WETLAND DELINEATION REPORT

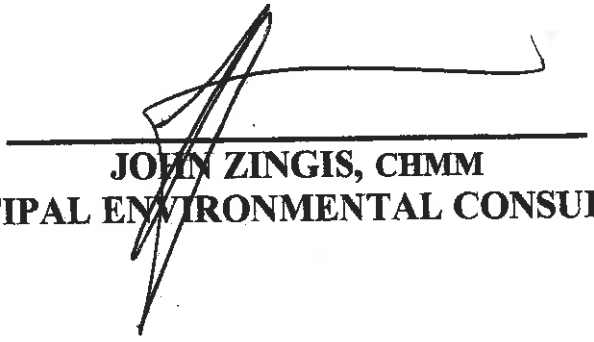
FOR:

LAKEWOOD-ALLENWOOD ROAD
BLOCK 42, LOT 88
TOWNSHIP OF HOWELL, MONMOUTH COUNTY

PREPARED FOR:

CELLO BUILDERS
DARRELL MONTICELLO
3201 ARTHUR STREET
WALL, NEW JERSEY 07719

PREPARED BY:



JOHN ZINGIS, CHMM
PRINCIPAL ENVIRONMENTAL CONSULTANT

February 14, 2003

AL&S
ENVIRONMENTAL MANAGEMENT SERVICES, INC.
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WETLAND DELINEATION REPORT

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List of Exhibits

I. Introduction

Air, Land & Sea Environmental Management Services, Inc. (AL&S) conducted an environmental evaluation on Block 42, Lot 88, located in Howell Township, Monmouth County (see Figures 1, 2 and 3). The purpose of the evaluation was to identify freshwater wetlands, transition areas and New Jersey State open waters in accordance with the Freshwater Wetlands Act N.J.A.C. 7:7A et seq., as amended through March 1992.

The property is located on Lakewood-Allenwood Road directly west of the Howell Township athletic fields (Figure 2). The property is currently a vacant wooded lot. Wetlands existing onsite traverse the property in an east west manner and are associated with the flood plain of Muddy Ford Brook (see Figure 3). Photographs of existing conditions accompany this report (see Exhibit I).

The methodology used to delineate the wetlands is described in the 1989 Federal Manual for Identifying and Delineating Jurisdictional Wetlands. The methodology enumerates the three-parameter approach to identify freshwater wetlands. The parameters are hydrophytic vegetation, hydric soils and hydrology. All three parameters must be present, under normal circumstances, to positively identify freshwater wetlands. Information collected during the field investigation is discussed in this report and on Wetland Determination Data Sheets (Exhibit II).

Freshwater wetlands were identified and marked in the field with two (2) sets of consecutively numbered survey flags as shown on the *Wetland Location Plan*, as prepared by GTS Consultants, Inc., Howell, New Jersey (Exhibit III). Wetlands were delineated throughout lot 42. Wetland flags (W4 to W10) extend in southwesterly direction from the eastern property line until breaching the western property boundary. Wetland flags W-8A through W-11A traverse the property in the same manner and parallel the aforementioned set of flags.

II. Freshwater Wetland Definition

The following definition of a wetland has been established by the NJDEP, Land Use Regulation Element and is used to administer the Section 404 of the Federal Clean Water Act.

" Freshwater wetland or wetland means an area that is inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions, commonly known as hydrophytic vegetation; providing, however, that the Department (NJDEP) in designating a wetland shall use the three-parameter approach (vegetation, soils and hydrology) enumerated in the 1989 Federal Manual for Identifying and Delineating Jurisdictional Wetlands and any subsequent amendments thereto. "

As defined above, wetlands are identified and delineated utilizing the three-parameter approach. An area must exhibit all three characteristics to be classified a wetland: 1) hydrophytic vegetation; 2) hydric soils and 3) wetland hydrology as enumerated in the 1989 Federal Manual for Identifying and Delineating Jurisdictional Wetlands.

"Hydrophyte" or hydrophytic vegetation means plant life adapted to growth and reproduction under periodically saturated root zone conditions during at least a portion of the growing season. A list of wetland plants has been prepared by the U.S. Fish and Wildlife Service (USF&WS, 1986).

"Hydric soils" are soils that are saturated, flooded or ponded long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic vegetation. Most soils that display hydric conditions are on

New Jersey's Official List of Hydric Soils developed by the U.S.D.A. Soil Conservation Service and the U.S. Fish and Wildlife Service (USF&WS, 1984). Also, wet phases of somewhat poorly drained soils not on New Jersey's Official List of Hydric Soils may be associated with a wetland and may be considered a hydric soil.

"Wetland hydrology" is the permanent or periodic inundation or soil saturation for a significant period of time, usually to the surface, for a period of one week or more during the growing season. Saturation or inundation to the surface is defined by any of the following conditions: 1) for somewhat poorly drained mineral soils, the water table is less than 0.5 feet from the surface usually for one week or more during the growing season; 2) soils which exhibit low permeability (<6.0 inches per hour), poorly drained or very poorly drained mineral soils have a water table less than 1.5 feet from the surface usually for one week or more during the growing season; 3) for more permeable soils (> 6.0 inches per hour) saturation or inundation within 1.0 feet of the surface defines hydrology.

"State open waters" means those waters of the United States within the boundary of the state or subject to its jurisdiction that are not wetlands as defined by the Freshwater Wetlands Act. These waters usually have surficial drainage runoff of 5 c.f.s. for the annual storm for the region.

III. Wetland Delineation Procedures

The environmental evaluation of the subject property began with a review of published environmental information available for the site. Information included the Lakewood Topographical Map (see Figure 3), Monmouth County Soil Survey (see Figure 4) and the NJDEP Freshwater Wetlands Map, Lakewood - Northeast Quadrant (see Figure 5). An onsite investigation then followed to identify and delineate the extent of freshwater wetlands.

The site investigation was performed using procedures outlined in the 1989 Federal Manual for Identifying and Delineating Jurisdictional Wetlands. Methodology described in the manual discusses the three-parameter approach and criteria required to positively identify freshwater wetlands. The following parameters were evaluated and recorded on field data sheets accompanying this report.

A. Vegetation:

Vegetation serves as one indicator documenting the presence of freshwater wetlands. Of particular importance is the presence and dominance of hydrophytic vegetation. Hydrophytic vegetation is adapted to exist and reproduce in saturated soil conditions. Dominance refers to strictly the spatial extent of vegetation occupying the study area within different stratum. A species or group of species is considered dominant when the individual or cumulative spatial area occupied by the vegetation exceeds 50 percent.

