



# LETTER OF TRANSMITTAL

SOLID WASTE ENGINEERING  
AND MANAGEMENT

ENGINEERING, INC.

Joyce Engineering, Inc.  
436 Spring Garden Street  
Greensboro, North Carolina 27401  
Tel (910) 230-1992  
Fax (910) 230-1998

TO:

North Carolina Department of  
Environment and Natural Resources  
401 Oberlin Road, Suite 150  
Raleigh, North Carolina 27605

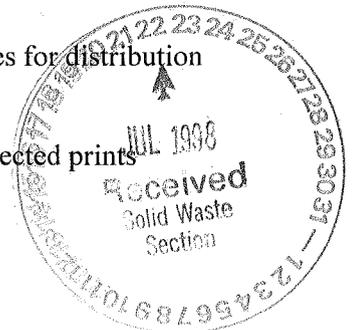
DATE	7/21/98	JOB NO.	356.02
Matt Gamble			
RE: Wilkes County			

Fac/Perm/Co ID #	Date	Doc ID#
9704	8/02/2011	DIN 14656

WE ARE SENDING YOU via \_\_\_ First Class Mail X Express Mail the following items:

COPIES	DATE	NO.	DESCRIPTION
1	7/21/98		Boring Plan Information

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> For approval            | <input type="checkbox"/> Approved as submitted    | <input type="checkbox"/> Resubmit ___ copies for approval   |
| <input checked="" type="checkbox"/> For your use | <input type="checkbox"/> Approved as noted        | <input type="checkbox"/> Submit ___ copies for distribution |
| <input type="checkbox"/> As requested            | <input type="checkbox"/> Returned for corrections | <input type="checkbox"/> Return ___ corrected prints        |



### REMARKS

Enclosed are documents regarding the boring plan layout for the Wilkes County lateral expansion. We will call you to discuss.

COPY TO File

SIGNED

Matthew J. Tischler

## Issues Related to Wilkes County Permit Renewal

### Background

Approximately 200 tons of municipal solid waste is managed daily at the Wilkes County Landfill in Roaring River. A lined landfill cell, approximately 12.5 acres in size, has been in use since October 1993. Leachate from this cell is stored in a lined surface impoundment, then transported to the Wilkesboro wastewater treatment plant for disposal. In addition to disposing of solid waste in a lined landfill cell, various waste recovery activities are carried out at the site. These include storage and shredding of wood waste, collection of recyclable materials, and collection of scrap tires and white goods for off-site recycling or disposal.

In September 1997, Joyce Engineering obtained current topographic contours of the landfill cell through aerial photogrammetric methods, and conducted calculations to predict the remaining capacity in the landfill. The landfill's remaining life was predicted to be approximately 2.5 years from the date of the flyover, or until roughly March 2000. Given the above, Wilkes County needs to have waste disposal capacity in place by late 1999, as it is unwise to assume that construction activities can occur in that area during the winter season.

### Where do we go from here?

We understand permit renewal for this facility is governed by .1617(e) and should consist of the following:

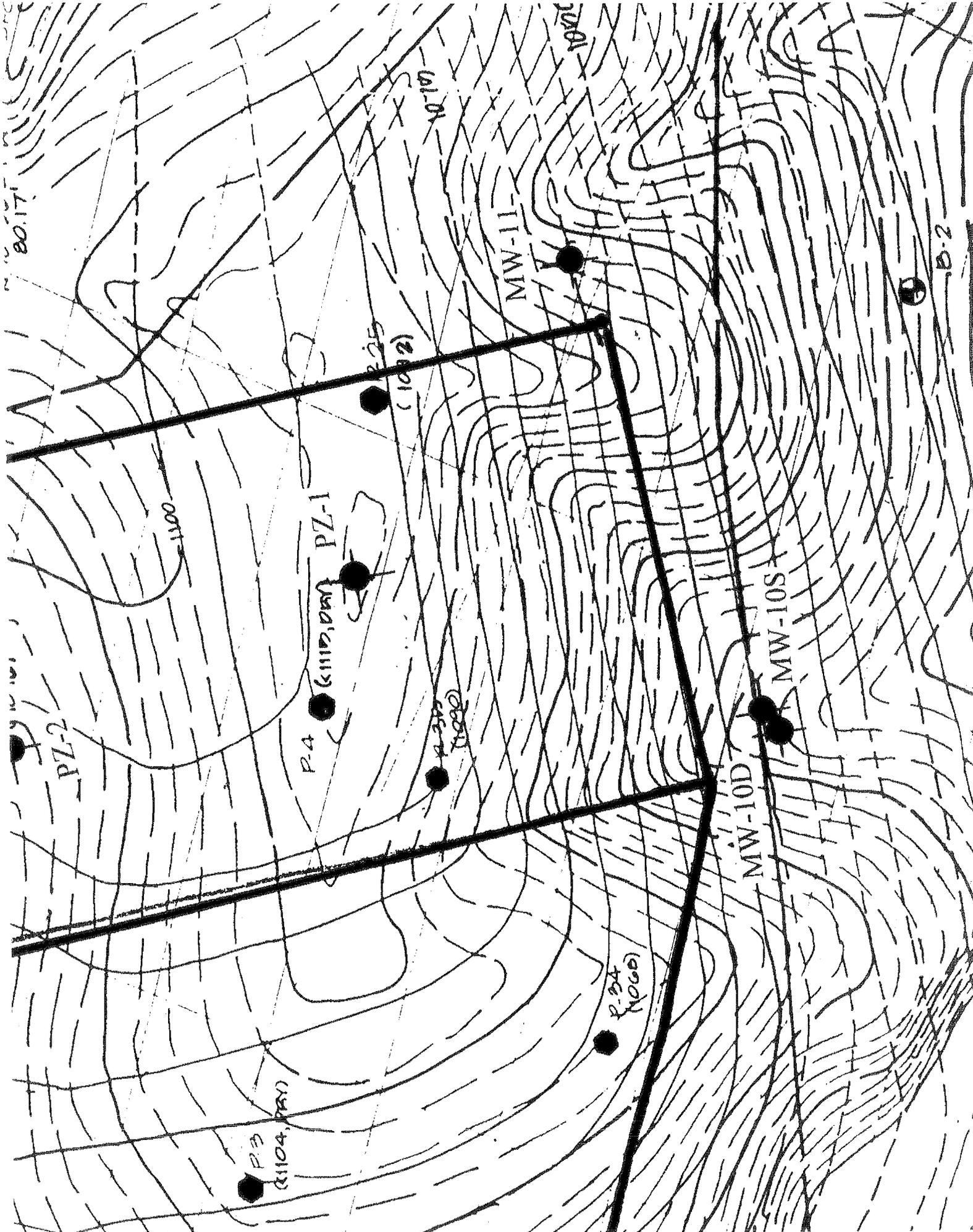
- ❖ Facility plan describing all phases of development - .1619  
(Cross-references location restrictions .1622)
- ❖ Engineering plan for the next five year phase - .1620  
(Cross-references design hydro report .1623 (b))
- ❖ Construction Quality Assurance plan - .1621
- ❖ Operations plan - .1625
- ❖ Closure and post-closure plan - .1627
- ❖ Water quality monitoring plan - .1623 (b)

