293-C-004

70-70 Bishop st

Bishop st 70- Amendment

12 Westbrook Common, Westbrook, ME 04098-1339

CITY OF PORTLAND, MAINE
DEVELOPMENT REVIEW APPLICATION
PLANNING DEPARTMENT PROCESSING FORM
Planning Department Copy

19990117
I. D. Number

Sebago Technics
Applicant

08/30/1999
Application Date

12 Westbrook Common, Westbrook, ME 04098-1339
Applicant's Mailing Address

Bishop St 70 - Amendment
Project Name/Description

James Seymour
Consultant/Agent

70 - 70 Bishop St
Address of Proposed Site

856-0277 **856-2206**
Applicant or Agent Daytime Telephone, Fax

293 C004
Assessor's Reference: Chart-Block-Lot

Proposed Development (check all that apply): ☐ New Building ☑ Building Addition ☐ Change Of Use ☐ Residential
☐ Office ☐ Retail ☐ Manufacturing ☐ Warehouse/Distribution ☑ Parking Lot ☐ Other (specify) **19 parking spaces**

7250 sq ft
Proposed Building square Feet or # of Units

Acreage of Site

I-M & R-5
Zoning

Check Review Required:

☑ Site Plan (major/minor)
☐ Subdivision # of lots
☐ PAD Review
☐ 14-403 Streets Review
☐ Flood Hazard
☐ Shoreland
☐ HistoricPreservation
☐ DEP Local Certification
☐ Zoning Conditional Use (ZBA/PB)
☐ Zoning Variance
☐ Other

Fees Paid: Site Plan **$400.00** Subdivisio Engineer Review **$168.00** Date **11/12/1999**

Planning Approval Status:

Reviewer **Kandi Talbot**

☑ **Approved**
☐ **Approved w/Conditions** See Attached
☐ **Denied**

Approval Date **10/18/1999** Approval Expiration **10/18/2000** Extension to ☐ Additional Sheets Attached

☑ OK to Issue Building Permi **Kandi Talbot** (signature) **11/18/1999** (date)

Performance Guarantee ☑ **Required*** ☐ **Not Required**

* No building permit may be issued until a performance guarantee has been submitted as indicated below

☑ Performance Guarantee Accepted	**11/17/1999** (date)	**$32,200.00** (amount)	**09/01/2000** (expiration date)
☑ Inspection Fee Paid	**11/12/1999** (date)	**$547.00** (amount)	
☐ Building Permit Issue	(date)		
☐ Performance Guarantee Reduced	(date)	(remaining balance)	(signature)
☐ Temporary Certificate of Occupancy	(date)	☐ Conditions (See Attached)	(expiration date)
☐ Final Inspection	(date)	(signature)	
☐ Certificate Of Occupancy	(date)		
☐ Performance Guarantee Released	(date)	(signature)	
☐ Defect Guarantee Submitted	(submitted date)	(amount)	(expiration date)
☐ Defect Guarantee Released	(date)	(signature)	

CITY OF PORTLAND, MAINE
DEVELOPMENT REVIEW APPLICATION
PLANNING DEPARTMENT PROCESSING FORM
D.R.C. Copy

19990117
I. D. Number

Sebago Technics
Applicant

08/30/1999
Application Date

12 Westbrook Common, Westbrook, ME 04098-1339
Applicant's Mailing Address

Bishop St 70 - Amendment
Project Name/Description

James Seymour
Consultant/Agent

70 - 70 Bishop St
Address of Proposed Site

856-0277 **856-2206**
Applicant or Agent Daytime Telephone, Fax

293 C004
Assessor's Reference: Chart-Block-Lot

Proposed Development (check all that apply): ☐ New Building ☑ Building Addition ☐ Change Of Use ☐ Residential
☐ Office ☐ Retail ☐ Manufacturing ☐ Warehouse/Distribution ☑ Parking Lot ☐ Other (specify) **19 parking spaces**

7250 sq ft
Proposed Building square Feet or # of Units

Acreage of Site

I-M & R-5
Zoning

Check Review Required:

☑ Site Plan (major/minor)
☐ Subdivision # of lots
☐ PAD Review
☐ 14-403 Streets Review
☐ Flood Hazard
☐ Shoreland
☐ HistoricPreservation
☐ DEP Local Certification
☐ Zoning Conditional Use (ZBA/PB)
☐ Zoning Variance
☐ Other

Fees Paid: Site Plan **$400.00** Subdivision Engineer Revie **$168.00** Date: **11/12/1999**

DRC Approval Status:

Reviewer **Steve Bushey**

☑ **Approved**
☐ **Approved w/Conditions** see attache
☐ **Denied**

Approval Date **10/18/1999** Approval Expiration **10/18/2000** Extension to ☐ Additional Sheets Attached

☑ Condition Compliance **Steve Bushey** (signature) **11/18/1999** (date)

Performance Guarantee ☑ **Required*** ☐ **Not Required**

* No building permit may be issued until a performance guarantee has been submitted as indicated below

☑ Performance Guarantee Accepted	**11/17/1999** (date)	**$32,200.00** (amount)	**09/01/2000** (expiration date)
☑ Inspection Fee Paid	**11/12/1999** (date)	**$547.00** (amount)	
☐ Building Permit	(date)		
☐ Performance Guarantee Reduced	(date)	(remaining balance)	(signature)
☐ Temporary Certificate Of Occupancy	(date)	☐ Conditions (See Attached)	(expiration date)
☐ Final Inspection	(date)	(signature)	
☐ Certificate Of Occupancy	(date)		
☐ Performance Guarantee Released	(date)	(signature)	
☐ Defect Guarantee Submitted	(submitted date)	(amount)	(expiration date)
☐ Defect Guarantee Released	(date)	(signature)	

CITY OF PORTLAND, MAINE
DEVELOPMENT REVIEW APPLICATION
PLANNING DEPARTMENT PROCESSING FORM
ADDENDUM

19990117
I. D. Number

Sebago Technics
Applicant

08/30/1999
Application Date

12 Westbrook Common, Westbrook, ME 04098-1339
Applicant's Mailing Address

Bishop St 70 - Amendment
Project Name/Description

James Seymour
Consultant/Agent

70 - 70 Bishop St
Address of Proposed Site

856-0277 **856-2206**
Applicant or Agent Daytime Telephone, Fax

293 C004
Assessor's Reference: Chart-Block-Lot

DRC Conditions of Approval

Planning Conditions of Approval

Inspections Conditions of Approval

1. This permit is being approved on the basis of plans submitted. Any deviations shall require a separate approval before starting that work.
2. New signage requires a separate permit.

Fire Conditions of Approval

DeLUCA-HOFFMAN ASSOCIATES, INC.
CONSULTING ENGINEERS

778 MAIN STREET
SUITE 8
SOUTH PORTLAND, MAINE 04106
TEL. 207 775 1121
FAX 207 879 0896

ROADWAY DESIGN
ENVIRONMENTAL ENGINEERING
TRAFFIC STUDIES AND MANAGEMENT
PERMITTING
AIRPORT ENGINEERING
SITE PLANNING
CONSTRUCTION ADMINISTRATION

MEMORANDUM

TO: Code Enforcement
Kandi Talbot, Planner

FROM: Jim Wendel, Development Review Coordinator

DATE: November 7, 1997

RE: Request for Certificate of Occupancy
Rainmaker Irrigation
70 Bishop Street

On November 6, 1997 I reviewed the site for compliance with the approved site plan and conditions dated 5/16/97; my comments are:

In general the site work is significantly incomplete.

1. The paving is incomplete. Four parking stalls, the dumpster area, the turnaround and approximately 3' at the back line of the paving limit has not been paved; also, the surface pavement has not been completed.

2. The raised bituminous sidewalk at the back door has not been constructed.

3. The pavement markings and handicapped signage have not been installed.

4. The grading to the left half of the lot has not been properly graded and stabilized.

5. The dumpster pad with fence has not been constructed; the dumpster is currently located at the back of the lot in full view from the street.

6. The riprap embankment along the back edge of the parking area has not been constructed; the area between the downslope to the wetlands and the back edge of the pavement is unvegetated.

7. No landscaping has been placed.

8. The business sign has not been installed.

9. The backfilling behind the radius granite curb for the left side of the entrance is incomplete; it is not final graded or compacted.

It is my opinion that no type of certificate of occupancy be issued until the incomplete construction noted above has been resolved.

JN1350.10/disk3/rainmker.doc

CITY OF PORTLAND
Planning and Urban Development Department

MEMORANDUM

TO: Duane G. Kline, Director of Finance

FROM: Kandice Talbot, Planner

DATE: August 5, 1997

RE: Rainmaker Irrigation, 70 Bishop Street

The site work associated with the Rainmaker Irrigation project at 70 Bishop Street, has been reviewed. Please reduce the Norway Savings Bank Escrow Account #8990036565 from $7,500.00 to $2,947.00. If you have any questions, please do not hesitate to contact me.

Kandice Talbot

Kandice Talbot
Planner

Joseph E. Gray, Jr., Director
Planning and Urban Development

Duane G. Kline
Director of Finance

O:\PLAN\DEVREVW\BISHOP70\MEMOS\REDUCTN.KST

From: Alex Jaegerman
To: kcote
Date: 12/1/97 5:20pm
Subject: Bishop Street - Rainmaker Irrigation -Reply

Kandi -

Thank you for the note about Rainmaker. It prompted me to send the message to Kathi Staples that we talked about. You have a copy. I am also sending this reply to a few others as a case in point. Others we have heard from are Diver Down on Presumpscot Street and we were curious about the impact of the fee on the Fore and Center Street lot if that had gone forward with all that curb and sidewalk to be rebuilt. I think there was another case as well. Do you know of others?

Alex.

>>> Kandi Talbot 12/01/97 02:23pm >>>
I was talking with the owner of Rainmaker Irrigation today regarding his property and his performance guarantee. I thought I should pass on parts of the conversation, just so you are aware of it.

He was a little discouraged about building in Portland. One reason was because of the fact that he had to put up an amount of money into the performance guarantee for the curb along the street. Then he had to turn around and put another amount of money into another account for the curb so he could get his street opening permit. He doesn't feel that the City should be holding in two places money for the same job.

The second issue really had to do with Public Works and his sewer connection and costing more money than expected.

He has two businesses. He has been thinking that he wanted to do some more work in Portland, especially in the Bishop Street area to kind of clean up the area so to speak.

He did say that he didn't have any problems with this department, but that because of the fees, etc., he has been seriously thinking of building in Scarborough on land that he owns there, instead of doing a Phase II project in Portland.

I know that there are always people who say they're going to take there business someplace else, but I do think he has a legitimate complaint about the money for the right-of-way work being held in two places. Is there anything we can do about this? I just think we're going to be getting this complaint more and more in the future from these smaller developers.

CC: JEG, kjb, KAS

CITY OF PORTLAND, MAINE
Department of Planning and Urban Development
SUBDIVISION/SITE DEVELOPMENT

COST ESTIMATE OF IMPROVEMENTS TO BE COVERED BY PERFORMANCE GUARANTEE

Date 5/19/97

Name of Project Rainmaker Irrigation
Address/Location 70 Bishop street Portland ME 04103
Developer
Form of Performance Guarantee
Type of Development: ___ Subdivision ✓ Site Plan (Major/Minor)

ITEM	QUANTITY	UNIT COST	Public R.O.W. ~~SUBTOTAL~~	Private Improve. ~~COMPLETED~~
1. STREET/SIDEWALK:				
Road - Trench Repair	300 SF	$2.25 SF	$675.00 ✓	
Granite Curbing (sloped Gran. curb)	60' (30LF)	25 LF	1000.00 ✓	$500.00 ✓
Sidewalks				
Esplanades				
~~Monuments~~ Bit. curb.	103 LF	2.00 LF		206.00
~~Street Lighting~~ Granite Tip Down	1	100.00 ea	100.00 ✓	
Other				
2. SANITARY SEWER:				
Manholes				
Piping 6" sewer service	60 LF	30 LF	1800.00 ✓	
Connections	1	400 LF	400.00 ✓	
Other				
3. STORM DRAINAGE:				
Manholes				
Catch Basins				
Piping				
Detention Basin				
Other				
4. SITE LIGHTING				
5. EROSION CONTROL	400' Silt Fence	$1.50 LF		$600.00 ✓
	Riprap	LS		700.00
6. RECREATION AND OPEN SPACE AMENITIES				
7. LANDSCAPING (Attach breakdown of plant materials, quantities, and unit costs)	—	Lump sum		$1500.00
8. MISCELLANEOUS				
		Total:	$3975.00	$3506.00

TOTAL AMOUNT OF PERFORMANCE GUARANTEE $7481.00
X 1.7% = INSPECTION FEE $127.18

Approved
Approved

June 1998

Norway Savings Bank

Incorporated 1866 • Member FDIC

SITE PLAN/SUBDIVISIONS
PERFORMANCE GUARANTEE:
ESCROW ACCOUNT

Account #8990036565

July 23, 1997

Joseph E. Gray, Jr., Director of Planning & Urban Development
City of Portland
389 Congress Street
Portland, ME 04101

RE: Application of Boyle Building Corp. for Bishop Street Site Improvements at 70 Bishop St., Portland, Maine.

Dear Mr. Gray:

This will certify you that Norway Savings Bank will hold the sum of Seven Thousand Five Hundred Dollars ($7,500.00) in an interest-bearing escrow account in the name of the City of Portland with the Bank. We will hold these funds as escrow agent for the benefit of the City of Portland on the following conditions:

1. These funds represent the estimated cost of installing site improvements as depicted on the site plan/subdivision plan and as approved by the Development Review Coordinator.
2. The City of Portland may draw against this escrow account by presentation of a draft in the event that Boyle Building Corp. fails to complete within twenty-four (24) months of this date the work stipulated in paragraph 1. Said draft shall be accompanied by a written statement from the Director of Parks and Public Works or the Director of Planning and Urban Development that Boyle Building Corp. has failed to complete such work, with a listing of improvements still to be completed, and the estimated cost of completing said improvements still to be completed as determined by the Development Review Coordinator.
3. The City of Portland may draw against this escrow for a period not to exceed 90 days after the expiration of this two-year commitment.
4. After all work in the public right of way has been completed and inspected to the satisfaction of the Department of Public Works, including but not limited to the installation of granite curbing, sidewalk, curb cut and street trees, Norway Savings Bank shall be eligible to receive a reduction in its obligation hereunder equal to the estimated cost of improvements. In no case, however, shall the obligations of Norway Savings Bank hereunder be reduced to an amount which is less than the estimated cost of completing all prescribed improvements as determined by the Department of Public Works, as described above.

Acct. No. 0699 0036557 Tax I.D. No. 04-3361344

Name: Boyle Building, Corp. Tel No. (207)878-7890

Business Address: City of Portland (Bishop Street)
70 Bishop Street
Portland, Maine 04103-2614

Sole Proprietor ☐ Partnership ☐ Association ☐ Corporation ☒

NORWAY SAVINGS BANK is hereby authorized to recognize the below signatures in payment of funds or transaction of any other business on this account.
The undersigned hereby certifies that the signatures hereto are the original genuine signatures of authorized persons and hereby consents that any funds now or hereafter on deposit in this account may be paid to or on the order or receipt of any Two (2) of them.
(Insert number)

The undersigned hereby agrees to the by-laws, rules and regulations governing deposits made in NORWAY SAVINGS BANK, now in force, and any amendments or additions thereto hereafter made without further notice. The undersigned further agrees that this account or proceeds thereof will be used for business purposes only.

The undersigned hereby certifies that their business has not failed to report income or interest earned and that their business is not subject to the 31% withholding regulation or other punitive measures imposed by the IRS.

The undersigned hereby certifies under penalty of perjury that the Social Security or employer's identification number provided for this account is the correct taxpayer identification number.

Furthermore, the undersigned acknowledges receipt of a copy of this signature card, Deposit Account Agreement, and Disclosure.

Print or Type Names Here		Genuine Signatures Here
William Boyle	WILL SIGN	X
Joseph E. Gray, Jr.	WILL SIGN	X
Dir. of Planning & Urban Development	WILL SIGN	
Kevin Markee, Treasurer	WILL SIGN	X

Office	Opened by	Date Opened	Init'l Deposit
06 Windham	Jane Gagnon	7/24/97	7,500.00

Rev. 2/93

DUPLICATE

GENERAL RECEIPT

CITY OF PORTLAND, MAINE

DEPARTMENT

DATE 7/23/97

RECEIVED FROM

ADDRESS

UNIT	ITEM	REVENUE CODE	DOLLAR AMOUNT
	Job # 97041		250 00
	Planning		50 00
	Plo		
		TOTAL	300 00

☐ CASH ☐ CHECK ☐ OTHER

RECEIVED BY

GBF INFORMATION SYSTEMS Box 878, Portland, ME 04104 (207) 774-1482 200747 BP
Commercial Printing • Business Forms • Advertising Specialties • Labels

---

RAINMAKER IRRIGATION
WILLIAM BOYLE
70 BISHOP STREET
PORTLAND, ME 04103
(207) 878-7890

MAINE BANK & TRUST
WINDHAM, ME 04062
52-150/112

3141

7/23/97

PAY TO THE ORDER OF City of Portland $ 300.00

Three hundred and 00/100 DOLLARS

Security features included. Details on back.

MEMO Planning Fee

⑈003141⑈ ⑆011201500⑆ 0053223 ⑈

MP

© 1993, 1995 INTUIT # 414 1-800-433-8610

CITY OF PORTLAND, MAINE
DEVELOPMENT REVIEW APPLICATION
PLANNING DEPARTMENT PROCESSING FORM

I. D. Number

Address:

Rainmaker Irrigation
Applicant 70 Bishop St Ptld, ME 04103

10 April 1997
Application Date

Applicant's Mailing Address

Project Name/Description

Consultant/Agent

50-72 Bishop St
Address of Proposed Site

Jim Seymour - 856-0277
Applicant or Agent Daytime Telephone, Fax

293-C-004
Assessor's Reference: Chart-Block-Lot

Proposed Development (check all that apply): X New Building ___ Building Addition ___ Change of Use ___ Residential
___ Office ___ Retail ___ Manufacturing ___ Warehouse/Distribution ___ Other (specify) Office/Storage/parking

1,200 Sq Ft
Proposed Building Square Feet or # of Units

35,660 Sq Ft
Acreage of Site

Zoning

Check Review Required:

[X] Site Plan (major/minor)	[ ] Subdivision # of lots ____	[ ] PAD Review	[ ] 14-403 Streets Review
[ ] Flood Hazard	[ ] Shoreland	[ ] Historic Preservation	[ ] DEP Local Certification
[ ] Zoning Conditional Use (ZBA/PB)	[ ] Zoning Variance	[ ] Single-Family Minor	[ ] Other ____

Fees paid: site plan 300.00 subdivision ____

Approval Status: Reviewer Kandi Talbot

[✓] **Approved** [ ] **Approved w/Conditions** listed below [ ] **Denied**

1. ____
2. ____
3. ____
4. ____

Approval Date 5/16/97 Approval Expiration 5/16/98 (date) Extension to ____ (date) [ ] Additional Sheets Attached

[ ] Condition Compliance ____ (signature) ____ (date)

Performance Guarantee [X] Required* [ ] Not Required

* No building permit may be issued until a performance guarantee has been submitted as indicated below

[X] Performance Guarantee Accepted	7/28/97 (date)	7,500.00 (amount)	10/23/1999 (expiration date)
[X] Inspection Fee Paid	7/23/97 (date)	300.00 (amount)	
Performance Guarantee Reduced	____ (date)	____ (remaining balance)	____ (signature)
Performance Guarantee Released	____ (date)	____ (signature)	
Defect Guarantee Submitted	____ (submitted date)	____ (amount)	____ (expiration date)
Defect Guarantee Released	____ (date)	____ (signature)	

Pink - Building Inspections Blue - Development Review Coordinator Green - Fire Yellow - Planning 2/9/95 Rev5 KT.DPUD

PLANNING BOARD REPORT #16-97

SIDEWALK AND GRANITE CURB WAIVER REQUEST IN THE VICINITY OF

70 BISHOP STREET

RAINMAKER IRRIGATION, APPLICANT

Submitted to:

Portland Planning Board
Portland, Maine

May 13, 1997

I. INTRODUCTION

Rainmaker Irrigation is requesting a waiver of sidewalk and granite curb from Chapter 25 of the Municipal code for their property at 70 Bishop Street.

Rainmaker Irrigation is proposing to construct a 1,200 square foot building at 70 Bishop Street for the purpose of their expanding lawn/property irrigation business. Sidewalk and granite curb has been required as part of the administrative review of this site plan. The request for waiver is included as Attachment 1. The applicant has also submitted two site plans, one showing the sidewalk and granite curb and the other showing granite curb just at the radius of the driveway. The site plans are included as Attachments 5 and 6.

128 notices were sent to area property owners.

II. PROPOSED WAIVER REQUEST

The property has approximately 294 feet of street frontage. There is presently no granite curb or sidewalk on the site. The applicant feels that installing granite curb and sidewalk would be an unreasonable burden, since there is no sidewalk or granite curb in this area of Bishop Street. The applicant is proposing granite curb along the radius of the driveway.

A copy of Chapter 25 and the waiver criteria of sec. 14-506 are shown as Attachments 2 and 3.

The property totals 36,000 sq. ft. and is zoned I-M. The site is currently vacant. Along Bishop Street, the properties are zoned I-M and are primarily industrial uses. Attachment 5 is a vicinity map.

There is existing granite curb and sidewalk which starts at the intersection of Forest Avenue and Bishop Street and runs approximately 375 feet along Bishop Street.

Public Works has reviewed the request for granite curb and sidewalk and will support the request because granite curb and sidewalks are not prevalent in the vicinity of this site. A memo from Public Works is included as Attachment 4.

III. 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 #16-97, the Planning Board finds that:

a. Extraordinary conditions do/do not exist (if yes, please specify those conditions); or

b. Undue hardship will/will not result (if yes, please specify the hardship).

The Board further finds that the granting of the waiver will/will not create potentially hazardous vehicle and pedestrian conflict or that it will/will not nullify the intent and purpose of the land development plan and the City ordinances.

As a result, the Board does/does not grant the request for a waiver of the curb and sidewalk requirements.

Attachments:

1. Letter from Applicant
2. Chapter 25
3. Waiver Criteria for Section 14-506
4. Public Work's Memo
5. Vicinity Map
6. Site Plan with Granite Curb and Sidewalk
7. Site Plan without Granite Curb and Sidewalk

Attachment 1

SebagoTechnics
Engineering & Planning for the Future

April 24, 1997
97072

Alex Jaegerman, Chief Planner
City of Portland
389 Congress Street
Portland, ME 04101

Rainmaker Irrigation - 70 Bishop Street

Dear Alex:

Please find attached copies of the revised site plan for the proposed Rainmaker Irrigation facility located at 70 Bishop Street. Revisions to the site plan include corrections per comments of the Minor Site Plan Review and have included a note indicating a deadline for the parking area to be paved. In addition, the owner has requested that we obtain a building permit as soon as possible for his current leased building area is not large enough to handle his growing business.

We understand the City's position regarding sidewalk and curbing requirements for non-residential developments (Article VI - Sec. 25-96). To expedite the building permit process, we are showing the granite curbing and bituminous sidewalk along the site's frontage with respective details and will provide a performance guarantee amount for the proposed construction costs. However, we formally ask that we be placed on the next Planning Board agenda to request a waiver of this requirement. Currently, this section of Bishop Street has neither curb nor sidewalk; therefore, we believe in this Industrial Zone (I-M) it is an unreasonable burden to the applicant.

In the interim, until we can be heard by the Planning Board, and if the planning staff has no further comments or conditions, we wish to proceed with obtaining a building permit. Upon the Board's decision, if it were to approve our waiver request, we would request our performance guarantee be released for the sidewalk and granite curb amount. We feel this solution provides the best option for Rainmaker Irrigation to begin construction while providing the City of Portland guarantees regarding the sidewalk and curb requirement until the Planning Board makes a formal decision.

12 Westbrook Common P.O. Box 1339 Westbrook, Maine 04098-1339 207-856-0277 Fax 207-856-2206

Please inform us at your earliest convenience of our date for the waiver request meeting with the Board. Feel free to contact us if you have any questions, comments, or require additional information.

Sincerely,

SEBAGO TECHNICS, INC.

James R. Seymour

James R. Seymour
Project Engineer

JRS:jc
Enc.

cc: William Boyle, Rainmaker Irrigation

Attachment 2

Sec. 25-83. Numbers to be affixed; renumbered.

Unless exempted by order of the city council, each owner, occupant or tenant of any building, or portion thereof, fronting on any such street or way, shall affix or inscribe on such building, or portion thereof, the number assigned thereto in accordance with the plan, and the city council may, whenever it deems it necessary, cause any such street or way to be renumbered. The city manager or his or her designated representative is authorized to enforce the requirements of this article. (Code 1968, § 709.3; Ord. No. 605-82, 5-19-82)

Secs. 25-84—25-95. Reserved.

ARTICLE VI. SIDEWALK AND CURBING CONSTRUCTION AND MAINTENANCE

Sec. 25-96. Required for nonresidential development; exceptions.

Where a nonresidential development requiring site plan approval abuts any accepted street and a sidewalk with granite curbing satisfactory to the public works authority has not already been provided, a sidewalk constructed of bituminous concrete, portland cement concrete, brick or other paving material and granite curbing shall be provided along the entire street frontage of the lot. If either a sidewalk or curbing, but not both, shall exist at such location which is satisfactory to the public works authority, only a sidewalk or curbing, as the case may be, shall be provided. In either case, such sidewalk and curbing shall be constructed in accordance with the specifications and to the satisfaction of the public works authority at no cost to the city. In conjunction with site plan review, the planning board may waive or modify the requirements contained herein upon a like finding and on the same terms and conditions as set forth in section 14-506(b) of this Code. (Code 1968, § 705.1; Ord. No. 42-84, § 1, 6-18-84)

Sec. 25-97. May be required generally; apportionment of cost.

(a) Notwithstanding the provisions of section 25-96, the city council may at any time direct the construction of a sidewalk of bituminous concrete, Portland cement concrete, brick or other paving material or granite curbing, or both, along any accepted street in the city. Such sidewalk or curbing shall be constructed by the city and the cost thereof shall be borne by the city.

(b) Such improvements may be ordered by the council upon petition of an abutting landowner, and one-half of the cost thereof shall be assessed to such abutting landowner and shall be collected by the city in the manner provided in sections 25-102 and 25-103. (Code 1968, § 705.2; Ord. No. 30-75, § 1, 1-6-75)

Sec. 25-98. Reconstruction; apportionment of cost.

(a) The city council may at any time direct the reconstruction of any sidewalk or curbing which has been constructed along any accepted street by other than the city and which has not

been accepted as the responsibility of the city. Such sidewalk or curbing shall be reconstructed by the city and the cost thereof shall be borne by the city.

(b) Such improvements may be ordered by the council upon the petition of an abutting landowner, and one-half of the cost thereof shall be assessed to such abutting landowner and shall be collected by the city in the manner provided in sections 25-102 and 25-103. (Code 1968, § 705.3; Ord. No. 30-75, § 2, 1-6-75)

Sec. 25-99. Waiver or amendment of requirements.

Except as otherwise provided in section 25-96 or 14-506, the city council may, upon application to it in writing, waive or amend by order the requirements of sidewalks or curbing when it finds that the circumstances in a specific case warrant such waiver or amendment; however, no such order shall be construed as waiving the requirement of cost apportionment, assessment and collection unless expressly stated therein. (Code 1968, § 705.4; Ord. No. 54-76, § 1, 1-19-76; Ord. No. 42-84, § 2, 6-18-84)

Sec. 25-100. Substitution of materials.

The public works authority may permit the substitution of other types of materials for sidewalks or curbing when, in his or her sole and exclusive judgment, he or she finds such substituted materials to be equal to or better than the materials required herein. (Code 1968, § 705.5)

Sec. 25-101. Service ways and curb cuts; sidewalks and curbing not to be removed; exceptions.

The design and location of service ways and curb cuts in sidewalks or curbing shall be as approved by the traffic engineer and the public works authority. No additional service ways or curb cuts and no alterations in existing service ways or curb cuts shall be made without the prior consent of the traffic engineer and public works authority, and no such sidewalk or curbing shall be removed except by the city through its duly authorized agents or as authorized by a permit issued by the public works authority. (Code 1968, § 705.6)

Sec. 25-102. Public works authority authorized to perform work; lien.

The public works authority is authorized in accordance with the provisions of sections 25-96, 25-97 and 25-98, to construct or reconstruct sidewalks or curbing along any accepted street in the city, and the city shall have a lien on that abutting property to which one-half of the expense thereof is properly assessable pursuant to the provisions of sections 25-96, 25-97(b) and 25-98(b). (Code 1968, § 705.7; Ord. No. 30-75, § 3, 1-6-75)

Sec. 25-103. Lien procedure.

The public works authority shall keep an accurate account of the expense of work under this article and shall, as soon as practicable after the completion thereof, make a return showing the location of each such sidewalk or curbing, its length and width, material of which

Attachment 3

of deeds which has not been approved as required by this article. Approval for the purpose of recording shall appear in writing on the recording plat. No public utility, water district, sanitary district or any utility company of any kind shall install services to any lot in a subdivision which has not received planning board approval.

(c) Any person who sells, leases, develops or builds upon or conveys for consideration any land in a subdivision which has not been approved as required by this article shall be punished by a fine of not more than five hundred dollars ($500.00) for each such occurrence. The city may institute proceedings to enjoin any violation of this section.
(Code 1968, § 603.15; Ord. No. 158-68, § 10, 5-6-68; Ord. No. 149-79, 6-6-79)

Sec. 14-505. Appeals.

An appeal from any final decision of the planning board regarding subdivision approval may be taken by the applicant or his authorized agent to superior court in accordance with Rule 80B of the Maine Rules of Civil Procedure.
(Code 1968, § 603.16; Ord. No. 158-68, § 10, 5-6-68; Ord. No. 149-79, 6-6-79)

Sec. 14-506. Modifications.

(a) Except for the requirements set forth in sections 14-498 and 14-499 pertaining to the provision and construction of curbs and sidewalks, the planning board if it finds that extraordinary conditions exist or that undue hardship may result from strict compliance with these regulations may vary the regulations so that substantial justice may be done and the public interest secured; provided that such variation will not have the effect of nullifying the intent and purpose of the land development plan and the regulations of this article.

SIDEWALK WAIVER CRITERIA

(b) Where the planning board finds that extraordinary conditions exist or that undue hardship may result from strict compliance with the requirements set forth in sections 14-498 and 14-499 pertaining to the provision and construction of curbs and sidewalks, it may vary the regulations so that substantial justice may be done and the public interest secured; provided that such variation will not have the effect of creating potentially hazardous vehicle and pedestrian conflict or nullifying the intent and purpose of the land development plan and the regulations of this article. For purposes of this subsection, the planning board may, but need not, consider such circumstances as where a street is a dead-end street, or where an alternative walking route is reasonably available, or where a street is scheduled for major reconstruction, or where the development of abutting land is substantially restricted.

(c) The standards and requirements of this article may be modified by the planning board in the case of a plan and program for a planned unit development which in the judgment of the planning board provides adequate public spaces and improvements for the circulation, recreation, light, air and service needs of the tract when fully developed and populated, and which also provides such covenants or other legal provisions as will assure conformity to and achievement of the land development plan.

(d) If at any time before or during the construction of the required improvements the subdivider demonstrates to the satisfaction of the project engineer and the public works au-

CITY OF PORTLAND, MAINE
PLANNING BOARD

Cyrus Y. Hagge, Chair
John H. Carroll, Vice Chair
Kenneth M. Cole III
Jaimey Caron
Kevin McQuinn
Deborah Krichels
Erin Rodriquez

May 23, 1997

James Seymour
Sebago Technics
12 Westbrook Commons
P.O. Box 1339
Westbrook ME 04098-1339

RE: 70 Bishop Street

Dear Jim:

On Tuesday, May 13, 1997, the Portland Planning Board voted 6-1 (Krichels opposed) to grant the waiver of curb and sidewalk.

The approval is based on the submitted site plan and the findings related to site plan review standards as contained in Planning Report # 16-96, which is attached.

Please note the following provisions and requirements for all site plan approvals:

1. A performance guarantee covering the site improvements as well as an inspection fee payment of 1.7% of the guarantee amount and 7 final sets of plans must be submitted to and approved by the Planning Division and Public Works prior to the release of the building permit. If you need to make any modifications to the approved site plan, you must submit a revised site plan for staff review and approval.

2. The site plan approval will be deemed to have expired unless work in the development has commenced within one (1) year of the approval or within a time period agreed upon in writing by the City and the applicant. Requests to extend approvals must be received before the expiration date.

3. A defect guarantee, consisting of 10% of the performance guarantee, must be posted before the performance guarantee will be released.

Sebago Technics
Engineering & Planning for the Future

October 6, 1999
97072

Kandice Talbot, Planner
Planning Department, 4th Floor
City of Portland
389 Congress Street
Portland, ME 04101

Rainmaker Irrigation

Dear Kandi:

The following responses and plan revisions have been prepared for your review and the DRC, Stephen Bushey. I have addressed the items in the order received:

Site Plan

1. Building dimensions have been added to the plan.
2. Handicap parking signs have been added to the plan and detail sheet.
3. Note 28 has been deleted; Note 29 has been revised and renumbered 28.
4. Offset dimensions for the proposed building have been added, although the Ordinance does not require this.

