Form # P 04

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK

CITY OF PORTLAND

BUILDING INSPECTION

PERMIT

Permit Number: 101004

Please Read Application And Notes, If Any, Attached

This is to certify that ~~LIEBER ROBERT A /Porperty Owner~~

has permission to ~~build 2 story 435 sq ft Single Family Home w/ 1 bath 1 bedroom~~

AT ~~41 BAYBERRY LN Peaks Island~~ ~~CBL~~ ~~089 J005001~~

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

Apply to Public Works for street line and grade if nature of work requires such information.

Notification of inspection must be given and written permission procured before this building or part thereof is lathed or otherwise closed-in. 24 HOUR NOTICE IS REQUIRED.

A certificate of occupancy must be procured by owner before this building or part thereof is occupied.

PERMIT ISSUED

NOV 16 2010

City of Portland

OTHER REQUIRED APPROVALS

Fire Dept. _____

Health Dept. _____

Appeal Board _____

Other _____

Department Name

11/16/10

Director - Building & Inspection Services

PENALTY FOR REMOVING THIS CARD

City of Portland, Maine - Building or Use Permit Application

389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

Permit No:	Issue Date:	CBL:
10-1004		089 J005001

Location of Construction:	Owner Name:	Owner Address:	Phone:
41 BAYBERRY LN Peaks Island	LIEBER ROBERT A	41 BAYBERRY LN	
Business Name:	**Contractor Name:**	**Contractor Address:**	**Phone**
	Porperty Owner	Portland	
Lessee/Buyer's Name	**Phone:**	**Permit Type:**	**Zone:**
		Single Family	IR1

Past Use:	Proposed Use:	Permit Fee:	Cost of Work:	CEO District:
Vacant Land	Single Family Home - build 2 story 435 sq ft Single Family Home w/ 1 bath 1 bedroom	$1,045.00	$95,000.00	1

FIRE DEPT: ☐ Approved ☐ Denied

Signature:

INSPECTION:
Use Group: R3 Type: 5B
IRC-2003
Signature: AWB 11/16/10

Proposed Project Description:
build 2 story 435 sq ft Single Family Home w/ 1 bath 1 bedroom

PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)

Action: ☐ Approved ☐ Approved w/Conditions ☐ Denied

Signature: Date:

Permit Taken By:	Date Applied For:
ldobson	08/16/2010

1. This permit application does not 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..

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NOV 16 2010

City of Portland

Zoning Approval

Special Zone or Reviews	Zoning Appeal	Historic Preservation
☐ Shoreland N/A	☐ Variance	☑ Not in District or Landmark
☐ Wetland N/A	☐ Miscellaneous	☐ Does Not Require Review
☐ Flood Zone panel 15 - zone C.	☐ Conditional Use	☐ Requires Review
☐ Subdivision	☐ Interpretation	☐ Approved
☑ Site Plan 2010-26	☐ Approved	☐ Approved w/Conditions
Maj ☐ Minor ☐ MM ☑ Of wl conditions	☐ Denied	☐ Denied ABM
Date: 9/23/10 ABM	Date:	Date:

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 is 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 provision of the code(s) applicable to such permit.

SIGNATURE OF APPLICANT | ADDRESS | DATE | PHONE

RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE | DATE | PHONE

5-12-11 DWM Rob 766-5043 forms not in place, rebar pins on ledge to be 6' max.

6/6/11 Meeting w/Rob in office - he will be submitting an Amendment - Change not using ICF's, block frost wall on ledge. Also changing Framing details. Approved to continue footing forms @ 12" x 12" JMB

6-16-11 DWM Rob 766-5043 Footings OK

City of Portland, Maine - Building or Use Permit

389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

Permit No:	Date Applied For:	CBL:
10-1004	08/16/2010	089 J005001

Location of Construction:	Owner Name:	Owner Address:	Phone:
41 BAYBERRY LN Peaks Island	LIEBER ROBERT A	41 BAYBERRY LN	
Business Name:	**Contractor Name:**	**Contractor Address:**	**Phone**
	Porperty Owner	Portland	
Lessee/Buyer's Name	**Phone:**	**Permit Type:**	
		Single Family	

Proposed Use:	Proposed Project Description:
Single Family Home - build 2 story 435 sq ft Single Family Home w/ 1 bath 1 bedroom	build 2 story 435 sq ft Single Family Home w/ 1 bath 1 bedroom

Dept: Zoning **Status:** Approved with Conditions **Reviewer:** Ann Machado **Approval Date:** 09/23/2010

Note: Have chain of title information to show that this is a lot of record. **Ok to Issue:** ☑

1) As discussed during the review process, the property must be clearly identified prior to pouring concrete and compliance with the required setbacks must be established. Due to the proximity of the setbacks of the proposed structure, it may be required to be located by a surveyor.
2) This permit is being issued to build the house only. Any future addition or accessory structure will have to be applied for under a separate permit.
3) This property shall remain a single family dwelling. Any change of use shall require a separate permit application for review and approval.
4) This permit is being approved on the basis of plans submitted. Any deviations shall require a separate approval before starting that work.

Dept: Building **Status:** Approved with Conditions **Reviewer:** Jeanine Bourke **Approval Date:** 11/16/2010

Note: **Ok to Issue:** ☑

1) Construction of 2 story ICF walls shall be in conformance with the design specifications for installation, fastenings, attachments and structural loads.
2) Permit approved based on the plans submitted and reviewed w/owner/contractor, with additional information as agreed on and as noted on plans regarding the open web trusses.
3) Separate permits are required for any electrical, plumbing, sprinkler, fire alarm HVAC systems, heating appliances, including pellet/wood stoves, commercial hood exhaust systems and fuel tanks. Separate plans may need to be submitted for approval as a part of this process.
4) Application approval based upon information provided by applicant. Any deviation from approved plans requires separate review and approrval prior to work.
5) Those building a new single family dwelling shall install a CO detector in each area within or giving access to bedrooms. That detection must be powered by the electrical service in the building and battery.

Dept: DRC **Status:** Approved with Conditions **Reviewer:** Philip DiPierro **Approval Date:** 11/16/2010

Note: **Ok to Issue:** ☑

1) Erosion and Sedimentation control shall be established around all disturbed areas and shall be inspected by the Development Review Coordinator prior to soil disturbance, and shall be done in accordance with Best Management Practices, Maine Department of Environmental Protection Technical and Design Standards and Guidelines. All Erosion and Sedimentation control measures must be inspected and maintaned daily.
2) NO CHANGES IN GRADING IS PROPOSED. ANY CHANGES IN TOPOGRAPHY SHALL REQUIRE ADDITIONAL REVIEW AND APPROVAL BY THE CITY.
3) The Development Review Coordinator reserves the right to require additional lot grading or other drainage improvements as necessary due to field conditions.

PERMIT ISSUED

NOV 16 2010

City of Portland

Location of Construction:	Owner Name:	Owner Address:	Phone:
41 BAYBERRY LN Peaks Island	LIEBER ROBERT A	41 BAYBERRY LN	
Business Name:	**Contractor Name:**	**Contractor Address:**	**Phone**
	Porperty Owner	Portland	
Lessee/Buyer's Name	**Phone:**	**Permit Type:**	
		Single Family	

4) A street opening permit(s) is required for your site. Please contact Carol Merritt ay 874-8300, ext. 8822. (Only excavators licensed by the City of Portland are eligible.)

5) All damage to sidewalk, curb, street, or public utilities shall be repaired to City of Portland standards prior to issuance of a certificate of occupancy.

6) The Development Review Coordinator (874-8632) must be notified five (5) working days prior to date required for final site inspection. Please make allowances for completion of site plan requirements determined to be incomplete or defective during the inspection. This is essential as all site plan requirements must be completed and approved by the Development Review Coordinator prior to issuance of a Certificate of Occupancy. Please schedule any property closing with these requirements in mind.

7) Two (2) City of Portland approved species and size trees must be planted on your street frontage prior to issuance of a Certificate of Occupancy.

8) All Site work (final grading, landscaping, loam and seed) must be completed prior to issuance of a certificate of occupancy.

9) Trees that are designated to be saved are to be protected during excavation and construction. Tree protection fencing is to be installed around the tree canopy drip line prior to the start of any excavation. Tree protection measures are to be inspected and maintained daily.

10 The applicant shall have a licensed surveyor install, prior to the issuance of any Certificate of Occupancy, permanent mounumentation/pins identifying property corners.

Comments:

8/26/2010-amachado: Left vcm for Phil. Survey does not include all the information from the checklist. Need to talk to Phil.

9/9/2010-amachado: Spoke to Rob Lieber. I told him that the 16' x 30' struture did not meet the rear setback. He said that it was on the master plan to be built in the future. I told him that we only wanted what was being built now on the siteplan and that he could apply for aseparate permit in the future to build an accessory building, but that it would have to meet the required setbacks. I told him that he could send me somthing in writing stating that he was not building the accessory building at this time and that it is not part of the plan. I am moving the permit forward in the system, but I can't sign off until I get something in writing.

9/23/2010-amachado: Received revised site plan.

9/27/2010-jrioux: Header schedule, change to roof rafter & floor spans/ sizing needed, concrete block wall installation specs..

10/26/2010-jrioux: Briefly met with owner at counter; recommendation schedule/ meet with a Plan Reviewer.

11/3/2010-jmb: Met with Rob L., he submitted the flat roof open web truss specs, need to meet with Jon R. As there is no plan review record, for any other outstanding items. The spec book for installation of ICF's was submitted.

11/5/2010-jmb: Met with Jon, I will complete the plan review for additional details. Sent Rob L. An email with items per the review record.

11/15/2010-jmb: Rob L. Left a vcmsg on 11/12 for an update on the status, I forwarded him the email sent on 11/5 for more information. Received an email with the clarifications.

11/16/2010-jmb: Issuance pending DRC approval....received

PERMIT ISSUED

NOV 16 2010

City of Portland

BUILDING PERMIT INSPECTION PROCEDURES

Please call 874-8703 or 874-8693 (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 Inspection 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 with construction.**

__X__ **Footing/Building Location Inspection: Prior to pouring concrete or setting precast piers**

__X__ **Re-Bar Schedule Inspection: Prior to pouring concrete**

__X__ **Framing/Rough Plumbing/Electrical: Prior to Any Insulating or drywalling**

__X__ **Final/Certificate of Occupancy: Prior to any occupancy of the structure or use. NOTE: There is a $75.00 fee per inspection at this point.**

__X__ **Underground electrical or plumbing inspection prior to pouring concrete**

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

NOV 16 2010

City of Portland

CBL: 089 J005001 **Building Permit #:** 10-1004

PORTLAND PERMIT # 11485 APPLICANTS COPY

SUBSURFACE WASTEWATER DISPOSAL

Date Permit Issued: 11/16/10 $ 100.00 FEE ☐ If Double Fee Charged

Local Plumbing Insector Signature L.P.I. # 07 12

THE WORK SPECIFIED IN THIS APPLICATION IS HEREBY AUTHORIZED TO BE INSTALLED IN ACCORDANCE WITH THE RULES. THIS PERMIT EXPIRES AFTER TWO YEARS FROM DATE ISSUED UNLESS WORK HAS COMMENCED.

