

ENVIRONMENTAL SITE ASSESSMENT

Whitehall Site

Charlotte, North Carolina

PREPARED FOR

The Crosland Group

125 Scaleybark Avenue

Charlotte, North Carolina

BY

WKD GEOSCIENCE

JOB NO. 52043

January 15, 1993



**WKD
Geoscience
11115 projects**

WKD GEOSCIENCE

January 15, 1993

The Crosland Group
125 Scaleybark Road
Charlotte, North Carolina 28209

Attention: Mr. Steve Brumm

Reference: Phase I Environmental Site Assessment
Whitehall Site
Charlotte, North Carolina
Geoscience Job No. 52043

WKD Geoscience has completed the Phase I Environmental Site Assessment of the referenced site. The purpose of this initial review and assessment was to evaluate site conditions which may forecast potential environmental problems. The study included review of available public and private information regarding the site history and that of adjacent properties. This report summarizes the information obtained during our Phase I Environmental Site Assessment (ESA).

FIGURES AND MAPS

- Vicinity Map: See enclosed Drawing No. 52043-1
- Site Layout: See enclosed Drawing No. 52043-2
- 1968 USGS Topographic Map: See enclosed Drawing No. 52043-3
- 1982 City Topographic Map: See enclosed Drawing No. 52043-4
- Tax Line Map: See enclosed Drawing No. 52043-5
- History Of Ownership: See enclosed Figure No. 52043-1

SITE OWNERSHIP AND LOCATION

Site Owners: Ms. Alice Grier Johnston

Date Of Ownership: According to title information provided by Perry, Patrick, Farmer & Micheaux, Ms. Johnston inherited the property on October 16, 1982.

Site Location: As shown on the enclosed Vicinity Map, Drawing No. 52043-1, the site is located between York Road (U.S. Highway 49) and Sandy Porter Road in the southern portion of Charlotte, North Carolina.

SITE DESCRIPTION AND CHARACTERISTICS

Brief Description Of Subject Site: As shown on the Site Layout, Drawing No. 52043-2, the subject site is a 660± acre, primarily undeveloped, parcel. Approximately 50 Percent of the subject site is clear agricultural land while the remaining 50 percent is moderately to heavily wooded. One lake, Moody Lake, and the lake bed of the former Johnson Lake, are located on the subject site. A small pond is located in the southwestern portion of the site. Coffee Creek extends across the easternmost portion of the property in a north to south direction. Several earthen roads and jeep trails extend across the site.

An abandoned horse farm is located in the southeastern portion of the site. This horse farm consists of a house, a tractor shed, a smokehouse, and two other farm outbuildings. The remains of a burnt barn are present near the current location of the stable. The remains of a burned and demolished barn are also present near the location of the house. Apparently a horse track was also present near the horse farm, however, this track has overgrown and is extremely difficult to distinguish from the surrounding topography.

Surrounding properties consist of commercial and residential properties to the east, Mott's Oil Equipment and Service, residential and undeveloped property to the south, residential and undeveloped property to the west and undeveloped property to the north.

Topography: The topography of the subject site is shown on the 1980 USGS Topographic Map and the 1983 City Topographic Map included in the Appendix as Drawing Nos. 52043-3 and -4, respectively. Topographically, the subject site is dominated by two large drainage features and several smaller drainage features. The Moody Lake drainage feature drains the majority of the northern portion of the subject site. While the Johnson Lake drainage feature drains the majority of the southern portion of the site. A smaller drainage feature is located in the southwestern portion of the property. The land between the two large drainage features and the small drainage feature in the western portion of the site is relatively level. The high elevation at the site of approximately 685 (MSL) feet is located in the northernmost corner of the subject site. The low elevation of approximately 574 feet is present in the eastern portion of the site along Coffee Creek

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State, State to Cites*
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Site Utilities: There are currently no utilities provided to the subject site however it is apparent that electricity was provided to the horse farm in the past.

Onsite Drinking Water Supplies: According to Mr. Ingram Richmond, former farm manager, there are seven water supply wells located on the subject site. The majority of these wells are located near the horse farm. Apparently two of these wells have been abandoned in the recent past. No construction details for the wells were available at the time this report was prepared. Conversations with Ms. Alice Johnston revealed that the water from these wells was potable when they were last used approximately 20 years ago.

