

PLANNING REPORT #10-88

PLANNING DEPARTMENT REPORT

RAY STREET TOWNHOMES

REQUEST FOR CHANGE OF OWNER

MERRYMEETING DEVELOPERS, INC., APPLICANT

Submitted to:

Portland Planning Board  
Portland, Maine

January 26, 1988

## **I. INTRODUCTION**

Merrymeeting Developers, Inc. is requesting review of a request for change of owner of the 98-unit Ray Street Townhomes R-5 PRUD. The site is 19.98 acres and zoned R-3 Residential. A site plan, vicinity map and letter from the applicant are included as Attachments 1, 2, and 3.

## **II. REVIEW OF FINANCIAL AND TECHNICAL CAPABILITY**

Subdivision approval for the Ray Street Townhomes Development was received in September, 1985. Site plan and PRUD approval was granted November 10, 1988. All applications were made by the Liberty Group, which is now selling the development to Merrymeeting Developers, Inc.

Merrymeeting Developers have submitted several documents attesting to their financial and technical capability. Attachment 4 is an unexecuted letter of credit from Maine Savings Bank. This letter has been reviewed and approved for form by the Corporation Counsel office. Attachment 5 is a letter from Maine Savings Bank agreeing to execute the letter of credit upon Planning Board approval. Attachment 6 is a second letter from Maine Savings Bank more generally attesting to the applicant's capabilities. Attachment 7 is a Certificate of Good Standing from the Secretary of State. Attachment 8 is a statement from the applicant of technical capability based on past projects and experience. Attachment 9 is the purchase and sale agreement for the project.

Planning Board Report #91-87 is hereby referenced.

## **III. MOTIONS FOR THE BOARD TO CONSIDER**

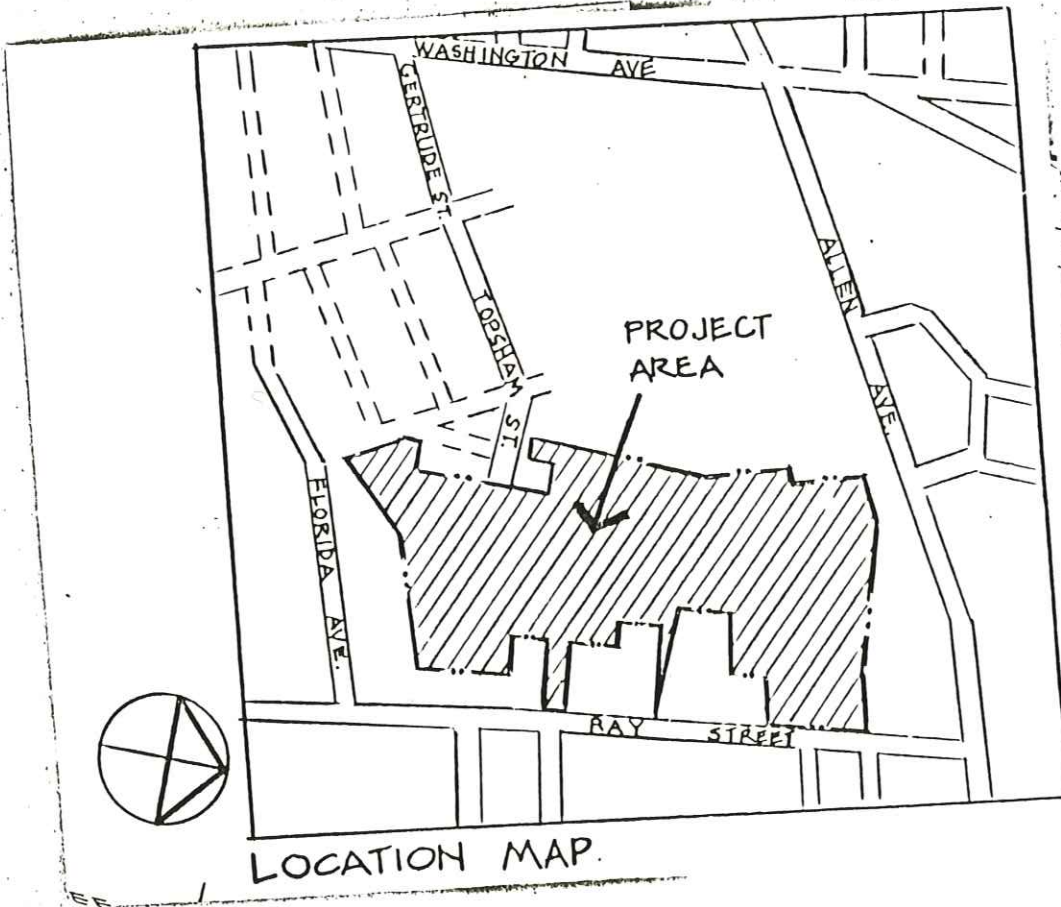
On the basis of plans and materials submitted by the applicant and on the basis of information contained in Planning Report #10-88 and Planning Board Report #91-87 relevant to review of financial and technical capability and/or other findings as follows:

1. That the Planning Board approves the change of owner of the Ray Street Townhomes R-3 PRUD from Liberty Group to Merrymeeting Developers, Inc.

### Attachments

1. Vicinity Map
2. Site Plan
3. Letter from Applicant
4. Letter of Credit
5. Bank execution letter
6. Bank capability letter
7. Certificate of Good Standing
8. Statement of Technical Capability
9. Purchase and Sale Agreement





LOCATION MAP.

MERRYMEETING DEVELOPERS, INC.

3 INDUSTRIAL PARKWAY  
BRUNSWICK, MAINE 04011

(207) 729-4188

January 7, 1988

Ms. Maureen O'Mara  
Planning Department  
City of Portland  
City Hall  
Portland, Maine 04101

Re: Merrymeeting Developers  
Transfer of permits for the "Ray Street Development"

Dear Ms. O'Mara:

Please consider this letter as a request for the transfer of Subdivision and Site Plan Permits for the 98 unit townhouse development proposed by the Liberty Group on Ray Street in the City of Portland from the Liberty Group to Merrymeeting Developers Inc.

In support of this request for the transfer of Subdivision and Site Plan Permits, Merrymeeting submits the following information:

Exhibit A: Certificate of Good Standing from the Secretary of the State of Maine.

Exhibit B: Contract for Sale of Real Estate

Exhibit C: Statement of Technical Ability

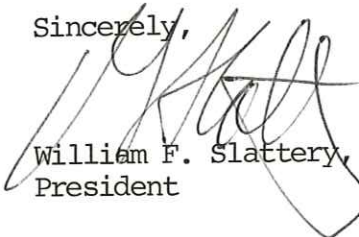
Exhibit D: Letter from Maine Savings Bank dated December 28, 1987 signed by Edward Dox, Assistant Vice President, Commercial Real, indicating that Maine Savings Bank has committed sufficient funds for Merrymeeting to complete the development.

We have reviewed the permits issued by the City of Portland to the Liberty Group for the Ray Street Development and are familiar with the requirements of these permits. We fully understand that prior to receiving the signed subdivision plan we must post a Letter of Credit acceptable to the City of Portland and that prior to receiving building permits we must post the inspection fee.

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Please advise us if any additional information is required in order for Merrymeeting Developers to receive the Subdivision and Site Plan Permits. We are prepared to attend any meeting(s) with the Board or Staff regarding this matter. The contact person here at Merrymeeting is Teco Brown. Please contact Mr. Brown if you have questions or require additional information.

Sincerely,

A handwritten signature in black ink, appearing to read 'W. Slattery', written over the typed name and title.

William F. Slattery,  
President



January 21, 1988

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

Re: Ray Street, Planned Unit Development  
Ray Street  
Portland, Maine  
Irrevocable Letter of Credit

Dear Mr. Gray:

Maine Savings Bank hereby issues its Irrevocable Letter of Credit for the account of Merrymeeting Developers as developer, hereinafter referred to as Merrymeeting Developers, in the name of the City of Portland in the aggregate amount of \$1,025,089.

The City of Portland may draw on this Letter of Credit by presentation of a sight draft at the Commercial Real Estate Department's office of Maine Savings Bank, One Maine Savings Plaza, Portland, Maine. Said draft shall be accompanied by an affidavit signed by the City of Portland's Director of Parks and Public Works or Director of Planning and Urban Development stating that Merrymeeting Developers has failed to complete by February 1, 1990, 2 years from date of approval of letter of credit, at Merrymeeting Developer's expense, the work on the roads and other public improvements as set forth in the attached schedule of Costs of Public Improvements. Merrymeeting Developer's commencement of development shall not be a condition precedent to the City of Portland's ability to draw on this letter of credit.

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

Merrymeeting Developers will notify the City of Portland for inspections.

## MAINE SAVINGS BANK

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 and other required improvements constructed chiefly below grade, Maine Savings Bank shall be eligible to receive a reduction in its obligations hereunder equal to the estimated cost of improvements. In no case, however, shall the obligations of Maine Savings Bank hereunder be reduced to an amount which is less than the estimated cost of completing all remaining prescribed improvements as determined by the Department of Public Works, as shown on the attached Schedule of Costs of Public Improvements.

This Letter of Credit will automatically expire on May 1, 1990 but may expire prior to this date when the City of Portland acknowledges in writing to Maine Savings Bank and Merrymeeting Developers that said work as outlined has been completed in accordance with City of Portland specifications, when Merrymeeting Developers has given the City of Portland a warranty deed or warranty deeds to the property within each street within the subdivision, and Merrymeeting Developers has filed with the City of Portland of a 10% Defect Bond (or other security acceptable to the City of Portland) insuring the workmanship and the durability of all materials used in the construction of the public improvements listed, for a period of one year from the date of the acceptance or approval of the City of Portland.

The total existing credit may be drawn upon by the City for any unaccepted or unapproved line item.

We engage with you that drafts drawn under and in compliance with the terms of this credit will be duly honored, However, other than the payment of monies as authorized hereunder, Maine Savings Bank shall not guarantee the performance of Merrymeeting Developers to the City of Portland.

Very truly yours,

MAINE SAVINGS BANKS

By: \_\_\_\_\_

Edward A. Dox  
Assistant Vice President  
Commercial Real Estate







January 21, 1988

Mr. Joseph E. Gray, Jr.  
Director  
Planning & Urban Development  
389 Congress Street  
Portland, Me. 04101

Re: Merrymeeting Developers Letter of Credit

Dear Mr. Gray:

Enclosed is an unsigned copy of the proposed Letter of Credit for the above project. Upon completion of the transference of the project and all approvals from the Liberty Group to Merrymeeting Developers, Inc., the signed original will be delivered to you.

Please call if you have any questions.

Very truly yours,

Edward A. Dox  
Assistant Vice President  
Commercial Real Estate

EAD/sg

encl.



December 28, 1987

TO WHOM IT MAY CONCERN:

This will confirm that Maine Savings Bank has reviewed the proposed 98-unit development off of Ray Street in Portland by Merrymeeting Developers, Inc. In our opinion, the plans and projected costs appear reasonable.

Maine Savings Bank has also reviewed the financial statements of the developer. In our opinion, the firm has the technical ability and financial capacity to successfully develop the subject project. Maine Savings Bank has committed sufficient funds to complete the project.

Very truly yours,

Edward A. Dox  
Assistant Vice President  
Commercial Real Estate

EAD/sg

# State of Maine

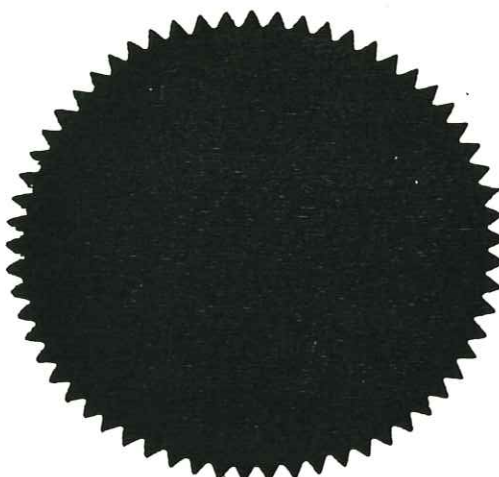


## Department of State

I, the Secretary of the State of Maine, certify that according to the provisions of the Constitution and Laws of the State of Maine, the Department of State is the legal custodian of the Great Seal of the State of Maine which is hereunto affixed and of the records of organization, charter amendments, dissolutions of corporations and annual reports filed by the same.

I FURTHER CERTIFY that MERRYMEETING DEVELOPERS, INC. is a duly organized corporation under the laws of the State of Maine and that the date of the incorporation of said corporation is January 10, 1983.

I FURTHER CERTIFY that said corporation has filed annual reports due to this Department, paid all corporate fees and that no action is now pending by or on behalf of the State of Maine to forfeit the charter and that according to the records in the Department of the Secretary of State, said corporation is a legally existing corporation in good standing under the laws of the State of Maine at the present time.



In Testimony Whereof, I have caused the Great Seal of the State to be hereunto affixed. GIVEN under my hand at Augusta, this fourteenth day of September in the year of our Lord one thousand nine hundred and eighty-seven.

[Signature] Secretary of State

EXHIBIT C: Re: Technical Ability

Merrymeeting Developers, Inc. was incorporated in 1983 and began with a 36 lot subdivision in Topsham. The Company then designed and built a 90 unit single family attached project entitled, "Merrymeeting Commons", also in Topsham, and both completely sold out. The next project was Coastal Estates I in 1984, a 76 single family attached unit project in Brunswick which sold out in 1985. Coastal Estates II followed with 50 units next to Coastal I, but with cape style attached homes and sold out in July of 1987. Countryside Estates is a 99 lot subdivision in Topsham which began in 1985 and is sold with 5 homes left to build. Orchard Hills is a 135 unit single family attached project in Bangor which duplicates the styles of homes in Coastal I and II. Orchard Hills started in the Spring of 1985 and is approximately 65% sold. Agamenticus Estates in South Berwick, a 305 lot subdivision, was designed as Old Mill II by Robert Levesque. We began construction in April 1985 and have over 200 homes sold. In May of 1986 we received final approval for a 47 planned unit development project, Fox Run Phase I, in Brunswick which is under construction and completely sold out. Merrymeeting also purchased a 27 lot subdivision in Biddeford, Village Lane Phase II, which is under construction and has 17 lots sold. Merrymeeting also bought the Farwell Mill in Lisbon and is now renovating the historic structure into apartments. In July of 1987, Merrymeeting gained approval to build 200 units of congregate housing in Topsham (26 Elm), and in August of 1987 gained approval for a 112 lot subdivision in Brunswick.

The developer has quickly developed the necessary training and experience to operate a successful development company. In-house management has grown recently to over 35 people including a former municipal planner with 10 years of experience, a former D.E.P. official with 11 years experience, and a former S.P.O. planner.

Site location permits from the Maine Department of Environmental Protection were given for the Merrymeeting Commons, Coastal Estates projects, Orchard Hills, countryside Estates, Agamenticus Estates, 26 Elm, Wildwood, a stump dump in South Berwick, and a soils mining operation in South Berwick. Municipal permits were obtained for all projects.

The above noted approvals indicate Merrymeeting's familiarity with municipal regulations and State statutes.

CONTRACT FOR SALE OF REAL ESTATE

Portland, Maine

December 17, 1987

RECEIVED OF MERRYMEETING DEVELOPERS, INC., or its assigns, hereinafter called the "Purchaser", the sum of TEN THOUSAND DOLLARS (\$10,000.00) as earnest money and in part payment on account of the purchase price of the following described real estate, situated in the County of Cumberland, and State of Maine wit:

The 98-Unit Ray Street Development located in Portland, Maine, together with all Municipal and necessary State DEP approvals, and including all existing architectural drawings and surveys, engineering studies, etc., in Seller's possession.

The total purchase price being ONE MILLION ONE HUNDRED TWENTY-FIVE THOUSAND DOLLARS (\$1,125,000.00), payment to be made as follows:

\$	10,000.00	Earnest Money Deposit
	1,115,000.00	Cash at Closing

Said deposit is received and held by the Broker, subject to the following conditions:

1. COMMERCIAL PROPERTIES, INC. (the "Broker") will hold said earnest money or deposit and act as escrow agent until transfer of title; that until December 15, 1987 at 5:00 P.M. will be given for obtaining the Owner's acceptance and, in the event of the Owner's non-acceptance, this deposit will be promptly returned to the Purchaser.
2. a). That a good and sufficient deed, showing good and merchantable title, will be delivered to the Purchaser, and it is agreed that this transaction will be closed and the Purchaser will pay the balance of the purchase price and execute all papers necessary for the completion of its purchase within five (5) days after Seller's receipt of DEP approval, whichever is later. However, should the title prove defective, then the Seller will have a reasonable time, after due and prompt notice of such defect or defects, to remedy the title; after which time, if such defect or defects are not corrected so that there is a merchantable title, then the Purchaser may, at its option, withdraw said deposit and be relieved from all obligations hereunder.

b). Purchaser acknowledges that certain parcels comprising the property and identified as Lots I-1, I-2, and I-3 on the City of Portland's Tax Map Number 402, and as shown as a .38 acre parcel in the most southerly portion of the property along Ash and Wadco Streets as shown on the Plan of Land for Liberty Group dated April 11, 1985 as revised through August 8, 1985 and prepared by Owen Haskell, Inc., do not have good and marketable title. Seller agrees to place Fifteen Thousand Dollars (\$15,000.0) of the sale proceeds into an escrow account which will be released to Seller when title to said lots is cleared. Seller agrees to use best efforts to clear title to said lots within ~~one (1) year~~ <sup>18 months</sup> after closing; any defects in title with respect to said lots shall not operate to allow Purchaser to be relieved from its obligations hereunder. Should seller be unable to clear the title within the 18 month period, the escrow fund shall be returned to purchaser and the parties obligations hereunder shall cease.

JM  
25

A COPY OF THE CONTRACT IS TO BE RECEIVED BY ALL PARTIES ANY, BY SIGNATURE, RECEIPT OF A COPY IS ACKNOWLEDGED.

COMMERCIAL PROPERTIES, INC.

BY: \_\_\_\_\_  
Broker/Salesperson

I/We hereby agree to purchase the above-described property at the price and upon the terms and conditions above set forth.

Witness: John Morone 12/17/87  
Date

Merrymatic Developers, Inc.  
by [Signature]  
Purchaser its President

\_\_\_\_\_  
Date

\_\_\_\_\_  
Purchaser

ACCEPTANCE

I/We hereby accept the offer and agree to deliver the above-described property at the price and upon the terms and conditions above stated. I/We further agree to pay the Broker above-named, as commission for its services herein, the sum of \$84,000.00 (8%). In the event said earnest money deposit is forfeited by said Purchaser, one-half thereof will go to said Broker and the remainder to me/us; provided, however, that the Broker's portion shall not exceed the full amount of the commission herein specified.

Signed this 16<sup>th</sup> day of December, 1987.

Witness: [Signature] 12/16/87  
Date

RAY STREET ASSOCIATES

By: [Signature]  
Seller: Michael A. Liberty,  
Its General Partner

\_\_\_\_\_  
Date

\_\_\_\_\_  
Seller

TRAFFIC IMPACT STUDY  
RAY STREET DEVELOPMENT  
PORTLAND, MAINE

INTRODUCTION

The purpose of this report is to update the 1985 Traffic Impact Study in conjunction with the proposed Ray Street residential development to be located on the southwest side of Ray Street between Allen Avenue and Florida Avenue in Portland, Maine. Present plans indicate the proposed development will consist of 98 residential units with access provided via one drive on Ray Street and one on Topsham Street.

BASE CONDITIONS

Traffic counts were conducted at the Washington Avenue/Allen Avenue intersection on October 27 and 28, 1987 (see Appendix) from 7:00-9:00 AM and 4:00-6:00 PM. Results of the peak period counts indicate the AM peak hour occurs between 7:15-8:15, while the PM peak hour occurs between 4:15-5:15.

The existing turning movement volumes were factored to estimate the 30th highest hour volume utilizing MDOT weekly group mean factors, producing the 1987 existing volumes. In addition, traffic generation from other future developments in the general study area were added to the street system and included the following projects: Woodmere Estates, Pineloch and Camarac.

FUTURE CONDITIONS

Trips generated from the proposed 98 residential units were estimated from the publication, Trip Generation, Institute of Transportation Engineers, 1983. Results indicate 49 trips, 10 entering and 39 exiting are anticipated during the AM peak hour and 59 trips, 39 entering and 20 exiting are anticipated during the PM peak hour. Distribution of these trips was based upon statistical data presented in the 1985 Study and existing turning movement volumes. The above trips were added to the 1987 existing volumes after the other future development trips were added, producing the 1987 Build traffic volumes.

ANALYSIS

Capacity calculations were performed at the Washington Avenue/Allen Avenue intersection utilizing procedures contained in the Highway Capacity Manual, Transportation Research Board, 1985. Analysis was performed during both the AM and PM peak hours under 1987 Existing and Build conditions. Results, as shown in the Appendix, indicates the intersection operates at Level of Service F during both peak hours, assuming no right turn on red and using the existing pre-timed signal phasing and timing.



An analysis of the intersection operations was conducted assuming an 8-phase fully-actuated controller is implemented and 20 percent of the southbound Washington Avenue right turns will make right turns on red. Results indicate the intersection would operate at Level of Service C during the AM peak hour and Level of Service D during the PM peak hour during 1987 Existing conditions. Under 1987 Build conditions, the intersection's level of service would decline to D during the AM peak hour and E during the PM peak hour.

RECOMMENDATIONS AND CONCLUSIONS

To provide adequate intersection operations at the Washington Avenue/Allen Avenue intersection, it is recommended that an 8-phase fully-actuated signal system be installed at this and the Washington Avenue Dairy Queen intersection (north of Allen Avenue) and Washington Avenue/Sanborn Street intersection. Upon implementation of these improvements, the Washington Avenue/Allen Avenue intersection should operate satisfactorily.

APPENDIX

CINCH PROGRAM VERSION DATE 1-12-1987  
 1985 HCM - CHAPTER 9: SIGNALIZED - OPERATIONAL ANALYSIS  
 WASHINGTON STREET/ALLEN AVENUE AM PEAK HOUR  
 1987 EXISTING

date:10-29-1987 time:17:14:19

LAST DATA SET NAMES LOADED OR SAVED

VOLUME=WAAE GEOMETRICS=WA SIGNAL=WAA

LOCATED IN CBD:N

VOLUME & GEOMETRICS

DIR	LT	VOLUMES			# OF LANES			LANE WIDTH			CROSS WALK
		TH	RT		LT	TH	RT	LT	TH	RT	
EB	229	157	136		1	1	0	12.5	11.5	0.0	0
WB	84	216	57		1	1	0	12.5	11.5	0.0	0
NB	153	482	37		1	2	0	12.5	11.0	0.0	0
SB	25	854	510		1	2	0	10.0	11.5	0.0	0

TRAFFIC & ROADWAY CONDITIONS

DIR	GRADE	%HV	ADJ PARK			PHF	PEDESTRIANS			ARR TIME	TYPE
			Y/N	MOVES	BUSES		CROSS	BUT	MIN		
EB	0.0%	5.0%	N	0	0	.820	0		7.0	3	
WB	0.0%	3.0%	N	0	0	.820	0		7.0	3	
NB	0.0%	7.0%	N	0	0	.820	0		7.0	3	
SB	0.0%	3.0%	N	0	0	.820	0		7.0	4	

PHASINGS

	EASTBOUND				WESTBOUND				NORTHBOUND				SOUTHBOUND				GREEN	Y+R	PRE/ACT
	l	t	r	p	l	t	r	p	l	t	r	p	l	t	r	p			
1									*	*	*						8.4	0	P
2									*	*	*		*	*	*		25.9	5	P
3	*	*	*														9.8	0	P
4	*	*	*		*	*	*										16.1	5	P

CYCLE= 70.0

VOLUME ADJUSTMENT WORKSHEET

PART 1 (MOVEMENT ADJUSTMENTS)

DIR	LTV	THV	RTV	PHF	LTFR	THFR	RTFR
EB	229	157	136	.820	279	191	166
WB	84	216	57	.820	102	263	70
NB	153	482	37	.820	187	588	45
SB	25	854	510	.820	30	1041	622

PART 2 (LANE GROUP ADJUSTMENTS)

DIR	LN	GROUP	FLOW	N	LU	v	Plt	Prt
EB	LT		279	1	1.00	279	1.00	0.00
EB	TH-RT		357	1	1.00	357	0.00	0.46
WB	LT		102	1	1.00	102	1.00	0.00
WB	TH-RT		333	1	1.00	333	0.00	0.21
NB	LT		187	1	1.00	187	1.00	0.00
NB	TH-RT		633	2	1.05	665	0.00	0.07
SB	LT		30	1	1.00	30	1.00	0.00
SB	TH-RT		1663	2	1.05	1747	0.00	0.37

PART 3 (OPPOSING VOLUME ADJUSTMENTS)

LEFT TURN BEING OPPOSED	OPPOSING APPROACH										# LANES	OPPOSING VOLUME
	VOLUMES			% OPPOSING LEFT TURN			LANES					
	LT	TH	RT	LT	TH	RT	LT	TH	RT			
EASTBOUND	102	263	70	100	100	100	1	1	0	333		
WESTBOUND	279	191	166	0	62	62	1	1	0	222		

NORTHBOUND	30	1041	622	100	100	100	1	2	0	1399
SOUTHBOUND	187	588	45	0	76	76	1	2	0	478

SATURATION FLOW ADJUSTMENT WORKSHEET

DIR LN GROUP	IDEAL	N	Fwid	Fhv	Fgr	Fpark	Fbus	Farea	Frft	Flt	s
EB LT	1800	1	1.017	0.976	1.000	1.000	1.000	1.000	1.000	0.950	1696
EB TH-RT	1800	1	0.983	0.976	1.000	1.000	1.000	1.000	0.930	1.000	1607
WB LT	1800	1	1.017	0.985	1.000	1.000	1.000	1.000	1.000	0.594	1072
WB TH-RT	1800	1	0.983	0.985	1.000	1.000	1.000	1.000	0.969	1.000	1689
NB LT	1800	1	1.017	0.966	1.000	1.000	1.000	1.000	1.000	0.950	1680
NB TH-RT	1800	2	0.967	0.966	1.000	1.000	1.000	1.000	0.989	1.000	3326
SB LT	1800	1	0.933	0.985	1.000	1.000	1.000	1.000	1.000	0.533	883
SB TH-RT	1800	2	0.983	0.985	1.000	1.000	1.000	1.000	0.944	1.000	3292

SUPPLEMENTAL WORKSHEET FOR LEFT-TURN ADJUSTMENT FACTOR FLT

INPUT VARIABLES

DIR	C	G	N	Va	Vm	Vlt	Plt	No	Vo	Plto
WB	70	16	1	102	333	102	1.00	1	222	0.00
SB	70	26	1	30	1399	30	1.00	2	478	0.00

CALCULATIONS

DIR	Sop	Yo	Gu	Fs	Pl	Gq	Pt	Gf	El	Fm	Flt
WB	1800	0.123	8.513	0.736	1.000	7.587	0.000	0.000	1.528	0.594	0.594
SB	3600	0.133	19.149	0.576	1.000	6.751	0.000	0.000	1.952	0.533	0.533

CAPACITY ANALYSIS WORKSHEET

DIR LN GROUP	v	s	v/s	g/C	c	v/c	CRITICAL
EB LT	279	1696	0.10	0.14	398	0.70	*
EB TH-RT	357	1607	0.22	0.37	594	0.60	
WB LT	102	1072	0.10	0.23	247	0.42	
WB TH-RT	333	1689	0.20	0.23	389	0.86	*
NB LT	187	1680	0.07	0.12	303	0.62	*
NB TH-RT	665	3326	0.20	0.49	1630	0.41	
SB LT	30	883	0.03	0.37	327	0.09	
SB TH-RT	1747	3292	0.53	0.37	1218	1.43	*

CYCLE= 70.0 LOST= 9.8 SUM V/S CRIT= 0.90 TOTAL V/C= 1.05

FOR THE EASTBOUND PROTECTED/PERMISSIVE LEFT TURN LANE THE CAPACITY, V/S AND V/C RATIOS HAVE ALL BEEN ADJUSTED TO REFLECT A CAPACITY FOR

102 LEFT TURNS ON THE CHANGE INTERVAL AND 58 ON THE PERMISSIVE PHASE

FOR THE NORTHBOUND PROTECTED/PERMISSIVE LEFT TURN LANE THE CAPACITY, V/S AND V/C RATIOS HAVE ALL BEEN ADJUSTED TO REFLECT A CAPACITY FOR

101 LEFT TURNS ON THE CHANGE INTERVAL AND 0 ON THE PERMISSIVE PHASE

LEVEL OF SERVICE WORKSHEET

DIR LN GROUP	v/c	g/C	C	d1	c	d2	PF	Delay	LOS	Avg Q	95% Q
EB LT	0.70	0.37	70.0	14.26	398	3.75	1.00	18.01	C	4.7	
EB TH-RT	0.60	0.37	70.0	13.58	594	1.24	1.00	14.81	B	4.4	
WB LT	0.42	0.23	70.0	17.44	247	0.68	1.00	18.11	C	1.5	
WB TH-RT	0.86	0.23	70.0	19.64	389	11.82	1.00	31.46	D	5.4	
NB LT	0.62	0.49	70.0	9.91	303	2.66	1.00	12.57	B	3.2	
NB TH-RT	0.41	0.49	70.0	8.65	1630	0.10	1.00	8.74	B	6.3	
SB LT	0.09	0.37	70.0	10.94	327	0.00	1.00	10.94	B	0.4	
SB TH-RT	1.43	0.37	70.0	22.49	1218	316.21	1.01	343.15	F	168.7	

DIR Delay LOS

EB	16.22	C
WB	28.32	D
NB	9.58	B
SB	337.45	F

INTERSECTION DELAY =170.39 INTERSECTION LOS=F

THE CYCLE LENGTH WITHIN THE BOUNDS OF 70 TO 90 SECONDS  
WHICH MINIMIZES CRITICAL MOVEMENT DELAY IS 90.0 SECONDS

FOR A V/C RATIO OF .95 THE CYCLE SHOULD BE 185.7 SECONDS  
for chosen cycle length 90.0

suggested timing phase 1 is	6.6 secs green,	0.0 secs yellow + red clear
suggested timing phase 2 is	47.3 secs green,	4.9 secs yellow + red clear
suggested timing phase 3 is	8.8 secs green,	0.0 secs yellow + red clear
suggested timing phase 4 is	17.6 secs green,	4.9 secs yellow + red clear

CINCH PROGRAM VERSION DATE 1-12-1987  
 1985 HCM - CHAPTER 9: SIGNALIZED - OPERATIONAL ANALYSIS  
 WASHINGTON/ALLEN PM PEAK HOUR  
 1987 EXISTING

date:10-29-1987 time:17:05:21  
 LAST DATA SET NAMES LOADED OR SAVED  
 VOLUME=WAPE GEOMETRICS=WA SIGNAL=WAP

LOCATED IN CBD:N  
 VOLUME & GEOMETRICS

DIR	VOLUMES			# OF LANES			LANE WIDTH			CROSS WALK
	LT	TH	RT	LT	TH	RT	LT	TH	RT	
EB	412	277	155	1	1	0	12.5	11.5	0.0	0
WB	119	245	70	1	1	0	12.5	11.5	0.0	0
NB	234	905	73	1	2	0	12.5	11.0	0.0	0
SB	59	614	368	1	2	0	10.0	11.5	0.0	0

TRAFFIC & ROADWAY CONDITIONS

DIR	GRADE	%HV	ADJ PARK			PEDESTRIANS			ARR TIME	ARR TYPE
			Y/N	MOVES	BUSES	PHF	CROSS	BUT MIN		
EB	0.0%	2.0%	N	0	0	.830	0	7.0	3	
WB	0.0%	4.0%	N	0	0	.830	0	7.0	3	
NB	0.0%	3.0%	N	0	0	.820	0	7.0	3	
SB	0.0%	3.5%	N	0	0	.830	0	7.0	4	

PHASINGS

	EASTBOUND				WESTBOUND				NORTHBOUND				SOUTHBOUND				GREEN	Y+R	PRE/ACT
	l	t	r	p	l	t	r	p	l	t	r	p	l	t	r	p			
1									*	*	*						12.6	0	P
2									*	*	*	*	*	*			27.0	6	P
3	*	*	*														19.8	0	P
4	*	*	*		*	*	*										18.0	6	P

CYCLE= 90.0

VOLUME ADJUSTMENT WORKSHEET

PART 1 (MOVEMENT ADJUSTMENTS)

DIR	LTV	THV	RTV	PHF	LTFR	THFR	RTFR
EB	412	277	155	.830	496	334	187
WB	119	245	70	.830	143	295	84
NB	234	905	73	.820	285	1104	89
SB	59	614	368	.830	71	740	443

PART 2 (LANE GROUP ADJUSTMENTS)

DIR	LN	GROUP	FLOW	N	LU	v	Plt	Prt
EB	LT		496	1	1.00	496	1.00	0.00
EB	TH-RT		520	1	1.00	520	0.00	0.36
WB	LT		143	1	1.00	143	1.00	0.00
WB	TH-RT		380	1	1.00	380	0.00	0.22
NB	LT		285	1	1.00	285	1.00	0.00
NB	TH-RT		1193	2	1.05	1252	0.00	0.07
SB	LT		71	1	1.00	71	1.00	0.00
SB	TH-RT		1183	2	1.05	1242	0.00	0.37

PART 3 (OPPOSING VOLUME ADJUSTMENTS)

LEFT TURN BEING OPPOSED	OPPOSING APPROACH									# LANES	OPPOSING VOLUME
	VOLUMES			% OPPOSING LEFT TURN			LEFT TURN				
	LT	TH	RT	LT	TH	RT	LT	TH	RT		
EASTBOUND	143	295	84	100	100	100	1	1	0	380	
WESTBOUND	496	334	187	0	48	48	1	1	0	248	

NORTHBOUND	71	740	443	100	100	100	1	2	0	1183
SOUTHBOUND	285	1104	89	0	68	68	1	2	0	813

SATURATION FLOW ADJUSTMENT WORKSHEET

DIR LN GROUP	IDEAL	N	Fwid	Fhv	Fgr	Fpark	Fbus	Farea	Frt	Flt	s
EB LT	1800	1	1.017	0.990	1.000	1.000	1.000	1.000	1.000	0.950	1721
EB TH-RT	1800	1	0.983	0.990	1.000	1.000	1.000	1.000	0.946	1.000	1658
WB LT	1800	1	1.017	0.980	1.000	1.000	1.000	1.000	1.000	0.453	814
WB TH-RT	1800	1	0.983	0.980	1.000	1.000	1.000	1.000	0.967	1.000	1677
NB LT	1800	1	1.017	0.985	1.000	1.000	1.000	1.000	1.000	0.950	1713
NB TH-RT	1800	2	0.967	0.985	1.000	1.000	1.000	1.000	0.989	1.000	3390
SB LT	1800	1	0.933	0.983	1.000	1.000	1.000	1.000	1.000	0.252	416
SB TH-RT	1800	2	0.983	0.983	1.000	1.000	1.000	1.000	0.944	1.000	3284

SUPPLEMENTAL WORKSHEET FOR LEFT-TURN ADJUSTMENT FACTOR FLT

INPUT VARIABLES

DIR	C	G	N	Va	Vm	Vlt	Plt	No	Vo	Plto
WB	90	18	1	143	380	143	1.00	1	248	0.00
SB	90	27	1	71	1183	71	1.00	2	813	0.00

CALCULATIONS

DIR	Sop	Yo	Gu	Fs	Pl	Gq	Pt	Gf	El	Fm	Flt
WB	1800	0.138	6.503	0.720	1.000	11.497	0.000	0.000	1.562	0.453	0.453
SB	3600	0.226	8.617	0.367	1.000	18.383	0.000	0.000	3.067	0.252	0.252

CAPACITY ANALYSIS WORKSHEET

DIR LN GROUP	v	s	v/s	g/C	c	v/c	CRITICAL
EB LT	496	1721	0.24	0.22	459	1.08	*
EB TH-RT	520	1658	0.31	0.42	696	0.75	
WB LT	143	814	0.18	0.20	163	0.88	
WB TH-RT	380	1677	0.23	0.20	335	1.13	*
NB LT	285	1713	0.12	0.14	320	0.89	*
NB TH-RT	1252	3390	0.37	0.44	1492	0.84	
SB LT	71	416	0.17	0.30	125	0.57	
SB TH-RT	1242	3284	0.38	0.30	985	1.26	*

CYCLE= 90.0 LOST=12.6 SUM V/S CRIT= 0.97 TOTAL V/C= 1.12

FOR THE EASTBOUND PROTECTED/PERMISSIVE LEFT TURN LANE THE CAPACITY, V/S AND V/C RATIOS HAVE ALL BEEN ADJUSTED TO REFLECT A CAPACITY FOR

81 LEFT TURNS ON THE CHANGE INTERVAL AND 0 ON THE PERMISSIVE PHASE

FOR THE NORTHBOUND PROTECTED/PERMISSIVE LEFT TURN LANE THE CAPACITY, V/S AND V/C RATIOS HAVE ALL BEEN ADJUSTED TO REFLECT A CAPACITY FOR

80 LEFT TURNS ON THE CHANGE INTERVAL AND 0 ON THE PERMISSIVE PHASE

LEVEL OF SERVICE WORKSHEET

DIR LN GROUP	v/c	g/C	C	d1	c	d2	PF	Delay	LOS	Avg Q	95% Q
EB LT	1.08	0.42	90.0	21.07	459	58.87	1.00	79.94	F	15.9	
EB TH-RT	0.75	0.42	90.0	16.77	696	3.09	1.00	19.86	C	7.5	
WB LT	0.88	0.20	90.0	26.57	163	26.67	1.00	53.24	E	3.6	
WB TH-RT	1.13	0.20	90.0	28.29	335	88.12	1.00	116.40	F	16.1	
NB LT	0.89	0.44	90.0	17.65	320	17.78	1.00	35.44	D	6.1	
NB TH-RT	0.84	0.44	90.0	17.01	1492	3.17	1.00	20.17	C	16.7	
SB LT	0.57	0.30	90.0	20.21	125	4.35	1.00	24.55	C	1.2	
SB TH-RT	1.26	0.30	90.0	26.96	985	153.78	0.97	176.03	F	68.2	

DIR Delay LOS

EB	49.19	E
WB	99.09	F
NB	23.01	C
SB	167.83	F

INTERSECTION DELAY = 81.45 INTERSECTION LOS=F

THE CYCLE LENGTH WITHIN THE BOUNDS OF 70 TO 90 SECONDS  
WHICH MINIMIZES CRITICAL MOVEMENT DELAY IS 90.0 SECONDS

THE V/C RATIO CAN'T BE .95 FOR THE GIVEN CONDITIONS

for chosen cycle length 90.0

suggested timing phase 1 is	10.0 secs green,	0.0 secs yellow + red clear
suggested timing phase 2 is	30.3 secs green,	6.3 secs yellow + red clear
suggested timing phase 3 is	19.0 secs green,	0.0 secs yellow + red clear
suggested timing phase 4 is	18.1 secs green,	6.3 secs yellow + red clear



INCH PROGRAM VERSION DATE 1-12-1987  
 985 HCM - CHAPTER 9: SIGNALIZED - OPERATIONAL ANALYSIS  
 ASHINGTON STREET/ALLEN AVENUE AM PEAK HOUR  
 987 EXISTING W/IMPROVEMENTS

ate:01-01-1980 time:00:15:47  
 AST DATA SET NAMES LOADED OR SAVED  
 OLUME=waae GEOMETRICS=wa SIGNAL=

OCATED IN CBD:N  
 OLUME & GEOMETRICS

IR	VOLUMES			# OF LANES			LANE WIDTH			CROSS WALK
	LT	TH	RT	LT	TH	RT	LT	TH	RT	
B	229	157	136	1	1	0	12.5	11.5	0.0	0
B	84	216	57	1	1	0	12.5	11.5	0.0	0
B	153	482	37	1	2	0	12.5	11.0	0.0	0
B	25	854	408	1	2	0	10.0	11.5	0.0	0

TRAFFIC & ROADWAY CONDITIONS

IR	GRADE	%HV	ADJ PARK		BUSES	PHF	PEDESTRIANS			ARR
			Y/N	MOVES			CROSS	BUT	MIN TIME	
B	0.0%	5.0%	N	0	0	.820	0		7.0	3
B	0.0%	3.0%	N	0	0	.820	0		7.0	3
B	0.0%	7.0%	N	0	0	.820	0		7.0	3
B	0.0%	3.0%	N	0	0	.820	0		7.0	4

HASINGS

	EASTBOUND				WESTBOUND				NORTHBOUND				SOUTHBOUND				GREEN	Y+R	PRE/ACT
	l	t	r	p	l	t	r	p	l	t	r	p	l	t	r	p			
1									*	*	*						6.3	0	A
2				*					*	*	*		*	*	*		45.5	5	A
3	*	*	*														9.7	0	A

YCLE= 90.0

VOLUME ADJUSTMENT WORKSHEET

ART 1 (MOVEMENT ADJUSTMENTS)

IR	LTV	THV	RTV	PHF	LTRF	THRF	RTFR
B	229	157	136	.820	279	191	166
B	84	216	57	.820	102	263	70
B	153	482	37	.820	187	588	45
B	25	854	408	.820	30	1041	498

ART 2 (LANE GROUP ADJUSTMENTS)

IR	LN	GROUP	FLOW	N	LU	v	Plt	Prt
B	LT		279	1	1.00	279	1.00	0.00
B	TH-RT		357	1	1.00	357	0.00	0.46
B	LT		102	1	1.00	102	1.00	0.00
B	TH-RT		333	1	1.00	333	0.00	0.21
B	LT		187	1	1.00	187	1.00	0.00
B	TH-RT		633	2	1.05	665	0.00	0.07
B	LT		30	1	1.00	30	1.00	0.00
B	TH-RT		1539	2	1.05	1616	0.00	0.32

ART 3 (OPPOSING VOLUME ADJUSTMENTS)

EFT TURN	VOLUMES			% OPPOSING LEFT TURN			# LANES			OPPOSING VOLUME
	LT	TH	RT	LT	TH	RT	LT	TH	RT	
ASTBOUND	102	263	70	100	100	100	1	1	0	333
ESTBOUND	279	191	166	0	65	65	1	1	0	234
ORTHBOUND	30	1041	498	100	100	100	1	2	0	1399
OUTHBOUND	187	588	45	0	88	88	1	2	0	556

SATURATION FLOW ADJUSTMENT WORKSHEET

IR	LN	GROUP	IDEAL	N	Fwid	Fhv	Fgr	Fpark	Fbus	Farea	Frt	Flt	s
B	LT		1800	1	1.017	0.976	1.000	1.000	1.000	1.000	1.000	0.950	1696
B	TH-RT		1800	1	0.983	0.976	1.000	1.000	1.000	1.000	0.930	1.000	1607
B	LT		1800	1	1.017	0.985	1.000	1.000	1.000	1.000	1.000	0.490	883
B	TH-RT		1800	1	0.983	0.985	1.000	1.000	1.000	1.000	0.969	1.000	1689
B	LT		1800	1	1.017	0.966	1.000	1.000	1.000	1.000	1.000	0.950	1680
B	TH-RT		1800	2	0.967	0.966	1.000	1.000	1.000	1.000	0.989	1.000	3326
B	LT		1800	1	0.933	0.985	1.000	1.000	1.000	1.000	1.000	0.473	783
B	TH-RT		1800	2	0.983	0.985	1.000	1.000	1.000	1.000	0.952	1.000	3319

SUPPLEMENTAL WORKSHEET FOR LEFT-TURN ADJUSTMENT FACTOR FLT

INPUT VARIABLES

IR	C	G	N	Va	Vm	Vlt	Plt	Na	Va	Plta
B	90	18	1	102	333	102	1.00	1	234	0.00
B	90	46	1	30	1399	30	1.00	2	556	0.00

CALCULATIONS

IR	Sap	Yo	Gu	Fs	P1	Gq	Pt	Gf	E1	Fm	Flt
B	1800	0.130	7.743	0.729	1.000	10.678	0.000	0.000	1.543	0.490	0.490
B	3600	0.154	37.392	0.528	1.000	8.122	0.000	0.000	2.132	0.473	0.473

CAPACITY ANALYSIS WORKSHEET

IR	LN	GROUP	v	s	v/s	g/c	c	v/c	CRITICAL
B	LT		279	1696	0.10	0.11	289	0.97	*
B	TH-RT		357	1607	0.22	0.31	503	0.71	
B	LT		102	883	0.12	0.20	181	0.57	
B	TH-RT		333	1689	0.20	0.20	346	0.96	*
B	LT		187	1680	0.07	0.07	197	0.95	*
B	TH-RT		665	3326	0.20	0.58	1916	0.35	
B	LT		30	783	0.04	0.51	396	0.08	
B	TH-RT		1616	3319	0.49	0.51	1673	0.96	*

YCLE= 90.0 LOST=10.0 SUM V/S CRIT= 0.86 TOTAL V/C= 0.96  
 OR THE EASTBOUND PROTECTED/PERMISSIVE LEFT TURN LANE THE CAPACITY, V/S AND V/C  
 RATIOS HAVE ALL BEEN ADJUSTED TO REFLECT A CAPACITY FOR

RATIOS HAVE ALL BEEN ADJUSTED TO REFLECT A CAPACITY FOR 79 LEFT TURNS ON THE CHANGE INTERVAL AND 26 ON THE PERMISSIVE PHASE OR THE NORTHBOUND PROTECTED/PERMISSIVE LEFT TURN LANE THE CAPACITY, V/S AND V/C RATIOS HAVE ALL BEEN ADJUSTED TO REFLECT A CAPACITY FOR 79 LEFT TURNS ON THE CHANGE INTERVAL AND 0 ON THE PERMISSIVE PHASE

LEVEL OF SERVICE WORKSHEET

DIR LN GROUP	v/c	g/C	C	d1	c	d2	PF	Delay	LOS	Avg Q	95% Q
EB LT	0.97	0.31	90.0	23.15	289	32.59	1.00	55.75	E	7.4	
EB TH-RT	0.71	0.31	90.0	20.76	503	3.21	0.85	20.37	C	6.1	
WB LT	0.57	0.20	90.0	24.47	181	3.04	1.00	27.51	D	2.0	
WB TH-RT	0.96	0.20	90.0	26.94	346	28.43	0.85	47.07	E	7.7	
NB LT	0.95	0.58	90.0	13.56	197	36.00	1.00	49.56	E	4.7	
NB TH-RT	0.35	0.58	90.0	7.69	1916	0.05	0.85	6.57	B	6.7	
SB LT	0.08	0.51	90.0	8.69	396	0.00	1.00	8.70	B	0.4	
SB TH-RT	0.96	0.51	90.0	16.29	1678	10.53	0.77	20.60	C	19.0	

DIR Delay LOS

EB	35.89	D
WB	42.47	E
NB	16.00	C
SB	20.38	C

INTERSECTION DELAY = 24.79 INTERSECTION LOS=C

THE CYCLE LENGTH WITHIN THE BOUNDS OF 80 TO 120 SECONDS WHICH MINIMIZES CRITICAL MOVEMENT DELAY IS 90.0 SECONDS

FOR A V/C RATIO OF .95 THE CYCLE SHOULD BE 100.4 SECONDS

for chosen cycle length 90.0

suggested timing phase 1 is	6.2 secs green,	0.0 secs yellow + red clear
suggested timing phase 2 is	45.5 secs green,	5.0 secs yellow + red clear
suggested timing phase 3 is	9.8 secs green,	0.0 secs yellow + red clear
suggested timing phase 4 is	18.4 secs green,	5.0 secs yellow + red clear

INCH PROGRAM VERSION DATE 1-12-1987  
 985 HCM - CHAPTER 9: SIGNALIZED - OPERATIONAL ANALYSIS  
 WASHINGTON/ALLEN PM PEAK HOUR  
 987 EXISTING W/IMPROVEMENTS

DATE: 01-01-1980 TIME: 00:29:05  
 DATA SET NAMES LOADED OR SAVED  
 VOLUME=WAPE GEOMETRICS=WA SIGNAL=WAP

LOCATED IN CBD:N  
 VOLUME & GEOMETRICS

LR	VOLUMES			# OF LANES			LANE WIDTH			CROSS WALK
	LT	TH	RT	LT	TH	RT	LT	TH	RT	
B	412	277	155	1	1	0	12.5	11.5	0.0	0
B	119	245	70	1	1	0	12.5	11.5	0.0	0
B	234	905	73	1	2	0	12.5	11.0	0.0	0
B	59	614	294	1	2	0	10.0	11.5	0.0	0

TRAFFIC & ROADWAY CONDITIONS

LR	GRADE	%HV	ADJ PARK		BUSES	PHF	PEDESTRIANS			ARR TIME	TYPE
			Y/N	MOVES			CROSS	BUT	MIN		
B	0.0%	2.0%	N	0	0	.830	0		7.0	3	
B	0.0%	4.0%	N	0	0	.830	0		7.0	3	
B	0.0%	3.0%	N	0	0	.820	0		7.0	3	
B	0.0%	3.5%	N	0	0	.830	0		7.0	4	

HASINGS

	EASTBOUND				WESTBOUND				NORTHBOUND				SOUTHBOUND				GREEN	Y+R	PRE/ACT
	l	t	r	p	l	t	r	p	l	t	r	p	l	t	r	p			
1									*	*	*						12.8	0	A
2									*	*	*	*	*	*			37.1	5	A
3	*	*	*														25.2	0	A

YCLE= 110.0

VOLUME ADJUSTMENT WORKSHEET

ART 1 (MOVEMENT ADJUSTMENTS)

IR	LTV	THV	RTV	PHF	LTFR	THFR	RTFR
B	412	277	155	.830	496	334	187
B	119	245	70	.830	143	295	84
B	234	905	73	.820	285	1104	89
B	59	614	294	.830	71	740	354

ART 2 (LANE GROUP ADJUSTMENTS)

IR	LN	GROUP	FLOW	N	LU	v	Plt	Prt
B	LT		496	1	1.00	496	1.00	0.00
B	TH-RT		520	1	1.00	520	0.00	0.36
B	LT		143	1	1.00	143	1.00	0.00
B	TH-RT		380	1	1.00	380	0.00	0.22
B	LT		285	1	1.00	285	1.00	0.00
B	TH-RT		1193	2	1.05	1252	0.00	0.07
B	LT		71	1	1.00	71	1.00	0.00
B	TH-RT		1094	2	1.05	1149	0.00	0.32

ART 3 (OPPOSING VOLUME ADJUSTMENTS)

EFT TURN DIRECTION OPPOSED	OPPOSING APPROACH										OPPOSING VOLUME
	VOLUMES			% OPPOSING LEFT TURN			# LANES				
	LT	TH	RT	LT	TH	RT	LT	TH	RT		
ASTBOUND	143	295	84	100	100	100	1	1	0	380	
ESTBOUND	496	334	187	0	48	48	1	1	0	252	
ORTHBOUND	71	740	354	100	100	100	1	2	0	1094	
OUTHBOUND	285	1104	89	0	74	74	1	2	0	886	

SATURATION FLOW ADJUSTMENT WORKSHEET

IR	LN	GROUP	IDEAL	N	Fuid	Fhv	Fgr	Fpark	Fbus	Farea	Frt	Flt	s
B	LT		1800	1	1.017	0.990	1.000	1.000	1.000	1.000	1.000	0.950	1721
B	TH-RT		1800	1	0.983	0.990	1.000	1.000	1.000	1.000	0.946	1.000	1658
B	LT		1800	1	1.017	0.980	1.000	1.000	1.000	1.000	1.000	0.435	781
B	TH-RT		1800	1	0.983	0.980	1.000	1.000	1.000	1.000	0.967	1.000	1677
B	LT		1800	1	1.017	0.985	1.000	1.000	1.000	1.000	1.000	0.950	1713
B	TH-RT		1800	2	0.967	0.985	1.000	1.000	1.000	1.000	0.989	1.000	3390
B	LT		1800	1	0.933	0.983	1.000	1.000	1.000	1.000	1.000	0.210	347
B	TH-RT		1800	2	0.983	0.983	1.000	1.000	1.000	1.000	0.951	1.000	3310

SUPPLEMENTAL WORKSHEET FOR LEFT-TURN ADJUSTMENT FACTOR FLT

INPUT VARIABLES

IR	C	G	N	Va	Vm	Vlt	Plt	No	Va	Plto
B	110	24	1	143	380	143	1.00	1	252	0.00
B	110	37	1	71	1094	71	1.00	2	886	0.00

CALCULATIONS

IR	Sop	Yo	Gu	Fs	P1	Gq	Pt	Gf	E1	Fm	Flt
B	1800	0.140	10.253	0.718	1.000	13.958	0.000	0.000	1.568	0.435	0.435
B	3600	0.246	13.337	0.321	1.000	23.798	0.000	0.000	3.504	0.210	0.210

CAPACITY ANALYSIS WORKSHEET

IR	LN	GROUP	v	s	v/s	g/c	c	v/c	CRITICAL
B	LT		496	1721	0.24	0.23	482	1.03	*
B	TH-RT		520	1658	0.31	0.45	754	0.69	
B	LT		143	781	0.18	0.22	172	0.83	
B	TH-RT		380	1677	0.23	0.22	369	1.03	*
B	LT		285	1713	0.12	0.12	280	1.02	*
B	TH-RT		1252	3390	0.37	0.45	1540	0.81	
B	LT		71	347	0.20	0.34	117	0.61	
B	TH-RT		1149	3310	0.35	0.34	1117	1.03	*

YCLE=110.0 LOST=10.0 SUM V/S CRIT= 0.93 TOTAL V/C= 1.03

ON THE NORTHBOUND PROTECTED/PERMISSIVE LEFT TURN LANE THE CAPACITY, V/S AND V/C RATIOS HAVE ALL BEEN ADJUSTED TO REFLECT A CAPACITY FOR 66 LEFT TURNS ON THE CHANGE INTERVAL AND 12 ON THE PERMISSIVE PHASE OR THE NORTHBOUND PROTECTED/PERMISSIVE LEFT TURN LANE THE CAPACITY, V/S AND V/C RATIOS HAVE ALL BEEN ADJUSTED TO REFLECT A CAPACITY FOR 66 LEFT TURNS ON THE CHANGE INTERVAL AND 15 ON THE PERMISSIVE PHASE

EVEL OF SERVICE WORKSHEET

IR LN GROUP	v/c	g/C	C	d1	c	d2	PF	Delay	LOS	Avg Q	95% Q
B LT	1.03	0.45	110.0	23.38	482	39.90	1.00	63.27	F	14.5	
B TH-RT	0.69	0.45	110.0	18.11	754	1.88	0.85	16.99	C	8.7	
B LT	0.83	0.22	110.0	31.14	172	19.06	1.00	50.20	E	3.7	
B TH-RT	1.03	0.22	110.0	32.86	369	44.02	0.85	65.35	F	11.4	
B LT	1.02	0.45	110.0	23.16	280	46.59	1.00	69.75	F	9.4	
B TH-RT	0.81	0.45	110.0	19.74	1540	2.45	0.85	18.86	C	19.9	
B LT	0.61	0.34	110.0	23.07	117	5.99	1.00	29.05	D	1.4	
B TH-RT	1.03	0.34	110.0	28.09	1117	27.86	0.79	44.07	E	24.5	

IR Delay LOS  
 B 39.58 D  
 B 61.20 F  
 B 28.30 D  
 B 43.20 E

INTERSECTION DELAY = 39.20 INTERSECTION LOS=D

THE CYCLE LENGTH WITHIN THE BOUNDS OF 80 TO 120 SECONDS WHICH MINIMIZES CRITICAL MOVEMENT DELAY IS 110.0 SECONDS

OR A V/C RATIO OF .95 THE CYCLE SHOULD BE 587.2 SECONDS or chosen cycle length 110.0

suggested timing phase 1 is 12.7 secs green, 0.0 secs yellow + red clear  
 suggested timing phase 2 is 37.2 secs green, 5.0 secs yellow + red clear  
 suggested timing phase 3 is 25.9 secs green, 0.0 secs yellow + red clear  
 suggested timing phase 4 is 24.2 secs green, 5.0 secs yellow + red clear

INCH PROGRAM VERSION DATE 1-12-1987  
 985 HCM - CHAPTER 9: SIGNALIZED - OPERATIONAL ANALYSIS  
 WASHINGTON STREET/ALLEN AVENUE AM PEAK HOUR  
 987 BUILD W/IMPROVEMENTS

DATE: 01-01-1980 TIME: 01:25:39  
 FAST DATA SET NAMES LOADED OR SAVED  
 VOLUME=WAAE GEOMETRICS=WA SIGNAL=WAA

LOCATED IN CBD:N  
 VOLUME & GEOMETRICS

IR	VOLUMES			# OF LANES			LANE WIDTH			CROSS WALK
	LT	TH	RT	LT	TH	RT	LT	TH	RT	
B	229	168	137	1	1	0	12.5	11.5	0.0	0
B	103	243	63	1	1	0	12.5	11.5	0.0	0
B	156	491	41	1	2	0	12.5	11.0	0.0	0
B	26	858	408	1	2	0	10.0	11.5	0.0	0

TRAFFIC & ROADWAY CONDITIONS

IR	GRADE	%HV	ADJ PARK			PHF	PEDESTRIANS			ARR
			Y/N	MOVES	BUSES		CROSS	BUT	MIN	
B	0.0%	5.0%	N	0	0	.820	0		7.0	3
B	0.0%	3.0%	N	0	0	.820	0		7.0	3
B	0.0%	7.0%	N	0	0	.820	0		7.0	3
B	0.0%	3.0%	N	0	0	.820	0		7.0	4

SIGNALS

	EASTBOUND				WESTBOUND				NORTHBOUND				SOUTHBOUND				GREEN	Y+R	PRE/ACT
	l	t	r	p	l	t	r	p	l	t	r	p	l	t	r	p			
1									*	*	*						6.5	0	A
2									*	*	*	*	*	*			43.8	5	A
3	*	*	*														9.9	0	A
4	*	*	*		*	*	*										19.8	5	A

CYCLE= 90.0

VOLUME ADJUSTMENT WORKSHEET

ART 1 (MOVEMENT ADJUSTMENTS)

IR	LTV	THV	RTV	PHF	LTVR	THVR	RTVR
B	229	168	137	.820	279	205	167
B	103	243	63	.820	126	296	77
B	156	491	41	.820	190	599	50
B	26	858	408	.820	32	1046	498

ART 2 (LANE GROUP ADJUSTMENTS)

IR	LN	GROUP	FLOW	N	LU	v	Plt	Prt
B	LT		279	1	1.00	279	1.00	0.00
B	TH-RT		372	1	1.00	372	0.00	0.45
B	LT		126	1	1.00	126	1.00	0.00
B	TH-RT		373	1	1.00	373	0.00	0.21
B	LT		190	1	1.00	190	1.00	0.00
B	TH-RT		649	2	1.05	681	0.00	0.08
B	LT		32	1	1.00	32	1.00	0.00
B	TH-RT		1544	2	1.05	1621	0.00	0.32

ART 3 (OPPOSING VOLUME ADJUSTMENTS)

LEFT TURN BEING OPPOSED	OPPOSING APPROACH			% OPPOSING LEFT TURN			# LANES			OPPOSING VOLUME
	VOLUMES				LT	TH	RT	LT	TH	
EASTBOUND	126	296	77	100	100	100	1	1	0	373
WESTBOUND	279	205	167	0	67	67	1	1	0	248
NORTHBOUND	32	1046	498	100	100	100	1	2	0	1399

190 377 30 0 07 1 2 0 383

ATURATION FLOW ADJUSTMENT WORKSHEET

IR LN GROUP	IDEAL N	Fwid	Fhv	Fgr	Fpark	Fbus	Farea	Frt	Flt	s
B LT	1800	1	1.017	0.976	1.000	1.000	1.000	1.000	0.950	1696
B TH-RT	1800	1	0.983	0.976	1.000	1.000	1.000	0.933	1.000	1610
B LT	1800	1	1.017	0.985	1.000	1.000	1.000	1.000	0.479	864
B TH-RT	1800	1	0.983	0.985	1.000	1.000	1.000	0.969	1.000	1690
B LT	1800	1	1.017	0.966	1.000	1.000	1.000	1.000	0.950	1680
B TH-RT	1800	2	0.967	0.966	1.000	1.000	1.000	0.988	1.000	3323
B LT	1800	1	0.933	0.985	1.000	1.000	1.000	1.000	0.464	768
B TH-RT	1800	2	0.983	0.985	1.000	1.000	1.000	0.952	1.000	3319

UPPLEMENTAL WORKSHEET FOR LEFT-TURN ADJUSTMENT FACTOR FLT  
 INPUT VARIABLES

IR	C	G	N	Va	Vm	Vlt	Plt	No	Va	Plto
B	90	20	1	126	373	126	1.00	1	248	0.00
B	90	44	1	32	1399	32	1.00	2	565	0.00

ALCULATIONS

IR	Sop	Yo	Gu	Fs	P1	Gq	Pt	Gf	E1	Fm	Flt
B	1800	0.138	8.580	0.720	1.000	11.223	0.000	0.000	1.563	0.479	0.479
B	3600	0.157	35.205	0.522	1.000	8.597	0.000	0.000	2.155	0.464	0.464

CAPACITY ANALYSIS WORKSHEET

IR LN GROUP	v	s	v/s	g/c	c	v/c	CRITICAL
B LT	279	1696	0.11	0.11	282	0.99	*
B TH-RT	372	1610	0.23	0.33	531	0.70	
B LT	126	864	0.15	0.22	190	0.66	
B TH-RT	373	1690	0.22	0.22	372	1.00	*
B LT	190	1680	0.07	0.07	200	0.95	*
B TH-RT	681	3323	0.20	0.56	1858	0.37	
B LT	32	768	0.04	0.49	374	0.08	
B TH-RT	1621	3319	0.49	0.49	1615	1.00	*

CYCLE= 90.0 LOST=10.0 SUM V/S CRIT= 0.89 TOTAL V/C= 1.00  
 FOR THE EASTBOUND PROTECTED/PERMISSIVE LEFT TURN LANE THE CAPACITY, V/S AND V/C RATIOS HAVE ALL BEEN ADJUSTED TO REFLECT A CAPACITY FOR 79 LEFT TURNS ON THE CHANGE INTERVAL AND 16 ON THE PERMISSIVE PHASE  
 FOR THE NORTHBOUND PROTECTED/PERMISSIVE LEFT TURN LANE THE CAPACITY, V/S AND V/C RATIOS HAVE ALL BEEN ADJUSTED TO REFLECT A CAPACITY FOR 79 LEFT TURNS ON THE CHANGE INTERVAL AND 0 ON THE PERMISSIVE PHASE

LEVEL OF SERVICE WORKSHEET

IR LN GROUP	v/c	g/c	C	d1	c	d2	PF	Delay	LOS	Avg Q	95% Q
B LT	0.99	0.33	90.0	22.81	282	38.66	1.00	61.47	F	7.9	
B TH-RT	0.70	0.33	90.0	19.97	531	2.83	0.85	19.38	C	6.2	
B LT	0.66	0.22	90.0	24.34	190	5.58	1.00	29.92	D	2.4	
B TH-RT	1.00	0.22	90.0	26.70	372	36.83	0.85	54.00	E	9.2	
B LT	0.95	0.56	90.0	14.18	200	35.90	1.00	50.08	E	4.9	
B TH-RT	0.37	0.56	90.0	8.36	1858	0.06	0.85	7.16	B	7.2	
B LT	0.08	0.49	90.0	9.40	374	0.00	1.00	9.40	B	0.4	
B TH-RT	1.00	0.49	90.0	17.61	1615	18.00	0.78	27.80	D	21.8	

IR Delay LOS

B	37.43	D
B	47.94	E
B	16.53	C
B	27.44	D

INTERSECTION DELAY = 29.41 INTERSECTION LOS=D

THE CYCLE LENGTH WITHIN THE BOUNDS OF 70 TO 90 SECONDS WHICH MINIMIZES CRITICAL MOVEMENT DELAY IS 90.0 SECONDS

FOR A V/C RATIO OF .95 THE CYCLE SHOULD BE 150.2 SECONDS  
 or chosen cycle length 90.0  
 suggested timing phase 1 is 6.2 secs green, 0.0 secs yellow + red clear



suggested timing phase 2 is 44.1 secs green, 3.0 secs yellow + red clear  
 suggested timing phase 3 is 9.8 secs green, 0.0 secs yellow + red clear  
 suggested timing phase 4 is 19.9 secs green, 5.0 secs yellow + red clear

INCH PROGRAM VERSION DATE 1-12-1987  
 985 HCM - CHAPTER 9: SIGNALIZED - OPERATIONAL ANALYSIS  
 ASHINGTON/ALLEN PM PEAK HOUR  
 987 BUILD W/IMPROVEMENTS  
 DATE: 01-01-1980 time: 01:39:16  
 AST DATA SET NAMES LOADED OR SAVED  
 VOLUME=WAPE GEOMETRICS=WA SIGNAL=WAP

LOCATED IN CBD:N

VOLUME & GEOMETRICS

IR	VOLUMES			# OF LANES			LANE WIDTH			CROSS WALK
	LT	TH	RT	LT	TH	RT	LT	TH	RT	
B	412	308	157	1	1	0	12.5	11.5	0.0	0
B	128	259	74	1	1	0	12.5	11.5	0.0	0
B	236	913	89	1	2	0	12.5	11.0	0.0	0
B	65	624	368	1	2	0	10.0	11.5	0.0	0

TRAFFIC & ROADWAY CONDITIONS

IR	GRADE	%HV	ADJ PARK			PHF	PEDESTRIANS			ARR TIME	TYPE
			Y/N	MOVES	BUSES		CROSS	BUT	MIN		
B	0.0%	2.0%	N	0	0	.830	0		7.0	3	
B	0.0%	4.0%	N	0	0	.830	0		7.0	3	
B	0.0%	3.0%	N	0	0	.830	0		7.0	3	
B	0.0%	3.5%	N	0	0	.830	0		7.0	4	

HASINGS

	EASTBOUND				WESTBOUND				NORTHBOUND				SOUTHBOUND				GREEN	Y+R	PRE/ACT
	l	t	r	p	l	t	r	p	l	t	r	p	l	t	r	p			
1									*	*	*						12.3	0	A
2									*	*	*	*	*	*			38.6	5	A
3	*	*	*														24.9	0	A
4	*	*	*		*	*	*										24.2	5	A

VCLE= 110.0

VOLUME ADJUSTMENT WORKSHEET

ART 1 (MOVEMENT ADJUSTMENTS)

IR	LTV	THV	RTV	PHF	LTFR	THFR	RTFR
B	412	308	157	.830	496	371	189
B	128	259	74	.830	154	312	89
B	236	913	89	.830	284	1100	107
B	65	624	368	.830	78	752	443

ART 2 (LANE GROUP ADJUSTMENTS)

IR	LN	GROUP	FLOW	N	LU	v	P1t	Prt
B	LT		496	1	1.00	496	1.00	0.00
B	TH-RT		560	1	1.00	560	0.00	0.34
B	LT		154	1	1.00	154	1.00	0.00
B	TH-RT		401	1	1.00	401	0.00	0.22
B	LT		284	1	1.00	284	1.00	0.00
B	TH-RT		1207	2	1.05	1268	0.00	0.09
B	LT		78	1	1.00	78	1.00	0.00
B	TH-RT		1195	2	1.05	1255	0.00	0.37

ART 3 (OPPOSING VOLUME ADJUSTMENTS)

EFT TURN OPPOSING APPROACH

EFT TURN	VOLUMES			% OPPOSING LEFT TURN			# LANES			OPPOSING VOLUME
	LT	TH	RT	LT	TH	RT	LT	TH	RT	
WESTBOUND	154	312	89	100	100	100	1	1	0	401
EASTBOUND	496	371	189	0	49	49	1	1	0	276



# CITY OF PORTLAND, MAINE

JOB NO. 5230

INTERSECTION PLAN  
WITH NUMBERED MOVEMENTS:

INTERSECTION Allan Ave - Washington Ave  
 DATE 10/28/87  
 DAY OF WEEK Wednesday  
 WEATHER \_\_\_\_\_  
 REMARKS: \_\_\_\_\_

## COUNT SUMMARY

MOVEMENT

	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL
7:00		2T	2T 1S	1T 2B	2B 1S	1T 1B	1T	1T 1B	1T	2T		1T 1B	12T 7B
7:15	6	156	95	35	47	14	35	71	16	20	46	3	25 565
7:15	2B	5T 1B	2T 1B		1T 1B	2T	2T	3T 1B			1B		15T 6B
7:30	3	163	124	46	29	22	36	99	7	21	55	11	15 639
7:30		1T 1B	2T 1B	4T 1B		2T	1T 1B	7T 1S			1B	2T 1B	19T 6B
7:45	6	207	123	46	36	29	55	73	9	20	46	76	23 651
7:45	1T 1B	1T	2T 2B	1T 1B	4T	2T 1B	3T 2B	2T 5B		1S		1T	17T 13B
8:00	4	235	136	56	39	32	46	151	10	25	50	19	55 832
8:00		3T 2S	3T 1S	1T 3B	2T			5T 3B	1T		1T	1B	16T 7B
8:15	6	172	76	51	40	36	30	94	7	11	46	8	45 604
8:15	1T 1B	7T 2B	2T 3B	1B 1S		2T 2B	2T	4T 2S		2T 2B	5T 1B		25T 11B
8:30	4	143	94	42	28	23	26	99	21	13	31	12	33 578
8:30	1T	5T 2B	1T 1B	2T 1B	2T 1B	2T	2T	16T 1S			1T	3T 1B	29T 6B
8:45	4	124	87	58	25	13	19	78	9	23	33	11	45 523
8:45	1T 1B	9T 1B	4T 3B	4T	3T	3T 2S	1T 1S	6T 2B	1T 1S	1T 1S	1T	1T 1B	35T 9B
9:00	15	122	72	51	33	18	30	86	15	12	38	11	65 553
:00													
:15													
:15													
:30													
:30													
:45													
:45													
:00													

PEAK HOUR COUNT

TIME: 7:15 TO: 8:15

23	792	473	212	146	20	142	407	34	78	200	53	2720
----	-----	-----	-----	-----	----	-----	-----	----	----	-----	----	------



AS RESIDENTS OF GERTRUDE AVENUE, PORTLAND, MAINE, WE ARE CONCERNED ABOUT THE IMPACT OUR NEIGHBORHOOD WOULD SUFFER FROM THE PROPOSED 98 UNIT PLANNED RESIDENTIAL DEVELOPMENT ON RAY STREET.

THE PLAN ALLOWS THEIR PRIVATE ROAD TO EXIT AT THE TOP OF OUR DEAD-END STREET.

WE STRONGLY OBJECT TO RESIDENTS OF THIS PROPOSED DEVELOPMENT HAVING EXCLUSIVE ACCESS TO GERTRUDE AVENUE FROM THEIR OWN PRIVATE ROAD.

Laurence R. Fitzgerald 31 GERTRUDE AVE.  
Mary Parvate Fitzgerald 31 Gertrude Ave.  
John R. Fitzgerald 31 Gertrude Ave  
William H. Johnson 25 Gertrude Ave  
Florence L. Scott 25 Gertrude Ave  
Emily K. Zimla 11 Gertrude Ave.  
Richard M. Azenda 11 Gertrude Ave.  
Pamela J. J. 1291 WASHINGTON AVE  
Laura M. Gaudette 32 Gertrude Ave.  
John Richio 54 Gertrude Ave  
Anne Richio 54 Gertrude Ave  
Philip H. Curtis 59 Gertrude Ave  
Edwin E. Curtis 59 Gertrude Ave  
Susan M. Jones 31 GERTRUDE AVE  
Carol De Vere 74 Gertrude Ave.  
Kirsten M. Kreemer 128 Gertrude Ave.  
Melvin Walls 122 Gertrude Ave  
Gayne Richards 15 Gertrude  
Margaret C. Godthorpe 53 GERTRUDE AVE  
Clara M. Walls 122 Gertrude Ave.  
Augusta Magnuson 40 Gertrude Ave. 12nd

RAY STREET ASSOCIATES  
38 PREBLE STREET  
PORTLAND, MAINE 04101  
(207) 772-0548

*Alert  
Any Date  
4/27/79  
Joe*

August 26, 1987

Mr. Joseph Gray  
City of Portland  
389 Congress Street  
Portland, Maine 04101

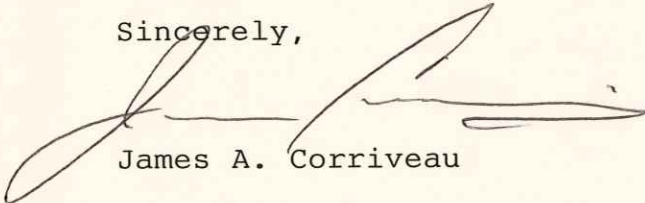
RE: Ray Street

Dear Joe:

Please schedule the captioned project for a Planning Board Workshop with a public hearing following shortly. Upon notification of the dates, we will arrange for the necessary information to be available for Staff review.

If you have any questions, please do not hesitate to call.

Sincerely,



James A. Corriveau

JAC:tmg

cc: F. Paul Frinsko

*Oct 6 workshop*

*Nov 10 P.H.*

*Joe: Have writer called with no response. Would appreciate some help! Thanks (J.C.)*



# CITY OF PORTLAND

---

JOSEPH E. GRAY, JR.  
DIRECTOR OF PLANNING  
AND URBAN DEVELOPMENT

August 28, 1987

Mr. James Corriveau  
Ray Street Associates  
38 Preble Street  
Portland, ME 04101

Dear Jamie:

Sorry we have missed each other. Your Ray Street Project is scheduled for an October 6th workshop, and a November 15th public hearing.

Alex Jaegerman can tell you which staff person is assigned to the project.

Sincerely,

Joseph E. Gray  
Director of Planning and Urban Development

JEG:lab

To: Maireen O'M<sup>ca</sup>era Planner  
From: Carmela Barta, City Arborist  
Re: Ray Street Development.

My greatest concern with this proposed plan development is the buffering situation. It appears that the developer intends to rely almost exclusively on existing vegetation to provide a buffer from surrounding properties. In many areas, this existing vegetation tends to dip ~~with into the~~ well below the 25' setback delineation. Due to the nature of the soils in this area, the quality of the existing vegetation is also questionable. There are many obvious areas which at this point should be supplemented with additional buffering. However, the ~~devep~~ developer should ~~be~~ also be made aware that, upon completion of this project, should inadequate perimeter buffering be present, additional buffering will be required at that time. Finally, all transformers must be suitably buffered.

Should you have any questions or comments, please do not hesitate to contact me. Thank you!

~~cc:~~ cc: File to Carmela



 THE  
DESIGN COLLABORATIVE  
LANDSCAPE ARCHITECTS

August 4, 1988

Maureen O'Meara  
Planning Department  
Portland City Hall  
389 Congress Street  
Portland, Maine 04101

RE: Ray Street - Merrymeeting Woods  
Our project no. GA/DC - 021188

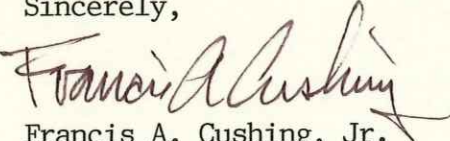
Dear Maureen:

Enclosed you will find six (6) sets of the revised Landscape plans for Merrymeeting Woods.

Please note that we have revised the proposal to include rustic trails. Details of the trail are shown as well.

We are requesting review for staff approval. Should you have any questions or require any additional information concerning this revised submission, please feel free to call.

Sincerely,

  
Francis A. Cushing, Jr.

Enclosures



CITY OF PORTLAND, MAINE

55 PORTLAND STREET  
PORTLAND, MAINE 04101  
(207) 775-5451

PARKS & PUBLIC WORKS

**GEORGE A. FLAHERTY**  
DIRECTOR

June 15, 1988

Mr. Teco Brown  
Merrymeeting Developers, Inc.  
3 Industrial Parkway  
Brunswick, ME 04011

Dear Teco,

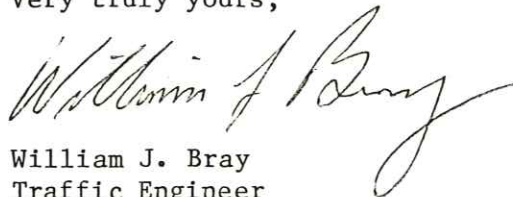
This is to acknowledge receipt of your letter dated June 1, 1988, regarding changes to your Ray Street Project.

Your request to relocate the curb and sidewalk changes to the easterly side of Ray Street has been approved by the Planning Department as an administrative change. The dimension and scale of improvement meet the conditions that I reviewed with you in the field and, therefore, are approved from this office as well. Please coordinate all construction activity with Ms. Nancy Kanuber who is the City inspector assigned to this project.

Finally, your cost estimate to reconstruct the existing utility trench was also approved. Please proceed with the work. The bill for performance of this work should be sent to my attention with reference to Field Purchase Order (FPO) #1135.

Thank you for extending this offer to the City. If you have any additional questions, please give me a call.

Very truly yours,



William J. Bray  
Traffic Engineer

WJB/sgg

cc: George A. Flaherty, Director of Parks/Public Works  
Bruce A. Bell, Superintendent of Streets/Sanitation  
Paul Niehoff, Materials Engineer  
Nancy Kanuber, Inspector  
Ellen Sanborn, Senior Accountant  
Maureen O'Meara, Planning

**THE**  
**DESIGN COLLABORATIVE**  
ARCHITECTS • LANDSCAPE ARCHITECTS

*Maneen  
this is your  
project  
I believe.*

May 25, 1988

Alex Jaegerman  
Planning Department  
City of Portland  
Portland, Maine

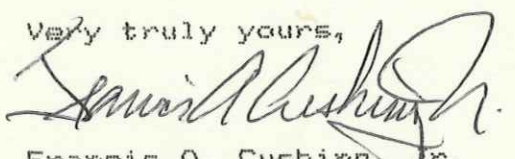
RE: Merrymeeting Woods - DC-021188  
(Formerly Ray Street)

Dear Alex:

We are submitting the enclosed information for staff review. This proposal represents a Landscape redesign of Merrymeeting Woods, formerly Ray Street. The attached narrative begins with a brief description of the landscape and site elements as approved by the Planning Board. Following in the same outline order are descriptions of the proposed changes. Product literature is included to represent some of the changes. In addition, three landscape plans are provided on Sheets L1, L2 and L3.

We are confident that you and your staff will not see the need to send the project on to Planning Board review since the proposed changes are of a minor nature. Additionally, we feel that you will find the proposed changes to be more valuable than the approved plan.

After you have had a chance to review this proposal, please contact me so that we may schedule a meeting. We look forward to having an opportunity to explain the proposal and receive comments from your staff.

Very truly yours,  
  
Francis A. Cushing, Jr.  
DESIGN COLLABORATIVE, INC.

cc: Project file: 021188

FAC/ejs

MERRYMEETING DEVELOPERS, INC.

3 INDUSTRIAL PARKWAY  
BRUNSWICK, MAINE 04011

(207) 729-4188

February 29, 1988

Maureen O'Mara  
Planning Department  
City Hall  
389 Congress Street  
Portland, ME 04101

Re: Ray Street Townhouses

Dear Ms. O'Mara:

By letter dated November 16, 1987 signed by Jack D. Humeniuk the City of Portland gave conditional approval to the Ray Street Townhouses.

Condition number 1.i. in the second sentence states "Ray Street will be widened to 16 feet from the centerline to the applicants side of the street and the entire roadway will be overlain with an 1 1/2" payment overlay from Nevada Avenue to Allen Avenue."

In a meeting on February 19, 1988 with Bill Bray, Robert Roy, Camilla Barton, Jamie Corriveau, yourself and representatives from Merrymeeting Developers, Mr. Bray explained that is was his intent to have work on Ray Street to be done by Merrymeeting Developers begin at Allen Avenue and end at recently constructed City project nearest Nevada Street. This information is also contained in Mr. Bray's November 4, 1987 memo regarding the Ray Street Development.

Mr. Bray also indicated that it was his intent to have a sidewalk constructed from the project entrance to Allen Avenue.

Please consider this letter a request for clarification of Condition 1.i. of the permit for the Ray Street Townhouses in accordance with the discussion of the February 19, 1988 meeting.

Thank you for your assistance is this matter.

Sincerely,

  
Teco Brown

TB/st

CITY OF PORTLAND, MAINE  
MEMORANDUM

TO: Kathy Taylor, Building Inspector

FROM: Paul Niehoff, Materials Engineer *PN*

SUBJECT: Merrymeeting Woods Development, Ray Street

DATE: 9/08/88

As I discussed with Sam on Friday, September 2nd, the Merrymeeting Woods project may have two C.O.s for their project. The site and public improvements have been completed close enough to allow the 2 C.O.s, but no more than two.

You have a copy of my letter, dated August 25, 1988, and attached is Merrymeeting's reply of that same date that denotes the conditions of the issuance of the first two C.O.s.