PROPERTY LOCATION

City, Town, or Plantation	PORTLAND, PEAKS ISLAND
Street or Road	41 BAYBERRY LANE
Subdivision, Lot *	

OWNER/APPLICANT INFORMATION

Name (last, first, MI)		Owner
LIEBER	ROBERT	

Mailing Address of ■ Owner ☐ Applicant	ROBERT LIEBER 131 BRACKETT STREET PORTLAND, ME 04102
Daytime Tel. *	766-5043

#2010-1008 89-J-5

Municipal Tax Map * 89 Lot * J-005

Owner or Applicant Statement

I state and acknowledge that the information submitted is correct to the best of my knowledge and understand that any falsification is reason for the Department and/or Local Plumbing Inspector to deny a permit.

Signature of Owner/Applicant — Date: 11/16/10

Caution: Inspections Required

I have inspected the installation authorized above and found it to be in compliance with the Subsurface Wastewater Disposal Rules Application.

Local Plumbing Inspector Signature — (1st) Date Approved — (2nd) Date Approved

PERMIT INFORMATION

TYPE OF APPLICATION

1. ■ First Time System
2. ☐ Replacement System
   Type Replaced: _____
   Year Installed: _____
3. ☐ Expanded System
   a. ☐ Minor Expansion
   b. ☐ Major Expansion
4. ☐ Experimental System
5. ☐ Seasonal Conversion

THIS APPLICATION REQUIRES

1. ■ No Rule Variance
2. ☐ First Time System Variance
   a. ☐ Local Plumbing Inspector Approval
   b. ☐ State & Local Plumbing Inspector Approval
3. Replacement System Variance
   a. ☐ Local Plumbing Inspector Approval
   b. ☐ State & Local Plumbing Inspector Approval
4. ☐ Minimum Lot Size Variance
5. ☐ Seasonal Conversion Approval

DISPOSAL SYSTEM COMPONENTS

1. ■ Complete Non-Engineered System
2. ☐ Primitive System(graywater & alt toilet)
3. ☐ Alternative Toilet, specify: _____
4. ☐ Non-Engineered Treatment Tank (only)
5. ☐ Holding Tank, _____ Gallons
6. ☐ Non-Engineered Disposal Field (only)
7. ☐ Seporated Laundry System
8. ☐ Complete Engineered System(2000gpd+)
9. ☐ Engineered Treatment Tank (only)
10. ☐ Engineered Disposal Field (only)
11. ☐ Pre-treatment, specify:
12. ☐ Miscellaneous components

SIZE OF PROPERTY

28,468 ■ sq. ft. ☐ acres

DISPOSAL SYSTEM TO SERVE

1. ■ Single Family Dwelling Unit, No. of Bedrooms: 3
2. ☐ Multiple Family Dwelling, No of Units: _____
3. ☐ Other: _____ SPECIFY

Current Use ☐ Seasonal ☐ Year Round ■ Undeveloped

SHORELAND ZONING

☐ Yes ■ No

TYPE OF WATER SUPPLY

1. ☐ Drilled Well 2. ☐ Dug Well 3. ☐ Private
4. ■ Public 5. ☐ Other:

DESIGN DETAILS (SYSTEM LAYOUT SHOWN ON PAGE 3)

TREATMENT TANK

1. ■ Concrete
   a. ■ Regular
   b. ☐ Low Profile
2. ☐ Plastic
3. ☐ Other: _____

CAPACITY 1000 gallons

DISPOSAL FIELD TYPE & SIZE

1. ☐ Stone Bed 2. Stone Trench
3. ■ Proprietary Device
   a. ☐ Cluster array c. ■ Linear
   b. ■ Regular d. ☐ H-20 loaded
4. ☐ Other:

SIZE 1056 ■ sq. ft. ☐ lin. ft.

22 ELJEN IN-DRAIN UNITS

GARBAGE DISPOSAL UNIT

1. ■ No 3. ☐ Maybe
2. ☐ Yes >> Specify one below:
   a. ☐ Multi-compartment tank
   b. ☐ _____ tanks in series
   c. ☐ Increase in tank capacity
   d. ☐ Filter on tank outlet

DESIGN FLOW

270 gallons per day

BASED ON:
1. ■ Table 501.1 (dwelling unit(s))
2. ☐ Table 501.2 (other facilities)

SHOW CALCULATIONS - for other facilities -

3 BEDROOMS AT 90 GALLONS PER DAY EACH

3. ☐ Section 503.0 (meter readings) ATTACH WATER-METER DATA

SOIL DATA & DESIGN CLASS

PROFILE	CONDITION	DESIGN
2	AIII/C	1

AT Observation Hole * TB A

Depth 27 " Elevation -64 " OF MOST LIMITING SOIL FACTOR

DISPOSAL FIELD SIZING

1. ☐ Small - 2.0 sq.ft./gpd
2. ☐ Medium - 2.6 sq.ft./gpd
3. ■ Medium-Large - 3.3 sq.ft./gpd
4. ☐ Large - 4.1 sq.ft./gpd
5. ☐ Extra-Large - 5.0 sq.ft./gpd

EFFLUENT/EJECTOR PUMP

1. ☐ Not required
2. ■ May be required
3. ☐ Required

Specify only for engineered systems:

DOSE: Gallons

LATITUDE AND LONGITUDE

at center of disposal area

Lat. N 43 d 39 m 35 s

Lon. W 70 d 10 m 53 s

if g.p.s., state margin of error

SITE EVALUATOR STATEMENT

I Certify that on 8/6/98 (date) I completed a site evaluation on this property and state that the data reported is accurate and that the proposed sytem is in compliance with the Subsurface Wastewater Disposal Rules (10-144A CMR 241).

Site Evaluator Signature — SE * 163 — Date 8/11/2010

RECEIVED

ALBERT FRICK — Site Evaluator Name Printed

(207) 839-5563 — Telephone Number

AFA@MAINERR.COM — E-mail Address

AUG 16 2010

ALBERT FRICK ASSOCIATES ~ 95A COUNTY ROAD ROAD GORHAM, MAINE 04038 ~ (207) 839-5563

Note: Changes to or deviations from the design should be confirmed with the Site Evaluator

HHE-200 Rev. 4/05

Dept. of Building Inspections
City of Portland Maine

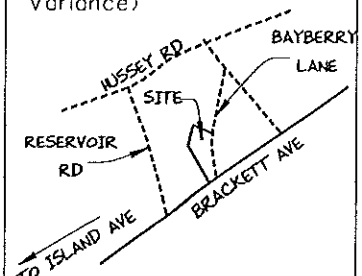
SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

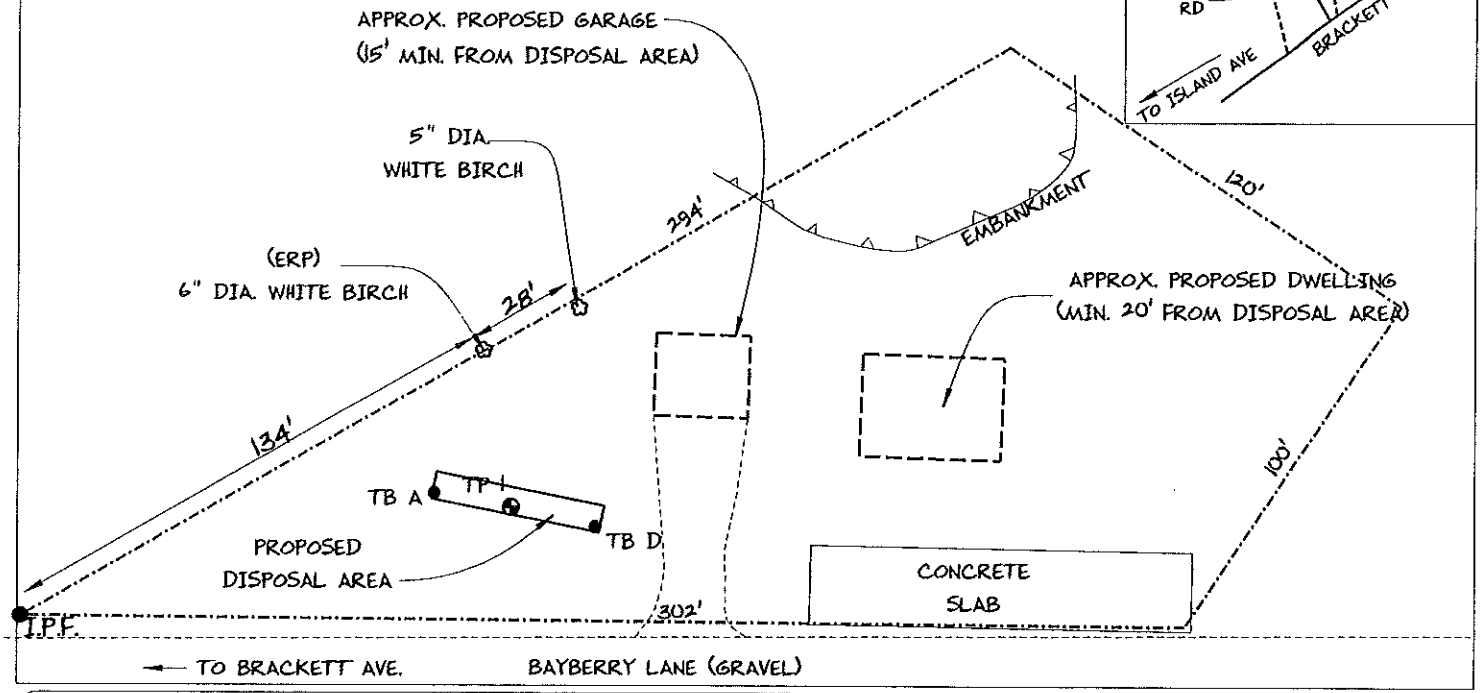
Maine Department of Human Services
Division of Health Engineering, Station 10 SHS
(207) 287-5672 FAX (207) 287-4172

Town, City, Plantation	Street, Road Subdivision	Owner's Name
PORTLAND, PEAKS ISLAND	41 BAYBERRY LANE	ROBERT LIEBER

SITE PLAN — Scale 1" = 50 Ft. or as shown

SITE LOCATION PLAN (Attach Map from Maine Atlas for New System Variance)





SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole TP 1 ■ Test Pit ☐ Boring
_____" Depth of Organic Horizon Above Mineral Soil

Depth (inches)	Texture	Consistency	Color	Mottling
0			DARK BROWN	
10	SANDY LOAM	FRIABLE	YELLOW BROWN	
20			LIGHT OLIVE BROWN	FEW, FAINT
30	BEDROCK			
40				
50				