Hydrophytic plant species are those species listed on the National and Regional List of Plant Species that Occur in Wetlands: New Jersey (USF&WS, 1988). Hydrophytic groups include Obligate, Facultative Wet, Facultative and Facultative

Upland plant species. The USF&WS has assigned the following wetland indicator classification for plant species:

Plant Affinity of Wetland Conditions

Classification	Percent Occurrence in Wetlands
Obligate Wetland (OBL)	>99%
Facultative Wet (FACW)	67-99%
Facultative (FAC)	34-66%
Facultative Upland (FACU)	1-33%
Obligate Upland (UPL)	<1%

A positive (+) or negative (-) symbol may be used in conjunction with the classification to further identify a plant species preference to either the drier or the wetter end of the occurrence range. A positive sign indicates the preference to the wetter end of the category. Conversely, a negative sign indicates the affinity for drier conditions.

Existing vegetation was evaluated throughout the property. Vegetative inventories were conducted at the location of soil borings. Species were identified and recorded on the Wetland Determination Data Sheets. If hydrophytic plant species were dominant in the sample area, the vegetation criteria were met.

B. Hydric Soils

A soil survey was conducted on site to identify the limits of hydric soils. Hydric soils usually develop certain morphological properties that can be readily observed in the field. Prolonged anaerobic soil conditions typically lower the soil redox potential and cause a chemical reduction of some soil components, mainly iron oxides and manganese oxides. This reduction affects solubility, movement and aggregation of these oxides, resulting in soil color changes.

Soil colors often reveal much about soil saturation and anaerobic conditions. Soil colors are identified using the Munsell soil color chart. The chart identifies three basic components of soil color: hue, value and chroma. Chromas having a value of 2 or less are usually indicative of hydric soil conditions. Low chroma colors include black and various shades of gray.

Soil borings were performed along a transect perpendicular to the wetland boundary (see Wetland Location Plan, Exhibit III). Soil borings were performed in the wetlands, at the wetland boundary and at an area upland of the wetland boundary. Soil borings were evaluated to an approximate depth of 30 inches. The soil profile was examined for color, texture, moisture and other hydric soil indicators. Characteristics were described on the Wetland Determination Data Sheets. If soil borings displayed hydric morphological characteristics within 18 inches of the surface, the soils were identified as hydric soils.

C. Hydrology

Wetland hydrology is often the least exact and most difficult parameter to establish in the field. Hydrology often varies greatly from season to season and from year to year. Saturation or inundation, under normal conditions, must be present for at least seven days during the growing season to meet the hydrology criteria. Numerous factors influence the wetness of an area, including precipitation, stratigraphy, topography, soil permeability and plant cover.

Wetland hydrology is identified in the field by some of the following hydrologic indicators: visual observation of inundation, observation of soil saturation, water marks on tree trunks, oxidized root channels, drift lines, water borne sediment deposits, tannic stained leaves, wetland drainage patterns, tree buttressing, and hydric soil characteristics. Hydrologic characteristics were evaluated and described on the Wetland Determination Data Sheets (Exhibit II).

IV. Existing Environmental Conditions

The environmental evaluation was conducted in natural areas throughout the lot, beginning at the eastern portion of the property. Several representative sampling transects were performed along the wetland boundary. A typical transect was installed near wetland flag W-4. This transect included soil borings SB-1 through SB-3. Vegetation, soil and hydrologic conditions varied slightly over distance primarily due to low topographical relief.

A. Vegetation

Upland vegetation on site consists of both woody and herbaceous species. The dominant upland woody species include mature American Beech (*Fagus grandifolia*, FAC), Pitch pine (*Pinus rigida*, FACU) and a mixed oak forest with very limited understory.

Wetland vegetation also consists of similar species such as Pitch pine (*Pinus rigida*, FACU), and Red Maple (*Acer rubrum*, FAC). The understory species consist of Highbush blueberry (*Vaccinium corymbosum*, FACW), Sweet pepperbush (*Clethra alnifolia*, FAC+), Cinnamon Fern (*Osmunda cinnamomea,* FACW).

B. Soils

The Monmouth County Soil Survey map indicates that the soil series found throughout the property are Klej loamy sand, (KlA).

Klej loamy sand, (KlA), soils are nearly level, moderately well drained or somewhat poorly drained soils in depressed areas and on low terraces. These soils are

classified as Group 3 on the list of New Jersey Hydric Soils. Group 3 soils display hydric conditions in few places, but additional verification is required. Permeability of these soils is rapid, and available water capacity low. Organic matter content and natural fertility is low. Seasonal high water table is at a depth of one and a half feet to four feet from January to April.

C. Hydrology

The main hydrologic feature of the property is a wetland system associated with the drainage basin of Muddy Ford Brook, which traverses the property in an east-west manner. The floodplain parallels the creek, and hydrology is within close proximity to the surface.

V. Conclusions

An environmental evaluation was completed on the subject property to identify and delineate freshwater wetlands. Methodology used to delineate wetlands is enumerated in the 1989 Federal Manual for Identifying and Delineating Jurisdictional Wetlands. The evaluation was conducted in accordance with NJDEP methodology.

The parcel is currently a vacant wooded lot with Muddy Ford Brook traversing the northern portion of the property. Based on review of published maps and AL&S's site inspection, wetlands on site appear to be associated with the floodplain of the brook. The wetland boundary paraleels this floodplain and is easily identifiable due to changes in vegetation, topography and soils on the property. Photographs were taken to document site conditions (Exhibit I) and vegetation and soil characteristics were recorded on Wetland Determination Data Sheets (Exhibit II). Wetland boundaries were marked in the field with one set of consecutively numbered survey flags as illustrated on the *Wetland Location Plan* (see Exhibit III).

The applicant is seeking the verification of the wetland boundary as set by AL&S as well as a determination as to the resource value of the wetlands located on this site.

VI. References

1. Cowardin, L.M., et al., 1979, *Classification of Wetlands and Deepwater Habitats of the United States,* USF&WS, Office of Biological Service, FWS/OBL- 79/31.

2. Environmental Laboratory, 1987, *Corps of Engineers Wetland Delineation Manual,* Technical Report Y-87-1, U.S. Department of the Army Waterways Experiment Station, Vicksburg, Missouri.

3. Federal Register, 1977, *Regulatory Programs of the Corps of Engineers,* Vol. 42, No. 138., U.S. Government Printing Office, Washington, D.C., pp. 37122-37167.

