

PROJECT SPECIAL PROVISIONS
PERMITS

The Contractor's attention is directed to the following permits, which have been issued to the Department of Transportation by the authority granting the permit.

PERMIT**AUTHORITY GRANTING THE PERMIT**

Dredge and Fill and/or
Work in Navigable Waters (404)

U. S. Army Corps of Engineers

Water Quality (401)

Division of Environmental Management, DENR,
State of North Carolina

The Contractor shall comply with all applicable permit conditions during construction of this project. Those conditions marked by * are the responsibility of the department and the Contractor has no responsibility in accomplishing those conditions.

Agents of the permitting authority will periodically inspect the project for adherence to the permits.

The Contractor's attention is also directed to Articles 107-10 and 107-14 of the Standard Specifications and the following:

Should the Contractor propose to utilize construction methods (such as temporary structures or fill in waters and/or wetlands for haul roads, work platforms, cofferdams, etc.) not specifically identified in the permit (individual, general, or nationwide) authorizing the project it shall be the Contractor's responsibility to coordinate with the Engineer to determine what, if any, additional permit action is required. The Contractor shall also be responsible for initiating the request for the authorization of such construction method by the permitting agency. The request shall be submitted through the Engineer. The Contractor shall not utilize the construction method until it is approved by the permitting agency. The request normally takes approximately 60 days to process; however, no extensions of time or additional compensation will be granted for delays resulting from the Contractor's request for approval of construction methods not specifically identified in the permit.

Where construction moratoriums are contained in a permit condition which restricts the Contractor's activities to certain times of the year, those moratoriums will apply only to the portions of the work taking place in the waters or wetlands provided that activities outside those areas is done in such a manner as to not affect the waters or wetlands.



41

Michael F. Easley, Governor

William G. Ross Jr., Secretary
North Carolina Department of Environment and Natural ResourcesAlan W. Klimek, P.E., Director
Division of Water Quality

May 5, 2005

Clay Willis
North Carolina Department of Transportation
113 Airport Drive, Suite 100
Edenton, NC 27932

Subject: Permit No. WQ0028792
DOT Bridge # 7 Hydrodemolition
Wastewater Treatment System
Washington/Bertie County

Dear Mr. Willis:

In accordance with your permit application received April 19, 2005, we are forwarding herewith Permit No. WQ0028792, dated May 5, 2005, to the North Carolina Department of Transportation for the construction and operation of the subject wastewater treatment system.

This permit shall be effective from the date of issuance until April 30, 2010 and shall be subject to the conditions and limitations as specified therein. Please pay particular attention to the monitoring requirements in this permit, and Condition I.1 requiring that the transportation, treatment, and disposal activities be completed by October 1, 2005. Failure to establish an adequate system for collecting and maintaining the required operational information will result in compliance problems.

If any parts, requirements, or limitations contained in this permit are unacceptable, you have the right to request an adjudicatory hearing upon written request within thirty (30) days following receipt of this permit. This request must be in the form of a written petition, conforming to Chapter 150B of North Carolina General Statutes, and filed with the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, NC 27699-6714. Unless such demands are made this permit shall be final and binding.

If you need additional information concerning this matter, please contact David Goodrich at (919) 715-6162.

Sincerely,

Alan W. Klimek, P.E.

cc: Washington County Health Department
Bertie County Health Department
Washington Regional Office, Aquifer Protection Section
Aquifer Protection Section, Central Office
Brian Wrenn, NC DWQ
Technical Assistance and Certification Unit
Aquifer Protection Section Central Files
NDPU Files

Aquifer Protection Section
Internet: h2o.enr.state.nc.us

1636 Mail Service Center
2728 Capital Boulevard

Raleigh, NC 27699-1636
Raleigh, NC 27604

Phone (919) 733-3221
FAX (919) 715-6048

Customer Service
1-877-623-6748

42

NORTH CAROLINA
ENVIRONMENTAL MANAGEMENT COMMISSION
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
RALEIGH
INFILTRATION SYSTEM PERMIT

