MOHR & SEREDIN
Landscape Architects, Inc.

March 27, 2001

Jonathan Spence, Planner
City of Portland
City Hall
389 Congress St.
Portland, ME 04101-3503

RE: Stroudwater River's Edge Subdivision – Resubmission for Workshop

Dear Jonathan:

Peter Kennedy has shared with us your letter of March 12, regarding the additional information that the City of Portland is seeking for the above referenced project. The team of consultants that are working on the River's Edge project for Mr. Kennedy have responded to your request for additional information by revising the plans for the project and providing additional plans and documentation. These are as follows:

1) Owen Haskell, Inc. has prepared a subdivision plan for the project with all of the requisite information.
2) Mohr & Seredin Landscape Architects, Inc. has prepared a landscape plan (L-1), depicting trees to remain and new planting.
3) Mohr & Seredin Landscape Architects, Inc. has prepared a lighting plan; showing two proposed streetlights for the project. Where this is a private-way only the two internal intersections will have streetlights. These will be 75-watt CMP Colonial luminaires, mounted on wood poles.
4) Pinkham & Greer Engineers have completed the Stormwater Management plan. The text is included with this letter and the plan set includes plans with the drainage area.
5) Letters of technical and financial capability are included with this submission as part of the text documentation.
6) A letter from the Portland Water District has been secured by Mr. Kennedy and is included with this submission.
7) Mohr & Seredin Landscape Architects Inc. has compiled a list of the other state and federal permits needed for implementation of the subdivision. This is included as Attachment A in this submission.
8) Mr. Kennedy has provided a deed for the property as proof of ownership of the parcel.
9) Mohr & Seredin Landscape Architects Inc. have completed the City's site plan checklist, which is included with this submission as Attachment B.

We are resubmitting all of the plans, and ask that you forward to us any comments or concerns with the project as proposed. We look forward to meeting with the Board for a workshop session on April 10.

Sincerely,

Stephen B. Mohr, ASLA

18 Pleasant Street, Portland, Maine 04101
(207) 871-0003

037087

SHORT FORM QUITCLAIM DEED WITH COVENANT

Robert C. Hunt, of Swampscott, Massachusetts, FOR CONSIDERATION PAID, grants to Stroudwater Farms Associates, with a mailing address of 40 Blanchard Road, Cumberland, Maine, with QUITCLAIM COVENANT, certain real property, together with any improvements thereon, located on Congress Street, Portland, Cumberland County, Maine, more particularly described in Exhibit A attached hereto.

Subject to an easement grant to the Portland Water District by deed dated October 2, 1981 and recorded at the Cumberland County Registry of Deeds in Book 4864, Page 144 and a right-of-way to E. Harriet Caron by deed dated February 29, 1956 and recorded at said Registry in Book 2263, Page 427.

Intending to convey a portion of the parcel conveyed to Robert C. Hunt by deeds from Charles R. Hunt dated May 10, 1960 and recorded at said Registry in Book 2538, Page 226, from Cecelia Hunt dated March 24, 1960 and recorded at said Registry in Book 2916, Page 478, from Donald A. Hunt dated March 24, 1960 and recorded in said Registry in Book 2916, Page 480, from Alan B. Hunt dated January 23, 1960 and recorded in said Registry in Book 2916, Page 476 and from Robert P. Hunt dated August 9, 1965 and recorded at said Registry in Book 2916, Page 474.

WITNESS my hand and seal this 29th day of July, 1988.

WITNESS:

H C Remmel II

PRINTED NAME: H.C Remmel II

Robert C. Hunt

Robert C. Hunt

July 29th, 1988

STATE OF MAINE
CUMBERLAND, ss.

PERSONALLY APPEARED the above-named Robert C. Hunt and acknowledged the foregoing instrument to be his free act and deed.

Before me,

H Charles Remmel II

Attorney at Law/Notary Public

PRINTED NAME: H Charles Remmel II

991.473
14967007.005

037087

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Before me,

H Charles Remmel II

Attorney at Law/Notary Public

PRINTED NAME: H Charles Remmel II

991.473
14967007.005

EXHIBIT A

Beginning at a point in the north westerly right-of-way line of Congress Street at the easterly corner of land now or formerly Robert L. Kelly-Rosenberg and Andrea H. Kelly-Rosenberg and recorded in the Cumberland County Registry of Deeds Book 6470, Page 325, thence north forty four degrees, fifty nine minutes, thirty six seconds west (N 44-59-36 W) along northeast line of said Robert L. Kelly-Rosenberg and Andrea H. Kelly-Rosenberg a distance of four hundred and zero hundredths feet (400.00') to a point being the northerly corner of said Robert L. Kelly-Rosenberg and Andrea H. Kelly-Rosenberg; thence south forty five degrees, zero minutes, twenty four seconds west (S 45-00-24 W) along the north west line of said Robert L. Kelly-Rosenberg and Andrea H. Kelly-Rosenberg a distance of one hundred twenty three and eighty two hundredths feet (123.82') to a point being the westerly corner of said Robert L. Kelly-Rosenberg and Andrea H. Kelly-Rosenberg and being in the northeasterly line of land now or formerly Joseph C. Pizzo Jr. and Sharon A. Pizzo and recorded in the Cumberland County Registry of Deeds Book 3822, Page 272; thence north forty four degrees, six minutes, three seconds west (N 44-06-03 W) along the north easterly line of said Joseph C. Pizzo Jr. and Sharon A. Pizzo and along the north easterly line of land now of formerly Portland Lodge No. 188 Benevolent and protective order of Elks of the United States of America and Recorded in the Cumberland County Registry of Deeds Book 6157, Page 37 and along north easterly line of land now or formerly Union Mutual Insurance Company a distance of thirteen hundred seventy nine feet (1379') to the Stroudwater River; thence in a generally easterly and southerly direction following the course of said Stroudwater River a distance of two thousand, six hundred and eight five feet (2685') to a point in the westerly line of land now or formerly Harriet Caron and recorded in Book 2263, Page 427; thence south twenty five degrees, twenty seven minutes, fifty eight seconds west (S 25-27-58 W) along the westerly line of said Harriet Caron a distance of six and twenty five hundredths feet (6.25') to a point in the westerly line of said Harriet Caron; thence south thirty three degrees, ten minutes, thirty two seconds east (S 33-10-32 E) along the westerly line of said Harriet Caron a distance of three hundred twenty six and fifty hundredths feet (326.50') to a point in the north westerly right-of-way line of Congress Street, said point being the southerly corner of said Harriet Caron; thence south forty five degrees, zero minutes, twenty four seconds west (S 45-00-24 W) along the north westerly right-of-way of Congress Street a distance four hundred forty and thirty two hundredths feet (440.32') to the point of beginning containing twenty seven and five hundredths acres (27.05 Ac.).

Stroudwater River's Edge Subdivision

State and Federal Permits required by the project:

1. Maine Department of Environmental Protection Natural Resources Protection Act – Tier I Wetland Alteration Permit
2. Army Corp of Engineers Wetland Alteration Permit.
3. Maine DEP Stormwater Permit
4. National Pollutant Discharge Elimination System (NPDES)- Notice of Intent (NOI)

ATTACHMENT A

ATTACHMENT B

CITY OF PORTLAND, MAINE
SITE PLAN CHECKLIST

RIVER'S EDGE
CONGRESS STREET, PORTLAND
Project Name, Address of Project

I.d. Number

MARCH 29, 2001

Submitted () & Date	Item	Required Information	Section 14-525 (b,c)
✓	(1)	Standard boundary survey (stamped by a registered surveyor, at a scale of not less than 1 inch to 100 feet and including:	1
✓	(2)	Name and address of applicant and name of proposed development	a
✓	(3)	Scale and north points	b
✓	(4)	Boundaries of the site	c
✓	(5)	Total land area of site	d
✓	(6)	Topography - existing and proposed (2 feet intervals or less)	e
✓	(7)	Plans based on the boundary survey including:	2
✓	(8)	Existing soil conditions	a
✓	(9)	Location of water courses, marshes, rock outcroppings and wooded areas	b
N/A (see comments below)	(10)	Location, ground floor area and grade elevations of building and other structures existing and proposed, elevation drawings of exterior facades, and materials to be used	c
✓	(11)	Approximate location of buildings or other structures on parcels abutting the site	d
N/A	(12)	Location of on-site waste receptacles	e
✓	(13)	Public utilities (CMP ENGINEERING IS CURRENTLY DEVELOPING ELECTRIC PLAN)	
✓	(14)	Water and sewer mains	e
✓	(15)	Culverts, drains, existing and proposed, showing size and directions of flows	e
✓	(16)	Location and dimensions, and ownership of easements, public or private rights-of-way, both existing and proposed	f
✓	(17)	Location and dimensions of on-site pedestrian and vehicular accessways	g
N/A	(18)	Parking areas	g
N/A	(19)	Loading facilities	g
✓	(20)	Design of ingress and egress of vehicles to and from the site onto public streets	g
✓	(21)	Curb and sidewalks	g
✓	(22)	Landscape plan showing:	h
✓	(23)	Location of existing proposed vegetation	h
✓	(24)	Type of vegetation	h
✓	(25)	Quantity of plantings	h
✓	(26)	Size of proposed landscaping	h
✓	(27)	Existing areas to be preserved	h
✓	(28)	Preservation measures to be employed	h
✓	(29)	Details of planting and preservation specifications	h
N/A	(30)	Location and dimensions of all fencing and screening	i
✓	(31)	Location and intensity of outdoor lighting system	j
✓	(32)	Location of fire hydrants, existing and proposed	k
✓	(33)	Written statement (PREVIOUSLY SUBMITTED)	c
✓	(34)	Description of proposed uses to be located on site	l
✓	(35)	Quantity and type of residential, if any	l
✓	(36)	Total land area of the site	b2
N/A (See Below)	(37)	Total floor area and ground coverage of each proposed building and structure	b2
✓	(38)	General summery of existing and proposed easements or other burdens	c3
✓	(39)	Method of handling solid waste disposal (PRIVATE CONTRACTOR)	4

✓	(40)	Applicant's evaluation of availability of off-site public facilities, including sewer, water and streets (EATON TRAFFIC ENG. REPORT UNDER SEPARATE COVER)	5
✓	(41)	Description of any problems of drainage or topography, or a representation that there are none	6
✓	(42)	An estimate of the time period required for completion of the development (4 years)	7
✓	(43)	A list of all state and federal regulatory approvals to which the development may be subject	8
✓	(44)	The status of any pending applications (APPLICATIONS SUBMITTED AFTER WORKSHOP REVIEW)	8
✓	(45)	Anticipated timeframe for obtaining such permits ± 30 DAYS	h8
N/A	(46)	A letter of non jurisdiction	h8
✓	(47)	Evidence of financial and technical capability to undertake and complete the development including a letter from a responsible financial institution stating that is has reviewed the planned development and would seriously consider financing it when approved.	

Note: Depending on the size and scope of the proposed development, the Planning Board or Planning Authority may request additional information, including (but not limited to):

- drainage patterns and facilities;
- erosion and sedimentation controls to be used during construction;
- a parking and/or traffic study;
- a noise study;
- an environmental impact study;
- a sun shadow study;
- a study of particulates and any other noxious emissions; and
- a wind impact analysis.

Other comments:

RE ITEMS 10 & 37: PROPOSED STRUCTURES WILL BE SINGLE FAMILY RESIDENCES, ± 1,000 - 1,500 SF FOOTPRINTS, & SITED WITHIN BLDG SETBACKS AS DETERMINED BY LOT PURCHASER.

M O H R & S E R E D I N
Landscape Architects, Inc.

March 8, 2001

Richard Knowland
City of Portland Planning Dept.
City Hall
389 Congress St.
Portland, ME 04102

RE: Stroudwater River's Edge Subdivision

Dear Rick:

Attached please find six (6) copies of the revised Stroudwater River's Edge plans. These have been updated to include the majority of the comments set forth in the memos from the City Staff and the City's Consultant, DeLuca Hoffman. The entire plan set has been redrawn by Pinkham and Greer Engineers, Mohr & Seredin Landscape Architects and Owen Haskell Inc., Surveyors. I offer the following as a summary of the revisions:

1) The erosion control and site preparation plan has been updated and detailed notes included in the plan per City standards.
2) The road plan and profile have been updated to incorporate the City's comments. The typical roadway section revised to match the previous submissions with the City.
3) The project details have been amended to incorporate all of the changes in the road plans and the issues identified by City staff.
4) A plan has been prepared identifying all of the wetland impacts and natural resource issues. The total wetland impact of the project, inclusive of individual lot grading, is approximately 1/3 of an acre.
5) Water quality has been reviewed and addressed through the inclusion of appropriate devices on the site. Calculations from Pinkham and Greer will be arriving under separate cover.
6) Pinkham and Greeer have completed a stormwater management report that includes the calculations required by the City and the technical standards set forth by the City ordinance. This will be sent under separate cover.
7) The lot lines have been adjusted to reflect the plans to limit wetland disturbance.

The project is identical to the one previously reviewed by the Board. The lot count, road layout, and circulation are identical to that previously approved by the Board. We have addressed the technical issues in this submission and are looking for staff comment on any additional items that will need attention. With respect to the Portland Trail's existing trail that crosses Lots 27, 28, and 29, a portion of the trail will be relocated to the area previously designed and the balance will be left in place. An easement will be created to the benefit of Portland Trails where the trail crosses other lots.

I trust this is sufficient for a workshop review. Please call if you have questions.

Sincerely,

Stephen B. Mohr, ASLA

18 Pleasant Street, Portland, Maine 04101
(207) 871-0003

PINKHAM & GREER

CONSULTING ENGINEERS, INC.

Drainage Report
River's Edge Subdivision
Portland, Maine
March 19, 2001

Introduction:

This project is before the Planning Board for reapproval. The project consists of 29 lots for single family homes located along the Stroudwater River. The site access is off Outer Congress Street. The Stroudwater River is buffered by an easement and property given to Portland Trails.

The watershed includes portions of Congress Street south to the Jetport and westerly to the Unum Campus.

The drainage for the original approval project was done by Land Use Consultants and T&M Associates, Inc. The conclusion made at the time indicates no stormwater detention is required due to the proximity of the project to the Stroudwater River and Casco Bay. This assumption remains valid and as such only developed design flows are included, so pipe sizing and stormwater treatment sizing can be reviewed.

This project is not located in a watershed listed as "Most at Risk" from development by the Maine Department of Environmental Protection.

Soils and Topography:

This project has a variety of soils including Scantic, Buxton, Limerick-Saco, and Elmwood. In general these are silt loams with poor drainage characteristics. The higher ridges on site are better drained and suitable for development.

Off site soils include Scantic and Buxton along the stream channel and Hollis, Woodbridge and Paxton at higher elevation. These soils are developable at the higher elevation. All soil types are based on medium intensity mapping by the Soil Survey of Cumberland County, by the Soil Conservation Service

The slope on the watershed varies from 3 to 5% along the ridges to less than 1% along the stream. Slopes along the subdivision lots vary from 2 to 20%.

PINKHAM & GREER

CONSULTING ENGINEERS, INC.

Alteration of Natural Drainage Ways:

This project's main access road runs across the natural slope of the land intersecting the several natural drainage routes onsite. The uphill drainage is either collected in the stormdrain system or carried through the project in the major culvert crossing.

The major drainage alteration occurs at the crossing of the stream at Station 19+00. This stream starts by the Jetport, crosses Congress Street, the new access road to UNUM then to this project. Our analysis indicates that a single 5' diameter culvert will pass the flow from a 25-year storm event.

The drainage swale on the north end of the road will be crossed with driveways. This area is the area below UNUM. The UNUM parking lots have detention basins and therefore we assume the existing developed flow is the same as the original undeveloped flow, which this model predicts.

Where discharge to the natural drainage ways occurs, the outlets will be riprapped.

Modeling Assumptions:

The site was modeled using the computer program HydroCAD. Time of concentration methods used include TR-55 sheet flow, shallow concentrated flow and channel flow. Watershed subcatchments are as delineated on Drawing DA1, attached to this report. Runoff curve numbers were selected from tables 2-2a and 2-2c of the SCS TR-55 manual. Copies of these tables are attached with the calculations with curve numbers used circled.

Modeling assumptions made for each subcatchment are summarized in the HydroCAD report. Roughness coefficients of channels, Weir coefficients and culvert entrance loss coefficients were taken from Appendix of the HydroCAD manual. Copies of these pages are attached to this report.

Specific assumptions include the following:

1. No detention is required. The model is used to size pipes and treatment system.

PINKHAM & GREER

CONSULTING ENGINEERS, INC.

2. The culverts that cross Congress Street pass the 25-year storm without overtopping the road.

3. The detention basins at UNUM maintain the flows in the existing conditions.

4. Future development along the stream channel is limited by the wetlands.

Model:

This model was developed to size the stormdrain components at the project. The major component of the system is the stream crossing at Station 19+00 on River's Edge Road. This culvert passes drainage from approximately 210 acres above the project. The drainage areas are depicted on sheet DA-1 subcatchment areas 1 to 4.

The model was used to size the stormdrain systems at Kings Pine and Mast Landing Road as well as the system at the end of River's Edge Road. These systems drain the roadways to oil/grit separators. These systems treat road runoff by removing suspended solids and oils.

Outlets from the stormdrain components direct water to the natural conveyance channels. These lead to the Stroudwater River.

Proposed BMP:

The drainage system includes the use of the oil/grit separators for water quality enhancement. The outlets are plunge pools for erosion control. Additional erosion control measures will include silt fence, hay bales and check dams. Mulching of the side slopes stockpiles and disturbed areas will provide temporary control of sediment transport.

Model Results:

The model predicts a flow of 133.6 CFS at the stream crossing during the 25-year storm. This is below the original approval's flow. I believe the reduction occurs at the Congress culvert.

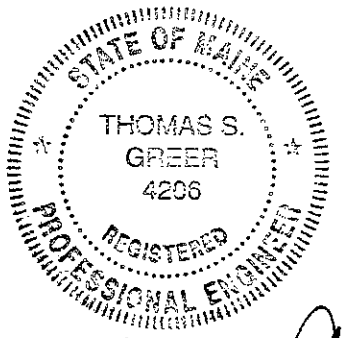
PINKHAM & GREER

CONSULTING ENGINEERS, INC.

The flow to the two oil/grit separators is listed below:

Rainfall	OSG-1	OSG-2
2.5"	1.22 CFS	1.32 CFS
4.7"	3.34 CFS	3.79 CFS

Based on these flows a 6' diameter Downstream Defender from HIL Technologies, Inc. is recommended.



3/20/01

INSPECTION AND MAINTENANCE
OF STORMWATER MANAGEMENT FACILITIES
River's Edge Subdivision
Portland, Maine
3-19-01

Stormwater Management Facilities include swales, paved surfaces, manholes, drain pipe, riprapped aprons, and level spreaders. Periodic inspection and maintenance of these site features and devices is necessary to prevent erosion, protect roadways and other paved areas, and remove pollutants from stormwater runoff.

SWALES, DITCHES, CURBS AND PAVED AREAS:

Swales, ditches, curbs and paved areas are easily inspected during a site walk or even a ride-by. Since visual inspection is easy, their condition should be assessed during and/or after significant rainfall events such as thunder showers and periods of heavy or extended rainfall and during periods of significant snowmelt. Any damage or unusual condition such as sedimentation of a ditch, erosion, damaged curb or dying vegetation should be recorded, dated and initialed by the inspector when observed. Even if there is no damage, the inspector should make record of these inspections at least twice annually.

Paved areas should be visually inspected monthly during the winter. The inspector should pay particular attention to the build up of sand around catch basin grates and remove accumulations that block the free flow of surface runoff to the catch basins. The date and initials of the inspector should be recorded on the forms provided as well as a notation of any cleanup effort that was made and the approximate volume of sand that was removed.

CATCH BASINS, DRAIN MANHOLES AND OUTLET STRUCTURES:

Catch Basins are precast concrete structures with sumps and cast iron grates used to collect stormwater and trap heavy sediments. Drain Manholes are similar structures constructed with a channel instead of a sump and a solid cast iron cover instead of a grate. Drain Manholes exist at changes in direction and/or size of storm drain pipe. Outlet structures are similar to drain manholes without a channel or invert. Outlet structures divert stormwater to level spreaders when the "first flush" has been captured in the ponds. Catch, basins, drain manholes, and outlet structures provide access to the closed storm drain system for inspection and maintenance.

There are catch basins on the site. Throughout the winter/spring sanding period, inspect catch basins monthly and after every significant rainfall event or period of heavy snowmelt. Clean catch basin sumps when sediment level is within 3 inches of the outlet pipe invert. Inspect drain manholes twice annually, once in the spring following the cleanup of winter sand and once in late fall prior to the winter sanding period. Remove sand deposits and debris as necessary. Record dates of inspections, observations and maintenance measures implemented (if any) on the forms provided and initial the entry.

Confined space entry safety procedures should be practiced when entering these structures.

DRAIN PIPES:

Drain pipes are road culverts and pipes connecting drain manholes. Inspect drain pipes when inspecting other stormwater maintenance facilities. At least annually make a visual inspection of the pipe. During the daylight you should be able to see light through most pipes as they have been laid to a straight line and grade. In some cases (e.g. pipe runs to a drain manhole, or is blocked) you will need a light to inspect pipes.

Clean pipes as necessary. Record inspections on the forms provided noting condition of pipe and any maintenance procedures implemented.

OIL GRIT SEPARATORS:

Oil/Grit Separators are precast concrete structures used to trap sediment and floatables before stormwater is discharged from the stormwater management system. These devices were manufactured by Vortechnics, 41 Evergreen Drive, Portland, ME (207) 878-3662. Review the Operation Maintenance Manual provided by Vortechnics periodically or H.I.L. Technologies, Inc., 94 Hutchins Drive, Portland, ME 04102, (207) 756-6200.

There are two oil/grit separators for the site. In the first year of operation inspect this device monthly during periods of heavy contaminant loadings (e.g. winter sandings, soil disturbances, oil spills). The inspection schedule can be modified in subsequent years based on observations made during the first year. As a minimum, inspect oil/grit separators twice annually; once following the winter/spring sanding period and once in late fall prior to the sand period.

There should always be standing water in the chamber to ensure the floatables are contained. Inspection observations should note this condition. Confined space entry safety procedures should be practiced when entering these structures.

Clean these devices when sediment is visible in the chamber and as recommended by Vortechnics or H.I.L Technologies. Dispose of sediments, floatables and water removed legally offsite. Record inspections on the forms provided noting condition and any maintenance procedures implemented. Record name of the company or person who cleans the oil/grit separators.

RIVER'S EDGE SUBDIVISION PORTLAND, MAINE			
INSPECTION / MAINTENANCE LOG			
SWALES, DITCHES, CURBS AND PAVED SURFACES			
I: INSPECTED - C: CLEANED – S: SWEPT - R: REPAIRED			
DATE	**INITIALS**	**ACTION**	**COMMENT**
4/21/99	TSG	I, C	EXAMPLE: removed sand around CB's 1, 2 and 3. Heavy rain over the weekend.

RIVER'S EDGE SUBDIVISION PORTLAND, MAINE			
INSPECTION / MAINTENANCE LOG			
DRAIN PIPES			
I: INSPECTED - C: CLEANED - R: REPAIRED			
DATE	**INITIALS**	**ACTION**	**COMMENT**
4/21/99	TSG	I, C	EXAMPLE: Cleaned debris pipes.

RIVER'S EDGE SUBDIVISION
PORTLAND, MAINE

INSPECTION / MAINTENANCE LOG

OIL/GRIT SEPARATORS

I: INSPECTED - C: CLEANED - R: REPAIRED

DATE	INITIALS	ACTION	COMMENT
4/21/99	TSG	I, C	EXAMPLE: Cleared sediment from chamber.

RIVER'S EDGE SUBDIVISION PORTLAND, MAINE			
INSPECTION / MAINTENANCE LOG			
CATCHBASINS, DRAIN MANHOLES AND OUTLET STRUCTURES			
I: INSPECTED - C: CLEANED - S: SWEPT - R: REPAIRED			
DATE	**INITIALS**	**ACTION**	**COMMENT**
4/21/99	TSG	I, C	EXAMPLE: removed sand around CB's 1, 2 and 3. Heavy rain over the weekend.

River's Edge 3/19/01

APPENDIX D-1: One Day Precipitation Values (SCS)

Table 3-4 **24 Hour Duration Rainfalls For Various Return Periods. Natural Resources Conservation Service County Rainfall Data**

County	Storm Type	Return Interval or Frequency 1-Yr	2-Yr	5-Yr	10-Yr	25-Yr	100-Yr	500-Yr	Annual	
Androscoggin		2.5	3.0	3.9	4.6	5.4	6.5	7.8	45.3	
Aroostook C		2.1	2.1	3.2	3.6	4.2	5.0	5.9	36.1	(Presque Isle Area)
Aroostook N		2.0	2.3	3.0	3.5	4.0	4.8	5.7	36.1	(Fort Kent Area)
Aroostook S	***S***	2.2	2.5	3.3	3.8	4.4	5.3	6.4	39.0	(Houlton Area)
Cumberland NW	***E***	2.8	3.3	4.3	5.0	5.8	6.9	8.3	43.4	(NW of St. Route 11)
Cumberland SE	***E***	2.5	3.0	4.0	4.7	5.5	6.7	8.1	44.4	(SE of St. Route 11)
Franklin		2.4	2.9	3.7	4.2	4.9	5.9	7.0	45.6	
Hancock		2.4	2.7	3.6	4.2	4.9	6.0	7.2	45.2	
Kennebec	***N***	2.4	3.0	3.8	4.4	5.1	6.1	7.2	41.7	
Knox-Lincoln	***O***	2.5	2.9	3.8	4.4	5.1	6.2	7.4	46.1	
Oxford E	***T***	2.5	3.0	4.0	4.6	5.3	6.4	7.6	43.0	(E of St. Route 26)
Oxford W	***E***	3.0	3.5	4.5	5.2	6.0	7.1	8.4	43.8	(W of St. Route 26)
Penobscot N	***S***	2.2	2.5	3.3	3.8	4.4	5.4	6.4	41.5	(N of Can.-Atl. Rwy)
Penobscot S		2.4	2.7	3.5	4.1	4.8	5.8	6.9	39.5	(S of Can.-Atl. Rwy)
Piscataquis N	***1***	2.2	2.5	3.3	3.8	4.4	5.3	6.3	38.5	(N of Can.-Atl. Rwy)
Piscataquis S		2.3	2.6	3.4	4.0	4.6	5.5	6.6	41.0	(S of Can.-Atl Rwy)
Sagadahoc	***A***	2.5	3.0	3.9	4.6	5.4	6.5	7.8	45.3	
Somerset N	***N***	2.2	2.5	3.3	3.8	4.4	5.3	6.3	37.3	(N of Can.-Atl. Rwy)
Somerset S	***D***	2.4	2.7	3.5	4.1	4.7	5.7	6.8	39.5	(S of Can.-Atl. Rwy)
Waldo		2.5	2.8	3.7	4.3	4.9	6.0	7.1	47.2	
Washington	***2***	2.4	2.5	3.4	4.0	4.8	5.9	7.1	44.2	
York		2.5	3.0	4.0	4.6	5.4	6.6	7.8	46.7	

NOTES: REVISED 4/10/92 Lew P. Crosby

24-HR. DURATION RAINFALL

SOURCES: 24-HR. DATA — TP 40

ANNUAL DATA — CDAN

Note 1: [1]Use ***Type II*** for Oxford County (with the exception of towns listed below) and Penobscot County (with the exception of towns listed below) and all Maine counties not listed below.

Note 2: [2]Use ***Type III*** for York, Cumberland, Androscoggin, Sagadahoc, Kennebec, Waldo, Knox, Piscataquis, Somerset, Franklin, Aroostook, Lincoln, Hancock, Washington Counties; the following Oxford County Towns: Porter, Brownfield, Hiram, Denmark, Oxford, Hebron, Buckfield, and Hartford; and the following Penobscot County towns: Dixmont, Newburgh, Hampden, Bangor, Veazie, Orono, Bradley, Clifton, Eddington, Holden, Brewer, Orrington, Plymouth, Etna, Carmel, Hermon, Glenburn, Old Town, Milford, and Greenfield.

