

**City of Portland, Maine – Building or Use Permit Application** 389 Congress Street, 04101, Tel: (207) 874-8703, FAX: 874-8716

Location of Construction: 1001 Westbrook St		Owner: City of Portland		Phone:		Permit <b>950382</b>	
Owner Address:		Leasee/Buyer's Name: Portland Jetport (Expansion)		Phone:		Business Name:	
Contractor Name: Sprinkler Systems, Inc.		Address: P.O. Box 1285 2-8 Avon St Lewiston, ME 04243		Phone: 782-0104		<div style="border: 2px solid black; padding: 5px; text-align: center;"> <b>PERMIT ISSUED</b>                  Permit Issued:  <b>APR 25 1995</b>  <b>CITY OF PORTLAND</b> </div>	
Past Use: Jetport		Proposed Use: same		COST OF WORK: \$ 39,000.00			
Proposed Project Description: Install sprinkler system as per plans		FIRE DEPT. <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Denied		INSPECTION: <i>111</i> Use Group: Type:		Zone: <i>RB</i> CBL: <i>204-A-001</i>	
		Signature: <i>[Signature]</i>		Signature: <i>[Signature]</i>		Zoning Approval: <i>[Signature]</i>	
PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.) Action:		Approved <input type="checkbox"/> Approved with Conditions <input type="checkbox"/> Denied <input type="checkbox"/>		Signature: _____ Date: _____		Special Zone or Reviews: <input type="checkbox"/> Shoreland <input type="checkbox"/> Wetland <input type="checkbox"/> Flood Zone <input type="checkbox"/> Subdivision <input type="checkbox"/> Site Plan <input type="checkbox"/> maj <input type="checkbox"/> minor <input type="checkbox"/> mm <input type="checkbox"/>	
Permit Taken By: <i>Mary Gresik</i>		Date Applied For: <i>21 April 1995</i>					

1. This permit application doesn't preclude the Applicant(s) from meeting applicable State and Federal rules.
2. Building permits do not include plumbing, septic or electrical work.
3. Building permits are void if work is not started within six (6) months of the date of issuance. False information may invalidate a building permit and stop all work..

**PERMIT ISSUED WITH REQUIREMENTS**

**PERMIT ISSUED WITH REQUIREMENTS**

**CERTIFICATION**

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the application issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provisions of the code(s) applicable to such permit

SIGNATURE OF APPLICANT <i>[Signature]</i> <i>Scott Garland</i>		ADDRESS:		DATE: <i>21 April 1995</i>		PHONE:	
RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE						PHONE:	

White-Permit Desk Green-Assessor's Canary-D.P.W. Pink-Public File Ivory Card-Inspector

**Historic Preservation**  
 Not in District or Landmark  
 Does Not Require Review  
 Requires Review

**Action:**  
 Approved  
 Approved with Conditions  
 Denied  
 Date: *4/24/95*  
*[Signature]*

**CEO DISTRICT**  
*[Signature]*  
*[Signature]*

COMMENTS

*Done w/out suspicion*

**Inspection Record**

Type	Date
Foundation: _____	_____
Framing: _____	_____
Plumbing: _____	_____
Final: _____	_____
Other: _____	_____

BUILDING PERMIT REPORT

DATE

4/25/95

ADDRESS

1001 Westbrook St

REASON FOR PERMIT

Sprinkler Installation

BUILDING OWNER

City of Portland

CONTRACTOR

Sprinkler Systems, Inc.

PERMIT APPLICANT

Scott Gaudet

APPROVED

✓

DENIED

CONDITIONS OF APPROVAL:

1. A 4" storz fire department connection is required.
2. Any new sprinkler construction over 6 sprinkler heads needs to have State Fire Marshall approval.
3. Any renovations of sprinkler systems over 20 sprinkler heads needs to have State Fire Marshall approval.
4. A sprinkler performance test shall be submitted to the Portland Fire Department after completion of sprinkler work.

**SPRINKLER SYSTEMS INC.**

P.O. Box 1285  
LEWISTON, ME 04243-1285

Letter of Transmittal

(207) 782-0104 FAX (207) 783-4865

DATE	4-17-95	JOB NO.	99046
ATTENTION			
RE: PORTLAND JETPORT			

TO CITY OF PORTLAND

\_\_\_\_\_

\_\_\_\_\_

WE ARE SENDING YOU  Attached  Under separate cover via \_\_\_\_\_ the following items:

- Shop drawings       Prints       Plans       Samples       Specifications  
 Copy of letter       Change order       \_\_\_\_\_

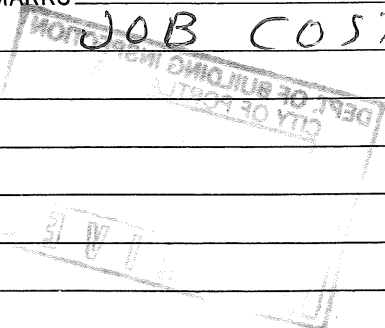
COPIES	DATE	NO.	DESCRIPTION
2	2-21-95	1	SPRINKLER SYSTEM
2	"	2	" "
2	"	3	" "
1			215.00 CHECK
1	4-13-95	99046	HYDRAULIC BALANCE SHEETS