In accordance with the provisions of Article 21 of Chapter 143, General Statutes of North Carolina as amended,
and other applicable Laws, Rules, and Regulations

PERMISSION IS HEREBY GRANTED TO

North Carolina Department of Transportation
Washington/Bertie County

FOR THE

construction and operation of a 28,000 GPD hydrodemolition wastewater treatment and infiltration system consisting of a series of pea gravel check dams on the bridge deck to filter the wastewater generated from the hydrodemolition of the surface cement on the State Route 45 Bridge (Bridge # 7) crossing the Roanoke/Middle/Cashie River; collection apparatus to capture all of the filtered wastewater; containment of the wastewater in a holding tank; adjustment of the pH to a level between 6.5 and 8.5 standard units through the addition of muriatic acid; tank truck transportation of the treated wastewater over the roadways to a constructed filtration/infiltration facility at the NCDOT Asphalt Plant on Blair Shores Road in Pea Ridge; placement of the treated wastewater into a bermed 19,000 square foot pretreatment area (where some infiltration will take place); and introduction (by surface flow) of the remaining treated wastewater into an existing, isolated 285,000 square foot borrow pit with no discharge of wastes to the surface waters, pursuant to the application received April 19, 2005, and in conformity with the project plan, specifications, and other supporting data subsequently filed and approved by the Department of Environment and Natural Resources and considered a part of this permit.

This permit shall be effective from the date of issuance until April 30, 2010 and shall be subject to the following specified conditions and limitations:

1. The transportation, treatment, and disposal activities shall be completed by October 1, 2005.
2. Upon completion of construction and prior to operation of this permitted facility, a certification must be received from a professional engineer certifying that the permitted facility has been installed in accordance with this permit, the approved plans and specifications, and other supporting materials. If this project is to be completed in phases and partially certified, you shall retain the responsibility to track further construction approved under the same permit, and shall provide a final certificate of completion once the entire project has been completed. Mail the Certification to the Division of Water Quality, Aquifer Protection Section, 1636 Mail Service Center, Raleigh, NC 27699-1636.
3. The Washington Regional Office, telephone number (252) 946-6481, shall be notified at least forty-eight (48) hours in advance of operation of the installed facilities so that an in-place inspection can be made. Such notification to the regional supervisor shall be made during the normal office hours from 8:00 a.m. until 5:00 p.m. on Monday through Friday, excluding State Holidays.

43

4. This permit shall become voidable unless the facilities are constructed in accordance with the conditions of this permit, the approved plans and specifications, and other supporting data.
5. This permit is effective only with respect to the nature and volume of wastes described in the application and other supporting data.
6. The facilities shall be properly maintained and operated at all times.
7. The following buffers shall be maintained:
 - a) 100 feet between treatment/storage units and any wells,
 - b) 50 feet between treatment/storage units and surface waters,
 - c) 50 feet between treatment/storage units and property lines,
 - d) 10 feet between disposal (wetted) area and upslope ditches, drains, and surface water diversions,
 - e) 25 feet between disposal (wetted) area and downslope ditches, drains, and surface water diversions,
 - f) 100 feet between disposal (wetted) area and wells, and
 - g) 50 feet between disposal (wetted) area and public right of ways or property lines,

The borrow pit, which is serving as an infiltration basin, may not be able to meet the 50-foot setback from the property lines. In these areas, the edge of the borrow pit shall not be expanded.

8. This permit is not transferable. In the event there is a desire for the facilities to change ownership, or there is a name change of the Permittee, a formal permit request must be submitted to the Division of Water Quality (Division) accompanied by an application fee, documentation from the parties involved, and other supporting materials as may be appropriate. The approval of the request will be considered on its merits and may or may not be approved.
9. In the event that the facilities fail to perform satisfactorily, including the creation of nuisance conditions, the Permittee shall take immediate corrective action, including those actions that may be required by this Division, such as the construction of additional or replacement treatment or disposal facilities.
10. The residuals generated from these treatment facilities must be disposed in accordance with General Statute 143-215.1 and in a manner approved by the Division.
11. The issuance of this permit shall not relieve the Permittee of the responsibility for damages to surface or groundwaters resulting from the operation of this facility.
12. The facilities shall be effectively maintained and operated as a non-discharge system to prevent the discharge of any wastewater resulting from the operation of this facility.
13. Diversion or bypassing of untreated wastewater from the treatment facilities is prohibited.
14. Freeboard in the infiltration basin shall not be less than two (2) feet at any time.
15. Any monitoring deemed necessary by the Division to insure surface and ground water protection will be established and an acceptable sampling reporting schedule shall be followed.
16. Adequate inspection, maintenance, and cleaning shall be provided by the Permittee to insure proper operation of the subject facilities.