Ryan's Edits
3/19/01

Appendix A: RUNOFF CURVE NUMBERS

Runoff curve numbers for urban areas[1]

Cover description		Curve numbers for hydrologic soil group—			
Cover type and hydrologic condition	Average percent impervious area[2]	A	B	C	D
Fully developed urban areas (vegetation established)					
Open space (lawns, parks, golf courses, cemeteries, etc.)[3]:					
Poor condition (grass cover < 50%)		68	79	86	89
Fair condition (grass cover 50% to 75%)		49	69	79	84
Good condition (grass cover > 75%)		39	61	74	80
Impervious areas:					
Paved parking lots, roofs, driveways, etc. (excluding right-of-way)		98	98	98	98
Streets and roads:					
Paved; curbs and storm sewers (excluding right-of-way)		98	98	98	98
Paved; open ditches (including right-of-way)		83	89	92	93
Gravel (including right-of-way)		76	85	89	91
Dirt (including right-of-way)		72	82	87	89
Western desert urban areas:					
Natural desert landscaping (pervious areas only)[4]		63	77	85	88
Artificial desert landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders)		96	96	96	96
Urban districts:					
Commercial and business	85	89	92	94	95
Industrial	72	81	88	91	93
Residential districts by average lot size:					
1/8 acre or less (town houses)	65	77	85	90	92
1/4 acre	38	61	75	83	87
1/3 acre	30	57	72	81	86
1/2 acre	25	54	70	80	85
1 acre	20	51	68	79	84
2 acres	12	46	65	77	82
Developing urban areas					
Newly graded areas (pervious areas only, no vegetation)[5]		77	86	91	94
Idle lands (CN's are determined using cover types similar to those in table 2-2c).					

[1]Average runoff condition, and $I_a = 0.2S$.
[2]The average percent impervious area shown was used to develop the composite CN's. Other assumptions are as follows: impervious areas are directly connected to the drainage system, impervious areas have a CN of 98, and pervious areas are considered equivalent to open space in good hydrologic condition. CN's for other combinations of conditions may be computed using figure 2-3 or 2-4.
[3]CN's shown are equivalent to those of pasture. Composite CN's may be computed for other combinations of open space cover type.
[4]Composite CN's for natural desert landscaping should be computed using figures 2-3 or 2-4 based on the impervious area percentage (CN = 98) and the pervious area CN. The pervious area CN's are assumed equivalent to desert shrub in poor hydrologic condition.
[5]Composite CN's to use for the design of temporary measures during grading and construction should be computed using figure 2-3 or 2-4, based on the degree of development (impervious area percentage) and the CN's for the newly graded pervious areas.

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RIVER'S EDGE
3/19/01
TSC

Runoff curve numbers for other agricultural lands[1]

Cover description		Curve numbers for hydrologic soil group—			
Cover type	Hydrologic condition	A	B	C	D
Pasture, grassland, or range—continuous forage for grazing.[2]	Poor	68	79	86	89
	Fair	49	69	79	84
	Good	39	61	74	80
Meadow—continuous grass, protected from grazing and generally mowed for hay.	—	30	58	71	78
Brush—brush-weed-grass mixture with brush the major element.[3]	Poor	48	67	77	83
	Fair	35	56	70	77
	Good	[4]30	48	65	73
Woods—grass combination (orchard or tree farm).[5]	Poor	57	73	82	86
	Fair	43	65	76	82
	Good	32	58	72	79
Woods.[6]	Poor	45	66	77	83
	Fair	36	60	73	79
	Good	[4]30	55	70	77
Farmsteads—buildings, lanes, driveways, and surrounding lots.	—	59	74	82	86

[1]Average runoff condition, and $I_a = 0.2S$.

[2]*Poor:* <50% ground cover or heavily grazed with no mulch.
Fair: 50 to 75% ground cover and not heavily grazed.
Good: >75% ground cover and lightly or only occasionally grazed.

[3]*Poor:* <50% ground cover.
Fair: 50 to 75% ground cover.
Good: >75% ground cover.

[4]Actual curve number is less than 30; use CN = 30 for runoff computations.

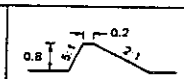
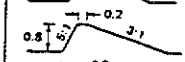
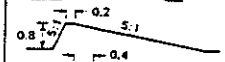
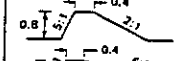
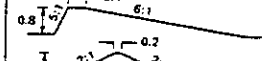
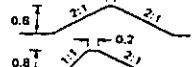
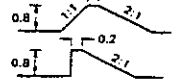
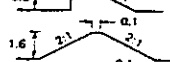
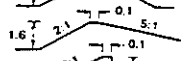
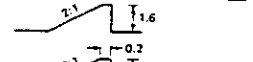
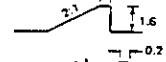
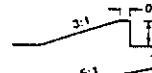
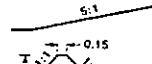
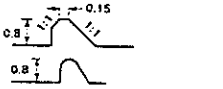
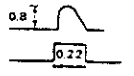
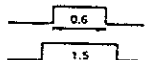
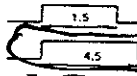
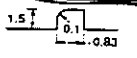
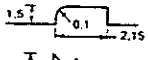
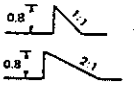
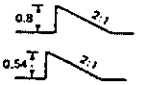
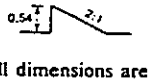
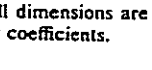
[5]CN's shown were computed for areas with 50% woods and 50% grass (pasture) cover. Other combinations of conditions may be computed from the CN's for woods and pasture.

[6]*Poor:* Forest litter, small trees, and brush are destroyed by heavy grazing or regular burning.
Fair: Woods are grazed but not burned, and some forest litter covers the soil.
Good: Woods are protected from grazing, and litter and brush adequately cover the soil.

Appendix D: BROAD CRESTED WEIR COEFFICIENTS River's Edge 3/19/01 TSG

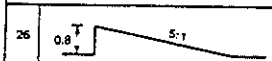
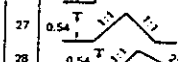
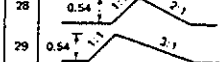
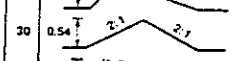
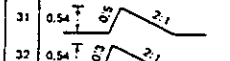
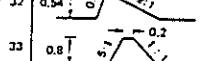
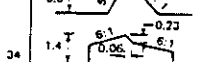
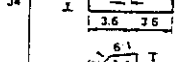
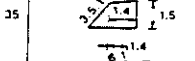
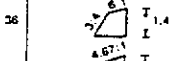
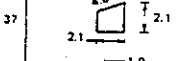
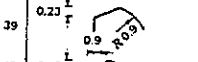
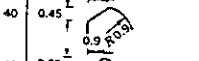
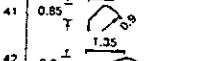
Note: This table contains *metric* discharge coefficients. To obtain English coefficients **multiply the values in this table by 1.81,** or use a multiplier of 1.81 in the HydroCAD weir description.

Discharge Coefficients for Broad-Crested Weirs*

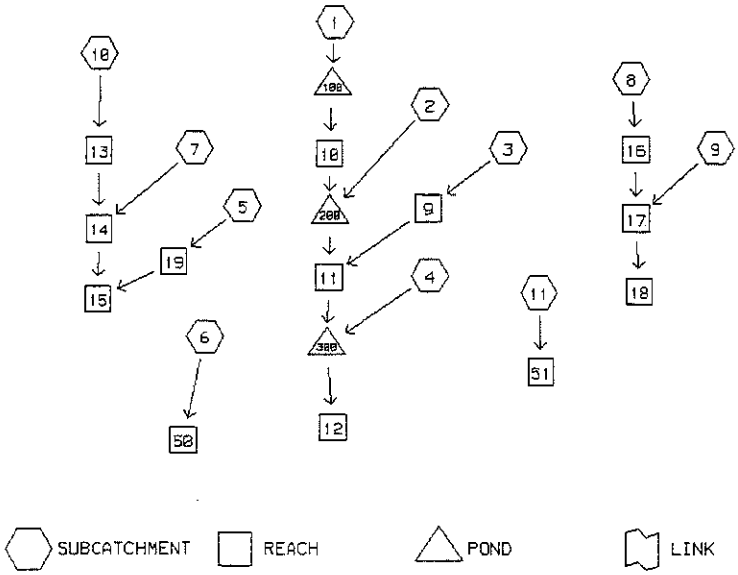
	Cross section	Upstream head h [m]							
		0.15	0.30	0.45	0.60	0.75	0.90	1.20	1.50
1		1.61	1.86	1.98					
2		1.60	1.80	1.90					
3		1.58	1.75	1.79					
4		1.53	1.64	1.77					
5		1.54	1.62	1.69					
6		1.72	1.88	1.98					
7		1.65	1.88	2.00					
8		1.53	1.80	1.93					
9					1.96	1.96	1.97	1.99	2.02
10					1.94	1.92	1.89	1.92	1.97
11			2.12	2.10	2.08	2.08	2.06	2.04	2.00
12			1.88	1.96	2.01	2.04	2.05	2.05	2.05
13					1.96	1.96	1.96	1.96	1.96
14					1.86	1.86	1.86	1.86	1.86
15		1.81	2.00						
16		2.10	2.35						
17		1.57	1.73	1.80	1.82	1.83	1.83		
18		1.44	1.46	1.55	1.56	1.69	1.76	1.84	
19		1.43	1.47	1.45	1.46	1.47	1.46	1.48	1.59
20		1.48	1.45	1.44	1.44				
21			1.56	1.60	1.65	1.70	1.74	1.84	1.92
22			1.56	1.56	1.55	1.55	1.55	1.55	1.54
23		2.13	2.13	2.13					
24		1.93	1.94	1.94					
25		1.94	1.98	1.97					

*All dimensions are in meters. Tabulated values represent metric weir coefficients.

Table 9-1 *Cont'd*

	Cross section	Upstream head h [m]							
		0.15	0.30	0.45	0.60	0.75	0.90	1.20	1.50
26		1.69	1.73	1.73					
27		2.28	2.25	2.06					
28		2.08	2.12	2.12					
29		1.92	1.93	1.92					
30		2.10	2.13	2.13					
31		2.03	2.03	2.01					
32		2.03	2.03	2.01					
33		1.65	1.94	2.10					
34			1.72	1.76	1.76	1.76	1.76	1.76	1.76
35				1.87	1.84	1.81	1.82	1.82	1.85
36			1.91	1.90	1.87	1.84	1.83	1.86	1.90
37						1.89	1.87	1.87	1.88
38			1.87	1.81	1.82	1.86	1.90	1.97	2.01
39		1.13	1.82 1.89	1.83 1.90	1.85 1.88	1.87 1.88	1.88 1.90	1.95	2.05
40		1.76	1.86 1.92	1.90 1.98	1.93 2.06	1.96 2.04	1.97 2.04	2.03	2.11
41		1.72	1.90	2.00	2.06	2.10	2.13		
42		1.78	1.84	1.89	1.93	1.97	2.00		
43		1.75	1.81	1.85	1.88	1.90	1.92	1.95	
44		1.60	1.92	1.95	1.94	1.85	1.82		
45		1.94	1.94	1.95	1.92	1.85	1.81	1.79	
46		1.72	1.72	1.70	1.72	1.76	1.79	1.85	
47		1.70	1.71	1.82					
48			2.09						

WATERSHED ROUTING ==========



SUBCATCHMENT 1	= JETPORT TO CONGRESS STREET	->	POND 100
SUBCATCHMENT 2	= BELOW CONGRESS ABOVE UNUM ENTRANCE	->	POND 200
SUBCATCHMENT 3	= AREA ESAT OF UNUM DEVELOPED	->	REACH 9
SUBCATCHMENT 4	= AREA ABOVE PROJECT CULVERT	->	POND 300
SUBCATCHMENT 5	= AREA NORTHWEST OF ROAD END	->	REACH 19
SUBCATCHMENT 6	= EAST OF ROAD STATION 23+00	->	REACH 50
SUBCATCHMENT 7	= CUL DE SAC STATION 25+ 00	->	REACH 14
SUBCATCHMENT 8	= FIRST CUL DE SAC STATION 13+00	->	REACH 16
SUBCATCHMENT 9	= ROAD TO EAST STATION 15+00	->	REACH 17
SUBCATCHMENT 10	= ROAD 19+85 TO 22+85	->	REACH 13
SUBCATCHMENT 11	= ROAD 10 TO 11+60	->	REACH 51
REACH 9	= TWIN CULVERTS UNUM ACESS ROAD	->	REACH 11
REACH 10	= BLUE LINE STREAM	->	POND 200
REACH 11	= BLUE LINE STREAM TO PROJECT CULVERT	->	POND 300
REACH 12	= BLUE LINE STREAM BELOW PROJECT	->	

REACH 13	= DMH 5 TO DMH 7	->	REACH 14
REACH 14	= DMH 7 TO OIL/GRIT 2	->	REACH 15
REACH 15	= CHANNEL BELOW PROJECT	->	
REACH 16	= DMH 3 TO DMH 1	->	REACH 17
REACH 17	= DMH 1 TO OIL/GRIT 1	->	REACH 18
REACH 18	= CHANNEL TO RIVER	->	
REACH 19	= DRIVEWAY CULVERT	->	REACH 15
REACH 50	= CULVERT AT 22+25	->	
REACH 51	= CB 15 TO DMH 9 OUTLET	->	
POND 100	= CULVERTS AT CONGRESS STREET	->	REACH 10
POND 200	= TWIN CULVERTS AT UNUM DRIVE	->	REACH 11
POND 300	= CULVERT AT STATION 19 00	->	REACH 12

RUNOFF BY SCS TR-20 METHOD: TYPE III 24-HOUR RAINFALL= 5.50 IN, SCS U.H.

RUNOFF SPAN = 10-20 HRS, dt= .10 HRS, 101 POINTS

SUBCAT NUMBER	AREA (ACRE)	Tc (MIN)	--GROUND COVERS (%CN)--	WGT'D CN	C	PEAK (CFS)	Tpeak (HRS)	VOL (AF)
1	150.17	99.9	100%80	80	-	166.1	13.28	37.56
2	10.86	49.8	100%72	72	-	14.30	12.65	2.14
3	15.89	29.7	100%74	74	-	28.97	12.38	3.36
4	32.65	41.8	100%73	73	-	48.97	12.54	6.67
5	10.33	57.1	100%74	74	-	13.51	12.74	2.17
6	2.78	41.7	100%80	80	-	5.22	12.52	.70
7	.85	2.6	100%80	80	-	3.39	12.00	.21
8	2.11	34.2	100%80	80	-	4.37	12.43	.53
9	.47	1.0	100%98	98	-	2.46	11.98	.16
10	.16	1.7	100%98	98	-	.86	11.99	.06
11	.20	1.5	50%98 50%74	86	-	.91	11.99	.06

REACH ROUTING BY STOR-IND+TRANS METHOD

REACH NO.	DIAM (IN)	BOTTOM WIDTH (FT)	DEPTH (FT)	SIDE SLOPES (FT/FT)		n	LENGTH (FT)	SLOPE (FT/FT)	PEAK VEL. (FPS)	TRAVEL TIME (MIN)	PEAK Qout (CFS)
9	24.0x2	-	-	-	-	.013	75	.0100	7.7	.2	28.91
10	-	10.0	5.0	.20	.20	.070	200	.0063	2.3	1.4	126.2
11	-	10.0	5.0	.20	.20	.070	2000	.0063	2.3	14.5	126.8
12	-	5.0	10.0	.33	.33	.035	400	.0150	6.0	1.1	133.5
13	12.0	-	-	-	-	.010	251	.0100	4.5	.9	.79
14	18.0	-	-	-	-	.010	35	.0400	11.3	.1	4.16
15	-	5.0	3.0	.20	.20	.050	120	.0500	3.6	.6	13.96
16	12.0	-	-	-	-	.010	242	.0400	11.9	.3	4.36
17	18.0	-	-	-	-	.010	35	.0500	12.7	0.0	4.77
18	-	6.0	5.0	.20	.20	.050	500	.0200	2.2	3.8	4.65
19	18.0	-	-	-	-	.010	45	.0400	15.8	0.0	13.51
50	18.0	-	-	-	-	.010	68	.0294	10.8	.1	5.21
51	12.0	-	-	-	-	.010	243	.0050	3.6	1.1	.82

POND ROUTING BY STOR-IND METHOD

POND NO.	START ELEV. (FT)	FLOOD ELEV. (FT)	PEAK ELEV. (FT)	PEAK STORAGE (AF)	PEAK FLOW Qin (CFS)	PEAK FLOW Qout (CFS)	PEAK FLOW Qpri (CFS)	PEAK FLOW Qsec (CFS)	---Qout--- ATTEN. (%)	---Qout--- LAG (MIN)
100	100.0	106.0	104.9	5.81	166.1	126.3			24	35.4
200	96.0	103.0	100.1	3.56	129.8	124.0			4	24.3
300	35.0	52.0	39.6	.37	133.6	133.6			0	1.5

SUBCATCHMENT 1 **JETPORT TO CONGRESS STREET**

PEAK= 166.1 CFS @ 13.28 HRS, VOLUME= 37.56 AF

ACRES	CN	
150.17	80	DEVELPOED D SOILS

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 5.50 IN
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
TR-55 SHEET FLOW	**SHEET**	33.9
Grass: Dense n=.24 L=200' P2=3 in s=.01 '/'		
SHALLOW CONCENTRATED/UPLAND FLOW	**SHALLOW**	8.9
Grassed Waterway Kv=15 L=800' s=.01 '/' V=1.5 fps		
SHALLOW CONCENTRATED/UPLAND FLOW	**WETLAND**	37.7
Woodland Kv=5 L=800' s=.005 '/' V=.35 fps		
CHANNEL FLOW	**TOP OF BLUE LINE BROOK**	19.4
a=20 sq-ft Pw=30' r=.667'		
s=.0063 '/' n=.07 V=1.29 fps L=1500' Capacity=25.7 cfs		
	Total Length= 3300 ft Total Tc=	99.9

SUBCATCHMENT 2 **BELOW CONGRESS ABOVE UNUM ENTRANCE**

PEAK= 14.30 CFS @ 12.65 HRS, VOLUME= 2.14 AF

ACRES	CN	
10.86	72	WOODS C/D SOILS

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 5.50 IN
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
TR-55 SHEET FLOW	**SHEET**	33.9
Grass: Dense n=.24 L=200' P2=3 in s=.01 '/'		
SHALLOW CONCENTRATED/UPLAND FLOW	**SHALLOW**	13.3
Woodland Kv=5 L=400' s=.01 '/' V=.5 fps		
CHANNEL FLOW	**BLUE LINE STREAM**	2.6
a=20 sq-ft Pw=30' r=.667'		
s=.0063 '/' n=.07 V=1.29 fps L=200' Capacity=25.7 cfs		
	Total Length= 800 ft Total Tc=	49.8

SUBCATCHMENT 3 **AREA ESAT OF UNUM DEVELOPED**

PEAK= 28.97 CFS @ 12.38 HRS, VOLUME= 3.36 AF

ACRES	CN	
15.89	74	C SOILS WITH DETENTION

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 5.50 IN
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
TR-55 SHEET FLOW	**SHEET**	27.3
Grass: Bermuda n=.41 L=200' P2=3 in s=.05 '/'		
CHANNEL FLOW	**ROAD DITCH**	2.4
a=10 sq-ft Pw=15' r=.667'		
s=.03 '/' n=.035 V=5.61 fps L=800' Capacity=56.1 cfs		
	Total Length= 1000 ft Total Tc=	29.7

SUBCATCHMENT 4 **AREA ABOVE PROJECT CULVERT**

PEAK= 48.97 CFS @ 12.54 HRS, VOLUME= 6.67 AF

ACRES	CN	
32.65	73	.8 D & .2 C SOILS BRUSH

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 5.50 IN
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
TR-55 SHEET FLOW	**SHEET**	17.8
Grass: Dense n=.24 L=200' P2=3 in s=.05 '/'		
SHALLOW CONCENTRATED/UPLAND FLOW	**SHALLOW**	11.0
Short Grass Pasture Kv=7 L=800' s=.03 '/' V=1.21 fps		
CHANNEL FLOW	**BLUE LINE STREAM**	13.0
a=20 sq-ft Pw=30' r=.667'		
s=.0063 '/' n=.07 V=1.29 fps L=1000' Capacity=25.7 cfs		
	Total Length= 2000 ft Total Tc=	41.8

SUBCATCHMENT 5 AREA NORTHWEST OF ROAD END

PEAK= 13.51 CFS @ 12.74 HRS, VOLUME= 2.17 AF

ACRES	CN	
10.33	74	SWALE AREA TO UNUM

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 5.50 IN
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
TR-55 SHEET FLOW	**SHEET**	36.0
Grass: Bermuda n=.41 L=200' P2=3 in s=.025 '/'		
SHALLOW CONCENTRATED/UPLAND FLOW	**SHALLOW**	21.1
Short Grass Pasture Kv=7 L=1400' s=.025 '/' V=1.11 fps		
	Total Length= 1600 ft Total Tc=	57.1

SUBCATCHMENT 6 EAST OF ROAD STATION 23+00

PEAK= 5.22 CFS @ 12.52 HRS, VOLUME= .70 AF

ACRES	CN	
2.78	80	C SOILS DEVELOPED ROAD

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 5.50 IN
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
TR-55 SHEET FLOW	**SHEET**	33.5
Grass: Bermuda n=.41 L=200' P2=3 in s=.03 '/'		
SHALLOW CONCENTRATED/UPLAND FLOW	**SHALLOW**	8.2
Short Grass Pasture Kv=7 L=600' s=.03 '/' V=1.21 fps		
	Total Length= 800 ft Total Tc=	41.7

SUBCATCHMENT 7 CUL DE SAC STATION 25+ 00

PEAK= 3.39 CFS @ 12.00 HRS, VOLUME= .21 AF

ACRES	CN	
.85	80	DEVELOPED ROAD

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 5.50 IN
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
TR-55 SHEET FLOW	**SHEET**	2.6
Smooth surfaces n=.011 L=250' P2=3 in s=.02 '/'		

SUBCATCHMENT 8 **FIRST CUL DE SAC STATION 13+00**

PEAK= 4.37 CFS @ 12.43 HRS, VOLUME= .53 AF

ACRES	CN	
2.11	80	C SOILS DEVELOPED

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 5.50 IN
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
TR-55 SHEET FLOW	**SHEET**	33.5
Grass: Bermuda n=.41 L=200' P2=3 in s=.03 '/'		
SHALLOW CONCENTRATED/UPLAND FLOW	**SHALLOW**	.7
Paved Kv=20.3282 L=200' s=.06 '/' V=4.98 fps		
	Total Length= 400 ft Total Tc=	34.2

SUBCATCHMENT 9 **ROAD TO EAST STATION 15+00**

PEAK= 2.46 CFS @ 11.98 HRS, VOLUME= .16 AF

ACRES	CN	
.47	98	ROAD

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 5.50 IN
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
SHALLOW CONCENTRATED/UPLAND FLOW	**DITCH FLOW**	1.0
Paved Kv=20.3282 L=300' s=.06 '/' V=4.98 fps		

SUBCATCHMENT 10 **ROAD 19+85 TO 22+85**

PEAK= .86 CFS @ 11.99 HRS, VOLUME= .06 AF

ACRES	CN	
.16	98	ROAD

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 5.50 IN
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
TR-55 SHEET FLOW	**SHEET**	1.7
Smooth surfaces n=.011 L=200' P2=3 in s=.04 '/'		

SUBCATCHMENT 11 **ROAD 10 TO 11+60**

PEAK= .91 CFS @ 11.99 HRS, VOLUME= .06 AF

ACRES	CN	
.10	98	ROAD
.10	74	LAWN
.20	86	

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 5.50 IN
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
TR-55 SHEET FLOW	**SHEET**	1.5
Smooth surfaces n=.011 L=160'	P2=3 in s=.03 '/'	

REACH 9 **TWIN CULVERTS UNUM ACESS ROAD**

Qin = 28.97 CFS @ 12.38 HRS, VOLUME= 3.36 AF
Qout= 28.91 CFS @ 12.38 HRS, VOLUME= 3.36 AF, ATTEN= 0%, LAG= .3 MIN

DEPTH (FT)	END AREA (SQ-FT)	DISCH (CFS)
0.00	0.00	0.00
.20	.33	.94
.40	.89	3.96
.60	1.59	8.86
1.40	4.70	37.88
1.60	5.39	44.23
1.80	5.96	48.22
1.88	6.13	48.67
1.94	6.23	48.22
2.00	6.28	45.24

24" PIPE X 2
n= .013
LENGTH= 75 FT
SLOPE= .01 FT/FT

STOR-IND+TRANS METHOD
PEAK DEPTH= 1.15 FT
PEAK VELOCITY= 7.7 FPS
TRAVEL TIME = .2 MIN
SPAN= 10-20 HRS, dt=.1 HRS

REACH 10 **BLUE LINE STREAM**

Qin = 126.3 CFS @ 13.87 HRS, VOLUME= 36.87 AF
Qout= 126.2 CFS @ 13.91 HRS, VOLUME= 36.80 AF, ATTEN= 0%, LAG= 2.6 MIN

DEPTH (FT)	END AREA (SQ-FT)	DISCH (CFS)
0.00	0.0	0.00
.50	6.3	5.85
1.00	15.0	20.73
1.50	26.3	45.33
2.15	44.6	93.96
3.00	75.0	190.28
4.00	120.0	358.67
5.00	175.0	595.41

10' x 5' CHANNEL
SIDE SLOPE= .2 '/'
n= .07
LENGTH= 200 FT
SLOPE= .0063 FT/FT

STOR-IND+TRANS METHOD
PEAK DEPTH= 2.44 FT
PEAK VELOCITY= 2.3 FPS
TRAVEL TIME = 1.4 MIN
SPAN= 10-20 HRS, dt=.1 HRS

REACH 11 **BLUE LINE STREAM TO PROJECT CULVERT**

Qin = 127.6 CFS @ 14.25 HRS, VOLUME= 41.63 AF
Qout= 126.8 CFS @ 14.68 HRS, VOLUME= 40.81 AF, ATTEN= 1%, LAG= 25.7 MIN

DEPTH (FT)	END AREA (SQ-FT)	DISCH (CFS)
0.00	0.0	0.00
.50	6.3	5.85
1.00	15.0	20.73
1.50	26.3	45.33
2.15	44.6	93.96
3.00	75.0	190.28
4.00	120.0	358.67
5.00	175.0	595.41

10' x 5' CHANNEL
SIDE SLOPE= .2 '/'
n= .07
LENGTH= 2000 FT
SLOPE= .0063 FT/FT

STOR-IND+TRANS METHOD
PEAK DEPTH= 2.44 FT
PEAK VELOCITY= 2.3 FPS
TRAVEL TIME = 14.5 MIN
SPAN= 10-20 HRS, dt=.1 HRS

REACH 12 **BLUE LINE STREAM BELOW PROJECT**

Qin = 133.6 CFS @ 14.65 HRS, VOLUME= 47.36 AF
Qout= 133.5 CFS @ 14.69 HRS, VOLUME= 47.29 AF, ATTEN= 0%, LAG= 1.9 MIN

DEPTH (FT)	END AREA (SQ-FT)	DISCH (CFS)
0.00	0.0	0.00
1.00	8.0	33.09
2.00	22.1	133.14
3.00	42.3	319.30
4.30	77.5	720.61
6.00	139.1	1574.78
8.00	233.9	3153.19
10.00	353.0	5460.13

5' x 10' CHANNEL
SIDE SLOPE= .33 '/'
n= .035
LENGTH= 400 FT
SLOPE= .015 FT/FT

STOR-IND+TRANS METHOD
PEAK DEPTH= 2.00 FT
PEAK VELOCITY= 6.0 FPS
TRAVEL TIME = 1.1 MIN
SPAN= 10-20 HRS, dt=.1 HRS

REACH 13 **DMH 5 TO DMH 7**

Qin = .86 CFS @ 11.99 HRS, VOLUME= .06 AF
Qout= .79 CFS @ 12.01 HRS, VOLUME= .06 AF, ATTEN= 9%, LAG= 1.0 MIN

DEPTH (FT)	END AREA (SQ-FT)	DISCH (CFS)
0.00	0.00	0.00
.10	.04	.10
.20	.11	.41
.30	.20	.91
.70	.59	3.88
.80	.67	4.53
.90	.74	4.94
.94	.77	4.98
.97	.78	4.94
1.00	.79	4.63

