#### DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK



# ITY OF PORTLA RIJII DING PERM



This is to certify that

Located at

NORMAND BERUBE BUILDERS INC /Dean & Allyn Inc.

88 SKYLARK RD

**PERMIT ID:** 2013-00461

CBL: 349 I007001

has permission to install NFPA 13D sprinkler sstem.

provided that the person or persons, firm or corporation accepting this permit shall comply with all of the provisions of the Statues of Maine and of the Ordinances of the City of Portland regulating the construction, maintenance and use of the buildings and structures, and of the application on file in the department.

Notification of inspection and written permission procured before this building or part thereof is lathed or otherwise clsoed-in. 48 HOUR NOTICE IS REQUIRED.

A final inspection must be completed by owner before this building or part thereof is occupied. If a certificate of occupancy is required, it must be procured prior to occupancy.

evention **Ø**fficer

Code Enforcement Officer / Plan Reviewer

THIS CARD MUST BE POSTED ON THE STREET SIDE OF THE PROPERTY THERE IS A PENALTY FOR REMOVING THIS CARD

Located at: 88 SKYLARK RD CBL: 349 I007001 PERMIT ID: 2013-00461

## BUILDING PERMIT INSPECTION PROCEDURES Please call 874-8703 (ONLY)

or email: buildinginspections@portlandmaine.gov

With the issuance of this permit, the owner, builder or their designee is required to provide adequate notice to the city of Portland Inspections Services for the following inspections. Appointments must be requested 48 to 72 hours in advance of the required inspection. The inspection date will need to be confirmed by this office.

- Please read the conditions of approval that is attached to this permit!! Contact this office if you have any questions.
- Permits expire in 6 months. If the project is not started or ceases for 6 months.
- If the inspection requirements are not followed as stated below additional fees may be incurred due to the issuance of a "Stop Work Order" and subsequent release to continue.

### **REQUIRED INSPECTIONS:**

Final - Fire

The project cannot move to the next phase prior to the required inspection and approval to continue, REGARDLESS OF THE NOTICE OF CIRCUMSTANCES.

IF THE PERMIT REQUIRES A CERTIFICATE OF OCCUPANCY, IT MUST BE PAID FOR AND ISSUED TO THE OWNER OR DESIGNEE BEFORE THE SPACE MAY BE OCCUPIED.

PERMIT ID: 2013-00461 Located at: 88 SKYLARK RD CBL: 349 I007001

City of Portland, Maine - E	Building or Use Permit	Permit No:	Date Applied For:	CBL:								
389 Congress Street, 04101 To	el: (207) 874-8703, Fax: (20	07) 874-8716	2013-00461	03/08/2013	349 1007001							
Location of Construction:	Owner Name:		Owner Address:	Phone:								
88 SKYLARK RD	NORMAND BERUBE	BUILDERS	1040 PORTLAND	RD								
Business Name:	Contractor Name:		Contractor Address:		Phone							
	Dean & Allyn Inc.		P.O. Box 709, 32 I	Lewiston Rd Gray	(207) 657-5646							
Lessee/Buyer's Name	Phone:		Permit Type:									
			Fire Sprinkler Sys	tems								
Proposed Use:		Propose	ed Project Description:									
New Single Family		install	NFPA 13D sprinkl	er sstem.								
Dept: Zoning Status	: Approved	Reviewer	: Ann Machado	Approval D	eate: 03/11/2013							
Note:	••				Ok to Issue: 🗹							
Dept: Fire Status	: Approved w/Conditions	Reviewer	: Ben Wallace Jr	Approval D	eate: 03/12/2013							
· •	. Approved w/Conditions	ACVICWEI.	. Den wanace si	Approvar	_							
Note:					Ok to Issue:							
1) A warning sign, with minimum	n ¼ in. letters, shall be affixed	-			_							

- 1) A warning sign, with minimum ¼ in. letters, shall be affixed adjacent to the main shutoff valve and shall state the following:

  Warning: The water system for this house supplies fire sprinklers that require certain flows and pressures to fight a fire.

