

Sommer & Williams

Landscape Architects • Landscape Engineering & Planning

March 5, 1985

RECEIVED
MAR 6 1985

LEON COUNTY, FLORIDA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENVIRONMENTAL AND ENGINEERING SERVICES
3401 W. Tharpe Street
Tallahassee, Fl. 32303
Att.: Mr. Helge Swanson

RE: BOBBIN BROOK PHASE II STORMWATER MANAGEMENT PLAN

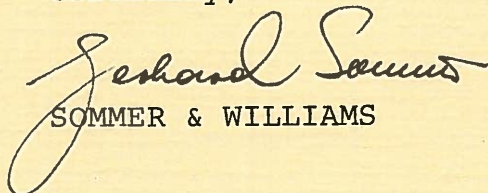
Dear Mister Swanson,

Enclosed find the requested Stormwater Management Plan (4 copies as requested), the completed application, storm runoff calculations and a check in the amount of \$ 77.15 filing fee.

We reviewed the entire area of the storm runoff basin, including previous calculations by other, and concluded that the control structure installed in Phase I, provides for off-site and on-site storm runoff volumes and capacity. We addressed this collective datum under note 1. on the Stormwater Management Plan for your review.

May I personally thank you and your committee for your valuable time and assistance you provided us in resolving this issue.

Cordially,


SOMMER & WILLIAMS

gs/GS; Dr. Pumphrey; FILE;
ENCLOSURES

STORMWATER RINOFF CONTROL DESIGN CALC'NS

33.7 Ac

Existing C = 25%

T.C. = 1 HR

 $I_{25yr} = 3.6 \text{ IN/HR}$

$$Q = (33.7)(3.6)(.25) = 30.3 \text{ cfs}$$

FUTURE C = 30%

T.C. = 1 HR

 $I_{25yr} = 3.6 \text{ IN/HR}$

$$Q = (33.7)(3.6)(.30) = 36.4 \text{ cfs}$$

$$\text{Volume} = 0.66 \text{ AC/FT}$$

ORIG. DESIGN OF DETENTION AREA PROVIDED: 3.66 AC FT.

ORIG. VOLUME = 2.84 AC FT.

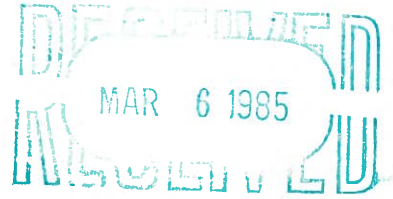
INCREASE IN VOLUME = 0.66 AC FT

3.50 AC FT Combined Volume

which is less than orig design

FOR ADDITIONAL INFORMATION SEE:

STORMWATER MANAGEMENT PLAN

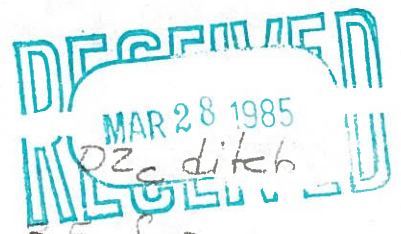


SWALES

1

SWALE #1
 $H = 9.2$ Ac
 $L = 3.6$
 $C = .3$

$\frac{10}{900} = 1.1\%$

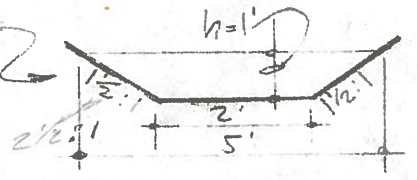


FOR .01 slope

Velocity = 5.5 fps

$Q = CIA$
 $= .3(3.6)(9.2)$
 $Q = 9.9$ cfs.