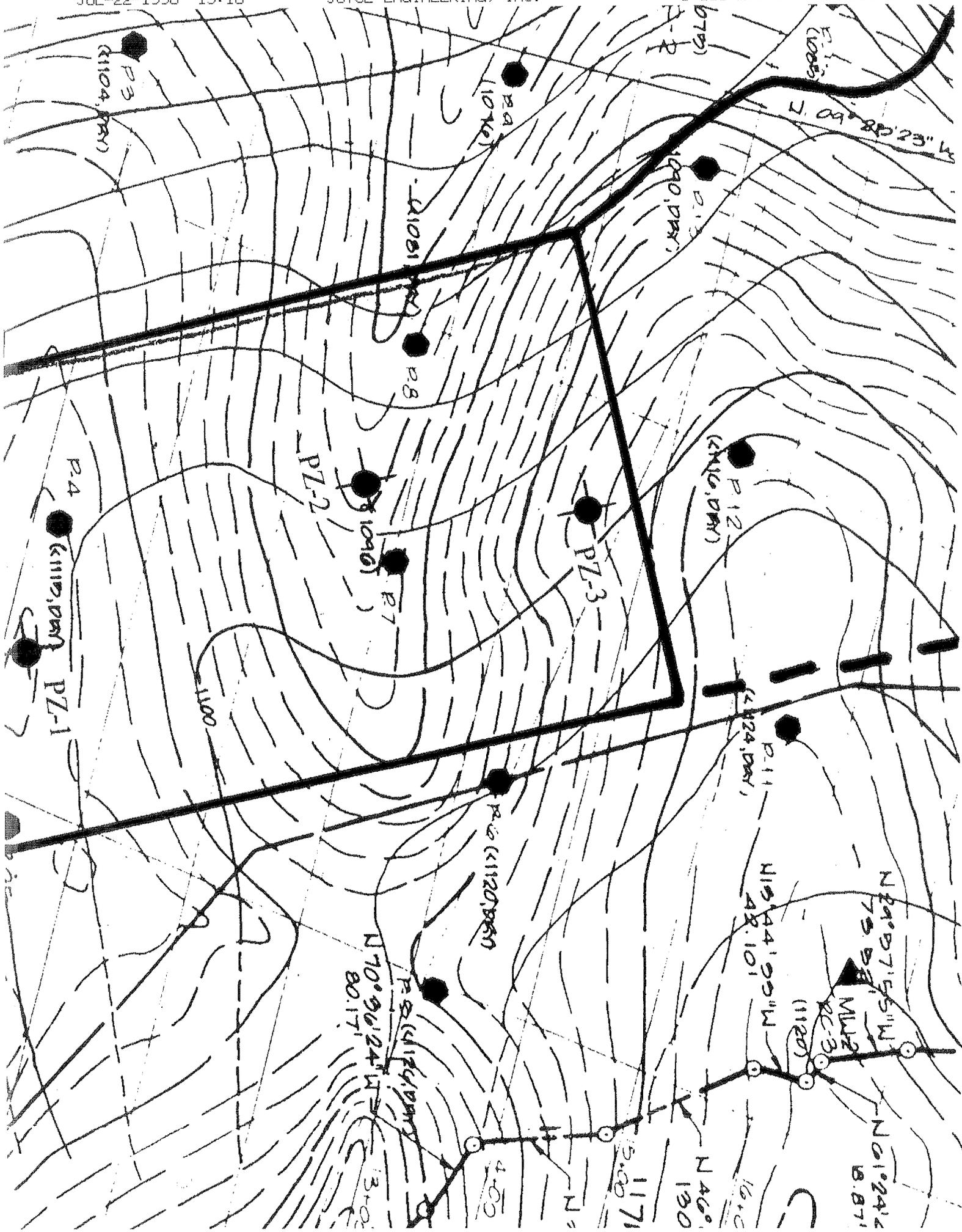
## Notes from File Search

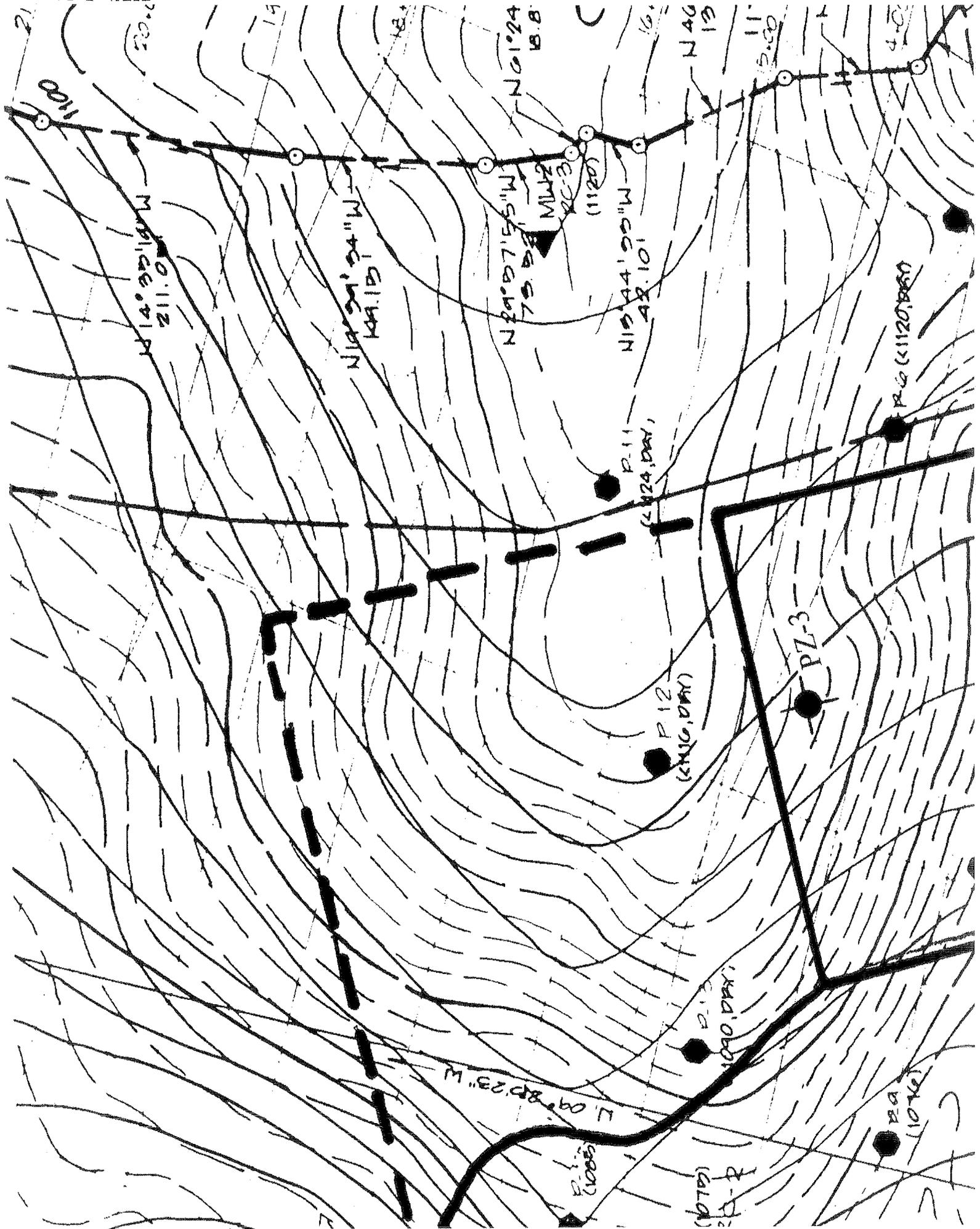
### Location Restrictions - Wilkes County Landfill