Please let me know if you have any questions about the situation or when contacted by Merrymeeting for additional C.O.s.

PN/sc

cc: Bill Boothby, Principal Engineer  
Sam Hoffses, Chief of Building Inspections  
Maureen O'Meara, Senior Planner  
Natalie Burns, Corporation Counsel  
attachment



**MERRYMEETING DEVELOPERS, INC.**

3 INDUSTRIAL PARKWAY  
BRUNSWICK, ME 04011

August 25, 1988

Mr. Paul Niehoff  
Materials Engineer  
Parks & Public Works  
City of Portland  
55 Portland Street  
Portland, Maine 04101

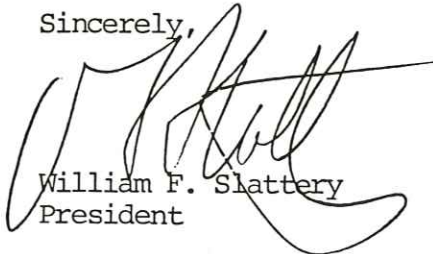
Re: Merrymeeting Woods Development

Dear Mr. Niehoff:

I have seen and reviewed your letter of August 25, and we agree to abide by the requirements of that letter as to additional Certificates of Occupancy for our Merrymeeting Woods development.

I will look forward to working with you and your staff and to accomplish all the required improvements and to having a successful project.

Sincerely,



William F. Slattery  
President

WFS/lis

MERRYMEETING DEVELOPERS, INC.

3 INDUSTRIAL PARKWAY  
BRUNSWICK, MAINE 04011

(207) 729-4188

February 8, 1988

Ms. Maureen O'Mara  
Planning Department  
City of Portland  
City Hall  
Portland, Maine 04101

Re: Merrymeeting Developers, Inc.  
Ray Street, Portland

Dear Ms. O'Mara:

On February 5, 1988 Approved Subdivision Plans for the former Liberty Group Ray Street Development were filed in the Cumberland County Registry of Deeds.

Referring to plans done by Owen Haskell, Inc. and signed by the Portland Planning Board, the following information is provided for your files:

Drawing RP-1 (Phase 1 of 4) is filed in Plan Book 168, Page 55.

Drawing RP-2 (Phase 2 of 4) is filed in Plan Book 168, Page 56.

Drawing Rp-3 (Phase 3 of 4) is filed in Plan Book 168, Page 57.

Drawing RP-4 (Phase 4 of 4) is filed in Plan Book 168, Page 58.

Sincerely,

A handwritten signature in black ink, appearing to read "Teco Brown", with a long horizontal flourish extending to the right.

Teco Brown

TB:cac

Enclosure



**MERRYMEETING DEVELOPERS, INC.**

3 INDUSTRIAL PARKWAY  
BRUNSWICK, ME 04011

HAND DELIVERED

April 11, 1988

Ms. Maureen O'Mara  
Portland Planning Department  
Portland City Hall  
Portland, Maine

Re: Merrymeeting Developers, Inc.  
Ray Street Town Homes

Dear Ms. O'Mara:

Attached for your review please find 6 sets of revised plan sheets for the noted project.

The changes are:

- SD 1 - Two note changes
- SD 2 - Pump station elevations
- SD 3 - Detail on water and sewer separation
- SD 4 - Manhole cover
- SD 7 - Site grading
- SD 8 - Site grading
- SD 9 - Sewer and water line locations
- SD 10 - Sewer and water line locations
- SD 11 - Sewer profiles
- SD 12 - Sewer profiles
- SD 14 - Storm drain profiles and additional hydrant

If these changes are acceptable, please advise me and we will provide the City with the revised mylars.

Sincerely,

Teco Brown

cc: Nancy Knauber



Teco Brown  
John Moncre  
Natalie  
Alex

## Coastal Estates I - Brunswick

PUD better for dev.

1. Secondary <sup>condos</sup> market neg less : 75% presale before next level  
PUD 60% " "
2. People like to own land w/ unit
3. Still have Assn. covers any improvements, easements on 2'
4. Footprint PUD's 8' from foundation
5. From Condo Assn to Homeowner Assn.
6. ~~con~~ utilities must be separate, common law ~~key~~ on party walls

- no severability of land

- no maintenance responsibilities

7. No amendment or termination at vote of 90% of owners
8. Problem w/ owner mindset - how large a private plot  
ex. land for a garden
9. Natalie provide outline of things to see

## Ray St

- no path in cul-de-sac of Phase I, at least sidewalk around + to mailboxes
- phasing of path completed w/ Phase II.
- will Phase 2<sup>tot</sup> lot remain in same area
- sidewalks
- close to property line (planting between prop. line and trail)
- o.k. on movement of foot lot

2. Trails:

The elements of the approved trail are redistributed to the active recreational areas and buffer plantings. The benches and defined walking area are now shown as part of the tot lots.

The developer and designer feel strongly that the trail should be eliminated from the plan and that the active recreation areas should be improved.

The trail was eliminated because of expense and field test failure of such design. The length and physical construction would be a major expense for this project. Also, the fact of the trail going through back yards was a drawback. Public access to private defensible space will reduce security. High installation and maintenance costs are not justified in context of the limited benefit of the trail to the residence.

3. Basketball Court:

The approved court will remain in place. Chain link fence will be added for separation from abutters and evergreen tree planting will be strengthened by increasing number and closer spacing. Bench seating and defined walk access will be provided as described in North End Tot Lot.

B. HARDSCAPE PROPOSED

1. Unit Walks:

Unit walks are reduced in square feet to that which is necessary. This will allow for more green space.

The new green space will be planted with roses and perennials.

The walk at the garden flat is straightened to allow for a more direct and formal entrance. The walk material will remain concrete.

2. Patios:

The patio material changed to a wood decking on sleepers. This will allow for a softer and cooler surface. The appearance will be less formal and more natural, much more appropriate for private space.

3. Entrance Stairs:

The stairs will be changed to a more traditional and formal finish lumber stair and landing. This change is proposed for functional and aesthetic reasons. Utility connections and access will be much easier. The approved rough timber risers are much too informal for a front door look that the proposed finish lumber stair will provide.

## C. LANDSCAPE PROPOSED

In general, care was taken in the redesign of the Landscape to provide equal or greater functional and aesthetic value than the approved plan. Proposed plant material size and conditions will meet city code.

### 1. Typical:

The patio plating scheme is changed to an eat scape. This change will provide the resident with the obvious benefit of being able to participate with the landscape. The proposed fruiting plants have three season interest in addition to their edible fruit. The foundation planting is similar to the approved plan with the following exceptions:

- a. Plant species are changed in favor of hardier and more tolerant material.
- b. Flowering plants are more intensively used.
- c. Landscape and lawn area is increased and pavement decreased.

### 2. Street Trees:

The quantity of street trees is increased from 27 to 35. The location of the trees has changed to a more orderly spacing and a more public or common location.

### 3. Buffer:

The plant species are changed in favor of native field grown evergreen trees. The trees will naturalize better with indigenous plants. The location of buffer trees has not changed from the approved plan. Additional internal buffering is added, i.e., buffering of units from units, and units from the traveled way. Additional buffering is located between the recreation area and abutting properties.

## C. LANDSCAPING/PLANT MATERIAL AS APPROVED

### 1. Typical Unit:

Anchor plants consist of a large evergreen and a deciduous tree that are faced with an understory planting of deciduous shrubs. Foundation planting consists of deciduous and broadleaf evergreens with a flowering tree in the front lawn. Lawn area is approximately 1600 S.F. typically. The backyard planting uses a flowering tree with an understory plantings at the corner of terrace to define the private terrace space.

### 2. Buffer:

The buffer consists of a mixture of evergreens planted in double row randomly spaced. Buffering is provided along property line and in small groups between units and along the road. Evergreen buffering was planted 20' o.c. typically.

### 3. Street trees:

Street trees were planted so each "building" would have a shade tree.

## PROPOSED SITE IMPROVEMENTS

### A. RECREATIONAL ELEMENTS PROPOSED

#### 1. Tot Lots

a. The north end tot lot will be relocated to the proposed basketball area. The new site will be flat and safer. Separation between the court area will be accomplished with distance, berms and plantings. The proposed site impacts the private defensible space of fewer units and is more readily accessible. The area of the tot lot has been increased to 5,000 S.F. A bituminous walk will be provided to access the play lot and ball court. Relocated benches will be provided for seating at the ball court and play area. Fencing has been changed to a more aesthetic and functional material. Evergreen tree buffering has been increased from 10 to 20 trees with tighter spacing.

b. The south end lot will be located in the same area as approved. The land area will be increased to 5,000 S.F. Solid wood fence and wood rail fence will be used to enclose and buffer the area from abutting units. Shade trees will be added. A bituminous walk is added to access the play area. Product literature is enclosed for play equipment and benches.

## EXISTING ELEMENTS OF THE RAY STREET SITE PLAN

### A. RECREATIONAL ELEMENTS AS APPROVED

#### 1. Tot Lots

##### a. North End Lot:

The north end tot lot is located 25' behind unit five and 40' from the road on a site with 13% slope. Approximately 200 S.F. enclosed with 4' high chain link fence and play equipment is provided. This will service the north end of the project (49 units).

##### b. South End:

The south end tot lot is located in the undisturbed area and 20' from the project road on a slope greater than 10%. Approximately 200 S.F. enclosed with a 4' high chain link fence and play equipment is provided. This will service the south end of the project (49 units).

#### 2. Trail:

Approximately 1,340' of trail meanders through the undisturbed area of the project. Plantings of deciduous and evergreen trees with benches are provided along the trail. The trail is 3 1/2' wide with a gravel base and a mulch surface cover.

#### 3. Basketball Court:

An asphalt court without fencing is located 35' from the project road near the entrance. Some buffering along the road and property line is provided. Buffering consists of 190 linear feet of evergreens planted 20' o.c.

### B. HARDSCAPE AS APPROVED

#### 1. Unit Walks:

Townhouse sidewalks wrap driveways 12' out to create a landing. Garden flat sidewalks meander from driveway to front door. They are constructed of concrete 4 1/2' wide with 6" gravel base.

#### 2. Patios/Terraces:

Patios/terraces are located off the back door of units. They are 8' x 10' concrete pads with a 6" gravel base.

#### 3. Stairs:

Front stairs are constructed of 6" x 8" timbers having a 1' tread and 6" risers. Units have a varied number of stairs.

# A R C H T E C T U R E

## RAY STREET DEVELOPMENT

### List of Documents

#### Site Drawings

EC-1	Site Plan
VM-1	Vicinity Map
L-1	Planting Plan
L-2	Typical Cluster Planting Plan
L-3	Planting Details

#### Recording Plats (with originals)

RP-1	Recording Plat Phase 1
RP-2	Recording Plat Phase 2
RP-3	Recording Plat Phase 3
RP-4	Recording Plat Phase 4

#### Architectural Drawings

A-1	Unit Plans & Elevations
-----	-------------------------

# A R C H T E C T U R E

## List of Documents Continued

### Civil Drawings

SD-1	Typical Details & General Notes
SD-2	Typical Details & Pump Station
SD-3	Water System Details
SD-4	Erosion Control & Detention Area Details
SD-5	Roadway Geometrics & Building Control
SD-6	Roadway Profile
SD-7	Final Site Grading & Drainage-North
SD-8	Final Site Grading & Drainage-South
SD-9	Site Utilities-North
SD-10	Site Utilities-South
SD-11	Sanitary Sewer Profiles
SD-12	Sanitary Sewer & Storm Draw Profiles
SD-13	Topsham Street Details
SD-14	Topsham Street Plan & Profile

### Other Documents

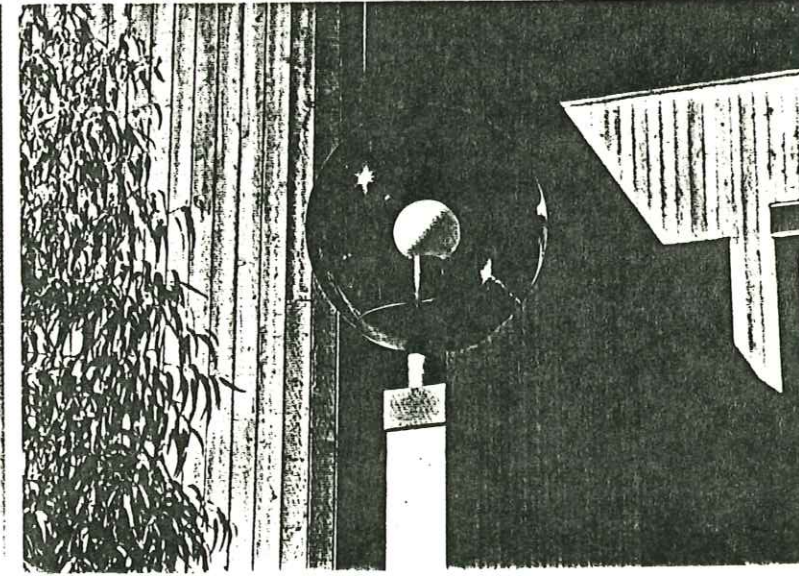
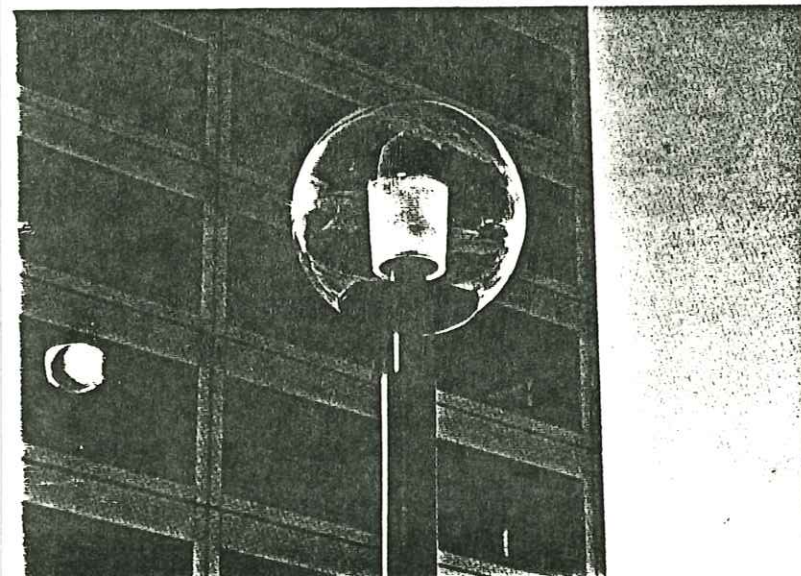
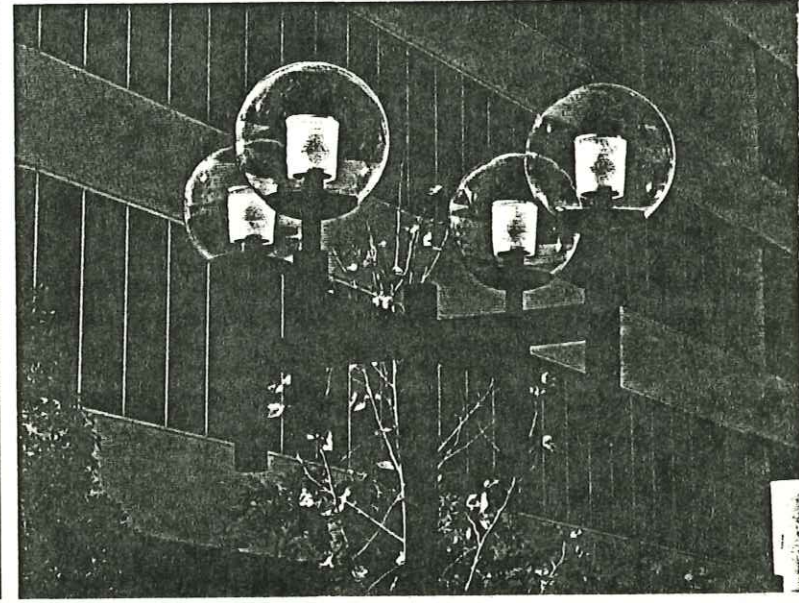
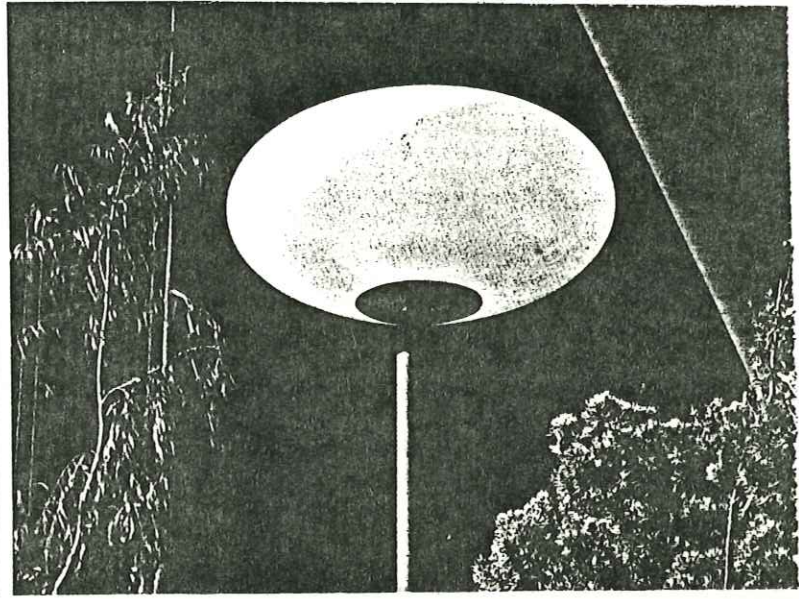
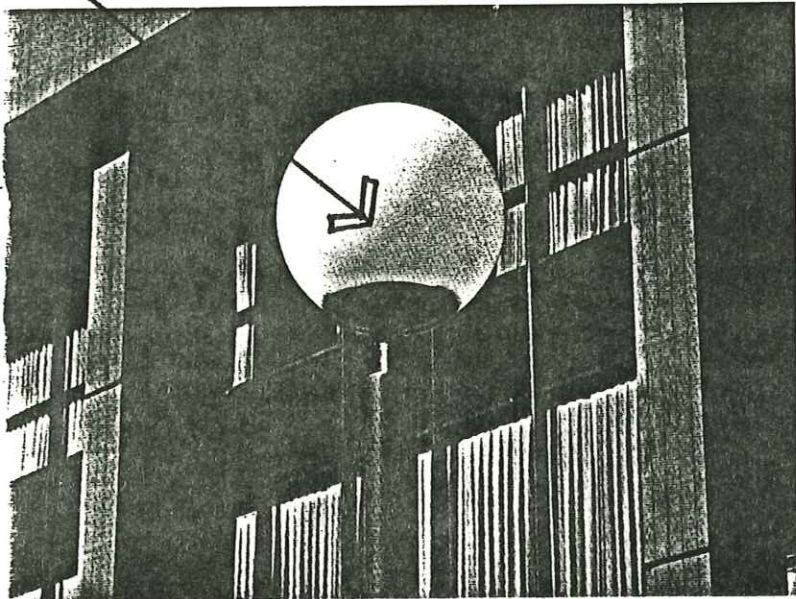
Playground Equipment

Exterior Light Cut Sheet

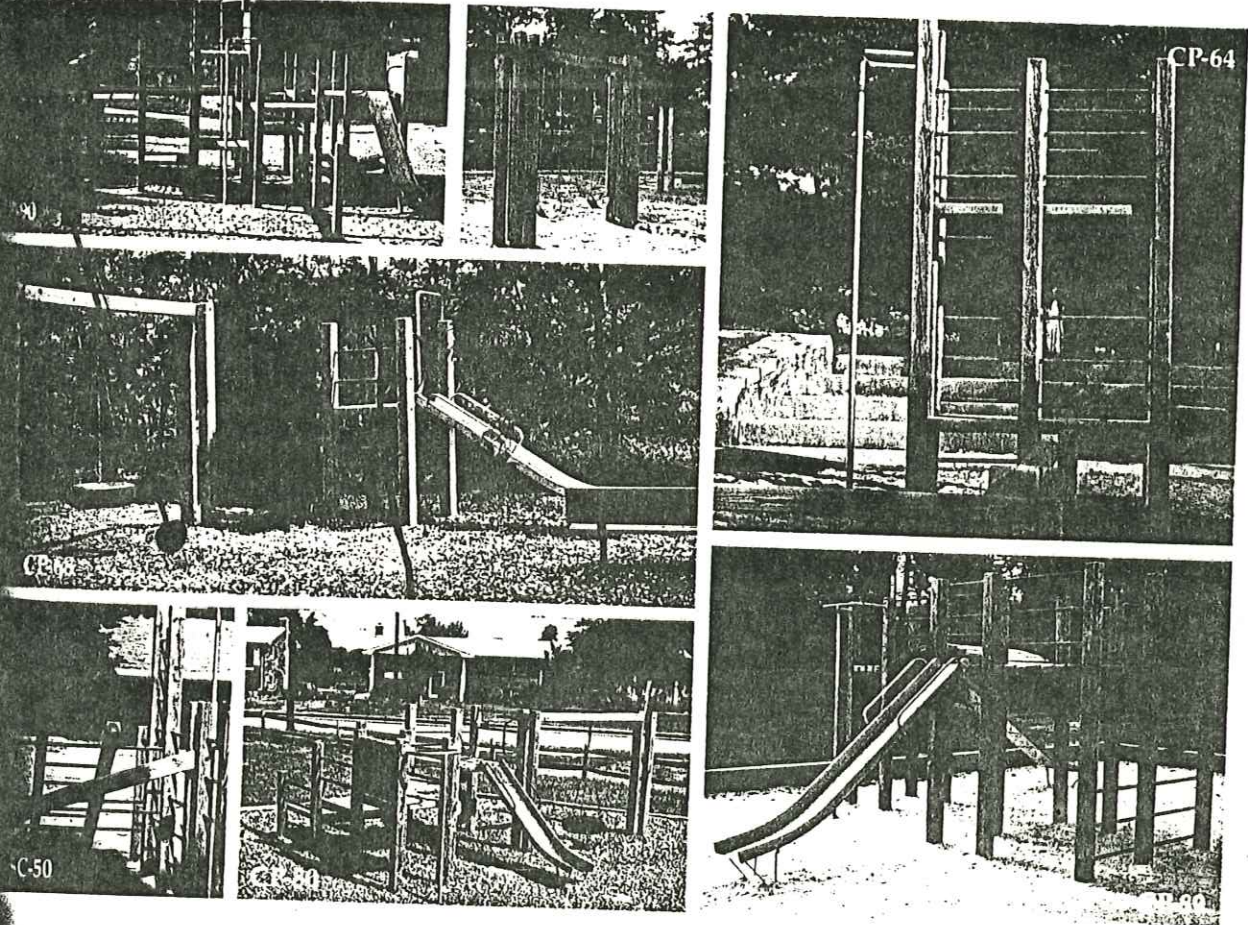


150 WATT HIGH-PRESSURE SODIUM LIGHT

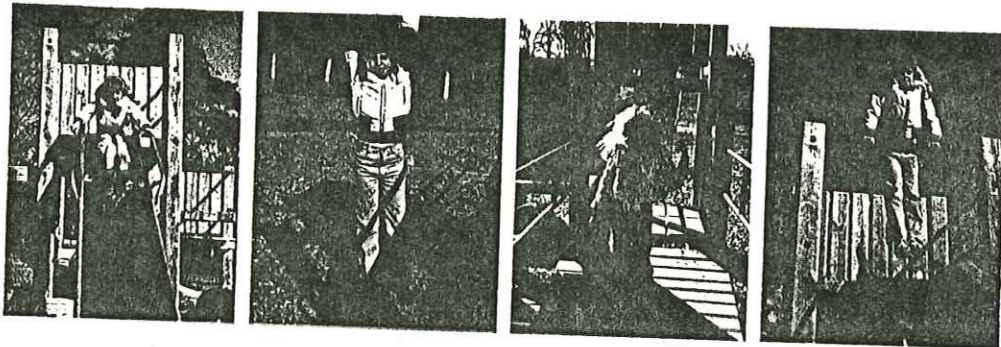
Pole Mount at 10'-0" above grade



Playground Equipment: Victor Stanley, Inc. Model No. 6202,  
 with one elevated platform, slide, fireman's pole, vertical  
 ladder, and two swings.  
 (Similar to model pictured )



*... great design flexibility  
 with many optional accessories ...*



Call 1-800-368-2573 Toll Free

conceived  
 electrostatic  
 fasteners

PLANNING REPORT #6-88

PLANNING DEPARTMENT REPORT

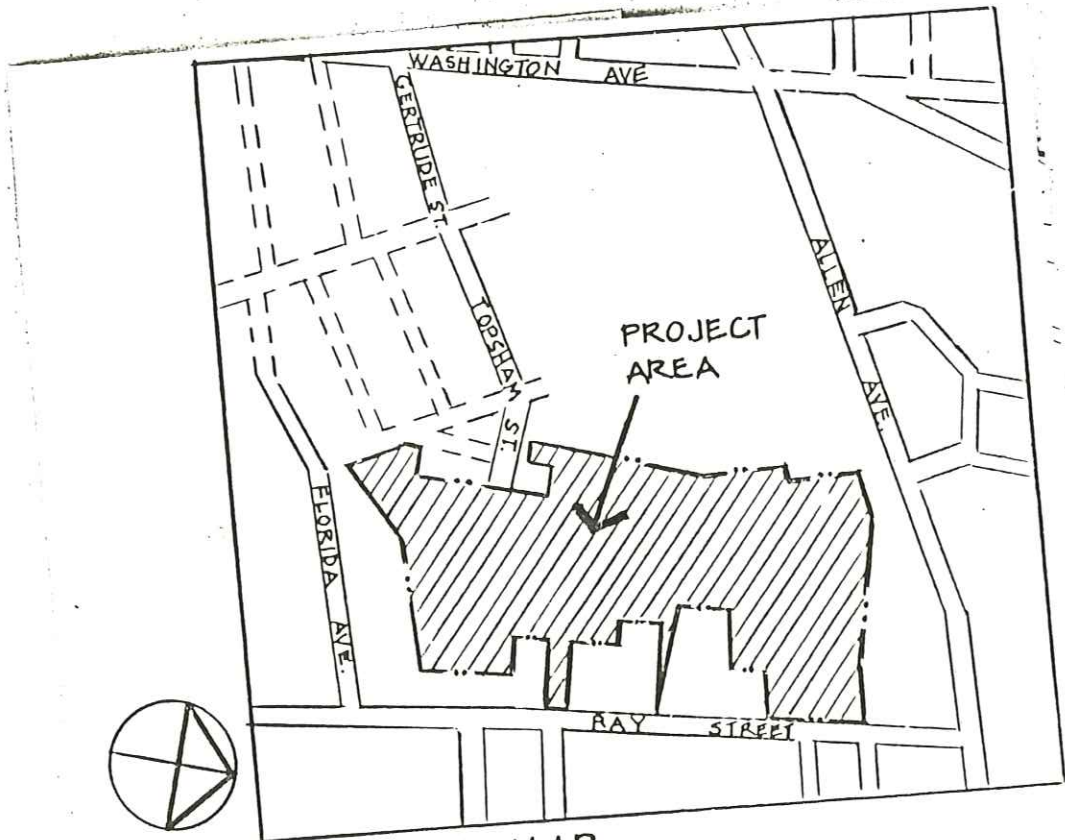
RAY STREET TOWNHOMES  
REVISION TO APPROVED PLAT

LIBERTY GROUP, APPLICANT

Submitted to:

Portland Planning Board  
Portland, Maine

January 12, 1988



LOCATION MAP

EE

## **I. INTRODUCTION**

Liberty Group is requesting a revision to an approved plat for Ray Street Townhomes. The plan is a 98-unit PRUD located in the vicinity of Ray Street and Allen Avenue. The site is 19.98 acres and zoned R-3 Residential. A vicinity map, approved plat, proposed revision and a letter from the applicant are included as Attachments 1, 2, 3 and 4.

## **II. ALTERATION TO AN APPROVED PLAT**

Under the subdivision ordinance, sec. 14-496(3)b, any alteration to an approved plat which affects utility easements must be submitted to the Planning Board.

The applicant has determined that a sewer easement which runs from the site boundary line to Allen Avenue is incorrectly depicted on the plat. The original easement cuts diagonally across the abutting Libby property. In fact, the easement follows along the abutter's property line directly to Allen Avenue. The applicant is requesting that a new plat be approved depicting the correct location of the sewer easement. Planning Board Report 91-87 is hereby referenced.

The Public Works Department has reviewed and approved the revision.

## **III. MOTIONS FOR THE BOARD TO CONSIDER**

On the basis of materials submitted by the applicant, and the findings of this board reflected in the information provided in Planning Report #6-88 relevant to standards for amending an approved plat, and/or other findings as follows:

1. That the Board approves the utility easement revision to the approved plan.

### Attachments

1. Vicinity map
2. Approved plat
3. Plat revision
4. Letter from applicant



- 1. 1/4" = 1' - 1/2" SCALE
- 2. 1/4" = 1' - 1/2" SCALE
- 3. 1/4" = 1' - 1/2" SCALE
- 4. 1/4" = 1' - 1/2" SCALE
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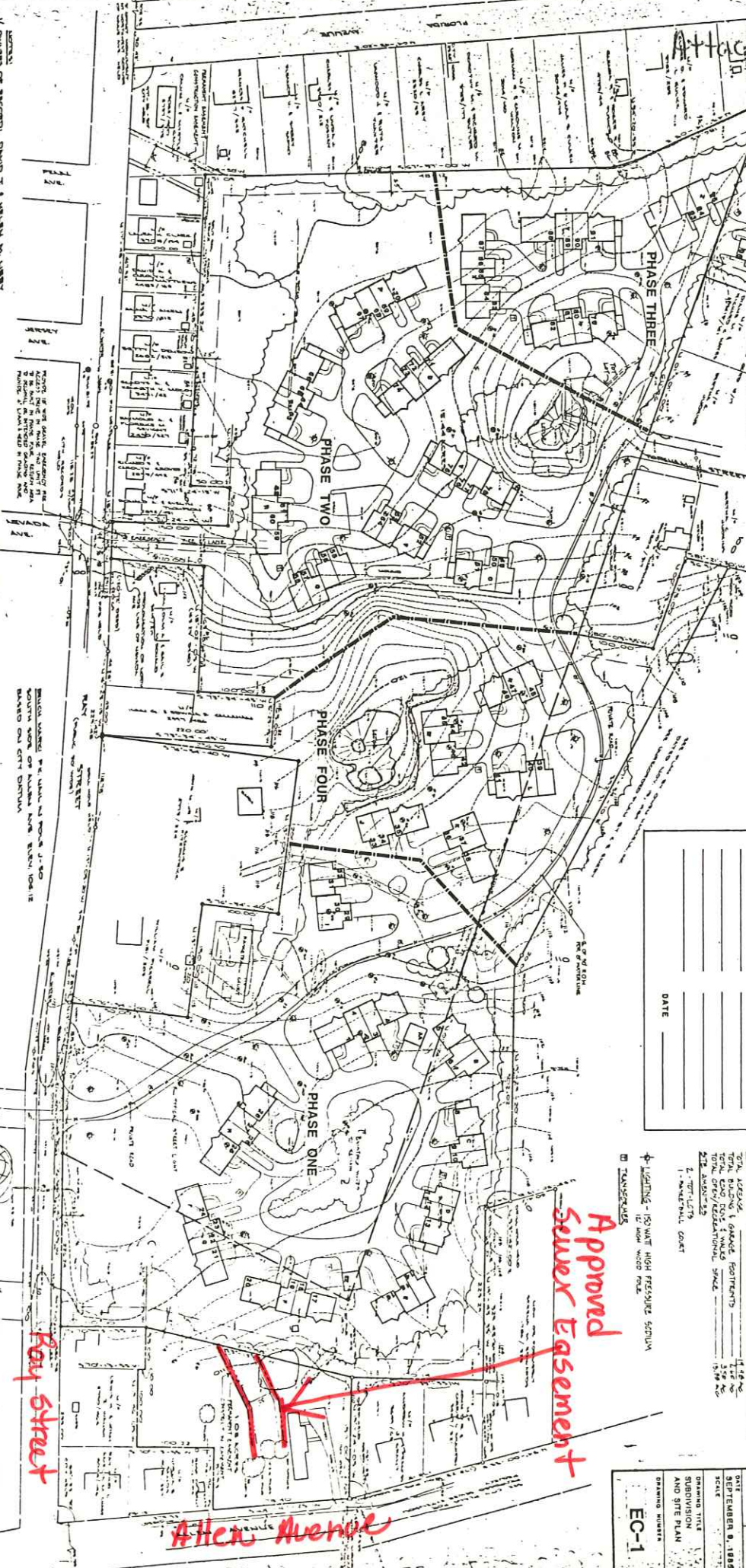
PLANNING BOARD OF PORTLAND

DATE \_\_\_\_\_

PHASE ONE	20 TH	32 UNITS	92 TOWNHOUSES
TWO	18 TH	30 UNITS	36 FLATS
THREE	12 TH	20 UNITS	98 TOTAL UNITS
FOUR	14 TH	20 UNITS	4 DETACHED GARAGES
	18 UNITS		93 ATTACHED GARAGES
			198 PARKING SPACES

TOTAL AREA: 1.17 AC  
 TOTAL ROAD DIST: 4.1 MILES  
 TOTAL OPEN/RECREATIONAL SPACE: 1.57 AC  
 2.7% PARKING  
 1.7% UTILS  
 1.1% MATERIALS  
 1.1% TRANSFER

LOADING - 15' WIDE HIGH PRESSURE SODIUM  
 TRANSFER



Approved Sewer Easement

Ray Street

Allen Avenue

ARCHITECT: ARCHITELIC ARCHITECTS P.C. PORTLAND, MAINE (207) 772-8022

PROJECT: RAY STREET SUBDIVISION PORTLAND, MAINE

DATE: SEPTEMBER 9, 1985

DRAWING TITLE: SUBDIVISION AND SITE PLAN

DRAWING NUMBER: EC-1

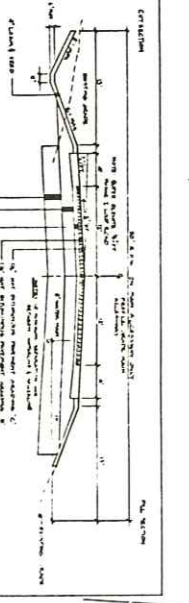
SCALE: AS SHOWN

DESIGNED BY: OWEN HASKELL, INC.

CHECKED BY: OWEN HASKELL, INC.

1. ALL UNITS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF PORTLAND ZONING ORDINANCE, CHAPTER 21A, SECTION 21A.02, 21A.03, 21A.04, 21A.05, 21A.06, 21A.07, 21A.08, 21A.09, 21A.10, 21A.11, 21A.12, 21A.13, 21A.14, 21A.15, 21A.16, 21A.17, 21A.18, 21A.19, 21A.20, 21A.21, 21A.22, 21A.23, 21A.24, 21A.25, 21A.26, 21A.27, 21A.28, 21A.29, 21A.30, 21A.31, 21A.32, 21A.33, 21A.34, 21A.35, 21A.36, 21A.37, 21A.38, 21A.39, 21A.40, 21A.41, 21A.42, 21A.43, 21A.44, 21A.45, 21A.46, 21A.47, 21A.48, 21A.49, 21A.50, 21A.51, 21A.52, 21A.53, 21A.54, 21A.55, 21A.56, 21A.57, 21A.58, 21A.59, 21A.60, 21A.61, 21A.62, 21A.63, 21A.64, 21A.65, 21A.66, 21A.67, 21A.68, 21A.69, 21A.70, 21A.71, 21A.72, 21A.73, 21A.74, 21A.75, 21A.76, 21A.77, 21A.78, 21A.79, 21A.80, 21A.81, 21A.82, 21A.83, 21A.84, 21A.85, 21A.86, 21A.87, 21A.88, 21A.89, 21A.90, 21A.91, 21A.92, 21A.93, 21A.94, 21A.95, 21A.96, 21A.97, 21A.98, 21A.99, 21A.100.

2. ALL UNITS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF PORTLAND ZONING ORDINANCE, CHAPTER 21A, SECTION 21A.02, 21A.03, 21A.04, 21A.05, 21A.06, 21A.07, 21A.08, 21A.09, 21A.10, 21A.11, 21A.12, 21A.13, 21A.14, 21A.15, 21A.16, 21A.17, 21A.18, 21A.19, 21A.20, 21A.21, 21A.22, 21A.23, 21A.24, 21A.25, 21A.26, 21A.27, 21A.28, 21A.29, 21A.30, 21A.31, 21A.32, 21A.33, 21A.34, 21A.35, 21A.36, 21A.37, 21A.38, 21A.39, 21A.40, 21A.41, 21A.42, 21A.43, 21A.44, 21A.45, 21A.46, 21A.47, 21A.48, 21A.49, 21A.50, 21A.51, 21A.52, 21A.53, 21A.54, 21A.55, 21A.56, 21A.57, 21A.58, 21A.59, 21A.60, 21A.61, 21A.62, 21A.63, 21A.64, 21A.65, 21A.66, 21A.67, 21A.68, 21A.69, 21A.70, 21A.71, 21A.72, 21A.73, 21A.74, 21A.75, 21A.76, 21A.77, 21A.78, 21A.79, 21A.80, 21A.81, 21A.82, 21A.83, 21A.84, 21A.85, 21A.86, 21A.87, 21A.88, 21A.89, 21A.90, 21A.91, 21A.92, 21A.93, 21A.94, 21A.95, 21A.96, 21A.97, 21A.98, 21A.99, 21A.100.



SUBDIVISION AND SITE PLAN

ARCHITECT: ARCHITELIC ARCHITECTS P.C. PORTLAND, MAINE

PROJECT: RAY STREET SUBDIVISION PORTLAND, MAINE

DATE: SEPTEMBER 9, 1985

DRAWING NUMBER: EC-1

OWEN HASKELL, INC.

1000 BROAD STREET  
 PORTLAND, MAINE 04101

SEP 9 1985

NOW OR FORMERLY  
SERENA M. EDWARDS  
1786 / 325

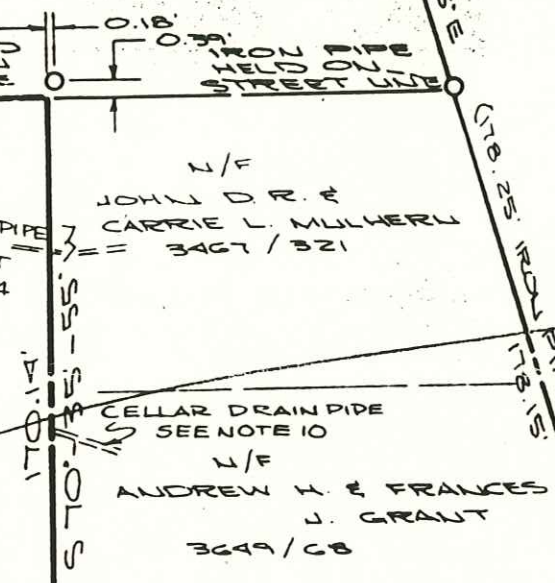
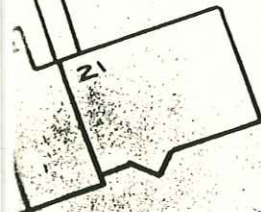
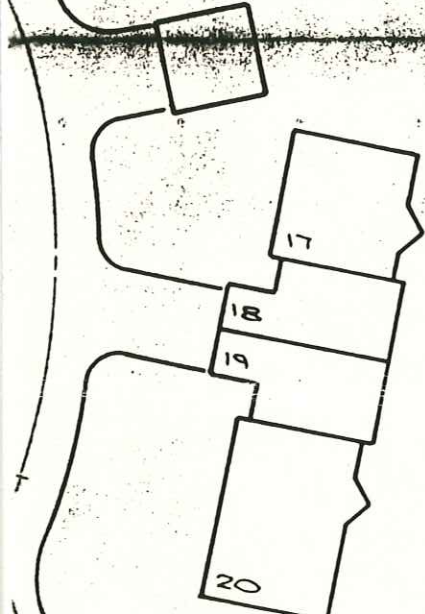
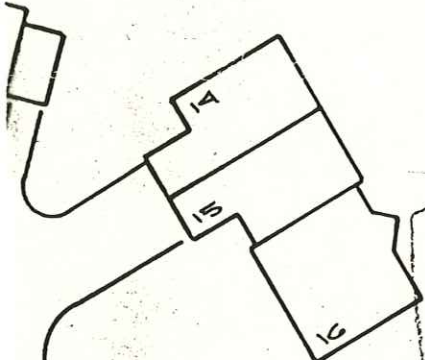
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329.45'  
N 19°-43'-35" W  
223.29'

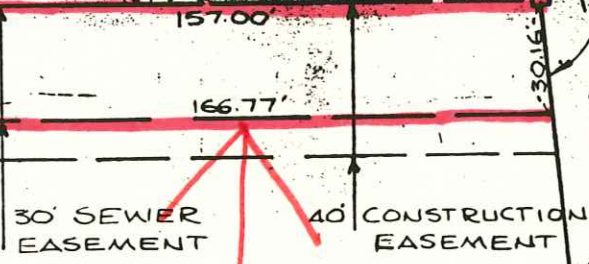
CELLAR DRAIN PIPE  
EASEMENT  
CCRD 5067/214  
SEE NOTE 9

N/F  
JOHN D. R. &  
CARRIE L. MULHERN  
3467 / 321

CELLAR DRAIN PIPE  
SEE NOTE 10  
N/F  
ANDREW H. & FRANCES  
J. GRANT  
3649 / 68



75'-25" DEED HELD  
90° DEED HELD



SEE CCRD 7145/81

30' SEWER  
EASEMENT

40' CONSTRUCTION  
EASEMENT

DAVID T. LIBBY  
2026 / 64

Proposed  
Sewer  
Easement

ALLEN AVENUE  
SGA-41-25 W  
319.53'  
(DEED HELD)

STONE MONUMENT  
DOWN

170.14'  
S 70°-15'-55" E  
178.25' IRON PIPE TO MONUMENT  
178.15'

275.88'  
S 83°-13'-15" W

N 34°-00'-55" E

190°-46'-30" DT

**RAY STREET ASSOCIATES  
38 PREBLE STREET  
PORTLAND, MAINE 04101  
(207) 772-0548**

January 7, 1988

Ms. Maureen O'Meara  
Planning Department  
City of Portland  
289 Congress Street  
Portland, Maine 04101

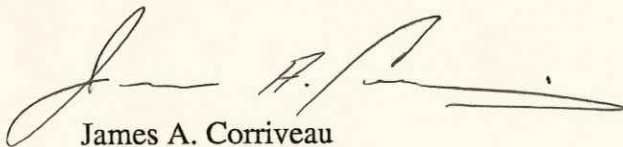
Dear Maureen:

Enclosed are the revised Ray Street mylars as well as an 8 1/2 x 11 reduction which shows the recorded sewer easement over the Libby property. As I explained to you and Alex on Tuesday, the easement that appeared on the approved site/subdivision plan was incorrect. It was originally felt that this was the best area for the sewer to exit our property. However, after many discussions with our engineers and Mr. Libby (the property owner) it was decided that it would serve all parties better if the easement was moved to the top of Mr. Libby's property. The easement was surveyed, an agreement drawn up which was signed by all parties, and it was recorded. Unfortunately, the Project Manager at the time neglected to inform the architect so that the plans could be redrawn. This was an honest oversight.

As soon as I was made aware of this situation I immediately brought it to your attention. As you can see from the attached letter from T.Y. Lin/Hunter Ballew Associates, the change in the easement will not affect the discharge of solid waste from the site.

If I can be of further assistance, please don't hesitate to call.

Sincerely,



James A. Corriveau  
Project Manager

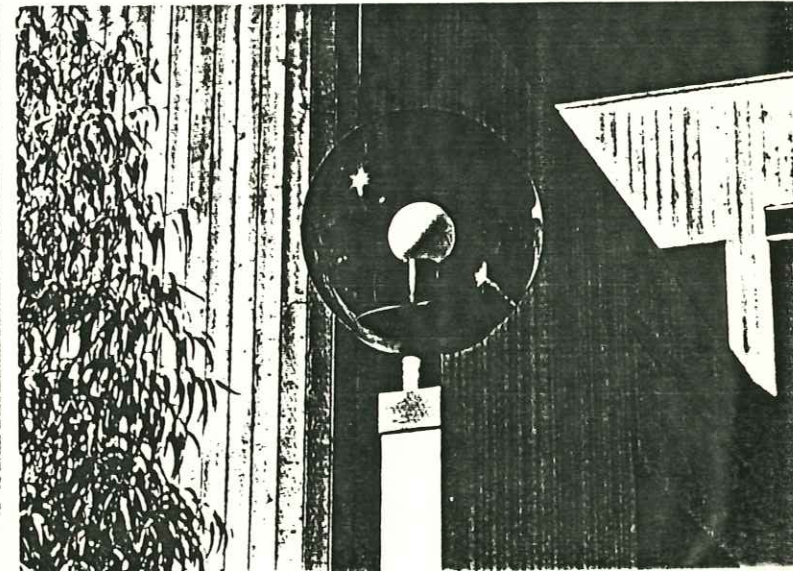
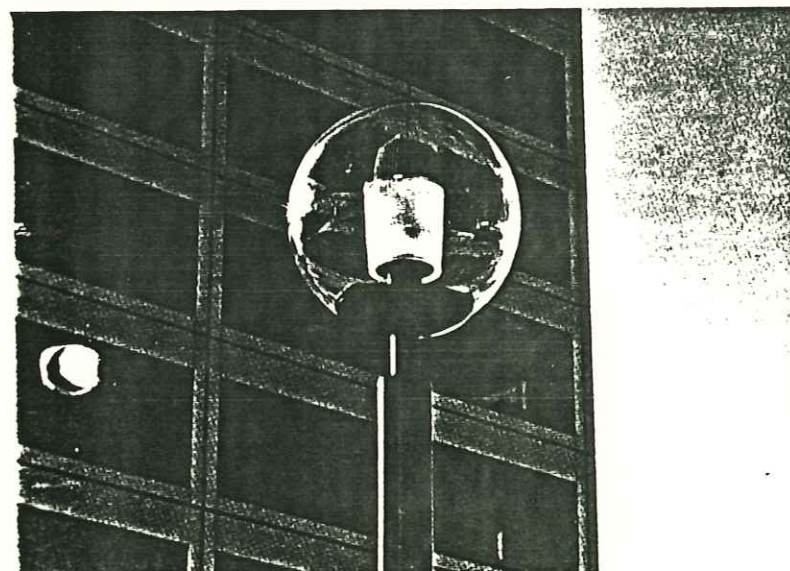
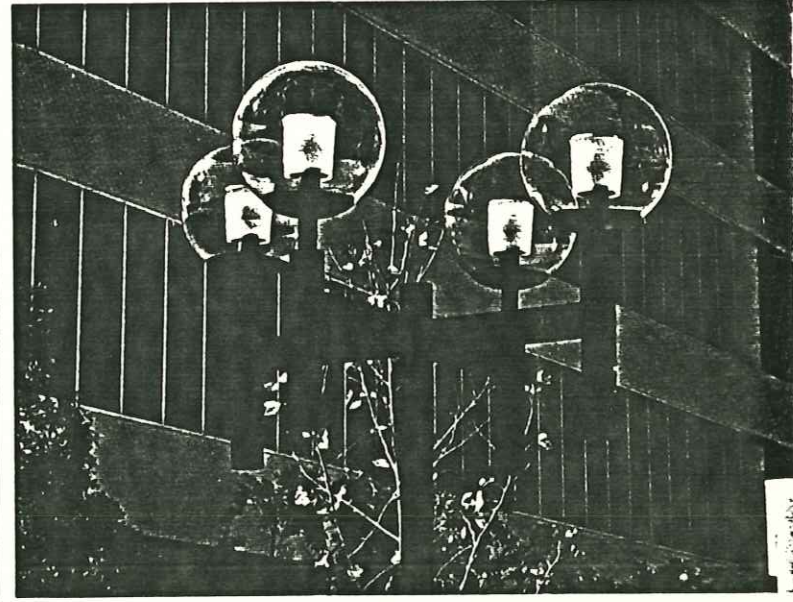
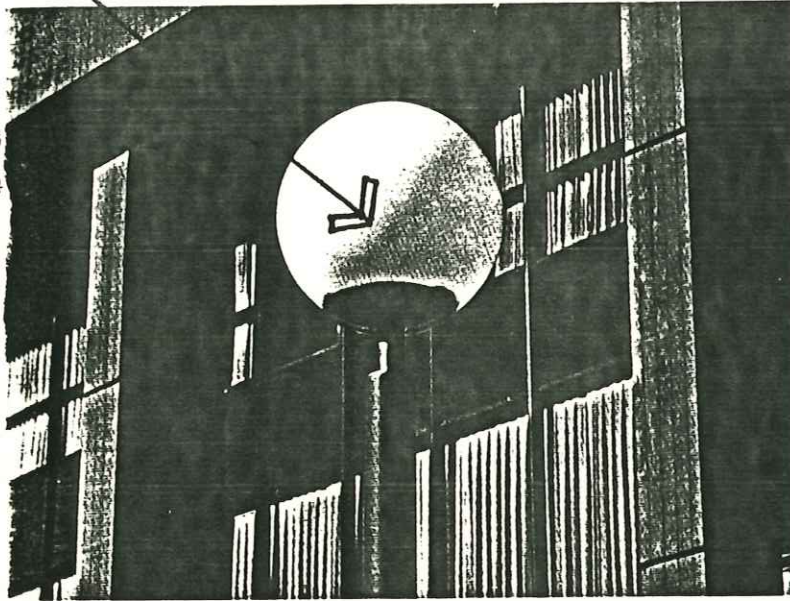
JAC:dlf

Enclosures



150 WATT HIGH-PRESSURE SODIUM LIGHT

Pole Mount at 10'-0" above grade



RAY STREET ASSOCIATES  
38 PREBLE STREET  
PORTLAND, MAINE 04101  
(207) 772-0548

Dave - FYI -

July 28, 1987

Mr. Alex Jaegerman  
Chief Planner  
Portland City Hall  
389 Congress Street  
Portland, Maine 04101

Oct 13  
workshop

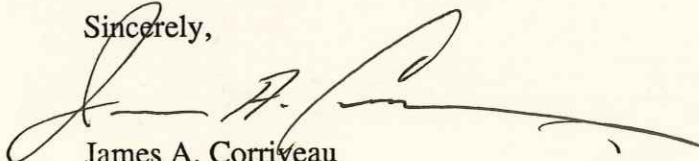
Dear Alex:

Please accept this letter as a formal request for a workshop, followed by a public hearing for our proposed Ray Street development. After reviewing our files, our workshop and subsequent public hearing will focus on site plan review and approval as our subdivision approval (already obtained) is good for another 18 months. As I mentioned to you, I have until October 10, 1987 before Ray Street's DEP permit must be extended. Therefore, any assistance in expediting my hearings will be greatly appreciated.

For your information, I have also paid the \$350.00 fee for a major site plan review.

Thank you for your consideration.

Sincerely,



James A. Corriveau

JAC/amm

cc: F. Paul Frinsko

RAY STREET ASSOCIATES  
38 PREBLE STREET  
PORTLAND, MAINE 04101  
(207) 772-0548

September 2, 1987

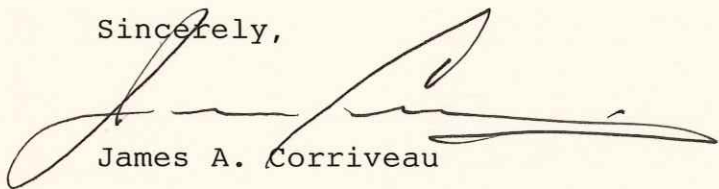
Mr. Joseph Gray, Jr.  
City of Portland  
389 Congress Street  
Portland, Maine 04101

RE: Ray Street

Dear Joe:

This letter is to confirm the Ray Street Project's public hearing date for November 10, 1987 versus your letter dated August 28, 1987 which states the date being November 15th.

Sincerely,

A handwritten signature in black ink, appearing to read "James A. Corriveau", with a long, sweeping horizontal stroke extending to the right.

James A. Corriveau

JAC:tmg

cc: F. Paul Frinsko

**CITY OF PORTLAND, MAINE**  
**M E M O R A N D U M**

**TO:** Chairman and Members of the Planning Board  
**FROM:** Maureen O'Meara, Planner  
**DATE:** October 6, 1987  
**SUBJECT:** Ray Street Townhomes PRUD

Ray Street Associates (Liberty Group) is requesting renewal of site plan approval of a PRUD approved September 10, 1985. The subdivision approval does not expire until 1988. The Board may also wish to review the plan under the R-3 PRUD standards as the site plan expiration may result in revisions to the originally approved plan. The development includes 98 units on a 19.98 acre site in the vicinity of Ray Street and Allen Avenue. The site plan and vicinity map are included as Attachments 1 and 2.

Access to the site will be from Ray Street and Topsham Street. An emergency fire lane is also planned off of Ray Street, across from Nevada Avenue. The City Traffic Engineer has requested an update of the traffic study.

The site is currently wooded with areas of exposed ledge. The applicant has proposed landscaping in front of the units, as well as a pathway, basketball court and two (2) tot lots. Attachment 3 is the landscaping plan.

98 2-bedroom units are proposed in a combination of 36 flats and 62 townhomes. A total of 27 buildings are proposed on the site, divided into one 5-unit building, fifteen 4-unit buildings and eleven 3-unit buildings. The structures are one to two stories in height. Existing buildings in the area are single family. Elevations are included as Attachment 4.

In reviewing the plan, some issues for discussion may include (1) a more formal preservation plan depicting a preservation fence to protect existing vegetation during construction; (2) the location of some 3 and 4 unit buildings in close proximity to single family homes; (3) the desirability in the number of bedrooms or expansion potential in the proposed units; (4) the need for an emergency access maintenance agreement; and (5) modifications needed as a result of the increased traffic on Allen Avenue since the 1985 approval.

/eg

Attachments

1. Site Plan
2. Vicinity Map
3. Landscape Plan
4. Elevations

*- sidewalk curbing on Ray Street*  
*- 1 & 2 story, clapboard shingles*  
*- preservation plan (do more) Barker, Momenick*  
*- 3.8 acres of open space*  
*- sewer connection? (Jack) capacity*  
*- phasing (Fenton)*  
*- density (O'Brien)*  
*- no blasting ledge (de Courcy)*  
*- open space (Fenton)*  
*- complete landscape & pres. plan.*  
*width of trees next to homes*

**RAY STREET ASSOCIATES  
38 PREBLE STREET  
PORTLAND, MAINE 04101**

October 21, 1987

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

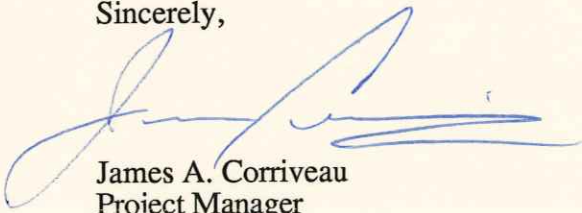
Dear Joe:

Have you had an opportunity to check on the status of the PRUD approval for Ray Street? At the Workshop on October 6, 1987 you stated to the Planning Board that you would research whether the PRUD approval expired at the time of our site plan expiration.

I remain very interested in what you discover. Please contact me when you have the answer.

Thank you for your consideration.

Sincerely,



James A. Corriveau  
Project Manager

JAC:dlf

cc: David R. Cope  
Paul Frinkso, Esq.  
Maureen O'Mara

**TYLIN** HUNTER - BALLEW  
ASSOCIATES  
INTERNATIONAL

5 FUNDY ROAD, FALMOUTH, MAINE 04105 TELEPHONE (207) 781-4721

October 28, 1987

Maureen O'Meara, Planner  
City of Portland Planning Dept.  
389 Congress Street  
Portland, Maine 04101

Dear Ms. O'Meara:

Robert Roy of the City of Portland Engineering Department and I spoke today concerning the Ray Street submission for Planning Board approval. Mr. Roy has allowed our firm until November 4th to design and review with him the 2 engineering issues which need to be rectified as stated in his 10-22-87 memo to you. Specifically we will design and locate a catch basin at the low point of Ray Street and we will review the Northport Business Park storm drainage plans on Gertrude/Topsham Street and coordinate our design so that we will be able to tie into this system.

If you have any questions, please do not hesitate to call.

Sincerely,

T. Y. LIN INTERNATIONAL/  
HUNTER-BALLEW ASSOCIATES



Barry J. Hosmer, L.A.

BJH/dcs

Copy: Jamie Corriveau, Liberty Group  
Robert Roy, Portland Engr. Dept.  
Barry Patrie, TYLI/HBA

JN: 70476.00

**RAY STREET ASSOCIATES  
38 PREBLE STREET  
PORTLAND, MAINE 04101  
(207) 772-0548**

October 28, 1987

Ms. Maureen O'Mara  
Planning Department  
City of Portland  
389 Congress Street  
Portland, Maine 04101

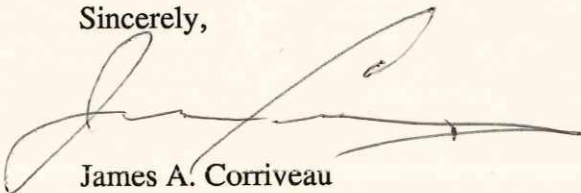
Dear Ms. O'Mara:

This is to reconfirm the subjects which we discussed at our October 27 meeting. We are reacting to those items listed on the attached internal memo per your conversation with Debbie Fisher on October 26. In addition, our traffic study will be updated.

As I mentioned to you, we are running on a very tight schedule if we are to provide you with the information you desire by Friday, October 30. For the record, however, I do not wish to reschedule our Public Hearing, scheduled for Tuesday, November 10, as you suggested.

Thank you for your consideration.

Sincerely,



James A. Corriveau

JAC:dlf

Enclosure

cc: David Cope  
Joe Gray  
Paul Frinkso, Esq.  
Alex Jaegerman

CITY OF PORTLAND, MAINE  
MEMORANDUM

TO: Maureen O'Meara, Planner

DATE: 10/26/87

FROM: Natalie L. Burns, Associate Corporation Counsel

SUBJECT: Ray Street Town Homes - PRUD

You have requested that I research the issue of whether a PRUD approval expires at the time that a Site Plan approval expires. The R-3 PRUD Standards are set forth in §14-87 of the City Code. The Planning Board reviews PRUD proposals based upon the standards of the Site Plan Ordinances and the Subdivision Ordinances in addition to three other standards set forth in the Ordinance. These standards are design relationship to site; design relationship to surrounding neighborhood; and open space. Because the PRUD approval is based upon Site Plan and Subdivision approval, the PRUD approval must necessarily expire when one of those other approvals expires. There cannot be a PRUD approval without both a valid Subdivision and Site Plan approval.

The Ray Street development currently has a Subdivision approval which is valid until 1988. However, since its Site Plan approval has expired, the PRUD approval is no longer valid. The Planning Board in its R-3 PRUD review process will consider 1) the Site Plan; and 2) the additional factors set forth above under the PRUD Standards in the Ordinance. Because the valid Subdivision approval continues in effect, those standards will not be considered in this review.

If you have any further questions about this please contact me.

*Natalie*

---

Natalie L. Burns  
Associate Corporation Counsel

NLB/smb



CITY OF PORTLAND, MAINE  
MEMORANDUM

TO: Maureen O'Meara, Planner

DATE: 10/26/87

FROM: Natalie L. Burns, Associate Corporation Counsel

SUBJECT: Ray Street Town Homes - PRUD

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If you have any further questions about this please contact me.

*Natalie*

Natalie L. Burns  
Associate Corporation Counsel

NLB/smb

**RAY STREET ASSOCIATES  
38 PREBLE STREET  
PORTLAND, MAINE 04101  
(207) 772-0548**

October 29, 1987

Ms. Maureen O'Mara  
Planning Department  
City of Portland  
289 Congress Street  
Portland, Maine 04101

Dear Ms. O'Mara:

We are proceeding smoothly with gathering the information to be submitted to the Planning Department in regard to Ray Street. You will receive this information by the close of business on Friday, October 30.

In accordance with the agreement between Mr. Hosmer of T.Y. Lin/Hunter-Ballew Associates and Mr. Roy of the City of Portland Engineering Department, the two engineering issues will be submitted on November 4, 1987. Please find attached a copy of Mr. Hosmer's notification to you of this agreement.

Thank you for your continued cooperation.

Sincerely,



James A. Corriveau  
Project Manager

JAC:dlf

Enclosure

cc: Joe Gray  
David R. Cope  
Paul Frinsko

**TYLIN** HUNTER - BALLEW  
ASSOCIATES  
INTERNATIONAL

5 FUNDY ROAD, FALMOUTH, MAINE 04105 TELEPHONE (207) 781-4721

October 28, 1987

Maureen O'Meara, Planner  
City of Portland Planning Dept.  
389 Congress Street  
Portland, Maine 04101

Dear Ms. O'Meara:

Robert Roy of the City of Portland Engineering Department and I spoke today concerning the Ray Street submission for Planning Board approval. Mr. Roy has allowed our firm until November 4th to design and review with him the 2 engineering issues which need to be rectified as stated in his 10-22-87 memo to you. Specifically we will design and locate a catch basin at the low point of Ray Street and we will review the Northport Business Park storm drainage plans on Gertrude/Topsham Street and coordinate our design so that we will be able to tie into this system.

If you have any questions, please do not hesitate to call.

Sincerely,

T. Y. LIN INTERNATIONAL/  
HUNTER-BALLEW ASSOCIATES



Barry J. Hosmer, L.A.

BJH/dcs

Copy: Jamie Corriveau, Liberty Group  
Robert Roy, Portland Engr. Dept.  
Barry Patrie, TYLI/HBA

JN: 70476.00

# Ray St. Townhouses

10/22/87

- 1) Turnaround easement at end of Topshem St required. Need executed deed. RP-1
- 2) drainage maintenance agreement -form
- 3) Note on recording plans that all roadways + utilities ~~within project~~ will remain privately owned + maintained.
- 4) Show required curb + sidewalk along Ray St. frontage. Catch basin will be required at low point along gutterline. ✓ w/ Bob what plan would you like this on
- 5) When will Gertrude / Topshem be improved?
- 6) Update plan 5D-14 to reflect storm drainage work in Gertrude Ave. by Northport.

10/29 mtg

- will be putting street imp. on recording plat
- yes put in catchbasin - recording plat
- Install granite to Allen ave w/ overlay
- Need additional buffering

talk to Manning

**RAY STREET ASSOCIATES  
38 PREBLE STREET  
PORTLAND, MAINE 04101  
(207) 772-0548**

October 26, 1987

Ms. Maureen O'Mara  
Planning Department  
City of Portland  
289 Congress Street  
Portland, Maine 04101

Dear Ms. O'Mara:

Below please find the majority of the information which the Planning Board requested at the October 6, 1987 Workshop:

- The light green areas on the presentation boards represent seeded grass.
- Landscaping plans: Sheet L-1 of the Ray Street plans previously submitted to the Board show the proposed landscaping for the entire area. Sheet L-2 shows the typical landscaping for a cluster of buildings.
- Attached please find the Ray Street Preservation Plan.

We can discuss in detail the traffic study, the width of the buffer zone of trees, and other matters at our 11:15 a.m. meeting on 27 October 1987.

Thank you for your cooperation.

Sincerely,



James A. Corriveau  
Project Manager

JAC:dlf

Enclosure

**LIBERTY GROUP**  
Real Estate Development

**MEMORANDUM**

To: m.m.  
Rethel  
From: J.C.

**TO:** JAMIE CORRIVEAU  
**FROM:** DEBBIE FISHER *DB*  
**DATE:** 26 OCTOBER 1987  
**SUBJECT:** PHONE CONVERSATION WITH MAUREEN O'MARA

I just this minute (11:00 a.m. Monday) got off of the phone with Maureen O'Mara in regard to Ray Street. You can meet with her Tuesday, 27 October 1987 at 11:15 a.m. at City Hall. She says Tuesday is the two week deadline for submittal of information regarding Ray Street for the Public Hearing -- according to meeting minutes from the Workshop, we have until 10 days before.

Anyway, the following is required, per the Department of Public Works:

*Done* / Turn-around easement at the top of Topsham Street

Drainage Maintenance Agreement (she'll give you the form tomorrow)

A note to go on the recording plans that all roads and utilities are privately owned and maintained

The recording plans need to reflect curb and sidewalk to be installed on the Ray Street frontage (granite curbing)

Catch basin needs to be installed at the low point on the gutter line on Ray Street

It must be noted when and how Gretrude and Topsham streets will be improved

Plan SD #14 must be updated to reflect storm drainage work which was done during Northport Plaza work

She hopes to provide you with an answer to the PRUD question at tomorrow's meeting.

11-4-87

Memorandum

TO: Maureen O'Mera  
FROM: W. S. B.  
SUBJECT: Ray Street Development

I am in receipt of the Traffic Impact Study prepared for the subject development. The Consultant has indicated that without traffic signalization improvements along Washington Avenue that insufficient capacity exists to handle this development. Therefore, in the interest of maintaining a reasonable level of service at our critical intersections along Washington Avenue the following ~~recommendations~~ conditions of approval must be imposed on this Development.

1. That the Developer design, purchase and install a new fully-actuated ~~controller~~ central system on Washington Avenue to include the Washington Avenue / Allen Avenue and Washington Avenue / Dairy Queen intersections as well as interconnected and programmed to include existing traffic systems at Auburn Street and Sanborn Street. All design plans and specifications must meet the approval of the City.

Further conditions of approval equally as important to insure that the project can be safely developed should include:

1. Widen the westerly side of Ray Street from the recently constructed City project nearest Nevada Street and extend to the intersection of Allen Avenue. The pavement should be widened to a width of 16 feet from the centerline and the improvements should include granite curb and bituminous

sidewalk

2. After all utilities and widening is accomplished the Developer should overlay the street with 1 1/2 inch pavement overlay.

3. Full stop sign control and/or possibly "speed bumps" should be installed along the project roadway system to discourage "cut-thru" traffic.

Each of these conditions must be included into the approval process as it is my opinion that the project cannot safely be developed.



LEGAL ADVERTISEMENT

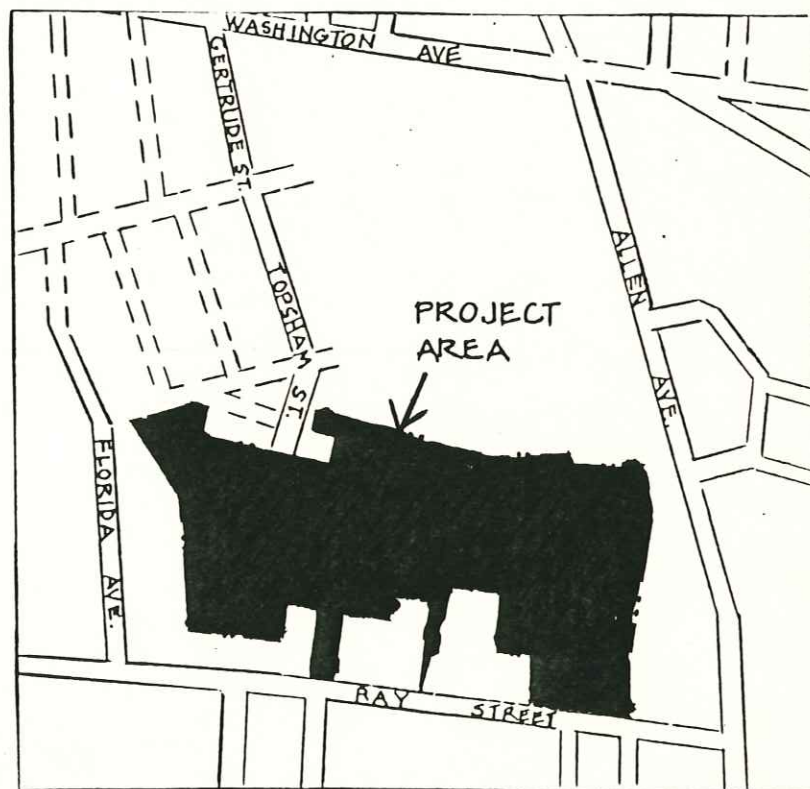
LEGAL ADVERTISEMENT

PORTLAND PLANNING BOARD  
PUBLIC NOTICE

Notice is hereby given that the Portland Planning Board will hold a public hearing Tuesday evening, November 10, 1987, at 7:30 P.M. in Room 209, City Hall, Portland, Maine to consider a planned residential unit development located in the vicinity of Ray Street as shown on the fragmentary map below. The proposal consists of 98 units on a 19.98 acre site with access from Ray Street and Topsham and Gertrude Street. The plan will be reviewed for conformance with the Site Plan Ordinance and R-3 PRUD Performance Standards of the Land Use Code.

Further information on this development can be obtained at the Planning Department office, City Hall, Room 211 or by calling 775-5451, extension 491.

Jack D. Humeniuk, Chairman  
Portland Planning Board



Single Column, single spaced, request publication  
11/2/87, both editions  
Bill to: Liberty Group



# CITY OF PORTLAND

---

JOSEPH E. GRAY, JR.  
DIRECTOR OF PLANNING  
AND URBAN DEVELOPMENT

November 2, 1987

TO RESIDENTS AND PROPERTY OWNERS IN THE VICINITY OF  
RAY STREET

The Portland Planning Board will hold a public hearing on Tuesday, November 10, 1987. The meeting begins at 7:30 P.M. in Room 209, City Hall, Portland, Maine.

The Board will consider a proposal by Liberty Group for a 98-unit Planned Residential Unit development. The 19.98 acre site is located in the vicinity of Ray Street and Florida Avenue and is zoned R-3 Residential. Access to the project will be from Ray Street and Topsham Street by way of Gertrude Street. The plan has subdivision approval and will be reviewed for conformance with the site plan ordinance and R-3 PRUD performance standards of the Land Use Code.

Should you wish to review the plans in advance, they are available in the Portland Planning Department, Room 211 of City Hall. If you are unable to attend the public meeting of the Planning Board, please send your comments in writing to Joseph E. Gray, Jr., Director of Planning and Urban Development, City Hall, Room 211, 389 Congress Street, Portland, Maine 04101.

Sincerely,

Alexander Jaegerman  
Chief Planner

MO/jf

cc: Jack D. Humeniuk, Chairman, Portland Planning Board  
Joseph E. Gray, Jr., Director of Planning & Urban Development

Nov. 7, 1987

City of Portland Planning Director  
Att: Mr. Joseph E. Gray, Dr.

Dear Sir:

I object strongly to the considerable development of housing construction in our neighborhood.

Already both Lyman Moore and Lyseth schools are overcrowded necessitating adding extra school rooms outside of the regular school buildings. These buildings are not even connected to the regular school buildings.

In addition the traffic will be deplorable.

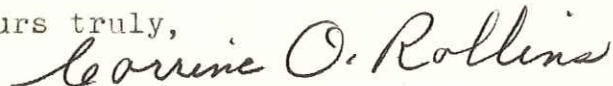
At this time there is time there is a 15 acre development for 34 houses between Summit Street and Allen Ave. There is a second development being considered east of Allen Ave. and Virginia Street..7 acres with 24 house lots.

There is, as you know, a third development a 19.98 acre site located in the vicinity of Ray Street and Florida Ave. Liberty Group is planning a 98-unit housing development.

These developments will greatly add to the traffic especially in the morning and evenings.

It is my hope that some of this development will be curtailed.

Yours truly,



Corrine O. Rollins  
1 Racine Ave.  
Portland, Me, 04103

CITY OF PORTLAND, MAINE  
MEMORANDUM

**TO:** Maureen O'Meara, Planner  
**FROM:** Robert J. Roy, Planning Engineer, Parks and Public Works  
**SUBJECT:** Ray Street Townhouse

**DATE:** 11/5/87

I have reviewed the resubmitted plans for this project and find them to be acceptable with the following condition:

1. That an executed turnaround easement and a drainage maintenance agreement be submitted.

Should the Planning Board include Bill Bray's condition of approval relating to improvements along Ray Street in their action on the project, the plans must be revised to reflect these requirements.

The utility, grading and drainage designs remain unchanged from the 1985 approval and are still acceptable.

Let me know if I can be of any further assistance.



RJR/bjk  
pc: William S. Bray, Principal Engineer

# CITY OF PORTLAND, MAINE

## PLANNING BOARD

Jack D. Humeniuk, Chairman  
Barbara A. Vestal, Vice Chairman  
John L. Barker  
Joseph R. DeCoursey  
Michael J. Fenton  
Jadine R. O'Brien  
Kenneth M. Cole, III

November 16, 1987

Jamie Corriveau  
Liberty Group  
38 Preble Street  
Portland, Maine 04101

Re: Ray Street Townhomes

Dear Mr. Corriveau:

On November 10, 1987 the Portland Planning Board voted (6-0) on the following motions regarding the Ray Street Townhomes.

1. That the plan is in conformance with the Site Plan Review Ordinance with the following conditions:
  - i. That the applicant install a fully actuated control system at the Washington Avenue/Allen Avenue intersection which will be interconnected with the Washington Avenue/Sanborn Street intersection and the Washington Street/Dairy Queen intersections. Ray Street will be widened to 16 feet from the centerline to the applicant's side of the street and the entire roadway will be overlain with an 1 1/2" pavement overlay from Nevada Avenue to Allen Avenue.
  - ii. That additional landscape buffering along the perimeter be proposed and installed as needed as determined by the City Arborist and that all transformers be suitably landscaped.
  - iii. That an executed turnaround easement be submitted for staff approval.
  - iv. That an executed emergency access maintenance agreement be submitted for staff approval.
2. That the plan is in conformance with the R-3 PRUD Performance Standards.

A performance guarantee covering the added public improvements as well as inspection fee payment of 1.7% of the guarantee amount must be submitted to and approved by the planning staff prior to receipt of a building permit. An estimate of the cost of proposed site improvements should be submitted to the Planning Department for review before a performance guarantee is submitted.



STATE OF MAINE  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 STATE HOUSE STATION 17 AUGUSTA, MAINE 04333

*Handwritten:*  
 T. David  
 Maurice F. J. E.  
 CITY CLERK  
 PORTLAND, MAINE  
 JAN 12 11 16 AM '80

DEPARTMENT ORDER

IN THE MATTER OF 12/29/87

LIBERTY GROUP, INC.  
 Portland, Maine  
 RAY STREET TOWN HOMES  
 #L-011219-87-B-R

) SITE LOCATION ORDER  
 )  
 )  
 ) FINDINGS OF FACT AND ORDER

Pursuant to the provision of Title 38, M.R.S.A., Section 483, the Department of Environmental Protection has considered the application of LIBERTY GROUP INC. with its supportive data, staff summary, agency review comments, and other related materials on file and finds the following facts:

1. On October 10, 1985 the applicant received approval to construct 98 townhomes on about 20 acres in Portland, Maine. Reference is made to DEP file #L-011219-87-A-N.
2. The applicant now wishes to renew the permit because they have not started construction, due to other project demands.
3. All findings of facts, conclusions, conditions and decisions remain the same as in Department of Environmental Protection approval L-011219-87-A-N, except for a revision in traffic conditions.
4. A traffic study by T.Y. Lin/Hunter Ballew Associates, dated December 16, 1987 was submitted, which evaluated the changes in traffic at 3 intersections impacted by the project. Based on that study the applicant proposes to install an eight phase signal system at the intersection of Washington Ave., and Allen Ave. This system would be coordinated with the controls at the intersections of Washington Ave. and Dairy Queen, and Washington Ave. and Sanborn Street. In addition, Ray Street would be widened and surfaced from Nevada Ave. to Allen Ave.

All the road and traffic improvements have been reviewed and approved by the Maine Department of Transportation and the City of Portland.

BASED on the above findings of fact, the Department makes the following conclusions:

- A. The applicant has provided adequate evidence of financial capacity and technical ability to meet air and water pollution control standards.
- B. The applicant has made adequate provision for solid waste disposal, the control of offensive odors, and the securing and maintenance of sufficient and healthful water supplies.
- C. The applicant has made adequate provision for traffic movement of all types into, out of or within the development area.

LIBERTY GROUP, INC.  
Portland, Maine  
RAY STREET TOWN HOMES  
#L-011219-87-B-R

2 SITE LOCATION ORDER  
)  
)  
) FINDINGS OF FACT AND ORDER

- D. The applicant has made adequate provision for fitting the development harmoniously into the existing natural environment and the development will not adversely affect existing uses, scenic character or natural resources in the municipality or in neighboring municipalities.
- E. The proposed development will be built on soil types which are suitable to the nature of the undertaking.
- F. The proposed development will not pose an unreasonable risk that a discharge to a significant ground water aquifer will occur.

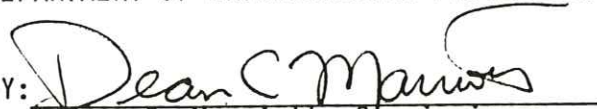
THEREFORE, the Department APPROVES WITH THE ATTACHED CONDITIONS the application of LIBERTY GROUP INC. to construct 98 townhomes as described in the findings above and in DEP permit L-011219-87-A-N. in Portland, Maine accordance with the following conditions:

1. The Standard Conditions of Approval, a copy attached.
2. All findings, conclusions, and conditions of Department of Environmental Protection Order #L-11219-87-A-N remain in effect.
3. Prior to operation or occupancy of the townhomes, the applicant must install the traffic signal system as described in the findings above.

DONE AND DATED AT AUGUSTA, MAINE, THIS 29TH DAY OF DECEMBER, 1987.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:

  
Dean C. Marriott, Commissioner

ANY PERSON WISHING TO APPEAL AN ORDER MUST DO SO WITHIN 30 DAYS OF THE RECEIPT OF THE ORDER

PLEASE NOTE ATTACHED SHEET FOR APPEAL PROCEDURES....

Date of initial receipt of application 9-9-87

Date of application acceptance 9-28-87

LIBERTY

MERRYMEETING DEVELOPERS, INC.

3 INDUSTRIAL PARKWAY  
BRUNSWICK, MAINE 04011

(207) 729-4188

December 23, 1987



Ms. Maureen O'Mara  
Planning Department  
City of Portland  
City Hall  
Portland, Maine 04101

Re: Ray Street Development

Dear Ms. O'Mara:

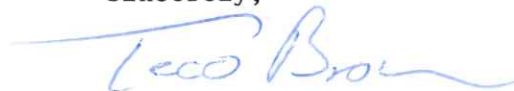
Merrymeeting Developers is in the process of purchasing the Ray Street Townhomes Development from the Liberty Group. We expect to close on the purchase prior to the end of calendar year 1987.

We request to appear on the Portland Planning Board agenda of February 23, 1988 in order to have both subdivision and Site Plan approvals transferred from Liberty to Merrymeeting.

We understand that a minimum of 10 calendar days prior to the February 23rd meeting, we must provide to you evidence regarding Merrymeeting's technical ability and financial capacity to undertake this project. We fully expect to have this information to you shortly after closing.

Should we be unable to appear on the February 23, 1988 Planning Board agenda, or need to file information other than that noted, please inform us. Thank you for your help.

Sincerely,



Teco Brown

TB:cac





# CITY OF PORTLAND

---

JOSEPH E. GRAY, JR.  
DIRECTOR OF PLANNING  
AND URBAN DEVELOPMENT

December 14, 1987

Jamie Corriveau  
Liberty Group  
38 Preble Street  
Portland, Maine 04101

RE: Ray Street Townhomes

Dear Mr. Corriveau:

As we discussed earlier today, a set of black-line mylars of the above project need to be submitted to the Planning Department. It is the policy of the Portland Public Works Department not to accept brown line mylars as the brown lines fade and the background turns brown, making the mylars difficult to read. A complete set of black line mylars, including a revised recording plat, of a quality submitted by the Liberty Group for past projects is needed.

Before the plat can be released for recording, the conditions listed in the November 16, 1987 letter of approval have to be met. In addition, a performance guarantee must be posted in an amount approved by the Public Works Department. A subdivision improvements estimate form is available on request.

If you plan to sell the Ray Street project, the financial and technical capability of the purchaser will have to be reviewed and approved by the Planning Board. The recording plat would also have to be revised to reflect the change of ownership.

If you have any questions or need forms, please contact me at ext. 491.

Sincerely,

*Maureen O'Meara*

Maureen O'Meara  
Planner

cc: Alex Jaegerman  
Joseph E. Gray, Jr.

LEGAL ADVERTISEMENT

LEGAL ADVERTISEMENT

PORTLAND PLANNING BOARD  
PUBLIC NOTICE

Notice is hereby given that the Portland Planning Board will hold a public hearing Tuesday evening, January 12, 1988, at 7:30 P.M. in Room 209, City Hall, Portland, Maine to consider as an unfinished business item, a revision to the Ray Street Townhomes subdivision approval. Liberty Group is asking for review of a revision to the 98-unit Planned Residential Unit Development located in the vicinity of Ray Street and Allen Avenue. The site is 19.98 acres and zoned R-3 Residential. The developer is shifting a sewer easement located on the property boundary to Allen Avenue from the middle to the edge of the abutter's property line.