12" PIPE
n= .01
LENGTH= 251 FT
SLOPE= .01 FT/FT

STOR-IND+TRANS METHOD
PEAK DEPTH= .29 FT
PEAK VELOCITY= 4.5 FPS
TRAVEL TIME = .9 MIN
SPAN= 10-20 HRS, dt=.1 HRS

REACH 14 **DMH 7 TO OIL/GRIT 2**

Qin = 4.18 CFS @ 12.00 HRS, VOLUME= .27 AF
Qout= 4.16 CFS @ 12.00 HRS, VOLUME= .27 AF, ATTEN= 1%, LAG= .1 MIN

DEPTH (FT)	END AREA (SQ-FT)	DISCH (CFS)
0.00	0.00	0.00
.15	.09	.57
.30	.25	2.39
.45	.45	5.35
1.05	1.32	22.87
1.20	1.52	26.70
1.35	1.68	29.11
1.41	1.72	29.38
1.46	1.75	29.11
1.50	1.77	27.31

18" PIPE
n= .01
LENGTH= 35 FT
SLOPE= .04 FT/FT

STOR-IND+TRANS METHOD
PEAK DEPTH= .39 FT
PEAK VELOCITY= 11.3 FPS
TRAVEL TIME = .1 MIN
SPAN= 10-20 HRS, dt=.1 HRS

REACH 15 **CHANNEL BELOW PROJECT**

Qin = 13.99 CFS @ 12.73 HRS, VOLUME= 2.44 AF
Qout= 13.96 CFS @ 12.74 HRS, VOLUME= 2.44 AF, ATTEN= 0%, LAG= .8 MIN

DEPTH (FT)	END AREA (SQ-FT)	DISCH (CFS)
0.00	0.00	0.00
.30	1.95	5.03
.60	4.80	18.22
.90	8.55	40.56
1.29	14.77	85.54
1.80	25.20	176.17
2.40	40.80	336.77
3.00	60.00	564.76

5' x 3' CHANNEL
SIDE SLOPE= .2 '/'
n= .05
LENGTH= 120 FT
SLOPE= .05 FT/FT

STOR-IND+TRANS METHOD
PEAK DEPTH= .50 FT
PEAK VELOCITY= 3.6 FPS
TRAVEL TIME = .6 MIN
SPAN= 10-20 HRS, dt=.1 HRS

REACH 16 **DMH 3 TO DMH 1**

Qin = 4.37 CFS @ 12.43 HRS, VOLUME= .53 AF
Qout= 4.36 CFS @ 12.43 HRS, VOLUME= .53 AF, ATTEN= 0%, LAG= .5 MIN

DEPTH (FT)	END AREA (SQ-FT)	DISCH (CFS)
0.00	0.00	0.00
.10	.04	.19
.20	.11	.81
.30	.20	1.81
.70	.59	7.76
.80	.67	9.05
.90	.74	9.87
.94	.77	9.96
.97	.78	9.87
1.00	.79	9.26

12" PIPE
n= .01
LENGTH= 242 FT
SLOPE= .04 FT/FT

STOR-IND+TRANS METHOD
PEAK DEPTH= .47 FT
PEAK VELOCITY= 11.9 FPS
TRAVEL TIME = .3 MIN
SPAN= 10-20 HRS, dt=.1 HRS

REACH 17 **DMH 1 TO OIL/GRIT 1**

Qin = 4.78 CFS @ 12.40 HRS, VOLUME= .70 AF
Qout= 4.77 CFS @ 12.40 HRS, VOLUME= .70 AF, ATTEN= 0%, LAG= .1 MIN

DEPTH (FT)	END AREA (SQ-FT)	DISCH (CFS)
0.00	0.00	0.00
.15	.09	.64
.30	.25	2.67
.45	.45	5.98
1.05	1.32	25.57
1.20	1.52	29.85
1.35	1.68	32.54
1.41	1.72	32.85
1.46	1.75	32.54
1.50	1.77	30.53

18" PIPE
n= .01
LENGTH= 35 FT
SLOPE= .05 FT/FT

STOR-IND+TRANS METHOD
PEAK DEPTH= .40 FT
PEAK VELOCITY= 12.7 FPS
TRAVEL TIME = 0.0 MIN
SPAN= 10-20 HRS, dt=.1 HRS

REACH 18 **CHANNEL TO RIVER**

Qin = 4.77 CFS @ 12.40 HRS, VOLUME= .70 AF
Qout= 4.65 CFS @ 12.53 HRS, VOLUME= .70 AF, ATTEN= 3%, LAG= 7.8 MIN

DEPTH (FT)	END AREA (SQ-FT)	DISCH (CFS)
0.00	0.0	0.00
.50	4.3	9.42
1.00	11.0	35.72
1.50	20.3	82.30
2.15	36.0	179.33
3.00	63.0	380.36
4.00	104.0	744.45
5.00	155.0	1269.36

6' x 5' CHANNEL
SIDE SLOPE= .2 '/'
n= .05
LENGTH= 500 FT
SLOPE= .02 FT/FT

STOR-IND+TRANS METHOD
PEAK DEPTH= .25 FT
PEAK VELOCITY= 2.2 FPS
TRAVEL TIME = 3.8 MIN
SPAN= 10-20 HRS, dt=.1 HRS

REACH 19 **DRIVEWAY CULVERT**

Qin = 13.51 CFS @ 12.74 HRS, VOLUME= 2.17 AF
Qout= 13.51 CFS @ 12.74 HRS, VOLUME= 2.17 AF, ATTEN= 0%, LAG= 0.0 MIN

DEPTH (FT)	END AREA (SQ-FT)	DISCH (CFS)
0.00	0.00	0.00
.15	.09	.57
.30	.25	2.39
.45	.45	5.35
1.05	1.32	22.87
1.20	1.52	26.70
1.35	1.68	29.11
1.41	1.72	29.38
1.46	1.75	29.11
1.50	1.77	27.31

18" PIPE
n= .01
LENGTH= 45 FT
SLOPE= .04 FT/FT

STOR-IND+TRANS METHOD
PEAK DEPTH= .73 FT
PEAK VELOCITY= 15.8 FPS
TRAVEL TIME = 0.0 MIN
SPAN= 10-20 HRS, dt=.1 HRS

REACH 50 **CULVERT AT 22+25**

Qin = 5.22 CFS @ 12.52 HRS, VOLUME= .70 AF
Qout= 5.21 CFS @ 12.53 HRS, VOLUME= .70 AF, ATTEN= 0%, LAG= .2 MIN

DEPTH (FT)	END AREA (SQ-FT)	DISCH (CFS)
0.00	0.00	0.00
.15	.09	.49
.30	.25	2.05
.45	.45	4.59
1.05	1.32	19.60
1.20	1.52	22.89
1.35	1.68	24.96
1.41	1.72	25.19
1.46	1.75	24.95
1.50	1.77	23.41

18" PIPE
n= .01
LENGTH= 68 FT
SLOPE= .0294 FT/FT

STOR-IND+TRANS METHOD
PEAK DEPTH= .47 FT
PEAK VELOCITY= 10.8 FPS
TRAVEL TIME = .1 MIN
SPAN= 10-20 HRS, dt=.1 HRS

REACH 51 **CB 15 TO DMH 9 OUTLET**

Qin = .91 CFS @ 11.99 HRS, VOLUME= .06 AF
Qout= .82 CFS @ 12.01 HRS, VOLUME= .06 AF, ATTEN= 10%, LAG= 1.3 MIN

DEPTH (FT)	END AREA (SQ-FT)	DISCH (CFS)
0.00	0.00	0.00
.10	.04	.07
.20	.11	.29
.30	.20	.64
.70	.59	2.74
.80	.67	3.20
.90	.74	3.49
.94	.77	3.52
.97	.78	3.49
1.00	.79	3.28

12" PIPE
n= .01
LENGTH= 243 FT
SLOPE= .005 FT/FT

STOR-IND+TRANS METHOD
PEAK DEPTH= .34 FT
PEAK VELOCITY= 3.6 FPS
TRAVEL TIME = 1.1 MIN
SPAN= 10-20 HRS, dt=.1 HRS

POND 100 **CULVERTS AT CONGRESS STREET**

Qin = 166.1 CFS @ 13.28 HRS, VOLUME= 37.56 AF
Qout= 126.3 CFS @ 13.87 HRS, VOLUME= 36.87 AF, ATTEN= 24%, LAG= 35.4 MIN

ELEVATION (FT)	AREA (SF)	INC.STOR (CF)	CUM.STOR (CF)
100.0	5000	0	0
102.0	40000	45000	45000
103.0	65000	52500	97500
105.0	95000	160000	257500
106.0	225000	160000	417500

STOR-IND METHOD
PEAK STORAGE = 252945 CF
PEAK ELEVATION= 104.9 FT
FLOOD ELEVATION= 106.0 FT
START ELEVATION= 100.0 FT
SPAN= 10-20 HRS, dt=.1 HRS
Tdet= 27.1 MIN (36.87 AF)

#	ROUTE	INVERT	OUTLET DEVICES
1	P	100.0'	**36" CULVERT X 2**
			n=.013 L=100' S=.01'/' Ke=.5 Cc=.9 Cd=.6 TW=101'
2	P	105.5'	**15' BROAD-CRESTED RECTANGULAR WEIR X 1.81**
			Q=C L H^1.5 C=1.48, 1.45, 1.44, 0, 0, 0, 0, 0

POND 200 **TWIN CULVERTS AT UNUM DRIVE**

Qin = 129.8 CFS @ 13.88 HRS, VOLUME= 38.94 AF
Qout= 124.0 CFS @ 14.28 HRS, VOLUME= 38.27 AF, ATTEN= 4%, LAG= 24.3 MIN

ELEVATION (FT)	AREA (SF)	INC.STOR (CF)	CUM.STOR (CF)
96.0	5000	0	0
98.0	40000	45000	45000
100.0	65000	105000	150000
103.0	85000	225000	375000

STOR-IND METHOD
PEAK STORAGE = 154922 CF
PEAK ELEVATION= 100.1 FT
FLOOD ELEVATION= 103.0 FT
START ELEVATION= 96.0 FT
SPAN= 10-20 HRS, dt=.1 HRS
Tdet= 21 MIN (37.89 AF)

#	ROUTE	INVERT	OUTLET DEVICES
1	P	96.0'	**42" CULVERT X 2**
			n=.013 L=75' S=.005'/' Ke=.5 Cc=.9 Cd=.6 TW=97'
2	P	102.0'	**15' BROAD-CRESTED RECTANGULAR WEIR X 1.81**
			Q=C L H^1.5 C=1.48, 1.45, 1.44, 0, 0, 0, 0, 0

POND 300 **CULVERT AT STATION 19 00**

Qin = 133.6 CFS @ 14.63 HRS, VOLUME= 47.47 AF
Qout= 133.6 CFS @ 14.65 HRS, VOLUME= 47.36 AF, ATTEN= 0%, LAG= 1.5 MIN

ELEVATION (FT)	AREA (SF)	INC.STOR (CF)	CUM.STOR (CF)
35.0	2000	0	0
40.0	5000	17500	17500
45.0	20000	62500	80000
50.0	40000	150000	230000
52.0	50000	90000	320000

STOR-IND METHOD
PEAK STORAGE = 16199 CF
PEAK ELEVATION= 39.6 FT
FLOOD ELEVATION= 52.0 FT
START ELEVATION= 35.0 FT
SPAN= 10-20 HRS, dt=.1 HRS
Tdet= 2.4 MIN (46.89 AF)

#	ROUTE	INVERT	OUTLET DEVICES
1	P	35.0'	**60" CULVERT**
			n=.023 L=100' S=.02'/' Ke=.5 Cc=.9 Cd=.6
2	P	50.0'	**15' BROAD-CRESTED RECTANGULAR WEIR X 1.81**
			Q=C L H^1.5 C=1.48, 1.45, 1.44, 0, 0, 0, 0, 0

RUNOFF BY SCS TR-20 METHOD: TYPE III 24-HOUR RAINFALL= 4.70 IN, SCS U.H.

RUNOFF SPAN = 10-20 HRS, dt= .10 HRS, 101 POINTS

SUBCAT NUMBER	AREA (ACRE)	Tc (MIN)	--GROUND COVERS (%CN)--	WGT'D CN	C	PEAK (CFS)	Tpeak (HRS)	VOL (AF)
1	150.17	99.9	100%80	80	-	131.0	13.29	29.63
2	10.86	49.8	100%72	72	-	10.74	12.66	1.62
3	15.89	29.7	100%74	74	-	22.11	12.38	2.58
4	32.65	41.8	100%73	73	-	37.10	12.55	5.08
5	10.33	57.1	100%74	74	-	10.29	12.75	1.66
6	2.78	41.7	100%80	80	-	4.12	12.53	.56
7	.85	2.6	100%80	80	-	2.69	12.00	.17
8	2.11	34.2	100%80	80	-	3.45	12.43	.42
9	.47	1.0	100%98	98	-	2.10	11.98	.14
10	.16	1.7	100%98	98	-	.74	11.99	.05
11	.20	1.5	50%98 50%74	86	-	.74	11.99	.05

REACH ROUTING BY STOR-IND+TRANS METHOD

REACH NO.	DIAM (IN)	BOTTOM WIDTH (FT)	DEPTH (FT)	SIDE SLOPES (FT/FT)		n	LENGTH (FT)	SLOPE (FT/FT)	PEAK VEL. (FPS)	TRAVEL TIME (MIN)	PEAK Qout (CFS)
9	24.0x2	-	-	-	-	.013	75	.0100	7.4	.2	22.08
10	-	10.0	5.0	.20	.20	.070	200	.0063	2.2	1.5	106.0
11	-	10.0	5.0	.20	.20	.070	2000	.0063	2.2	15.2	106.7
12	-	5.0	10.0	.33	.33	.035	400	.0150	5.9	1.1	112.2
13	12.0	-	-	-	-	.010	251	.0100	4.3	1.0	.67
14	18.0	-	-	-	-	.010	35	.0400	10.6	.1	3.34
15	-	5.0	3.0	.20	.20	.050	120	.0500	3.4	.6	10.62
16	12.0	-	-	-	-	.010	242	.0400	11.3	.4	3.44
17	18.0	-	-	-	-	.010	35	.0500	12.0	0.0	3.79
18	-	6.0	5.0	.20	.20	.050	500	.0200	2.2	3.8	3.70
19	18.0	-	-	-	-	.010	45	.0400	14.8	.1	10.29
50	18.0	-	-	-	-	.010	68	.0294	10.0	.1	4.12
51	12.0	-	-	-	-	.010	243	.0050	3.4	1.2	.66

POND ROUTING BY STOR-IND METHOD

POND NO.	START ELEV. (FT)	FLOOD ELEV. (FT)	PEAK ELEV. (FT)	PEAK STORAGE (AF)	PEAK FLOW Qin (CFS)	PEAK FLOW Qout (CFS)	PEAK FLOW Qpri (CFS)	PEAK FLOW Qsec (CFS)	---Qout--- ATTEN. (%)	---Qout--- LAG (MIN)
100	100.0	106.0	103.9	3.94	131.0	106.0			19	30.5
200	96.0	103.0	99.6	2.91	108.9	104.8			4	21.0
300	35.0	52.0	39.1	.33	112.2	112.2			0	1.5

RUNOFF BY SCS TR-20 METHOD: TYPE III 24-HOUR RAINFALL= 3.00 IN, SCS U.H.

RUNOFF SPAN = 10-20 HRS, dt= .10 HRS, 101 POINTS

SUBCAT NUMBER	AREA (ACRE)	Tc (MIN)	--GROUND COVERS (%CN)--	WGT'D CN	C	PEAK (CFS)	Tpeak (HRS)	VOL (AF)
1	150.17	99.9	100%80	80	-	60.61	13.35	13.86
2	10.86	49.8	100%72	72	-	4.05	12.71	.65
3	15.89	29.7	100%74	74	-	8.90	12.41	1.08
4	32.65	41.8	100%73	73	-	14.45	12.59	2.08
5	10.33	57.1	100%74	74	-	4.11	12.79	.70
6	2.78	41.7	100%80	80	-	1.92	12.55	.26
7	.85	2.6	100%80	80	-	1.26	12.00	.08
8	2.11	34.2	100%80	80	-	1.61	12.45	.20
9	.47	1.0	100%98	98	-	1.33	11.98	.09
10	.16	1.7	100%98	98	-	.47	11.99	.03
11	.20	1.5	50%98 50%74	86	-	.40	11.99	.03

REACH ROUTING BY STOR-IND+TRANS METHOD

REACH NO.	DIAM (IN)	BOTTOM WIDTH (FT)	DEPTH (FT)	SIDE SLOPES (FT/FT)		n	LENGTH (FT)	SLOPE (FT/FT)	PEAK VEL. (FPS)	TRAVEL TIME (MIN)	PEAK Qout (CFS)
9	24.0x2	-	-	-	-	.013	75	.0100	5.6	.2	8.89
10	-	10.0	5.0	.20	.20	.070	200	.0063	1.9	1.8	56.64
11	-	10.0	5.0	.20	.20	.070	2000	.0063	1.8	18.2	54.56
12	-	5.0	10.0	.33	.33	.035	400	.0150	5.0	1.3	57.25
13	12.0	-	-	-	-	.010	251	.0100	3.8	1.1	.42
14	18.0	-	-	-	-	.010	35	.0400	8.9	.1	1.67
15	-	5.0	3.0	.20	.20	.050	120	.0500	2.6	.8	4.29
16	12.0	-	-	-	-	.010	242	.0400	8.9	.5	1.60
17	18.0	-	-	-	-	.010	35	.0500	9.8	.1	1.81
18	-	6.0	5.0	.20	.20	.050	500	.0200	2.2	3.8	1.77
19	18.0	-	-	-	-	.010	45	.0400	11.3	.1	4.11
50	18.0	-	-	-	-	.010	68	.0294	8.0	.1	1.92
51	12.0	-	-	-	-	.010	243	.0050	2.8	1.4	.34

POND ROUTING BY STOR-IND METHOD

POND NO.	START ELEV. (FT)	FLOOD ELEV. (FT)	PEAK ELEV. (FT)	PEAK STORAGE (AF)	PEAK FLOW Qin (CFS)	PEAK FLOW Qout (CFS)	PEAK FLOW Qpri (CFS)	PEAK FLOW Qsec (CFS)	Qout ATTEN. (%)	Qout LAG (MIN)
100	100.0	106.0	102.4	1.49	60.61	56.76			6	15.9
200	96.0	103.0	98.3	1.44	58.15	54.34			7	18.9
300	35.0	52.0	37.7	.22	57.32	57.30			0	1.7

RUNOFF BY SCS TR-20 METHOD: TYPE III 24-HOUR RAINFALL= 2.50 IN, SCS U.H.

RUNOFF SPAN = 10-20 HRS, dt= .10 HRS, 101 POINTS

SUBCAT NUMBER	AREA (ACRE)	Tc (MIN)	--GROUND COVERS (%CN)--	WGT'D CN	C	PEAK (CFS)	Tpeak (HRS)	VOL (AF)
1	150.17	99.9	100%80	80	-	42.07	13.37	9.76
2	10.86	49.8	100%72	72	-	2.45	12.74	.42
3	15.89	29.7	100%74	74	-	5.63	12.43	.72
4	32.65	41.8	100%73	73	-	8.95	12.62	1.36
5	10.33	57.1	100%74	74	-	2.59	12.82	.46
6	2.78	41.7	100%80	80	-	1.33	12.57	.19
7	.85	2.6	100%80	80	-	.88	12.01	.06
8	2.11	34.2	100%80	80	-	1.12	12.46	.14
9	.47	1.0	100%98	98	-	1.10	11.98	.07
10	.16	1.7	100%98	98	-	.39	11.99	.03
11	.20	1.5	50%98 50%74	86	-	.30	11.99	.02

REACH ROUTING BY STOR-IND+TRANS METHOD

REACH NO.	DIAM (IN)	BOTTOM WIDTH (FT)	DEPTH (FT)	SIDE SLOPES (FT/FT)		n	LENGTH (FT)	SLOPE (FT/FT)	PEAK VEL. (FPS)	TRAVEL TIME (MIN)	PEAK Qout (CFS)
9	24.0x2	-	-	-	-	.013	75	.0100	5.0	.3	5.60
10	-	10.0	5.0	.20	.20	.070	200	.0063	1.7	2.0	40.18
11	-	10.0	5.0	.20	.20	.070	2000	.0063	1.7	20.0	38.94
12	-	5.0	10.0	.33	.33	.035	400	.0150	4.5	1.5	40.80
13	12.0	-	-	-	-	.010	251	.0100	3.6	1.2	.34
14	18.0	-	-	-	-	.010	35	.0400	8.2	.1	1.22
15	-	5.0	3.0	.20	.20	.050	120	.0500	2.6	.8	2.73
16	12.0	-	-	-	-	.010	242	.0400	8.1	.5	1.11
17	18.0	-	-	-	-	.010	35	.0500	9.1	.1	1.32
18	-	6.0	5.0	.20	.20	.050	500	.0200	2.2	3.8	1.26
19	18.0	-	-	-	-	.010	45	.0400	9.8	.1	2.59
50	18.0	-	-	-	-	.010	68	.0294	7.5	.2	1.33
51	12.0	-	-	-	-	.010	243	.0050	2.5	1.6	.25

POND ROUTING BY STOR-IND METHOD

POND NO.	START ELEV. (FT)	FLOOD ELEV. (FT)	PEAK ELEV. (FT)	PEAK STORAGE (AF)	PEAK FLOW Qin (CFS)	PEAK FLOW Qout (CFS)	PEAK FLOW Qpri (CFS)	PEAK FLOW Qsec (CFS)	Qout ATTEN. (%)	Qout LAG (MIN)
100	100.0	106.0	102.0	1.09	42.07	40.25			4	12.7
200	96.0	103.0	98.0	1.01	41.21	40.39			2	11.5
300	35.0	52.0	37.2	.18	40.91	40.87			0	1.8

037088

PURCHASE AGREEMENT

Agreement made this 29th day of July, 1988 by and between Robert C. Hunt ("Hunt") of Swampscott, Massachusetts and Stroudwater Farms Associates, a Maine general partnership ("Stroudwater").

W I T N E S S E T H:

WHEREAS, Hunt has entered into a Purchase and Sale Agreement dated October 11, 1986 ("Agreement") to sell property located at 1821-1855 Congress Street, Portland, Maine ("the Premises") as described on Exhibit A attached hereto; and

WHEREAS, the Agreement provides as partial consideration by Stroudwater to Hunt for the purchase price that Hunt "shall, after closing, be entitled to his first choice of and title to one single-family serviced residential lot upon the Premises when such lots become available to be marketed to the general public or any other individual or entity, and Buyer agrees to convey such lot to seller at no cost to Seller. Seller shall have this right after Buyer has selected two such lots."

WHEREAS, Hunt has chosen Lot Number 17 as shown on the "River's Edge Amended Recording Plat" dated June 13, 1988 by Kimball Chase Company, Inc., to be recorded in the Cumberland County Registry of Deeds (a true copy of said Plat has been furnished by Stroudwater to Hunt in conjunction herewith); and as shown on Exhibit B attached hereto.

R.C.H. DDR

WHEREAS, Stroudwater has selected two lots of its choice as provided in the contract; and

WHEREAS, Hunt has contemporaneously with the execution of this document executed a deed conveying the property described on Exhibit A to Stroudwater;

NOW THEREFORE, in consideration of the mutual covenants and promises set forth herein and in said October 11, 1986 Agreement, Hunt and Stroudwater agree as follows:

1. Stroudwater agrees to convey all its right, title and interest in the parcel known as Lot 17 as shown on said Plat to Hunt free and clear of all liens and encumbrances as soon as subdivision approvals from the City of Portland and the Maine Department of Environmental Protection have been obtained, and such lots would otherwise "become available to be marketed to the general public or any other individual or entity."

2. Stroudwater agrees that it will install, up to the property line of Lot 17, roads, sewer lines, water lines and electrical lines no later than ~~two~~ five (5) years.

R.C.H. DDR

from the date hereof, unless said lot is otherwise repurchased by Stroudwater pursuant to a purchase option to be recorded between the parties covering Lot 17.

3. In furtherance of this Purchase Agreement, Stroudwater has placed in escrow* a deed to Lot 17, together with a Declaration of Value and a Mortgage Release Deed from Peoples Heritage Savings Bank, which instruments may be recorded upon the fulfillment of the terms and conditions of this Purchase Agreement.

* with Charles Rennel II his Attorney

4. Stroudwater agrees to pay all real estate, sewer, or other tax assessments imposed on Lot 17 until such time as the roads, sewer lines, water lines and electrical lines to Lot 17 have been completed to said lot.

5. Hunt shall be responsible for all recording fees and his portion of the real estate transfer taxes with respect to the conveyance of said Lot 17. Stroudwater shall pay its portion of the real estate transfer taxes.

WITNESS our hands and seals this 29th day of July, 1988.

Witness
U. C. Remmel

Witness

Robert C. Hunt

Charles Rennel II
STROUDWATER FARMS ASSOCIATES

By: Its General Partner
PRINTED NAME: PETER D. KENNEDY

State of Maine
Cumberland, ss. July 29, 1988

Personally appeared the above named PETER D. Kennedy General Partner of Stroudwater Farms Associates as aforesaid and acknowledged the foregoing instrument to be his free act and deed and the free act and deed of said General Partnership.

Before me,

Attorney-at-Law/ ~~Notary Public~~ ALAN ATKINS
PRINTED NAME:

CONSENT AND RECOGNITION

Peoples Heritage Savings Bank joins in this instrument only to recognize the existence of the obligation provided by this Purchase Agreement as between Stroudwater and Hunt; and that such Purchase Agreement shall have priority over a mortgage to be given it by Stroudwater, but has no other obligation hereunder.

PEOPLES HERITAGE SAVINGS BANK

Dated:

by _____

its: _____

2. Soil disturbance

A. Applicability

(1) This section applies to an activity involving soil disturbance or fill placement adjacent to, but not in:

(a) A coastal wetland, great pond, river, stream or brook or significant wildlife habitat contained within a freshwater wetland; or

(b) Freshwater wetlands consisting of or containing:

(i) Under normal circumstances, at least 20,000 square feet of aquatic vegetation, emergent marsh vegetation or open water, except for artificial ponds or impoundments; or

(ii) Peatlands dominated by shrubs, sedges and sphagnum moss.

NOTE: The Natural Resources Protection Act ("NRPA") regulates activities adjacent to the protected natural resources only if operated in such a manner that material or soil may be washed into them. If existing barriers (i.e. ice berms, retaining walls) or site conditions (i.e. negative slope) are such that material or soil could not wash into the resource, then the activity is not regulated under the NRPA. The use of silt fence and hay bale barriers does not change the law's applicability to an activity.

(2) This section does not apply to an activity where sustained slopes are steeper than 3 horizontal feet: 1 vertical foot (approximately 33% slope) between the normal high water line or upland edge of the protected resource and the soil disturbance.

(3) Activities that qualify for permit by rule under another section are not required to comply with this section unless expressly stated in that section.

(4) A soil disturbance activity performed or supervised by individuals currently certified in erosion control practices by the DEP is exempt from the 14 day waiting period required in Section 1(C)(1).

(5) This section does not apply to an activity that is not or will not be in compliance with the terms and conditions of a permit issued under the Site Location of Development Law, 38 M.R.S.A. Sections 481 to 490, the Storm Water Management Law, 38 M.R.S.A. Section 420-D, or the Natural Resources Protection Act, 38 M.R.S.A. Sections 480-A to 480-Z.

(6) This section does not apply to an activity that does not conform to the local shoreland zoning ordinance.

NOTE: Contact the local Code Enforcement Officer for information on local shoreland zoning requirements. In most shoreland areas, a 75 or 100 foot undisturbed buffer strip is required between the disturbed areas and the water or wetland.

Marge's call?

B. Submissions

(1) The applicant is required to submit photographs of the area which will be affected by the activity proposed.

(2) Photographs showing the completed project and the affected area must be submitted within 20 days of the activity's completion. The photographs must be sent with a copy of the notification form or labelled with the applicant's name and the town in which the activity took place.

C. Standards

(1) A 25 foot setback must be maintained between the normal high water line or upland edge of the protected natural resource and the activity. Existing vegetation within the setback zone may not be disturbed. Areas that have slopes of 3 horizontal feet: 1 vertical foot (approximately 33% slope), or steeper, may not be counted when determining the 25 foot setback.

(2) The setback requirement does not apply to:

(a) The planting of vegetation for the purpose of controlling erosion;

(b) The removal or replacement of underground storage tanks when performed in accordance with 38 M.R.S.A. Section 566-A;

(c) The placement or replacement of a foundation or supports for a legally existing structure or addition that is not closer to a protected natural resource than the existing structure. Any fill, other than that required to maintain the integrity of the structure such as foundation backfill, must meet the 25 foot setback standard; or

(d) The closure of a landfill in conformance with the DEP's solid waste management rules.