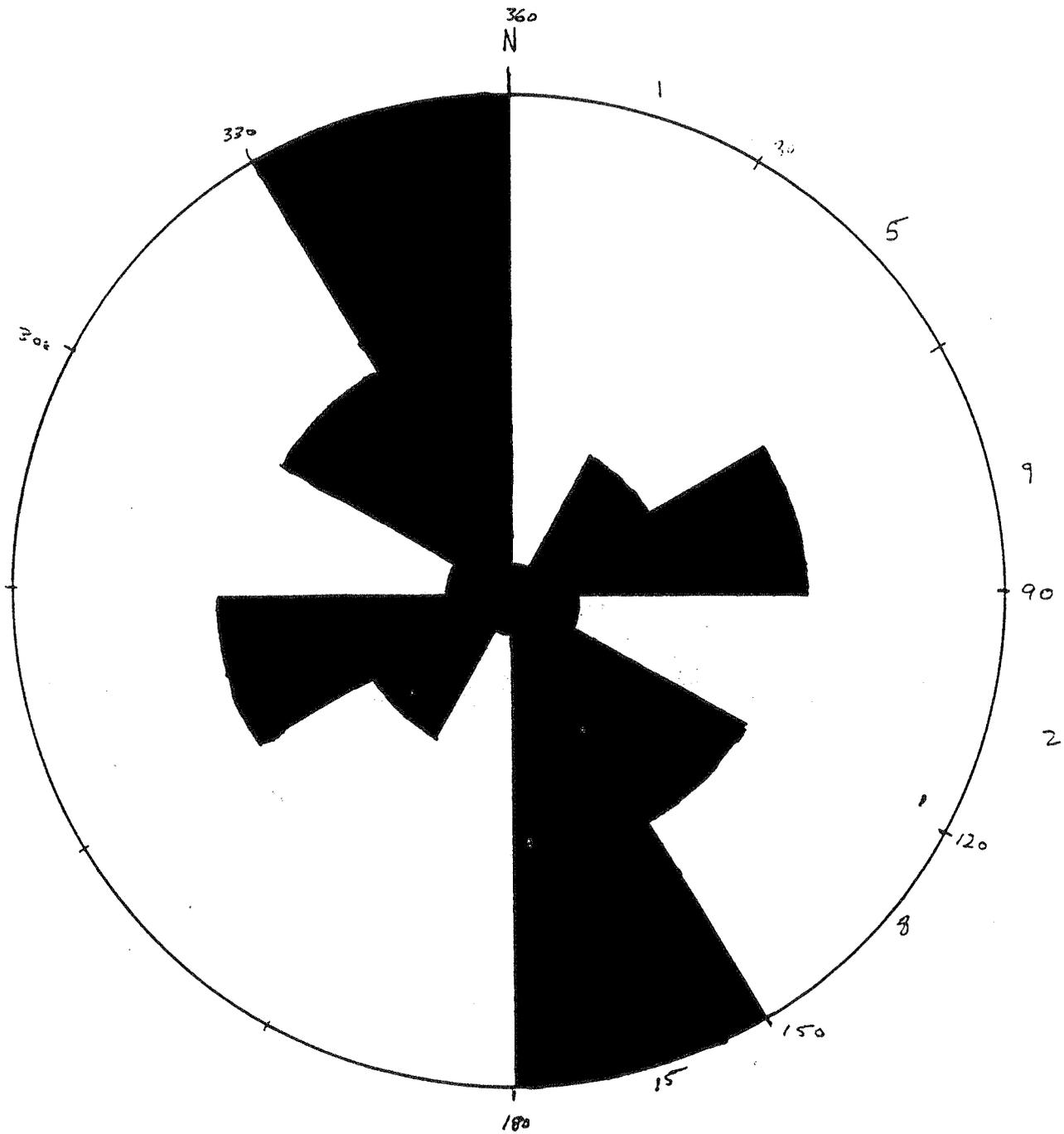
1. Airport safety - According to info reviewed, no airport runway used by a turbo jet is located within 10,000 feet nor is there a runway used by piston type aircraft within 5000 feet.
2. Floodplains - 1978 FEMA map submitted previously shows no floodplains affected.
3. Wetlands - A wetland survey was performed by the Army COE. No disturbance to wetlands is anticipated on this site.
4. Fault areas - The Brevard fault zone runs through the immediate vicinity of the site, however it has not been active for several million years, definitely not in the holocene epoch.
5. Seismic impact zone - The Wilkes County Landfill development area is located in a seismic impact area (an area where the probability is 10% or greater that the peak horizontal acceleration will exceed 0.10g in 250 years). The facility will be designed to address this issue.
6. Unstable areas - Based on past available geotechnical data, and the inherent characteristics of the Blue Ridge physiographic province, the site does not appear to be in a location susceptible to forces capable of impairing the integrity of some or all of the landfill structural components. Further site characterization should support this.
7. Cultural resources - Appalachian Archeological Services performed an archeological survey of the proposed landfill development area to evaluate the presence of archeological or historical sites. Based on their review, development of the proposed site will not damage or destroy any archeological or historical sites.
8. State nature and historic preserve - Information reviewed indicates that no state parks, recreation or scenic areas, or other lands included in the state nature and historic preserve are located in the immediate proximity of the landfill site.
9. Water supply watersheds - A conversation with Steve Zoufaly indicated that the landfill expansion area is located in a WS-IV protected area, but after Aug. 1, 1998 will probably be reclassified as a WS-V. Neither classification restricts development of the lateral expansion.
10. Endangered and threatened species - NC Wildlife Resources Commission has performed an endangered species study relative to the presence of any endangered or threatened species of plant, fish or wildlife. Their conclusion was that no adverse effects on state or federally endangered or threatened species would occur with development of the site.