17. The Permittee or his designee shall inspect the wastewater recycle facilities to prevent malfunctions and deterioration, operator errors and discharges which may cause or lead to the release of wastes to the environment, a threat to human health, or a nuisance. The Permittee shall maintain an inspection log or summary including at least the date and time of inspection, observations made, and any maintenance, repairs, or corrective actions taken by the Permittee. This log of inspections shall be maintained by the Permittee for a period of three years from the date of the inspection and shall be made available to the Division or other permitting authority, upon request.
18. Any duly authorized officer, employee, or representative of the Division may, upon presentation of credentials, enter and inspect any property, premises or place on or related to the recycle system at any reasonable time for the purpose of determining compliance with this permit, may inspect or copy any records that must be maintained under the terms and conditions of this permit, and may obtain samples of groundwater, surface water, or leachate.
19. The annual administering and compliance fee must be paid by the Permittee within thirty (30) days after being billed by the Division. Failure to pay the fee accordingly may cause the Division to initiate action to revoke this permit as specified by 15A NCAC 2H .0205 (c)(4).
20. Failure to abide by the conditions and limitations contained in this permit may subject the Permittee to an enforcement action by the Division in accordance with North Carolina General Statute 143-215.6A to 143-215.6C.
21. The issuance of this permit does not exempt the Permittee from complying with any and all statutes, rules, regulations, or ordinances which may be imposed by other government agencies (local, state, and federal) which have jurisdiction, including but not limited to applicable river buffer rules in 15A NCAC 2B.0200, erosion and sedimentation control requirements in 15A NCAC Chapter 4 and under the Division's General Permit NCG010000, and any requirements pertaining to wetlands under 15A NCAC 2B .0200 and 2B .0500.20.
22. A set of approved plans and specifications for the subject project must be retained by the Permittee for the life of this project.
23. **Noncompliance Notification:**

The Permittee shall report by telephone to the Raleigh Regional Office, telephone number (919) 571-4700, as soon as possible, but in no case more than 24 hours or on the next working day following the occurrence or first knowledge of the occurrence of any of the following:

- a. Any occurrence at the wastewater treatment facility which results in the treatment of significant amounts of wastes which are abnormal in quantity or characteristic, such as the dumping of the contents of a basin or tank, the known passage of a slug of hazardous substance through the facility, or any other unusual circumstances;
- b. Any process unit failure, due to known or unknown reasons, that renders the facility incapable of adequate wastewater treatment, such as mechanical or electrical failures of pumps, aerators, compressors, etc.;
- c. Any failure of a pumping station, sewer line, or treatment facility resulting in a by-pass directly to receiving waters without treatment of all or any portion of the influent to such station or facility; or
- d. Any time that self-monitoring information indicates that the facility is not in compliance with its permit limitations.

45

Occurrences outside normal business hours may also be reported to the Division's Emergency Management personnel at telephone number (800) 858-0368, or (919) 733-3300. Persons reporting such occurrences by telephone shall also file a written report in letter form within five (5) days following first knowledge of the occurrence. This report must outline the actions taken or proposed to be taken to ensure that the problem does not recur.