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Field Tr.
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Ponds, Streams, Wetlands, And/Or Floodplains: As previously mentioned, there is one lake and the lake bed of a former lake located on the subject site. There is also a small pond present in the western portion of the subject site. There are several small streams at various locations throughout the site. Generally these streams are located in the drainage features occupied by Moody Lake and the former Johnson Lake. The water in these streams generally appeared clear with no visible film; however, there was a small pool of stagnant water below the dam for Moody Lake. As previously mentioned, Coffey Creek extends in a north to south direction across the eastern portion of the property; the two large drainage features drain into Coffey Creek.

*used to
fill lake w/ gmt*

Review of the National Wetlands Inventory Map prepared by the United States Department of the Interior revealed the presence of designated wetlands areas at various locations on the subject property. These approximate locations are shown on the Site Layout, Drawing No. 52043-2. Johnson Lake, Moody Lake, and the small pond are designated as palustrine, unconsolidated bottom, permanently flooded, diked/impounded wetlands. The portion of the dry lake bed of the former Johnson Lake is classified as a palustrine, emergent, persistent, semi-permanently flooded, diked/impounded wetlands. Coffey Creek and portions of its floodplain are designated as palustrine, forested, broadleaf deciduous, temporarily flooded wetlands. Other locations on the property are classified as palustrine, forested, broadleaf deciduous, temporarily flooded and palustrine, forested, broadleaf deciduous, seasonally flooded and the area north of the small pond is designated as a palustrine, emergent, persistent, seasonally flooded diked/impounded wetlands environment. It should be noted that the National Wetlands Inventory is prepared using aerial photographs of the area. Therefore, it should not be considered as a positive determination of wetlands environments.

It is apparent that the floodplain of Coffey Creek extends approximately 200 feet on either side of the main channel onto the subject property.

Vegetation: Vegetation in the cleared portions of the subject site consists primarily of tall grasses and brush consisting of blackberries and small conifers. Vegetation in the wooded portions of the site consist of small to large size hardwoods and conifers. Apparently due to winter conditions, deciduous plants were not foliated however, all vegetation in the areas examined during our site reconnaissance appeared healthy.

Septic Tanks, Leach Fields: Apparently there are nitrification fields located near the former location of the horse farm.

Fill Or Excavated Soil: Fill was placed during the construction of the dams located on the subject property.

Above/Underground Storage Tanks: It has been reported that one 1,000 gallon underground storage tank (UST) was located on the subject property. Mr. Ingram Richmond indicated that this tank was removed from the site in approximately 1990. Since this tank was a farm UST with a capacity of less than 1,100 gallons it was not regulated by the State of North Carolina. Therefore, no samples were required when the tank was removed and no samples were taken. Mr. Richmond indicated that the tank appeared to be in good condition upon its removal. However, it is possible that releases from this tank have occurred throughout the past. No information regarding the age of the tank was available at the time this report was prepared.

Mr. Melvin Mottsinger, owner of Mott's Oil, indicated that there is one 280 gallon above ground Varsol storage tank currently on the Mott's property. According to Mr. Mottsinger, the contents of this tank are used to test pumps.

Mr. Mottsinger also indicated that two USTs were removed from the Mott's site approximately five years ago. These tanks apparently consisted of one 550 gallon petroleum tank and one 1,000 gallon petroleum tank. No samples of the soil below these tanks were analyzed for the presence of petroleum hydrocarbons.

Drummed Materials And Chemical Storage: One 55-gallon drum was located in the tractor shed. This drum was approximately half full with Hydrotex Essentiallube lubricant. This drum appeared in good condition and there was no evidence that spills had occurred from this drum.

Solid Waste: Trash and debris were noted in association with the majority of the buildings at the horse farm. This trash consisted of old tin cans, paper, and wood and scrap metal. A large amount of building debris is associated with the previously mentioned demolished barn.

Asphalt roof shingles were noted at two locations at the subject site. Both of these locations were on the western portion of the property as shown on the Site Layout, Drawing No. 52043-2.

Asbestos Containing Materials: An asbestos survey was not included as part of the ESA; therefore, the presence of asbestos containing materials (ACM) cannot be ruled out.

