwise specified.

3. PERMIT RENEWAL REQUIREMENT - The Permittee, at least 90 days prior to the expiration date of this permit, shall request permit renewal by letter in accordance with 15A NCAC 2Q .0304(d) and (f). Pursuant to 15A NCAC 2Q .0203(i), no permit application fee is required for renewal of an existing air permit. The renewal request should be submitted to the Regional Supervisor, DAQ.

4. ANNUAL FEE PAYMENT - Pursuant to 15A NCAC 2Q .0203(a), the Permittee shall pay the annual permit fee within 30 days of being billed by the DAQ. Failure to pay the fee in a timely manner will cause the DAQ to initiate action to revoke the permit.

5. EQUIPMENT RELOCATION - A new air permit shall be obtained by the Permittee prior to establishing, building, erecting, using, or operating the emission sources or air cleaning equipment at a site or location not specified in this permit.

6. This permit is subject to revocation or modification by the DAQ upon a determination that information contained in the application or presented in the support thereof is incorrect, conditions under which this permit was granted have changed, or violations of conditions contained in this permit have occurred. The facility shall be properly operated and maintained at all times in a manner that will effect an overall reduction in air pollution. Unless otherwise specified by this permit, no emission source may be operated without the concurrent operation of its associated air cleaning device(s) and appurtenances.

7. REPORTING REQUIREMENT - Any of the following that would result in previously unpermitted, new, or increased emissions must be reported to the Regional Supervisor, DAQ:

   a. changes in the information submitted in the application regarding facility emissions;

   b. changes that modify equipment or processes of existing permitted facilities; or

   c. changes in the quantity or quality of materials processed.

   If appropriate, modifications to the permit may then be made by the DAQ to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause a violation of the emission limitations specified herein.

8. This permit is nontransferable by the Permittee. Future owners and operators must obtain a new air permit from the DAQ.

9. This issuance of this permit in no way absolves the Permittee of liability for any potential civil penalties which may be assessed for violations of State law which have occurred prior to the effective date of this permit.

10. This permit does not relieve the Permittee of the responsibility of complying with all applicable requirements of any Federal, State, or Local water quality or land quality control authority.

11. Reports on the operation and maintenance of the facility shall be submitted by the Permittee to the Regional Supervisor, DAQ at such intervals and in such form and detail as may be required by the DAQ. Information required in such reports may include, but is not limited to, process weight rates, firing rates, hours of operation, and preventive maintenance schedules.

12. A violation of any term or condition of this permit shall subject the Permittee to enforcement pursuant to G.S. 143-215.114A, 143-215.114B, and 143-215.114C, including assessment of civil and/or criminal penalties.

13. Pursuant to North Carolina General Statute 143-215.3(a)(2), no person shall refuse entry or access to any authorized representative of the DAQ who requests entry or access for purposes of inspection, and who presents appropriate credentials, nor shall any person obstruct, hamper, or interfere with any such representative while in the process of carrying out his official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

14. The Permittee must comply with any applicable Federal, State, or Local requirements governing the handling, disposal, or incineration of hazardous, solid, or medical wastes, including the Resource Conservation and Recovery Act (RCRA) administered by the Division of Waste Management.

15. PERMIT RETENTION REQUIREMENT - The Permittee shall retain a current copy of the air permit at the site. The Permittee must make available to personnel of the DAQ, upon request, the current copy of the air permit for the site.

16. CLEAN AIR ACT SECTION 112(r) REQUIREMENTS - Pursuant to 40 CFR Part 68 "Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act, Section 112(r)," if the Permittee is required to develop and register a risk management plan pursuant to Section 112(r) of the Federal Clean Air Act, then the Permittee is required to register this plan in accordance with 40 CFR Part 68.