Soil Classification		Slope	Limiting Factor	
2 (Profile)	AIII/C (Condition)	7 %	28"	☐ Ground Water ☐ Restrictive Layer ■ Bedrock ☐ Pit Depth

Observation Hole TB ☐ Test Pit ■ Boring
_____" Depth of Organic Horizon Above Mineral Soil

Depth (inches)	Texture	Consistency	Color	Mottling
0				
10	TB A = 27" TO BEDROCK			
20	TB D = 29" TO BEDROCK			
30				
40				
50				

Soil Classification		Slope	Limiting Factor	
Profile	Condition	%	27"	☐ Ground Water ☐ Restrictive Layer ■ Bedrock ☐ Pit Depth

Albert Frick
Site Evaluator Signature

163
SE *

8/11/2010
Date

ALBERT FRICK ASSOCIATES – 95A COUNTY ROAD ROAD GORHAM, MAINE 04038 – (207) 839-5563

SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

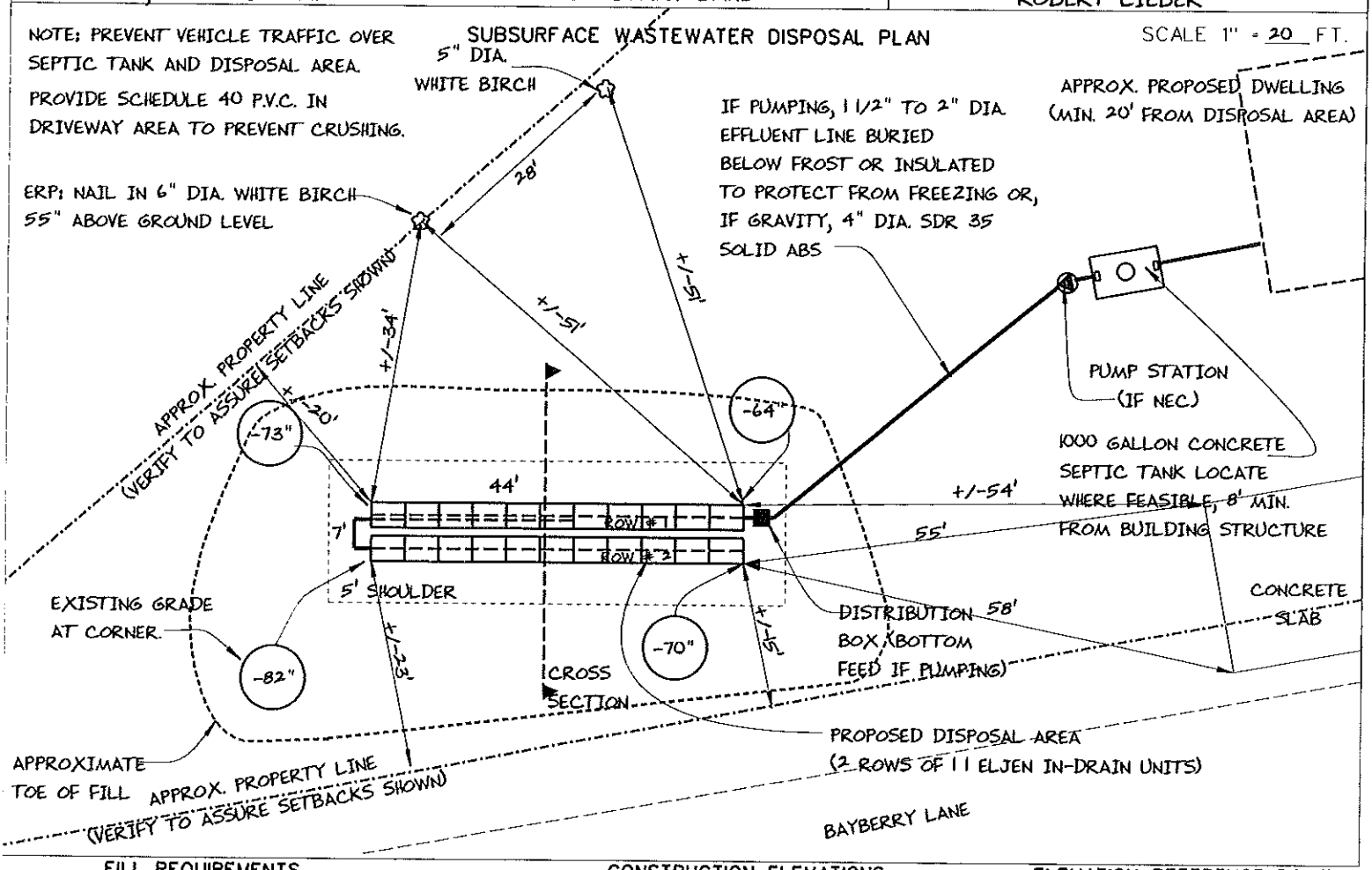
Maine Department of Human Services
Division of Health Engineering, Station 10 SHS
(207) 287-5672 FAX (207) 287-4172

Town, City, Plantation	Street, Road, Subdivision	Owner's Name
PORTLAND, PEAKS ISLAND	41 BAYBERRY LANE	ROBERT LIEBER

NOTE: PREVENT VEHICLE TRAFFIC OVER SEPTIC TANK AND DISPOSAL AREA.
PROVIDE SCHEDULE 40 P.V.C. IN DRIVEWAY AREA TO PREVENT CRUSHING.

SUBSURFACE WASTEWATER DISPOSAL PLAN

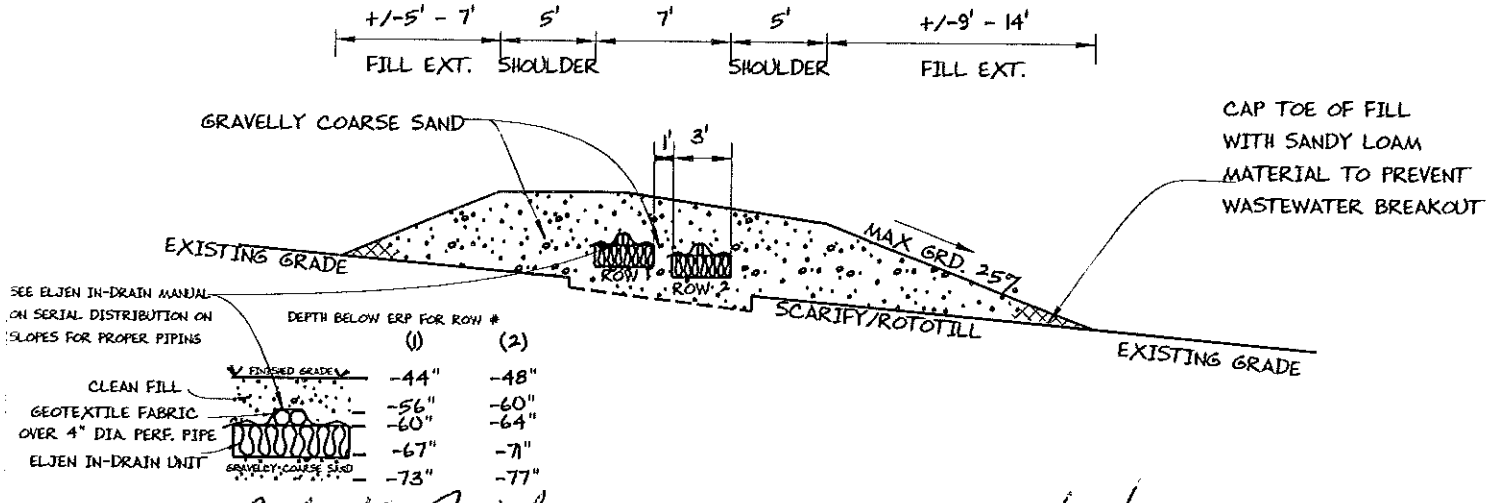
SCALE 1" = 20 FT.



FILL REQUIREMENTS		CONSTRUCTION ELEVATIONS	ELEVATION REFERENCE POINT
Depth of Fill (Upslope)	: 20" – 29"	Finished Grade Elevation	SEE DETAIL BELOW
Depth of Fill (Downslope)	: 22" – 34"	Top of Distribution Pipe or Proprietary Device	Location & Description 6" DIA. WHITE BIRCH, NAIL 55" ABOVE BASE
DEPTHS AT CROSS-SECTION (shown below)		Bottom of Disposal Area	Reference Elevation is 0.0" or _____

DISPOSAL AREA CROSS SECTION

SCALE:
VERTICAL: 1" = 5 FT
HORIZONTAL: 1" = 10 FT



Albert Frick
Site Evaluator Signature

163
SE #

8/11/2010
Date

ALBERT FRICK ASSOCIATES – 95A COUNTY ROAD ROAD GORHAM, MAINE 04038 – (207) 839-5563

Albert Frick Associates, Inc.
Soil Scientists & Site Evaluators
95A County Road Gorham, Maine 04038
(207) 839-5563

PORTLAND, PEAKS ISLAND	41 BAYBERRY LANE	ROBERT LIEBER
TOWN	LOCATION	APPLICANT'S NAME

1) The Plumbing and Subsurface Wastewater Disposal Rules adopted by the State of Maine, Department of Human Services pursuant to 22 M.R.S.A. § 42 (the "Rules") are incorporated herein by reference and made a part of this application and shall be consulted by the owner/applicant, the system installer and/or building contractor for further construction details and material specifications. The system Installer should contact Albert Frick Associates, Inc. 839-5563, if there are any questions concerning materials, procedures or designs. The system installer and/or building contractor installing the system shall be solely responsible for compliance with the Rules and with all state and municipal laws and ordinances pertaining to the permitting, inspection and construction of subsurface wastewater disposal systems.

2) This application is intended to represent facts pertinent to the Rules only. It shall be the responsibility of the owner/applicant, system Installer and/or building contractor to determine compliance with and to obtain permits under all applicable local, state and/or federal laws and regulations (including, without limitation, Natural Resources Protection Act, wetland regulations, zoning ordinances, subdivision regulations, Site Location of Development Act and minimum lot size laws) before installing this system or considering the property on which the system is to be installed a "buildable" lot. It is recommended that a wetland scientist be consulted regarding wetland regulations. Prior to the commencement of construction/installation, the local plumbing inspector or Code Enforcement Officer shall inform the owner/applicant and Albert Frick Associates, Inc of any local ordinances which are more restrictive than the Rules in order that the design may be amended. All designs are subject to review by local, state and/or federal authorities. Albert Frick Associates, Inc.'s liability shall be limited to revisions required by regulatory agencies pursuant to laws or regulations in effect at the time of preparation of this application.

3) All information shown on this application relating to property lines, well locations, subsurface structures and underground facilities (such as utility lines, drains, septic systems, water lines, etc.) are based solely upon information provided by the owner/applicant and has been relied upon by Albert Frick Associates, Inc. in preparing this application. The owner/applicant shall review this application prior to the start of construction and confirm this information. Well locations on abutting properties but not readily visible above grade should be confirmed by the owner/applicant prior to system installation to assure minimum setbacks.