(3) The following measures must be taken to prevent erosion of soil or fill material from disturbed areas into the 25 foot buffer and the resource:

(a) Staked hay bales or silt fence must be properly installed between the area of soil disturbance and the edge of the 25 foot buffer to the resource before the activity begins;

(b) Hay bales or silt fence barriers must be maintained until the disturbed area is permanently stabilized;

(c) Within 7 calendar days following the completion of any soil disturbance, and prior to any storm event, mulch must be spread on any exposed soils;

(d) All disturbed soils must be permanently stabilized; and

(e) Within 30 days of final stabilization of the site, any silt fence must be removed.

NOTE: For guidance on erosion and sedimentation controls, consult the Maine Erosion and Sediment Control Handbook for Construction: Best Management Practices, dated March 1991. This handbook and other references on silt fence or hay bale installation and site stabilization are available from the DEP.

D. Definitions. The following terms, as used in this chapter, have the following meanings, unless the context indicates otherwise:

(1) Fill. a. (verb) To put into or upon, supply to, or allow to enter a water body or wetland any earth, rock, gravel, sand, silt, clay, peat, or debris; b. (noun) Material, other than structures, placed in or adjacent to a water body or wetland.

(2) Land adjacent to a protected natural resource. Any land area within 100 feet, measured horizontally, of the normal high water line of a great pond, river, stream or brook or the upland edge of a coastal wetland or freshwater wetland.

(3) Structure. Anything built for the support, shelter or enclosure of persons, animals, goods or property of any kind, together with anything constructed or erected with a fixed location on or in the ground. Examples of structures include buildings, utility lines and roads.

(4) Upland edge. The boundary between upland and wetland.

NOTES:

(1) Section 480-Q(15-A) of the NRPA exempts the installation, removal or repair of a septic system from permitting requirements as of March 1, 1995, as long as the system complies with all requirements of the subsurface wastewater disposal rules adopted by the Department of Human Services pursuant to 22 M.R.S.A. Section 42(3).

(2) The placement of wastewater treatment facilities or disposal systems by people in possession of an overboard discharge license or conditional discharge permit is exempt from the NRPA, subject to certain conditions (see Chapter 596 of DEP Regulations "Overboard Discharges: Licensing, Relicensing, Transfer and Abandonment of Licenses").

M O H R & S E R E D I N
Landscape Architects, Inc.

April 10, 2001

Mr. Jonathan Spence, Planner
City of Portland
City Hall
389 Congress St.
Portland, ME 04101-3503

RE: River's Edge Subdivision Workshop Submission

Dear Jonathan:

Attached please find plans and supporting information for Peter Kennedy's proposed subdivision on Congress Street in Stroudwater. The plans have been revised to reflect the modifications discussed in our meeting on April 6 and include the following changes:

1) The building windows on Lots 6, 7, 12, 13, 14, 15, 16, 17, 18 and 28 have been reduced to limit the area of wetland impact. All of the plans have been revised to show the corrected building windows.
2) The wetland impact plan has been changed to show the total impact at 14,670 square feet inclusive of all road and lot fill.

In addition to the changes set forth above, we have clarified the ownership issue on Lot 17. Mrs. Hunt holds a purchase agreement for Lot 17, not a fee interest in the lot. Accordingly, the wetland fill for Lot 17 is included in this plan. Bill Eaton is working on the traffic study for the project, which will be available for the Planning Board workshop. This submission includes the following:

1) Revised project plan set
2) Hunt Purchase Agreement for Lot 17
3) Homeowner's documents
4) Copy of the DEP Tier I Wetland application.

Please call if you have questions, or wish to meet to go over the submission in detail.

Sincerely,

Stephen B. Mohr, ASLA

18 Pleasant Street, Portland, Maine 04101
(207) 871-0003

037088

PURCHASE AGREEMENT

Agreement made this 29th day of July, 1988 by and between Robert C. Hunt ("Hunt") of Swampscott, Massachusetts and Stroudwater Farms Associates, a Maine general partnership ("Stroudwater").

W I T N E S S E T H:

WHEREAS, Hunt has entered into a Purchase and Sale Agreement dated October 11, 1986 ("Agreement") to sell property located at 1821-1855 Congress Street, Portland, Maine ("the Premises") as described on Exhibit A attached hereto; and

WHEREAS, the Agreement provides as partial consideration by Stroudwater to Hunt for the purchase price that Hunt "shall, after closing, be entitled to his first choice of and title to one single-family serviced residential lot upon the Premises when such lots become available to be marketed to the general public or any other individual or entity, and Buyer agrees to convey such lot to seller at no cost to Seller. Seller shall have this right after Buyer has selected two such lots."

WHEREAS, Hunt has chosen Lot Number 17 as shown on the "River's Edge Amended Recording Plat" dated June 13, 1988 by Kimball Chase Company, Inc., to be recorded in the Cumberland County Registry of Deeds (a true copy of said Plat has been furnished by Stroudwater to Hunt in conjunction herewith); and as shown on Exhibit B attached hereto.

R.C.H. DDK

WHEREAS, Stroudwater has selected two lots of its choice as provided in the contract; and

WHEREAS, Hunt has contemporaneously with the execution of this document executed a deed conveying the property described on Exhibit A to Stroudwater;

NOW THEREFORE, in consideration of the mutual covenants and promises set forth herein and in said October 11, 1986 Agreement, Hunt and Stroudwater agree as follows:

1. Stroudwater agrees to convey all its right, title and interest in the parcel known as Lot 17 as shown on said Plat to Hunt free and clear of all liens and encumbrances as soon as subdivision approvals from the City of Portland and the Maine Department of Environmental Protection have been obtained, and such lots would otherwise "become available to be marketed to the general public or any other individual or entity."

2. Stroudwater agrees that it will install, up to the property line of Lot 17, roads, sewer lines, water lines and electrical lines no later than ~~two~~ five (5) years.

R.C.H. DDK

from the date hereof, unless said lot is otherwise repurchased by Stroudwater pursuant to a purchase option to be recorded between the parties covering Lot 17.

3. In furtherance of this Purchase Agreement, Stroudwater has placed in escrow a deed to Lot 17, together with a Declaration of Value and a Mortgage Release Deed from Peoples Heritage Savings Bank, which instruments may be recorded upon the fulfillment of the terms and conditions of this Purchase Agreement.

4. Stroudwater agrees to pay all real estate, sewer, or other tax assessments imposed on Lot 17 until such time as the roads, sewer lines, water lines and electrical lines to Lot 17 have been completed to said lot.

5. Hunt shall be responsible for all recording fees and his portion of the real estate transfer taxes with respect to the conveyance of said Lot 17. Stroudwater shall pay its portion of the real estate transfer taxes.

WITNESS our hands and seals this 29th day of July, 1988.

Witness
U. C. Remmel

Witness

Robert C. Hunt

Charles Kennel II
STROUDWATER FARMS ASSOCIATES

By: Its General Partner
PRINTED NAME: PETER O. KENNEDY

State of Maine
Cumberland, ss. July 29, 1988

Personally appeared the above named PETER O. Kennedy General Partner of Stroudwater Farms Associates as aforesaid and acknowledged the foregoing instrument to be his free act and deed and the free act and deed of said General Partnership.

Before me,

Attorney-at-Law/ ~~Notary Public~~ ALAN ATKINS
PRINTED NAME:

CONSENT AND RECOGNITION

Peoples Heritage Savings Bank joins in this instrument only to recognize the existence of the obligation provided by this Purchase Agreement as between Stroudwater and Hunt; and that such Purchase Agreement shall have priority over a mortgage to be given it by Stroudwater, but has no other obligation hereunder.

PEOPLES HERITAGE SAVINGS BANK

Dated:

by _____

its: _____

RIVER'S EDGE HOMEOWNERS ASSOCIATION
PORTLAND, MAINE
BY-LAWS

ARTICLE I
NAME

The name of this Association shall be RIVER'S EDGE HOMEOWNERS ASSOCIATION.

ARTICLE II
MEMBERSHIP

SECTION 1. Defined. Members of the Association shall be the owners of record of parcels of land (Lots) 1 through 29 at River's Edge, Portland, Maine in the area as defined on a plan entitled "Final Subdivision Plan, River's Edge, Congress Street, Portland, Maine" recorded in Plan Book _____, Page _____, Cumberland County Registry of Deeds.

An owner shall be defined as the owner(s) of record of any residential parcels (Lots) numbers 1 through 29 described on the aforementioned Plat. Each owner of a Lot shall automatically become and be a member of the Association as long as he/she continues as the owner of a Lot. Upon termination of interest of an owner in a Lot, his/her membership and any interest in the Association shall thereupon automatically terminate and transfer and inure to the next owner of his/her Lot succeeding him/her in interest.

ARTICLE III
MEETINGS

SECTION 1. Annual Meeting. The annual meeting of the members of the Association shall be held on the second Sunday of January in each year at 1:30 p.m., unless a different hour is fixed by the Directors and stated in the notice of the meeting. The purpose for which the annual meeting is to be held, in addition to those prescribed by law, the Articles of Incorporation, or by these By-Laws, may be specified by the Directors or the President provided that such purpose is set forth in the notice of meeting.

SECTION 2. Special Meetings. Special meetings of the members may be called by the President or by the Directors.

SECTION 3. Notice of Meetings. A written notice of every annual or special meeting of the members, stating the place, date and hour thereof, and the purpose for which the meeting is to be held shall be given by the Clerk or by the officer calling the meeting at least fifteen (15) days before the meeting to each member entitled to vote by leaving such notice with him/her or at his/her residence or usual place of business, or by mailing it postage prepaid and addressed to such member at his/her address as it appears upon the books of the corporation. No notice need be given to any member if a written waiver of

notice, executed before or after the meeting by the member or his /her attorney is filed with the records of the meeting.

SECTION 4. Emergency Meetings. Emergency meetings may be called in the same manner as special meetings. The notice of such meetings shall be given in the same manner as set forth in Section 2, above, except that the notice for such meeting shall be 48 hours. The purpose of a special meeting shall be limited to action on such matters as are necessary to protect the health of members, to provide emergency access to members' property, to prevent further or unnecessary destruction of Association property or to meet other emergencies resulting from unforeseen or unanticipated damage, destruction or catastrophe. The amount of money to be appropriated or expended by the vote at any emergency meeting shall not exceed the total amount of the previous year's expenditures for maintenance.

SECTION 5. Quorums. Five (5) members shall constitute a quorum for any meeting but a lesser number may adjourn a meeting from time to time without further notice.

SECTION 6. Voting.

A. There shall be only one vote per parcel as shown on the Subdivision Plat referred to above, regardless of the number of owners.

B. A vote of the majority of the members present at any meeting shall be sufficient to decide any questions, except amendment of the By-Laws, provided there is a quorum present.

SECTION 7. Annual Budget. No later than thirty (30) days prior to each Annual Meeting of the members of the Association the Board of Directors shall estimate the Common Expenses for the following fiscal year and shall present the estimate to the members at their annual meeting as the proposed budget for such fiscal year. The annual assessment required to meet annual estimated Common Expenses for each fiscal year must be approved by majority vote of the members of the Association at their Annual Meeting held prior to the commencement of the fiscal year to which the estimated budget of Common Expenses applies. If the Lot owners disapprove such budget then the budget for the preceding fiscal year shall be the budget for the succeeding fiscal year.

ARTICLE IV
PURPOSE

SECTION 1. Purpose. The purpose of the Association is to perpetually hold, own, maintain, improve, develop and operate the land of the Association and to provide and maintain pedestrian and vehicular rights of ways and easements, utility and drainage easements, storm drainage, detention areas and roads and ways for the benefit of its

members and their families and to obtain insurance of all types for the protection of the parcel owners and property interests of the Association.

SECTION 2. Control of Land. The Association shall assume control of the affairs of the subdivision at such time as 20 of the lots in the subdivision have been conveyed to individual lot owners, and the owners are living in the subdivision.

SECTION 3. Road. As used in these By-Laws: "Road" means, collectively, all the area within the rights of way identified on the subdivision plan and identified as _____, _____, and _____, (street names).

SECTION 4. Drainage Easement. Those areas that are required to provide adequate drainage for all the roadway areas within the subdivision. Any or all drainage easements are shown on the Final Subdivision Plan for River's Edge, Congress Street, Portland, Maine dated _____. Homeowners cannot put any obstructions in drainage easements that would prevent water from flowing freely through them.

SECTION 5. Responsibilities. The Association shall perform and be responsible for the maintenance, resurfacing, improvement, clearing and repair of, and snow removal from the Road and for the payment of any real estate taxes assessed thereon, and for the cost of any labor, equipment or materials and management related to the Road, drainage easements and detention basin and supervision therefore, provided the City has the right but not the obligation to maintain, clear, or repair drainage easements in the event of the Association's neglect or refusal to do so upon reasonable request by the City.

SECTION 6. Assessments.

A. In furtherance of its purpose, the Association shall have the right to pay all expenses of maintenance, services and taxes assessed by the City of Portland on Association property and for the purpose of meeting these expenses shall have the right to assess the members on an equitable basis.

B. All assessments shall be billed no later than two (2) weeks prior to the commencement of the succeeding fiscal year by the Treasurer of the Association sending the bills therefore to the respective Lot owners at the address recorded in the Secretary's records either personally or by placing the bill in the United States mails, postage prepaid, addressed to the Lot owner as aforesaid.

C. All sums so assessed and billed shall become due no later than the commencement of the fiscal year to which the assessment applies. If the assessment to a lot owner is not paid to the Association within thirty (30) days

after the date when due, then said assessment shall be delinquent and shall be recoverable by the Association together with interest at the annual rate of eighteen percent (18%), costs of collection and reasonable attorneys' fees provided by the law to the Association.

D. If the City exercises its right to maintain, clear, or repair drainage easements under Section 5 above, the Association shall pay the City of Portland its reasonable expenses for such work, and said sum shall be assessed to lot owners in the same manner as other assessments are assessed by the City of Portland in Section 6A above.

SECTION 7. Access. Furthermore, the Association, or its duly appointed representative, shall have the right to access any parcel at any reasonable hour and after reasonable notice to the owner of the parcel(s) encumbered and utility systems for their intended use and for the benefit of the Association's members and families. The Association shall have the power to take legal action to enforce payment of its assessments.

ARTICLE V
DIRECTORS

SECTION 1. Number. There shall be three (3) Directors, one of whom shall be the President of the Association. Two Directors shall be elected at each annual meeting to serve until the next annual meeting and the President shall automatically become a member of the Board of Directors.

SECTION 2. Powers. The business and affairs of the Association shall be managed by the Board of Directors who may exercise all of the powers of the Association except as otherwise provided by law, by the Articles of Incorporation or by the By-Laws. In the event of a vacancy in the Board of Directors, except with regard to the office of President, the remaining Directors may fill the vacancy until the next annual meeting.

SECTION 3. Meetings. Regular meetings of the Directors may be held without call or notice at such places and at such times as the Directors from time to time determine, provided that any Director who is absent when such determination is made shall be given notice of the meeting.

Special meetings of the Directors may be held at any time and place designated in a notice by the President or two or more Directors. There shall be no time limit for such notice provided each Director has received actual notice of the meeting.

SECTION 4. Quorum. Three Directors shall constitute quorum and a vote of a majority of those Directors present shall be sufficient to decide any matter.

SECTION 5. Action by Consent. Any action by the Directors may be taken without a meeting if a written consent thereto is signed by all the Directors and filed with the records of the Directors' meetings. Such consent shall be treated as a vote of the Directors for all purposes.

ARTICLE VI
OFFICERS

The officers of the corporation shall be a President, Treasurer and Clerk.

SECTION 1. Election. The officers of the corporation shall be elected annually at the annual meeting by a vote of a majority of all members present. To be eligible for election any individual must be an owner or one of the owners of record of a parcel of land as defined herein.

SECTION 2. Tenure. Each officer shall hold office from the date of his/her election until the next annual meeting of the members or until his successor is chosen and qualified. Any officer may resign by delivering his/her written resignation to the President of any Director and such resignation shall be effective upon receipt unless it is specified to be effective at some time or upon the happening of some other event.

SECTION 3. President. The President shall be the chief executive officer of the Association and a member of the Board of Directors. He/She shall have general supervision and control of the affairs of the Association and unless otherwise provided by the Directors he shall preside at all meetings of the members of the Directors.

SECTION 4. Treasurer. The Treasurer shall have general charge of the financial affairs of the Association and cause to be kept accurate books of account. He/She shall have custody of all funds and valuable documents of the Association and shall be the second certifying officer.

All checks and deposits for the payment of money shall be signed by the President or Treasurer or by such other individual as the Board of Directors may designate.

The Treasurer shall act as President pro tem in the absence of the President.

SECTION 5. Clerk. The Clerk, or in his/her absence the Treasurer, shall keep a record of all meetings of the members. The Clerk shall be registered agent of the Association and maintain the registered office. The Clerk shall maintain an accurate list of members.

ARTICLE VII
MISCELLANEOUS PROVISIONS

SECTION 1. Fiscal Year. Except as from time to time otherwise determined by the members, the fiscal year of the Association shall be January 1st, to December 31st.

SECTION 2. Seal. The seal of the corporation shall, subject to alteration by the members, bear its name, the word "Maine" and the year of the incorporation.

SECTION 3. Execution of Instruments. All deeds, leases, transfers, contracts, bonds, notes and other obligations authorized to be executed by an officer of the Association in its behalf shall be signed by the President and/or Treasurer or in particular cases as otherwise determined by the members.

SECTION 4. Amendments. These By-Laws may at any time be amended by a vote of two-thirds of the members present or voting by written proxy provided that notice of the substance of the proposed amendment is stated in the notice of the meeting, and a quorum is present.

SECTION 5. Lot Owner Responsibilities. Each Lot owner shall perform and be responsible for the maintenance, resurfacing, improvement, clearing and repair of, and snow removal from the Driveway on his/her Lot, and for the cost of any labor, equipment or materials and management related to the Lot drainage and individual Lot improvements.

ARTICLE VIII
DISSOLUTION

In the event of dissolution of the corporation, the net assets after payment of all creditors shall be distributed pro-rata among the members owning parcels described in the "River's Edge Subdivision". Each parcel shall receive an equal share in the distribution irrespective of the number of record owners.

_____ _____

Dated

Peter D. Kennedy, President
River's Edge Homeowner's Association

M O H R & S E R E D I N
Landscape Architects, Inc.

April 10, 2001

Ms. Linda Kokemuller
Maine DEP – Portland Office
312 Canco Road
Portland, ME 04103

RE: Tier 1 Application for Wetland Alteration at River's Edge in Stroudwater

Dear Linda:

On behalf of Peter Kennedy we submit the attached application for wetland alterations at the proposed Stroudwater River's Edge subdivision in Portland. Peter Kennedy is proposing to move forward with a twenty-nine lot, single family subdivision that was started in 1992. At that time a 1,300 foot long construction road was built into the site following a circa 1968 logging road. In 1992 approximately 2,000 square feet of wetland was impacted with the installation of culverts at the road's stream crossing, but no other changes occurred on the property.

At this time the subdivision is being resubmitted to the City of Portland for final approval, and the lots have been overlaid with the wetland boundaries to identify fill areas on each lot, in addition to the fill required for the roads. The total wetland impact, inclusive of all proposed lots, is 14,670 square feet. The building windows on the recording plan have been shaped to prohibit grading and filling beyond the limits anticipated by the enclosed plan. The lot layout is based on the existing road, and wetland fills have been kept to the minimum amount practicable.

Please review this, and call with any questions.

Sincerely,

Stephen B. Mohr, ASLA

18 Pleasant Street, Portland, Maine 04101
(207) 871-0003

DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP)

APPLICATION FORM for FRESHWATER WETLAND ALTERATION

(For **Tier 1 and Tier 2 Review** under 38 M.R.S.A. Sec. 480-X)

- PLEASE TYPE OR PRINT IN *BLACK INK ONLY* (3 COPIES, PLEASE BEAR DOWN)
- SEE ATTACHED INSTRUCTIONS

1. Name of Applicant:	Peter D. Kennedy	4. Name of Agent: (if applicable)	Mohr & Seredin Landscape Architects
2. Applicant's Mailing Address:	18 Carroll St. Falmouth, ME 04105	5. Agent's Mailing Address:	18 Pleasant St. Portland, ME 04101
3. Applicant's Daytime Phone No: (with area code)	207-781-2071	6. Agent's Daytime Phone No: (with area code)	207-871-0003
7. Statement of Authorization:	I hereby authorize the above named person to act in my behalf as my agent in the processing of this application. *Signature of Applicant*:		

8. Name of Wetland (if known):	Unnamed	9. Amount of Impact (sq. ft.):	14,670 sf	10. Previous Wetland Alteration?	X Yes ❑No

11. Type of Wetland (Check all that apply):	X Forested X Scrub Shrub ❑ Emergent X Wet Meadow ❑ Peatland	❑ Open Water VEGETATIVE TYPE: ❑ Deciduous XConiferous/Fir ❑ Other_____	12. Fee Schedule:	TIER 1 ❑ 0 - 4,999 sq.ft. = $35 ❑ 5,000 - 9,999 sq.ft. = $75 X10,000 - 14,999 sq.ft.= $150	TIER 2 ❑ 15,000 - 19,999 sq.ft. = $211 ❑ 20,000 - 43,560 sq.ft.(1 acre) = .204¢/sq.ft

13. Location of Project (Town/City):	Portland, Maine	14. Tax Map #	217 Block A
		15. Tax Lot #	8
16. Detailed Directions to the Project:	Rt. 295 to Congress Street (west); to stoplight at Westbrook St.; go straight on Outer Congress 300 feet; driveway on right into site.		
17. Project Purpose and Description, inlcude alternative analysis: (attach sheet if necessary)	Single family subdivision on 19.1 acres; the main road was constructed in 1992 following an existing circa 1968 logging road. The proposed impact includes the roads and all lots.		

- **I have read** the criteria for eligibility (on the reverse side) and affirm that my project meets all the requirements including eligibility, avoidance, minimization, erosion control, water quality and classification standards, and buffer strips.
- **I have submitted** a copy of this application, including attachments, to the municipality in which the project is located.
- **I authorize** staff of State and Federal agencies, having jurisdiction over this activity, to access the project site for the purpose of determining compliance with the rules.
- **I have attached 2 copies of all of the required submissions listed below.** (see instruction sheet)

18. TIER 1	TIER 2	
X Fee	❑ Fee	❑ Alternatives Analysis
X Topographic Map	❑ Topographic Map	❑ Compensation Plan (if required)
X Plan or Drawing (8 1/2" x 11")	❑ Plan or Drawing (8 1/2" x 11")	❑ Description of Previously Mined Peatland (if required)
X Photos of Area	❑ Professional Certification	❑ Statement/Copy of cover letter to Maine Historic Preservation Commission
	❑ Copy of Public Notice	
	❑ Erosion Control Plan	❑ Photos of Area

✧ ***NOTIFICATION FORMS CANNOT BE ACCEPTED WITHOUT THE NECESSARY ATTACHMENTS*** ✧

19. Signature of Applicant:	Peter D. Kennedy	20. Date:	April 10, 2001

Keep the bottom copy as your record of application. Send the form with attachments via Certified Mail or hand deliver to the Maine Dept. of Environmental Protection **at the appropriate regional office listed below.** Permits are valid for two years.

AUGUSTA DEP
17 STATE HOUSE STATION
AUGUSTA, ME 04333-0017
(207) 287-2111

PORTLAND DEP
312 CANCO ROAD
PORTLAND, ME 04103
(207) 822-6300

BANGOR DEP
106 HOGAN ROAD
BANGOR, ME 04401
(207) 941-4570

PRESQUE ISLE DEP
1235 CENTRAL DRIVE
PRESQUE ISLE, ME 04769
(207) 764-0477

FOR OFFICE USE ONLY

APP #:	FP:	Assigned to:	Decision Date:	UTM: N	Site Visit:
CK #:	Recv'd:	Returned:	Decision: A D W R M	E	Compliance:

NOTICE OF INTENT TO FILE

Please take notice that Peter Kennedy, 18 Carroll St, Falmouth , ME
(Name, Address and Phone of Applicant)

is intending to file a Natural Resources Protection Act permit application for Tier 2 review with the Maine Department of Environmental Protection pursuant to the provisions of 38 M.R.S.A. §§ 480-X on or about April 10, 2001.
(date application will be filed with Department)

The application is for construction of a new road and 29 house lots on
(state specifically what is to be done. For example, "...constructing a 10 foot wide road across wetland to access a proposed home site...")

19.1 acres involving the fill of 14, 670 square feet of scrub-shrub forested wetland.

at the following location:

Outer Congress Street, Portland, Maine

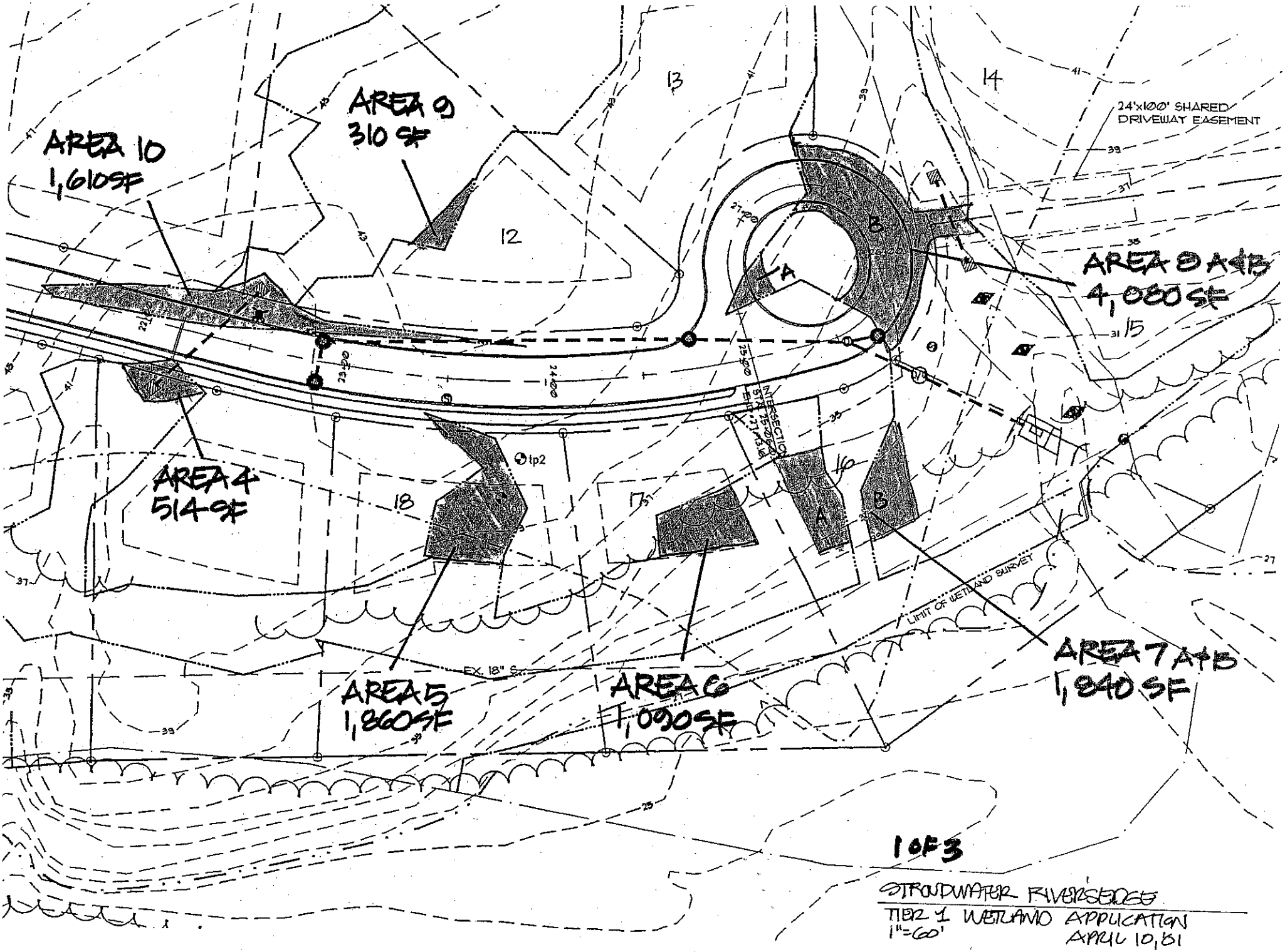
(include route numbers, fire roads, and town where project takes place)

A request for a public hearing or a request that the Board of Environmental assume jurisdiction over this application must be received by the Department, in writing, no later than 20 days after the application is found by the Department to be complete and is accepted for processing. A public hearing may or may not be held at the discretion of the Commissioner or Board of Environmental Protection. Public comment on the application will be accepted throughout the processing of the application.