Grading and Utility Plan

1. The calculation of the riprap apron for the detention pond inlet/outlet is included.
2. Notes regarding utility requirements for the contractor have been added.
3. The sanitary sewer service has been revised to show two 45° bends and a cleanout has been added both inside and outside the building.
4. Spot grades have been added.
5. The detention pond detail has been revised to correctly indicate a culvert instead of an outlet control structure.
6. The bottom of the pond is to be constructed with 4" loam. Since the majority of runoff entering the pond will come from the front parking lot via shallow flow, the end of the parking lot and pond side have been designed with a riprap slope. This will mitigate the runoff velocities and re-suspension of sediment. Also, the pond has been designed with a 2' sump to promote wetland vegetation which will also prevent sediment re-suspension.

Attachment 4

CITY OF PORTLAND, MAINE
DEPARTMENT OF PUBLIC WORKS
OPERATIONS / ENGINEERING SECTION
MEMORANDUM

TO: ***Kandi Talbot, Planner***
FROM: ***Katherine A. Staples, P.E., City Engineer***
DATE: ***May 8, 1997***
SUBJECT: ***#50-72 Bishop St. Property - Waiver of curb and sidewalk***

The Department will support the request for waiver of curb and sidewalk requirements for the #50-72 Bishop St. property based on the applicant's commitment to installing granite curb along the driveway radius per City specifications.

This position is based on the existing conditions in this area, namely that granite curb and sidewalks are not prevalent in the vicinity of this site, and is not to be construed as precedent setting.

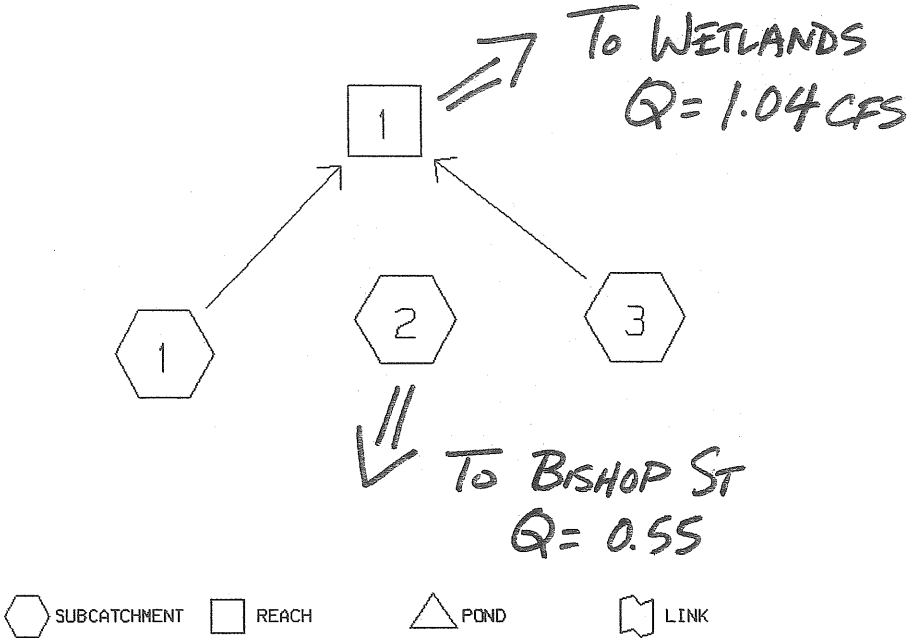
KAS/kas
pc: William J. Bray, P.E., Deputy Director
Bruce A. Bell, Operations Manager
Tony Lombardo, Project Engineer
Todd Merkle, Associate Engineer

Attachment 5

RAINMAKER IRRIGATION		70 BISHOP STREET			97072	
STORMWATER SUMMARY						
8/30/1999						
PROJECT AREA	= 1.04 AC.		SOILS ON SITE		FILL SOIL=C-SOIL	
					SCANTIC=D-SOIL	
WATERSHED AREA	AVG CN	ACRES	Tc min	PEAK RUNOFF RATES (CFS)		
PRE-DEV.				2YR	10YR	25YR
WS-1	84	0.51	8.30	0.78	1.52	1.88
WS-2	89	0.33	14.00	0.55	0.99	1.20
WS-3	83	0.2	4.70	0.32	0.65	0.81
STUDY POINT #1	TO WETLANDS			**1.04**	**2.05**	**2.54**
STUDY POINT #2	TO BISHOP ST.			**0.55**	**0.99**	**1.2**
WATERSHED AREA	AVG CN	ACRES	Tc min	PEAK RUNOFF RATES (CFS)		
POST-DEV				2YR	10YR	25YR
WS-1	89	0.49	3.9	1.08	1.93	2.34
WS-2	88	0.18	2.6	0.39	0.71	0.87
WS-3	82	0.24	16.1	0.28	0.57	0.71
WS-4	98	0.17	2.5	0.5	0.79	0.93
STUDY POINT #1	TO WETLANDS			**0.51**	**1.89**	**2.55**
STUDY POINT #2	TO BISHOP S			**0.5**	**0.79**	**0.93**
NET CHANGE	STUDY PT.#1			-0.53	-0.16	+0.01
	STUDY PT.#2			-0.03	-0.20	-0.27

Data for 97072 RAINMAKER IRR. BISHOP ST., PORTLAND exist
TYPE III 24-HOUR RAINFALL= 3.00 IN
Prepared by SEBAGO TECHNICS, INC. 28 Aug 99
HydroCAD 5.00 000643 (c) 1986-1998 Applied Microcomputer Systems

WATERSHED ROUTING EXIST. COND. – 2 YR STORM



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	.51	8.3	51%79 49%89	84	-	.78	12.09	.06
2	.33	14.0	100%89	89	-	.55	12.15	.05
3	.20	4.7	60%86 40%79	83	-	.32	12.02	.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)
1	-	-	-	-	-	-	-	0.0	0.0	1.04 N

Data for 97072 RAINMAKER IRR. BISHOP ST., PORTLAND exist
TYPE III 24-HOUR RAINFALL= 3.00 IN
Prepared by SEBAGO TECHNICS, INC. 28 Aug 99
HydroCAD 5.00 000643 (c) 1986-1998 Applied Microcomputer Systems

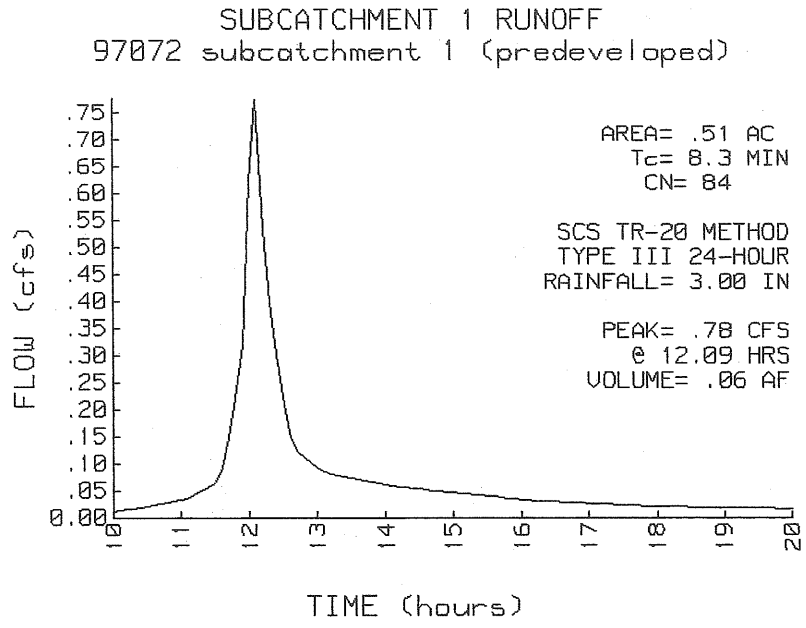
SUBCATCHMENT 1 — 97072 subcatchment 1 (predeveloped)

PEAK= .78 CFS @ 12.09 HRS, VOLUME= .06 AF

ACRES	CN	
.26	79	Woods,good condition,group D
.25	89	Gravel space c-soil
.51	84	

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 3.00 IN
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
TR-55 SHEET FLOW	**AB**	1.5
Smooth surfaces n=.011 L=150'	P2=3 in s=.03 '/'	
TR-55 SHEET FLOW	**BC**	5.4
Range n=.13 L=70' P2=3 in	s=.035 '/'	
SHALLOW CONCENTRATED/UPLAND FLOW	**C-C1**	1.4
Woodland Kv=5 L=85' s=.04 '/'	V=1 fps	
	Total Length= 305 ft Total Tc=	8.3



SUBCATCHMENT 2 97072 subcatchment 2 (predeveloped)

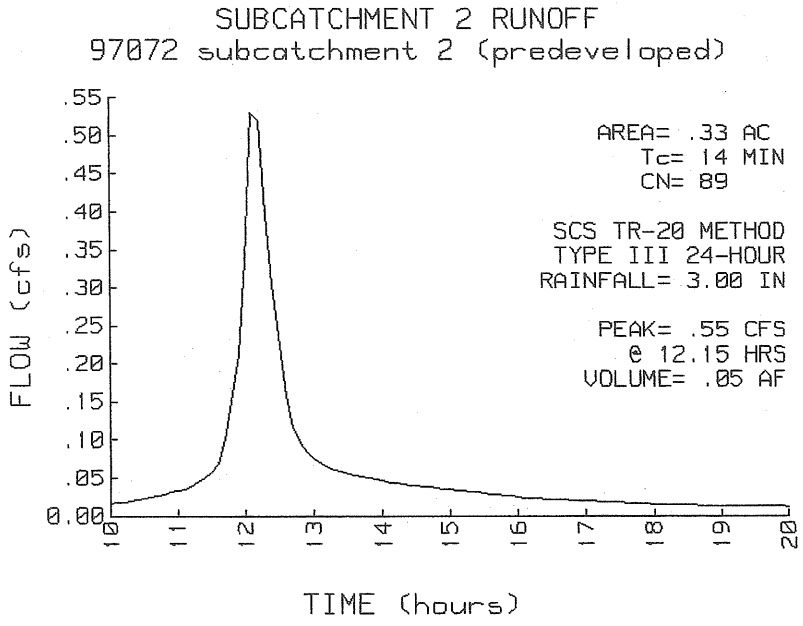
PEAK= .55 CFS @ 12.15 HRS, VOLUME= .05 AF

ACRES	CN	
.33	89	Gravel parking c-soil

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 3.00 IN
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
TR-55 SHEET FLOW	DE	14.0

Grass: Short n=.15 L=150' P2=3 in s=.02 '/'



Data for 97072 RAINMAKER IRR. BISHOP ST., PORTLAND exist
TYPE III 24-HOUR RAINFALL= 3.00 IN
Prepared by SEBAGO TECHNICS, INC. 28 Aug 99
HydroCAD 5.00 000643 (c) 1986-1998 Applied Microcomputer Systems

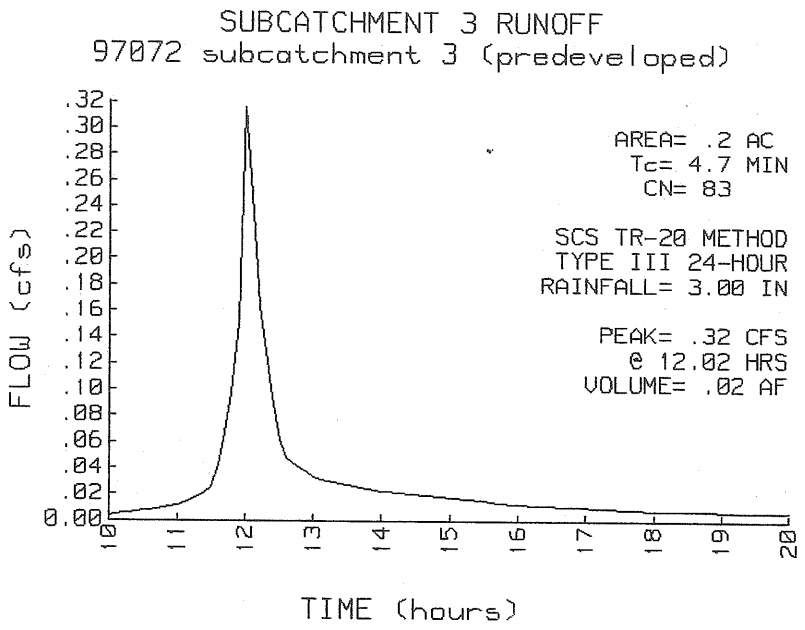
SUBCATCHMENT 3 97072 subcatchment 3 (predeveloped)

PEAK= .32 CFS @ 12.02 HRS, VOLUME= .02 AF

ACRES	CN	
.12	86	Open Space, poor condition, C
.08	79	Woods,good condition,group D
.20	83	

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 3.00 IN
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
TR-55 SHEET FLOW	FG	.7
Smooth surfaces n=.011 L=70' P2=3 in s=.043 '/'		
TR-55 SHEET FLOW	GH	3.8
Range n=.13 L=50' P2=3 in s=.043 '/'		
SHALLOW CONCENTRATED/UPLAND FLOW	HI	.2
Unpaved Kv=16.1345 L=60' s=.063 '/' V=4.05 fps		
	Total Length= 180 ft	Total Tc= 4.7



REACH 1

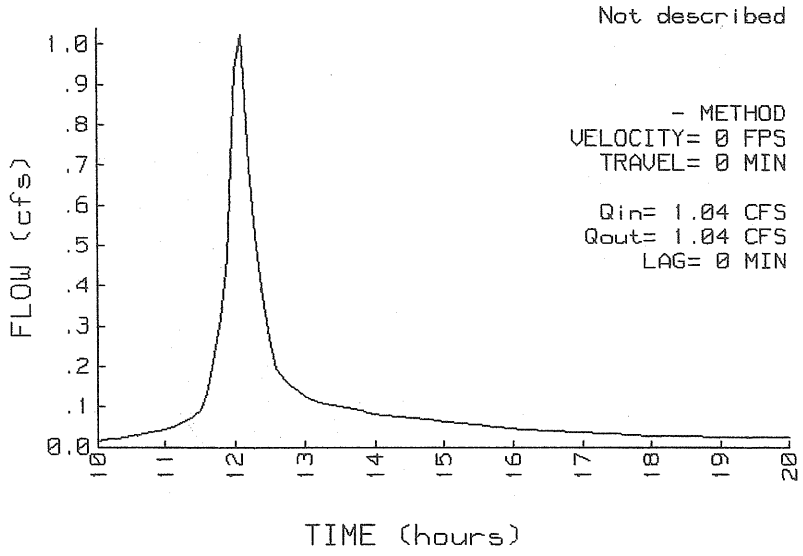
Not described

Qin = 1.04 CFS @ 12.07 HRS, VOLUME= .08 AF
Qout= 1.04 CFS @ 12.07 HRS, VOLUME= .08 AF, ATTEN= 0%, LAG= 0.0 MIN

DEPTH (FT)	END AREA (SQ-FT)	DISCH (CFS)

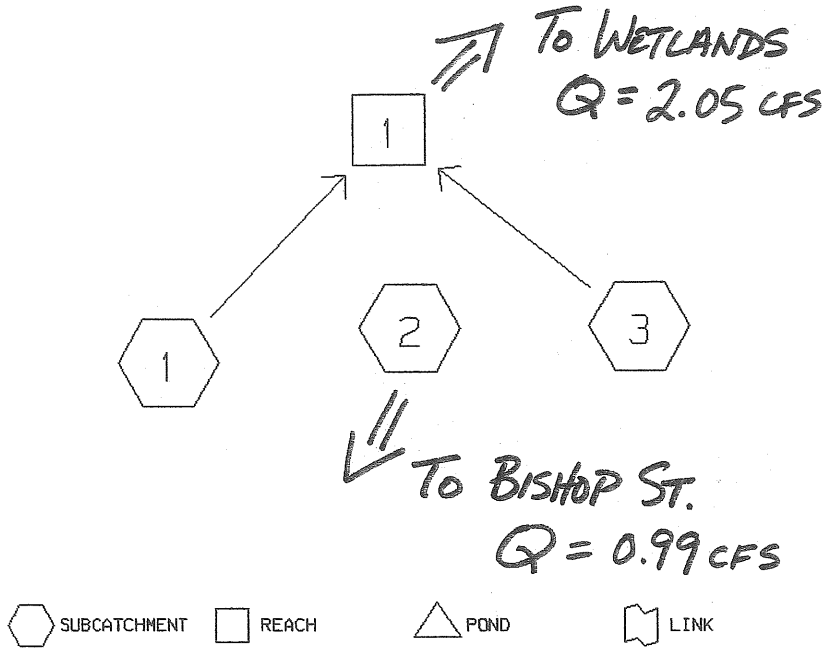
- METHOD
PEAK DEPTH= 0.00 FT
PEAK VELOCITY= 0.0 FPS
TRAVEL TIME = 0.0 MIN
SPAN= 10-20 HRS, dt=.1 HRS

REACH 1 INFLOW & OUTFLOW



Data for 97072 RAINMAKER IRR. BISHOP ST., PORTLAND exist
TYPE III 24-HOUR RAINFALL= 4.70 IN
Prepared by SEBAGO TECHNICS, INC. 28 Aug 99
HydroCAD 5.00 000643 (c) 1986-1998 Applied Microcomputer Systems

WATERSHED ROUTING EXIST COND. 10 YR STORM



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	.51	8.3	51%79 49%89	84	-	1.52	12.08	.12
2	.33	14.0	100%89	89	-	.99	12.14	.09
3	.20	4.7	60%86 40%79	83	-	.65	12.02	.04

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)
1	-	-	-	-	-	-	-	0.0	0.0	2.05 N

Data for 97072 RAINMAKER IRR. BISHOP ST., PORTLAND exist
TYPE III 24-HOUR RAINFALL= 4.70 IN
Prepared by SEBAGO TECHNICS, INC. 28 Aug 99
HydroCAD 5.00 000643 (c) 1986-1998 Applied Microcomputer Systems

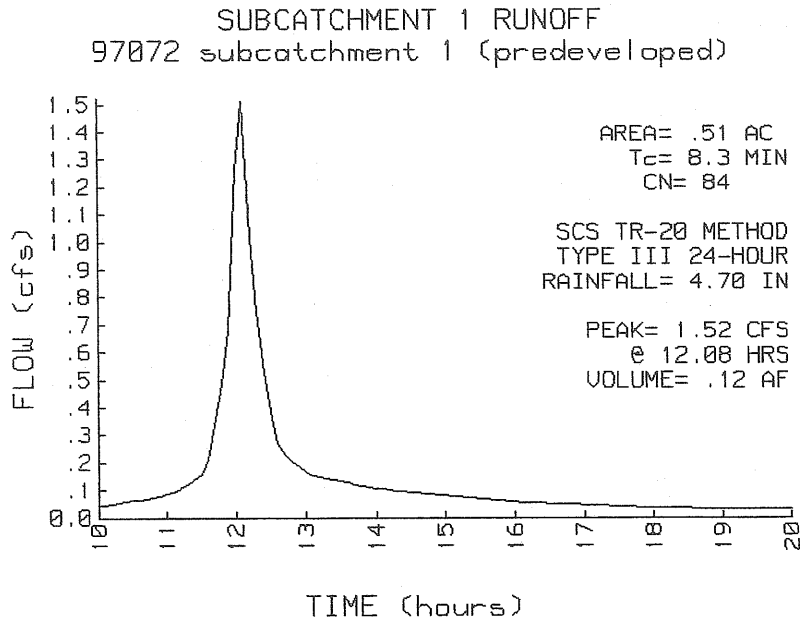
SUBCATCHMENT 1 97072 subcatchment 1 (predeveloped)

PEAK= 1.52 CFS @ 12.08 HRS, VOLUME= .12 AF

ACRES	CN	
.26	79	Woods,good condition,group D
.25	89	Gravel space c-soil
.51	84	

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 4.70 IN
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
TR-55 SHEET FLOW	**AB**	1.5
Smooth surfaces n=.011 L=150'	P2=3 in s=.03 '/'	
TR-55 SHEET FLOW	**BC**	5.4
Range n=.13 L=70' P2=3 in	s=.035 '/'	
SHALLOW CONCENTRATED/UPLAND FLOW	**C-C1**	1.4
Woodland Kv=5 L=85' s=.04 '/'	V=1 fps	
	Total Length= 305 ft Total Tc=	8.3



Data for 97072 RAINMAKER IRR. BISHOP ST., PORTLAND exist
TYPE III 24-HOUR RAINFALL= 4.70 IN
Prepared by SEBAGO TECHNICS, INC. 28 Aug 99
HydroCAD 5.00 000643 (c) 1986-1998 Applied Microcomputer Systems

SUBCATCHMENT 2 97072 subcatchment 2 (predeveloped)

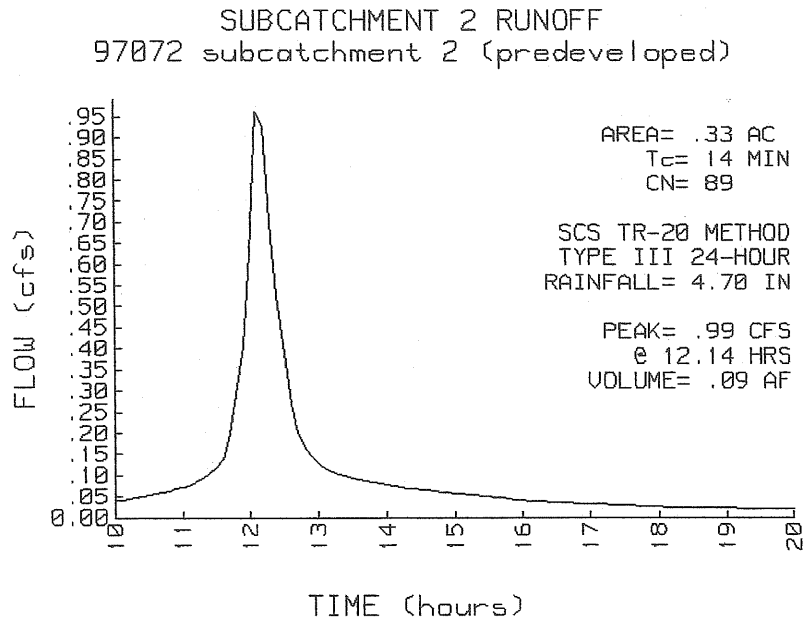
PEAK= .99 CFS @ 12.14 HRS, VOLUME= .09 AF

ACRES	CN	
.33	89	Gravel parking c-soil

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 4.70 IN
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
TR-55 SHEET FLOW	DE	14.0

Grass: Short n=.15 L=150' P2=3 in s=.02 '/'



Data for 97072 RAINMAKER IRR. BISHOP ST., PORTLAND exist
TYPE III 24-HOUR RAINFALL= 4.70 IN
Prepared by SEBAGO TECHNICS, INC. 28 Aug 99
HydroCAD 5.00 000643 (c) 1986-1998 Applied Microcomputer Systems

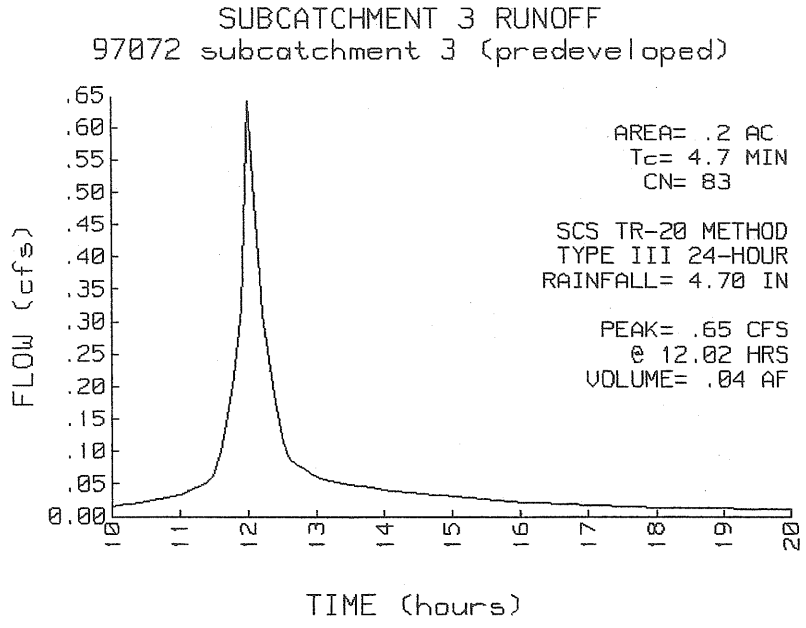
SUBCATCHMENT 3 97072 subcatchment 3 (predeveloped)

PEAK= .65 CFS @ 12.02 HRS, VOLUME= .04 AF

ACRES	CN	
.12	86	Open Space, poor condition, C
.08	79	Woods,good condition,group D
.20	83	

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 4.70 IN
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
TR-55 SHEET FLOW	FG	.7
Smooth surfaces n=.011 L=70' P2=3 in s=.043 '/'		
TR-55 SHEET FLOW	GH	3.8
Range n=.13 L=50' P2=3 in s=.043 '/'		
SHALLOW CONCENTRATED/UPLAND FLOW	HI	.2
Unpaved Kv=16.1345 L=60' s=.063 '/' V=4.05 fps		
	Total Length= 180 ft Total Tc=	4.7



REACH 1

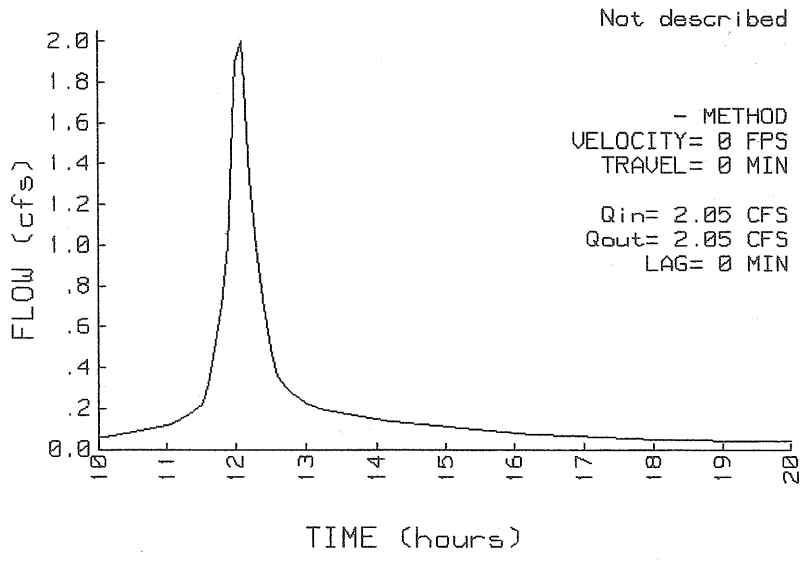
Not described

Qin = 2.05 CFS @ 12.06 HRS, VOLUME= .16 AF
Qout= 2.05 CFS @ 12.06 HRS, VOLUME= .16 AF, ATTEN= 0%, LAG= 0.0 MIN

DEPTH (FT)	END AREA (SQ-FT)	DISCH (CFS)

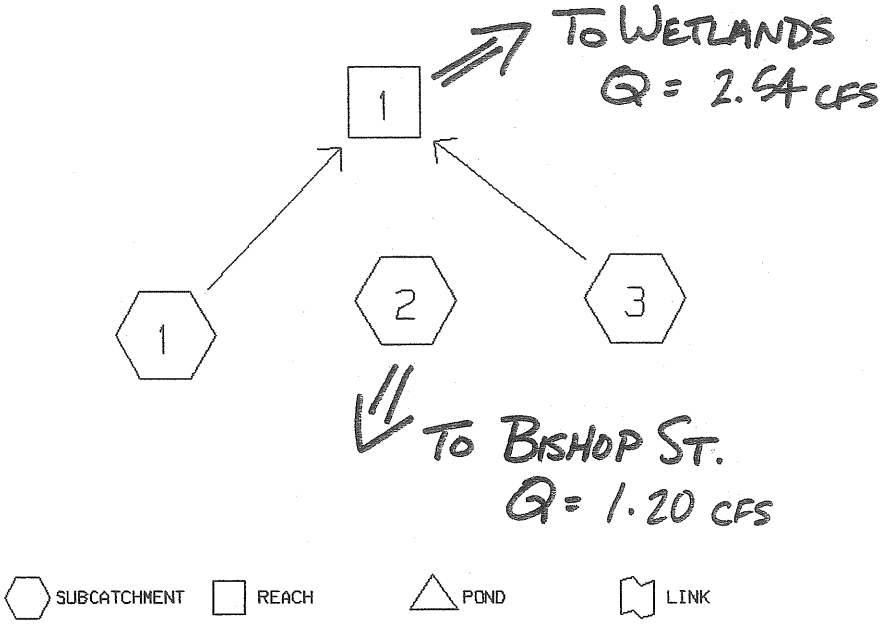
- METHOD
PEAK DEPTH= 0.00 FT
PEAK VELOCITY= 0.0 FPS
TRAVEL TIME = 0.0 MIN
SPAN= 10-20 HRS, dt=.1 HRS

REACH 1 INFLOW & OUTFLOW



Data for 97072 RAINMAKER IRR. BISHOP ST., PORTLAND exist
TYPE III 24-HOUR RAINFALL= 5.50 IN
Prepared by SEBAGO TECHNICS, INC. 28 Aug 99
HydroCAD 5.00 000643 (c) 1986-1998 Applied Microcomputer Systems

WATERSHED ROUTING EXIST. COND. - 25 YR STORM



SUBCATCHMENT REACH POND LINK

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	.51	8.3	51%79 49%89	84	-	1.88	12.08	.14
2	.33	14.0	100%89	89	-	1.20	12.14	.10
3	.20	4.7	60%86 40%79	83	-	.81	12.02	.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)
1	-	-	-	-	-	-	-	0.0	0.0	2.54 N

Data for 97072 RAINMAKER IRR. BISHOP ST., PORTLAND exist
TYPE III 24-HOUR RAINFALL= 5.50 IN
Prepared by SEBAGO TECHNICS, INC. 28 Aug 99
HydroCAD 5.00 000643 (c) 1986-1998 Applied Microcomputer Systems

SUBCATCHMENT 1 97072 subcatchment 1 (predeveloped)

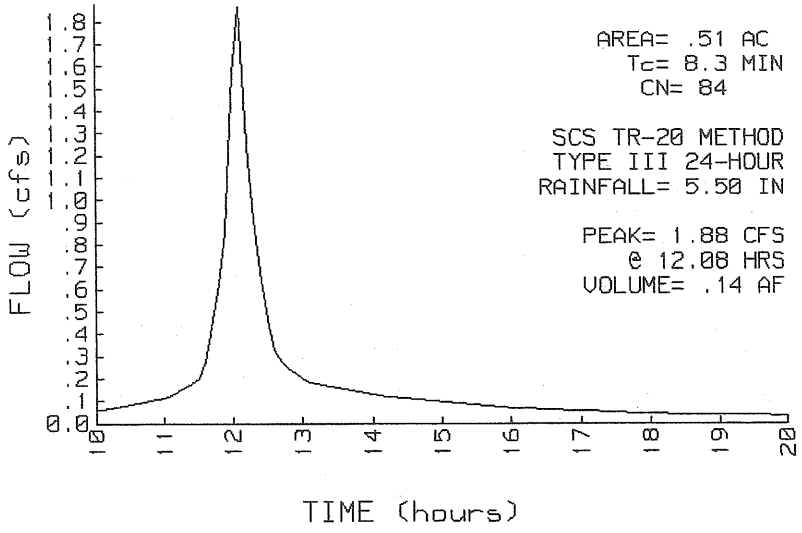
PEAK= 1.88 CFS @ 12.08 HRS, VOLUME= .14 AF

ACRES	CN	
.26	79	Woods,good condition,group D
.25	89	Gravel space c-soil
.51	84	

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	AB	1.5
Smooth surfaces n=.011 L=150'	P2=3 in s=.03 '/'	
TR-55 SHEET FLOW	BC	5.4
Range n=.13 L=70' P2=3 in	s=.035 '/'	
SHALLOW CONCENTRATED/UPLAND FLOW	C-C1	1.4
Woodland Kv=5 L=85' s=.04 '/'	V=1 fps	
	Total Length= 305 ft Total Tc=	8.3

SUBCATCHMENT 1 RUNOFF
97072 subcatchment 1 (predeveloped)



Data for 97072 RAINMAKER IRR. BISHOP ST., PORTLAND exist
TYPE III 24-HOUR RAINFALL= 5.50 IN
Prepared by SEBAGO TECHNICS, INC. 28 Aug 99
HydroCAD 5.00 000643 (c) 1986-1998 Applied Microcomputer Systems

SUBCATCHMENT 2 97072 subcatchment 2 (predeveloped)

