

AA 364-00 ~~Anne Arundel Co Board~~
of Education, Mayo Elem. School

MSA-S-1829-783

Conditional
Approval by
Commission
8/2/00

PARCEL NO.: 413 LOT 6
 OWNER: ELLIOT, CRAWFORD K
 ELLIOT, F
 ADDRESS: 1267 STEELE RIDGE DR.
 EDGEWATER MD. 21037-4207
 LIBER/FOLIO: 1991-235
 TAX ACCOUNT: 1-886-02393175
 ZONING: R2 USE: RESIDENTIAL



MAYO
 ELEMENTARY SCHOOL
 SITE

MIN. 10' BLDG.
 SETBACK

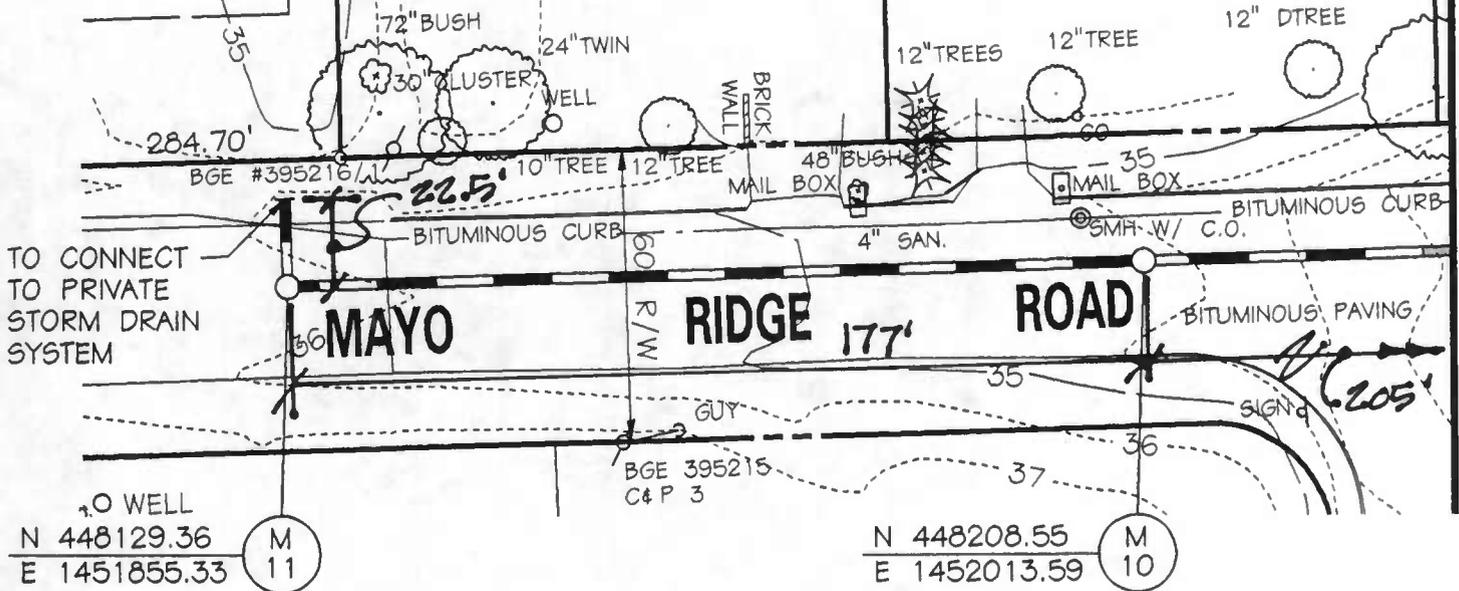
PARCEL NO.: 413 LOT 1
 OWNER: MALLAM, DANIEL L.
 MALLAM, JULIE L
 ADDRESS: 1272 MAYO RIDGE RD
 EDGEWATER MD. 21037-4205
 LIBER/FOLIO: 4943-42
 TAX ACCOUNT: 1-886-07904600
 ZONING: R2 USE: RESIDENTIAL