Urea Formaldehyde Insulation: A urea formaldehyde insulation survey was not included as part of the ESA however, based on the type of construction located on the property it is unlikely that any urea formaldehyde insulation is present on the site.

Radon: Radon is a colorless, odorless gas produced by natural decay of uranium in rocks and soils. Currently, there are no regulations regarding radon in North Carolina, and a radon survey was not included as part of the ESA. Radon concentrations were measured in five homes per county in 1987 by the University of North Carolina and the North Carolina Department of Human Resources. According to Mr. Henry Sutton with the Air Quality Section of the Mecklenburg County Department of Environmental Protection (MCDEP) the radon levels in the Mecklenburg County homes that were tested were below 4.0 picocuries per liter of air. The EPA recommends follow-up testing and remediation for levels greater than or equal to 4.0 picocuries per liter of air. While the occurrence of problematic levels of radon gas cannot be ruled out, available data indicates that environmental risks are low for the physiographic area.

SITE HISTORY AND USE

Zoning: According to the City of Charlotte Zoning Department, the site is currently zoned R-3, single family residential.

Current And Former Uses Of Site: Currently, the site is predominantly undeveloped. It is apparent that the recreational use of off-road vehicles takes place on the site on a regular basis. An abandoned horse farm is located in the southeastern portion of the property. According to former owners and occupants of the subject site, the site was utilized primarily as a horse farm dating back to the 1920s. Portions of the site were also used for agricultural purposes such as cultivation of grain and hay and for cattle farming.

Review of aerial photographs dating back to 1938 reveal that the horse farm and the associated buildings and one house and a barn located in the western portion of the property are the only improvements on the subject site. These aerial photographs revealed that the majority of the site has been wooded or used for agricultural purposes in the past.

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Current And Former Uses Of Surrounding Properties: Properties located north of the subject site would be considered upslope and include undeveloped property. Mott's Oil is located on York Road south of the subject site and is upslope of a small portion of the site. Mr. Melvin Mottsinger indicated that Mott's sells and services small petroleum tanks and pumps. As previously mentioned, two USTs were removed from the Mott's site approximately 5 years ago.

Persons Contacted Relative To Site History And Neighboring Sites:

Name: Ms. Alice Grier Johnston
Position: Property Owner
Phone: (704) 364-3787

Name: Ms. Joyce Skaradzinski
Position: Property Owner's Secretary
Phone: (704) 366-3481

Name: Mr. Ingram Richmond
Position: Former Horse Farm Manager
Phone: (803) 831-1520

Name: Mr. Melvin Mottsinger
Position: Owner, Mott's Oil Equipment and Service
Phone: (704) 588-0202

GEOLOGIC/HYDROGEOLOGIC INTERPRETATION

Surficial And Bedrock Geology: The site is located in the Charlotte Belt of the Piedmont Physiographic Province of North Carolina. The surficial geology consists of residual soils which have weathered in place from underlying bedrock. The surrounding topography consists of rolling land and broad ridges. Bedrock outcrops and boulders consisting of mafic gabbro and diorite and quartz boulders were noted on the subject property. The geologic map of North Carolina indicates that the subject site lies on the contact between pinkish-grey massive to weakly foliated granitic rock and metamorphosed mafic rock consisting of metagabbro, metadiorite and mafic plutonic-volcanic complexes.

Surface And Ground Water Flow Rates And Directions: Surface and ground water flow rates and directions were not determined. In general, both surface and ground water flow directions are controlled by contours of landforms in the Piedmont with flow occurring approximately perpendicular to the contours from high to low elevation. Based on review of the topographic maps, it appears that the divide between the Coffey Creek drainage and the Steele Creek drainage is located in the western portion of the subject site between the two large Moody Lake and Johnson Lake drainage

features and the smaller drainage feature in the extreme western portion of the property. Therefore, surface water flow and presumably ground water flow in the eastern portion of the property appears to be downward to the north and east towards Coffey Creek while drainage in the western portion of the property appears to be south and west down to Steele Creek.

SUBSURFACE EXPLORATION

Drilling Locations: Ten soil borings were performed by Geoscience as part of a geotechnical evaluation under Geoscience Job No. 12039. The findings are reported under separate cover dated January 18, 1993 and entitled "Report of Preliminary Subsurface Exploration".