Further information on this revision can be obtained at the Planning Department office, City Hall, Room 211 or by calling 775-5451, extension 491.

Jack D. Humeniuk, Chairman  
Portland Planning Board

*Single Column, Single spaced, to be published 1/9/87  
in both editions.*

*Bill to: Liberty Group*

**T.Y. LIN** HUNTER - BALLEW  
ASSOCIATES  
INTERNATIONAL

5 FUNDY ROAD, FALMOUTH, MAINE 04105 TELEPHONE (207) 781-4721

January 7, 1988

Jamie Corriveau  
Liberty Group  
38 Preble Street  
Portland, Maine 04101

Subject: Ray St. Condominium Project

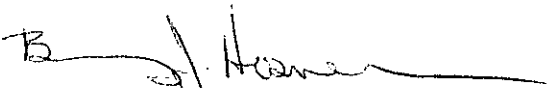
Dear Jamie:

By relocating the sanitary easement from the right to the left side of the Libby Property on Allen Avenue the total length of sanitary line has been increased by 4 linear feet. The distance the effluent is being pumped has been increased by 30'+ there by decreasing the gravity portion to Allen Avenue by the same. The total head on the pumpstation has been reduced by 1.4+ feet. The same layout criteria for horizontal installation was used in the relocation of the sanitary line. It is our opinion that this relocation closely reflects the previous layout and will function in the same manner. Revised plans are currently being finalized and will be sent out upon completion.

If you have any further questions please feel free to call.

Sincerely,

T.Y. LIN INTERNATIONAL/  
HUNTER-BALLEW ASSOCIATES

  
Barry J. Hosmer

BJH/11h

Copy: Barry A. Patrie  
JN: 50413.04

**RAY STREET ASSOCIATES  
38 PREBLE STREET  
PORTLAND, MAINE 04101  
(207) 772-0548**

January 6, 1988

Mr. Alex Jaegerman  
Chief Planner  
Planning Department  
City of Portland  
289 Congress Street  
Portland, Maine 04101

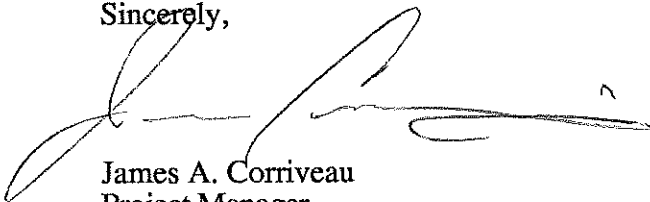
Dear Alex:

Thank you and Maureen O'Meara for seeing me on such short notice yesterday afternoon -- I truly appreciate your patience and cooperation in regard to Ray Street.

It is my understanding that the Recording Plats for the above will be signed at the Planning Board meeting on Tuesday, January 12th. Also, time will be allocated during the January 26th Planning Board meeting for the Board to review Merrymeeting's ownership transfer documents and their financial and technical ability documents. Be assured that this paperwork will be submitted to Maureen very soon in order to give her adequate time for review.

Thank you again for your time.

Sincerely,



James A. Corriveau  
Project Manager

JAC:dlf

cc: Jack Humeniuk  
Maureen O' Meara  
Joe Gray

**RAY STREET ASSOCIATES  
38 PREBLE STREET  
PORTLAND, MAINE 04101  
(207) 772-0548**

January 15, 1988

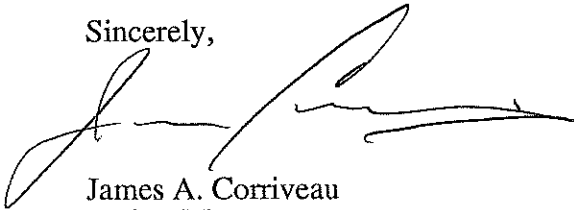
Ms. Maureen O'Meara  
Planning Department  
City of Portland  
389 Congress Street  
Portland, Maine 04101

Dear Maureen:

Thank you for your cooperation and patience over the past several weeks in regard to the Ray Street development. We appreciate all of the time and effort you put into the project during the Site Plan renewal stage last year and, most recently, during this transfer of ownership period.

Thank you again for your support.

Sincerely,

A handwritten signature in black ink, appearing to read 'James A. Corriveau', written in a cursive style.

James A. Corriveau  
Project Manager

JAC:dlf

222x

January 14, 1988

NOTICE TO RESIDENTS AND PROPERTY OWNERS IN THE VICINITY OF  
RAY STREET AND ALLEN AVENUE

The Portland Planning Board will hold a public hearing on Tuesday, January 26, 1988. The meeting begins at 7:30 p.m. in Room 209, City Hall, Portland, Maine.

The Board will consider a request by Merrymeeting Developers to change the owner of the 98-unit Ray Street Townhomes project approved with Liberty Group as the applicant. The site is 19.98 acres and zoned R-3 Residential. Access to the development will be from Ray Street and Topsham Street by way of Gertrude Street. The proposal will be reviewed for financial and technical capability of the applicant.

Plans are available for review in the Portland Planning Department, Room 211 of City Hall. Written comments may be sent to Joseph E. Gray, Jr., Director of Planning and Urban Development, City Hall Room 211, 389 Congress Street, Portland, Maine 04101.

Alexander Jaegerman, Chief Planner

MO/eg

207x

January 14, 1988

NOTICE TO RESIDENTS AND PROPERTY OWNERS IN THE VICINITY OF  
CAPISIC AND MACY STREETS

The Portland Planning Board will hold a workshop meeting on Tuesday, January 26, 1988 at 3:30 p.m. in Room 209, City Hall, Portland, Maine.

The Board will consider a proposal by David Dipietro for a 14-unit PRUD located in the vicinity of Capisic and Macy Streets. The site is 3.09 acres and zoned R-3 Residential. Access to the development will be from Macy Street.

The workshop meeting is an opportunity for the applicant to present the plan to the Planning Board in an informal session, which is open to the public. No decision will be made by the Planning Board at this meeting and public comments are not generally received at the workshop meeting. Written comments on the proposal may be sent to Joseph E. Gray, Jr., Director of Planning and Urban Development, Room 211, City Hall, 389 Congress Street, Portland, Maine 04101.

Alexander Jaegerman, Chief Planner

MO/eg

Department of Parks and Public Works

SUBDIVISION / SITE DEVELOPMENT

COST BREAKDOWN OF IMPROVEMENTS TO BE COVERED BY PERFORMANCE GUARANTEE

DATE 1/13/88

Name of Project Ray Street  
 Address / Location 19.98 on Ray Street, Portland, Maine  
 Developer Liberty Group Inc.  
 Form of Performance Guarantee \_\_\_\_\_  
 Type of Development - Subdivision Site Plan (Major / Minor)

ITEM	QUANTITY	UNIT COST	SURTOTAL	COMPLETED
1. STREET/SIDEWALK: Topsham St.	830 L.F.	63.37	52,600	
Road (Private Road)	3,640 L.F.	\$103	\$375,000	
Granite Curbing	1,620 L.F.	\$ 20	\$ 32,400	
Sidewalks	(Included in item 8)			
Esplanades	_____			
Monuments	_____			
Street Lighting	(See site lighting)			
Other	_____			
2. SANITARY SEWER:				
Manholes	160 V.F.	\$125	\$20,000	
Piping	3338 LF	\$21.40	\$71,435	
Connections	27 EA	\$100	\$ 2,700	
Other - Pumping Sta.	1 EA	\$35,000	\$35,000	
3. STORM DRAINAGE				
Manholes	41 VF	\$125	\$5,125	
Catch Basins	78 VF	\$125	\$9,750	
Piping	1552 LF	\$ 17	\$26,385	
Detention Basin	2 EA	\$2,500	\$5,000	
Other	_____			
4. SITE LIGHTING			\$48,600	
5. EROSION CONTROL			\$1,500	
6. RECREATION AND OPEN SPACE AMENITIES				
Basketball Court			\$10,000	
Tot Lots (2EA)			\$20,000	
7. LANDSCAPING (Attach breakdown of plant materials, quantities, and unit costs)				
Price as directed by city of Portland			\$141,600	
8. MISCELLANEOUS	1000 CY	\$50	\$50,000	
(Rock Ex.)				
TOTAL AMOUNT OF PERFORMANCE GUARANTEE		\$1,012,095		
X 1.7% = INSPECTION FEE	\$17,206			
8. (Cont.)				
Fully actuated control system at Washington/Allen			\$30,000	
Ray Street improvements			\$75,000	

Approved [Signature] 1/14/88  
 Approved [Signature] 1/14/88  
 rev. 9/15/87

1/26/88 Public hearing

Humen, Vostal, O'Brien, DC, Cole

Chestnut St. Garage

O'Brien - time table

construction as soon as possible  
⇒ 8 months

DC - like org bldg  
serves as a model

DC motion

Cole sec.

unan

---

Ray St.

Charles Bagley, Teco Brown, James Comiveau -

Tack - thorough application

Cole - love to throw something

Cole moves

Vostal seconded

unan.

---

Terrace Pond

George Campbell

Ron Ward - purpose of R-5 zone

§ 117 C Dimensional + use requirements

PRUD standards - totally to somewhat objective

- "reasonableness"

Steve Mohr - presentation

brick + clapboard ext. mats

quotes Webster's dictionary on compatible

Campbell - arguing low vacancy rate for affordable rental units

\$ 475 - \$ 575 range

Public

705 Riverside St - mowing + maintaining for last 25 yrs

39' from back

25' from driveway

some vegetation does not exist

Bill - widening to 48'

not sure if symmetrical

front porch to st. 2' 8' drop

increase slope of driveway, front lawn

widening to 2' on either side

Bill amends ROW 40'



CITY OF PORTLAND, MAINE  
PLANNING BOARD

Jack D. Humeniuk, Chairman  
Barbara A. Vestal, Vice Chairman  
John L. Barker  
Joseph R. DeCoursey  
Michael J. Fenton  
Jadine R. O'Brien  
Kenneth M. Cole, III

January 27, 1988

Teco Brown  
Merrymeeting Developers, Inc.  
3 Industrial Parkway  
Brunswick, Maine 04101

Re: Ray Street Townhomes

Dear Mr. Brown:

On January 26, 1988 the Portland Planing Board voted unanimously on the following motion regarding the Ray Street Townhomes:


- That the Planning Board approves the change of owner of the Ray Street Townhomes R-3 PRUD from Liberty Group to Merrymeeting Developers, Inc.

Mylar copies of the construction drawing for the subdivision must be submitted to the Public Works Department prior to the release of the plat. In addition, a performance guarantee covering the public improvements as well as inspection fee payment of 1.7% of the guarantee amount must be submitted to and approved by the Planning Division and Public Works prior to the recording of the plat. The 1985 subdivision approval is valid for three (3) years.

The approval is based on the submitted plan and the findings related to Site Plan, Subdivision, and R-3 PRUD Performance Standards as contained in Planning Report #91-87 and #10-88, which is attached. If you need to make any modifications to the approved plan, you must submit a revised plan for the planning staff's review. The site plan will be deemed to have expired unless work on the development has commenced within six (6) months of the approval or within the time period agreed upon in writing by the City and the applicant.

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

Sincerely,



Jack D. Humeniuk, Chairman  
Portland Planning Board

MO/jf



CITY OF PORTLAND, MAINE

389 CONGRESS STREET  
PORTLAND, MAINE 04101  
(207) 775-5451

DEPARTMENT OF PLANNING & URBAN DEVELOPMENT

**P. SAMUEL HOFFSES, CHIEF**  
INSPECTION SERVICES DIVISION

April 1, 1988

RE: 2 Ray Street, Portland, Maine

Merrymeeting Developers, Inc.  
122 Main Street  
Topsham, Maine 04086

Dear Sir:

Your application to construct Phase I Bldgs. A & B total 7 units has been reviewed and a permit is herewith issued subject to the following requirements:

Site Plan Requirements

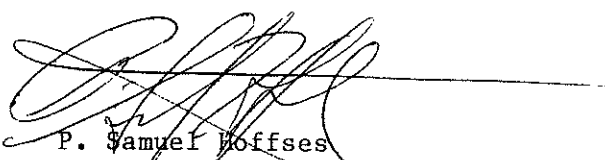
Inspection Services Approved March 31, 1988 W. J. Turner  
Public Works Approved March 25, 1988 W. J. Boothby  
Planning Division Approved October 2, 1988 Ms. M. O'Mara  
Fire Department Approved October 3, 1988 F.F. J. Dobkowski

Building Code Requirements

1. All lot lines and the lot shall be clearly marked before calling for a foundation permit.
2. All concrete and the earth below the concrete shall be protected from freezing.
3. Article 910.3 would give this project a classification of (Use Group R-3) if the following is met and maintained.

If you have any questions regarding these requirements, please do not hesitate to contact this office.

Sincerely,

  
P. Samuel Hoffses  
Chief of Inspection Services

/el

cc: LT. James P. Collins, Fire Prevention  
William Boothby, Public Works  
Ms. M. O'Mara, Planner

BUILDING PERMIT REPORT

DATE: 1/APRIL/88  
ADDRESS: 412-422 RAY STREET.  
REASON FOR PERMIT: Phase 1 bldgs A & B with garages  
+7 condo dwelling.  
BUILDING OWNER: Merrymeeting Developers, Inc.  
CONTRACTOR: Same.

PERMIT APPLICANT

APPROVED: \*4 thru \*8 DENIED

CONDITION OF APPROVAL ~~OR DENIAL~~:

- 1.) All vertical openings shall be enclosed with construction having a fire rating of at least one(1) hour, including fire doors with self-closers.
- 2.) Each apartment shall have access to two(2) separate, remote and approved means of egress. A single exit is acceptable when it exits directly from the apartment to the building exterior with no communications to other apartment units.
- 3.) The boiler shall be protected by enclosing with one(1) hour fire rated construction including fire doors and ceiling, or by placing over the boiler, two(2) residential sprinkler heads supplied from the domestic water.
- \*4.) Every sleeping room below the fourth story in buildings of Use Groups R and I-1 shall have at least one operable window or exterior door approved for emergency egress or rescue. The units must be operable from the inside opening without the use of separate tools. Where windows are provided as a means of egress or rescue, they shall have a sill height not more than 44 inches (1118 mm) above the floor. All egress or rescue windows from sleeping rooms must have minimum net clear openings of 5.7 square feet (0.53m<sup>2</sup>). The minimum net clear opening height dimension shall be 24 inches (610 mm). The minimum net clear opening width dimension shall be 20 inches (508 mm).
- \*5.) In addition to any automatic fire alarm system required by Sections 1018.3.5, a minimum of one single station smoke detector shall be installed in each guest room, suite of sleeping area in buildings of Use Groups R-1 and I-1 and in dwelling units in the immediate vicinity of the bedrooms in buildings of Use Group R-2 or R-3. When actuated, the detector shall provide an alarm suitable to warn the occupants within the individual unit (see Section 1717.3.1).



**ONE**  
**Maine Savings Bank**

IRREVOCABLE LETTER OF CREDIT #012888-1

January 28, 1988

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

Re: Ray Street, Planned Unit Development  
Ray Street  
Portland, Maine  
Irrevocable Letter of Credit #012888-1

Dear Mr. Gray:

Maine Savings Bank hereby issues its Irrevocable Letter of Credit for the account of Merrymeeting Developers as developer, hereinafter referred to as Merrymeeting Developers, in the name of the City of Portland in the aggregate amount of \$1,025,089.

The City of Portland may draw on this Letter of Credit by presentation of a sight draft at the Commercial Real Estate Department's office of Maine Savings Bank, One Maine Savings Plaza, Portland, Maine. Said draft shall be accompanied by an affidavit signed by the City of Portland's Director of Parks and Public Works or Director of Planning and Urban Development stating that Merrymeeting Developers has failed to complete by February 1, 1990, 2 years from date of approval of letter of credit, at Merrymeeting Developer's expense, the work on the roads and other public improvements as set forth in the attached schedule of Costs of Public Improvements. Merrymeeting Developer's commencement of development shall not be a condition precedent to the City of Portland's ability to draw on this letter of credit.

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

Merrymeeting Developers will notify the City of Portland for inspections.

## MAINE SAVINGS BANK

Letter to the City of Portland  
Page Two  
1-28-88

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 and other required improvements constructed chiefly below grade, Maine Savings Bank shall be eligible to receive a reduction in its obligations hereunder equal to the estimated cost of improvements. In no case, however, shall the obligations of Maine Savings Bank hereunder be reduced to an amount which is less than the estimated cost of completing all remaining prescribed improvements as determined by the Department of Public Works, as shown on the attached Schedule of Costs of Public Improvements.

This Letter of Credit will automatically expire on May 1, 1990 but may expire prior to this date when the City of Portland acknowledges in writing to Maine Savings Bank and Merrymeeting Developers that said work as outlined has been completed in accordance with City of Portland specifications, when Merrymeeting Developers has given the City of Portland a warranty deed or warranty deeds to the property within each street within the subdivision, and Merrymeeting Developers has filed with the City of Portland of a 10% Defect Bond (or other security acceptable to the City of Portland) insuring the workmanship and the durability of all materials used in the construction of the public improvements listed, for a period of one year from the date of the acceptance or approval of the City of Portland.

The total existing credit may be drawn upon by the City for any unaccepted or unapproved line item.

We engage with you that drafts drawn under and in compliance with the terms of this credit will be duly honored, However, other than the payment of monies as authorized hereunder, Maine Savings Bank shall not guarantee the performance of Merrymeeting Developers to the City of Portland.

Very truly yours,

MAINE SAVINGS BANKS

By: 

Edward A. Dox  
Assistant Vice President  
Commercial Real Estate

**MAINE SAVINGS BANK**

Letter to the City of Portland  
Page Three  
1-28-88

The City of Portland hereby accepts the providing of alternative security for Merrymeeting Developers obligations to be performed pursuant to Section 14-501 (a) of the Portland City Code.

Dated: 2/2/88

By: *Joseph E. Gray, Jr.*  
Joseph E. Gray, Jr.  
Its duly Authorized  
Director of Planning  
and Urban Development

Seen and Agreed to:

MERRYMEETING DEVELOPERS, INC.

*William F. Slattery*

2/1/88  
Date

*William F. Slattery*  
William F. Slattery  
As An Individual

2/1/88  
Date

Approved per Section 14-501 (a), Portland City Code

By: *[Signature]*  
Director of Finance

2/10/88  
Date

Approved per Section 14-501(a), Portland City Code

By: *Natalie L. Burns*  
Corporation Counsel

2/1/88  
Date

Department of Parks and Public Works

SUBDIVISION / SITE DEVELOPMENT

COST BREAKDOWN OF IMPROVEMENTS TO BE COVERED BY PERFORMANCE GUARANTEE

DATE 1/13/88

Name of Project Ray Street

Address / Location 19.98 on Ray Street, Portland, Maine

Developer Liberty Group Inc.

Form of Performance Guarantee \_\_\_\_\_

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

ITEM	QUANTITY	UNIT COST	SUBTOTAL	COMPLETED
Topsham St.	830 L.F.	63.37	52,600	
1. STREET/SIDEWALK: Road (Private Road)	3,640 L.F.	\$103	\$375,000	
Granite Curbing	1,620 L.F.	\$ 20	\$ 32,400	
Sidewalks	(Included in item 8)			
Esplanades				
Monuments				
Street Lighting	(See site lighting)			
Other				
2. SANITARY SEWER:				
Manholes	160 V.F.	\$125	\$20,000	
Piping	3338 LF	\$21.40	\$71,435	
Connections	27 EA	\$100	\$ 2,700	
Other - Pumping Sta.	1 EA	\$35,000	\$35,000	
3. STORM DRAINAGE				
Manholes	41 VF	\$125	\$5,125	
Catch Basins	78 VF	\$125	\$9,750	
Piping	1552 LF	\$ 17	\$26,385	
Detention Basin	2 EA	\$2,500	\$5,000	
Other				
4. SITE LIGHTING			\$48,600	
5. EROSION CONTROL			\$1,500	
6. RECREATION AND OPEN SPACE AMENITIES <u>Basketball Court</u>			\$10,000	
<u>Tot Lots (2EA)</u>			\$20,000	
7. LANDSCAPING (Attach breakdown of plant materials, quantities, and unit costs) <u>Price as directed by city of Portland</u>			\$141,600	
8. MISCELLANEOUS <u>1000 CY</u> (Rock Ex.)		\$50	\$50,000	

TOTAL AMOUNT OF PERFORMANCE GUARANTEE \$1,012,095 | Approved [Signature]  
 X 1.7 % = INSPECTION FEE \$17,206 | Approved [Signature]

rev. 9/15/87

8. (Cont.)  
 Fully actuated control system at  
 Washington/Allen \$30,000  
 Ray Street improvements \$75,000

A R C H T E C T U R E

October 19, 1987

Mr. Jamie Corriveau  
Liberty Group  
38 Preble St.  
Portland, Me. 04101

Re: Ray Street Development  
Portland, Maine

Dear Jamie:

The Preservations Plan was added to the drawings SD-7 and SD-8 on April 30, 1986. Enclosed is a copy of the plan that was included on those plans.

Thank you,

  
MANNING MORRILL

MM/dp



Ray Street Preservation Plan  
As indicated on plan SD-7

1. Coordinate with landscape architect exact location of existing vegetation to remain. All disturbed unpaved areas not specifically addressed by landscaping plans shall be treated with 4" loam and seeded as required.
2. Coordinate with landscaping and architectural plans exact dimensions, location and construction of patios and walkways for each individual unit type.
3. Limits of work for each phase as designated on these plans shall be respected in addition to the property lines of all abutters.
4. Unless otherwise indicated all utilities, final grading, paving and other work within the limits of work for each phase is to be completed.
5. Provide sufficient erosion control throughout the construction period for each phase and until adequate groundcover is established where indicated on this sheet. The engineer reserves the right to order additional erosion control protection where actual conditions may necessitate.

Erosion control measures to be provided by the contractor are not limited to those indicated on this sheet, but are indicated only as a guide. Actual erosion control measure locations are dependent upon contractor's work progression, and shall be in accordance with details on sheet SD-4.

6. Sedimentation occurring in detention areas during construction shall be removed and areas re-graded, as necessary. Final grading in detention areas shall conform to this drawing after the removal of all erosion control measures and the establishing of sufficient ground cover.
7. Foundation drains are indicated only for final point of drainage from each building. Refer to architectural drawings for location and depth of drains around building perimeter. Minimum slope on drains to be 2%
8. Final grading in detention areas to conform to this drawing after the removal of all erosion controls and the completion of the entire project.
9. All trees or shrubs which are to be preserved shall be clearly marked by the Developer and inspected by the City Arborist of LA fencing or other protective barriers shall surround these trees or shrubs near construction sites and shall be retained throughout the construction period. Grade changes shall not occur within drip line of trees to be preserved. Changes in normal drainage patterns shall be avoided. All trees marked for preservation are subject to continuous inspections throughout the construction period. All trees marked for preservation are subject to the same conditions outlined above in Section VII-1, Technical supplement to City of Portland Land use ordinance.

Ray Street Page Preservation Plan  
As indicated on Plan SD-8

1. Coordinate with landscape architect exact location of existing vegetation to remain. All disturbed unpaved areas not specifically addressed by landscaping plans shall be treated with 4" loam and seeded as required.
2. Coordinate with landscaping and architectural plans exact dimensions, location and construction of patios and walkways for each individual unit type.
3. Limits of work for each phase as designated on these plans shall be respected in addition to the property lines of all abutters.
4. Unless otherwise indicated all utilities, final grading, paving and other work within the limits of work for each phase is to be completed.
5. Provide sufficient erosion control throughout the construction period for each phase and until adequate groundcover is established where indicated on this sheet. The engineer reserves the right to order additional erosion control protection where actual conditions may necessitate.

Erosion control measures to be provided by the contractor are not limited to those indicated on this sheet, but are indicated only as a guide. Actual erosion control measure locations are dependent upon contractor's work progression, and shall be in accordance with details on sheet Sd-4.

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7. Foundation drains are indicated only for final point of drainage from each building. Refer to architectural drawings for location and depth of drains around building perimeter. Minimum slope on drains to be 2%
8. Final grading in detention areas to conform to this drawing after the removal of all erosion controls and the completion of the entire project.
9. All trees or shrubs which are to be preserved shall be clearly marked by the Developer and inspected by the City Arborist of LA for preliminary acceptance prior to the onset of any construction. Fencing or other protective barriers shall surround these trees or shrubs near construction sites and shall be retained throughout the construction period. Grade changes shall not occur within the drip line of trees to be preserved. Changes in normal drainage patterns shall be avoided. All trees marked for preservation are subject to continuous inspection throughout the construction period. All trees marked for preservation are subject to the same conditions outlined above in Section VII-1, Technical supplement of City of Portland Land Use Ordinance.

CITY OF PORTLAND, MAINE

389 CONGRESS STREET  
PORTLAND, MAINE 04101  
(207) 775-5451



PLANNING & URBAN DEVELOPMENT

JOSEPH E. GRAY, JR.  
DIRECTOR

June 12, 1989

John C. Schwanda  
Owen-Haskell, Inc.  
8 Broadway  
South Portland, ME 04106

Dear Mr. Schwanda:

This letter is to confirm the revision to the approved subdivision plan of the Fallbrook-A Condominium (formerly Ray Street Development) project located on Ray Street. The approved revision includes the shift in location of buildings, D, E, F, G, and EE. This change in location was made necessary because of improvements already built by Merrymeeting Developers and because of ledge. As outlined in your letter dated May 9, 1989, there will be no change in the number of units. 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.

The revised mylar recording plat will need to be signed and recorded at the Registry of Deeds. If you have any questions regarding this procedure, please contact Planner Richard Henry, who handled this project.

Sincerely,

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

cc: Alexander Jaegerman, Chief Planner  
Rich Henry, Planner  
Steve Harris, Planning Engineer  
P. Samuel Hoffses, Chief Building Inspector  
Jeff, Tarling, City Arborist  
Lt. James Collins, Fire Department  
Natalie Burns, Associate Corporation Counsel  
Approval Letter File

**HUNTER-BALLEW ASSOCIATES**

5 Fundy Road  
 FALMOUTH, MAINE 04105  
 (207) 781-4721

JOB RAT ST. B50410  
 SHEET NO. 1 OF 1  
 CALCULATED BY JXE DATE 4-18-85  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 SCALE \_\_\_\_\_

**PRELIMINARY DRAINAGE CALCULATIONS**

AREA NO	PEAK PRE-DEVELOPMENT RUNOFF RATE (CFS)	PEAK POST-DEVELOPMENT RUNOFF RATE (CFS)	REQ'D DETENTION TO MAINTAIN PRE-DEVELOPMENT RUNOFF RATES (GALLONS)	DETENTION POND SIZE @ TOP
1	7.8	14.1	117,300	68' x 112'
2	6.0	10.1	45,300	46' x 68'
3	8.7	16.2	112,400	68' x 112'

ASSUMPTIONS


1. THESE RUNOFF CALCULATIONS ARE BASED ON A 25 YR 24 HR STORM FOR PORTLAND, ME, USING THE S.C.S. METHOD OF CALCULATIONS.
2. CALCULATIONS ARE PRELIMINARY, AND BASED ON PRELIMINARY DEMANDS BY ARCHITECT, DATED 4.17.85
3. DETENTION POND DIMENSIONS GIVEN ARE FOR THE TOP OF THE BASIN - ALL BASINS ARE 3.5' TO 4.0' DEEP, AND HAVE SIDE SLOPES OF 4:1.
4. BASIN SIZES AND DETENTION VOLUMES REQ'D ARE IDEALIZED, AND THESE SIZES REPRESENT PRELIMINARY DESIGN ASSUMPTIONS AND INFORMATION.

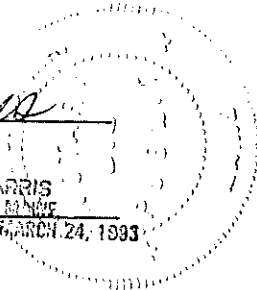
STATE OF MAINE  
CUMBERLAND, ss

October 28, 1987

Personally appeared the above-named David R. Cope,  
of Bay Street Assoc's, and acknowledged the  
foregoing instrument to be his free act and deed in his said capacity, and the free act and deed of  
said \_\_\_\_\_.

Before me,

  
Notary Public/Attorney at Law  
Print name: KELLIE D. HARRIS  
NOTARY PUBLIC, MAINE  
MY COMMISSION EXPIRES MARCH 24, 1993



\* Where this Agreement is a condition of subdivision rather than site plan approval, this clause  
should instead read "and recorded in the Cumberland County Registry of Deeds in Plan Book  
\_\_\_\_\_, Page \_\_\_\_\_."

## DRAINAGE MAINTENANCE AGREEMENT

IN CONSIDERATION OF Planning Board approval granted by the Planning Board of the City of Portland to a plan entitled Ray Street Development, dated September 9, 1987 and filed with the City of Portland, Department of Planning and Urban Development, 389 Congress Street, Portland, Maine \* and pursuant to a condition thereof, Ray Street Associates, a General Partnership with a place of business at 38 Preble Street, Portland, ME, the owner of the subject premises, does hereby agree, for itself, its successors and assigns (the "Owner"), as follows:

That it will, at its own cost and expense and at all times in perpetuity, maintain in good repair and in proper working order the surface water drainage system as shown on said plan, including but not limited to the detention basin or basins and the outlet or outlets therefrom, for the benefit of the said City of Portland, all persons in lawful possession of said premises and abutters thereto; further, that the said City of Portland, said persons in lawful possession and said abutters, or any of them, may enforce this Agreement by an action at law or in equity in any court of competent jurisdiction; further, that after giving the Owner written notice and a reasonable time to perform, the said City of Portland may, but its authorized agents or representatives, enter upon said premises or any portion thereof for the purpose of performing the aforementioned maintenance of said surface water drainage system in the event of any failure or neglect thereof, the cost and expense thereof to be reimbursed in full to the said City of Portland by the Owner upon demand.

This Agreement shall not confer upon the said City of Portland or any other person the right to utilize said surface water drainage system for public use or for the development of any other other property, and the Owner shall bear no financial responsibility by virtue of the Agreement for enlarging the capacity of said service water drainage system for any reason whatsoever.

This Agreement shall bind the undersigned only so long as it retains any interest in said premises, and shall run with the land and be binding upon its successors and assigns as their interests may from time to time appear.

Date at Portland, Maine this 28 day of October, 1987.

By  
Its

David R. Cope



## Hunter-Ballew Associates

ENGINEERING • PLANNING • SURVEYING

5 Fundy Road  
Falmouth, Maine 04105  
207/781-4721

PRINCIPALS  
Robert E. Hunter  
Robert L. Ballew  
Ralph P. Norris  
Barry A. Patrie

April 17, 1985

Mr. Douglas Duncan  
Liberty Group  
38 Preble Street  
Portland, Maine 04101

Subject: Submission of Preliminary Traffic Impact Study  
Ray Street Development  
Portland, Maine

Dear Mr. Duncan:

In accordance with our agreement, we are pleased to submit herewith the Preliminary Traffic Impact Study for the proposed Ray Street housing complex planned for the southwest side of Ray Street near Allen Avenue. This study includes the trip generation by the proposed development, a sight distance analysis, and accident history in the vicinity of the development. A capacity analysis will be completed at a later date since traffic counts in the vicinity of the development could not be made due to utility construction.

In summary, our conclusions to date are as follows:

1. The planned 103 units will generate 680 daily trip ends (ins plus outs) with 68 of the trips occurring during the PM peak hour.
2. The sight distances at the proposed entrances to the complex are in excess of minimum standards except at the existing intersection of Ray Street and Allen Avenue which is slightly below the standards to the left.
3. The accident rate on Allen Avenue in the vicinity of the site is below the rate for similar intersections within the State of Maine.

We will be completing the capacity analysis when the construction in the vicinity of the site is completed in the near future. Should you have any questions, please contact me.

Sincerely,

HUNTER-BALLEW ASSOCIATES

Thomas L. Gorrill

TLG/dcs  
Enc.  
JN: 841150



**Hunter-Ballew Associates**  
ENGINEERING • PLANNING • SURVEYING

PRELIMINARY REPORT  
ON THE TRAFFIC IMPACT STUDY  
FOR  
PROPOSED RAY STREET DEVELOPMENT  
RAY STREET  
PORTLAND, MAINE

PREPARED FOR  
THE LIBERTY GROUP

PREPARED BY  
HUNTER-BALLEW ASSOCIATES  
CONSULTING ENGINEERS  
FALMOUTH, MAINE

APRIL 1985





## **Hunter-Ballew Associates**

ENGINEERING • PLANNING • SURVEYING

### SECTION I - INTRODUCTION AND PURPOSE OF STUDY

In March 1985, the Liberty Group retained Hunter-Ballew Associates to prepare a Traffic Impact Study in conjunction with the proposed Ray Street apartment complex to be located on the southwest side of Ray Street between Allen Avenue and Florida Avenue in Portland, Maine. Figure 1, following this page, shows the proposed site.

The object of this preliminary study is to determine the trip generation by the proposed development, determine the available sight distance and compare this to sight distance standards, and analyze the accident history in the vicinity of the site. In addition, the impact of traffic resulting from the complex on the existing street system will be analyzed in a later report when the utility construction in the area is completed and traffic counts can be made.

### SECTION II - DATA COLLECTION AND ASSEMBLY

The Liberty Group supplied Hunter-Ballew Associates with the following information:

1. Site plan of the proposed housing development.

The Maine Department of Transportation supplied Hunter-Ballew Associates with the following data:

1. Recent traffic counts in the vicinity of the site.
2. Accident data in the vicinity of the site.

In addition to this data, Hunter-Ballew Associates collected the following information:

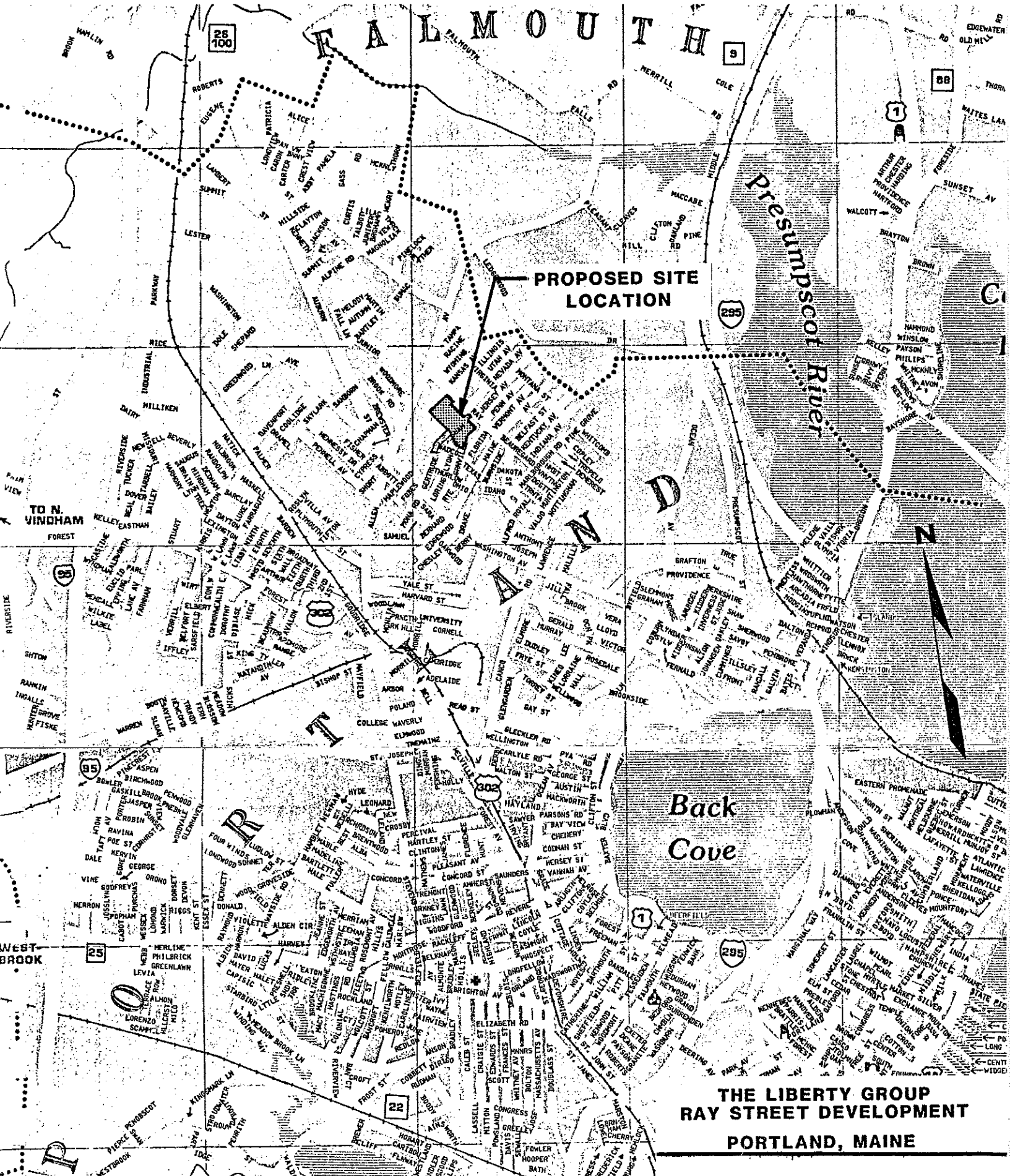
1. Available sight distances at the driveways to the site.
2. Roadway geometrics and posted speed limits.

### SECTION III - EXISTING STREET TRAFFIC

This section will be completed at a later date when the utility construction in the area is completed and traffic counts can be made.

### SECTION IV - TRAFFIC TO AND FROM THE COMPLEX

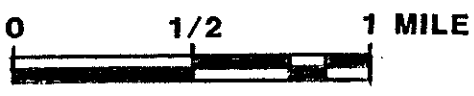
Liberty Group's proposed complex is planned to consist of 103 units. Using the Institute of Transportation Engineer's (ITE) publication, Trip



**PROPOSED SITE  
LOCATION**

**Back  
Cove**

**THE LIBERTY GROUP  
RAY STREET DEVELOPMENT  
PORTLAND, MAINE**



**GRAPHIC SCALE**

**SITE PLAN**



## Hunter-Ballew Associates

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Generation, published in 1983, the expected daily and peak hour trip ends (ins plus outs) have been compiled and are presented below:

### Proposed Development Traffic Generation

Land Use	Size	Trip Ends Per Unit*		Total Trip Ends	
		Daily	Peak Hour	Daily	Peak Hour
Low Level Apartments	103 units	6.6	0.66	680	68

\*1 trip in plus 1 trip out = 2 trip ends.

The directional distribution of the 68 peak hour trips will be addressed in the final report.

### SECTION V - COMBINED STREET AND COMPLEX TRAFFIC

This section will be completed in the final report.

### SECTION VI - CAPACITY ANALYSIS

This section will be completed in the final report.

### SECTION VII - SIGHT DISTANCE ANALYSIS

Two driveways are planned for the proposed complex. The first driveway is planned to be located on the southwest side of Ray Street approximately 570 feet from the centerline of Allen Avenue. The second entrance will be located off the end of Gertrude Street located off Washington Avenue.

Using the American Association of State Highway Officials (AASHTO) publication, A Policy on Geometric Design of Highways and Streets, published in 1984, the following sight distances are required:

<u>Operating Speed on Major Street (mph)</u>	<u>Sight Distance Required to Left and Right</u>
20	250'
25	325'
30	410'
35	520'



**Hunter-Ballew Associates**  
ENGINEERING • PLANNING • SURVEYING

The speed limit on Ray Street is not posted, but is 25 mph according to the City of Portland. The posted speed limit on Allen Avenue and on Washington Avenue is 35 mph. A comparison of the available sight distances to the required sight distances is made below based on the above speeds.

Comparison of Available Sight Distance to Required Sight Distance

<u>Location</u>	<u>Exiting Driveway Looking:</u>	<u>Available Sight Distance (Ft)</u>	<u>Required Sight Distance (Ft)</u>
Proposed Ray St. Driveway	Left	570	325
	Right	450*	325
Intersection of Ray St. & Allen Ave.	Left	490	520
	Right	800	520
Intersection of Gertrude St. & Washington Ave.	Left	1200	520
	Right	800	520

\*Reconstruction of Ray Street is planned in the near future which will improve this sight distance.

As can be seen from the above comparison, the sight distances are in excess of the requirements except to the left at the existing intersection of Ray Street and Allen Avenue which is slightly below AASHTO standards.

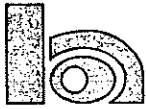
SECTION VIII - ACCIDENT ANALYSIS

The Maine Dept. of Transportation supplied Hunter-Ballew Associates with accident data for the intersection of Ray Street and Allen Avenue for the five year period from 1979 through 1983 for Allen Avenue from Woodmere Road south of Ray Street to Virginia Avenue north of Ray Street. This data showed a total of three accidents over the five year period which is below the accident rate for similar intersections.

The accident data for Ray Street and Washington Avenue at Gertrude Street has not yet been furnished to the consultant and will be supplied in the final report.

SECTION IX - CONCLUSIONS AND RECOMMENDATIONS

The following conclusions and recommendations are made based on the



## **Hunter-Ballew Associates**

ENGINEERING • PLANNING • SURVEYING

foregoing preliminary traffic analyses:

1. The planned 103 units will generate 680 daily trip ends (ins plus outs) with 68 of the trips occurring during the PM peak hour.
2. The sight distances at the proposed entrances to the complex are in excess of minimum standards except at the existing intersection of Ray Street and Allen Avenue which is slightly below the standards to the left.
3. The accident rate on Allen Avenue in the vicinity of the site is below the rate for similar intersections within the State of Maine.

**THE**  
**DESIGN COLLABORATIVE**  
ARCHITECTS • LANDSCAPE ARCHITECTS

May 25, 1988

Alex Jaegerman  
Planning Department  
City of Portland  
Portland, Maine

RE: Merrymeeting Woods - DC-021188  
(Formerly Ray Street)

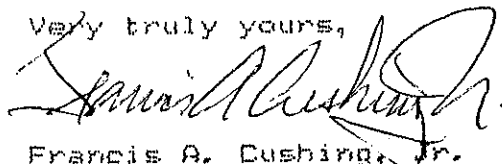
Dear Alex:

We are submitting the enclosed information for staff review. This proposal represents a Landscape redesign of Merrymeeting Woods, formerly Ray Street. The attached narrative begins with a brief description of the landscape and site elements as approved by the Planning Board. Following in the same outline order are descriptions of the proposed changes. Product literature is included to represent some of the changes. In addition, three landscape plans are provided on Sheets L1, L2 and L3.

We are confident that you and your staff will not see the need to send the project on to Planning Board review since the proposed changes are of a minor nature. Additionally, we feel that you will find the proposed changes to be more valuable than the approved plan.

After you have had a chance to review this proposal, please contact me so that we may schedule a meeting. We look forward to having an opportunity to explain the proposal and receive comments from your staff.

Very truly yours,



Francis A. Cushing, Jr.  
DESIGN COLLABORATIVE, INC.

cc: Project file: 021188

FAC/ejs

## EXISTING ELEMENTS OF THE RAY STREET SITE PLAN

### A. RECREATIONAL ELEMENTS AS APPROVED

#### 1. Tot Lots

##### a. North End Lot:

The north end tot lot is located 25' behind unit five and 40' from the road on a site with 13% slope. Approximately 200 S.F. enclosed with 4' high chain link fence and play equipment is provided. This will service the north end of the project (49 units).

##### b. South End:

The south end tot lot is located in the undisturbed area and 20' from the project road on a slope greater than 10%. Approximately 200 S.F. enclosed with a 4' high chain link fence and play equipment is provided. This will service the south end of the project (49 units).

#### 2. Trail:

Approximately 1,340' of trail meanders through the undisturbed area of the project. Plantings of deciduous and evergreen trees with benches are provided along the trail. The trail is 3 1/2' wide with a gravel base and a mulch surface cover.

#### 3. Basketball Court:

An asphalt court without fencing is located 35' from the project road near the entrance. Some buffering along the road and property line is provided. Buffering consists of 190 linear feet of evergreens planted 20' o.c.

### B. HARDSCAPE AS APPROVED

#### 1. Unit Walks:

Townhouse sidewalks wrap driveways 12' out to create a landing. Garden flat sidewalks meander from driveway to front door. They are constructed of concrete 4 1/2' wide with 6" gravel base.

#### 2. Patios/Terraces:

Patios/terraces are located off the back door of units. They are 8' x 10' concrete pads with a 6" gravel base.

#### 3. Stairs:

Front stairs are constructed of 6" x 8" timbers having a 1' tread and 6" risers. Units have a varied number of stairs.

## C. LANDSCAPING/PLANT MATERIAL AS APPROVED

### 1. Typical Unit:

Anchor plants consist of a large evergreen and a deciduous tree that are faced with an understory planting of deciduous shrubs. Foundation planting consists of deciduous and broadleaf evergreens with a flowering tree in the front lawn. Lawn area is approximately 1600 S.F. typically. The backyard planting uses a flowering tree with an understory plantings at the corner of terrace to define the private terrace space.

### 2. Buffers:

The buffer consists of a mixture of evergreens planted in double row randomly spaced. Buffering is provided along property line and in small groups between units and along the road. Evergreen buffering was planted 20' c.c. typically.

### 3. Street trees:

Street trees were planted so each "building" would have a shade tree.

## PROPOSED SITE IMPROVEMENTS

### A. RECREATIONAL ELEMENTS PROPOSED

#### 1. Tot Lots

a. The north end tot lot will be relocated to the proposed basketball area. The new site will be flat and safer. Separation between the court area will be accomplished with distance, berms and plantings. The proposed site impacts the private defensible space of fewer units and is more readily accessible. The area of the tot lot has been increased to 5,000 S.F. A bituminous walk will be provided to access the play lot and ball court. Relocated benches will be provided for seating at the ball court and play area. Fencing has been changed to a more aesthetic and functional material. Evergreen tree buffering has been increased from 10 to 20 trees with tighter spacing.

b. The south end lot will be located in the same area as approved. The land area will be increased to 5,000 S.F. Solid wood fence and wood rail fence will be used to enclose and buffer the area from abutting units. Shade trees will be added. A bituminous walk is added to access the play area. Product literature is enclosed for play equipment and benches.



## 2. Trail:

The elements of the approved trail are redistributed to the active recreational areas and buffer plantings. The benches and defined walking area are now shown as part of the tot lots.

The developer and designer feel strongly that the trail should be eliminated from the plan and that the active recreation areas should be improved.

The trail was eliminated because of expense and field test failure of such design. The length and physical construction would be a major expense for this project. Also, the fact of the trail going through back yards was a drawback. Public access to private defensible space will reduce security. High installation and maintenance costs are not justified in context of the limited benefit of the trail to the residence.

## 3. Basketball Court:

The approved court will remain in place. Chain link fence will be added for separation from abutters and evergreen tree planting will be strengthened by increasing number and closer spacing. Bench seating and defined walk access will be provided as described in North End Tot Lot.

## B. HARDSCAPE PROPOSED

### 1. Unit Walks:

Unit walks are reduced in square feet to that which is necessary. This will allow for more green space.

The new green space will be planted with roses and perennials.

The walk at the garden flat is straightened to allow for a more direct and formal entrance. The walk material will remain concrete.

### 2. Patio:

The patio material changed to a wood decking on sleepers. This will allow for a softer and cooler surface. The appearance will be less formal and more natural, much more appropriate for private space.

### 3. Entrance Stairs:

The stairs will be changed to a more traditional and formal finish lumber stair and landing. This change is proposed for functional and aesthetic reasons. Utility connections and access will be much easier. The approved rough timber risers are much too informal for a front door look that the proposed finish lumber stair will provide.

## C. LANDSCAPE PROPOSED

In general, care was taken in the redesign of the Landscape to provide equal or greater functional and aesthetic value than the approved plan. Proposed plant material size and conditions will meet city code.

### 1. Typical:

The patio planting scheme is changed to an eat scape. This change will provide the resident with the obvious benefit of being able to participate with the landscape. The proposed fruiting plants have three season interest in addition to their edible fruit. The foundation planting is similar to the approved plan with the following exceptions:

- a. Plant species are changed in favor of hardier and more tolerant material.
- b. Flowering plants are more intensively used.
- c. Landscape and lawn area is increased and pavement decreased.

### 2. Street Trees:

The quantity of street trees is increased from 27 to 35. The location of the trees has changed to a more orderly spacing and a more public or common location.

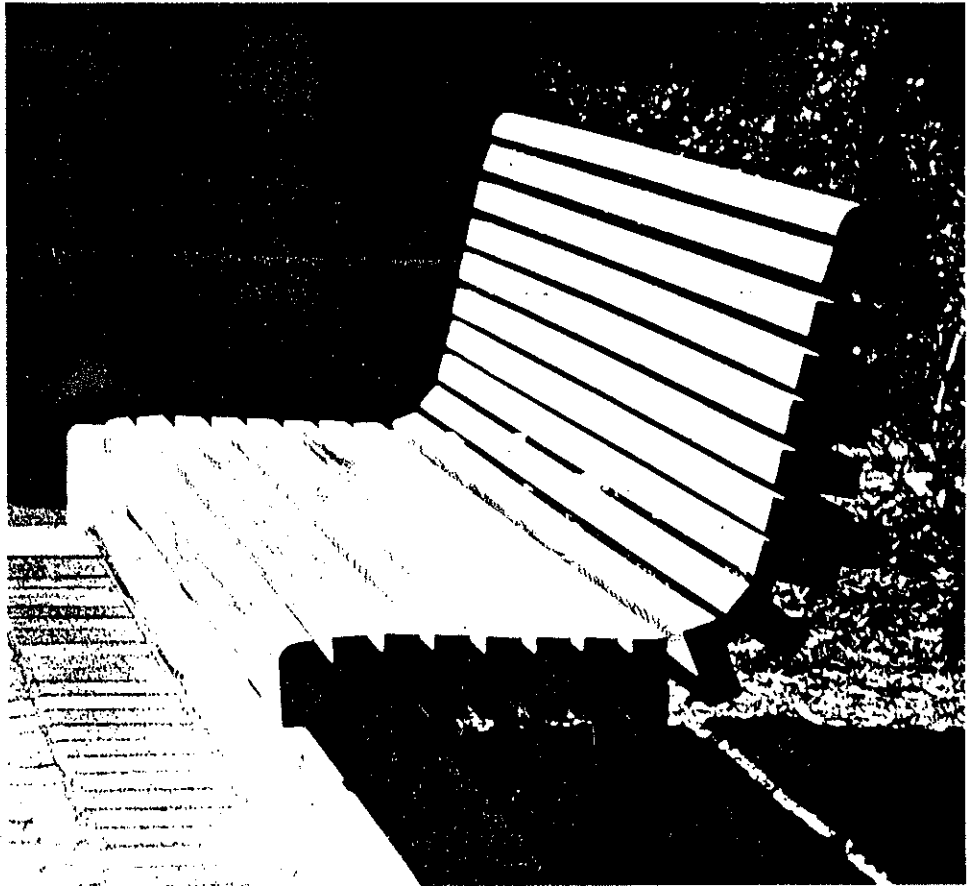
### 3. Buffer:

The plant species are changed in favor of native field grown evergreen trees. The trees will naturalize better with indigenous plants. The location of buffer trees has not changed from the approved plan. Additional internal buffering is added, i.e., buffering of units from units, and units from the traveled way. Additional buffering is located between the recreation area and abutting properties.

## 400 SERIES

*all 2x4 construction . . . leg and center brace contour bars are made with 3/8" solid steel bars precision formed to required contour. In-ground legs are made with high-tensile strength 2 1/2" diameter tubular steel welded directly to formed contour bar. Rectangular tubular steel used for legs of flat benches. Finished frames are PUBLICOTE-treated*

**UB-418:** A massive reverse-contoured bench utilizing 18 2x4's in a graceful double contour. Extremely comfortable and elegant. Shown in redwood, with permanent leg.



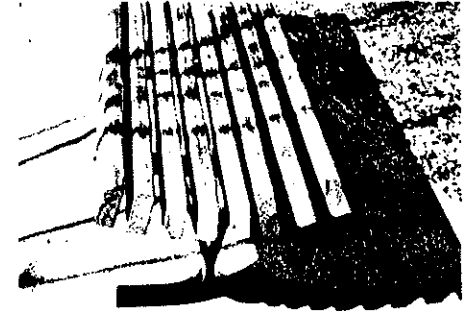
UB-418

**UB-414:** A graceful single-contour bench comprised of 14 2x4's, shown in walnut-stained redwood.



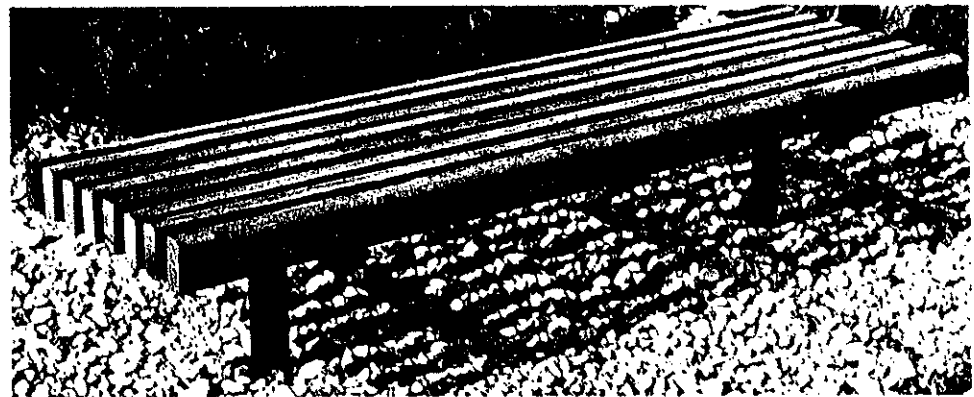
UB-414

**UB-408C:** Is a gently contoured flat bench. It uses 8 2 x 4's, shown in purpleheart with optional gull-wing legs.



UB-408C

**UB-408:** A flat bench using 8 2x4's . . . shown in purpleheart, with permanent legs.

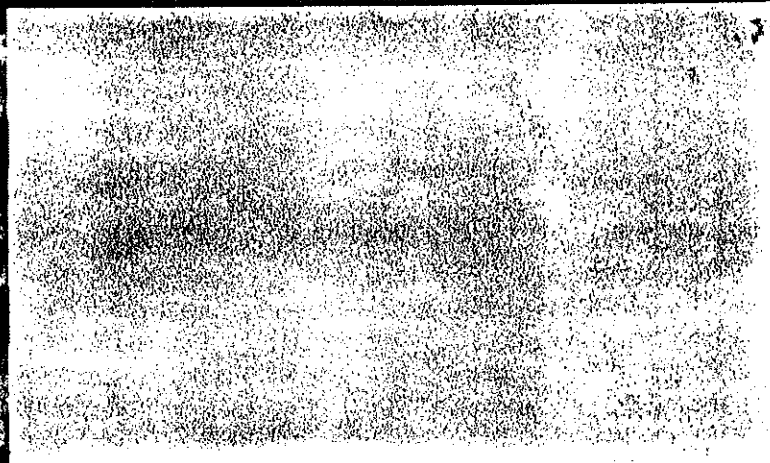


UB-408

**Also available, but not shown:**

**UB-433:** A three-foot square center-post mounted UNISLAT bench with a 4" square tubular steel center post, utilizing 17 2x4's

**UB-444:** A four-foot square center-post mounted UNISLAT bench with a 4" square tubular steel center post, utilizing 22 2x4's



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CITY OF PORTLAND, MAINE

389 CONGRESS STREET  
PORTLAND, MAINE 04101  
(207) 775-5451



PLANNING & URBAN DEVELOPMENT

JOSEPH E. GRAY, JR.  
DIRECTOR

June 12, 1989

John C. Schwanda  
Owen-Haskell, Inc.  
8 Broadway  
South Portland, ME 04106

Dear Mr. Schwanda:

This letter is to confirm the revision to the approved subdivision plan of the Fallbrook-A Condominium (formerly Ray Street Development) project located on Ray Street. The approved revision includes the shift in location of buildings, D, E, F, G, and EE. This change in location was made necessary because of improvements already built by Merrymeeting Developers and because of ledge. As outlined in your letter dated May 9, 1989, there will be no change in the number of units. 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.

The revised mylar recording plat will need to be signed and recorded at the Registry of Deeds. If you have any questions regarding this procedure, please contact Planner Richard Henry, who handled this project.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Joseph E. Gray, Jr.', is written over the typed name.

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

cc: Alexander Jaegerman, Chief Planner  
✓ Rich Henry, Planner  
Steve Harris, Planning Engineer  
P. Samuel Hoffses, Chief Building Inspector  
Jeff, Tarling, City Arborist  
Lt. James Collins, Fire Department  
Natalie Burns, Associate Corporation Counsel  
Approval Letter File

*Phone  
xerox  
Joe*

CITY OF PORTLAND, MAINE

389 CONGRESS STREET

PORTLAND, MAINE 04101

(207) 775-5451



PLANNING & URBAN DEVELOPMENT

**JOSEPH E. GRAY, JR.**  
DIRECTOR

May 3, 1989

Mr. Christopher Goucher  
Vice President  
Merreal Corporation  
P.O. Box 1280  
Portland, ME 04101

Dear Mr. Goucher:

Thank you for your recent letter summarizing our understanding regarding the construction of the basketball court at the Fallbrook Condominiums on Ray Street.

You may delay the installation of the basketball court beyond June 1, 1989. Construction may take place at a later phase of the development to be mutually agreed to by the City and Developer. Merreal Corporation, or a subsequent developer, will provide adequate bonding on a letter of credit to assure funding the improvement.

Thank you for your assistance in resolving this issue.

Sincerely,

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

**CITY OF PORTLAND  
MEMORANDUM**

**TO:** Chair and Members of the Planning Board

**FROM:** Richard Henry, Planner

**DATE:** January 10, 1989

**SUBJECT:** Financial and Technical Capability of  
MM II Real Estate Corporation

MM II Real Estate Corporation has requested approval of the Planning Board for transfer of all local permits and approvals for the Merrymeeting Woods Condominium (Ray St. Townhomes) from Merrymeeting Developers Inc., to MM II. The Ray St. Townhomes were originally approved as a subdivision, with Liberty Group as the applicant, on September 10, 1985. A revised site plan was approved by the Board, on September 2, 1988, with Merrymeeting Developers as the applicant.

MM II is a wholly owned subsidiary of Maine Savings Bank. Maine Savings Bank is the construction lender on several of Merrymeeting's developments, including the project for which they are requesting transfer approval. Because of financial difficulties, Merrymeeting conveyed and assigned to MM II all state and local permits and approvals on November 30, 1988. The mortgage securing the financing for the project has been assumed by MM II, so that the financial capability of MM II is backed by Maine Savings Bank's original loan commitment.

MM II intends to complete the first phase of site work, infrastructure, and condominium units in order to obtain certificates of occupancy. In the future, MM II has stated the intention of either entering into a joint venture in order to complete the project, or selling it to another developer, at which point they would require further approval from the City. Copies of Maine Savings Bank's letter, the deed and Assignment are included as Attachments 1, 2, and 3. The letter from Maine Savings Bank attesting to the financial capability of MM II has been reviewed by Corporation Counsel and found to be sufficient.

Motion for the Board to consider:

Based on the submissions provided by the applicant (and/or other findings) relating to financial and technical capacity, that MM II meets the subdivision review requirement of section 4-497 (10) that the subdivider has the financial and technical capacity to meet all subdivision development standards.

RH/jy

DRUMMOND WOODSUM PLIMPTON & MACMAHON

ATTORNEYS AT LAW

245 COMMERCIAL STREET

PORTLAND, MAINE 04101

(207) 772-1941

FAX (207) 772-3627

DAVID PLIMPTON  
HUGH G. E. MACMAHON  
JOHN A. GRAUSTEIN  
JOSEPH L. DELAFIELD III  
S. JAMES LEVIS, JR.  
DANIEL AMORY  
ROBERT E. HIRSHON  
HARRY R. PRINGLE  
RICHARD A. SPENCER  
JOHN A. MAHANEY  
THOMAS H. ALLEN  
RICHARD A. CARRIUOLO  
RONALD N. WARD  
RICHARD A. HULL III  
JAY S. BLUMENKOPF  
JOHN S. KAMINSKI  
RUFUS E. BROWN  
KATHLEEN BARRY  
WILLIAM L. PLOUFFE  
CAROLYN B. HULL  
EDWARD F. FEIBEL

JERROL A. CROUTER  
KEITH C. JONES  
WILLIAM A. MCCUE  
MICHAEL E. HIGH  
WILLIAM R. BRITTON, JR.  
RICHARD A. SHINAY  
BRUCE W. SMITH  
THERESA J. BRYANT  
E. WILLIAM STOCKMEYER  
ERIC J. BRYANT  
BARBARA L. KRAUSE  
BENJAMIN E. MARCUS  
ELTING H. SMITH, JR.  
MELISSA A. HEWEY  
ANDREW H. COHEN  
ERIC R. HERLAN  
MARK E. STANDEN  
GEORGE T. DILWORTH  
GENE A. MAGUIRE  
JOHN B. ROGERS  
DAINA J. VALENTINO

PARK ONE-ELEVEN  
409 ALFRED STREET  
BIDDEFORD, MAINE 04005  
(207) 282-5983  
FAX (207) 282-4310

OF COUNSEL  
DANIEL T. DRUMMOND, JR.  
HAROLD E. WOODSUM, JR.

December 19, 1988

HAND DELIVERED

Mr. Joseph E. Gray, Jr.  
Director of Planning & Urban Development  
City of Portland  
City Hall  
Portland, Maine 04101

Re: Merrymeeting Developers, Inc./MM II Real Estate  
Corporation  
Merrymeeting Woods Condominium  
Ray Street, Portland, Maine

Dear Mr. Gray:

We are writing on behalf of our client, MM II Real Estate Corporation ("MM II"), to request the approval of the Portland Planning Board to the transfer of all local permits and approvals for Merrymeeting Woods Condominium (the "Project") from Merrymeeting Developers, Inc. ("Merrymeeting") to MM II. We are currently seeking similar approval from the Maine Department of Environmental Protection ("DEP") regarding state approvals for the Project.

MM II is a wholly owned subsidiary of Maine Savings Bank (the "Bank"). The Bank is the construction lender on several of Merrymeeting's developments, including the Project. Over the past several months Merrymeeting has found itself in financial difficulties and as part of an effort to resolve those difficulties, Merrymeeting conveyed the Project to MM II and assigned to MM II all state and local permits and approvals in connection therewith. These transfers occurred on November 30, 1988, and we enclose copies of the deed recorded in the Cumberland County Registry of Deeds and the Assignment of permits and approvals for your records.



Mr. Joseph E. Gray, Jr.  
December 19, 1988  
Page 2

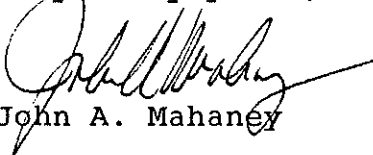
It is not MM II's intention to complete the entire Project on its own. Rather, MM II desires to stabilize the Project by completing the site work, infrastructure and condominium units currently under construction in the first phase to the point where certificates of occupancy for the completed units can be obtained. There are currently reservation agreements outstanding with respect to the sale of five units in the first phase of the Project. MM II's long range plans for completion of the Project would involve either a joint venture with or a sale to another developer. Obviously any such future transfer would require further approvals from both the DEP and the City of Portland.

The transfer of the Project to MM II was subject to the existing construction financing between the Bank and Merrymeeting. A mortgage securing that financing remains in place. That mortgage and the financing it secures have been assumed by MM II. Therefore, MM II's financial ability to complete the necessary work is backed by the Bank's original loan commitment of \$3,165,000. With respect to technical ability to complete those aspects of the Project noted above and any further work MM II should decide to undertake, MM II has ongoing contractual arrangements with Merrymeeting, whereby Merrymeeting will continue to provide planning and engineering services to the Project. Additionally, as we believe you are aware, MM II has contracted for the services of Downeast Construction Management Group, Inc. of South Portland for independent construction and engineering advice and services.

We hope that this letter provides you and the Planning Board with sufficient information to act on MM II's request for transfer of permits and approvals for the Project. If there is anything further you require, however, please let us know. We ask that this request be placed on the Planning Board's agenda for its next meeting which we understand is scheduled for Tuesday, January 10, 1989.

Thank you for your assistance.

Very truly yours,



John A. Mahaney

JAM/jb  
Enclosures

cc: Thomas Lewis  
Christopher Goucher

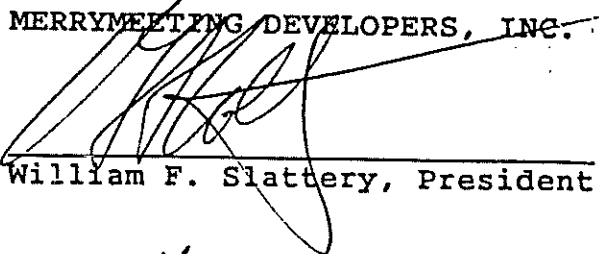
WARRANTY DEED

MERRYMEETING DEVELOPERS, INC., a Maine corporation with a principal place of business at 3 Industrial Parkway, Brunswick, Maine, for consideration paid grants to MM II REAL ESTATE CORPORATION, a Delaware corporation with a principal place of business c/o Maine Savings Bank, One Maine Savings Plaza, Portland, Maine 04101, with Warranty Covenants, the land with the buildings and improvements thereon situated in Portland, Cumberland County, Maine described in Schedule A attached hereto and made a part hereof.

IN WITNESS WHEREOF, the said Merrymeeting Developers, Inc. has caused this instrument to be sealed with its corporate seal and signed in its corporate name by William F. Slattery, its President thereunto duly authorized, this 29th day of November, 1988.

MERRYMEETING DEVELOPERS, INC.

by

  
William F. Slattery, President

November 29, 1988

STATE OF MAINE  
CUMBERLAND, ss.

Then personally appeared the above-named William F. Slattery, President of Merrymeeting Developers, Inc., and acknowledged the foregoing instrument to be his free act and deed in his said capacity, and the free act and deed of said corporation.

Before me,

  
Notary Public/Attorney at Law

John A. Mahaney

Schedule A

A certain parcel of land situated on the Westerly side of Ray Street in the City of Portland, County of Cumberland and State of Maine bounded and described as follows:

Beginning at a 5/8" iron rod set on the Westerly sideline of Ray Street at the Southeasterly corner of the land of Lewis H. and Joan I. Waugh (see Book 2790, page 464) which rod is located S 19°-46'-05" E along the Westerly sideline of Ray Street 255.00 feet from the Southerly sideline of Allen Avenue;

Thence S 19°-46'-05" E along the sideline of Ray Street 331.98 feet to a 3/4" iron pipe found;

Thence, S 13°-05'-20" E along the sideline of Ray Street 88.43 feet to the land now or formerly of William Pickrell (Book 2181, page 203);

Thence, S 76°-54'-40" W by the land of Pickrell 150.00 feet to a point marked by a 5/8" iron rod set;

Thence, S 13°-05'-20" E by the land of Pickrell 150.00 feet to a point marked by a 5/8" iron rod set at the land now or formerly of John N. Jr. and Glennis E. Fitzpatrick (Book 2773, page 224);

Thence, S 76°-54'-40" W by the land of Fitzpatrick 100.00 feet to a point marked by a 5/8" iron rod set;

Thence, S 13°-05'-20" E by the land of Fitzpatrick 200.00 feet to a point marked by a 5/8" iron rod set;

Thence, N 76°-54'-40" E by the land of Fitzpatrick 256.90 feet to a point on the Westerly sideline of Ray Street marked by a 5/8" iron rod set;

Thence, S 16°-25'-15" E by the sideline of Ray Street 1.42 feet to a point marked by a 5/8" iron rod set at the land now or formerly of Ivan G. and Edwina F. Callahan (Book 2997, page 486);

Thence, S 73°-34'-45" W by the land of Callahan 220.00 feet to a point marked by a 5/8" iron rod set;

Thence, S 16°-25'-15" E by the land of Callahan 65.00 feet to a point marked by a 5/8" iron rod set;

Thence, N 73°-34'-45" E by the land of Callahan 100.00 feet to a point marked by a 5/8" iron rod set at the land now or formerly of Malcolm A. and Gail E. McDonald (Book 3614, page 219);

Thence, S 18°-02'-05" E by the land of McDonald 163.18 feet to a point marked by a 5/8" iron rod set;

Thence, N 74°-25'-15" E by the land of McDonald 120.00 feet to a point on the Westerly sideline of Ray Street marked by a 5/8" Iron rod set;

Thence, S 18°-35'-45" E by the sideline of Ray Street 47.17 feet to a point marked by a 5/8" iron rod set at the land now or formerly of Donald A. and Evalyn Thompson (Book 2892, page 451);

Thence, S 71°-24'-15" W by the land of Thompson 150.00 feet to a point marked by a 5/8" iron rod set;

Thence, S 18°-35'-45" E by the land of Thompson 50.00 feet to a point marked by a 5/8" iron rod set;

Thence, N 71°-24'-15" E by the land of Thompson 50.00 feet to a point marked by a 5/8" iron rod set at the land now or formerly of Richard E. and Carolyn Grover (Book 2895, page 492);

Thence, S 18°-35'-45" E by the land of Grover and by the land now or formerly of Raymond A. and Florence M. Sevigny (Book 2490, page 327) 72.78 feet to a point marked by a 5/8" iron rod set;

Thence, S 17°-48'-10" E by the land of Sevigny and by the lands now or formerly of Gladys A. and Kenneth V. Moody (Book 3471, page 62), Betty L. Denbow (Book 2682, page 313), Anna J. Aiken (Book 3570, page 212), David A. and Carolyn J. Matthews (Book 4483, page 163), Laura H. Clark (Book 3708, page 194), and George and Doris Castonia (Book 4960, page 286) 333.24 feet to a point marked by a 5/8" iron rod set at the land now or formerly of Frances F. Gatchell (Book 6257, page 342);

Thence, S 71°-28'-30" W by the land of Gatchell 51.09 feet to a point marked by a 5/8" iron rod set;

Thence, S 67°-57'-00" W by the land of Gatchell and lands now or formerly of Eleanor L. and Sherry Sapko, Charles E. and Linda J. Foshay (Book 3920, page 212), Linwood J. and Ruth L. Thaxter, Charles L. Arey (Book 2320, page 55), Dorothy M. and Richard M. Butler (Book 3765, page 177), Norman C. and Caroline M. Walton (Book 2014, page 140), James P. and Lula S. Cullen (Book 2044, page 474), and Glenda R. and Roger R. Pushor (Book 4755, page 44) 481.12 feet to a point marked by a 5/8" iron rod set;

Thence, S 54°-20'-55" W by the land of Pushor 29.58 feet to a point marked by a 5/8" iron rod set;

Thence, S 45°-14'-05" W by the land now or formerly of Claire D. and Edward L. Gulick (Book 3782, page 285) and by the land now or formerly of John H. and Jeannette B. Greer (Book 2824, page 131) 186.45 feet to a stone wall intersection and the end of Wadco Street;

Thence, N 01°-01'-00" W by a stonewall 7.90 feet to the Northeasterly sideline of Wadco Street;

Thence, N 37°-18'-55" W by the sideline of Wadco Street 165.51 feet to a point marked by a 5/8" iron rod set at the Easterly sideline of Ash Street;

Thence, N 01°-28'-55" W by the sideline of Ash Street 100.00 feet to a point marked by a 5/8" iron rod set at the land now or formerly of Diane M. and Richard C. Hayes (Book 3615, page 161);

Thence, N 88°-31'-05" E by the land of Hayes 98.80 feet to a stonewall;

Thence, N 01°-01'-00" W by the land of Hayes, the land now or formerly of Bertha C. Judkins, by the end of Topsham Street, and by the land now or formerly of David F. Marshall (Book 4804, page 317) 369.17 feet to a 1" iron pipe found;

Thence, N 01°-26'-15" W by the land of Marshall 125.00 feet;

Thence, S 80°-04'-05" W by the land of Marshall 100.00 feet to a point marked by a 5/8" iron rod set;

Thence, S 01°-09'-05" E by the land of Marshall 125.00 feet to a 1" iron pipe found at the Northeast corner of the land now or formerly of Bertha C. Judkins;

Thence, S 81°-21'-30" W by the land of Judkins 56.91 feet to a 1/4" iron rod found at the Southeast corner of the land now or formerly of F. S. Plummer Co. (Book 6869, page 110);

Thence, N 07°-34'-10" E by land of F. S. Plummer Co. 592.31 feet;

Thence, N 19°-29'-20" W by the land of F. S. Plummer Co. 302.02 feet to a drill hole found and the land now or formerly of Serena M. Edwards (Book 1786, page 325);

Thence, N 53°-42'-00" E by the land of Edwards 34.49 feet to a drill hole found;

Thence, N 19°-43'-35" W by the land of Edwards 223.29 feet to the land now or formerly of John D. R. and Carrie L. Mulhern (Book 3467, page 321);

Thence, N 70°-35'-55" E by the land of Mulhern and by the land now or formerly of Andrew H. and Frances J. Grant (Book 3649, page 68) 170.14 feet;

Thence, N 83°-13'-15" E by the land now or formerly of Richard Libby 275.88 feet to a point marked by a 5/8" iron rod set at the Southwest corner of the land of Waugh;

Thence, N 70°-13'-55" E by the land of Waugh 110.00 feet to the point of beginning.

Said parcel contains 19.98 acres and is shown on a plan entitled "Plan of Land Ray Street Development, Ray Street, Portland, Maine for Liberty Group" by Owen Haskell, Inc. dated August 16, 1985 as amended through December 29, 1987.

Provided however that the below described property is excluded from the warranty covenants:

A certain lot or parcel of land in Portland, County of Cumberland and State of Maine bounded and described as follows:

Commencing at the southeasterly corner of that property conveyed to Diane M. Hayes and Richard C. Hayes by deed recorded in the Cumberland County Registry of Deeds at Book 3615, Page 161, and a stone wall in the ground; thence S 88° 31' 5" W along the southerly bound of said Hayes ninety-eight and eighty hundredths feet (98.80') to the easterly side of Ash Street, so-called; thence S 1° 28' 55" E one hundred feet (100') along the easterly side of Ash Street to the northeasterly side of Wadco Street; thence S 37° 18' 55" E one hundred sixty-five and fifty-one hundredths feet (165.51') to a point; thence S 1° 1' 00" E seven and ninety hundredths feet (7.90') to a point and land now or formerly of Greer; thence N 1° 1' 00" W two hundred thirty-four and nineteen hundredths feet (234.19') along the stone wall to the point of beginning.

Also granting and conveying those easements and rights, in common with Merrymeeting Developers, Inc., its successors and assigns, which easements and rights are described in the below referenced documents:

- (1) Easement from George and Doris Castonia dated December 20, 1985, recorded in the Cumberland County Registry of Deeds at Book 7036, Page 92;
- (2) Easement from Calvin L. and Myrtle W. Gailey, dated December 20, 1985, and recorded in the Cumberland County Registry of Deeds at Book 7036, Page 96;
- (3) Easement from Francis F. Gatchell dated December 20, 1985, and recorded in the Cumberland County Registry of Deeds at Book 7036, Page 100; and
- (4) Easement from Richard Libby and Virginia Crabtree dated April 23, 1986, recorded in the Cumberland County Registry of Deeds at Book 7145, Page 81.

Meaning and intending to include and hereby conveying all of the premises conveyed by Ray Street Associates to Merrymeeting Developers, Inc. by quitclaim deed with covenant dated December 30, 1987 and recorded in the Cumberland County Registry of Deeds in Book 8161, Page 84 and by warranty deed dated December 31, 1987 and recorded in said Registry of Deeds in Book 8161, Page 79.

This conveyance is made subject to two (2) mortgages to Mainè Savings Bank, the first dated December 28, 1987 recorded with said Registry in Book 8161, Page 85 and the second dated November 1, 1988 and recorded with said Registry in Book 8543, Page 110.

ASSIGNMENT

FOR GOOD AND VALUABLE CONSIDERATION, the receipt and sufficiency of which are hereby acknowledged, MERRYMEETING DEVELOPERS, INC., a Maine corporation ("Assignor"), hereby assigns, transfers and conveys to MM II REAL ESTATE CORPORATION, a Delaware corporation ("Assignee"), all of Assignor's rights and interest in and to all licenses, permits, orders, approvals, variances, certificates and conditional uses, whether preliminary, interim or final, issued or granted or to be issued or granted by any federal, state, municipal or other governmental authority and any agency, board, council, department, official, inspector or other body or individual acting pursuant to any such authority for, relating to or in connection with the following project or development:

Ray Street Development, Portland, Maine

The foregoing project or development being located upon premises more particularly described in a deed from Assignor to Assignee dated November 29, 1988.

IN WITNESS WHEREOF, the undersigned Merrymeeting Developers, Inc. has caused this instrument to be executed in its corporate name by its President William F. Slattery duly authorized this 30th day of November, 1988.

MERRYMEETING DEVELOPERS, INC.,  
a Maine corporation

By: \_\_\_\_\_

  
William F. Slattery  
Its President



*Alex, 2<sup>nd</sup> draft*

City of Portland  
Memorandum

TO: Chair and Members of the Planning Board  
FROM: Richard Henry, Planner  
DATE: January 10, 1989  
SUBJECT: Financial and Technical Capability of MMII Real Estate Corporation

MM II Real Estate Corporation has requested approval of the Planning Board for transfer of all local permits and approvals for the Merrymeeting Woods Condominium (Ray St. Townhomes) from Merrymeeting Developers Inc., to MM II. The Ray St. Townhomes were originally approved as a subdivision, with Liberty Group as the applicant, on September 10, 1985. A revised site plan was approved by the Board, on September 2, 1988, with Merrymeeting Developers as the applicant.

MM II is a wholly owned subsidiary of Maine Savings Bank. Maine Savings Bank is the construction lender on several of Merrymeeting's developments, including the project for which they are requesting transfer approval. Because of financial difficulties, Merrymeeting conveyed, and assigned to MM II all state and local permits and approvals on Nov. 30, 1988. The mortgage securing the financing for the project has been assumed by MM II, so that the financial capability of MM II is backed by Maine Savings Bank's original loan commitment.

MM II intends to complete the first phase of site work, infrastructure, and condominium units in order to obtain certificates of occupancy. In the future, MM II has stated the intention of either entering into a joint venture in order to complete the project, or selling it to another developer, at which point they they would require further approval from the City. Copies of Maine Savings Bank's letter, the deed and Assignment are included as Attachments 1, 2, and 3. The letter from Maine Savings Bank attesting to the financial capability of MM II has been reviewed by Corporation Counsel and found to be sufficient.

*Motion for the Board to consider:*

*Based on the submissions provided by the applicant relating to financial and technical capacity, that MMII meets the subdivision review requirement of section 4-497(10) that the subdivider has the financial and technical capacity to meet all subdivision development standards.*

*(and/or other findings)*

3/2/89

re-siting locations of buildings  
Meeting # John Schwanda

& need to reference landscape plan to make sure it stays the same. - # of plantings stay same

as long as # of units or easements aren't affected  
recorded in sections, pg's outlandings?

DRUMMOND WOODSUM PLIMPTON & MACMAHON  
ATTORNEYS AT LAW  
245 COMMERCIAL STREET  
PORTLAND, MAINE 04101

(207) 772-1941  
FAX (207) 772-3627

HUGH G. E. MACMAHON  
JOHN A. GRAUSTEIN  
JOSEPH L. DELAFIELD III  
S. JAMES LEVIS, JR.  
DANIEL AMORY  
ROBERT E. HIRSHON  
HARRY R. PRINGLE  
RICHARD A. SPENCER  
JOHN A. MAHANEY  
THOMAS H. ALLEN  
RICHARD A. CARRIUOLO  
RONALD N. WARD  
RICHARD A. HULL III  
JAY S. BLUMENKOPF  
JOHN S. KAMINSKI  
RUFUS E. BROWN  
KATHLEEN BARRY  
WILLIAM L. PLOUFFE  
CAROLYN B. HULL  
EDWARD F. FEIBEL  
JERROL A. CROUTER

KEITH C. JONES  
WILLIAM A. MCCUE  
MICHAEL E. HIGH  
WILLIAM R. BRITTON, JR.  
RICHARD A. SHINAY  
BRUCE W. SMITH  
THERESA J. BRYANT  
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OF COUNSEL  
DANIEL T. DRUMMOND, JR.  
HAROLD E. WOODSUM, JR.  
DAVID PLIMPTON

April 7, 1989

Mr. Joseph E. Gray Jr.  
Director of Planning and Urban Development  
City of Portland  
City Hall  
Portland, Maine 04101

RE: Merrymeeting Woods, Ray Street, Portland

Dear Mr. Gray:

I am writing on behalf of Merreal Corp. regarding the Merrymeeting Woods Condominium project on Ray Street. For your information, the project is now named Fallbrook, a Condominium.