4) Installation of a garbage (grinder) disposal is not recommended. If one is installed, an additional 1000 gallon septic tank or a septic tank filter shall be connected in series to the proposed septic tank. Risers and covers should be installed over the septic tank outlet to allow for easy maintenance.

5) The system user shall avoid introducing kitchen grease or fats into this system. Chemicals such as septic tank cleaners and/or chlorine (such as from water treatment units) and controlled or hazardous substances shall not be disposed of in this system. Additives such as yeast or enzymes are discouraged, since they have not been proven to extend system life.

6) The septic tank should be pumped within two years of installation and subsequently as recommended by the pump service, but in no event should the septic tank be pumped less often than every three years. All septic tanks, pump stations and additional treatment tanks shall be installed to prevent ground water and surface water infiltration. Risers and covers should be properly installed to provide access while preventing surface water intrusion.

PORTLAND, PEAKS ISLAND	41 BAYBERRY LANE	ROBERT LIEBER
TOWN	LOCATION	APPLICANT'S NAME

7) The actual water flow or number of bedrooms shall not exceed the design criteria indicated on this application without a re-evaluation of the system as proposed. If the system is supplied by public water or a private service with a water meter, the water consumption per period should be divided by the number of days to calculate the average daily water consumption [water usage (cu. ft.) x 7.48 cu. ft. (gallons per cu. ft.) ÷ (# of days in period) = gals per day].

8) The general minimum setbacks between a well and septic system serving a single family residence is 100-300 feet, unless the local municipality has a more stringent requirement. A well installed by an abutter within the minimum setback distances prior to the issuance of a permit for the proposed disposal system may void this design.

9) When a gravity system is proposed: BEFORE CONSTRUCTION/INSTALLATION BEGINS, the system installer or building contractor shall review the elevations of all points given in this application and the elevation of the existing and/or proposed building drain and septic tank inverts for compatibility to minimum slope requirement. In gravity systems, the invert of the septic tank(s) outlet(s) shall be at least 4 inches above the invert of the distribution box outlet at the disposal area.

10) When an effluent pump is required: Provisions shall be made to make certain that surface and ground water does not enter the septic tank or pump station, by sealing/grouting all seams and connections, and by placement of a riser and lid at or above grade. An alarm device warning of a pump failure shall be installed. Also, when pumping is required of a chamber system, install a "T" connection in the distribution box and place 3 inches of stone or a splash plate in the first chamber. Insulate gravity pipes, pump lines and the distribution box as necessary to prevent freezing.

11) On all systems, remove the vegetation, organic duff and old fill material from under the disposal area and any fill extension. On sites where the proposed system is to be installed in natural soil, scarify the bottom and sides of the excavated disposal area with a rake. Do not use wheeled equipment on the scarified soil surface. For systems installed in fill, scarify the native soil by roto-tilling or scarifying with teeth of backhoe to a depth of at least 8 inches over the entire disposal and fill extension area to prevent glazing and to promote fill bonding. Place fill in loose layers no deeper that 8 inches and compact before placing more fill (this ensures that voids and loose pockets are eliminated to minimize the chance of leakage or differential setting). Do not use wheeled equipment on the scarified soil area until after 12 inches of fill is in place. Keep equipment off proprietary devices. Divert the surface water away from the disposal area by ditching or shallow landscape swales.

12) Unless noted otherwise, fill shall be gravelly coarse sand which contains no more that 5% fines (silt and clay). Crushed stone shall be clean and free of any rock dust from the crushing process.

13) Do not install systems on loamy, silty, or clayey soils during wet periods since soil smearing/glazing may seal off the soil interface.

14) Seed all filled and disturbed surfaces with perennial grass seed, then mulch with hay or equivalent material to prevent erosion. Alternatively, bark or permanent landscape mulch may be used to cover system. Woody trees or shrubs are not permitted on the disposal area or fill extensions.

15) If an advanced wastewater treatment unit is part of the design, the system shall be operated and maintained per manufacturer's specifications.

Albert Frick Associates, Inc.
Soil Scientists & Site Evaluators
95A County Road Gorham, Maine 04038
(207) 839-5563

City of Portland, Maine - Building or Use Permit

389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

Permit No:	Date Applied For:	CBL:
20106008	08/17/2010	089 J005001

Location of Construction:	Owner Name:	Owner Address:	Phone:
41 BAYBERRY LN	LIEBER ROBERT A	41 BAYBERRY LN	
Business Name:	**Contractor Name:**	**Contractor Address:**	**Phone**
	Robert Lieber		
Lessee/Buyer's Name	**Phone:**	**Permit Type:**	
		First Time System	

Proposed Use:	Proposed Project Description:

Dept: Building **Status:** Approved with Conditions **Reviewer:** Jeanine Bourke **Approval Date:**

Note: **Ok to Issue:** ☐

1) This system is not design for vehicular traffic (h-20 load). The pipe carrying effluent shall be protected from frost and sleeved if vehicles will traverse.

Comments:

11/5/2010-jmb: Need applicants signature, notified

11/16/2010-jmb: Rob L. Will sign when he picks up the permit

BUILDING PERMIT INSPECTION PROCEDURES

Please call 874-8703 or 874-8693 (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 Inspection 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 with construction.**

__X__ **Septic field and extension inspection for bottom preparation/scarification to verify removal of vegetation, established transitional horizon and erosion and sedimentation control measures.**

__X__ **Exposed septic field installation and tank location inspection to check elevations, dimensions, piping, pumping station and system design prior to covering.**

__X__ **Backfill inspection of septic field for approved materials, stabilization, slopes and extensions**

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

General Building Permit Application

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

Location/Address of Construction: 41 Bayberry Lane		
Total Square Footage of Proposed Structure/Area: 435	Square Footage of Lot: 28,468	
Tax Assessor's Chart, Block & Lot Chart# Block# Lot# Map 89 J 5	Applicant *must be owner, Lessee or Buyer* Name Robert Lieber Address 139 Brackett City, State & Zip Portland ME 04102	Telephone: 766-5043
Lessee/DBA (If Applicable)	Owner (if different from Applicant) Name Address City, State & Zip	Cost Of Work: $ 95,000 C of O Fee: $ Total Fee: $

Current legal use (i.e. single family): Vacant

If vacant, what was the previous use? military reservation

Proposed Specific use: Single family house

Is property part of a subdivision? no If yes, please name

Project description: SFH 2story's 1bedroom 1bath-

970
+ 300
+ 75
$1345

Contractor's name: Robert Lieber

Address: 139 Brackett St

City, State & Zip Portland ME 04102 Telephone: 766 5043

Who should we contact when the permit is ready: Robert Lieber Telephone:

Mailing address: 139 Brackett St Portland ME 04102

Please submit all of the information outlined on the applicable Checklist. Failure to do so will result in the automatic denial of your permit.

In order to be sure the City fully understands the full scope of the project, the Planning and Development Department may request additional information prior to the issuance of a permit. For further information or to download copies of this form and other applications visit the Inspections Division on-line at www.portlandmaine.gov, or stop by the Inspections Division office, room 315 City Hall or call 874-8703.

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

RECEIVED
AUG 16 2010
Dept. of Building Inspections
City of Portland Maine

Signature: Date: 8/11/10

This is not a permit; you may not commence ANY work until the permit is issue

Jeanie Bourke - 41 Bayberry Lane, Peaks Island - Single Family Construction

From: Philip DiPierro
To: Code Enforcement & Inspections
Date: 11/16/2010 1:32 PM
Subject: 41 Bayberry Lane, Peaks Island - Single Family Construction

Hi all, this project, site plan #2010-0026 at 41 Bayberry Lane on Peaks Island - Leiber single family home, meets minimum DRC site plan requirements for the issuance of the building permit. Please see UI for sign off.

Thanks.

phil

Jeanie Bourke - Re: FW: Message from 28C-1

From: robert lieber <robertlieber@me.com>
To: Jeanie Bourke <JMB@portlandmaine.gov>
Date: 11/15/2010 5:56 PM
Subject: Re: FW: Message from 28C-1

Okay here are some answers, please let me know if there are anymore that I can help with.

> 1. The first floor plan shows the hearth extension for the wood stove, will there also be a thickened footing for the chimney and hearth?

Yes there will be, I plan on supporting an area of 6'x6' with a large footing pinned to ledge under the woodstove. I am making the area 6' X 6' for a possibile future masonary heater.

> 2. What will the roof sheathing be?

5/8 PLY

> 3. What is the u-factor of the windows

I plan on a total of .35 u-value for my windows

> 4. Is there a toilet in the bathroom?

Yes, I am unsure why the the symbol for it on the plan is what it is. It is between the sink and the shower

> 5. Confirm that the utility room walls, ceiling and stairs will have sheet rock.

Yes sheetrock will be applyed to the walls ceiling and stairs of the utility room.

Best, Rob
766-5043

On Nov 15, 2010, at 10:14 AM, Jeanie Bourke <JMB@portlandmaine.gov> wrote:

> Hi Rob,
> In response to your voice messages from Nov. 12, note that I sent this email to you on 11/5 for the additional information.
> Thanks,
> Jeanie
>
> >>> Jeanie Bourke 11/5/2010 11:59 AM >>>
> Rob,
> I have completed the review and have a few more questions:
> 1. The first floor plan shows the hearth extension for the wood stove, will there also be a thickened footing for the chimney and hearth?
> 2. What will the roof sheathing be?
> 3. What is the u-factor of the windows

10-1004 41 Bayberry 089-J-005

ONE AND TWO FAMILY	PLAN REVIEW	CHECKLIST		
Soil type/Presumptive Load Value (Table R401.4.1)				
Component	Submitted Plan	Findings	Revisions	Date
STRUCTURAL Footing Dimensions/Depth (Table R403.1 & R403.1(1), (Section R403.1 & R403.1.4.1)	8"X16"			
Foundation Drainage, Fabric, Damp proofing (Section R405 & R406)	N/A - slab but shown	~~need foundation Plan~~ 6'X6' w/Footings & Chimney increase Footing	11/15/10	✓
Ventilation/Access (Section R408.1 & R408.3) Crawls Space ONLY	N/A			
Anchor Bolts/Straps, spacing (Section R403.1.6)	ICF Forms & connectors/plates			
Lally Column Type (Section R407) Girder & Header Spans (Table R 502.5(2))	N/A			
Built-Up Wood Center Girder Dimension/Type	N/A			
Sill/Band Joist Type & Dimensions	ICF w/ simpson ties			
First Floor Joist Species Dimensions and Spacing (Table R502.3.1(1) & Table R502.3.1(2))	N/A slab			
Second Floor Joist Species Dimensions and Spacing (Table R502.3.1(1) & Table R502.3.1(2))	open web joists @ 16" OC.			
Attic or additional Floor Joist Species Dimensions and Spacing (Table R802.4(1) andR802.4(2))	N/A Flat Roof			