RECEIVED

OCT 16 2003

CHESAPEAKE BAY
 CRITICAL AREA COMMISSION

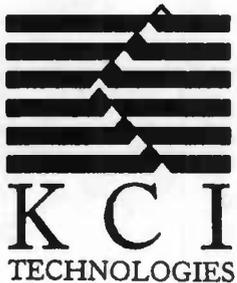
MATCH LINE SEE PLAN 2 OF 3



WELL
 N 448129.36
 E 1451855.33



N 448208.55
 E 1452013.59



ENGINEERS AND PLANNERS
 10 NORTH PARK DRIVE
 HUNT VALLY, MD. 21030-1888
 (410) 316-7800

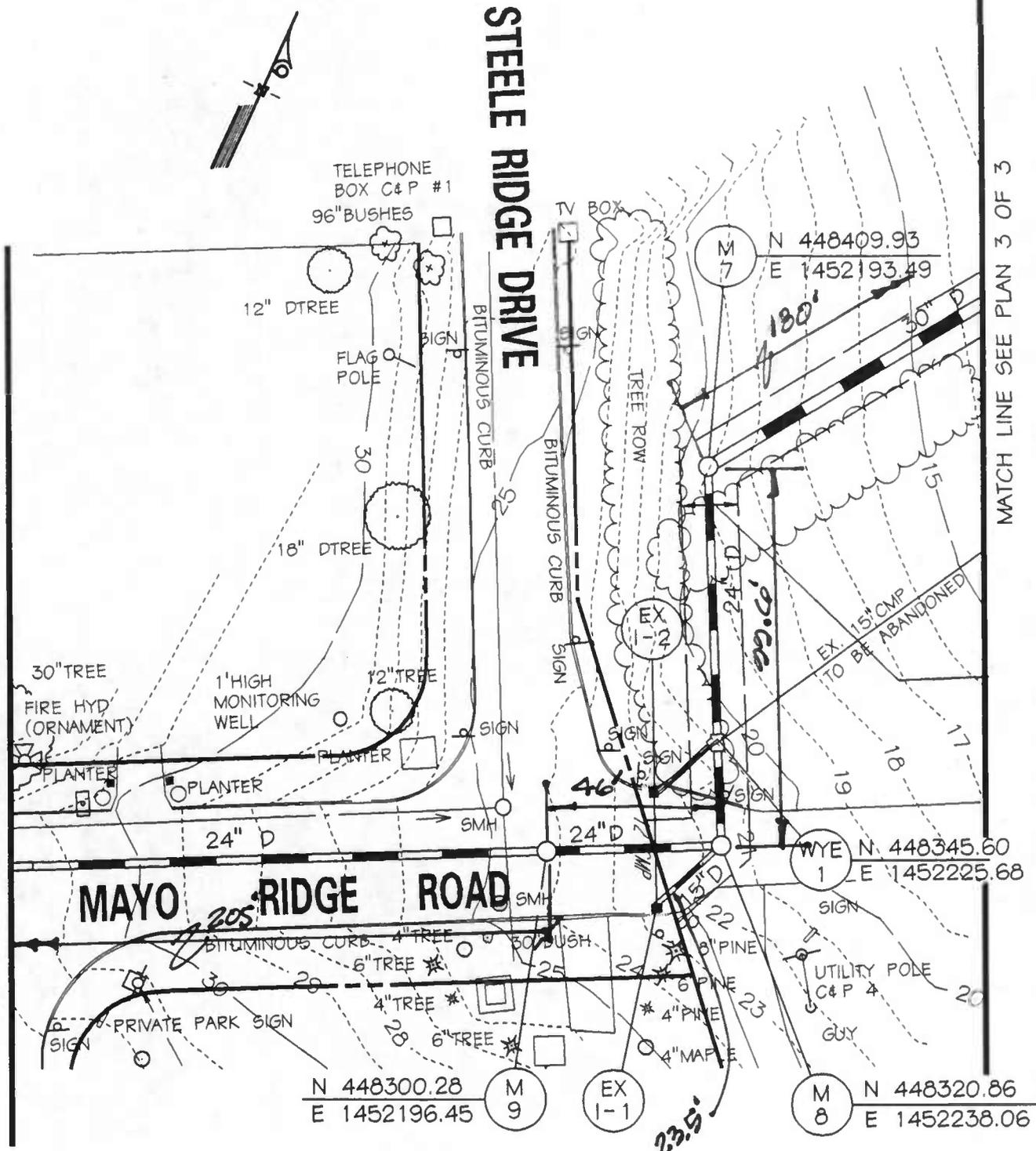
OPTION 1
 MAYO RIDGE ROAD
 STORM DRAIN EXTENSION
 PLAN 1 OF 3, SHEET 1 OF 6

E1451800
N448500

STEELE RIDGE DRIVE

MATCH LINE SEE PLAN 1 OF 3

MATCH LINE SEE PLAN 3 OF 3



N 448300.28
E 1452196.45

M 9

EX 1-1

M 8

N 448320.86
E 1452238.06



ENGINEERS AND PLANNERS
10 NORTH PARK DRIVE
HUNT VALLEY, MD. 21030-1888
(410) 316-7800

OPTION 1
MAYO RIDGE ROAD
STORM DRAIN EXTENSION
PLAN 2 OF 3, SHEET 2 OF 6

Judge John C. North, II
Chairman



Ren Serey
Executive Director

STATE OF MARYLAND
CHESAPEAKE BAY CRITICAL AREA COMMISSION

1804 West Street, Suite 100, Annapolis, Maryland 21401

(410) 260-3460 Fax: (410) 974-5338

August 4, 2000

Ms. Lisa Seaman-Crawford
Anne Arundel County Public Schools
2644 Riva Road
Annapolis, Maryland 21401

RE: Mayo Elementary School, Conditional Approval to Exceed Allowable Impervious Surface

Dear Ms. Seaman-Crawford:

At its meeting on August 2, 2000, the Chesapeake Bay Critical Area Commission unanimously approved the proposal to exceed allowable impervious surfaces on the existing Mayo Elementary School site. Pursuant to COMAR 27.02.06, this project required conditional approval from the Commission because it was not consistent with the Anne Arundel County Critical Area Program, specifically the strict 15% impervious surface limit.

In order to be considered by the Commission, Anne Arundel County Public Schools demonstrated that there were special circumstances (the existing school already exceeded the impervious surface limits); that the project was otherwise in conformance with the Critical Area Program; and that the project otherwise provides substantial benefits to the Critical Area Program (provisions for stormwater management and substantial native plantings).