The application will be filed for public inspection at the Department of Environmental Protection's office in Portland
(Portland, Augusta, Bangor or Presque Isle - see regional map in this application packet to file your application with the appropriate DEP office)

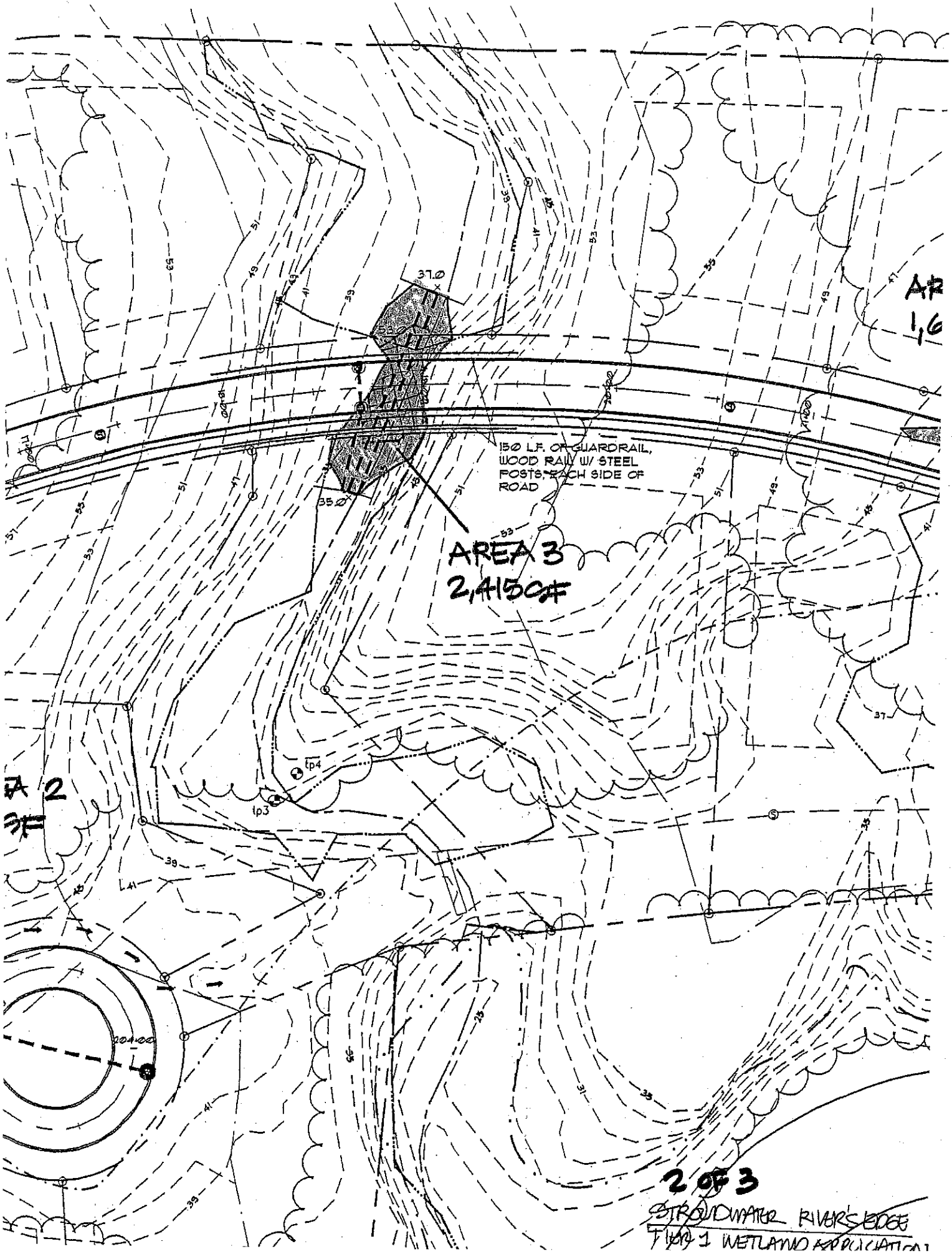
during normal working hours. A copy of the application may also be seen at the municipal offices in Portland, Maine.
(town where project takes place)

Written public comments may be sent to the Department of Environmental Protection, Bureau of Land and Water Quality, 17 State House Station, Augusta, Maine 04333.



1 OF 3

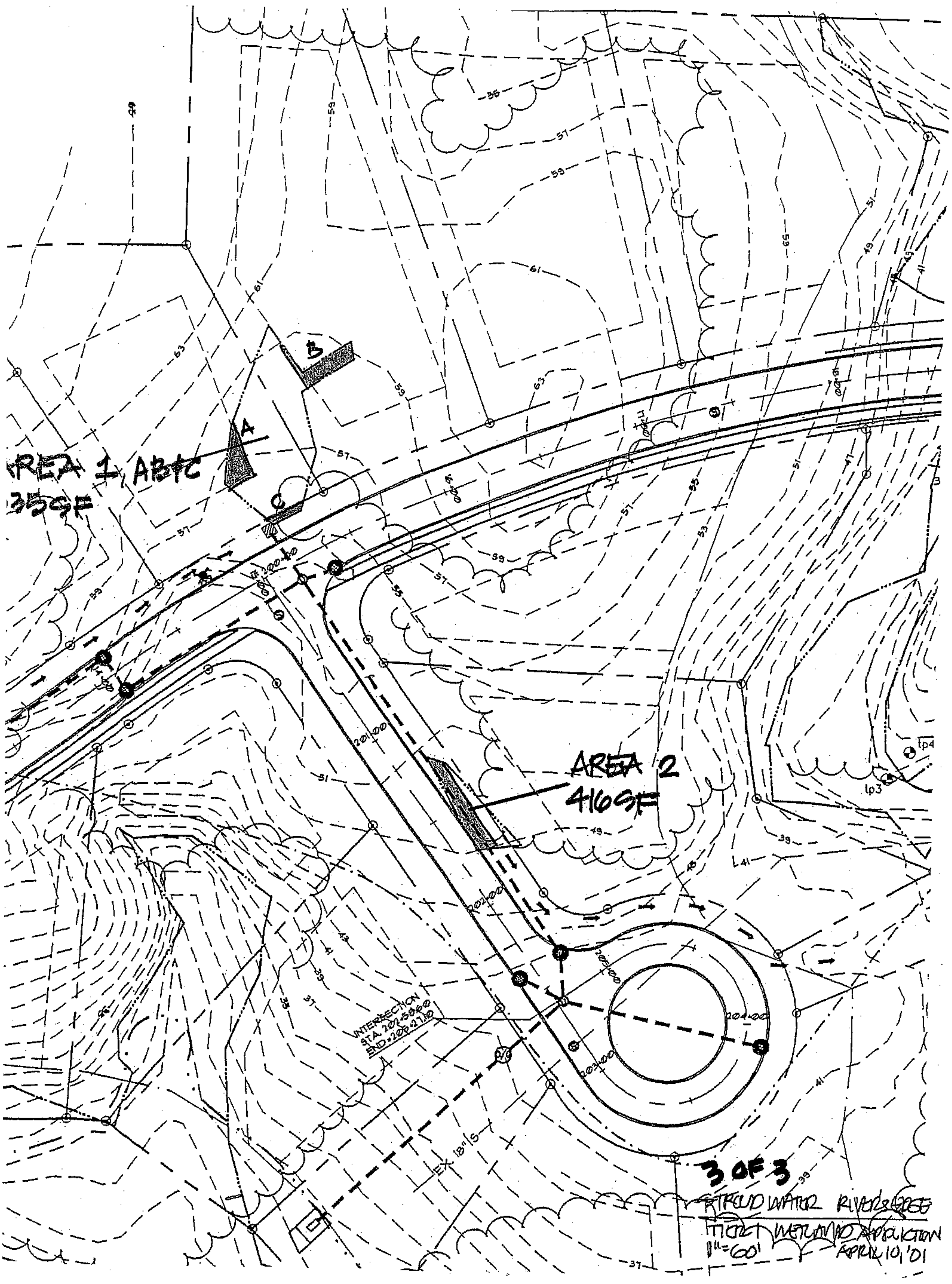
STRAWBERRY RIVERSEDGE
TIER 1 WETLAND APPLICATION
1"=60'
APRIL 10, 51



2 OF 3

STRATHMORE RIVER'S EDGE

FIG 1 WETLAND ASSOCIATION


AREA 1 A,B,C
35 SF
A
B
C
AREA 2
416 SF
INTERSECTION
STA. 202+58.60
END. 203+27.10
EX. 18" S
3 OF 3
STROUDWATER RIVER & EDGE
TICKET WETLAND APPLICATION
1" = 60'
APRIL 10, '01

REVIEW

CITY OF PORTLAND, MAINE
MEMORANDUM

TO: Jonathan Spence, Planner

FROM: Penny Littell, Associate Corporation Counsel
Ext. 8430

DATE: April 19, 2001

RE: River's Edge Subdivision Homeowners Association
Documents

Jonathan:

I had an opportunity to review the Homeowners' Association documents and Bylaws provided by the applicant in the above-referenced subdivision. I have several comments relative to these documents.

The first is a question. Is the association to be incorporated? If not, then the word "corporation" through the document should be changed to read "Association."

On page 2, under Article IV, Section 1 "Purpose", I would amend it to read:

> The purposes of the Association is to perpetually hold, own, maintain, improve, develop and operate the land of the Association "**as identified in Exhibit __ attached hereto and incorporated herein** . . .".

Under the same article, Section 2 "Control of Land", I would change the word "subdivision" to "PRUD".

Under Section 4 "Drainage Easement", I would change the third sentence of that paragraph beginning with "Homeowners" to read as follows: "Homeowners shall not, in any way, obstruct any drainage easements."

Under Section 5 of the same Article entitled "Responsibilities", I would add to the last sentence where it ends

> "upon reasonable request by the City, **in which case the cost thereof shall be assessed against the Association and shall be a lien on the property of the Association. In addition, the Association shall be responsible for the lighting of this PRUD, for the cost of trash removal from the properties contained with the PRUD, and for any and all landscaping and landscape maintenance**

therein. The ___ [name of road] shall at all times remain a private road and the Association shall be responsible all maintenance, plowing and lighting along said road. The City shall not be responsible for providing these services, plowing or lighting of said road.

Jonathan, I would be happy to discuss these documents in further detail with you.

Stroudwater - River Edge

Needs - out of 3rd Party Conservation Easement -

Issues
- traffic study - check w/ Larry
- road stds
- land is already conveyed to Portland Trails?
- DEP stormwater treatment permit (us or them
- plantings on donuts
- Home owner association ?
- moving the trail?
  - new easement ?
- Site Location : 1 over 3 acre imp.
- lot configuration ? - envelopes?.
  - Lot 12,
  - Lot 18
- wetlands - building envelopes can not be in wetlands
- Old Access easement (VACATED?)

Linda Kosanovich

Department of Public Works

William J. Bray
Director

CITY OF PORTLAND

March 1, 2001

Mr. Peter D. Kennedy
Kennedy Construction Co.
18 Carroll Street
Falmouth Maine 04105

RE: The Capacity to handle an Anticipated Increase in Wastewater Flows, from the Proposed "Rivers Edge" Subdivision, to be located at 1823-1855 Congress Street, Portland, Maine

Dear Mr. Kennedy:

The existing eighteen-inch diameter ductile iron sewer pipe (known as the Stroutwater River Interceptor) located cross-country and Northwesterly of your proposed subdivision has adequate capacity to transport the anticipated wastewater flows of 9,135 GPD, from your proposed subdivision. The Portland Water District sewage treatment facility, located off Marginal Way, has adequate capacity to treat the anticipated wastewater flows of 9,135 GPD, from your proposed subdivision.

Anticipated Wastewater Flows from the Proposed "Rivers Edge" Subdivision	
Proposed twenty-nine single-family homes @ 315 GPD/home	= 9,135GPD
Total Proposed Increase in Wastewater Flows for this Project	**= 9,135 GPD**

If I can be of further assistance, please call me at 874-8832.

Sincerely,
CITY OF PORTLAND

Frank J. Brancely, BA, MA
Senior Engineering Technician

FJB/hld

cc: Joseph E. Gray, Director, Department of Planning, & Urban Development, City of Portland
Richard Knowland Planner, Dept. of Planning & Urban Development, City of Portland
Katherine A. Staples, PE, City Engineer, City of Portland
Bradley Roland, PE, Environmental Projects Engineer, City of Portland
Anthony W. Lombardo, PE, Project Engineer, City of Portland
Stephen K. Harris, Assistant Engineer, City of Portland
Desk File

O:\Engshare\CSO\ Congress1823-1855 Street (Kennedy Const.).

Peter Kennedy - Stroud water Subdivision
- conceptually OK
- technically in need of details

Need -

1. Subdivision Plat
   - survey - dimensions - property boundaries - ROW's (-Adjacent ?) recording into
     - contours
     - flood hazards
     - street curve into
     - wetlands
     - Vicinity MAP
   - landscape plan < Existing / proposed
   - lighting plan
   - Acceptable Storm water Management Plan
   - " Erosion Control Plan
   - Ownership Deeds
   - financial / Technical Capacity

Issues

- incomplete submittal
- Having existing trail (built in wrong place according to Applicant)
- Street names
  - Mast Landing → Shoreline DR ?
  - Kings Pine Cir → Heritage Ct. ?
- Gate - Signage - landscape buffering

March 12, 2001

Mr. Peter D. Kennedy
Kennedy Construction Co.
18 Carroll Street
Falmouth, ME 04105

RE: Stroudwater River's Edge Subdivision

Dear Mr. Kennedy:

The Planning Department has received your application for subdivision and site plan approval for the project known as River's Edge. Although the application appears to not have significant conceptual problems, the following materials are necessary in order to constitute a complete submittal:

1. An official subdivision plan including dimensions, lot sizes, street curve information, vicinity map, existing or proposed easements, delineation of flood hazards and wetland, adjacent property owner information and all other pertinent and required details.

2. A landscape plan identifying existing, intended for preservation, and proposed vegetation.

3. A lighting plan if any street lighting is to be included for this project.

4. A storm water management plan including supporting computations and basis of design.

5. Letters of technical and financial capacity.

6. A letter from the Portland Water District demonstrating the availability of sufficient capacity.

7. A list of all state and federal regulatory approvals which this development may be subject to.

8. Evidence of the applicants existing ownership, title or interest in the property.

The project is tentatively scheduled for the April 10th workshop. If the materials necessary to constitute a complete submittal are not received prior to the Wednesday preceding this date, the workshop will have to be rescheduled. The erosion control and site preparation plans as well as the project details submitted are currently under review. I will be forwarding any comments generated by these reviews to you.

If you have any questions, please do not hesitate to contact me at 874-8083.

Sincerely,

Jonathan Spence
Planner

CC: Sarah Hopkins, Development Review Services Manager

July 24, 2001

Via Fax 756-8258

Jonathan Spence
City Planner
City of Portland
389 Congress Street
Portland, ME 04101

RE: Stroudwater Farms Associate Development on Outer Congress Street

Dear Jonathan:

I write on behalf of Portland Trails to indicate that Portland Trails anticipates granting the necessary drainage easement for the Stroudwater Farms' proposal put forward by Mr. Peter Kennedy. The easement will be subject to our Trustees final approval. Nan Cumming, Portland Trails Executive Director, and I met with Mr. Kennedy on Wednesday, July 18 to discuss the proposal and ask Mr. Kennedy questions relating to the relocation of the existing Stroudwater Trail built and maintained by Portland Trails.

The Stroudwater Trail adjoining Congress Street was made possible by Mr. Kennedy agreeing to deed Portland Trails the land in 1994. Mr. Kennedy is one of those exceptional developers who is willing to allow a trail and open their land to public access. We wish that there were more developers in the City who are willing to support open space and trails as Mr. Kennedy has done, rather than attempting to make rare and beautiful areas of the City the preserve of a select few.

We and other Portland Trails members had a number of questions relating to the exact location of the rebuilt trail, parking, signage, and snow clearance of the parking area. Mr. Kennedy stated that the trail will be relocated at his expense and will be done immediately after the drainage is installed across Portland Trails' land. Mr. Kennedy is also willing to adjust lot lines slightly if necessary for the relocation of the Stroudwater Trail. We understand that Mr. Kennedy will require an easement from Portland Trails across the land he previously deeded to us to install the required drainage. Based on our conversation, we anticipate that a deed will be prepared by Mr. Kennedy and forwarded to Portland Trails for review shortly for review.

We also discussed trail signage and the parking for the Stroudwater Trail land adjacent to the planned lot 29. Parking for three cars for the trail land is insufficient. To allow for public access, it is also important that trail signage separately identify the public access to the Stroudwater Trail. The trail signage should be distinct from the private entry of the subdivision so that members of the public know that they are welcome to walk or drive in, park, and use the trail so long as they respect the privacy of the homeowners in the planned development.

Mr. Kennedy indicated that he is open to allowing more parking spaces and public access signage, but deferred the details to his landscape architect, Steve Mohr, who was on vacation last week. We will work out the details with Mr. Mohr (who designed and laid out the original trail in this area) to ensure that the newly relocated trail is adequate.

Lastly, we also indicated that the parking for the trail must remain open (and plowed) during the winter because snow shoeing and cross-country skiing are popular activities on this section of the trail. In particular, we do not want the trail parking to be used as snow storage – which will prevent winter-use parking. Mr. Kennedy indicated that he will be undertaking the plowing for several years himself and this should not be a problem and afterwards arrangements can be made with the homeowners association to ensure that the public access parking remains open and clear during the winter. Further, if it is necessary to allow for a winding trail rather than a long run of stairs, Mr. Kennedy indicated a willingness to slightly adjust lot lines in the areas of lots 26 through 29 and will work on this detail based up a field survey with Mr. Mohr. This is an important trail design issue to avoid a 30-60 foot run of stairs adjacent to Lot 29.

We will attend the Planning Board hearing on the project on July 24 to answer additional questions should you or the Planning Board have any. In the meantime, please do not hesitate to call if there are any additional details that you or members of the public believe Portland Trails should address.

Very truly yours,

David Littell

DL:pmp

cc: Peter Kennedy
Steve Mohr
Nan Cumming, Executive Director, Portland Trails

From: "Jeff Sommer" <sommer@ime.net>
To: Portland.CityHall(AQJ,RWK)
Date: Wed, Jul 25, 2001 10:58 AM
Subject: FW: River's Edge Proposal

-----Original Message-----
From: Jeff Sommer [mailto:sommer@ime.net]
Sent: Wednesday, July 25, 2001 8:11 AM
To: jspence@ci.portland.me.us
Cc: rknowland@ci.portland.me.us; ajaegermann@ci.portland.me.us
Subject: River's Edge Proposal

Jonathan -

While we did not get many of the conditions attached that we were hoping for, I do thank you for all of the time you have expended with me and other SVA members over the last few weeks.

However, I am concerned about how several items have played out over the course of the approval process.

1. At last night's meeting, Steve Mohr's representatations concerning the violation on the Kennedy parcel last year were demonstrably false and misleading. The violation did not occur on PWD land nor was it committed by PWD. As Rick Knowland will point out, the area in question was the end/turnaround of the cul de sac at the far end of the property nearest UNUM. Mr. Knowland and Steve Bushey inspected the area shortly after the unpermitted grading occurred. Mr. Knowland then spoke with and, as I understand it, sent a cease and dissist letter to Mr. Kennedy concerning this unpermitted activity abutting an existing stream.

Further, I was an eye witness to the violation in progress and spoke with kennedy. He was inspecting the work and there was a bull dozer and operater on site with him. I had been weed wacking along the trail (as a Portland Trails volunteer) when I heard construction equipment. I approached Mr. Kennedy and asked him what was going on. He indicated he was doing some rough road work on his subdivision. After that conversation, I contacted Rick Knowland and he and Steve Bushey did their site walk, also discovering the violation of grading within a procribed area of a stream.

The area in question is not along the PWD easement nor is it an area where PWD has done work. It does correspond exactly with the proposed end of the cul de sac and was inspected by none other than Mr. Kennedy. I am an eye witness. Given the Chair's commments about emotion vs. facts I believe it is important to clarify this matter with both planning staff and the board. The Stroudwater Village Association's and Mr. Mohr's credibility are at stake. Once again, Mr. Mohr's statements were both false and misleading to planning staff and the board.

I would welcome your advice (or your colleague's advioce) on how best to indicate that the SVA and its members do not make unsupported charges and

were correct on the facts in this instance. As we come before the board on a regular basis, it is important that the facts in this instance come to light and our credibility not be impugned.

2. Another question about the conditions the board directed staff to include in the project. Would comment from the public be considered by staff in the drafting of these conditions? Specifically, I am most concerned about the buffer and do not disturb areas on lots 26-29 being revised "up the slope." If I submitted comments, would these at least be reviewed by staff at this time?

3. While their was some discussion about whether building envelopes can fall within the shoreland zone, I do not believe that my general comment about differing staff standards concerning grades, setbacks, buffers on PRP III and River's Edge was adequately addressed. Given the similar topography, ecology, regulations, and proximity to a fragile riverine ecosystem of lots 26-29 on River's Edge to the PRP III proposal, why was staff review and the standards employed by staff (especially concerning buffers, the disturbance to root systems from construction and grading, and the difficulty of containing disturbance within the building envelope) not included in staff discussion of River's Edge? Could some of these concerns be submitted and addressed during the condition drafting phase for River's Edge (especially as they relate to buffers on lotsb 26-29) to mitigate these apparently different standards? I would welcome your thoughts.

4. Lastly, it is apparent that our submission might have had more weight had it been sent to the city at the workshop or shortly thereafter. Lesson learned. The SVA and I would welcome any thoughts you or your colleagues might have to improve the effectiveness of our advocacy and participation in the process.

Thanks for all of your hard work. I look forward to hearing from you.

Jeff Sommer

Stroudwater River's Edge

Technical capacity to complete the project

The consultant team assembled by Mr. Kennedy for the project includes the following:

1) Surveying/plat preparation	Owen Haskell, Inc. 16 Casco St. Portland, ME 04101-2979
2) Civil Engineering/Stormwater Management	Pinkham & Greer Consulting Engineers 170 U.S. Route One Falmouth, ME 04105
3) Land planning and landscape architecture	Mohr & Seredin Landscape Architects, Inc. 18 Pleasant St. Portland, ME 04101

The consultant team brings to the project a collective experience of 75 years of practice, and over 300 projects of a similar character. The team of consultants have demonstrated ability in the City on previous subdivisions including: Pineloch Woods, Presumpscott River Place, and Garrison Street Subdivision. All of the firms working on this project have registered professionals involved with the project.

Peter Kennedy has developed several projects in Maine including: subdivisions in Cape Elizabeth, Bath, and Portland. Mr. Kennedy's recent work includes commercial and residential development in Falmouth and a large residential development in Ossining, NY.

Memorandum

To: Jonathan Spence

CC: [Click **here** and type name]

From: Steve Bushey

Date: 4/24/01

Re: Rivers Edge Subdivision

I have reviewed the latest plans dated March 27, 2001 for the Rivers Edge Subdivision and find that they are preliminary in nature and continue to need additional data. I recommend that Staff and I complete a site walk if possible. I highly recommend the planning Board complete a site walk if possible also. I offer the following comments for your review and to pass on to the applicant as you see fit.

1. The applicant should provide a basis for the soils information presented on drawing S-1. The applicant should provide a detailed explanation of the site's soils limitations, bedrock depths and other significant criteria for design. The subdivision ordinance allows the Dept. to require a high intensity soil survey and geotechnical data for the project. To date I have not seen a geotechnical report or any engineering recommendations for design of pavement sections, drainage measures, topsoil depths and turf establishment recommendations.

2. How will the Shoreland Zone impact and possibly restrict land clearing activity and development within at least ten of the lots?

3. The applicant must provide preliminary individual lot grading plans so that we may assess the building potential on each lot. Several lots, notably 26, 27, and 28 have very steep slopes and are within the shoreland zone. The plan contains no detail as to how these lots will or can be developed on slopes in excess of 15%.

4. Does the subdivision plan show the complete holdings of the owner? What are the complete boundaries for Lot 30 and what are the plans for this lot?

5. The subdivision plan states that all lots shall have NFPA 13D Fire protection. What does this entail and has the fire Dept. reviewed?

6. The Erosion Control Plan is lacking in detail and contains no representation of required silt fence locations and other necessary BMP's. I will not comment in any detail until the plan is reworked to satisfactorily address the erosion control requirements for the site.

7. The applicant should provide supporting design computations for all riprap sizing, apron sizing and other related BMP design criteria.

8. The applicant should provide a plan that outlines the anticipated clearing limits for both the road construction and lot construction. Does the applicant propose to build the homes on each lot or will other private contractors be responsible for individual lot development?

9. The Portland Water District should review and sign off on all water main installation and materials including hydrant type.

10. The 5' Culvert cross section does no accurately represent the actual installation conditions since the culvert will have over 9' of cover over it. This should be revised to show actual conditions.

11. The plan view and detail for the 5' culvert should accurately show the limits of the riprap aprons. Sizing criteria must be provided. The culvert exceeds the 75' Permit by rule length for NRPA permitting and will need to be reviewed under a full NRPA application.

12. The applicant should provide a design basis for the storm drain system and why the catch basins are so deep. Will rock removal be required to install this system?

13. The pipe inlet at the front of lot 6 should be detailed and the grading shown for this installation. It is recommended that a grading plan be provided to show the impacts of the road development on the frontage of many of the lots.

14. The applicant should provide a basis for all catch basin locations and review the need to add basins in locations such as the west corner opposite Sta 13+00 for example.

15. The lot numbers on sheet P-2 appear to be misaligned.

16. The vertical curve length between 17+55 and 19+25 is too short and must have a K value over 20.

17. DMH #3 should be reconfigured since the inlet from CB #13 is almost opposite the main line inlet. This structure may also need to be at least a 6' dia. Structure.

These comments are based on my initial review of the drawings. I will continue to review however my time may be better off spent if the applicant completes their own review and submits updated and more substantially complete drawings.

If you have any questions please call.

Steve Bushey, Technical Reviewer

Planning & Urban Development

Joseph E. Gray Jr.
Director

CITY OF PORTLAND

May 1, 2001

Mr. Stephen B. Mohr, ASLA
Mohr and Seredin Inc.
18 Pleasant Street
Portland, ME 04101

RE: Stroudwater River's Edge Subdivision

Dear Mr. Mohr:

I have received comments from Steve Bushey, Engineering Consultant for the City of Portland, regarding the proposed River's Edge Subdivision. Steve feels that the plans are still preliminary in nature and continue to need additional data. Specific items of concern include:

1. The applicant should provide a basis for the soils information presented on drawing S-1. The applicant should provide a detailed explanation of the site's soils limitations, bedrock depths and other significant criteria for design. The subdivision ordinance allows the Dept. to require a high intensity soil survey and geotechnical data for the project. To date staff has not seen a geotechnical report or any engineering recommendations for design of pavement sections, drainage measures, topsoil depths and turf establishment recommendations.

2. The applicant must provide preliminary individual lot grading plans so that we may assess the building potential on each lot. Several lots, notably 26, 27, and 28 have very steep slopes and are within the shoreland zone. The plan contains no detail as to how these lots will or can be developed on slopes in excess of 15%.

3. The Erosion Control Plan is lacking in detail and contains no representation of required silt fence locations and other necessary BMP's. Steve will not comment in any detail until the plan is reworked to satisfactorily address the erosion control requirements for the site.

4. The applicant should provide supporting design computations for all riprap sizing, apron sizing and other related BMP design criteria.

5. The 5' Culvert cross section does no accurately represent the actual installation conditions since the culvert will have over 9' of cover over it. This should be revised to show actual conditions.

389 Congress Street • Portland, Maine 04101 • (207) 874-8721 • FAX 756-8258 • TTY 874-8936

Post-it™ Fax Note 7671	Date	# of pages ▶
To Steve Mohr	From Rhonda	
Co./Dept.	Co. DEP	
Phone #	Phone # 287-8765	
Fax # 871-1419	Fax #	

111-? Strawbw

Applicant Name & Address: Peter D. Kennedy
18 Carroll St.
Falmouth, ME 04105

DEP Project Number: 01-1158
CORPS Permit Number:
Project Location: Portland

Description of Work: The applicant proposes to construct a 29-lot single family residential subdivision on 19.1 acres. The main road was constructed in 1992. Proposed wetland fills total 11,770 square feet and will result from road construction, house driveways, and minimal building envelopes. The types of wetland to be altered include forested, wet meadow, and scrub-shrub.