ROSE DIAGRAM OF SURFACE FEATURE  
ORIENTATION FREQUENCY

**PROJECT**

Wilkes County Landfill



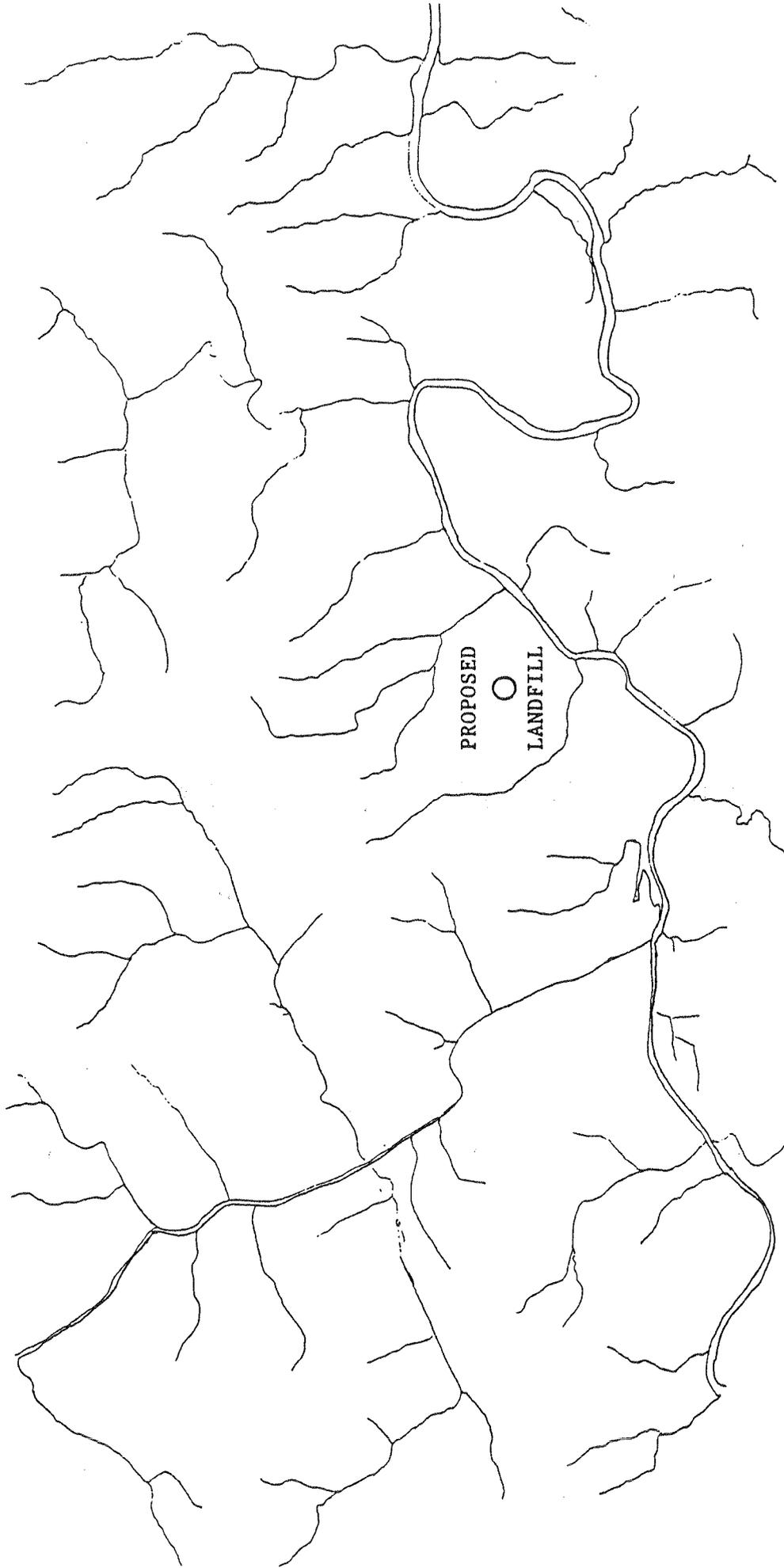
**Westinghouse**

SCALE: \_\_\_\_\_

JOB NO: 4112-90-121