Enclosed is a copy of a portion of the initial condominium plat along with a corresponding copy of the original development plan approved by the Planning Board. Please note that the "as built" condominium plat varies in rather minor respects. For example, the configurations of the buildings and the location of walkways varies somewhat from the original plan. In addition, the building containing units 8, 9 and 10 has been rotated slightly.

We assume that such variations from the approved plan are not substantial enough to require reapproval by the Planning Board, but we want to bring these changes to your attention nevertheless. If approval is required or if you have any questions or comments, please do not hesitate to contact me. I anticipate that as the development proceeds we will encounter additional minor variations. In that regard, we will continue to keep you informed.

Sincerely,



Elting H. Smith, Jr.

EHS/djb  
Enclosures

cc: Christopher Goucher  
John A. Mahaney

Sept 86  
1st mylon

Meeting

May 19, 1988

Play st site Plan revisions

original - Nov. 87

C, D, E re topo

rotate b-ball court 90°?

changes in building + landscape

want to move unit w/ landscape tied to it.  
instead of redoing entire plan

1/3/89

projects

merging

comparable or better for letter of change of ownership

MM has met problems throughout the state

Ray that Tomhones - lib group approved?  
Liberty to MM - MMTT is one of main savings to proceed w/project

Mr. Sawyer sub.

73 India st.

*Nathan*  
*Set a drawing*

*Joe,*  
*I discussed this with Nick - the bank will remain as the*  
*owner of record.*

THOMPSON, MCNABOE, ASHLEY & BULL

BENJAMIN THOMPSON  
THOMAS R. MCNABOE  
EDWARD J. ASHLEY  
NICHOLAS BULL  
BRUCE M. TOMPKINS  
LAWRENCE R. CLOUGH  
DAVID M. HIRSHON  
MARK G. FUREY  
LEONARD W. LANGER  
JOHN R. BASS, II  
EDWARD S. MACCOLL  
JANET C. MCCA\*  
MARSHALL J. TINKLE\*\*  
YVONNE V. MILLER\*\*\*

COUNSELORS AT LAW  
85 EXCHANGE STREET  
P.O. BOX 447  
PORTLAND, MAINE 04112-0447

BENJAMIN THOMPSON  
(1857-1918)  
NATHAN W. THOMPSON  
(1895-1969)  
TELEPHONE (207) 774-7600  
TELECOPIER (207) 772-1039  
CABLE THOMPOR  
TELEX 944410

\*ALSO ADMITTED IN VA AND DC  
\*\*ALSO ADMITTED IN DC  
\*\*\*ALSO ADMITTED IN MA AND NY

August 17, 1989

Mr. Joseph Gray  
Chairman of Planning Dept.  
and Urban Development  
Portland City Hall  
389 Congress Street  
Portland, Maine 04101

RE: Merreal Corp. - R. Risbara Construction Co., Inc. Agreement  
for the Completion of Fallbrook Condominium

Dear Joe:

As you may know, R. Risbara Construction Co., Inc. has entered into a development agreement with Merreal Corp. for the development of condominium units 11 - 32 at Fallbrook Condominium adjacent to Ray Street in the City of Portland. Merreal Corp. is a subsidiary of Maine Savings Bank and is the successor-developer to Merrymeeting Developers. Merreal Corp. remains the declarant for purposes of dealing with units 1 - 10 and for the build-out of units beyond unit 32. I am not certain whether the Planning Staff would deem it necessary to have Risbara Construction approved as a successor-developer or co-developer with respect to the issues of financial and technical capacity to complete the development. Would you please let me know if we need to provide the Planning Department with further information. Maine Savings Bank has already financed the construction for which Risbara Construction will be responsible and that construction loan has already closed.

Please advise. Best wishes.

Sincerely yours,



Nicholas Bull

NB/sjm  
cc: Rocco C. Risbara Jr.  
Ronald Ward, Esquire  
Christopher Goucher

THOMPSON, MCNABOE, ASHLEY & BULL

BENJAMIN THOMPSON  
THOMAS R. MCNABOE  
EDWARD J. ASHLEY  
NICHOLAS BULL  
BRUCE M. TOMPKINS  
LAWRENCE R. CLOUGH  
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COUNSELORS AT LAW  
85 EXCHANGE STREET  
P.O. BOX 447  
PORTLAND, MAINE 04112-0447

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TELEX 944410

\*ALSO ADMITTED IN VA AND DC  
\*\*ALSO ADMITTED IN DC  
\*\*\*ALSO ADMITTED IN MA AND NY

August 29, 1989

Mr. Joseph Gray  
Chairman of Planning Dept.  
and Urban Development  
Portland City Hall  
389 Congress Street  
Portland, Maine 04101

RE: Transfer of Certain Declarant Rights by Merreal Corp. to  
R. Risbara Construction Co., Inc.


Dear Joe:

I write this letter simply to confirm a telephone conversation that I had with Stephanie Burns after I originally wrote to you on August 17, 1989 requesting your advices with respect to the transfer of certain declarant rights by Merreal Corp. to Risbara Construction. Stephanie has advised me that the City is aware of the transfer but deems it unnecessary for Risbara Construction to apply to the Planning Board for approval as a co or joint developer with Merreal Corp. I did tell Stephanie that the original letters of credit delivered to the City are still in place and will be released as and when the City's Building Inspector determines that there has been compliance with the terms of Planning Board approval.

If you have any questions or comments please give me a call.

Best wishes.

Sincerely yours,



Nicholas Bull

NB/sjm

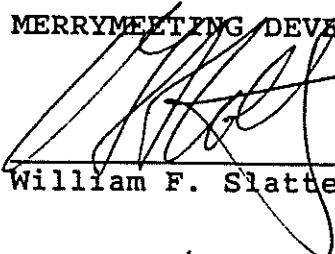
cc: R. Risbara Construction Co., Inc.  
Stephanie Burns, Corporation Counsel  
Ronald Ward, Esquire

WARRANTY DEED

MERRYMEETING DEVELOPERS, INC., a Maine corporation with a principal place of business at 3 Industrial Parkway, Brunswick, Maine, for consideration paid grants to MM II REAL ESTATE CORPORATION, a Delaware corporation with a principal place of business c/o Maine Savings Bank, One Maine Savings Plaza, Portland, Maine 04101, with Warranty Covenants, the land with the buildings and improvements thereon situated in Portland, Cumberland County, Maine described in Schedule A attached hereto and made a part hereof.

IN WITNESS WHEREOF, the said Merrymeeting Developers, Inc. has caused this instrument to be sealed with its corporate seal and signed in its corporate name by William F. Slattery, its President thereunto duly authorized, this 29th day of November, 1988.

MERRYMEETING DEVELOPERS, INC.


by   
William F. Slattery, President

STATE OF MAINE  
CUMBERLAND, ss.

November 29, 1988

Then personally appeared the above-named William F. Slattery, President of Merrymeeting Developers, Inc., and acknowledged the foregoing instrument to be his free act and deed in his said capacity, and the free act and deed of said corporation.

Before me,

  
Notary Public/Attorney at Law  
John A. Mahaney



Also granting and conveying those easements and rights, in common with Merrymeeting Developers, Inc., its successors and assigns, which easements and rights are described in the below referenced documents:

(1) Easement from George and Doris Castonia dated December 20, 1985, recorded in the Cumberland County Registry of Deeds at Book 7036, Page 92;

(2) Easement from Calvin L. and Myrtle W. Gailey, dated December 20, 1985, and recorded in the Cumberland County Registry of Deeds at Book 7036, Page 96;

(3) Easement from Francis F. Gatchell dated December 20, 1985, and recorded in the Cumberland County Registry of Deeds at Book 7036, Page 100; and

(4) Easement from Richard Libby and Virginia Crabtree dated April 23, 1986, recorded in the Cumberland County Registry of Deeds at Book 7145, Page 81.

Meaning and intending to include and hereby conveying all of the premises conveyed by Ray Street Associates to Merrymeeting Developers, Inc. by quitclaim deed with covenant dated December 30, 1987 and recorded in the Cumberland County Registry of Deeds in Book 8161, Page 84 and by warranty deed dated December 31, 1987 and recorded in said Registry of Deeds in Book 8161, Page 79.

This conveyance is made subject to two (2) mortgages to Maine Savings Bank, the first dated December 28, 1987 recorded with said Registry in Book 8161, Page 85 and the second dated November 1, 1988 and recorded with said Registry in Book 8543, Page 110.

Thence, N 19°-43'-35" W by the land of Edwards 223.29 feet to the land now or formerly of John D. R. and Carrie L. Mulhern (Book 3467, page 321);

Thence, N 70°-35'-55" E by the land of Mulhern and by the land now or formerly of Andrew H. and Frances J. Grant (Book 3649, page 68) 170.14 feet;

Thence, N 83°-13'-15" E by the land now or formerly of Richard Libby 275.88 feet to a point marked by a 5/8" iron rod set at the Southwest corner of the land of Waugh;

Thence, N 70°-13'-55" E by the land of Waugh 110.00 feet to the point of beginning.

Said parcel contains 19.98 acres and is shown on a plan entitled "Plan of Land Ray Street Development, Ray Street, Portland, Maine for Liberty Group" by Owen Haskell, Inc. dated August 16, 1985 as amended through December 29, 1987.

Provided however that the below described property is excluded from the warranty covenants:

A certain lot or parcel of land in Portland, County of Cumberland and State of Maine bounded and described as follows:

Commencing at the southeasterly corner of that property conveyed to Diane M. Hayes and Richard C. Hayes by deed recorded in the Cumberland County Registry of Deeds at Book 3615, Page 161, and a stone wall in the ground; thence S 88° 31' 5" W along the southerly bound of said Hayes ninety-eight and eighty hundredths feet (98.80') to the easterly side of Ash Street, so-called; thence S 1° 28' 55" E one hundred feet (100') along the easterly side of Ash Street to the northeasterly side of Wadco Street; thence S 37° 18' 55" E one hundred sixty-five and fifty-one hundredths feet (165.51') to a point; thence S 1° 1' 00" E seven and ninety hundredths feet (7.90') to a point and land now or formerly of Greer; thence N 1° 1' 00" W two hundred thirty-four and nineteen hundredths feet (234.19') along the stone wall to the point of beginning.

Thence, S 54°-20'-55" W by the land of Pushor 29.58 feet to a point marked by a 5/8" iron rod set;

Thence, S 45°-14'-05" W by the land now or formerly of Claire D. and Edward L. Gulick (Book 3782, page 285) and by the land now or formerly of John H. and Jeannette B. Greer (Book 2824, page 131) 186.45 feet to a stone wall intersection and the end of Wadco Street;

Thence, N 01°-01'-00" W by a stonewall 7.90 feet to the Northeasterly sideline of Wadco Street;

Thence, N 37°-18'-55" W by the sideline of Wadco Street 165.51 feet to a point marked by a 5/8" iron rod set at the Easterly sideline of Ash Street;

Thence, N 01°-28'-55" W by the sideline of Ash Street 100.00 feet to a point marked by a 5/8" iron rod set at the land now or formerly of Diane M. and Richard C. Hayes (Book 3615, page 161);

Thence, N 88°-31'-05" E by the land of Hayes 98.80 feet to a stonewall;

Thence, N 01°-01'-00" W by the land of Hayes, the land now or formerly of Bertha C. Judkins, by the end of Topsham Street, and by the land now or formerly of David F. Marshall (Book 4804, page 317) 369.17 feet to a 1" iron pipe found;

Thence, N 01°-26'-15" W by the land of Marshall 125.00 feet;

Thence, S 80°-04'-05" W by the land of Marshall 100.00 feet to a point marked by a 5/8" iron rod set;

Thence, S 01°-09'-05" E by the land of Marshall 125.00 feet to a 1" iron pipe found at the Northeast corner of the land now or formerly of Bertha C. Judkins;

Thence, S 81°-21'-30" W by the land of Judkins 56.91 feet to a 1/4" iron rod found at the Southeast corner of the land now or formerly of F. S. Plummer Co. (Book 6869, page 110);

Thence, N 07°-34'-10" E by land of F. S. Plummer Co. 592.31 feet;

Thence, N 19°-29'-20" W by the land of F. S. Plummer Co. 302.02 feet to a drill hole found and the land now or formerly of Serena M. Edwards (Book 1786, page 325);

Thence, N 53°-42'-00" E by the land of Edwards 34.49 feet to a drill hole found;

Thence, N 73°-34'-45" E by the land of Callahan 100.00 feet to a point marked by a 5/8" iron rod set at the land now or formerly of Malcolm A. and Gail E. McDonald (Book 3614, page 219);

Thence, S 18°-02'-05" E by the land of McDonald 163.18 feet to a point marked by a 5/8" iron rod set;

Thence, N 74°-25'-15" E by the land of McDonald 120.00 feet to a point on the Westerly sideline of Ray Street marked by a 5/8" Iron rod set;

Thence, S 18°-35'-45" E by the sideline of Ray Street 47.17 feet to a point marked by a 5/8" iron rod set at the land now or formerly of Donald A. and Evelyn Thompson (Book 2892, page 451);

Thence, S 71°-24'-15" W by the land of Thompson 150.00 feet to a point marked by a 5/8" iron rod set;

Thence, S 18°-35'-45" E by the land of Thompson 50.00 feet to a point marked by a 5/8" iron rod set;

Thence, N 71°-24'-15" E by the land of Thompson 50.00 feet to a point marked by a 5/8" iron rod set at the land now or formerly of Richard E. and Carolyn Grover (Book 2895, page 492);

Thence, S 18°-35'-45" E by the land of Grover and by the land now or formerly of Raymond A. and Florence M. Sevigny (Book 2490, page 327) 72.78 feet to a point marked by a 5/8" iron rod set;

Thence, S 17°-48'-10" E by the land of Sevigny and by the lands now or formerly of Gladys A. and Kenneth V. Moody (Book 3471, page 62), Betty L. Denbow (Book 2682, page 313), Anna J. Aiken (Book 3570, page 212), David A. and Carolyn J. Matthews (Book 4483, page 163), Laura H. Clark (Book 3708, page 194), and George and Doris Castonia (Book 4960, page 286) 333.24 feet to a point marked by a 5/8" iron rod set at the land now or formerly of Frances F. Gatchell (Book 6257, page 342);

Thence, S 71°-28'-30" W by the land of Gatchell 51.09 feet to a point marked by a 5/8" iron rod set;

Thence, S 67°-57'-00" W by the land of Gatchell and lands now or formerly of Eleanor L. and Sherry Sapko, Charles E. and Linda J. Foshay (Book 3920, page 212), Linwood J. and Ruth L. Thaxter, Charles L. Arey (Book 2320, page 55), Dorothy M. and Richard M. Butler (Book 3765, page 177), Norman C. and Caroline M. Walton (Book 2014, page 140), James P. and Lula S. Cullen (Book 2044, page 474), and Glenda R. and Roger R. Pushor (Book 4755, page 44) 481.12 feet to a point marked by a 5/8" iron rod set;

Schedule A

A certain parcel of land situated on the Westerly side of Ray Street in the City of Portland, County of Cumberland and State of Maine bounded and described as follows:

Beginning at a 5/8" iron rod set on the Westerly sideline of Ray Street at the Southeasterly corner of the land of Lewis H. and Joan I. Waugh (see Book 2790, page 464) which rod is located S 19°-46'-05" E along the Westerly sideline of Ray Street 255.00 feet from the Southerly sideline of Allen Avenue;

Thence S 19°-46'-05" E along the sideline of Ray Street 331.98 feet to a 3/4" iron pipe found;

Thence, S 13°-05'-20" E along the sideline of Ray Street 88.43 feet to the land now or formerly of William Pickrell (Book 2181, page 203);

Thence, S 76°-54'-40" W by the land of Pickrell 150.00 feet to a point marked by a 5/8" iron rod set;

Thence, S 13°-05'-20" E by the land of Pickrell 150.00 feet to a point marked by a 5/8" iron rod set at the land now or formerly of John N. Jr. and Glennis E. Fitzpatrick (Book 2773, page 224);

Thence, S 76°-54'-40" W by the land of Fitzpatrick 100.00 feet to a point marked by a 5/8" iron rod set;

Thence, S 13°-05'-20" E by the land of Fitzpatrick 200.00 feet to a point marked by a 5/8" iron rod set;

Thence, N 76°-54'-40" E by the land of Fitzpatrick 256.90 feet to a point on the Westerly sideline of Ray Street marked by a 5/8" iron rod set;

Thence, S 16°-25'-15" E by the sideline of Ray Street 1.42 feet to a point marked by a 5/8" iron rod set at the land now or formerly of Ivan G. and Edwina F. Callahan (Book 2997, page 486);

Thence, S 73°-34'-45" W by the land of Callahan 220.00 feet to a point marked by a 5/8" iron rod set;

Thence, S 16°-25'-15" E by the land of Callahan 65.00 feet to a point marked by a 5/8" iron rod set;

ASSIGNMENT

FOR GOOD AND VALUABLE CONSIDERATION, the receipt and sufficiency of which are hereby acknowledged, MERRYMEETING DEVELOPERS, INC., a Maine corporation ("Assignor"), hereby assigns, transfers and conveys to MM II REAL ESTATE CORPORATION, a Delaware corporation ("Assignee"), all of Assignor's rights and interest in and to all licenses, permits, orders, approvals, variances, certificates and conditional uses, whether preliminary, interim or final, issued or granted or to be issued or granted by any federal, state, municipal or other governmental authority and any agency, board, council, department, official, inspector or other body or individual acting pursuant to any such authority for, relating to or in connection with the following project or development:

Ray Street Development, Portland, Maine

The foregoing project or development being located upon premises more particularly described in a deed from Assignor to Assignee dated November 29, 1988.

IN WITNESS WHEREOF, the undersigned Merrymeeting Developers, Inc. has caused this instrument to be executed in its corporate name by its President William F. Slattery duly authorized this 30th day of November, 1988.

MERRYMEETING DEVELOPERS, INC.,  
a Maine corporation

By: \_\_\_\_\_

  
William F. Slattery  
Its President

Mr. Joseph E. Gray, Jr.  
December 19, 1988  
Page 2


It is not MM II's intention to complete the entire Project on its own. Rather, MM II desires to stabilize the Project by completing the site work, infrastructure and condominium units currently under construction in the first phase to the point where certificates of occupancy for the completed units can be obtained. There are currently reservation agreements outstanding with respect to the sale of five units in the first phase of the Project. MM II's long range plans for completion of the Project would involve either a joint venture with or a sale to another developer. Obviously any such future transfer would require further approvals from both the DEP and the City of Portland.

The transfer of the Project to MM II was subject to the existing construction financing between the Bank and Merrymeeting. A mortgage securing that financing remains in place. That mortgage and the financing it secures have been assumed by MM II. Therefore, MM II's financial ability to complete the necessary work is backed by the Bank's original loan commitment of \$3,165,000. With respect to technical ability to complete those aspects of the Project noted above and any further work MM II should decide to undertake, MM II has ongoing contractual arrangements with Merrymeeting, whereby Merrymeeting will continue to provide planning and engineering services to the Project. Additionally, as we believe you are aware, MM II has contracted for the services of Downeast Construction Management Group, Inc. of South Portland for independent construction and engineering advice and services.

We hope that this letter provides you and the Planning Board with sufficient information to act on MM II's request for transfer of permits and approvals for the Project. If there is anything further you require, however, please let us know. We ask that this request be placed on the Planning Board's agenda for its next meeting which we understand is scheduled for Tuesday, January 10, 1989.

Thank you for your assistance.

Very truly yours,



John A. Mahaney

JAM/jb  
Enclosures

cc: Thomas Lewis  
Christopher Goucher

DRUMMOND WOODSUM PLIMPTON & MACMAHON

ATTORNEYS AT LAW  
245 COMMERCIAL STREET  
PORTLAND, MAINE 04101

(207) 772-1941

FAX (207) 772-3627

DAVID PLIMPTON  
HUGH G. E. MACMAHON  
JOHN A. GRAUSTEIN  
JOSEPH L. DELAFIELD III  
S. JAMES LEVIS, JR.  
DANIEL AMORY  
ROBERT E. HIRSHON  
HARRY R. PRINGLE  
RICHARD A. SPENCER  
JOHN A. MAHANEY  
THOMAS H. ALLEN  
RICHARD A. CARRIUOLO  
RONALD N. WARD  
RICHARD A. HULL III  
JAY S. BLUMENKOPF  
JOHN S. KAMINSKI  
RUFUS E. BROWN  
KATHLEEN BARRY  
WILLIAM L. PLOUFFE  
CAROLYN B. HULL  
EDWARD F. FEIBEL

JERROL A. CROUTER  
KEITH C. JONES  
WILLIAM A. MCCUE  
MICHAEL E. HIGH  
WILLIAM R. BRITTON, JR.  
RICHARD A. SHINAY  
BRUCE W. SMITH  
THERESA J. BRYANT  
E. WILLIAM STOCKMEYER  
ERIC J. BRYANT  
BARBARA L. KRAUSE  
BENJAMIN E. MARCUS  
ELTING H. SMITH, JR.  
MELISSA A. HEWEY  
ANDREW H. COHEN  
ERIC R. HERLAN  
MARK E. STANDEN  
GEORGE T. DILWORTH  
GENE A. MAGUIRE  
JOHN B. ROGERS  
DAINA J. VALENTINO

PARK ONE-ELEVEN  
409 ALFRED STREET  
BIDDEFORD, MAINE 04006  
(207) 282-8983  
FAX (207) 282-4310

OF COUNSEL  
DANIEL T. DRUMMOND, JR.  
HAROLD E. WOODSUM, JR.

December 19, 1988

HAND DELIVERED

Mr. Joseph E. Gray, Jr.  
Director of Planning & Urban Development  
City of Portland  
City Hall  
Portland, Maine 04101

Re: Merrymeeting Developers, Inc./MM II Real Estate  
Corporation  
Merrymeeting Woods Condominium  
Ray Street, Portland, Maine

Dear Mr. Gray:

We are writing on behalf of our client, MM II Real Estate Corporation ("MM II"), to request the approval of the Portland Planning Board to the transfer of all local permits and approvals for Merrymeeting Woods Condominium (the "Project") from Merrymeeting Developers, Inc. ("Merrymeeting") to MM II. We are currently seeking similar approval from the Maine Department of Environmental Protection ("DEP") regarding state approvals for the Project.

MM II is a wholly owned subsidiary of Maine Savings Bank (the "Bank"). The Bank is the construction lender on several of Merrymeeting's developments, including the Project. Over the past several months Merrymeeting has found itself in financial difficulties and as part of an effort to resolve those difficulties, Merrymeeting conveyed the Project to MM II and assigned to MM II all state and local permits and approvals in connection therewith. These transfers occurred on November 30, 1988, and we enclose copies of the deed recorded in the Cumberland County Registry of Deeds and the Assignment of permits and approvals for your records.



CITY OF PORTLAND, MAINE

389 CONGRESS STREET  
PORTLAND, MAINE 04101  
(207) 874-8300



DEPARTMENT OF PLANNING & URBAN DEVELOPMENT

**P. SAMUEL HOFFSES, CHIEF**  
INSPECTION SERVICES DIVISION

July 3, 1989

Risbara Construction  
P.O. Box 485  
Scarborough, Maine 04074

Re: Corner of Ray and Allen Avenue, Portland, Maine - Buildings G-F-E-D-EF.

Dear Sir:

Your application to construct 4 (four) buildings - 14 dwelling unit condominiums has been reviewed and a permit is herewith issued subject to the following requirements.

Site Plan Review Requirements

This permit is being issued with the understanding that it complies with the original approved Site Plan Approval.

Building Code Requirements

- 1.) Please read and implement items 1,6,7,8 and9 of the attached Building Permit Report.
- 2.) Each dwelling unit must be completely separated from the adjacent dwelling unit(s) by fire separation wall(s) and floor/ceiling assemblies of not less than 1-hour fire resistance rated construction and each unit has independent means of egress.
- 3.) Sound transmission control shall be maintained between units as per Section 714 of the Building Code.

If you have any questions regarding these requirments, please do not hesitate to contact this office.

Sincerely,

  
P. Samuel Hoffses  
Chief, Inspection Services

cc: S. Harris, Public Works  
R. Henry, Planning Division  
W. Giroux, Zoning Office

CITY OF PORTLAND, MAINE  
PLANNING BOARD

John L. Barker, Chairman  
Jack D. Humeniuk, Vice Chairman  
Harry E. Cummings  
Jean E. Gilpatrick  
Nunzio A. DiMillo  
Joseph R. DeCoursey  
Barbara A. Vesta

September 19, 1985

Mr. Douglas Duncan  
The Liberty Group  
38 Preble Street  
Portland, ME 04101

Re: Ray Street Townhomes

Dear Mr. Duncan:

On September 10, 1985, the Portland Planning Board reviewed the Liberty Group's request to waive the requirement for curbs and a sidewalk along Ray Street for the Ray Street Townhomes development. The motion to waive the requirement failed (the vote was 3-3) so curbs and a sidewalk are required along the project's frontage on Ray Street.

The Board voted (6-0) that the subdivision plan for the Planned Residential Unit Development (PRUD) was in conformance with the PRUD performance standards of the R-3 Residence Zone. The finding of zoning conformance was approved with the following conditions:

1. Adult passive recreation shall be provided within the PRUD in order to provide additional functional open space. The developer must work with the Planning Staff in developing the open space plan.

The subdivision plan for the Ray Street Townhomes development was approved (4-2) by the Board with the following conditions:

1. The revised plan indicating the fire lane and hydrant must receive final approval from the Fire Department;
2. A turnaround easement meeting Public Works specifications must be provided at the end of Topsham Street;
3. A preservation plan, such as that which is indicated in the Subdivision Ordinance-Technical Supplement, must be indicated in the plan. The Danny Shadblow (Amelanchier Cunadensis) must be increased in size to eight to ten (8-10) feet. All shrubs must be a minimum size of two to two and a half (2 - 2 1/2) feet. The revised landscaping plan must be reviewed and approved by the City Arborist, and
4. The drainage maintenance agreement must be executed.

*Make  
can we discuss  
Joe*

*I talked to Ned about this.  
They'll let us know if they want to do a change of ownership and new performance guarantees*

DRUMMOND WOODSUM PLIMPTON & MACMAHON  
ATTORNEYS AT LAW  
245 COMMERCIAL STREET  
PORTLAND, MAINE 04101

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- |                         |                         |
|-------------------------|-------------------------|
| HUGH G. E. MACMAHON     | KEITH C. JONES          |
| JOHN A. GRAUSTEIN       | WILLIAM A. MCCUE        |
| JOSEPH L. DELAFIELD III | MICHAEL E. HIGH         |
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| DANIEL AMORY            | RICHARD A. SHINAY       |
| ROBERT E. HIRSHON       | BRUCE W. SMITH          |
| HARRY R. PRINGLE        | THERESA J. BRYANT       |
| RICHARD A. SPENCER      | E. WILLIAM STOCKMEYER   |
| JOHN A. MAHANEY         | ERIC J. BRYANT          |
| THOMAS H. ALLEN         | BARBARA L. KRAUSE       |
| RICHARD A. CARRIUOLO    | BENJAMIN E. MARCUS      |
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| JERROL A. CROUTER       |                         |

OF COUNSEL  
DANIEL T. DRUMMOND, JR.  
HAROLD E. WOODSUM, JR.  
DAVID PLIMPTON

July 17, 1989

Mr. Joseph E. Gray, Jr.  
Director of Planning and Urban Development  
City of Portland  
City Hall  
Portland, Maine 04101

Re: Fallbrook Condominium, Ray Street, Portland

Dear Mr. Gray:

I am writing at the request of Chris Goucher regarding the ownership of the above project. Merreal Corp. continues to own and retain responsibility for this project, however, R. Risbara Construction Co., Inc. is or will soon be the owner of all development rights necessary to construct condominium units 11 through 32. These development rights are a transferable interest under the Maine Condominium Act, and although there is no traditional deed of a defined parcel of real estate, Risbara is the "owner" for such purposes as obtaining building permits, certificates of occupancy and so forth.

If you have any questions about this limited transfer of development rights, please do not hesitate to give me a call.

In addition, I want to let you know that Risbara is acting as agent for Merreal in certain regards and is authorized to obtain certificates of occupancy for units 3, 4, 6, 7 and 9. Lastly, Risbara has contracted with Merreal to complete off-site improvements relating to phase one of the project and is authorized to obtain any and all permits from the City of Portland.

Again, if you have any questions, please feel free to give either me or Chris Goucher a call.

Very truly yours,

*Ned Smith*  
Elting H. Smith, Jr.

/djb

cc: Christopher Goucher  
Lawrence Clough, Esq.  
Rocco Risbara, III

Merreal Corp.  
P.O. Box 1280  
Portland, ME 04101

April 26, 1989

Mr. Joseph E. Gray, Jr.  
Director of Planning and Urban Development  
City of Portland  
City Hall  
Portland, Maine 04101

Re: Fallbrook Condominiums  
(formerly Merrymeeting Woods)  
Ray Street  
Portland, Maine

Dear Joe:

This letter is written as a follow up to our conversation today regarding the construction of the basketball court at Fallbrook.

As I told you, Merreal Corp. does not have any problem in building the basketball court but based on conversations with several of the purchasers in the development, a number of common concerns are surfacing.

The most important concern is that if the Court is developed at this point, it would most probably be used by non-residents given, that of the first six units being sold, there are a total of three teenage children (two boys/one girl).

On this basis, we propose the following:

Merreal Corp (or subsequent developer) will provide adequate bonding or letter of credit instrument to provide assurance of funding the improvement. At a time in the future, to be mutually agreed to by the City and developer, the basketball court will be developed, or:

In the event the owner profile is such that the improvement would essentially be unused or become a policing problem for the Homeowners Association, the developer and/or Homeowners Association will request an amendment to the approved plan deleting the basketball court or providing some other form of recreation facility.

Mr. Joseph E. Gray, Jr.  
Page Two  
April 26, 1989

It is not our intent to avoid the expense of developing this amenity. However the long term maintenance cost and control of usage will rest with the Homeowners.


To the extent they desire to have the amenity, it will be provided.

To the extent the Homeowners determine they do not want the amenity, we feel it is important to provide a means for that decision to be made when a better sense of community is established for the development.

I trust this adequately recaps our conversation and I appreciate your assistance in addressing the issue.

Please confirm that Merreal Corp can delay the installation of the basketball court, since we are attempting to address all planning staff requirements by June 1, 1989.

Very truly yours,



Christopher D. Goucher  
Vice President

CDG/sg

cc: Scott Forbes



# LIBERTY GROUP

REAL ESTATE DEVELOPMENT

September 2, 1986

Mr. Joe Gray, Director  
City of Portland Planning Board  
389 Congress Street  
Portland, Maine 04101

Re: Ray Street Townhomes

Dear Mr. Gray:

As per your telephone conversation with my secretary Carrie today, this letter is to request a six month extension on our approval of the Ray Street Townhome development. Our present extension expires September 10 and we would like to extend that date for an additional six months.

If you need any additional information, please do not hesitate to call me.

Sincerely,

Russell W. Williams

RWW/cjk



Dave -  
File - Ray St  
Townhomes.  
AS

# CITY OF PORTLAND

JOSEPH E. GRAY, JR.  
DIRECTOR OF PLANNING  
AND URBAN DEVELOPMENT

September 3, 1986

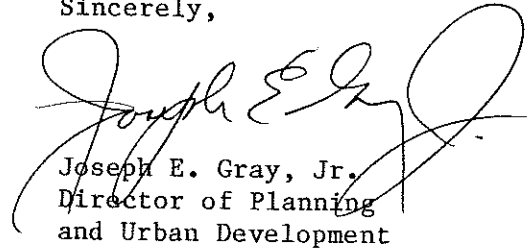
Mr. Russell Williams  
Liberty Group  
38 Preble Street  
Portland, Maine 04101

Dear Mr. Williams:

In my capacity as Director of Planning and Urban Development for the City of Portland, I hereby grant your request for a six month extension to your site plan approval for the Ray Street Townhouse project.

This extension will expire on March 10, 1987.

Sincerely,



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

JEG/lis

CITY OF PORTLAND, MAINE  
MEMORANDUM

**TO:** Chairman and Planning Board Members  
**FROM:** Barbara Barhydt, Planner BB  
**SUBJECT:** Ray Street Development by the Liberty Group

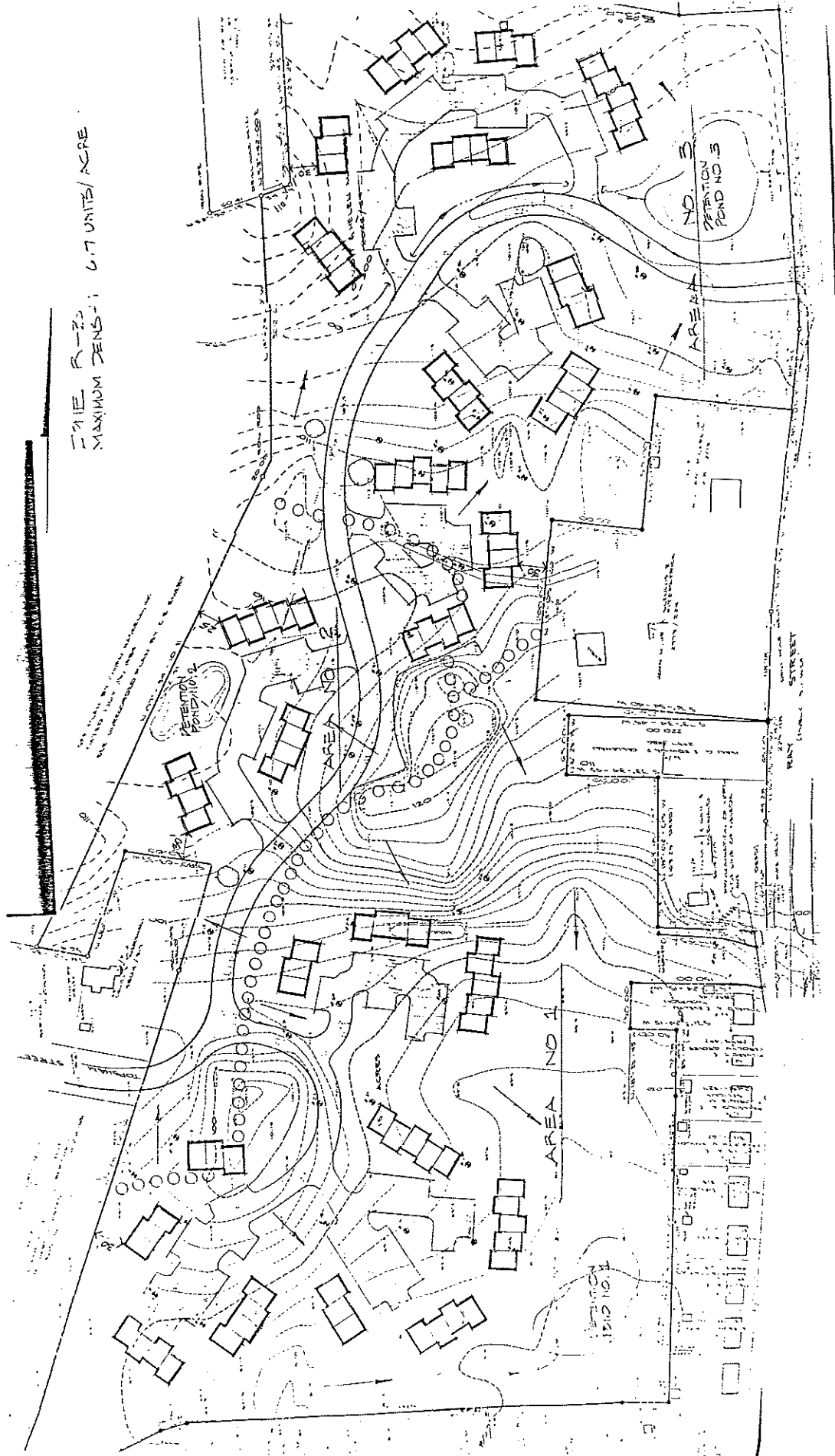
**DATE:**

April 23, 1985

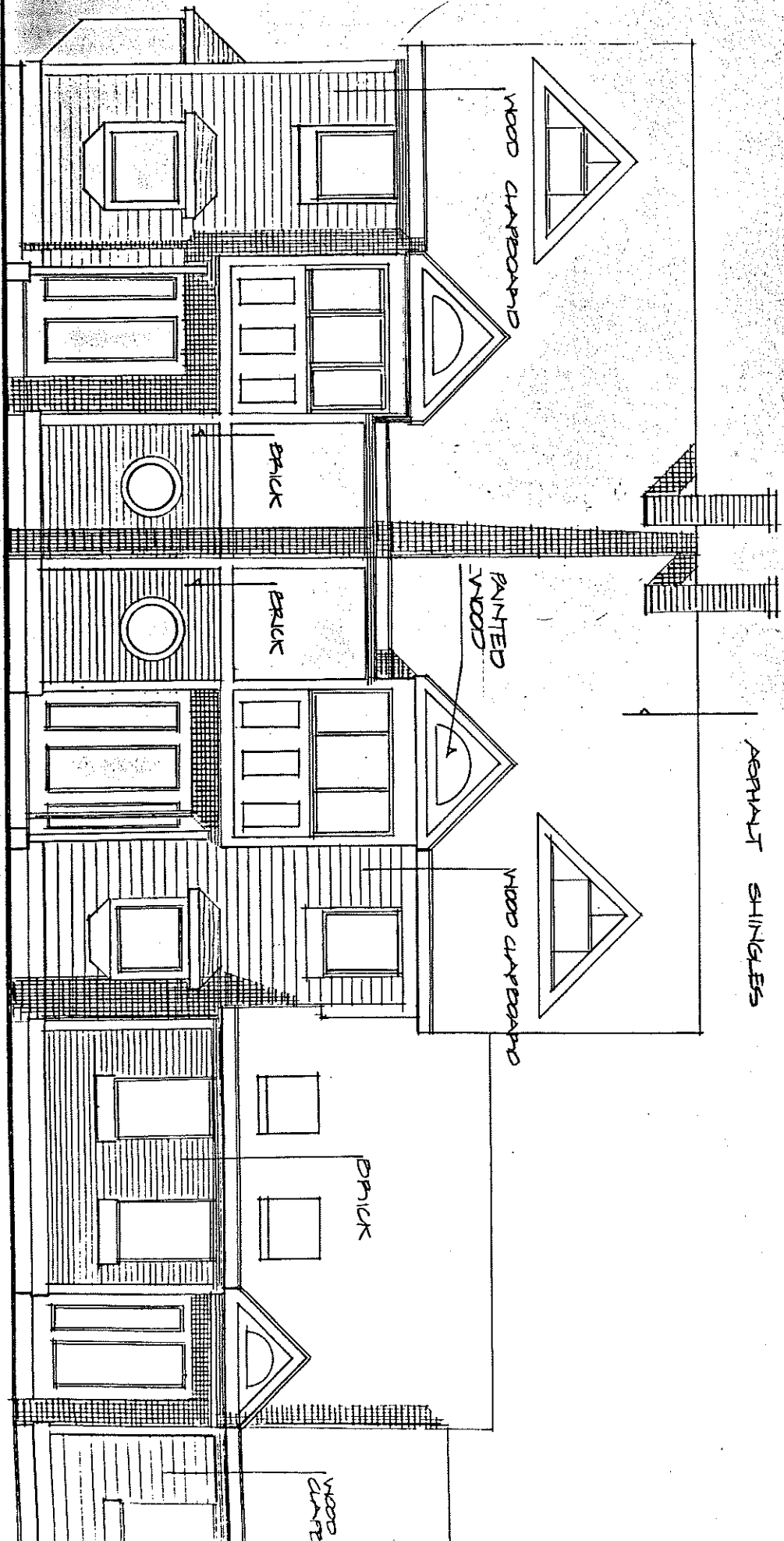
The Liberty Group is proposing to construct an R-3 Residence Zone planned residential unit development. The site is located off Ray Street, between Allen and Florida Avenues. The total area of the site is 19.6 acres. A total of 103 two-bedroom units are being proposed and the maximum allowable density is 105 units. The units are grouped in clusters of three to five. The units will be one and two-story buildings. The exterior will be brick and clapboard. Access to the site will be over Ray Street and the applicants are proposing to improve Topsham Street to Gertrude Avenue. A total of 206 parking spaces are proposed which is a ratio of two spaces per unit. The site has a significant amount of ledge and the site has three separate drainage areas. Three smaller detention basins are proposed to control stormwater runoff.



THE R-20  
MAXIMUM DENSITY: 6.7 UNITS/ACRE



Elevations



WOOD SHAPED

BRICK

BRICK

PAINTED WOOD

WOOD SHAPED

BRICK

WOOD SHAPED

ASPHALT SHINGLES

CITY OF PORTLAND, MAINE  
MEMORANDUM

TO: Barbara Barhydt, Planner  
FROM: Carmela G. Barton, Arborist  
SUBJECT: Ray Street Development

DATE:

September 10, 1985

The developer indicates the use of existing trees to provide a buffer from abutting homeowners. A preservation plan, such as that which is indicated in the Subdivision Ordinance-Technical Supplement, must be indicated on this plan to insure the retention of this buffer, as well as the groupings of existing trees within the proposed development.

The Danny Shadblow (Amelanchier Canadensis) must be increased in size to 8'-10'. All shrubs must be a minimal size of 2-2 1/2'. Other than these additions and corrections, the submitted plan is acceptable.

Should you have any questions or comments, please do not hesitate to contact me.

January 17, 1986

Mr. Manning Morrill  
Archtellic  
38 Preble St.  
Portland, ME 04101

Dear Manning:

I have reviewed your proposed adult recreational amenities for the Liberty Group development Ray Street Townhomes. The proposed improvements consist of a path system leading to several benches in two open space locations. The Planning Board required the addition of adult passive recreational amenities as a condition of their approval of the project. These improvements are to be reviewed at the administrative level.

I have concluded that the improvements as proposed are a good beginning, but are insufficient for approval. I suggested when you brought the plan for review that a more extensive pathway system connecting the two open space areas should be considered. In addition, the landscape treatment and other improvements in the open space areas that are the destination of the paths should be expanded upon. For example, intensive ornamental plantings could be provided to beautify the area around the benches, whether a formal garden or an enhancement of the natural setting. Also, additional outdoor furnishings should be considered. Other projects have included picnic tables, barbecue pits, gazebos, garden plots, etc. These and other possible amenities were discussed with you by Ms. Barhydt previously.

Again, I would say that the drawings submitted represent a good approach if the improvements can be enhanced or expanded upon as suggested above or as you might have other appropriate ideas.

Sincerely,

Alexander Jaegerman  
Chief Planner

AJ:mm



# LIBERTY GROUP

REAL ESTATE DEVELOPMENT

February 27, 1986

*File  
Ray St Townhomes*

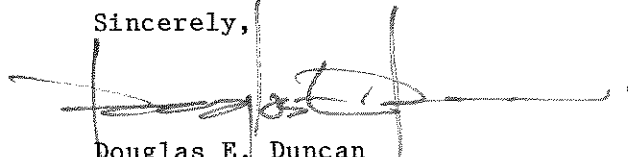
City of Portland Planning Board  
389 Congress Street  
Portland, ME 04101

Dear Sir:

On September 10, 1985, the Planning Board held a meeting on the Ray Street development. At this time I am requesting a copy of the minutes of that meeting.

Please send them to the address below at your convenience.

Sincerely,



Douglas E. Duncan  
Project Manager

DED/cjk

*sent  
3/3/86*

38 Preble Street  
Portland, Maine 04101  
(207) 772-0548

March 7, 1986

Mr. Douglas Duncan  
Project Manager  
Liberty Group  
38 Preble Street  
Portland, Maine 04101

Dear Mr. Duncan,

Thank you for your letter of February 27, 1986 requesting an extension of your September 10, 1985, Site Plan approval on the Ray Street Townhouses.

In my capacity as Director of Planning and Urban Development for the City of Portland, I hereby grant you an extension through September 10, 1986.

Sincerely,

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

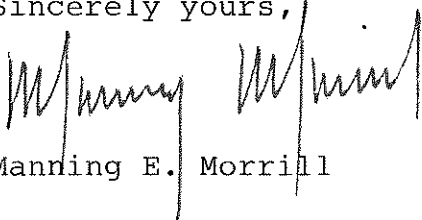
/dmm

cc: Alex Jaegerman  
Sam Hoffses

May 6, 1986  
Page Two

We hope that the changes indicated will fulfill your requirements and we will be able to receive approval on this project.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Manning E. Morrill". The signature is written in dark ink and is positioned above the printed name.

Manning E. Morrill

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

Doug Duncan - Liberty Group

David Lloyd - Archtellic

A R C H T E C T U R E

May 6, 1986

Mr. Alexander Jaegerman  
Chief Planner  
City of Portland  
389 Congress St.  
Portland, ME 04101

Dear Alex:

We are here submitting the revised documents for Liberty Group's Ray Street development. The changes are indicated on the documents with revision clouds and should fulfill the conditions placed upon the approvals of September 10, 1985.

With regard to the conditions of approval:

Item 1: It is my understanding that the plan has received final approval from the Fire Department.

Item 2: The turnaround easement has been indicated on the four recording plats (one for each phase).

Item 3: The Preservation Plan has been added by notation on the site grading plans.

Item 4: Execution of the drainage maintenance agreement will be executed at the time of final approval.

With regard to the conformance with Planned Residential Unit Development standards.

Item 1: We have revised the plan to increase the path network through the project. We have not however connected the basketball court in phase one to the path system as public passage in this area would be very much to the detriment of the residential units in this area (this is their semi-private area). A path connection at this location would also encourage through pedestrian traffic which is not the intent of the path network. We have increased the number and frequency of benches and planting along the path and feel this is an appropriate amenity for the project.





# CITY OF PORTLAND

---

JOSEPH E. GRAY, JR.  
DIRECTOR OF PLANNING  
AND URBAN DEVELOPMENT

August 15, 1987

Marriner Bailey  
Horton Hill Road  
Chittenden, Vermont 05737

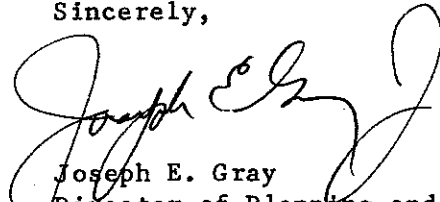
Dear Mr. Bailey:

The site plan approval for the Liberty Group Ray Street Townhouses has lapsed. They have recently reapplied for approval and will be appearing before the Planning Board this fall. The exact date has not been set.

Since the Board must hold a public hearing on the reapproval we will be sending public notices. You should receive a notice if you received one for the first hearing.

It is my understanding that they have made no change in the plan that was originally approved.

Sincerely,



Joseph E. Gray  
Director of Planning and  
Urban Development

JEG/jef

Horton Hill Rd.  
Chittenden, Vt. 05737  
August 8, 1987

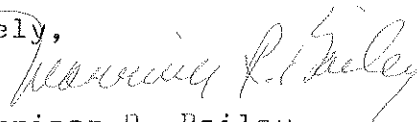
City of Portland, Maine  
Dept. of Planning & Urban  
Development  
211 City Hall  
Portland, Maine 04101

Dear Sirs:

As a property owner on Gertrude Avenue in East Deering, I have been interested in the progress of a Ray Street Townhouse project. To my knowledge, the developer of the proposed project, Liberty Group, had received extension of their Site Plan Approval to September 10, 1986. Can you advise me as to whether they have received further extensions to the present and also whether there have been any significant changes in the Plan as originally approved?

I have been impressed with the positive and concerned attitude of you people, both in your hearings and in my visits to your offices. Thanks for your help, past and future.

Sincerely,



Marriner R, Bailey

TO: DEPARTMENT OF ENVIRONMENTAL PROTECTION

FROM: Town of Portland, ME.

TYPE OF APPLICATION: Site Location

Please use this form to return your comments, if any, to this office, in writing not later than Sept. 6. Otherwise, we will assume that you have no objections to this project. Questions concerning this project should be directed to Chuck Kellogg at 289-2111.

PROJECT

APPLICANT

NUMBER: L-01129-87-A-N

NAME: Liberty Group Inc.

NAME: Ray Street Townhouses

CONTACT: Douglas Duncan

LOCATION: Portland

772-0548

After a thorough review of the above project, as presented to us, and consideration of our agency's standards, programs and responsibilities, the following comments are submitted to the Department of Environmental Protection.

(Comments must be signed and dated in order to be accepted by this Department.)  
(If additional space is needed, please attach another sheet.)

SIGNATURE: \_\_\_\_\_

DATE: \_\_\_\_\_

IN RESPONSE TO A MAJOR DEVELOPMENT  
14-526 (b) (2)

- A. The applicant is proposing 98 residential condominium units to be located on land off Ray Street between Allen Avenue and Florida Avenue. All units will be two bedrooms and 1½ bath dwellings.
- B. Total land area of the site: 19.98 acres.  
Total ground coverage of all buildings and garages: 2.60 acres  
Total ground coverage of all paving, parking and walks: 3.50 acres  
Total available open/recreational space: 13.88 acres  
*open space of*
- C. There are no existing and/or proposed easements on the property. *only easement*
- D. The applicant will be using a private solid waste disposal contractor who will be disposing of the solid waste on a weekly basis from the proposed development. *- 2005? when?*
- E. Adequate capacity exists for sewer, water, and electricity. Also there is sufficient street system capacity to handle the traffic generated by this proposed development.
- G. The applicant estimates that the development should be completed within two years from the date of final approval.

*cost of units*

CITY OF PORTLAND, MAINE  
MEMORANDUM

TO: Sam Hoffses, Chief of Building Inspections  
DATE: 12/16/88

FROM: Paul Niehoff, Materials Engineer *PN*

SUBJECT: Additional Certificates of Occupancy for Merrymeeting Development, Ray Street

Public Works' Engineering is satisfied at this point with the public improvements for the above project. The bank is requesting 2 C.O.s and I have discussed with Joe Ponzetti that we'll notify Building Inspections that the 2 C.O.s may be issued, but no additional C.O.s will be issued until further items have been corrected and I receive a letter from Joe stating other conditions.

Any questions, please give me a call.

PN/sc

cc: Bill Boothby, Acting City Engineer  
Nancy Knauber, Engineer Tech III  
Maureen O'Meara, Senior Planner

PRELIMINARY ENGINEERING REPORT  
RAY STREET DEVELOPMENT  
RAY STREET  
PORTLAND, MAINE

PREPARED FOR  
LIBERTY GROUP

PREPARED BY  
T. Y. LIN INTERNATIONAL/HUNTER-BALLEW ASSOCIATES  
CONSULTING ENGINEERS  
FALMOUTH, MAINE

JULY 1985

# TY LIN INTERNATIONAL HUNTER - BALLEW ASSOCIATES

6 FUNDY ROAD, FALMOUTH, MAINE 04105 TELEPHONE (207) 781-4721

July 26, 1985

Mr. Douglas Duncan  
Liberty Group  
38 Preble Street  
Portland, Maine 04101

Subject: Ray Street Development

Dear Mr. Duncan:

We have prepared preliminary design studies of the infrastructure required to support the proposed 98 unit Ray Street Housing Project, including roadways, water supply, sewerage, drainage and traffic impact. The preliminary designs are illustrated on the accompanying plan set. Key design considerations and a description of the necessary infrastructure are outlined in the prepared report. All pertinent data, computations and correspondence are appended to the report.

The preliminary design report and plan set should provide sufficient detail for the initial City of Portland Planning Board review process. It will also serve as a primary exhibit for the DEP Site Location Application. Upon completion of the review process, modifications will be made as necessary and a final submission can be prepared.

If you have any questions or comments, please do not hesitate to contact us.

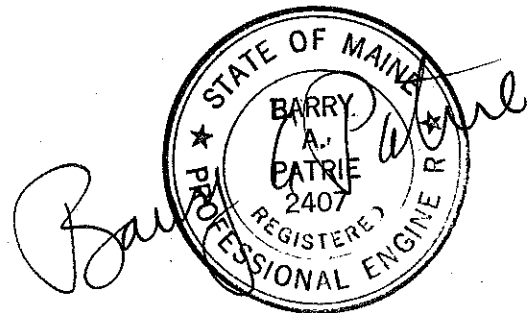
Sincerely,

T. Y. LIN INTERNATIONAL/  
HUNTER-BALLEW ASSOCIATES



Barry A. Patrie, P.E.

BAP/dcs  
Encs.  
JN: 841151



**REPORT**



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## INTRODUCTION

A preliminary engineering evaluation has been prepared for the Ray Street Housing Development located on the property controlled by Liberty Group, Inc., of Portland, Maine. The property is located on the western side of Ray Street between Allen Avenue and Florida Avenue in Portland, Maine. The design evaluation includes the consideration of roadway installation; sewer, water and other utilities; and an extensive site drainage analysis. In addition, a traffic impact study has been prepared analyzing the traffic in the vicinity of the proposed entrances to the development. The following report describes the physical facilities required and identifies key design considerations.

## PROJECT LAYOUT

The proposed development layout, as developed in coordination with CBT Landscape Architects of Boston, Massachusetts, is shown on the accompanying plan set. This layout is the basis for the engineering design considerations.

The development is in Residential Zone R-3 of the City of Portland and the layout is designed to meet all applicable subdivision ordinances. A total of 98 living units are proposed on the 19.98 acre site. The buildings are grouped in four basic areas, designated A through D on the accompanying plan set. The building units are configured as attached structures, with 3 to 5 units per building. In addition, there are 83 attached single car garages and 14 separate two car garages. Parking is provided for 196 cars which includes garage space. All four building areas will be serviced from a 1500' primary access road running through the property connecting Ray Street with Topsham Street.

## TOPOGRAPHIC FEATURES

The topography of the site is illustrated in the accompanying plan set by two foot interval contours obtained by a standard stadia survey performed by Owen Haskell, Inc., of South Portland, Maine. Project datum is based on City of Portland datum.

The site is characterized by varied topography with elevations ranging from 79 feet to 125 feet and is situated along a ridge separating two distinct watersheds. Two pronounced high areas with steep gradients divide the site into two (2) basic drainage areas, with associated relatively large, lower lying flat areas. The topography of the site has a major influence on the drainage analysis and the project's infrastructure design.

### SOIL CONDITIONS

The soil conditions of the site were evaluated through the digging of test pits throughout the site and visual classification in conjunction with SCS Soil Survey data. Test pits were dug by Archtellic Architects of Portland, Maine. Location of test pits and associated data are shown on Figure 1 of the accompanying plan set. A SCS soil map is provided in Appendix A.

The entire site is characterized by shallow soils over bedrock. Surface ledge outcroppings are common throughout the site, especially in the higher elevations where soil depths tend to decrease. The majority of the site has a sandy loam to silty loam upper layer, with deeper soils in the low southeastern and northeastern portions of the site consisting of clays two feet to three feet below the surface. A seasonal high water table also seems to predominate the site, with most soils exhibiting good drainage characteristics except in the lower areas.

Depth to ledge in conjunction with site topography significantly influences infrastructure design. Utility installation must anticipate considerable rock excavation. Considerable fill may also be required for final grading around structures and for roadway construction.

### REQUIRED INFRASTRUCTURE

The preliminary infrastructure design is based upon aforementioned topography, soil conditions, drainage analysis, traffic impact analysis and project layout criteria. The infrastructure design includes access road, sanitary sewer, water supply and site drainage facilities. The key design features are described in the following paragraphs.

#### ROADWAY

The completed project will access the City's public road system at two (2) different locations. The first entrance will be located on the southwest side of Ray Street, approximately 570 feet from the centerline of Allen Avenue. The second entrance will be provided by extending Topsham Street on the southwest side of the site. Presently, Topsham Street is an unimproved paper street as designated by the City of Portland. Topsham Street is essentially the continuation of Gertrude Street from the intersection of Gertrude and Wadco Street at which time the City of Portland will require that Topsham Street be built to City standards. Upon its completion, Topsham Street will be dedicated to the City of Portland. The City of Portland will then assume all responsibility for the maintenance of the street and accompanying utilities.

The roadway within the site connecting Ray Street to Topsham Street will be a private roadway. Five primary driveways will branch from this roadway to the four building Areas, A through D. A series of horizontal curves were laid out to compliment topographic constraints as well as aesthetic considerations. Gradients along the roadway vary from .5% to 6%. Primary roadway geometry, as well as area driveway geometry, was designed in accordance with the City of Portland subdivision ordinances, and is in compliance with Portland City Fire Department requirements. Most buildings utilize assigned piggyback parking spaces, with two spaces (including garage) provided for each unit. Individual building driveways and parking areas conform to MDOT standards for minimum curb radii and turning radii.

Typical roadway sections for the different areas of the project are attached in Appendix B.

#### SANITARY SEWER

All units will be serviced by a sanitary sewer system as illustrated on Figure 3 of the accompanying plan set. Due to site topography, depth of bedrock, and proximity to City of Portland sanitary sewer lines, all sewage from the site will be collected to one point within site. At this point it will be pumped into the City system on Ray Street. A letter from the City of Portland stating they will accept and treat the sewage generated by the development is attached in Appendix E.

Specifically, each building of attached units will internally collect its sewage to one point. Collection of building services to centralized locations will be achieved by gravity to the extent possible. Sewage will be directed to a central low point in Area A, where it will be pumped to a high point near Area B. From this point, all remaining collection will be by gravity to a low spot in the northeastern section of Area C. All sewage will then be pumped to a new manhole in Ray Street.

Due to site topographical constraints and shallowness of bedrock, extensive rock excavation may be encountered. To achieve necessary cover, insulation of many lines may be considered to minimize rock excavation.

#### WATER SUPPLY

Water supply will be provided by the Portland Water District by a water line extending through the property connecting to existing mains in Topsham Street and Ray Street as illustrated on Figure 3 of the accompanying plan set. A letter from the Portland Water District in Appendix E states they will service the development.

Each building of attached units will be serviced by one service lead which will be divided internally to each individual unit. Three fire hydrants have been provided for the project, as per City of Portland Fire Department recommendations.

As with the sanitary sewer installation, extensive rock excavation may be encountered. Similarly, insulation on privately owned lines may be considered to minimize rock excavation.

#### OTHER UTILITIES

Power, telephone and cable TV hookup will be provided by the respective utilities. All service will be underground, with trenching done in accordance with individual utility and City of Portland regulations.

#### GENERAL SITE DRAINAGE

The final site grading and planned drainage infrastructure are illustrated on Figure 2 of the accompanying plan set. Due to site topography and property constraints, primary site drainage will be accomplished by overland flow to created swales wherever possible. Where necessary to cross roadways, 12" culverts are proposed with 2 feet minimum cover over the top of the culvert. Where more substantial flows are involved and topography permits, a catch basin with underground piping will be utilized.

Roadway drainage will be accomplished in a similar manner, with maintainable open ditches on both sides of the roadway. Drainage will be

directed off-site to established drainage courses. Where necessary, detention basins and control structures will be constructed to limit post-development flow rates to pre-development levels (see Drainage Study section).

DRAINAGE STUDY

DESCRIPTION OF ANALYSIS

The development of a site will change its surface water runoff characteristics. In order to minimize the impact of increased surface water runoff volumes, pre-development and post-development analysis are necessary. For analytical purposes, the Ray Street site can be divided into five distinct existing and future drainage areas. This is illustrated in the accompanying plan set. The site is situated along a ridge which divides the runoff from the site into two (2) basic watersheds. Drainage Areas 1 and 3 make up approximately 85% of the site and drain easterly. Flow from Drainage Area 1 enters the City of Portland system on Ray Street, while drainage from Area 3 follows an undefined course beyond Ray Street towards Falmouth. Drainage Areas 2, 4 and 5 make up the remaining 15% of the site and drain southwesterly to the Fall Brook Interceptor, approximately 1/4 mile away.

The five areas have been analyzed for present and future runoff conditions. It is important to note that in post-development predictions, the five areas tend to change in tributary acreage due to project layout and final site grading.

The actual analysis was made utilizing a computer modeling technique developed by T. Y. Lin/Hunter-Ballew Associates for the City of Portland. This model primarily utilizes SCS runoff prediction techniques (TR-55) modified to reflect local conditions and made compatible with desk top computer equipment. This model was applied to the Fall Brook watershed in the City of Portland and was subjected to reasonable verification through field gaging. With this extensive model development and calibration to Southern Maine conditions, the program represents the best runoff predictive tool available.

The above analysis technique was applied to the proposed development site. Surface runoff projections were made utilizing a 10 year and 25 year, 24 hour, Type II storm as defined by SCS. Hydrographs were computed for both existing conditions and post-development conditions for the site. These hydrographs, as well as individual area input data, are provided in Appendix C.

EXISTING CONDITIONS

Existing topography, soil conditions and vegetation greatly affect the existing site runoff characteristics. Definition of established drainage courses must also be carefully considered.

Drainage in Area 1 gathers in an undefined pattern toward the southeast corner of the site. Little flow from adjacent properties flows through the site, except from the backyards of abutters adjacent to the southeast corner. Runoff gathers in a broad pattern from higher portions of this area and works

its way to the large, low-lying southeastern corner. This area tends to be quite damp, and older vegetation appears to be dying while giving way to more water tolerant, noxious vegetation. There is an existing drainage swale between the properties of Gailey and Castonia which leads from this area. This, in turn, leads to a 12 foot long section of 12" pipe, which empties into a City catch basin on Ray Street.

Area 2 drains westward onto the property of F. S. Plummer, for which a 28 unit subdivision has recently been approved. The area drains well to an area with little or no slope, just prior to the property line. This topography has created a damp area devoid of vegetation just prior to the property line.

Area 3 has a relatively well defined path of drainage through it. Off-site drainage from approximately 2.2 acres west of the site enters the central portion of this area. From this point to an existing 18" culvert under Ray Street, the runoff gathers in a broad, well-defined swale. Standing water has been reported at a relatively low spot immediately preceding the culvert at Ray Street.

Areas 4 and 5 have little tributary area and drain southwest off the property with no problems. Drainage from these areas appears to be gathering on the north side of Topsham Street, where it would then flow southwest to the East Side Interceptor.

IMPACT OF DEVELOPMENT

As can be seen on the accompanying drawings, and explained further in the section General Site Drainage, site development will require substantial regrading. This will provide greater control over site runoff and will prevent water from ponding on the site.

Utilizing the aforementioned analysis technique and the conditions of each existing and future drainage area, a detailed evaluation was performed for overall site drainage. The following table summarizes the results of this evaluation:

Table 1 - Runoff Rates - All Areas with no Detention Facilities

Area No.	Existing			Post-Development		
	Area (AC)	10 Yr Storm (CFS)	25 Yr Storm (CFS)	Area (AC)	10 Yr Storm (CFS)	25 Yr Storm (CFS)
1	9.57	7.2	10.7	10.06	13.6	19.0
2	2.29	2.7	3.8	1.49	2.7	3.6
3	9.61	5.7	7.4	10.15	11.3	13.6
4	.56	1.6	2.1	.33	1.0	1.3
5	.15	.2	.3	.15	.2	.3
Sum	22.18	17.4	24.3	22.18	28.8	37.8



As seen from Table I, future runoff rates from Areas 2 and 4 will not exceed pre-development levels. Area 5 will be untouched by the proposed development; therefore, no change in runoff rates would be expected from this area. Post-development surface water runoff rates from Areas 1 and 3 will exceed pre-development levels.

REQUIRED DETENTION FACILITIES

In order to maintain post-development runoff rates at pre-development levels, some form of control must be implemented in Drainage Areas 1 and 3. As illustrated in the accompanying plan set, detention basins with flow control structures will be provided for Areas 1 and 3. Using the same modeling technique previously described, the effect of these detention areas on the flow rates leaving their respective areas can be seen in the following table:

Table II - Runoff Rates - Drainage Areas 1 and 3 with Detention

Area No.	Existing			:	Post-Development		
	Area (AC)	10 Yr Storm (CFS)	25 Yr Storm (CFS)		Area (AC)	10 Yr Storm (CFS)	25 Yr Storm (CFS)
1	9.57	7.2	10.7	:	10.06	4.8	5.3
2	2.29	2.7	3.8	:	1.49	2.7	3.6
3	9.61	5.7	7.4	:	10.15	5.0	5.6
4	.56	1.6	2.1	:	.33	1.0	1.3
5	.15	.2	.3	:	.15	.2	.3
Sum	22.18	17.4	24.3	:	22.18	13.7	16.1

From Table II it can be seen that post-development predicted flow rates are actually below existing values. All design input data and hydrographs can be found in Appendix C.

Proper design and construction of the basins and flow control structures are critical to insure the effectiveness of this method of control. In Area 1 this will be accomplished by the construction of a continuous earth berm extending along the southwest and northeast property lines in this area. The height of the top of the berm will be about elevation 82.30 feet. The berm would start ten feet inside the property line with 3:1 side slopes on either side. A control structure would be placed in the berm at the location of the existing drainage swale. This control structure would effectively store water behind the berm and limit flow into the existing swale to existing (pre-development) levels. Further illustration of the proposed flow control structure can be found in Appendix D. Analysis indicates that for a 25 year, 24 year, Type II storm, water levels would not exceed elevation 81.30 or 1.9 feet of depth (approximately 247,000 gallons). For this case, the basin would fully empty within 6 hours. On the abutters' side of the berm, regrading will be done to drain any runoff in this area down toward the existing swale in the southeast corner of the property.

The entire area which will act as a detention basin will have to be cleared, regraded and loamed, and seeded with an appropriate grass. The basin and control structure will have to be maintained to retain property drainage properties. Screening vegetation will be permitted on the berm in certain areas only. While it would be desirable to clean and perhaps rework the existing swale across the abutters' property to the existing City catch basin, the abutters' cooperation will be necessary. Further illustration of the proposed flow control structure can be found in Appendix D.

Area 3 will be handled with a similar type of arrangement. Some regrading will be required, but no constructed berm will be required given existing topography of Ray Street and the future roadway layout. Analysis indicates that for a 25 year, 24 hour, Type II storm, water levels will not exceed elevation 96.45 or 2.0 feet of depth (approximately 116,400 gallons). The basin will empty within 5 hours for a storm of this size and duration. The same clearing, grading and maintenance aspects which applied to Drainage Area 1 apply to this area as well.

#### CONCLUSIONS

Through properly designed site grading and drainage infrastructure, runoff from the site can be controlled to exit the site in a predictable manner along established courses. With property constructed detention facilities, water should fully drain from the site and will not flow at rates exceeding pre-development levels.

#### TRAFFIC IMPACT

The generation of added traffic and its impact on existing roadways is of concern in any development program. A traffic impact study has been performed and is attached to this report in Appendix G.

# State of Maine

Exhibit G



## Department of State

*I, the Secretary of the State of Maine, certify that* according to the provisions of the Constitution and Laws of the State of Maine, the Department of State is the legal custodian of the Great Seal of the State of Maine which is hereunto affixed and of the records of organization, charter amendments, dissolutions of corporations and annual reports filed by the same.

I FURTHER CERTIFY that Liberty Group, Inc. is a duly organized corporation under the laws of the State of Maine and that the date of the incorporation of said corporation is February 24, 1981.

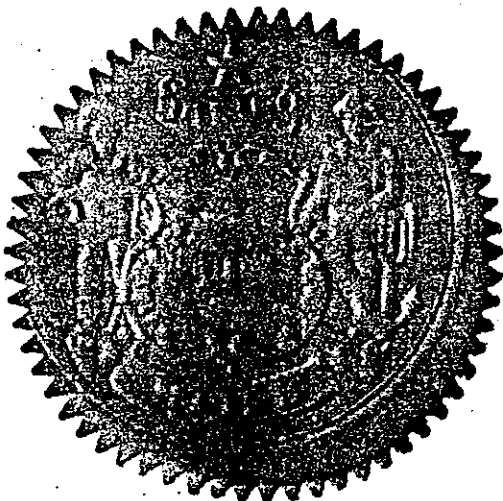
I FURTHER CERTIFY that on May 8, 1981 an amendment Changing the Authorized Capital Stock was filed; on January 4, 1982 a Resolution Allowing Similar Name was filed; and on March 20, 1984 a Resolution Allowing Similar Name was filed. No further amendments have been filed to date.

I FURTHER CERTIFY that said corporation has filed all annual reports due to this Department, paid all corporate franchise taxes and fees and that no action is now pending by or on behalf of the State of Maine to forfeit the charter and that according to the records in the Department of the Secretary of State, said corporation is a legally existing corporation in good standing under the laws of the State of Maine at the present time.

In Testimony Whereof, I have caused the Great Seal of the State to be hereunto affixed. GIVEN under my hand at Augusta, this  
Seventeenth \_\_\_\_\_ day of July \_\_\_\_\_ in the year  
of our Lord one thousand nine hundred and eighty-five.

A handwritten signature in cursive script, appearing to read "Rodney S. Lewis".

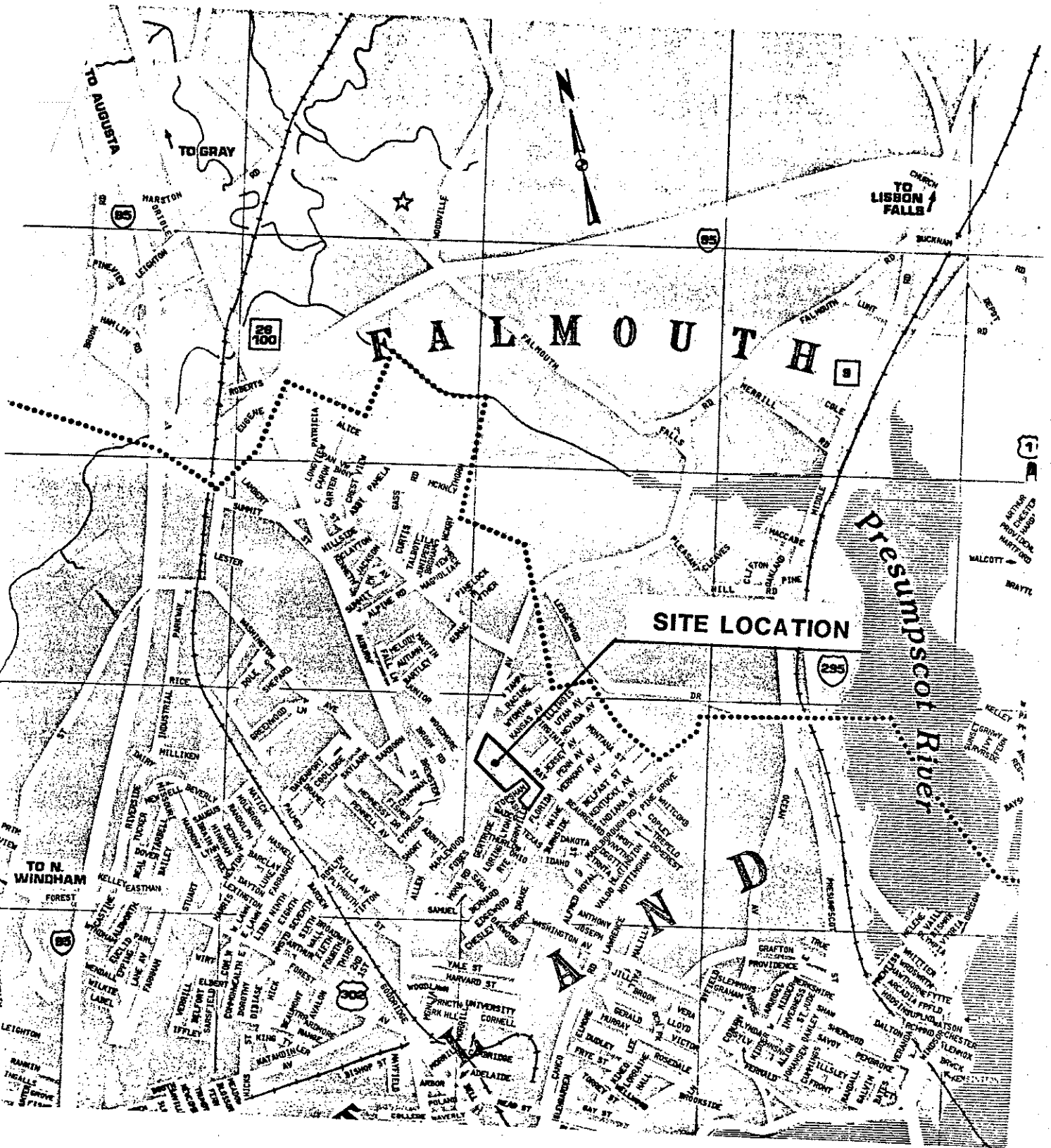
Secretary of State



APPENDIX A

MAPS

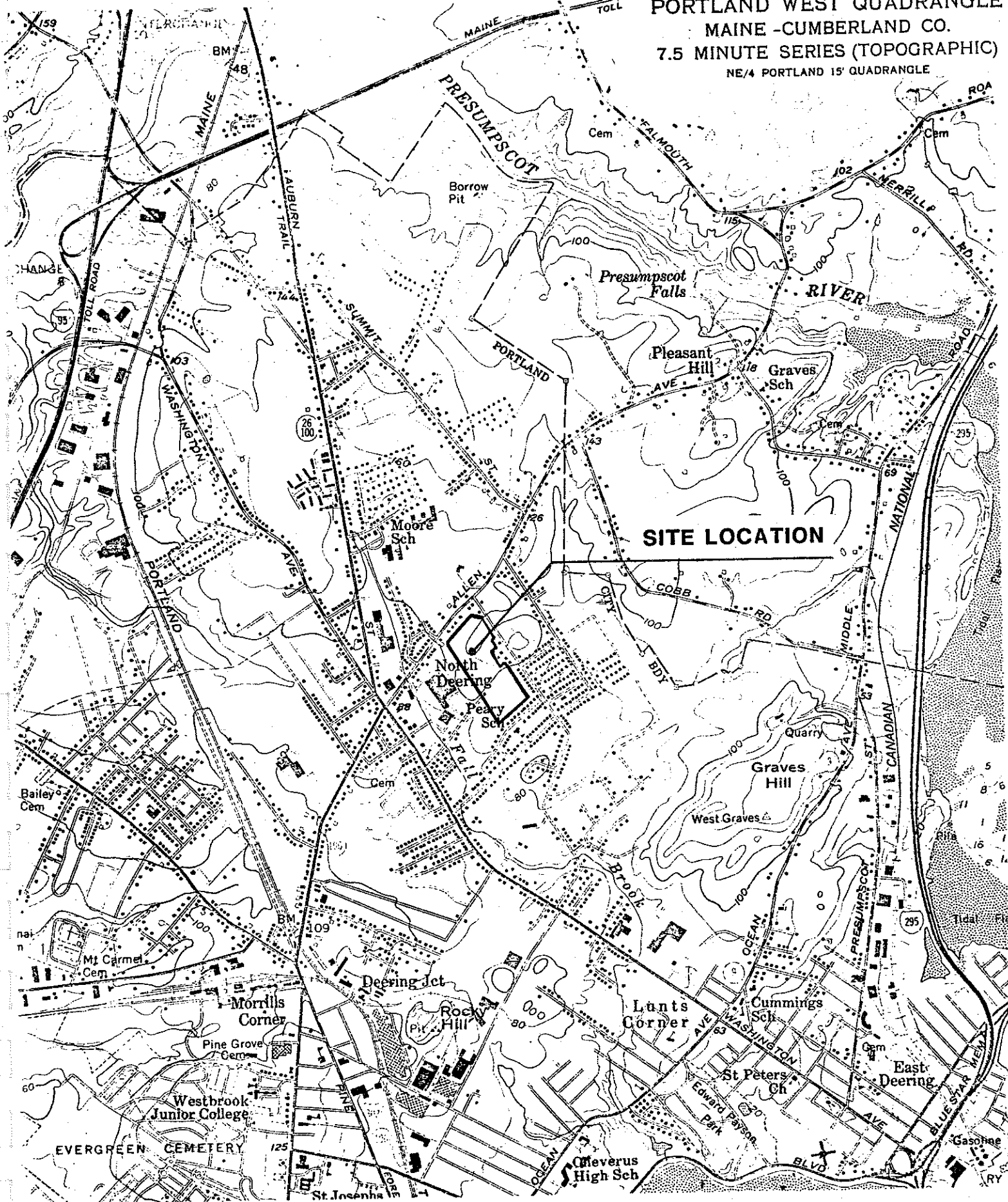
1. SITE LOCATION
2. USGS
3. SCS SOILS MAP



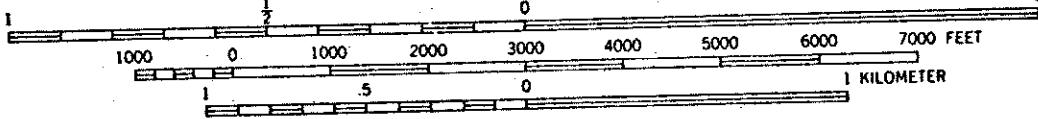
# GREATER PORTLAND

AIRPORT  HOSPITAL  POST OFFICE 	<b>SCALE</b> 	CITY HALL  SCHOOL, COLL.  CIVIC CTR. 
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PORTLAND WEST QUADRANGLE  
MAINE - CUMBERLAND CO.  
7.5 MINUTE SERIES (TOPOGRAPHIC)  
NE/4 PORTLAND 15' QUADRANGLE



SCALE 1:24000



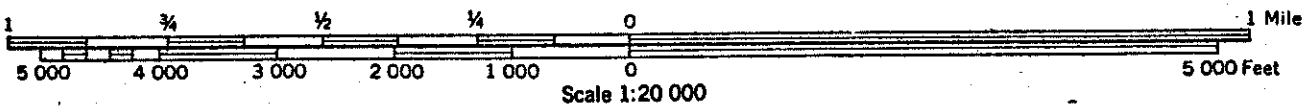


**SITE LOCATION**

**North Dearing**

**QUARRY**

**QUARRY**



Scale 1:20 000

APPENDIX B  
ROADWAY SECTIONS



APPENDIX C

DRAINAGE CALCULATIONS

Drainage computations are in the following order:

1. EXISTING BASIN INPUT DATA
2. FUTURE BASIN INPUT DATA
3. EXISTING VS. FUTURE, 10 YR STORM AND HYDROGRAPHS
4. EXISTING VS. FUTURE, 25 YR STORM AND HYDROGRAPHS
5. DETENTION BASIN HYDROGRAPHS AND DATA, 10 YR and 25 YR STORMS

NOTE: Figures shown in Table I of the report for Drainage Area 5 were computed by the rational method. TR-55 computer simulation does not allow for such small areas to be computed.