THESE ARE TRANSMITTED as checked below:

- For approval       Approved as submitted       Resubmit \_\_\_\_\_ copies for approval  
 For your use       Approved as noted       Submit \_\_\_\_\_ copies for distribution  
 As requested       Returned for corrections       Return \_\_\_\_\_ corrected prints  
 For review and comment       PERMIT  
 FOR BIDS DUE \_\_\_\_\_ 19\_\_\_\_       PRINTS RETURNED AFTER LOAN TO US

REMARKS

JOB COST 39,000.00



COPY TO \_\_\_\_\_

SIGNED: Tom Mower

SPRINKLER SYSTEMS, INC.

P.O. BOX 1285

LEWISTON, MAINE 04243-1285

HYDRAULIC DESIGN INFORMATION SHEET

NAME PORTLAND JETPORT DATE A-13-95  
 LOCATION 1001 WESTBROOK STREET, PORTLAND, ME  
 BUILDING - SYSTEM NO. 1 OF 1  
 CONTRACTOR THE DIAZ CORP. CONTRACT NO. 94046  
 CALCULATED BY SCOTT E GARLAND DRAWING NO. 1-3 OF 3  
 CONSTRUCTION:  COMBUSTIBLE  NON-COMBUSTIBLE CEILING HEIGHT VARIES FT.  
 OCCUPANCY MERCANTILE - OH GFI

SYSTEM DESIGN	<input checked="" type="checkbox"/> NFPA 13: <input type="checkbox"/> LT. HAZ.      ORD. HAZ. GP. <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> EX. HAZ. <input type="checkbox"/> NFPA 231 <input type="checkbox"/> NFPA 231C:      FIGURE _____; CURVE _____ <input type="checkbox"/> OTHER (Specify) _____ <input type="checkbox"/> SPECIFIC RULING _____ MADE BY _____ DATE _____																							
	<table border="1"> <tr> <td>AREA OF SPRINKLER OPERATION</td> <td><u>1500 SF.</u></td> <td colspan="2" style="text-align: center;">SYSTEM TYPE</td> </tr> <tr> <td>DENSITY</td> <td><u>.20</u></td> <td><input checked="" type="checkbox"/> WET</td> <td><input type="checkbox"/> DRY    <input type="checkbox"/> DELUGE    <input type="checkbox"/> PRE-ACTION</td> </tr> <tr> <td>AREA PER SPRINKLER</td> <td><u>130 SF MAX</u></td> <td colspan="2" style="text-align: center;">SPRINKLER OR NOZZLE</td> </tr> <tr> <td>HOSE ALLOWANCE GPM: INSIDE</td> <td><u>100 GPM</u></td> <td>MAKE <u>RELIABLE</u></td> <td>MODEL <u>"6"</u></td> </tr> <tr> <td>HOSE ALLOWANCE GPM: OUTSIDE</td> <td><u>150 GPM</u></td> <td>SIZE <u>1 1/2" x 1 1/2"</u></td> <td>K-FACTOR <u>5.62</u></td> </tr> <tr> <td>RACK SPRINKLER ALLOWANCE</td> <td><u>-</u></td> <td colspan="2">TEMPERATURE RATING <u>165°</u></td> </tr> </table>	AREA OF SPRINKLER OPERATION	<u>1500 SF.</u>	SYSTEM TYPE		DENSITY	<u>.20</u>	<input checked="" type="checkbox"/> WET	<input type="checkbox"/> DRY <input type="checkbox"/> DELUGE <input type="checkbox"/> PRE-ACTION	AREA PER SPRINKLER	<u>130 SF MAX</u>	SPRINKLER OR NOZZLE		HOSE ALLOWANCE GPM: INSIDE	<u>100 GPM</u>	MAKE <u>RELIABLE</u>	MODEL <u>"6"</u>	HOSE ALLOWANCE GPM: OUTSIDE	<u>150 GPM</u>	SIZE <u>1 1/2" x 1 1/2"</u>	K-FACTOR <u>5.62</u>	RACK SPRINKLER ALLOWANCE	<u>-</u>	TEMPERATURE RATING <u>165°</u>
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CALCULATION SUMMARY    GPM REQUIRED 483<sup>26</sup>    PSI REQUIRED 66<sup>89</sup>    AT BASE OF RISER  
 "C" FACTOR USED:      OVERHEAD 120      UNDERGROUND 140