FIG. NO: 5

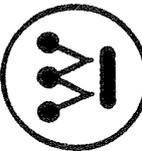
North



SURFACE DRAINAGE PATTERN

PROJECT

Wilkes County Landfill



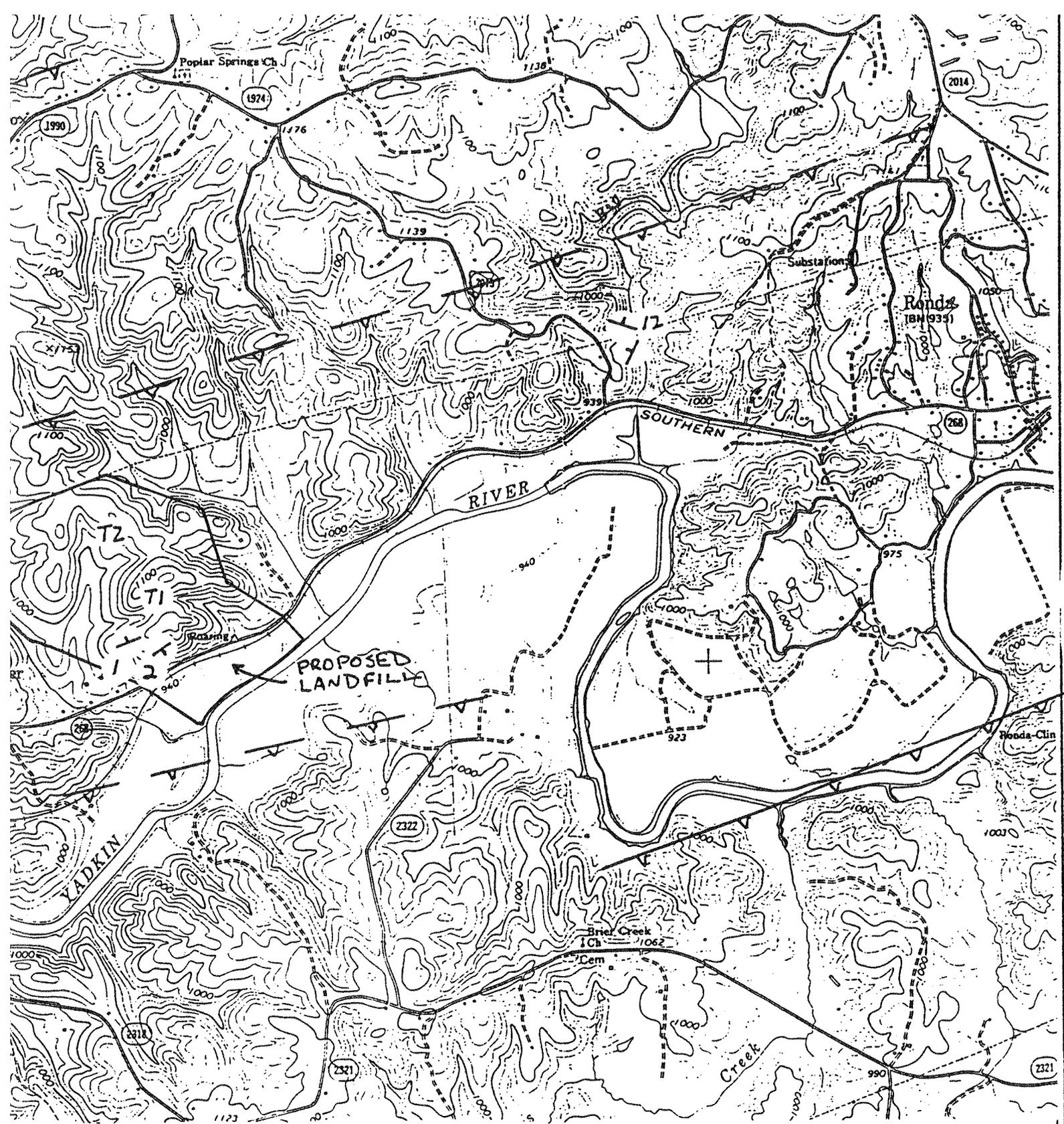
Westinghouse

SCALE: 1" = 4,000 ft.

