ENVIRONMENTAL PLANNING SERVICES

WETLAND DELINEATION AND RECONNAISSANCE SURVEY

PREPARED FOR:

BL COMPANIES

February 7, 2005

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ENVIRONMENTAL PLANNING SERVICES

INTRODUCTION

This report documents the results of investigations conducted by Environmental Planning Services (EPS) at a site located on the north side of Boston Post Road (RT 1) and the west side of Joan Drive in Guilford, CT. EPS was retained to flag the limits of inland wetlands at the site and conduct preliminary wildlife and wetland functional assessments. Field visits were conducted on January 17 and 31, 2005.

The site's wildlife value in relation to the surrounding area was also assessed using GIS (Geographic Information System) data obtained from the CT Department of Environmental Protection. Because wildlife species do not recognize man-made boundaries, a landscape scale analysis is important to better understand the site's overall biological value.

WETLANDS

At the Federal level, four agencies are principally involved with wetland identification and delineation: Army Corp of Engineers (ACOE), Environmental Protection Agency (US EPA), Fish and Wildlife Service (F&WS), and Natural Resources (formerly Soil) Conservation Service (NRCS). Each of these agencies has developed techniques for identifying the limits of wetlands for various purposes. The ACOE and USEPA are responsible for making jurisdictional determinations of wetlands regulated under Section 404 of the Clean Water Act (formerly known as the Federal Water Pollution Control Act, 33 U.S.C.1344). The regulatory definition of wetlands used by the USEPA and ACOE for administering the Section 404 program is: those areas that are inundated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas (EPA, 40 CFR 230.3 and 33 CFR 328.3).

The working definition is based on the fact that wetlands possess three essential characteristics: (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology, which is the driving force creating all wetlands. These three parameters are also referred to an mandatory technical criteria, and if three are met for an area, it must be identified as a wetland. Such wetlands are often referred to as jurisdictional wetlands. The requirements of 33 CFR Part 328.3 apply once the limits of the jurisdictional wetland (or watercourses) are defined, if the proposed site activity results in the deposition of dredged or fill material into a wetland or water of the U.S. Deposition of fill is defined liberally, to include material deposited ahead of the machine, as a result of bulldozing or scraping soil out of an area.

However, the primary wetland jurisdiction in the state of Connecticut is at the municipal level under state enabling legislation (Connecticut Inland Wetlands and Watercourses Act). The ACOE has overlapping jurisdiction, but for permitting purposes, local project approvals (Site Plan Approval) typically start at the local level.

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The requirements of 33 CFR Part 328.3 do not apply with respect to determining the limits of regulated wetlands or watercourses under the Connecticut Inland Wetlands and Watercourses Act. Connecticut wetlands are defined as areas of poorly drained, very poorly drained, floodplain, and alluvial soils. Watercourses are defined as bogs, swamps, or marches, as well as lakes, ponds, rivers, streams, etc., whether man-made, permanent or intermittent. The limits of jurisdiction are typically similar to federal wetlands, but there are important exceptions, especially in floodplains. In addition, under the Connecticut Wetlands and Watercourses Act, the municipal wetland agency has the ability to establish an upland review area, typically 50- to 100-feet from the limit of the wetland/watercourse. The municipal agency may restrict certain activities within the upland review area, however the ACOE typically does not.

Therefore, our determination of the presence of regulated wetlands or watercourse on the site or adjacent to the site has been made by a soil scientist, based on criteria established in the Connecticut Inland Wetlands and Watercourses Act, i.e., areas of poorly drained, very poorly drained, floodplain, and alluvial soils. The wetlands were delineated by walking across the parcel in question on January 17, 2005, and examining the upper 20" of the soil profile with a spade and auger. Those areas meeting the requirements noted above were marked with pink plastic flagging tape numbered with the following sequences: WL 1-1 through 64 (includes flags 1-1 through 1-21) and WL 65-110.

Wetland soils on the site consist of Raypol soils. The Raypol series consists of very deep, poorly drained soils formed in loamy over sandy and gravelly glacial outwash. They are nearly level to gently sloping soils in shallow drainageways and low-lying positions on terraces and plains. The soils have a water table at or near the surface much of the year.