24. Upon classification of the wastewater treatment and reclaimed water utilization facilities by the Water Pollution Control System Operators Certification Commission (WPCSOCC), the Permittee shall designate a certified operator to be in responsible charge (ORC) and one or more certified operator(s) to be back-up ORC(s) of the facilities in accordance with 15A NCAC 8G .0201. The ORC shall visit the facilities during every day of wastewater delivery and shall comply with all other conditions specified in these rules. A certified operator of a grade equivalent to or greater than that assigned to the wastewater treatment facilities shall be on call 24 hours per day.
25. Upon commencement of the cement hydrodemolition process, the treated wastewater will be sampled after it has been treated with muriatic acid and before it is drained from the first transportation tanker truck onto the infiltration area. This sample will be analyzed by a Division of Water Quality certified laboratory for the following parameters:

pH	Sulfate (SO ₄)	Chloride	Total Dissolved Solids	Calcium
Aluminum	Arsenic	Barium	Cadmium	Chromium
Copper	Iron	Lead	Manganese	Magnesium
Selenium	Total Phosphorous	Zinc		
Volatile Organic Compounds (by EPA Method 8260)				
Semi-Volatile Compounds (by EPA Method 8270)				
PCBs (by EPA Method 8082)				

The results of this initial sampling will be used to determine the subsequent sample parameters for the four monitoring wells described below.

26. **Well Construction and Monitoring Criteria:**

- Within ninety (90) days of permit issuance, four new monitor wells, one upgradient (MW-1) and three downgradient (MW-2, MW-3 & MW-4), shall be installed to monitor groundwater quality. The wells shall be constructed such that the water level in the well is never above or below the screened (open) portion of the well at any time during the year. The general location and name for each well is marked on Figure 2. Each monitoring well shall be constructed in accordance with this permit and approved by the Washington Regional Office.
- The wells must be constructed by either a North Carolina Certified Well Contractor, the property owner, or the property lessee according to General Statutes 87-98.4(b)(2). If the construction is not performed by a certified well contractor, the property owner or lessee, provided they are a natural person, must physically perform the actual well construction activities. All well(s) must be constructed according to the North Carolina Well Construction Standards (15A NCAC 2C .0108) and any local county rules.
- The Washington Regional Office, telephone number (252) 946-6481, shall be notified at least forty-eight (48) hours prior to the construction of any monitoring well so that an inspection can be made of the monitoring well location. Such notification to the regional groundwater supervisor shall be made during the normal office hours from 8:00 a.m. until 5:00 p.m. on Monday through Friday, excluding state holidays.

46

- d. Within thirty (30) days of completion of all well construction activities, a certification must be received from a professional engineer or a licensed geologist certifying that the monitoring wells are located according to this permit.

27. **Monitor Well Sampling Criteria:**

- a. Monitor wells MW-1, MW-2, MW-3 and MW-4 shall be sampled initially after construction and thereafter every March, July, and November for the parameters listed below. Prior to sampling the parameters, the measurement of water levels must be taken. The depth to water in each well shall be measured from the surveyed point on the top of the casing. The measuring points (top of well casing) of all monitoring wells shall be surveyed relative to a common datum.

Water Level

pH	Sulfate (SO ₄)	Chloride	Total Dissolved Solids	Calcium
Aluminum	Arsenic	Barium	Cadmium	Chromium
Copper	Iron	Lead	Manganese	Magnesium
Selenium	Total Phosphorous	Zinc		
Volatile Organic Compounds (by EPA Method 8260)				
Semi-Volatile Compounds (by EPA Method 8270)				
PCBs (by EPA Method 8082)				

The Division may shorten this list of sampling parameters, pending the results of the initial testing of the wastewater stream described in condition 25.

- b. Any laboratory selected to analyze parameters must be Division of Water Quality (DWQ) certified for those parameters required.

28. **Reporting / Documentation of Monitor Well Data:**

- a. All reports and documentation (GW-1, GW-59) shall be mailed to the following address:

**NCDENR-DWQ
Information Processing Unit
1617 Mail Service Center
Raleigh, NC 27699-1617**

Updated blank forms (GW-1, GW-59) may be downloaded from the Groundwater Section's website at <http://gw.ehnr.state.nc.us/> or requested from the address mentioned above.