4. Petrides, G.A., 1986, *A Field Guide to Trees and Shrubs,* Houghton Mifflin Co., Boston, 431 pp..

5. Robichaud, B. and Buell, M.F., 1983, *Vegetation of New Jersey,* Rutgers University Press, New Brunswick, N.J., 340 pp..

6. State of New Jersey, 1986, *Freshwater Wetlands Map, Lakewood, Northeast Quadrant.*

7. Symonds, G.W., 1958, *The Tree Identification Book,* Quill, N.Y., 272 pp.

8. Symonds, G.W., 1963, *The Shrub Identification Book,* William Morrow and Co., N.Y., 379 pp.

9. Tiner, R.W., 1988, *Field Guide to Nontidal Wetland Identification,* U.S. Fish and Wildlife Service, Newton Corner, MA, 283 pp.

10. U.S. Department of Agriculture, Soil Conservation Service, 1980, *Soil Survey of Monmouth County, New Jersey,* 102 pp.

11. U.S. Fish and Wildlife Service, 1984, *Official List of New Jersey's Hydric Soils.*

12. U.S. Fish and Wildlife Service, 1986, *Wetland Plants of the State of New Jersey.*

13. U.S.G.S., 1989, *Lakewood, N.J., Topographical Map.*

14. *Wetland Location Plan, Block 42 Lot 88, Howell Township, Monmouth County* as prepared by GTS Consultants, Inc.