The Commission approved the request for conditional approval based on the extent to which the project is in compliance with the Critical Area Program; the adequacy of the mitigation measures proposed and the extent to which the project (including any mitigation measures), provides substantial public benefits to the Critical Area Program. The Commission approved the request with the following conditions:

1. *The applicant shall resubmit any revisions to the project to the County (Department of Planning and Code Enforcement) for review and to the Commission for Approval.*
2. *The applicant will work with County and Commission staff regarding the use of only native species in landscaping the site.*
3. *If construction begins after the new stormwater management regulations are adopted, then the applicant will provide treatment for the first inch of rainfall in accordance with the new regulations.*

Branch Office: 31 Creamery Lane, Easton, MD 21601
(410) 822-9047 Fax: (410) 820-5093

Ms. Lisa Seaman-Crawford
August 4, 2000
Page 2

This approval is specific to the existing Mayo Elementary School site. If any alternative sites are considered, those plans should be submitted to this office for review and possibly for conditional approval by the full Commission.

I have enclosed several lists of native plant species that are recommend for use within the Critical Area. Anne Arundel County also has recently published a list of recommended species. Please forward this information to the landscape architect that you are working with on this project. Final revised landscape plans should be submitted to the County and to this office for review.

If you have any questions or would like to discuss any of the above comments in more detail, please feel free to contact me at (410) 260-3477.

Sincerely,



LeeAnne Chandler
Natural Resources Planner

cc: Mr. Alan Levy, County Executive's Office (w/o encl.)
Mr. Michael Lambert, KCI Technologies, Inc.
Mr. Kevin Dooley, PACE (w/o encl.)
Ms. Penny Chalkley, PACE (w/o encl.)
AA364-00



10 North Park Drive
Hunt Valley, MD 21030-1846
(410) 316-7800

June 10, 1999

Direct Dial Number

Ms. Carole Mark
Grimm & Parker
11785 Beltsville Drive
Suite 1400
Calverton, MD 20705

RE: Environmental Wetland Delineation & Wetland Jurisdictional Determination

SUBJ: Mayo Elementary School
KCI Job No.: 01-99047E

Dear Ms. Mark:

The purpose of this letter report is to document existing wetland conditions, as field delineated by KCI Technologies, Inc. (KCI) on May 11, 1999, at the Mayo Elementary School property in Mayo, Maryland. The study area for the delineation includes the property bounded by Mayo Road (MD 214) and Mayo Ridge Road. At the present time, the Anne Arundel County Board of Education is investigating the property to determine the feasibility for future additions to the current facility or construction of a new school facility.

The study area consists of a small forested area that receives drainage from a 12" pipe at the northwestern portion of the property. A 4 foot wide swale extends from the pipe as a channel, into the forest for approximately 35 feet. The channel dissipates into a small forested wetland area that drains to a stormwater pipe at MD 214. A crushed stone road borders the study area to the west and Mayo Road (MD 214) borders the study area to the south.

Vegetation

Dominant overstory vegetation within the forest community consists of red maple (*Acer rubrum*), red oak (*Quercus rubra*), and sweet gum (*Liquidambar styraciflua*). The understory consists of sweet gum, willow oak (*Quercus phellos*), smooth sumac (*Rhus glabra*), box elder (*Acer negundo*), black gum (*Nyssa sylvatica*), and black cherry (*Prunus serotina*). The shrub layer consists of multiflora rose (*Rosa multiflora*), greenbrier (*Smilax spp.*), and tartarian honeysuckle (*Lonicera tatarica*). In the forested region, the herbaceous layer consisted of sensitive fern (*Onoclea sensibilis*) and cinnamon fern (*Osmunda cinnamomea*).



MS. CAROLE MARK
JUNE 10, 1999
PAGE 2

Watershed and Drainage Patterns

The study area drains to White Marsh Creek which is included in the West Chesapeake Bay Drainage Basin. White Marsh Creek is designated as a Use I stream (MDE 1994). Designated uses for Use I waters include water contact recreation and protection of aquatic life (MDE 1994). The study area receives drainage from maintained adjacent properties as well as athletic fields and parking lots on the property.

Soils

According to the Soil Survey of Anne Arundel County, Maryland (USDA-SCS 1973), soils underlying the study area include soils of the Monmouth clay loam and Monmouth-Urban land complex soil types. These soil types are described in greater detail as follows:

Monmouth clay loam (MwC3) - The Monmouth series consists of deep, well-drained, soils that formed in unconsolidated beds of fine textured sediments. Glauconite typically makes up 40 to 70 percent of the parent material of these soils. The water table is seasonally greater than four feet below the surface. Monmouth clay loam typically has lost most of its original sandy surface through erosion. A typical Monmouth soil profile consists of 9 inches of fine sandy loam (2.5Y 4/4) in the surface layer and 5 inches of heavy sandy clay loam (2.5 Y 4/4) in the upper sub-soil.

Monmouth-Urban land complex (MxB) - The Monmouth series consists of deep, well-drained soils that formed in unconsolidated beds of fine textured sediments. The Monmouth-Urban land complex differs from the other soil types in the Monmouth series because of its inclusions of disturbed lands. The fill material incorporated into these soils from disturbances creates variable textures and colors throughout the soil profiles. The water table is seasonally greater than four feet below the surface.

Neither of the soil types present in the study area are listed as primary or secondary hydric soils in Anne Arundel County (USDA-SCS 1985). Primary hydric soils are defined as soil that in its undrained condition is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic vegetation (USDA-SCS 1985). Secondary hydric soils are soils that potentially contain small inclusions of hydric soils, typically in drainage ways, depressions, and seepage areas (USDA-SCS 1991).