- b. For the initial sampling of the well(s), the permittee shall submit a copy of the GW-1 Form (Well Construction Record) with the Compliance Monitoring Form (GW-59) for each well to the address listed in the "Reporting / Documentation" section of the Groundwater Requirements. Initial Compliance Monitoring Forms that do not include copies of the GW-1 form may be returned to the permittee without being processed. Failure to submit these forms as required by this permit may result in the initiation of enforcement activities pursuant to NC General Statutes 143-215.6A.

47

- c. The results of the sampling and analysis must be received on Form GW-59 (Groundwater Quality Monitoring; Compliance Report Form) by the Groundwater Section (address listed in the "Reporting / Documentation" section of the Groundwater Requirements), on or before the last working day of the month following the sampling month. The data of all groundwater sampling and effluent sampling analyses required by the permit conditions must be reported using the most recent GW-59 form along with attached copies of the laboratory analyses.
- d. Within sixty (60) days of completion of all monitoring well(s), the Permittee shall submit two original copies of a scaled site map (scale no greater than 1"=100'); however, special provisions may be granted upon prior approval for large properties. The map(s) must include the following information:
- 1) The location and identity of each monitoring well.
 - 2) The location of major components of the waste disposal system.
 - 3) The location of property boundaries within 500 feet of the disposal area(s).
 - 4) The latitude and longitude of the established horizontal control monument.
 - 5) The elevation of the top of the well casing (which shall be known as the "measuring point") relative to a common datum.
 - 6) The depth of water below the measuring point at the time the measuring point is established.
 - 7) The location of Review and Compliance boundaries.
 - 8) The date the map is prepared and/or revised.

Control monuments shall be installed in such a manner and made of such materials that the monument will not be destroyed due to activities that may take place on the property. Maps and any supporting documentation shall be sent to the Groundwater Section as addressed in the "Reporting / Documentation" above.

The Permittee is responsible for the geographic accuracy of any map submitted, however produced.

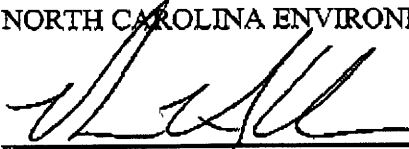
29. **Applicable Boundaries:**

- a. The **COMPLIANCE BOUNDARY** for the disposal system is specified by regulations in 15A NCAC 2L, Groundwater Classifications and Standards. The Compliance Boundary is for the disposal system constructed after December 31, 1983 is established at either (1) 250 feet from the waste disposal area, or (2) 50 feet within the property boundary, whichever is closer to the waste disposal area. An exceedance of Groundwater Quality Standards. An exceedance of Groundwater Quality Standards at or beyond the Compliance Boundary is subject to remediation action according to 15A NCAC 2L .0106(d)(2).
- b. A **REVIEW BOUNDARY** is established around the disposal systems midway between the Compliance Boundary and the perimeter of the waste disposal area. Any exceedance of standards at the Review Boundary shall require action in accordance with 15A NCAC 2L .0106(d)(1).
- c. Any additional groundwater quality monitoring, as deemed necessary by the Division, shall be provided.

- 30. The Permittee, at least six (6) months prior to the expiration of this permit, shall request its extension. Upon receipt of the request, the Commission will review the adequacy of the facilities described therein, and if warranted, will extend the permit for such period of time and under such conditions and limitations as it may deem appropriate.

Permit issued this the 5th day of May, 2005.

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION



Alan W. Klimek, P.E., Director
Division of Water Quality
By Authority of the Environmental Management Commission