Permit for:	[X] Tier 1	[ ] Tier 2
Date of Review:	5/1/01	
DEP Decision:	[X] Approved	[ ] Denied (see attached letter)
CORPS Action:	[X]	The Corps has been notified of your application. The following are subject to Federal screening: (1) projects with previously authorized or unauthorized work, in combination with a Tier 1 permit for a single and complete project, which total more than 15,000 square feet of altered area; (2) projects with multiple state permits and/or state exemptions which apply to a single and complete project that total more than 15, 000 square feet of altered area; and (3) projects that may impact a vernal pool, as determined by the State of Maine or the Corps. If your activity is listed above, *Corps approval is required for your project.* For information regarding the status of your application contact the Corps' Maine Project Office at 623-8367.

[X] Special Conditions: Further wetland alteration shall be approved by the Department prior to construction.

Standard Conditions:

1) This permit is good for two (2) years from the date signed and is transferable only with prior approval from the Department.
2) The project must be completed according to the plans in the application. Any change in the project plans shall be reviewed and approved by the Department.
3) Properly installed erosion control measures shall be installed prior to beginning the project, and all disturbed soil shall be stabilized immediately upon project completion.
4) A copy of this approval shall be sent to the City of Portland. Department approval of your activity does not supersede or substitute the need for any necessary local approvals.

This decision satisfies the Water Quality Certification requirement.

Please note the attached sheet for guidance on appeal procedures. If you have any questions regarding this, please contact Marybeth Richardson, project manager, at 207-822-6335.

MARTHA G. KIRKPATRICK, COMMISSIONER

DATE 5/4/01

cc: file
City of Portland

FILED
MAY - 8 2001
BOARD OF ENVIRONMENTAL PROT.
STATE OF MAINE

Post-it® Fax Note 7671	Date	# of pages ▶
To Steve Mohr	From Rhonda	
Co./Dept.	Co. DEP	
Phone #	Phone # 287-8765	
Fax # 871-1419	Fax #	

111-? Stream

Applicant Name & Address: Peter D. Kennedy
18 Carroll St.
Falmouth, ME 04105

DEP Project Number: 01-1158
CORPS Permit Number:
Project Location: Portland

Description of Work: The applicant proposes to construct a 29-lot single family residential subdivision on 19.1 acres. The main road was constructed in 1992. Proposed wetland fills total 11,770 square feet and will result from road construction, house driveways, and minimal building envelopes. The types of wetland to be altered include forested, wet meadow, and scrub-shrub.

Permit for:	[X] Tier 1	[ ] Tier 2
Date of Review:	5/1/01	
DEP Decision:	[X] Approved	[ ] Denied (see attached letter)
CORPS Action:	[X] The Corps has been notified of your application. The following are subject to Federal screening: (1) projects with previously authorized or unauthorized work, in combination with a Tier 1 permit for a single and complete project, which total more than 15,000 square feet of altered area; (2) projects with multiple state permits and/or state exemptions which apply to a single and complete project that total more than 15, 000 square feet of altered area; and (3) projects that may impact a vernal pool, as determined by the State of Maine or the Corps. If your activity is listed above, *Corps approval is required for your project.* For information regarding the status of your application contact the Corps' Maine Project Office at 623-8367.	

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This decision satisfies the Water Quality Certification requirement.

Please note the attached sheet for guidance on appeal procedures. If you have any questions regarding this, please contact Marybeth Richardson, project manager, at 207-822-6335.

MARTHA G. KIRKPATRICK, COMMISSIONER

DATE 5/4/01

cc: file
City of Portland

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MAY - 8 2001
BOARD OF ENVIRONMENTAL PROT.
STATE OF MAINE

PBR1

CITY OF PORTLAND, MAINE

PLANNING BOARD

November 28, 2001

Mr. Peter D. Kennedy
Stroudwater Farms Associates
18 Carroll Street
Falmouth, ME 04105

RE: River's Edge Subdivision
(CBL 217-A-008)

Dear Mr. Kennedy:

On November 27, 2001,the Portland Planning Board voted 5-0 (Cole absent, Rodriguez resigned) on the following motion regarding the River's Edge subdivision:

1. On the basis of plans and material submitted by the applicant and on the basis of information contained in Planning Report #30-01a, relevant to the applicable standards of the City of Portland, the approved headstone detail and the condition of approval requiring granite transition stones be modified to allow continuous bituminous curbing behind catch basin drains installed in accordance with the recommendations of the attached memos.

All other conditions and requirements of the original approval remain.

If there are any questions regarding the Board's actions, please contact the planning staff.

Sincerely,

Jaimey Caron, Chair
Portland Planning Board

cc: Alexander Jaegerman, Chief Planner
Jonathan C. Spence, Planner
Marge Schmuckal, Zoning Administrator
Tony Lombardo, Project Engineer
Jay Reynolds, Development Review Coordinator
William Bray, Director of Public Works
Eric Labelle, City Engineer
Jeff Tarling, City Arborist
Penny Littell, Associate Corporation Counsel
Lt. Gaylen McDougall, Fire Prevention
Inspection Department
Lee Urban, Director of Economic Development
Don Hall, Appraiser, Assessor's Office
Susan Doughty, Assessor's Office
Approval Letter File

① further analysis - of traffic
② standards of review
turning lane ?
- speed limit.

CITY OF PORTLAND, MAINE
MEMORANDUM

TO: Chair Caron and Members of the Planning Board

FROM: Jonathan Spence, Planner

DATE: June 12, 2001

RE: River's Edge Subdivision; Peter Kennedy Applicant
In the vicinity of 1827 Congress Street

Peter Kennedy requests workshop review for a residential subdivision in the vicinity of 1827 Congress Street and the Stroudwater River. Back in 1993, the Planning Board approved a 29 lot residential subdivision for this site in conformance with a previously approved conditional rezoning. The subdivision approval has lapsed. The current subdivision application remains largely unchanged from the original plan. Minor changes have been made to lot configurations and building envelopes to minimize wetland impacts.

This proposal will be reviewed for conformance with the subdivision, site plan and shore land regulations.

Conditional Zoning

The City Council after Planning Board recommendation enacted a conditional R-3 zoning for this site in 1992. The conditional zone is still valid and did not have an expiration clause (See Attachment 7).

The purpose of the conditional zone was to allow the subdivision a private roadway. The original zoning for the site was R-1 and R-2 which does not allow private roadways for single-family subdivisions. The R-3 zone was used as a conditional zone to take advantage of the R-3 single-family PRUD provisions. While the single family PRUD provisions were later eliminated from the R-3 zoning text, the conditional zone and development scheme are still valid. Sections #2 and #3 of the conditional zone references a private roadway.

As part of the conditional zoning, the applicant agreed to convey the entire subdivision frontage along the Stroudwater River to Portland Trails. The 7.87 acre parcel has already been transferred to Portland Trails and a trail has been construction within the open space.

Subdivision Features

traffic
pollution
density - wants it lighter

Zoning:	Conditional R-3
Land Area:	19.13 acres
Residential lots:	29
Lot sizes:	12,316 sq ft to 37,856 sq ft
Private open space lots:	1 active lot: 9,898 sq ft 2 passive lots: 16,149 sq ft and 29,919 sq ft

Portland Trails lot: 7.87 acres (previously conveyed)

Traffic

Access to the site will be from Congress Street. A traffic report has been submitted as a component of this application. Larry Ash, Traffic Engineer for the City of Portland, has reviewed this report. Mr. Ash finds that there are no traffic concerns or issues with respect to this proposed development. Mr. Ash does insist that 30' radii' be provided at the entrance/exit to facilitate the movement of vehicles into and out of the development. The memo from Mr. Ash is included as attachment 3.

Since the Board's 1993 approval, Congress Street was widened to four lanes in the vicinity of the site. Curbs and sidewalks were installed along the Congress Street frontage of the property.

Roadway

All of the roadways are private and will be owned and maintained by a homeowner's association. The main roadway into the site from Congress Street is 24-foot wide with bituminous curbs and an underground storm water collection system. This roadway will be 1,580 feet long and ends in a cul-de-sac. Two other short roadways are also planned off of the main roadway. These roadways will be 20 feet wide.

A sidewalk on one side of the street is shown along the main roadway.

Portland Trails' access to their open space is from land adjacent to lot 29. This strip of land includes a small parking area and a driveway easement for the abutting residence on Congress Street.

Historic District

It appears that about twelve of the lots (nearest Congress Street) are located within the Stroudwater Historic District. The design of these houses will need to be reviewed by the Historic Preservation Committee.

Engineering

The applicant has worked closely with Steve Bushey, Engineering Consultant for the City of Portland, to address engineering issues and concerns related to this proposal. The latest comments from Mr. Bushey are included as attachment 2. The applicant met with city staff and Mr. Bushey on Wednesday, June 6, 2001 to discuss these items. Revised drainage plans addressing these items have been submitted and are currently under review. Changes requested to the subdivision plan have not been received. The applicant has stated that they wish to submit this revised subdivision plan after the workshop session. A subdivision plan consistent with Mr. Bushey's latest comments is required prior to a public hearing.

Individual lot grading plans for lots with significant building difficulties due to topography and wetland encumbrances have been submitted and included as attachment 4.

The applicant is developing language to be included as notes on the subdivision plan to address buffer areas within individually owned lots. Staff encourages the applicant to include language that explicitly defines permitted and non-permitted activities within these buffer areas. Due to the unique characteristics of the site, preservation in a natural state of all areas outside of building envelopes with minor exceptions is encouraged.

Wetland Impact

The applicant has received a Tier 1 approved permit from the Department of Environmental Protection for wetland filling resulting from road construction, private driveways and home site preparation. A copy of this permit has been included as attachment 6.

Landscaping

The applicant is working with Jeff Tarling, City Arborist, to develop a landscape plan that integrates the subdivision into the existing landscape. This landscape plan must be completed prior to a public hearing.

Fire

A note on the recording plan indicates that all residences will be required to have NFPA 13D fire protection sprinklers.

Homeowners Association

Association bylaws have been submitted and reviewed by staff. Additional minor revisions are required. A draft of these by-laws is included as attachment 5. These revisions must be completed prior to the public hearing.

Attachments

1. Proposed Subdivision Plan
2. Most Recent Engineering Comments
3. Memo From Larry Ash, Traffic Engineer
4. Individual Lot grading Plans for Lots 16-18 and 27-29
5. Draft of Homeowners Association By-laws
6. Approved Tier 1 Wetland Fill Permit
7. 1993 Planning Board Approval Letter
8. 1993 Planning Board Report Including Conditional Zone

AH. # 2

From: "Steve Bushey" <SBushey@DelucaHoffman.com>
To: Portland.CityHall(JSpence)
Date: Tue, Jun 5, 2001 8:01 AM
Subject: Rivers Edge Subdivision

Jonathan,

I have reviewed the latest submission materials dated April 10, 2001 (plans) and May 16, 2001 (letter) for the proposed Rivers Edge Subdivision. The responses appear to address my earlier comments from April. From the materials I recieved I am uncertain if all my comments were responded to. I will assume you have the materials.

Based on my review there still appears to be some issues that need to be addressed. I would suggest you speak with Rick Knowland regarding the Presumpscot River Place III project and the notes that are being required for the project on their plans. The Rivers Edge project is similiar in nature therefore many of the conditions of approval for PRP III will also apply to this project.

I offer the following comments based on the latest review.

Subdivision Plan.

1. This will be a recording plat therefore it should adequately reference the Lot 30 boundaries and the granting of the Lot to Portland Trails. I also recommend the plan show the actual limits of the trail since it does not show up on any drawings.

2. Is the buffer line also intended as a limits of disturbance line. There should be specifics measures to outline and insure that any buffer areas are maintained.

3. The plan should be stamped and sealed by the surveyor.

4. The street names should show up on the recording plat. Are these names acceptable to emergency services?

5. Are the plans designed in accordance with the original contract zone?

6. All drainage easements must show on the plan. The easement on lot 19/20 is missing for example.

7. Staff and corp. Counsel should discuss the need for dimensioning of all setbacks, buffers etc. to allow enforcement during construction.

Erosion control plan

1. Silt fence should be added to the southwest side of Cul-De -Sac #2

2. The applicant should provide evidence of a construction easement to install the storm drain adjacent the caron property and the trail parking lot.

3. The phasing should include specific requirements to install the

water quality devises and all storm drain oufalls etc. prior to any further construction. The plan must be specific in order to avoid the problems encountered at the Auburn Pines project, where the contractor ended up building the detention basin last since they stockpiled material in the area of the proposed basin during the entire construction period.

4. What type of maintenance program will be required for the storm drain system and water quality devices. who will be responsible to clean and maintain all open and closed storm drain conveyance systems?

5. The outfall from DMH #8 should be designed with a level spreader.

6. The applicant's engineer should review the stability of the open area between the outfall from Water quality unit #1 and the river. This area appears prone to erosion due to the new outfall. Additional BMP measures should be installed at this location to prevent erosion so close to the River.

Detail Sheet C-5

1. Where will the drop manholes be used? All structures should have the words "storm drain" or "sewer" cast into the cover.
The drop manhole should be installed in accordance with the City of Portland Standard.

Sheet P-2

1. The minimum K value for crest curves is 15. The curve at Station 19+86 should be slightly lengthened.

2. Has a full NRPA permit application and approval been obtained for the 5' dia. culvert since it exceeds the Permit by Rule length of 75'?

3. Staff should review the constructability of lots 16, 17 and 18 since the building areas are significantly limited due to the wetlands. The house footprints are likely to extend into the wetland zones therefore it should be anticipated that drainage problems will be persistent at these locations in the future.

4. The Underdrain should be shown on the plan. Where will is discharge to?

Sheet P-3

1. Is landscaping proposed for the center islands of the Cul-de-Sacs?

2. A detail for the level lip spreader should be provided.

General

1. I have not seen any lot grading plans. I still have concerns about lots 26, 27, 28, and 29 and their developability since they have slopes that exceed 20 %

If you have any questions regarding these comments please call.

Steve Bushey, Technical Reviewer

AH. #3

From: Larry Ash
To: Jonathan Spence
Date: Thu, Jun 7, 2001 1:00 PM
Subject: Stroudwater River's Edge Subdivision

Jonathan: I have reviewed the traffic report by Bill Eaton as regards this proposed development and do not have further traffic concerns or issues with the development.

If the development proceeds I would insist that 30 foot radius' be provided at the entrance/exit to facilitate the movement of vehicles into and out of the development.

Should you have further questions please call.

M O H R & S E R E D I N
Landscape Architects, Inc.

June 7, 2001

Mr. Jonathan Spence
Portland Planning Department
Portland City Hall
389 Congress St.
Portland, ME 04101

RE: Kennedy's Stroudwater Subdivision

Dear Jonathan:

I appreciated the time that you took yesterday to meet with us to go over the staff comments on the Stroudwater project. Pinkham & Greer have completed the plan revisions identified by Mr. Bushey, and we will be forwarding complete sets to you under separate cover. In order to meet your deadline for getting material in, I am submitting the following information to you to include in the Planning Board's packet for next Tuesday's workshop.

1) A reduced copy of the subdivision plan.
2) Copies of the grading plans for the lots that have limitations based on steep slopes and wet areas.

With respect to the question of what occurs within the buffer areas indicated on the subdivision plan, we propose to add a note on the recording plat that will identify the restrictions that occur within the buffer zone. Our current thinking is that there will be no vegetative clearing, structures, or accessory uses permitted within the buffer zone that occurs on each lot. These areas will be left in their natural condition, but the lot owners will be able to clear the understory for a 5' widewalking trail down through the wooded areas to provide access on their property. We will refine this and discuss it with the Planning Board at the workshop. Please call if I have not addressed all of your issues.

Sincerely,

Stephen B. Mohr, ASLA

Cc: Peter Kennedy

18 Pleasant Street, Portland, Maine 04101
(207) 871-0003

ATTACHMENT B

PLANNING REPORT #17-93

STROUDWATER RIVER'S EDGE PRUD
STROUDWATER FARMS ASSOCIATES, APPLICANT
SUBDIVISION, SITE PLAN, PRUD, AND SHORELAND REVIEW

Submitted to:

Portland Planning Board
Portland, Maine

June 8, 1993

I. INTRODUCTION

Stroudwater Farms Associates are requesting site plan, subdivision, PRUD, and shoreland review for a 29-unit Planned Residential Unit Development in the vicinity of Congress Street and the Stroudwater River.

The applicant is proposing a 29 unit PRUD in which homeowners will own their homes and the lots on which they are built, and the association will own and maintain in common the roadways and active/passive areas within the development. In addition, a 7.86 parcel of land will be deeded in fee interest to Portland Trails, on which a trail will be constructed by the applicant.

This development was the subject of a conditional rezoning from R1/R2 to R-3 with restrictions that the projcet will be a single family subdivision at the R1/R2 density. The rezoning provides for a private road and for river edge land to be donated for public use.

II. SUMMARY OF FINDINGS

Zoning	Conditional R-3
Land Area	27 Acres
Total number of lots	29 Residential 1 lot to be conveyed to Portland Trails 2 passive recreation lots 1 active recreation lot
Land uses	Single family residential, institutional
Lot sizes	10,940 to 41,597 sq. ft.

III. STAFF REVIEW

The development proposal has been reviewed for compliance with the Subdivision, Site Plan, PRUD, and Shoreland Ordinances of the Land Use Code. Review of the proposal has been completed by the Departments of Planning, Parks and Public Works, Fire, and Inspections. The comments of these departments are contained in this report.

IV. SUBDIVISION REVIEW

1. Water and Air Pollution

The proposal will not cause undue air or water pollution. As a residential development using public sanitary and water facilities, it is not anticipated that the subdivision will have an adverse effect upon the environment.

2/3. Water

The Portland Water District, in a 1987 letter, stated that there would only be sufficient capacity to serve this development if the 6" waterline in Congress Street were to be replaced with a 12" waterline. This replacement was completed in 1988.

4. Soil Erosion and Sedimentation Control

An erosion and sedimentation control plan has been submitted by the applicant. This plan outlines the limits of disturbance and a schedule of work. Temporary erosion and sedimentation control measures will consist of hay bales, silt fencing, filter fabric fence and jute mesh. Permanent measures will consist of loaming, seeding, pavement, curbing, wood chip mulch, and stone dust.

The owner will maintain all permanent sedimentation and erosion control measures until the Homeowners Association assumes control of the development.

5. Traffic

Traffic will enter the site from Congress Street through a private entrance. The entrance will include a divided island, gatehouse, parking, and mailboxes. An entrance and parking area for people using the trail will also be located at the Congress Street entrance.

The roads of the development consist of River's Edge Drive and two cul-de-sacs: Kings Pine and Mast Landing. Lt. MacDougall has requested that all names of the development be changed. All proposed names are similar to existing street names.

Proposed	Existing
River's Edge Drive	River View
Kings Pine	Kings Mark
Mast Landing	Old Mast Road

The applicant has agreed to change the names of the streets. A recommended condition of approval would be:

- that prior to the recording of the subdivision plat, the applicant submit for staff review and approval a revised set of street names for the roadways serving the development.

- the private street within the development will be 24 ft. wide with bituminous curbing and an underground stormwater collection system. A sidewalk will be placed on the north side of the main road and on the northeastern cul-de-sac.

Congress Street Improvements

The applicant will complete the Congress Street traffic improvements as stipulated by the conditions for rezoning. No improvements will be required in the first phase which will generate approximately 170 trip ends per day with morning and afternoon peak hour traffic of 17-21 trip ends.

When Phase II is 75% occupied, the applicant will submit a generation study to the traffic engineer. If the study indicates a need for Congress Street improvements, those improvements will be completed by the applicant or his successor.

Congress Street improvements will include street widening, curbing, and sidewalks (see Attachment 8).

10. Shoreland

The applicant has submitted a detailed plan for temporary and permanent sedimentation and erosion control. These measures should guarantee that the proposed construction will have no adverse affect on the quality of the river or its shoreline.

SHORELAND REGULATIONS: DIVISION 26

(a) beach construction: the applicant does not propose to construct any type of beach associated with the project.

(b) tree clearance: the only clearance of trees within the shoreland zone will consist of selective removal of vegetation for the construction of a 5 ft. wide path.

(c) erosion and sedimentation control: the applicant has submitted a detailed sedimentation and erosion control plan for both temporary and permanent measures. This plan is included as Attachment 7.

(d) piers, docks, wharves, etc: the applicant has submitted details for the timber stairs and timber boardwalk which will be constructed as part of the trail. The boardwalk was designed in compliance with the Floodplain Management Ordinance.

(e) road construction: there are no roads proposed within the shoreland zone.

(f) structures: the only structure within the flood hazard zone is the boardwalk. Because of the topography of the site, this location could not be changed. The applicant states that the materials have been selected and the trail designed to be resistant to flood damage.

(g) water quality protection: the applicant does not forsee any activity which would entail the discharge of any noxious material.

The applicant does intend to outlet stormwater directly into the stream and river but does not anticipate any degradation of the water quality to result.

(h) general site plan features: the proposed plan appears to meet the seven shoreland standards. The proposal will not endanger wildlife habitat and will conserve access to waters and natural beauty.

11. Groundwater

The development will be served by sanitary and storm sewer and will therefore not adversely affect the quality or quantity of groundwater.

12. Flood Plain

The applicant will construct a trail within a lot to be deeded to Portland Trails. Portions of the trail and its associated boardwalks are located within the Flood Hazard Zone. The applicant has submitted information regarding the construction of the trail in the floodplain. (See Attachment 12).

FLOOD PLAIN MANAGEMENT REGULATIONS: DIVISION 26.5

(a) the applicant does not forsee the reduction of the flood carrying capacity of the watercourse within this development.

(b) the boardwalk and pathways within the floodplain have been designed to minimize flood damage. The path will consist of 2" by 4" decking on posts. The decking will be able to float with the tide but will be tethered with 18" long galvanized wire at each post.

No residential structures are proposed within the flood hazard zone.

(c) no utilities are proposed within the flood hazard zone.

(d) the base flood elevation of the area is 10 ft. There are no building envelopes with an elevation less than 25 ft., therefore no buildings will be constructed below the base flood elevation.

(e) there are no building envelopes located within a Zone A of the flood insurance map.

(f) no improvements, fill, or encroachments are proposed within the floodway.

13. Wetlands

Stroudwater Farms Associates has filed an application with the Army Corps of Engineers for a nationwide permit for 100 sq. ft. of wetland disturbance associated with the construction of the trail.

This construction will also require a DEP NRPA permit due to its proximity to the stream and river.

V. SITE PLAN REVIEW

The Site Plan review standards apply to the construction of the trail along the Stroudwater River and the trail entrance and parking area near the Congress Street entrance. Also, PRUD standards are included in the Site Plan Ordinance. The proposal is, in fact, a PRUD, but the PRUD standards have never been used in the review of a detached type of PRUD where the lots are owned separately and the buildings will be constructed individually.

1. Vehicular Loading and Unloading

The applicant has proposed a private entrance to the site which will include a gatehouse, mailboxes, and drop-off/parking areas.

The Traffic Engineer expressed concern as to the vertical curve at the entrance which would provide inadequate visibility. The applicant has revised the plans accordingly.

The applicant has also provided a public parking area and entrance to the trail which will also serve as a second access for a neighbor to the development on Congress Street.

Handicapped users of the trail may use the sidewalk into the development and access the trail via the association lot in order to avoid a set of timber steps at the entrance to the trail.

2. Parking

The applicant indicates the provision of three parking spaces at the trail entrance.

3. Bulk, Location and Height

The trail is designed to be "low profile", following the contours of the bank. The boardwalk will be set at elevation 25.5 to 26.0, and is designed to lift off its supports under high water conditions. (The boardwalk will be tethered to its supports to keep it from floating away.)

4. Utilities

The development is not anticipated to overburden the sewers, stormdrains, or water facilities. There are no utilities associated with the trail or trail entrance of the project.

5. Landscaping/Existing Vegetation

There is no landscaping proposed along the trail or at the entrance. In order to construct the 5 ft. wide trail, there will be minimal removal of existing vegetation as stipulated in the Shoreland Zoning Regulations.

6. Drainage/Erosion and Sedimentation Control

The applicant has submitted a detailed Sedimentation and Erosion Control Plan which is included as Attachment 7.

Melodie Esterberg, Development Review Coordinator, has reviewed the drainage and sedimentation and erosion control plans and agrees with its recommended measures. Her comments are included as Attachment 16a.

The applicant is not recommending detention of stormwater. Rather, runoff will be directed to the existing swales, river, and stream which will be well protected with filter fabric, fencing, and jute mesh. There are also five drainage easements throughout the property running across house lots and the pedestrian trail.

A potential condition of approval would be:

- that the applicant submit for staff review and approval the drainage easements and access easement for the Caron Property.

7. **Lighting**

The applicant has not proposed exterior lighting as part of the plan.

8. **Fire Department Review**

The Fire Department has reviewed the proposal and recommends changing the names of all streets within the subdivision. The applicant has agreed to change the names.

9. **City Projects**

The project does not interfere with any known projects planned by the City.

10. **PRUD Review**

The applicant has submitted a response to the PRUD standards which is included as Attachment 15.

A. <u>Design Relationship to Site</u>

The applicant has designed the building windows, roadways, and recreation spaces to protect the sensitive areas of the development while also taking advantage of the topography and natural amenities of the site.

The more sensitive areas have been held as common areas to protect them from development and to assure their maintenance. These areas include the areas around the deep ravine which serves as a drainage swale for the property.

B. <u>Internal Design Character and Relationship to Surrounding Neighborhood</u>

The building windows and internal layout of the project have been designed to preserve the quality of the surrounding neighborhood and to buffer neighboring properties.

*** Since the lots will be owned individually and the homes built separately, there is no method to review the design at this time. It is within the purview of the Planning Board to review the architecture of these buildings once proposed. However, in order to expedite the process for prospective homeowners, design review may occur at the administrative level during the required "minor-minor" review of single family homes.

The Planning Board may wish to direct staff on this matter.

C. Recreation and Open Space

1. External Buffers

By providing building envelopes, the applicant has in effect, provided a 25 ft. buffer around the project. Additionally, the parcel to be deeded to Portland Trails, and the Shoreland Zone Regulations will provide a substantial buffer on the north side of the parcel, as well.

2. Internal Buffers

The building envelopes will create a buffer between buildings within the development. Existing vegetation will be preserved around the stream and river on the association lots as part of the sedimentation and erosion control measures and the Shoreland regulations.

3. Passive Recreational Open Space

The applicant has reserved the area around the stream as passive recreation space for the PRUD. The trail and access to the trail are also components of passive open space.

4. Active Recreational Open Space

The Association Lot providing access to the river will serve as the PRUD's active open space. The space will include a canoe rack, gazebo, and open lawn area.

The applicant will provide illustrations of the active open space amenities at the public hearing for the Board's review.

5. Private Open Space

The lots range in size from 10,940 - 41,597 sq. ft. providing sufficient amounts of individual private open space for each homeowner.

VI. HISTORIC PRESERVATION REVIEW

Four lots on the westernmost cul-de-sac will have to be reviewed by the Historic Preservation Committee. These lots are located within the Stroudwater Historic District.

VII. MOTIONS FOR THE BOARD TO CONSIDER

On the basis of plans and materials submitted by the applicant and on the basis of information contained in Planning Report #17-93, the Planning Board finds:

1. That the proposed River's Edge PRUD is in conformance with the Subdivision Ordinance of the Land Use Code.

2. That the proposed River's Edge PRUD is in conformance with the Site Plan Ordinance of the Land Use Code.

Potential Conditions of Approval:

- that prior to the recording of the subdivision plat, the applicant submit for staff review and approval a revised set of street names for the roadways serving the development.

- that the applicant submit for staff review and approval the drainage easements and access easement for the Caron property.

3. That the proposed River's Edge PRUD is in conformance with the Shoreland and Flood Hazard regulations of the Land Use Code.