MS. CAROLE MARK
JUNE 10, 1999
PAGE 3

Delineation Methods

Prior to on-site field investigations, a preliminary data review was conducted using National Wetland Inventory (NWI) Maps (USFWS 1982), the Soil Survey of Anne Arundel County, Maryland (USDA-SCS 1973), a list of the Hydric Soils of the State of Maryland (USDA-SCS 1985), and topographic site maps. Through the review of existing data, areas that potentially contained wetlands were identified for investigation purposes.

At the start of the delineation, field reconnaissance was performed to determine the initial presence or absence of wetlands within the study area and to identify existing drainage networks/patterns both within, and draining to, the study area. During the delineation, all areas that met the definition of a wetland, as specified in the Army Corps of Engineers Wetland Delineation Manual (Environmental Laboratory 1987) were identified. The routine determination method was used to identify wetland boundaries in areas where normal environmental conditions were present. Procedures described for atypical situations were followed in portions of the site that were significantly disturbed. Wetland boundaries were flagged in the field with consecutively numbered pink and black striped flagging tape or orange pin flags along the wetland/upland interface.

Wetland Conditions

One small area exists on the site that met the definition of a regulated wetland. This area includes the small wooded area located in the northwestern portion of the property beginning at the 12" stormwater outfall pipe. The system begins as an ephemeral drainage channel with an unconsolidated bottom of sand that drains into a small wooded area. In the wooded area the channelized flow appears to be impeded by a large upland hummock. In the areas surrounding this upland hummock, a palustrine forested broad-leaved deciduous, intermittently flooded wetland (PFO1J) exists until the system reaches MD 214 and drains under the road via a drainage pipe.

Dominant vegetation within the forested wetland area consists of red maple, red oak, and sweet gum in the overstory. Sweet gum, willow oak, smooth sumac, box elder, multiflora rose, greenbrier and black gum dominated the understory and shrub layer. The herbaceous layer is sparse but cinnamon fern and sensitive fern are present.

Based upon soils mapping, the wetland area appears to be underlain by a non-hydric soil type, however hydric soils were observed in the channel and PFO areas. A representative profile from within the wetland indicated a sandy loam material in the first 6 inches (A/Upper B horizon) with a Munsell soil coloration of 10YR 2/2 (hue/value/chroma). This was underlain by an 6-inch layer of a sandy clay loam material in the mid-B horizon with a coloration of 5Y 4/2 and mottles of 7.5



MS. CAROLE MARK
JUNE 10, 1999
PAGE 4

YR 6/8. The mid-B horizon appeared to be a conglomeration of various soil textures and types with the textures becoming more clayey with depth.

Hydrologic influence to the wetland system appears to be a result of discharge from the 12" stormwater pipe. Based on the soil types identified as present in the study area, by the Soil Survey Mapping, it is unlikely that groundwater contributes to the hydrology of the site. The wetland is most likely supported by surface water hydrology only. Hydrologic indicators included wetland drainage patterns, saturated soils, 1-2 inches of standing water, and hummocking.

Based upon the hydrophytic vegetation, hydric soils, and hydrologic indicators, the area field-delineated as Wetland System W1 is considered a nontidal wetland. The wetland is classified as PFO1J wetland with an ephemeral channel as a major hydrologic source.

Conclusions and Permitting Requirements

The study area contained one ephemeral channel and one palustrine forested wetland system. Ephemeral channels are not regulated as Waters of the United States by the United States Army Corps of Engineers (ACOE), however the channel present appears to be a major hydrologic source for the existing forested wetland. In order for an official designation of the channel as an ephemeral channel, concurrence by the ACOE and/or the MDE will be required. This system is likely the result of concentrated stormwater flows and varies from an ephemeral channel to palustrine forested wetland throughout the small wooded area.

Wetland investigations of this type reflect the current state of temporal and variable conditions that require individual professional judgement. This is therefore, a professional estimate of the study areas wetlands based on the delineation methodology utilized and best available information on the site. Verification of wetland boundaries for regulatory (permitting) purposes can be done only through a review by the ACOE and/or the MDE in consultation with the U.S. Environmental Protection Agency (EPA) and the U.S. Fish and Wildlife Service (FWS).

Pursuant to current wetland regulations, proposed impacts associated with any grading or clearing activity within wetlands and modifications to the existing wetland regime at the site will require both Federal and State authorization. To obtain authorization, a *Joint Federal/State Application for the Alteration of Any Floodplain, Waterway, Tidal or Nontidal Wetland in Maryland* (also known as a Wetland Permit Application) will need to be completed and submitted to the Maryland Department of the Environment (MDE).



MS. CAROLE MARK
JUNE 10, 1999
PAGE 5

Proposed impacts would potentially be eligible for Federal authorization under the Maryland State Programmatic General Permit (MDSPPG), pursuant to Section 404 of the Clean Water Act (33 U.S.C. 1344) and/or Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403). Proposed impacts may also be eligible for State authorization pursuant to the Nontidal Wetlands Protection

Act and/or require individual Water Quality Certification under Section 401 of the Clean Water Act (33 U.S.C. 1344) and the *Code of Maryland Regulations* (COMAR), Section 26.08.02.10.