REQ'D MIN. DITCH
 DZA 2' Bottom
 1' Deep
 Width = 5'

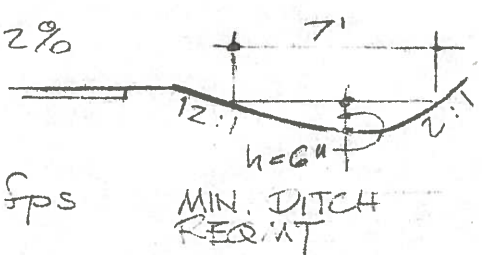


SWALE #2

slope $\frac{8}{400} = 2\%$

@ pipe a $\rightarrow 4.9$ cfs

DIA Ditch
 velocity ≈ 3 fps



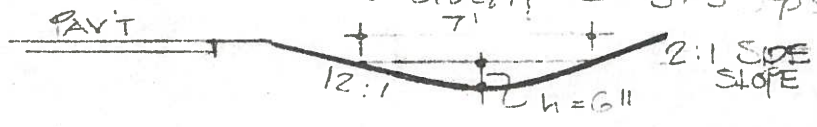
MIN. DITCH REQ'D

SWALE #3

flow @ pipe c = 4.9 cfs

slope $\frac{12}{400} = 3\%$

DIA Ditch
 velocity ≈ 3.3 fps



MINIM. DITCH REQ'D

SWALE #4

slope 2%

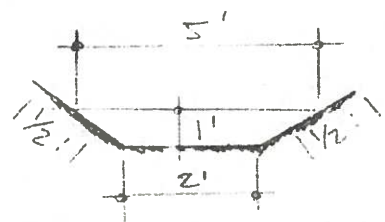
A-B + (300x400)
 $120000 \approx 3AC$

DZA ditch
 velocity ≈ 4.9 fps

$(.3)(3)(6.3)$
 5.67 cfs

2
 5.7
 $4.9 = A$
 $5.7 = B$

 16.3 cfs



MINIMUM DITCH REQUIREMENT

42 SHEETS 5 SQUARE
 42 SHEETS 10 SQUARE
 42 SHEETS 20 SQUARE
 NATIONAL

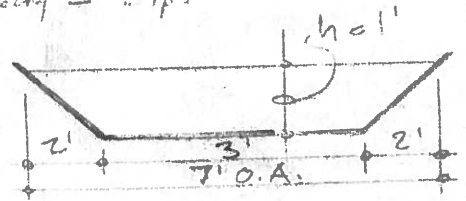
SWALE #5

Ditch A = 16.3 cfs

C = 4.6 cfs

$$+6AC = \frac{9.0 \text{ cfs}}{29.9 \text{ cfs}}$$

Slope = 2.5%

From chart - velocity $\cong 5 \text{ fps}$ MIN. ASSUMED
DITCH CONSTR.

Area = $(3+7) \times 1 = 5 \text{ sf}$

P = $1.7' + 3' + 1.7' = 6.4'$

R = $\frac{A}{P} = \frac{5}{6.4} = 0.7813$

$R^{2/3} = 0.3482$

S = 0.025 ft/ft

$S^{1/2} = 0.1581$

$V = \frac{1.486}{n} (R^{2/3}) (S^{1/2})$

$= \frac{1.486}{0.03} (0.3482) (0.1581)$

$= 6.6 \text{ fps}$

Q = AV

$= 5(6.6)$

Q = 33.2 cfs

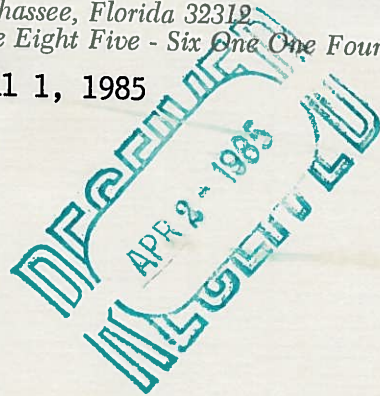
Since Q of assumed ditch is greater than discharge expected, depth in ditch will be less and actual velocity will be less than the 6.6 fps calculated.

JAMES E. PUMPHREY, D.D.S., P.A.
CLIFFORD E. CAMPBELL, D.M.D., P.A.