WATER SUPPLY	<table border="1"> <tr> <th colspan="2">WATER FLOW TEST</th> <th colspan="2">PUMP DATA</th> <th colspan="2">TANK OR RESERVOIR</th> </tr> <tr> <td>DATE &amp; TIME</td> <td><u>A-12-95</u></td> <td>RATED CAPACITY</td> <td>_____</td> <td>CAPACITY</td> <td>_____</td> </tr> <tr> <td>STATIC PSI</td> <td><u>84</u></td> <td>AT PSI</td> <td>_____</td> <td>ELEVATION</td> <td>_____</td> </tr> <tr> <td>RESIDUAL PSI</td> <td><u>60</u></td> <td>ELEVATION</td> <td>_____</td> <td colspan="2" style="text-align: center;">WELL</td> </tr> <tr> <td>GPM FLOWING</td> <td><u>1150</u></td> <td colspan="4">PROOF FLOW _____ GPM</td> </tr> <tr> <td>ELEVATION</td> <td><u>-(7.0)</u></td> <td colspan="4"></td> </tr> </table>	WATER FLOW TEST		PUMP DATA		TANK OR RESERVOIR		DATE & TIME	<u>A-12-95</u>	RATED CAPACITY	_____	CAPACITY	_____	STATIC PSI	<u>84</u>	AT PSI	_____	ELEVATION	_____	RESIDUAL PSI	<u>60</u>	ELEVATION	_____	WELL		GPM FLOWING	<u>1150</u>	PROOF FLOW _____ GPM				ELEVATION	<u>-(7.0)</u>				
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LOCATION <u>HYDRANT #1653</u> SOURCE OF INFORMATION <u>PORTLAND WATER DISTRICT</u>																																					

COMMODITY STORAGE	COMMODITY _____ CLASS _____ LOCATION _____ STORAGE HEIGHT _____ AREA _____ AISLE WIDTH _____ STORAGE METHOD: SOLID PILED _____ % PALLETIZED _____ % RACK _____ %								
	<input type="checkbox"/> SINGLE ROW <input type="checkbox"/> CONVENTIONAL PALLET <input type="checkbox"/> AUTOMATIC STORAGE <input type="checkbox"/> ENCAPSULATED <input type="checkbox"/> DOUBLE ROW <input type="checkbox"/> SLAVE PALLET <input type="checkbox"/> SOLID SHELVING <input type="checkbox"/> NON-ENCAPSULATED <input type="checkbox"/> MULTIPLE ROW <input type="checkbox"/> OPEN								
	<table border="1"> <tr> <th colspan="2">FLUE SPACING IN INCHES</th> <th colspan="2">CLEARANCE FROM TOP OF STORAGE TO CEILING</th> </tr> <tr> <td>LONGITUDINAL _____</td> <td>TRANSVERSE _____</td> <td>_____ FT.</td> <td>_____ IN.</td> </tr> </table>	FLUE SPACING IN INCHES		CLEARANCE FROM TOP OF STORAGE TO CEILING		LONGITUDINAL _____	TRANSVERSE _____	_____ FT.	_____ IN.
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LONGITUDINAL _____	TRANSVERSE _____	_____ FT.	_____ IN.						
HORIZONTAL BARRIERS PROVIDED _____									

Sprinkler Systems, Inc.  
HYDRAULIC CALCULATIONS

4-13-95, PORTLAND JETPORT (PENTHOUSE), 94046, C= 120

PAGE NUMBER 2

REF PT#	K	GPM	TOTAL GPM	PIPE I.D.	PIPE LTH	EQUIV FTGS	LOSS /FT	TOTAL LOSS	TOTAL PSI	JCT PT#
									9.04	
1	5.62	16.90	16.90	1.049	0.000	0	0.0953	0.00	9.04	1
1	0.00	0.00	16.90	1.049	11.667	2	0.0953	1.30	10.35	2
	K = 5.2543									
									9.04	
2	5.62	16.90	16.90	1.049	3.000	5	0.0953	0.76	9.81	2
	K = 5.3971 )		17.36						10.35	
2	5.25	16.90	34.26	1.452	11.667	6	0.0723	1.28	11.62	3
3	5.62	19.16	53.42	1.452	8.667	0	0.1645	1.43	13.05	4
4	5.62	20.30	73.72	1.452	8.167	6	0.2985	4.23	17.28	AT
	K = 17.7359									
									9.04	
5	5.62	16.90	16.90	1.049	1.333	5	0.0953	0.60	9.65	AT
	K = 5.4414 )		22.62						17.28	
AT	17.74	73.72	96.34	1.687	0.417	8	0.2358	1.99	19.26	A
	ELEVATION = .417 FEET							0.18	19.44	
A	0.00	0.00	96.34	3.260	12.000	0	0.0095	0.11	19.56	B
	K = 21.7843									
									9.04	
6	5.62	16.90	16.90	1.049	8.667	0	0.0953	0.83	9.87	7
7	5.62	17.65	34.55	1.452	8.667	0	0.0735	0.64	10.51	8
8	5.62	18.22	52.77	1.452	8.667	0	0.1608	1.39	11.90	9
9	5.62	19.39	72.16	1.452	8.167	6	0.2869	4.06	15.96	BT
	K = 18.0599									
									9.04	
10	5.62	16.90	16.90	1.049	1.333	5	0.0953	0.60	9.65	BT
	K = 5.4414 )		21.74						15.96	
BT	18.06	72.16	93.90	1.687	0.417	8	0.2249	1.89	17.86	B
	ELEVATION = .417 FEET							0.18	18.04	
	K = 22.1091 )		97.77						19.56	
B	21.78	96.34	194.11	3.260	11.000	0	0.0348	0.38	19.94	C
C	22.11	98.73	292.84	3.260	99.000	50	0.0746	11.11	31.05	H1
H1	17.95	100.01	392.84	4.260	15.167	0	0.0349	0.53	31.58	H2
H2	0.00	0.00	392.84	4.260	11.500	20	0.0349	1.10	32.68	D
D	0.00	0.00	392.84	4.260	17.250	60	0.0349	2.70	35.37	Z
Z	0.00	0.00	392.84	4.260	3.667	0	0.0349	0.13	35.50	RT
RT	0.00	0.00	392.84	4.026	11.000	39	0.0459	2.30	37.80	RB
	ELEVATION = 44.667 FEET							19.34	57.14	
	K = 51.9695									