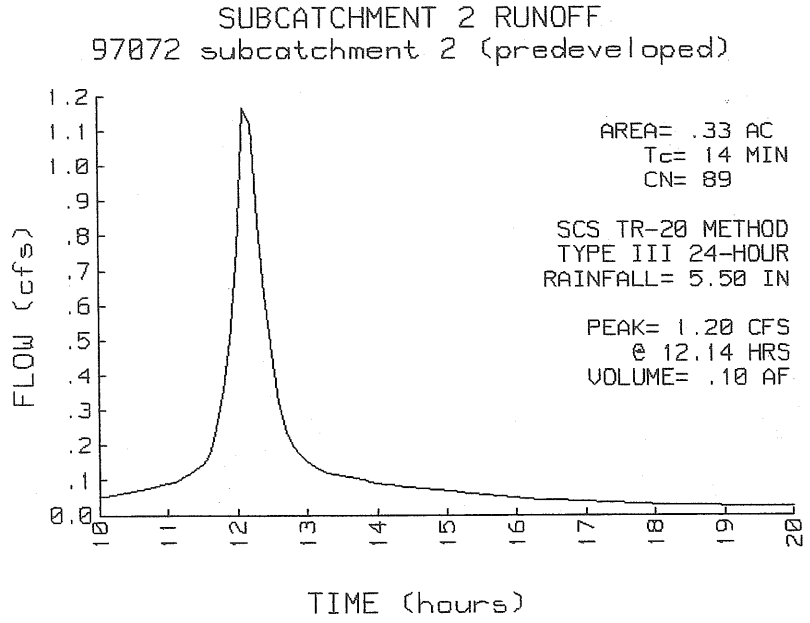
PEAK= 1.20 CFS @ 12.14 HRS, VOLUME= .10 AF

ACRES	CN	
.33	89	Gravel parking c-soil

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	DE	14.0

Grass: Short n=.15 L=150' P2=3 in s=.02 '/'



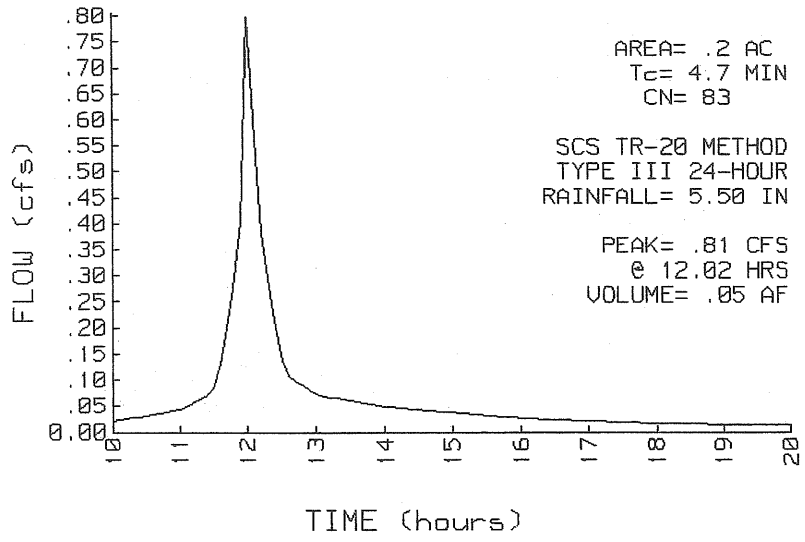
SUBCATCHMENT 3 97072 subcatchment 3 (predeveloped)

PEAK= .81 CFS @ 12.02 HRS, VOLUME= .05 AF

ACRES	CN		
.12	86	Open Space, poor condition, C	SCS TR-20 METHOD
.08	79	Woods,good condition,group D	TYPE III 24-HOUR
.20	83		RAINFALL= 5.50 IN
			SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
TR-55 SHEET FLOW	FG	.7
Smooth surfaces n=.011 L=70' P2=3 in s=.043 '/'		
TR-55 SHEET FLOW	GH	3.8
Range n=.13 L=50' P2=3 in s=.043 '/'		
SHALLOW CONCENTRATED/UPLAND FLOW	HI	.2
Unpaved Kv=16.1345 L=60' s=.063 '/' V=4.05 fps		
	Total Length= 180 ft Total Tc=	4.7

SUBCATCHMENT 3 RUNOFF
97072 subcatchment 3 (predeveloped)



REACH 1

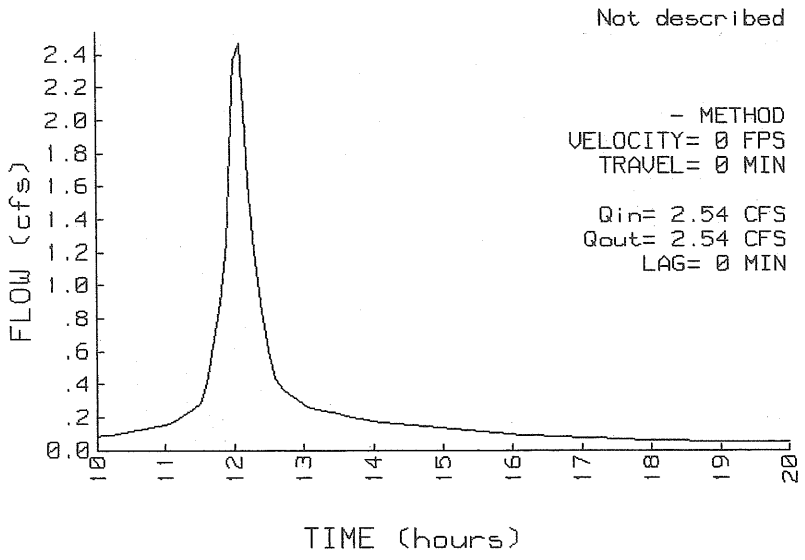
Not described

Qin = 2.54 CFS @ 12.06 HRS, VOLUME= .20 AF
Qout= 2.54 CFS @ 12.06 HRS, VOLUME= .20 AF, ATTEN= 0%, LAG= 0.0 MIN

DEPTH (FT)	END AREA (SQ-FT)	DISCH (CFS)

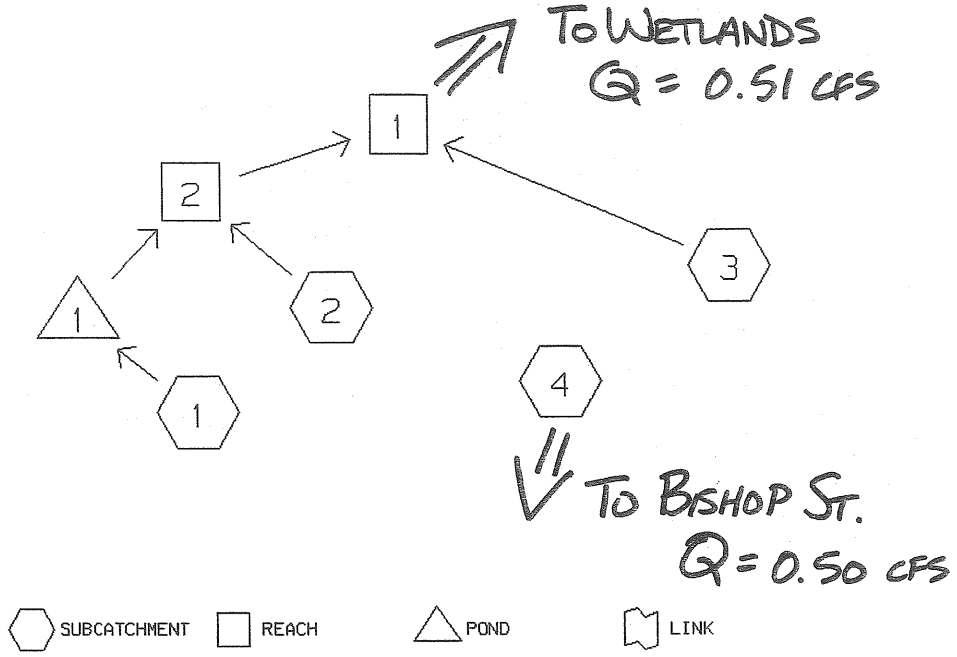
- METHOD
PEAK DEPTH= 0.00 FT
PEAK VELOCITY= 0.0 FPS
TRAVEL TIME = 0.0 MIN
SPAN= 10-20 HRS, dt=.1 HRS

REACH 1 INFLOW & OUTFLOW



Data for 97072 RAINMAKER IRR.BISHOP ST.,PORTLAND proposed
TYPE III 24-HOUR RAINFALL= 3.00 IN
Prepared by SEBAGO TECHNICS, INC. 28 Aug 99
HydroCAD 5.00 000643 (c) 1986-1998 Applied Microcomputer Systems

WATERSHED ROUTING 2 YR DEV. COND.



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	.49	3.9	10%80 29%74 61%98	89	-	1.08	12.01	.07
2	.18	2.6	56%80 44%98	88	-	.39	12.00	.02
3	.24	16.1	29%74 50%80 21%98	82	-	.28	12.19	.03
4	.17	2.5	100%98	98	-	.50	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)
1	-	-	-	-	-	-	-	-	0.0	0.0	.51 N
2	-	5.0	2.0	.10	.50	.030	85	.0080	1.3	1.1	.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)
1	91.0	95.0	93.3	.04	1.08	.21			80	27.6

Data for 97072 RAINMAKER IRR.BISHOP ST.,PORTLAND proposed
TYPE III 24-HOUR RAINFALL= 3.00 IN
Prepared by SEBAGO TECHNICS, INC. 28 Aug 99
HydroCAD 5.00 000643 (c) 1986-1998 Applied Microcomputer Systems

SUBCATCHMENT 1 97072 subcatchment 1 (developed)

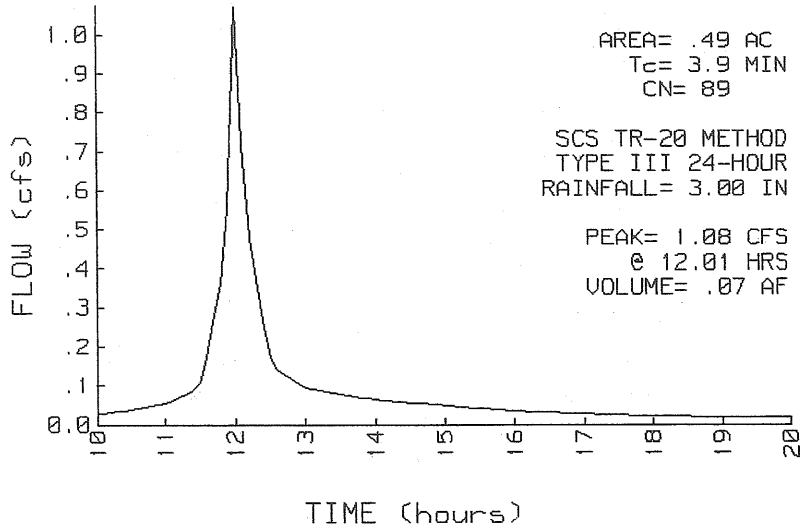
PEAK= 1.08 CFS @ 12.01 HRS, VOLUME= .07 AF

ACRES	CN	
.05	80	Grass,good condition,group D
.14	74	Grass,good condition,group C
.30	98	Impervious
.49	89	

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 3.00 IN
SPAN= 10-20 HRS, dt=.1 HRS

Method			Comment		Tc (min)
TR-55 SHEET FLOW			AB		2.5
Smooth surfaces	n=.011	L=90'	P2=3 in	s=.0028 '/'	
TR-55 SHEET FLOW			BC		1.4
Smooth surfaces	n=.011	L=60'	P2=3 in	s=.0058 '/'	
SHALLOW CONCENTRATED/UPLAND FLOW			CD		0.0
Grassed Waterway	Kv=15	L=20'	s=.33 '/'	V=8.62 fps	
			Total Length= 170 ft	Total Tc=	3.9

SUBCATCHMENT 1 RUNOFF
97072 subcatchment 1 (developed)



Data for 97072 RAINMAKER IRR.BISHOP ST.,PORTLAND proposed
TYPE III 24-HOUR RAINFALL= 3.00 IN
Prepared by SEBAGO TECHNICS, INC. 28 Aug 99
HydroCAD 5.00 000643 (c) 1986-1998 Applied Microcomputer Systems

SUBCATCHMENT 2 97072 subcatchment 2 (developed)

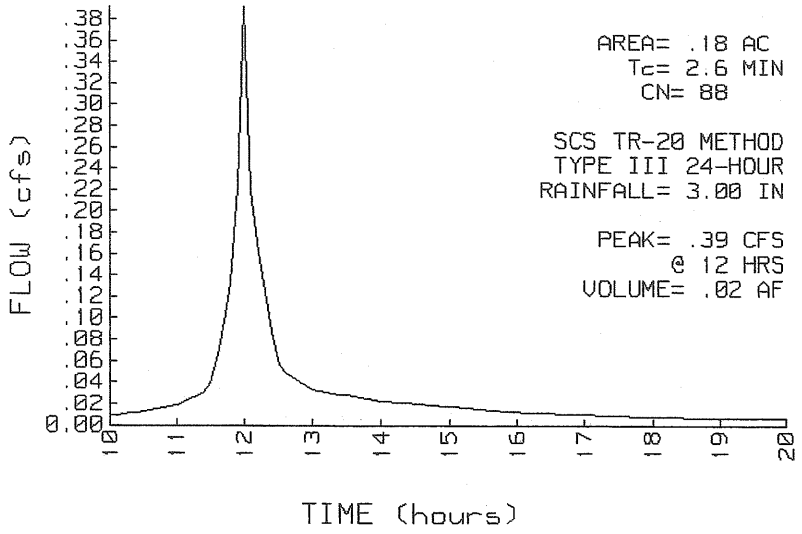
PEAK= .39 CFS @ 12.00 HRS, VOLUME= .02 AF

ACRES	CN	
.10	80	Grass,good condition,group D
.08	98	ROOF
.18	88	

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 3.00 IN
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
TR-55 SHEET FLOW	DE	2.4
Grass: Short n=.15 L=30' P2=3 in s=.0691 '/'		
SHALLOW CONCENTRATED/UPLAND FLOW	E-E1	.2
Grassed Waterway Kv=15 L=60' s=.08 '/' V=4.24 fps		
	Total Length= 90 ft Total Tc=	2.6

SUBCATCHMENT 2 RUNOFF
97072 subcatchment 2 (developed)



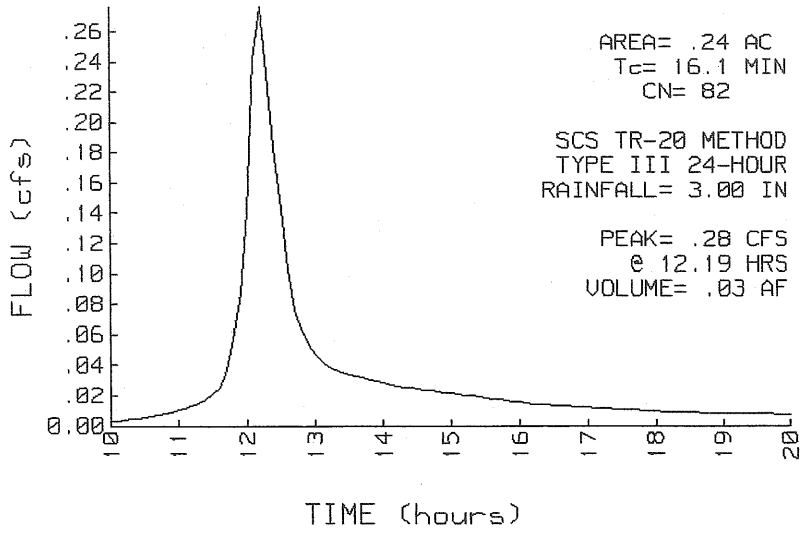
SUBCATCHMENT 3 97072 subcatchment 3 (developed)

PEAK= .28 CFS @ 12.19 HRS, VOLUME= .03 AF

ACRES	CN		
.07	74	Grass,good condition,group C	SCS TR-20 METHOD
.12	80	Grass,good condition,group D	TYPE III 24-HOUR
.05	98	IMPERVIOUS	RAINFALL= 3.00 IN
.24	82		SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
TR-55 SHEET FLOW	JK	15.7
Grass: Dense n=.24 L=140' P2=3 in s=.0333 '/'		
SHALLOW CONCENTRATED/UPLAND FLOW	KL	.4
Grassed Waterway Kv=15 L=95' s=.06 '/' V=3.67 fps		
	Total Length= 235 ft Total Tc=	16.1

SUBCATCHMENT 3 RUNOFF
97072 subcatchment 3 (developed)



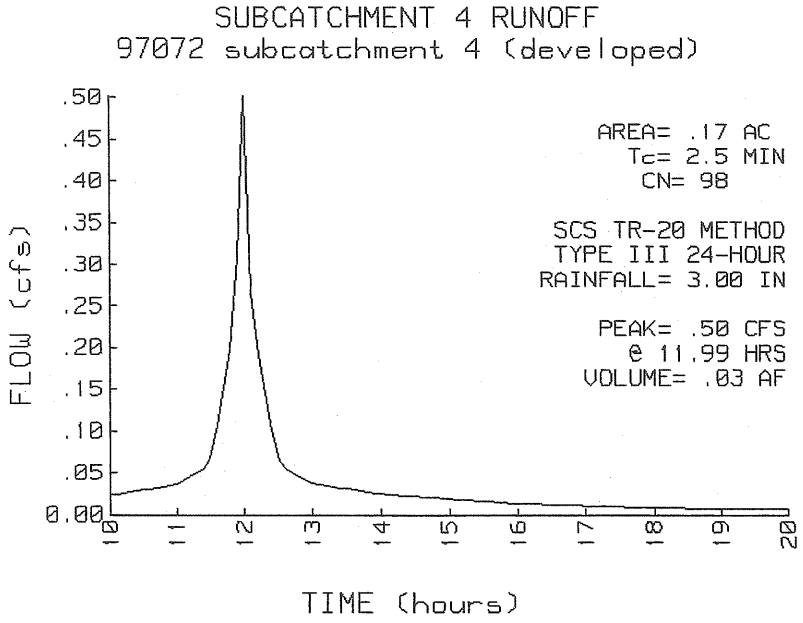
SUBCATCHMENT 4 97072 subcatchment 4 (developed)

PEAK= .50 CFS @ 11.99 HRS, VOLUME= .03 AF

ACRES	CN	
.17	98	Impervious

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 3.00 IN
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
TR-55 SHEET FLOW	GH	2.0
Smooth surfaces n=.011 L=122'	P2=3 in s=.0092 '/'	
SHALLOW CONCENTRATED/UPLAND FLOW	HI	.5
Paved Kv=20.3282 L=56' s=.0089 '/'	V=1.92 fps	
	Total Length= 178 ft	Total Tc= 2.5



REACH 1

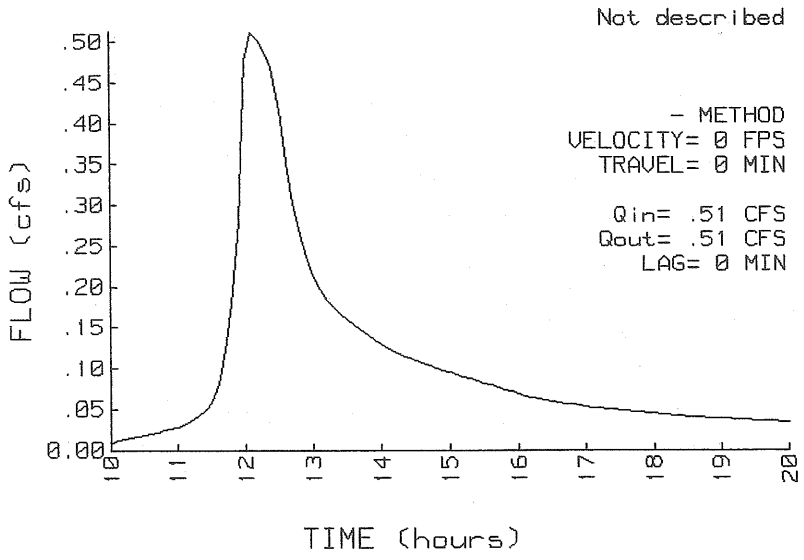
Not described

Qin = .51 CFS @ 12.13 HRS, VOLUME= .09 AF
Qout= .51 CFS @ 12.13 HRS, VOLUME= .09 AF, ATTEN= 0%, LAG= 0.0 MIN

DEPTH (FT)	END AREA (SQ-FT)	DISCH (CFS)

- METHOD
PEAK DEPTH= 0.00 FT
PEAK VELOCITY= 0.0 FPS
TRAVEL TIME = 0.0 MIN
SPAN= 10-20 HRS, dt=.1 HRS

REACH 1 INFLOW & OUTFLOW



Data for 97072 RAINMAKER IRR.BISHOP ST.,PORTLAND proposed
TYPE III 24-HOUR RAINFALL= 3.00 IN
Prepared by SEBAGO TECHNICS, INC. 28 Aug 99
HydroCAD 5.00 000643 (c) 1986-1998 Applied Microcomputer Systems

REACH 2 97072 Reach 1 (developed swale)

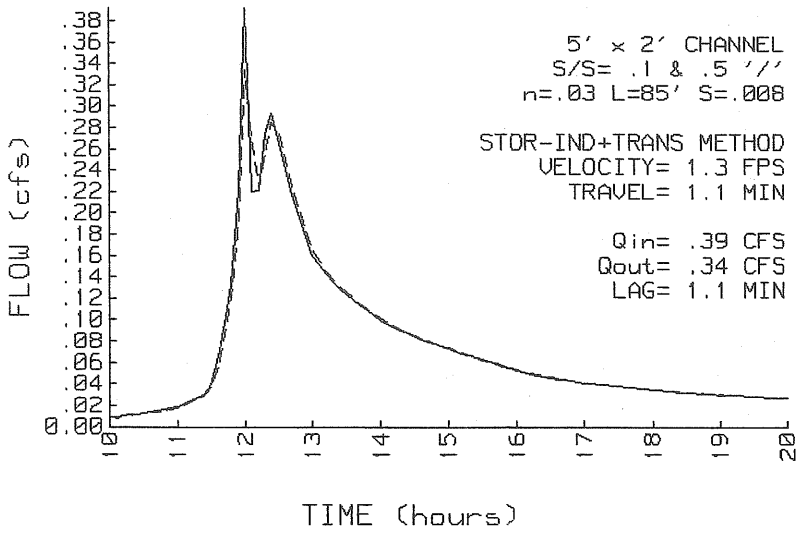
Qin = .39 CFS @ 12.00 HRS, VOLUME= .06 AF
Qout= .34 CFS @ 12.02 HRS, VOLUME= .06 AF, ATTEN= 14%, LAG= 1.1 MIN

DEPTH (FT)	END AREA (SQ-FT)	DISCH (CFS)
0.0	0.0	0.00
.2	1.2	1.66
.4	3.0	5.86
.6	5.2	12.76
.9	8.7	26.34
1.2	14.6	53.14
1.6	23.4	99.83
2.0	34.0	165.32

5' x 2' CHANNEL
S/S= .1 & .5 '/'
n= .03
LENGTH= 85 FT
SLOPE= .008 FT/FT

STOR-IND+TRANS METHOD
PEAK DEPTH= .04 FT
PEAK VELOCITY= 1.3 FPS
TRAVEL TIME = 1.1 MIN
SPAN= 10-20 HRS, dt=.1 HRS
3 x FINER ROUTING

REACH 2 INFLOW & OUTFLOW
97072 Reach 1 (developed swale)



POND 1 97072 Pond 1 (developed)

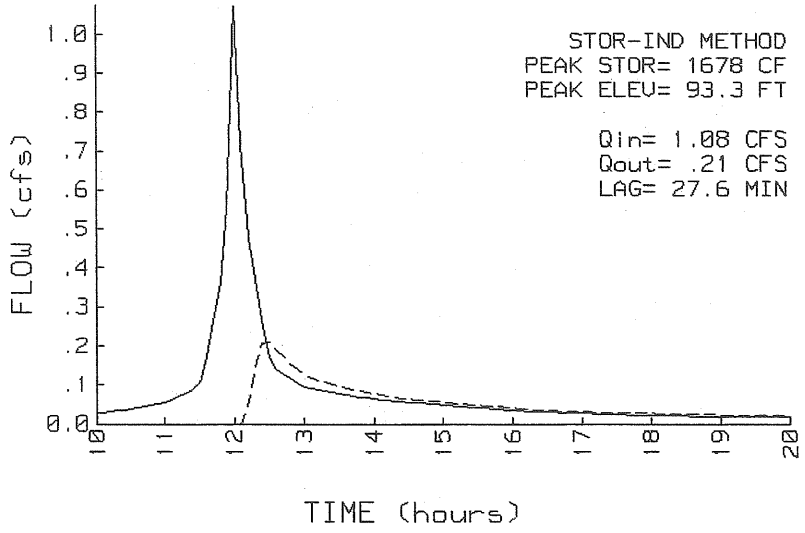
Qin = 1.08 CFS @ 12.01 HRS, VOLUME= .07 AF
Qout= .21 CFS @ 12.47 HRS, VOLUME= .04 AF, ATTEN= 80%, LAG= 27.6 MIN

ELEVATION (FT)	AREA (SF)	INC.STOR (CF)	CUM.STOR (CF)
91.0	329	0	0
92.0	645	487	487
93.0	1042	843	1330
94.0	1680	1361	2691
95.0	2499	2089	4780

STOR-IND METHOD
PEAK STORAGE = 1678 CF
PEAK ELEVATION= 93.3 FT
FLOOD ELEVATION= 95.0 FT
START ELEVATION= 91.0 FT
SPAN= 10-20 HRS, dt=.1 HRS
Tdet= 166.3 MIN (.04 AF)

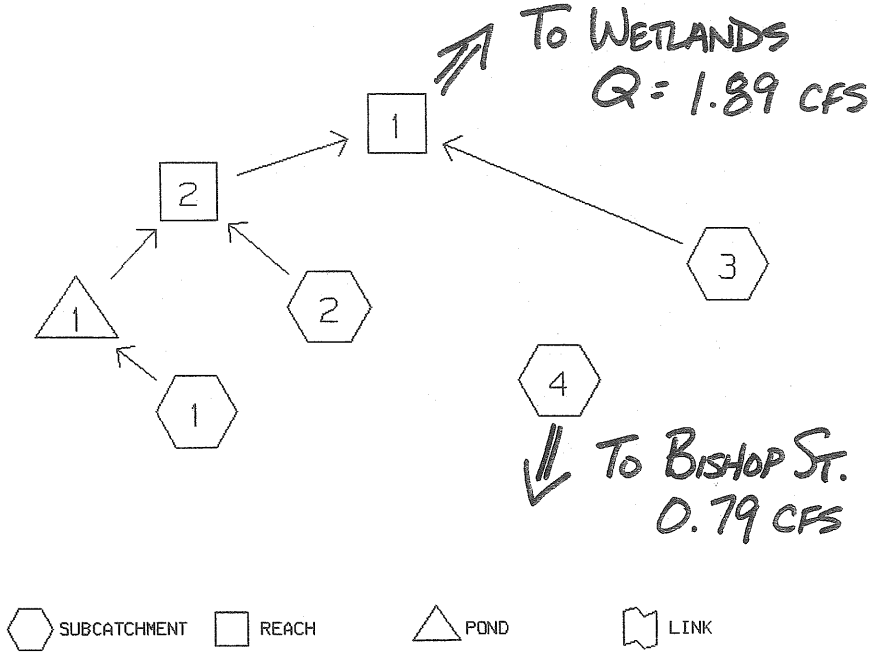
#	ROUTE	INVERT	OUTLET DEVICES
1	P	93.0'	**10" CULVERT** n=.011 L= 52' S=.005'/' Ke=.5 Cc=.9 Cd=.6

POND 1 INFLOW & OUTFLOW
97072 Pond 1 (developed)



Data for 97072 RAINMAKER IRR.BISHOP ST.,PORTLAND proposed
TYPE III 24-HOUR RAINFALL= 4.70 IN
Prepared by SEBAGO TECHNICS, INC. 28 Aug 99
HydroCAD 5.00 000643 (c) 1986-1998 Applied Microcomputer Systems

WATERSHED ROUTING 10 YR DEV. COND.



SUBCATCHMENT REACH POND LINK

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	.49	3.9	10%80 29%74 61%98	89	-	1.93	12.01	.13
2	.18	2.6	56%80 44%98	88	-	.71	12.00	.05
3	.24	16.1	29%74 50%80 21%98	82	-	.57	12.18	.05
4	.17	2.5	100%98	98	-	.79	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)
1	-	-	-	-	-	-	-	-	0.0	0.0	1.89 N
2	-	5.0	2.0	.10	.50	.030	85	.0080	1.3	1.1	1.32

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)
1	91.0	95.0	93.6	.05	1.93	1.02			47	9.6

Data for 97072 RAINMAKER IRR.BISHOP ST.,PORTLAND proposed
TYPE III 24-HOUR RAINFALL= 4.70 IN
Prepared by SEBAGO TECHNICS, INC. 28 Aug 99
HydroCAD 5.00 000643 (c) 1986-1998 Applied Microcomputer Systems

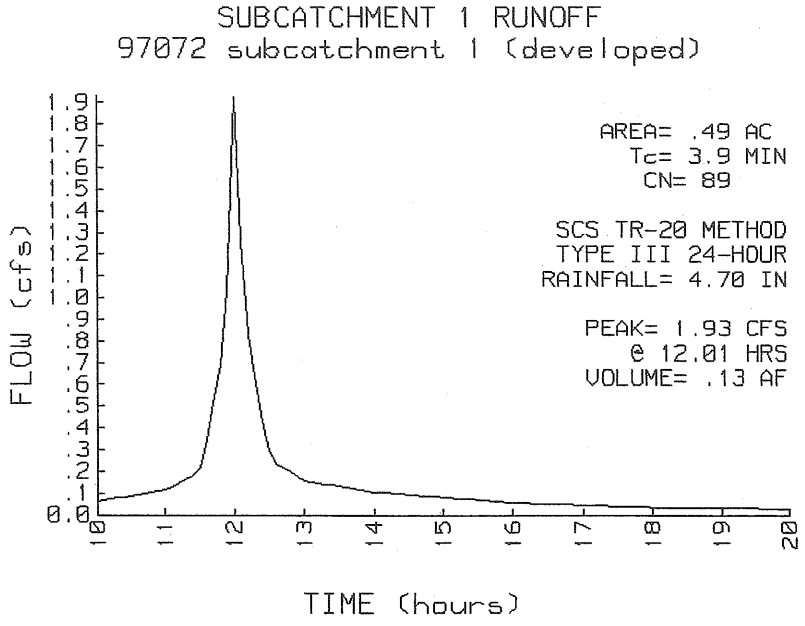
SUBCATCHMENT 1 97072 subcatchment 1 (developed)

PEAK= 1.93 CFS @ 12.01 HRS, VOLUME= .13 AF

ACRES	CN	
.05	80	Grass,good condition,group D
.14	74	Grass,good condition,group C
.30	98	Impervious
.49	89	

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 4.70 IN
SPAN= 10-20 HRS, dt=.1 HRS

Method			Comment		Tc (min)
TR-55 SHEET FLOW			**AB**		2.5
Smooth surfaces	n=.011	L=90'	P2=3 in	s=.0028 '/'	
TR-55 SHEET FLOW			**BC**		1.4
Smooth surfaces	n=.011	L=60'	P2=3 in	s=.0058 '/'	
SHALLOW CONCENTRATED/UPLAND FLOW			**CD**		0.0
Grassed Waterway	Kv=15	L=20'	s=.33 '/'	V=8.62 fps	
			Total Length= 170 ft	Total Tc=	3.9



SUBCATCHMENT 2 97072 subcatchment 2 (developed)

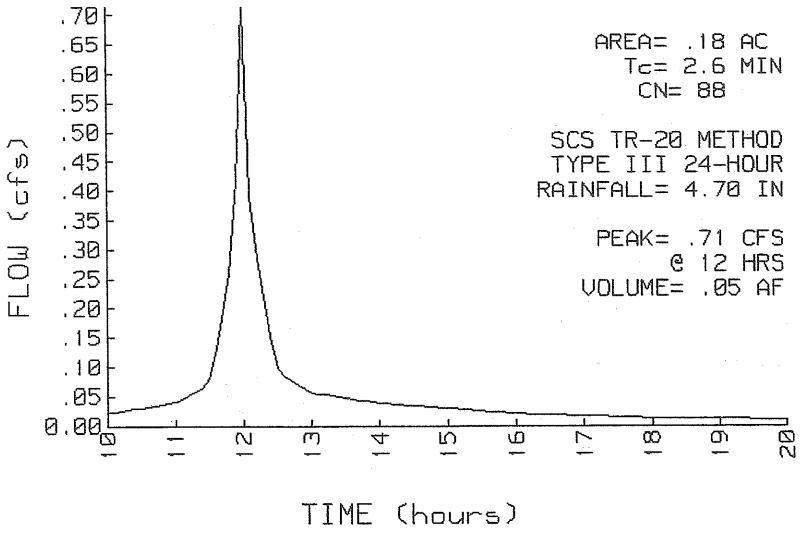
PEAK= .71 CFS @ 12.00 HRS, VOLUME= .05 AF

ACRES	CN	
.10	80	Grass,good condition,group D
.08	98	ROOF
.18	88	

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 4.70 IN
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
TR-55 SHEET FLOW	DE	2.4
Grass: Short n=.15 L=30' P2=3 in s=.0691 '/'		
SHALLOW CONCENTRATED/UPLAND FLOW	E-E1	.2
Grassed Waterway Kv=15 L=60' s=.08 '/' V=4.24 fps		
	Total Length= 90 ft Total Tc=	2.6

SUBCATCHMENT 2 RUNOFF
97072 subcatchment 2 (developed)