This area is located within the Chesapeake Bay Critical area, therefore a Critical Area Consistency Report will have to be completed if development is proposed on the Mayo Elementary School property. Any potential impacts to wetlands will have to be addressed as part of the Description of Proposed Impacts portion of the report.

If you have any questions regarding this wetland investigation or permitting requirements, please feel free to contact me at 410-316-7865.

Sincerely,

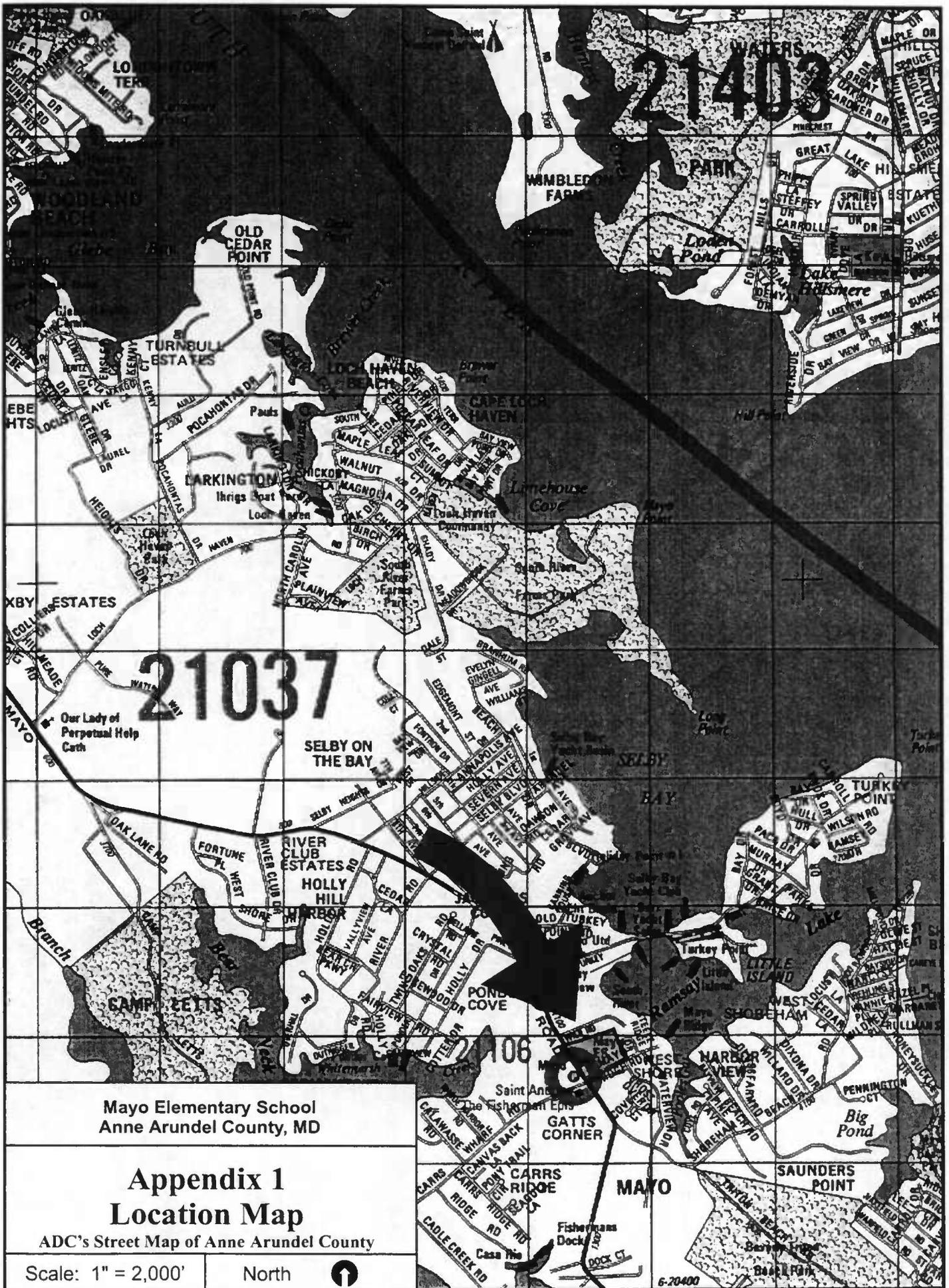
A handwritten signature in black ink, appearing to read "Scott Lowe", written over a faint circular stamp.

Scott Lowe
Environmental Scientist

SL/kaf
Encl.

cc: Mr. Rich Pfingsten, (PWS #1105) - EPD
Ms. Laura Moran, EPD
Mr. Michael Lambert - UP&D