Pitch, Span, Spacing& Dimension (Table R802.5.1(1) - R 802.5.1(8)) Roof Rafter; Framing & Connections (Section R802.3 & R802.3.1)	Flat 1/4" pitch open web Truss see Rec	w/ venting 16" O.C.
Sheathing; Floor, Wall and roof (Table R503.2.1.1(1)	Roof?	5/8" 11/15/10 (R) ✓
Fastener Schedule (Table R602.3(1) & (2))	conform	
Private Garage (Section R309) Living Space ? (Above or beside)	N/A →	
Fire separation (Section R309.2)		Utility Room understair ? Sheetrock all covered 11/15/10 (S) ✓
Opening Protection (Section R309.1)		
Emergency Escape and Rescue Openings (Section R310)		
Roof Covering (Chapter 9)	Bitumen	
Safety Glazing (Section R308)	As Noted - Bath	
Attic Access (Section R807)	N/A	
Chimney Clearances/Fire Blocking (Chap. 10)	2" clearance	
Header Schedule (Section 502.5(1) & (2)	Bond Beams / concrete	
Energy Efficiency (N1101.2.1) R-Factors of Walls, Floors, Ceilings, Building Envelope, U-Factor Fenestration	R-21, R-38 ? U Factor	.35 11/15/10 (S) ✓

Type of Heating System	wood stove	condition
Means of Egress (Sec R311 & R312) Basement	N/A	
Number of Stairways	1	
Interior	1	
Exterior		
Treads and Risers (Section R311.5.3)	7 1/4" x 10" w/ winders to code	
Width (Section R311.5.1)	36" min	
Headroom (Section R311.5.2)	open 9' ceiling	
Guardrails and Handrails (Section R312 & R311.5.6 – R311.5.6.3)	34"-38" off tread	
Smoke Detectors (Section R313) Location and type/Interconnected	marked to code	
Draftstopping (Section R502.12) and Fireblocking (Section (R602.8)	N/A	
Dwelling Unit Separation (Section R317) and IBC – 2003 (Section 1207)		
Deck Construction (Section R502.2.1)	2 x 12" w/ Rim dble less than 30" off grade	

? toilet
Yes 11/15/10

Applicant: Rob Licber — *Date:* 8/26/10

Address: 41 Bayberry Lane, Peaks Island — *C-B-L:* 89-J-005

permit # 10-1004

CHECK-LIST AGAINST ZONING ORDINANCE

** revised site plan received 9/23/10
- proposed shed has been removed
- ~~front~~ porch added

Date - new

Zone Location - IR-1

(*Interior*) *or corner lot* - build 18'x26' two story home

Proposed Use/Work - ↓

Sewage Disposal - ~~private~~.

Lot Street Frontage - 100' min. - 294' scaled (OK)

Front Yard - 30' min. - ~~30~~ 30' scaled (OK)

Rear Yard - 30' min. - 42 ~~scaled~~ (OK)

Side Yard - 20' min. - 25' on right scaled (OK)
145 ~~left~~ on left " (OK) *

Projections - stair 9x8'8", porch 16'x9

Width of Lot - 100' min. - ~~215~~ 215' scaled

Height - 35' min. - 20' scaled

Lot Area - 40,000 ϕ min. (lot of record - min of 10,000 ϕ) - 28468 ϕ (OK)
have changed title

(*Lot Coverage*)/*Impervious Surface* - 20% = 5693.6 ϕ

proposed - 18x26 = 468
8.67x9 = 78.03
546.03
16x9 porch = 144
690.03 (OK)

Area per Family - N/A

Off-street Parking - 2 spaces required (-OK)

Loading Bays - N/A

Site Plan - minor/minor 2010-0026

Shoreland Zoning/Stream Protection - N/A

Flood Plains - panel 15 - zone C

August 11, 2010

City of Portland Planning and Development Department
and Inspections Division.

I am resubmitting plans to build a single family house on Peaks Island. The original submission was in 2006. Financial concerns were the reason for pulling the application. I came close to receiving approval for the project, pending structural information on the second floor ledger system. I have included with this resubmission data supplied buy Build Block that should help answer such structural concerns. Please do not hesitate to contact me if concerns arise.

Thank you

Robert Lieber
766-5043

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

2010-0026
Application I. D. Number

Marge Schmuckal

8/16/2010
Application Date

Lieber Robert A
Applicant

41 Bayberry Ln , Peaks Island, ME 04108
Applicant's Mailing Address

Single Family Home
Project Name/Description

Consultant/Agent

41 - 41 Bayberry Ln, Portland, Maine
Address of Proposed Site

Agent Ph: Agent Fax:
Applicant or Agent Daytime Telephone, Fax

089 J005001
Assessor's Reference: Chart-Block-Lot

Proposed Development (check all that apply): ☑ New Building ☐ Building Addition ☐ Change Of Use ☑ Residential ☐ Office ☐ Retail
☐ Manufacturing ☐ Warehouse/Distribution ☐ Parking Lot ☐ Apt 0 ☐ Condo 0 ☐ Other (specify)

Proposed Building square Feet or # of Units	Acreage of Site	Proposed Total Disturbed Area of the Site	Zoning
		0	

Check Review Required:

☐ Site Plan (major/minor) ☐ Zoning Conditional - PB ☐ Subdivision # of lots ☐ Design Review
☐ Amendment to Plan - Board Review ☐ Zoning Conditional - ZBA ☐ Shoreland ☐ Historic Preservation ☐ DEP Local Certification
☐ Amendment to Plan - Staff Review ☐ Zoning Variance ☐ Flood Hazard ☐ Site Location
☐ After the Fact - Major ☐ Stormwater ☐ Traffic Movement ☐ Housing Replacement
☐ After the Fact - Minor ☐ PAD Review ☐ 14-403 Streets Review ☐ Other

Fees Paid: Site Plan $50.00 Subdivision Engineer Review $250.00 Date 8/16/2010

Zoning Approval Status:

Reviewer

☐ Approved ☐ Approved w/Conditions See Attached ☐ Denied

Approval Date Approval Expiration Extension to ☐ Additional Sheets Attached

☐ Condition Compliance signature date

Performance Guarantee ☐ Required* ☐ Not Required

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

☐ Performance Guarantee Accepted	date	amount	expiration date
☐ Inspection Fee Paid	date	amount	
☐ Building Permit Issue	date		
☐ Performance Guarantee Reduced	date	remaining balance	signature
☐ Temporary Certificate of Occupancy	date	☐ Conditions (See Attached)	expiration date
☐ Final Inspection	date	signature	
☐ Certificate Of Occupancy	date		
☐ Performance Guarantee Released	date	signature	
☐ Defect Guarantee Submitted	submitted date	amount	expiration date
☐ Defect Guarantee Released	date	signature	

Jeanie Bourke - Re: 41 bayberry lane peaks island

From: Jonathan Rioux
To: lieber, robert
Date: 11/2/2010 3:01 PM
Subject: Re: 41 bayberry lane peaks island
CC: Bourke, Jeanie; Munson, Tammy; St. Louis Littell, Penny

Mr. Lieber,

If you are amending your permit application from wood frame to trusses please come in and indicate the changes. If you would like to meet with a Plan Reviewer (Jeanie or Tammy) please schedule a time @ 207.874.8703. Otherwise, your permit will remain on hold until enough information (roof rafters framing, pitch, and connections) is provided to meet minimal code requirement.

Jon Rioux
Code Enforcement Officer

City of Portland
Planning and Urban Development Department
Inspection Services Division
389 Congress St. Rm 315
Portland, ME 04101
Office: 207.874.8702
Support Staff: 207.874.8703
jrioux@portlandmaine.gov

>>> robert lieber <robertlieber@me.com> 11/1/2010 9:28 AM >>>
HI John,
I dropped off the Build Block manual on Thursday.

As for the buildings joists and rafters I now plan on using a Open Joist product, the truss system offers me more flexibilty.

I'll be setting them 16" on center for a total clear span of 17'-6". Chord size 4X2, Chord grade #2 and depth 11 7/8".

Below are the links to the tables provided by the manufacturer.

Please give me a call if you need any further information refering to my application.
Robert Lieber
766-5043

Allowable Uniform Live Load Tables @ L/360 Deflection, 15lb. Dead Load
http://www.ufpi.com/product/oj/tech/360_15.htm

Span Charts for 11-7/8" Truss Depth*

http://www.ufpi.com/product/oj/tech/spans.htm

Universal Forest Products

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OPEN JOIST

Where speed meets strength.

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Durodek Table Details

Spaced Joist Profiles

Floor Performance

Span Charts

Uniform Load Tables

L/360 Deflection, 15lb. Dead Load

L/480 Deflection 15lb. Dead Load

L/360 Deflection 25lb. Dead Load

L/480 Deflection 25lb. Dead Load

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Allowable Uniform Live Load Tables

Allowable live loads, shown in pounds per square foot (PSF), are shown on these tables for the four common on-center spacing options and for various truss clear spans. The tables show allowable loads for all four available truss depths.

L/360 Deflection, 15lb. Dead Load

Values shown are in pounds per square foot (psf)

Clear Span	9-1/4" Depth o.c.. Spacing				11-7/8" Depth o.c. Spacing				14" Depth o.c. Spacing				16" Depth o.c. Spacing			
	12"	16"	19.2"	24"	12"	16"	19.2"	24"	12"	16"	19.2"	24"	12"	16"	19.2"	24"
10'-1"	183	134	109	84	212	155	127	99	241	177	145	113	241	177	145	113
11'-1"	147	110	92	73	188	137	112	87	212	155	127	99	212	155	127	99
12'-1"	115	86	72	58	164	119	97	75	188	137	112	87	188	137	112	87
13'-1"	94	71	59	47	145	105	85	65	169	123	100	77	169	123	100	77
14'-1"	77	58	48	38	120	90	75	57	137	99	80	61	153	111	90	69
15'-1"	64	48	40	32	102	77	64	49	128	93	75	57	145	105	85	65
16'-1"	86	65	54	43	88	66	55	43	105	75	60	45	142	103	83	63
17'-1"	72	54	45	36	91	65	51	38	90	64	51	38	169	123	100	77
18'-1"	61	46	38	30	84	59	47	35	99	71	56	42	161	117	95	73
19'-1"	53	40	33	26	92	65	52	39	88	62	49	37	128	92	74	57
20'-1"					78	59	49	38	80	56	44	33	148	107	87	67
21'-1"					67	50	42	34	83	62	51	38	121	87	70	53
22'-1"					59	44	37	30	74	56	44	33	127	91	74	56
23'-1"									64	48	40	29	104	78	65	52
24'-1"									58	43	36	29	96	72	60	47
25'-1"													83	62	52	42
26'-1"													83	62	52	42
27'-1"													75	56	47	38
28'-1"													64	48	40	32
29'-1"													56	42	35	28

- Consult Open Joist™ Engineering for allowable loads at clear span ranges not shown.
- Special Engineering Note: Open Joist trusses may be manufactured with components that provide increased structural values that may exceed the performance levels indicated in these charts.