EXISTING  
7-16-85

Ray Street Development- Portland, Me.  
Area 1

A(acs)	Curve No.	Percent	Area (ac)
9.57			
A(sq.mi.)		.0150	
Fields		2.00	.19
A	30		
B	58		
C	71		
D	78	100.00	.19
Area Cn		100.00	.19
Forest		83.00	7.94
A	36		
B	60		
C	73	90.00	7.15
D	79	10.00	.79
Area CN		100.00	7.94
Wetland	77	15.00	1.44
Lawns			
A	44		
B	65		
C	77		
D	82		
Area CN			
Pavement			
1(in.dep.)	.10		
2	.15		
3	.20		
4	.30		
Depr. (in)			
Roofs			
Peak	.10		
Flat	.15		
Connected			
Urban(Direct)			
Depr.(in)			
Urban(Perv+Ind)			
CN(Perv+Ind)			
IAcoef(U)			
Rural	100.00		9.57
CN(Rural)			74.20
IAcoef(R)	.20		
TOTAL AREA	100.00		9.57
Area CN(D+U+R)			74.20
Max.Ret(in)			3.48
Length	880		
Top Elev.(MSL)	124		
Bot Elev.(MSL)	79		
Slope(%)			5.11
Lag adjustment			
Percent impervious			1.00
Percent piped			1.00
Percent wetland	15.00		1.54
SCS Unit Hydrograph (Urb.Perv.+Rural)			
Lag time(hr) **			.46
T Conc.(hr)			.76
UHpeak(cfs)			14.26
** $((L^{0.9}) * (MR + 1.0)^{0.7}) / (1900 * (S^{0.5})) * C1 * Cw$			

EXISTING  
7-16-85

Ray Street Development- Portland, Me.  
Area 2

=====			
	Curve No.	Percent	Area (ac)
A(acres)		2.29	
A(sq.mi.)		.0036	
Fields		3.00	.07
A	30		
B	58		
C	71	50.00	.03
D	78	50.00	.03
Area Cn		100.00	.07
Forest		85.00	1.95
A	36		
B	60		
C	73	90.00	1.75
D	79	10.00	.19
Area CN		100.00	1.95
Wetland	77	12.00	.27
Lawns			
A	44		
B	65		
C	77		
D	82		
Area CN			
Pavement			
1(in.dep.)	.10		
2	.15		
3	.20		
4	.30		
Depr. (in)			
Roofs			
Peak	.10		
Flat	.15		
Connected			
-----			
Urban(Direct)			
Depr.(in)			
Urban(Perv+Ind)			
CN(Perv+Ind)			
IAcoef(U)			
Rural		100.00	2.29
CN(Rural)			74.04
IAcoef(R)		.20	
-----			
TOTAL AREA		100.00	2.29
Area CN(D+U+R)			74.04
Max.Ret(in)			3.51
Length		410	
Top Elev.(MSL)		124	
Bot Elev.(MSL)		105	
Slope(%)			4.83
-----			
Lag adjustment			
Percent impervious			1.00
Percent piped			1.00
Percent wetland		12.00	1.54
-----			
SCS Unit Hydrograph (Urb.Perv.+Rural)			
Lag time(hr) **			.24
T Conc.(hr)			.40
UHpeak(cfs)			6.56
**	((L^0.9)*(MR+1.0)^0.7)/(1900*(S^0.5))*C1*Cw		

EXISTING Ray Street Development- Portland, Me.  
7-16-85 Area 3

		9.61	
A(acres)		.0150	
A(sq.mi.)		Percent	Area (ac)
Fields	Curve No.	12.00	1.15
A	30		
B	58		
C	71	50.00	.58
D	78	50.00	.58
Area Cn		100.00	1.15
Forest		77.50	7.45
A	36		
B	60		
C	73	90.00	6.70
D	79	10.00	.74
Area CN		100.00	7.45
Wetland	77	10.50	1.01
Lawns			
A	44		
B	65		
C	77		
D	82		
Area CN			
Pavement			
1(in.dep.)	.10		
2	.15		
3	.20		
4	.30		
Depr. (in)			
Roofs			
Peak	.10		
Flat	.15		
Connected			
-----			
Urban(Direct)			
Depr.(in)			
Urban(Perv+Ind)			
CN(Perv+Ind)			
IAcoef(U)			
Rural	100.00		9.61
CN(Rural)			74.07
IAcoef(R)	.20		
-----			
TOTAL AREA	100.00		9.61
Area CN(D+U+R)			74.07
Max.Ret(in)			3.50
Length	740		
Top Elev.(MSL)	124		
Bot Elev.(MSL)	95		
Slope(%)			4.04
-----			
Lag adjustment			
Percent impervious			1.00
Percent piped			1.00
Percent wetland	10.50		1.54
-----			
SCS Unit Hydrograph (Urb.Perv.+Rural)			
Lag time(hr) **			.44
T Conc.(hr)			.74
UHpeak(cfs)			14.82
**	$((L^{0.9}) * (MR + 1.0)^{0.7}) / (1900 * (S^{0.5})) * C1 * Cw$		

EXISTING  
7-16-85

Ray Street Development- Portland, Me.  
Area 4

A(acres)	Curve No.	Percent	Area (ac)
.56			
A(sq.mi.)		.0009	
		5.00	.03
Fields			
A	30		
B	58		
C	71	100.00	.03
D	78		
Area Cn		100.00	.03
Forest		95.00	.53
A	36		
B	60		
C	73	50.00	.27
D	79	50.00	.27
Area CN		100.00	.53
Wetland	77		
Lawns			
A	44		
B	65		
C	77		
D	82		
Area CN			
Pavement			
1(in.dep.)	.10		
2	.15		
3	.20		
4	.30		
Depr. (in)			
Roofs			
Peak	.10		
Flat	.15		
Connected			
-----			
Urban(Direct)			
Depr.(in)			
Urban(Perv+Ind)			
CN(Perv+Ind)			
IAcoef(U)			
Rural		100.00	.56
CN(Rural)			75.75
IAcoef(R)		.20	
-----			
TOTAL AREA		100.00	.56
Area CN(D+U+R)			75.75
Max.Ret(in)			3.20
Length		180	
Top Elev.(MSL)		105	
Bot Elev.(MSL)		91	
Slope(%)			7.94
-----			
Lag adjustment			1.00
Percent impervious			1.00
Percent piped			1.00
Percent wetland			1.00
-----			
SCS Unit Hydrograph (Urb.Perv.+Rural)			
Lag time(hr) **			.05
T Conc.(hr)			.09
UHpeak(cfs)			6.98
**	((L^0.9)*(MR+1.0)^0.7)/(1900*(S^0.5))*C1*Cw		

EXISTING  
7-16-85

Ray Street Development- Portland, Me.  
Area 5

A(acres)		.15	
A(sq.mi.)		.0002	
	Curve No.	Percent	Area (ac)
<b>Fields</b>			
A	30		
B	58		
C	71		
D	78		
Area Cn			
<b>Forest</b>		100.00	.15
A	36		
B	60		
C	73	100.00	.15
D	79		
Area CN		100.00	.15
<b>Wetland</b>			
	77		
<b>Lawns</b>			
A	44		
B	65		
C	77		
D	82		
Area CN			
<b>Pavement</b>			
1(in.dep.)	.10		
2	.15		
3	.20		
4	.30		
<b>Depr. (in)</b>			
<b>Roofs</b>			
Peak	.10		
Flat	.15		
<b>Connected</b>			
-----			
<b>Urban(Direct)</b>			
Depr.(in)			
<b>Urban(Perv+Ind)</b>			
CN(Perv+Ind)			
IAcoef(U)			
Rural		100.00	.15
CN(Rural)			73.00
IAcoef(R)		.20	
-----			
<b>TOTAL AREA</b>		100.00	.15
Area CN(D+U+R)			73.00
Max.Ret(in)			3.70
Length		115	
Top Elev.(MSL)		110	
Bot Elev.(MSL)		99	
Slope(%)			9.57
-----			
<b>Lag adjustment</b>			
Percent impervious			1.00
Percent piped			1.00
Percent wetland			1.00
-----			
<b>SCS Unit Hydrograph (Urb.Perv.+Rural)</b>			
Lag time(hr) **			.04
T Conc.(hr)			.06
UHpeak(cfs)			2.84
** $((L^{0.9}) * (MR+1.0)^{0.7}) / (1900 * (S^{0.5})) * C1 * Cw$			

FUTURE  
7-16-85

Ray Street Development- Portland, Me.  
Area 1F

=====			
A(acres)		10.06	
A(sq.mi.)		.0157	
	Curve No.	Percent	Area (ac)
Fields		11.00	1.11
A	30		
B	58		
C	71	50.00	.55
D	78	50.00	.55
Area Cn		100.00	1.11
Forest		28.00	2.82
A	36		
B	60		
C	73	90.00	2.54
D	79	10.00	.28
Area CN		100.00	2.82
Wetland	77	4.90	.49
Lawns		29.80	3.00
A	44		
B	65	50.00	1.50
C	77	50.00	1.50
D	82		
Area CN		100.00	3.00
Pavement		13.30	1.34
1(in.dep.)	.10		
2	.15	100.00	1.34
3	.20		
4	.30		
Depr. (in)		100.00	1.34
Roofs		13.00	1.31
Peak	.10	100.00	1.31
Flat	.15		
Connected			
-----			
Urban(Direct)		13.30	1.34
Depr. (in)			.15
Urban(Perv+Ind)		42.80	4.31
CN(Perv+Ind)			78.29
IAcoef(U)			.13
Rural		43.90	4.42
CN(Rural)			74.21
IAcoef(R)		.20	
-----			
TOTAL AREA		100.00	10.06
Area CN(D+U+R)			79.12
Max.Ret(in)			2.64
Length		910	
Top Elev.(MSL)		124	
Bot Elev.(MSL)		79	
Slope(%)			4.95
-----			
Lag adjustment			
Percent impervious		13.30	.92
Percent piped		12.00	.93
Percent wetland		4.90	1.35
-----			
SCS Unit Hydrograph (Urb.Perv.+Rural)			
Lag time(hr) **			.31
T Conc.(hr)			.52
UHpeak(cfs)			22.15
**	((L^0.9)*(MR+1.0)^0.7)/(1900*(S^0.5))*C1*Cw		

FUTURE  
7-16-85

Ray Street Development- Portland, Me.  
Area 2F

=====			
	Curve No.	Percent	Area (ac)
A(acres)		1.49	
A(sq.mi.)		.0023	
Fields		14.00	.21
A	30		
B	58		
C	71	50.00	.10
D	78	50.00	.10
Area Cn		100.00	.21
Forest		20.00	.30
A	36		
B	60		
C	73	90.00	.27
D	79	10.00	.03
Area CN		100.00	.30
Wetland	77	3.00	.04
Lawns		30.00	.45
A	44		
B	65	50.00	.22
C	77	50.00	.22
D	82		
Area CN		100.00	.45
Pavement		20.00	.30
1(in.dep.)	.10		
2	.15	100.00	.30
3	.20		
4	.30		
Depr. (in)		100.00	.30
Roofs		13.00	.19
Peak	.10	100.00	.19
Flat	.15		
Connected			
-----			
Urban(Direct)		20.00	.30
Depr. (in)			.15
Urban(Perv+Ind)		43.00	.64
CN(Perv+Ind)			78.26
IAcoef(U)			.13
Rural		37.00	.55
CN(Rural)			74.22
IAcoef(R)		.20	
-----			
TOTAL AREA		100.00	1.49
Area CN(D+U+R)			80.71
Max.Ret(in)			2.39
Length		460	
Top Elev.(MSL)		124	
Bot Elev.(MSL)		105	
Slope(%)			4.30
-----			
Lag adjustment			
Percent impervious		20.00	.88
Percent piped			1.00
Percent wetland		3.00	1.28
-----			
SCS Unit Hydrograph (Urb.Perv.+Rural)			
Lag time(hr) **			.17
T Conc.(hr)			.28
UHpeak(cfs)			6.04



FUTURE Ray Street Development- Portland, Me.  
7-16-85 Area 3F

=====		10.15	
A(acres)		.0159	
A(sq.mi.)	Curve No.	Percent	Area (ac)
Fields		21.65	2.20
A	30		
B	58		
C	71	50.00	1.10
D	78	50.00	1.10
Area Cn		100.00	2.20
Forest		32.90	3.34
A	36		
B	60		
C	73	90.00	3.01
D	79	10.00	.33
Area CN		100.00	3.34
Wetland	77	6.25	.63
Lawns		19.10	1.94
A	44		
B	65	50.00	.97
C	77	50.00	.97
D	82		
Area CN		100.00	1.94
Pavement		11.60	1.18
1(in.dep.)	.10		
2	.15	100.00	1.18
3	.20		
4	.30		
Depr. (in)		100.00	1.18
Roofs		8.50	.86
Peak	.10	100.00	.86
Flat	.15		
Connected			
-----			
Urban(Direct)		11.60	1.18
Depr.(in)			.15
Urban(Perv+Ind)		27.60	2.80
CN(Perv+Ind)			78.39
IAcoef(U)			.13
Rural		60.80	6.17
CN(Rural)			74.27
IAcoef(R)		.20	
-----			
TOTAL AREA		100.00	10.15
Area CN(D+U+R)			78.16
Max.Ret(in)			2.79
Length		720	
Top Elev.(MSL)		124	
Bot Elev.(MSL)		95	
Slope(%)			4.15
-----			
Lag adjustment			
Percent impervious		11.60	.93
Percent piped		10.00	.94
Percent wetland		6.25	1.39
-----			
SCS Unit Hydrograph (Urb.Perv.+Rural)			
Lag time(hr) **			.30
T Conc.(hr)			.49
UHpeak(cfs)			23.39
**		$((L^{0.9}) * (MR + 1.0)^{0.7}) / (1900 * (S^{0.5})) * C1 * Cw$	

A(acres)	Curve No.	Percent	Area (ac)
.33			
A(sq.mi.)			
.0005			
Fields		17.50	.06
A	30		
B	58		
C	71	100.00	.06
D	78		
Area Cn		100.00	.06
Forest		52.20	.17
A	36		
B	60		
C	73	100.00	.17
D	79		
Area CN		100.00	.17
Wetland	77		
Lawns			
A	44		
B	65		
C	77		
D	82		
Area CN			
Pavement		30.30	.10
1(in.dep.)	.10		
2	.15	100.00	.10
3	.20		
4	.30		
Depr. (in)		100.00	.10
Roofs			
Peak	.10		
Flat	.15		
Connected			
Urban(Direct)		30.30	.10
Depr.(in)			.15
Urban(Perv+Ind)			
CN(Perv+Ind)			
IAcoef(U)			
Rural		69.70	.23
CN(Rural)			72.50
IAcoef(R)		.20	
TOTAL AREA		100.00	.33
Area CN(D+U+R)			80.23
Max.Ret(in)			2.46
Length		190	
Top Elev.(MSL)		98	
Bot Elev.(MSL)		91	
Slope(%)			3.68
Lag adjustment			
Percent impervious		30.30	.82
Percent piped			1.00
Percent wetland			1.00
SCS Unit Hydrograph (Urb.Perv.+Rural)			
Lag time(hr) **			.06
T Conc.(hr)			.10
UHpeak(cfs)			3.73
** $((L^{0.9}) * (MR + 1.0)^{0.7}) / (1900 * (S^{0.5})) * C1 * Cw$			

FUTURE Ray Street Development- Portland, Me.  
7-16-85 Area 5F

=====			
A(acres)		.15	
A(sq.mi.)		.0002	
	Curve No.	Percent	Area (ac)
Fields			
A	30		
B	58		
C	71		
D	78		
Area Cn			
Forest		100.00	.15
A	36		
B	60		
C	73	100.00	.15
D	79		
Area CN		100.00	.15
Wetland	77		
Lawns			
A	44		
B	65		
C	77		
D	82		
Area CN			
Pavement			
1(in.dep.)	.10		
2	.15		
3	.20		
4	.30		
Depr. (in)			
Roofs			
Peak	.10		
Flat	.15		
Connected			
-----			
Urban(Direct)			
Depr.(in)			
Urban(Perv+Ind)			
CN(Perv+Ind)			
IAcoef(U)			
Rural	100.00		.15
CN(Rural)			73.00
IAcoef(R)	.20		
-----			
TOTAL AREA		100.00	.15
Area CN(D+U+R)			73.00
Max.Ret(in)			3.70
Length		115	
Top Elev.(MSL)		110	
Bot Elev.(MSL)		99	
Slope(%)			9.57
-----			
Lag adjustment			
Percent impervious			1.00
Percent piped			1.00
Percent wetland			1.00
-----			
SCS Unit Hydrograph (Urb.Perv.+Rural)			
Lag time(hr) **			.04
T Conc.(hr)			.06
UHpeak(cfs)			2.84
**	$((L^{0.9}) * (MR + 1.0)^{0.7}) / (1900 * (S^{0.5})) * C1 * Cw$		

Rain data:  
Name: 10SHORT

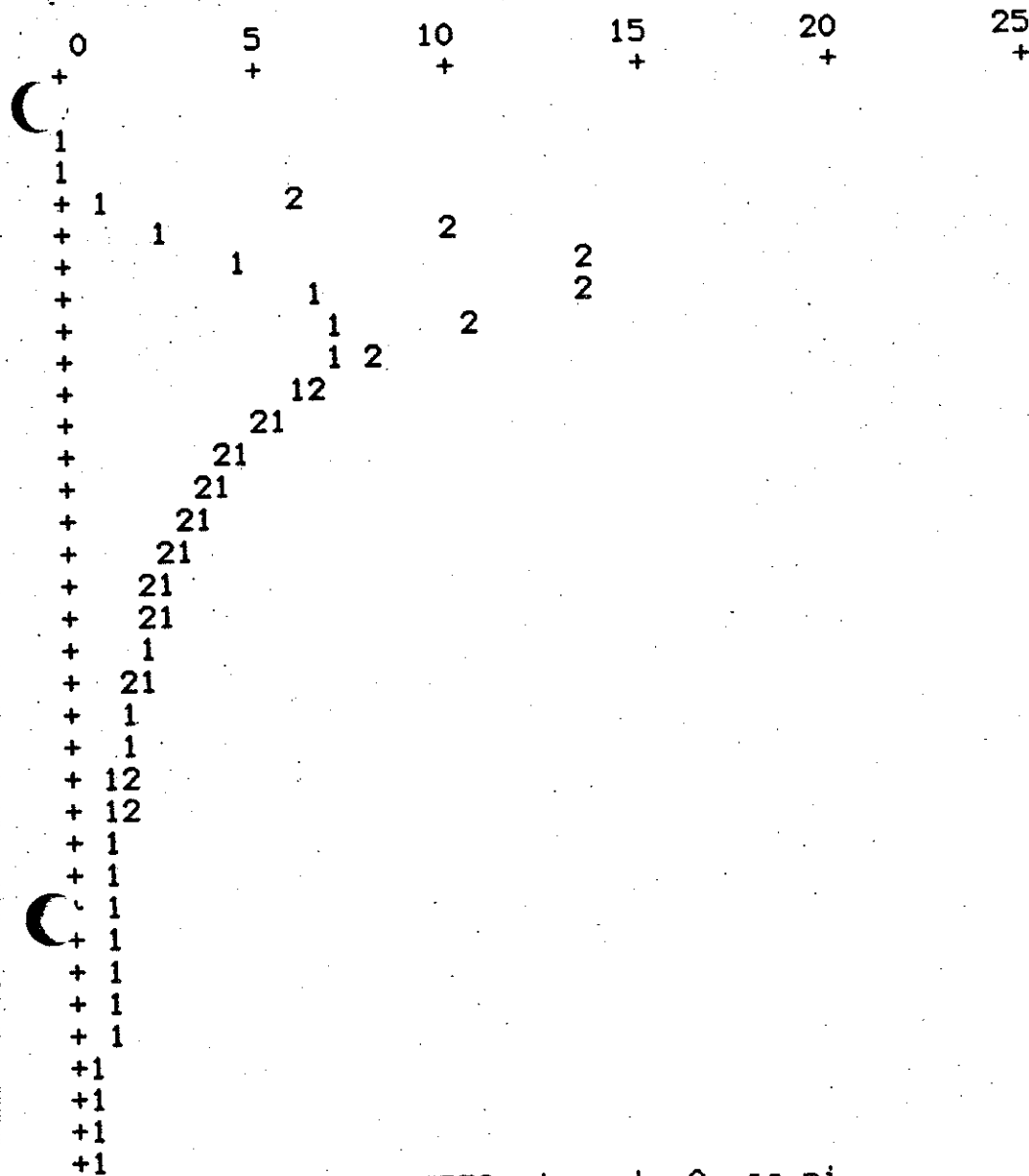
107 YEAR STORM

Rainfall:  
No. of increments: 48

Increment 1 : .0175 in  
Increment 2 : .0175 in  
Increment 3 : .0175 in  
Increment 4 : .0175 in  
Increment 5 : .02 in  
Increment 6 : .02 in  
Increment 7 : .02 in  
Increment 8 : .02 in  
Increment 9 : .0275 in  
Increment 10 : .0275 in  
Increment 11 : .0275 in  
Increment 12 : .0275 in  
Increment 13 : .035 in  
Increment 14 : .035 in  
Increment 15 : .035 in  
Increment 16 : .035 in  
Increment 17 : .055 in  
Increment 18 : .055 in  
Increment 19 : .055 in  
Increment 20 : .055 in  
Increment 21 : .4275 in  
Increment 22 : .4275 in  
Increment 23 : .4275 in  
Increment 24 : .4275 in  
Increment 25 : .08 in  
Increment 26 : .08 in  
Increment 27 : .08 in  
Increment 28 : .08 in  
Increment 29 : .0425 in  
Increment 30 : .0425 in  
Increment 31 : .0425 in  
Increment 32 : .0425 in  
Increment 33 : .03 in  
Increment 34 : .03 in  
Increment 35 : .03 in  
Increment 36 : .03 in  
Increment 37 : .0225 in  
Increment 38 : .0225 in  
Increment 39 : .0225 in  
Increment 40 : .0225 in  
Increment 41 : .02 in  
Increment 42 : .02 in  
Increment 43 : .02 in  
Increment 44 : .02 in  
Increment 45 : .0175 in  
Increment 46 : .0175 in  
Increment 47 : .0175 in  
Increment 48 : .0175 in

Time interval: .125 hrs

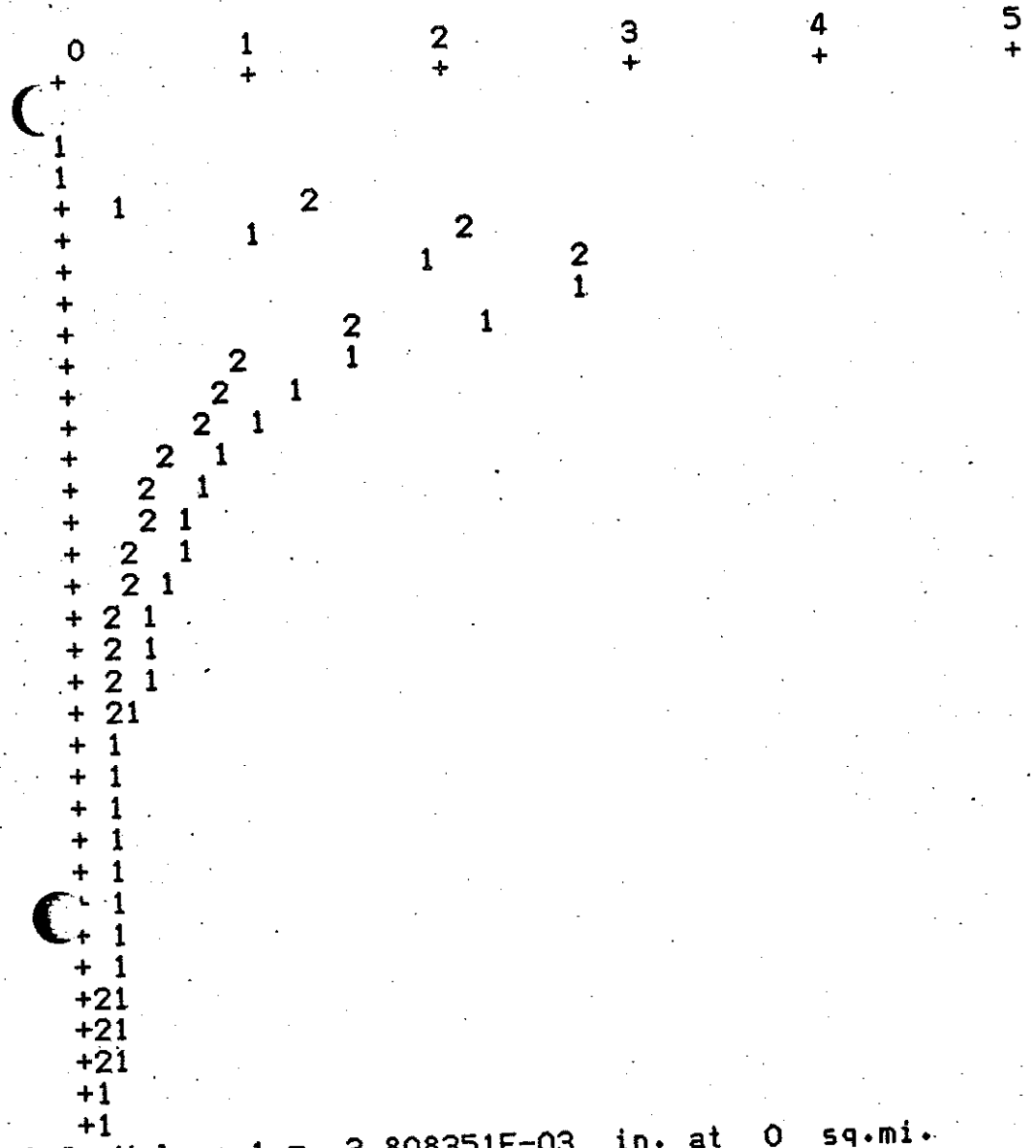
FLOW (CFS)



TIME	FLOW1	FLOW2
0.0	0.0	0.0
0.1	0.0	0.0
0.3	0.0	0.0
3.0	0.8	5.9
3.1	2.4	10.0
3.2	4.7	*13.6
3.4	6.7	13.5
3.5	*7.2	10.7
3.6	6.8	8.1
3.8	6.0	6.3
3.9	5.3	4.9
4.0	4.6	3.9
4.2	4.0	3.3
4.3	3.5	2.8
4.4	3.1	2.5
4.5	2.7	2.1
4.7	2.4	1.9
4.8	2.1	1.8
4.9	1.9	1.7
5.0	1.6	1.6
5.2	1.4	1.6
5.3	1.2	1.6
5.4	1.1	1.5
5.6	1.0	1.2
5.7	0.9	1.1
5.8	0.8	0.9
5.9	0.8	0.9
6.1	0.8	0.8
6.2	0.8	0.8
6.3	0.8	0.8
6.5	0.7	0.7
6.6	0.6	0.4
6.7	0.5	0.2
6.9	0.3	0.1

R.O. Volume 1 = .0157573 in. at 0 sq.mi.  
 R.O. Volume 2 = .0225277 in. at 0 sq.mi.  
 RMS = 226.61

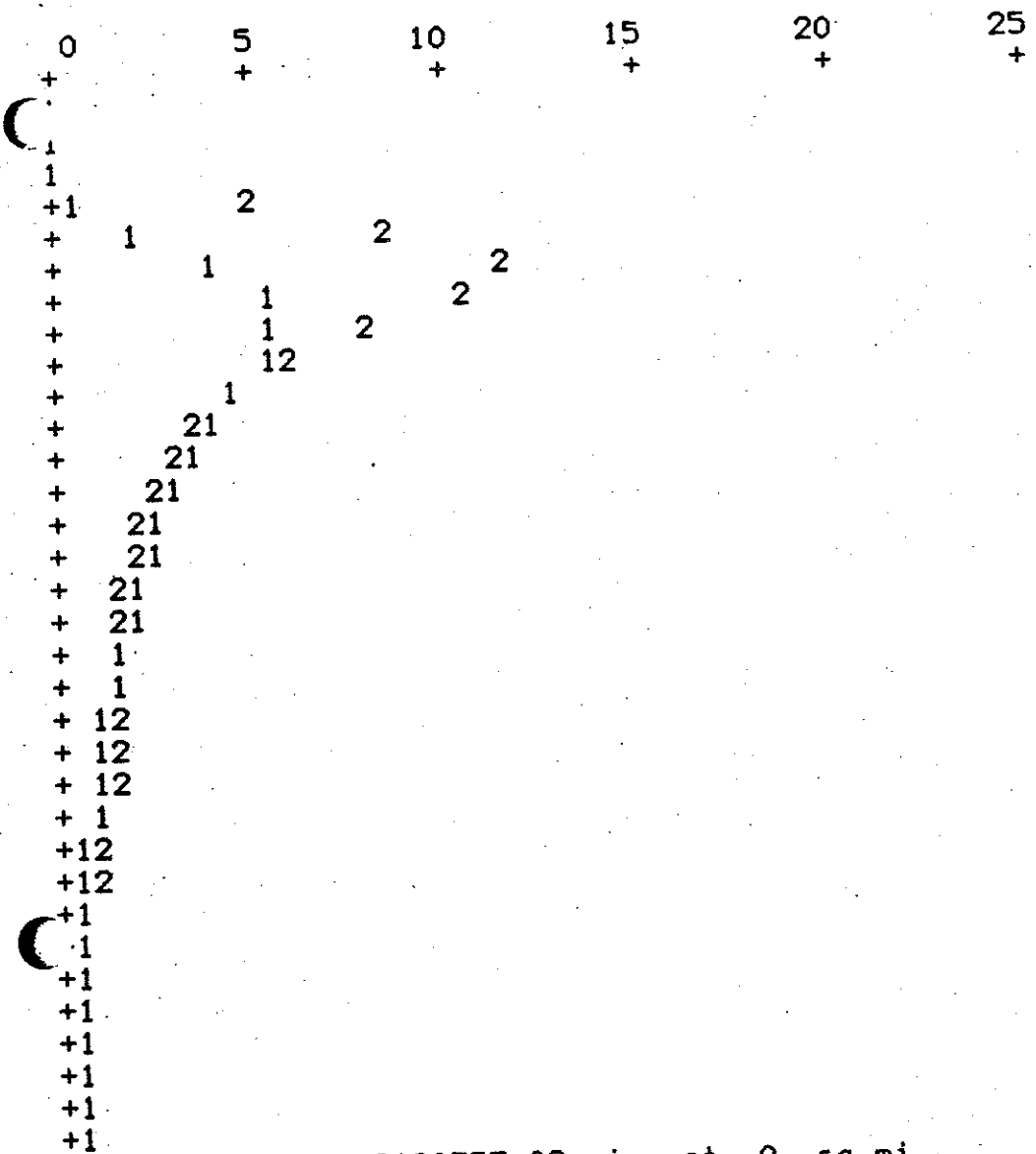
FLOW (CFS)



TIME	FLOW1	FLOW2
0.0	0.0	0.0
0.1	0.0	0.0
0.3	0.0	0.0
2.9	0.3	1.3
3.0	1.0	2.1
3.1	1.9	2.7
3.2	*2.7	*2.7
3.4	2.2	1.5
3.5	1.5	0.9
3.6	1.2	0.8
3.8	1.0	0.7
3.9	0.8	0.5
4.0	0.7	0.4
4.2	0.6	0.4
4.3	0.6	0.3
4.4	0.5	0.3
4.5	0.4	0.2
4.7	0.4	0.2
4.8	0.4	0.2
4.9	0.3	0.2
5.0	0.2	0.2
5.2	0.2	0.2
5.3	0.2	0.2
5.4	0.2	0.2
5.6	0.2	0.2
5.7	0.2	0.2
5.8	0.2	0.2
5.9	0.2	0.2
6.1	0.2	0.1
6.2	0.2	0.1
6.3	0.2	0.1
6.5	0.1	0.0
6.6	0.1	0.0

R.O. Volume 1 = 3.808351E-03 in. at 0 sq.mi.  
 R.O. Volume 2 = 3.788202E-03 in. at 0 sq.mi.  
 RMS = 4.480002

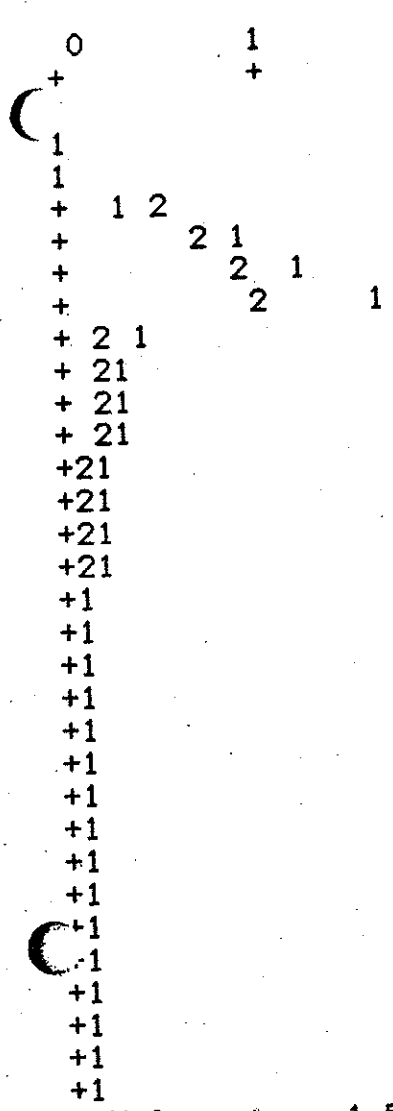
FLOW (CFS)



TIME	FLOW1	FLOW2
0.0	0.0	0.0
0.1	0.0	0.0
0.3	0.0	0.0
3.0	0.7	5.2
3.1	2.0	8.5
3.2	3.9	11.3
3.4	5.4	10.7
3.5	5.7	8.2
3.6	5.3	6.0
3.8	4.7	4.7
3.9	4.1	3.7
4.0	3.5	2.9
4.2	3.0	2.4
4.3	2.6	2.1
4.4	2.3	1.9
4.5	2.0	1.6
4.7	1.8	1.5
4.8	1.6	1.4
4.9	1.4	1.3
5.0	1.2	1.3
5.2	1.0	1.3
5.3	0.9	1.3
5.4	0.8	1.1
5.6	0.7	0.9
5.7	0.7	0.8
5.8	0.6	0.7
5.9	0.6	0.7
6.1	0.6	0.7
6.2	0.6	0.6
6.3	0.6	0.6
6.5	0.6	0.5
6.6	0.5	0.3
6.7	0.4	0.2

R.O. Volume 1 = 1.219075E-02 in. at 0 sq.mi.  
 R.O. Volume 2 = .0182962 in. at 0 sq.mi.  
 RMS = 154.2

FLOW (CFS)



TIME	FLOW1	FLOW2
0.0	0.0	0.0
0.1	0.0	0.0
0.3	0.0	0.0
2.7	0.3	0.5
2.9	0.9	0.7
3.0	1.2	0.9
3.1	K 1.6	K 1.0
3.2	0.4	0.2
3.4	0.3	0.2
3.5	0.3	0.2
3.6	0.3	0.2
3.8	0.2	0.1
3.9	0.2	0.1
4.0	0.2	0.1
4.2	0.2	0.1
4.3	0.1	0.1
4.4	0.1	0.1
4.5	0.1	0.1
4.7	0.1	0.1
4.8	0.1	0.1
4.9	0.1	0.1
5.0	0.1	0.1
5.2	0.1	0.1
5.3	0.1	0.0
5.4	0.1	0.0
5.6	0.1	0.0
5.7	0.1	0.0
5.8	0.1	0.0
5.9	0.1	0.0
6.1	0.1	0.0
6.2	0.1	0.0

R.O. Volume 1 = 1.55155E-03 in. at 0 sq.mi.  
R.O. Volume 2 = 1.10825E-03 in. at 0 sq.mi.  
RMS = .72



Rain data:  
Name: 25SHORT

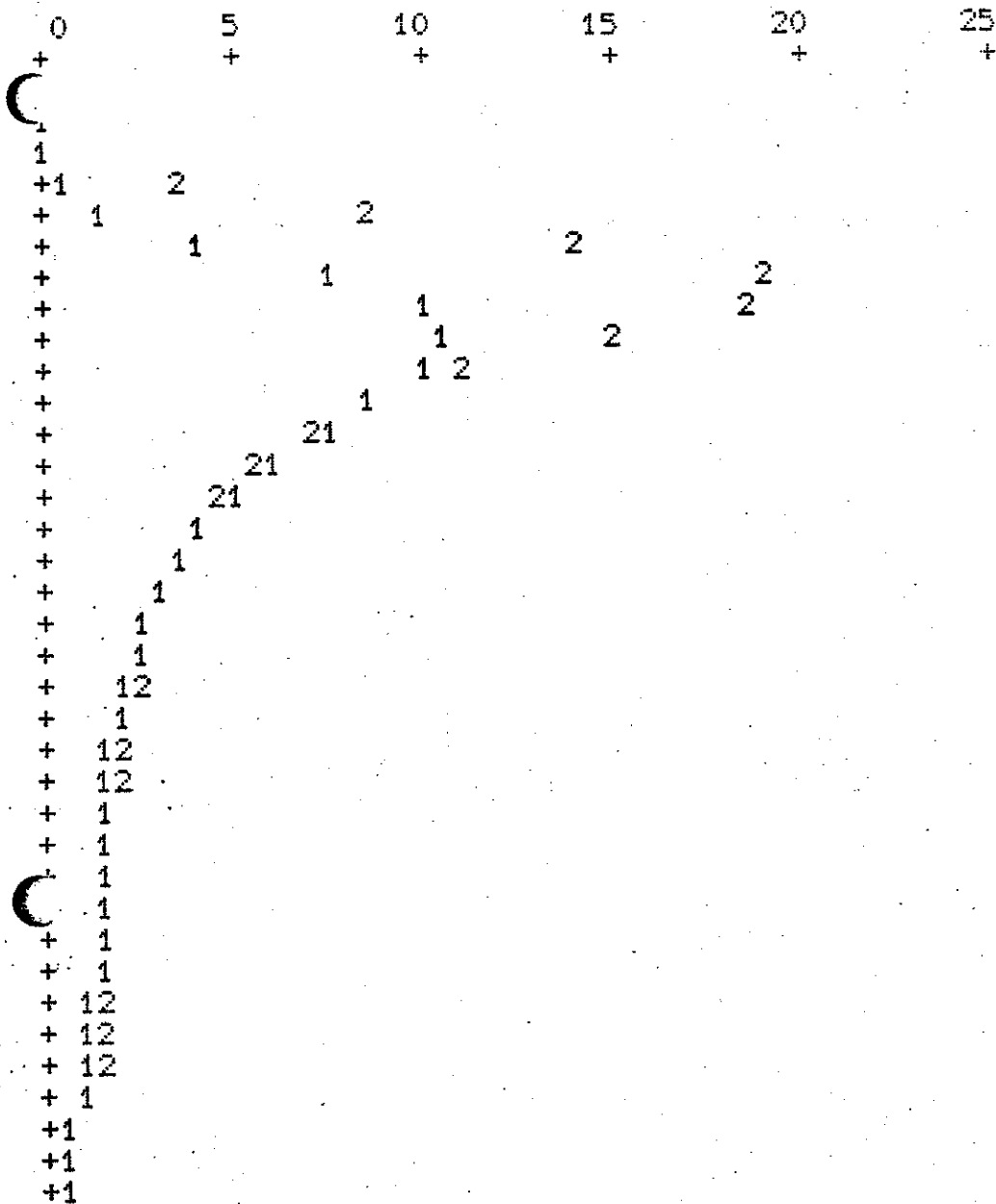
CH YE STORM

Rainfall:  
No. of increments: 48

Increment 1 : .0225 in  
Increment 2 : .0225 in  
Increment 3 : .0225 in  
Increment 4 : .0225 in  
Increment 5 : .025 in  
Increment 6 : .025 in  
Increment 7 : .025 in  
Increment 8 : .025 in  
Increment 9 : .0325 in  
Increment 10 : .0325 in  
Increment 11 : .0325 in  
Increment 12 : .0325 in  
Increment 13 : .0425 in  
Increment 14 : .0425 in  
Increment 15 : .0425 in  
Increment 16 : .0425 in  
Increment 17 : .065 in  
Increment 18 : .065 in  
Increment 19 : .065 in  
Increment 20 : .065 in  
Increment 21 : .5125 in  
Increment 22 : .5125 in  
Increment 23 : .5125 in  
Increment 24 : .5125 in  
Increment 25 : 9.749999E-02 in  
Increment 26 : 9.749999E-02 in  
Increment 27 : 9.749999E-02 in  
Increment 28 : 9.749999E-02 in  
Increment 29 : .05 in  
Increment 30 : .05 in  
Increment 31 : .05 in  
Increment 32 : .05 in  
Increment 33 : .035 in  
Increment 34 : .035 in  
Increment 35 : .035 in  
Increment 36 : .035 in  
Increment 37 : .0275 in  
Increment 38 : .0275 in  
Increment 39 : .0275 in  
Increment 40 : .0275 in  
Increment 41 : .025 in  
Increment 42 : .025 in  
Increment 43 : .025 in  
Increment 44 : .025 in  
Increment 45 : .02 in  
Increment 46 : .02 in  
Increment 47 : .02 in  
Increment 48 : .02 in

Time interval: .125 hrs

FLOW (CFS)



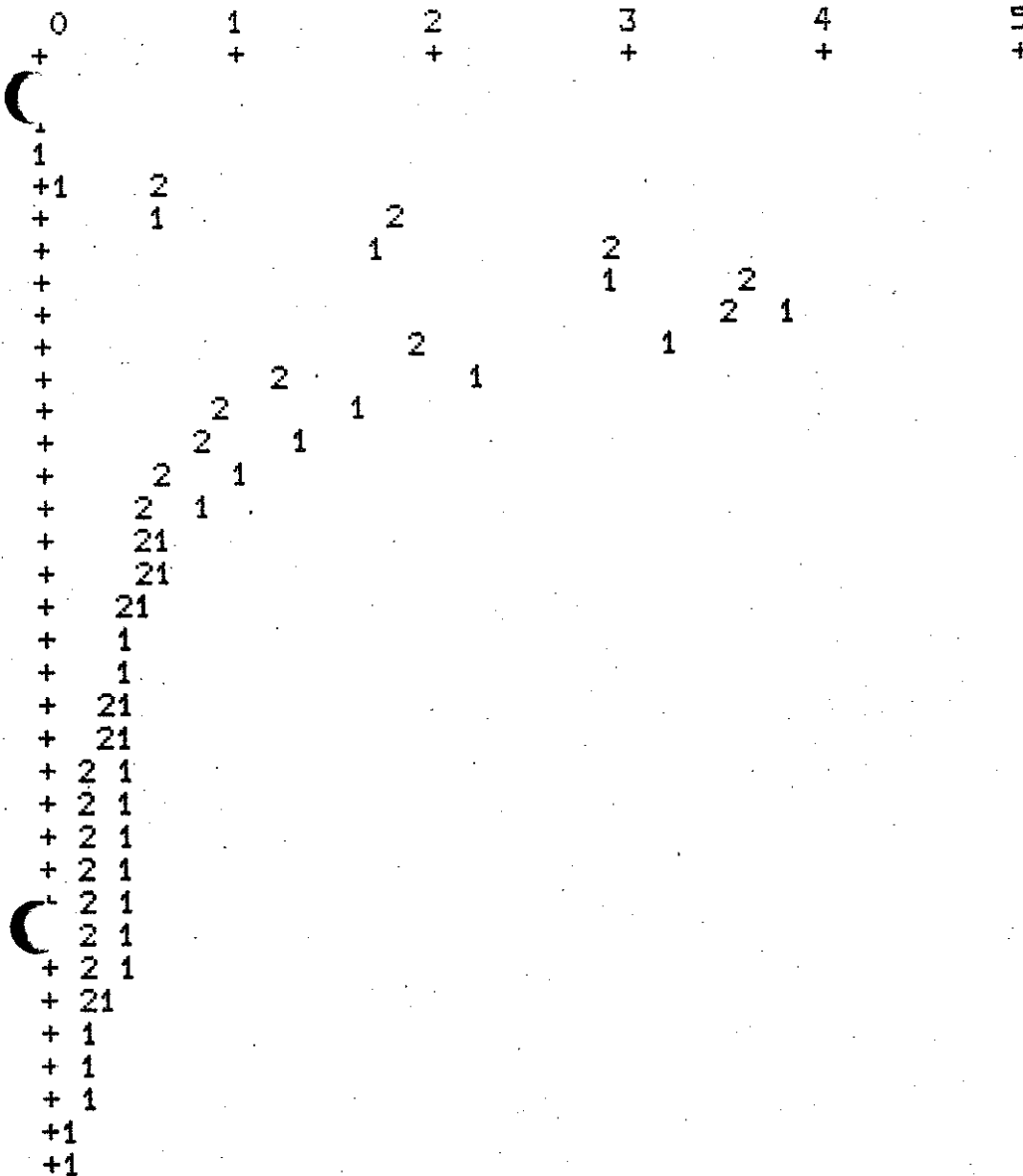
TIME	FLOW1	FLOW2
0.0	0.0	0.0
0.1	0.0	0.0
0.3	0.0	0.0
2.9	0.4	3.6
3.0	1.7	8.6
3.1	4.2	14.2
3.2	7.6	19.0*
3.4	10.2	18.7
3.5	*10.7	14.8
3.6	9.9	11.2
3.8	8.7	8.7
3.9	7.4	6.9
4.0	6.2	5.4
4.2	5.1	4.5
4.3	4.2	3.9
4.4	3.6	3.4
4.5	3.1	3.0
4.7	2.6	2.7
4.8	2.3	2.6
4.9	2.0	2.4
5.0	1.9	2.1
5.2	1.7	1.9
5.3	1.7	1.8
5.4	1.6	1.7
5.6	1.6	1.7
5.7	1.6	1.6
5.8	1.6	1.6
5.9	1.5	1.6
6.1	1.4	1.6
6.2	1.2	1.6
6.3	1.1	1.6
6.5	1.0	1.3
6.6	0.8	0.9
6.7	0.6	0.5
6.9	0.4	0.3
7.0	0.3	0.1

R.O. Volume 1 = .0222456 in. at 0 sq.mi.  
 R.O. Volume 2 = 3.240121E-02 in. at 0 sq.mi.  
 RMS = 380.9401

Output file 1: C:\B2.OUT Comments: BASIN 2 EXISTING  
 Output file 2: C:\B2F.OUT Comments: BASIN 2 FUTURE

25 YR. STORM

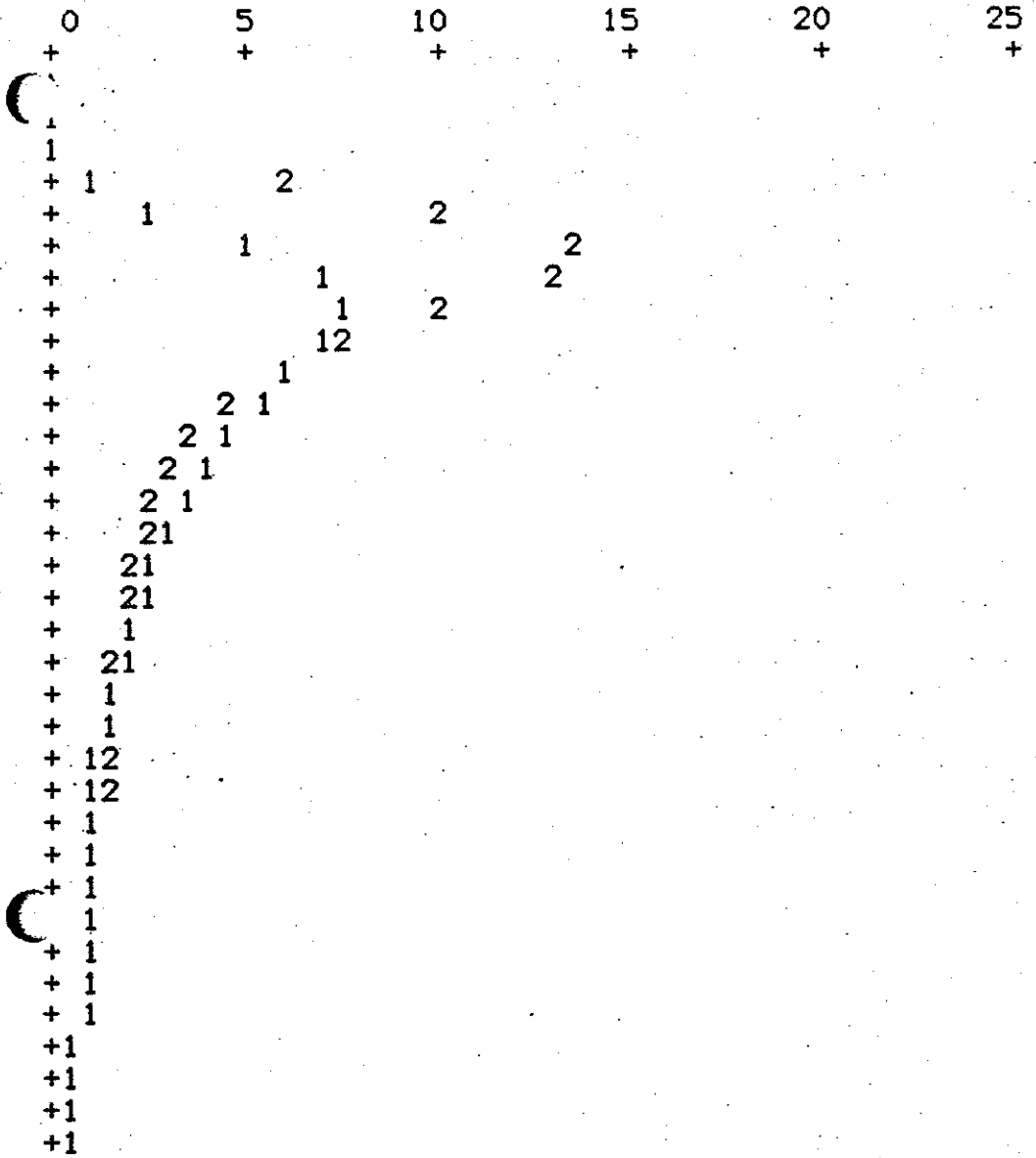
FLOW (CFS)



TIME	FLOW1	FLOW2
0.0	0.0	0.0
0.1	0.0	0.0
0.3	0.0	0.0
2.7	0.1	0.6
2.9	0.6	1.8
3.0	1.7	2.9
3.1	2.9	3.6
3.2	3.8	3.5
3.4	3.2	1.9
3.5	2.2	1.2
3.6	1.6	0.9
3.8	1.3	0.8
3.9	1.0	0.6
4.0	0.8	0.5
4.2	0.6	0.5
4.3	0.6	0.5
4.4	0.5	0.4
4.5	0.4	0.4
4.7	0.4	0.4
4.8	0.4	0.3
4.9	0.4	0.3
5.0	0.4	0.2
5.2	0.4	0.2
5.3	0.4	0.2
5.4	0.4	0.2
5.6	0.4	0.2
5.7	0.4	0.2
5.8	0.4	0.2
5.9	0.3	0.2
6.1	0.2	0.2
6.2	0.2	0.2
6.3	0.2	0.2
6.5	0.1	0.1
6.6	0.1	0.0

R.O. Volume 1 = .0053196 in. at 0 sq.mi.  
 R.O. Volume 2 = 4.977051E-03 in. at 0 sq.mi.  
 RMS = 7.740001

FLOW (CFS)



TIME	FLOW1	FLOW2
0.0	0.0	0.0
0.1	0.0	0.0
0.3	0.0	0.0
3.0	0.9	5.9
3.1	2.6	10.0
3.2	5.0	*13.6
3.4	7.0	13.0
3.5	*7.4	10.1
3.6	6.8	7.5
3.8	6.0	5.9
3.9	5.3	4.7
4.0	4.5	3.7
4.2	3.9	3.1
4.3	3.4	2.7
4.4	3.0	2.4
4.5	2.6	2.1
4.7	2.3	1.9
4.8	2.1	1.8
4.9	1.8	1.7
5.0	1.6	1.7
5.2	1.3	1.6
5.3	1.2	1.6
5.4	1.0	1.4
5.6	0.9	1.2
5.7	0.9	1.0
5.8	0.8	0.9
5.9	0.8	0.9
6.1	0.8	0.8
6.2	0.8	0.8
6.3	0.8	0.8
6.5	0.7	0.6
6.6	0.6	0.4
6.7	0.5	0.2
6.9	0.3	0.1

R.O. Volume 1 = 1.577745E-02 in. at 0 sq.mi.  
 R.O. Volume 2 = 2.190305E-02 in. at 0 sq.mi.  
 RMS = 201.23



Data Filename > C:R1.INP

Reservoir data:

Name: R1

No. of discharge, storage values: 7

ELEV.		Discharge, Storage:
	1	0 cfs, 0 acft
71.4	2	.029 cfs, .029 acft
80.4	3	3.85 cfs, .118 acft
80.9	4	4.71 cfs, .363 acft
81.4	5	5.44 cfs, .854 acft
81.9	6	9.5 cfs, 1.55 acft
82.5	7	15.99 cfs, 2.8 acft

ELEV 79.4'

COMMENTS:

BASIN 1 - FUTURE/12in

Data Filename > C:R2.INP

Reservoir data:

Name: R2

No. of discharge, storage values: 7

ELEV.		Discharge, Storage:
94.5	1	0 cfs, 0 acft
94.95	2	2.72 cfs, .01 acft
95.45	3	3.85 cfs, .072 acft
95.95	4	4.71 cfs, .221 acft
96.45	5	5.44 cfs, .35 acft
96.95	6	9.5 cfs, .502 acft
97.45	7	15.99 cfs, .671 acft

COMMENTS:

BASIN 3 - FUTURE/12in

MAX. ELEV'S Q<sub>25</sub>

→ DRAINAGE AREA # 1

Q<sub>MAX</sub> = 5.3 CFS

Q = 3.846 √h FOR 12" ORIFICE

h = (5.3 / 3.846)<sup>2</sup> = 1.89'

Approx Volume = (0.854 - 0.363) / (5.44 - 4.71) = 0.67 AC·FT / CFS

(5.3 - 4.71 CFS) (0.67 AC·FT / CFS) = 0.395 AC·FT

+ 0.363

0.758 AC·FT

= 247,000 GALLONS

HUNTER-BALLEW ASSOCIATES  
 5 Fundy Road  
 FALMOUTH, MAINE 04105  
 (207) 781-4721

JOB RAY ST BEO411  
 SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_  
 CALCULATED BY JWB DATE 7.22.85  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 SCALE \_\_\_\_\_

MAX ELEV & VOLUMES (CONT'D)

DRAINAGE AREA # 3

$$Q_{max} = \overset{5.6}{7.9} \text{ CFS}$$

$$\frac{9.5 - 5.44 \text{ CFS}}{.5'} = 8.12 \text{ CFS/FT}$$

$$(5.6 - 5.44 \text{ CFS}) \left( \frac{1 \text{ FT}}{8.12 \text{ CFS}} \right) = .020 \text{ FT}$$

$$+ 2.0$$

$$\approx \underline{+ 2.0} \text{ FT MAX ELEV @ 2.0}$$

$$V; \frac{.502 - .350 \text{ AC.FT.}}{9.50 - 5.44 \text{ CFS}} = .042 \frac{\text{AC.FT.}}{\text{CFS}}$$

$$(5.6 - 5.44 \text{ CFS}) \left( \frac{.042 \text{ AC.FT.}}{\text{CFS}} \right) = .007$$

$$+ \underline{.35}$$

$$.357 \text{ AC.FT.}$$

$$= \underline{116,400 \text{ GALS}}$$

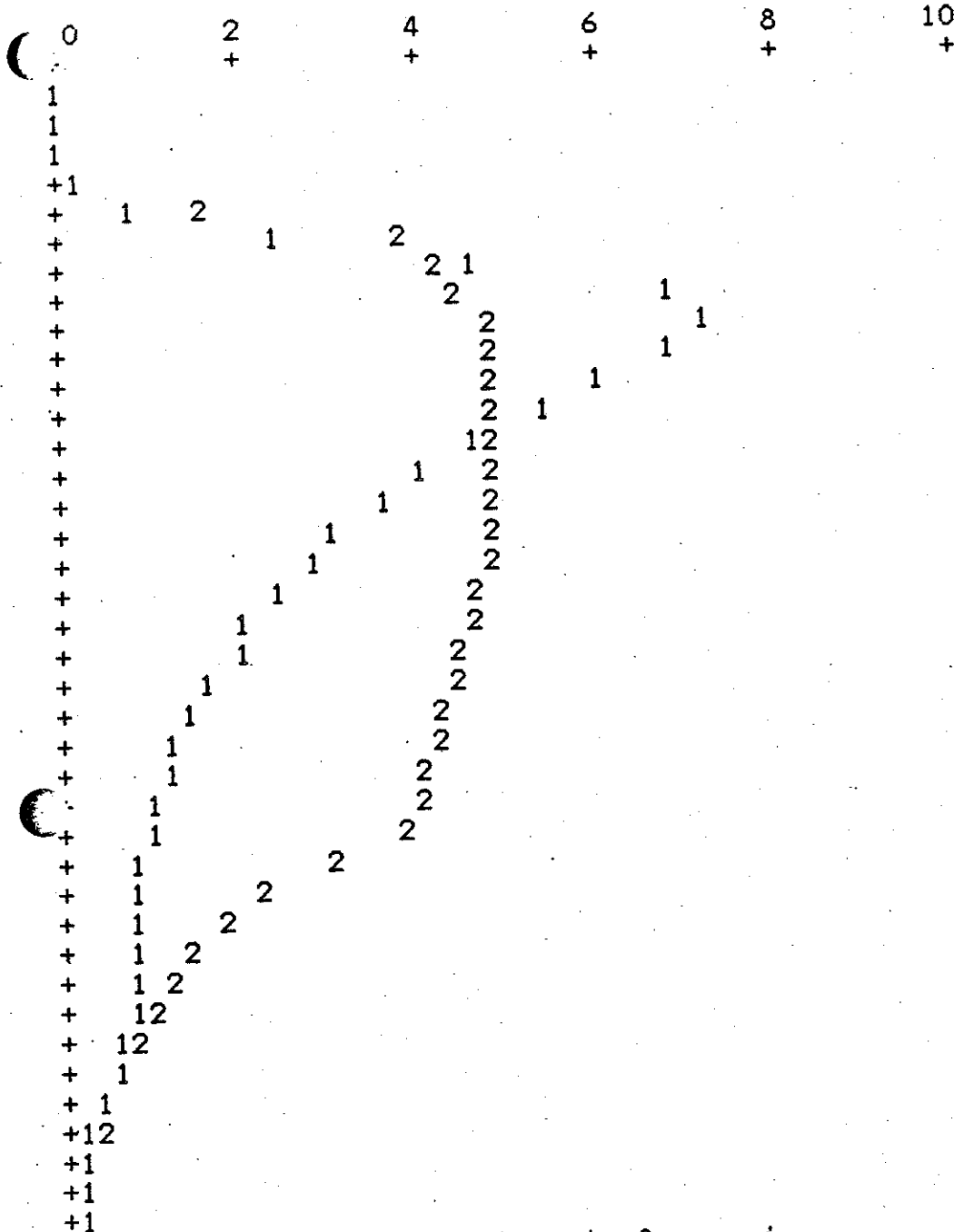
$$1 \text{ AC.FT.} = 3.26 \times 10^5 \text{ GALS}$$

Output file 1: B1.OUT  
 Output file 2: R1.OUT

Comments: BASIN 1 EXISTING  
 Comments: BASIN 1 -FUTURE/12in

10YE STORM  
 W/ DENSIMON

OUTFLOW (CFS)



TIME	FLOW1	FLOW2
0.0	0.0	0.0
0.1	0.0	0.0
0.3	0.0	0.0
2.9	0.1	0.2
3.0	0.8	1.6
3.1	2.4	3.9
3.2	4.7	4.1
3.4	6.7	4.5
3.5	*7.2	4.7
3.6	6.8	4.8
3.8	6.0	4.8
3.9	5.3	*4.8
4.0	4.6	4.8
4.2	4.0	4.8
4.3	3.5	4.8
4.4	3.1	4.8
4.5	2.7	4.7
4.7	2.4	4.6
4.8	2.1	4.5
4.9	1.9	4.4
5.0	1.6	4.3
5.2	1.4	4.2
5.3	1.2	4.2
5.4	1.1	4.1
5.6	1.0	4.0
5.7	0.9	3.9
5.8	0.8	2.9
5.9	0.8	2.2
6.1	0.8	1.7
6.2	0.8	1.4
6.3	0.8	1.2
6.5	0.7	1.0
6.6	0.6	0.8
6.7	0.5	0.6
6.9	0.3	0.5
7.0	0.2	0.3
7.1	0.2	0.2
7.2	0.1	0.1
7.4	0.1	0.1

R.O. Volume 1 = .0157573 in. at 0 sq.mi.  
 R.O. Volume 2 = 2.195411E-02 in. at 0 sq.mi.  
 RMS = 105.2449

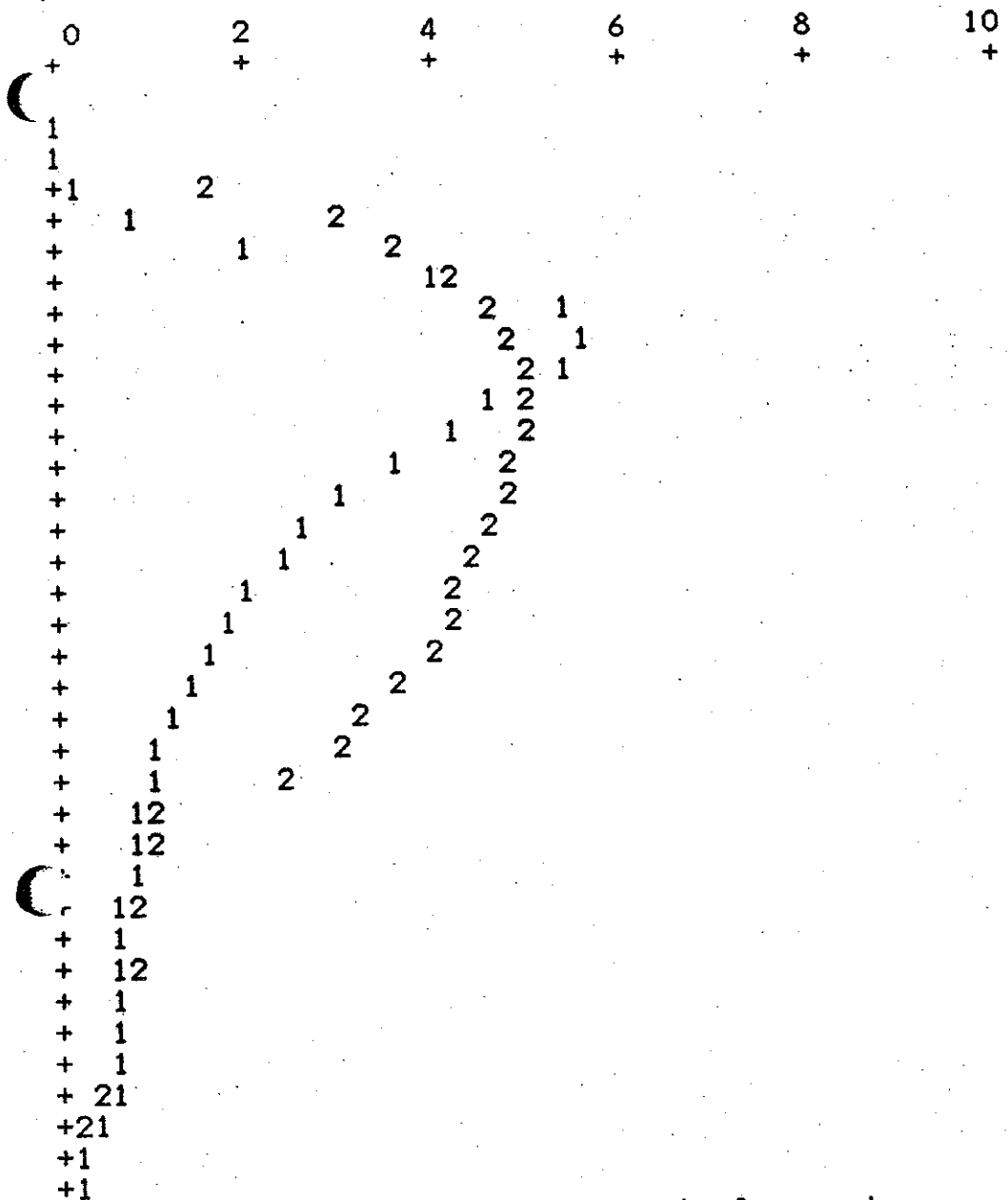


Output file 1: B3.OUT  
 Output file 2: R2.OUT

Comments: BASIN 3 EXISTING  
 Comments: BASIN 3 -FUTURE/12in

10 YR STORM  
 W/ DETENTION

OUTFLOW (CFS)



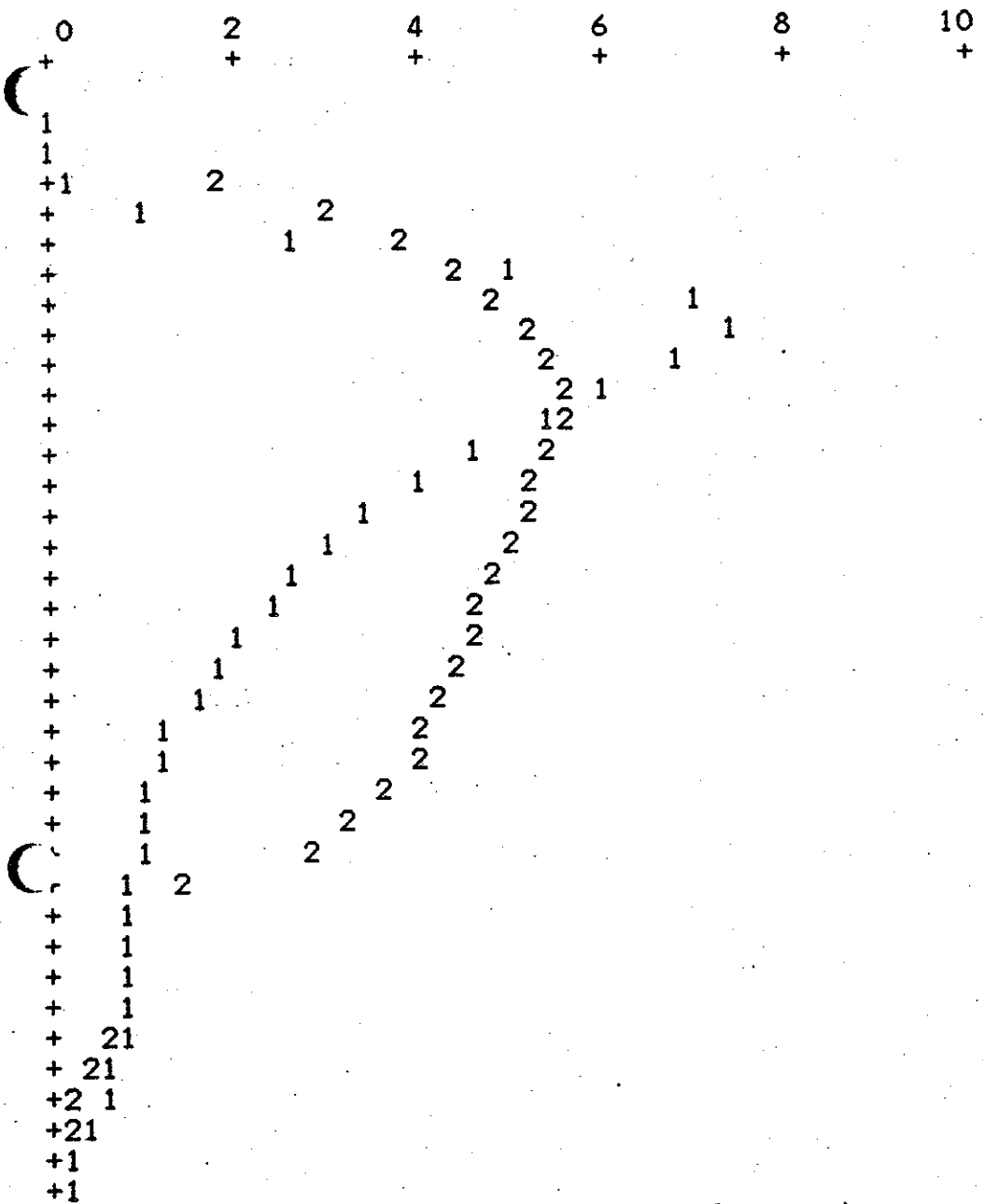
TIME	FLOW1	FLOW2
0.0	0.0	0.0
0.1	0.0	0.0
0.3	0.0	0.0
2.9	0.1	1.7
3.0	0.7	2.9
3.1	2.0	3.6
3.2	3.9	4.1
3.4	5.4	4.5
3.5	*5.7	4.8
3.6	5.3	4.9
3.8	4.7	*5.0
3.9	4.1	4.9
4.0	3.5	4.8
4.2	3.0	4.7
4.3	2.6	4.6
4.4	2.3	4.4
4.5	2.0	4.3
4.7	1.8	4.1
4.8	1.6	3.9
4.9	1.4	3.7
5.0	1.2	3.3
5.2	1.0	2.9
5.3	0.9	2.3
5.4	0.8	1.0
5.6	0.7	1.0
5.7	0.7	0.8
5.8	0.6	0.7
5.9	0.6	0.7
6.1	0.6	0.7
6.2	0.6	0.6
6.3	0.6	0.6
6.5	0.6	0.5
6.6	0.5	0.4
6.7	0.4	0.2
6.9	0.2	0.1
7.0	0.2	0.0

R.O. Volume 1 = 1.219075E-02 in. at 0 sq.mi.  
 R.O. Volume 2 = 1.829009E-02 in. at 0 sq.mi.  
 RMS = 57.14677



25 YEAR  
W/ DETENTION

OUTFLOW (CFS)



TIME	FLOW1	FLOW2
0.0	0.0	0.0
0.1	0.0	0.0
0.3	0.0	0.0
2.9	0.2	1.8
3.0	0.9	3.0
3.1	2.6	3.8
3.2	5.0	4.3
3.4	7.0	4.8
3.5	*7.4	5.2
3.6	6.8	5.4
3.8	6.0	*5.6
3.9	5.3	5.6
4.0	4.5	5.4
4.2	3.9	5.3
4.3	3.4	5.1
4.4	3.0	5.0
4.5	2.6	4.8
4.7	2.3	4.7
4.8	2.1	4.5
4.9	1.8	4.4
5.0	1.6	4.2
5.2	1.3	4.1
5.3	1.2	3.9
5.4	1.0	3.6
5.6	0.9	3.2
5.7	0.9	2.9
5.8	0.8	1.4
5.9	0.8	0.8
6.1	0.8	0.8
6.2	0.8	0.8
6.3	0.8	0.8
6.5	0.7	0.7
6.6	0.6	0.5
6.7	0.5	0.3
6.9	0.3	0.1
7.0	0.2	0.1
7.1	0.1	0.0

R.O. Volume 1 = 1.577745E-02 in. at 0 sq.mi.  
 R.O. Volume 2 = 2.189574E-02 in. at 0 sq.mi.  
 RMS = 91.53494

APPENDIX D

DETENTION FACILITIES

1. DETENTION AREA A, PLAN VIEW
2. DETENTION AREA B, PLAN VIEW
3. TYPICAL FLOW CONTROL STRUCTURE, ELEVATION & SECTION

HUNTER-BALLEW ASSOCIATES

5 Fundy Road  
FALMOUTH, MAINE 04105  
(207) 781-4721

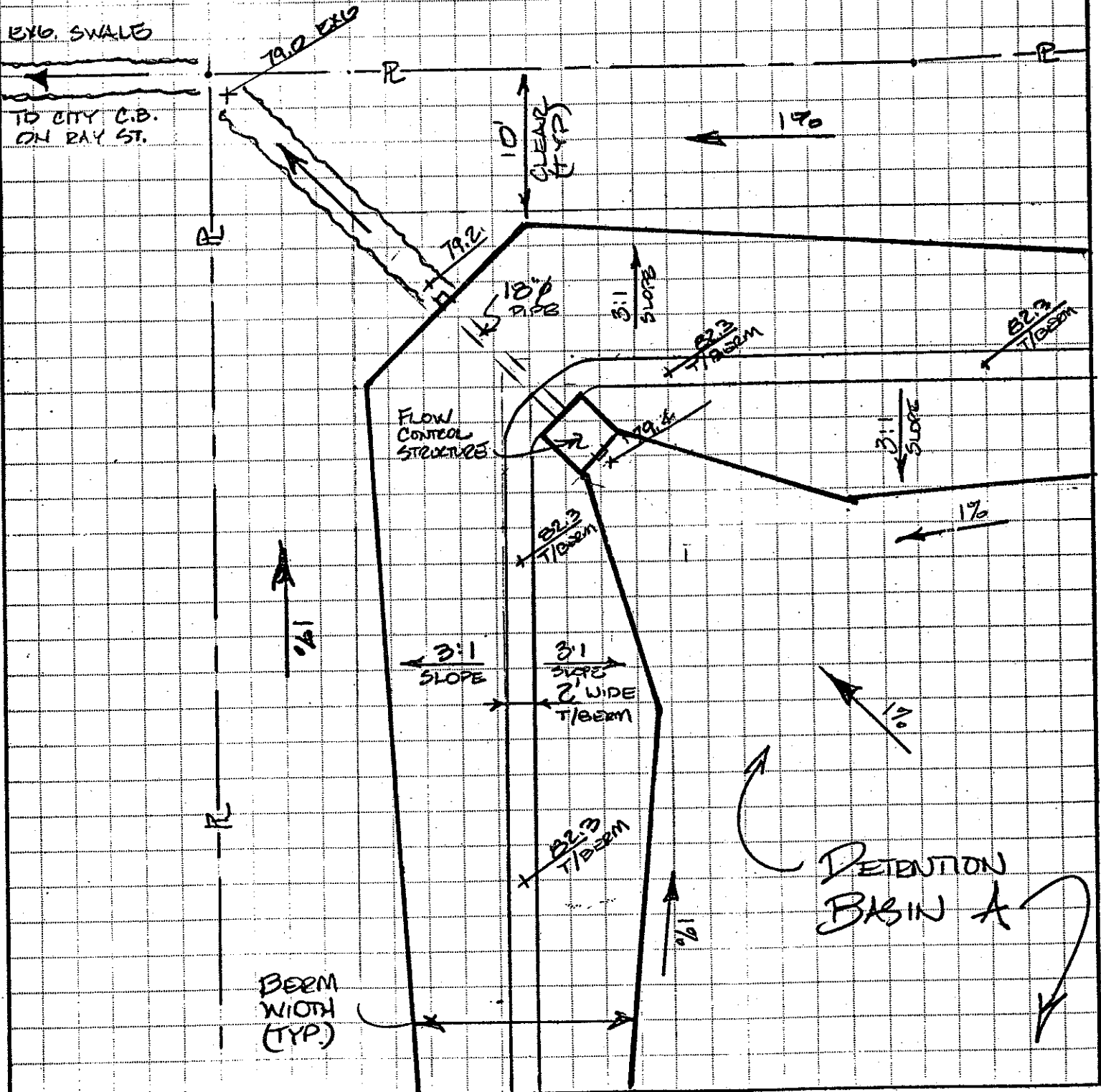
JOB 020411 OF 4  
SHEET NO. 1  
CALCULATED BY JWE DATE 7.22.85  
CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_  
SCALE 1" = 10'

PLAN VIEW DETENTION  
AREA "A"



EXIST. SWALE

TO CITY C.D.  
ON RAY ST.



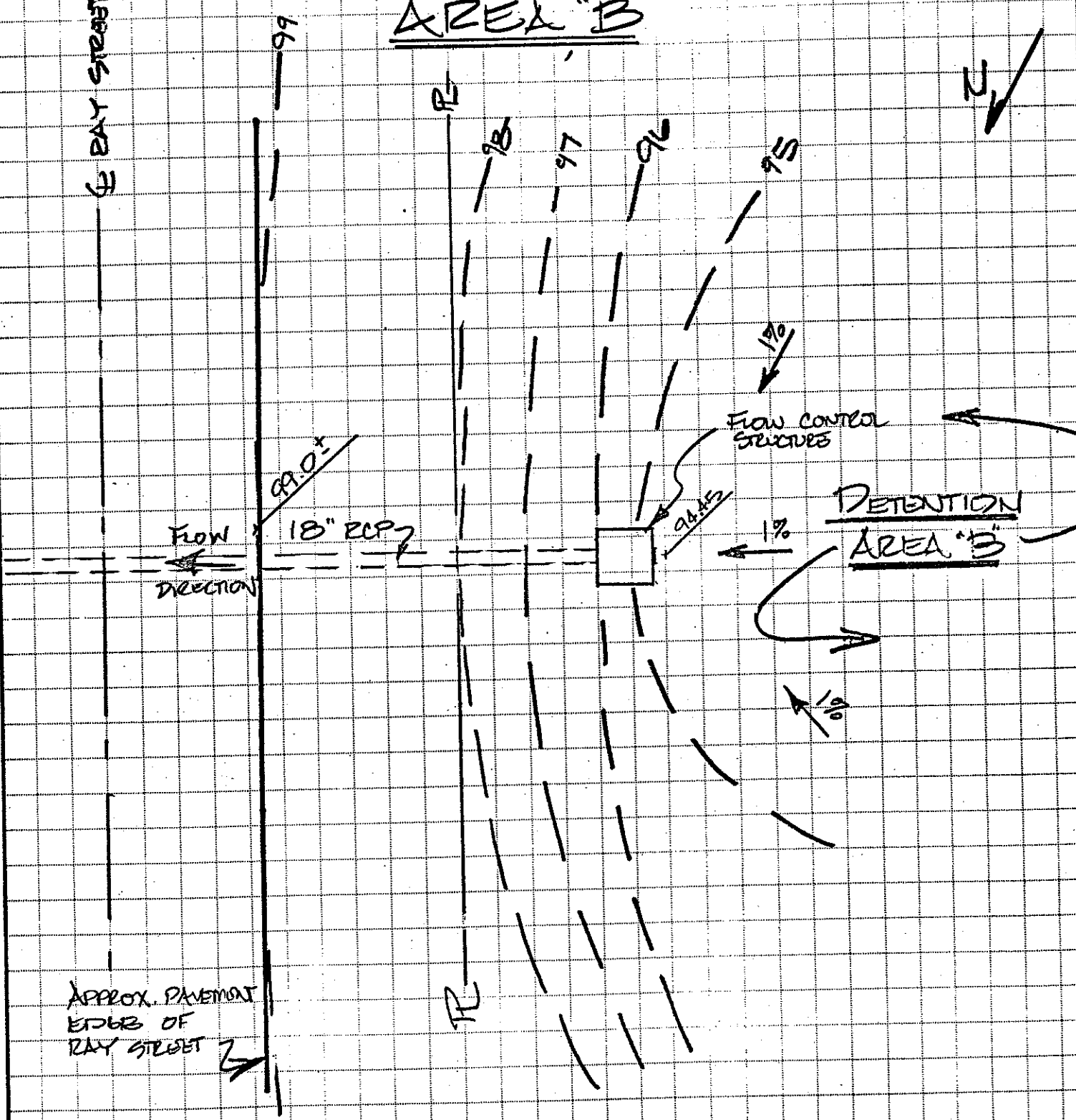
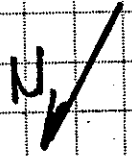
HUNTER-BALLEW ASSOCIATES

5 Fundy Road  
FALMOUTH, MAINE 04105  
(207) 781-4721

JOB B50411 RAY STREET  
SHEET NO. 2 OF 4  
CALCULATED BY JWE DATE 7-22-85  
CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_  
SCALE 1" = 10'

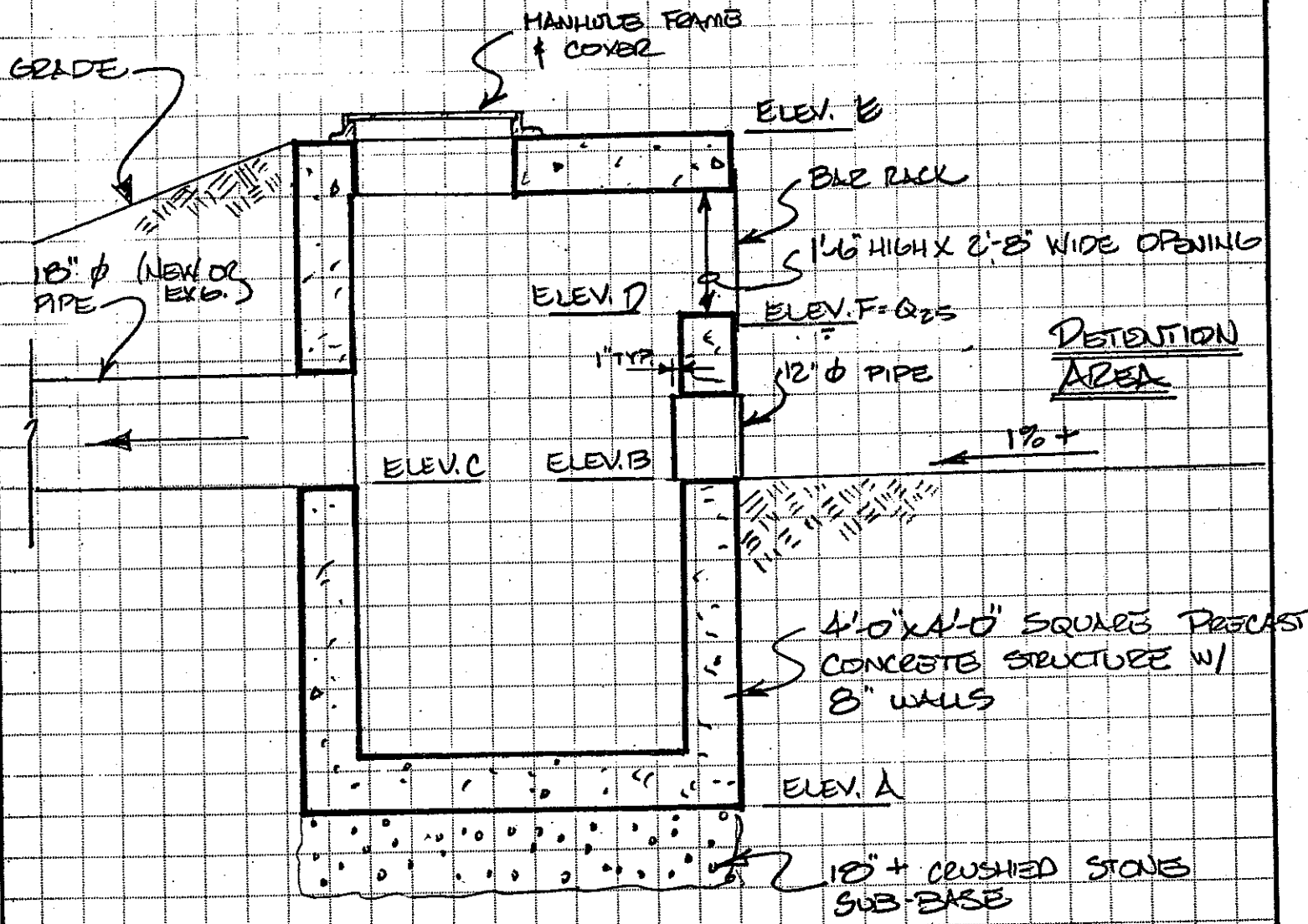
PLAN VIEW DETENTION  
AREA "B"

RAY STREET



APPROX. PAVEMENT  
EDGES OF  
RAY STREET

# TYP. SECTION THRU CONTROL STRUCTURES

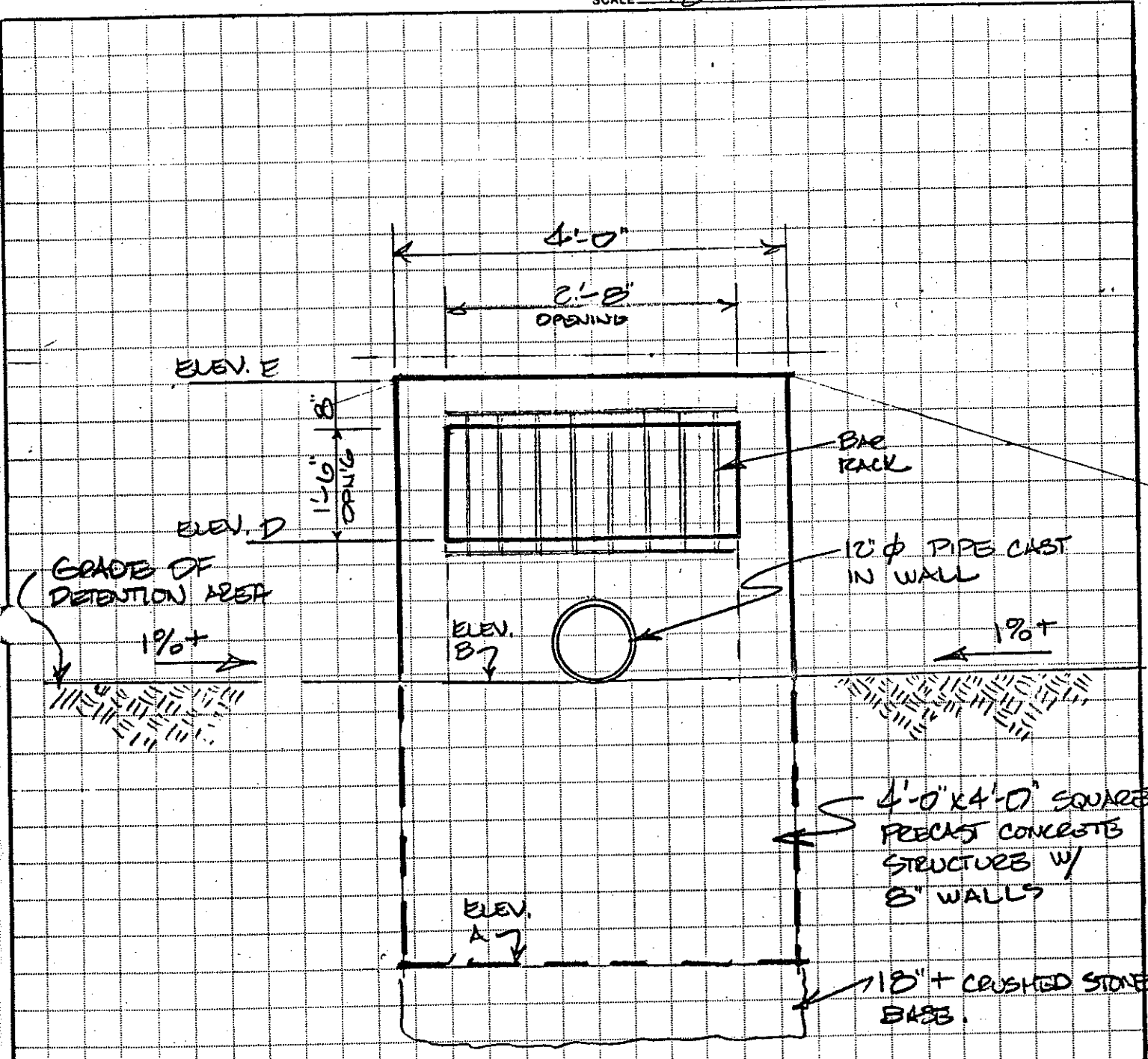


		RETENTION AREA "A" STRUCTURES	RETENTION AREA "B" STRUCTURES
ELEV. A	BASE/STRUCTURE	75.40'	90.45'
ELEV. B	ENT. INVERT	79.40'	94.45'
ELEV. C	EXIT INVERT	79.35'	94.40'
ELEV. D	BOT. EMERGENCY OP'G	81.40'	96.45'
ELEV. E	TOP/STRUCTURE	83.57'	98.62'
ELEV. F	Q25 FLOOD ELEV.	81.30'	96.45'

HUNTER-BALLEW ASSOCIATES

5 Fundy Road  
FALMOUTH, MAINE 04105  
(207) 781-4721

JOB 850411  
SHEET NO. 4 OF 4  
CALCULATED BY JWB DATE 7-2-85  
CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_  
SCALE 1/2" = 1'-0"



FRONT ELEVATION OF  
FLOW CONTROL STRUCTURE

\* ELEVATION KEY ON PREVIOUS PAGE



APPENDIX E

UTILITY SERVICE LETTERS

1. LETTER FROM PORTLAND PUBLIC WORKS (SANITARY SEWER)
2. LETTER FROM PORTLAND WATER DISTRICT



# CITY OF PORTLAND

---

RECEIVED BY  
HUNTER-BALLEW ASSOC.  
ON

JUL 24 1985

GEORGE A. FLAHERTY  
DIRECTOR OF PARKS & PUBLIC WORKS

July 22, 1985

Mr. James Ecker  
T.Y. Lin Int./Hunter-Ballew Assoc.  
Fundy Road  
Falmouth, Maine 04105

Re: Proposed RAY STREET CONDO DEVELOPMENT

Dear Mr. Ecker:

The 18" dia. RCP sewer located in Ray Street and sewage treatment facilities in the City of Portland have adequate capacity to transport and treat the anticipated wastewater flows from your proposed 98 two bedroom units. Attached is a sheet showing the location and size of that sewer.