DESIGN AREA \* 1  
(NOT MOST REMOTE)

W 1

Sprinkler Systems, Inc.  
HYDRAULIC CALCULATIONS

4-13-95, PORTLAND JETPORT (UPPER LEVEL), 94046, C= 120

PAGE NUMBER 3

REF PT#	K	GPM	TOTAL GPM	PIPE I.D.	PIPE LTH	EQUIV FTGS	LOSS /FT	TOTAL LOSS	TOTAL PSI	JCT PT#
									18.24	
11	5.62	24.00	24.00	1.049	0.000	0	0.1823	0.00	18.24	11
11	0.00	0.00	24.00	1.049	9.667	0	0.1823	1.76	20.00	12
12	5.62	25.13	49.13	1.452	9.667	0	0.1409	1.36	21.36	13
13	5.62	25.97	75.11	1.687	10.000	0	0.1488	1.49	22.85	14
14	5.62	26.86	101.97	1.687	10.000	0	0.2620	2.62	25.47	15
15	5.62	28.36	130.33	1.687	10.000	0	0.4125	4.13	29.59	EE
EE	0.00	0.00	130.33	2.154	14.000	10	0.1255	3.01	32.61	E
E	0.00	0.00	130.33	2.154	10.000	15	0.1255	3.14	35.74	FT
FT	0.00	0.00	130.33	2.154	3.250	10	0.1255	1.66	37.41	F
			ELEVATION = 3.25 FEET					1.41	38.81	
F	0.00	0.00	130.33	4.260	7.000	0	0.0045	0.03	38.85	H
	K = 20.9117									

DESIGN AREA # 2  
(HYDRAULICALLY MOST  
REMOTE)  
SEE PAGE 3+9

									18.24	
16	5.62	24.00	24.00	1.049	9.667	0	0.1823	1.76	20.00	17
17	5.62	25.13	49.13	1.452	9.667	0	0.1409	1.36	21.36	18
18	5.62	25.97	75.11	1.687	10.000	0	0.1488	1.49	22.85	19
19	5.62	26.86	101.97	1.687	10.000	0	0.2620	2.62	25.47	20
20	5.62	28.36	130.33	1.687	10.000	0	0.4125	4.13	29.59	HH
HH	0.00	0.00	130.33	2.154	22.250	15	0.1255	4.67	34.27	H
			ELEVATION = 3.25 FEET					1.41	35.68	
			K = 21.8207 ) 136.00						38.85	
H	20.91	130.33	266.34	4.260	12.000	0	0.0170	0.20	39.05	J
	K = 42.6206									

									18.24	
21	5.62	24.00	24.00	1.452	9.667	0	0.0374	0.36	18.60	22
22	5.62	24.24	48.24	1.687	10.000	0	0.0656	0.66	19.25	23
23	5.62	24.66	72.90	1.687	10.000	0	0.1408	1.41	20.66	24
24	5.62	25.55	98.44	1.687	10.000	0	0.2455	2.45	23.12	JJ
JJ	0.00	0.00	98.44	2.154	19.000	10	0.0747	2.17	25.28	JT
JT	0.00	0.00	98.44	2.154	3.250	10	0.0747	0.99	26.27	J
			ELEVATION = 3.25 FEET					1.41	27.68	
			K = 18.7116 ) 116.93						39.05	
J	42.62	266.34	383.26	4.260	96.000	0	0.0333	3.20	42.25	N
N	0.00	0.00	383.26	4.260	139.667	70	0.0333	6.99	49.24	P
P	0.00	0.00	383.26	4.260	14.583	10	0.0333	0.82	50.06	Q
Q	0.00	0.00	383.26	4.260	37.917	40	0.0333	2.60	52.66	Z
Z	13.78	100.00	483.26	4.260	3.667	0	0.0512	0.19	52.84	RT
RT	0.00	0.00	483.26	4.026	11.000	39	0.0674	3.37	56.21	RB
			ELEVATION = 24.667 FEET					10.68	66.89	
	K = 59.0867									