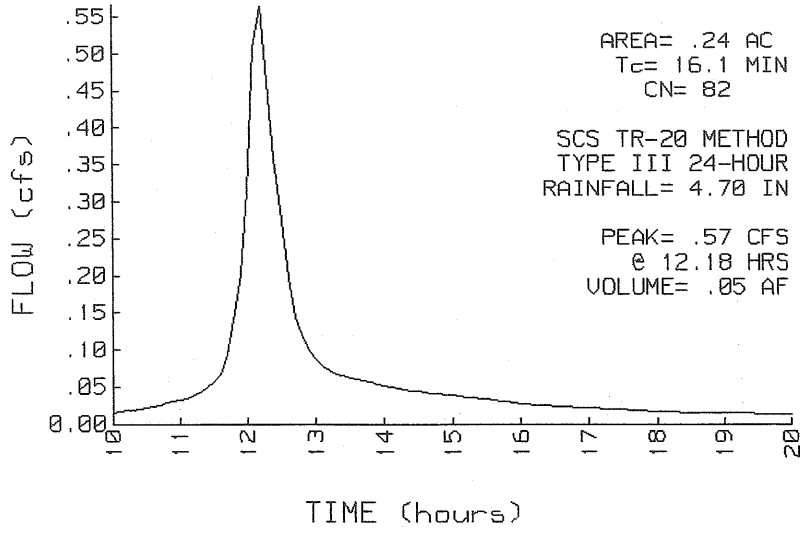
SUBCATCHMENT 3 97072 subcatchment 3 (developed)

PEAK= .57 CFS @ 12.18 HRS, VOLUME= .05 AF

ACRES	CN		
.07	74	Grass,good condition,group C	SCS TR-20 METHOD
.12	80	Grass,good condition,group D	TYPE III 24-HOUR
.05	98	IMPERVIOUS	RAINFALL= 4.70 IN
.24	82		SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
TR-55 SHEET FLOW	JK	15.7
Grass: Dense n=.24 L=140' P2=3 in s=.0333 '/'		
SHALLOW CONCENTRATED/UPLAND FLOW	KL	.4
Grassed Waterway Kv=15 L=95' s=.06 '/' V=3.67 fps		
	Total Length= 235 ft Total Tc=	16.1

SUBCATCHMENT 3 RUNOFF
97072 subcatchment 3 (developed)



SUBCATCHMENT 4 97072 subcatchment 4 (developed)

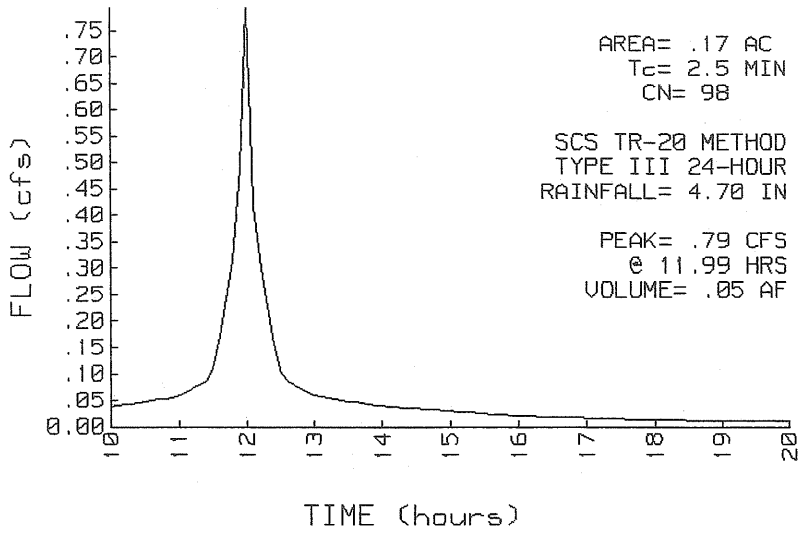
PEAK= .79 CFS @ 11.99 HRS, VOLUME= .05 AF

ACRES	CN	
.17	98	Impervious

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 4.70 IN
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
TR-55 SHEET FLOW	**GH**	2.0
Smooth surfaces n=.011 L=122'	P2=3 in s=.0092 '/'	
SHALLOW CONCENTRATED/UPLAND FLOW	**HI**	.5
Paved Kv=20.3282 L=56' s=.0089 '/'	V=1.92 fps	
	Total Length= 178 ft Total Tc=	2.5

SUBCATCHMENT 4 RUNOFF
97072 subcatchment 4 (developed)



REACH 1

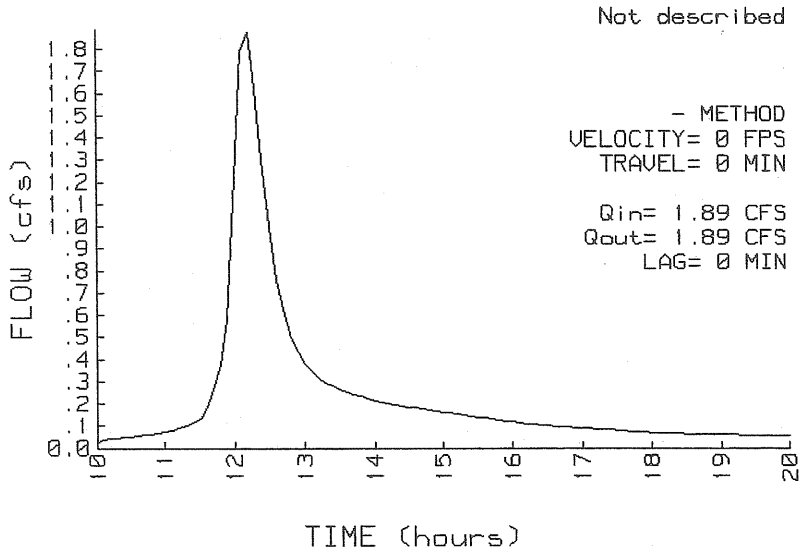
Not described

Qin = 1.89 CFS @ 12.18 HRS, VOLUME= .19 AF
Qout= 1.89 CFS @ 12.18 HRS, VOLUME= .19 AF, ATTEN= 0%, LAG= 0.0 MIN

DEPTH (FT)	END AREA (SQ-FT)	DISCH (CFS)

- METHOD
PEAK DEPTH= 0.00 FT
PEAK VELOCITY= 0.0 FPS
TRAVEL TIME = 0.0 MIN
SPAN= 10-20 HRS, dt=.1 HRS

REACH 1 INFLOW & OUTFLOW



REACH 2 97072 Reach 1 (developed swale)

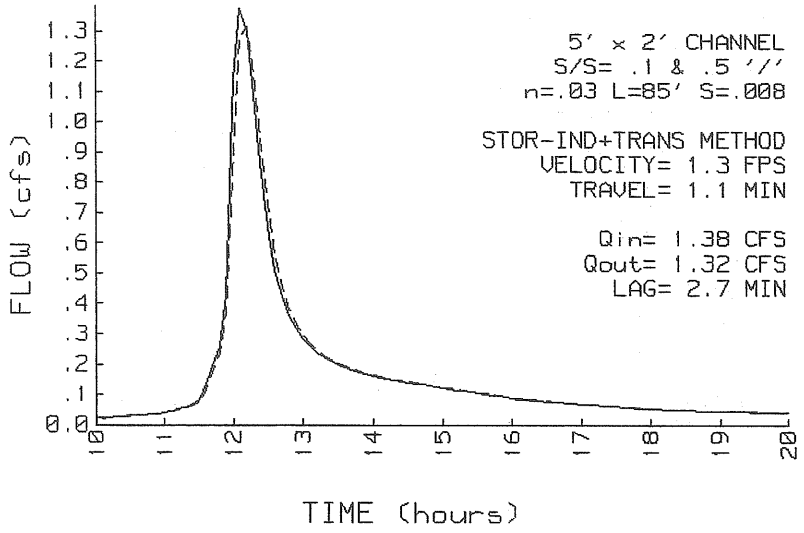
Qin = 1.38 CFS @ 12.12 HRS, VOLUME= .14 AF
Qout= 1.32 CFS @ 12.17 HRS, VOLUME= .14 AF, ATTEN= 4%, LAG= 2.7 MIN

DEPTH (FT)	END AREA (SQ-FT)	DISCH (CFS)
0.0	0.0	0.00
.2	1.2	1.66
.4	3.0	5.86
.6	5.2	12.76
.9	8.7	26.34
1.2	14.6	53.14
1.6	23.4	99.83
2.0	34.0	165.32

5' x 2' CHANNEL
S/S= .1 & .5 '/'
n= .03
LENGTH= 85 FT
SLOPE= .008 FT/FT

STOR-IND+TRANS METHOD
PEAK DEPTH= .16 FT
PEAK VELOCITY= 1.3 FPS
TRAVEL TIME = 1.1 MIN
SPAN= 10-20 HRS, dt=.1 HRS
3 x FINER ROUTING

REACH 2 INFLOW & OUTFLOW
97072 Reach 1 (developed swale)



Data for 97072 RAINMAKER IRR.BISHOP ST.,PORTLAND proposed
TYPE III 24-HOUR RAINFALL= 4.70 IN
Prepared by SEBAGO TECHNICS, INC. 28 Aug 99
HydroCAD 5.00 000643 (c) 1986-1998 Applied Microcomputer Systems

POND 1 97072 Pond 1 (developed)

Qin = 1.93 CFS @ 12.01 HRS, VOLUME= .13 AF
Qout= 1.02 CFS @ 12.17 HRS, VOLUME= .09 AF, ATTEN= 47%, LAG= 9.6 MIN

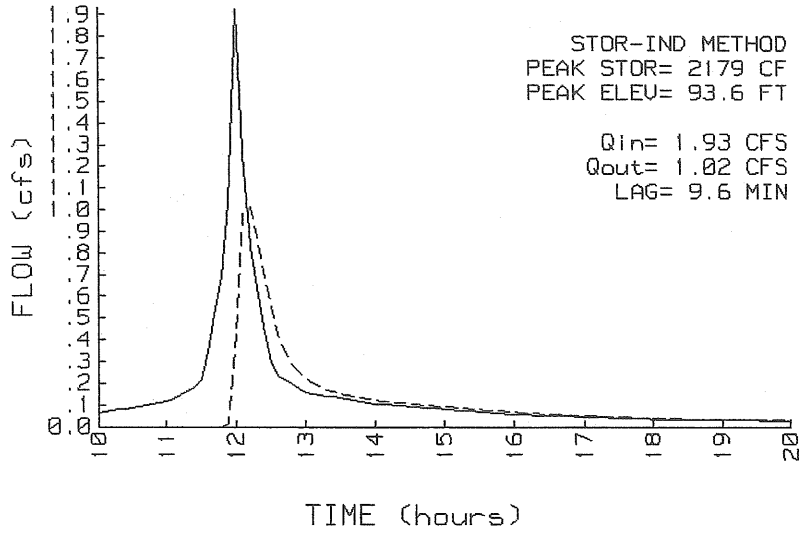
ELEVATION (FT)	AREA (SF)	INC.STOR (CF)	CUM.STOR (CF)
91.0	329	0	0
92.0	645	487	487
93.0	1042	843	1330
94.0	1680	1361	2691
95.0	2499	2089	4780

STOR-IND METHOD
PEAK STORAGE = 2179 CF
PEAK ELEVATION= 93.6 FT
FLOOD ELEVATION= 95.0 FT
START ELEVATION= 91.0 FT
SPAN= 10-20 HRS, dt=.1 HRS
Tdet= 108.2 MIN (.09 AF)

#	ROUTE	INVERT	OUTLET DEVICES
1	P	93.0'	**10" CULVERT**

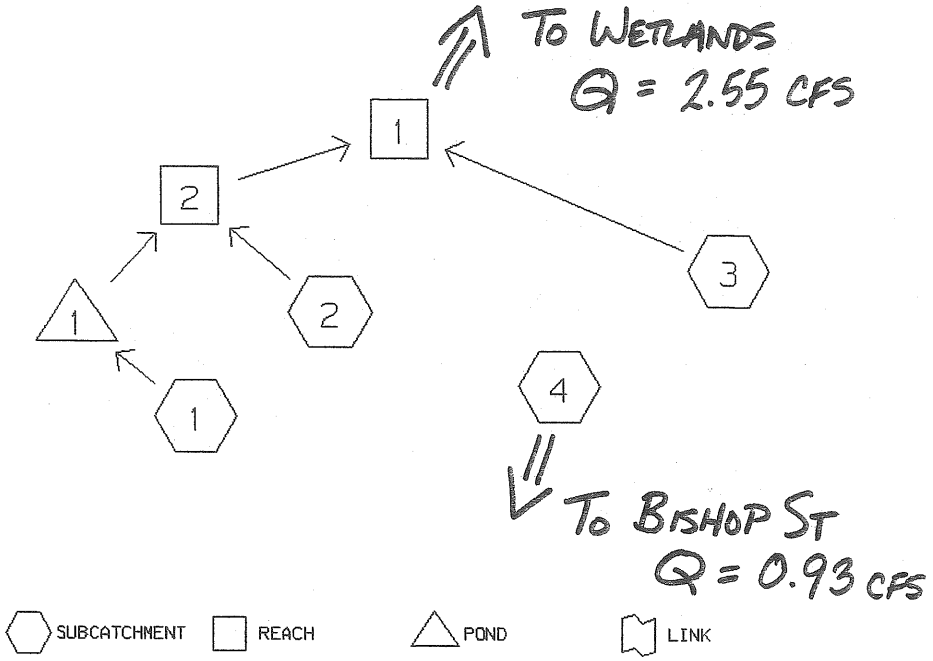
n=.011 L=52' S=.005'/' Ke=.5 Cc=.9 Cd=.6

POND 1 INFLOW & OUTFLOW
97072 Pond 1 (developed)



Data for 97072 RAINMAKER IRR.BISHOP ST.,PORTLAND proposed
TYPE III 24-HOUR RAINFALL= 5.50 IN
Prepared by SEBAGO TECHNICS, INC. 28 Aug 99
HydroCAD 5.00 000643 (c) 1986-1998 Applied Microcomputer Systems

WATERSHED ROUTING 25 YR DEV. COND



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	.49	3.9	10%80 29%74 61%98	89	-	2.34	12.01	.15
2	.18	2.6	56%80 44%98	88	-	.87	12.00	.05
3	.24	16.1	29%74 50%80 21%98	82	-	.71	12.18	.06
4	.17	2.5	100%98	98	-	.93	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)
1	-	-	-	-	-	-	-	-	0.0	0.0	2.55 N
2	-	5.0	2.0	.10	.50	.030	85	.0080	1.4	1.0	1.86

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)
1	91.0	95.0	93.8	.06	2.34	1.46			37	7.7

Data for 97072 RAINMAKER IRR.BISHOP ST.,PORTLAND proposed
TYPE III 24-HOUR RAINFALL= 5.50 IN
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HydroCAD 5.00 000643 (c) 1986-1998 Applied Microcomputer Systems

SUBCATCHMENT 1 97072 subcatchment 1 (developed)

PEAK= 2.34 CFS @ 12.01 HRS, VOLUME= .15 AF

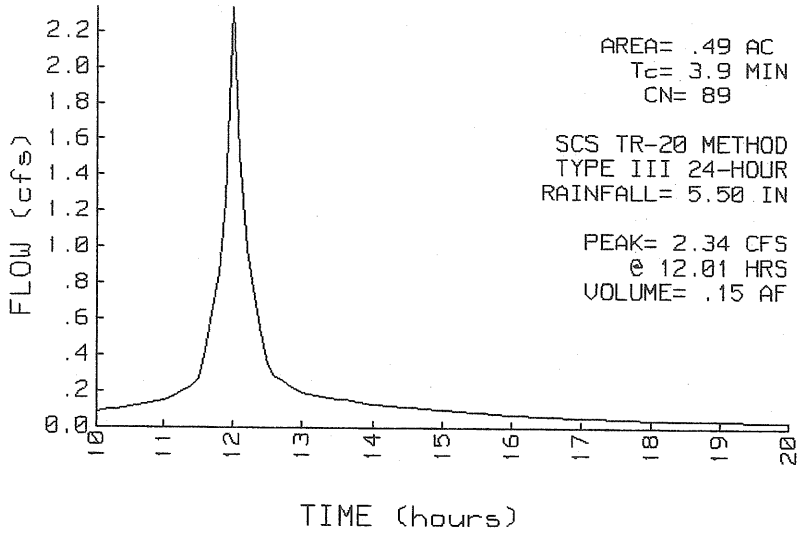
ACRES	CN	
.05	80	Grass,good condition,group D
.14	74	Grass,good condition,group C
.30	98	Impervious
.49	89	

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			AB		2.5
Smooth surfaces	n=.011	L=90'	P2=3 in	s=.0028 '/'	
TR-55 SHEET FLOW			BC		1.4
Smooth surfaces	n=.011	L=60'	P2=3 in	s=.0058 '/'	
SHALLOW CONCENTRATED/UPLAND FLOW			CD		0.0
Grassed Waterway	Kv=15	L=20'	s=.33 '/'	V=8.62 fps	

Total Length= 170 ft Total Tc= 3.9

SUBCATCHMENT 1 RUNOFF
97072 subcatchment 1 (developed)



Data for 97072 RAINMAKER IRR.BISHOP ST.,PORTLAND proposed
TYPE III 24-HOUR RAINFALL= 5.50 IN
Prepared by SEBAGO TECHNICS, INC. 28 Aug 99
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SUBCATCHMENT 2 97072 subcatchment 2 (developed)

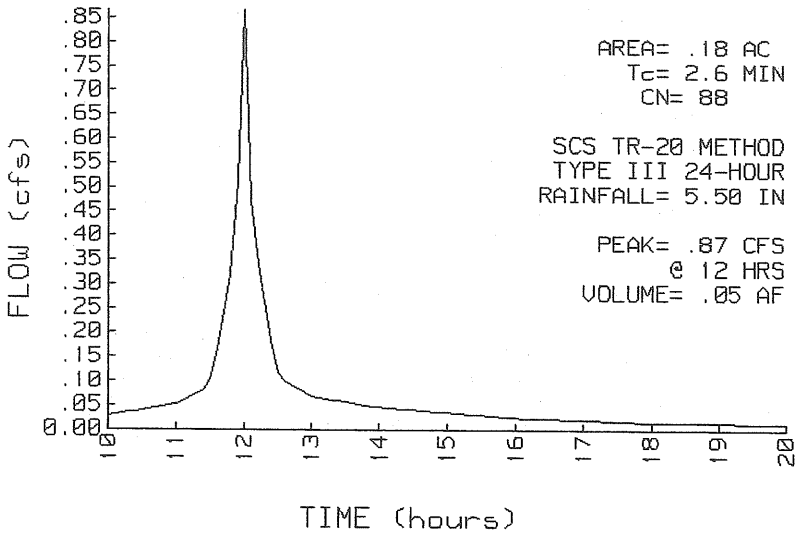
PEAK= .87 CFS @ 12.00 HRS, VOLUME= .05 AF

ACRES	CN	
.10	80	Grass,good condition,group D
.08	98	ROOF
.18	88	

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	DE	2.4
Grass: Short n=.15 L=30' P2=3 in s=.0691 '/'		
SHALLOW CONCENTRATED/UPLAND FLOW	E-E1	.2
Grassed Waterway Kv=15 L=60' s=.08 '/' V=4.24 fps		
	Total Length= 90 ft Total Tc=	2.6

SUBCATCHMENT 2 RUNOFF
97072 subcatchment 2 (developed)



SUBCATCHMENT 3 97072 subcatchment 3 (developed)

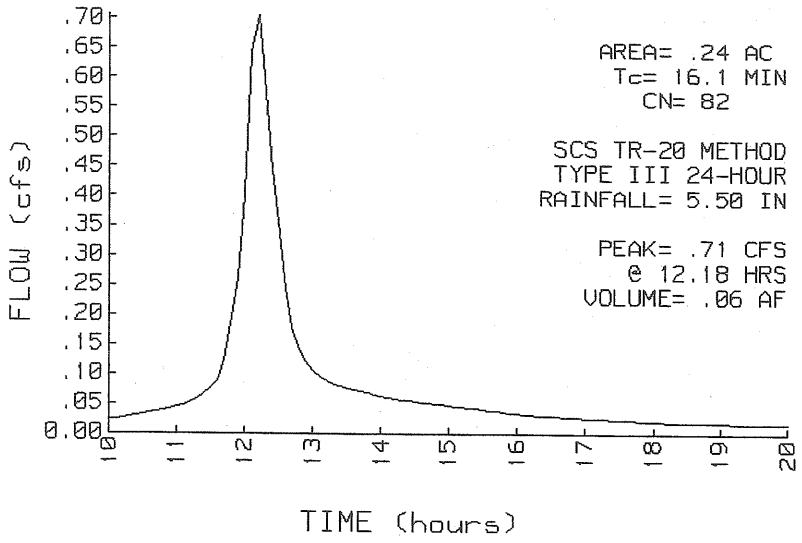
PEAK= .71 CFS @ 12.18 HRS, VOLUME= .06 AF

ACRES	CN	
.07	74	Grass,good condition,group C
.12	80	Grass,good condition,group D
.05	98	IMPERVIOUS
.24	82	

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	JK	15.7
Grass: Dense n=.24 L=140' P2=3 in s=.0333 '/'		
SHALLOW CONCENTRATED/UPLAND FLOW	KL	.4
Grassed Waterway Kv=15 L=95' s=.06 '/' V=3.67 fps		
	Total Length= 235 ft Total Tc=	16.1

SUBCATCHMENT 3 RUNOFF
97072 subcatchment 3 (developed)



Data for 97072 RAINMAKER IRR.BISHOP ST.,PORTLAND proposed
TYPE III 24-HOUR RAINFALL= 5.50 IN
Prepared by SEBAGO TECHNICS, INC. 28 Aug 99
HydroCAD 5.00 000643 (c) 1986-1998 Applied Microcomputer Systems

SUBCATCHMENT 4 97072 subcatchment 4 (developed)

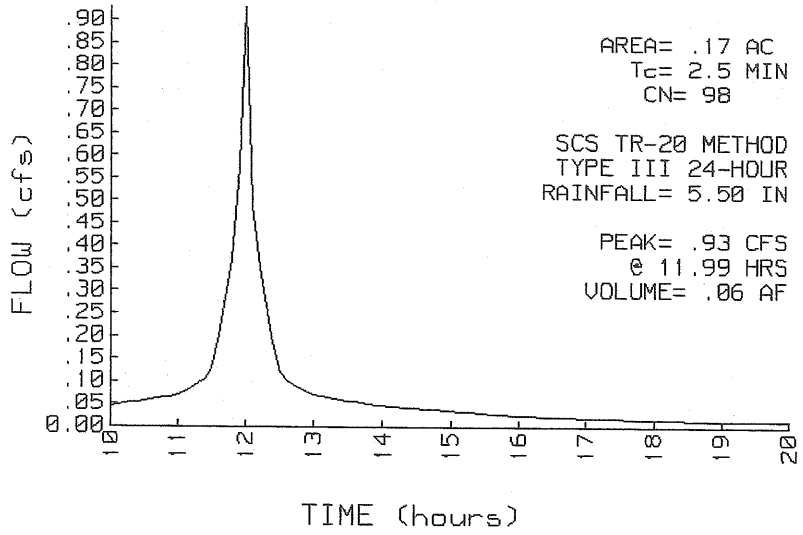
PEAK= .93 CFS @ 11.99 HRS, VOLUME= .06 AF

ACRES	CN	
.17	98	Impervious

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	GH	2.0
Smooth surfaces n=.011 L=122'	P2=3 in s=.0092 '/'	
SHALLOW CONCENTRATED/UPLAND FLOW	HI	.5
Paved Kv=20.3282 L=56' s=.0089 '/'	V=1.92 fps	
	Total Length= 178 ft	Total Tc= 2.5

SUBCATCHMENT 4 RUNOFF
97072 subcatchment 4 (developed)



REACH 2 97072 Reach 1 (developed swale)

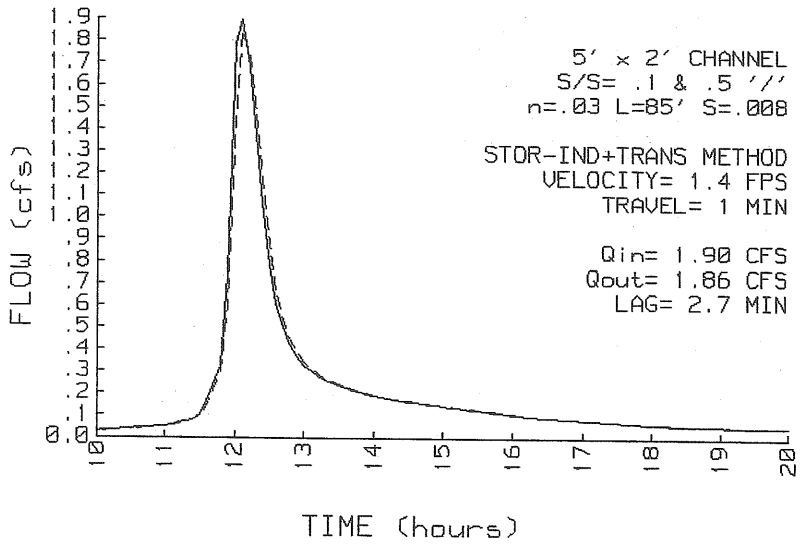
Qin = 1.90 CFS @ 12.08 HRS, VOLUME= .17 AF
Qout= 1.86 CFS @ 12.13 HRS, VOLUME= .17 AF, ATTEN= 2%, LAG= 2.7 MIN

DEPTH (FT)	END AREA (SQ-FT)	DISCH (CFS)
0.0	0.0	0.00
.2	1.2	1.66
.4	3.0	5.86
.6	5.2	12.76
.9	8.7	26.34
1.2	14.6	53.14
1.6	23.4	99.83
2.0	34.0	165.32

5' x 2' CHANNEL
S/S= .1 & .5 '/'
n= .03
LENGTH= 85 FT
SLOPE= .008 FT/FT

STOR-IND+TRANS METHOD
PEAK DEPTH= .21 FT
PEAK VELOCITY= 1.4 FPS
TRAVEL TIME = 1.0 MIN
SPAN= 10-20 HRS, dt=.1 HRS
3 x FINER ROUTING

REACH 2 INFLOW & OUTFLOW
97072 Reach 1 (developed swale)



POND 1 97072 Pond 1 (developed)

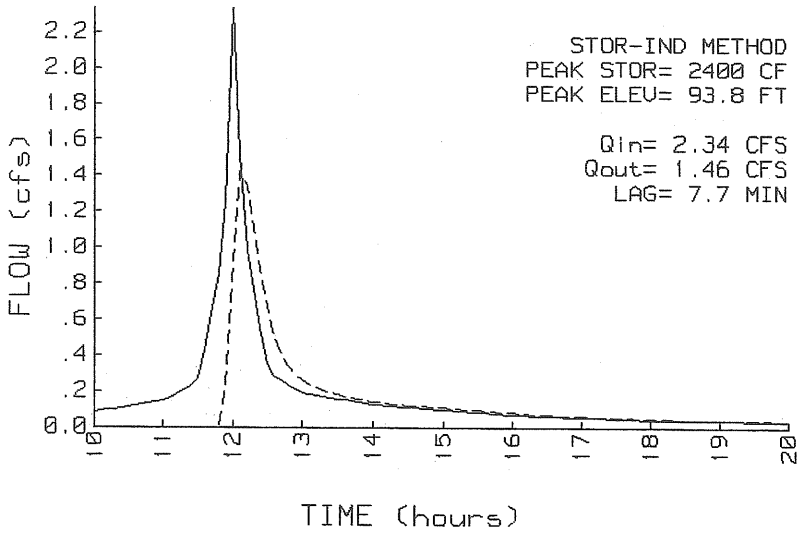
Qin = 2.34 CFS @ 12.01 HRS, VOLUME= .15 AF
Qout= 1.46 CFS @ 12.14 HRS, VOLUME= .12 AF, ATTEN= 37%, LAG= 7.7 MIN

ELEVATION (FT)	AREA (SF)	INC.STOR (CF)	CUM.STOR (CF)
91.0	329	0	0
92.0	645	487	487
93.0	1042	843	1330
94.0	1680	1361	2691
95.0	2499	2089	4780

STOR-IND METHOD
PEAK STORAGE = 2400 CF
PEAK ELEVATION= 93.8 FT
FLOOD ELEVATION= 95.0 FT
START ELEVATION= 91.0 FT
SPAN= 10-20 HRS, dt=.1 HRS
Tdet= 95.8 MIN (.12 AF)

#	ROUTE	INVERT	OUTLET DEVICES
1	P	93.0'	**10" CULVERT** n=.011 L= 52' S=.005'/' Ke=.5 Cc=.9 Cd=.6

POND 1 INFLOW & OUTFLOW
97072 Pond 1 (developed)



SebagoTechnics
Engineering & Planning for the Future

August 27, 1999
97072

Marge Schmuckal, Zoning Administrator
City of Portland
389 Congress Street
Portland, ME 04101

Rainmaker Irrigation - Site Plan, 70 Bishop Street

Dear Marge:

On behalf of Rainmaker Irrigation, I am pleased to submit eight sets of plans for their proposed Amended Site Plan for the expansion of their 70 Bishop Street property. Since the last approval, William Boyle (the owner) has acquired property abutting the original piece from the University of New England and Dennis and Sheila Frappier. This submission and application include the addition of a 7,250 square foot building, parking area, and construction of a detention pond to meet stormwater quantities for the entire lot.

In addition to this City application for minor site plan, the applicant will be filing for a Wetland Alteration Fill Permit since it will be necessary to fill wetlands for the construction of the building, parking areas, and detention area. This filing will be concurrent with the City's review.

The current property is located in both the I-M and R-5 zoning districts. Both the current Rainmaker Irrigation building and the proposed building will fall under the I-M zoning. A 30 foot use allowance into the abutting zone enables a portion of the proposed professional/office building to be constructed into the R-5 Zone. However, to accommodate for the building placement, pavement setbacks, and parking requirements, the aisle widths in the parking lot were reduced to 22 feet instead of being 24 feet. The last submission approved 14 spaces for Rainmaker's main office building. This application requires 19 additional spaces and proposes 24 spaces.

Stormwater calculations have been included for the entire parcel. The original site plan did not require stormwater calculations since the impervious area, although altered, was not increased. The original site prior to any development was a vacant gravel lot containing an abandoned trailer, rock debris, and inert waste. There was little vegetation except for brush growth near the wetland limits. The calculations enclosed account for the pre-development conditions prior to the original Rainmaker Irrigation application. A detention pond controlled solely by a 10" culvert meets the stormwater quantities required. No catch basins are designed, and all flows generated on site will be sheet or shallow concentrated flows with the exception of the pond outfall.

12 Westbrook Common P.O. Box 1339 Westbrook, Maine 04098-1339 207-856-0277 Fax 207-856-2206

The site will be accessed from the existing driveway and serviced from the utilities in Bishop Street. A service stub currently exists for the sewer; however, street opening permits will be required for gas, electric, telephone and water services.

Accompanied with the site plan and details are a landscaping and lighting plan. The building will be constructed with 75 watt wall paks with shields (catalog cuts included) and recessed lighting at the entrances. Building plans are also attached for your review.

The applicant, when originally filing in 1997, requested a waiver for sidewalks and granite curbing. The applicant did construct the entrances with granite curbing and the waiver was granted for the construction of sidewalk and granite curbing along Bishop Street. Similarly, the applicant will again request a waiver of the sidewalk and curbing requirement. No sidewalks are in the vicinity and no curbing is found on this portion of Bishop Street. We understand that this will require a Planning Board decision, and we request a meeting on the next possible agenda.

In the interim, we will wait to hear from the planning staff regarding the minor site plan review. Please feel free to contact Mr. Boyle or myself with any comments or questions.

Sincerely,

SEBAGO TECHNICS, INC.