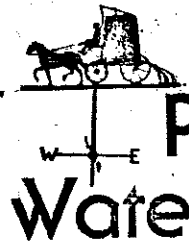
Sincerely,

*William B. Goodwin*

William B. Goodwin, P.E.  
Environmental Project Engineer

WBG/HP-86B

Enclosure



# Portland Water District

225 Douglass St. • P.O. Box 3553 • Portland, ME 04104-3553

(207) 774-5961

July 23, 1985

RECEIVED BY  
HUNTER-BALLEW ASSOC.  
ON

JUL 24 1985

Mr. James Ecker  
TY LIN/HUNTER BALLEW ASSOC.  
5 Fundy Road  
Falmouth, ME 04105

Re: Ray Street Development

Dear Mr. Ecker:

The Portland Water District has received from your office a preliminary utilities plan dated 07-23-85 of the above-mentioned proposed project located off Ray Street in Portland.

The District is in accord with the layout of the public water system to serve this project, as shown on this preliminary utilities plan. With the construction of the public water system as shown, the District will have adequate facilities to serve this proposed project, and meet all normal water demands for domestic service and fire protection.

With the granting of an easement, and certification by the developer that all required permits have been received, the District looks forward to serving this project.

Very truly yours,

Donald E. Wyman  
Director of Marketing/Customer Relations

DEW/d

APPENDIX F

TRAFFIC REPORT

REPORT  
ON THE TRAFFIC IMPACT STUDY  
FOR  
PROPOSED RAY STREET DEVELOPMENT  
RAY STREET  
PORTLAND, MAINE

PREPARED FOR  
THE LIBERTY GROUP

PREPARED BY  
HUNTER-BALLEW ASSOCIATES  
CONSULTING ENGINEERS  
FALMOUTH, MAINE

MAY 1985

## SECTION I - INTRODUCTION AND PURPOSE OF STUDY

In March 1985, the Liberty Group retained Hunter-Ballew Associates to prepare a Traffic Impact Study in conjunction with the proposed Ray Street apartment complex to be located on the southwest side of Ray Street between Allen Avenue and Florida Avenue in Portland, Maine. Figure 1, following this page, shows the proposed site.

The object of this study is to develop and analyze the impact of traffic resulting from the proposed housing complex with existing street traffic. Also included in this study will be recommendations for traffic operations improvements if the study shows any of these improvements to be warranted.

## SECTION II - DATA COLLECTION AND ASSEMBLY

The Liberty Group supplied Hunter-Ballew Associates with the following information:

1. Site plan of the proposed housing development.

The Maine Department of Transportation supplied Hunter-Ballew Associates with the following data:

1. Recent traffic counts in the vicinity of the site.
2. Accident data in the vicinity of the site.

In addition to this data, Hunter-Ballew Associates collected the following information:

1. Peak hour PM turning movement counts in the vicinity of the development.
2. Available sight distances at the driveways to the site.
3. Roadway geometrics and posted speed limits.

## SECTION III - EXISTING STREET TRAFFIC

The Maine Dept. of Transportation supplied Hunter-Ballew Associates with the following Annual Average Daily Traffic counts in the vicinity of the complex:

Location	Year	AADT
Washington Ave., between Ray St. & Canco	1977	20,935
Allen Ave., Falmouth-Portland Border	1977	3,420
	1981	4,010
Allen Ave., North of Washington Ave.	1977	5,505

In addition to this data, Hunter-Ballew Associates conducted PM peak hour counts in the vicinity of the complex at the following locations:

- o Intersection of Washington Ave. and Gertrude Ave.
- o Intersection of Allen Ave. and Ray St.

These counts were adjusted to obtain the 1985 AADT presented below, using MDOT's weekly group mean factors to account for seasonal variations

1985 Annual Average Daily Traffic

Location	AADT
Washington Ave. at Gertrude Street	21,200
Allen Ave., North of Ray Street	6,100
Allen Ave., South of Ray Street	6,885

As can be seen by comparing the 1985 AADT at Washington and Gertrude to the 1977 AADT at Washington Ave. between Ray Street and Canco Road, the traffic on Washington Ave. has remained stable. The traffic on Allen Ave. has experienced an average annual growth of 8.7% north of Ray St. and 2.8% south of Ray St. over the 9 year period.

Based on the counts taken by the consultant, it was determined that the PM peak hour was 4:35 PM to 5:35 PM at both locations. Using the weekly group mean factors previously discussed, the PM turning movements were adjusted to design hour street traffic for use in this study and are presented in Figures 2 and 3.

SECTION IV - TRAFFIC TO AND FROM THE COMPLEX

Liberty Group's proposed complex is planned to consist of 103 units. Using the Institute of Transportation Engineer's (ITE) publication, Trip

Generation, published in 1983, the expected daily and peak hour trip ends (ins plus outs) have been compiled and are presented below:

Proposed Development Traffic Generation

Land Use	Size	Trip Ends Per Unit*		Total Trip Ends	
		Daily	Peak Hour	Daily	Peak Hour
Low Level Apartments	103 units	6.6	0.66	680	68

\*1 trip in plus 1 trip out = 2 trip ends.

Two driveways are planned for the complex. The first is to be an extension of Gertrude Avenue located off Washington Avenue. The second entrance will be located on the southwest side of Ray Street approximately 570 feet from the centerline of Allen Avenue.

The consultant expects that 80% of the trips will be entering and exiting the complex via Gertrude Ave., with the remaining 20% entering and exiting via the entrance on Ray Street. This distribution has been further subdivided for use in the study. The data generated by the PM peak hour counts indicates that 60% of the traffic on Washington Avenue travels outbound and 40% of the traffic is inbound. The data also indicates that 40% of the traffic on Allen Avenue travels towards Washington Avenue and 60% travels towards Falmouth. Accordingly, the consultant has distributed the PM development traffic on Washington Avenue and Allen Avenue based on the PM traffic distribution on these streets. Based on these distributions, the PM development distributions have been compiled and are presented in Figures 4 & 5.

SECTION V - COMBINED STREET AND COMPLEX TRAFFIC

The consultant has combined the existing street traffic with the traffic to be generated by the complex for both entrances. These combined peak hour traffic volumes are presented in Figures 6 and 7.

SECTION VI - CAPACITY ANALYSIS

The capacity analysis compares the amount of time required to allow each leg of approaching traffic to pass through an intersection to the amount of time available for all approaching traffic to pass through the intersection. As the traffic approaching in intersection increases, additional time is required to allow this traffic to pass through the intersection. The amount of time available to pass vehicles through an intersection varies, depending upon the desired level of service.



Level of service is a measure of an intersection's performance which is dependent on the vehicle delay and the reserve capacity for the intersecting streets. Reserve capacity is the additional number of vehicles an approach can accommodate over the existing approach traffic before extreme congestion occurs and is used to evaluate unsignalized intersections.

A tabulation of various levels of service is shown below:

Reserve Capacities for Unsignalized Intersections

<u>Reserve Capacity</u>	<u>Level of Service</u>	<u>Expected Traffic Delay</u>
400 or more	A	Little or No Delay
300 to 399	B	Short Traffic Delay
200 to 299	C	Average Traffic Delay
100 to 199	D	Long Traffic Delay
0 to 99	E	Very Long Traffic Delay
Less than 0	F	Failure-Extreme Congestion

For areas such as Portland, the design level of service is 'C'.

Using the combined peak hour traffic shown in Figures 6 and 7, capacity analyses were performed for the following intersections:

- o Washington Ave. and Gertrude Ave.
- o Allen Ave. and Ray St.

These analyses were done in accordance with the procedures outlined in the Transportation Research Board's circular entitled, Proposed Chapters for the 1985 Highway Capacity Manual.

The results of the capacity analyses are presented below:

Capacity Analysis  
Intersection of Washington Ave. and Gertrude Ave.

<u>Condition</u>	<u>Movement</u>	<u>Reserve Capacity</u>	<u>Level of Service</u>
Existing	Left & Right Turn from Gertrude	100	D
	Left Turn into Gertrude	286	C
Combined	Left & Right Turn from Gertrude	66	E
	Left Turn into Gertrude	273	C

Capacity Analysis  
Intersection of Allen Ave. and Ray St.

Condition	Movement	Reserve Capacity	Level of Service
Existing	Left & Right Turn from Ray	378	B
	Left Turn into Ray	795	A
Combined	Left & Right Turn from Ray	375	B
	Left Turn into Ray	788	A

As can be seen from the above table, all movements will operate at a level of service C or better except the turns from Gertrude onto Washington Ave. The analysis would indicate that the low level of service for Gertrude at Washington is caused by insufficient gaps in the through traffic on Washington Avenue. However, our experience has shown, based on gap studies which the consultant has performed on similar intersections, that these movements will operate at a level of service 'C' or better.

Based on the results of the capacity analysis, it is concluded that the proposed complex traffic will have a minimal impact on the existing street system.

SECTION VII - SIGHT DISTANCE ANALYSIS

Two driveways are planned for the proposed complex. The first driveway is planned to be located on the southwest side of Ray Street approximately 570 feet from the centerline of Allen Avenue. The second entrance will be located off the end of Gertrude Street located off Washington Avenue.

Using the American Association of State Highway Officials (AASHTO) publication, A Policy on Geometric Design of Highways and Streets, published in 1984, the following sight distances are required:

Operating Speed on Major Street (mph)	Sight Distance Required to Left and Right
20	250'
25	325'
30	410'
35	520'

The speed limit on Ray Street is not posted, but is 25 mph according to the City of Portland. The posted speed limit on Allen Avenue and on

Washington Avenue is 35 mph. A comparison of the available sight distances to the required sight distances is made below based on the above speeds.

Comparison of Available Sight Distance to Required Sight Distance

<u>Location</u>	<u>Exiting Driveway Looking:</u>	<u>Available Sight Distance (Ft)</u>	<u>Required Sight Distance (Ft)</u>
Proposed Ray St. Driveway	Left	570	325
	Right	450*	325
Intersection of Ray St. & Allen Ave.	Left	490	520
	Right	800	520
Intersection of Gertrude St. & Washington Ave.	Left	1200	520
	Right	800	520

\*Reconstruction of Ray Street is planned in the near future which will improve this sight distance.

To further improve the sight distance, it is the consultant's recommendation to remove the existing trees that are located on the property of the proposed development that are along Ray Street to the right, looking out of the proposed driveway.

As can be seen from the above comparison, the sight distances are in excess of the requirements except to the left at the existing intersection of Ray Street and Allen Avenue which is slightly below AASHTO standards.

SECTION VIII - ACCIDENT ANALYSIS

The Maine Dept. of Transportation supplied Hunter-Ballew Associates with accident data for the intersection of Ray Street and Allen Avenue for the five year period from 1979 through 1983 for Allen Avenue from Woodmere Road south of Ray Street to Virginia Avenue north of Ray Street. This data showed a total of three accidents over the five year period which is below the accident rate for similar intersections.

The Maine Dept. of Transportation supplied Hunter-Ballew Associates with accident data for the intersection of Washington Ave. and Gertrude Ave. for the three year period from 1982 through 1983. This data showed 1 accident for this intersection over the three year period which is below the accident rate for similar intersections.

SECTION IX - CONCLUSIONS AND RECOMMENDATIONS

The following conclusions and recommendations are made based on the foregoing preliminary traffic analyses:

1. The planned 103 units will generate 680 daily trip ends (ins plus outs) with 68 of the trips occurring during the PM peak hour.
2. The complex will have a minimal impact on the level of service of the existing street system.
3. The sight distances at the proposed entrances to the complex are in excess of minimum standards except at the existing intersection of Ray Street and Allen Avenue which is slightly below the standards to the left.
4. The accident rate on Allen Avenue in the vicinity of the site is below the rate for similar intersections within the State of Maine.
5. The accident rate on Washington Ave. at Gertrude Ave. is below the rate for similar intersections within the State of Maine.

APPLICATION FOR PROJECT APPROVAL  
UNDER THE  
SITE LOCATION OF DEVELOPMENT LAW  
(38 MRSA § 481-488)

DATE RECEIVED

PLEASE TYPE OR PRINT:

Name of Applicant: Liberty Group, Inc.  
Address: 38 Preble Street Telephone No.: 772-0548  
City: Portland State: Maine Zip Code: 04101  
Local Contact (Name, Address & Tel. No.): Douglas Duncan  
(same address as above)

LOCATION OF ACTIVITY

Name of Project: Ray Street Townhomes  
Street or Route Number: Bounded by homes on Ray Street, Florida Avenue,  
and Allen Avenue. (See Exhibit A)  
Municipality or Township: Portland County: Cumberland

By signing this application the applicant certifies that he has (1) published the public notice once in a newspaper circulated in the area where the project is located, (2) sent a copy of the notice form to the owners of property abutting the land upon which the project is located, (3) sent a copy of the public notice form to the chief municipal officer and chairman of the municipal planning board, and (4) filed a duplicate of this application in the municipal office.

DATE: 07/26/85

\_\_\_\_\_  
Signature of Applicant  
Douglas Duncan, Project Manager  
\_\_\_\_\_  
Printed Name & Title

IF APPLICANT IS A CORPORATION ATTACH  
CERTIFICATE OF GOOD STANDING FROM  
THE SECRETARY OF STATE OF MAINE  
TEL. 207-289-3676  
See Exhibit G.

\_\_\_\_\_  
Signature of Authorized Agent

1. State below the objective of the project as proposed, including, as appropriate, number of lots, size of buildings, parking lots, etc.

Applicant proposing to construct 98 townhomes on a 19.98 acre tract of land in  
Portland. (See exhibit A.)

2. If the project is an expansion of an existing project or facilities, submit a brief summary of all pertinent aspects of the existing facilities and/or the larger project. (For subdivisions a copy of municipality approved plans.)

N/A

3. a. State approximate date for start of construction November 1, 1985

b. State approximate date for completion of construction November 1, 1985

4. a. How many acres included in this project? 19.98

b. How many total acres do you own? 15.44

c. How many total acres do you lease? none

d. How many total acres are under option? 4.54

e. Other (explain) See Exhibit B.

5. What is the existing use of the site (farmland, wood lot, commercial, etc.)? Woodland

6. a. State below the estimated total cost of the project, as proposed in this application, and itemize major categories, including estimated costs of activities to be devoted to minimizing or preventing adverse effects on the surrounding environment during construction and/or operation of this project.

Legal	\$25,000	Water Supply	*
Surveys	\$15,000	Landscaping	*
Roads	*	Erosion Control	*
Sewers	*	Other* Subtotal =	\$660,000
Structures	\$6,800,000	TOTAL	\$7,500,000

6. b. ATTACH A STATEMENT AS TO HOW YOU PLAN TO FINANCE THE PROJECT. Provide evidence of your financial capacity to finance this project. If the costs involve more than normal legal and surveying fees, submit one of the following:

i. A letter from a financial institution, governmental agency, or other funding agency which states a funding commitment or an "intent to fund" specifying the amount of funds and the uses for which the funds may be utilized; or

Exhibit C.

13. If sewage disposal is to be provided by a method other than individual septic tanks, state the name and address of the person or agency responsible for the maintenance of such system and the installation schedule. Provide a letter assuring that proper service is, or will be, available. See Exhibit A -

letter included from Bill Goodwin, Portland Public Works, 55 Portland Street,  
Portland, Maine 04101

14. a. If the proposed project will discharge any liquid waste from any commercial or industrial processing, or any sewage, into any stream, river, pond, lake or other body of water, including tidal waters, provide the following information: N/A

BODY OF WATER	TYPE OF DISCHARGE	QUANTITY (Gal/Day)
---------------	-------------------	--------------------

b. Has a waste discharge license been applied for from the Department of Environmental Protection, Bureau of Water Quality Control? Check One: YES  NO

15. State below the present condition of the public access routes to the proposed project, including the type, condition, and width of road surface and number of travel lanes. Refer to Figure 2 and Exhibit A, Traffic Impact Study.

- a. Road Name \_\_\_\_\_
- b. Type and Condition \_\_\_\_\_
- c. Width of Travel Surface (excluding road shoulders) \_\_\_\_\_
- d. Width of Road Shoulder \_\_\_\_\_
- e. Number of Lanes \_\_\_\_\_

16. State below the nature of the interior roads and parking system within the proposed project, including the type and width of road surface, length of road, number of lanes, parking areas and capacity, the width of right-of-way, and the estimated completion schedule. If roads are to be built "to town standards," attach a copy of these standards. Plans must include a typical cross-section of roads proposed (see pg. 9 for example). See Exhibit A, road cross-sections appended.

- a. Name of Road not yet named
- b. Type bituminous concrete
- c. Width of Travel Surface (excluding road shoulders) 24'
- d. Width of Road Shoulders 4'
- e. Length of Roads 3300'±
- f. Parking Lot Size N/A
- g. Number of Spaces 196 total
- h. Width of Right-of-Way 50'

17. Attach statement of maintenance responsibility of any commonly owned facilities, including roads and parking lots. (If the road(s) are to be dedicated as a town road, indicate who will maintain the road(s) until the town accepts the responsibility.)

See Exhibit D.

18. List the type and amounts of all solid wastes to be generated both during construction and operation. Organic wastes from site clearing and preparation. Construction waste from wood frame construction. Household waste of 1.8 C.Y./unit/month.

Indicate the method of collection and location of the disposal area(s) for each of the wastes listed.

See Exhibit E.

- a. Drainage and slope data to include location and size of culverts, areas to be riprapped, location and typical cross-section of drainage ditches.
- b. For areas to be seeded, indicate seed mixture by percent, type of fertilizer, application rates (lbs./100 square feet) of seed, fertilizer and lime.
- c. Areas to be mulched and type of mulch.
- d. Sedimentation pond locations and appropriate engineering data where applicable.
- e. SCHEDULE OF APPROXIMATE DATES FOR IMPLEMENTATION FOR a. through d. above.

27. State below whether the proposed development will require the installation of advertising signs, display lighting, or any similar device which might have an impact on the surrounding environment.

Check One: YES  NO  If YES, explain: There will not be any commercial or retail advertising signage. Signage will be limited to entrance & development identification signage only.

28. Indicate whether the proposed project will:

- a. Cause any changes in climate: YES  NO
- b. Lower the ground water table in the project vicinity. YES  NO
- c. Increase noise levels by more than ten decibels (dbA) at any time for a duration exceeding one minute. YES  NO

Explain why you have answered yes to any of the above.

---



---



---

29. Attach a copy of any deed covenants, restrictions and/or association agreements to be imposed on prospective purchasers and/or occupants of the development.

See Exhibit D.

30. List below the names and addresses of the owners of abutting property.

See Exhibit G.

NAME	ADDRESS
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

CHECK APPLICATION FOR COMPLETENESS



In order to save time when reviewing projects, D.E.P. is requesting that soils information be presented in a log format.

Lot No.	T.P. No.	Soil Name (Soil Scientists Only)	Plumbing Code Designation (As per table 6-1)	Textural Classifications	Depth of Pit	Depth to Seasonal Water	Depth to Impervious Layer	Depth to Bedrock	Area of Suitable Soil

A suggested set of requirements for the establishment of an association for road maintenance is as follows.

- The association shall be established by deed covenants or lease agreements.
- The developer shall specify the common facilities or properties in the development, the extent and time of their transfer to the association, and the arrangements for transfer of association control to the property owners, lessees, or other person or body.
- The covenants shall give each lot owner or lessee rights in and responsibilities for the common facilities or properties.
- The association shall be incorporated and named in the deed covenants or lease agreements.
- The covenants or lease agreements shall give each lot owner or lessee automatic membership and voting rights in the association.
- The assessment collection shall be strengthened by a covenant or lease provision making an unpaid assessment a lien against a delinquent owner's or lessee's property.
- The covenant or lease agreement shall be automatically renewable at the end of its basic term.

NOTE: Use this form or one containing identical information.

**APPLICANT SHALL SEND THIS NOTICE**

(To owners of abutting property, municipal officials and newspapers)

Please take notice that Liberty Group, Inc. (Name of Applicant)

38 Preble Street, Portland, Maine 04101  
(Address of Applicant)

is filing an application for a Site Location Permit with the Maine Department of Environmental Protection pursuant to the Provisions of Title 38 MRSA Sec. 481-489 to: Construct and sell

98 townhomes and association roads, utilities and recreation facilities on  
(State specifically what is to be done)

land bounded by Allen Avenue, Ray Street and Florida Avenue.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

in the town of Portland, Maine

The application will be filed for public inspection at the Department's Office in Augusta and at the municipal offices on July 29, 1985  
(Date)

Written comments from any interested person must be sent to the Department of Environmental Protection within 14 days of filing of the application to receive consideration.

Request for a public hearing must also be sent to the Department within 14 days of filing of the application.

LIST OF EXHIBITS & FIGURES

- Exhibit A - Preliminary Engineering Report
- Exhibit B - Purchase Options (3 pcs.)
- Exhibit C - Financing Letter (Maine Savings)
- Exhibit D - Covenants and Deeds
- Exhibit E - Waste Management Agreements
- Exhibit F - Erosion Control Plan
- Exhibit G - State of Maine Certificate of Good Standing
- Exhibit H - List of Abutters

- Figure 1 - Existing Site and Drainage Area
- Figure 2 - Proposed Site Layout and Drainage
- Figure 3 - Proposed Site Utilities



PRELIMINARY ENGINEERING REPORT  
RAY STREET DEVELOPMENT  
RAY STREET  
PORTLAND, MAINE

PREPARED FOR  
LIBERTY GROUP

PREPARED BY  
T. Y. LIN INTERNATIONAL/HUNTER-BALLEW ASSOCIATES  
CONSULTING ENGINEERS  
FALMOUTH, MAINE

JULY 1985

# **T. Y. LIN** HUNTER - BALLEW ASSOCIATES INTERNATIONAL

5 FUNDY ROAD, FALMOUTH, MAINE 04105 TELEPHONE (207) 781-4721

July 26, 1985

Mr. Douglas Duncan  
Liberty Group  
38 Preble Street  
Portland, Maine 04101

Subject: Ray Street Development

Dear Mr. Duncan:

We have prepared preliminary design studies of the infrastructure required to support the proposed 98 unit Ray Street Housing Project, including roadways, water supply, sewerage, drainage and traffic impact. The preliminary designs are illustrated on the accompanying plan set. Key design considerations and a description of the necessary infrastructure are outlined in the prepared report. All pertinent data, computations and correspondence are appended to the report.

The preliminary design report and plan set should provide sufficient detail for the initial City of Portland Planning Board review process. It will also serve as a primary exhibit for the DEP Site Location Application. Upon completion of the review process, modifications will be made as necessary and a final submission can be prepared.

If you have any questions or comments, please do not hesitate to contact us.

Sincerely,

T. Y. LIN INTERNATIONAL/  
HUNTER-BALLEW ASSOCIATES



Barry A. Patrie, P.E.

BAP/dcs  
Encs.  
JN: 841151

**REPORT**

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# TY LIN INTERNATIONAL HUNTER - BALLEW ASSOCIATES

5 FUNDY ROAD, FALMOUTH, MAINE 04105 TELEPHONE (207) 781-4721

July 24, 1985

Mr. Douglas Duncan  
Liberty Group  
38 Preble Street  
Portland, Maine 04101

Subject: Ray Street Development

Dear Mr. Duncan:

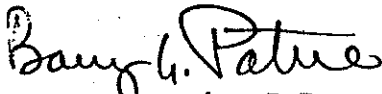
We have prepared preliminary design studies of the infrastructure required to support the proposed 98 unit Ray Street Housing Project, including roadways, water supply, sewerage, drainage and traffic impact. The preliminary designs are illustrated on the accompanying plan set. Key design considerations and a description of the necessary infrastructure are outlined in the prepared report. All pertinent data, computations and correspondence are appended to the report.

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If you have any questions or comments, please do not hesitate to contact us.

Sincerely,

T. Y. LIN INTERNATIONAL/  
HUNTER-BALLEW ASSOCIATES



Barry A. Patrie, P.E.

BAP/dcs  
Encs.  
JN: 841151



## INTRODUCTION

A preliminary engineering evaluation has been prepared for the Ray Street Housing Development located on the property controlled by Liberty Group, Inc., of Portland, Maine. The property is located on the western side of Ray Street between Allen Avenue and Florida Avenue in Portland, Maine. The design evaluation includes the consideration of roadway installation; sewer, water and other utilities; and an extensive site drainage analysis. In addition, a traffic impact study has been prepared analyzing the traffic in the vicinity of the proposed entrances to the development. The following report describes the physical facilities required and identifies key design considerations.

## PROJECT LAYOUT

The proposed development layout, as developed in coordination with CBT Landscape Architects of Boston, Massachusetts, is shown on the accompanying plan set. This layout is the basis for the engineering design considerations.

The development is in Residential Zone R-3 of the City of Portland and the layout is designed to meet all applicable subdivision ordinances. A total of 98 living units are proposed on the 19.98 acre site. The buildings are grouped in four basic areas, designated A through D on the accompanying plan set. The building units are configured as attached structures, with 3 to 5 units per building. In addition, there are 83 attached single car garages and 14 separate two car garages. Parking is provided for 196 cars which includes garage space. All four building areas will be serviced from a 1500' primary access road running through the property connecting Ray Street with Topsham Street.

## TOPOGRAPHIC FEATURES

The topography of the site is illustrated in the accompanying plan set by two foot interval contours obtained by a standard stadia survey performed by Owen Haskell, Inc., of South Portland, Maine. Project datum is based on City of Portland datum.

The site is characterized by varied topography with elevations ranging from 79 feet to 125 feet and is situated along a ridge separating two distinct watersheds. Two pronounced high areas with steep gradients divide the site into two (2) basic drainage areas, with associated relatively large, lower lying flat areas. The topography of the site has a major influence on the drainage analysis and the project's infrastructure design.

### SOIL CONDITIONS

The soil conditions of the site were evaluated through the digging of test pits throughout the site and visual classification in conjunction with SCS Soil Survey data. Test pits were dug by Archtellic Architects of Portland, Maine. Location of test pits and associated data are shown on Figure 1 of the accompanying plan set. A SCS soil map is provided in Appendix A.

The entire site is characterized by shallow soils over bedrock. Surface ledge outcroppings are common throughout the site, especially in the higher elevations where soil depths tend to decrease. The majority of the site has a sandy loam to silty loam upper layer, with deeper soils in the low southeastern and northeastern portions of the site consisting of clays two feet to three feet below the surface. A seasonal high water table also seems to predominate the site, with most soils exhibiting good drainage characteristics except in the lower areas.

Depth to ledge in conjunction with site topography significantly influences infrastructure design. Utility installation must anticipate considerable rock excavation. Considerable fill may also be required for final grading around structures and for roadway construction.

## REQUIRED INFRASTRUCTURE

The preliminary infrastructure design is based upon aforementioned topography, soil conditions, drainage analysis, traffic impact analysis and project layout criteria. The infrastructure design includes access road, sanitary sewer, water supply and site drainage facilities. The key design features are described in the following paragraphs.

### ROADWAY

The completed project will access the City's public road system at two (2) different locations. The first entrance will be located on the southwest side of Ray Street, approximately 570 feet from the centerline of Allen Avenue. The second entrance will be provided by extending Topsham Street on the southwest side of the site. Presently, Topsham Street is an unimproved paper street as designated by the City of Portland. Topsham Street is essentially the continuation of Gertrude Street from the intersection of Gertrude and Wadco Street at which time the City of Portland will require that Topsham Street be built to City standards. Upon its completion, Topsham Street will be dedicated to the City of Portland. The City of Portland will then assume all responsibility for the maintenance of the street and accompanying utilities.

The roadway within the site connecting Ray Street to Topsham Street will be a private roadway. Five primary driveways will branch from this roadway to the four building Areas, A through D. A series of horizontal curves were laid out to compliment topographic constraints as well as aesthetic considerations. Gradients along the roadway vary from .5% to 6%. Primary roadway geometry, as well as area driveway geometry, was designed in accordance with the City of Portland subdivision ordinances, and is in compliance with Portland City Fire Department requirements. Most buildings utilize assigned piggyback parking spaces, with two spaces (including garage) provided for each unit. Individual building driveways and parking areas conform to MDOT standards for minimum curb radii and turning radii.

Typical roadway sections for the different areas of the project are attached in Appendix B.

### SANITARY SEWER

All units will be serviced by a sanitary sewer system as illustrated on Figure 3 of the accompanying plan set. Due to site topography, depth of bedrock, and proximity to City of Portland sanitary sewer lines, all sewage from the site will be collected to one point within site. At this point it will be pumped into the City system on Ray Street. A letter from the City of Portland stating they will accept and treat the sewage generated by the development is attached in Appendix E.

Specifically, each building of attached units will internally collect its sewage to one point. Collection of building services to centralized locations will be achieved by gravity to the extent possible. Sewage will be directed to a central low point in Area A, where it will be pumped to a high point near Area B. From this point, all remaining collection will be by gravity to a low spot in the northeastern section of Area C. All sewage will then be pumped to a new manhole in Ray Street.

Due to site topographical constraints and shallowness of bedrock, extensive rock excavation may be encountered. To achieve necessary cover, insulation of many lines may be considered to minimize rock excavation.

#### WATER SUPPLY

Water supply will be provided by the Portland Water District by a water line extending through the property connecting to existing mains in Topsham Street and Ray Street as illustrated on Figure 3 of the accompanying plan set. A letter from the Portland Water District in Appendix E states they will service the development.

Each building of attached units will be serviced by one service lead which will be divided internally to each individual unit. Three fire hydrants have been provided for the project, as per City of Portland Fire Department recommendations.

As with the sanitary sewer installation, extensive rock excavation may be encountered. Similarly, insulation on privately owned lines may be considered to minimize rock excavation.

#### OTHER UTILITIES

Power, telephone and cable TV hookup will be provided by the respective utilities. All service will be underground, with trenching done in accordance with individual utility and City of Portland regulations.

#### GENERAL SITE DRAINAGE

The final site grading and planned drainage infrastructure are illustrated on Figure 2 of the accompanying plan set. Due to site topography and property constraints, primary site drainage will be accomplished by overland flow to created swales wherever possible. Where necessary to cross roadways, 12" culverts are proposed with 2 feet minimum cover over the top of the culvert. Where more substantial flows are involved and topography permits, a catch basin with underground piping will be utilized.

Roadway drainage will be accomplished in a similar manner, with maintainable open ditches on both sides of the roadway. Drainage will be

directed off-site to established drainage courses. Where necessary, detention basins and control structures will be constructed to limit post-development flow rates to pre-development levels (see Drainage Study section).

## DRAINAGE STUDY

### DESCRIPTION OF ANALYSIS

The development of a site will change its surface water runoff characteristics. In order to minimize the impact of increased surface water runoff volumes, pre-development and post-development analysis are necessary. For analytical purposes, the Ray Street site can be divided into five distinct existing and future drainage areas. This is illustrated in the accompanying plan set. The site is situated along a ridge which divides the runoff from the site into two (2) basic watersheds. Drainage Areas 1 and 3 make up approximately 85% of the site and drain easterly. Flow from Drainage Area 1 enters the City of Portland system on Ray Street, while drainage from Area 3 follows an undefined course beyond Ray Street towards Falmouth. Drainage Areas 2, 4 and 5 make up the remaining 15% of the site and drain southwesterly to the Fall Brook Interceptor, approximately 1/4 mile away.

The five areas have been analyzed for present and future runoff conditions. It is important to note that in post-development predictions, the five areas tend to change in tributary acreage due to project layout and final site grading.

The actual analysis was made utilizing a computer modeling technique developed by T. Y. Lin/Hunter-Ballew Associates for the City of Portland. This model primarily utilizes SCS runoff prediction techniques (TR-55) modified to reflect local conditions and made compatible with desk top computer equipment. This model was applied to the Fall Brook watershed in the City of Portland and was subjected to reasonable verification through field gaging. With this extensive model development and calibration to Southern Maine conditions, the program represents the best runoff predictive tool available.

The above analysis technique was applied to the proposed development site. Surface runoff projections were made utilizing a 10 year and 25 year, 24 hour, Type II storm as defined by SCS. Hydrographs were computed for both existing conditions and post-development conditions for the site. These hydrographs, as well as individual area input data, are provided in Appendix C.

### EXISTING CONDITIONS

Existing topography, soil conditions and vegetation greatly affect the existing site runoff characteristics. Definition of established drainage courses must also be carefully considered.

Drainage in Area 1 gathers in an undefined pattern toward the southeast corner of the site. Little flow from adjacent properties flows through the site, except from the backyards of abutters adjacent to the southeast corner. Runoff gathers in a broad pattern from higher portions of this area and works

its way to the large, low-lying southeastern corner. This area tends to be quite damp, and older vegetation appears to be dying while giving way to more water tolerant, noxious vegetation. There is an existing drainage swale between the properties of Gailey and Castonia which leads from this area. This, in turn, leads to a 12 foot long section of 12" pipe, which empties into a City catch basin on Ray Street.

Area 2 drains westward onto the property of F. S. Plummer, for which a 28 unit subdivision has recently been approved. The area drains well to an area with little or no slope, just prior to the property line. This topography has created a damp area devoid of vegetation just prior to the property line.

Area 3 has a relatively well defined path of drainage through it. Off-site drainage from approximately 2.2 acres west of the site enters the central portion of this area. From this point to an existing 18" culvert under Ray Street, the runoff gathers in a broad, well-defined swale. Standing water has been reported at a relatively low spot immediately preceding the culvert at Ray Street.

Areas 4 and 5 have little tributary area and drain southwest off the property with no problems. Drainage from these areas appears to be gathering on the north side of Topsham Street, where it would then flow southwest to the East Side Interceptor.

#### IMPACT OF DEVELOPMENT

As can be seen on the accompanying drawings, and explained further in the section General Site Drainage, site development will require substantial regrading. This will provide greater control over site runoff and will prevent water from ponding on the site.

Utilizing the aforementioned analysis technique and the conditions of each existing and future drainage area, a detailed evaluation was performed for overall site drainage. The following table summarizes the results of this evaluation:

Table 1 - Runoff Rates - All Areas with no Detention Facilities

Area No.	Existing			Post-Development		
	Area (AC)	10 Yr Storm (CFS)	25 Yr Storm (CFS)	Area (AC)	10 Yr Storm (CFS)	25 Yr Storm (CFS)
1	9.57	7.2	10.7	10.06	13.6	19.0
2	2.29	2.7	3.8	1.49	2.7	3.6
3	9.61	5.7	7.4	10.15	11.3	13.6
4	.56	1.6	2.1	.33	1.0	1.3
5	.15	.2	.3	.15	.2	.3
Sum	22.18	17.4	24.3	22.18	28.8	37.8

As seen from Table I, future runoff rates from Areas 2 and 4 will not exceed pre-development levels. Area 5 will be untouched by the proposed development; therefore, no change in runoff rates would be expected from this area. Post-development surface water runoff rates from Areas 1 and 3 will exceed pre-development levels.

REQUIRED DETENTION FACILITIES

In order to maintain post-development runoff rates at pre-development levels, some form of control must be implemented in Drainage Areas 1 and 3. As illustrated in the accompanying plan set, detention basins with flow control structures will be provided for Areas 1 and 3. Using the same modeling technique previously described, the effect of these detention areas on the flow rates leaving their respective areas can be seen in the following table:

Table II - Runoff Rates - Drainage Areas 1 and 3 with Detention

Area No.	Existing			Post-Development		
	Area (AC)	10 Yr Storm (CFS)	25 Yr Storm (CFS)	Area (AC)	10 Yr Storm (CFS)	25 Yr Storm (CFS)
1	9.57	7.2	10.7	10.06	4.8	5.3
2	2.29	2.7	3.8	1.49	2.7	3.6
3	9.61	5.7	7.4	10.15	5.0	5.6
4	.56	1.6	2.1	.33	1.0	1.3
5	.15	.2	.3	.15	.2	.3
Sum	22.18	17.4	24.3	22.18	13.7	16.1

From Table II it can be seen that post-development predicted flow rates are actually below existing values. All design input data and hydrographs can be found in Appendix C.

Proper design and construction of the basins and flow control structures are critical to insure the effectiveness of this method of control. In Area 1 this will be accomplished by the construction of a continuous earth berm extending along the southwest and northeast property lines in this area. The height of the top of the berm will be about elevation 82.30 feet. The berm would start ten feet inside the property line with 3:1 side slopes on either side. A control structure would be placed in the berm at the location of the existing drainage swale. This control structure would effectively store water behind the berm and limit flow into the existing swale to existing (pre-development) levels. Further illustration of the proposed flow control structure can be found in Appendix D. Analysis indicates that for a 25 year, 24 year, Type II storm, water levels would not exceed elevation 81.30 or 1.9 feet of depth (approximately 247,000 gallons). For this case, the basin would fully empty within 6 hours. On the abutters' side of the berm, regrading will be done to drain any runoff in this area down toward the existing swale in the southeast corner of the property.



The entire area which will act as a detention basin will have to be cleared, regraded and loamed, and seeded with an appropriate grass. The basin and control structure will have to be maintained to retain property drainage properties. Screening vegetation will be permitted on the berm in certain areas only. While it would be desirable to clean and perhaps rework the existing swale across the abutters' property to the existing City catch basin, the abutters' cooperation will be necessary. Further illustration of the proposed flow control structure can be found in Appendix D.

Area 3 will be handled with a similar type of arrangement. Some regrading will be required, but no constructed berm will be required given existing topography of Ray Street and the future roadway layout. Analysis indicates that for a 25 year, 24 hour, Type II storm, water levels will not exceed elevation 96.45 or 2.0 feet of depth (approximately 116,400 gallons). The basin will empty within 5 hours for a storm of this size and duration. The same clearing, grading and maintenance aspects which applied to Drainage Area 1 apply to this area as well.

#### CONCLUSIONS

Through properly designed site grading and drainage infrastructure, runoff from the site can be controlled to exit the site in a predictable manner along established courses. With property constructed detention facilities, water should fully drain from the site and will not flow at rates exceeding pre-development levels.

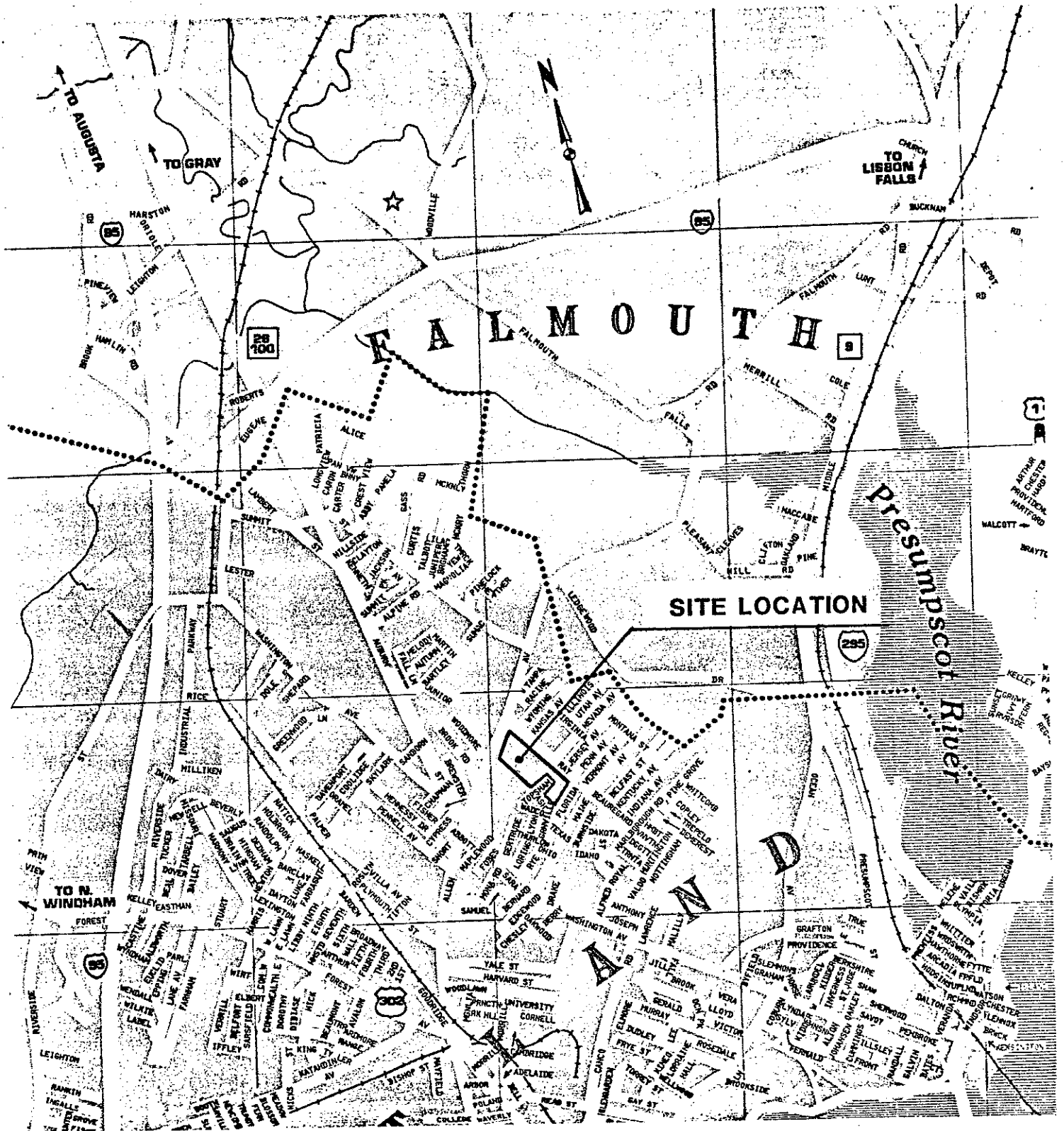
#### TRAFFIC IMPACT

The generation of added traffic and its impact on existing roadways is of concern in any development program. A traffic impact study has been performed and is attached to this report in Appendix G.

APPENDIX A

MAPS

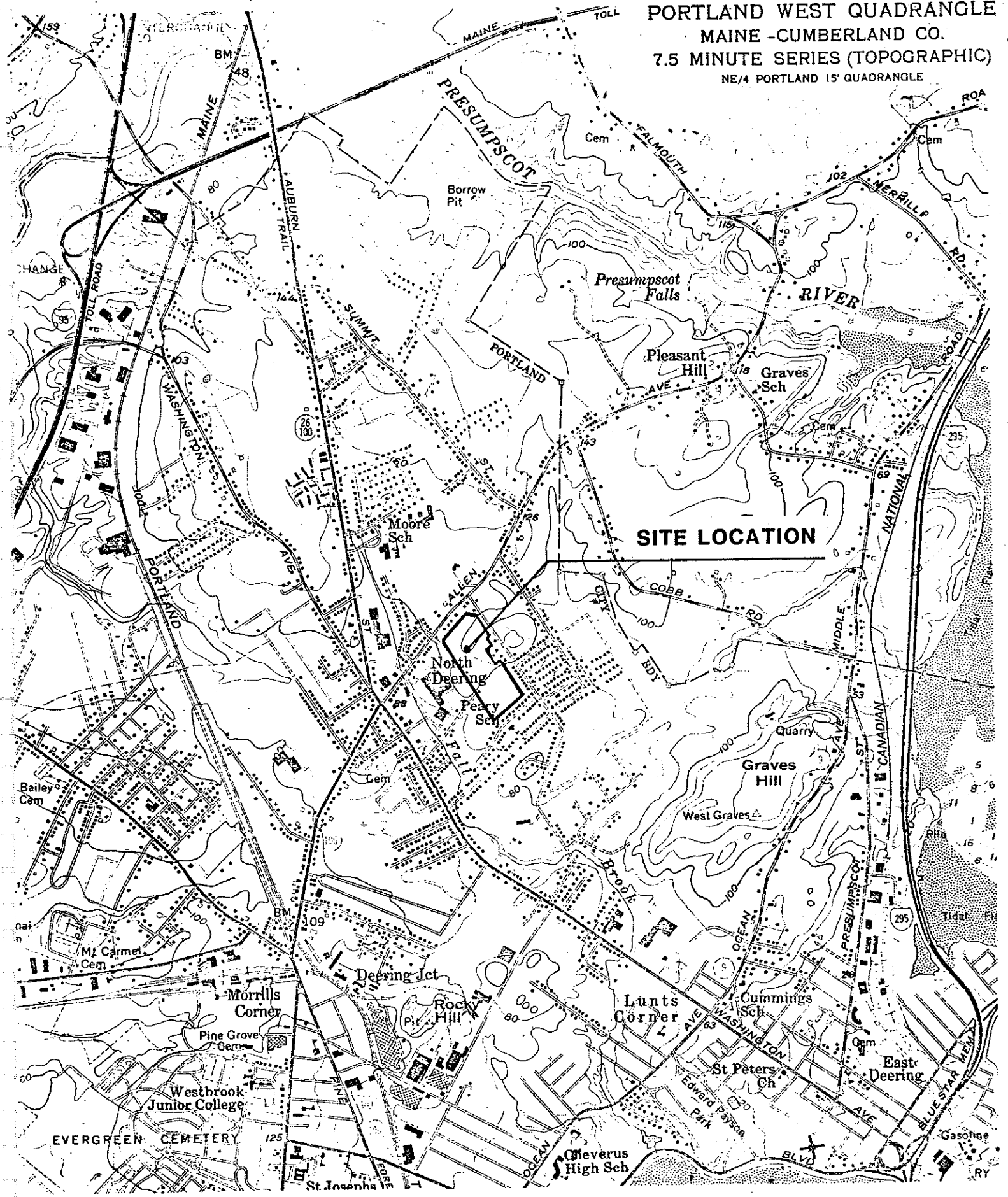
1. SITE LOCATION
2. USGS
3. SCS SOILS MAP



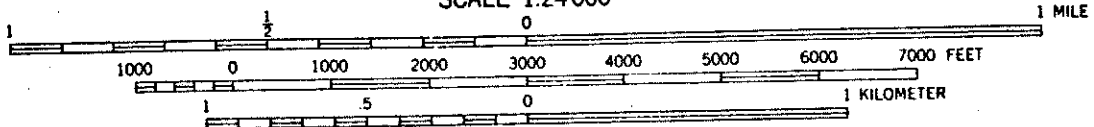
# GREATER PORTLAND

<p>AIRPORT </p> <p>HOSPITAL </p> <p>POST OFFICE </p>	<p>SCALE</p> <hr style="border: 0; border-top: 1px solid black; width: 100%;"/> <p>1 MILE 1 KILOMETER</p>	<p>CITY HALL </p> <p>SCHOOL, COLL. </p> <p>CIVIC CTR. </p>
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PORTLAND WEST QUADRANGLE  
MAINE - CUMBERLAND CO.  
7.5 MINUTE SERIES (TOPOGRAPHIC)  
NE/4 PORTLAND 15' QUADRANGLE



SCALE 1:24 000



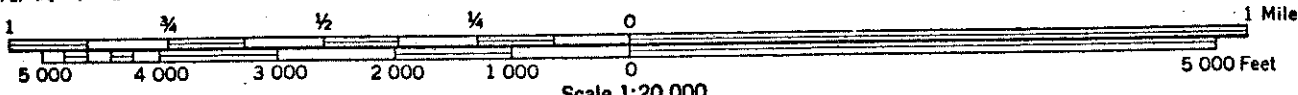


**SITE LOCATION**

**North Deering**

**QUARRY**

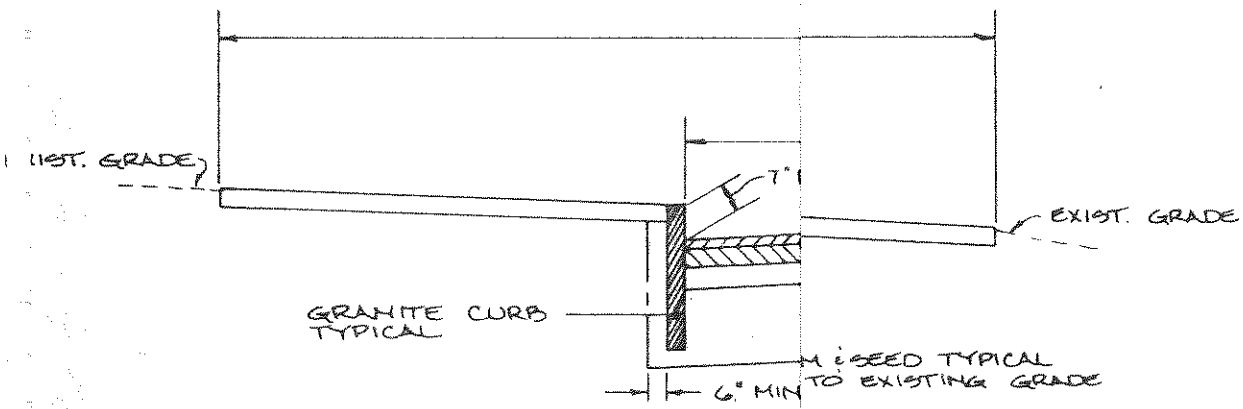
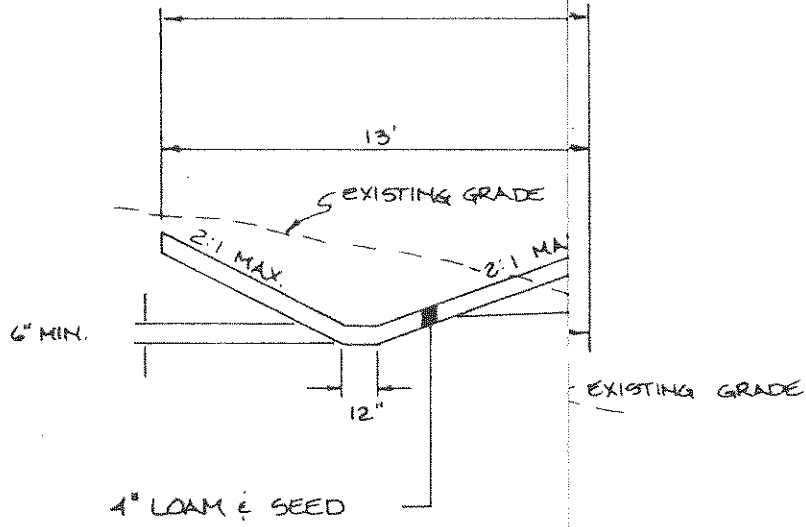
**QUARRY**



APPENDIX B  
ROADWAY SECTIONS

CUT SECTION

SECTION



APPENDIX C

DRAINAGE CALCULATIONS

Drainage computations are in the following order:

1. EXISTING BASIN INPUT DATA
2. FUTURE BASIN INPUT DATA
3. EXISTING VS. FUTURE, 10 YR STORM AND HYDROGRAPHS
4. EXISTING VS. FUTURE, 25 YR STORM AND HYDROGRAPHS
5. DETENTION BASIN HYDROGRAPHS AND DATA, 10 YR and 25 YR STORMS

NOTE: Figures shown in Table I of the report for Drainage Area 5 were computed by the rational method. TR-55 computer simulation does not allow for such small areas to be computed.



EXISTING  
7-16-85

Ray Street Development- Portland, Me.  
Area 1

A(acres)	Curve No.	Percent	Area (ac)
9.57			
A(sq.mi.)		.0150	
		2.00	.19
Fields			
A	30		
B	58		
C	71		
D	78	100.00	.19
Area Cn		100.00	.19
Forest		83.00	7.94
A	36		
B	60		
C	73	90.00	7.15
D	79	10.00	.79
Area CN		100.00	7.94
Wetland	77	15.00	1.44
Lawns			
A	44		
B	65		
C	77		
D	82		
Area CN			
Pavement			
1(in.dep.)	.10		
2	.15		
3	.20		
4	.30		
Depr. (in)			
Roofs			
Peak	.10		
Flat	.15		
Connected			
Urban(Direct)			
Depr.(in)			
Urban(Perv+Ind)			
CN(Perv+Ind)			
IAcoef(U)			
Rural		100.00	9.57
CN(Rural)			74.20
IAcoef(R)		.20	
TOTAL AREA		100.00	9.57
Area CN(D+U+R)			74.20
Max.Ret(in)			3.48
Length		880	
Top Elev.(MSL)		124	
Bot Elev.(MSL)		79	
Slope(%)			5.11
Lag adjustment			
Percent impervious			1.00
Percent piped			1.00
Percent wetland		15.00	1.54
SCS Unit Hydrograph (Urb.Perv.+Rural)			
Lag time(hr) **			.46
T Conc.(hr)			.76
UHpeak(cfs)			14.26
** $((L^{0.9}) * (MR + 1.0)^{0.7}) / (1900 * (S^{0.5})) * C1 * Cw$			

EXISTING  
7-16-85

Ray Street Development- Portland, Me.  
Area 2

=====			
A(acres)		2.29	
A(sq.mi.)		.0036	
	Curve No.	Percent	Area (ac)
Fields		3.00	.07
A	30		
B	58		
C	71	50.00	.03
D	78	50.00	.03
Area Cn		100.00	.07
Forest		85.00	1.95
A	36		
B	60		
C	73	90.00	1.75
D	79	10.00	.19
Area CN		100.00	1.95
Wetland	77	12.00	.27
Lawns			
A	44		
B	65		
C	77		
D	82		
Area CN			
Pavement			
1(in.dep.)	.10		
2	.15		
3	.20		
4	.30		
Depr. (in)			
Roofs			
Peak	.10		
Flat	.15		
Connected			
-----			
Urban(Direct)			
Depr.(in)			
Urban(Perv+Ind)			
CN(Perv+Ind)			
IAcoef(U)			
Rural	100.00		2.29
CN(Rural)			74.04
IAcoef(R)	.20		
-----			
TOTAL AREA	100.00		2.29
Area CN(D+U+R)			74.04
Max.Ret(in)			3.51
Length	410		
Top Elev.(MSL)	124		
Bot Elev.(MSL)	105		
Slope(%)			4.83
-----			
Lag adjustment			
Percent impervious			1.00
Percent piped			1.00
Percent wetland	12.00		1.54
-----			
SCS Unit Hydrograph (Urb.Perv.+Rural)			
Lag time(hr) **			.24
T Conc.(hr)			.40
UHpeak(cfs)			6.56
**	((L^0.9)*(MR+1.0)^0.7)/(1900*(S^0.5))*C1*Cw		

EXISTING Ray Street Development- Portland, Me.  
7-16-85 Area 3

=====			
A(acres)		9.61	
A(sq.mi.)		.0150	
	Curve No.	Percent	Area (ac)
Fields		12.00	1.15
A	30		
B	58		
C	71	50.00	.58
D	78	50.00	.58
Area Cn		100.00	1.15
Forest		77.50	7.45
A	36		
B	60		
C	73	90.00	6.70
D	79	10.00	.74
Area CN		100.00	7.45
Wetland	77	10.50	1.01
Lawns			
A	44		
B	65		
C	77		
D	82		
Area CN			
Pavement			
1(in.dep.)	.10		
2	.15		
3	.20		
4	.30		
Depr. (in)			
Roofs			
Peak	.10		
Flat	.15		
Connected			
-----			
Urban(Direct)			
Depr.(in)			
Urban(Perv+Ind)			
CN(Perv+Ind)			
IAcoef(U)			
Rural		100.00	9.61
CN(Rural)			74.07
IAcoef(R)		.20	
-----			
TOTAL AREA		100.00	9.61
Area CN(D+U+R)			74.07
Max.Ret(in)			3.50
Length		740	
Top Elev.(MSL)		124	
Bot Elev.(MSL)		95	
Slope(%)			4.04
-----			
Lag adjustment			
Percent impervious			1.00
Percent piped			1.00
Percent wetland		10.50	1.54
-----			
SCS Unit Hydrograph (Urb.Perv.+Rural)			
Lag time(hr) **			.44
T Conc.(hr)			.74
UHpeak(cfs)			14.82
**	((L^0.9)*(MR+1.0)^0.7)/(1900*(S^0.5))*C1*Cw		

EXISTING Ray Street Development- Portland, Me.  
7-16-85 Area 4

=====			
A(acres)		.56	
A(sq.mi.)		.0009	
	Curve No.	Percent	Area (ac)
Fields		5.00	.03
A	30		
B	58		
C	71	100.00	.03
D	78		
Area Cn		100.00	.03
Forest		95.00	.53
A	36		
B	60		
C	73	50.00	.27
D	79	50.00	.27
Area CN		100.00	.53
Wetland	77		
Lawns			
A	44		
B	65		
C	77		
D	82		
Area CN			
Pavement			
1(in.dep.)	.10		
2	.15		
3	.20		
4	.30		
Depr. (in)			
Roofs			
Peak	.10		
Flat	.15		
Connected			
-----			
Urban(Direct)			
Depr.(in)			
Urban(Perv+Ind)			
CN(Perv+Ind)			
IAcoef(U)			
Rural		100.00	.56
CN(Rural)			75.75
IAcoef(R)		.20	
-----			
TOTAL AREA		100.00	.56
Area CN(D+U+R)			75.75
Max.Ret(in)			3.20
Length		180	
Top Elev.(MSL)		105	
Bot Elev.(MSL)		91	
Slope(%)			7.94
-----			
Lag adjustment			1.00
Percent impervious			1.00
Percent piped			1.00
Percent wetland			1.00
-----			
SCS Unit Hydrograph (Urb.Perv.+Rural)			.05
Lag time(hr) **			.09
T Conc.(hr)			6.98
UHpeak(cfs)			
** $((L^{0.9}) * (MR + 1.0)^{0.7}) / (1900 * (S^{0.5})) * C1 * Cw$			

EXISTING Ray Street Development- Portland, Me.  
7-16-85 Area 5

A(acres)		.15	
A(sq.mi.)		.0002	
	Curve No.	Percent	Area (ac)
<b>Fields</b>			
A	30		
B	58		
C	71		
D	78		
Area Cn			
Forest		100.00	.15
A	36		
B	60		
C	73	100.00	.15
D	79		
Area CN		100.00	.15
Wetland	77		
<b>Lawns</b>			
A	44		
B	65		
C	77		
D	82		
Area CN			
<b>Pavement</b>			
1(in.dep.)	.10		
2	.15		
3	.20		
4	.30		
Depr. (in)			
<b>Roofs</b>			
Peak	.10		
Flat	.15		
Connected			
-----			
Urban(Direct)			
Depr.(in)			
Urban(Perv+Ind)			
CN(Perv+Ind)			
IAcoef(U)			
Rural		100.00	.15
CN(Rural)			73.00
IAcoef(R)		.20	
-----			
TOTAL AREA		100.00	.15
Area CN(D+U+R)			73.00
Max.Ret(in)			3.70
Length		115	
Top Elev.(MSL)		110	
Bot Elev.(MSL)		99	
Slope(%)			9.57
-----			
<b>Lag adjustment</b>			
Percent impervious			1.00
Percent piped			1.00
Percent wetland			1.00
-----			
<b>SCS Unit Hydrograph (Urb.Perv.+Rural)</b>			
Lag time(hr) **			.04
T Conc.(hr)			.06
UHpeak(cfs)			2.84
**	$((L^{0.9}) * (MR+1.0)^{0.7}) / (1900 * (S^{0.5})) * C1 * Cw$		

=====			
A(acres)		10.06	
A(sq.mi.)		.0157	
	Curve No.	Percent	Area (ac)
Fields		11.00	1.11
A	30		
B	58		
C	71	50.00	.55
D	78	50.00	.55
Area Cn		100.00	1.11
Forest		28.00	2.82
A	36		
B	60		
C	73	90.00	2.54
D	79	10.00	.28
Area CN		100.00	2.82
Wetland	77	4.90	.49
Lawns		29.80	3.00
A	44		
B	65	50.00	1.50
C	77	50.00	1.50
D	82		
Area CN		100.00	3.00
Pavement		13.30	1.34
1(in.dep.)	.10		
2	.15	100.00	1.34
3	.20		
4	.30		
Depr. (in)		100.00	1.34
Roofs		13.00	1.31
Peak	.10	100.00	1.31
Flat	.15		
Connected			
-----			
Urban(Direct)		13.30	1.34
Depr.(in)			.15
Urban(Perv+Ind)		42.80	4.31
CN(Perv+Ind)			78.29
IAcoef(U)			.13
Rural		43.90	4.42
CN(Rural)			74.21
IAcoef(R)		.20	
-----			
TOTAL AREA		100.00	10.06
Area CN(D+U+R)			79.12
Max.Ret(in)			2.64
Length		910	
Top Elev.(MSL)		124	
Bot Elev.(MSL)		79	
Slope(%)			4.95
-----			
Lag adjustment			
Percent impervious		13.30	.92
Percent piped		12.00	.93
Percent wetland		4.90	1.35
-----			
SCS Unit Hydrograph (Urb.Perv.+Rural)			
Lag time(hr) **			.31
T Conc.(hr)			.52
UHpeak(cfs)			22.15
**	$((L^{0.9}) * (MR + 1.0)^{0.7}) / (1900 * (S^{0.5})) * C1 * Cw$		

FUTURE  
7-16-85

Ray Street Development- Portland, Me.  
Area 2F

=====			
A(acres)		1.49	
A(sq.mi.)		.0023	
	Curve No.	Percent	Area (ac)
Fields		14.00	.21
A	30		
B	58		
C	71	50.00	.10
D	78	50.00	.10
Area Cn		100.00	.21
Forest		20.00	.30
A	36		
B	60		
C	73	90.00	.27
D	79	10.00	.03
Area CN		100.00	.30
Wetland	77	3.00	.04
Lawns		30.00	.45
A	44		
B	65	50.00	.22
C	77	50.00	.22
D	82		
Area CN		100.00	.45
Pavement		20.00	.30
1(in.dep.)	.10		
2	.15	100.00	.30
3	.20		
4	.30		
Depr. (in)		100.00	.30
Roofs		13.00	.19
Peak	.10	100.00	.19
Flat	.15		
Connected			
-----			
Urban(Direct)		20.00	.30
Depr.(in)			.15
Urban(Perv+Ind)		43.00	.64
CN(Perv+Ind)			78.26
IAcoef(U)			.13
Rural		37.00	.55
CN(Rural)			74.22
IAcoef(R)		.20	
-----			
TOTAL AREA		100.00	1.49
Area CN(D+U+R)			80.71
Max.Ret(in)			2.39
Length		460	
Top Elev.(MSL)		124	
Bot Elev.(MSL)		105	
Slope(%)			4.30
-----			
Lag adjustment			
Percent impervious		20.00	.88
Percent piped			1.00
Percent wetland		3.00	1.28
-----			
SCS Unit Hydrograph (Urb.Perv.+Rural)			
Lag time(hr) **			.17
T Conc.(hr)			.28
UHpeak(cfs)			6.04

FUTURE  
7-16-85

Ray Street Development- Portland, Me.  
Area 3F

	Curve No.	Percent	Area (ac)
A(acres)		10.15	
A(sq.mi.)		.0159	
Fields		21.65	2.20
A	30		
B	58		
C	71	50.00	1.10
D	78	50.00	1.10
Area Cn		100.00	2.20
Forest		32.90	3.34
A	36		
B	60		
C	73	90.00	3.01
D	79	10.00	.33
Area CN		100.00	3.34
Wetland	77	6.25	.63
Lawns		19.10	1.94
A	44		
B	65	50.00	.97
C	77	50.00	.97
D	82		
Area CN		100.00	1.94
Pavement		11.60	1.18
1(in.dep.)	.10		
2	.15	100.00	1.18
3	.20		
4	.30		
Depr. (in)		100.00	1.18
Roofs		8.50	.86
Peak	.10	100.00	.86
Flat	.15		
Connected			
Urban(Direct)		11.60	1.18
Depr.(in)			.15
Urban(Perv+Ind)		27.60	2.80
CN(Perv+Ind)			78.39
IAcoef(U)			.13
Rural		60.80	6.17
CN(Rural)			74.27
IAcoef(R)		.20	
TOTAL AREA		100.00	10.15
Area CN(D+U+R)			78.16
Max.Ret(in)			2.79
Length		720	
Top Elev.(MSL)		124	
Bot Elev.(MSL)		95	
Slope(%)			4.15
Lag adjustment			
Percent impervious		11.60	.93
Percent piped		10.00	.94
Percent wetland		6.25	1.39
SCS Unit Hydrograph (Urb.Perv.+Rural)			
Lag time(hr) **			.30
T Conc.(hr)			.49
UHpeak(cfs)			23.39
** $((L^{0.9}) * (MR+1.0)^{0.7}) / (1900 * (S^{0.5})) * C1 * Cw$			



A(acres)	Curve No.	Percent	Area (ac)
.33			
A(sq.mi.)			
.0005			
		17.50	.06
Fields			
A	30		
B	58		
C	71	100.00	.06
D	78		
Area Cn		100.00	.06
Forest		52.20	.17
A	36		
B	60		
C	73	100.00	.17
D	79		
Area CN		100.00	.17
Wetland	77		
Lawns			
A	44		
B	65		
C	77		
D	82		
Area CN			
Pavement		30.30	.10
1(in.dep.)	.10		
2	.15	100.00	.10
3	.20		
4	.30		
Depr. (in)		100.00	.10
Roofs			
Peak	.10		
Flat	.15		
Connected			
Urban(Direct)		30.30	.10
Depr. (in)			.15
Urban(Perv+Ind)			
CN(Perv+Ind)			
IAcoef(U)			
Rural		69.70	.23
CN(Rural)			72.50
IAcoef(R)		.20	
TOTAL AREA		100.00	.33
Area CN(D+U+R)			80.23
Max.Ret(in)			2.46
Length		190	
Top Elev.(MSL)		98	
Bot Elev.(MSL)		91	
Slope(%)			3.68
Lag adjustment			
Percent impervious		30.30	.82
Percent piped			1.00
Percent wetland			1.00
SCS Unit Hydrograph (Urb.Perv.+Rural)			
Lag time(hr) **			.06
T Conc.(hr)			.10
UHpeak(cfs)			3.73
** $((L^{0.9}) * (MR+1.0)^{0.7}) / (1900 * (S^{0.5})) * C1 * Cw$			

FUTURE Ray Street Development- Portland, Me.  
7-16-85 Area 5F

A(acres)		.15	
A(sq.mi.)		.0002	
	Curve No.	Percent	Area (ac)
<b>Fields</b>			
A	30		
B	58		
C	71		
D	78		
Area Cn			
Forest		100.00	.15
A	36		
B	60		
C	73	100.00	.15
D	79		
Area CN		100.00	.15
Wetland	77		
Lawns			
A	44		
B	65		
C	77		
D	82		
Area CN			
Pavement			
1(in.dep.)	.10		
2	.15		
3	.20		
4	.30		
Depr. (in)			
Roofs			
Peak	.10		
Flat	.15		
Connected			
-----			
Urban(Direct)			
Depr.(in)			
Urban(Perv+Ind)			
CN(Perv+Ind)			
IAcoef(U)			
Rural		100.00	.15
CN(Rural)			73.00
IAcoef(R)		.20	
-----			
TOTAL AREA		100.00	.15
Area CN(D+U+R)			73.00
Max.Ret(in)			3.70
Length		115	
Top Elev.(MSL)		110	
Bot Elev.(MSL)		99	
Slope(%)			9.57
-----			
Lag adjustment			
Percent impervious			1.00
Percent piped			1.00
Percent wetland			1.00
-----			
SCS Unit Hydrograph (Urb.Perv.+Rural)			
Lag time(hr) **			.04
T Conc.(hr)			.06
UHpeak(cfs)			2.84
** ((L^0.9)*(MR+1.0)^0.7)/(1900*(S^0.5))*C1*Cw			

Rain data:  
Name: 10SHORT

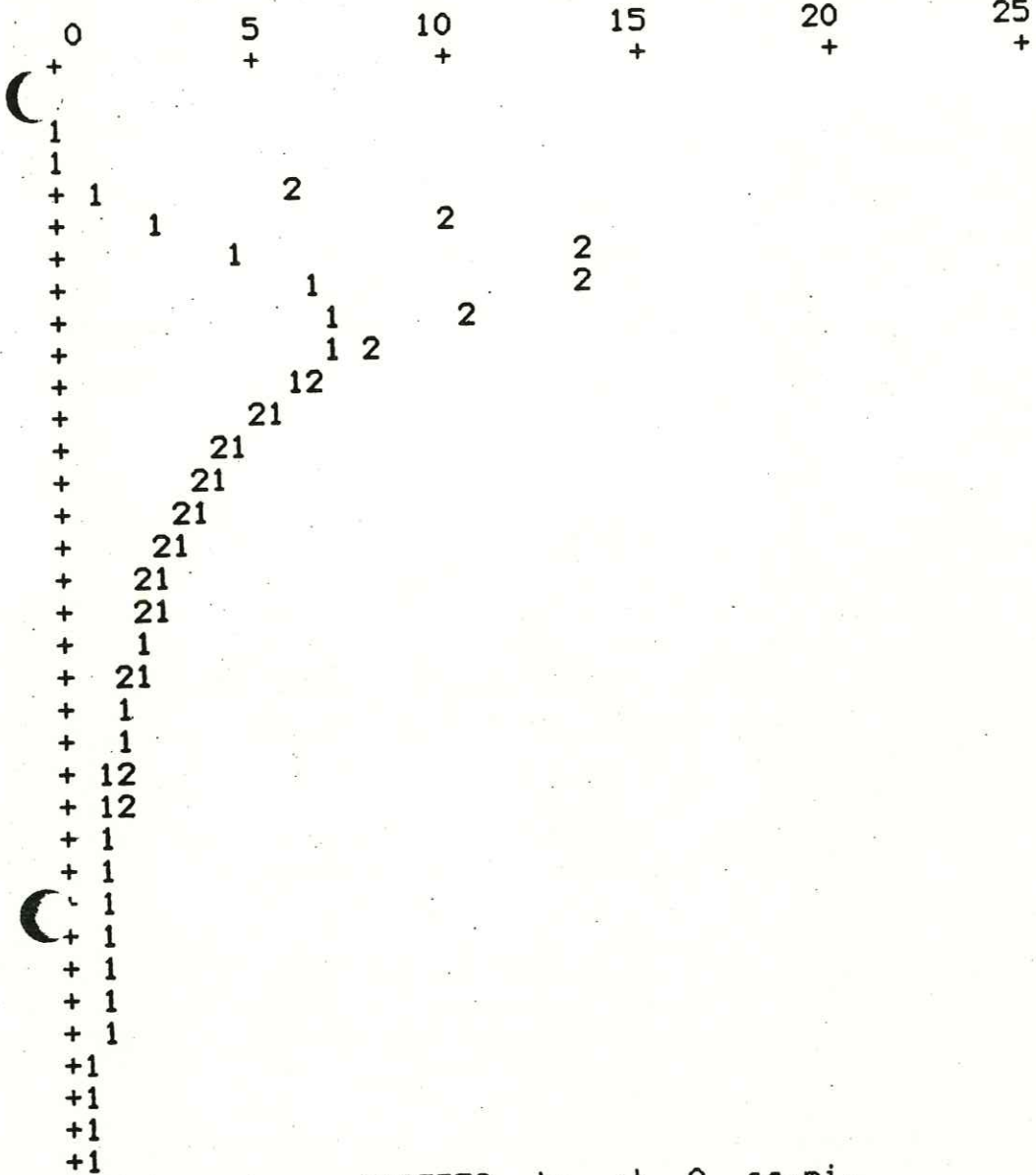
107 YEAR STORM

Rainfall:  
No. of increments: 48

Increment 1 : .0175 in  
Increment 2 : .0175 in  
Increment 3 : .0175 in  
Increment 4 : .0175 in  
Increment 5 : .02 in  
Increment 6 : .02 in  
Increment 7 : .02 in  
Increment 8 : .02 in  
Increment 9 : .0275 in  
Increment 10 : .0275 in  
Increment 11 : .0275 in  
Increment 12 : .0275 in  
Increment 13 : .035 in  
Increment 14 : .035 in  
Increment 15 : .035 in  
Increment 16 : .035 in  
Increment 17 : .055 in  
Increment 18 : .055 in  
Increment 19 : .055 in  
Increment 20 : .055 in  
Increment 21 : .4275 in  
Increment 22 : .4275 in  
Increment 23 : .4275 in  
Increment 24 : .4275 in  
Increment 25 : .08 in  
Increment 26 : .08 in  
Increment 27 : .08 in  
Increment 28 : .08 in  
Increment 29 : .0425 in  
Increment 30 : .0425 in  
Increment 31 : .0425 in  
Increment 32 : .0425 in  
Increment 33 : .03 in  
Increment 34 : .03 in  
Increment 35 : .03 in  
Increment 36 : .03 in  
Increment 37 : .0225 in  
Increment 38 : .0225 in  
Increment 39 : .0225 in  
Increment 40 : .0225 in  
Increment 41 : .02 in  
Increment 42 : .02 in  
Increment 43 : .02 in  
Increment 44 : .02 in  
Increment 45 : .0175 in  
Increment 46 : .0175 in  
Increment 47 : .0175 in  
Increment 48 : .0175 in

Time interval: .125 hrs

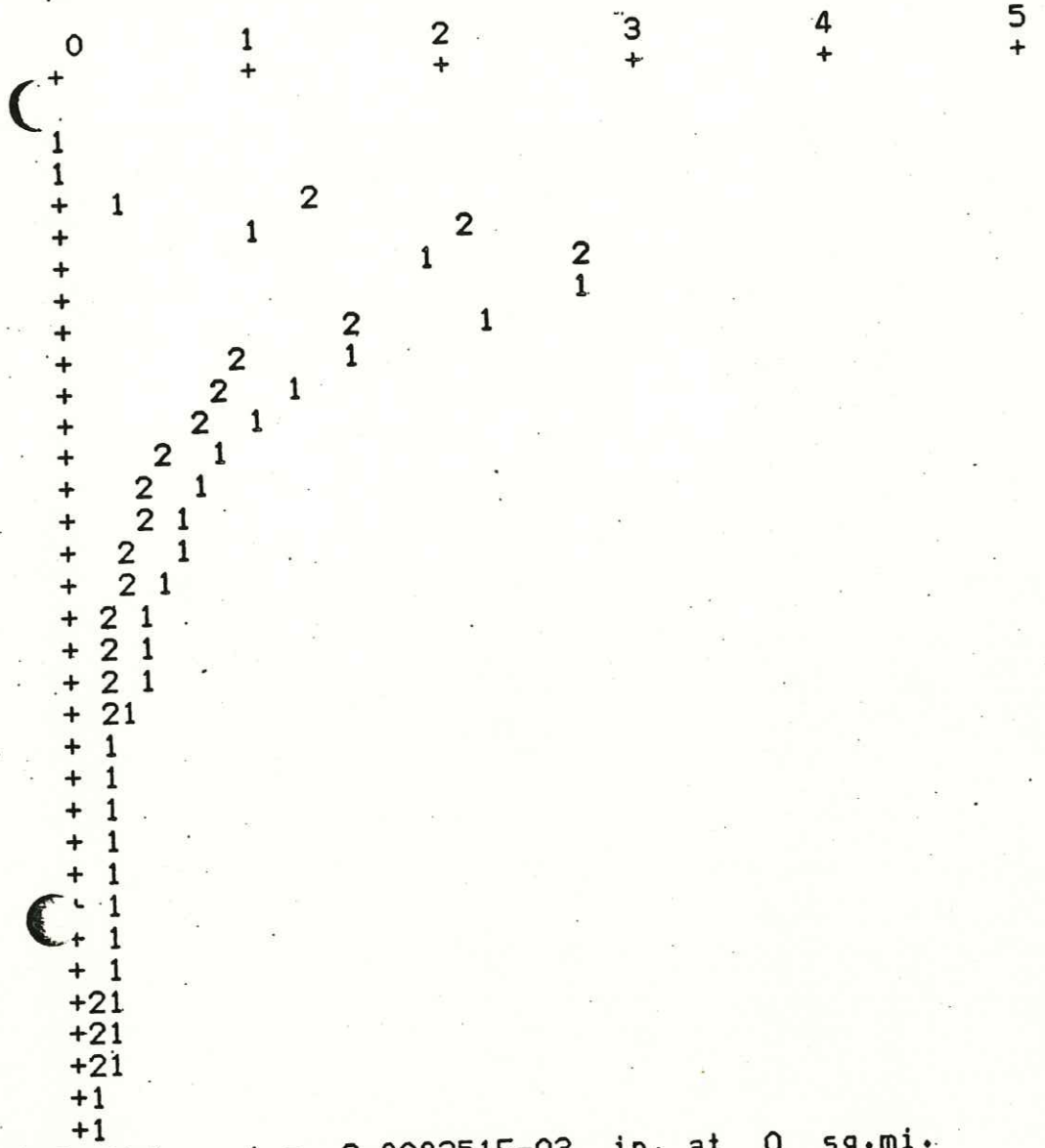
FLOW (CFS)