Soil Types: The subsurface conditions at the site, as indicated in our geotechnical report, generally consist of residual silty SANDS and Partially Weathered Rock.

Depth To Ground Water: No ground water was encountered in any of the soil borings.

REVIEW OF APPLICABLE GOVERNMENTAL AGENCIES

Environmental and regulatory agencies of the State of North Carolina, Mecklenburg County, and the City of Charlotte were contacted to determine if any environmental problems were known to exist or have formerly existed at the site or the immediate surrounding area. The following issues were addressed:

- o Air Quality
- o Ground Water Quality
- o Surface Water Quality
- o Solid Waste
- o Surface Spills
- o Hazardous Waste Storage and Disposal
- o Underground Storage Tanks
- o Soil Contamination

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Federal (EPA) and State lists available through the Freedom of Information Act were also reviewed including:

- o State Inactive Hazardous Sites Inventory dated September, 1992
- o Hazardous Waste Facilities Generators, Treators, Storers, Disposers and Transporters dated September, 1992
- o North Carolina National Priorities List (Superfund) dated September, 1992
- o EPA WASTELAN (CERCLIS-ERRIS) dated September, 1992
- o WASTELAN Preremedial Report 20 dated July, 1992
- o Ground Water Incidents List (NCDEHNR-DEM) dated June 3, 1992
- o Petroleum Underground Storage Tank Database (NCDEHNR-DEM) dated July, 1992
- o FINDS List (Facilities Index List) dated September, 1992.

Agencies and Personnel Contacted:

1. North Carolina Department of Environment, Health and Natural Resources (NCDEHNR)

Division of Environmental Management (DEM)
Mooresville Regional Office: (704) 663-1699

2. North Carolina Department of Transportation Planning and Environmental Branch
(919) 733-7845

3. Mecklenburg County:

Mecklenburg County Department Of Environmental Protection (MCDEP)

Mr. Don Willard, Division Manager
700 North Tryon Street
Charlotte, North Carolina 28202

Charlotte-Mecklenburg Fire Department
Spill Response Division: Mr. Bart Massey (704) 336-2461
Permitting Section: Ms. Delores Wilbourn (704) 336-2101

3. City of Charlotte:

Zoning Department (704) 336-3569

There were no environmental problems on file with the agencies listed above for the subject property or immediate surrounding area. However, an environmental impact statement prepared in association with the proposed outer belt expansion indicated that there were wetlands located on the subject property.

Environmental Permits: None discovered.

Summary Of Prior Citations Or Fines For Violations Of Environmental Regulations: None discovered.

SUMMARY AND RECOMMENDATIONS

The UST which was formerly located on the subject site is a point of environmental concern. Since no soil samples were analyzed upon removal of the tank for the presence of petroleum hydrocarbons, it is not known whether there were releases of product from this tank. Geoscience recommends that soil samples be taken from the vicinity of the former location of this tank and analyzed for the presence of petroleum hydrocarbons.

The USTs which were formerly located on the Mott's property could be a point of environmental concern. Due to the apparently upgradient location of the Mott's property relative to a portion of the subject site it is possible that if petroleum had been released from the Mott's tanks it could have migrated onto the subject site. However, we understand from Mr. Steve Brumm that the portion of the property that may be impacted is part of an NCDOT right-of-way.

Cursory examination of the suspected wetlands areas by Geoscience personnel revealed that it is likely that these areas will be classified as wetlands environments, however, the Corps of Engineers should be contacted to make a positive identification. If these areas are determined to be wetlands, special site development considerations will be required. Section 404 of the Clean Water Act requires a permit for the discharge of fill into the waters of the United States. Wetlands environments are considered to be waters of the United States and therefore permits would be required before fill is placed in these areas.

Our review of public information available from the State of North Carolina, Mecklenburg County, and the City of Charlotte revealed no reports of environmental problems on the site. The discovered information regarding the site's history revealed no evidence of operations on the site that would represent a signifi-

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cant threat to the environment. On the basis of the information summarized herein, and with the exception of the previously mentioned concerns, the subject property does not have observable characteristics or historical precedent (last 50 years) indicating the existence of significant environmental liability.