									22.62	
31	8.20	39.00	39.00	1.452	0.000	0	0.0919	0.00	22.62	31
31	0.00	0.00	39.00	1.452	6.500	12	0.0919	1.70	24.32	FT
FT	0.00	0.00	39.00	2.154	3.250	10	0.0135	0.18	24.50	F
			ELEVATION = 3.25 FEET					1.41	25.91	
F	0.00	0.00	39.00	4.260	5.000	0	0.0005	0.00	25.91	G
	K = 7.6620									

Sprinkler Systems, Inc.  
HYDRAULIC CALCULATIONS

4-13-95, PORTLAND JETPORT (UPPER LEVEL), 94046, C= 120

PAGE NUMBER 4

DESIGN AREA #3

(NOT MOST REMOTE)

REF PT#	K	GPM	TOTAL GPM	PIPE I.D.	PIPE LTH	EQUIV FTGS	LOSS /FT	TOTAL LOSS	TOTAL PSI	JCT PT#
32	8.20	39.00	39.00	1.452	16.500	3	0.0919	1.79	24.41	33
K = 7.8933										
33	8.20	39.00	39.00	1.452	0.500	6	0.0919	0.60	23.22	33
K = 8.0938 ) 39.99										
33	7.89	39.00	78.99	1.687	23.750	12	0.1634	5.84	30.25	34
ELEVATION = 3.75 FEET										
K = 13.9908										
34	5.62	14.87	14.87	1.049	0.667	5	0.0752	0.43	7.43	34
ELEVATION = -.667 FEET										
K = 5.5657 ) 31.42										
34	13.99	78.99	110.41	1.687	6.000	0	0.3035	1.82	33.70	35
35	5.57	32.31	142.72	2.154	1.000	10	0.1484	1.63	35.33	G
G	7.66	45.54	188.26	4.260	2.000	0	0.0089	0.02	35.35	H
H	0.00	0.00	188.26	4.260	12.000	0	0.0089	0.11	35.46	J
K = 31.6174										
36	5.62	14.87	14.87	1.049	9.917	2	0.0752	0.90	7.90	37
ELEVATION = -3.917 FEET										
K = 5.9715										
37	5.62	14.87	14.87	1.049	3.917	5	0.0752	0.67	7.67	37
ELEVATION = -3.917 FEET										
K = 6.0831 ) 15.15										
37	5.97	14.87	30.02	1.049	1.000	5	0.2758	1.65	7.86	JT
JT	0.00	0.00	30.02	2.154	3.250	10	0.0083	0.11	7.97	J
ELEVATION = 3.25 FEET										
K = 9.8049 ) 58.38										
J	31.62	188.26	246.65	4.260	14.000	0	0.0147	0.21	35.66	K
K = 41.3022										
38	5.57	14.87	14.87	1.049	6.000	0	0.0752	0.45	7.59	39
39	5.57	15.33	30.20	1.049	1.000	5	0.2790	1.67	9.26	K
K = 9.9235 ) 59.26										
K	41.30	246.65	305.91	4.260	82.000	0	0.0220	1.80	37.46	N
N	0.00	0.00	305.91	4.260	139.667	70	0.0220	4.61	42.07	P
P	0.00	0.00	305.91	4.260	14.583	10	0.0220	0.54	42.61	Q
Q	0.00	0.00	305.91	4.260	37.917	40	0.0220	1.71	44.32	Z
Z	15.02	100.00	405.91	4.260	3.667	0	0.0371	0.14	44.46	RT
RT	0.00	0.00	405.91	4.026	11.000	39	0.0488	2.44	46.90	RB
ELEVATION = 24.667 FEET										
K = 53.4934										
40	5.62	21.60	21.60	1.049	1.250	5	0.1500	0.94	15.71	40
ELEVATION = 1.25 FEET										
K = 53.4934										



Sprinkler Systems, Inc.  
HYDRAULIC CALCULATIONS

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REF FT#	K	GPM	TOTAL GPM	PIPE I.D.	PIPE LTH	EQUIV FTGS	LOSS /FT	TOTAL LOSS	TOTAL PSI	JCT PT#
40	0.00	0.00	21.60	1.049	8.000	0	0.1500	1.20	17.45	41
41	5.36	22.38	43.98	1.452	8.000	0	0.1148	0.92	18.37	42
42	5.36	22.96	66.95	1.687	8.500	0	0.1203	1.02	19.39	43
43	5.36	23.60	90.54	1.687	9.000	0	0.2103	1.89	21.28	44
44	5.36	24.72	115.26	1.687	9.000	0	0.3287	2.96	24.24	45
45	5.36	26.38	141.65	2.154	9.000	0	0.1464	1.32	25.56	NN
NN	0.00	0.00	141.65	2.154	20.000	15	0.1464	5.12	30.68	N
ELEVATION = 2 FEET								0.87	31.55	
K = 25.2180										