Permit Number WQ0028792

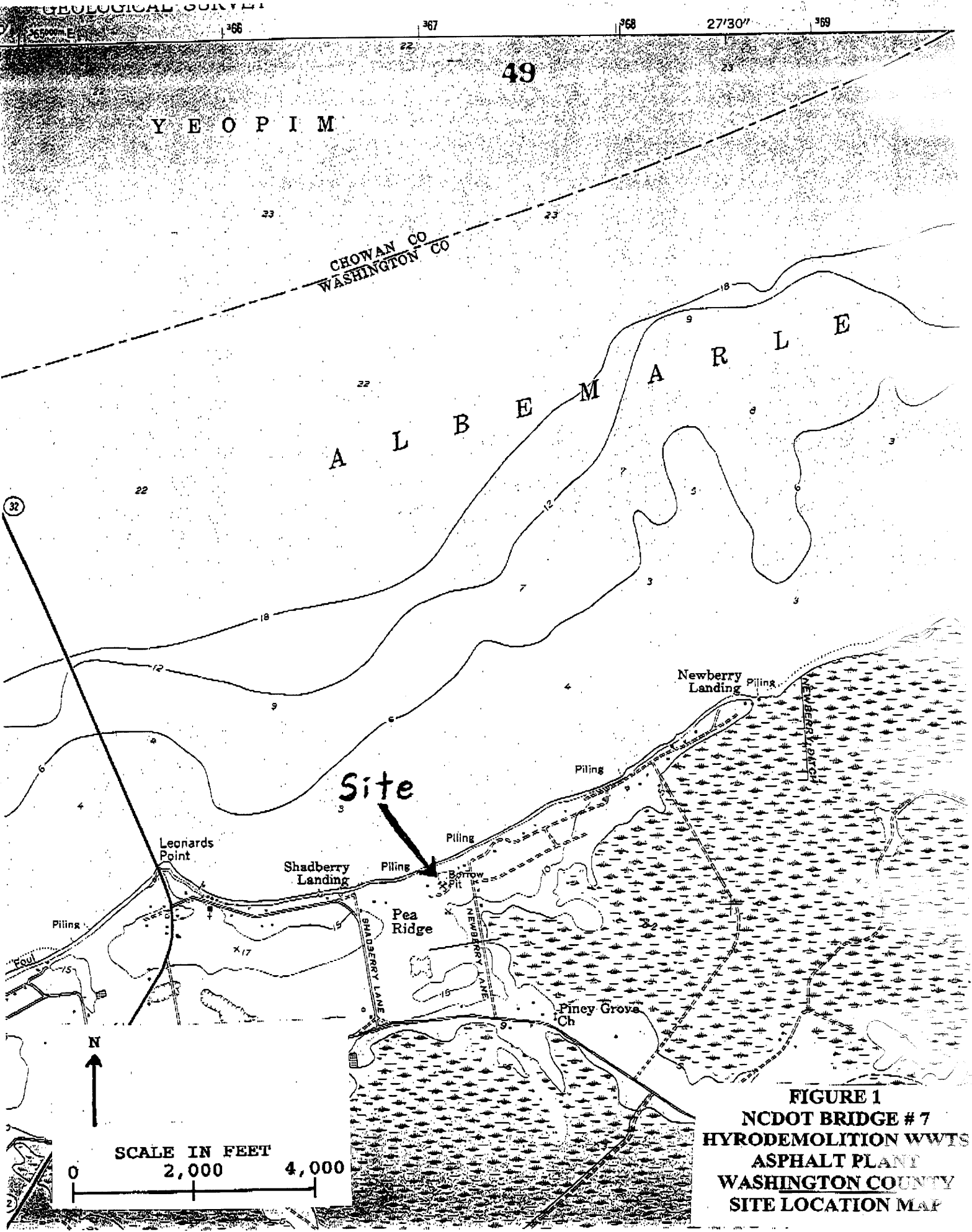


FIGURE 1
NCDOT BRIDGE #7
HYRODEMOLITION WWTs
ASPHALT PLANT
WASHINGTON COUNTY