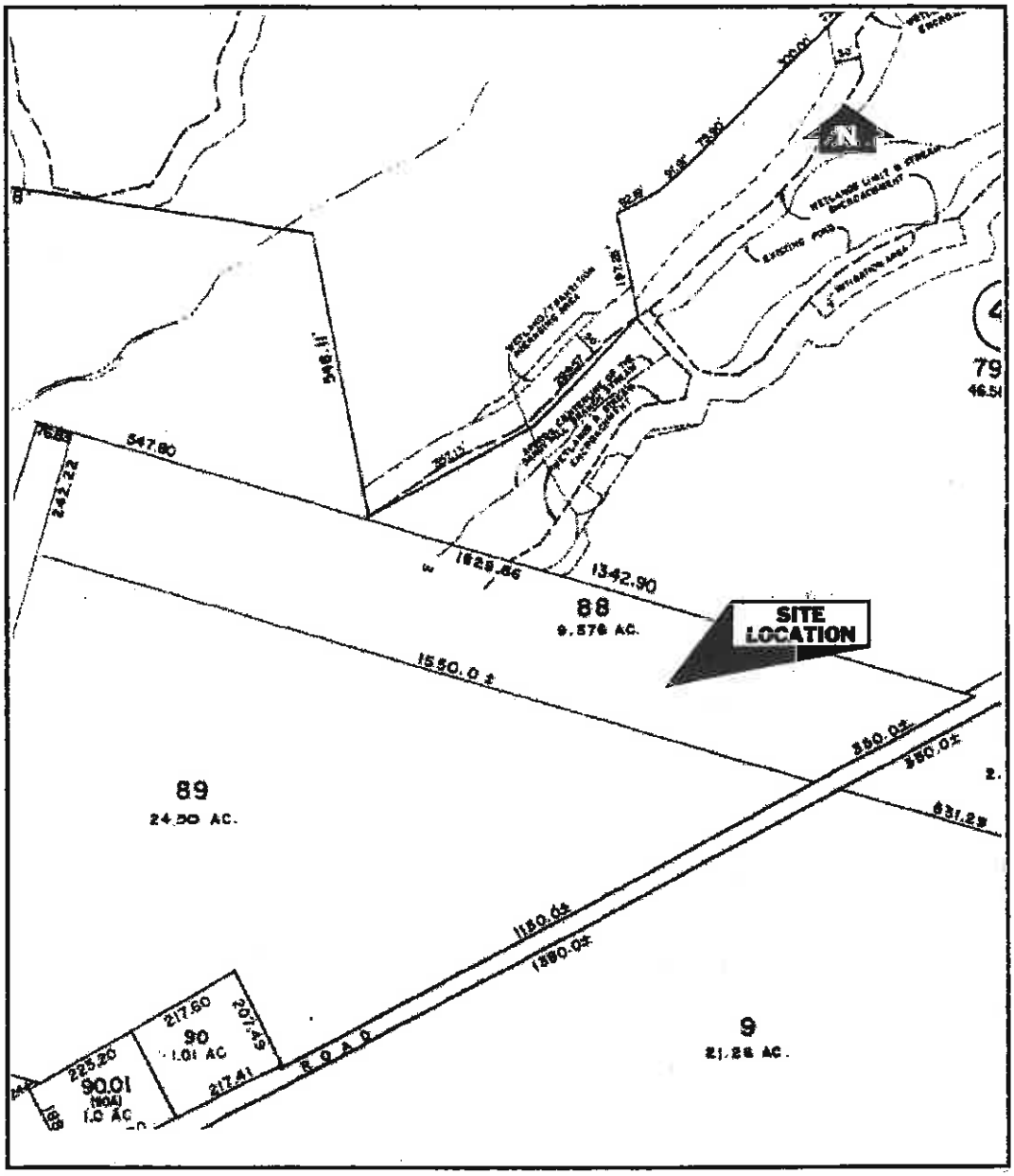

FIGURE 1

HOWELL TOWNSHIP
MUNICIPAL TAX MAP
MONMOUTH COUNTY

NOT TO SCALE

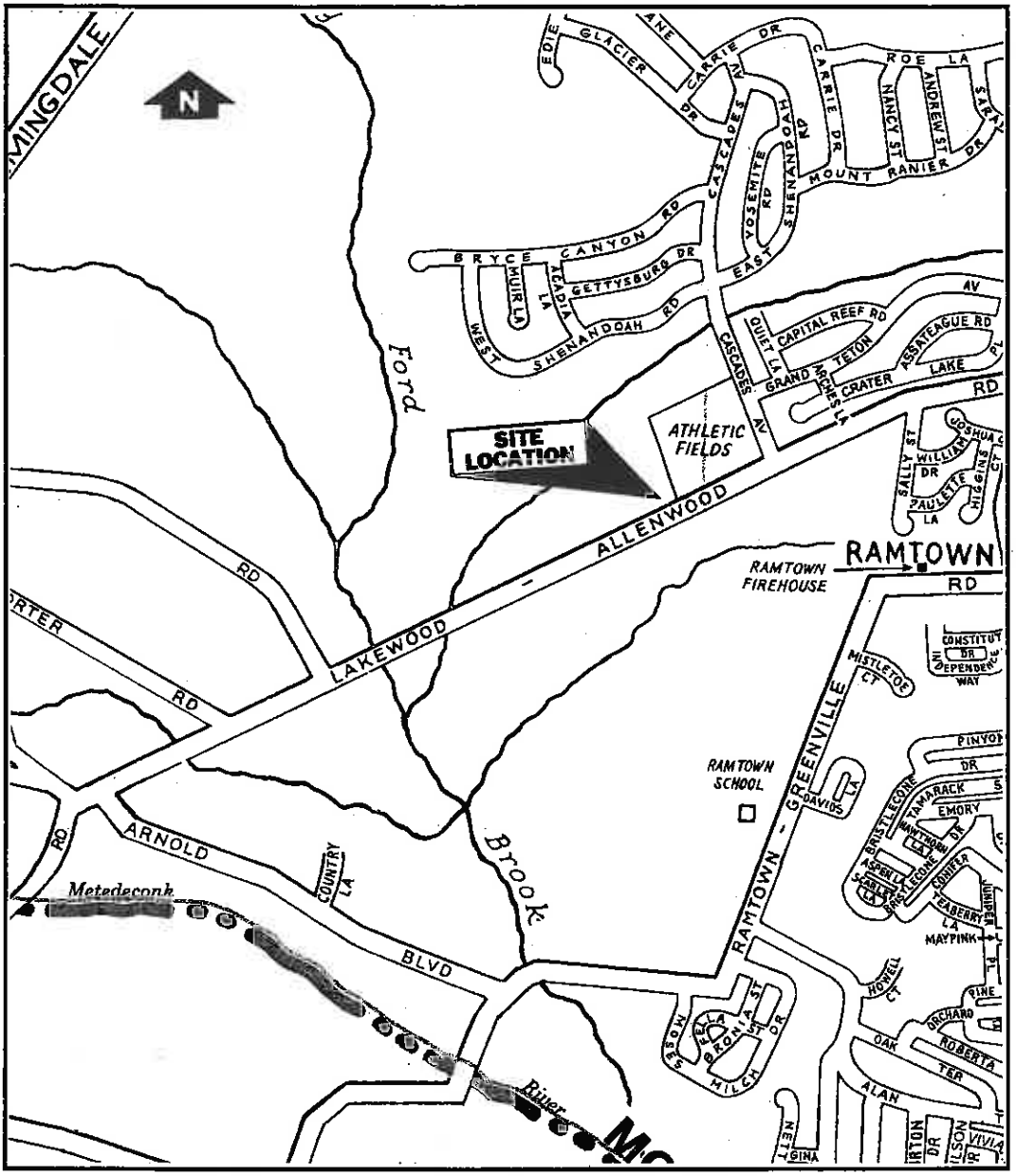

FIGURE 2

COUNTY ROADWAY MAP

MONMOUTH COUNTY HAGSTROM

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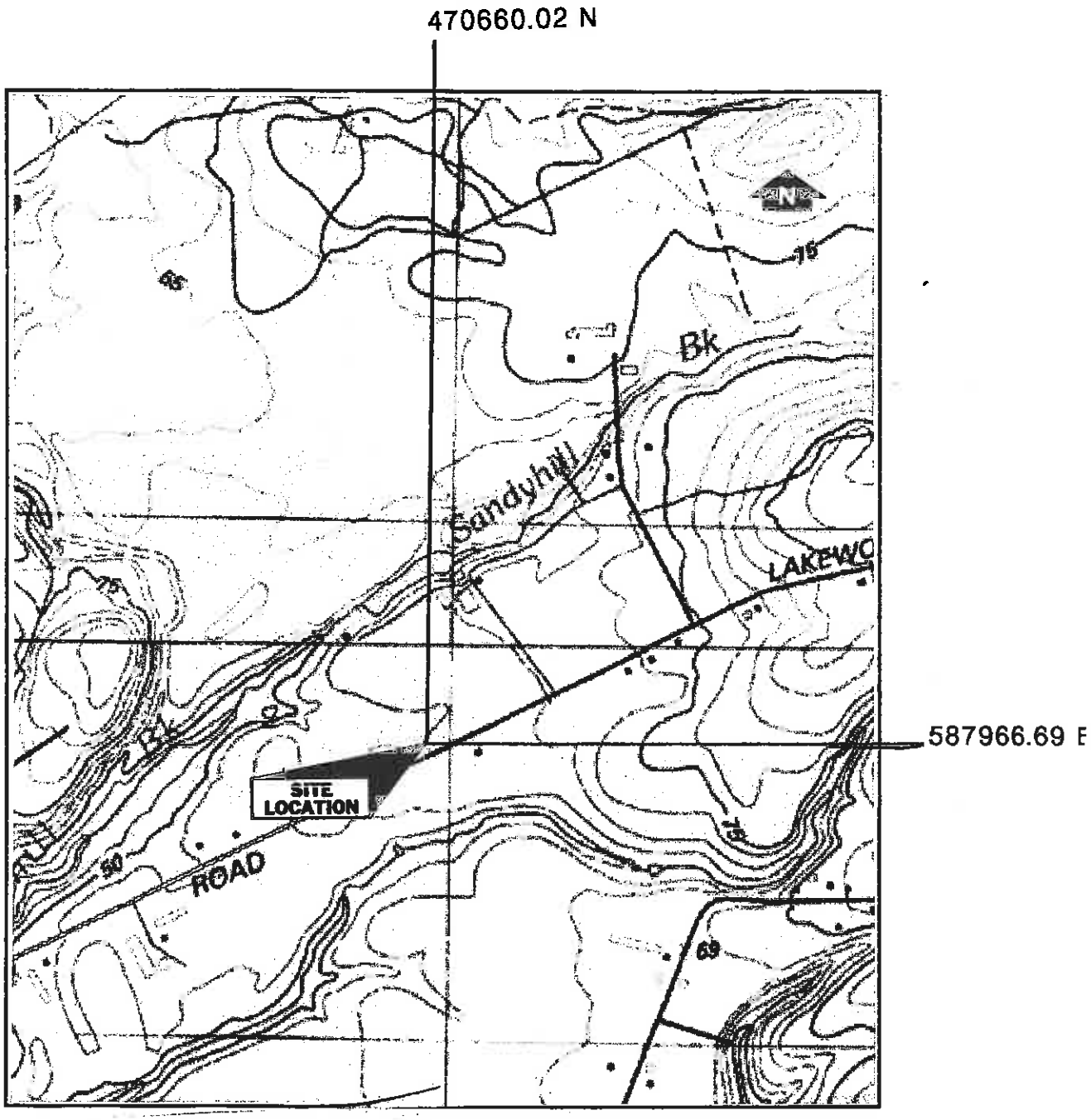