Attachments:

1. Letters from the Applicant
2. Subdivision Plan
3. Entrance Plan
4. Conditions for rezoning as approved by the City Council
5. Homeowners' Association Document
6. Letter from Portland Trails
7. Erosion Control Plan
8. Congress Street Improvments
9. Pedestrian easement to the Portland Trails parcel
10. Letter from Portland Water District from July of 1987
11. Letter of Financial Capability
12. Flood Plain/Shoreland Submittal
13. Boardwalk/Trail Detail
14. Vertical Curve Detail
15. PRUD Review Submission
16. Staff Comments
    a. Development Review Coordinator
    b. Traffic Engineer

ATTACHMENT

MOHR & SEREDIN
Landscape Architects, Inc.

April 20, 1993

Portland Planning Board
Portland City Hall
389 Congress Street
Portland, ME 04101

RE: Stroudwater River's Edge PRUD
Amended Subdivision, Site Plan and Shoreland Zoning Request

Dear Board Members;

On behalf of Peter Kennedy we submit the attached plans and information in support of a request for amended subdivision, site plan and shoreland zoning approval for a 29 lot PRUD located off of Congress Street in the Stroudwater section of the City. The proposed development is an amendment to the project previously approved by the City, and is located on the 27.0 acre parcel rezoned to R-3 by City Council action in October, 1992. The rezoning action taken by the City was for a 29 unit PRUD, and the attached plans and documentation are in compliance with the conditions of the contract for rezoning and the R-3 space and bulk standards for a PRUD.

The developed portion of the project is proposed to be located on the 19.1 acres zoned R-3. The balance of the site, 7.9 acres, will be given in fee simple interest to Portland Trails for their use as open space, and for connecting the trail systems in Portland. As a part of the site plan improvements Peter Kennedy will build the trail within the Portland Trails lot.

The proposed layout of the subdivision is identical to that previously reviewed by the Board. There are twenty-nine (29) detached house sites located on 29 "lots" that range in size from 10,940 s.f. to 41,597 s.f. The locations for building the homes are identified as "building windows", and are shown where previously approved by the Board. Within the subdivision, 39,781 s.f. (0.91 AC) are set aside as permanent open space for passive/active use by the homeowners. These areas include the active recreation lot located adjacent to the river, and the open space bordering the stream which bisects the property. The PRUD requirements of 8,700 s.f. of open space have been exceeded by the proposed Association Lots. The trails and open space of 7.9 acre Portland Trails lot will also be available to the homeowners as passive use areas.

The new, private roads are proposed as 24' wide and 20' wide paved, curbed roads. The drainage system will be an enclosed storm system with catchbasins and drainage lines directing flows to existing swales, the stream or the river. Revised stormwater calculations have been prepared, and no detention is proposed, because of the direct

discharge to the River and the property's location lower in the overall watershed of the Stroudwater River.

The entrance of the subdivision will include a divided island and parking to serve the Homeowners Association This is envisioned as a common area for mailboxes, waiting for the bus, and pick-up/drop-off. A separate driveway for access to the Portland Trails trailhead will exit from the new private road and terminate in a small, off-street parking lot constructed to serve the trail.

New utility systems will include underground electric from CMP and Portland Water District water service from Congress Street. Private sanitary sewer service will serve the development through connection to the PWD sewer line which crosses the property. All services to the subdivision and for the roads (e.g. plowing, repair, garbage collection) will be paid for by the Homeowners Association.

As previously agreed, Mr. Kennedy will make the Congress Street traffic improvements as required by each phase of the project. Phase I (17 lots) will not involve any off-site traffic improvements. Phase II (12 lots) will require widening and curbs, if that work has not been completed by MDOT. Estimated traffic flows from Phase I are anticipated as 170 trip ends per day, with a.m. and p.m. peak hour traffic of 17 to 21 trip ends.

This submission includes the following:

1. Preliminary Recording Plat
2. Preliminary Subdivision Plan
3. Road Plans & Profiles (3 Drawings)
4. Copy of City Council Amendment to Zoning Map
5. Draft Homeowners Association Document
6. 1992 Letter from Portland Trails
7. Erosion Control Plan
8. Entrance Detail
9. FEMA Flood Map

We trust this is sufficient for the workshop on May 11 with the Planning Board. Please call if you have any questions.

Sincerely;

Stephen B. Mohr, ASLA

MOHR & SEREDIN

Landscape Architects, Inc.

May 25, 1993

Portland Planning Board
Portland City Hall
389 Congress Street
Portland, Me 04101

Re: Stroudwater River's Edge PRUD - Final Approval Request for Amended Subdivision, Site Plan, Shoreland Zoning and work in the Floodplain

Dear Board Members;

On behalf of Peter Kennedy and Stroudwater Farms Associates, we submit the attached plans and information for final plan approval for the 29-unit Stroudwater River's Edge PRUD. Per the contract zone, 29 lots for single family residential use will be developed, a 7.86 acre lot will be deeded in fee interest to Portland Trails, and the Homeowners Association will own the road rights of way and three interior lots. The three Association lots total 55,966 s.f., and are set aside as permanent passive areas, or as recreation and river access for the Homeowners Association.

As stated on the recording plat, all of the roads within the PRUD are proposed as private rights of way. The City of Portland will provide no municipal services for the Association roads. The Homeowners Association shall be responsible for all solid waste collection, utilities and road maintenance. The new roads will be 24 feet in width, have bituminous curbing, and a sidewalk will be constructed on one side of the main road and eastern cul de sac.

The subdivision will be served by existing sanitary sewer and water services which exist on-site, or in Congress Street. Storm drainage will be handled via an on-site enclosed drainage system. Drainage easements have been defined to preserve the proposed drainage patterns within the PRUD. All existing utilities have adequate capacity to serve the 29 house lots.

18 Pleasant Street, Portland, Maine 04101
(207) 871-0003

Traffic will enter and exit the PRUD by a new curb cut on Congress Street. Phase I's 17 lots will require no improvements in the public way, other than the installation of drainage structures. The 12 lots of Phase II will require the widening of Congress Street if that work has not been completed by MDOT. The developer will conduct a traffic study when 75% of Phase II's lots are occupied, and asses the need for Congress Street improvements at that time. The entrance to the PRUD will include a divided island, gatehouse, parking and community mailbox. An easement is provided to the adjacent lot owned by the Carron's, to maintain vehicular access to their lot.

The deeding of lot 30 to Portland Trails will include the construction of 2,500 feet of new trail on the lot by Stroudwater Farms Associates. This portion of the trail is designed to connect with the overall plan for Portland per The Vision for Portland Trails. The final trail location will be set in the field by representatives of Portland Trails, but the general location (± 5 feet) is shown on the plans. An easement for sidewalk access from the Portland trails parking lot to the Association Lot 31A has been proposed to provide access for the disabled to the level portions of the trail. Portions of the gravel trail are located within the floodplain, but only one structure, the boardwalk, is below elevation 26. Refer to the attached floodplain information in Appendix A. Lot 30 is conveyed subject to drainage easements which will preserve the drainage patterns of the Association road, lots and existing swales, as well as access to the river by Association members.

Four of the lots on the westerly cul de sac fall within the Stroudwater Historic District. The individual homes will have to undergo review by the Portland Historic Preservation Committee. The construction of the trail will require a DEP NRPA permit due to its proximity to the stream and river, and because of the disturbance of approximately 100 s.f. of floodplain-associated wetlands. The previous subdivision received DEP Site Location of Development approval in 1987 for plans which are similar to those in this submission. The current plan contains only 19.14 acres to be subdivided, so no Site Location of Development Permit will be required. Stroudwater Farms Associates has filed with the Army Corps of Engineers for a Nationwide Permit for the 100 s.f. wetland disturbance, and anticipates approval by July 1, 1993. None of the homes, structures or improvements of the PRUD are located in the floodplain.

The developer has previously submitted information for the workshop, and submits the following in support of this request for final approval:

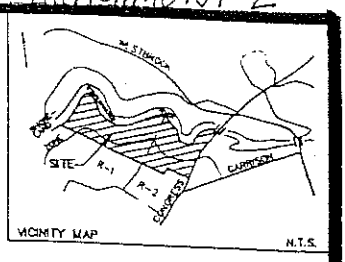
1. Final Recording Plat
2. Subdivision Plan
3. Road Plans and Profiles (3 Drawings)
4. Portland Trails Plan and Details (1 Drawing)
5. Erosion Control Plan (1 Drawing)
6. Construction Details (2 Drawings)
7. FEMA Flood Map
8. Appendix A - Flood Hazard Information
9. Cost Breakdown for Phase I

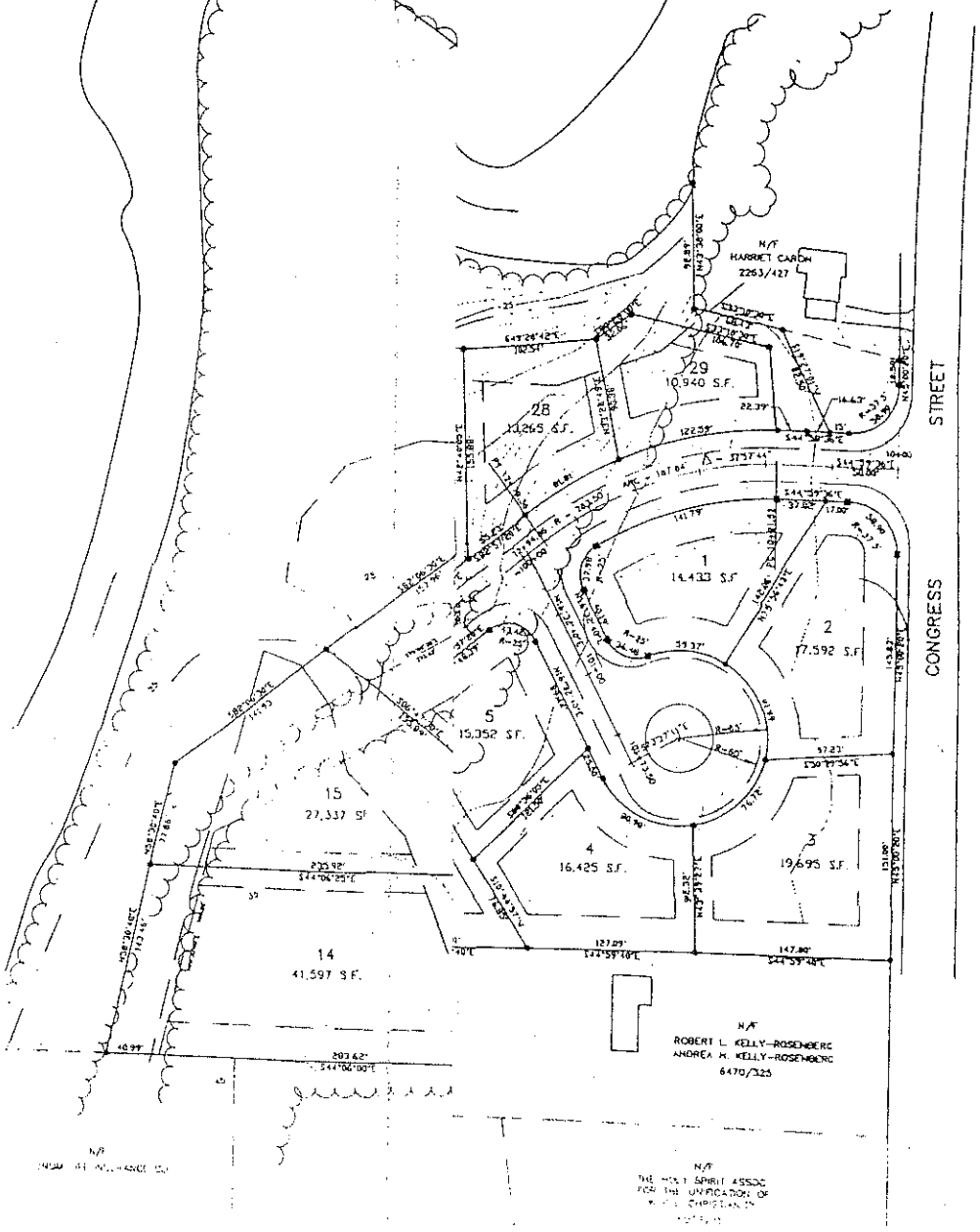
We look forward to meeting with you on June 8 for the public hearing on this project.

Sincerely,

Stephen B. Mohr, ASLA

ATTACHMENT 2





PRELIMINARY

LEGEND

- IRON PIPE OR PIN FOUND
- IRON PIN TO BE SET
- GRANITE MONUMENT TO BE SET
- 6157/37 DEED BOOK/PAGE
- TREE LINE
- SHORELAND ZONE LINE
- BUFFER LINE
- FLOOD HAZARD LINE
- STREAM
- BUILDING WINDOW

GRAPHIC SCALE

0 50 100

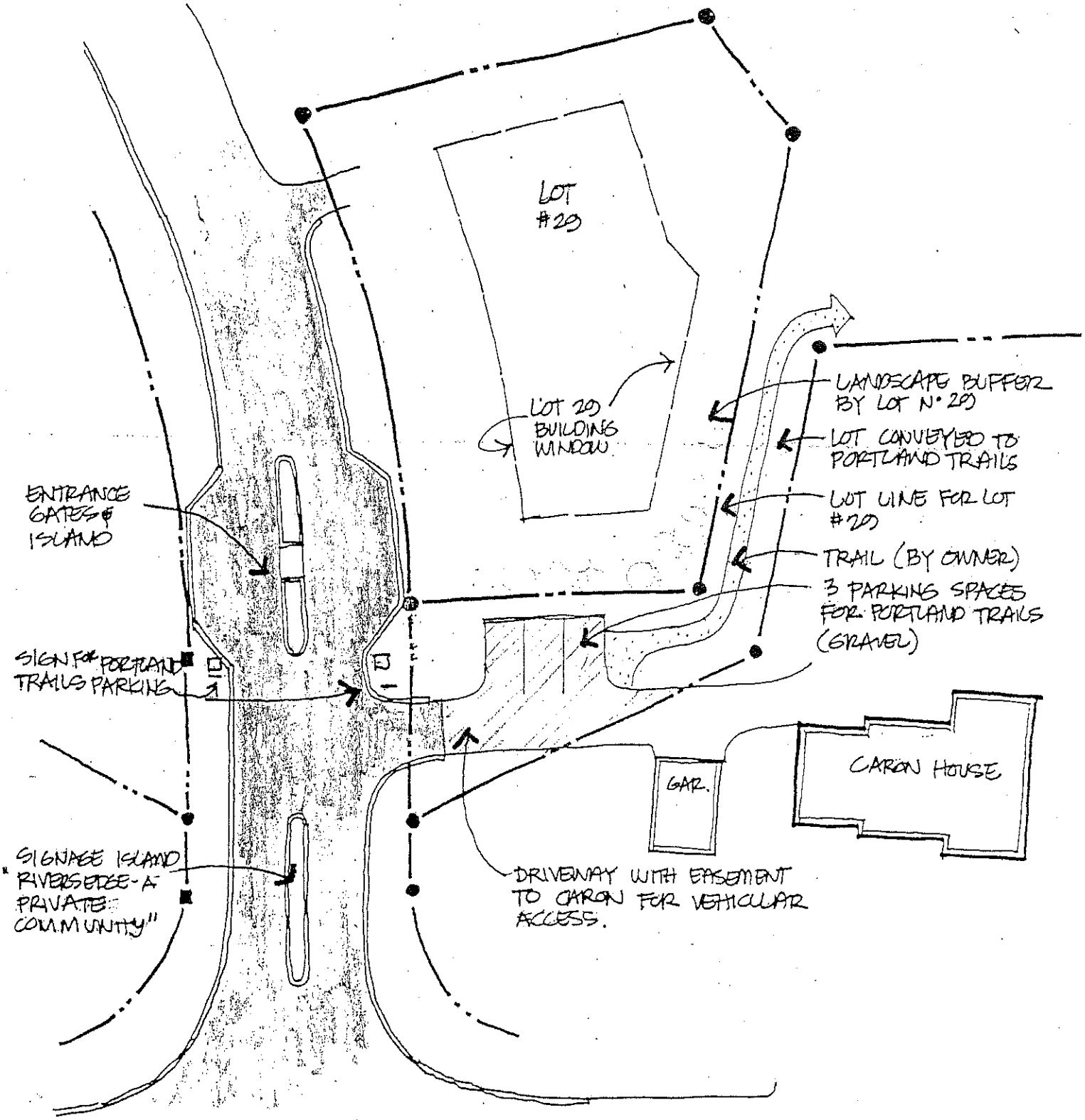
PRELIMINARY

AMENDED SUBDIVISION PLAN
RIVER'S EDGE
CONGRESS STREET, PORTLAND, MAINE
MADE FOR
STROUDWATER FARM ASSOCIATES
(207) 797-4234

OWEN HASKELL, INC.
H.I. and E.C. JORDAN SURVEYORS
(207) 799-5464
BOWDOINHAM, ME/8 BROADWAY, SO.PORTLAND, ME/KENNEBUNK, ME

Drawn By	Date	Job No
Trace By JLW	APRIL 1, 1993	910709

ATTACHMENT



Stroudwater River's Edge

ENTRANCE LAYOUT

APRIL 23, 1993

1" = 30'

ATTACHMENT 5

STROUDWATER RIVER'S EDGE HOMEOWNERS ASSOCIATION, PORTLAND, MAINE BY-LAWS

ARTICLE I
NAME

The name of this Association shall be STROUDWATER RIVER'S EDGE HOMEOWNERS ASSOCIATION.

ARTICLE II
MEMBERSHIP

SECTION 1. Defined. Members of the Association shall be the owners of record of parcels of land (Lots) at Stroudwater River's Edge, Portland, Maine in the area as defined on a plan entitled "Stroudwater River's Edge Subdivision" recorded in Plan Book , Page , Cumberland County Registry of Deeds.

An owner shall be defined as the owner(s) of record of any residential parcel (Lot) described on the aforementioned Plat. Each owner of a Lot shall automatically become and be a member of the Association as long as he/she continues as the owner of a Lot. Upon termination of interest of an owner in a Lot, his/her membership and any interest in the Association shall thereupon automatically terminate and transfer and inure to the next owner of his/her Lot succeeding him/her in interest.

ARTICLE III
MEETINGS

SECTION 1. Annual Meeting. The annual meeting of the members of the Association shall be held on the second Sunday following Labor Day in each year at 1:30 p.m., unless a different hour is fixed by the Directors and stated in the notice of the meeting. The purpose for which the annual meeting is to be held, in addition to those prescribed by law, the Articles of Incorporation, or by these By-Laws, may be specified by the Directors or the President provided that such purpose is set forth in the notice of meeting.

SECTION 2. Special Meetings. Special meetings of the members may be called by the President or by the Directors.

SECTION 3. Notice of Meetings. A written notice of every annual or special meeting of the members, stating the place, date and hour thereof, and the purpose for which the

meeting is to be held shall be given by the Clerk or by the officer calling the meeting at least fifteen (15) days before the meeting to each member entitled to vote by leaving such notice with him or at his residence or usual place of business, or by mailing it postage prepaid and addressed to such member at his address as it appears upon the books of the corporation. No notice need by given to any member if a written waiver of notice, executed before or after the meeting by the member or his attorney is filed with the records of the meeting.

SECTION 4. Emergency Meetings. Emergency meetings may be called in the same manner as special meetings. The notice of such meetings shall be given in the same manner as set forth in Section 2, above, except that the notice for such meeting shall be 48 hours. The purpose of a special meeting shall be limited to action on such matters as are necessary to protect the health of members, to provide emergency access to members' property, to prevent further or unnecessary destruction of Association property or to meet other emergencies resulting from unforeseen or unanticipated damage, destruction or catastrophe. The amount of money to be appropriated or expended by the vote at any emergency meeting shall not exceed the total amount of the previous year's expenditures for maintenance.

SECTION 5. Quorums. Six (6) members shall constitute a quorum for any meeting but a lesser number may adjourn a meeting from time to time without further notice.

SECTION 6. Voting.

A. There shall be only one vote per parcel as shown on the Subdivision Plat referred to above, regardless of the number of owners.

B. A vote of the majority of the members present at any meeting shall be sufficient to decide any questions, except amendment of the By-Laws, provided there is a quorum present.

SECTION 7. Annual Budget. No later than thirty (30) days prior to each Annual Meeting of the members of the Association the Board of Directors shall estimate the Common Expenses for the following fiscal year and shall present the estimate to the members at their annual meeting as the proposed budget for such fiscal year. The annual assessment required to meet annual estimated Common Expenses for each fiscal year must be approved by majority vote of the members of the Association at their Annual Meeting held prior to the commencement of the fiscal year to which the estimated budget of Common Expenses applies. If the Lot owners disapprove

such budget then the budget for the preceding fiscal year shall be the budget for the succeeding fiscal year.

ARTICLE IV
PURPOSE

SECTION 1. Purpose. The purpose of the Association is to perpetually hold, own, maintain, improve, develop and operate the land of the Association and to provide and maintain pedestrian and vehicular easements, utility and drainage easements, storm drainage, detention areas and roads and ways for the benefit of its members and their families and to obtain insurance of all types for the protection of the parcel owners and property interests of the Association.

SECTION 2. Control of Land. The Association shall assume control of the affairs of the subdivision at such time as twenty-two (22) of the lots in the subdivision have been conveyed to individual lot owners, and the owners are living in the subdivision.

SECTION 3. Road. As used in these By-laws: "Road" means, collectively, all the area within the rights of way identified on the subdivision plan and identified as King's Pine Circle, Mast Landing and Riversedge Drive extending from the right of way line of Congress Street.

SECTION 4. Responsibilities. The Association shall perform and be responsible for the maintenance, resurfacing, improvement, clearing and repair of, and snow removal from the Road and for the payment of any real estate taxes assessed thereon, and for the cost of any labor, equipment or materials and management related to the Road, drainage easements and common area and supervision therefor.

SECTION 5. Assessments.

A. In furtherance of its purpose, the Association shall have the right to pay all expenses of maintenance, services and taxes assessed by the City of Portland on Association property and for the purpose of meeting these expenses shall have the right to assess the members on an equitable basis.

B. All assessments shall be billed no later than two (2) weeks prior to the commencement of the succeeding fiscal year by the Treasurer of the Association sending the bills therefor to the respective Lot owners at the address recorded in the Secretary's records either personally or by placing the bill in the United States mails, postage prepaid, addressed to the Lot owner as aforesaid. All sums so assessed and billed shall become due no

later than the commencement of the fiscal year to which the assessment applies. If the assessment to a lot owner is not paid to the Association within thirty (30) days after the date when due, then said assessment shall be delinquent and shall be recoverable by the Association together with interest at the annual rate of eighteen percent (18%), costs of collection and reasonable attorneys' fees provided by the law to the Association.

SECTION 6. Access. Furthermore, the Association, or its duly appointed representative, shall have the right to access any parcel at any reasonable hour and after reasonable notice to the owner of the parcel(s) encumbered and utility systems for their intended use and for the benefit of the Association's members and families. The Association shall have the power to take legal action to enforce payment of its assessments.

SECTION 7. Collection of Assessments. In furtherance of the foregoing purposes the Association shall have the power to do or take any and all acts permitted by law including without limiting the generality of the foregoing, bringing of an action at law against the delinquent Lot owner, placing a Lien against the Lot in favor of the Association and the right to foreclose, enter contracts and to buy, sell, lease or mortgage real estate.

ARTICLE V
DIRECTORS

SECTION 1. Number. There shall be five (5) Directors, one of whom shall be the President of the Association. Four Directors shall be elected at each annual meeting to serve until the next annual meeting and the President shall automatically become a member of the Board of Directors.

SECTION 2. Powers. The business and affairs of the Association shall be managed by the Board of Directors who may exercise all of the powers of the Association except as otherwise provided by law, by the Articles of Incorporation or by the By-Laws. In the event of a vacancy in the Board of Directors, except with regard to the office of President, the remaining Directors may fill the vacancy until the next annual meeting.

SECTION 3. Meetings. Regular meetings of the Directors may be held without call or notice at such places and at such times as the Directors from time to time determine, provided that any Director who is absent when such determination is made shall be given notice of the meeting.

Special meetings of the Directors may be held at any time and place designated in a notice by the President or two or more Directors. There shall be no time limit for such notice provided each Director has received actual notice of the meeting.

SECTION 4. Quorum. Three Directors shall constitute quorum and a vote of a majority of those Directors present shall be sufficient to decide any matter.

SECTION 5. Action by Consent. Any action by the Directors may be taken without a meeting if a written consent thereto is signed by all the Directors and filed with the records of the Directors meetings. Such consent shall be treated as a vote of the Directors for all purposes.

ARTICLE VI
OFFICERS

The officers of the corporation shall be a President, Treasurer and Clerk.

SECTION 1. Election. The officers of the corporation shall be elected annually at the annual meeting by a vote of a majority of all members present. To be eligible for election any individual must be an owner or one of the owners of record of a parcel of land as defined herein.

SECTION 2. Tenure. Each officer shall hold office from the date of his election until the next annual meeting of the members or until his successor is chosen and qualified. Any officer may resign be delivering his written resignation to the President of any Director and such resignation shall be effective upon receipt unless it is specified to be effective at some time or upon the happening of some other event.

SECTION 3. President. The President shall be the chief executive officer of the Association and a member of the Board of Directors. He/She shall have general supervision and control of the affairs of the Association and unless otherwise provided by the Directors he shall preside at all meetings of the members of the Directors.

SECTION 4. Treasurer. The Treasurer shall have general charge of the financial affairs of the Association and cause to be kept accurate books of account. He/She shall have custody of all funds and valuable documents of the Association and shall be the second certifying officer.

All checks and deposits for the payment of money shall be signed by the President or Treasurer or by such other individual as the Board of Directors may designate.

The Treasurer shall act as President pro tem in the absence of the President.

SECTION 5. Clerk. The Clerk, or in his/her absence the Treasurer, shall keep a record of all meetings of the members. The Clerk shall be registered agent of the Association and maintain the registered office. The Clerk shall maintain an accurate list of members.

ARTICLE VII
MISCELLANEOUS PROVISIONS

SECTION 1. Fiscal Year. Except as from time to time otherwise determined by the members, the fiscal year of the Association shall be September 1, to August 31.

SECTION 2. Seal. The seal of the corporation shall, subject to alteration by the members, bear its name, the work "Maine" and the year of the incorporation.

SECTION 3. Execution of Instruments. All deeds, leases, transfers, contracts, bonds, notes and other obligations authorized to be executed by an officer of the Association in its behalf shall be signed by the President and/or Treasurer or in particular cases as otherwise determined by the members.

SECTION 4. Amendments. These By-Laws may at any time be amended by a vote of two-thirds of the members present or voting by written proxy provided that notice of the substance of the proposed amendment is stated in the notice of the meeting, and a quorum is present.

SECTION 5. Lot Owner Responsibilities. Each Lot owner shall perform and be responsible for the maintenance, resurfacing, improvement, clearing and repair of, and snow removal from the Driveway on his/her Lot, and for the cost of any labor, equipment or materials and management related to the Lot drainage and individual Lot improvements.

ARTICLE VIII
DISSOLUTION

In the event of dissolution of the corporation, the net assets after payment of all creditors shall be distributed pro-rata among the members owning parcels described in the "Stroudwater River's Edge Subdivision". Each parcel shall receive an equal share in the distribution irrespective of the number of record owners.

ATTACHMENT 6

PORTLAND TRAILS

July 16, 1992

Stephen B. Mohr
Mohr & Seredin
18 Pleasant St.
Portland, ME 04101

Re: Stroudwater River's Edge Parcel

Dear Steve Mohr,

Thank you for your letter and revised plan of July 9 concerning the land you propose to convey to Portland Trails in Peter Kennedy's River's Edge subdivision. I have reviewed your proposals with members of our Executive Committee and a few of our consultants.

First, let me say we are enthusiastic about the potential of this project to help fulfill the objectives of Portland Trails and the City of Portland's Shoreway Access Plan. We hope it will prove to be a model for other landowners.

Further, we are optimistic that together with you we have a general framework that should prove acceptable to both Portland Trails and to you for proceeding to the creation of a continuous riverside trail along this section of the Stroudwater River. We believe that the agreement will provide adequate access both along the river and from Congress Street, including handicapped access, and that adequate trailhead parking will be provided for trail users arriving from elsewhere by car.

As you know, some specifics remain to be settled. We will continue to work expeditiously with you to conclude an agreement to all of our satisfaction on this important project.

Yours truly,

J. P. Monro

J. Peter Monro, President
Board of Trustees, Portland Trails

cc: A. Hopkins, C. Norden, R. Spencer, N. Smith

ATTACHMENT 7

MOHR & SEREDIN

Landscape Architects, Inc.