UFP Emlenton, LLC manufactures the Open Joist™ product as a licensee of Distribution Open Joist 2000, Inc. All Open Joist product design and engineering calculations are created by the licensor, Distribution Open Joist 2000, Inc.

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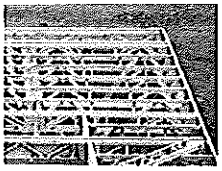


Span Charts

· 9-1/4" Truss Depth
· 11-7/8" Truss Depth
· 14" Truss Depth
· 16" Truss Depth

9-1/4" Truss Depth"

9-1/4" Depth Maximum Live Load Deflection (L/360 & L/480, 1-1/2" Minimum Bearing Each End)

Chord* Size	Chord* Grade	Loading (PSF)		12" o.c.		16" o.c.		19.2" o.c.		24" o.c.	
		Live	Dead	L/360	L/480	L/360	L/480	L/360	L/480	L/360	L/480
3x2	#2	40	15	15'-9"	15'-9"	15'-9"	14'-11"	15'-6"	14'-0"	14'-3"	12'-10"
4x2	MSR 2100	40	15	19'-9"	19'-5"	19'-1"	17'-3"	17'11"	16'-6"	16'-11"	
3x2	#2	50	15	15'-9"	15'-3"	15'-3"	13'-9"	14'-3"	12'-10"	13'-2"	11'-11"
4x2	MSR 2100	50	15	19'-9"	17'-11"	17'-11"	16'-4"	16'-11"			
3x2	#2	100	15	13'-2"	11'-11"	11'-11"	10'-8"	11'-1"	9'-11"	9'-3"	8'-9"

11-7/8" Truss Depth*

11-7/8" Depth Maximum Live Load Deflection - (L/360 & L/480, 1-1/2" Minimum Bearing Each End)

Chord* Size	Chord* Grade	Loading (PSF)		12" o.c.		16" o.c.		19.2" o.c.		24" o.c.	
		Live	Dead	L/360	L/480	L/360	L/480	L/360	L/480	L/360	L/480
3x2	#2	40	15	16'-9"	16'-9"	16'-9"	16'-9"	16'-9"	16'-8"	16'-9"	15'-2"
4x2	#2	40	15	18'-9"	18'-9"	18'-9"	18'-9"	18'-9"	18'-7"	17'-2"	17'-2"
4x2	MSR 2100	40	15	22'-9"	22'-9"	22'-9"	21'-0"	21'-5"	19'-10"	19'-3"	
3x2	#2	50	15	16'-9"	16'-9"	16'-9"	16'-5"	16'-9"	15'-2"	14'-1"	14'-1"
4x2	#2	50	15	18'-9"	18'-9"	18'-9"	18'-5"	17'-8"	17'-3"	15'-4"	14'-1"
4x2	MSR 2100	50	15	22'-9"	21'-5"	21'-5"	19'-8"	20'-3"		16'-3"	
3x2	#2	100	15	15'-7"	14'-1"	13'-11"	12'-9"	12'-3"	11'-11"	10'-4"	10'-4"
4x2	#2	100	15	16'-11"							

Top of Page

14" Truss Depth*

14" Depth Maximum Live Load Deflection - (L/360 & L/480, 1-1/2" Minimum Bearing Each End)

Chord* Size	Chord* Grade	Loading (PSF)		12" o.c.		16" o.c.		19.2" o.c.		24" o.c.	
		Live	Dead	L/360	L/480	L/360	L/480	L/360	L/480	L/360	L/480
3x2	#2	40	15	17'-9"	17'-9"	17'-9"	17'-9"	17'-9"	17'-9"	17'-9"	16'-4"
4x2	#2	40	15	20'-9"	20'-9"	20'-9"	20'-9"	20'-9"	19'-10"	18'-9"	18'-5"
4x2	MSR 2100	40	15	24'-9"	24'-9"	24'-8"	22'-9"	23'-5"	21'-2"	20'-10"	
3x2	#2	50	15	17'-9"	17'-9"	17'-9"	17'-7"	17'-9"	16'-5"	16'-4"	15'-3"
4x2	#2	50	15	20'-9"	20'-9"	20'-9"	19'-8"	19'-9"	18'-6"		
4x2	MSR 2100	50	15	24'-9"	23'-2"	23'-2"	21'-0"	21'-10"			
3x2	#2	100	15	16'-9"	15'-2"	14'-4"	13'-8"	12'-10"	12'-8"	10'-9"	10'-9"
4x2	#2	100	15	18'-4"							

16" Truss Depth*

16" Depth Maximum Live Load Deflection - (L/360 & L/480, 1-1/2" Minimum Bearing Each End)

Chord* Size	Chord* Grade	Loading (PSF)		12" o.c.		16" o.c.		19.2"o.c.		24" o.c.	
		Live	Dead	L/360	L/480	L/360	L/480	L/360	L/480	L/360	L/480
3x2	#2	40	15	16'-9"	16'-9"	16'-9"	16'-9"	16'-9"	16'-9"	16'-9"	16'-9"
4x2	#2	40	15	21'-9"	21'-9"	21'-9"	21'-9"	21'-9"	21'-9"	21'-9"	21'-9"
4x2	MSR 2100	40	15	25'-9"	25'-9"	25'-9"	25'-9"	25'-9"	25'-6"	25'-9"	22'-5"
4x2	MSR 2400	40	15	29'-9"	29'-8"	29'-9"	27'-7"	28'-5"		26'-10"	
3x2	#2	50	15	16'-9"	16'-9"	16'-9"	16'-9"	16'-9"	16'-9"	16'-9"	16'-9"
4x2	#2	50	15	21'-9"	21'-9"	21'-9"	21'-9"	21'-9"	21'-9"	21'-9"	20'-10"
4x2	MSR 2100	50	15	25'-9"	25'-9"	25'-9"	25'-0"	25'-9"	22'-5"	23'-10"	

Jeanie Bourke - Fwd: FW: Message from 28C-1

From: robert lieber <robertlieber@me.com>
To: Jeanie Bourke <JMB@portlandmaine.gov>
Date: 11/3/2010 3:26 PM
Subject: Fwd: FW: Message from 28C-1
Attachments: 3CRV11.jpg; Flat Roof_Rev1.pdf

Hi Jeanie,
Here are three attachedments, the PDF is the tech drawing and specs on the 20 ft truss with a clear span of 17 6" an the two jpgs are drawings reinforcements needed for my case when cantilevering and for where the truss sits on the top plate.

Please let me know if I can supply you with any other info towards my application
Thank you
Robert Lieber

Begin forwarded message:

From: Jamie Pouliot <jpouliot@coastalforestproductscom>
Date: November 03, 2010 3:01:21 PM
To: robertlieber@me.com
Subject: FW: Message from 28C-1

Hi Rob,

Here is the revised calc sheets. Let me know if you need anything else.

Thank you,

Jamie Pouliot

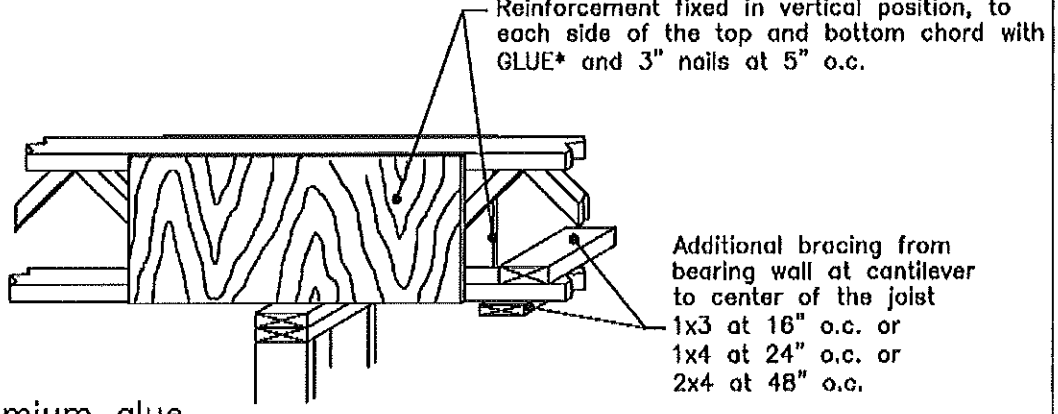
Coastal Forest Products

451 South River Road

Bedford, NH 03110

Ph: (800) 932-9663 x281

Fax: (603) 634-4444



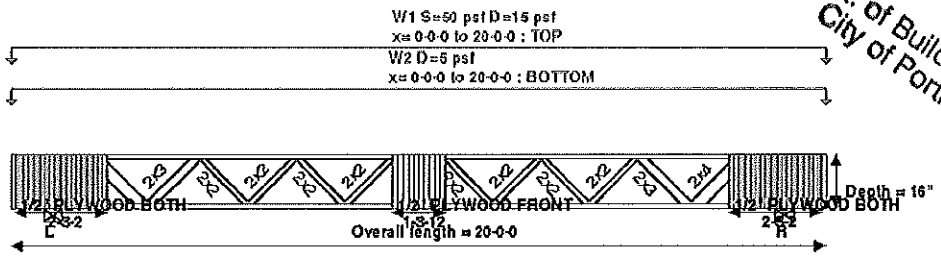
REINFORCEMENT FOR CANTILEVERED JOIST

DETAIL No.8VS

OPEN JOIST 2000®

Manufacturer or Distributor	References
Distribution OpenJoist 2000 inc 1970, rue des Toitures Trois-Rivieres, Quebec G8V 1V9 1-888-877-7999	Drawing by: Dany Rochefort Job number: Joist Id: Customer: Coastal Forest Product inc Building address: Project: Portland ME. (Flat Roof)

Fixed Trim Specification	Perimeter material	Joist Characteristics (Top-Bottom, Depth, Length, Plies, Spacing)
Left: 1.125", right: 1.125"	Left: 1 1/8" OSB, right: 1 1/8" OSB	4 X 2 SPF #1/#2, 16", 20-0-0, 1 ply, 16.00" o.c.



BEARING ANALYSIS

Label	Width, Center (fis)	R (lb)	R / R_s	Critical LC - UNB	Uplift R (lb)		Critical LC - UNB
L	0-5-8, 1-0-4	935	0.37	2#110	-	-	-
R	0-5-8, 18-11-12	935	0.37	2#011	-	-	-

LOAD CASES

LC1 : D
LC2 : D+S

LEGEND: D: Dead, S: Snow.

CHORD CONCENTRATED LOAD ANALYSIS

Label	P (lb)	P_a (lb)	P / P_a	Critical LC - UNB

No concentrated load in analysis.