JOB NO: 4112-90-121

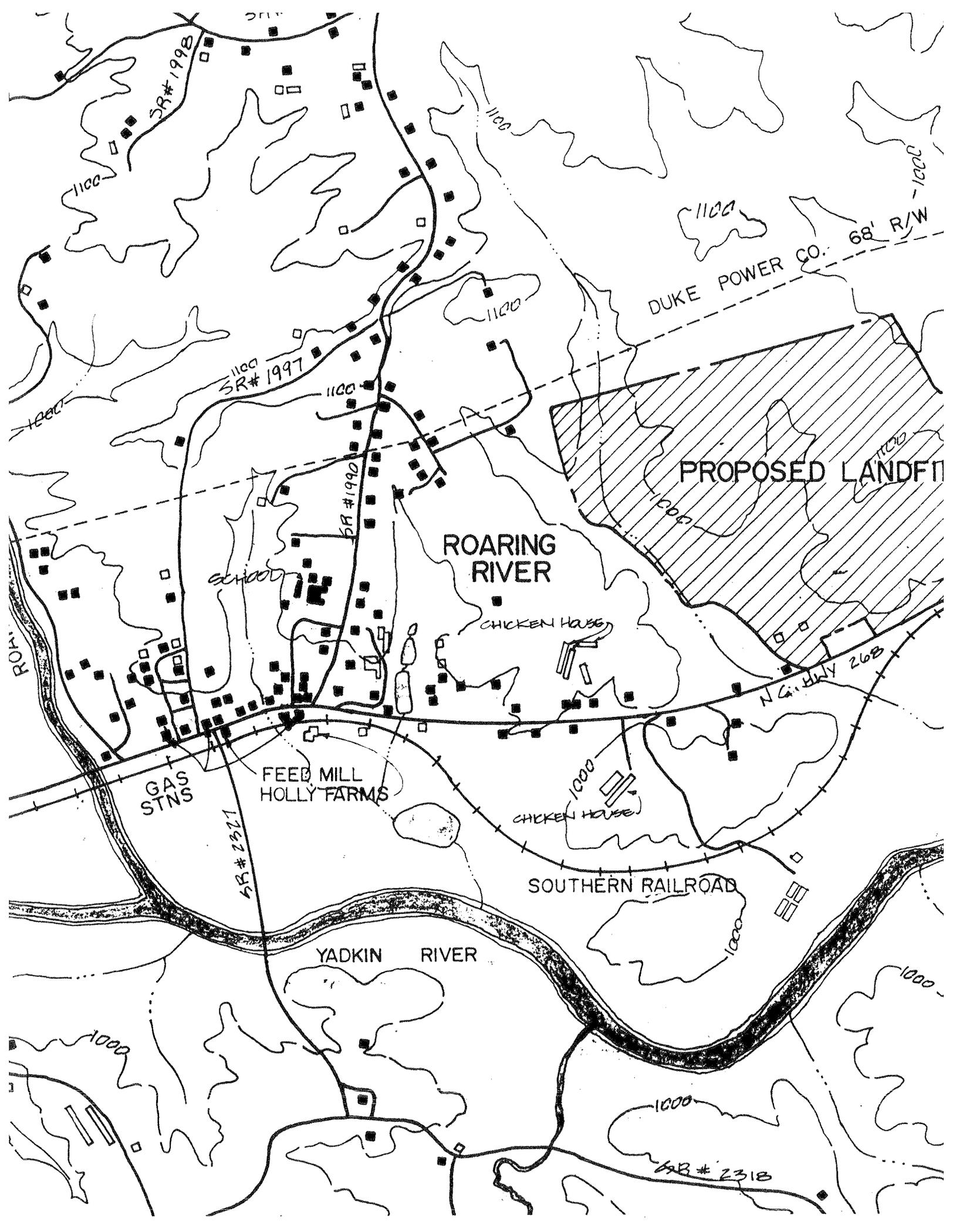
FIG NO: 3





TY LANDFILL  
 UNTY, N.C.

REVISIONS: ○	PROJECT NO. 4112-90-121	DRAWING NO. FIGURE 1
○	PROJECT MGR. MIKE GROVES	SHEET NO.
○	CHECKED BY:	REVISION NO.
○	DRAWN BY:	SCALE: 1" = 2000'
○	FILE:	DATE: 4-9-90