  Devices that restrict the flow or decrease the pressure or automatically shut off the water to the fire sprinkler system, such as water softeners, filtrations systems, and automatic shut off valves, shall not be added to this system without a review of the fire sprinkler system by a fire protection specialist. Do not remove this sign.
- 2) The sprinkler system shall be installed in accordance with NFPA 13D.
- 3) A copy of the required state sprinkler permit with RMS signoff shall be provided prior to the final inspection.
- 4) All control valves shall be supervised in accordance with NFPA 13D. Pad locks shall only be installed on valves designed to be secured in the open position by pad lock.

City of Portland,	Maine - Rui	lding or Use	Permit Applica	tion [	Permit No:	Issue Date	:	CBL:		
389 Congress Street,		•		ł	2013-00461			349 1007001		
Location of Construction:		Owner Name:		Owner	Address:			Phone:		
88 SKYLARK RD		NORMAND I BUILDERS II		1040 0407	PORTLAND R					
Business Name:		Contractor Name	2:	Contra	actor Address:			Phone		
	Inc.	P.O. 0403	Box 709, 32 Le 9	Gray ME	IE (207) 657-5646					
Lessee/Buyer's Name		Phone:		1	Type: Sprinkler Syste	ms		Zone: R3		
Past Use:		Proposed Use:		Permi	t Fee:	Cost of Wor	k:	CEO District:		
New single family (#2	New Single Fa	amily		Г	Approved Denied N/A	\$0.00 INSPECTI Use Group	NSPECTION:			
Proposed Project Descripti install sprinkler syster		family (#2012-	65665)		ure: BANACA	n. (58) HES DISTRIC	Signature:			
				Ac	etion: Approv		proved w/Cor	d w/Conditions Denied		
				31	gnature:			iic.		
Permit Taken By: bjs		oplied For: 3/2013		Zoning Approval						
1. This permit applie	cation does not	preclude the	Special Zone or R	eviews	Zonin	ıg Appeal	Historic Preservatio			
Applicant(s) from Federal Rules.			Shoreland		☐ Variance	ė		Not in District or Landman		
2. Building permits septic or electrica	Wetland		Miscella	neous		Does Not Require Review				
3. Building permits are void if work is not started within six (6) months of the date of issuance.			☐ Flood Zone		Conditio			Requires Review		
	False information may invalidate a building permit and stop all work		Subdivision		Interpret	ation		Approved		
			Site Plan		☐ Approve	:d		Approved w/Conditions		
			Maj Minor 1	мм []	_ Denied			Denied		
			OK Date: 31113	βų	Date:		Date:	ten		
I hereby certify that I a that I have been author this jurisdiction. In ad representative shall have code(s) applicable to st	rized by the own dition, if a perm we the authority	ner to make this nit for work desc	application as his a cribed in the applica	at the puthorization is	proposed work i ed agent and I a issued, I certify	gree to con that the coo	form to all le official'	applicable laws of authorized		
SIGNATURE OF APPLICA	ANT		ADDI	RESS		DATE		PHONE		
PEGPONGIPI E PERGONI	IN CHARGE OF V	OPV TITLE				DATE		PHONE		

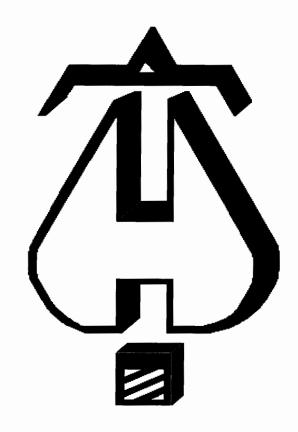
えつうりしし One- or Two-family Fire Sprinkler Permit

If you or the property owner owes real estate or property taxes or user charges on any property within the city, payment arrangements must be made before permits of any kind are accepted.

549 ION 65 516 (ARE	200
Installation address: 88 SKYLARK	COAD
Building owner: Berube Builders	Phone: 883 8270
Installer: DEAN AND ALLYN	
Total sq/ft of building floor space per unit: 5	CE PLANI Single-family home
Sq/ft of sprinklered floor space per unit: See	PLAN Two-family home
Is this a multipurpose piping system? Y / N	Sprinkler piping uses Pex? Y / N
Water supply: Municipal Water	Stored water   Other
Include electronic copy of approved State Sprin	kler Permit plans: 🛛 BY CMAIL
Additional cost to the owner for the home fire	sprinkler system for <u>each</u> dwelling
unit minus costs necessary for domestic needs (	See below): $A=$
Attach cost breakdown: A City plum	ping permit has been pulled:
	COST OF WORK: 5700
RECEIVED	(A times number of units)
MAR 0 7 2013	
Dept. of Building Inspections City of Portland Maine	NO FEE REQUIRED

Additional information and Frequently asked questions about home fire sprinkler systems may be found at <a href="https://www.pprtlandmaine.gov/fireprevention">www.pprtlandmaine.gov/fireprevention</a>.