Practice limited to Orthodontics

2027 Thomasville Road
Tallahassee, Florida 32312
Three Eight Five - Six One One Four

April 1, 1985



Mr. Helge Swanson
Dept. of Public Works
3401 W. Tharpe Street
Tallahassee, FL 32303

Dear Mr. Swanson,

As the developer of Bobbin Brook II, I am writing to confirm the fact that there will be no activity on lots 39,40,41,42,43,&44 that will result in a reduction of the storage volume of the flood prone area.

Sincerely,

Jim Pumphrey
General Partner
Bobbin Brook, Ltd.

JEP/jte



EXHIBIT "B"

A

$C = .25$

.5 ft/min calculated

$Q = C L A$

$= .3(6.3)(2.6)$

$Q = 4.9 \text{ cfs}$

$n = 0.013$ Seelye pg 18-68

Riveted & spiral steel pipe

Pipe slope = 2% = 0.02

From Seelye pg 18-2

Pipe size = 12' min

velocity = 6.4 fps

B

$Q = C L A$

$= (.3)(6.6)(2.9)$

$= 5.7 \text{ cfs}$

Pipe slope = 1% = .01

Pipe = 15"

Velocity = 5.1 fps

C

$Q = C L A$

$= (.3)(6.6)(2.3)$

$= 4.6 \text{ cfs}$

Pipe slope = 1% = .01

Pipe = 15"

Velocity = 4.8 fps

Pipe = 15"

Velocity = 4.9 fps

(D) $Q = CIA$
 $= (1.3)(67)(2.7)$
 $= 5.8 \text{ cfs}$
 4% slope

12" pipe
 Velocity = 8.7 fps

(C+D) = (E+F)

$2.3 + 2.9 = 5.2 \text{ Ac}$

$Q = CIA = (1.3)(5.0)(5.2)$

$Q = 7.8 \text{ cfs}$

$\frac{7.8}{2} = 3.9 \text{ cfs}$
 each pipe

5.5% slope

Pipe = 12" ~~dia~~

Velocity = 7.5 fps

(G) 36.4 cfs

Slope = 1%

Pipe = 30" ϕ

Velocity = 8.1 fps

42 SHEETS 50 SHEETS 3 SQUARE
 42 SHEETS 100 SHEETS 3 SQUARE
 42 SHEETS 200 SHEETS 3 SQUARE
 42 SHEETS 400 SHEETS 3 SQUARE



Storage Required in Retention Area

$$\text{Existing flow} = 30.3 \text{ cfs}$$

$$\text{Future flow} = \underline{36.4 \text{ cfs}}$$

$$\text{Difference} = 6.1 \text{ cfs. to be retained}$$

$$T_c = 1 \text{ hr} = 3600 \text{ sec.}$$

$$6.1 \times 3600 = \frac{21,960}{43560} = 0.50 \text{ Acft.}$$

$$\text{ORIG. Retention provided} = 3.66 \text{ Acft.}$$

$$\text{ORIG Volume} = 2.84 \text{ Acft}$$

$$\text{INCREASE IN VOLUME} = \frac{0.50 \text{ Acft}}{}$$

$$3.34 \text{ Acft Combined Vol}$$

$$3.34 < 3.66 \text{ provided.}$$

	Type Permit	Dev.	
89-0240	5	Church	11-02-20- 605 -0000
(5/4/09)		Developer	
	.84 acres	Church	

Rt 3 Box 765 Centerville Rd.

No violations

85-0082	Long. Bobbin Brook I & II	11-06-29
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145.5 Acres

Cont.