STROUDWATER RIVER'S EDGE - EROSION AND SEDIMENTATION CONTROL

A 27 Acre parcel of land on Congress Street which borders on the Stroudwater River is proposed to be developed into a 29 lot subdivision, with a 7.9 acre parcel, abutting the river, deeded to Portland Trails. Approximately 2100 lf of road is proposed to be constructed with three cul-de-sac turnarounds. A stonedust trail along the river will be constructed by the developer as part of this project.

A detailed erosion and sedimentation control plan has been prepared for the proposed project in accordance with the practices and standards set forth in the State of Maine Environmental Quality Handbook. Erosion and sedimentation are not anticipated to be significant on this site due to the limited area of construction and significant buffers preserved around watercourses. Based on the proposed program and existing conditions the attached narrative has been prepared to protect adjacent areas from sedimentation and the site from excessive erosion. Refer to the description below for general E&SC details:

A. The limits of disturbance for earth movement and construction limits are as shown on the plans.

B. The project site, as existing, has the drainage handled via sheet flow over wooded and meadow areas to the Stroudwater River. New drainage patterns will be handled via sheet drainage and piping to the swales, stream or river. Proposed swales and inlets will be protected with erosion controls to eliminate siltation.

C. Temporary erosion and sedimentation control devices will consist of haybales, filter fabric fence and jute mesh. Haybales will be used around all inlets, silt fence will be located at the toe of all slopes and jute mesh will be used on slopes over 3:1.

D. Permanent erosion and sedimentation control measures will consist of bituminous paving, loaming and seeding, wood chip mulch, or stonedust walks.

E. The sedimentation and erosion control measures proposed for the proposed project will be installed prior to the start of any construction on the site. The filter fabric fence will be placed first, and haybales around inlets and outlets will be placed as construction progresses. All measures will be periodically checked and inspected for accumulation of silt, etc. All measures will be maintained until disturbed areas are fully stabilized.

F. Upon completion of the project all permanent erosion and sedimentation control measures will be maintained by the owner until the Homeowners Association assumes control of the subdivision.

G. The proposed schedule for work is as follows:

Activity	Start	Stop
Phase I		
1. Place erosion controls	Summer 1993	
2. Maintain and inspect	Duration of project	
3. Seed & overseed disturbed areas	Fall 1993	Nov. 1993
4. Remove erosion control measures		Nov. 1993

All proposed methods for controlling erosion and sedimentation from the Stroudwater River's Edge project are based upon sound conservation practices such as those outlined in the State of Maine Environmental Quality Handbook. recommended Practices of the USDA Soil Conservation Service, and the Stormwater Management Manual prepared by the Greater Portland Council of Governments.

The project involves the construction of roads, trails, and stormwater drainage systems, construction of a drive and construction of building additions. The most critical period for erosion will be during construction of the roads. The following detailed practices will be used to prevent erosion during construction on this site:

A. Disturbed areas will be limited to only those areas under active construction. Permanent seeding or stabilization will be carried out immediately after final grading is completed or temporary measures will be applied such as mulching until permanent measures are in place.

B. Topsoil will be stockpiled when necessary in areas which have minimum potential for erosion and will be kept as far as possible from existing drainage areas. All stockpiles remaining longer than 15 days shall be seeded with conservation mix or mulched and anchored if seeding is not possible due to the time of year.

C. No slopes will exceed a maximum of 3:1 and shall be stabilized with permanent seeding immediately upon final grading unless due to winter conditions temporary measures are utilized.

D. Hay bale check dams will be utilized in all swales and to prevent sediment erosion runoff from leaving the site. In areas where the total drainage area exceeds 1/2 acre, silt fences will be used in lieu of hay bales. Hay bales will be inspected on a weekly basis or after a period of significant rainfall. Sediment will be removed and hay bales replaced as necessary.

E. Rip Rap will be placed at all inlets and outlets of storm drains.

With the above measures applied. the construction of this project will not result in erosion and sedimentation problems for the site, abutting land or downstream areas.

Stephen B. Mohr, RLA #75

The Maine Department of Transportation has submitted plans for the reconstruction of Congress Street to the Department of Parks and Public Works for review. In order to provide a good transition for this development and the reconstruction project, the applicant should provide field control information to locate the proposed entrance on Congress Street. If MDOT is not willing to provide the access as shown, the developer should construct the access within the Congress Street right-of-way to arterial street standards. These details can be worked out when the applicant applies for a street opening permit for the site.

The Stroudwater River trail to be constructed by the applicant will serve as an important portion of the Shoreway Access trail network linking in the future to UNUM to the northwest.

At the entrance of the development, an access easement to an abutter, E. Harriet Caron has been indicated, as well as vehicular and pedestrian easement to Portland Trails. Another 13 ft. wide pedestrian easement is also granted to Portland Trails through the active recreation lot to provide handicapped access to the trail for those who cannot use the timber steps at the main entrance to the trail. (See Attachment 13.)

Mr. William Bray, Deputy Director of Parks and Public Works, has reviewed the plans and recommends approval. A memo to the Board from Mr. Bray is included as Attachment 16b.

6. Sanitary/Stormwater

An 8 inch sanitary sewer service will be connected to the sewer which runs through the property within a 100 ft. Portland Water District easement.

The drainage system will be an enclosed storm system with catchbasins and drainage lines directing flows to the existing swales, stream, and Stroudwater River.

The drainage plans indicate the installation of three catchbasins and three manholes in River's Edge Drive, two manholes in Kings Pine and two catchbasins and two manholes in Mast Landing.

7. Solid Waste

As stipulated in the conditions for rezoning and as noted on the plan, the removal of solid waste will be the responsibility of the Homeowner's Association. The City of Portland will not provide services within the development.

8. Scenic Beauty

The proposal will not have an undue adverse affect on the scenic or natural beauty of the area. The applicant will give a portion of land in fee interest to provide pedestrian access to a trail along the Stroudwater River.

9. Financial and Technical Capability

The applicant has submitted a letter of financial capability from Mr. Mark Lawler, Vice President of Peoples Heritage Bank. This letter is included as Attachment 11.

ATTACHMENT C-1
(EXCERPT)

PLANNING REPORT #17-93

STROUDWATER RIVER'S EDGE PRUD
STROUDWATER FARMS ASSOCIATES, APPLICANT
SUBDIVISION, SITE PLAN, PRUD, AND SHORELAND REVIEW

Submitted to:

Portland Planning Board
Portland, Maine

June 8, 1993

I. INTRODUCTION

Stroudwater Farms Associates are requesting site plan, subdivision, PRUD, and shoreland review for a 29-unit Planned Residential Unit Development in the vicinity of Congress Street and the Stroudwater River.

The applicant is proposing a 29 unit PRUD in which homeowners will own their homes and the lots on which they are built, and the association will own and maintain in common the roadways and active/passive areas within the development. In addition, a 7.86 parcel of land will be deeded in fee interest to Portland Trails, on which a trail will be constructed by the applicant.

This development was the subject of a conditional rezoning from R1/R2 to R-3 with restrictions that the projcet will be a single family subdivision at the R1/R2 density. The rezoning provides for a private road and for river edge land to be donated for public use.

II. SUMMARY OF FINDINGS

Zoning	Conditional R-3
Land Area	27 Acres
Total number of lots	29 Residential 1 lot to be conveyed to Portland Trails 2 passive recreation lots 1 active recreation lot
Land uses	Single family residential, institutional
Lot sizes	10,940 to 41,597 sq. ft.

III. STAFF REVIEW

The development proposal has been reviewed for compliance with the Subdivision, Site Plan, PRUD, and Shoreland Ordinances of the Land Use Code. Review of the proposal has been completed by the Departments of Planning, Parks and Public Works, Fire, and Inspections. The comments of these departments are contained in this report.

IV. SUBDIVISION REVIEW

1. Water and Air Pollution

The proposal will not cause undue air or water pollution. As a residential development using public sanitary and water facilities, it is not anticipated that the subdivision will have an adverse effect upon the environment.

2/3. Water

The Portland Water District, in a 1987 letter, stated that there would only be sufficient capacity to serve this development if the 6" waterline in Congress Street were to be replaced with a 12" waterline. This replacement was completed in 1988.

4. Soil Erosion and Sedimentation Control

An erosion and sedimentation control plan has been submitted by the applicant. This plan outlines the limits of disturbance and a schedule of work. Temporary erosion and sedimentation control measures will consist of hay bales, silt fencing, filter fabric fence and jute mesh. Permanent measures will consist of loaming, seeding, pavement, curbing, wood chip mulch, and stone dust.

The owner will maintain all permanent sedimentation and erosion control measures until the Homeowners Association assumes control of the development.

5. Traffic

Traffic will enter the site from Congress Street through a private entrance. The entrance will include a divided island, gatehouse, parking, and mailboxes. An entrance and parking area for people using the trail will also be located at the Congress Street entrance.

The roads of the development consist of River's Edge Drive and two cul-de-sacs: Kings Pine and Mast Landing. Lt. MacDougall has requested that all names of the development be changed. All proposed names are similar to existing street names.

Proposed	Existing
River's Edge Drive	River View
Kings Pine	Kings Mark
Mast Landing	Old Mast Road

The applicant has agreed to change the names of the streets. A recommended condition of approval would be:

- that prior to the recording of the subdivision plat, the applicant submit for staff review and approval a revised set of street names for the roadways serving the development.

- the private street within the development will be 24 ft. wide with bituminous curbing and an underground stormwater collection system. A sidewalk will be placed on the north side of the main road and on the northeastern cul-de-sac.

Congress Street Improvements

The applicant will complete the Congress Street traffic improvements as stipulated by the conditions for rezoning. No improvements will be required in the first phase which will generate approximately 170 trip ends per day with morning and afternoon peak hour traffic of 17-21 trip ends.

When Phase II is 75% occupied, the applicant will submit a generation study to the traffic engineer. If the study indicates a need for Congress Street improvements, those improvements will be completed by the applicant or his successor.

Congress Street improvements will include street widening, curbing, and sidewalks (see Attachment 8).

The Maine Department of Transportation has submitted plans for the reconstruction of Congress Street to the Department of Parks and Public Works for review. In order to provide a good transition for this development and the reconstruction project, the applicant should provide field control information to locate the proposed entrance on Congress Street. If MDOT is not willing to provide the access as shown, the developer should construct the access within the Congress Street right-of-way to arterial street standards. These details can be worked out when the applicant applies for a street opening permit for the site.

The Stroudwater River trail to be constructed by the applicant will serve as an important portion of the Shoreway Access trail network linking in the future to UNUM to the northwest.

At the entrance of the development, an access easement to an abutter, E. Harriet Caron has been indicated, as well as vehicular and pedestrian easement to Portland Trails. Another 13 ft. wide pedestrian easement is also granted to Portland Trails through the active recreation lot to provide handicapped access to the trail for those who cannot use the timber steps at the main entrance to the trail. (See Attachment 13.)

Mr. William Bray, Deputy Director of Parks and Public Works, has reviewed the plans and recommends approval. A memo to the Board from Mr. Bray is included as Attachment 16b.

6. Sanitary/Stormwater

An 8 inch sanitary sewer service will be connected to the sewer which runs through the property within a 100 ft. Portland Water District easement.

The drainage system will be an enclosed storm system with catchbasins and drainage lines directing flows to the existing swales, stream, and Stroudwater River.

The drainage plans indicate the installation of three catchbasins and three manholes in River's Edge Drive, two manholes in Kings Pine and two catchbasins and two manholes in Mast Landing.

7. Solid Waste

As stipulated in the conditions for rezoning and as noted on the plan, the removal of solid waste will be the responsibility of the Homeowner's Association. The City of Portland will not provide services within the development.

8. Scenic Beauty

The proposal will not have an undue adverse affect on the scenic or natural beauty of the area. The applicant will give a portion of land in fee interest to provide pedestrian access to a trail along the Stroudwater River.

9. Financial and Technical Capability

The applicant has submitted a letter of financial capability from Mr. Mark Lawler, Vice President of Peoples Heritage Bank. This letter is included as Attachment 11.

10. Shoreland

The applicant has submitted a detailed plan for temporary and permanent sedimentation and erosion control. These measures should guarantee that the proposed construction will have no adverse affect on the quality of the river or its shoreline.

SHORELAND REGULATIONS: DIVISION 26

(a) beach construction: the applicant does not propose to construct any type of beach associated with the project.

(b) tree clearance: the only clearance of trees within the shoreland zone will consist of selective removal of vegetation for the construction of a 5 ft. wide path.

(c) erosion and sedimentation control: the applicant has submitted a detailed sedimentation and erosion control plan for both temporary and permanent measures. This plan is included as Attachment 7.

(d) piers, docks, wharves, etc: the applicant has submitted details for the timber stairs and timber boardwalk which will be constructed as part of the trail. The boardwalk was designed in compliance with the Floodplain Management Ordinance.

(e) road construction: there are no roads proposed within the shoreland zone.

(f) structures: the only structure within the flood hazard zone is the boardwalk. Because of the topography of the site, this location could not be changed. The applicant states that the materials have been selected and the trail designed to be resistant to flood damage.

(g) water quality protection: the applicant does not forsee any activity which would entail the discharge of any noxious material.

The applicant does intend to outlet stormwater directly into the stream and river but does not anticipate any degradation of the water quality to result.

(h) general site plan features: the proposed plan appears to meet the seven shoreland standards. The proposal will not endanger wildlife habitat and will conserve access to waters and natural beauty.

11. Groundwater

The development will be served by sanitary and storm sewer and will therefore not adversely affect the quality or quantity of groundwater.

12. Flood Plain

The applicant will construct a trail within a lot to be deeded to Portland Trails. Portions of the trail and its associated boardwalks are located within the Flood Hazard Zone. The applicant has submitted information regarding the construction of the trail in the floodplain. (See Attachment 12).

FLOOR PLAIN MANAGEMENT REGULATIONS: DIVISION 26.5

(a) the applicant does not forsee the reduction of the flood carrying capacity of the watercourse within this development.

(b) the boardwalk and pathways within the floodplain have been designed to minimize flood damage. The path will consist of 2" by 4" decking on posts. The decking will be able to float with the tide but will be tethered with 18" long galvanized wire at each post.

No residential structures are proposed within the flood hazard zone.

(c) no utilities are proposed within the flood hazard zone.

(d) the base flood elevation of the area is 10 ft. There are no building envelopes with an elevation less than 25 ft., therefore no buildings will be constructed below the base flood elevation.

(e) there are no building envelopes located within a Zone A of the flood insurance map.

(f) no improvements, fill, or encroachments are proposed within the floodway.

13. Wetlands

Stroudwater Farms Associates has filed an application with the Army Corps of Engineers for a nationwide permit for 100 sq. ft. of wetland disturbance associated with the construction of the trail.

This construction will also require a DEP NRPA permit due to its proximity to the stream and river.

V. SITE PLAN REVIEW

The Site Plan review standards apply to the construction of the trail along the Stroudwater River and the trail entrance and parking area near the Congress Street entrance. Also, PRUD standards are included in the Site Plan Ordinance. The proposal is, in fact, a PRUD, but the PRUD standards have never been used in the review of a detached type of PRUD where the lots are owned separately and the buildings will be constructed individually.

1. Vehicular Loading and Unloading

The applicant has proposed a private entrance to the site which will include a gatehouse, mailboxes, and drop-off/parking areas.

The Traffic Engineer expressed concern as to the vertical curve at the entrance which would provide inadequate visibility. The applicant has revised the plans accordingly.

The applicant has also provided a public parking area and entrance to the trail which will also serve as a second access for a neighbor to the development on Congress Street.

Handicapped users of the trail may use the sidewalk into the development and access the trail via the association lot in order to avoid a set of timber steps at the entrance to the trail.

2. Parking

The applicant indicates the provision of three parking spaces at the trail entrance.

3. Bulk, Location and Height

The trail is designed to be "low profile", following the contours of the bank. The boardwalk will be set at elevation 25.5 to 26.0, and is designed to lift off its supports under high water conditions. (The boardwalk will be tethered to its supports to keep it from floating away.)

4. Utilities

The development is not anticipated to overburden the sewers, stormdrains, or water facilities. There are no utilities associated with the trail or trail entrance of the project.

5. Landscaping/Existing Vegetation

There is no landscaping proposed along the trail or at the entrance. In order to construct the 5 ft. wide trail, there will be minimal removal of existing vegetation as stipulated in the Shoreland Zoning Regulations.

6. Drainage/Erosion and Sedimentation Control

The applicant has submitted a detailed Sedimentation and Erosion Control Plan which is included as Attachment 7.

Melodie Esterberg, Development Review Coordinator, has reviewed the drainage and sedimentation and erosion control plans and agrees with its recommended measures. Her comments are included as Attachment 16a.

The applicant is not recommending detention of stormwater. Rather, runoff will be directed to the existing swales, river, and stream which will be well protected with filter fabric, fencing, and jute mesh. There are also five drainage easements throughout the property running across house lots and the pedestrian trail.

A potential condition of approval would be:

- that the applicant submit for staff review and approval the drainage easements and access easement for the Caron Property.

7. Lighting

The applicant has not proposed exterior lighting as part of the plan.

8. Fire Department Review

The Fire Department has reviewed the proposal and recommends changing the names of all streets within the subdivision. The applicant has agreed to change the names.

9. City Projects

The project does not interfere with any known projects planned by the City.

10. PRUD Review

The applicant has submitted a response to the PRUD standards which is included as Attachment 15.

A. Design Relationship to Site

The applicant has designed the building windows, roadways, and recreation spaces to protect the sensitive areas of the development while also taking advantage of the topography and natural amenities of the site.

The more sensitive areas have been held as common areas to protect them from development and to assure their maintenance. These areas include the areas around the deep ravine which serves as a drainage swale for the property.

B. Internal Design Character and Relationship to Surrounding Neighborhood

The building windows and internal layout of the project have been designed to preserve the quality of the surrounding neighborhood and to buffer neighboring properties.

*** Since the lots will be owned individually and the homes built separately, there is no method to review the design at this time. It is within the purview of the Planning Board to review the architecture of these buildings once proposed. However, in order to expedite the process for prospective homeowners, design review may occur at the administrative level during the required "minor-minor" review of single family homes.

The Planning Board may wish to direct staff on this matter.

C. Recreation and Open Space

1. External Buffers

By providing building envelopes, the applicant has in effect, provided a 25 ft. buffer around the project. Additionally, the parcel to be deeded to Portland Trails, and the Shoreland Zone Regulations will provide a substantial buffer on the north side of the parcel, as well.

2. Internal Buffers

The building envelopes will create a buffer between buildings within the development. Existing vegetation will be preserved around the stream and river on the association lots as part of the sedimentation and erosion control measures and the Shoreland regulations.

3. Passive Recreational Open Space

The applicant has reserved the area around the stream as passive recreation space for the PRUD. The trail and access to the trail are also components of passive open space.

4. Active Recreational Open Space

The Association Lot providing access to the river will serve as the PRUD's active open space. The space will include a canoe rack, gazebo, and open lawn area.

The applicant will provide illustrations of the active open space amenities at the public hearing for the Board's review.

5. Private Open Space

The lots range in size from 10,940 - 41,597 sq. ft. providing sufficient amounts of individual private open space for each homeowner.

VI. HISTORIC PRESERVATION REVIEW

Four lots on the westernmost cul-de-sac will have to be reviewed by the Historic Preservation Committee. These lots are located within the Stroudwater Historic District.

VII. MOTIONS FOR THE BOARD TO CONSIDER

On the basis of plans and materials submitted by the applicant and on the basis of information contained in Planning Report #17-93, the Planning Board finds:

1. That the proposed River's Edge PRUD is in conformance with the Subdivision Ordinance of the Land Use Code.

2. That the proposed River's Edge PRUD is in conformance with the Site Plan Ordinance of the Land Use Code.

   Potential Conditions of Approval:

   - that prior to the recording of the subdivision plat, the applicant submit for staff review and approval a revised set of street names for the roadways serving the development.

   - that the applicant submit for staff review and approval the drainage easements and access easement for the Caron property.

3. That the proposed River's Edge PRUD is in conformance with the Shoreland and Flood Hazard regulations of the Land Use Code.

Attachments:

1. Letters from the Applicant
2. Subdivision Plan
3. Entrance Plan
4. Conditions for rezoning as approved by the City Council
5. Homeowners' Association Document
6. Letter from Portland Trails
7. Erosion Control Plan
8. Congress Street Improvments
9. Pedestrian easement to the Portland Trails parcel
10. Letter from Portland Water District from July of 1987
11. Letter of Financial Capability
12. Flood Plain/Shoreland Submittal
13. Boardwalk/Trail Detail
14. Vertical Curve Detail
15. PRUD Review Submission
16. Staff Comments
    a. Development Review Coordinator
    b. Traffic Engineer

CITY OF PORTLAND, MAINE
MEMORANDUM

TO: Chair Carroll and Members of the Portland Planning Board

FROM: Richard Knowland, Senior Planner

DATE: July 27, 1999

RE: Peter Kennedy (Stroudwater Farm Associates Subdivision)

Introduction

Peter Kennedy (Stroudwater Farm Associates) requests workshop review for a 29-lot residential subdivision in the vicinity of 1823 Congress Street. This subdivision was originally approved by the Planning Board in 1993. Unfortunately the approval lapsed and must be reviewed again. The resubmitted plan is identical to the originally approved plan. Attachment A includes the subdivision plan.

Earlier in the year, Mr. Kennedy requested an office-park designation for this site, but he has withdrawn this proposal.

In 1992, a contract zone was approved for this site (see Attachment B). The contract zone is still valid since there was no time limitation placed on this proposal, according to Corporation Counsel. This opinion assumes there have been no significant changes in the original plan referenced in the contract. The parcel was rezoned from R-1/R-2 to R-3 with restrictions that the project have a single-family development at the R-1/R-2 density. The primary impetus for the contract change was to allow a private roadway for a single-family subdivision, rather than a public street. The roadway as well as three common space lots will be owned and maintained by a homeowners association.

This development, like the earlier one, will be reviewed for subdivision, site plan, PRUD, and shoreland regulations.

The lots range in size from 10,940 sq. ft to 41,597 sq. ft. The primary roadway (Riversedge Drive) is 2600 feet long, and ends with a cul-de-sac. There are two other short roadways, (Mast Landing and Kings Pine) within the subdivision. The roadways will have a paved width of 24 feet, and will be privately owned and maintained by a homeowners' association. No sidewalks are proposed along the roadway. The Board may want to revisit the sidewalk issue.

A note on the plan indicates that all residences shall have NFPA 13D fire protection systems.

Condition #5 of the contract required that the applicant deed 7.8 acres of land adjacent to the Stroudwater River to Portland Trails. This condition has been met by the developer.

Aside from the Portland Trails open space, there are two passive open space lots (16,149 sq. ft. and 29,919

sq. ft.) and one active open space lot (9,898 sq. ft.) for the subdivision.

Condition # 7 of the contract states:

> In the event that Phase II of the project is not constructed or that fewer than seventy-five (75) percent of the structures in that phase are constructed by January 1, 1998, the applicant for rezoning or any successor shall submit to the City Traffic Engineer a trip generation study for the project . If this study indicates a need for improvements to Congress Street, the applicant for rezoning or any successor shall be responsible for those improvements determined to be necessary by the City Traffic Engineer.

This information has not been submitted to date. However, a number of traffic reports have been completed for the Congress Street corridor, so it may not be necessary to do another one. We will confer with the City Traffic Engineer on this issue.

As the front section of the subdivision is located within an historic district, the Historic Preservation Committee will be reviewing the design of individual houses as they are proposed.

There were three conditions of approval noted in the 1993 Board review of this project.

1. Applicant shall submit a revised set of street names for the roadways serving the development . . . The Fire Department indicated the names were too similar to existing street names.

2. Applicant submit for staff review and approval drainage easements and access easements for the Caron property.

3. Prior to the issuance of a building permit, applicant shall install a 12 inch waterline in Congress Street as required by the Portland Water District . . . If this was not covered by recent Congress Street roadway improvements, this will need to be done by the applicant.

Attachments:

A. Subdivision Plan
B. Contract Zone
C. 1993 Planning Board Report (excerpt)
D. 1993 Approval Letter

CITY OF PORTLAND, MAINE
MEMORANDUM

TO: Chair Carroll and Members of the Portland Planning Board

FROM: Richard Knowland, Senior Planner

DATE: July 27, 1999

RE: Peter Kennedy Subdivision (Stroudwater Farm Associates)
1823 Congress Street

Peter Kennedy has withdrawn his Riversedge Subdivision application. See attached letter.

ATTACHMENT B-1

City of Portland, Maine

IN THE CITY COUNCIL

AMENDMENT TO ZONING MAP
RE: CONDITIONAL R-3 REZONING
CONGRESS STREET

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF PORTLAND, MAINE IN CITY COUNCIL ASSEMBLED AS FOLLOWS:

That the Zoning Map of the City of Portland, dated March 1958, as amended and on file in the Department of Planning and Urban Development, and incorporated by reference into the Zoning Ordinance by §14-49 of the Portland City Code, be and hereby is amended by adopting the map change amendment shown on Attachment 1.

Said rezoning shall be subject to the following conditions:

1. The area of the rezoning shall be the limits of the property owned by Stroudwater Farms Associates as indicated on Exhibit A.

2. The development of the property shall be for twenty-nine single-family homes on individual lots on a private road, as shown on Exhibit B, subject to alterations approved by the Planning Board as part of the subdivision and site plan review.

3. The owner or owners of each lot shall be members of a Homeowners Association which shall own and maintain both the private road and any open space of the subdivision.

4. The development shall be served by a private road with a single curb cut from Congress Street. Said private road shall be twenty-four feet in width, paved and shall have bituminous concrete curbing. The private road shall be owned and maintained by the applicant for rezoning until establishment of the successor Stroudwater River's Edge Homeowners' Association, as set forth in Exhibit C. The City shall not at any time either maintain the private road or provide any type of services on the private road.

5. The applicant for rezoning shall deed approximately ten acres of land adjacent to the Stroudwater River to Portland Trails either in fee or as a protective easement, for use as buffer space, trails, and passive recreational uses only. Said deed shall include an

access easement from Congress Street and proof of recording of the deed in the Cumberland County Registry of Deeds shall be provided to the City prior to the issuance of any building permit. In the event that this land is deeded to Portland Trails as a conservation easement pursuant to 33 M.R.S.A. §477, the deed shall also create a third-party right of enforcement in the City and shall specify the time and manner in which both the City and Portland Trails can enter the easement area in order to ensure compliance with the terms of the easement.

6. In the event that Phase II of the project is constructed, improvements to Congress Street shall be completed and operational prior to occupancy of seventy-five (75) percent of the structures in that phase. The Congress Street improvements shall consist of road widening and sidewalk repairs, as required by the City Traffic Engineer.

7. In the event that Phase II of the project is not constructed or that fewer than seventy-five (75) percent of the structures in that phase are constructed by January 1, 1998, the applicant for rezoning or any successor shall submit to the City Traffic Engineer a trip generation study for the project. If this study indicates a need for improvements to Congress Street, the applicant for rezoning or any successor shall be responsible for those improvements determined to be necessary by the City Traffic Engineer.

8. This conditional rezoning shall be limited to the applicant for rezoning and to any successor Homeowners' Association. The conditional rezoning shall only be transferable by sale or by lease if the planning authority determines that a subsequent user of the property shall comply with all of the requirements of this conditional rezoning.

9. The applicant shall file a copy of this rezoning, along with a reference to the subject property, in the Cumberland County Registry of Deeds.

The above-stated restrictions, provisions, and conditions are an essential part of the rezoning, shall run with the subject premises to the extent set forth in Paragraph 6, shall bind the Owner, its successors and assigns of said property or any interest therein to the extent set forth in Paragraph 6, and any party in possession or occupancy of said property or any part thereof, and shall inure to the benefit of and be enforceable by the City of

Portland, by and through its duly authorized representatives.

If any of the restrictions, provisions, conditions, or portions thereof set forth herein is for any reason held invalid or unconstitutional by any Court of competent jurisdiction, such portion shall be deemed as a separate, distinct and independent provision and such determination shall not affect the validity of the remaining portions hereof.

Except as expressly modified herein, the use and occupancy of the subject premises shall be governed by and comply with the provisions of the Land Use Code of the City of Portland and any applicable amendments thereto or replacement thereof.

In the event of a breach of any condition(s), the Planning Board shall have the authority, after hearing to resolve the issue resulting in the breach. The resolution may include a recommendation to the City Council that the site be rezoned to R-1 and R-2.