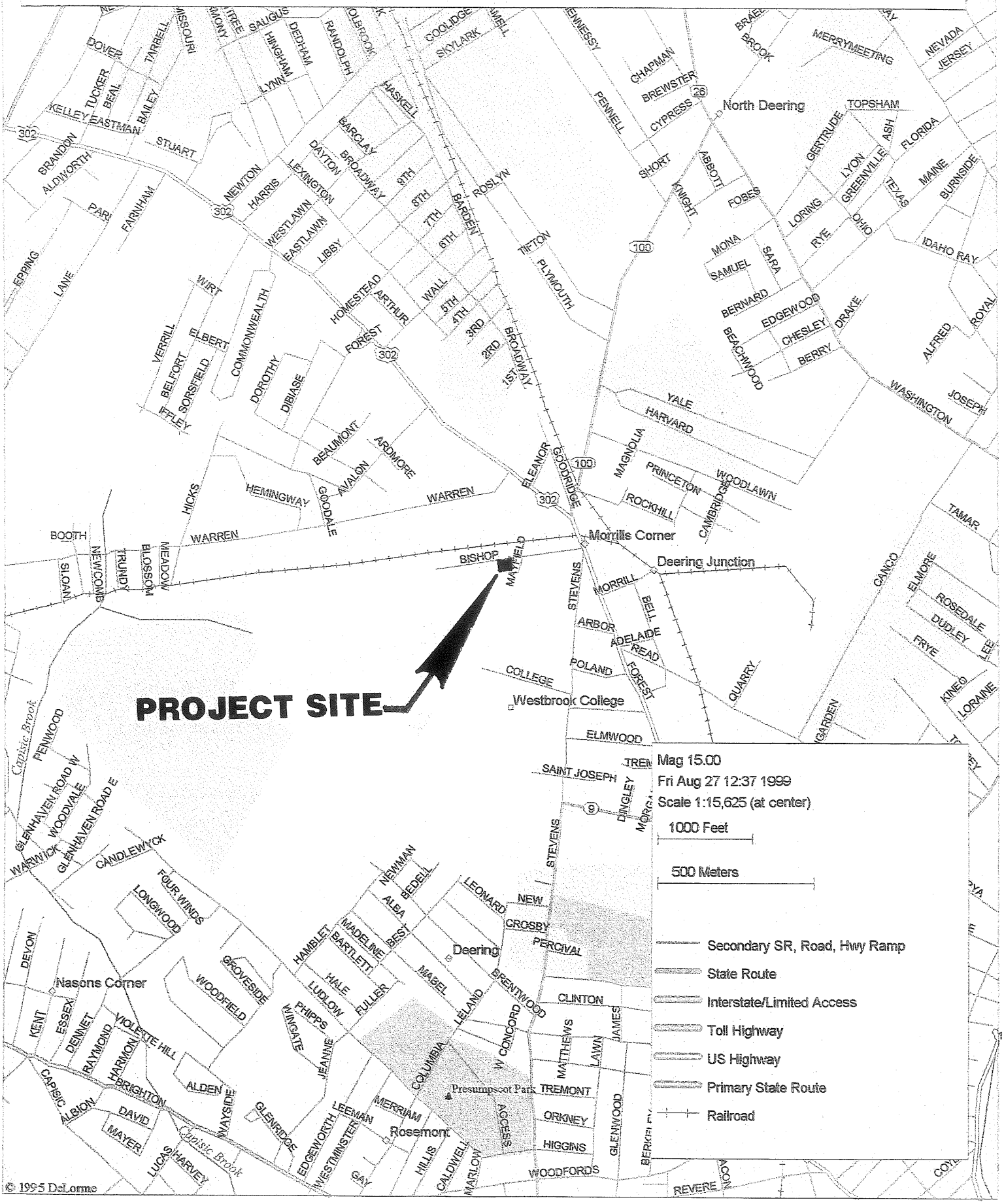
James R. Seymour

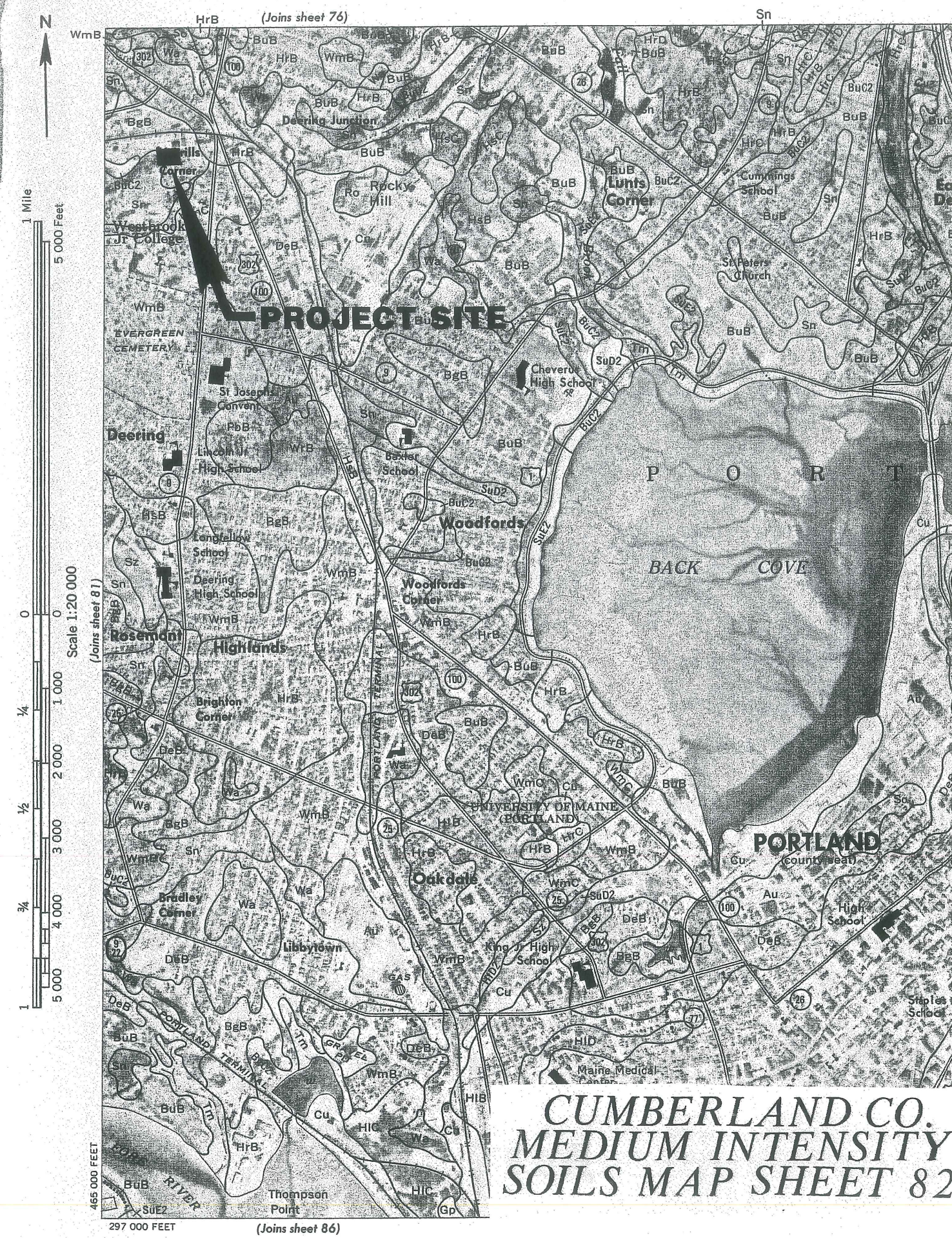
James R. Seymour
Project Engineer

JRS:jc
Enc.

cc: William Boyle, Rainmaker Irrigation

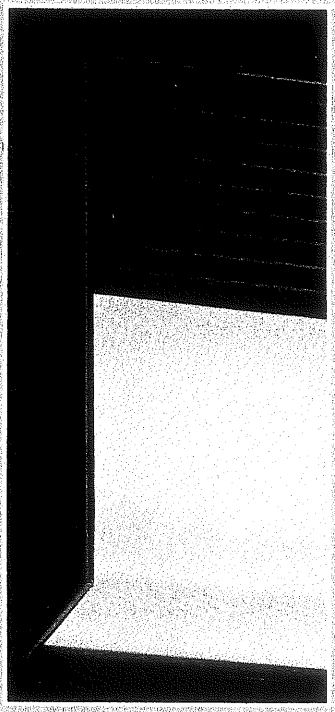
RAINMAKER LOCATION MAP

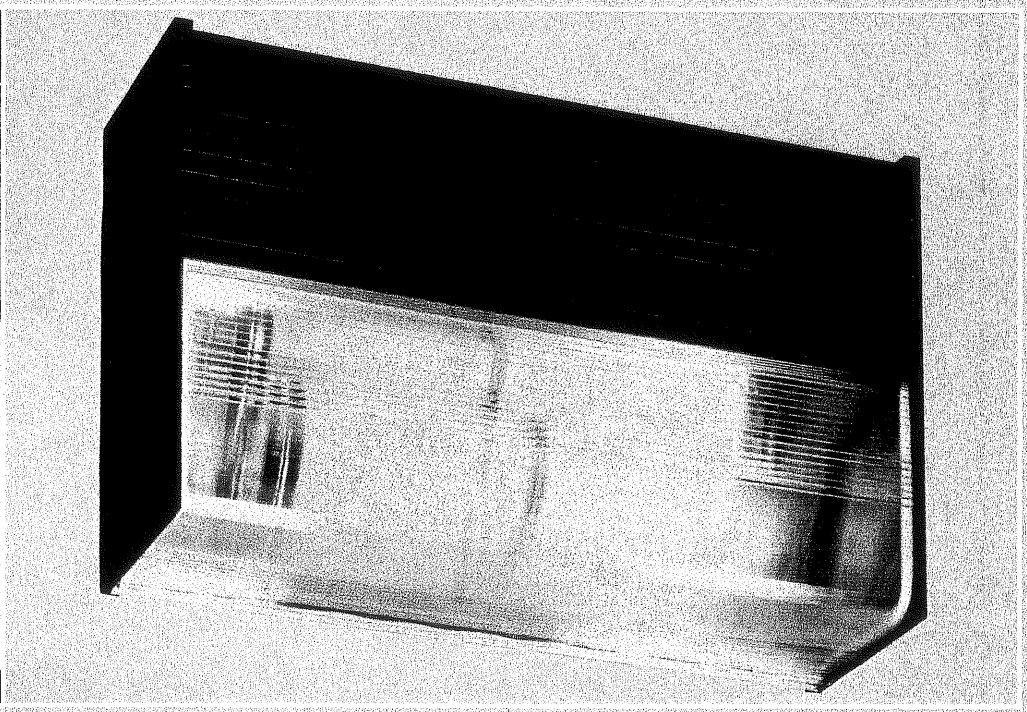




CUMBERLAND CO.
MEDIUM INTENSITY
SOILS MAP SHEET 82

Compact Bracket





WALL-LITER-S™

The smartly styled Wall-Liter is expressly designed in three sizes for low-wattage HID lamps, from 35W LPS to 250W HPS, and provides higher foot-candle levels with greater efficiency to preserve energy and save operating costs.

Distinctive linear design compliments building facades with an exceptionally thin—only 5 3/16" in depth—compact wall bracket. "Clam-shell" die-cast construction and snap-out ballast cover gives total access to electrical components for fast installation and easy maintenance.

- Heavy-gauge aluminum housing for rugged outdoor applications. Standard finish is bronze acrylic enamel. Black and other colors available.
- Specular Alzak reflector for peak efficiency & lasting performance. Reflector forms air barrier to isolate lamp heat from electrical components.
- Unbreakable polycarbonate prismatic lens is UV inhibited, for low wattage HPS models. Integral track for spring-loaded hinge pins and linear prisms for optical control.
- Diffusing Pyrex® glass lens for MH and 250 watt HPS models.
- HPF ballast available for all voltages. Compartmentized electrical components isolated from lamp heat to extend ballast and capacitor life.
- Closed-cell, cross-linked polyethylene gasketing keeps lens and ballast cover watertight.
- UL Listed "Suitable for Wet Locations." I.B.E.W. Union made.
- Protected by Guth's "Labor Allowance Guarantee" warranty program.

GUTH

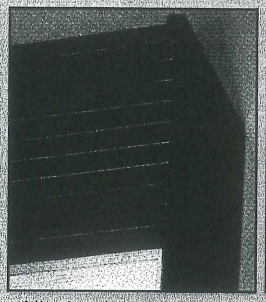
Pyrex–TM Corning

Alzak–TM Alcoa

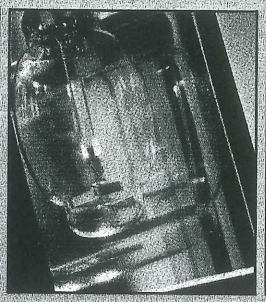
lighting excellence by tradition

WALL-LITER-S™

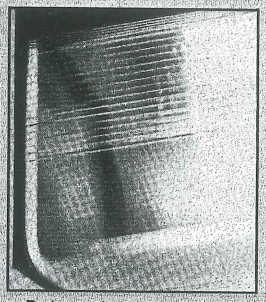
Details



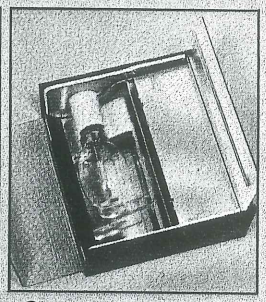
All-aluminum housing resists corrosion



Alzak® aluminum reflector won't pit or corrode



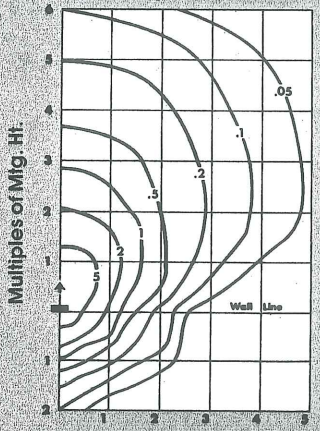
Polycarbonate lens is virtually indestructible



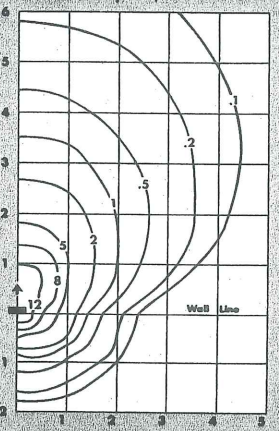
Clam-shell design for easy servicing

Photometric Data

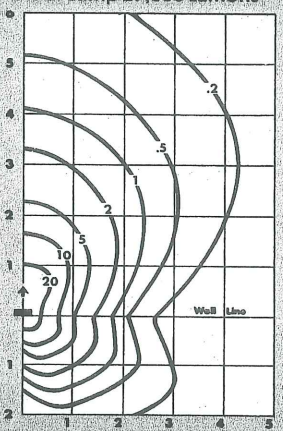
B18-605 100W H.P.S.
Clear Lamp 9,500 Lumens



B18-606 150W H.P.S.
Clear Lamp 16,000 Lumens



B18-705 250W H.P.S.
Clear Lamp 27,500 Lumens



Multiples of Mtg. Ht.

Mounting Height Conversion Chart*

Mounting Height	Footcandle Multiplier
8′	1.56
10′	1.00
12′	.69
14′	.51
16′	.39
18′	.31
20′	.25
22½′	.20
25′	.16

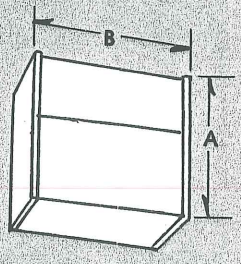
*Photometrics taken with 10′ mounting height. For other mounting heights, use footcandle multiplier above.

Catalog Listings

PROPOSED →

CWA or HIGH REACTANCE BALLASTS (HPF)

Catalog Number*	Lens	Lamps/Watts and Type	Bulb	Total Watts**	Dimensions A	B	C
B17-601/120	Pyrex Glass	100W MV	E23½ or BT25	124	12⅜″	11⅝″	5 3/16″
B17-602/120	Pyrex Glass	175W MV	E or BT28	200	12⅜″	11⅝″	5 3/16″
B17-701/120	Pyrex Glass	250W MV	E or BT28	285	18⅞″	11⅝″	5 3/16″
B17-603/120	Pyrex Glass	175W MH	E or BT28	210	12⅜″	11⅝″	5 3/16″
B17-703/120	Pyrex Glass	250W MH	E or BT28	294	18⅞″	11⅝″	5 3/16″
B18-604/120	Polycarbonate	70W HPS	E23½ or BT25	88	12⅜″	11⅝″	5 3/16″
B18-605/120	Polycarbonate	100W HPS	E23½ or BT25	130	12⅜″	11⅝″	5 3/16″
B18-606/120	Polycarbonate	150W HPS	E23½ or BT25	188	12⅜″	11⅝″	5 3/16″
B17-705/120	Pyrex Glass	250W HPS	E18	300	18⅞″	11⅝″	5 3/16″
B18-607/120†	Polycarbonate	35/55W LPS	SOX 35 SOX 55	62 or 87	18⅞″	11⅝″	5 3/16″



†Same unit operates either 35W or 55W lamp.
*All units listed for 120 volts. For other voltages change "/120" to voltage desired.
**To find maximum current demand per fixture at any voltage, divide total watts by circuit voltage and then: divide by .82 for MV; .95 for MH; .85 for 70/150W HPS; .92 for 250W HPS; .90 for LPS.

REACTOR BALLAST (NPF)—120 VOLT ONLY

Catalog Number*	Lens	Lamps/Watts and Type	Bulb (Med. Base)	Total Watts**	Maximum Amps	Dimensions A	B
B18-620/120	Polycarbonate	35W HPS	E or B17	43	1.15	8″	11⅝″
B18-621/120	Polycarbonate	50W HPS	E or B17	60	1.80	8″	11⅝″
B18-622/120	Polycarbonate	70W HPS	E or B17	82	2.25	8″	11⅝″
B18-623/120	Polycarbonate	100W HPS	E or B17	115	3.05	12⅜″	11⅝″
B18-624/120	Polycarbonate	150W HPS	E or B17	170	4.50	12⅜″	11⅝″

QS Qwik-Ship Item

ACCESSORIES
Add "/FF" suffix—Fixture fuse.
Add "/TP" suffix—Tamper proof screws.
Add "/PEC" suffix—Photo-electric cell.
Add "/CAB" suffix—Cast aluminum outlet box.
Add "/LS" suffix—Lexan shield for glass lens units.
Add "/B214" suffix—Corner bracket.
Add "/L" suffix—Prepackaged lamp.

Specifications and data are subject to change without notice.

Form 1186B

GUTH
lighting excellence by tradition
P.O. Box 7079
St. Louis, MO 63177
(314) 533-3200
A Subsidiary of Jac Jacobsen Industries, Inc.

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7. Silt fence has been added to the plan as required or near points of erosion potential during construction.

Landscape and Lighting Plan

1. The Erosion and Sedimentation Control Plan (ESCP) has been revised to reflect the current application.
2. The ESCP has been revised to refer to the City of Portland and DRC.
3. A wintertime condition section has been added meeting MDEP standards.

Details

1. A handicap ramp detail has been added.
2. A riprap outlet/inlet detail has been added.
3. Planting details have been added.

Stormwater Report

The stormwater calculations have been revised for the detention pond per the DRC's comments. The flow rates did increase from the previously submitted calculations. The 2-year and 10-year storms show a very slight increase of 0.02 and 0.03 cfs, respectively, while the proposed 25-year storm showed a decrease of 0.08 cfs. The pond's bottom is to remain at Elevation 91.0, but modeling for detention does not start until 92.9.

I believe we have adequately addressed all of the City's concerns and items. If all items are correct and acceptable, we would be looking for an approval as soon as possible. Please feel free to contact our office if you have any questions or require additional information.

Sincerely,

SEBAGO TECHNICS, INC.

James R. Seymour

James R. Seymour
Project Engineer

JRS:jc
Enc.

cc: William Boyle

RAINMAKER IRRIGATION		70 BISHOP STREET		97072		
STORMWATER SUMMARY						
8/30/1999 REVISED 10/1/99 *						
PROJECT AREA	= 1.04 AC.		SOILS ON SITE	FILL SOIL=C-SOIL		
				SCANTIC=D-SOIL		
WATERSHED AREA	AVG CN	ACRES	Tc min	PEAK RUNOFF RATES (CFS)		
PRE-DEV.				2YR	10YR	25YR
WS-1	84	0.51	8.30	0.78	1.52	1.88
WS-2	89	0.33	14.00	0.55	0.99	1.20
WS-3	83	0.2	4.70	0.32	0.65	0.81
STUDY POINT #1	TO WETLANDS			**1.04**	**2.05**	**2.54**
STUDY POINT #2	TO BISHOP ST.			**0.55**	**0.99**	**1.2**
WATERSHED AREA	AVG CN	ACRES	Tc min	PEAK RUNOFF RATES (CFS)		
POST-DEV				2YR	10YR	25YR
WS-1	89	0.49	3.9	1.08	1.93	2.34
WS-2	88	0.18	2.6	0.39	0.71	0.87
WS-3	82	0.24	16.1	0.28	0.57	0.71
WS-4	98	0.17	2.5	0.5	0.79	0.93
STUDY POINT #1	TO WETLANDS			1.06	2.08	2.46 *
STUDY POINT #2	TO BISHOP S			**0.5**	**0.79**	**0.93**
NET CHANGE	STUDY PT.#1			+0.02	+0.03	- 0.08 *
	STUDY PT.#2			-0.03	-0.20	-0.27

Data for 97072 RAINMAKER IRR.BISHOP ST.,PORTLAND proposed
TYPE III 24-HOUR RAINFALL= 3.00 IN
Prepared by SEBAGO TECHNICS, INC. 1 Oct 99
HydroCAD 5.00 000643 (c) 1986-1998 Applied Microcomputer Systems

POND 1 97072 Pond 1 (developed)

Qin = 1.08 CFS @ 12.01 HRS, VOLUME= .07 AF
Qout= .60 CFS @ 12.16 HRS, VOLUME= .07 AF, ATTEN= 45%, LAG= 8.8 MIN

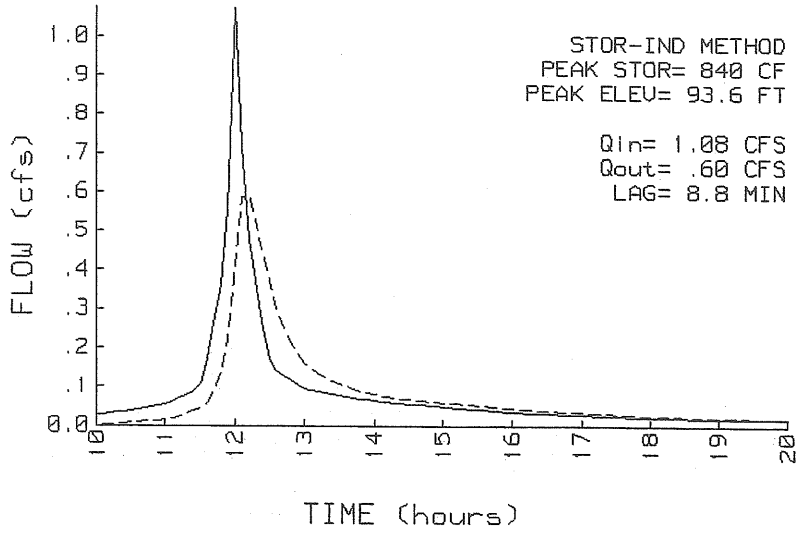
ELEVATION (FT)	AREA (SF)	INC.STOR (CF)	CUM.STOR (CF)
92.9	0	0	0
93.0	1042	52	52
94.0	1680	1361	1413
95.0	2500	2090	3503

STOR-IND METHOD
PEAK STORAGE = 840 CF
PEAK ELEVATION= 93.6 FT
FLOOD ELEVATION= 95.0 FT
START ELEVATION= 93.0 FT
SPAN= 10-20 HRS, dt=.1 HRS
Tdet= 52.9 MIN (.07 AF)

#	ROUTE	INVERT	OUTLET DEVICES
1	P	93.0'	10" CULVERT

n=.02 L=52' S=.005'/' Ke=.5 Cc=.9 Cd=.6

POND 1 INFLOW & OUTFLOW
97072 Pond 1 (developed)



REACH 2 97072 Reach 1 (developed swale)

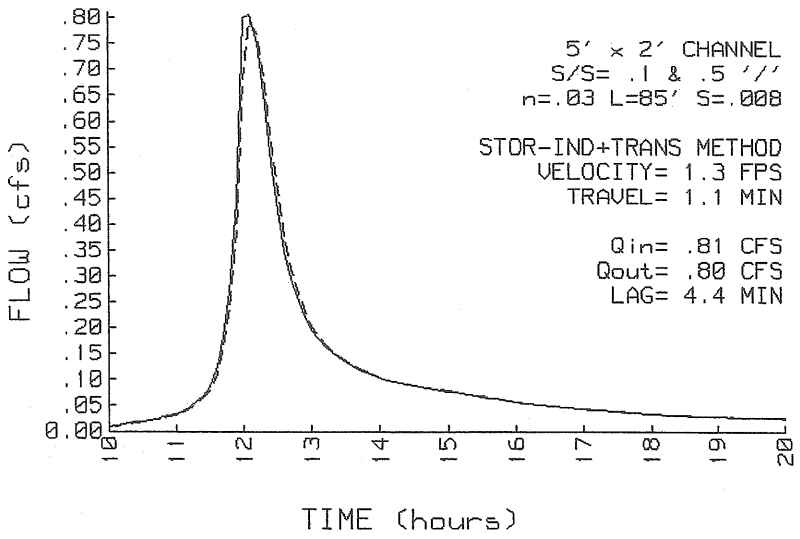
Qin = .81 CFS @ 12.06 HRS, VOLUME= .09 AF
Qout= .80 CFS @ 12.13 HRS, VOLUME= .09 AF, ATTEN= 1%, LAG= 4.4 MIN

DEPTH (FT)	END AREA (SQ-FT)	DISCH (CFS)
0.0	0.0	0.00
.2	1.2	1.66
.4	3.0	5.86
.6	5.2	12.76
.9	8.7	26.34
1.2	14.6	53.14
1.6	23.4	99.83
2.0	34.0	165.32

5' x 2' CHANNEL
S/S= .1 & .5 '/'
n= .03
LENGTH= 85 FT
SLOPE= .008 FT/FT

STOR-IND+TRANS METHOD
PEAK DEPTH= .10 FT
PEAK VELOCITY= 1.3 FPS
TRAVEL TIME = 1.1 MIN
SPAN= 10-20 HRS, dt=.1 HRS
3 x FINER ROUTING

REACH 2 INFLOW & OUTFLOW
97072 Reach 1 (developed swale)



REACH 1

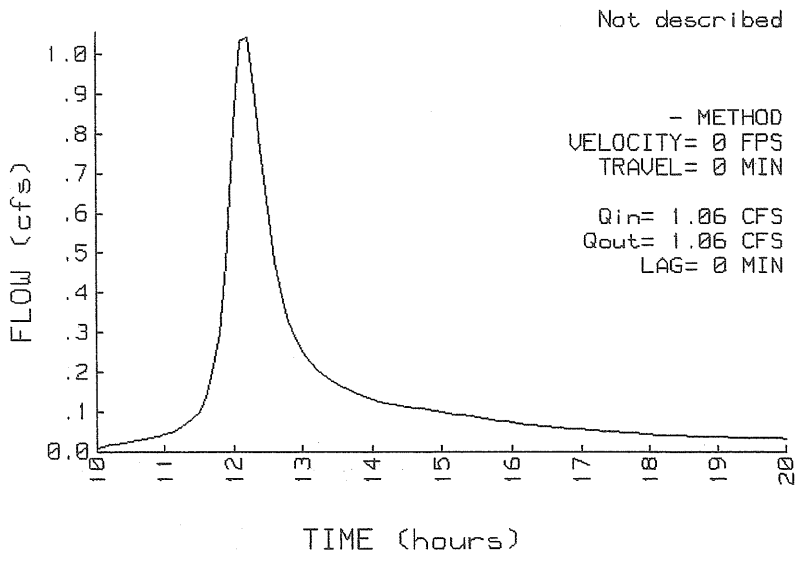
Not described

Qin = 1.06 CFS @ 12.16 HRS, VOLUME= .12 AF
Qout= 1.06 CFS @ 12.16 HRS, VOLUME= .12 AF, ATTEN= 0%, LAG= 0.0 MIN

DEPTH (FT)	END AREA (SQ-FT)	DISCH (CFS)

- METHOD
PEAK DEPTH= 0.00 FT
PEAK VELOCITY= 0.0 FPS
TRAVEL TIME = 0.0 MIN
SPAN= 10-20 HRS, dt=.1 HRS

REACH 1 INFLOW & OUTFLOW



Data for 97072 RAINMAKER IRR.BISHOP ST.,PORTLAND proposed
TYPE III 24-HOUR RAINFALL= 4.70 IN
Prepared by SEBAGO TECHNICS, INC. 1 Oct 99
HydroCAD 5.00 000643 (c) 1986-1998 Applied Microcomputer Systems

POND 1 — 97072 Pond 1 (developed)

Qin = 1.93 CFS @ 12.01 HRS, VOLUME= .13 AF
Qout= 1.17 CFS @ 12.14 HRS, VOLUME= .12 AF, ATTEN= 39%, LAG= 7.8 MIN

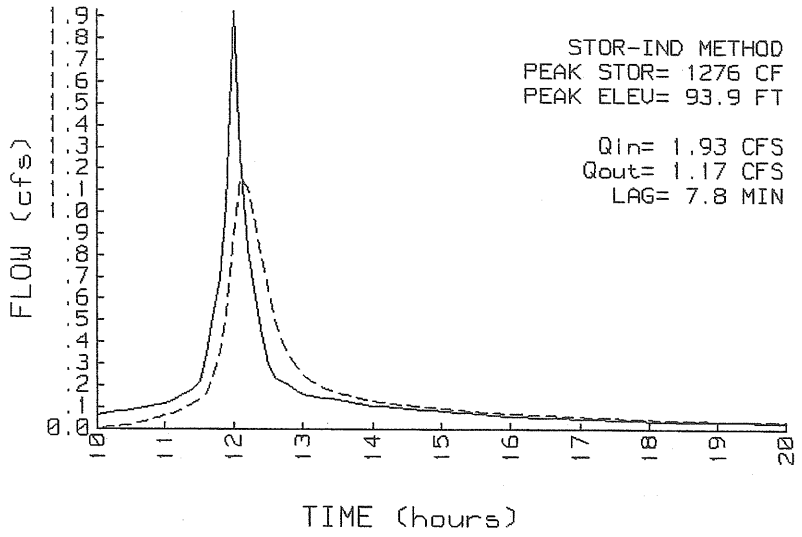
ELEVATION (FT)	AREA (SF)	INC.STOR (CF)	CUM.STOR (CF)
92.9	0	0	0
93.0	1042	52	52
94.0	1680	1361	1413
95.0	2500	2090	3503

STOR-IND METHOD
PEAK STORAGE = 1276 CF
PEAK ELEVATION= 93.9 FT
FLOOD ELEVATION= 95.0 FT
START ELEVATION= 93.0 FT
SPAN= 10-20 HRS, dt=.1 HRS
Tdet= 40.2 MIN (.12 AF)

#	ROUTE	INVERT	OUTLET DEVICES
1	P	93.0'	**10" CULVERT**

n=.02 L=52' S=.005'/' Ke=.5 Cc=.9 Cd=.6

POND 1 INFLOW & OUTFLOW
97072 Pond 1 (developed)



REACH 2 97072 Reach 1 (developed swale)

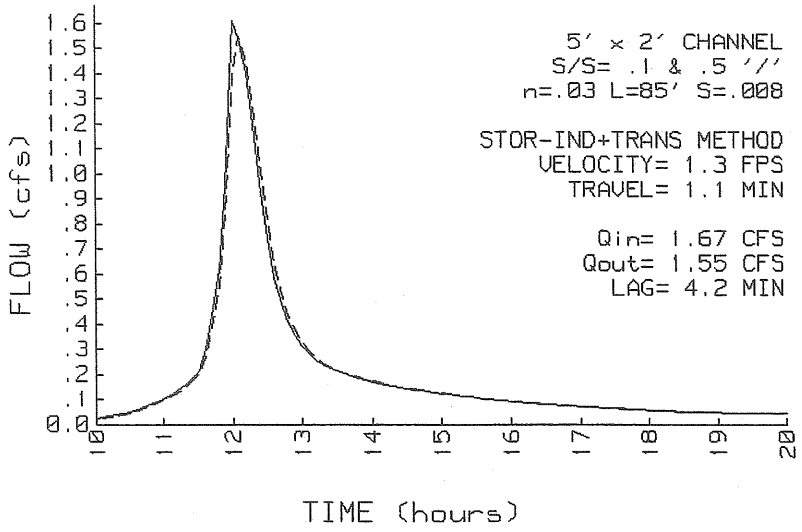
Qin = 1.67 CFS @ 12.04 HRS, VOLUME= .17 AF
Qout= 1.55 CFS @ 12.11 HRS, VOLUME= .17 AF, ATTEN= 7%, LAG= 4.2 MIN

DEPTH (FT)	END AREA (SQ-FT)	DISCH (CFS)
0.0	0.0	0.00
.2	1.2	1.66
.4	3.0	5.86
.6	5.2	12.76
.9	8.7	26.34
1.2	14.6	53.14
1.6	23.4	99.83
2.0	34.0	165.32

5' x 2' CHANNEL
S/S= .1 & .5 '/'
n= .03
LENGTH= 85 FT
SLOPE= .008 FT/FT

STOR-IND+TRANS METHOD
PEAK DEPTH= .19 FT
PEAK VELOCITY= 1.3 FPS
TRAVEL TIME = 1.1 MIN
SPAN= 10-20 HRS, dt=.1 HRS
3 x FINER ROUTING

REACH 2 INFLOW & OUTFLOW
97072 Reach 1 (developed swale)



REACH 1

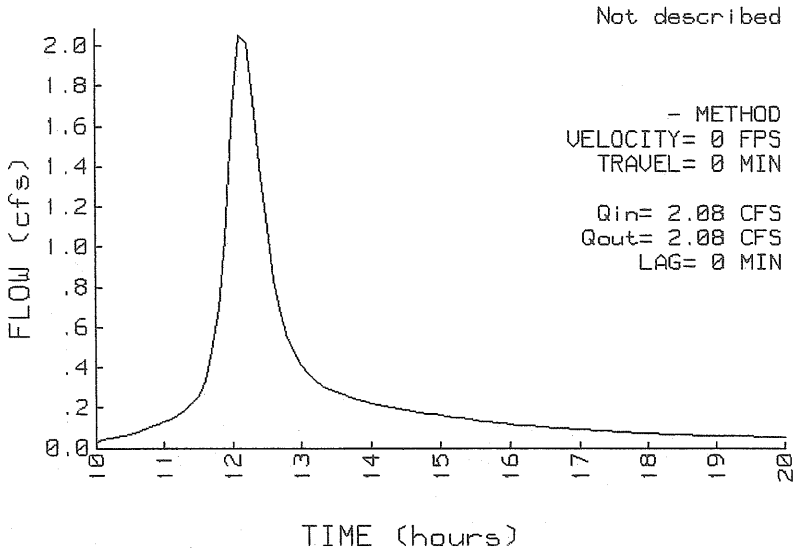
Not described

Qin = 2.08 CFS @ 12.14 HRS, VOLUME= .22 AF
Qout= 2.08 CFS @ 12.14 HRS, VOLUME= .22 AF, ATTEN= 0%, LAG= 0.0 MIN

DEPTH (FT)	END AREA (SQ-FT)	DISCH (CFS)