CLOSURE

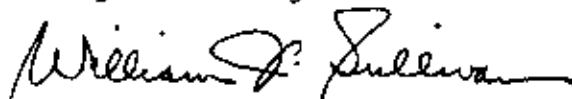
Much of the information provided in this summary report is based upon personal interviews and review of available documents, records, and maps held by the appropriate government and private agencies. This summary is subject to the limitation of historical documentation, availability and accuracy of pertinent records and the personal recollection of those persons contacted.

WKD Geoscience appreciates this opportunity to be of service to you. Should any questions arise concerning this report or if we can be of further service to you, please contact the undersigned.

Respectfully,
WKD GEOSCIENCE



Harold J. Smith
Project Geologist



William J. Sullivan, P.E.
Director

HJS/WJS/mej
Enclosures
7-1-87



APPENDIX

Drawing No. 52043-1 - Vicinity Map

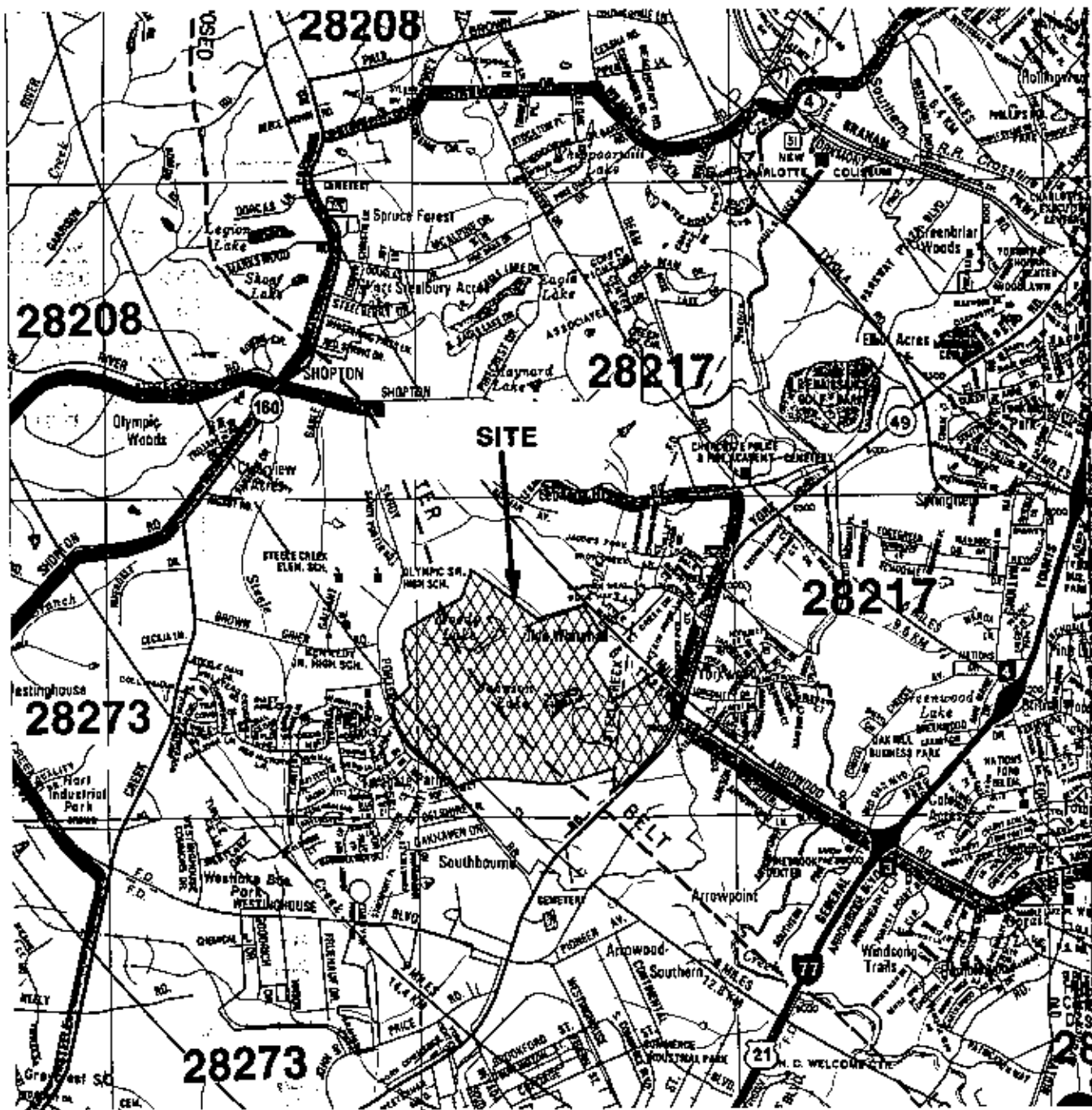
Drawing No. 52043-2 - Site Layout

Drawing No. 52043-3 - 1968 USGS Topographic Map

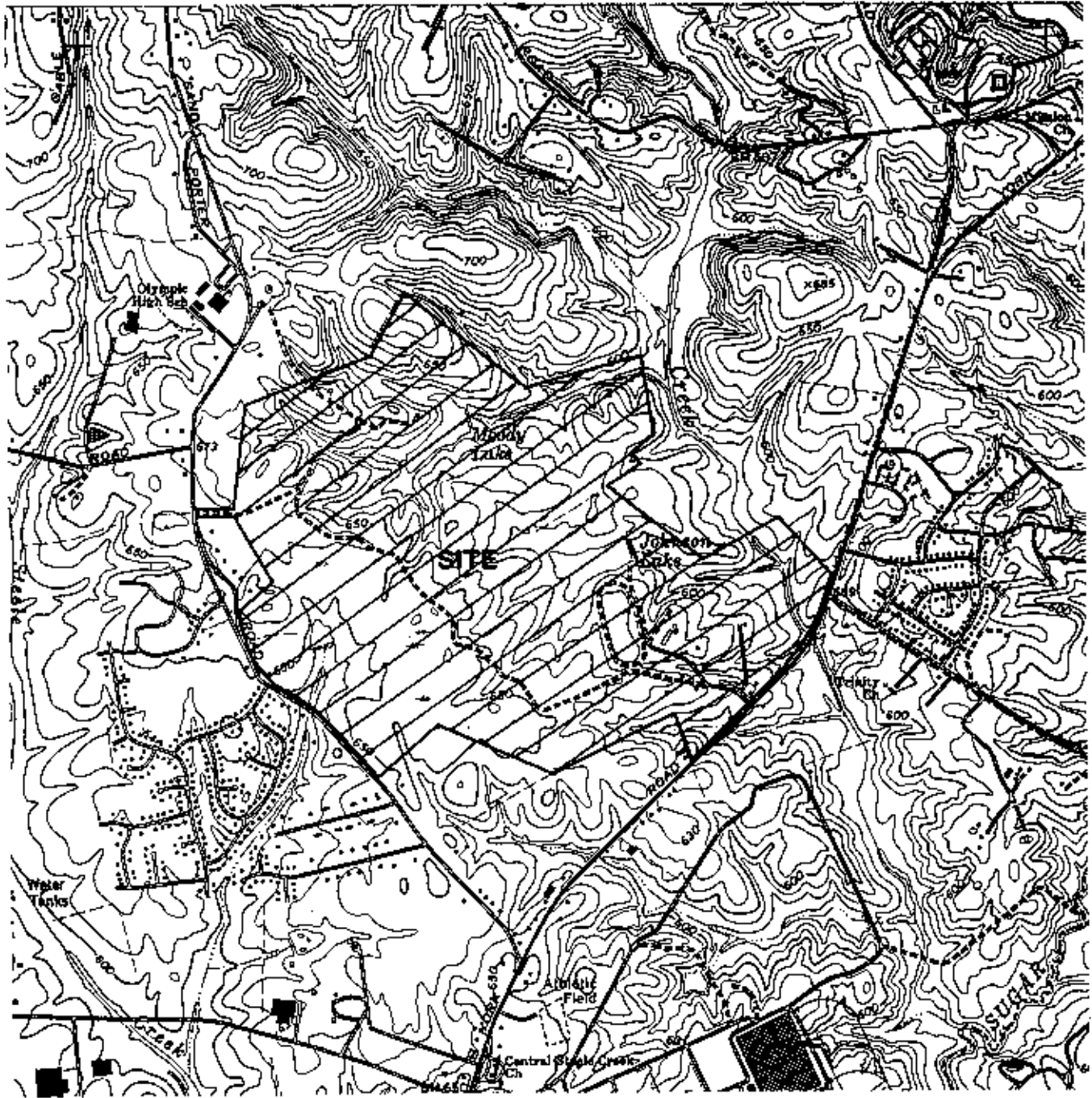
Drawing No. 52043-4 - 1982 City Topographic Map