SITE LOCATION MAP

NCDOT Asphalt Plant Site Washington County

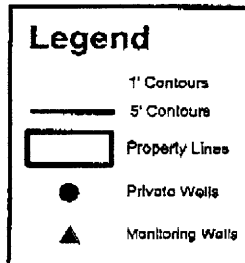
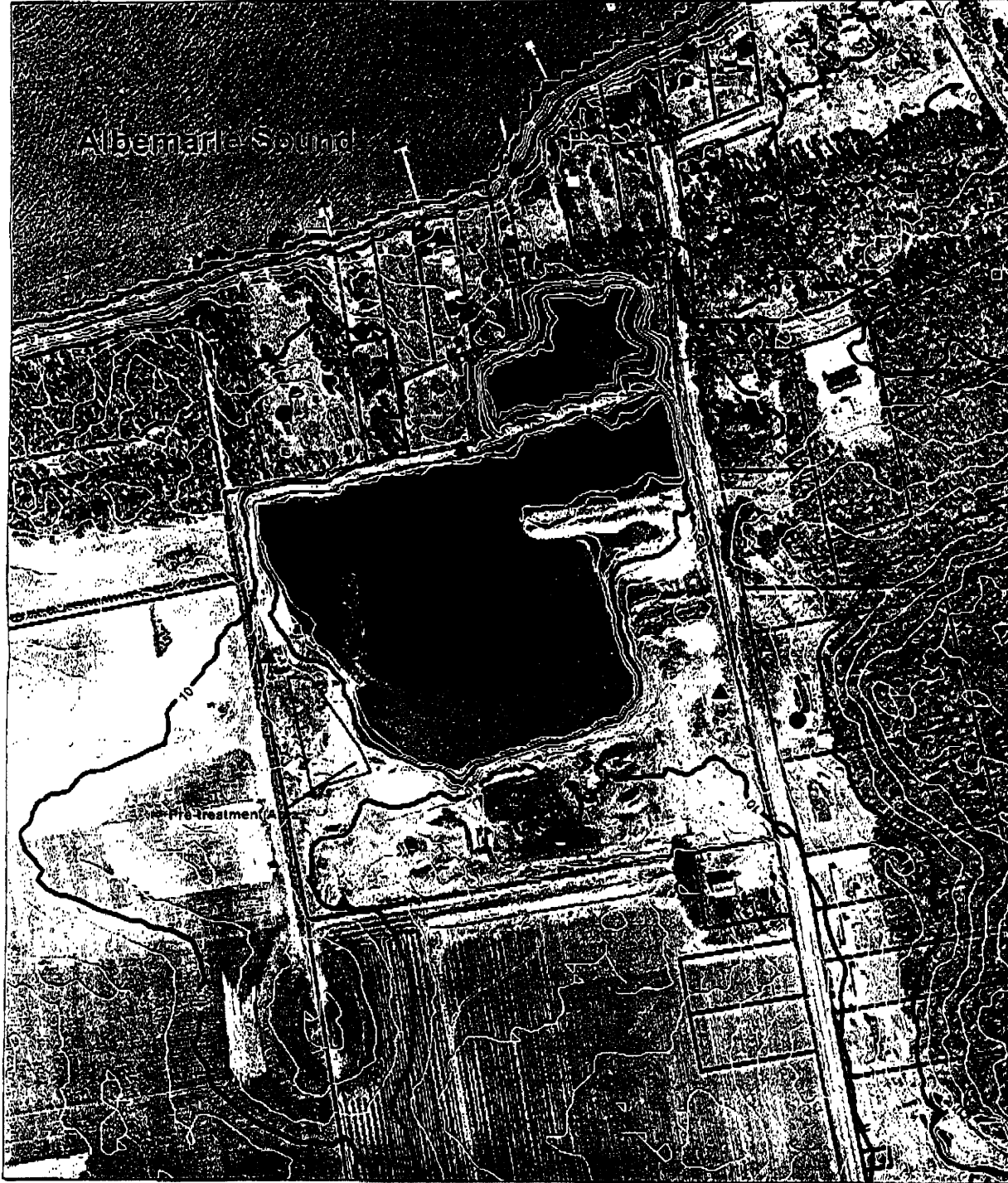