Sprinkler system cost must deduct costs that would have been incurred if the system did not provide sprinkler service. In a well pump system it would include the difference between the well pump to be installed and the one that would have been installed if there were no sprinkler demand on the system. Includes additional piping and valves that are required only because of NFPA Standard 13D, and not already required for domestic needs. Includes cost of sprinkler heads and additional installation costs.



. . . Fire Protection by Computer Design

DEAN & ALLYN, INC. PO BOX 709 116 LEWISTON ROAD GRAY, MAINE 04039 207-657-5646

Job Name: 88 SKYLARK ROAD

Building

Location

: 88 SKYLARK ROAD PORTLAND MAINE

: ONE System

Contract : C13XXXX

Data File : SKYLARK ROAD.WXF

#### HYDRAULIC DESIGN INFORMATION SHEET

```
Name - 88 SKYLARK ROAD
                                                                Date - 3-2-13
                                PORTLAND MAINE
Location - 88 SKYLARK ROAD
                                                       System No. - ONE
Building -
Contractor - DEAN AND ALLYN, INC.
                                                      Contract No. - C13XXXX
Calculated By - H. KING I Construction: (X) Combustible ( ) Non-Combustible
                                                      Drawing No. - 1 OF 1
                                                            Ceiling Height 8'
OCCUPANCY - RESIDENCE
    Type of Calculation: ( )NFPA 13 Residential
                                                                   (X)NFPA 13D
                                                     ( )NFPA 13R
S
Y
    Number of Sprinklers Flowing: ()1
                                           (X)2
                                                     ()4
S
    ()Other
                                            Made by
                                                                  Date
Т
    ( )Specific Ruling
\mathbf{E}
                                                               System Type
Μ
    Listed Flow at Start Point - 13
                                          Gpm
     Listed Pres. at Start Point - 7
                                                      (X) Wet
                                                                   ( ) Dry
                                          Psi
                                                                   ( ) PreAction
D
     MAXIMUM LISTED SPACING 16
                                                     ( ) Deluge
                                    x 16
     Domestic Flow Added
                                                     Sprinkler or Nozzle
                                          Gpm
Ε
                                                                  Model FREEDOM
S
     Additional Flow Added
                                          Gpm
                                                Make VIKING
     Elevation at Highest Outlet - 10'
                                                Size
                                                                  K-Factor 4.9
Ι
                                          Feet
     Note: CUSHION 23.0
                          PSI
                                                Temperature Rating 155
G
Ν
                                     Psi Required 47.0
                                                             CITY
Calculation
              Gpm Required 31.0
Summary
                                      Overhead 120
                                                               Underground 120
              C-Factor Used:
                                                            Tank or Reservoir:
W
    Water Flow Test:
                                   Pump Data:
                                  Rated Cap.
                                                          Cap.