APPENDIX 1
LOCATION MAP

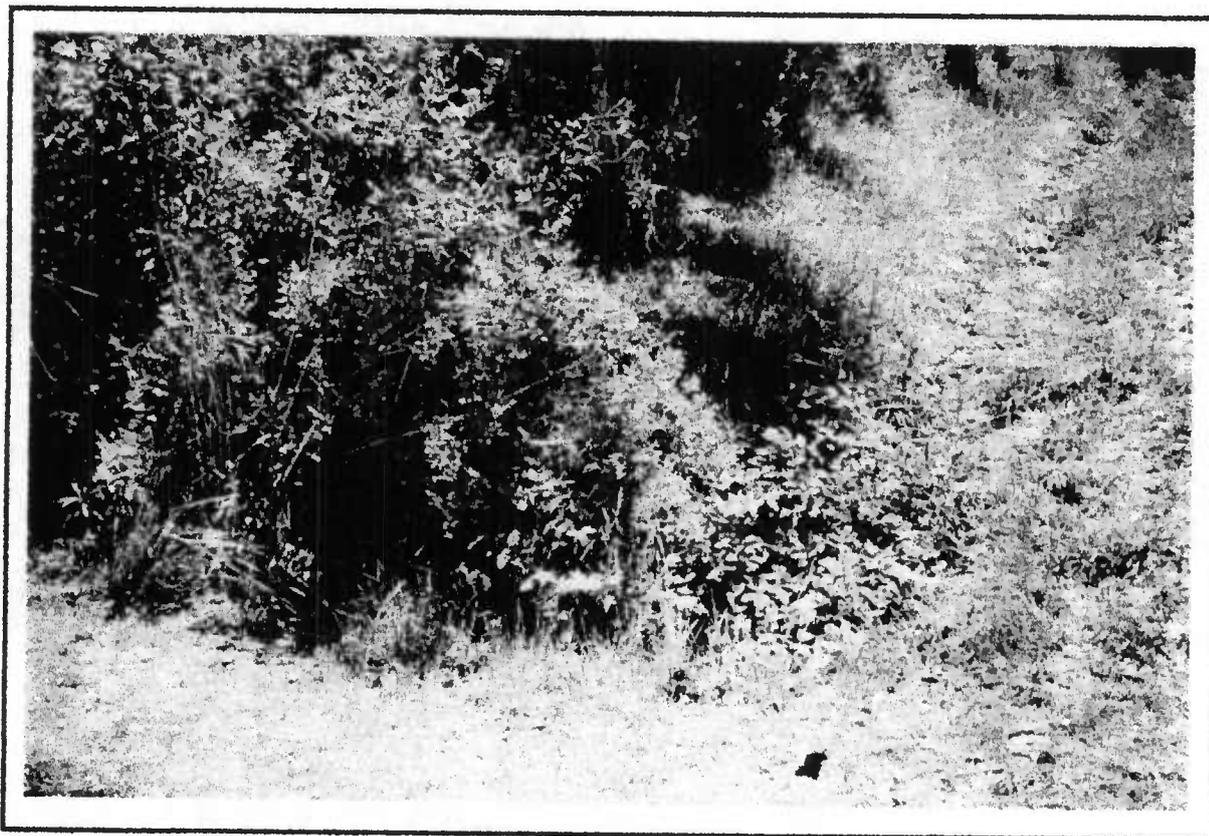


APPENDIX 2

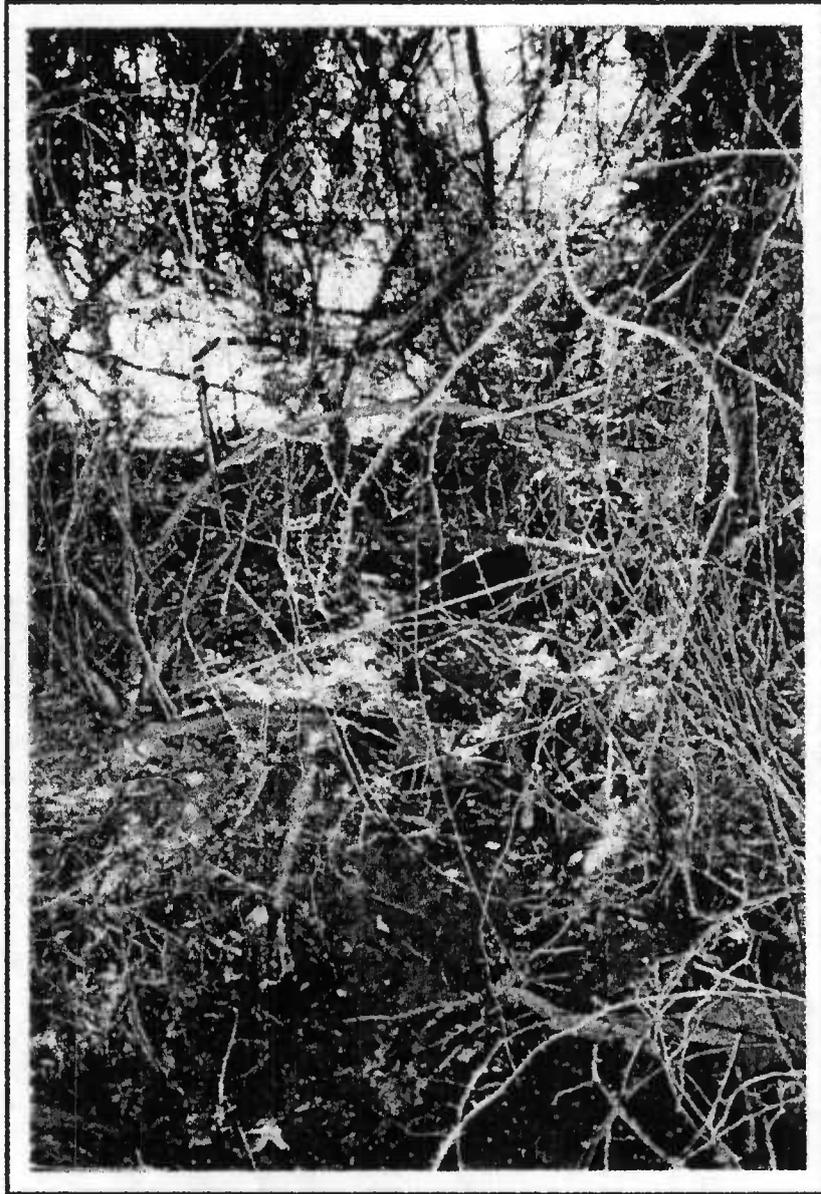
SITE PHOTOGRAPHS



Input pipe at the head of Wetland System 1



Outfall pipe downstream of Wetland System 1



PFO area in Wetland System 2

APPENDIX 3

WETLAND DATA POINT FORMS

Project: Mayo Elementary School		Wetland: 1	Transect:	Point: 1	
Client: Grimm & Parker		Date: May 11, 1999	Method: Routine		
Watershed: West Chesapeake Bay Area		County, State: Anne Arundel County, MD			
Weather: sunny		Recorded by: MJP and SBL			
Sampling Point Description: sample point taken within PFO system					
VEGETATION: Stratum: 1-Trees; 2-Saplings/Shrubs; 3-Herbs; 4-Woody Vines					
Frequency Sampling Method: Visual estimate of percent aerial cover.					
Dominant Plant Species		Common Name	Stratum	Status	Freq.
<i>Acer rubrum</i>		red maple	1	FAC	40%
<i>Liquidambar styraciflua</i>		sweet gum	1	FAC	50%
<i>Quercus rubra</i>		red oak	1	FACU-	10%
<i>Smilax rotundifolia</i>		common greenbriar	2	FAC	40%
<i>Rosa multiflora</i>		multiflora rose	2	FACU	20%
<i>Onoclea sensibilis</i>		sensitive fem	3	FACW	30%
Hydrophitic Vegetation ? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Basis: Dominant species greater than 50% FAC-OBL species.					
SOILS: Series: Monmouth					
Hydric Soils List 1' 2' No <input checked="" type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulphic Odor <input type="checkbox"/>					
Soil Sample	Munsell Soil Chart Color		Textures	Other Indicators/ Comments	
	Matrix	Mottle			
0-6"	2.5Y 4/2		sandy loam	saturated	
6-12"	7.5Y 5/0	10YR 5/6	sandy loam	saturated	
Hydric Soils ? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Basis: Low chroma soils.					
HYDROLOGY:					
Inundated ? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth:					
Saturated Soils ? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth to Saturation: surface					
Other Hydrology Indicators ? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
<input checked="" type="checkbox"/> Drift Lines	<input checked="" type="checkbox"/> Surface Scoured Areas	Morphological Plant Adaptations			
<input type="checkbox"/> Water Marks	<input type="checkbox"/> Oxidized Root Channels	<input checked="" type="checkbox"/> Waterbourne Sediment Deposits			