Drawing No. 52043-5 - Tax Line Map

Figure No. 52043-1 - History Of Ownership



WKD GEOSCIENCE CHARLOTTE, NORTH CAROLINA		
SCALE: 1" = 4000'	APPROVED BY <i>[Signature]</i>	DRAWN BY N/A
DATE: 12/22/92	Whitehall Site Charlotte, North Carolina	
VICINITY MAP		DRAWING NUMBER 52043-1



**WKD GEOSCIENCE
CHARLOTTE, NORTH CAROLINA**

SCALE: 124,000

APPROVED BY

DRAWN BY N/A

DATE: 12/22/92

**Whitehall Site
Charlotte, North Carolina**

1968 USGS TOPOGRAPHIC MAP

DRAWING NUMBER

52043-3

CHAIN OF TITLE
Property of Alice Grier Johnston
76 acres (more or less)
Steele Creek Township, Mecklenburg County, North Carolina

Book/Page*

1176-231 Heirs of A. A. Porter (William S. Porter, Kate Porter, Alpheus A. Porter, Jr. and wife, Fradonia B. Porter) to Sandy G. Porter (75% interest), recorded November 7, 1945.

E15-1946 Estate of Sandy G. Porter (D/O/D July 16, 1966) to Lois D. Porter.

3437-436 First Union National Bank and Alpheus A. Porter, Co-Executors U/W Lois D. Porter to David R. Johnston, recorded June 26, 1972.

82E-2068 Estate of David R. Johnston (D/O/D October 16, 1982) to Alice Grier Johnston.

* Books and Pages refer to recordings and filings in the Mecklenburg County Public Registry.

CHAIN OF TITLE
Property of Alice Grier Johnston
325 acres (more or less)
Steele Creek Township, Mecklenburg County, North Carolina

Book/Page*

- 754-57 Raleigh Savings Bank & Trust Co. to G. D. Moody, recorded October 25, 1929.
- 1748-180 Nancy Sadler Moody, widow to George D. Moody, Jr. and Francis S. Moody, recorded May 25, 1955.
- 2124-173 Francis S. Moody (unmarried) and George D. Moody and wife, Martha P. Moody to David R. Johnston, recorded December 28, 1959.
- 82E-1068 Estate of David R. Johnston (D/O/D October 16, 1982) to Alice Grier Johnston.

* Books and Pages refer to recordings and filings in the Mecklenburg County Public Registry.

CHAIN OF TITLE
Property of Alice Grier Johnston
312.5 acres (more or less)
Steele Creek Township, Mecklenburg County, North Carolina

Book/Page*

654-50 Southeastern Development Company to R. Horace Johnston, recorded January 24, 1927.

E7-317 Estate of R. Horace Johnston (D/O/D October 22, 1949) to David Rolston Johnston

82E-2068 Estate of David R. Johnston (D/O/D October 16, 1982) to Alice Greir Johnston, widow.