- METHOD
PEAK DEPTH= 0.00 FT
PEAK VELOCITY= 0.0 FPS
TRAVEL TIME = 0.0 MIN
SPAN= 10-20 HRS, dt=.1 HRS

REACH 1 INFLOW & OUTFLOW



Data for 97072 RAINMAKER IRR.BISHOP ST.,PORTLAND proposed
TYPE III 24-HOUR RAINFALL= 5.50 IN
Prepared by SEBAGO TECHNICS, INC. 1 Oct 99
HydroCAD 5.00 000643 (c) 1986-1998 Applied Microcomputer Systems

POND 1 — 97072 Pond 1 (developed)

Qin = 2.34 CFS @ 12.01 HRS, VOLUME= .15 AF
Qout= 1.31 CFS @ 12.15 HRS, VOLUME= .15 AF, ATTEN= 44%, LAG= 8.5 MIN

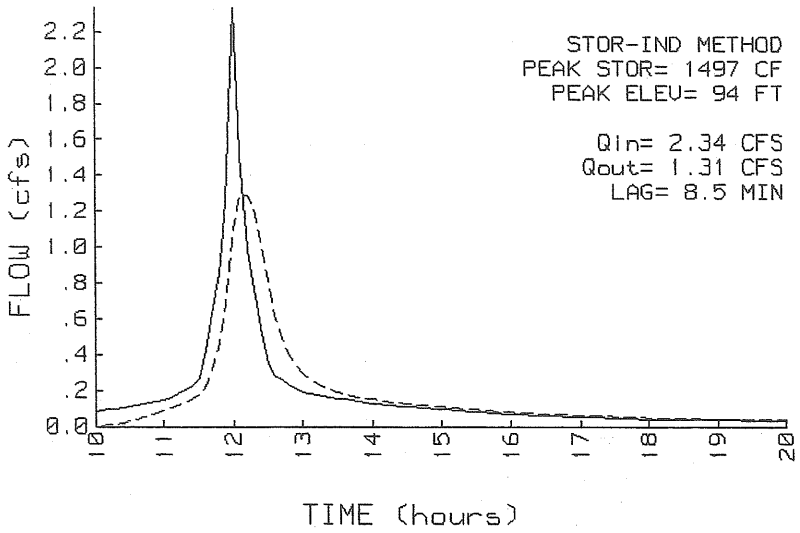
ELEVATION (FT)	AREA (SF)	INC.STOR (CF)	CUM.STOR (CF)
92.9	0	0	0
93.0	1042	52	52
94.0	1680	1361	1413
95.0	2500	2090	3503

STOR-IND METHOD
PEAK STORAGE = 1497 CF
PEAK ELEVATION= 94.0 FT
FLOOD ELEVATION= 95.0 FT
START ELEVATION= 93.0 FT
SPAN= 10-20 HRS, dt=.1 HRS
Tdet= 36.9 MIN (.15 AF)

#	ROUTE	INVERT	OUTLET DEVICES
1	P	93.0'	**10" CULVERT**

n=.02 L=52' S=.005'/' Ke=.5 Cc=.9 Cd=.6

POND 1 INFLOW & OUTFLOW
97072 Pond 1 (developed)



REACH 2 97072 Reach 1 (developed swale)

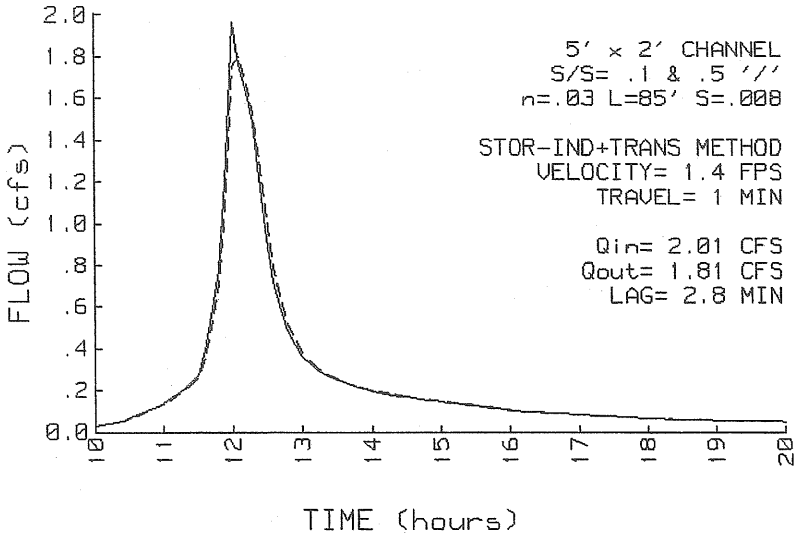
Qin = 2.01 CFS @ 12.03 HRS, VOLUME= .20 AF
Qout= 1.81 CFS @ 12.08 HRS, VOLUME= .20 AF, ATTEN= 10%, LAG= 2.8 MIN

DEPTH (FT)	END AREA (SQ-FT)	DISCH (CFS)
0.0	0.0	0.00
.2	1.2	1.66
.4	3.0	5.86
.6	5.2	12.76
.9	8.7	26.34
1.2	14.6	53.14
1.6	23.4	99.83
2.0	34.0	165.32

5' x 2' CHANNEL
S/S= .1 & .5 '/'
n= .03
LENGTH= 85 FT
SLOPE= .008 FT/FT

STOR-IND+TRANS METHOD
PEAK DEPTH= .21 FT
PEAK VELOCITY= 1.4 FPS
TRAVEL TIME = 1.0 MIN
SPAN= 10-20 HRS, dt=.1 HRS
3 x FINER ROUTING

REACH 2 INFLOW & OUTFLOW
97072 Reach 1 (developed swale)



REACH 1

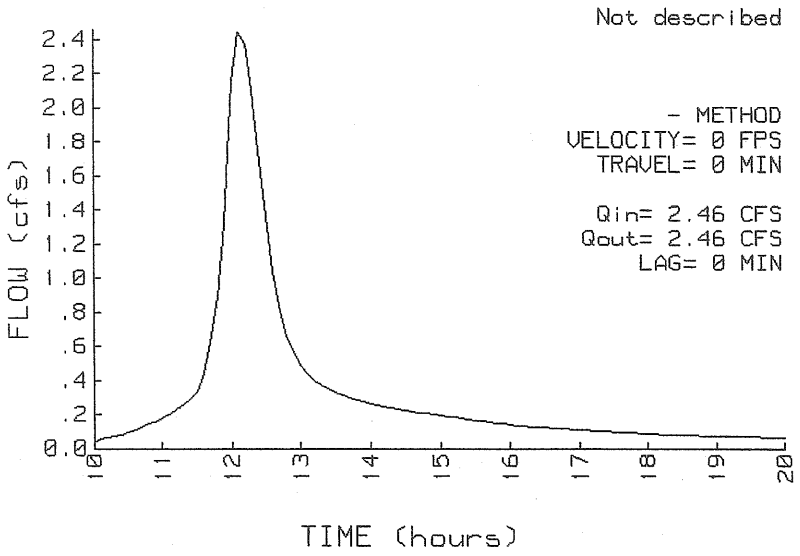
Not described

Qin = 2.46 CFS @ 12.13 HRS, VOLUME= .27 AF
Qout= 2.46 CFS @ 12.13 HRS, VOLUME= .27 AF, ATTEN= 0%, LAG= 0.0 MIN

DEPTH (FT)	END AREA (SQ-FT)	DISCH (CFS)

- METHOD
PEAK DEPTH= 0.00 FT
PEAK VELOCITY= 0.0 FPS
TRAVEL TIME = 0.0 MIN
SPAN= 10-20 HRS, dt=.1 HRS

REACH 1 INFLOW & OUTFLOW



LANDOWNER William Boyle ADDRESS 70 Bishop St, Portland, ME

PROJECT Rainmaker Irrigation BY JRS @ STI DATE 10/01/99

********** STONE LINED PLUNGE POOL OR APRON DESIGN **********

I	DISCHARGE FOR FULL PIPE FLOW ONLY	(CFS)	Q=	2.5
N	PIPE DIAMETER	(FT)	D=	.87
P	PIPE INVERT TO TAILWATER DISTANCE	(FT)	ZP=	.5
U	SOIL / RIPRAP DENSITY	(PCF)	DN=	165
T	PIPE SLOPE - FT DROP / FT PIPE	(FT/FT)	S=	.005
S	WIDTH OF RECEIVING CHANNEL	(ft)	WC=	4
O	MINIMUM FLARE RATE OF APRON SIDES		Z=	2.38
U	LENGTH OF ROCK LINED APRON	(ft)	LA=	4
T P	WIDTH OF APRON AT RECEIVING CHANNEL	(ft)	WA=	4
U	MINIMUM ROCK d50 FOR APRON DESIGN	(IN)	Zd50=	4
T	MINIMUM ROCK THICKNESS OF APRON	(IN)	TRA=	10

WANT ANOTHER TRIAL FOR A NEW CHANNEL WIDTH (APRON) OR D50 (POOL) Y/N?

Finance Department

Duane G. Kline
Director

CITY OF PORTLAND

May 23, 2001

Peter H. Godsoe, Vice President
Norway Savings Bank
261 Main Street
Norway, ME 04268

Re: Boyle Building, Inc.
Letter of Credit No. 99-011

Dear Mr. Godsoe:

As the Department of Planning & Urban Development has authorized the release of the above-named letter of credit, I am hereby returning to you the original document, dated November 16, 1999.

If you require any further information, please let me know.

Sincerely,

Duane G. Kline
Finance Director

DGK.jlb

pc: Kandi Talbot, Planner

Planning & Urban Development

Joseph E. Gray Jr.
Director

CITY OF PORTLAND

TO: Duane Kline, Finance Department

FROM: Alexander Jaegerman, Chief Planner

DATE: May 16, 2001

SUBJECT: Request for Release of Letter of Credit
Rainmaker Irrigation / #70 Bishop Street
Lead CBL#293-C-004; Id #1999-0117

Please release the Letter of Credit account #99-011 for 70 Bishop Street (Rainmaker Irrigation).

Original Sum $ 32,200.00

The project is over three years old, and after an inspection, the determination was made that a defect amount would not be applicable at this time.

Approved: Alexander Jaeger 5/16/01
Alexander Jaegerman
Chief Planner

cc: Kandice Talbot, Planner
Development Review Coordinator
Tony Lombardo, Public Works
Code Enforcement

O:\PLAN\CORRESP\DRC\PERFORM\70BISHOP.DOC

RAINMAKER IRRIGATION | 70 BISHOP STREET | 97072

STORMWATER SUMMARY

8/30/1999 REVISED 10/1/99 * REVISED AGAIN 12-13-99 **

PROJECT AREA = 1.04 AC. SOILS ON SITE FILL SOIL=C-SOIL
SCANTIC=D-SOIL

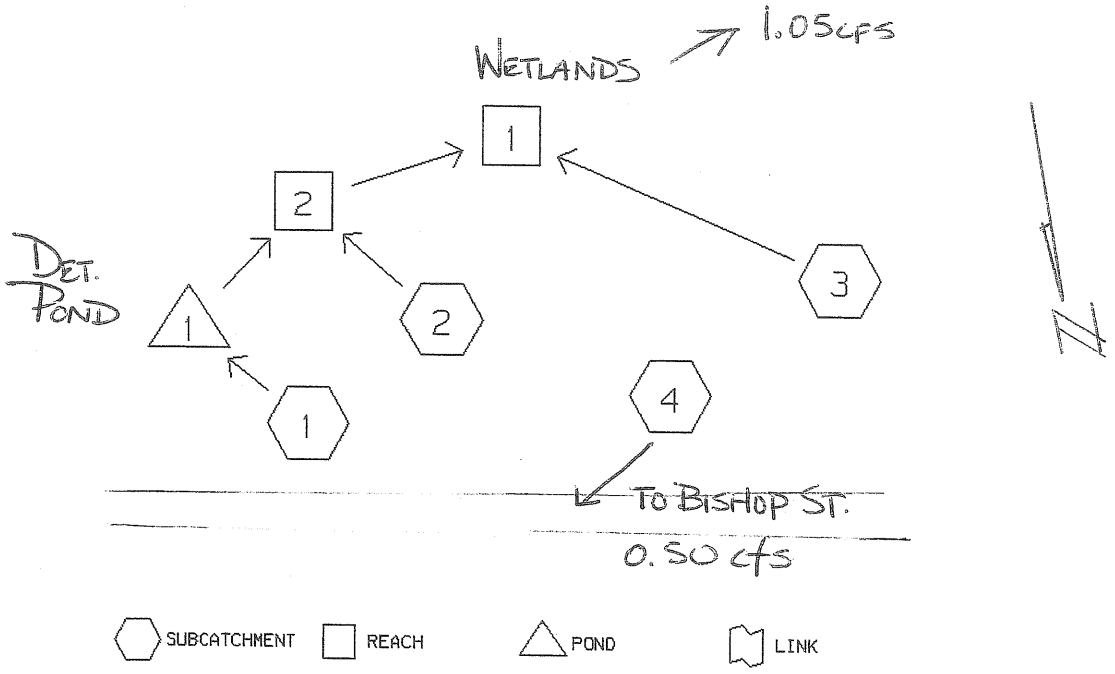
WATERSHED AREA	AVG CN	ACRES	Tc min	PEAK RUNOFF RATES (CFS) 2YR	10YR	25YR
PRE-DEV.						
WS-1	84	0.51	8.30	0.78	1.52	1.88
WS-2	89	0.33	14.00	0.55	0.99	1.20
WS-3	83	0.2	4.70	0.32	0.65	0.81
STUDY POINT #1	TO WETLANDS			**1.04**	**2.05**	**2.54**
STUDY POINT #2	TO BISHOP ST.			**0.55**	**0.99**	**1.2**

WATERSHED AREA	AVG CN	ACRES	Tc min	PEAK RUNOFF RATES (CFS) 2YR	10YR	25YR	
POST-DEV							
WS-1	89	0.49	3.9	1.08	1.93	2.34	
WS-2	88	0.18	2.6	0.39	0.71	0.87	
WS-3	82	0.24	16.1	0.28	0.57	0.71	
WS-4	98	0.17	2.5	0.5	0.79	0.93	
STUDY POINT #1	TO WETLANDS			1.05	2.08	2.47	**
STUDY POINT #2	TO BISHOP S			**0.5**	**0.79**	**0.93**	

NET CHANGE				
	STUDY PT.#1	+0.01	+0.03	-0.07 **
	STUDY PT.#2	-0.03	-0.20	-0.27

Data for 97072 RAINMAKER IRR.BISHOP ST.,PORTLAND proposed
TYPE III 24-HOUR RAINFALL= 3.00 IN
Prepared by SEBAGO TECHNICS, INC. 12 Nov 99
HydroCAD 5.00 000643 (c) 1986-1998 Applied Microcomputer Systems

WATERSHED ROUTING 24HR - PROPOSED COND.



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	.49	3.9	10%80 29%74 61%98	89	-	1.08	12.01	.07
2	.18	2.6	56%80 44%98	88	-	.39	12.00	.02
3	.24	16.1	29%74 50%80 21%98	82	-	.28	12.19	.03
4	.17	2.5	100%98	98	-	.50	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)
1	-	-	-	-	-	-	-	-	0.0	0.0	1.05 N
2	-	5.0	2.0	.10	.50	.030	85	.0080	1.3	1.1	.79

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)
1	93.0	95.0	93.6	.02	1.08	.59			45	9.0

Data for 97072 RAINMAKER IRR.BISHOP ST.,PORTLAND proposed
TYPE III 24-HOUR RAINFALL= 3.00 IN
Prepared by SEBAGO TECHNICS, INC. 12 Nov 99
HydroCAD 5.00 000643 (c) 1986-1998 Applied Microcomputer Systems

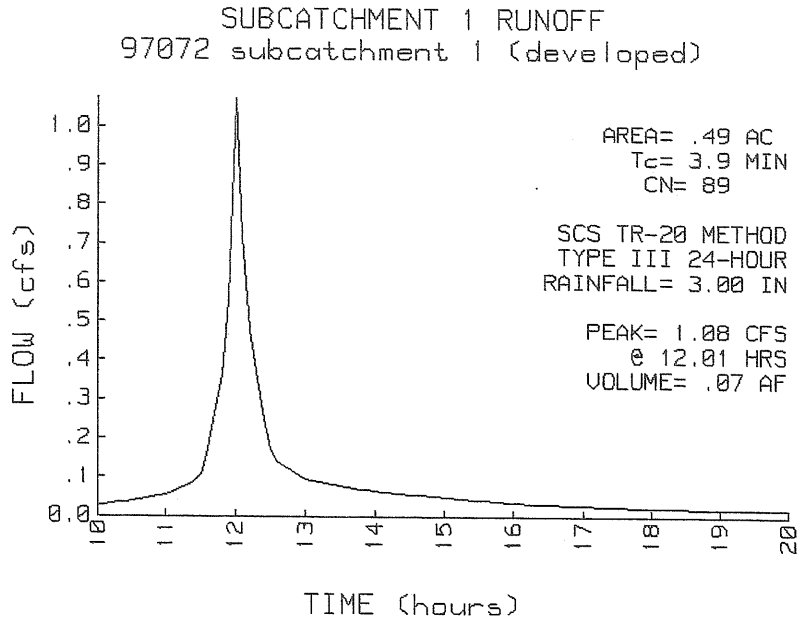
SUBCATCHMENT 1 — 97072 subcatchment 1 (developed)

PEAK= 1.08 CFS @ 12.01 HRS, VOLUME= .07 AF

ACRES	CN	
.05	80	Grass,good condition,group D
.14	74	Grass,good condition,group C
.30	98	Impervious
.49	89	

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 3.00 IN
SPAN= 10-20 HRS, dt=.1 HRS

Method			Comment		Tc (min)
TR-55 SHEET FLOW			AB		2.5
Smooth surfaces	n=.011	L=90'	P2=3 in	s=.0028 '/'	
TR-55 SHEET FLOW			BC		1.4
Smooth surfaces	n=.011	L=60'	P2=3 in	s=.0058 '/'	
SHALLOW CONCENTRATED/UPLAND FLOW			CD		0.0
Grassed Waterway	Kv=15	L=20'	s=.33 '/'	V=8.62 fps	
			Total Length= 170 ft	Total Tc=	3.9



Data for 97072 RAINMAKER IRR.BISHOP ST.,PORTLAND proposed
TYPE III 24-HOUR RAINFALL= 3.00 IN
Prepared by SEBAGO TECHNICS, INC. 12 Nov 99
HydroCAD 5.00 000643 (c) 1986-1998 Applied Microcomputer Systems

SUBCATCHMENT 2 97072 subcatchment 2 (developed)

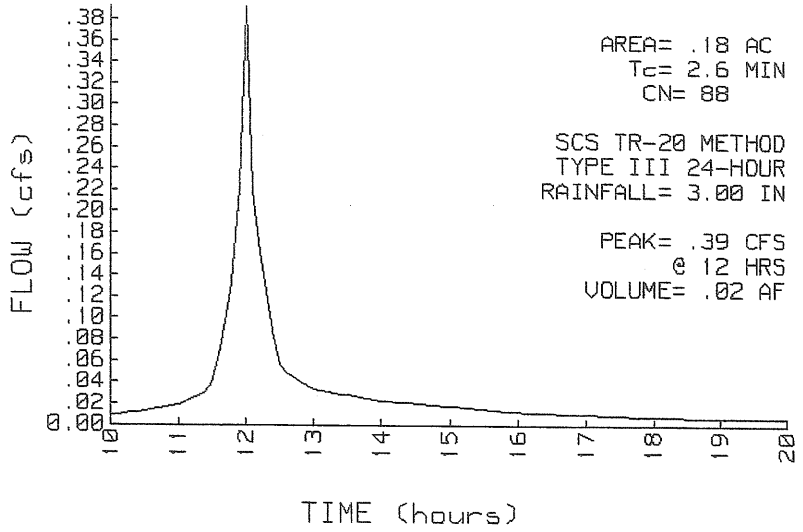
PEAK= .39 CFS @ 12.00 HRS, VOLUME= .02 AF

ACRES	CN	
.10	80	Grass,good condition,group D
.08	98	ROOF
.18	88	

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 3.00 IN
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
TR-55 SHEET FLOW	DE	2.4
Grass: Short n=.15 L=30' P2=3 in s=.0691 '/'		
SHALLOW CONCENTRATED/UPLAND FLOW	E-E1	.2
Grassed Waterway Kv=15 L=60' s=.08 '/' V=4.24 fps		
	Total Length= 90 ft Total Tc=	2.6

SUBCATCHMENT 2 RUNOFF
97072 subcatchment 2 (developed)



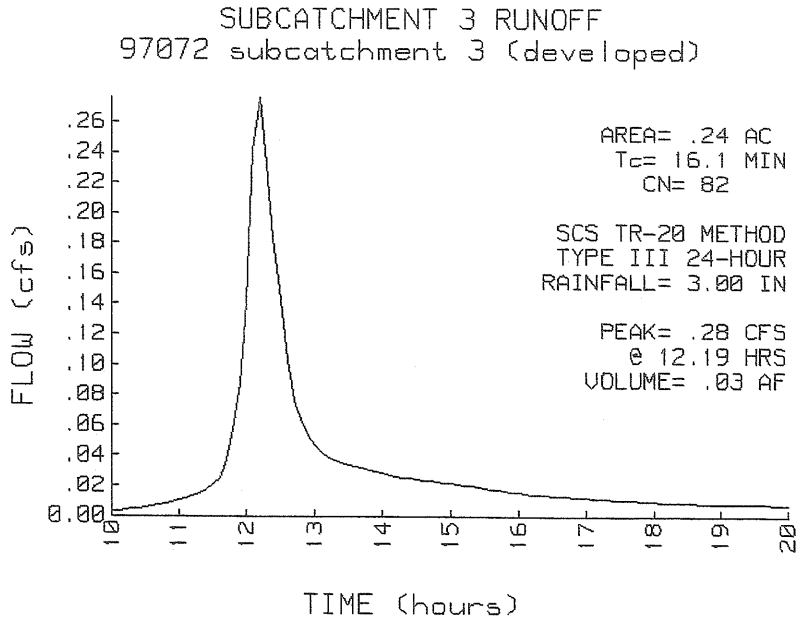
SUBCATCHMENT 3 97072 subcatchment 3 (developed)

PEAK= .28 CFS @ 12.19 HRS, VOLUME= .03 AF

ACRES	CN	
.07	74	Grass,good condition,group C
.12	80	Grass,good condition,group D
.05	98	IMPERVIOUS
.24	82	

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 3.00 IN
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
TR-55 SHEET FLOW	JK	15.7
Grass: Dense n=.24 L=140' P2=3 in s=.0333 '/'		
SHALLOW CONCENTRATED/UPLAND FLOW	KL	.4
Grassed Waterway Kv=15 L=95' s=.06 '/' V=3.67 fps		
	Total Length= 235 ft Total Tc=	16.1



Data for 97072 RAINMAKER IRR.BISHOP ST.,PORTLAND proposed
TYPE III 24-HOUR RAINFALL= 3.00 IN
Prepared by SEBAGO TECHNICS, INC. 12 Nov 99
HydroCAD 5.00 000643 (c) 1986-1998 Applied Microcomputer Systems

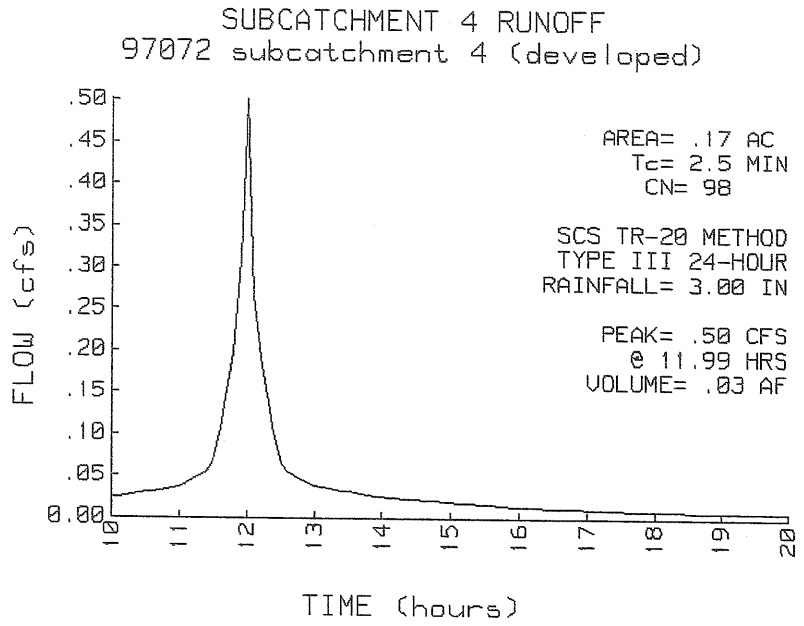
SUBCATCHMENT 4 97072 subcatchment 4 (developed)

PEAK= .50 CFS @ 11.99 HRS, VOLUME= .03 AF

ACRES	CN	
.17	98	Impervious

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 3.00 IN
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
TR-55 SHEET FLOW	GH	2.0
Smooth surfaces n=.011 L=122'	P2=3 in s=.0092 '/'	
SHALLOW CONCENTRATED/UPLAND FLOW	HI	.5
Paved Kv=20.3282 L=56' s=.0089 '/'	V=1.92 fps	
	Total Length= 178 ft	Total Tc= 2.5



REACH 1

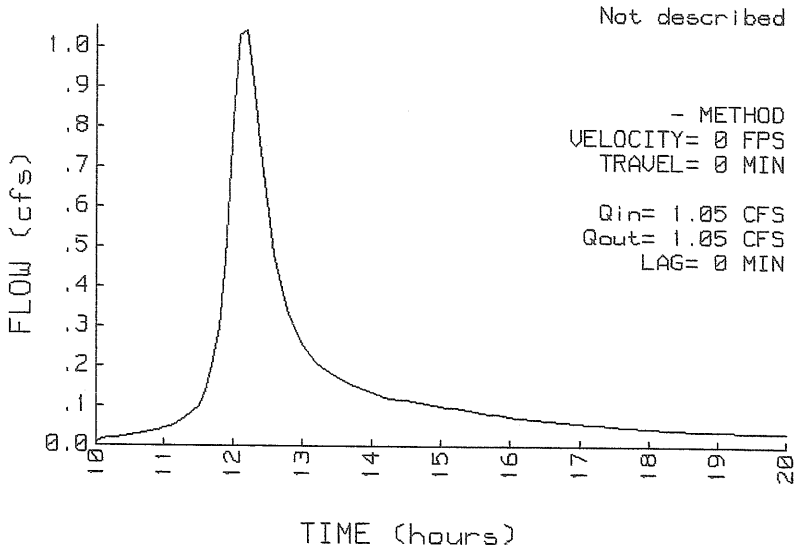
Not described

Qin = 1.05 CFS @ 12.16 HRS, VOLUME= .12 AF
Qout= 1.05 CFS @ 12.16 HRS, VOLUME= .12 AF, ATTEN= 0%, LAG= 0.0 MIN

DEPTH (FT)	END AREA (SQ-FT)	DISCH (CFS)

- METHOD
PEAK DEPTH= 0.00 FT
PEAK VELOCITY= 0.0 FPS
TRAVEL TIME = 0.0 MIN
SPAN= 10-20 HRS, dt=.1 HRS

REACH 1 INFLOW & OUTFLOW



REACH 2 97072 Reach 1 (developed swale)

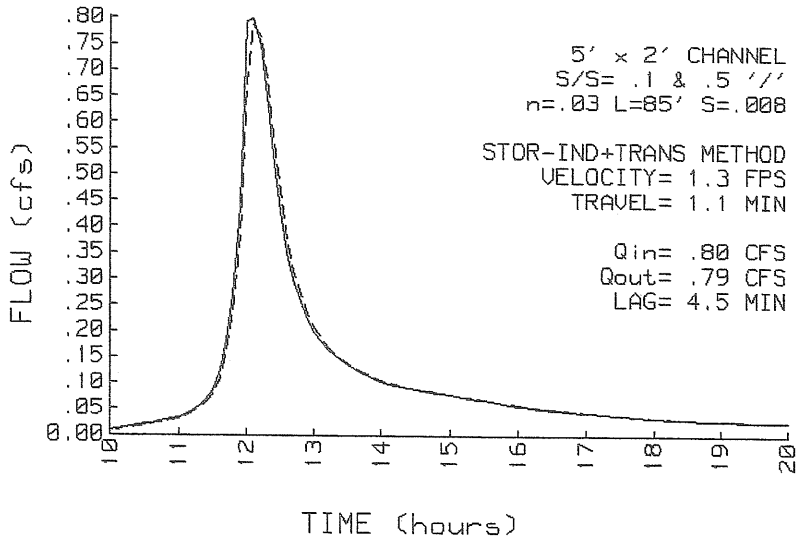
Qin = .80 CFS @ 12.06 HRS, VOLUME= .09 AF
Qout= .79 CFS @ 12.13 HRS, VOLUME= .09 AF, ATTEN= 1%, LAG= 4.5 MIN

DEPTH (FT)	END AREA (SQ-FT)	DISCH (CFS)
0.0	0.0	0.00
.2	1.2	1.66
.4	3.0	5.86
.6	5.2	12.76
.9	8.7	26.34
1.2	14.6	53.14
1.6	23.4	99.83
2.0	34.0	165.32

5' x 2' CHANNEL
S/S= .1 & .5 '/'
n= .03
LENGTH= 85 FT
SLOPE= .008 FT/FT

STOR-IND+TRANS METHOD
PEAK DEPTH= .10 FT
PEAK VELOCITY= 1.3 FPS
TRAVEL TIME = 1.1 MIN
SPAN= 10-20 HRS, dt=.1 HRS
3 x FINER ROUTING

REACH 2 INFLOW & OUTFLOW
97072 Reach 1 (developed swale)



Data for 97072 RAINMAKER IRR.BISHOP ST.,PORTLAND proposed
TYPE III 24-HOUR RAINFALL= 3.00 IN
Prepared by SEBAGO TECHNICS, INC. 12 Nov 99
HydroCAD 5.00 000643 (c) 1986-1998 Applied Microcomputer Systems

POND 1 97072 Pond 1 (developed)

Qin = 1.08 CFS @ 12.01 HRS, VOLUME= .07 AF
Qout= .59 CFS @ 12.16 HRS, VOLUME= .07 AF, ATTEN= 45%, LAG= 9.0 MIN

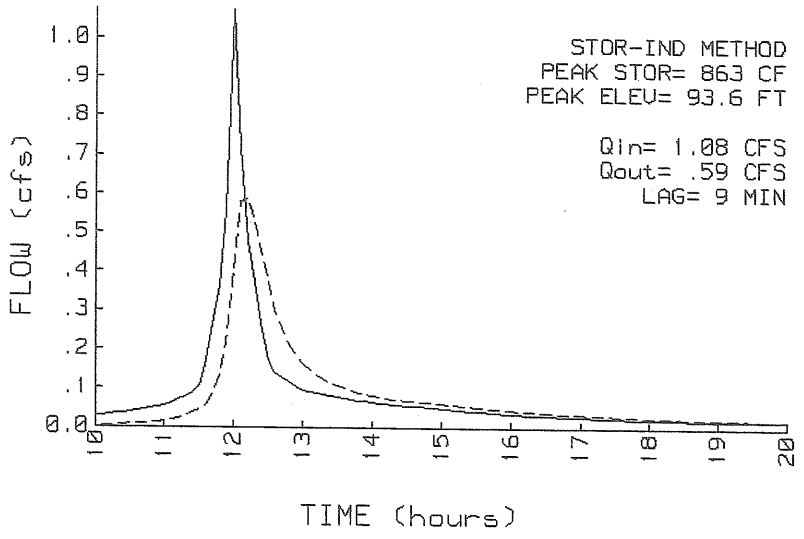
ELEVATION (FT)	AREA (SF)	INC.STOR (CF)	CUM.STOR (CF)
92.9	0	0	0
93.0	1270	63	63
94.0	1510	1390	1453
95.0	1760	1635	3088

STOR-IND METHOD
PEAK STORAGE = 863 CF
PEAK ELEVATION= 93.6 FT
FLOOD ELEVATION= 95.0 FT
START ELEVATION= 93.0 FT
SPAN= 10-20 HRS, dt=.1 HRS
Tdet= 55.3 MIN (.06 AF)

#	ROUTE	INVERT	OUTLET DEVICES
1	P	93.0'	10" CULVERT

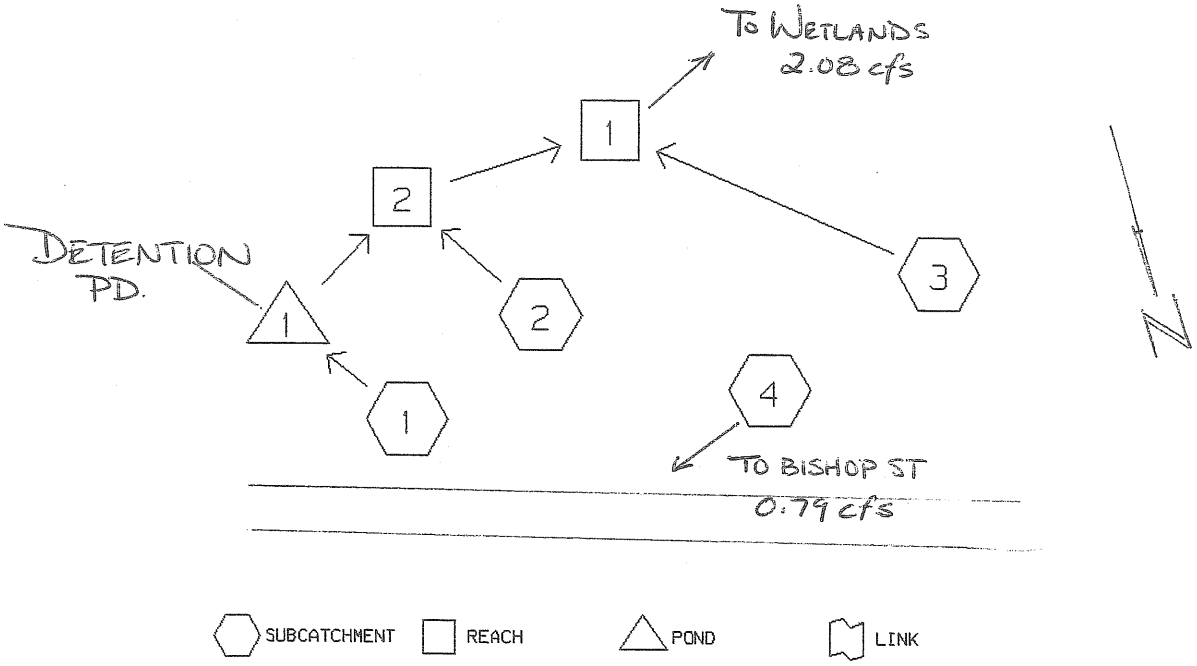
n=.02 L=48' S=.005'/' Ke=.5 Cc=.9 Cd=.6

POND 1 INFLOW & OUTFLOW
97072 Pond 1 (developed)



Data for 97072 RAINMAKER IRR.BISHOP ST.,PORTLAND proposed
TYPE III 24-HOUR RAINFALL= 4.70 IN
Prepared by SEBAGO TECHNICS, INC. 12 Nov 99
HydroCAD 5.00 000643 (c) 1986-1998 Applied Microcomputer Systems

WATERSHED ROUTING 10 YR - PROPOSED COND.