    Date of Test - 2007
Α
    Time of Test
                                  @ Psi
                                                          Elev.
т
    Static (Psi)
                   - 70
                                  Elev.
\mathbf{E}
    Residual (Psi) - 69
                                  Other
                                                                Well
R
    Flow (Gpm)
                    - 838
                                                          Proof Flow Gpm
    Elevation
                    - 0
P
    Location: SKYLARK ROAD
Р
    Source of Information: P W D
\mathbf{L}
Y
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## Fittings Used Summary

DEAN	&	ALL'	YN,	INC.
88 SK	ΥL	ARK	RO	AD

Page 2 Date 3-2-13

	Legend Name	1/2	3/4	1	11/4	1½	<b>2</b>	21/2	3	31/2	4.	5	6	8	10	12	14	16	18	20	24
E	NFPA 13 90' Standard Elbow	1	2	2	3	4	5	6	7	8	10	12	14	18	22	27	35	<b>4</b> 0	45	50	61
G	NFPA 13 Gate Valve	0	0	1	1	1	1	1	1	1	2	2	3	4	5	6	7	8	10	11	13
T	NFPA 13 90' Flow thru Tee	3	4	5	6	8	10	12	15	17	20	25	30	35	50	60	71	81	91	101	121

#### **Units Summary**

Diameter Units Length Units Inches Feet

Flow Units
Pressure Units

US Gallons per Minute Pounds per Square Inch

Note: Fitting Legend provides equivalent pipe lengths for fittings types of various diameters. Equivalent lengths shown are standard for actual diameters of Sched 40 pipe and CFactors of 120 except as noted with \*. The fittings marked with a \* show equivalent lengths values supplied by manufacturers based on specific pipe diameters and CFactors and they require no adjustment. All values for fittings not marked with a \* will be adjusted in the calculation for CFactors of other than 120 and diameters other than Sched 40 per NFPA.

Pressure / Flow Summary - STANDARD

DEAN & ALLYN, INC. 88 SKYLARK ROAD

Page 3 Date 3-2-13

Node No.	Elevation	K-Fact	Pt Actual	Pn	Flow Actual	Density	Area	Press Req.
1A	10.0	4.9	7.0	na	12.96	0.05	256	7.0
1	10.0	K = K @ 1	7.35	na	12.96			
2	10.0	K = K @ 1	7.43	na	13.04			
10	10.0	•	10.44	na				
11	10.0		10.97	na				
TR	0.0		18.05	na				
FF	0.0		25.58	na	5.0			
CTY	0.0		47.0	na				

The maximum velocity is 10.45 and it occurs in the pipe between nodes FF and CTY

DEAN & ALLYN, INC. 88 SKYLARK ROAD

Page 4 Date 3-2-13

Hyd. Ref. Point	Qa Dia. "C" Qt Pf/Ft	Fitting or Eqv. Ln.	Pipe Ftng's Total	Pt Pe Pf	Pt Pv Pn	****** Notes *****
1A	12.96 1.049	1T 5.0	1.000	7.000		K Factor = 4.90
to 1	120.0 12.96 0.0583	0.0 0.0	5.000 6.000	0.0 0.350		Vel = 4.81
	0.0	0.0	0.000	0.330		<u> </u>
	12.96			7.350		K Factor = 4.78
1 to	12.96 1.049 120.0	5E 10.0 0.0	43.000 10.000	7.350 0.0		K Factor @ node 1
10	12.96 0.0584	0.0	53.000	3.093		Vel = 4.81
	0.0 12.96			10.443		K Factor = 4.01
2	13.04 1.049	5E 10.0	45.000	7.431		K Factor @ node 1
to 11	120.0 13.04 0.0590	1T 5.0 0.0	15.000 60.000	0.0 3.537		Vel = 4.84
	0.0	0.0	00.000	3.331		VEI - 4.04
	13.04			10.968		K Factor = 3.94
10 to	12.96 1.049 120.0	0.0 0.0	9.000 0.0	10.443 0.0		
	12.96 0.0583	0.0	9.000	0.525		Vel = 4.81
11	13.04 1.049	1E 2.0	11.000	10.968 4.331		
to TR	120.0 26.0 0.2115	0.0 0.0	2.000 13.000	4.331 2.749		Vel = 9.65
TR	0.0 1.049	1Z 0.0	10.000	18.048		
to	120.0	0.0	0.0	5.000		* Fixed loss = 5
FF	26.0 0.2537	0.0	10.000	2.537		Vel = 9.65
FF to	5.00 1.101 120.0	1G 1.266 1T 6.328	85.000 7.594	25.585 0.0		Qa = 5
CTY	31.0 0.2313	0.0	92.594	21.416		Vel = 10.45
	0.0 31.00			47.001		K Factor = 4.52

Demand:
D1 - Elevation
D2 - System Flow
D2 - System Pressure
Hose ( Demand )
D3 - System Demand
Safety Margin City Water Supply:
C1 - Static Pressure : 70
C2 - Residual Pressure: 69
C2 - Residual Flow : 838 : 4.331 : 26 : 47.001 : 5 : 31 : 22.997 150 140 130 P 120 R 110  $E^{100}$ S 90  $s^{80}$ C1 C2 ս 70 R 60 **D2** E 50 40 D3 30 20 10 800 900 400 500 600 700 100 200 300 FLOW ( N ^ 1.85 )