wetland violation

TYPE PERMIT: SW

PERMIT #: 85-0082

LOCATION: Maclay Road

PARCEL #: 11 06 29 - 0000

NAME OF DEVELOPMENT: Belkin Brook Phase II

FLOODPLAIN: YES _____ NO _____

OWNER: James E. Pumphrey

PHONE: 385 6114

ACRES: 77.15

CONTR.: Wms & Wms Const Co

PHONE: 576-1112

ENGR.: Sommer & Williams

PHONE: 912 228 0606

	DATE:	BY:	ENTERED:
<input checked="" type="checkbox"/> APPLICATION RECEIVED	<u>3-6-85</u>	<u>RM</u>	<u>Set</u>
<input type="checkbox"/> PERMIT AMENDMENT RECEIVED	_____	_____	_____
<input type="checkbox"/> ADDITIONAL INFO. REQUESTED	<u>④ 3-14-85</u>	<u>HGU</u>	_____
<input type="checkbox"/> RESUBMITTAL	<u>⑤ 3-28-85</u>	<u>HGU</u>	_____
<input type="checkbox"/> APPLICATION APPROVED	<u>⑨ 4-8-85</u>	<u>HS</u>	_____
<input type="checkbox"/> APPLICATION APPROVED W/ SPECIAL CONDITIONS	_____	_____	_____
<input type="checkbox"/> APPLICATION DENIED	_____	_____	_____
<input type="checkbox"/> STAFF REVIEW	<u>⑧ 4-5-85</u>	<u>WGN</u>	_____
<input type="checkbox"/> SITE VISIT	<u>② 3-13-85</u> <u>⑦ 4-4-85</u>	<u>HGU</u> <u>WGN</u>	_____
<input type="checkbox"/> TEAM REVIEW	<u>③ 3-14-85</u> <u>⑥ 3-28-85</u>	<u>HGU</u> <u>HGU</u>	<u>Set</u>
<input type="checkbox"/> APPLICANT CONFERENCE	_____	_____	_____
<input type="checkbox"/> FINAL INSPECTION APPROVED	_____	_____	_____
<input type="checkbox"/> NOTICE OF VIOLATION	_____	_____	_____
<input type="checkbox"/> STOP WORK ORDER	_____	_____	_____
<input type="checkbox"/> REFERRED TO COUNTY ATTORNEY	_____	_____	_____
<input type="checkbox"/> OTHER	_____	_____	_____

LEON COUNTY DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENVIRONMENTAL AND ENGINEERING SERVICES
STORMWATER MANAGEMENT PERMIT

DATE ISSUED April 8, 1985

PERMIT NO. 85-0082 S

PROJECT Bobbin Brook II

SPECIAL CONDITIONS PER
EXHIBIT B

LOCATION Maclay Road

PERMITTEE Dr. James E. Pumphrey

Failure to conform to the terms and conditions of the permit shall constitute a violation and may result in a fine of up to \$500 or imprisonment of up to 60 days or both.

PERMIT SHALL BE POSTED ON SITE DURING ALL PHASES OF ACTIVITY

project: Bobbin Brook Ph. II
proj. no: 148.0
date: 3/28/85
from: G. SOMMER
to: H. G. UNDERWOOD

transmittal letter

Sommer & Williams

Victoria Square • P.O. Box 1756 • Thomasville, GA 31792

P.O. Box 14186 • Tallahassee, FL 32317

(912) 228-0606

we transmit: () herewith () under separate cv.
for your: () approval () use () information
() review & comment () record
the following: 3 ~~X~~ drawings () shop drawings () catalogue cuts
() specifications () change order

Dear Mr. Underwood
As requested in yesterday's meeting in
your office we enclose additional prints
for your use

Cordially,

J. Sommer

copies to:	w/encl.
	<input type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>

by:

Sommer & Williams

Landscape Architecture • Planning • Landscape Engineering

Gerhard Sommer
Landscape Architect

Phillip Williams
Landscape Architect

Andrew Keel
Professional Engineer

March 27. 1985

Department of Public Works
3401 West Tharpe Street
Tallahassee, Fl. 32303
Att.: Mr. H. Grady Underwood



RE: BOBBIN BROOK PHASE II

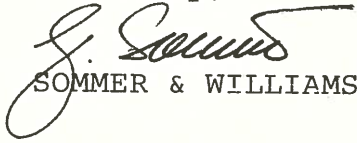
Dear Sirs:

In reference to your letter dated March 14. 1985, we herewith reply in numerical order with your request items:

1. Storm runoff in this area will be sheet drained across the 100 foot power line easement at a very low velocity in swale #1 on the plan, with an average slope not exceeding one percent, to an existing stream.
2. For typical drainage swales see calculations for swales #1 through #5 and site details for road cross sections DWG. 148.17 attached herein.
3. The note regarding the 0.66 Ac. retention in wide swale was shown in error and on the wrong side of the control structure. It should have said that Phase II requires 0.50 Ac.Ft. runoff storage in the basin of the control structure #2 as shown on the plan, also see sheet 5 attached.
4. Storm drain diameters and calculations are attached herein, see sheets 4 & 5.
5. See calculations sheet 1 & 2 for velocities in road-side and drainage easement swales. See also DWG #148.17 enclosed herein.
6. The 100 year flood line is shown on the plan by a circle dash circle line. The owner requested that he be allowed to fill in 50 feet from the 100 year flood line as shown on the plans to make lots 41, 42 and 43 useable in combination with the required setback limits for this project. The fill for this was to be obtained by excavating a small pond behind lots 41, 42 and 43, this would result in no volume reduction in the flood prone area and the remainder of the property would be undevelopable and remain natural.

We appreciate your comments. Please feel free to contact us for any other information you may require, so we can complete this work.

Cordially,


SOMMER & WILLIAMS

gs/GS; DR. PUMPHREY; FILE; ENCLOSURES



file

Board of County Commissioners

DEPARTMENT OF PUBLIC WORKS
3401 WEST THARPE STREET
TALLAHASSEE, FLORIDA 32303
904-488-9300

Commissioners:

DOUG NICHOLS
District 1

GAYLE NELSON
District 2

WILLIAM J. MONTFORD
District 3

ROBERT K. HENDERSON
District 4

J. LEE VAUSE
District 5

JAMES W. PARRISH
County Administrator

F. E. STEINMEYER, III
County Attorney

March 14, 1985

Sommer & Williams
Post Office Box 1756
Thomasville, Ga. 31792

Re: Bobbin Brokk Phase II
File #85-0082S

Dear Sirs:

We have found the plans and application submitted on March 6, 1985, for the above subject project to be incomplete. Please provide the following on the plans so that we may complete our review.

- 1) The plan indicates that stormwater will be collected and directed from Rosebay Court to adjacent property by way of a 360' drainage easement. Normally stormwater detention is required to reduce impact on downhill property owners. Please provide clarification.
- 2) Show typical section of drainage swales.
- 3) Provide clarifications concerning note on plan, "control #1...0.66 Ac. retention provided for in wide swale." Provide calculations showing how it was determined that 0.66 Ac./feet of detention will be required.
- 4) Show diameter of crossdrains and calculations used in sizing these facilities.
- 5) Provide calculations giving velocity in drainage easement and roadside drainage swales.

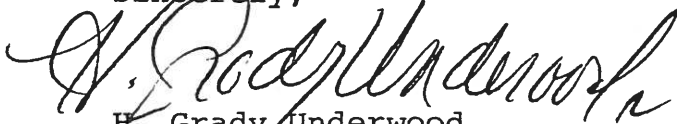
Sommer & Williams
March 14, 1985
Page Two

Re: Bobbin Brook - Phase II
File #85-0082S

- 6) Show 100 year flood elevation on plan and provide copy of deed restrictions with statement that no activities will be allowed in flood plain that will result in a reduction in the storage volume of the flood prone area.

Thank you for your prompt attention to this request. We will continue the permitting process upon receipt of your reply.