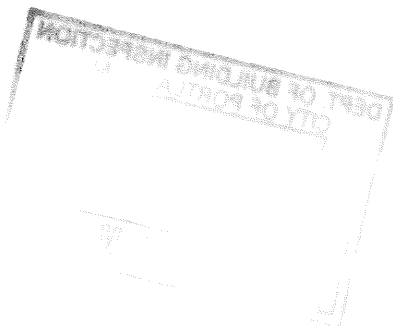
CHECK LINE # 1

25	5.62	14.87	14.87	1.049	3.667	5	0.0752	0.65	7.00	25
ELEVATION = -3.667 FEET								-1.59	6.06	
25	0.00	0.00	14.87	1.049	12.000	0	0.0752	0.90	6.97	26
26	6.04	15.94	30.81	1.049	4.000	0	0.2894	1.16	8.12	L
K = 10.8082										

CHECK LINE # 2

27	5.62	14.87	14.87	1.049	0.667	5	0.0752	0.43	7.00	27
ELEVATION = -.667 FEET								-0.29	7.14	
27	0.00	0.00	14.87	1.049	10.000	0	0.0752	0.75	7.89	28
28	5.57	15.63	30.50	1.049	11.833	11	0.2841	6.49	14.38	L
ELEVATION = .833 FEET								0.36	14.74	
L	10.81	41.49	72.00	1.452	5.500	0	0.2857	1.57	16.31	29
K = 17.8275										

29	5.62	14.87	14.87	1.049	4.917	8	0.0752	0.97	7.00	29
ELEVATION = .917 FEET								0.40	8.37	
K = 5.1400 ) 20.76										
29	17.83	72.00	92.76	1.687	2.500	0	0.2199	0.55	16.86	30
30	6.04	24.79	117.55	1.687	4.000	8	0.3408	4.09	20.95	M
M	0.00	0.00	117.55	1.687	5.000	8	0.3408	4.43	25.38	E
ELEVATION = -1.25 FEET								-0.54	24.84	
K = 23.5860										



Sprinkler Systems, Inc.  
HYDRAULIC CALCULATIONS

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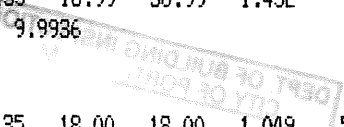
REF PT#	K	GPM	TOTAL GPM	PIPE I.D.	PIPE LTH	EQUIV FTGS	LOSS /FT	TOTAL LOSS	TOTAL PSI	JCT PT#
									7.00	
60	5.62	14.87	14.87	1.049	0.667	5	0.0752	0.43	7.43	60
			ELEVATION = -.667 FEET					-0.29	7.14	
60	0.00	0.00	14.87	1.049	6.000	0	0.0752	0.45	7.59	61
61	5.57	15.33	30.20	1.049	9.000	0	0.2790	2.51	10.10	62
	K = 9.5035									
									7.00	
62	5.62	14.87	14.87	1.049	0.500	5	0.0752	0.41	7.41	62
			ELEVATION = .5 FEET					0.22	7.63	
	K = 5.3830 ) 17.11									
62	9.50	30.20	47.31	1.452	10.667	4	0.1314	1.93	12.03	63
			ELEVATION = -1.167 FEET					-0.51	11.52	
63	5.57	18.89	66.20	1.452	12.000	0	0.2446	2.94	14.46	64
64	5.57	21.16	87.36	1.452	22.167	9	0.4086	12.74	27.19	AB
			ELEVATION = 3.5 FEET					1.52	28.71	
AB	0.00	0.00	87.36	2.635	12.000	0	0.0224	0.27	28.98	AC
AC	16.31	87.77	175.14	2.635	12.000	0	0.0812	0.97	29.95	AD
	K = 32.0007									
									7.14	
65	5.57	14.87	14.87	1.049	13.333	4	0.0752	1.30	8.44	66
			ELEVATION = -.833 FEET					-0.36	8.08	
66	5.57	15.82	30.69	1.452	12.000	0	0.0590	0.71	8.79	67
67	5.57	16.50	47.19	1.452	22.167	9	0.1308	4.08	12.86	AD
			ELEVATION = 3.5 FEET					1.52	14.38	
	K = 12.4446 ) 68.11									
AD	32.00	175.14	243.25	2.635	42.000	0	0.1492	6.26	36.22	X
X	0.00	0.00	243.25	3.260	134.000	15	0.0529	7.88	44.10	Y
Y	0.00	0.00	243.25	3.260	67.500	66	0.0529	7.06	51.16	Z
Z	13.98	100.00	343.24	4.260	3.667	0	0.0272	0.10	51.26	RT
RT	0.00	0.00	343.24	4.026	11.000	39	0.0358	1.79	53.05	RB
			ELEVATION = 10.333 FEET					4.47	57.53	
	K = 45.2553									
									10.26	
50	5.62	18.00	18.00	1.049	1.000	5	0.1071	0.64	10.90	50
			ELEVATION = 1 FEET					0.43	11.33	
50	0.00	0.00	18.00	1.049	12.000	0	0.1071	1.29	12.62	51
51	5.35	18.99	36.99	1.452	7.000	6	0.0833	1.08	13.70	R
	K = 9.9936									
									11.33	
52	5.35	18.00	18.00	1.049	5.500	2	0.1071	0.80	12.14	R
	K = 5.1668 ) 19.13									
R	9.99	36.99	56.12	1.452	20.500	3	0.1802	4.23	17.94	SS
SS	5.35	22.64	78.76	1.687	15.500	8	0.1625	3.82	21.75	SS
SS	0.00	0.00	78.76	1.687	16.000	8	0.1625	3.90	25.65	S
S	0.00	0.00	78.76	2.635	10.000	0	0.0185	0.19	25.84	T
	K = 15.4945									
									11.33	
54	5.35	18.00	18.00	1.049	12.000	0	0.1071	1.29	12.62	55