<input type="checkbox"/> Hummocking	<input type="checkbox"/> Water-Stained Leaves	<input checked="" type="checkbox"/> Wetland Drainage Patterns			
Other:					
Wetland Hydrology ? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Basis: multiple indicators					

Disturbed Area ? Yes No Basis:

Problem Area ? Yes No Basis:

Wetland ? Yes No If yes, Cowardin Classification: PFO1J

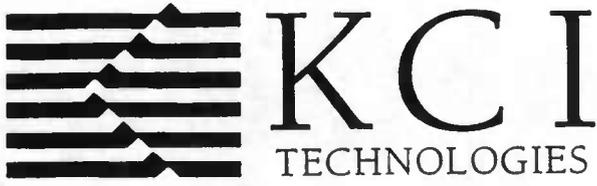
Comments:

Project: Mayo Elementary School		Wetland: 1	Transect:	Point: 2	
Client: Grimm & Parker		Date: May 11, 1999	Method: Routine		
Watershed: West Chesapeake Bay		County, State: Anne Arundel County, MD			
Weather: sunny		Recorded by: MJP and SBL			
Sampling Point Description: sample point taken within upland adjacent to wetland system					
VEGETATION: Stratum: 1-Trees; 2-Saplings/Shrubs; 3-Herbs; 4-Woody Vines					
Frequency Sampling Method: Visual estimate of percent aerial cover.					
Dominant Plant Species		Common Name	Stratum	Status	Freq.
<i>Quercus phellos</i>		willow oak	1	FAC+	20%
<i>Quercus rubra</i>		red oak	1	FACU-	40%
<i>Liquidambar styraciflua</i>		sweet gum	1	FAC	20%
<i>Rosa multiflora</i>		mutliflora rose	2	FACU	50%
<i>Acer negundo</i>		box elder	2	FAC+	20%
<i>Nyssa sylvatica</i>		black gum	2	FAC	20%
Hydrophitic Vegetation ? Yes No <input checked="" type="checkbox"/> Basis: Dominant species less than 50% FAC-OBL.					
SOILS: Series: Monmouth					
Hydric Soils List 1' 2' No <input checked="" type="checkbox"/> Histosol Histic Epipedon Sulphic Odor					
Soil Sample	Munsell Soil Chart Color		Textures	Other Indicators/ Comments	
	Matrix	Mottle			
0-10"	2.5Y 4/4		sandy loam		
10+"	2.5Y 3/4		loamy sand		
Hydric Soils ? Yes No <input checked="" type="checkbox"/> Basis:					
HYDROLOGY:					
Inundated ? Yes No <input checked="" type="checkbox"/> Depth:					
Saturated Soils ? Yes No <input checked="" type="checkbox"/> Depth to Saturation:					
Other Hydrology Indicators ? Yes No <input checked="" type="checkbox"/>					
Drift Lines	Surface Scoured Areas		Morphological Plant Adaptations		
Water Marks	Oxidized Root Channels		Waterbourne Sediment Deposits		
Hummocking	Water-Stained Leaves		Wetland Drainage Patterns		
Other:					
Wetland Hydrology ? Yes No <input checked="" type="checkbox"/> Basis:					