The non-wetland soils were not examined in detail, exceptas was necessary to delineate the wetland boundary. They consist of Hollis-rock outcrop complex and Udorthent soils. The Hollis series consists of shallow, well drained and somewhat excessively drained soils formed in a thin mantle of glacial till derived mainly from gneiss, schist, and granite. They are nearly level to very steep upland soils on bedrock controlled hills and ridges. Depth to hard bedrock ranges from 10 to 20 inches. Bedrock outcrops vary from few to many.
Udorthents is a miscellaneous land type used to denote moderately well to excessively drained earthen material which has been so disturbed by cutting, filling, or grading that the original soil profile can no longer be discerned.

Under Connecticut law, local municipal Wetland Agencies enforce the State of Connecticut enabling legislation. They also have the authority under the statute to regulate activity in an upland review area adjacent to wetlands. The depth or width of this upland review area is determined by each municipality, but is typically 50-100 feet from the wetland boundary. The New England District ACOE does not enforce a buffer zone or upland review area. The ACOE believes that their jurisdiction ends at the limit of the jurisdictional wetlands.

It is important to note that the Nationwide permits promulgated by the ACOE under Section 404 of the Clean Water Act do not apply in Connecticut. Instead, ACOE has issued General Permits that cover activity that meets certain area restrictions and other criteria, and which has been granted a local Inland Wetland Permit and all necessary state wetland and environmental permits. Under the CT Programmatic General Permit (as it applies to filling of non-tidal wetlands), total wetland impacts (direct plus indirect) totaling less than 5000 sq. ft. are permitted without further processing by the ACOE, provided that the CT and local permits are in place, and provided further that the impacts have been minimized to the maximum extent practical. The ACOE retains the right to require an individual permit in their sole discretion, and they meet monthly with the CTDEP, US Region 1 EPA, US Fish and Wildlife Service, and US National Marine Fisheries Service to review all applications that meet the area requirements of the General Permit. If any of these agencies object, the ACOE will require an individual permit. The New England ACOE typically does not "validate" wetland determinations in the absence of a pending permit application, but if requested, they have done so in the past.

WETLAND FUNCTIONS AND VALUES

The following information provides a brief description of the characteristics of the site's wetlands as well as their principal functions. This summary is based on field observations made during wetland delineation work as well as a brief review of natural resource GIS data pertaining to the site.

Wetlands on the site consist of Spinning Mill Brook with narrow bands of forested wetland (a.k.a. wooded swamp) flanking the north and south side of the brook. Spinning Mill Brook is a large perennial stream which originates north of the site at Enders Pond. The flanking forested wetlands consist of fairly typically wooded wetland habitat. The non-wetland areas of the site have undergone some significant clearing, filling and regrading in the past and consist mainly of old field habitat. The primary functions and values of the site's wetlands are fish habitat, floodwater storage and wetland wildlife habitat. The site provides moderate to moderately high quality values for these functions

WILDLIFE HABITAT

The site contains both wetland and non-wetland habitat types. Their locations are shown on the attached "Wildlife Habitat Map". Their characteristics are described below.

Wetland Habitats

Wetlands on the site consist of Spinning Mill Brook with narrow bands of forested wetland (a.k.a. "wooded swamp") flanking the north and south side of the brook. Spinning Mill Brook is a large perennial stream which originates north of the site at Enders Pond. The brook ranges from level and meandering to rocky and high-gradient. A small pond, likely man-made is located within the brook at the site's southeastern end.

The flanking forested wetlands consist of fairly typically wooded swamp habitat. The tree canopy consists mainly of Red Maple (*Acer rubrum*) and Black Birch (*Betula lenta*) with scattered Hemlock (*Tsuga canadensis*). The shrub layer consists of Pepperbush (*Clethra spp.*) and Spicebush (*Lindera benzoin*) with scattered Mountain Laurel (*Kalmia latifolia*) and Greenbriar (*Smilax spp.*).

The primary functions and values of the site's wetlands are fish habitat, floodwater storage and wetland wildlife habitat.