DESIGN AREA # 4

(NOT MOST REMOTE)

DESIGN AREA # 5

(NOT MOST REMOTE)



Sprinkler Svstems, Inc.  
HYDRAULIC CALCULATIONS

4-13-95, PORTLAND JETPORT (LOWER LEVEL), 94046, C= 120

PAGE NUMBER 7

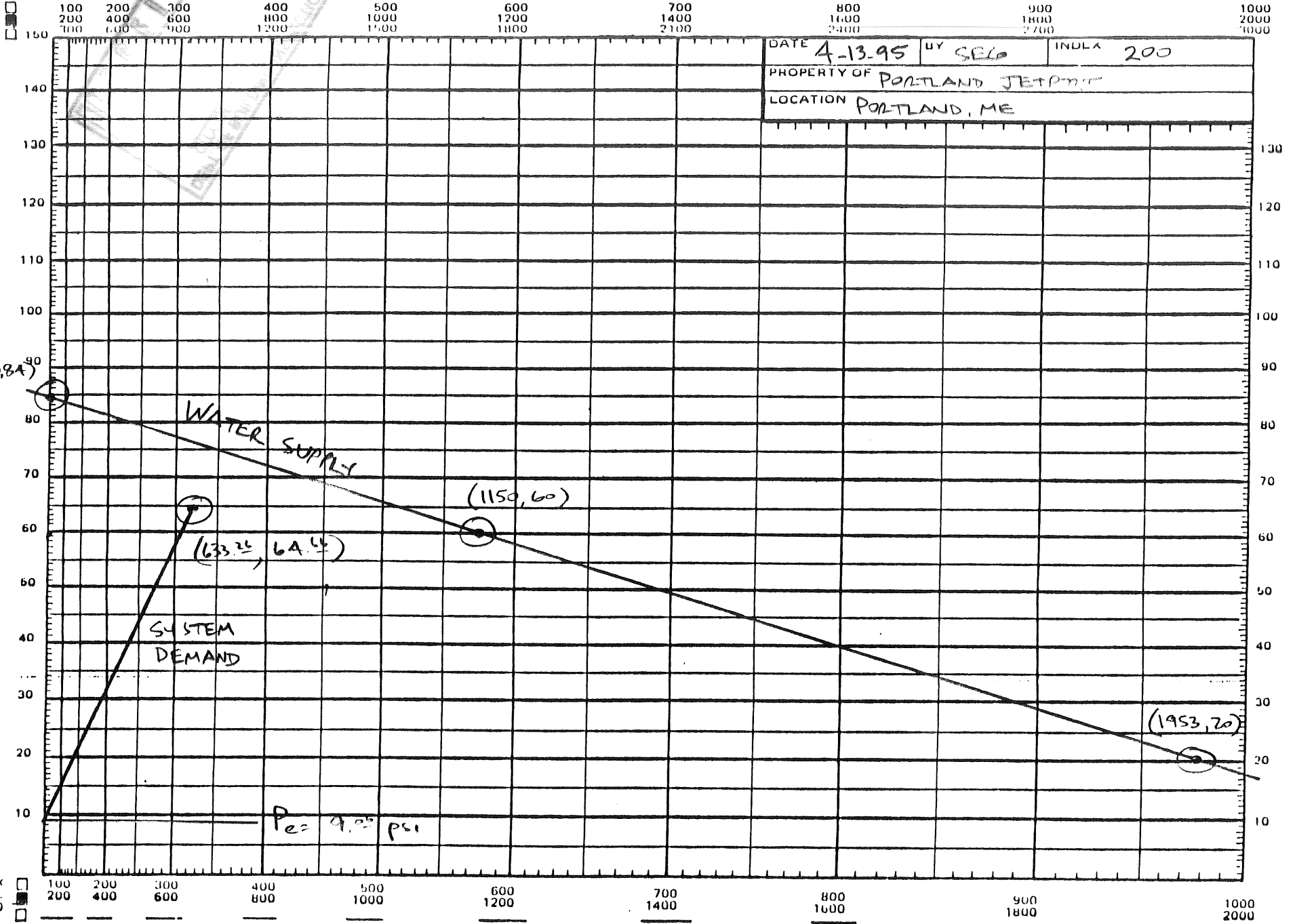
REF PT#	K	GPM	TOTAL GPM	PIPE I.D.	PIPE LTH	EQUIV FTGS	LOSS /FT	TOTAL LOSS	TOTAL PSI	JCT PT#
55	5.35	18.99	36.99	1.452	12.000	0	0.0833	1.00	13.62	56
56	5.35	19.73	56.72	1.452	12.000	0	0.1838	2.21	15.82	57
57	5.35	21.27	77.99	1.687	12.000	0	0.1596	1.91	17.74	TT
TT	0.00	0.00	77.99	1.687	16.000	8	0.1596	3.85	21.57	T
K = 16.7938 )			85.37						25.84	
T	15.49	78.76	164.13	2.635	10.333	0	0.0720	0.74	26.58	U
U	16.79	86.59	250.72	3.260	9.250	0	0.0559	0.52	27.10	V
K = 48.1603										
									11.33	
58	5.35	18.00	18.00	1.452	12.000	0	0.0220	0.26	11.60	59
59	5.35	18.21	36.21	1.452	12.000	0	0.0801	0.96	12.56	VV
VV	0.00	0.00	36.21	1.687	16.000	8	0.0386	0.93	13.48	V
K = 9.8602 )			51.33						27.10	
V	48.16	250.72	302.05	3.260	13.667	0	0.0790	1.08	28.18	H
H	0.00	0.00	302.05	3.260	9.833	22	0.0790	2.51	30.69	X
X	0.00	0.00	302.05	3.260	134.000	15	0.0790	11.77	42.46	Y
Y	0.00	0.00	302.05	3.260	67.500	66	0.0790	10.54	53.00	Z
Z	13.74	100.00	402.05	4.260	3.667	0	0.0364	0.13	53.14	RT
RT	0.00	0.00	402.05	4.026	11.000	39	0.0480	2.40	55.53	RB
ELEVATION = 11.167 FEET								4.84	60.37	
K = 51.7460										