FIGURE 3
lAKEWOOD QUADRANGLE
U.S. GEOLOGICAL SURVEY MAP

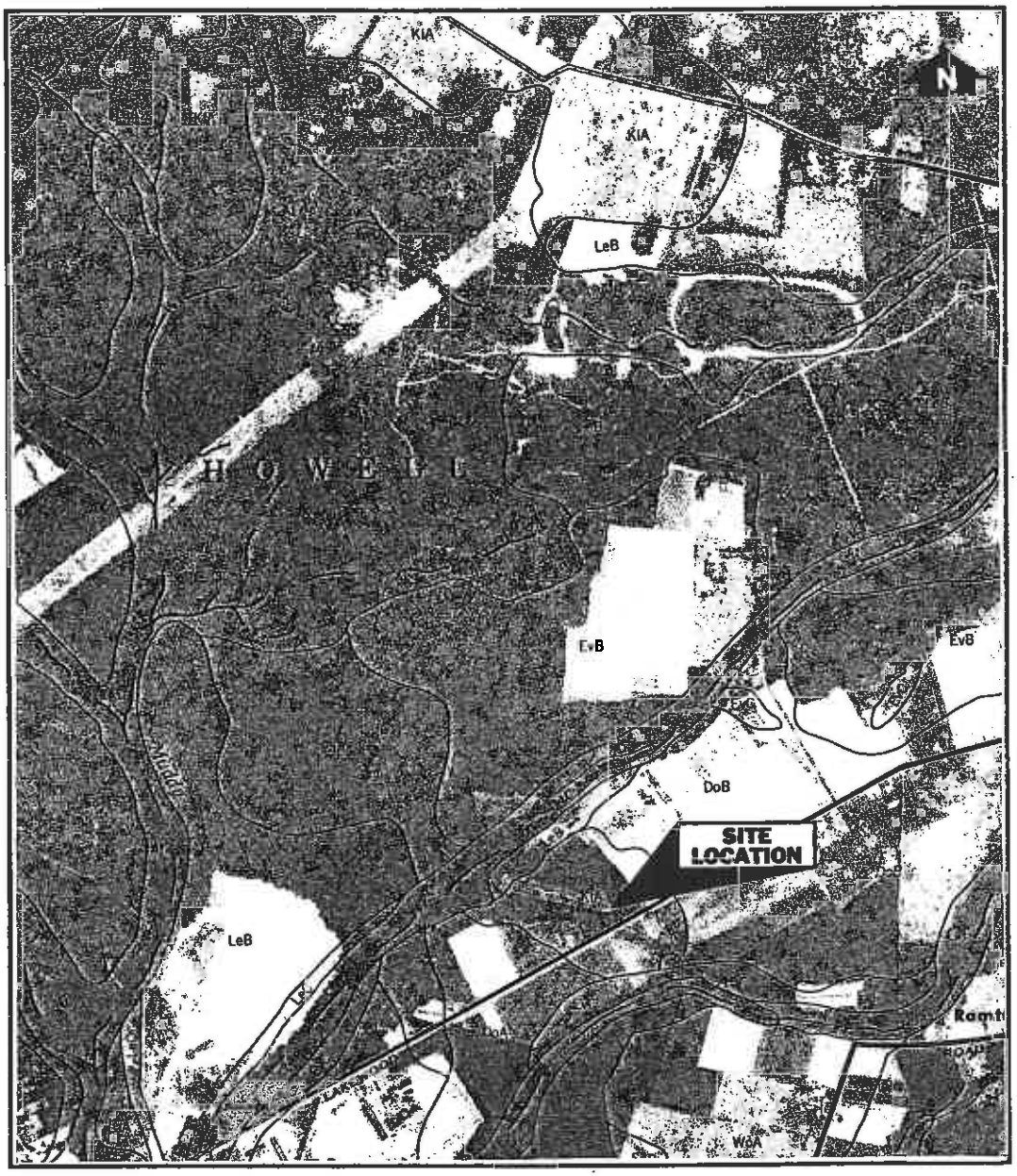

FIGURE 4
MONMOUTH COUNTY
U.S.D.A. SOIL SURVEY MAP

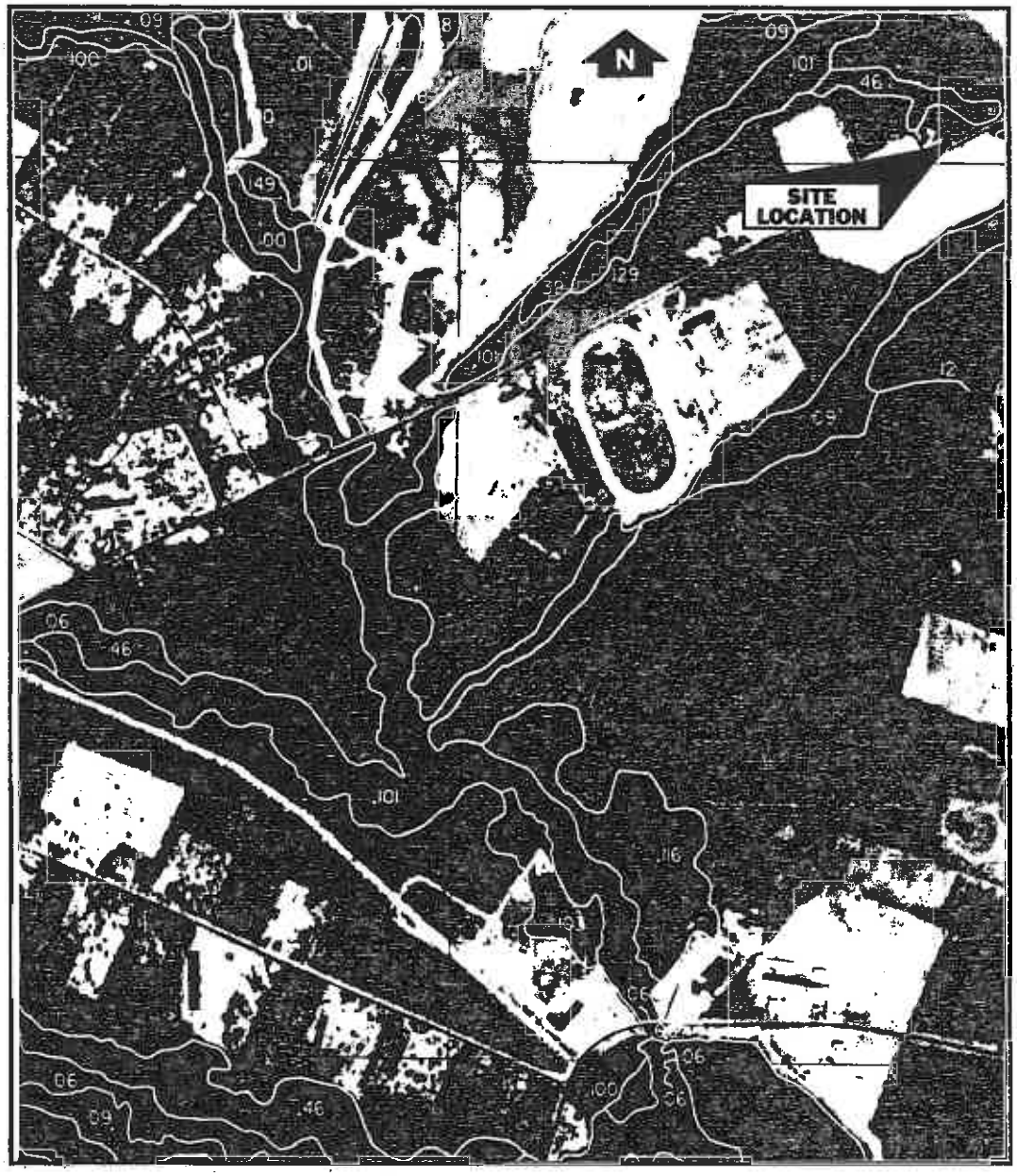

FIGURE 5

NJDEP FRESHWATER WETLANDS MAP

LAKEWOOD QUADRANGLE – NORTHEAST QUADRANT

Scale 1" = 1,000'

Photo 1: Downslope view of soil borings at wetland flag W-1.

Photo 2: Westerly view of wetland boundary at flag W-1.

Photo 3: Easterly view of wetland boundary line.

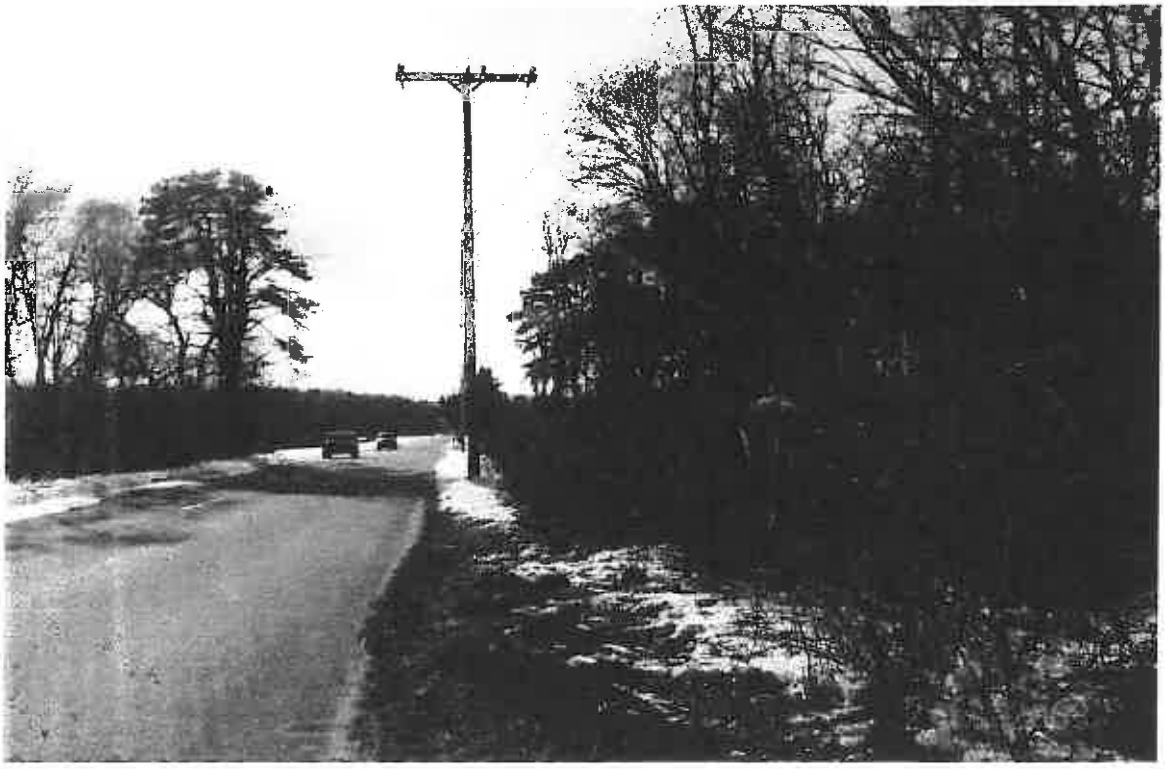

Photo 4: Westerly view of property at Lakewood - Allenwood Road.

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WETLAND DETERMINATION DATA SHEET
Soil Boring #1

APPLICANT: Mr. Monticello — PROJECT NUMBER: B3039
BLOCK(S): 42 — LOT(S): 88 — DATE: 10. 8.02
EVALUATION LOCATION: Near Flag W-2
WETLAND AREA X — ON LINE: ___ — UPLAND AREA: ___

VEGETATION ASSESSMENT

TREES:		INDICATOR	HERBS:		INDICATOR
SPECIES	% COVER	STATUS	SPECIES	% COVER	STATUS
1. *Pinus rigida*		FACU	1. *Osmunda cinnamomea*		FACW
2. *Acer rubrum*		FAC	2.		
3.			3		
			4.		

SAPLINGS:		INDICATOR	WOODY SHRUBS:		INDICATOR
SPECIES	% COVER	STATUS	SPECIES	% COVER	STATUS
1.			1. *Vaccinium corymbosum*		FACW
2.			2. *Clethra alnifolia*		FAC+
3.			3.		