Upland Habitats

The majority of the non-wetland areas of the site have undergone some significant clearing, filling and re-grading in the past and consist mostly of "old field" habitat. The vegetation consists mainly of a variety of herbaceous vegetation (grasses, forbs) and Autumn Olive* (*Elaeagnus umbellata*) with scattered Multiflora Rose* (*Rosa multiflora*) Red Cedar (*Juniperus virginiana*) and Sumac (*Rhus spp.*). Old field "edges" consist mainly of young black birch and Cottonwood (*Populus deltoides*). A small portion of the southeastern area of the site is mixed hardwood forest consisting mainly of black birch, Red Oak (*Quercus rubrum*), Black Oak (*Quercus velutina*), and American Beech (*Fagus grandifolia*).

OVERALL WILDLIFE VALUE

The site is suitable habitat for a variety of songbird and mammalian species associated with riparian and early-succesional (open, unforested) habitats. The past disturbance (cutting, filling, re-grading) which has occurred on the site has likely had a negative impact on the overall wildlife value of the site. Small scale clearing of vegetation typically has little or no negative impacts to wildlife and can often be a benefit to many species. However it is the filling and re-grading of the land associated with that clearing that tends to have a deleterious affect on wildlife. The site is not likely to support a diversity of amphibian species.

NATURAL DIVERSITY DATABASE REVIEW

The Connecticut Department of Environmental Protection's Natural Diversity Database program represents current documented data showing the known locations of any endangered, threatened or special concern species and significant natural communities. Submission to the database for information regarding a given site is done if the subject site:

1. Occurs within a designated NDDB area
2. Overlaps a water body that has been designated a NDDB area
3. Is upstream or downstream (by less than ½ a mile) from a NDDB area

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* Invasive, non-native species

The most recent maps dated June 2004 were reviewed. The subject site does not fit any of the above criteria. Therefore, no information request was made to the DEP's Natural Diversity Database Program regarding review of the proposed activities. A topographic map showing the natural diversity database areas relative to the subject site has been attached in this report.

STATE-LISTED SPECIES

State-listed species represent species listed as endangered, threatened or special concern by the Connecticut Endangered Species Act. Suitable habitat was found on the site for one species of special concern[1], the Wood Turtle (*Clemmys insculpta*). The wood turtle inhabits riparian habitats bordered by floodplain, woodlands or meadows. Terrestrial habitats used during the summer include pastures, old fields, woodlands, powerline cuts, and railroad beds, bordering on or adjacent to streams and rivers[2]. Because the site contains a perennial stream bordered by old field habitat, and wood turtle are known to occur in the town of Guilford, the use of this site by wood turtle cannot be ruled out on the basis of habitat conditions. Spring-summer surveys would be required to confirm the presence of wood turtle on this site.

FLOODZONES AND AQUIFERS

The area surrounding Spinning Mill Brook is located within the FEMA's floodzone A. The site is not located within any aquifer protection areas but is located in close proximity to the Guilford Well field, a preliminary aquifer protection area operated by the Connecticut Water Company.

Respectfully submitted,

Michael S. Klein, Principal
Registered Soil Scientist
Certified Professional Wetland Scientist