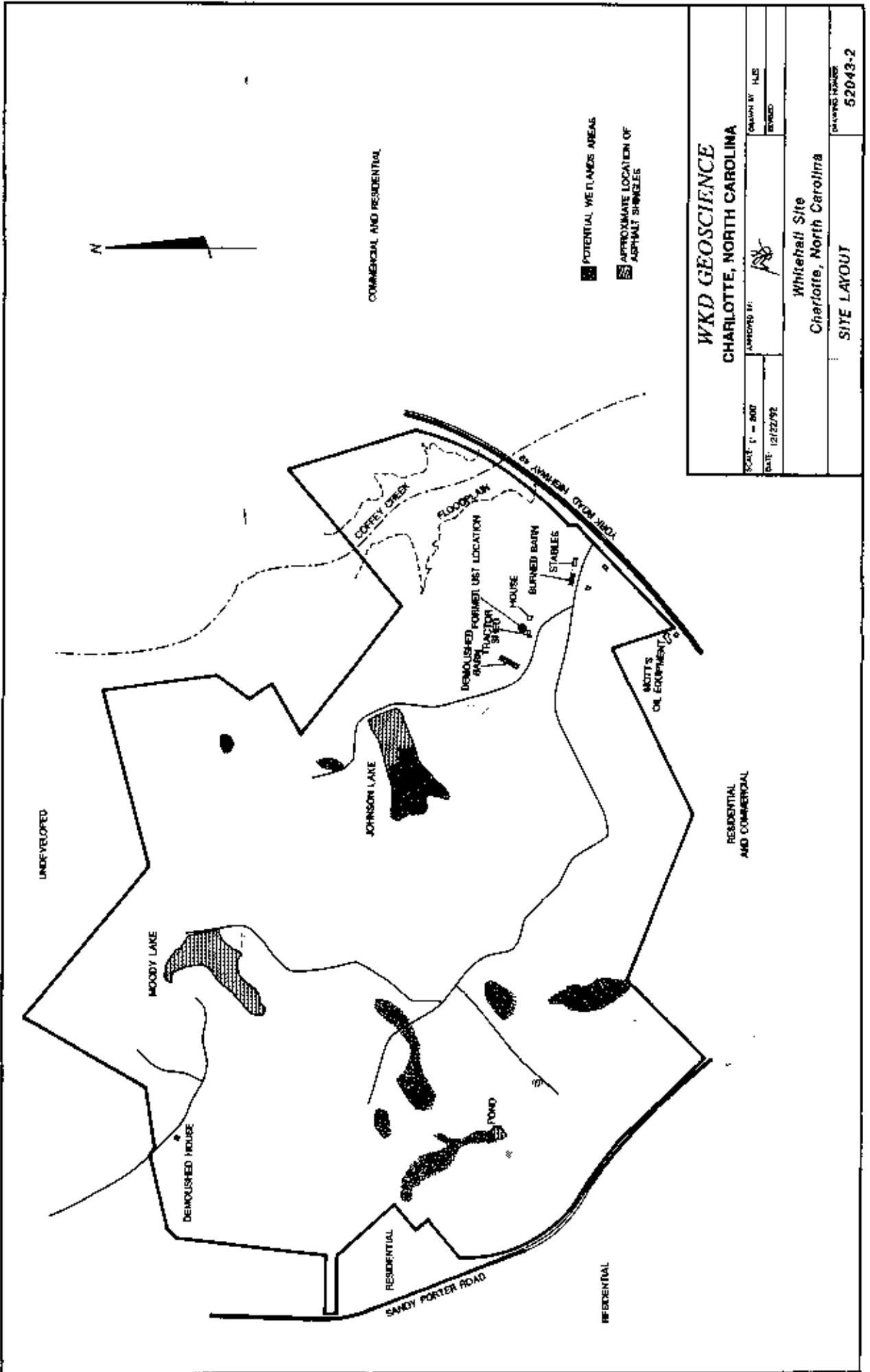
* Books and Pages refer to recordings and filings in the Mecklenburg County Public Registry.

CHAIN OF TITLE
Property of Alice Grier Johnston
48.56 acres (more or less)
Steele Creek Township, Mecklenburg County, North Carolina

Book/Page*

399-95	J. B. Watt and wife, Emma Watt to W. Frank Watt, recorded March 18, 1919
1140-265	W. Frank Watt and wife, Jessie Watt to R. Horace Johnston, recorded January 25, 1945.
E7-317	Estate of R. Horace Johnston (D/O/D October 22, 1949) to David R. Johnston.
82E-1068	Estate of David R. Johnston (D/O/D October 16, 1982) to <u>Alice Grier Johnston</u> .

* Books and Pages refer to recordings and filings in the Mecklenburg County Public Registry.



WKD GEOSCIENCE
CHARLOTTE, NORTH CAROLINA

SCALE: 1" = 200'	APPROVED BY:	DRAWN BY: FILE
DATE: 12/22/92		REVISED:
Whitehall Site Charlotte, North Carolina		DRAWING NUMBER 52043-2
SITE LAYOUT		