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	.49	3.9	10%80 29%74 61%98	89	-	1.93	12.01	.13
2	.18	2.6	56%80 44%98	88	-	.71	12.00	.05
3	.24	16.1	29%74 50%80 21%98	82	-	.57	12.18	.05
4	.17	2.5	100%98	98	-	.79	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)
1	-	-	-	-	-	-	-	-	0.0	0.0	2.08 N
2	-	5.0	2.0	.10	.50	.030	85	.0080	1.3	1.1	1.54

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)
1	93.0	95.0	93.9	.03	1.93	1.17			40	7.8

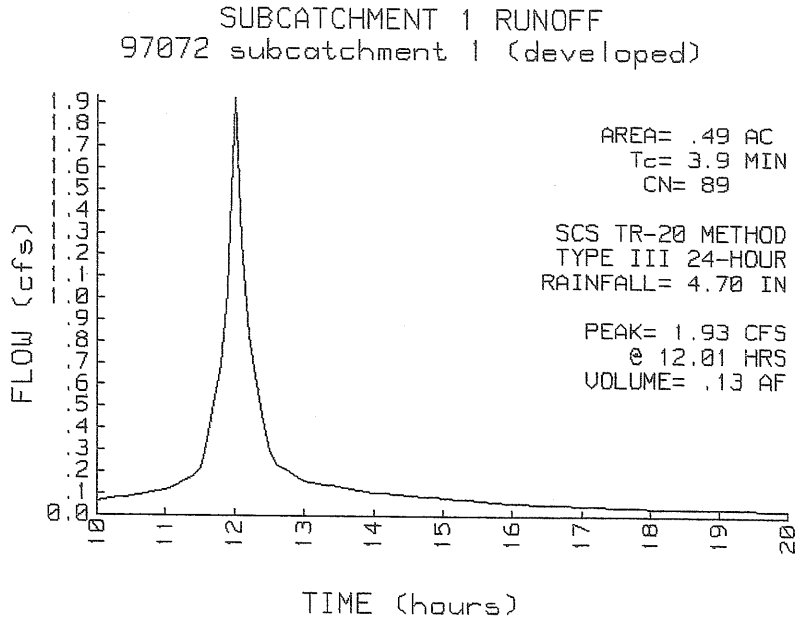
SUBCATCHMENT 1 — 97072 subcatchment 1 (developed)

PEAK= 1.93 CFS @ 12.01 HRS, VOLUME= .13 AF

ACRES	CN	
.05	80	Grass,good condition,group D
.14	74	Grass,good condition,group C
.30	98	Impervious
.49	89	

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 4.70 IN
SPAN= 10-20 HRS, dt=.1 HRS

Method			Comment		Tc (min)
TR-55 SHEET FLOW			AB		2.5
Smooth surfaces	n=.011	L=90'	P2=3 in	s=.0028 '/'	
TR-55 SHEET FLOW			BC		1.4
Smooth surfaces	n=.011	L=60'	P2=3 in	s=.0058 '/'	
SHALLOW CONCENTRATED/UPLAND FLOW			CD		0.0
Grassed Waterway	Kv=15	L=20'	s=.33 '/'	V=8.62 fps	
			Total Length= 170 ft	Total Tc=	3.9



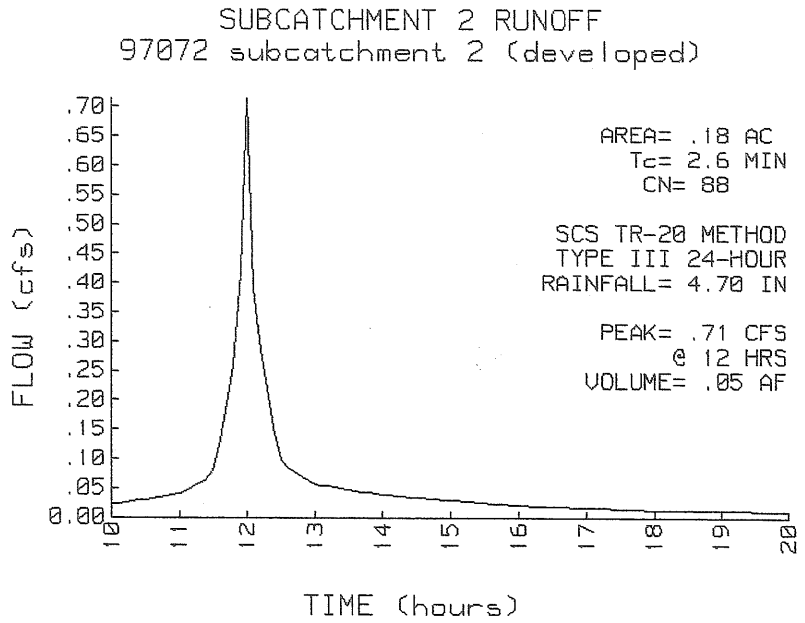
SUBCATCHMENT 2 97072 subcatchment 2 (developed)

PEAK= .71 CFS @ 12.00 HRS, VOLUME= .05 AF

ACRES	CN	
.10	80	Grass,good condition,group D
.08	98	ROOF
.18	88	

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 4.70 IN
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
TR-55 SHEET FLOW	DE	2.4
Grass: Short n=.15 L=30' P2=3 in s=.0691 '/'		
SHALLOW CONCENTRATED/UPLAND FLOW	E-E1	.2
Grassed Waterway Kv=15 L=60' s=.08 '/' V=4.24 fps		
	Total Length= 90 ft Total Tc=	2.6



Data for 97072 RAINMAKER IRR.BISHOP ST.,PORTLAND proposed
TYPE III 24-HOUR RAINFALL= 4.70 IN
Prepared by SEBAGO TECHNICS, INC. 12 Nov 99
HydroCAD 5.00 000643 (c) 1986-1998 Applied Microcomputer Systems

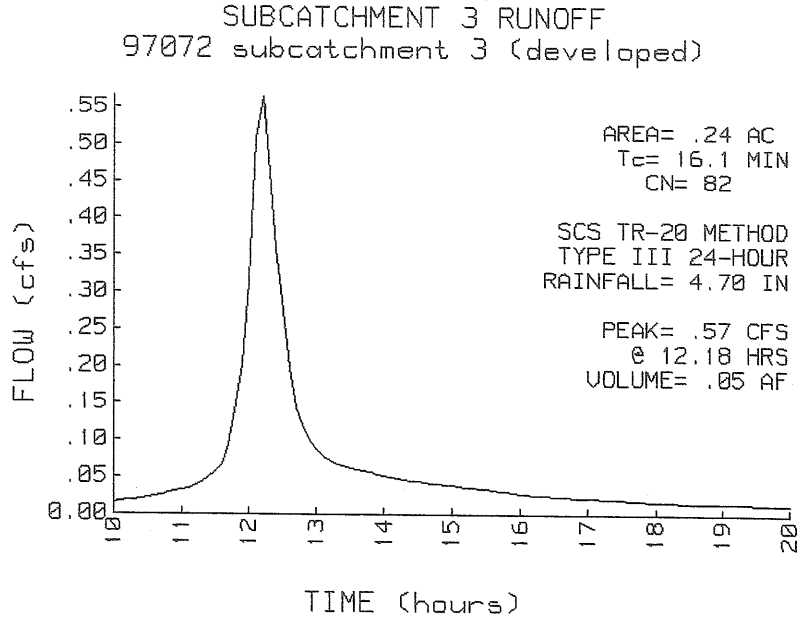
SUBCATCHMENT 3 97072 subcatchment 3 (developed)

PEAK= .57 CFS @ 12.18 HRS, VOLUME= .05 AF

ACRES	CN	
.07	74	Grass,good condition,group C
.12	80	Grass,good condition,group D
.05	98	IMPERVIOUS
.24	82	

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 4.70 IN
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
TR-55 SHEET FLOW	JK	15.7
Grass: Dense n=.24 L=140' P2=3 in s=.0333 '/'		
SHALLOW CONCENTRATED/UPLAND FLOW	KL	.4
Grassed Waterway Kv=15 L=95' s=.06 '/' V=3.67 fps		
	Total Length= 235 ft	Total Tc= 16.1



Data for 97072 RAINMAKER IRR.BISHOP ST.,PORTLAND proposed
TYPE III 24-HOUR RAINFALL= 4.70 IN
Prepared by SEBAGO TECHNICS, INC. 12 Nov 99
HydroCAD 5.00 000643 (c) 1986-1998 Applied Microcomputer Systems

SUBCATCHMENT 4 97072 subcatchment 4 (developed)

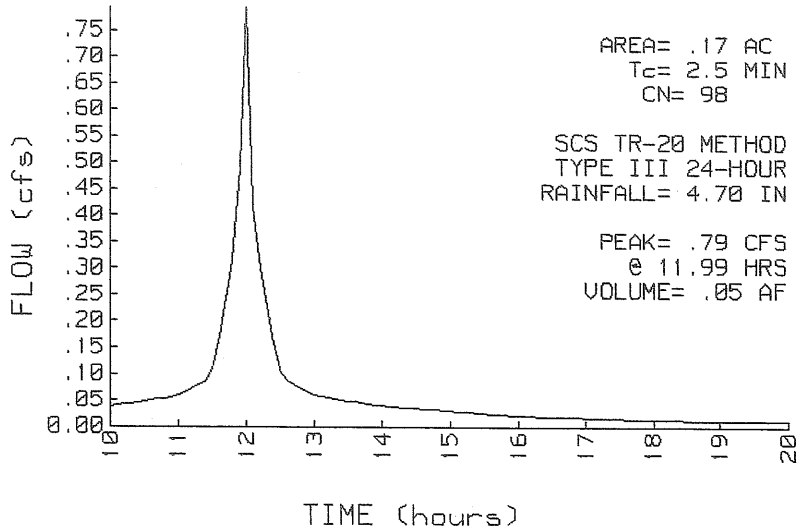
PEAK= .79 CFS @ 11.99 HRS, VOLUME= .05 AF

ACRES	CN	
.17	98	Impervious

SCS TR-20 METHOD
TYPE III 24-HOUR
RAINFALL= 4.70 IN
SPAN= 10-20 HRS, dt=.1 HRS

Method	Comment	Tc (min)
TR-55 SHEET FLOW	GH	2.0
Smooth surfaces n=.011 L=122'	P2=3 in s=.0092 '/'	
SHALLOW CONCENTRATED/UPLAND FLOW	HI	.5
Paved Kv=20.3282 L=56' s=.0089 '/'	V=1.92 fps	
	Total Length= 178 ft	Total Tc= 2.5

SUBCATCHMENT 4 RUNOFF
97072 subcatchment 4 (developed)



REACH 1

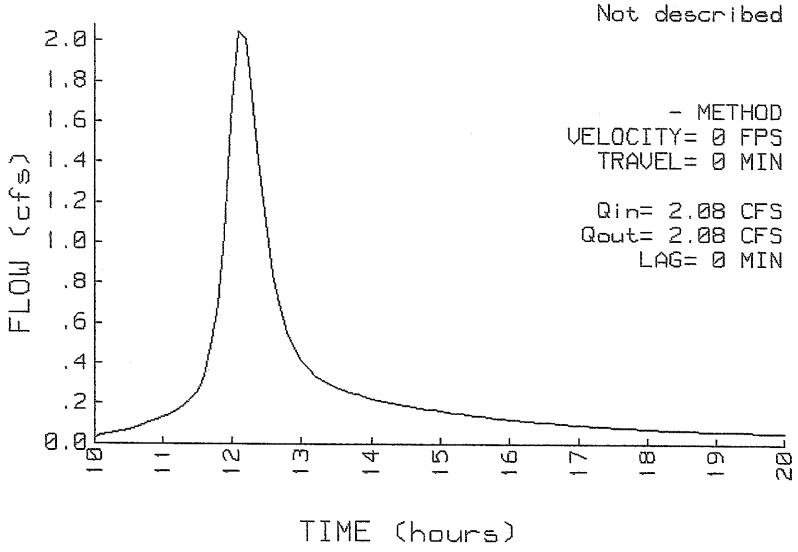
Not described

Qin = 2.08 CFS @ 12.14 HRS, VOLUME= .22 AF
Qout= 2.08 CFS @ 12.14 HRS, VOLUME= .22 AF, ATTEN= 0%, LAG= 0.0 MIN

DEPTH (FT)	END AREA (SQ-FT)	DISCH (CFS)

- METHOD
PEAK DEPTH= 0.00 FT
PEAK VELOCITY= 0.0 FPS
TRAVEL TIME = 0.0 MIN
SPAN= 10-20 HRS, dt=.1 HRS

REACH 1 INFLOW & OUTFLOW



REACH 2 97072 Reach 1 (developed swale)

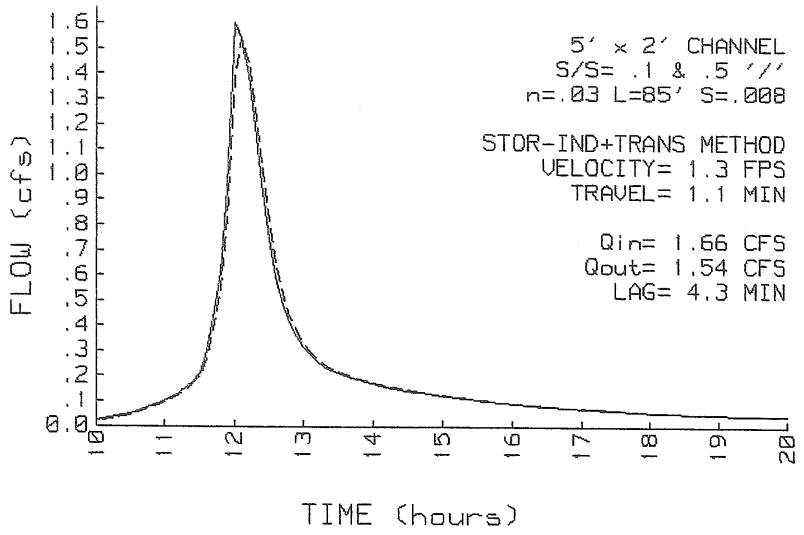
Qin = 1.66 CFS @ 12.04 HRS, VOLUME= .17 AF
Qout= 1.54 CFS @ 12.11 HRS, VOLUME= .17 AF, ATTEN= 7%, LAG= 4.3 MIN

DEPTH (FT)	END AREA (SQ-FT)	DISCH (CFS)
0.0	0.0	0.00
.2	1.2	1.66
.4	3.0	5.86
.6	5.2	12.76
.9	8.7	26.34
1.2	14.6	53.14
1.6	23.4	99.83
2.0	34.0	165.32

5' x 2' CHANNEL
S/S= .1 & .5 '/'
n= .03
LENGTH= 85 FT
SLOPE= .008 FT/FT

STOR-IND+TRANS METHOD
PEAK DEPTH= .19 FT
PEAK VELOCITY= 1.3 FPS
TRAVEL TIME = 1.1 MIN
SPAN= 10-20 HRS, dt=.1 HRS
3 x FINER ROUTING

REACH 2 INFLOW & OUTFLOW
97072 Reach 1 (developed swale)



POND 1 97072 Pond 1 (developed)

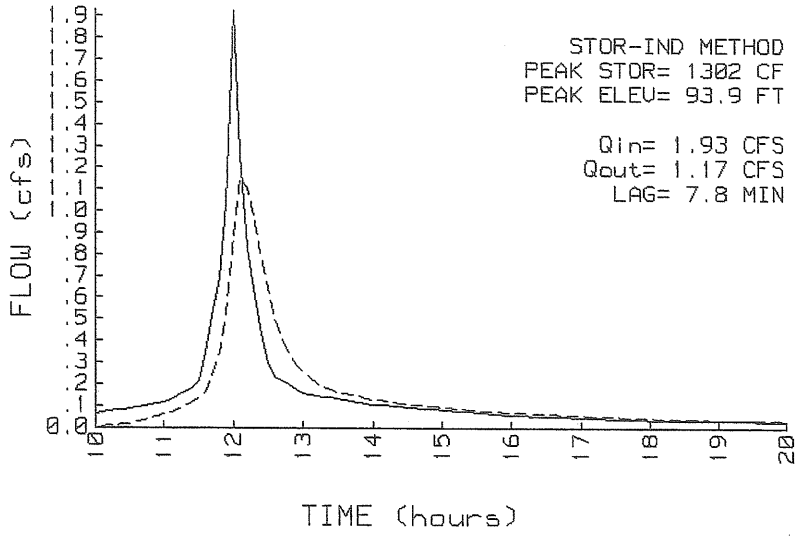
Qin = 1.93 CFS @ 12.01 HRS, VOLUME= .13 AF
Qout= 1.17 CFS @ 12.14 HRS, VOLUME= .12 AF, ATTEN= 40%, LAG= 7.8 MIN

ELEVATION (FT)	AREA (SF)	INC.STOR (CF)	CUM.STOR (CF)
92.9	0	0	0
93.0	1270	63	63
94.0	1510	1390	1453
95.0	1760	1635	3088

STOR-IND METHOD
PEAK STORAGE = 1302 CF
PEAK ELEVATION= 93.9 FT
FLOOD ELEVATION= 95.0 FT
START ELEVATION= 93.0 FT
SPAN= 10-20 HRS, dt=.1 HRS
Tdet= 41 MIN (.12 AF)

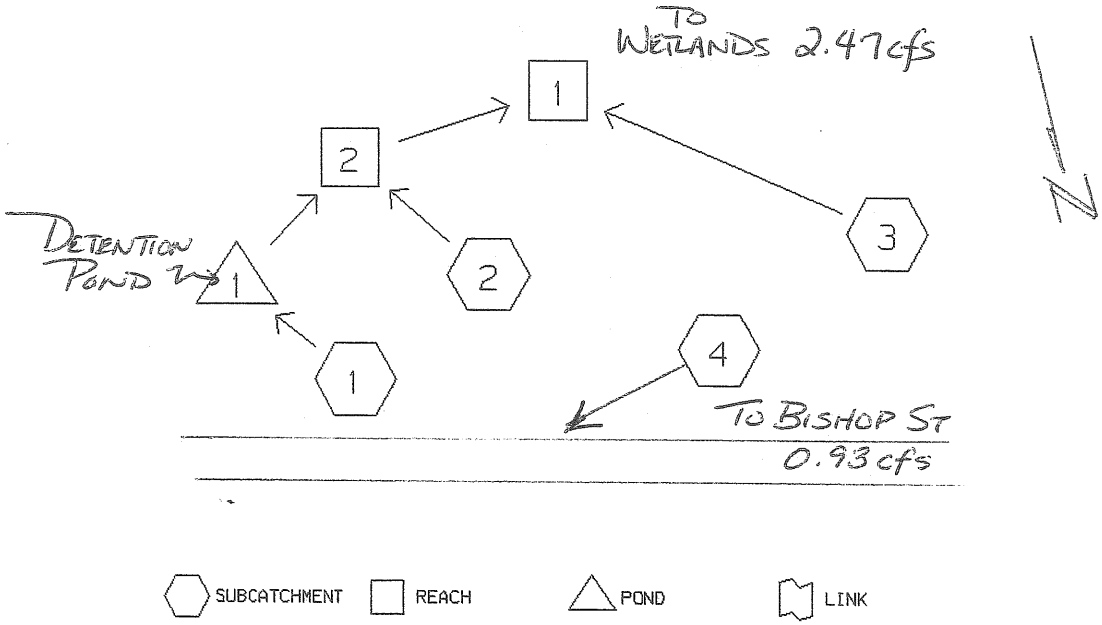
#	ROUTE	INVERT	OUTLET DEVICES
1	P	93.0'	**10" CULVERT** n=.02 L=48' S=.005'/' Ke=.5 Cc=.9 Cd=.6

POND 1 INFLOW & OUTFLOW
97072 Pond 1 (developed)



Data for 97072 RAINMAKER IRR.BISHOP ST.,PORTLAND proposed
TYPE III 24-HOUR RAINFALL= 5.50 IN
Prepared by SEBAGO TECHNICS, INC. 12 Nov 99
HydroCAD 5.00 000643 (c) 1986-1998 Applied Microcomputer Systems

WATERSHED ROUTING 25 YR - PROPOSED COND



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	.49	3.9	10%80 29%74 61%98	89	-	2.34	12.01	.15
2	.18	2.6	56%80 44%98	88	-	.87	12.00	.05
3	.24	16.1	29%74 50%80 21%98	82	-	.71	12.18	.06
4	.17	2.5	100%98	98	-	.93	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)
1	-	-	-	-	-	-	-	-	0.0	0.0	2.47 N
2	-	5.0	2.0	.10	.50	.030	85	.0080	1.4	1.0	1.81

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)
1	93.0	95.0	94.0	.03	2.34	1.33			43	8.5

Data for 97072 RAINMAKER IRR.BISHOP ST.,PORTLAND proposed
TYPE III 24-HOUR RAINFALL= 5.50 IN
Prepared by SEBAGO TECHNICS, INC. 12 Nov 99
HydroCAD 5.00 000643 (c) 1986-1998 Applied Microcomputer Systems

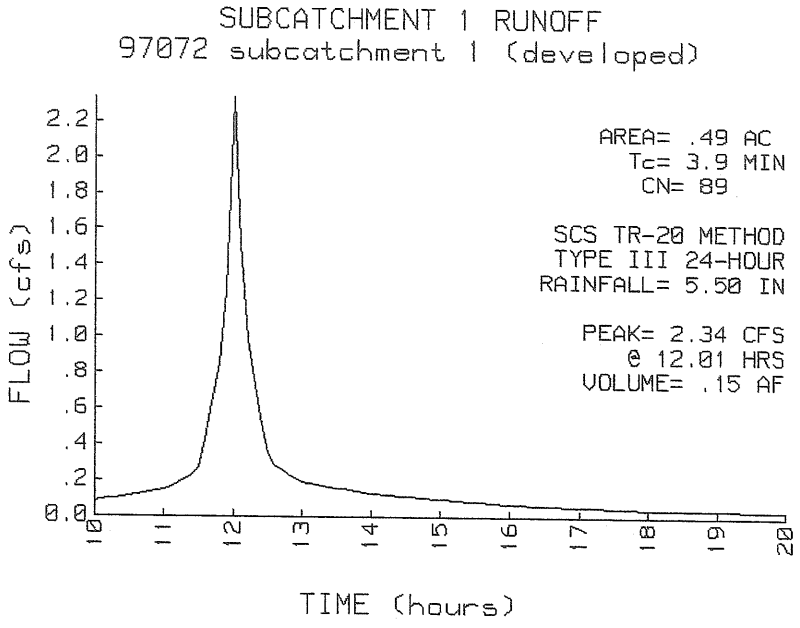
SUBCATCHMENT 1 — 97072 subcatchment 1 (developed)

PEAK= 2.34 CFS @ 12.01 HRS, VOLUME= .15 AF

ACRES	CN	
.05	80	Grass,good condition,group D
.14	74	Grass,good condition,group C
.30	98	Impervious
.49	89	

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			AB		2.5
Smooth surfaces	n=.011	L=90'	P2=3 in	s=.0028 '/'	
TR-55 SHEET FLOW			BC		1.4
Smooth surfaces	n=.011	L=60'	P2=3 in	s=.0058 '/'	
SHALLOW CONCENTRATED/UPLAND FLOW			CD		0.0
Grassed Waterway	Kv=15	L=20'	s=.33 '/'	V=8.62 fps	
			Total Length= 170 ft	Total Tc=	3.9



Data for 97072 RAINMAKER IRR.BISHOP ST.,PORTLAND proposed
TYPE III 24-HOUR RAINFALL= 5.50 IN
Prepared by SEBAGO TECHNICS, INC. 12 Nov 99
HydroCAD 5.00 000643 (c) 1986-1998 Applied Microcomputer Systems

SUBCATCHMENT 2 97072 subcatchment 2 (developed)

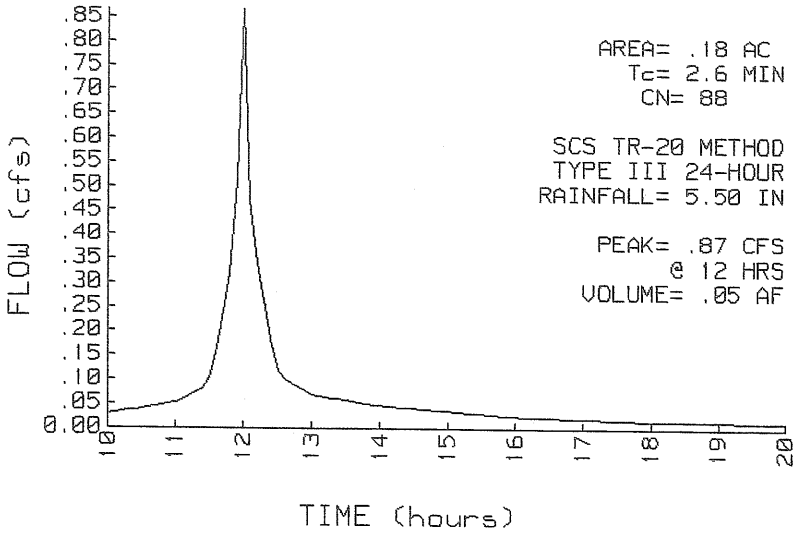
PEAK= .87 CFS @ 12.00 HRS, VOLUME= .05 AF

ACRES	CN	
.10	80	Grass,good condition,group D
.08	98	ROOF
.18	88	

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	DE	2.4
Grass: Short n=.15 L=30' P2=3 in s=.0691 '/'		
SHALLOW CONCENTRATED/UPLAND FLOW	E-E1	.2
Grassed Waterway Kv=15 L=60' s=.08 '/' V=4.24 fps		
	Total Length= 90 ft Total Tc=	2.6

SUBCATCHMENT 2 RUNOFF
97072 subcatchment 2 (developed)



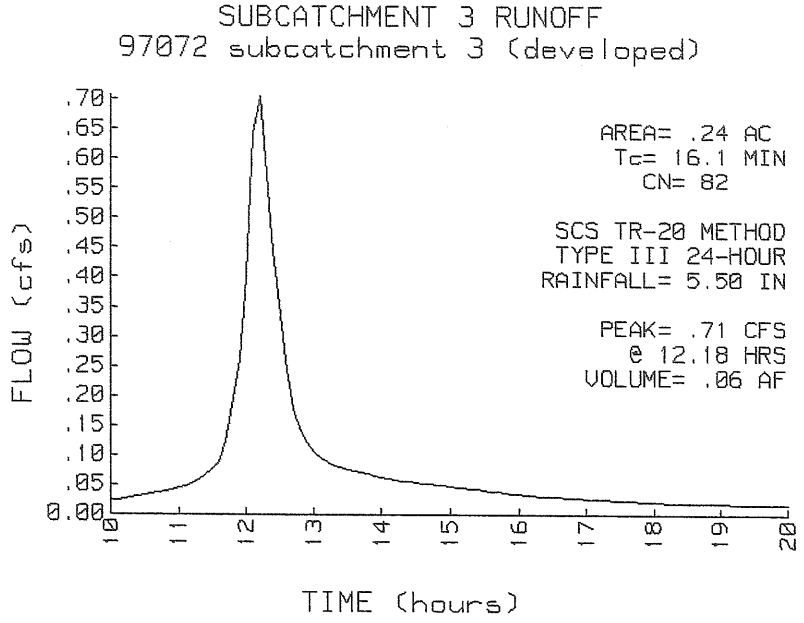
SUBCATCHMENT 3 97072 subcatchment 3 (developed)

PEAK= .71 CFS @ 12.18 HRS, VOLUME= .06 AF

ACRES	CN	
.07	74	Grass,good condition,group C
.12	80	Grass,good condition,group D
.05	98	IMPERVIOUS
.24	82	

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	JK	15.7
Grass: Dense n=.24 L=140' P2=3 in s=.0333 '/'		
SHALLOW CONCENTRATED/UPLAND FLOW	KL	.4
Grassed Waterway Kv=15 L=95' s=.06 '/' V=3.67 fps		
	Total Length= 235 ft Total Tc=	16.1



SUBCATCHMENT 4 97072 subcatchment 4 (developed)

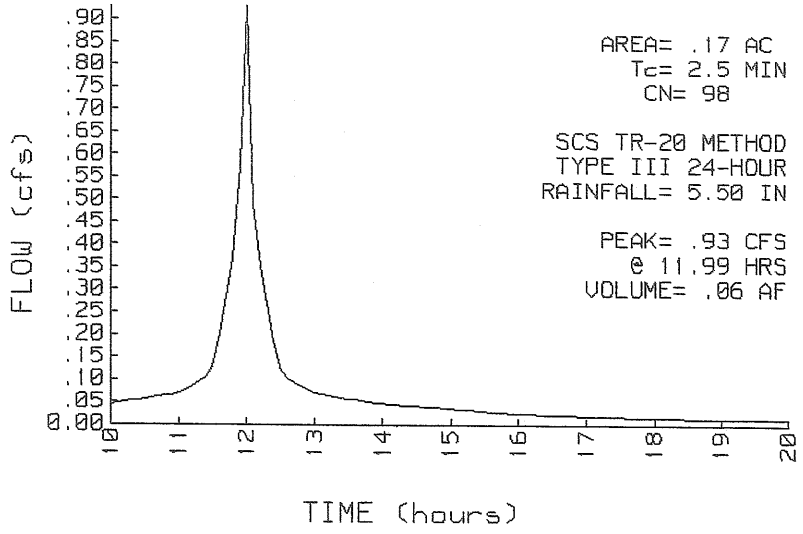
PEAK= .93 CFS @ 11.99 HRS, VOLUME= .06 AF

ACRES	CN	
.17	98	Impervious

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	GH	2.0
Smooth surfaces n=.011 L=122'	P2=3 in s=.0092 '/'	
SHALLOW CONCENTRATED/UPLAND FLOW	HI	.5
Paved Kv=20.3282 L=56'	s=.0089 '/' V=1.92 fps	
	Total Length= 178 ft	Total Tc= 2.5

SUBCATCHMENT 4 RUNOFF
97072 subcatchment 4 (developed)



REACH 1

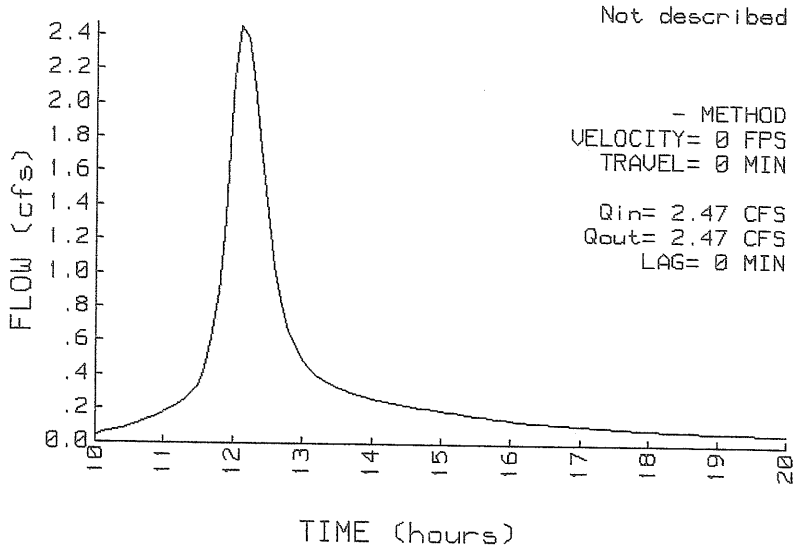
Not described

Qin = 2.47 CFS @ 12.13 HRS, VOLUME= .27 AF
Qout= 2.47 CFS @ 12.13 HRS, VOLUME= .27 AF, ATTEN= 0%, LAG= 0.0 MIN

DEPTH (FT)	END AREA (SQ-FT)	DISCH (CFS)