REINFORCEMENTS

- Reinforce joist with 1/2" PLYWOOD x 2-3-2 of length, starting at 0-1-2 from left end of joist, fixed on BOTH sides in VERTICAL position to top and bottom chord with PL PREMIUM glue and 3" nails at 5" o.c.
- Reinforce joist with 1/2" PLYWOOD x 1-3-12 of length, starting at 9-4-2 from left end of joist, fixed on FRONT side in VERTICAL position to top and bottom chord with PL PREMIUM glue and 3" nails at 5" o.c.
- Reinforce joist with 1/2" PLYWOOD x 2-3-2 of length, starting at 17-7-12 from left end of joist, fixed on BOTH sides in VERTICAL position to top and bottom chord with PL PREMIUM glue and 3" nails at 5" o.c.

See details 3CRV11 & 8VS

SHEAR AND BENDING ANALYSIS

at* (fis)	V (lb)	V_a (lb)	C_D	V / (V_a C_D)	Critical LC - UNB
2-5-0	710	1299	1.15	0.47	2#110

at* (fis)	M (lb.ft)	M_a (lb.ft)	C_D	M / (M_a C_D)	Critical LC - UNB
10-8-0	3728	8115	1.15	0.40	2#010

** From the left end of joist.*

LOADING

- W2 BOTTOM AREA load, Position (fis) from LEFT: start=0-0-0, end=20-0-0, Magnitude (psf): D=5
- W1 TOP AREA load, Position (fis) from LEFT: start=0-0-0, end=20-0-0, Magnitude (psf): S=50, D=15

DEFLECTION

		Critical LOAD CASE	UNB	Calculated Δ (in)	Camb (in)	Δ-Camb (in)		Criteria Δ (in)		Calc. / Crt.
Δ Live	Span L-R	LCL1 : S	010	0.153	-	-	L/1406	0.449	L/480	0.34
	Cant. L	LCL1 : S	010	-0.028	-	-	-	0.125	-	0.22
	Cant. R	LCL1 : S	010	-0.028	-	-	-	0.125	-	0.22
Δ Total	Span L-R	LCT1 : D+S -camber	101	0.058	0.215	-0.157	L/1370	0.898	L/240	0.18
	Cant. L	LCT1 : D+S -camber	101	-0.010	-0.052	0.041	-	0.125	-	0.33
	Cant. R	LCT1 : D+S -camber	101	-0.010	-0.052	0.041	-	0.125	-	0.33
Creep	Span L-R	LCC1 : 1.5D+S -camber	101	0.088	0.215	-0.127	L/1696	0.898	L/240	0.14
	Cant. L	LCC1 : 1.5D+S -camber	101	-0.016	-0.052	0.036	-	0.125	-	0.29
	Cant. R	LCC1 : 1.5D+S -camber	101	-0.016	-0.052	0.036	-	0.125	-	0.29

VIBRATIONS

Sheating: 3/4 CSP Glued and Nailed
CS (Continuous Strongback): NONE
Strapping: NONE
Gypsum Board: NONE

2006 ICC (USA)/1.2.3.17

NOTES

OPEN JOIST 2000® is in accordance with ICC 2006 and NDS-2005. OPEN JOIST 2000® was evaluated by ICC (report # ESR-1035) and is quality controlled by a qualified third part agency. Parts are joined together with phenol-resorcinol adhesives. Lumber used for diagonal and vertical web members is visually graded in-plant as per quality control manual. A sub-floor must be attached to the top chord member according to the building code. If specified, strong backs must be of dry lumber and attached to the joists, according to current practice. Required bearing length must be determined for each application based on specifications by the manufacturer and must never be less than 1.5 inches. OPEN JOIST 2000® must be used under dry conditions. Refer to the specifications by the manufacturer for details of installation.

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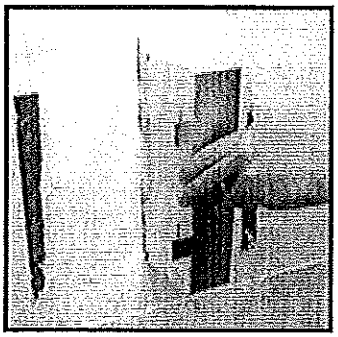
ICF CONNECTORS

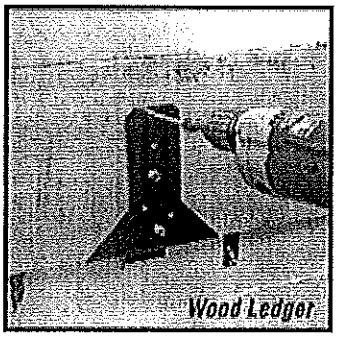
SIMPSON Strong-Tie

Installation



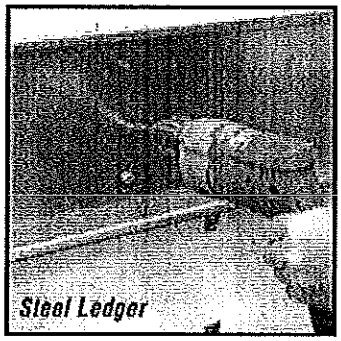
INSTALLATION OF ICFLC:

- Snap a line for the bottom of the ledger and mark off the required on center spacing.
- Cut vertical kerfs at the marked location on the ICF. Bottom of ICFLC is 1" below chalk line.
- Insert an ICFLC bracket through each cut. Glue is recommended on the exposed flange to the ICF.
- Place the concrete (f'c=2500psi).



ATTACHMENT OF WOOD LEDGER:

- Slip the ICFLC-W underneath the wood ledger.
- Attach the 6 screws partially into the ledger.
- Position the ICFLC-W with the ledger bottom level with chalk line and drive the screws through the wood and the ICFLC.



ATTACHMENT OF STEEL LEDGER:

- Position the steel ledger up against the ICFLC and drive the required number of screws through the steel ledger into the ICFLC.
- All screws shall be located at least 1/2" from the edge of the ICFLC.
- Space screws evenly.

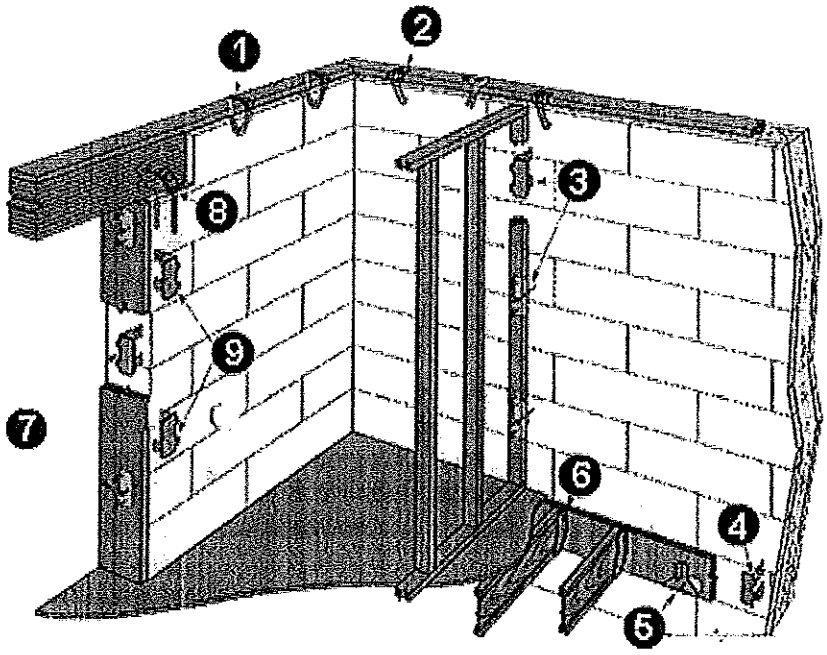
SIMPSON Strong-Tie

Products

- **For Steel Ledger:** Position steel ledger against ICFLC.
  - Attach with three 1/4-14x3/4" #3 drill pt. screws (not provided). Minimum screw shear capacity is 750 lbs.
- **For Wood Ledger:** Slip ICFLC-W underneath wood ledger.
  - Attach the 6 D3 screws (provided) partially into ledger, starting at the bottom of the ICFLC-W.
  - Position the ICFLC-W or ICFLC-CW with the ledger against the ICFLC, and drive the screws through the wood and the ICFLC.

WARNING: Industry studies show that hardened fasteners can experience performance problems in wet environments. Accordingly, use this product in dry environments only.

Choose the Right Connector for the Job



1 Use LMA4 for 2x4.
Use LMA6 for 2x6.

2 Use MAS.

3 Attach interior partition walls with D-3 screws into ICFLC where needed.

4 Use ICFLC to attach ledger to ICF.

5 Use ICFLC-W for solid sawn lumber or ICFLC-CW for LVL.

6 Use IUS hanger for I-joist floor system.

7 Use ICFLC with D-3 screws to attach garage jambs.

8 Use GLB series connectors for garage headers.

9 Use ICFLC to attach garage door track.

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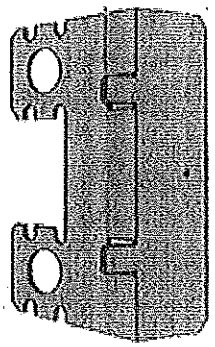
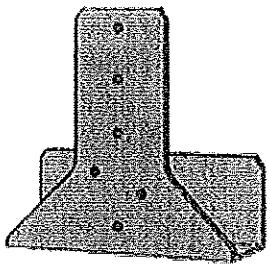
ICF CONNECTORS

SIMPSON Strong-Tie



ICFLC



ICFLC-W & ICFLC-CW

Click image to enlarge.

Printer Version (Catalog PDF)

CLICK FOR PRICING

BuildBlock is pleased to offer **ICF Connectors by Simpson Strong-Tie.** For your convenience, you can order connectors from us and they'll be delivered along with your BuildBlock ICFs.

The **ICFLC** and **ICFLC-W** ledger connector system is engineered to solve the challenges of mounting steel or wood ledgers on insulated concrete form (ICF) walls.

Simpson's ledger connector system is easy, quick and versatile to use. The perforations in the embedded leg of the ICFLC permit the concrete to flow around it anchoring the ICFLC securely within the concrete. The exposed flange provides a structural surface for mounting either a wood or a steel ledger.

MATERIAL: ICFLC - 14 gauge; ICFLC-W and ICFLC-CW - 16 gauge.

FINISH: Galvanized.

INSTALLATION:

- Snap chalk line for bottom of ledger.
- Mark required on center spacing.
- Cut vertical kerfs at marks.
- Insert ICFLC.
- Place concrete.