TIME	FLOW1	FLOW2
0.0	0.0	0.0
0.1	0.0	0.0
0.3	0.0	0.0
3.0	0.8	5.9
3.1	2.4	10.0
3.2	4.7	*13.6
3.4	6.7	13.5
3.5	*7.2	10.7
3.6	6.8	8.1
3.8	6.0	6.3
3.9	5.3	4.9
4.0	4.6	3.9
4.2	4.0	3.3
4.3	3.5	2.8
4.4	3.1	2.5
4.5	2.7	2.1
4.7	2.4	1.9
4.8	2.1	1.8
4.9	1.9	1.7
5.0	1.6	1.6
5.2	1.4	1.6
5.3	1.2	1.6
5.4	1.1	1.5
5.6	1.0	1.2
5.7	0.9	1.1
5.8	0.8	0.9
5.9	0.8	0.9
6.1	0.8	0.8
6.2	0.8	0.8
6.3	0.8	0.8
6.5	0.7	0.7
6.6	0.6	0.4
6.7	0.5	0.2
6.9	0.3	0.1

R.O. Volume 1 = .0157573 in. at 0 sq.mi.  
 R.O. Volume 2 = .0225277 in. at 0 sq.mi.  
 RMS = 226.61

FLOW (CFS)



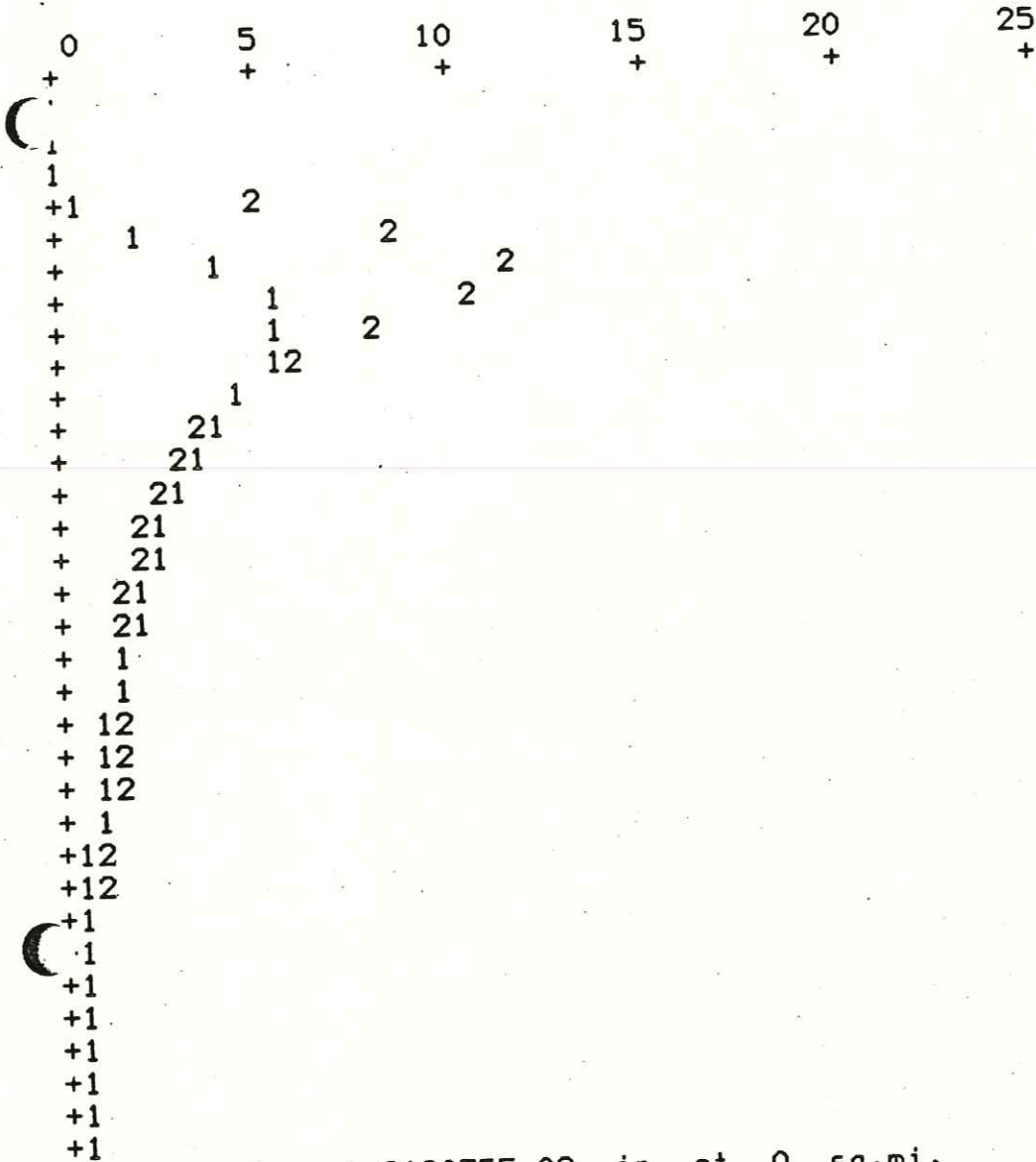
TIME	FLOW1	FLOW2
0.0	0.0	0.0
0.1	0.0	0.0
0.3	0.0	0.0
2.9	0.3	1.3
3.0	1.0	2.1
3.1	1.9	2.7
3.2	*2.7	*2.7
3.4	2.2	1.5
3.5	1.5	0.9
3.6	1.2	0.8
3.8	1.0	0.7
3.9	0.8	0.5
4.0	0.7	0.4
4.2	0.6	0.4
4.3	0.6	0.3
4.4	0.5	0.3
4.5	0.4	0.2
4.7	0.4	0.2
4.8	0.4	0.2
4.9	0.3	0.2
5.0	0.2	0.2
5.2	0.2	0.2
5.3	0.2	0.2
5.4	0.2	0.2
5.6	0.2	0.2
5.7	0.2	0.2
5.8	0.2	0.2
5.9	0.2	0.2
6.1	0.2	0.1
6.2	0.2	0.1
6.3	0.2	0.1
6.5	0.1	0.0
6.6	0.1	0.0

R.O. Volume 1 = 3.808351E-03 in. at 0 sq.mi.  
 R.O. Volume 2 = 3.788202E-03 in. at 0 sq.mi.  
 RMS = 4.480002

Output file 1: C:B3.OUT Comments: BASIN 3 EXISTING  
 Output file 2: C:B3F.OUT Comments: BASIN 3 FUTURE

19 YR STSRG.

FLOW (CFS)



TIME	FLOW1	FLOW2
0.0	0.0	0.0
0.1	0.0	0.0
0.3	0.0	0.0
3.0	0.7	5.2
3.1	2.0	8.5
3.2	3.9	11.3
3.4	5.4	10.7
3.5	5.7	8.2
3.6	5.3	6.0
3.8	4.7	4.7
3.9	4.1	3.7
4.0	3.5	2.9
4.2	3.0	2.4
4.3	2.6	2.1
4.4	2.3	1.9
4.5	2.0	1.6
4.7	1.8	1.5
4.8	1.6	1.4
4.9	1.4	1.3
5.0	1.2	1.3
5.2	1.0	1.3
5.3	0.9	1.3
5.4	0.8	1.1
5.6	0.7	0.9
5.7	0.7	0.8
5.8	0.6	0.7
5.9	0.6	0.7
6.1	0.6	0.7
6.2	0.6	0.6
6.3	0.6	0.6
6.5	0.6	0.5
6.6	0.5	0.3
6.7	0.4	0.2

R.O. Volume 1 = 1.219075E-02 in. at 0 sq.mi.  
 R.O. Volume 2 = .0182962 in. at 0 sq.mi.  
 RMS = 154.2



Rain data:

Name: 25SHORT

25 YE STORM

Rainfall:

No. of increments: 48

Increment 1 : .0225 in  
Increment 2 : .0225 in  
Increment 3 : .0225 in  
Increment 4 : .0225 in  
Increment 5 : .025 in  
Increment 6 : .025 in  
Increment 7 : .025 in  
Increment 8 : .025 in  
Increment 9 : .0325 in  
Increment 10 : .0325 in  
Increment 11 : .0325 in  
Increment 12 : .0325 in  
Increment 13 : .0425 in  
Increment 14 : .0425 in  
Increment 15 : .0425 in  
Increment 16 : .0425 in  
Increment 17 : .065 in  
Increment 18 : .065 in  
Increment 19 : .065 in  
Increment 20 : .065 in  
Increment 21 : .5125 in  
Increment 22 : .5125 in  
Increment 23 : .5125 in  
Increment 24 : .5125 in  
Increment 25 : 9.749999E-02 in  
Increment 26 : 9.749999E-02 in  
Increment 27 : 9.749999E-02 in  
Increment 28 : 9.749999E-02 in  
Increment 29 : .05 in  
Increment 30 : .05 in  
Increment 31 : .05 in  
Increment 32 : .05 in  
Increment 33 : .035 in  
Increment 34 : .035 in  
Increment 35 : .035 in  
Increment 36 : .035 in  
Increment 37 : .0275 in  
Increment 38 : .0275 in  
Increment 39 : .0275 in  
Increment 40 : .0275 in  
Increment 41 : .025 in  
Increment 42 : .025 in  
Increment 43 : .025 in  
Increment 44 : .025 in  
Increment 45 : .02 in  
Increment 46 : .02 in  
Increment 47 : .02 in  
Increment 48 : .02 in

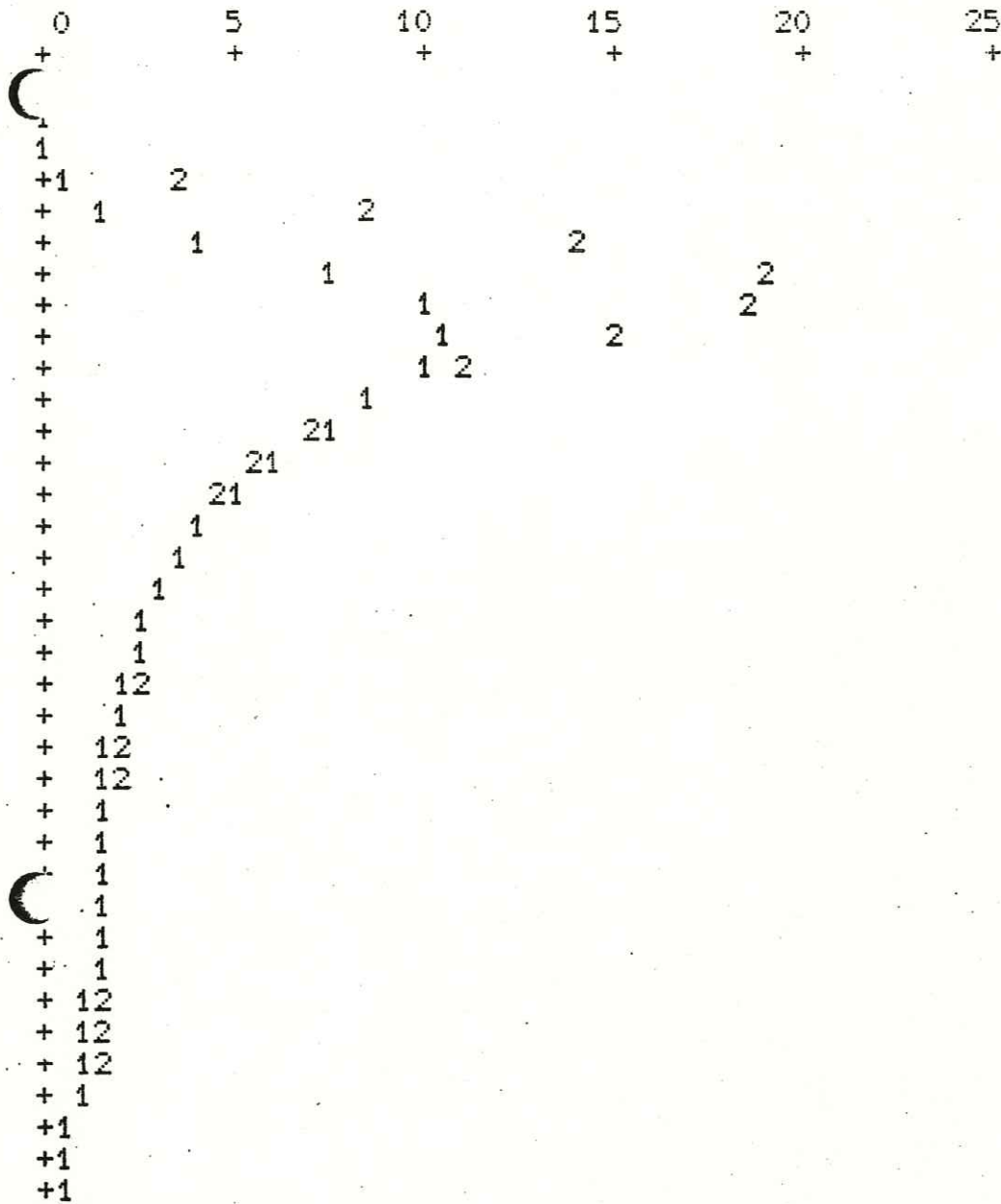
Time interval: .125 hrs



Output file 1: C:\B1.OUT Comments: BASIN 1 EXISTING  
 Output file 2: C:\B1F.OUT Comments: BASIN 1 FUTURE

25 Yr Storm

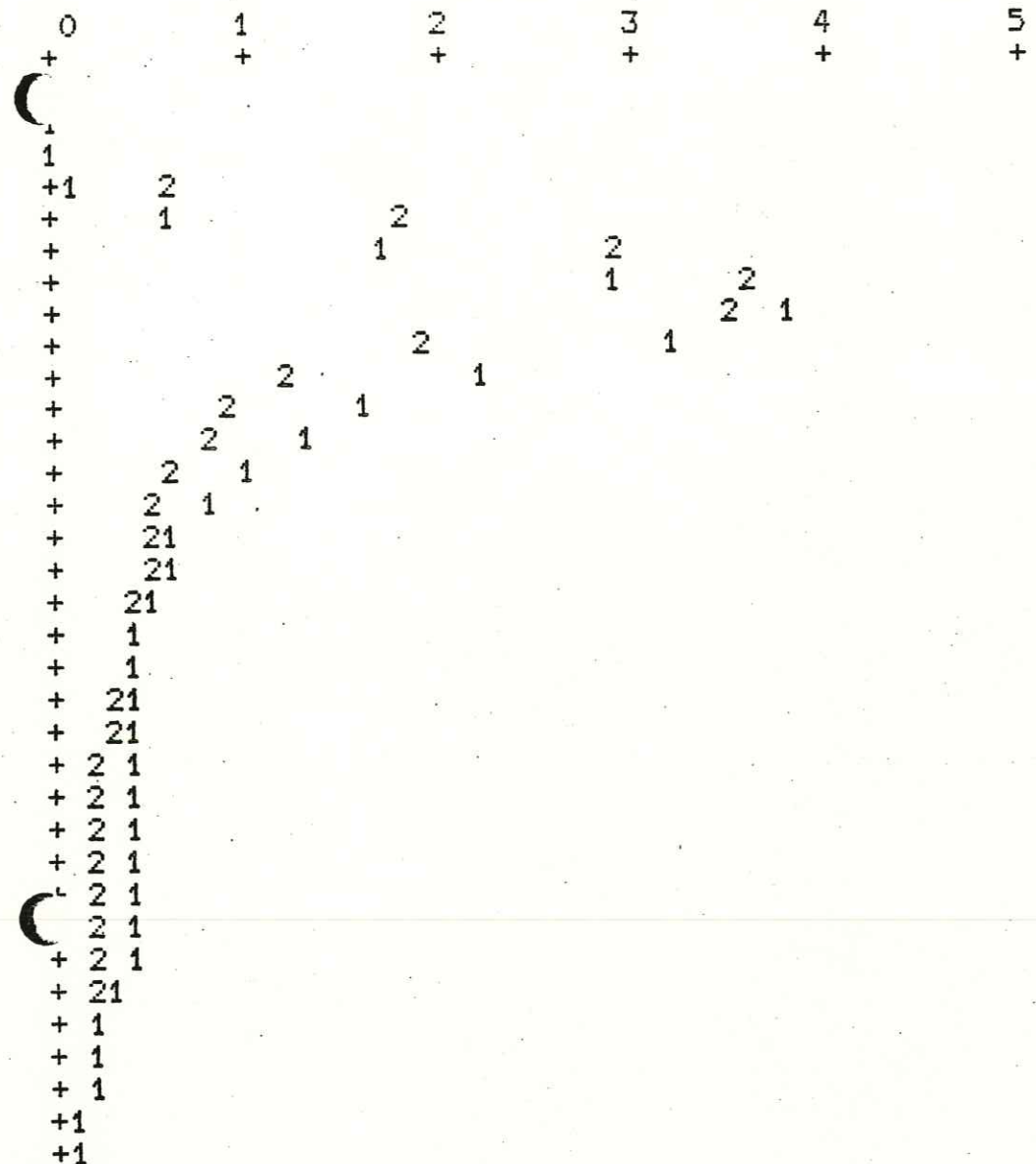
FLOW (CFS)



TIME	FLOW1	FLOW2
0.0	0.0	0.0
0.1	0.0	0.0
0.3	0.0	0.0
2.9	0.4	3.6
3.0	1.7	8.6
3.1	4.2	14.2
3.2	7.6	19.0*
3.4	10.2	18.7
3.5	*10.7	14.8
3.6	9.9	11.2
3.8	8.7	8.7
3.9	7.4	6.9
4.0	6.2	5.4
4.2	5.1	4.5
4.3	4.2	3.9
4.4	3.6	3.4
4.5	3.1	3.0
4.7	2.6	2.7
4.8	2.3	2.6
4.9	2.0	2.4
5.0	1.9	2.1
5.2	1.7	1.9
5.3	1.7	1.8
5.4	1.6	1.7
5.6	1.6	1.7
5.7	1.6	1.6
5.8	1.6	1.6
5.9	1.5	1.6
6.1	1.4	1.6
6.2	1.2	1.6
6.3	1.1	1.6
6.5	1.0	1.3
6.6	0.8	0.9
6.7	0.6	0.5
6.9	0.4	0.3
7.0	0.3	0.1

R.O. Volume 1 = .0222456 in. at 0 sq.mi.  
 R.O. Volume 2 = 3.240121E-02 in. at 0 sq.mi.  
 RMS = 380.9401

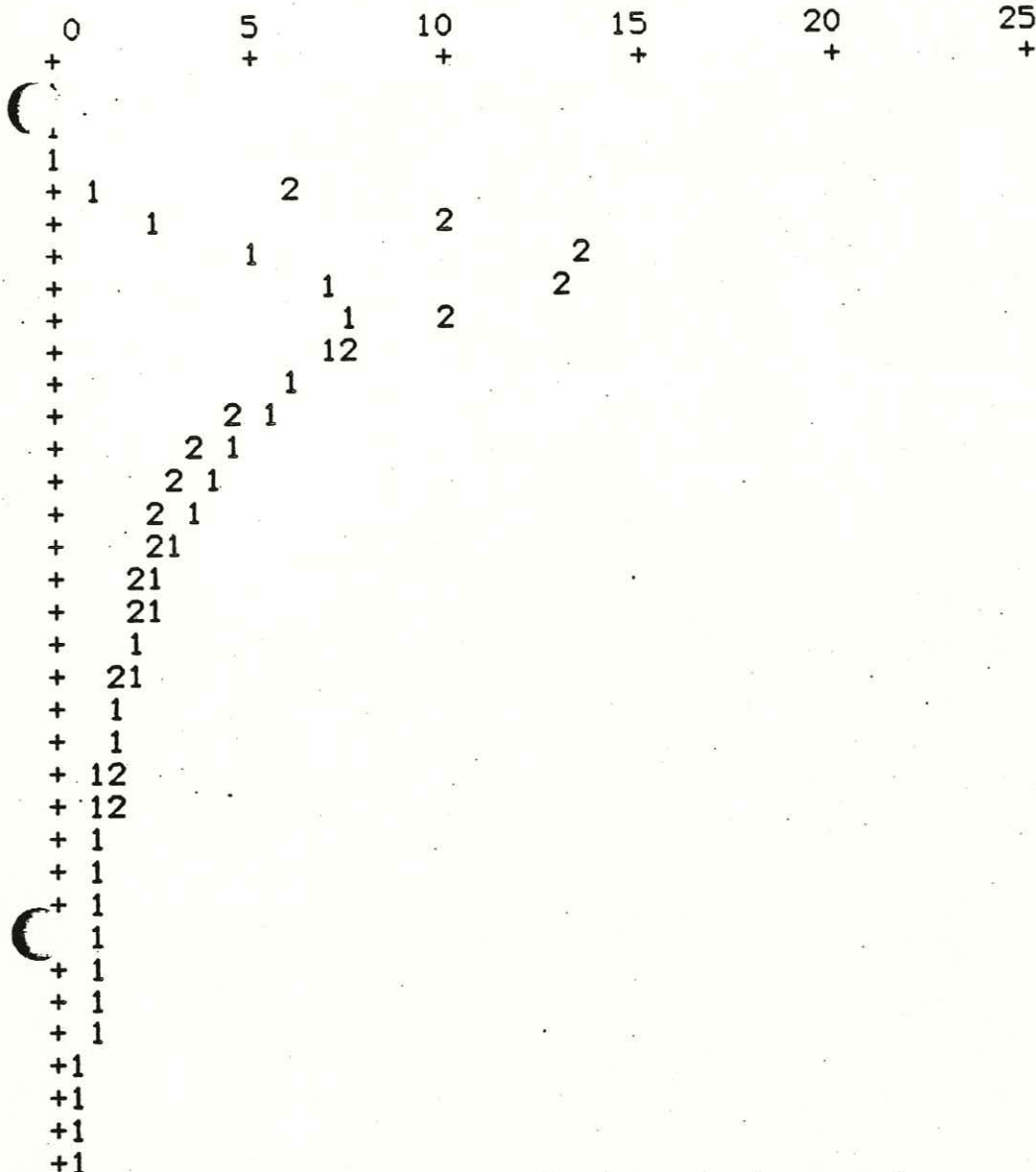
FLOW (CFS)



TIME	FLOW1	FLOW2
0.0	0.0	0.0
0.1	0.0	0.0
0.3	0.0	0.0
2.7	0.1	0.6
2.9	0.6	1.8
3.0	1.7	2.9
3.1	2.9	3.6
3.2	3.8	3.5
3.4	3.2	1.9
3.5	2.2	1.2
3.6	1.6	0.9
3.8	1.3	0.8
3.9	1.0	0.6
4.0	0.8	0.5
4.2	0.6	0.5
4.3	0.6	0.5
4.4	0.5	0.4
4.5	0.4	0.4
4.7	0.4	0.4
4.8	0.4	0.3
4.9	0.4	0.3
5.0	0.4	0.2
5.2	0.4	0.2
5.3	0.4	0.2
5.4	0.4	0.2
5.6	0.4	0.2
5.7	0.4	0.2
5.8	0.4	0.2
5.9	0.3	0.2
6.1	0.2	0.2
6.2	0.2	0.2
6.3	0.2	0.2
6.5	0.1	0.1
6.6	0.1	0.0

R.O. Volume 1 = .0053196 in. at 0 sq.mi.  
 R.O. Volume 2 = 4.977051E-03 in. at 0 sq.mi.  
 RMS = 7.740001

FLOW (CFS)



TIME	FLOW1	FLOW2
0.0	0.0	0.0
0.1	0.0	0.0
0.3	0.0	0.0
3.0	0.9	5.9
3.1	2.6	10.0
3.2	5.0	*13.6
3.4	7.0	13.0
3.5	*7.4	10.1
3.6	6.8	7.5
3.8	6.0	5.9
3.9	5.3	4.7
4.0	4.5	3.7
4.2	3.9	3.1
4.3	3.4	2.7
4.4	3.0	2.4
4.5	2.6	2.1
4.7	2.3	1.9
4.8	2.1	1.8
4.9	1.8	1.7
5.0	1.6	1.7
5.2	1.3	1.6
5.3	1.2	1.6
5.4	1.0	1.4
5.6	0.9	1.2
5.7	0.9	1.0
5.8	0.8	0.9
5.9	0.8	0.9
6.1	0.8	0.8
6.2	0.8	0.8
6.3	0.8	0.8
6.5	0.7	0.6
6.6	0.6	0.4
6.7	0.5	0.2
6.9	0.3	0.1

R.O. Volume 1 = 1.577745E-02 in. at 0 sq.mi.  
 R.O. Volume 2 = 2.190305E-02 in. at 0 sq.mi.  
 RMS = 201.23



Data Filename > C:R1.INP  
Reservoir data:  
Name: R1

No. of discharge, storage values: 7

ELEV.		Discharge, Storage:	0 cfs, 0 acft	ELEV 79.4'
79.4	1	Discharge, Storage:	.029 cfs, .029 acft	
80.4	2	Discharge, Storage:	3.85 cfs, .118 acft	
80.9	3	Discharge, Storage:	4.71 cfs, .363 acft	
81.4	4	Discharge, Storage:	5.44 cfs, .854 acft	
81.9	5	Discharge, Storage:	9.5 cfs, 1.55 acft	
82.5	6	Discharge, Storage:	15.99 cfs, 2.8 acft	

COMMENTS:

BASIN 1 - FUTURE/12in

Data Filename > C:R2.INP  
Reservoir data:  
Name: R2

No. of discharge, storage values: 7

ELEV.		Discharge, Storage:	0 cfs, 0 acft
94.95	1	Discharge, Storage:	2.72 cfs, .01 acft
95.45	2	Discharge, Storage:	3.85 cfs, .072 acft
95.95	3	Discharge, Storage:	4.71 cfs, .221 acft
96.45	4	Discharge, Storage:	5.44 cfs, .35 acft
96.95	5	Discharge, Storage:	9.5 cfs, .502 acft
97.45	6	Discharge, Storage:	15.99 cfs, .671 acft

COMMENTS:

BASIN 3 - FUTURE/12in

MAX. ELEVS Q25

→ DRAINAGE  
AREAS # 1

$$Q_{MAX} = 5.3 \text{ CFS}$$

$$Q = 3.846 \sqrt{h} \quad \text{FOR 12" ORIFICE}$$

$$h = \left( \frac{5.3}{3.846} \right)^2 = \underline{\underline{1.89'}}$$

$$\text{APPROX VOLUME} = \frac{.854 - .363}{5.44 - 4.71} = .67 \frac{\text{AC.FT}}{\text{CFS}}$$

$$\begin{aligned} (5.3 - 4.71 \text{ CFS}) \left( .67 \frac{\text{AC.FT}}{\text{CFS}} \right) &= .395 \text{ AC.FT} \\ &+ .363 \\ &\underline{\hspace{1.5cm}} \\ &= .758 \text{ AC.FT} \end{aligned}$$

$$= \underline{\underline{247,000 \text{ GALLON}}}$$

# HUNTER-BALLEW ASSOCIATES

5 Fundy Road  
FALMOUTH, MAINE 04105  
(207) 781-4721

JOB RAY ST 850411  
SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_  
CALCULATED BY JWB DATE 7-22-85  
CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_  
SCALE \_\_\_\_\_

## MAX BLENDS & VOLUMES (CONT'D)

### DRAINAGE AREA # 3

$$Q_{MAX} = \overset{5.6}{7.9} \text{ CFS}$$

$$\frac{9.5 - 5.44 \text{ CFS}}{.15'} = 8.12 \text{ CFS/FT}$$

$$(5.6 - 5.44 \text{ CFS}) \left( \frac{1 \text{ FT}}{8.12 \text{ CFS}} \right) = .020 \text{ FT}$$

$$+ 2.0$$

$$\approx \underline{+2.0} \text{ FT MAX BLEN Q}_{20}$$

$$V; \frac{.502 - .350 \text{ AC.FT.}}{9.50 - 5.44 \text{ CFS}} = .042 \frac{\text{AC.FT.}}{\text{CFS}}$$

$$(5.6 - 5.44 \text{ CFS}) \left( \frac{.042 \text{ AC.FT.}}{\text{CFS}} \right) = .007$$

$$+ \underline{.35}$$

$$.357 \text{ AC.FT.}$$

$$= \underline{116,400 \text{ GALS.}}$$

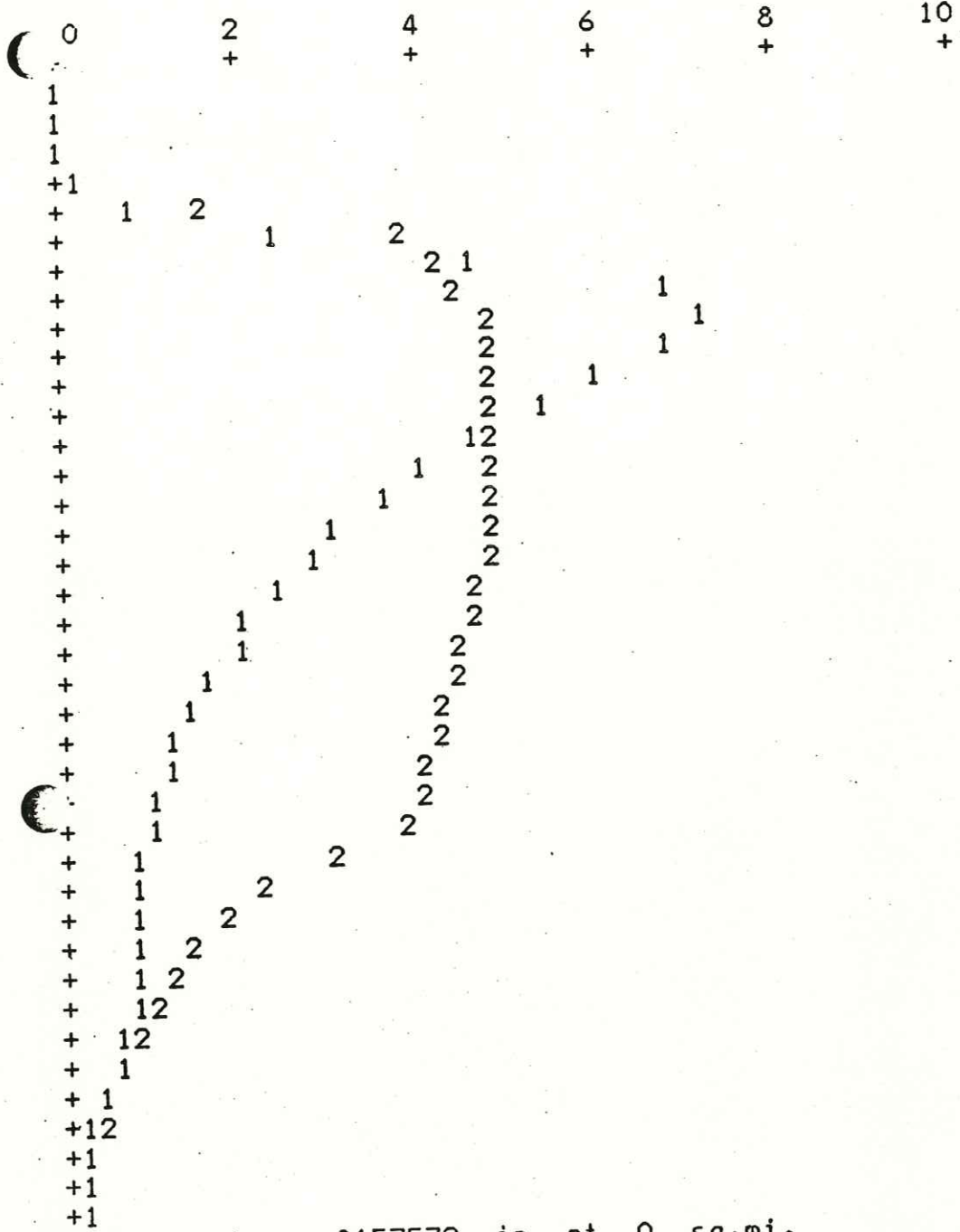
$$1 \text{ AC.FT.} = 3.26 \times 10^5 \text{ GALS}$$

Output file 1: B1.OUT  
 Output file 2: R1.OUT

Comments: BASIN 1 EXISTING  
 Comments: BASIN 1 -FUTURE/12in

10yr STORM  
 W/ DEDUCTION

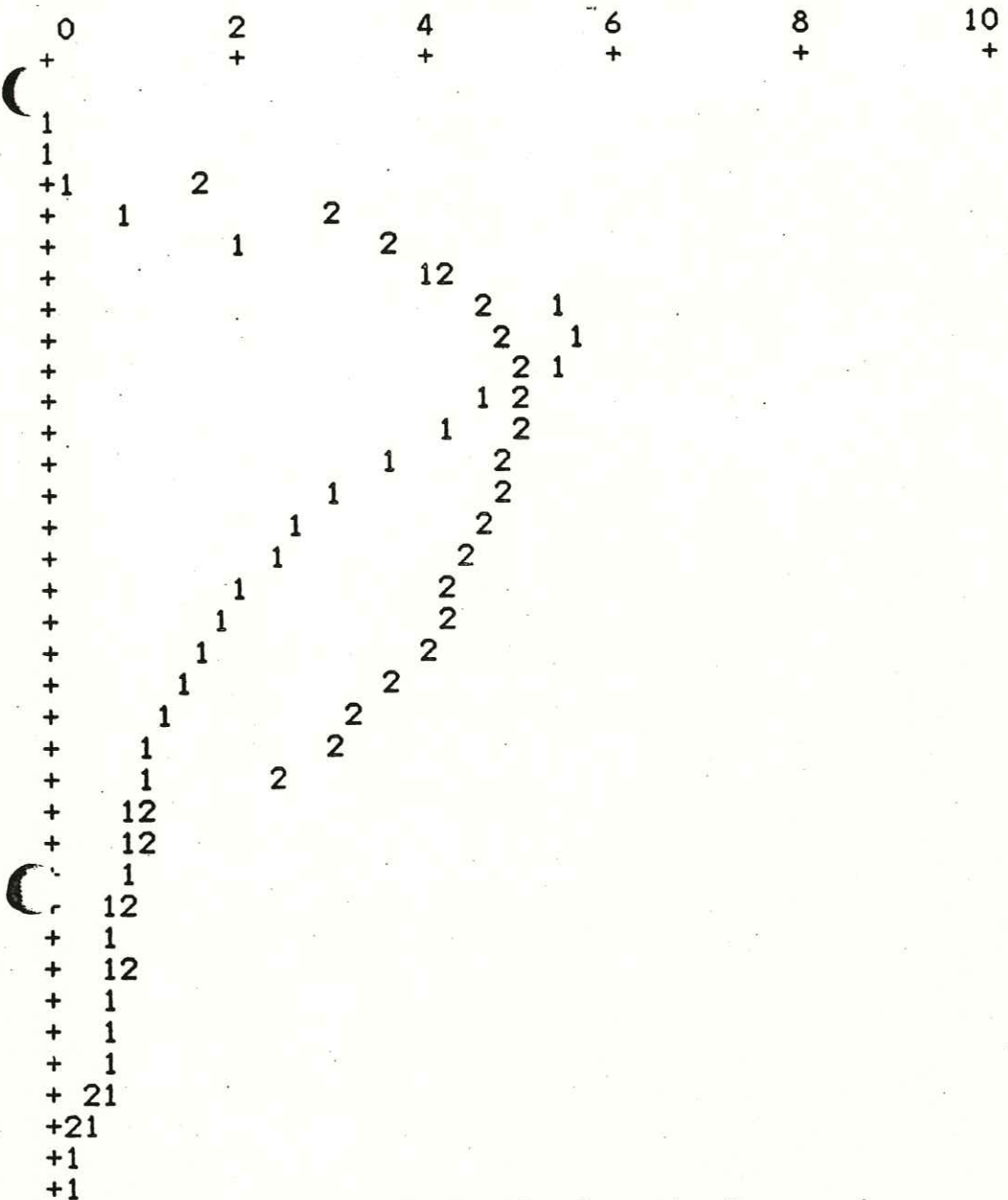
OUTFLOW (CFS)



TIME	FLOW1	FLOW2
0.0	0.0	0.0
0.1	0.0	0.0
0.3	0.0	0.0
2.9	0.1	0.2
3.0	0.8	1.6
3.1	2.4	3.9
3.2	4.7	4.1
3.4	6.7	4.5
3.5	*7.2	4.7
3.6	6.8	4.8
3.8	6.0	4.8
3.9	5.3	*4.8
4.0	4.6	4.8
4.2	4.0	4.8
4.3	3.5	4.8
4.4	3.1	4.8
4.5	2.7	4.7
4.7	2.4	4.6
4.8	2.1	4.5
4.9	1.9	4.4
5.0	1.6	4.3
5.2	1.4	4.2
5.3	1.2	4.2
5.4	1.1	4.1
5.6	1.0	4.0
5.7	0.9	3.9
5.8	0.8	2.9
5.9	0.8	2.2
6.1	0.8	1.7
6.2	0.8	1.4
6.3	0.8	1.2
6.5	0.7	1.0
6.6	0.6	0.8
6.7	0.5	0.6
6.9	0.3	0.5
7.0	0.2	0.3
7.1	0.2	0.2
7.2	0.1	0.1
7.4	0.1	0.1

R.O. Volume 1 = .0157573 in. at 0 sq.mi.  
 R.O. Volume 2 = 2.195411E-02 in. at 0 sq.mi.  
 RMS = 105.2449

OUTFLOW (CFS)



TIME	FLOW1	FLOW2
0.0	0.0	0.0
0.1	0.0	0.0
0.3	0.0	0.0
2.9	0.1	1.7
3.0	0.7	2.9
3.1	2.0	3.6
3.2	3.9	4.1
3.4	5.4	4.5
3.5	*5.7	4.8
3.6	5.3	4.9
3.8	4.7	*5.0
3.9	4.1	4.9
4.0	3.5	4.8
4.2	3.0	4.7
4.3	2.6	4.6
4.4	2.3	4.4
4.5	2.0	4.3
4.7	1.8	4.1
4.8	1.6	3.9
4.9	1.4	3.7
5.0	1.2	3.3
5.2	1.0	2.9
5.3	0.9	2.3
5.4	0.8	1.0
5.6	0.7	1.0
5.7	0.7	0.8
5.8	0.6	0.7
5.9	0.6	0.7
6.1	0.6	0.7
6.2	0.6	0.6
6.3	0.6	0.6
6.5	0.6	0.5
6.6	0.5	0.4
6.7	0.4	0.2
6.9	0.2	0.1
7.0	0.2	0.0

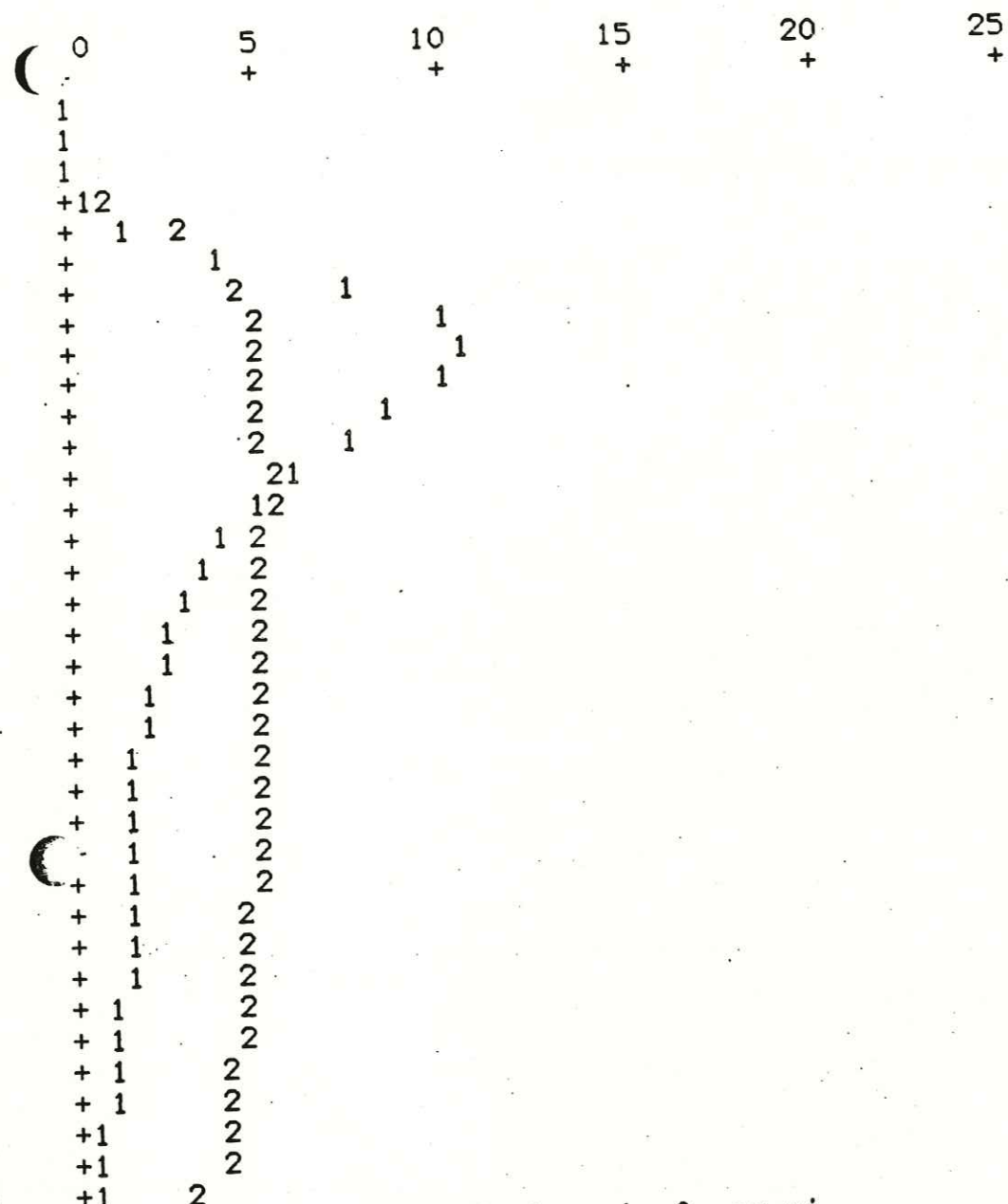
R.O. Volume 1 = 1.219075E-02 in. at 0 sq.mi.  
 R.O. Volume 2 = 1.829009E-02 in. at 0 sq.mi.  
 RMS = 57.14677



Output file 1: C:B1.OUT    Comments: BASIN 1 EXISTING  
 Output file 2: C:R1.OUT    Comments: BASIN 1 -FUTURE/12in

*25 years*  
W/ Data 12.01.11

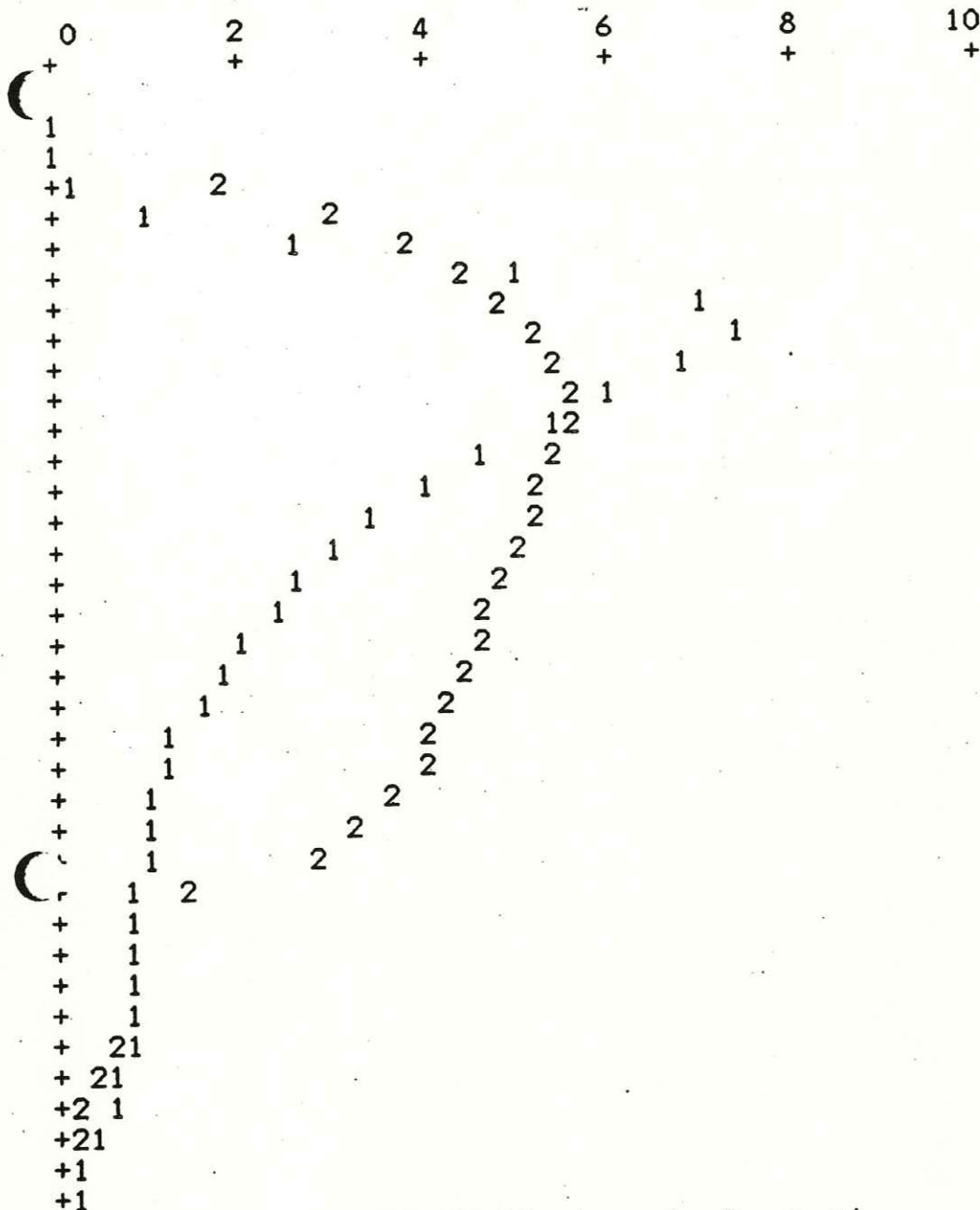
OUTFLOW (CFS)



TIME	FLOW1	FLOW2
0.0	0.0	0.0
0.1	0.0	0.0
0.3	0.0	0.0
2.9	0.4	1.2
3.0	1.7	2.9
3.1	4.2	4.1
3.2	7.5	4.5
3.4	10.1	4.8
3.5	*10.7	5.0
3.6	9.9	5.1
3.8	8.7	5.2
3.9	7.4	5.2
4.0	6.1	5.3
4.2	5.1	5.3
4.3	4.2	5.2
4.4	3.6	5.2
4.5	3.0	5.2
4.7	2.6	5.1
4.8	2.3	5.1
4.9	2.0	5.1
5.0	1.9	5.0
5.2	1.7	5.0
5.3	1.6	4.9
5.4	1.6	4.9
5.6	1.6	4.8
5.7	1.6	4.8
5.8	1.5	4.7
5.9	1.5	4.7
6.1	1.4	4.5
6.2	1.2	4.4
6.3	1.1	4.3
6.5	1.0	4.2
6.6	0.8	4.1
6.7	0.6	4.0
6.9	0.4	3.9
7.0	0.3	2.8

R.O. Volume 1 = .0221247 in. at 0 sq.mi.  
 R.O. Volume 2 = 3.155916E-02 in. at 0 sq.mi.  
 RMS = 309.2048

OUTFLOW (CFS)



TIME	FLOW1	FLOW2
0.0	0.0	0.0
0.1	0.0	0.0
0.3	0.0	0.0
2.9	0.2	1.8
3.0	0.9	3.0
3.1	2.6	3.8
3.2	5.0	4.3
3.4	7.0	4.8
3.5	*7.4	5.2
3.6	6.8	5.4
3.8	6.0	*5.6
3.9	5.3	5.6
4.0	4.5	5.4
4.2	3.9	5.3
4.3	3.4	5.1
4.4	3.0	5.0
4.5	2.6	4.8
4.7	2.3	4.7
4.8	2.1	4.5
4.9	1.8	4.4
5.0	1.6	4.2
5.2	1.3	4.1
5.3	1.2	3.9
5.4	1.0	3.6
5.6	0.9	3.2
5.7	0.9	2.9
5.8	0.8	1.4
5.9	0.8	0.8
6.1	0.8	0.8
6.2	0.8	0.8
6.3	0.8	0.8
6.5	0.7	0.7
6.6	0.6	0.5
6.7	0.5	0.3
6.9	0.3	0.1
7.0	0.2	0.1
7.1	0.1	0.0

R.O. Volume 1 = 1.577745E-02 in. at 0 sq.mi.  
 R.O. Volume 2 = 2.189574E-02 in. at 0 sq.mi.  
 RMS = 91.53494

APPENDIX D

DETENTION FACILITIES

1. DETENTION AREA A, PLAN VIEW
2. DETENTION AREA B, PLAN VIEW
3. TYPICAL FLOW CONTROL STRUCTURE, ELEVATION & SECTION

HUNTER-BALLEW ASSOCIATES

5 Fundy Road  
FALMOUTH, MAINE 04105  
(207) 781-4721

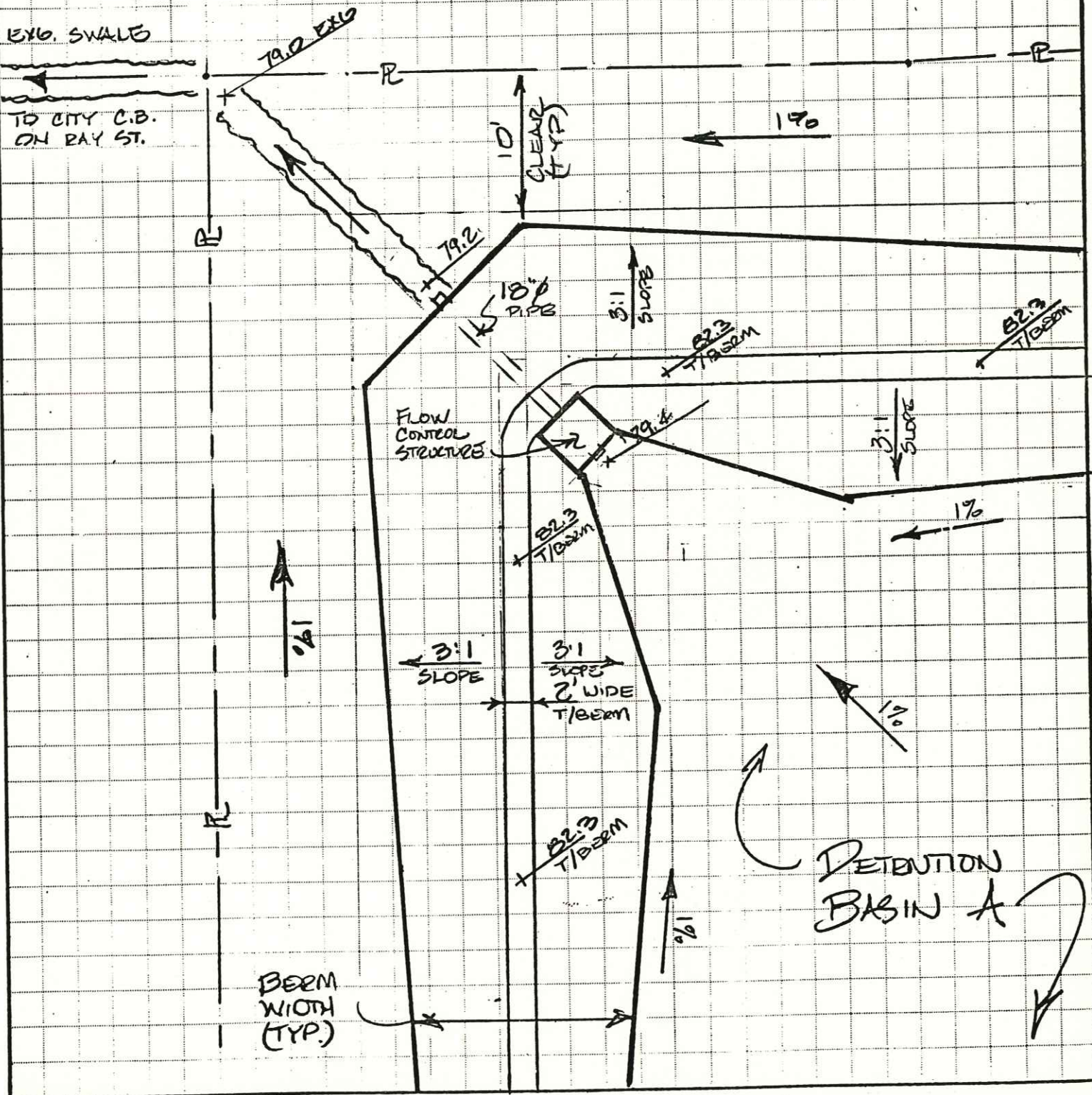
JOB 850411 KAY ST 2051  
SHEET NO. 1 OF 4  
CALCULATED BY JWE DATE 7-22-85  
CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_  
SCALE 1" = 10'

PLAN VIEW DETENTION  
AREA "A"



EXG. SWALE

TO CITY C.B.  
ON RAY ST.



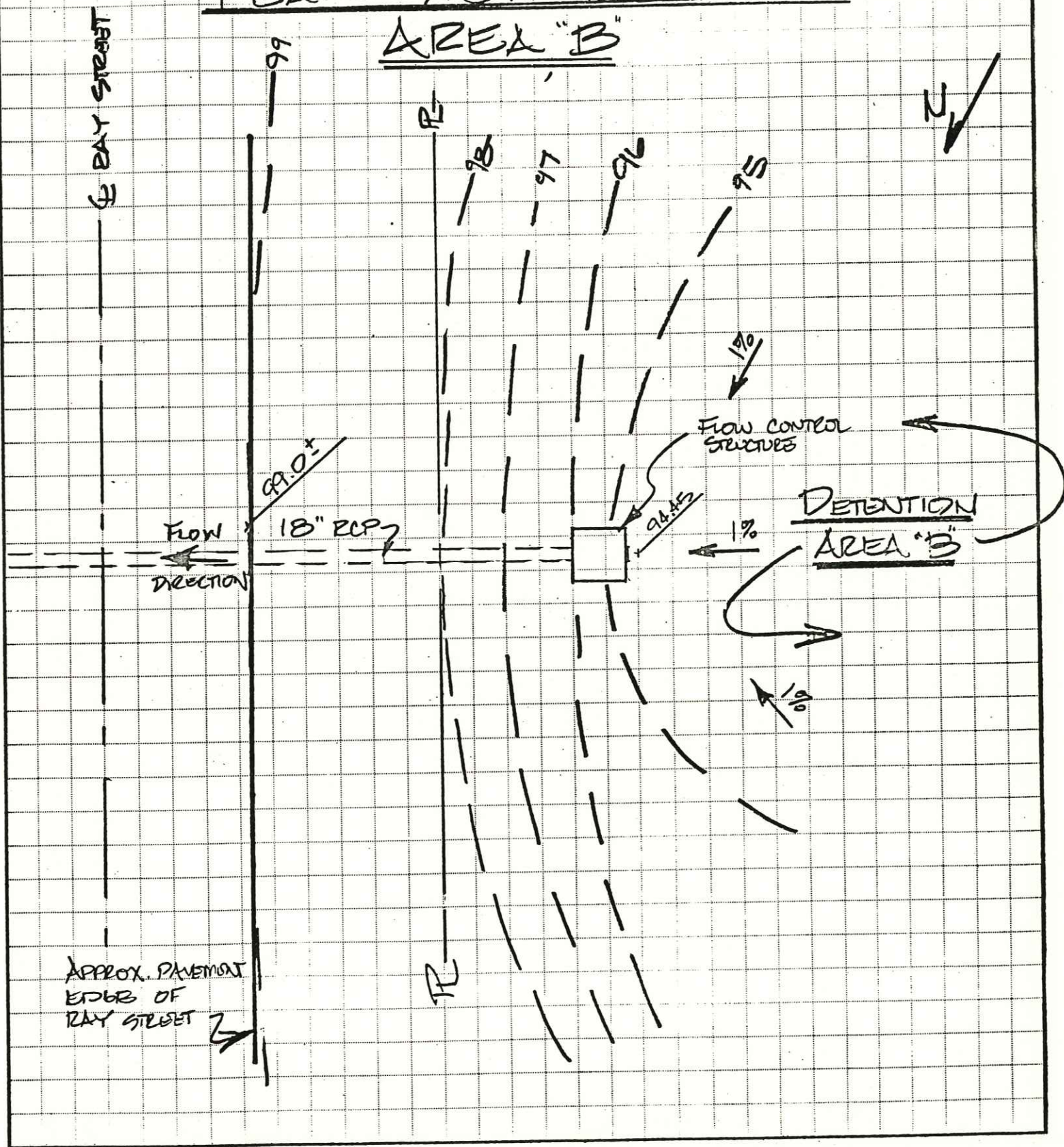
RETENTION  
BASIN A

HUNTER-BALLEW ASSOCIATES

5 Fundy Road  
FALMOUTH, MAINE 04105  
(207) 781-4721

JOB B50411 RAY STREET  
SHEET NO. 2 OF 4  
CALCULATED BY JWE DATE 7-22-85  
CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_  
SCALE 1" = 10'

PLAN VIEW DETENTION  
AREA "B"

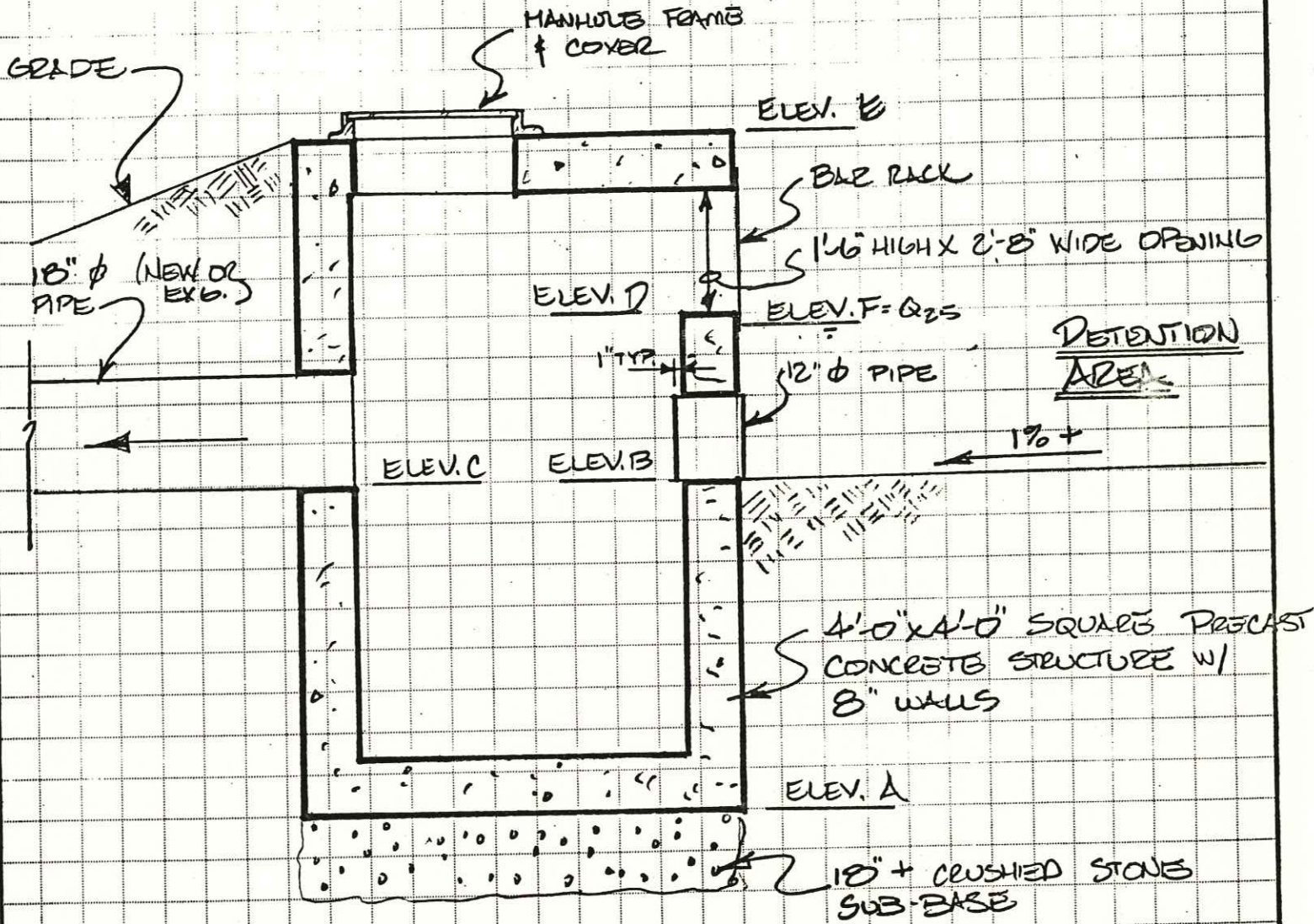


HUNTER-BALLEW ASSOCIATES

5 Fundy Road  
 FALMOUTH, MAINE 04105  
 (207) 781-4721

JOB 850411 RAY STREET  
 SHEET NO. 3 OF 4  
 CALCULATED BY JWB DATE 7.22.05  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 SCALE 1/2" = 1'-0"

TYP. SECTION THRU CONTROL STRUCTURES

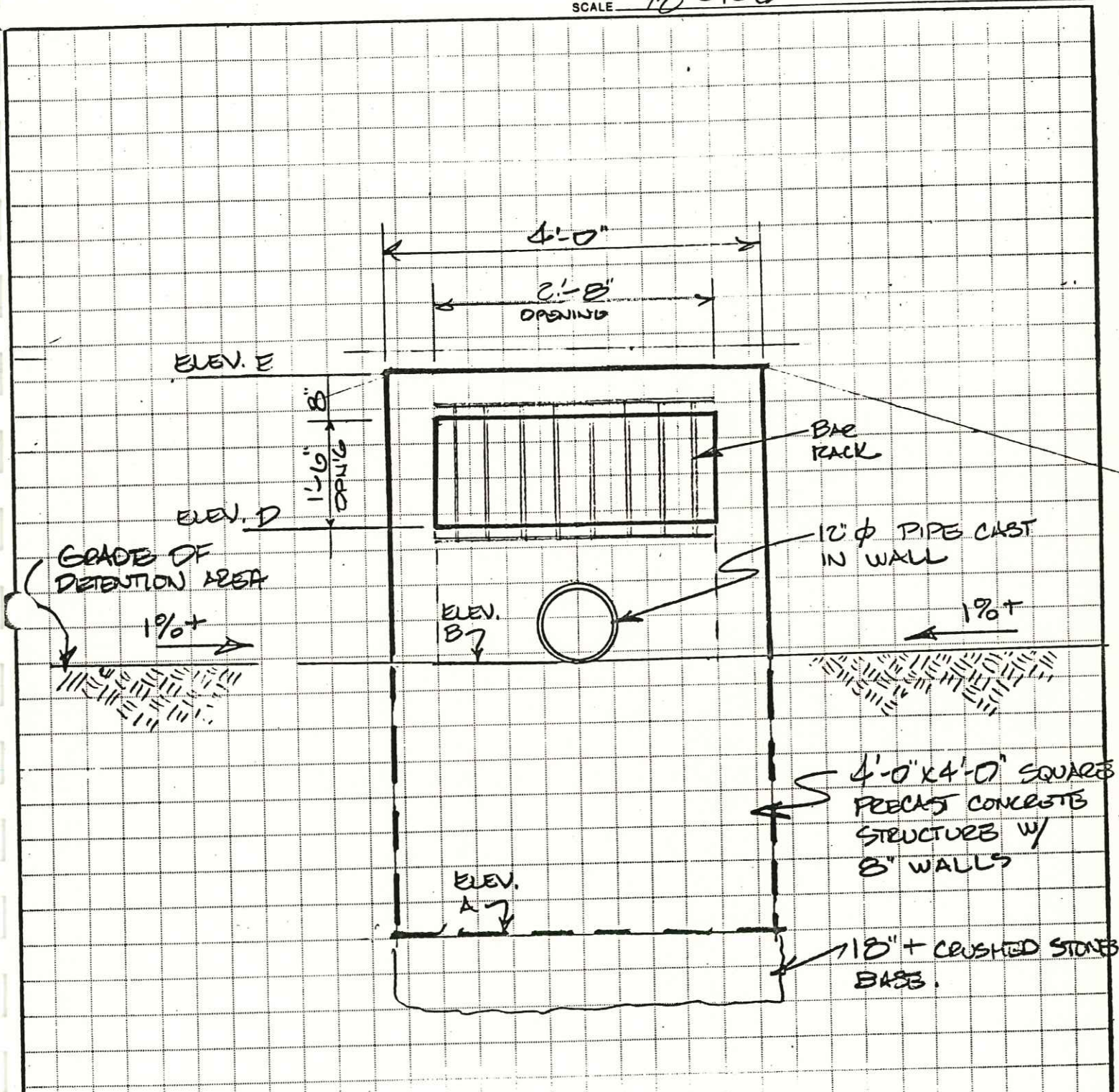


		DETENTION AREA "A" STRUCTURES	DETENTION AREA "B" STRUCTURES
ELEV. A	BASE/STRUCTURE	75.40'	90.45'
ELEV. B	ENT. INVERT	79.40'	94.45'
ELEV. C	EXIT INVERT	79.35'	94.40'
ELEV. D	BOT. EMERGENCY OP'G	81.40'	96.45'
ELEV. E	TOP/STRUCTURE	83.57'	98.62'
ELEV. F	Q25 FLOOD ELEV.	81.30'	96.45'

HUNTER-BALLEW ASSOCIATES

5 Fundy Road  
FALMOUTH, MAINE 04105  
(207) 781-4721

JOB 850411  
SHEET NO. 4 OF 4  
CALCULATED BY JWB DATE 7.12.85  
CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_  
SCALE 1/2" = 1'-0"



FRONT ELEVATION OF  
FLOW CONTROL STRUCTURE

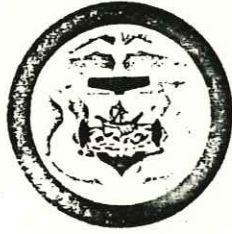
\* ELEVATION KEY ON PREVIOUS PAGE

APPENDIX E

UTILITY SERVICE LETTERS

1. LETTER FROM PORTLAND PUBLIC WORKS (SANITARY SEWER)
2. LETTER FROM PORTLAND WATER DISTRICT





# CITY OF PORTLAND

---

RECEIVED BY  
HUNTER-BALLEW ASSOC.  
ON

GEORGE A. FLAHERTY  
DIRECTOR OF PARKS & PUBLIC WORKS

JUL 24 1985

July 22, 1985

Mr. James Ecker  
T.Y. Lin Int./Hunter-Ballow Assoc.  
Fundy Road  
Falmouth, Maine 04105

Re: Proposed RAY STREET CONDO DEVELOPMENT

Dear Mr. Ecker:

The 18" dia. RCP sewer located in Ray Street and sewage treatment facilities in the City of Portland have adequate capacity to transport and treat the anticipated wastewater flows from your proposed 98 two bedroom units. Attached is a sheet showing the location and size of that sewer.

Sincerely,

*William B. Goodwin*

William B. Goodwin, P.E.  
Environmental Project Engineer

WBG/HP-86B

Enclosure



# Portland Water District

225 Douglass St. • P.O. Box 3553 • Portland, ME 04104-3553

(207) 774-5961

July 23, 1985

RECEIVED BY  
HUNTER-BALLEW ASSOC.  
ON

Mr. James Ecker  
TY LIN/HUNTER BALLEW ASSOC.  
5 Fundy Road  
Falmouth, ME 04105

JUL 24 1985

Re: Ray Street Development

Dear Mr. Ecker:

The Portland Water District has received from your office a preliminary utilities plan dated 07-23-85 of the above-mentioned proposed project located off Ray Street in Portland.

The District is in accord with the layout of the public water system to serve this project, as shown on this preliminary utilities plan. With the construction of the public water system as shown, the District will have adequate facilities to serve this proposed project, and meet all normal water demands for domestic service and fire protection.

With the granting of an easement, and certification by the developer that all required permits have been received, the District looks forward to serving this project.

Very truly yours,

Donald E. Wyman  
Director of Marketing/Customer Relations

DEW/d

APPENDIX F

TRAFFIC REPORT

REPORT  
ON THE TRAFFIC IMPACT STUDY  
FOR  
PROPOSED RAY STREET DEVELOPMENT  
RAY STREET  
PORTLAND, MAINE

PREPARED FOR  
THE LIBERTY GROUP

PREPARED BY  
HUNTER-BALLEW ASSOCIATES  
CONSULTING ENGINEERS  
FALMOUTH, MAINE

MAY 1985

## SECTION I - INTRODUCTION AND PURPOSE OF STUDY

In March 1985, the Liberty Group retained Hunter-Ballew Associates to prepare a Traffic Impact Study in conjunction with the proposed Ray Street apartment complex to be located on the southwest side of Ray Street between Allen Avenue and Florida Avenue in Portland, Maine. Figure 1, following this page, shows the proposed site.

The object of this study is to develop and analyze the impact of traffic resulting from the proposed housing complex with existing street traffic. Also included in this study will be recommendations for traffic operations improvements if the study shows any of these improvements to be warranted.

## SECTION II - DATA COLLECTION AND ASSEMBLY

The Liberty Group supplied Hunter-Ballew Associates with the following information:

1. Site plan of the proposed housing development.

The Maine Department of Transportation supplied Hunter-Ballew Associates with the following data:

1. Recent traffic counts in the vicinity of the site.
2. Accident data in the vicinity of the site.

In addition to this data, Hunter-Ballew Associates collected the following information:

1. Peak hour PM turning movement counts in the vicinity of the development.
2. Available sight distances at the driveways to the site.
3. Roadway geometrics and posted speed limits.

## SECTION III - EXISTING STREET TRAFFIC

The Maine Dept. of Transportation supplied Hunter-Ballew Associates with the following Annual Average Daily Traffic counts in the vicinity of the complex:

<u>Location</u>	<u>Year</u>	<u>AADT</u>
Washington Ave., between Ray St. & Canco	1977	20,935
Allen Ave., Falmouth-Portland Border	1977 1981	3,420 4,010
Allen Ave., North of Washington Ave.	1977	5,505

In addition to this data, Hunter-Ballew Associates conducted PM peak hour counts in the vicinity of the complex at the following locations:

- o Intersection of Washington Ave. and Gertrude Ave.
- o Intersection of Allen Ave. and Ray St.

These counts were adjusted to obtain the 1985 AADT presented below, using MDOT's weekly group mean factors to account for seasonal variations

1985 Annual Average Daily Traffic

<u>Location</u>	<u>AADT</u>
Washington Ave. at Gertrude Street	21,200
Allen Ave., North of Ray Street	6,100
Allen Ave., South of Ray Street	6,885

As can be seen by comparing the 1935 AADT at Washington and Gertrude to the 1977 AADT at Washington Ave. between Ray Street and Canco Road, the traffic on Washington Ave. has remained stable. The traffic on Allen Ave. has experienced an average annual growth of 8.7% north of Ray St. and 2.8% south of Ray St. over the 9 year period.

Based on the counts taken by the consultant, it was determined that the PM peak hour was 4:35 PM to 5:35 PM at both locations. Using the weekly group mean factors previously discussed, the PM turning movements were adjusted to design hour street traffic for use in this study and are presented in Figures 2 and 3.

SECTION IV - TRAFFIC TO AND FROM THE COMPLEX

Liberty Group's proposed complex is planned to consist of 103 units. Using the Institute of Transportation Engineer's (ITE) publication, Trip

Generation, published in 1983, the expected daily and peak hour trip ends (ins plus outs) have been compiled and are presented below:

Proposed Development Traffic Generation

Land Use	Size	Trip Ends Per Unit*		Total Trip Ends	
		Daily	Peak Hour	Daily	Peak Hour
Low Level Apartments	103 units	6.6	0.66	680	68

\*1 trip in plus 1 trip out = 2 trip ends.

Two driveways are planned for the complex. The first is to be an extension of Gertrude Avenue located off Washington Avenue. The second entrance will be located on the southwest side of Ray Street approximately 570 feet from the centerline of Allen Avenue.

The consultant expects that 80% of the trips will be entering and exiting the complex via Gertrude Ave., with the remaining 20% entering and exiting via the entrance on Ray Street. This distribution has been further subdivided for use in the study. The data generated by the PM peak hour counts indicates that 60% of the traffic on Washington Avenue travels outbound and 40% of the traffic is inbound. The data also indicates that 40% of the traffic on Allen Avenue travels towards Washington Avenue and 60% travels towards Falmouth. Accordingly, the consultant has distributed the PM development traffic on Washington Avenue and Allen Avenue based on the PM traffic distribution on these streets. Based on these distributions, the PM development distributions have been compiled and are presented in Figures 4 & 5.

SECTION V - COMBINED STREET AND COMPLEX TRAFFIC

The consultant has combined the existing street traffic with the traffic to be generated by the complex for both entrances. These combined peak hour traffic volumes are presented in Figures 6 and 7.

SECTION VI - CAPACITY ANALYSIS

The capacity analysis compares the amount of time required to allow each leg of approaching traffic to pass through an intersection to the amount of time available for all approaching traffic to pass through the intersection. As the traffic approaching in intersection increases, additional time is required to allow this traffic to pass through the intersection. The amount of time available to pass vehicles through an intersection varies, depending upon the desired level of service.

Level of service is a measure of an intersection's performance which is dependent on the vehicle delay and the reserve capacity for the intersecting streets. Reserve capacity is the additional number of vehicles an approach can accommodate over the existing approach traffic before extreme congestion occurs and is used to evaluate unsignalized intersections.

A tabulation of various levels of service is shown below:

Reserve Capacities for Unsignalized Intersections

Reserve Capacity	Level of Service	Expected Traffic Delay
400 or more	A	Little or No Delay
300 to 399	B	Short Traffic Delay
200 to 299	C	Average Traffic Delay
100 to 199	D	Long Traffic Delay
0 to 99	E	Very Long Traffic Delay
Less than 0	F	Failure-Extreme Congestion

For areas such as Portland, the design level of service is 'C'.

Using the combined peak hour traffic shown in Figures 6 and 7, capacity analyses were performed for the following intersections:

- o Washington Ave. and Gertrude Ave.
- o Allen Ave. and Ray St.

These analyses were done in accordance with the procedures outlined in the Transportation Research Board's circular entitled, Proposed Chapters for the 1985 Highway Capacity Manual.

The results of the capacity analyses are presented below:

Capacity Analysis  
Intersection of Washington Ave. and Gertrude Ave.

Condition	Movement	Reserve Capacity	Level of Service
Existing	Left & Right Turn from Gertrude	100	D
	Left Turn into Gertrude	286	C
Combined	Left & Right Turn from Gertrude	66	E
	Left Turn into Gertrude	273	C



Capacity Analysis  
Intersection of Allen Ave. and Ray St.

Condition	Movement	Reserve Capacity	Level of Service
Existing	Left & Right Turn from Ray	378	B
	Left Turn into Ray	795	A
Combined	Left & Right Turn from Ray	375	B
	Left Turn into Ray	788	A

As can be seen from the above table, all movements will operate at a level of service C or better except the turns from Gertrude onto Washington Ave. The analysis would indicate that the low level of service for Gertrude at Washington is caused by insufficient gaps in the through traffic on Washington Avenue. However, our experience has shown, based on gap studies which the consultant has performed on similar intersections, that these movements will operate at a level of service 'C' or better.

Based on the results of the capacity analysis, it is concluded that the proposed complex traffic will have a minimal impact on the existing street system.

SECTION VII - SIGHT DISTANCE ANALYSIS

Two driveways are planned for the proposed complex. The first driveway is planned to be located on the southwest side of Ray Street approximately 570 feet from the centerline of Allen Avenue. The second entrance will be located off the end of Gertrude Street located off Washington Avenue.

Using the American Association of State Highway Officials (AASHTO) publication, A Policy on Geometric Design of Highways and Streets, published in 1984, the following sight distances are required:

<u>Operating Speed on Major Street (mph)</u>	<u>Sight Distance Required to Left and Right</u>
20	250'
25	325'
30	410'
35	520'

The speed limit on Ray Street is not posted, but is 25 mph according to the City of Portland. The posted speed limit on Allen Avenue and on

Washington Avenue is 35 mph. A comparison of the available sight distances to the required sight distances is made below based on the above speeds.

Comparison of Available Sight Distance to Required Sight Distance

Location	Exiting Driveway Looking:	Available Sight Distance (Ft)	Required Sight Distance (Ft)
Proposed Ray St. Driveway	Left	570	325
	Right	450*	325
Intersection of Ray St. & Allen Ave.	Left	490	520
	Right	800	520
Intersection of Gertrude St. & Washington Ave.	Left	1200	520
	Right	800	520

\*Reconstruction of Ray Street is planned in the near future which will improve this sight distance.

To further improve the sight distance, it is the consultant's recommendation to remove the existing trees that are located on the property of the proposed development that are along Ray Street to the right, looking out of the proposed driveway.

As can be seen from the above comparison, the sight distances are in excess of the requirements except to the left at the existing intersection of Ray Street and Allen Avenue which is slightly below AASHTO standards.

SECTION VIII - ACCIDENT ANALYSIS

The Maine Dept. of Transportation supplied Hunter-Ballew Associates with accident data for the intersection of Ray Street and Allen Avenue for the five year period from 1979 through 1983 for Allen Avenue from Woodmere Road south of Ray Street to Virginia Avenue north of Ray Street. This data showed a total of three accidents over the five year period which is below the accident rate for similar intersections.

The Maine Dept. of Transportation supplied Hunter-Ballew Associates with accident data for the intersection of Washington Ave. and Gertrude Ave. for the three year period from 1982 through 1983. This data showed 1 accident for this intersection over the three year period which is below the accident rate for similar intersections.

SECTION IX - CONCLUSIONS AND RECOMMENDATIONS

The following conclusions and recommendations are made based on the foregoing preliminary traffic analyses:

1. The planned 103 units will generate 680 daily trip ends (ins plus outs) with 68 of the trips occurring during the PM peak hour.
2. The complex will have a minimal impact on the level of service of the existing street system.
3. The sight distances at the proposed entrances to the complex are in excess of minimum standards except at the existing intersection of Ray Street and Allen Avenue which is slightly below the standards to the left.
4. The accident rate on Allen Avenue in the vicinity of the site is below the rate for similar intersections within the State of Maine.
5. The accident rate on Washington Ave. at Gertrude Ave. is below the rate for similar intersections within the State of Maine.

STANDARD FORM OPTION

Option granted this 23 day of 15<sup>th</sup> APRIL, 1985, by Mr. Richard Libby, Guardian, Conservator for David Libby of 495 Allen Avenue, Portland, Maine, hereinafter called "Seller", to Liberty Group, Inc. of Portland, Maine, hereinafter called "Buyer".