17. PREVENTION OF ACCIDENTAL RELEASES - GENERAL DUTY - Pursuant to Title I Part A Section 112(r)(1) of the Clean Air Act "Hazardous Air Pollutants - Prevention of Accidental Releases - Purpose and General Duty," although a risk management plan may not be required, if the Permittee produces, processes, handles, or stores any amount of a listed hazardous substance, the Permittee has a general duty to take such steps as are necessary to prevent the accidental release of such substance and to minimize the consequences of any release. **This condition is federally-enforceable only.**

Permit issued this the 27th of August 2007.

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

Steven F. Vozzo
Regional Air Quality Supervisor
By Authority of the Environmental Management Commission

Air Permit No. 09655R01

Appendix J

Record Keeping Forms

CUMBERLAND COUNTY, NORTH CAROLINA - WILKES ROAD YARD FACILITY – PERMIT No. 26-10

COMPOST PILE TEMPERATURE TRACKING FORM (ONE FORM PER PILE)

Pile ID Number		Location (See Figure)		Approximate Pile Size	

Date/Time	Temperature readings (deg. F)										Was the 131 deg. min. Achieved?		Indicated whether the pile was turned or aerated.	
	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	Yes	No	Yes	No
Comments														

Name and Signature _____

Instructions: Take a representative number of temperature readings at each pile on daily basis until a minimum temperature of 131 degrees is recorded for 3 consecutive days.

Figure 2-1

Cumberland County, NC
Wilkes Road
Yard Waste Facility
Closed LCID Landfill

Date/Time Analysis Report

For the period 09/01/2010 - 09/30/2010
Sites: 3

			TOTAL				AVERAGE			
Date	Day of Week	Hour	Vehicles	Count	Volume	Weight	Minutes on Site	Count	Volume	Weight
09/01/10	Wednesday		98	38	143	262.08	6	0	1	2.67
09/02/10	Thursday		73	20	70	231.39	3	0	1	3.17
09/03/10	Friday		106	43	414	536.31	3	0	4	5.06
09/04/10	Saturday		67	26	48	61.10	4	0	1	0.91
09/07/10	Tuesday		95	32	267	398.02	4	0	3	4.19
09/08/10	Wednesday		96	48	501	588.92	3	1	5	6.13
09/09/10	Thursday		109	34	391	540.87	4	0	4	4.96
09/10/10	Friday		111	40	394	512.27	3	0	4	4.62
09/11/10	Saturday		67	23	39	49.64	9	0	1	0.74
09/13/10	Monday		89	24	368	487.73	5	0	4	5.48
09/14/10	Tuesday		92	36	280	459.21	3	0	3	4.99
09/15/10	Wednesday		82	38	81	191.83	4	0	1	2.34
09/16/10	Thursday		117	49	469	619.49	3	0	4	5.29
09/17/10	Friday		92	34	336	424.01	6	0	4	4.61
09/18/10	Saturday		71	25	18	33.36	6	0	0	0.47
09/20/10	Monday		88	37	326	438.47	3	0	4	4.98
09/21/10	Tuesday		84	28	188	334.20	5	0	2	3.98
09/22/10	Wednesday		87	40	306	377.38	5	0	4	4.34
09/23/10	Thursday		91	27	188	354.43	3	0	2	3.89
09/24/10	Friday		87	31	14	122.00	5	0	0	1.40
09/25/10	Saturday		61	25	22	37.61	6	0	0	0.62
09/27/10	Monday		25	3	53	121.27	10	0	2	4.85
09/28/10	Tuesday		48	13	48	179.82	3	0	1	3.75
09/29/10	Wednesday		58	19	97	189.40	3	0	2	3.27
09/30/10	Thursday		31	11	128	226.26	3	0	4	7.30
			2025	**744**	**5189**	**7777.07**	**4**	**0**	**3**	**3.84**
	Monday		202	64	747	1047.47	4	0	4	5.19
	Tuesday		319	109	783	1371.25	4	0	2	4.30
	Wednesday		421	183	1128	1609.61	4	0	3	3.82
	Thursday		421	141	1246	1972.44	3	0	3	4.69
	Friday		396	148	1158	1594.59	4	0	3	4.03
	Saturday		266	99	127	181.71	6	0	0	0.68
			2025	**744**	**5189**	**7777.07**	**4**	**0**	**3**	**3.84**