SR# 1998

SR# 1997

SR# 1990

SR# 2327

DUKE POWER CO. 68' R/W

PROPOSED LANDFILL

ROARING RIVER

SCHOOL

CHICKEN HOUSE

GAS STNS

FEED MILL  
HOLLY FARMS

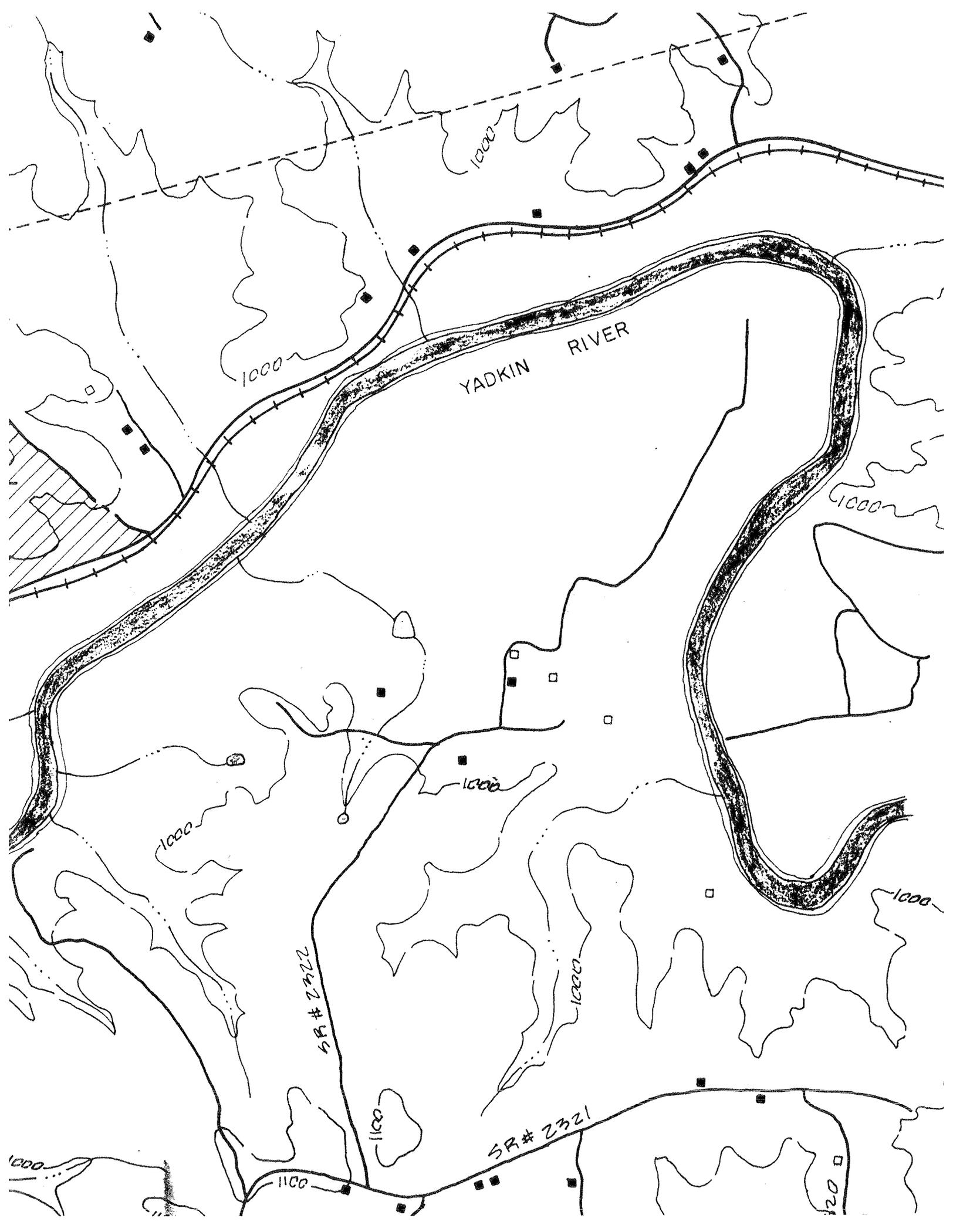
CHICKEN HOUSE

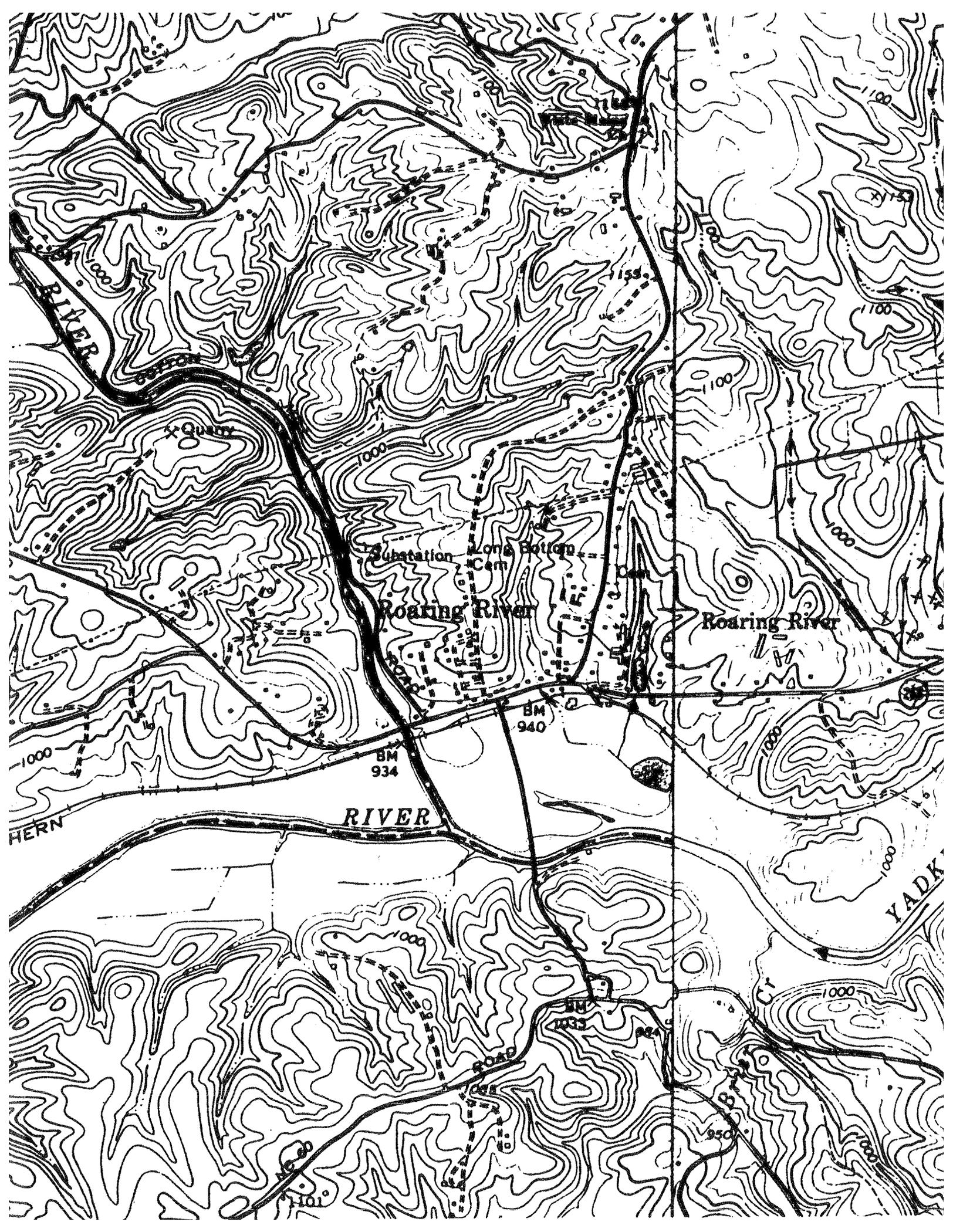
N.C. Hwy 268

SOUTHERN RAILROAD

YADKIN RIVER

SR# 2318





RIVER

X Quarry

Substation

Long Bottom Cem

Roaring River