FIGURE 2
NCDOT BRIDGE # 7
HYRODEMOLITION WWT
ASPHALT PLANT
WASHINGTON COUNTY
SITE DETAIL MAP

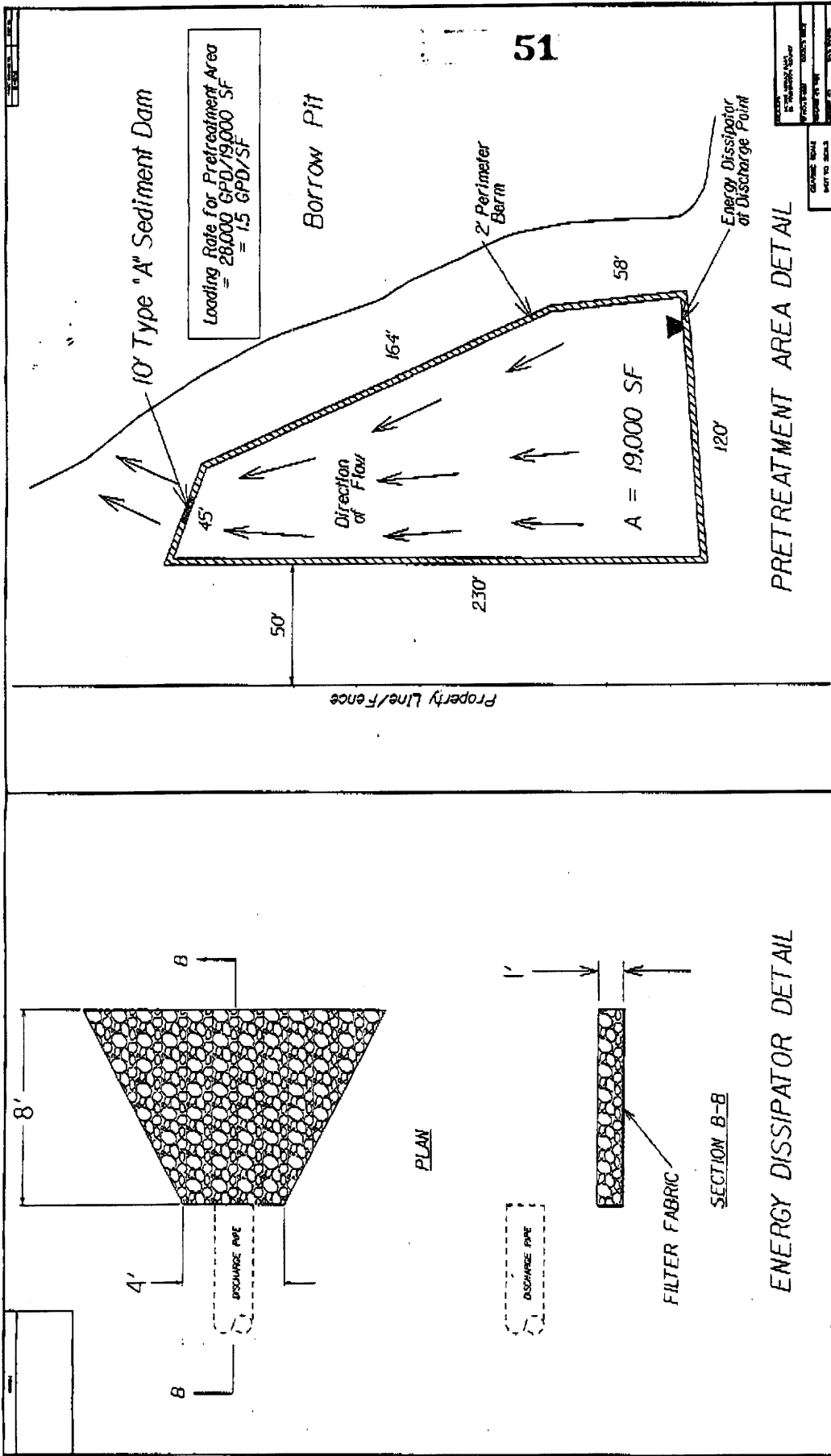


FIGURE 3

NC DOT BRIDGE # 7

HYRODEMOLITION WWTS

ASPHALT LEAKANT

WASHTINGTONG COUNTY

CONSTRUCTION DETAILS DIAGRAMS