- METHOD
PEAK DEPTH= 0.00 FT
PEAK VELOCITY= 0.0 FPS
TRAVEL TIME = 0.0 MIN
SPAN= 10-20 HRS, dt=.1 HRS

REACH 1 INFLOW & OUTFLOW



REACH 2 97072 Reach 1 (developed swale)

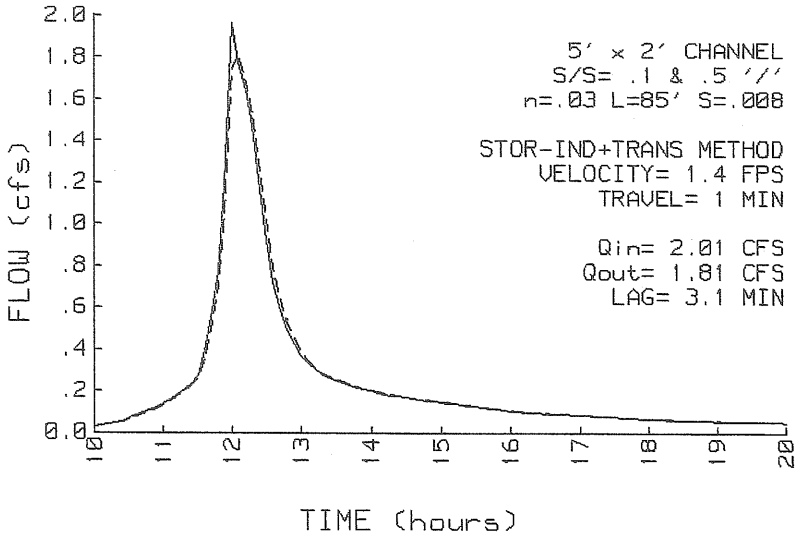
Qin = 2.01 CFS @ 12.03 HRS, VOLUME= .20 AF
Qout= 1.81 CFS @ 12.08 HRS, VOLUME= .20 AF, ATTEN= 10%, LAG= 3.1 MIN

DEPTH (FT)	END AREA (SQ-FT)	DISCH (CFS)
0.0	0.0	0.00
.2	1.2	1.66
.4	3.0	5.86
.6	5.2	12.76
.9	8.7	26.34
1.2	14.6	53.14
1.6	23.4	99.83
2.0	34.0	165.32

5' x 2' CHANNEL
S/S= .1 & .5 '/'
n= .03
LENGTH= 85 FT
SLOPE= .008 FT/FT

STOR-IND+TRANS METHOD
PEAK DEPTH= .21 FT
PEAK VELOCITY= 1.4 FPS
TRAVEL TIME = 1.0 MIN
SPAN= 10-20 HRS, dt=.1 HRS
3 x FINER ROUTING

REACH 2 INFLOW & OUTFLOW
97072 Reach 1 (developed swale)



Data for 97072 RAINMAKER IRR.BISHOP ST.,PORTLAND proposed
TYPE III 24-HOUR RAINFALL= 5.50 IN
Prepared by SEBAGO TECHNICS, INC. 12 Nov 99
HydroCAD 5.00 000643 (c) 1986-1998 Applied Microcomputer Systems

POND 1 — 97072 Pond 1 (developed)

Qin = 2.34 CFS @ 12.01 HRS, VOLUME= .15 AF
Qout= 1.33 CFS @ 12.15 HRS, VOLUME= .15 AF, ATTEN= 43%, LAG= 8.5 MIN

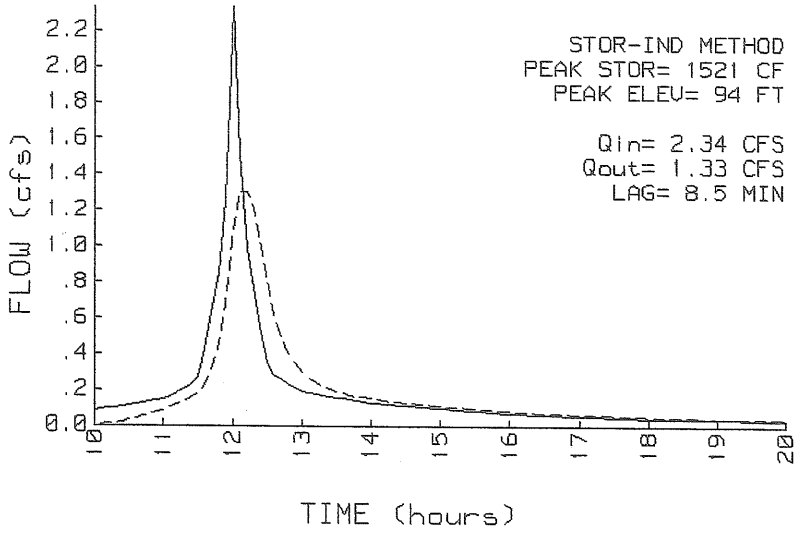
ELEVATION (FT)	AREA (SF)	INC.STOR (CF)	CUM.STOR (CF)
92.9	0	0	0
93.0	1270	63	63
94.0	1510	1390	1453
95.0	1760	1635	3088

STOR-IND METHOD
PEAK STORAGE = 1521 CF
PEAK ELEVATION= 94.0 FT
FLOOD ELEVATION= 95.0 FT
START ELEVATION= 93.0 FT
SPAN= 10-20 HRS, dt=.1 HRS
Tdet= 37.6 MIN (.15 AF)

#	ROUTE	INVERT	OUTLET DEVICES
1	P	93.0'	**10" CULVERT**

n=.02 L=48' S=.005'/' Ke=.5 Cc=.9 Cd=.6

POND 1 INFLOW & OUTFLOW
97072 Pond 1 (developed)



1359.93

Sebago Technics

Engineering & Planning for the Future

December 13, 1999
97072

Kandi Talbot, Planner
City of Portland
389 Congress Street
Portland, ME 04101

70 Bishop Street, Rainmaker Irrigation – Detention Pond Revisions

Dear Kandi:

Please find attached four sets of the revised Grading & Utilities Plan for Rainmaker Irrigation, 70 Bishop Street, along with the revised post-condition calculations for the revised detention pond.

Per our recent phone call, we revised the shape, location and grading of the proposed detention pond. Our client, William Boyle, requested that we revise the pond to save some existing large maple trees adjacent to his site's eastern corner/sideline. He felt these trees would make an important screen with his neighbors and were worth the effort to protect. To save these maples, we are forced to construct the pond further to the west slightly closer to the parking lot with steeper 1:1 sideslopes and longer bottom elevation.

The construction of the pond will require stone riprap sideslopes for stabilization purposes. The slight elongation of the shape also allowed for some reduction in the outlet pipe length. As the attached calculations indicate, the pond will perform almost identically as it did when we modeled it in our last revised plans submitted October 1, 1999. The proposed-condition calculations and summary are attached. Since no changes occurred in the pre-condition calculations, or with the watershed areas or characteristics, that information was not included.

As you are aware, William Boyle is currently in construction and would like this relatively minor revision approved as soon as possible. Please contact us if you have questions or require additional information.

Sincerely,

SEBAGO TECHNICS, INC.

James R. Seymour
Project Manager

JRS:jc
Enc.

cc: William Boyle – Rainmaker Irrigation
Stephen Bushey, P.E. – Acting DRC/DeLuca-Hoffman

RECEIVED
DEC 15 1999

One Chabot Street P.O. Box 1339 Westbrook, Maine 04098-1339 207-856-0277 Fax 207-856-2206

November 18, 1999

William Boyle
Rainmaker Irrigation
70 Bishop Street
Portland, ME 04103

re: 70 Bishop Street

Dear Mr. Boyle:

On October 18, 1999 the Portland Planning Authority granted minor site plan approval for a 7,250 sq. ft. building located at 70 Bishop Street.

The approval is based on the submitted site plan. If you need to make any modifications to the approved site plan, you must submit a revised site plan for staff review and approval.

Please note the following provisions and requirements for all site plan approvals:

1. The site plan approval will be deemed to have expired unless work in the development has commenced within one (1) year of the approval or within a time period agreed upon in writing by the City and the applicant. A one year extension may be granted by this department if requested by the applicant in writing prior to the expiration date of the site plan.

2. A performance guarantee in a form acceptable to the City of Portland and an inspection fee equal to 1.7% of the performance guarantee will have to be posted before beginning any site construction or issuance of a building permit.

3. A defect guarantee, consisting of 10% of the performance guarantee, must be posted before the performance guarantee will be released.

4. Prior to construction, a preconstruction meeting shall be held at the project site with the contractor, development review coordinator, Public Work's representative and owner to review the construction schedule and critical aspects of the site work. At that time, the site/building contractor shall provide three (3) copies of a detailed construction schedule to the attending City representatives. It shall be the contractor's responsibility to arrange a mutually agreeable time for the preconstruction meeting.

5. If work will occur within the public right-of-way such as utilities, curb, sidewalk and driveway construction, a street opening permit(s) is required for your site. Please contact Carol Merritt at

874-8300, ext. 8828. (Only excavators licensed by the City of Portland are eligible.)

6. The Development Review Coordinator (874-8300 ext. 8722) must be notified five (5) working days prior to date required for final site inspection. Please make allowances for completion of site plan requirements determined to be incomplete or defective during the inspection. This essential as all site plan requirements must be completed and approved by the Development Review Coordinator prior to issuance of a Certificate of Occupancy. Please schedule any property closing with these requirements in mind.

If there are any questions, please contact the Planning Staff.

Sincerely,

Joseph E. Gray, Jr.
Director of Planning and Urban Development

cc: Alexander Jaegerman, Chief Planner
Kandice Talbot, Planner
P. Samuel Hoffses, Building Inspector
Marge Schmuckal, Zoning Administrator
Tony Lombardo, Project Engineer
Development Review Coordinator
William Bray, Director of Public Works
Jeff Tarling, City Arborist
Penny Littell, Associate Corporation Counsel
Lt. Gaylen McDougall, Fire Prevention
Inspection Department
Lee Urban, Director of Economic Development
Susan Doughty, Assessor's Office
Approval Letter File

Planning & Urban Development

Alexander Jaegerman
Planning Director

CITY OF PORTLAND

March 12, 2002

Mr. William Boyle
Rainmaker Irrigation
70 Bishop Street
Portland, ME 04103

Subject: Minor Site Plan – 70 Bishop Street

Dear Mr. Boyle:

After an inspection of your site, it was found that the drainage swale/detention area was not constructed in accordance with the approved site plan.

It was noticed that, because of minor grading conditions, water is being held back on adjacent properties, and is not making its way into the drainage swale. It appears that the top of the swale is raised higher than existing ground grade. As shown on the approved site plan, the top of the swale was to be at-grade, thus designed to collect drainage from these areas.

To correct this problem, lowering the berm in a specific location along the adjacent properties would allow runoff to enter the swale.
I feel this resolution to this item would be easy to achieve.

Please contact me at your earliest convenience to discuss this matter.
Thank You for Your Time.

Sincerely,

Jay Reynolds
Development Review Coordinator

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

CITY OF PORTLAND, MAINE
DEVELOPMENT REVIEW APPLICATION
PLANNING DEPARTMENT PROCESSING FORM

I. D. Number ____________

Address: 70 Bishop St

Applicant: Rainmaker Irrigation, 70 Bishop St Ptld, ME 04103

Application Date: 10 April 1997

Applicant's Mailing Address: ____________

Project Name/Description: ____________

Consultant/Agent: James Seymour

Address of Proposed Site: 50-72 Bishop St

Applicant or Agent Daytime Telephone, Fax: Jim Seymour - 856-0277

Assessor's Reference: Chart-Block-Lot: 293-C-004

Proposed Development (check all that apply): X New Building ___ Building Addition ___ Change of Use ___ Residential ___ Office ___ Retail ___ Manufacturing ___ Warehouse/Distribution ___ Other (specify) Office/Storage/parking

Proposed Building Square Feet or # of Units: 1,200 Sq Ft

Acreage of Site: 35,660 Sq Ft

Zoning: ____________

Kandi Talbot

Check Review Required:

- [x] Site Plan (major/minor)
- [ ] Subdivision # of lots ________
- [ ] PAD Review
- [ ] 14-403 Streets Review
- [ ] Flood Hazard
- [ ] Shoreland
- [ ] Historic Preservation
- [ ] DEP Local Certification
- [ ] Zoning Conditional Use (ZBA/PB)
- [ ] Zoning Variance
- [ ] Single-Family Minor
- [ ] Other ________

Fees paid: site plan 300.00 subdivision ____________

Approval Status: Reviewer: Steve Bushey

- [ ] **Approved**
- [x] **Approved w/Conditions** listed below
- [ ] **Denied**

1. Portland Public Works review utility connections and curb opening on Bishop St.
2. The 2" gas service must be revised to connect to gas main and not the water main
3. Public Works approve trench cap methods for services in Bishop St.
4. E+S measures be installed prior to earth moving activity.

Approval Date 4/11/97 Approval Expiration ________ (date) Extension to ________ (date) [ ] Additional Sheets Attached

[ ] Condition Compliance ____________ (signature) ____________ (date)

Performance Guarantee [ ] Required* [ ] Not Required

* No building permit may be issued until a performance guarantee has been submitted as indicated below

[ ] Performance Guarantee Accepted	date	amount	expiration date
[ ] Inspection Fee Paid	date	amount	
Performance Guarantee Reduced	date	remaining balance	signature
Performance Guarantee Released	date	signature	
Defect Guarantee Submitted	submitted date	amount	expiration date
Defect Guarantee Released	date	signature	

Planning & Urban Development

Joseph E. Gray Jr.
Director

CITY OF PORTLAND

TO: Duane Kline, Finance Department

FROM: Alexander Jaegerman, Chief Planner

DATE: May 16, 2001

SUBJECT: Request for Release of Letter of Credit
Rainmaker Irrigation / #70 Bishop Street
Lead CBL#293-C-004; Id #1999-0117

Please release the Letter of Credit account #99-011 for 70 Bishop Street (Rainmaker Irrigation).

Original Sum $ 32,200.00

The project is over three years old, and after an inspection, the determination was made that a defect amount would not be applicable at this time.

Approved: Alexander Jaeger 5/16/01
Alexander Jaegerman
Chief Planner

cc: Kandice Talbot, Planner
Development Review Coordinator
Tony Lombardo, Public Works
Code Enforcement

O:\PLAN\CORRESP\DRC\PERFORM\70BISHOP.DOC

Planning & Urban Development

Joseph E. Gray Jr.
Director

CITY OF PORTLAND

January 5, 2000

Mr. Jim Seymour
Sebago Technics
12 Westbrook Commons
Westbrook, ME 04098-1339

RE: 70 Bishop Street

Dear Jim:

This letter is to confirm the revision to the approved site plan of the Rainmaker project located at 70 Bishop Street. The approved revision includes a change to the detention basin. The revised plan has been reviewed and approved by the project review staff including representatives of the Planning, Public Works, Building Inspections, Fire and Parks Departments.

If you have any questions regarding the revision please contact the planning staff at 874-8901.

Sincerely,

Joseph E. Gray, Jr.
Director of Planning and Urban Development

cc: Alexander Jaegerman, Chief Planner
Kandice Talbot, Planner
P. Samuel Hoffses, Building Inspector
Jeff Tarling, City Arborist
William Bray, Director of Public Works
Tony Lombardo, Project Engineer
Lt. Gaylen McDougall, Fire Prevention
Penny Littell, Associate Corporation Counsel
Inspection Department
Development Review Coordinator
Lee Urban, Director of Economic Development
Susan Doughty, Assessor's Office
Approval Letter File

O:\PLAN\DEVREVW\BISHOP70\REVISION.WPD

Norway Savings Bank
Incorporated 1866 • Member FDIC

SITE PLAN/SUBDIVISIONS
PERFORMANCE GUARANTEE:
LETTER OF CREDIT # 99-011

November 16, 1999

Joseph E. Gray, Jr., Director of Planning & Urban Development
City of Portland
389 Congress Street
Portland, ME 04101

RE: Application of Boyle Building, Inc. and/or William M. Boyle for an Office Building at Bishop St., Portland, Maine.

Dear Mr. Gray:

Norway Savings Bank hereby issues its Irrevocable Letter of Credit No. 99-011 for the account of Boyle Building, Inc. and/or William M. Boyle as developer, hereinafter referred to as the Developer, in the name of the City of Portland in the aggregate amount of $32,200.00.

The City, through its Director of Planning and Urban Development, may draw on this Letter of Credit by presentation of a sight draft and the original Letter of Credit and all amendments thereto, at Norway Savings Bank's office located at 261 Main St., Norway, ME. 04268 stating that:

1. the Developer has failed to complete by September 1, 2000, or by the expiration date of any temporary certificate of occupancy issued, whichever date comes first, at the Developer's expense, the work on the roads and other public improvements as set forth in a certain Schedule of Costs of Public Improvements dated October 26, 1999; or
2. the Developer has failed to post the ten percent (10%) Defect Bond or Guarantee required by the Portland City Code sections 14-501 and 14-525; or
3. the Developer has failed to notify the City for inspections.

In the event of Norway Savings Bank's dishonor of the City of Portland's sight draft, Norway Savings Bank shall inform the City of Portland in writing of the reason or reasons therefor within three (3) working days of the dishonor.

After all underground work in the public right of way has been completed and inspected to the satisfaction of the Department of Public Works, including, but not limited to, sanitary sewers, storm drains, catch basins, manholes, electrical conduits, and other required improvements constructed chiefly below grade, the City of Portland Director of Planning and Urban Development or the City of Portland Director of Finance as provided in section 14-501 of the Portland City Code may authorize Norway Saving Bank, by written certification, to reduce the available amount of this Letter of Credit by a specified amount.

It is a condition of this Letter of Credit that it is deemed to be automatically extended without amendment for period(s) of one year each from the current expiration date hereof, or any future expiration date, unless at least sixty (60) days prior to any expiration date, Norway Savings Bank notifies the Director of Planning and Urban Development by registered mail at the above listed address that Norway Savings Bank elects not to consider this Letter of Credit renewed for any such additional period.

In the event of such notice, the City may draw hereunder by presentation of a sight draft drawn on the Bank, accompanied by the original Letter of Credit and all amendments thereto, and a statement purportedly signed by the Director of Planning and Urban Development reading as follows:

This drawing results from notification that Norway Savings Bank has elected not to renew its Letter of Credit No. 99-011; or

This drawing results from the Developer's failure to timely complete, to the satisfaction of the City, the public improvements set forth in a certain Schedule of Costs of Public Improvements dated October 26, 1999; or

This drawing results from the Developer's failure to post a ten percent (10%) Defect Guarantee or Bond as provided in section 14-501 of the Portland City Code; or

This drawing results from the Developer's failure to notify the City for inspections.

This Letter of Credit will automatically expire upon the earlier of:

1. Norway Savings Bank's receipt of a written statement from the City of Portland that said work, as outlined in a certain Schedule of Costs of Public Improvements date October 26, 1999 between the Developer and the City of Portland, has been completed in accordance with the City of Portland specifications and Norway Saving Bank's Letter of Credit no. 99-011 may be canceled; or

2. The expiration date of September 1, 2000 or any automatically extended date as specified herein.

Partial drawings are permitted.

We engage with you that drafts drawn under and in compliance with the terms of this Letter of credit will be duly honored of presented at our office at 261 Main St., Norway, ME. 04268 on or before September 1, 2000 or any automatically extended date as specified herein.

This Letter of Credit sets forth in full the terms of our undertaking. This Letter of credit shall not be modified, amended or amplified by reference to any document or agreement referred to herein or to which this Letter of Credit relates.

This Letter of Credit is subject to the Uniform Customs and Practice for Documentary Credits, as revised, the International Chamber of Commerce Brochure No. 290. The obligations of the Bank hereunder, and matters not governed by the Uniform Customs and Practice for Documentary Credits, shall be governed by the laws of the State of Maine.

Very truly yours,

Norway Savings Bank

By: _____ Date: 11/16/99
Peter H. Godsoe, Vice President, duly authorized

The City of Portland has accepted the providing of alternative security for the Developer's obligations to be performed pursuant to Section 14-501 and/or Section 14-525 of the Portland City Code.

By: _____ Date: 11/16/99
Joseph E. Gray, Jr.
Its duly authorized Director of Planning & Urban Development

Seen and Agreed to:

Boyle Building, Inc.

By: _____ Date: 11/16/99
William M. Boyle, its President, duly authorized

By: _____ Date: 11/16/99
William M. Boyle, individually

Reviewed pursuant to Section 14-501 and/or Section 14-525, Portland City Code:

By: _____ Date: 11/16/99
Corporation Counsel

By: _____ Date: _____
Director of Finance

WILLIAM M. BOYLE
PH. (207) 878-0350
70 BISHOP STREET
PORTLAND, ME 04103

52-8761/2112
0

185

Date 11/10/99

Pay to the Order of City of Portland $ 715.00

Seven Hundred Fifteen and 00/100 Dollars

Security features are included. Details on back.

S.D. WARREN CREDIT UNION
35 CUMBERLAND STREET
WESTBROOK, MAINE 04092

For

⑆211287612⑆ 70035049498⑈ 0185

COLONIAL CLASSIC® WDCC © Clarke American

DUPLICATE

GENERAL RECEIPT

CITY OF PORTLAND, MAINE

DEPARTMENT Planning DATE 11-12-1999

RECEIVED FROM [illegible]

ADDRESS 70 Bishop St.
04103

UNIT	ITEM	REVENUE CODE	DOLLAR AMOUNT
	Inspection Fee		[illegible]
	Engineer Fee		1108 —
	Job #		
	19990157		

☐ CASH ☒ CHECK ☐ OTHER **TOTAL** [illegible]

[illegible] 185

RECEIVED BY [illegible]

GBF INFORMATION SYSTEMS Box 878, Portland, ME 04104 (207) 774-1482 200747-BP
Commercial Printing • Business Forms • Advertising Specialties • Labels

STATE OF MAINE
17 State House Station
Augusta, ME 04333

Tier 1 / Tier 2 Decision

Applicant Name & Address:

William Boyle
Rainmaker Irrigation
70 Bishop Street
Portland, ME 04103

Put with Bldg Permit

DEP Project Number: 99-857-S
CORPS Permit Number : 199902704
Project Location: **Portland**

Description of Work: Approximately 4,300 square feet of scrub-shrub wetland was filled in 1997. The applicant now proposes to fill approximately 5,009 square feet of this wetland for development of an office building, for a total aggregate alteration of 9.309 square feet. The project is located on Bishop Street in the City of Portland, Maine.

Permit for:	[X] Tier 1	[ ] Tier 2
Date of DEP Review:	November 2, 1999	
DEP Decision:	[X] Approved	[ ] Denied (see attached letter)
CORPS Action:	[ ] Approved	[ ] Ineligible (<4,300 ft^2, exempt from Corps review)
	[ ] approval enclosed	
	[ ] approval pending (decision letter forthcoming from Maine Project Office)	

[X] Approval Pending: The Corps, Maine Project office, is in the process of reviewing the project. The final decision will be forthcoming directly from their regional office headquarters.

[X] Special Conditions: Further wetland fill or alteration must be approved by the Department and ACOE prior to starting.

Standard Conditions:

- Approval from both the DEP and the Army Corps of Engineers is required in order to proceed with your project. This permit is good for two (2) years from the date signed and is transferable only with prior approval from the Department.
- The project must be completed according to the plans in the application. Any change in the project plans must be reviewed and approved by the Department.
- Properly installed erosion control measures must be installed prior to beginning the project, and all disturbed soil should be stabilized immediately upon project completion.
- A copy of this approval will 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 Alexander Wong, project manager, at 207-822-6328.

for

MARTHA G. KIRKPATRICK, COMMISSIONER

11/3/99
DATE

cc: file
City of Portland

DeLUCA HOFFMAN ASSOCIATES, INC.
CONSULTING ENGINEERS

778 MAIN STREET
SUITE 8
SOUTH PORTLAND, MAINE 04106
TEL. 207 775 1121
FAX 207 879 0896

- ROADWAY DESIGN
- ENVIRONMENTAL ENGINEERING
- TRAFFIC STUDIES AND MANAGEMENT
- PERMITTING
- AIRPORT ENGINEERING
- SITE PLANNING
- CONSTRUCTION ADMINISTRATION

FAX COVER SHEET

To: Kandi Talbot
Planning

From: Steve Bushey

Fax #

Date: 10/28/99

Phone:

Pages (Incl. Cover): 3

Re: Bishop St. Perf. Guarantee

☑ Urgent ☒ For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

COMMENTS:

I didn't have benefit of a plan however here are my comments (cited)

Steve

Department of Planning and Urban Development
SUBDIVISION/SITE DEVELOPMENT

COST ESTIMATE OF IMPROVEMENTS TO BE COVERED BY PERFORMANCE GUARANTEE

Date 10/26/99

Name of Project: Bishop St Office Complex

Address/Location: 68 Bishop St

Developer: William Boyle

Form of Performance Guarantee

Type of Development ______ Subdivision ______ Site Plan (Major/Minor)

TO BE FILLED OUT BY APPLICANT:

Item	PUBLIC Quantity	PUBLIC Unit Cost	PUBLIC Subtotal	PRIVATE Quantity	PRIVATE Unit Cost	PRIVATE Subtotal
1. STREET, SIDEWALK						
Road						1000.00
Granite Curbing				290'		7300.00
Sidewalks						
Esplanades						
Monuments						
Street Lighting						
Other						
2. SANITARY SEWER						
Manholes				70'	$30	500.00 LOW $2,100
Piping						
Connections						
Other						
3. STORM DRAINAGE						
Manholes						
Catchbasins						
Piping				60	$30	1800
Detention Basin				1		3500.00
Other						
4. SITE LIGHTING						
EROSION CONTROL						$500
RECREATION AND OPEN SPACE AMENITIES						

	PUBLIC			PRIVATE		
ITEM	Quantity	Unit Cost	Subtotal	Quantity	Unit Cost	Subtotal
LANDSCAPING (Attach breakdown of plant materials, quantities, and unit costs)			2000.00			1022.00
MISCELLANEOUS						
TOTAL			2,000.00			30,200
GRAND TOTAL			28,700.00			

$ 32,200

INSPECTION FEE (to be filled out by City)

	PUBLIC	PRIVATE	TOTAL
A: 1.7% of totals:	34.00	513.40	547.00
or			
B: Alternative Assessment:			
Assessed by:	(name)	(name)	

Engineering Fee: $168.00

Total Fees: $715.00

Department of Planning and Urban Development
SUBDIVISION/SITE DEVELOPMENT

COST ESTIMATE OF IMPROVEMENTS TO BE COVERED BY PERFORMANCE GUARANTEE

Date 10/26/99

Name of Project: Bishop St Office Complex

Address/Location 68 Bishop St

Developer William Boyle

Form of Performance Guarantee _____

Type of Development: _____ Subdivision _____ Site Plan (Major/Minor)

TO BE FILLED OUT BY APPLICANT:

	PUBLIC			PRIVATE		
Item	Quantity	Unit Cost	Subtotal	Quantity	Unit Cost	Subtotal
1. STREET SIDEWALK						
Road						10000.00
Granite Curbing				290'		7300.00
Sidewalks						
Esplanades						
Monuments						
Street Lighting						
Other						
2. SANITARY SEWER						
Manholes						
Piping				70'		500.00
Connections						
Other						
3. STORM DRAINAGE						
Manholes						
Catchbasins						
Piping				60		400.00
Detention Basin				1		2500.00
Other						
4. SITE LIGTING						
EROSION CONTROL						
RECREATION AND OPEN SPACE AMENITIES						

Item	PUBLIC Quantity	PUBLIC Unit Cost	PUBLIC Subtotal	PRIVATE Quantity	PRIVATE Unit Cost	PRIVATE Subtotal
2 LANDSCAPING (Attach breakdown of plant materials, quantities, and unit costs)			2000.00			16000.00
3 MISCELLANEOUS						
TOTAL	2,000.00			26700.00		
GRAND TOTAL	28700.00			X		

INSPECTION FEE (to be filled out by City)

	PUBLIC	PRIVATE	TOTAL
A: 1.7% of totals:			
or			
B: Alternative Assessment:			
Assessed by:	(name)	(name)	

SEBAGO TECHNICS, INC.
12 Westbrook Common
P.O. Box 1339
WESTBROOK, ME 04098-1339

Phone (207) 856-0277 FAX (207) 856-2206

LETTER OF TRANSMITTAL

Hand Delivered

DATE	JOB NO.
10-21-99	97072

ATTENTION

RE: RAINMAKER IRRIGATION
REV. SET

TO KANDI TALBOT - PLANNER
PLANNING DEPT. 4TH FLOOR
CITY HALL
PORTLAND, ME

WE ARE SENDING YOU ☒ Attached ☐ Under separate cover via _____ the following items:

☐ Shop drawings ☐ Prints ☒ Plans ☐ Samples ☐ Specifications

☐ Copy of letter ☐ Change order ☐ _____

COPIES	DATE	NO.	DESCRIPTION
1	10-21-99	—	REV. SET OF PLANS - RAINMAKER IRRIGATION

THESE ARE TRANSMITTED as checked below:

☐ For approval ☐ Approved as submitted ☐ Resubmit _____ copies for approval

☐ For your use ☐ Approved as noted ☐ Submit _____ copies for distribution

☐ As requested ☐ Returned for corrections ☐ Return _____ corrected prints

☒ For review and comment ☐ _____

☐ FOR BIDS DUE _____ 19 _____ ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS

Kandi:

The only change was the slope at the rear of the proposed building is now 1:1 grade and riprapped. Those changes were per the Army Corp review of the wetland application to fill. Call if you have questions.

Thanks

COPY TO _____

SIGNED: James Seymour

If enclosures are not as noted, kindly notify us at once.

DeLUCA-HOFFMAN ASSOCIATES, INC.
CONSULTING ENGINEERS

778 MAIN STREET
SUITE 8
SOUTH PORTLAND, MAINE 04106
TEL. 207 775 1121
FAX 207 879 0896

ROADWAY DESIGN
ENVIRONMENTAL ENGINEERING
TRAFFIC STUDIES AND MANAGEMENT
PERMITTING
AIRPORT ENGINEERING
SITE PLANNING
CONSTRUCTION ADMINISTRATION

MEMORANDUM

TO: Kandi Talbot, Planner

FROM: Steve Bushey, Acting Development Review Coordinator SD

DATE: October 18, 1999

RE: Rainmaker Irrigation – Site Plan, 70 Bishop Street
Review Memo #2

I have reviewed the latest plans dated 8-20-99 and letter from Jim Seymour dated October 6, 1999 and find that my comments of September 28, 1999 have been substantially addressed and that the current application is acceptable for approval. If you have any questions, please contact me.

DeLUCA-HOFFMAN ASSOCIATES, INC.
CONSULTING ENGINEERS

778 MAIN STREET
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MEMORANDUM

TO: Kandi Talbot, Planner

FROM: Steve Bushey, Acting Development Review Coordinator SB

DATE: September 28, 1999

RE: Rainmaker Irrigation – Site Plan, 70 Bishop Street

I have reviewed the site plan application materials for the Rainmaker Inspection proposal. Based on this review, I offer the following comments to be addressed by the Applicant:

Site Plan

1. The building dimensions should be placed on the drawing.
2. Handicap parking signs should be identified at the head of each handicap space.
3. Notes 28 and 29 should be updated to reflect the current application.
4. An offset dimension to the side or rear lines should be provided to aid in the building layout.

Grading and Utilities Plan

1. The riprap aprons at each pipe inlet/outlet should be sized and riprap sizing/thickness identified.
2. Notes should be added to direct the contractor to install all utility services in accordance with the applicable serving utility standards.
3. The sanitary sewer service should be reviewed to include two 45° bends in lieu of a 90° bend. A clean out is also recommended at the change of direction.
4. Spot grade elevations at the proposed door locations and around the building would be beneficial.
5. The Detention Pond Section should be corrected to reflect a 10" outlet pipe and the removal of an outlet control structure, since one is not proposed.
6. The Applicant should provide data on the basin bottom construction. The goal is to avoid a bottom which will re-suspend sediment.
7. The grading plan should include the location of all erosion control measures including silt fence, construction entrance, etc.

Landscape and Lighting Plan

1. The Erosion and Sedimentation Control Plan should be revised and updated to reflect the current application, specifically, the first paragraph of Section D.

2. The first two paragraphs of Section A should be updated to refer to the City of Portland or Development Review Coordinator.
3. The Applicant should add specific wintertime construction measures in accordance with the MeDEP Standards for Stabilizing Sites for the winter.

Details

1. A detail for the ramp at the handicap spaces should be added.
2. A detail for the riprap pipe inlet/outlet aprons should be added.
3. Planting details should be provided.

Stormwater Report

1. It appears that the stormwater routing computations for the proposed basin started at an elevation of 91.0. Based on the plans, it appears the outlet will be at 93.0, thus the basin will likely retain water most of the time. The routing computations should be performed with a starting elevation of 93.0 to determine the actual basin functioning with water in it.