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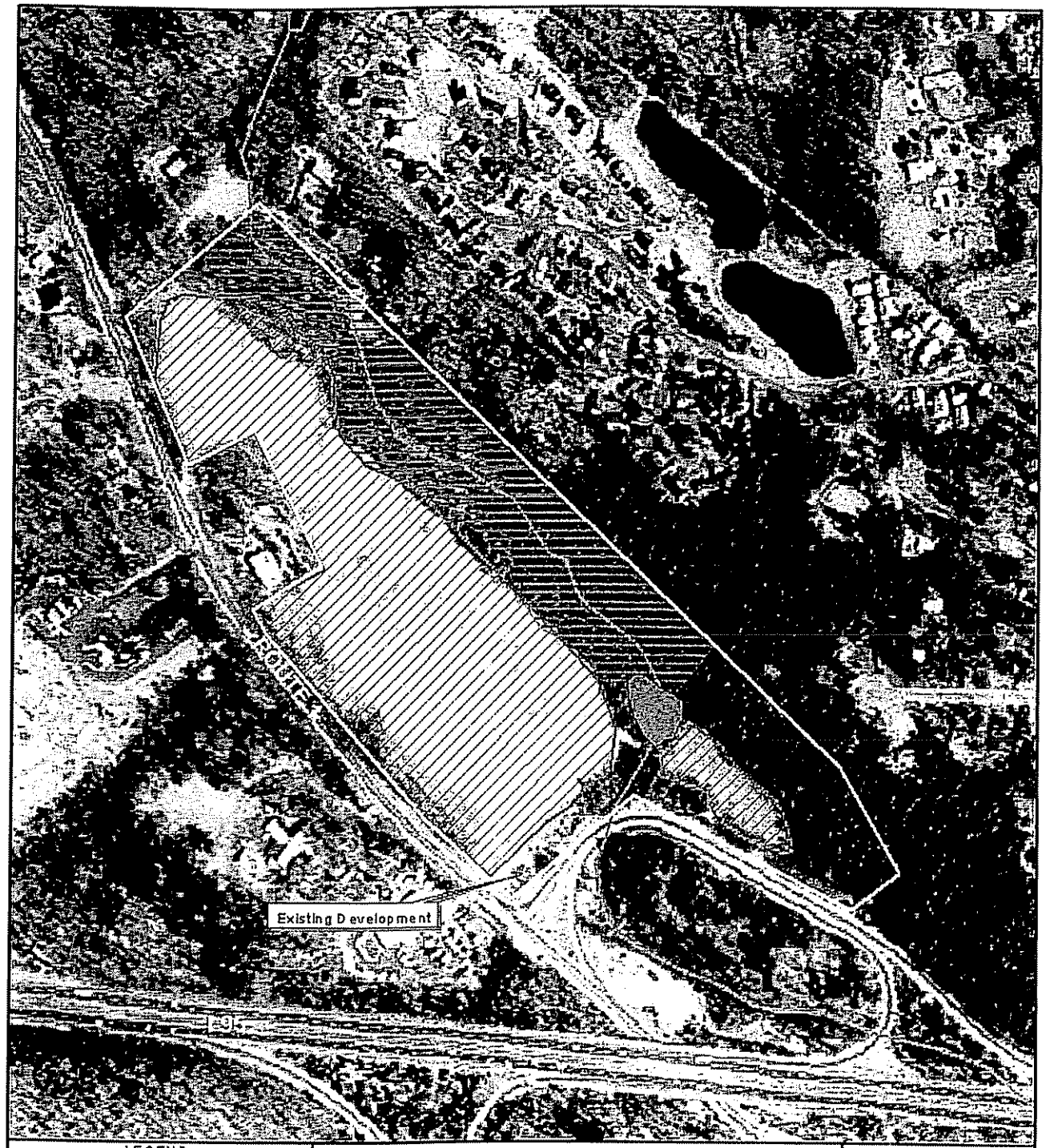
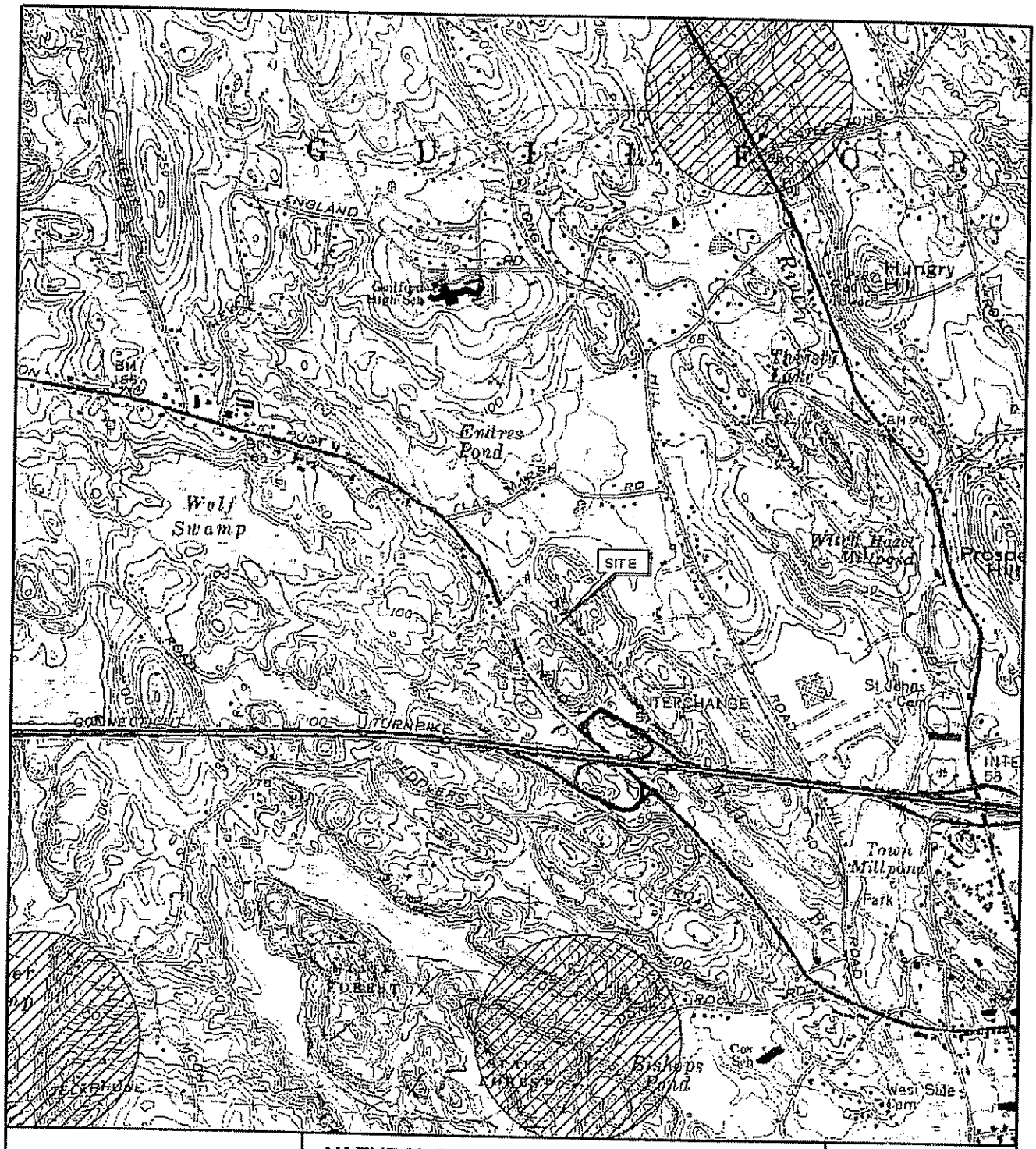
[1] "Species of Special Concern" means any native plant species or any native nonharvested wildlife species documented by scientific research and inventory to have a naturally restricted range or habitat in the state, to be at a low population level, to be in such high demand by man that its unregulated taking would be detrimental to the conservation of its population or has been extirpated from the state (CT Endangered Species Act).