In consideration of the sum of Two Thousand Five Hundred Dollars (\$2,500) and other valuable consideration, the receipt of which is hereby acknowledged by the Seller, the Seller hereby grants to the Buyer the exclusive option upon the terms and conditions set forth herein, to purchase the following described property: The larger portion of the David Libby property at 495 Allen Avenue, Portland, Maine, as outlined on the attached drawing and as calculated by excluding from the entire piece that small piece on which the Libby house sits with proposed approximate lot dimensions of 178.40' along Allen Avenue, 157' along Grant property, 285' along proposed Liberty property and 225' along Sands and Waugh property.

The parcel under option to be approximately 4.26 acres.

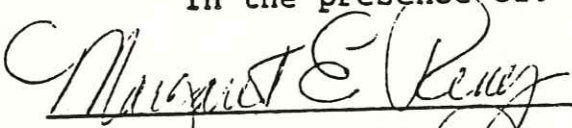
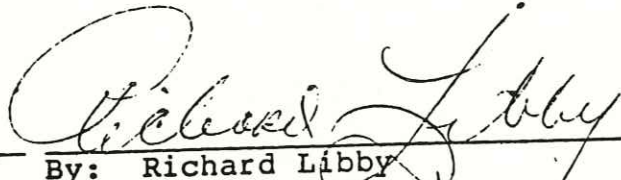
1. This Option shall be for a period of six (6) months from the date of this Agreement except as otherwise provided for in the next paragraph.
2. The Seller hereby grants to the Buyer an additional period of six (6) months in which to exercise its option to purchase. At the end of the initial six (6) month period as a consideration the Buyer shall pay to the Seller the sum of Three Thousand Five Hundred Dollars (\$3,500). This additional six (6) month Option period shall commence on the expiration of the aforesaid six (6) month period provided written notice of intent to continue the Option is given by Buyer to Seller at least fifteen (15) days prior to the end of the initial six (6) month Option period. If such notice is not timely given, this Option shall terminate.
3. Buyer may exercise this Option at any time during the term hereof.
4. If this Option is exercised, the total purchase price for the property shall be Forty-two Thousand Dollars (\$42,000) to be paid by the Buyer at the closing. Buyer shall notify Seller of its election to exercise this Option by sending written notice to the Seller at the address shown above and may record a Notice of Exercise of Option at the Cumberland County Registry of Deeds.
5. If the Option is not exercised, the Option considerations due shall belong absolutely to the Seller. In the event the Buyer elects to exercise its option, all option considerations paid shall be credited towards the purchase price. In the event that the Buyer elects to exercise this Option and fails to close the transaction in accordance with



the terms hereof, then in that event, the Option considerations shall be retained by the Seller as liquidated damages in lieu of any and all other damages.

6. The real estate shall be conveyed by Warranty Deed with good and merchantable title free and clear of all encumbrances. However, should the title prove defective, then the Seller shall have thirty (30) days after due notice of such defect or defects to remedy the title; after which time, if such defect or defects are not corrected so that there is a good and merchantable title, then the Buyer may, at his option, withdraw said deposits and be relieved from all obligations hereunder.
7. The Buyer, its agents and representatives shall be permitted to enter upon the property for any necessary site preparation, including conducting a land survey and any other testing necessary to enable the Buyer to determine whether the property is suitable for its contemplated use. No waste shall be committed by Buyer.
8. Real estate taxes shall be prorated as of the date of closing.
9. Seller shall be responsible for any real estate commission.
10. This Option shall enure to the benefit of, and shall bind, the heirs, successors and assigns of the Seller and the Buyer. This Option shall be freely assignable by the Buyer.
11. The closing shall take place not more than sixty (60) days after written notification of the Buyers intent to exercise the Option, the exact date to be set by agreement by the Buyer and the Seller. The closing shall take place at the offices of Alan R. Atkins, Esquire, Bernstein, Shur, Sawyer & Nelson, One Monument Square, Portland, Maine, or such other place as is mutually convenient to the parties.

IN WITNESS WHEREOF, the Seller has signed, sealed and acknowledged this Option on the day and year first above written.

SIGNED, SEALED AND DELIVERED  
in the presence of:

  
  
 By: Richard Libby

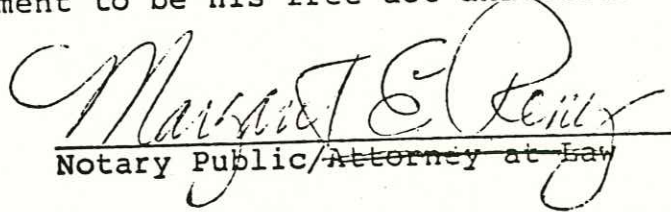
  
  
 By: Liberty Group DOUGLAS E. DUNCAN

STATE OF MAINE, Cumberland, ss.

April 23, 1985

Personally appeared the above-named Richard Libby and acknowledged the above Option instrument to be his free act and deed.  
Before me,

MARGARET E. RENY  
NOTARY PUBLIC, MAINE  
MY COMMISSION EXPIRES AUGUST 4, 1990

  
 Notary Public/Attorney at Law

SEAL

STANDARD FORM OPTION

Option granted this 19th day of July, 1985 by Mitchell Cope,  
of The Minat Corporation hereinafter called "SELLER", to Liberty  
Group, Inc. of \_\_\_\_\_, hereinafter called "BUYER".

In consideration of the sum of-----One Hundred-----Dollars (\$100.00 )  
and other valuable consideration, the receipt of which is hereby acknowledged  
by the Seller. The Seller hereby grants to the Buyer the exclusive option upon  
the terms and conditions set forth herein, to purchase the following described  
property: Approximately 15 acres of land bounded by homes along Allen Avenue,  
Ray Street, and Florida Avenue in Portland, Cumberland County, Maine as shown  
on Assessor's map 403 D and the attached map.

1. This Option shall be for a period of six ( 6 ) months from the date  
of this Agreement except as otherwise provided for in the next paragraph.
2. The Seller hereby grants to the Buyer an additional period of six ( 6 )  
months in which to exercise its option to purchase. At the end of the initial  
six ( 6 ) month period as a consideration the Buyer shall pay to the  
Seller the sum of-----One Hundred-----Dollars (\$100.00 ). This  
additional six ( 6 ) month Option period shall commence on the expiration  
of the aforesaid six ( 6 ) month period.

The Seller hereby grants to the Buyer a second additional period of six  
( 6 ) months in which to exercise its option to purchase. At the end of the  
first additional six ( 6 ) month period as a consideration the Buyer  
shall pay to the Seller the sum of-----One Hundred----- (\$100.00 )  
Dollars. This second additional six ( 6 ) month option period shall  
commence on the expiration of the aforesaid additional six ( 6 ) month  
period.

3. Buyer may exercise this Option at any time during the term hereof.
4. If this Option is exercised, the total purchase price for the property shall  
be-----One Hundred Twenty Five Thousand-----Dollars (\$125,000.00) to be  
paid by the Buyer at the closing. Buyer shall notify Seller of its election  
to exercise this Option by sending written notice to the Seller at the address  
shown above or by recording a Notice of Exercise of Option at the Cumberland  
County Registry of Deeds.
5. If the Option is not exercised, the Option considerations shall belong abso-  
lutely to the Seller. In the event the Buyer elects to exercise its option,  
all option considerations shall be credited towards the purchase price.  
In the event that the Buyer elects this Option and fails to close the trans-  
action in accordance with the terms hereof, then in that event, the Option  
considerations shall be retained by the Seller as liquidated damages in lieu  
of any and all other damages.

6. The real estate shall be conveyed by Warranty Deed with good and merchantable title free and clear of all encumbrances. However, should the title prove defective, then the Seller shall have (a reasonable time ~~XXXXXXXXXX~~ after due notice of such defect or defects to remedy the title; after which time, if such defect or defects are not corrected so that there is a good and merchantable title, then the Buyer may, at his option, withdraw said deposits and be relieved from all obligations hereunder.
7. The Buyer, its agents and representative shall be permitted to enter upon the property for any necessary site preparation, including conducting a land survey and any other testing necessary to enable the Buyer to determine whether the property is suitable for its contemplated use.
8. Real estate taxes shall be prorated as of the date of closing.
9. Seller shall be responsible for any real estate commission.
10. This Option shall enure to the benefit of, and shall bind, the heirs, successors and assigns of the Seller and the Buyer. This Option shall be freely assignable by the Buyer.
11. The closing shall take place not more than sixty (60) days after written notification of the Buyers intent to exercise the Option, the exact date to be set by the Buyer. The closing shall take place at the offices of Alan R. Atkins, Esquire, Bernstein, Shur, Sawyer & Nelson, One Monument Square, Portland, Maine, or such other place as is mutually convenient to the parties.

IN WITNESS WHEREOF, the Seller has signed, sealed and acknowledged this Option on the day and year first above written.

SIGNED, SEALED AND DELIVERED in the presence of: The Minat Corporation

Margaret E. Reny

By: Mitchell Cope  
President

STATE OF MAINE

Cumberland County, SS

July 26, 1985

Personally appeared the above-named Mitchell Cope and acknowledged the above Option instrument to be his free act and deed.

Before me,  
Margaret E. Reny  
Notary Public  
Attorney at Law

MARGARET E. RENY  
NOTARY PUBLIC, MAINE  
MY COMMISSION EXPIRES AUGUST 4, 1990



STANDARD FORM OPTION

Option granted this 19th day of July, 1985 by Mitchell Cope,  
of The Minat Corporation hereinafter called "SELLER", to Liberty  
Group, Inc. of hereinafter called "BUYER".

In consideration of the sum of ---One Hundred---Dollars (\$100.00 )  
and other valuable consideration, the receipt of which is hereby acknowledged  
by the Seller. The Seller hereby grants to the Buyer the exclusive option upon  
the terms and conditions set forth herein, to purchase the following described  
property: Land of approximately 17,00 sq. ft. in size and bounded by Wadco Street  
and Ash Street (paper) on the westerly sidelines and by The Minat Corporation  
property on the easterly side, having approximate sideline dimensions of 115  
ft. east to west, 100 ft. north to south, 180 ft. northwest to southeast and  
240' south to north, such property located in the city of Portland, near Florida  
Avenue and Ray Street, in Cumberland County. (See cc Assessors Plan No. 402)

1. This Option shall be for a period of six ( 6 ) months from the date  
of this Agreement except as otherwise provided for in the next paragraph.
2. The Seller hereby grants to the Buyer an additional period of six ( 6 )  
months in which to exercise its option to purchase. At the end of the initial  
six ( 6 ) month period as a consideration the Buyer shall pay to the  
Seller the sum of ---One Hundred---Dollars (\$ 100.00 ). This  
additional six ( 6 ) month Option period shall commence on the expiration  
of the aforesaid six ( 6 ) month period.

The Seller hereby grants to the Buyer a second additional period of six  
( 6 ) months in which to exercise its option to purchase. At the end of the  
first additional six ( 6 ) month period as a consideration the Buyer  
shall pay to the Seller the sum of ---One Hundred--- (\$100.00 )  
Dollars. This second additional six ( 6 ) month option period shall  
commence on the expiration of the aforesaid additional six ( 6 ) month  
period.

3. Buyer may exercise this Option at any time during the term hereof.
4. If this Option is exercised, the total purchase price for the property shall  
be -----One Thousand-----Dollars (\$1,000.00 ) to be  
paid by the Buyer at the closing. Buyer shall notify Seller of its election  
to exercise this Option by sending written notice to the Seller at the address  
shown above or by recording a Notice of Exercise of Option at the Cumberland  
County Registry of Deeds.
5. If the Option is not exercised, the Option considerations shall belong abso-  
lutely to the Seller. In the event the Buyer elects to exercise its option,  
all option considerations shall be credited towards the purchase price.  
In the event that the Buyer elects this Option and fails to close the trans-  
action in accordance with the terms hereof, then in that event, the Option  
considerations shall be retained by the Seller as liquidated damages in lieu  
of any and all other damages.

6. The real estate shall be conveyed by Warranty Deed with good and merchantable title free and clear of all encumbrances. However, should the title prove defective, then the Seller shall have (a reasonable time ~~XXXXXX days~~ after due notice of such defect or defects to remedy the title; after which time, if such defect or defects are not corrected so that there is a good and merchantable title, then the Buyer may, at his option, withdraw said deposits and be relieved from all obligations hereunder.
7. The Buyer, its agents and representative shall be permitted to enter upon the property for any necessary site preparation, including conducting a land survey and any other testing necessary to enable the Buyer to determine whether the property is suitable for its contemplated use.
8. Real estate taxes shall be prorated as of the date of closing.
9. Seller shall be responsible for any real estate commission.
10. This Option shall enure to the benefit of, and shall bind, the heirs, successors and assigns of the Seller and the Buyer. This Option shall be freely assignable by the Buyer.
11. The closing shall take place not more than sixty (60) days after written notification of the Buyers intent to exercise the Option, the exact date to be set by the Buyer. The closing shall take place at the offices of Alan R. Atkins, Esquire, Bernstein, Shur, Sawyer & Nelson, One Monument Square, Portland, Maine, or such other place as is mutually convenient to the parties.

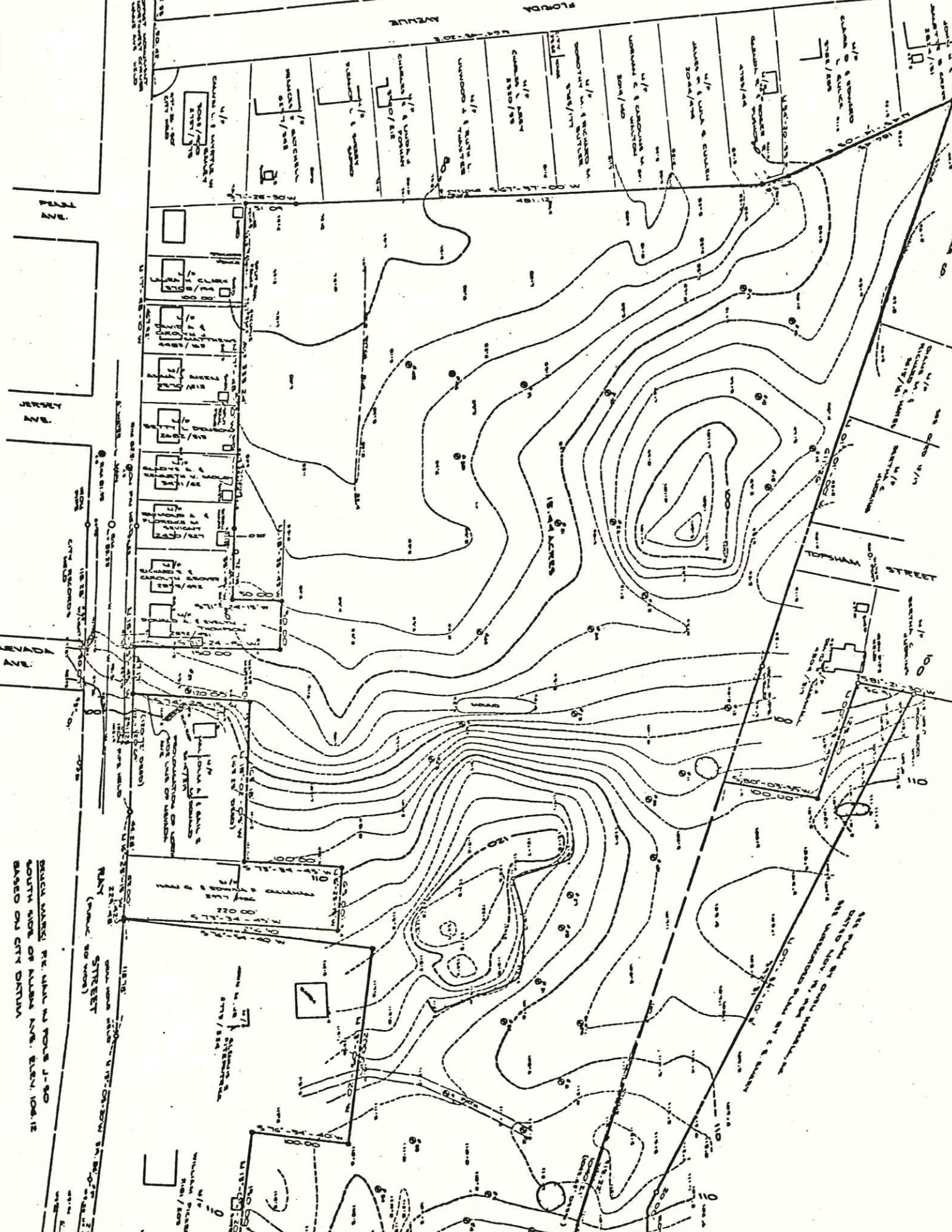
IN WITNESS WHEREOF, the Seller has signed, sealed and acknowledged this Option on the day and year first above written.

SIGNED, SEALED AND DELIVERED in the presence of: The Minat Corporation  
*Margaret E. Reny* By: *Mitchell Case*  
 \_\_\_\_\_ President

STATE OF MAINE  
Cumberland County, SS July 26, 1985  
 Personally appeared the above-named Mitchell Case  
 and acknowledged the above Option instrument to be his free act and deed.

Before me,  
*Margaret E. Reny*  
 Notary Public  
 Attorney at Law  
 MARGARET E. RENY  
 NOTARY PUBLIC, MAINE  
 MY COMMISSION EXPIRES AUGUST 4, 1990

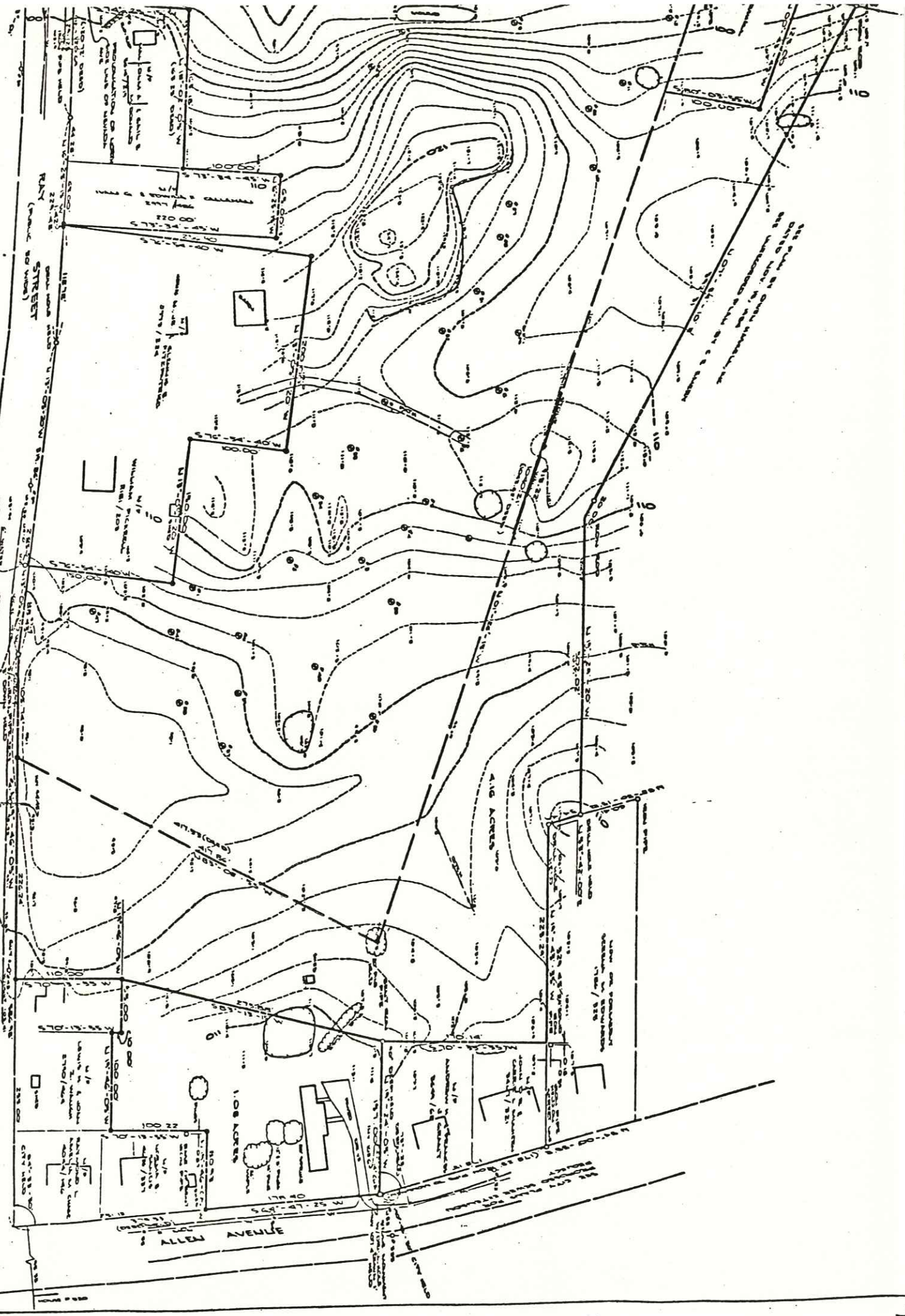
NOTES:  
 1/ DIMENSIONS OF RECORD: DAVID T. & WELSH M. LIBBY  
 2/ ALL UNIMPROVED UTILITIES ARE APPROXIMATE AS  
 SHOWN  
 3/ ALL DIMENSIONS ARE APPROXIMATE AS  
 SHOWN  
 4/ ALL DIMENSIONS ARE APPROXIMATE AS  
 SHOWN  
 5/ ALL DIMENSIONS ARE APPROXIMATE AS  
 SHOWN



DIMENSIONS ARE APPROXIMATE AS SHOWN  
 BASED ON CITY DATA

MAP NO. 2 1961

SUBJECT MATTER: RE. MAP NO. 1-50 SOUTH SIDE OF ALLEN AVE. EAST 106.12 BASED ON CITY DATA



110

5107-47-25 W

4.16 ACRES

1.00 ACRES

ALLEN AVENUE

RYL STREET

JUL 18 1985

Exhibit C

**ONE**  
**Maine Savings Bank**

July 17, 1985

RE: Ray Street Town Homes  
Portland, Maine

To Whom It May Concern:

The Maine Savings Bank is familiar with the project to be developed, known as the Ray Street Town Homes in Portland, by the Liberty Group. It is our understanding that this is a development of 98 condominium units to be sold. The value of the project would be approximately \$7,500,000.

The purpose of this letter is to let you know that the Maine Savings Bank is familiar with the Liberty Group and their various projects, having lent to this organization over the past few years well over \$20,000,000. They have displayed to us the capability, both from a financial and business point of view, to be able to complete a project such as the Ray Street Town Homes in a very proficient manner. Maine Savings Bank would be pleased to process their application for such financing.

If the Maine Savings Bank can provide you further information, please let me know.

Very truly yours,

*Thomas F. Frechette*

Thomas F. Frechette  
Vice President

TFF:jrw

STREET MAP OF NEW YORK CITY  
BASED ON CITY CHARTER

SEAL

MARGARET S. RENVY  
MAYOR'S OFFICE  
APPOINTMENT EXPIRES AUGUST 4, 1990

*Edward DeLong 4/27/88*  
*Margaret Renvy 4/23/85*

LIBERTY

LIBERTY

RECEIVED

1995 MAY -9 AM 9:00

*D. ...*

Covenants for the condominium deeds are in the process of being drafted. The covenants will affect only maintenance, limits of ownership and rules of conduct. The covenants will not affect the project's construction or its impact upon the environment. Please contact Douglas Duncan of Liberty Group, Inc., 38 Preble Street, Portland, ME 04101 (Tel. 772-0548) if and when any further information is required.

**WASTE MANAGEMENT OF MAINE - PORTLAND**

P. O. Box 6419  
 Portland, Maine 04102  
 207/797-3290

Exhibit E

**SERVICE AGREEMENT  
 NON-HAZARDOUS WASTES**

CUSTOMER'S BILLING NAME <b>Liberty Group</b>	
CUSTOMER'S BILLING ADDRESS <b>38 Preble St.</b>	
CITY, STATE, ZIP CODE <b>Portland, Maine</b>	
CUSTOMER CONTACTS <b>Douglas Duncan</b>	TELEPHONE NO. <b>772-0548</b>
SERVICE LOCATION <b>Ray St. Townhouses</b>	
SERVICE ADDRESS <b>Ray St. &amp; Elm Ave.</b>	
CITY, STATE, ZIP CODE <b>Portland, Maine</b>	
BANK REFERENCE	CONTACT

CUSTOMER NUMBER	
<input checked="" type="checkbox"/> NEW ACCOUNT	\$
HOW OBTAINED	
<input type="checkbox"/> CHANGE	\$
TYPE OF CHANGE	
<input type="checkbox"/> CANCEL	\$
REASON	
<input type="checkbox"/> SHORT-TERM	\$
CUSTOMER P.O.	
TELEPHONE NO.	

THIS IS A LEGALLY BINDING CONTRACT, AND CONTRACTOR AGREES TO PROVIDE AND CUSTOMER AGREES TO ACCEPT THE FOLLOWING SERVICES AND EQUIPMENT AT THE CHARGES AND FREQUENCY OF COLLECTION INDICATED BELOW SUBJECT TO THE TERMS AND CONDITIONS SPECIFIED ON THE REVERSE SIDE.

**CONTAINER SPECIFICATIONS**

QUANTITY	CAPACITY (CU. YDS.)	OPEN	CLOSED	FRONT	REAR	OTHER	CASTERS

FREQUENCY OF SERVICE

ON CALL

PICK UP(S) PER WEEK

EFFECTIVE SERVICE DATE

EFFECTIVE DISC. DATE

CUSTOMER OWNED

WMI OWNED

EQUIP. PROMISE DATE

P.U. DEL.

DATE DELIVERED

CONTRACT REVIEW DATE

**SCHEDULE OF CHARGES**

SERVICE CHARGE PER MONTH \$ \_\_\_\_\_

ADDITIONAL CHARGE PER YARD OVER CONT. SPEC. \$ \_\_\_\_\_

CONTAINER USE CHARGE \$ \_\_\_\_\_

COMPACTOR USE CHARGE \$ \_\_\_\_\_

**SERVICE CHARGE PER**

YARD \$ \_\_\_\_\_

LOAD SIZE \$ \_\_\_\_\_

OR SIZE \$ \_\_\_\_\_

LIFT SIZE \$ \_\_\_\_\_

SIZE \$ \_\_\_\_\_

\*INDICATE COMPACTOR LOAD WITH A "C"

PREVIOUS SVC \$ \_\_\_\_\_

PRESENT SVC \$ \_\_\_\_\_

DIVISION  
CONTAINER SHOP  
DEL. P.U.

	MON	TUE	WED	THUR	FRI	SAT	SUN	TOT
NEW								
OLD								
ROUTE								

(OFFICE USE ONLY)

640

UPDATE STREET LISTING

SALE SUMMARY

TICKET TAB

TICKET PLATE

CUST. FILE

COMPACTOR FILE

ROUTE CARD

**SPECIAL INSTRUCTIONS**

Refuse generated at Ray St. Townhouses will not be transported to the municipally operated disposal facility for disposal. Consolidated Waste Services, Inc. operating a landfill in Norridgewock, Maine will be the disposal facility utilized. Transportation and equipment will be negotiated following project completion, as well as the related fees.

MISCELLANEOUS DATA FOR - "640" - LINE 50

THE TERMS AND CONDITIONS ON REVERSE SIDE ARE PART OF THE AGREEMENT.

**CUSTOMER**

AUTHORIZED SIGNATURE \_\_\_\_\_

TITLE \_\_\_\_\_

DATE 7/17/85

**CONTRACTOR**

REPRESENTATIVE'S SIGNATURE \_\_\_\_\_

TERRITORY NO. \_\_\_\_\_

DATE 7/19/85



**TERM.** This agreement is a legally binding contract and shall extend for a minimum period of one (1) year from the effective date of service, and shall be automatically renewed from year to year unless either party shall give written notice of termination (Certified Mail) to the other at least thirty (30) days prior to the annual termination date. In the event the Customer should discontinue this Service Agreement other than as provided above, it is agreed and contracted that said Customer shall pay to Contractor as liquidated damages an amount for the remaining months to be determined on the basis of the amount of the contract for the period of time during the existence of this Service Agreement, or if customer has not been serviced for three months, Customer's most recent monthly bill multiplied by three. The Schedule of Charges may be adjusted from time to time to reflect increases or decreases in the Consumer-Price Index since the last such adjustment. Further, the Schedule of Charges may be adjusted from time to time subject to approval by the customer. Contractor agrees that if Customer no longer requires any collection and disposal service for its waste materials, through discontinuance of its business, relocation outside the area in which the Contractor provides collection service, or similar reason, Customer may terminate this agreement upon written notice given to the Contractor at least thirty (30) days prior to the intended termination date, but only upon payment of all amounts then due Contractor.

**DEFINITION OF EQUIPMENT.** The word "equipment" as used in these Terms and Conditions shall mean all containers used for the storage of waste material including stationary compaction units, stationary baling units, waste material loading devices, tanks, tankers, and such other on-site devices as may be specified on the face of this agreement.

**CUSTOMER'S DUTIES AND LIABILITY.** The equipment provided by Contractor is done so for Contractor's convenience in providing the service called for by this Agreement.

Customer shall be responsible for the cleanliness and safekeeping of the equipment.

Customer shall not make any alterations or improvements to the equipment without the prior written consent of the Contractor.

Customer warrants that the equipment will only be filled level with its top and not otherwise overloaded. Customer shall be liable to Contractor for any overweight fines caused by an overload condition.

Customer shall not overload the equipment, nor use it for incineration purposes, and shall be liable to Contractor for loss or damage in excess of reasonable wear and tear.

Customer warrants that waste delivered to Contractor hereunder will not contain any hazardous or toxic waste as defined by local, state, federal, or provincial laws or regulations.

All equipment furnished by the Contractor for use by the Customer which the Customer has not purchased, shall remain the property of the Contractor and the Customer shall have no right, title or interest in equipment.

Customer agrees to defend, hold harmless and indemnify Contractor against all claims, lawsuits and any other liability of injury to persons or damage to property or the environment connected with the use of the equipment by the Customer or breach of any warranty by the Customer.

On collection day, the Contractor's vehicle shall have clear access to the equipment. If the equipment is blocked to prohibit collection, Customer will be notified and one additional attempt for collection shall be made by Contractor's vehicle. Any additional collection will be classified an "extra pick-up" and so duly charged.

**CHARGES AND PAYMENT.** Customer shall pay the Contractor on a monthly basis for the collection and disposal to be provided by the Contractor (including all charges for equipment maintenance) in accordance with the schedule of charges shown on the reverse side of this agreement.

Payment shall be made by Customer within ten (10) days after receipt of an invoice from the Contractor. In the event that any payment is not made when due, Contractor at its sole option may at any time terminate the Agreement on notice to the Customer and recover any equipment on the premises of the Customer. Contractor may impose, and Customer agrees to pay, a late fee for all past due payments not to exceed the maximum rate allowed by applicable law.

**DISPOSAL AND FUEL COST INCREASES.** Since sanitary landfill and other disposal charges and fuel costs to which Contractor is subject are a significant cost of the service provided, Contractor may increase the unit price of the collection services provided the Customer in an amount equal to any equivalent unit increase in disposal or fuel costs.

**CHANGES.** Changes in the Schedule of Charges, frequency of collection service, number, capacity and type of equipment may be agreed to orally or in writing, by the parties. Consent to oral changes shall be evidenced by the actions and practices of the parties.

**DRIVEWAYS AND PARKING AREAS.** Customer warrants that any right of way provided a Customer from Contractor's equipment location to the most convenient public way is sufficient to bear the weight of all of the Contractor's equipment and vehicles reasonably required to perform the services herein contracted. Contractor shall not be responsible for damage to any private pavement or accompanying sub-surface of any route reasonably necessary to perform the services herein contracted.

**ATTORNEY'S FEES.** In the event of a breach of this agreement by either party, the breaching party shall pay all reasonable attorney's fees, collection fees and costs of the other party incident to any action brought to enforce this agreement.

**ASSIGNMENT AND BENEFIT.** This agreement shall be binding on the parties and their successors and assigns.

**MISCELLANEOUS.** If any conflict or differences exist in this agreement between terms which are printed and those which are typed or written, the typed or written language shall govern.

LANDFILL CONTRACT

This is a contract between CONSOLIDATED WASTE SERVICES, INC., a Maine corporation operating a landfill at Norridgewock, County of Somerset, State of Maine (hereinafter "Consolidated") and Liberty Group, Developer, Portland, County of Cumberland, State of Maine (hereinafter "Ray Street Townhouses"). This contract is for the two (2) year period commencing on July 18, 1985 and ending on July 17, 1987. During the period this contract is in effect, including any renewals and extensions, Ray Street Townhouses will exclusively utilize the facilities of Consolidated at Norridgewock as and in lieu of a municipal waste disposal facility and Waste Management of Maine - Portland (hereinafter "Waste") as sole transporting company to Consolidated. To that end, Consolidated will permit vehicles authorized by Ray Street Townhouses and Waste to enter the facility during normal operating hours to dump or empty refuse and waste. The following are the terms and conditions of this contract:

1. This contract, and the operation of the landfill, are subject to any and all rules, regulations and orders of the Maine Department of Environmental Protection and the United States Environmental Protection Agency, including any new rules, regulations or orders effective during the term of this agreement.
2. The following types of wastes are specifically EXCLUDED from this contract and may not be dumped in the landfill:
  - (a) "Septage" as defined in Title 38, Maine Revised Statutes, Section 1303(9), including any and all wastes generated by septic tanks, cesspools or similar facilities;
  - (b) "Sludge" from any municipal, commercial or industrial wastewater treatment plant or pollution control facility;
  - (c) Any waste which has been designated a "special waste" or a "hazardous waste" by the Maine Department of Environmental Protection or the United States Environmental Protection Agency;
  - (d) Agricultural wastes, animal carcasses or animal by-products.

3. The following types of wastes will be accepted, but only if segregated and disposed of in specially designated areas:
  - (a) Tires;
  - (b) Junk cars, wrecks and other similar auto, truck, tractor, and/or trailer parts;
  - (c) White goods; and
  - (d) Large or bulky scrap metal.
4. The price for waste disposed of at Consolidated's facility shall be Fifteen Dollars (\$15.00) per ton. Bills will be rendered on the first of the month based upon the weight tickets at Consolidated's scales for the previous month and payments are due on or before the 10th day of that month.
5. Consolidated reserves the right to set its hours of operation, and dumping shall be permitted only during those hours; provided, that Consolidated agrees that, barring unforeseen or unexpected events beyond the control of Consolidated, it will be in operation at least forty (40) hours per week.
6. Consolidated reserves the right to set reasonable rules and regulations concerning the operation of the landfill, the conduct of drivers and others on the premises and or any other matter necessary or desirable for the safe, legal and efficient operation of the landfill. Ray Street Townhouses agrees to instruct all drivers, agents and contractors who come upon the landfill site to conform to such rules and regulations.
7. No private vehicles or individual dumping is permitted.
8. If Consolidated shall, from time to time, not insist upon strict compliance with this contract or any terms thereof, such conduct shall not constitute a waiver of Consolidated's right to do so on other or future occasions.
9. Under normal circumstances, only those types of garbage trucks or rubbish hauling trucks with enclosed bodies shall be permitted to dump wastes at the facility. Special arrangements can be made for other types of equipment where the management of Consolidated determines that delivery of waste in an open body or uncovered truck does not pose the likelihood of blowing debris or other legal, environmental or operational problems for the landfill.

10. If any claims are made against Consolidated by anyone, including any regulatory agency, alleging in substance the disposal of unauthorized or special or hazardous waste, whether or not resulting in damage or injury to property or person, then in the event that such disposal is claimed to be as a result of the act or omission of Ray Street Townhouses, its contractors, agents or employees, then in that event, Ray Street Townhouses agrees to take over and assume, at its own expense, all costs of investigating and defending such claim and to INDEMNIFY, SAVE AND HOLD HARMLESS Consolidated of and from all claims and damages arising therefrom.

DATE: 7-17-85

CONSOLIDATED WASTE SERVICES, INC.

By:   
Its  
Duly Authorized

LIBERTY GROUP

By:   
Its  
Duly Authorized

**Waste Management of Maine-Portland**  
2000 Forest Avenue  
Portland, Maine 04103  
207/797-8290 1-800-322-1353

**George Weimer**  
Sales Manager



A Waste Management Company

July 23, 1985  
Ray Street Development  
JN. 841151

SOIL EROSION AND SEDIMENTATION CONTROL PLAN

Soil erosion and sedimentation will follow the State of Maine Department of Transportation "Standard Specifications for Highways and Bridges," Revisions of June 1981.

Specifically, these measures will include:

- a. Existing vegetation will be preserved in those areas not to be occupied by building, pavement, utilities or detention basin. This shall also apply to areas not required for cut/fill.
- b. Storm water detention basins for particular areas will be constructed prior to construction of roads, utilities and buildings, and those areas will be rough graded to act as sedimentation basin during the construction period. After construction, the basin will be cleared of accumulated debris and sediment, and graded as shown on the site plan.
- c. Vegetation will be established on final slopes as soon as possible after their construction. Special care will be taken along all property boundaries and in the areas of the detention basins.
- d. Stockpiles of any loam salvaged during the construction will be seeded with rye to establish a rapid cover.
- e. Geotextile fencing will be installed throughout the project site during construction and maintained until the disturbed areas are satisfactorily revegetated, at which time they will be removed.
- f. Street excavation will have the required subbase in place as soon as possible after construction begins to minimize the amount of soil exposed to erosion.
- g. Inlets and outlets of all culverts will be rip-rapped.
- h. Revegetation will be accomplished as soon as practical after construction activities have been completed. Loam and seed, bark mulch, and plantings will be used to re-establish the ground cover, as coordinated through landscape architect's office.
- i. After construction all disturbed areas that will not be paved or built upon, or otherwise treated, will be seeded with the following mixes:

Detention Basins: 50% Creeping Red Fescue  
25% Kentucky Blue Grass  
10% Domestic Rye  
10% Red Top  
5% Ledino Clover

at 6 lbs/1000 ft<sup>2</sup>

All Other Areas: 60% Flyking Kentucky Bluegrass  
30% Penn Red Fescue  
10% Manhattan Turf-Type Rye Grass

at 4 lbs/1000 ft<sup>2</sup>

These areas will be fertilized with 10-20-20 at the rate of 2 lbs/100 ft<sup>2</sup>  
and limed at the rate of 10 lbs/100 ft<sup>2</sup> (to be verified by soil test).

# State of Maine

Exhibit G



## Department of State

*I, the Secretary of the State of Maine, certify that* according to the provisions of the Constitution and Laws of the State of Maine, the Department of State is the legal custodian of the Great Seal of the State of Maine which is hereunto affixed and of the records of organization, charter amendments, dissolutions of corporations and annual reports filed by the same.

I FURTHER CERTIFY that Liberty Group, Inc. is a duly organized corporation under the laws of the State of Maine and that the date of the incorporation of said corporation is February 24, 1981.

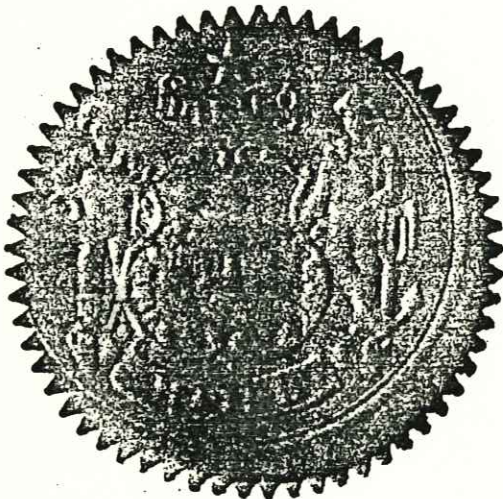
I FURTHER CERTIFY that on May 8, 1981 an amendment Changing the Authorized Capital Stock was filed; on January 4, 1982 a Resolution Allowing Similar Name was filed; and on March 20, 1984 a Resolution Allowing Similar Name was filed. No further amendments have been filed to date.

I FURTHER CERTIFY that said corporation has filed all annual reports due to this Department, paid all corporate franchise taxes and fees and that no action is now pending by or on behalf of the State of Maine to forfeit the charter and that according to the records in the Department of the Secretary of State, said corporation is a legally existing corporation in good standing under the laws of the State of Maine at the present time.

In Testimony Whereof, I have caused the Great Seal of the State to be hereunto affixed. GIVEN under my hand at Augusta, this  
Seventeenth \_\_\_\_\_ day of July \_\_\_\_\_ in the year  
of our Lord one thousand nine hundred and eighty-five.

A handwritten signature in cursive script, appearing to read 'R. Douglas'.

Secretary of State



Kenneth & Patricia Edwards  
469 Allen Avenue  
Portland, ME 04103  
(Lots D 1 & 6)

Carrie & John Mulherne  
477 Allen Avenue  
Portland, ME 04103  
(Lot D 13)

Andrew & Frances Grant  
485 Allen Avenue  
Portland, ME 04103  
(Lot D 18)

David & Helen Libby  
495 Allen Avenue  
Portland, ME 04103  
(Lots D 7, 12 & 15)

Norma Sands  
515 Allen Avenue  
Portland, ME 04103  
(Lots D 10, 11 & 14)

Amelia & Raymond Chase  
517 Allen Avenue  
Portland, ME 04103  
(Lot D 9)

Lewis & Joan Waugh  
446 Ray Street  
Portland, ME 04103  
(Lots D 4, 5, & 8)

William & Pauline Pickrell  
402 Ray Street  
Portland, ME 04103  
(Lot D 16)

John & Glennis Fitzpatrick  
398 Ray Street  
Portland, ME 04103  
(Lot D 17)

Ivan & Edwina Callahan  
378 Ray Street  
Portland, ME 04103  
(Lot F 6)

Gail & Malcolm McDonald  
368 Ray Street  
Portland, ME 04103  
(Lot F 5)

Donald & Evelyn Thompson  
356 Ray Street  
Portland, ME 04103  
(Lot 17)

Richard & Carolyn Grover  
354 Ray Street  
Portland, ME 04103  
(Lot F 8)

Raymond & Florence Sevigny  
352 Ray Street  
Portland, ME 04103  
(Lot F 9)

Gladys & Kenneth Moody  
344 Ray Street  
Portland, ME 04103  
(Lot F 10)

Betty Denbow  
340 Ray Street  
Portland, ME 04103  
(Lot F 11)

Anna Aiken  
336 Ray Street  
Portland, ME 04103  
(Lot F 12)

David & Carolyn Matthews  
334 Ray Street  
Portland, ME 04103  
(Lot F 13)



Laura Clark  
330 Ray Street  
Portland, ME 04103  
(Lot F 14)

Dorothy Butler  
92 Florida Avenue  
Portland, ME 04103  
(Lots A 5 & 6)

Doris & George Castonia  
326 Ray Street  
Portland, ME 04103  
(Lot F 15)

Caroline Walton  
86 Florida Avenue  
Portland, ME 04103  
(Lots A 3 & 4)

Calvin & Myrtle Gailey  
316 Ray Street  
Portland, ME 04103  
(Lots A 17-20)

Lula Cullen  
80 Florida Avenue  
Portland, ME 04103  
(Lots 1 & 2)

Francis Gatchell  
114 Florida Avenue  
Portland, ME 04103  
(Lots A 15-16)

Glenda & Roger Pushor  
76 Florida Avenue  
Portland, ME 04103  
(Lots 27 & 28)

Eleanor & Sherry Sapko  
110 Florida Avenue  
Portland, ME 04103  
(Lots A 13-14)

Claire & Edward Gulick  
102 Baxter Blvd.  
Portland, ME 04101  
(Lots A 24-26)

Charles & Linda Foshay  
106 Florida Avenue  
Portland, ME 04103  
(Lots A 11-12)

John and Jeanette Greer  
62 Florida Avenue  
Portland, ME 04103  
(Lots A 22 & 23)

Linwood and Ruth Thaxter  
100 Florida Avenue  
Portland, ME 04103  
(Lots A 9 & 10)

Eilo Baldini  
18 Salt Spray Lane  
Cape Elizabeth, ME 04107  
(Lot B 1)

Charles Arey  
96 Florida Avenue  
Portland, ME 04103  
(Lots 7 & 8)

Thomas Fiorica  
12 Church Street  
Jay, ME 04239  
(Lot B 1)

Richard & Emily Zelmas  
11 Gertrude Avenue  
Portland, ME 04103  
(Lot B 20)

Carl & Jane Shaw  
15 Gertrude Avenue  
Portland, ME 04103  
(Lots B 18 & 19)

Florence Scott  
25 Gertrude Avenue  
Portland, ME 04103  
(Lot B 17)

Lawrence & Mary Louise Fitzgerald  
31 Gertrude Avenue  
Portland, ME 04103  
(Lots B 15 & 16)

C.A.T.L. ton & Co.  
389 Congress Street  
Portland, ME 04101  
(Lot B 14)

Simpson Memorial Church  
1301 Washington Avenue  
Portland, ME 04103  
(Lots A 1-6)

Laura Gaudette  
32 Gertrude Avenue  
Portland, ME 04103  
(Lot A 7)

Ruth Magnuson  
40 Gertrude Avenue  
Portland, ME 04103  
(Lot A 8)

John & Ann Richio  
54 Gertrude Avenue  
Portland, ME 04103  
(Lots D 1 & 2)

Raymond Carye  
Northport Realty Trust  
15 Monsignor O'Brien Highway  
Cambridge, MA 02141  
(Lots D 3-5)

Gladys & Hughes Grant  
10 Sunset Avenue  
Falmouth, ME 04105  
(Lots D 6 & 7)

Wayne Kimball  
74 Gertrude Avenue  
Portland, ME 04103  
(Lots D 8 & 9)

The Arthur Company  
34 Preble Street  
Portland, ME 04101  
(Lots D 10; E 7, 10-13;  
and I 1-3)

Harold & Karin Gower  
181 Carlson Street  
West, ME 04092  
(Lot D 11)

Melvin & Claire Works  
122 Gertrude Avenue  
Portland, ME 04103  
(Lots H 1-3)

Bertha Judkins  
Dryden, ME  
(Lots H 4-5; I 7-6)

David Marshall  
128 Gertrude Avenue  
Portland, ME 04103  
(Lots H 6 & 7)

Diane & Richard Hayes  
21 Martin Avenue  
Scarborough, ME 04074  
(Lots I 4 & 5)

Marriner Bailey  
Horton Hill Road  
Chittenden, VT 05737  
(Lot J 3)

Fred Scribner  
443 Congress Street  
Portland, ME 04101  
(Lots E 8 & 9)

Merrill Wood  
389 Congress Street  
Portland, ME 04103  
(Lot E 6)

Edwin Curtis  
59 Gertrude Avenue  
Portland, ME 04101  
(Lot E 5)

Elwin & Margaret Goldthwaite  
53 Gertrude Avenue  
Portland, ME 04103  
(Lots E 1-4)

Claire & Edward L. Gulick  
102 Baxter Blvd.  
Portland, ME 04101

PLANNING REPORT #91-87

RAY STREET TOWNHOMES

SITE PLAN AND P.R.U.D. REVIEW

LIBERTY GROUP, APPLICANT

Submitted to:

Portland Planning Board  
Portland, Maine

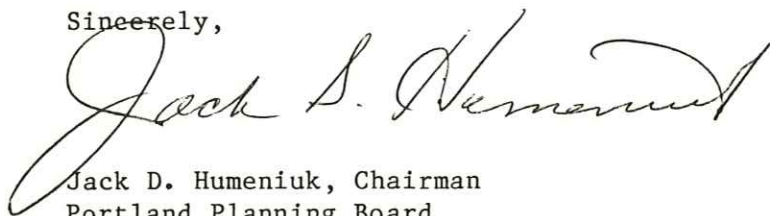
November 10, 1987

J. Corriveau  
November 16, 1987  
Page 2.

The approval is based on the submitted plan and the findings related to Site Plan and R-3 PRUD Performance Standards as contained in Planning Report #91-87 which is attached. If you need to make any modifications to the approved plan, you must submit a revised plan for the planning staff's review. The site plan will be deemed to have expired unless work on the development has commenced within six (6) months of the approval or within the time period agreed upon in writing by the City and the applicant. The PRUD approval expires whenever the subdivision or site plan approval becomes invalid.

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

Sincerely,



Jack D. Humeniuk, Chairman  
Portland Planning Board

MO/jf

cc: Joseph E. Gray, Jr., Director of Planning & Urban Development  
Alexander Jaegerman, Chief Planner  
✓ Maureen O'Meara, Planner  
P. Samuel Hoffses, Chief of Building Inspections  
Warren J. Turner, Zoning Administrator  
George Flaherty, Director of Parks & Public Works  
Thomas Eaton, City Engineer  
William Boothby, Principal Engineer  
Robert Roy, Planning Engineer  
Carmela Barton, City Arborist  
Natalie Burns, Associate Corporation Counsel  
Michael Baillargeon, Supervisor of Delivery and Collection  
125 Forest Avenue, Portland, Maine 04101  
William Bray, City Traffic Engineer

## I. INTRODUCTION

Liberty Group is requesting review of a 98-unit Planned Residential Unit Development, located on 19.98 acres off of Ray Street and Topsham Street by way of Gertrude Street. The development is in the R-3 Residential zone. This project was previously reviewed and approved by the Portland Planning Board September 10, 1985. The site plan has expired which also invalidates the PRUD approval. The subdivision approval is still in effect and will not be reviewed. The site plan and vicinity map are included as Attachments 1 and 2.

440 notices have been mailed to area residents and property owners. In addition, a legal advertisement was published in both November 2, 1987 editions of the Guy Gannett newspapers.

## II. SUMMARY OF FINDINGS

Zoning	R-3 Residential
Land Area	19.98 acres
Number of Units	98 units proposed; 107 units maximum allowed
Density	4.9 units per acre
Building Type	Cape and townhouse style buildings
Number of Bedrooms	2 bedrooms with expansion potential
Parking	98 garage spaces plus driveway stacking proposed; 98 required
Number of stories	1 to 2
Land Uses	Residential single family

## III. STAFF REVIEW

The proposal has been reviewed for compliance with the R-3 Residential zone, Site Plan Ordinance, and R-3 PRUD Performance Standards of the Land Use Code. The plan has been reviewed and approved by the Building, Traffic, Fire, Public Works and Planning Departments. The comments of those departments are contained in this report.

## Site Plan Review

### 1. PARKING AND CIRCULATION

A traffic study updated by the applicant has recommended signal improvements at the Washington Avenue/Allen Avenue intersection, Washington Avenue/Dairy Queen intersection and Washington Avenue/Sanborn Street intersection. The applicant will be installing a fully actuated control system at the Washington/Allen Avenue intersection which will be interconnected with the other intersections. In addition, granite curbing and sidewalk will be installed from Nevada Avenue to Allen Avenue along Ray Street. Ray Street will also be widened 16 feet from the centerline to the applicant's side of the street and the entire roadway will be overlain with a 1 1/2" pavement overlay.

Interior circulation will be along the proposed roadway, which is 24 feet wide. The City Traffic Engineer has recommended stop sign control or speed bumps to control "cut-through" traffic which the applicant is including as part of the site design. Ninety-eight garage spaces are provided with room in the driveway areas for stacking for an approximate total of two parking spaces per unit.

Mr. William Bray, City Traffic Engineer, has reviewed and approved the project. His comments are included as Attachment 3.

### 2. BULK, LOCATION, AND HEIGHT

The applicant is proposing cape and townhouse style units with two bedrooms and one garage per unit. The development consists of fifteen 4-unit buildings, eleven 3-unit buildings, and one 5-unit building. Three of the 4-unit buildings are all townhouses while the rest are two townhouse units flanked by a flat or cape style unit. The units will be one to two stories high. The townhouse units will be 30 feet high to the peak of the roof. Exterior materials will be clapboard and wood trim stained to weather. Elevations are included as Attachment 4.

### 3. LANDSCAPING

The applicant proposes to preserve existing vegetation along the perimeter of the project and inside the cul-de-sac. Foundation plantings are also proposed in front of the units. The landscape plan is included as Attachment 5.

Ms. Carmela Barton has reviewed the plan and has suggested that additional perimeter buffering is needed due to the quality of existing vegetation and the narrowness of proposed buffering in some areas. A potential condition of approval is:

- That additional landscape buffering along the perimeter be proposed and installed as needed as determined by the City Arborist.

Ms. Barton's comments are included as Attachment 6.

4. SOILS AND DRAINAGE

The geologic conditions do not pose an undue hindrance to developing the site.

The drainage for Phase I and IV of the site will be collected and conveyed to a detention area located in the corner of the Ray Street frontage. Phases II and III will drain into a detention area located in the Ray Street/Florida Avenue corner of the site.

Mr. Robert Roy, Planning Engineer, has reviewed the plan. A potential condition of approval is:

- That an executed turnaround easement and a drainage maintenance agreement be submitted.

Mr. Roy's comments are included as Attachment 7.

5. EXTERIOR LIGHTING

The plan includes 30 150-watt high pressure sodium lights mounted on 12 foot wood poles along the road and driveway areas.

6. ZONING AMENDMENT

The proposal does not include a zoning amendment.

7. FIRE SAFETY

The proposed development will not create an undue fire safety hazard by not providing adequate access to the site for emergency vehicles. The development will have two access roads and an emergency access lane. As the plan is currently phased, Phase I will have access onto Ray Street. Phases II and III, a total of 49 units, will have access from Topsham Street with an emergency access lane onto Ray Street. Phase IV will connect the first three phases. The applicant will also be installing a hydrant in the project. A potential condition of approval is:

- That an executed emergency access maintenance agreement be submitted for staff approval.

The Fire Department has reviewed and approved the plan.

8. PRELIMINARY PLAN

Since the October 6, 1987 workshop, the applicant has made no significant changes to the plan.

9. CITY PROJECTS

The proposed development will not interfere with any known City project.



## Planned Residential Performance Standards

### 1. DESIGN RELATIONSHIP TO SITE

The development demonstrates a reasonably unified response to the design possibilities of the site, by virtue of including such elements as the design and layout of the buildings, circulation plan, open space, drainage and orientation to form a functionally integrated whole.

Existing exposed ledge on the site will remain as part of the open space and backyard areas.

### 2. DESIGN RELATIONSHIP TO SURROUNDING NEIGHBORHOOD

The design and layout of the development and buildings, by virtue of such features as architectural style, exterior finish, height and scale, circulation, open space, and landscaping, is reasonably compatible with the surrounding neighborhood.

The surrounding neighborhood is primarily single family 1 to 2 story homes. The applicant is proposing cape style or garden flat units which are one story combined with 2-story townhouse units. The units will be grouped together into 3 to 5 unit buildings. The two 4-unit townhouse buildings have been located in the middle of the site.

### 3. Open Space

All open spaces on the site are functionally integrated into the development plan by virtue of such features as landscaping, lighting, walkways, furnishings, accessibility to residents, recreation, orientation to achieve energy conservation or solar access, gardening, preservation of natural site amenities, and use as a buffer for privacy between housing clusters and to screen the development from nearby roadways and surrounding neighborhoods.

The applicant is proposing two tot lots and a basketball court area near Ray Street. The remaining open areas of the development serve as detention areas or include significant ledge outcroppings.

#### IV. MOTIONS FOR THE BOARD TO CONSIDER

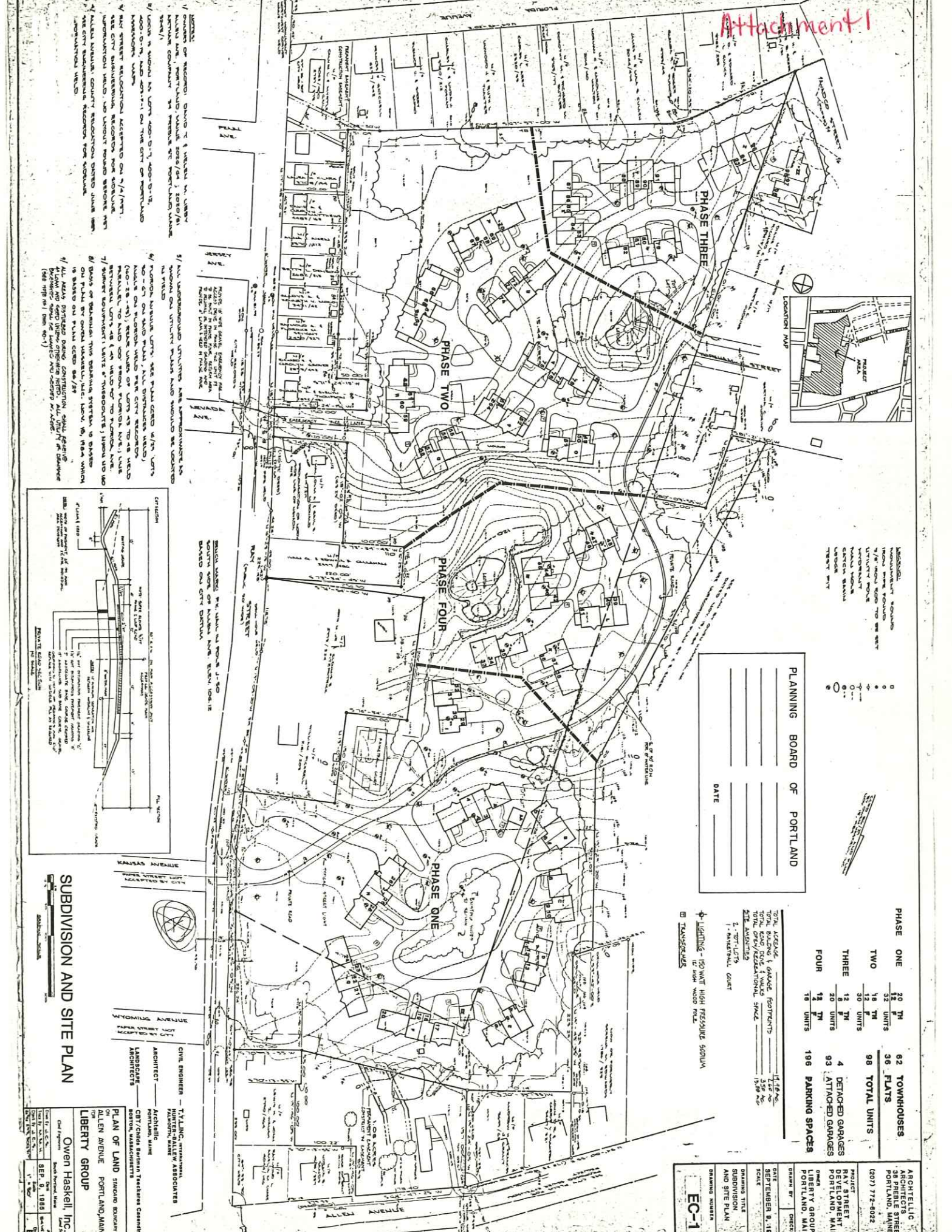
On the basis of plans and materials submitted by the applicant and on the basis of information contained in Planning Report #91-87 relevant to standards for site plan and R-3 PRUD review and/or other findings as follows:

1. That the plan is in conformance with the site plan ordinance of the Land Use Code.
  - A. Potential Conditions of Approval
    - i. That additional landscape buffering along the perimeter be proposed and installed as needed as determined by the City Arborist.
    - ii. That an executed turnaround easement and a drainage maintenance agreement be submitted.
    - iii. That an executed emergency access maintenance agreement be submitted for staff approval.
2. That the plan is in conformance with the R-3 PRUD Standards of the Land Use code.

Waivers: none requested.

#### Attachments

1. Vicinity Map
2. Site Plan
3. Traffic Engineer's Comments
4. Elevations
5. Landscaping Plan
6. City Arborist's Comments
7. Planning Engineer's Comments



- 1. UNIMPAVED ROADS
- 2. UNIMPAVED DRIVEWAYS
- 3. UNIMPAVED SIDEWALKS
- 4. UNIMPAVED DRIVEWAYS
- 5. UNIMPAVED DRIVEWAYS
- 6. UNIMPAVED DRIVEWAYS
- 7. UNIMPAVED DRIVEWAYS
- 8. UNIMPAVED DRIVEWAYS
- 9. UNIMPAVED DRIVEWAYS
- 10. UNIMPAVED DRIVEWAYS

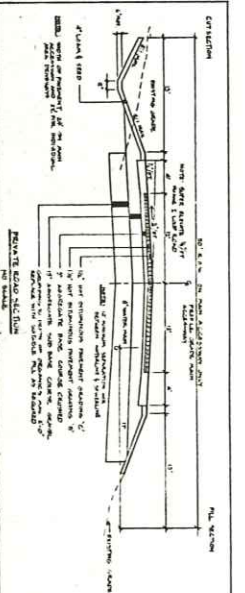
PLANNING BOARD OF PORTLAND

DATE \_\_\_\_\_

PHASE	ONE	TWO	THREE	FOUR	TOTAL
TOWNHOUSES	62	36	98	196	
FLATS					
TOTAL UNITS	62	36	98	196	
DETACHED GARAGES	4	93			
ATTACHED GARAGES					
PARKING SPACES					

TOTAL ACRES: 1.1844  
 TOTAL GROSS AREA: 1,184,400 SQ. FT.  
 TOTAL GROSS AREA: 1,184,400 SQ. FT.  
 TOTAL GROSS AREA: 1,184,400 SQ. FT.

1. LIGHTING - 150 WATT HIGH PRESSURE SODIUM  
 2. TRANSFORMERS



**SUBDIVISION AND SITE PLAN**

ARCHITECT: T.Y. LING, ARCHITECTS  
 LANDSCAPE ARCHITECTS: GERT/CHAS BERLIN THEISSERS GARDENING, INC.  
 CIVIL ENGINEER: T.Y. LING, ARCHITECTS  
 PORTLAND, MAINE

LIBERTY GROUP  
 Owen Haskell, Inc.  
 SEP. 9. 1985

ARCHITECT: ARCHITECTS  
 36 PORTLAND, MAINE  
 (207) 774-8022

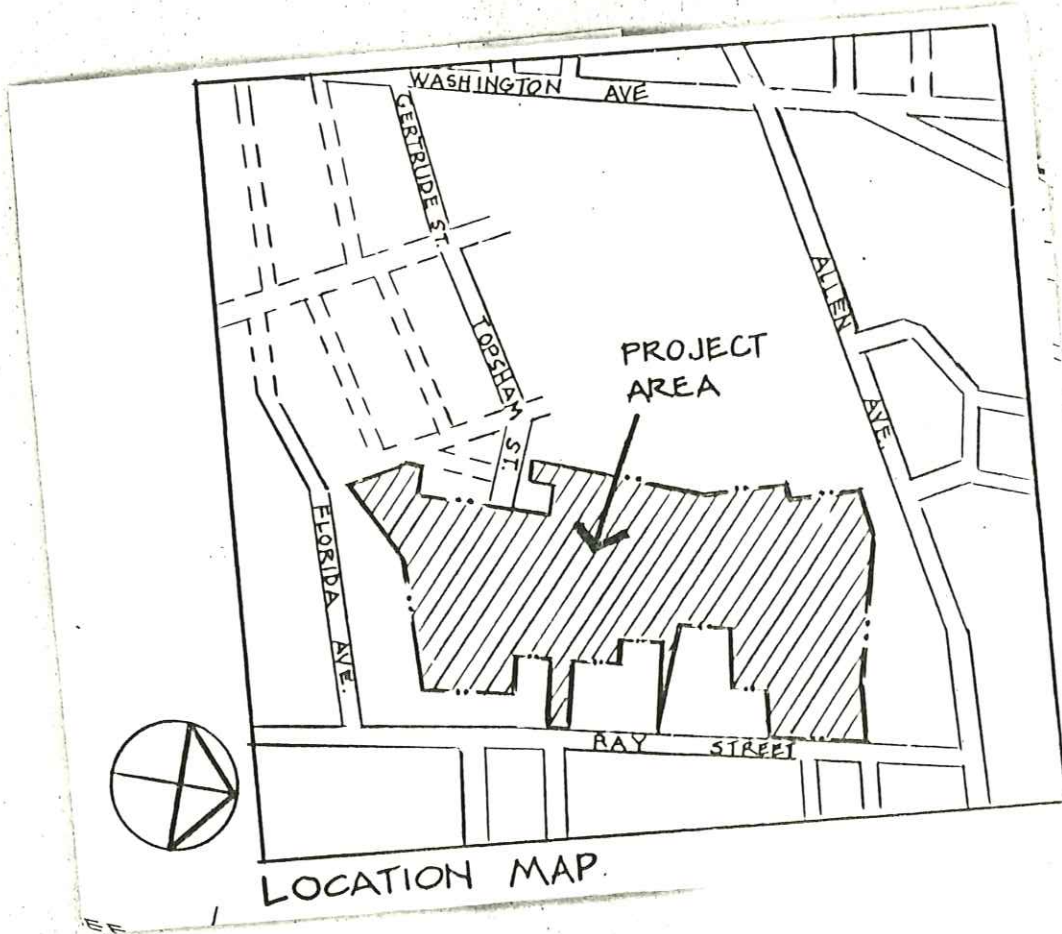
PROJECT SHEET  
 DEVELOPMENT  
 PORTLAND, MAINE

LIBERTY GROUP, INC.  
 PORTLAND, MAINE

DATE: SEPTEMBER 8, 1985  
 DRAWN BY: [ ]  
 CHECKED BY: [ ]

DRAWING TITLE:  
 SUBDIVISION  
 AND SITE PLAN

DRAWING NUMBER:  
**EC-1**



CITY OF PORTLAND, MAINE  
M E M O R A N D U M

**TO:** Maureen O'Meara, Planner  
**FROM:** William Bray, Traffic Engineer  
**DATE:** November 4, 1987  
**SUBJECT:** Ray Street Development

I am in receipt of the Traffic Impact Study prepared for the subject development. The consultant had indicated that without traffic signalization improvements along Washington Avenue that insufficient capacity exists to handle this development. Therefore, in the interest of maintaining a reasonable level of service at our critical intersections along Washington Avenue the following condition of approval must be imposed on this development:

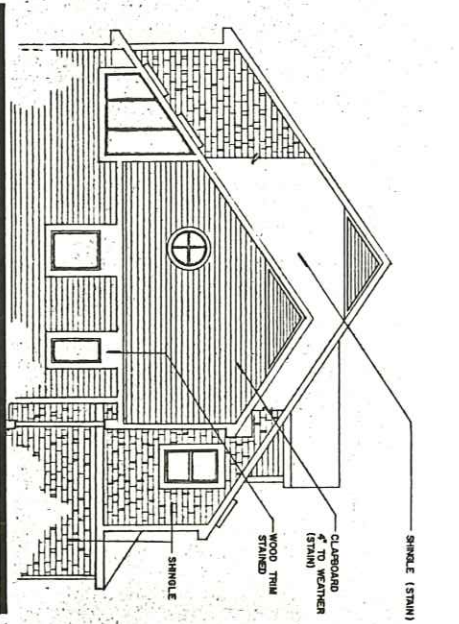
1. That the Developer design, purchase and install a new fully-actuated control system on Washington Avenue to include the Washington Avenue/Allen Avenue and Washington Avenue/Dairy Queen intersections as well as interconnected and programmed to include existing traffic systems at Auburn Street and Sanborn Street. All design plans and specifications must meet the approval of the City.

Further conditions of approval equally as important to insure that the project can be safely developed should include:

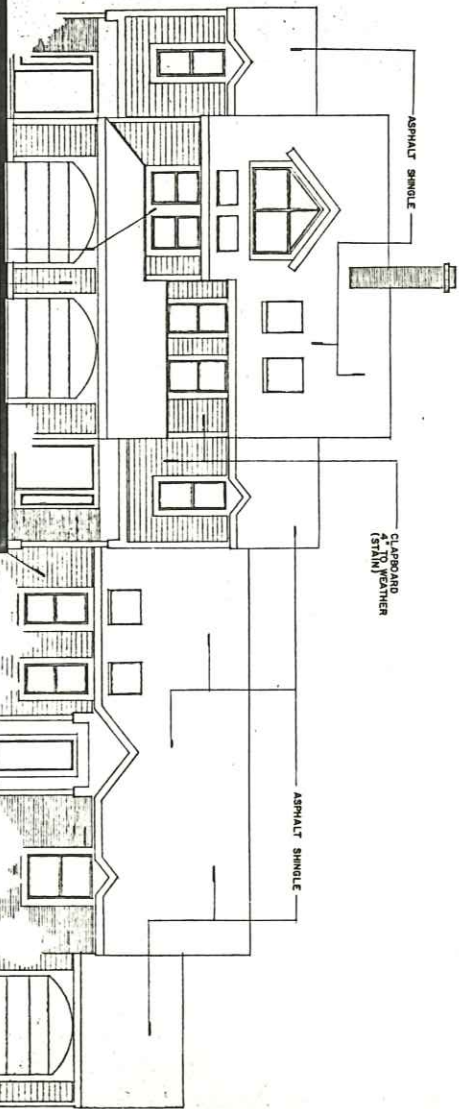
2. Widen the westerly side of Ray Street from the recently constructed City project nearest Nevada Street and extend to the intersection of Allen Avenue. The pavement should be widened to a width of 16 feet from the centerline and the improvements should include granite curb and bituminous sidewalk.
3. After all utilities and widening is accomplished the Developer should overlay the street with 1 1/2 inch pavement overlay.
4. Full stop sign control and/or possibly "speed bumps" should be installed along the project roadway system to discourage "cut-thru" traffic.

Each of these conditions must be included into the approved process or it is my opinion that the project cannot safely be developed.

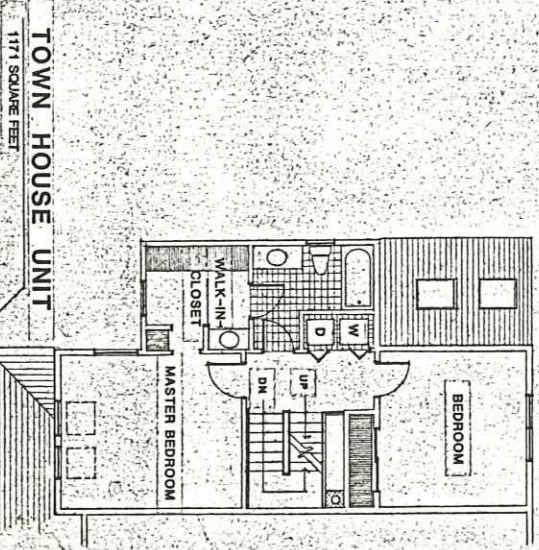
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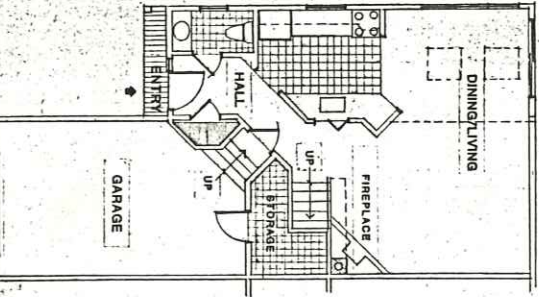
SIDE ELEVATION



FRONT ELEVATION

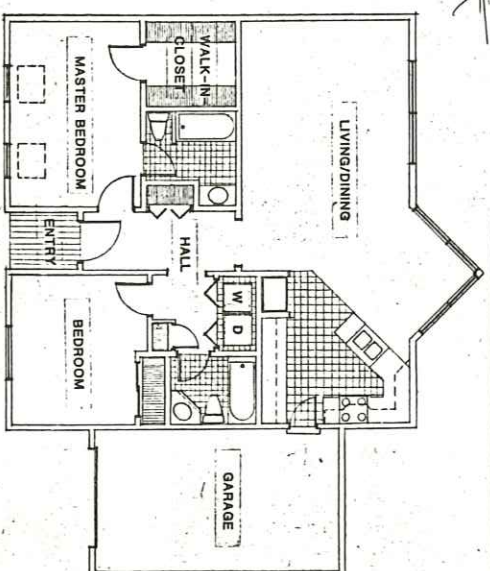


TOWN HOUSE UNIT



SECOND FLOOR

FIRST FLOOR



GARDEN UNIT

PROJECT: <b>ARCHITELLS ARCHITECTS</b> 84 MIDDLE STREET PORTLAND, MAINE OWNER: <b>LIBERTY GROUP</b> PORTLAND, ME PHONE: 773-6932	DATE: 8/18/09	DRAWN BY: [initials]	CHECKED BY: [initials]
SCALE: 1/4" = 1'-0"	DATE: 8/18/09	PROJECT: [initials]	PROJECT: [initials]
DRAWING TITLE: UNIT PLANS	DATE: 8/18/09	PROJECT: [initials]	PROJECT: [initials]
ELEVATIONS:	DATE: 8/18/09	PROJECT: [initials]	PROJECT: [initials]
SHEET NUMBER: A-1	DATE: 8/18/09	PROJECT: [initials]	PROJECT: [initials]



ASB

CITY OF PORTLAND  
MEMORANDUM

**TO:** Maureen O'Meara, Planner  
**FROM:** Carmela Barton, City Arborist  
**DATE:** November 5, 1987  
**SUBJECT:** Ray Street Development

My greatest concern with this proposed development is the buffering situation. It appears that the developer intends to rely almost exclusively on existing vegetation to provide a buffer from surrounding properties. In many areas, this existing vegetation tends to dip well below the 25' setback delineation. Due to the nature of the soils in this area, the quality of the existing vegetation is also questionable. There are many obvious areas which at this point should be supplemented with additional buffering. However, the developer should also be made aware that, upon completion of this project, should inadequate perimeter buffering be present, additional buffering will be required at that time. Finally, all transformers must be suitably buffered.

Should you have any questions or comments, please do not hesitate to contact me. Thank you!

/jfb

cc: File to Carmela Barton



CITY OF PORTLAND, MAINE  
MEMORANDUM

**TO:** Maureen O'Meara, Planner  
**FROM:** Robert J. Roy, Planning Engineer, Parks and Public Works  
**SUBJECT:** Ray Street Townhouse

**DATE:** 11/5/87

I have reviewed the resubmitted plans for this project and find them to be acceptable with the following condition:

1. That an executed turnaround easement and a drainage maintenance agreement be submitted.

Should the Planning Board include Bill Bray's condition of approval relating to improvements along Ray Street in their action on the project, the plans must be revised to reflect these requirements.

The utility, grading and drainage designs remain unchanged from the 1985 approval and are still acceptable.

Let me know if I can be of any further assistance.



RJR/bjk  
pc: William S. Bray, Principal Engineer

CITY OF PORTLAND, MAINE  
PLANNING BOARD

---

Jack D. Humeniuk, Chairman  
Barbara A. Vestal, Vice Chairman  
John L. Barker  
Joseph R. DeCoursey  
Michael J. Fenton  
Jadine R. O'Brien  
Kenneth M. Cole, III

November 16, 1987

Jamie Corriveau  
Liberty Group  
38 Preble Street  
Portland, Maine 04101

Re: Ray Street Townhomes

Dear Mr. Corriveau:

On November 10, 1987 the Portland Planning Board voted (6-0) on the following motions regarding the Ray Street Townhomes.

1. That the plan is in conformance with the Site Plan Review Ordinance with the following conditions:
  - i. That the applicant install a fully actuated control system at the Washington Avenue/Allen Avenue intersection which will be interconnected with the Washington Avenue/Sanborn Street intersection and the Washington Street/Dairy Queen intersections. Ray Street will be widened to 16 feet from the centerline to the applicant's side of the street and the entire roadway will be overlain with an 1 1/2" pavement overlay from Nevada Avenue to Allen Avenue.
  - ii. That additional landscape buffering along the perimeter be proposed and installed as needed as determined by the City Arborist and that all transformers be suitably landscaped.
  - iii. That an executed turnaround easement be submitted for staff approval.
  - iv. That an executed emergency access maintenance agreement be submitted for staff approval.
2. That the plan is in conformance with the R-3 PRUD Performance Standards.

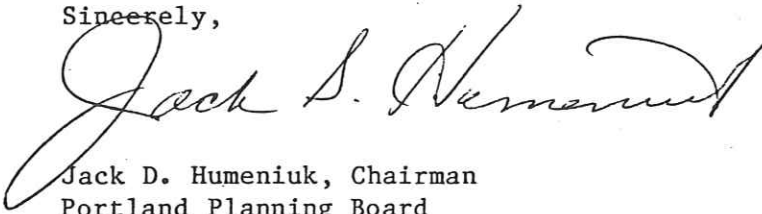
A performance guarantee covering the added public improvements as well as inspection fee payment of 1.7% of the guarantee amount must be submitted to and approved by the planning staff prior to receipt of a building permit. An estimate of the cost of proposed site improvements should be submitted to the Planning Department for review before a performance guarantee is submitted.

J. Corriveau  
November 16, 1987  
Page 2.

The approval is based on the submitted plan and the findings related to Site Plan and R-3 PRUD Performance Standards as contained in Planning Report #91-87 which is attached. If you need to make any modifications to the approved plan, you must submit a revised plan for the planning staff's review. The site plan will be deemed to have expired unless work on the development has commenced within six (6) months of the approval or within the time period agreed upon in writing by the City and the applicant. The PRUD approval expires whenever the subdivision or site plan approval becomes invalid.

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

Sincerely,



Jack D. Humeniuk, Chairman  
Portland Planning Board

MO/jf

cc: Joseph E. Gray, Jr., Director of Planning & Urban Development  
Alexander Jaegerman, Chief Planner  
Maureen O'Meara, Planner  
P. Samuel Hoffses, Chief of Building Inspections  
Warren J. Turner, Zoning Administrator  
George Flaherty, Director of Parks & Public Works  
Thomas Eaton, City Engineer  
William Boothby, Principal Engineer  
Robert Roy, Planning Engineer  
Carmela Barton, City Arborist  
Natalie Burns, Associate Corporation Counsel  
Michael Baillargeon, Supervisor of Delivery and Collection  
125 Forest Avenue, Portland, Maine 04101  
William Bray, City Traffic Engineer

CITY OF PORTLAND, MAINE  
PLANNING BOARD

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September 19, 1985

Mr. Douglas Duncan  
The Liberty Group  
38 Preble Street  
Portland, ME 04101

Re: Ray Street Townhomes

Dear Mr. Duncan:

On September 10, 1985, the Portland Planning Board reviewed the Liberty Group's request to waive the requirement for curbs and a sidewalk along Ray Street for the Ray Street Townhomes development. The motion to waive the requirement failed (the vote was 3-3) so curbs and a sidewalk are required along the project's frontage on Ray Street.

The Board voted (6-0) that the subdivision plan for the Planned Residential Unit Development (PRUD) was in conformance with the PRUD performance standards of the R-3 Residence Zone. The finding of zoning conformance was approved with the following conditions:

1. Adult passive recreation shall be provided within the PRUD in order to provide additional functional open space. The developer must work with the Planning Staff in developing the open space plan.

The subdivision plan for the Ray Street Townhomes development was approved (4-2) by the Board with the following conditions:

1. The revised plan indicating the fire lane and hydrant must receive final approval from the Fire Department;
2. A turnaround easement meeting Public Works specifications must be provided at the end of Topsham Street;
3. A preservation plan, such as that which is indicated in the Subdivision Ordinance-Technical Supplement, must be indicated in the plan. The Danny Shadblow (Amelanchier Cunadensis) must be increased in size to eight to ten (8-10) feet. All shrubs must be a minimum size of two to two and a half (2 - 2 1/2) feet. The revised landscaping plan must be reviewed and approved by the City Arborist, and
4. The drainage maintenance agreement must be executed.

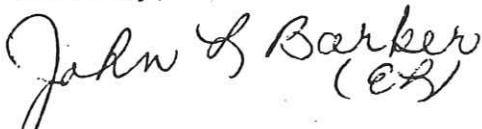
The site plan was approved (4-2) by the Board.

Mylar copies of the construction drawing for the project must be submitted to the Public Works Department prior to the release of the plat. In addition, a performance bond covering the public improvements must be submitted to and approved by the Planning Division and Public Works prior to the recording of the subdivision plat. The subdivision approval is valid for three years.

The site plan approval is based on the submitted site plan and stated conditions. If you want to make any modifications to the approved site plan, you must submit a revised plan for the planning staff's review. The site plan will be deemed to have expired unless work on the development has commenced within six (6) months of the approval or within the time period agreed upon in writing by the City and the applicant.

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

Sincerely,

Handwritten signature of John L. Barker in cursive, with the initials "CB" written below the name.

John L. Barker, Chairman  
Portland Planning Board

el

cc: Joseph E. Gray, Jr., Director of Planning and Urban Development  
Alexander Jaegerman, Chief Planner  
✓Barbara Barhydt, Planner  
P. Samuel Hoffses, Chief of Building Inspections  
George Flaherty, Director of Parks and Public Works  
Marc Guimont, City Engineer  
William Boothby, Principal Engineer  
Robert Roy, Planning Engineer  
William Bray, City Traffic Engineer  
Carmela G. Barton, City Arborist  
Manning Morrill, Archtellic, 38 Preble Street, Portland, ME 04101