Sincerely,



H. Grady Underwood,
Environmental Planner

HGU/rem

Date: 3-14-85

Signature: H. H. Underwood

File: 85-0082 (S)

Project Name Bobbin Brook - Phase II

Address to:

Date of Submittal 3-6-85

Application
 Resubmittal

Sommer + Williams

P.O. Box 1756

Thomasville, Ga. 31792

Status:

Approval
 Approval with conditions
 Denial
 Incomplete

INFORMATION NEEDED

Provide information concerning the following:

- (1) Plan indicates that stormwater will be collected and directed from Rosebay Court to adjacent property by way of a 360' drainage easement. Normally stormwater detention is required to reduce impact on ~~adjacent~~ ^{downhill} property owners. Please provide clarification.
- (2) Show typical section of drainage swales.
- (3) Provide calculations giving velocity in drainage easements ~~and~~ and roadside drainage swales.
- (4) Show diameters of cross drains and calculations used in sizing these facilities.
- (5) Provide clarification concerning note on plan "Control #1.00 0.66 Ac. retention provided ~~for~~ ^{how it was determined that} for in ~~wide~~ ^{swale}". Provide calculations showing ~~that~~ 0.66 Ac/1 foot of detention will be required.
- (6) Show 100 year flood elevation on plan and provide copy of deed restrictions ~~to~~ (over).

TYPE PERMIT: SWL

PERMIT #: 1362

LOCATION: Maclay

PARCEL #: 11-06-28-0000

NAME OF DEVELOPMENT: Bobbin Brook Ph. 2

FLOODPLAIN: YES _____ NO _____

OWNER: James Pumphrey

PHONE: 385-6114

ACRES: 145

CONTR.: _____

PHONE: _____

ENGR.: Summer Wms.

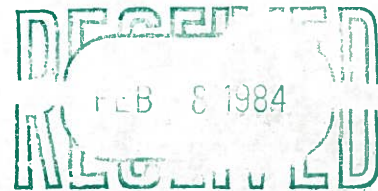
PHONE: (912) 228-0606

	DATE:	BY:	ENTE
<input checked="" type="checkbox"/> APPLICATION RECEIVED	<u>2-26-82</u>	<u>URM</u>	<u>RB</u>
<input type="checkbox"/> PERMIT AMENDMENT RECEIVED	_____	_____	_____
<input type="checkbox"/> ADDITIONAL INFO. REQUESTED	_____	_____	_____
<input type="checkbox"/> RESUBMITTAL	_____	_____	_____
<input checked="" type="checkbox"/> APPLICATION APPROVED	<u>3-8-82</u>	<u>URM</u>	<u>RB</u>
<input type="checkbox"/> APPLICATION APPROVED W/ SPECIAL CONDITIONS	_____	_____	_____
<input type="checkbox"/> APPLICATION DENIED	_____	_____	_____
<input type="checkbox"/> STAFF REVIEW	_____	_____	_____
<input type="checkbox"/> SITE VISIT	_____	_____	_____
<input type="checkbox"/> TEAM REVIEW	_____	_____	_____
<input type="checkbox"/> APPLICANT CONFERENCE	_____	_____	_____
<input type="checkbox"/> FINAL INSPECTION APPROVED	_____	_____	_____
<input type="checkbox"/> NOTICE OF VIOLATION	_____	_____	_____
<input type="checkbox"/> STOP WORK ORDER	_____	_____	_____
<input type="checkbox"/> REFERRED TO COUNTY ATTORNEY	_____	_____	_____
<input type="checkbox"/> OTHER	_____	_____	_____

Sommer & Williams

Landscape Architects • Landscape Engineering & Planning

February 7, 1984



TO: Helge Swanson, Engineer
Leon County Environmental Services
1123 Thomasville Road
Tallahassee, FL

RE: REVISED PRELIMINARY PLAT FOR **BOBBIN BROOK, PHASE II**

*78 ac
44 lots*
→ *Approved Pkg. Com.
Feb 16 1984*

Dear Helge,

Enclosed please find a print of the revised preliminary plat for the subdivision Bobbin Brook, Phase II, which Dr. James E. Pumphrey asked our firm to prepare.

As we discussed in our telephone conversation of February 1, the revised plat provides the same number of lots and dwelling units, as well as the same type of conceptual stormwater management design. The difference between the two plats, generally speaking, is the road alignment and the lot line locations.