Date/Time Analysis Report

For the period 10/01/2010 - 10/31/2010
Sites: 3

			TOTAL				AVERAGE			
Date	Day of Week	Hour	Vehicles	Count	Volume	Weight	Minutes on Site	Count	Volume	Weight
10/01/10	Friday		79	21	94	216.52	5	0	1	2.74
10/02/10	Saturday		58	11	12	34.67	7	0	0	0.60
10/04/10	Monday		83	29	118	239.48	6	0	1	2.89
10/05/10	Tuesday		95	43	183	389.17	7	0	2	4.10
10/06/10	Wednesday		80	29	85	190.57	5	0	1	2.38
10/07/10	Thursday		104	44	134	331.68	2	0	1	3.19
10/08/10	Friday		103	32	112	318.68	3	0	1	3.09
10/09/10	Saturday		84	32	16	48.91	9	0	0	0.58
10/11/10	Monday		111	35	111	250.91	6	0	1	2.26
10/12/10	Tuesday		82	30	127	241.78	2	0	2	2.95
10/13/10	Wednesday		85	34	8	123.32	6	0	0	1.45
10/14/10	Thursday		83	27	4	198.24	4	0	0	2.39
10/15/10	Friday		66	16	6	97.03	6	0	0	1.47
10/16/10	Saturday		69	23	22	44.43	7	0	0	0.64
10/18/10	Monday		83	26	57	170.97	5	0	1	2.06
10/19/10	Tuesday		82	25	14	138.39	5	0	0	1.69
10/20/10	Wednesday		75	18	16	95.32	4	0	0	1.27
10/21/10	Thursday		79	27	10	126.85	6	0	0	1.61
10/22/10	Friday		77	26	12	131.63	3	0	0	1.71
10/23/10	Saturday		58	21	18	35.54	8	0	0	0.61
10/25/10	Monday		56	16	8	100.72	5	0	0	1.80
10/26/10	Tuesday		42	9	0	117.95	1	0	0	2.81
10/27/10	Wednesday		82	25	8	106.17	4	0	0	1.29
10/28/10	Thursday		65	17	0	135.61	2	0	0	2.09
10/29/10	Friday		80	18	0	123.87	7	0	0	1.55
10/30/10	Saturday		47	14	8	37.59	5	0	0	0.80
			2008	**648**	**1183**	**4046.00**	**5**	**0**	**1**	**2.01**
	Monday		333	106	294	762.08	6	0	1	2.29
	Tuesday		301	107	324	887.29	4	0	1	2.95
	Wednesday		322	106	117	515.38	5	0	0	1.60
	Thursday		331	115	148	792.38	4	0	0	2.39
	Friday		405	113	224	887.73	5	0	1	2.19
	Saturday		316	101	76	201.14	8	0	0	0.64
			2008	**648**	**1183**	**4046.00**	**5**	**0**	**1**	**2.01**

Appendix K

Fire Marshall's Certification

Pearce's Mill Fire Department

2998-A Gillespie Street
Fayetteville, NC. 28306
910-425-5881

To: Whom it may Concern

January 20, 2011

Wilkes Road Land Fill is in the Pearce's Mill Fire District. And the Pearce's Mill Fire Department is able to get in the gates after hours. There are two hydrants, one is a 2-inch hydrant within the gates, and one is a 6-8 inch hydrant outside the gates. The Landfill has a 5,000 Gallon tanker on site, an Excavator, and other equipment to fight fire with. If you have any questions, feel free to contact me at the number below.

Sincerely,

Nathan T Smith

Nathan T. Smith
Deputy Chief
Pearce's Mill Fire Department
(910) 425-5881