HYDROPHYTIC VEGETATION PRESENT? Yes: X No: ____

SOIL
(see also Page 2 of 2 for boring log)

SERIES AND PHASE: Klej loamy sand, (KlA) ON HYDRIC LIST ? Yes: X – Group 3 No:
MOTTLE COLOR: MATRIX COLOR: Black (10YR 3/1)
GLEYED: Yes: No: X
OTHER INDICATORS:
HYDRIC SOILS ? Yes: X No:
BASIS: Groundwater @ 12"

HYDROLOGY

INUNDATED SOILS: Yes: No: X DEPTH TO STANDING WATER: 14"
SATURATED SOILS: Yes: X No: DEPTH TO SATURATION: 10"
OTHER INDICATORS:
WETLAND HYDROLOGY PRESENT ? Yes: X No:
BASIS:
NORMAL CIRCUMSTANCES ? Yes: X No:
WETLAND DETERMINATION? Yes: X No:
COMMENTS:

SITE EVALUATOR _____ Date: 10/8/02
John Zingis, CHMM

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SOIL BORING LOG
SOIL BORING #1

APPLICANT: Mr. Milano
PROJECT NUMBER: B3039
BLOCK(S): 42 LOT(S): 88
DATE: 10.18.02
EVALUATION LOCATION: Near Flag W-2
WETLAND AREA: X ON LINE: UPLAND AREA:

Horizon Depth	Color/Munsell	Soil Characterization
0-12"	Organic Muck (10YR 3/1)	Sand, single grain, loose.
12-30"	Grayish Brown (10 YR 5/2)	Sand, single grain, loose.

SPECIAL COMMENTS or NOTES: Soils saturated at 10" below grade. Groundwater observed at 14" below grade.

Site Evaluator: _____ Date: 10/8/02
John Zingis, CHMM

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WETLAND DETERMINATION DATA SHEET
Soil Boring #2

APPLICANT: Mr. Monticello
PROJECT NUMBER: B3039
BLOCK(S): 42 LOT(S): 88 DATE: 10. 8.02
EVALUATION LOCATION: Near Flag W-2
WETLAND AREA ON LINE: X UPLAND AREA:

VEGETATION ASSESSMENT

TREES: SPECIES	% COVER	INDICATOR STATUS	HERBS: SPECIES	% COVER	INDICATOR STATUS
1 *Fagus grandifolia*		FAC	1.		
2. *Acer rubrum*		FAC	2.		
3.			3		
			4.		

SAPLINGS: SPECIES	% COVER	INDICATOR STATUS	WOODY SHRUBS: SPECIES	% COVER	INDICATOR STATUS
1.			1. *Clethra alnifolia*		FAC+
2.			2.		
3.			3.		

HYDROPHYTIC VEGETATION PRESENT? Yes: No: X

SOIL
(see also Page 2 of 2 for boring log)

SERIES AND PHASE: Klej loamy sand, (KlA) ON HYDRIC LIST ? Yes: X – Group 3 No:
MOTTLE COLOR: MATRIX COLOR: Black (10YR 4/1)
GLEYED: Yes: No: X
OTHER INDICATORS:
HYDRIC SOILS ? Yes: No: X
BASIS:

HYDROLOGY

INUNDATED SOILS: Yes: No: X DEPTH TO STANDING WATER: Not observed
SATURATED SOILS: Yes: X No: DEPTH TO SATURATION: 22"
OTHER INDICATORS:
WETLAND HYDROLOGY PRESENT ? Yes: No: X
BASIS:
NORMAL CIRCUMSTANCES ? Yes: X No:
WETLAND DETERMINATION? Yes: No: X
COMMENTS:

SITE EVALUATOR _____ Date: 10/8/09
John Zingis, CHMM

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SOIL BORING LOG
SOIL BORING #2

APPLICANT: Mr. Milano
BLOCK(S): 42 LOT(S): 88
EVALUATION LOCATION: Near Flag W-2
WETLAND AREA: ON LINE: X UPLAND AREA:

PROJECT NUMBER: B3039
DATE: 10.18.02

Horizon Depth	Color/Munsell	Soil Characterization
0-17"	Dark Gray (10YR 47/1)	Sand, single grain, loose.
17-21"	Dark Yellowish Brown (10 YR 4/4)	Sand, single grain, loose.
21-30"	Dark Brown (10YR 3/3)	Loamy sand, single grain, loose.

SPECIAL COMMENTS or NOTES: Saturated soils at 22" below grade. Groundwater was not observed within soil boring.

Site Evaluator: _____ Date: 10/8/02
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WETLAND DETERMINATION DATA SHEET
Soil Boring #3

APPLICANT: Mr. Monticello PROJECT NUMBER: B3039
BLOCK(S): 42 LOT(S): 88 DATE: 10. 8.02
EVALUATION LOCATION: Near Flag W-2
WETLAND AREA ON LINE: UPLAND AREA: X

VEGETATION ASSESSMENT

TREES: SPECIES	% COVER	INDICATOR STATUS	HERBS: SPECIES	% COVER	INDICATOR STATUS
1 *Fagus grandifolia*	33	FAC	1.		
2. *Acer rubrum*	33	FAC	2.		
3. *Pinus rigida*	33	FACU	3		
			4.		

SAPLINGS: SPECIES	% COVER	INDICATOR STATUS	WOODY SHRUBS: SPECIES	% COVER	INDICATOR STATUS
1.			1.		
2.			2.		
3.			3.		

HYDROPHYTIC VEGETATION PRESENT? Yes: No: X

SOIL
(see also Page 2 of 2 for boring log)

SERIES AND PHASE: Klej loamy sand, (KlA) ON HYDRIC LIST ? Yes: X – Group 3 No:
MOTTLE COLOR: (10YR 3/6) MATRIX COLOR: Black (10YR 7/1)
GLEYED: Yes: No: X
OTHER INDICATORS:
HYDRIC SOILS ? Yes: No: X
BASIS:

HYDROLOGY

INUNDATED SOILS: Yes: No: X DEPTH TO STANDING WATER: Not observed
SATURATED SOILS: Yes: X No: DEPTH TO SATURATION: Not observed
OTHER INDICATORS:
WETLAND HYDROLOGY PRESENT ? Yes: No: X
BASIS:
NORMAL CIRCUMSTANCES ? Yes: X No:
WETLAND DETERMINATION? Yes: No: X
COMMENTS:

SITE EVALUATOR _____ Date: 10/8/02
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SOIL BORING LOG
SOIL BORING #3

APPLICANT: Mr. Milano
BLOCK(S): 42 LOT(S): 88
EVALUATION LOCATION: Near Flag W-4A
WETLAND AREA: ON LINE:

PROJECT NUMBER: B3035
DATE: 10.18.02

UPLAND AREA: X

Horizon Depth	Color/Munsell	Soil Characterization
0-14"	Dark Gray (10YR 7/1)	Sand, single grain, loose.
14-23"	Yellowish Brown (10 YR 5/8)	Sand, single grain, loose with common, medium, distinct Dark Yellowish Brown (10YR 3/6) mottles observed at 16" below grade.
23-30"	Dark Brown (10YR 6/8)	Loamy sand, single grain, loose.