[2] Klemens, M. W. 1993. Amphibians and Reptiles of Connecticut and Adjacent Regions. CT DEP Bulletin 112


Existing Development
LEGEND
Wooded Swamp-Riparian Forest Floodplain Complex
Pond
Property Boundary
Old Field
Spinning Mill Brook
Mixed Hardwood Forest (unmarked areas)
WILDLIFE HABITAT MAP
Route 1 and Jones Drive, Guilford
Map showing wildlife habitats based on CT DEP aerial photograph (1995). This map is intended for general planning purposes only
Environmental Planning Services, West Hartford, CT (860) 236-1578
N
SCALE
80 0 80 Feet



KEY

Site Boundary

NDDB Areas

NATURAL DIVERSITY DATABASE MAP

USGS topographic map showing the CT DEP's natural diversity database areas (maps dated June 2004) This map is intended for general planning purposes only

N

SCALE

400 0 400 800 Feet

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WETLAND FLAGGING SKETCH

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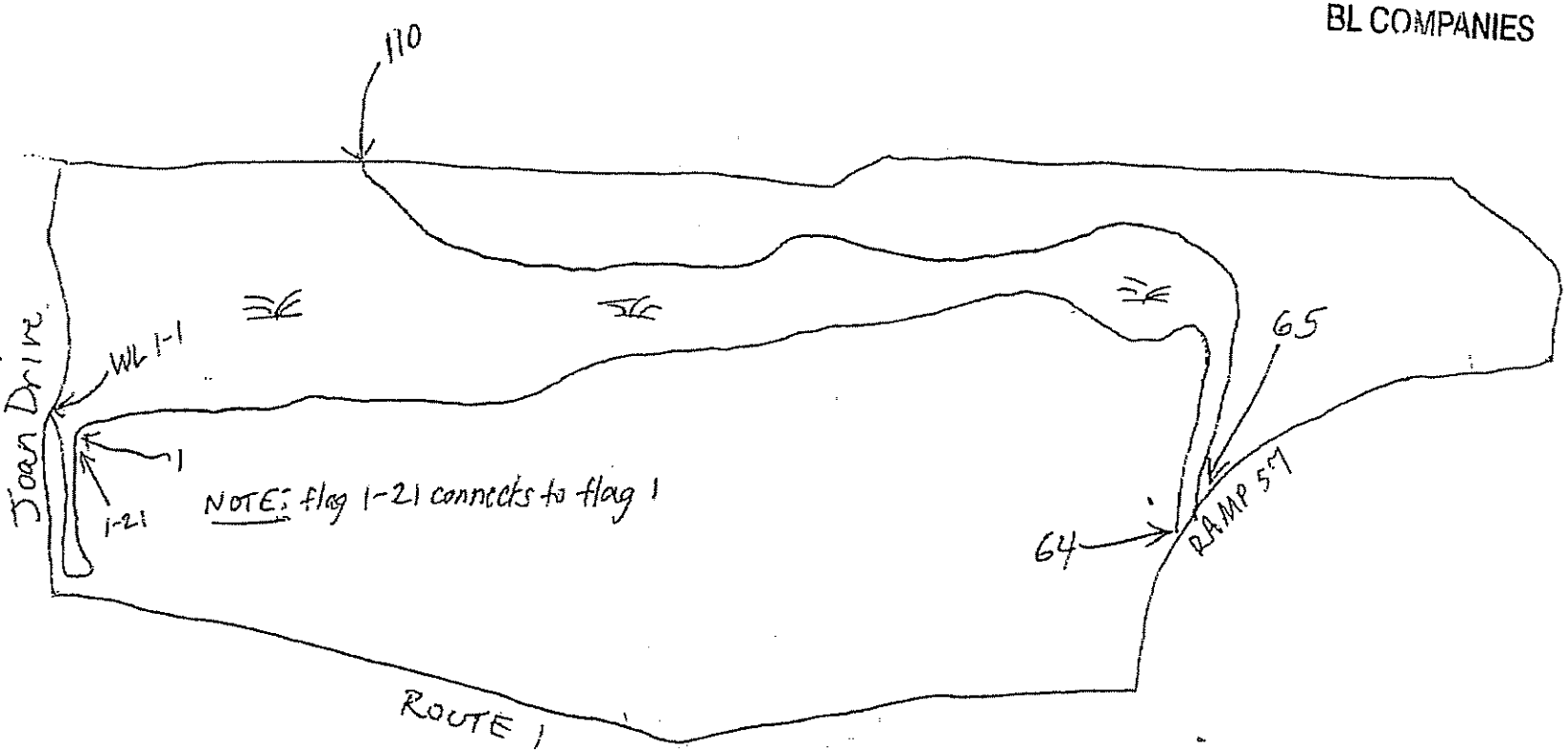
& Report is in the mail.



SITE LOCATION:	
FROM:	Eric Davison Phone: 860-803-0938 (cell) Email: edavison@snet.net
TO:	Sen Marks
DATE:	1/17/05

Note: the information shown on this sketch, including the wetland Boundary, is approximate. This map is intended for surveying purposes only.