Roaring River

BM 934

BM 940

HERN

RIVER

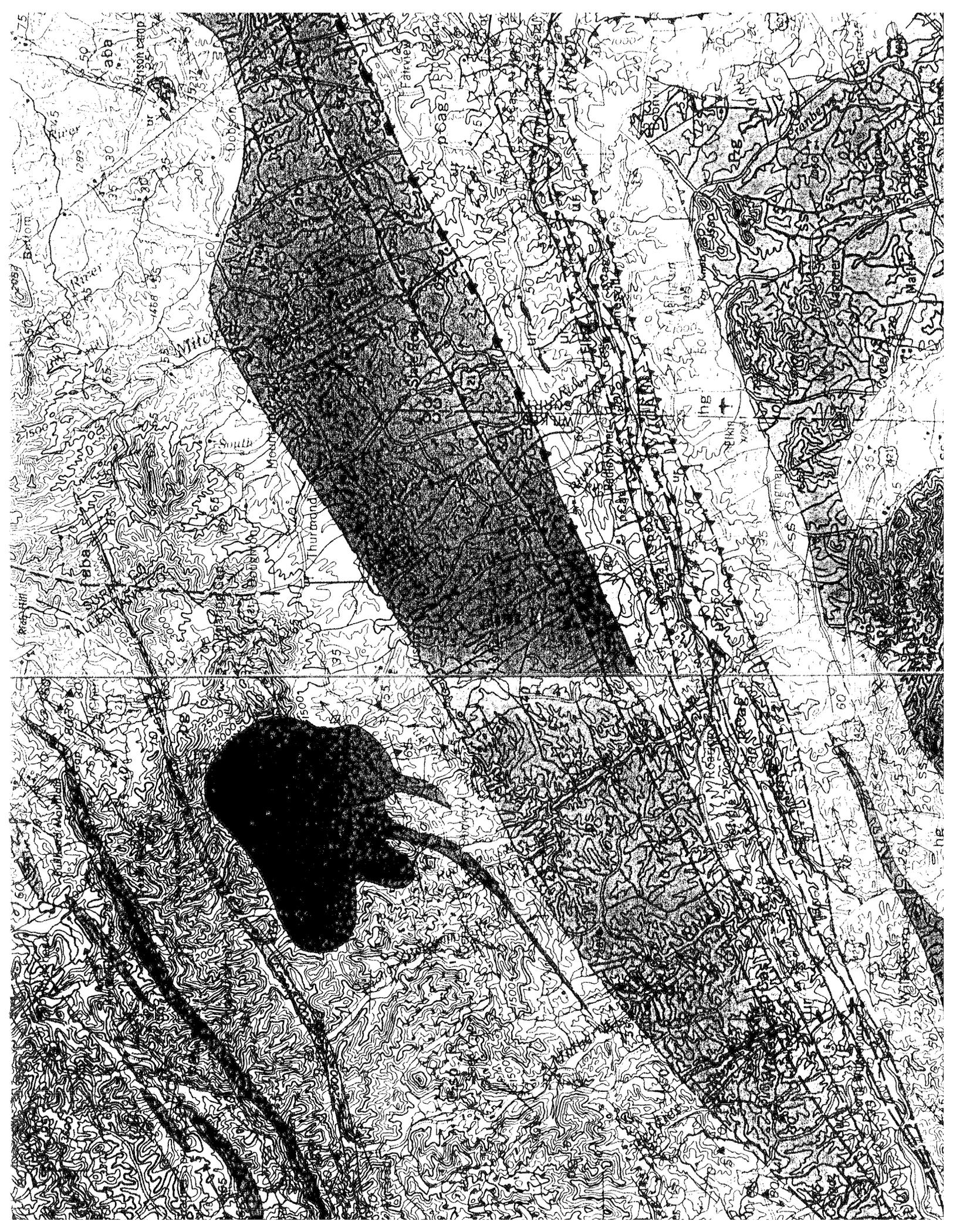
YADK

ROAD

BM 933

930







WS-WEST 1:250,000 ← → WS-EAST 1:250,000

Geologic map compiled in 1965-1969. Base from U.S. Geological Survey, 1951.  
 10,000 meter Universal Transverse Mercator grid (http://www.ngs.gov/).  
 1:250,000 scale.

Matt,  
 We will discuss.  
 Dan

45 MILES

1:250,000