SPECIAL COMMENTS or NOTES: Groundwater was not observed within soil boring.

Site Evaluator: _____ Date: 10/8/02
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STATEMENT OF QUALIFICATIONS

JOHN ZINGIS, CHMM
President

EDUCATION

Stockton State College, B.S., Environmental Sciences, 1983
Colorado State University, Graduate Studies, 1986
Ocean County College, Civil Engineering Curriculum, 1990

EMPLOYMENT HISTORY

1997 – Present	Air, Land & Sea Environmental Management Services, Inc.
1992 - 1997	Brinkerhoff Environmental Services, Inc.
1989 - 1992	Maser Sosinski & Associates
1987 - 1989	Wetland Inventories
1986 - 1989	Dover Township, Conservation Officer
1985 - 1986	Birdsall Engineering
1983 - 1985	Goodman, Allgair & Scott

CERTIFICATION/REGISTRATIONS

- Qualified Wetlands Expert, Ocean County Superior Court, Monmouth County Superior Court, and Ocean County Board of Tax Appeals
- Qualified Land Use – Environmental Planning Expert, Tax Court of NJ, Monmouth County Superior Court
- Qualified Dune Expert, NJDEP Office of Administrative Law
- Qualified Environmental Expert witness before Municipal Planning Boards and Environmental Commissions
- Certified Hazardous Materials Manager (CHMM)
- Certified NJDEP Subsurface Evaluator #3527
- Certified NJDEP Underground Storage Tank Closure #3527
- Registered "Site Evaluator", N J DEP, Division of Water Resources
- Habitat Evaluation Procedures, U.S. Fish & Wildlife Service
- Member, Association of New Jersey Environmental Commissions (ANJEC)

PROFESSIONAL EXPERIENCE

Land Use Development – Environmental Permitting

As a Project Manager, with over 15 years experience in land development, Mr. Zingis has completed over 650 applications with the New Jersey Department of Environmental Protection (NJDEP), Land Use Regulation Element. Experience includes numerous Freshwater Wetland applications (transition area waivers, buffer averaging, Individual and General Permits), wetland boundary verifications with the letters of interpretation (LOI), Coastal Area Facility Review Act (CAFRA), and Environmental Impact Statements demonstrating compliance with regulations. Mr. Zingis has assisted real estate investors, engineers, surveyors and attorneys in procuring other environmental permits from the New Jersey Pinelands Commission and United States Army Corps of Engineers. His expertise has been recognized in courts of law and before land use boards.

NJDEP Preliminary Site Assessment – Phase I – Environmental Site Assessments

Since 1989 Mr. Zingis has performed over 150 Phase I – Environmental Site Assessments, Environmental Site Assessment Checklists and NJDEP Preliminary Assessments. His services were provided to the Resolution Trust Corporation (RTC), Federal Deposit Insurance Corporation (FDIC), many lending institutions, real estate investors and environmental attorneys. These assessments are intended to complete a due diligent inquiry of properties and determine the potential presence of environmental conditions that may pose a liability to the property owner. In New Jersey the NJDEP's due diligent inquiry directs the inspector to follow guidelines enumerated within the NJDEP's *Technical Requirements for Site Remediation* (NJAC 7:26E et. seq.) to complete Preliminary Assessments to identify potential Areas of Environmental Concern.

NJDEP Site Investigations & Remedial Investigations

Mr. Zingis has successfully pooled professional teams of attorney's, engineers, surveyors, laboratories and drilling contractors to perform various levels of environmental investigations associated with discharges of hazardous substances to the environment or to complete due diligence investigations for real estate transactions. These services include a commanding knowledge of NJDEP's *Technical Requirements for Site Remediation* (NJAC 7:26E et. seq.) and experience in communicating with the NJDEP to restore environmentally distressed properties. Professional environmental assessments have included EPA Superfund Sites (Sayreville Landfill and Denzer – Schafer X-Ray), junkyards, former gasoline stations and industrial buildings, to list a few.

PROFESSIONAL EXPERIENCE

Underground Storage Tank (UST) Management

Mr. Zingis has over 7 years of experience in preparing NJDEP Closure Plans, overseeing tank removals, implementing site investigations, soil and ground water sampling and laboratory analysis. When required, he has cost effectively managed the cleanup of soil and groundwater contamination resulting from leaking underground storage tanks (LUST's). His expertise lies with the working knowledge of the technical regulations and implementing cleanup programs with NJDEP approval. Services include the preliminary site assessment of UST's for commercial and residential real estate transactions, UST removal, and case closure management. Mr. Zingis has also provided litigation support in several cases to identify and defend potential responsible parties in litigation matters. Often his expertise has lead to settlements, avoiding costly trail proceedings.

Brownfield Property Re-development

Since the EPA and NJDEP have offered Brownfield Re-development initiatives, contaminated property restoration is becoming an integral part of industrial / commercial investment opportunities. Mr. Zingis has participated in Phase II – Environmental Site Investigations, assessed levels of soil contamination, characterized ground water contaminants and flow direction, assessed sensitive environmental receptors, and often successfully negotiated favorable cleanup standards, on a case by case basis, with the EPA and NJDEP. His expertise has specifically been called upon to redevelop municipal landfills, garages and junkyards. Mr. Zingis has also received NJDEP approvals to implement natural attenuation and bioremediation technologies to treat contaminated properties in a cost-effective manner. He has also been a frequent lecturer to governmental agencies, real estate investors and attorneys, through the New Jersey Institute for Continuing Legal Education (ICLE).

Governmental Consultant – Environmental Matters

Mr. Zingis has served as a Special Environmental Consultant for several municipalities throughout the State of New Jersey. His professional services included being appointed by Ocean Township, to characterize the Southern Ocean Landfill; appointed by Jackson Township, to assess existing junk yards, publish a Children's version of the Township's Natural Resource Inventory and monitor the Legler Landfill (former EPA Superfund Site); appointed by the Boroughs of Avon and Bradley Beach to assess their inland lakes; appointed by Woodbridge Township to prepare a Natural Resource Inventory; and the Borough of Helmetta to perform a Remedial Investigation and prepare a Remedial Action Workplan to name a few projects.