Disturbed Area ? Yes No Basis:
 Problem Area ? Yes No Basis:
 Wetland ? Yes No If yes, Cowardin Classification:
 Comments:

APPENDIX 4

APPROXIMATE WETLAND BOUNDARY



OFFICES OF KCI TECHNOLOGIES, INC.

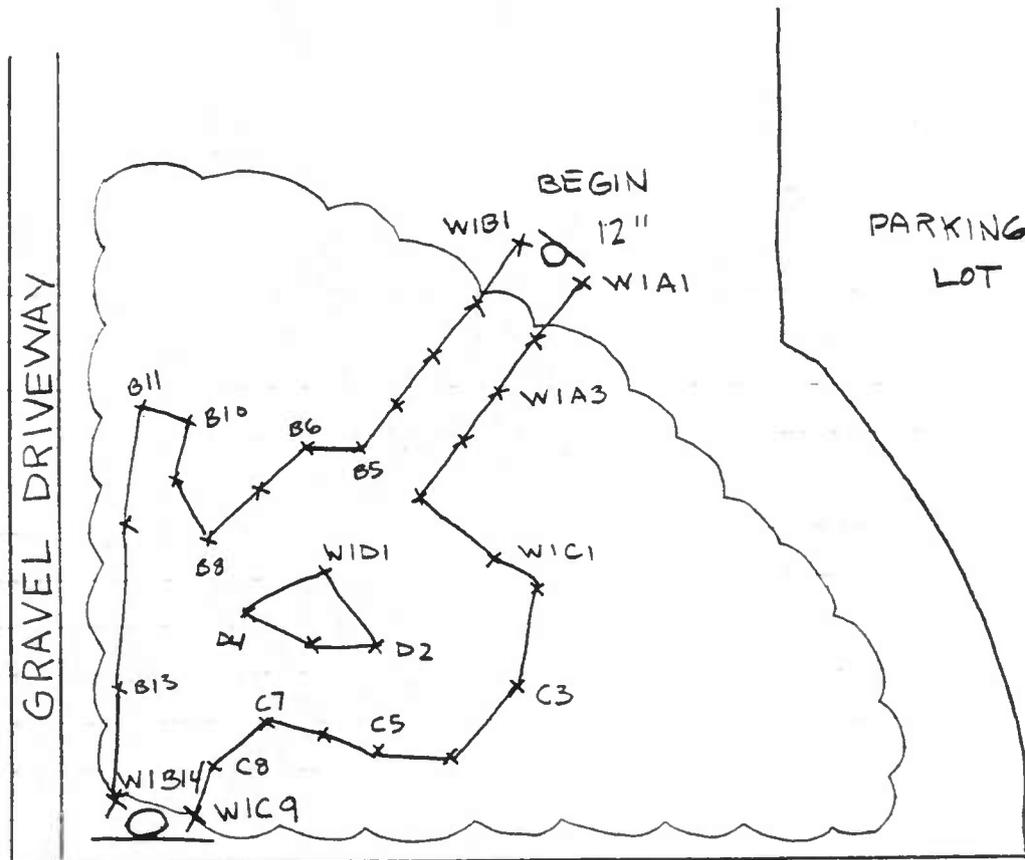
3105 LORENA AVENUE
 3220 TILLMAN DRIVE, SUITE 215
 7739 FROSCHE ROAD
 211 ROANOKE STREET, SUITE 12
 387-A CORNELIUS STREET
 10 NORTH PARK DRIVE
 14409 GREENVIEW DRIVE, SUITE 102
 10640 CRESTWOOD DRIVE
 5001 LOUISE DRIVE, SUITE 201
 100 COMMERCE DRIVE, SUITE 112
 3 GATEWAY CENTER, SUITE 1665
 4601 SIX FORKS ROAD, SUITE 200
 5650 BRECKENRIDGE PARK DRIVE, SUITE 104
 1200 G STREET, NW, SUITE 800

BALTIMORE, MD 21230
 BENSALEM, PA 19020-2083
 CHARLOTTE, NC 28208
 CHRISTIANSBURG, VA 24073
 HILLSBOROUGH, NC 27278
 HUNT VALLEY, MD 21030-1888
 LAUREL, MD 20708
 MANASSAS, VA 20109
 MECHANICSBURG, PA 17055-6912
 NEWARK, DE 19713-2879
 PITTSBURGH, PA 15222-1004
 RALEIGH, NC 27609-5210
 TAMPA, FL 33610
 WASHINGTON, DC 20005

DESIGN _____ DATE _____ SUBJECT _____ J.O. _____
 CHECK _____ DATE _____ SHEET _____ OF _____

APPROXIMATE WETLAND BOUNDARY

MAYO ELEMENTARY SCHOOL



END

MARYLAND 214