B W L

NOZZLE TYPE & LOCATION	FLOW IN G.P.M.	PIPE SIZE	FITTING & DEVICES	PIPE EQUIV. LENGTH	FRICTION LOSS P.S.I./FT	REQUIRED P.S.I.	HYD. REF. PT	ELEV.	NOTES
C:140	0 -	8" CLCT	2T W 45°	LGTH. 322.0	.0018	PT 66.89	RB	-7.0	
X1	Q483.26			FTG. 111.0		PF .78			
				TOT. 431.0		PE -3.03			
	0 -	12" CLCT	45° EL	LGTH. 400	.00025	PT 64.64	X1		
X2	Q483.26			FTG. 18.0		PF .03			
				TOT. 580		PE -			
Hose	0 150.00			LGTH.		PT 64.66	X2		
X2	Q633.26			FTG.		PF			
				TOT.		PE			
	Q			LGTH.		PT			Pavail C Q=633.26 = 76.04
	Q			FTG.		PF			
	Q			TOT.		PE			
	Q			LGTH.		PT			Prog C Q=633.26 = 64.66
	Q			FTG.		PF			
	Q			TOT.		PE			
	Q			LGTH.		PT			P cushion = 11.38 psi
	Q			FTG.		PF			
	Q			TOT.		PE			
	Q			LGTH.		PT			
	Q			FTG.		PF			
	Q			TOT.		PE			
	Q			LGTH.		PT			
	Q			FTG.		PF			
	Q			TOT.		PE			
	Q			LGTH.		PT			
	Q			FTG.		PF			
	Q			TOT.		PE			
	Q			LGTH.		PT			
	Q			FTG.		PF			
	Q			TOT.		PE			
	Q			LGTH.		PT			
	Q			FTG.		PF			
	Q			TOT.		PE			
	Q			LGTH.		PT			
	Q			FTG.		PF			
	Q			TOT.		PE			
	Q			LGTH.		PT			
	Q			FTG.		PF			
	Q			TOT.		PE			
	Q			LGTH.		PT			
	Q			FTG.		PF			
	Q			TOT.		PE			
	Q			LGTH.		PT			
	Q			FTG.		PF			
	Q			TOT.		PE			
	Q			LGTH.		PT			
	Q			FTG.		PF			
	Q			TOT.		PE			

# WATER SUPPLY GRAPH NO. N 1.85



DATE 4-13-95 BY SEL BY INDLX 200  
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 LOCATION PORTLAND, ME

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CHECK SCALE USED