We certainly thank you for granting us the extra time we needed to submit this plat and would be happy to meet with you at your convenience to answer any questions you may have.

Cordially,

A handwritten signature in cursive script that reads "Phillip Williams".

Phillip Williams

ENCL.

PW/pw

LEON COUNTY DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENVIRONMENTAL SERVICES

CLEARING AND DEVELOPMENT PERMIT

Date Issued March 10, 1982 **Permit No** 1362 C&D

Project MACLAY SUBDIVISION

Location South of Maclay Road

Owner/Agent Dr. Jim Pumphrey

Securing this permit does not exempt the applicant from local, state, or federal regulations. "SPECIAL CONDITIONS EXIST"

The person accepting this permit shall conform to the terms of the application on file in the office of the Division of Environmental Services and shall conform to the requirements of Ordinance No. 73-10 as amended by 73-57 & 75-5.

This permit must be posted on site during all phases of construction.



Board of County Commissioners

Bobbin Brook

DEPARTMENT OF PUBLIC WORKS
3401 WEST THARPE STREET
TALLAHASSEE, FLORIDA 32303
904-488-9300

Commissioners

DOUG NICHOLS
District 1

GAYLE NELSON
District 2

WILLIAM J. MONTFORD
District 3

ROBERT K. HENDERSON
District 4

J. LEE VAUSE
District 5

JAMES W. PARRISH
County Administrator

F. E. STEINMEYER, III
County Attorney

December 18, 1986

Dr. James E. Pumphrey
3551 N. Meridian Road
Tallahassee, Florida 32308

RE: Filling Activities in a Wetland Area

Dear Dr. Pumphrey:

Citizen calls concerning filling activities in the wetlands area adjacent to Meridian Road prompted an investigation by this Department. During this investigation, a road bed was discovered on the north portion of your property (Parcel #11-06-20-602-0000).

Filling activities in wetlands is closely regulated by the Leon County Stormwater Management Ordinance #85-08. Mr. Helge Swanson, Chief of Environmental Review, has asked that you call him at 488-9300 to arrange an appointment with him with the intent of determining your development plans for this parcel.

Thank you for your cooperation in this matter.

Sincerely,

A handwritten signature in cursive script that reads "Raymond E. Keaton".

Raymond E. Keaton
Engineering Inspector

REK/sa

BROWARD DAVIS & ASSOC., INC.

PLANNING • ENGINEERING • SURVEYING • DEVELOPMENT MANAGEMENT

FLORIDA • GEORGIA • ALABAMA

BROWARD P. DAVIS, P.L.S.
LARRY E. DAVIS, P.L.S.
LEE F. DOWLING, P.L.S.
JANET M. JACKSON, P.L.S.



WALTER A. JOHNSON, P.E., P.L.S.
NEVINS C. SMITH, JR., P.E.
KAREN K. BASS, E.I.

March 5, 1982

Mr. Mike Murphree
Drainage Engineer
Leon County Courthouse
Tallahassee, Florida 32301

RE: MACLAY

Dear Mike:

Per our agreement 3-5-82, the following information revised plans and calculations.

Ownerships in Bobbin Mill Woods along creek as it runs across lots from Maclay Westward according to Dr. Jim Pumphrey:

1. Williams
2. Cohen
3. Dunlop
4. Pumphrey
5. Cheek
6. Lovelace

The remainder out to Meridian is owned by Dr. Pumphrey. Bobbin Mill Woods is a recorded subdivision and the County didn't want an easement along the creek. The deed restrictions in Maclay will be similar to Bobbin Mill Woods. There will be an easement along the creek in Maclay. Dr. Pumphrey wants the creek in Maclay to be left natural. Please see revised plat with additional easements.

Please review attached revised drainage calculations. Thank you for catching the error in original calculations.

Please call if you have any questions.

Sincerely,

W. A. Johnson, P.E.
Florida Registered Engineer, No. 9295

WAJ/bac
cc: Dr. Jim Pumphrey
BPD #70-289 PSR #1483