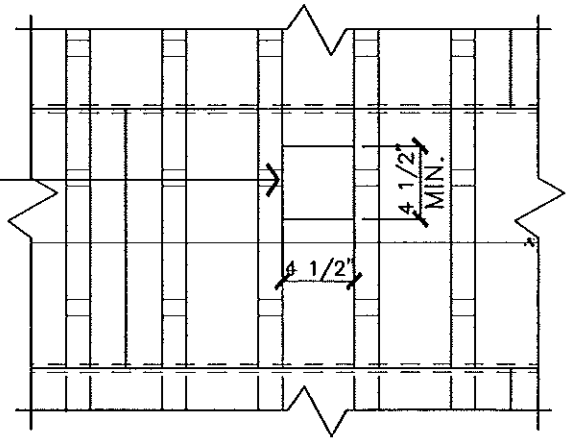
SIMPSON Strong-Tie

Products

1800 999-5099

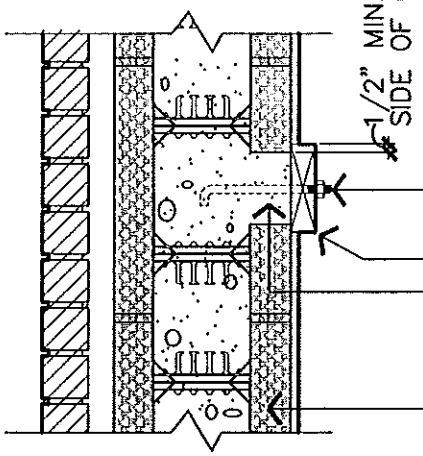
TYPICAL CUT-OUTS SHALL BE PLACED BETWEEN WEBBING TO RETAIN THE INTEGRITY OF THE FORM

ALL OPENINGS SHALL BE 1/2" LESS THAN THE VERTICAL HGT. OF THE APPLIED LEDGE MEMBER -CENTER LEDGE ON OPENING



3/29 ELEVATION TYPICAL CUT-OUT

SCALE: 1" = 1'-0"



NOTE:
ATTACH CONTINUOUS WOOD CLEAT TO WEBBING W/ ADEQUATE SCREWS TO PROVIDE A DAM DURING CONCRETE POUR

CAST EMBEDDED ANCHOR BOLTS - TYPE & FREQUENCY AS REQUIRED BY APPLICATION LOAD

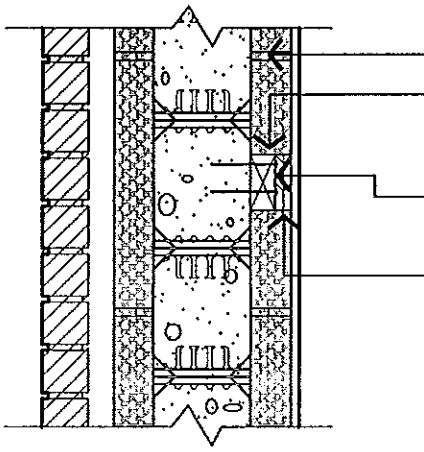
2x6 MIN. DIMENSIONAL LUMBER (CONTINUOUS)

CUT AND REMOVE REQUIRED PORTION OF FORM TO EXTEND CONCRETE CORE TO WOOD CLEAT (CONTINUOUS CONTACT) - DO NOT CUT OPENING THROUGH WEBBING

"BuildBlock" 6" OR 8" I.C.F. UNITS

2/29 VERTICAL SECTION MODERATE & HEAVY LOADS

SCALE: 1" = 1'-0"



"BuildBlock" 6" OR 8" I.C.F. UNITS

CUT AND REMOVE REQUIRED PORTION OF FORM TO RECEIVE WOOD NAILER POST CONCRETE POUR

2x_ DIMENSIONAL LUMBER ATTACHED W/ POWDER ACTUATED FASTENERS

PLYWOOD OR OTHER WOOD FILLER FLUSH TO FORM FACE - FASTEN TO 2x_ NAILER

1/29 VERTICAL SECTION LIGHT & MODERATE LOADS

SCALE: 1" = 1'-0"

NOTE:
DUE TO VARIATIONS IN SELECTED PRINTER SETTINGS, NOTED SCALES MAY NO LONGER BE APPLICABLE

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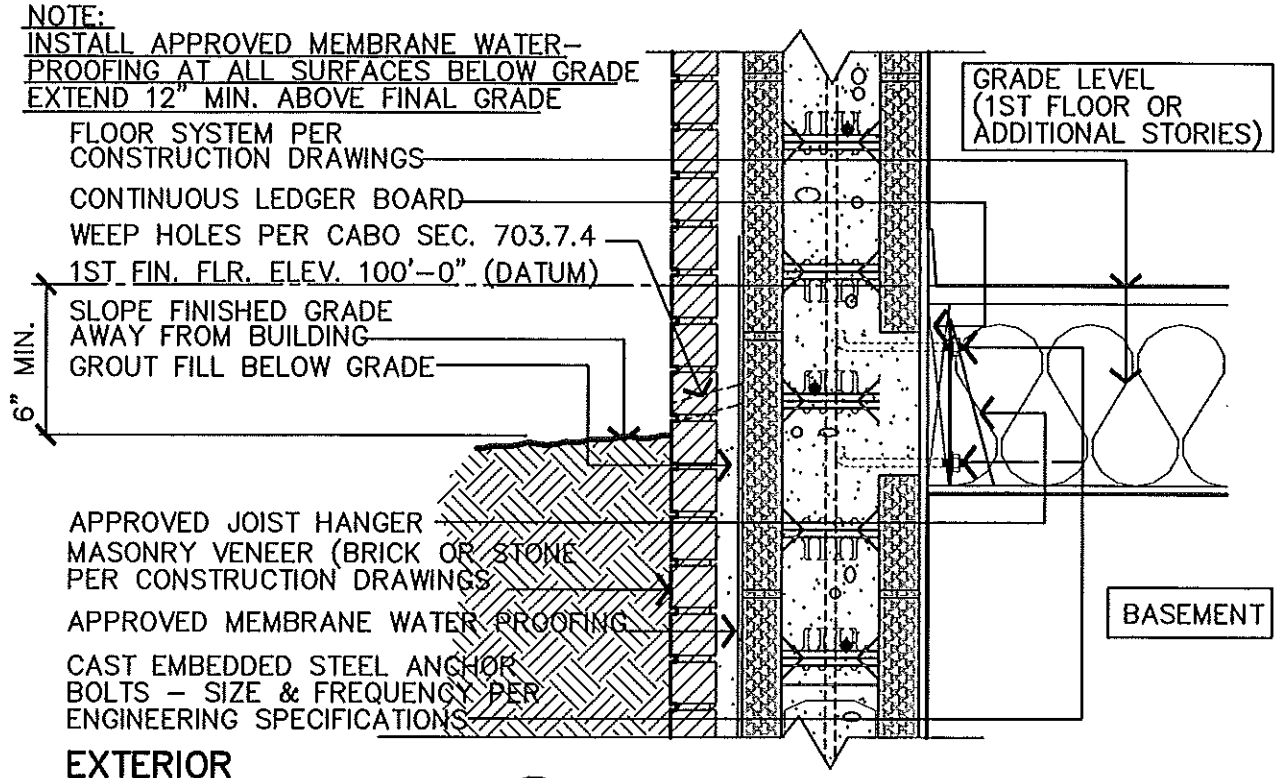
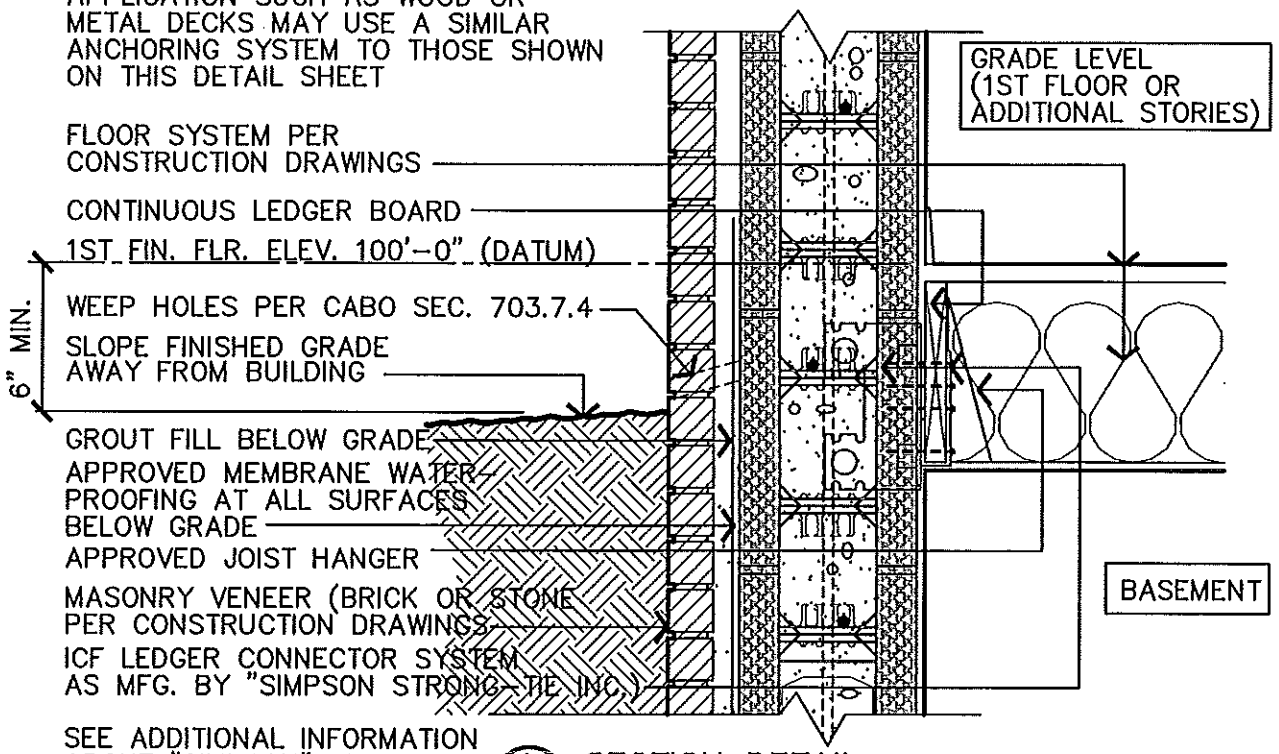
LOAD HANGING DETAILS		
DATE / REVISION	12-01-04 / 1	DETAIL SHEET 29
SCALE	AS NOTED	
FILE NAME	BBDTL-29.AEC	



EXTERIOR APPLICATIONS

FLOOR SYSTEM FOR EXTERIOR APPLICATION SUCH AS WOOD OR METAL DECKS MAY USE A SIMILAR ANCHORING SYSTEM TO THOSE SHOWN ON THIS DETAIL SHEET

2/14 ALTERNATE SECTION DETAIL
SCALE: 1" = 1'-0"



SEE ADDITIONAL INFORMATION ABOUT "SIMPSON" PRODUCTS ONLINE - WWW.STRONGTIE.COM OR CONTACT ENGINEERING SUPPORT @ 1-800-999-5099

1/14 SECTION DETAIL
SCALE: 1" = 1'-0"

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TYPICAL FLOOR INTERSECTIONS

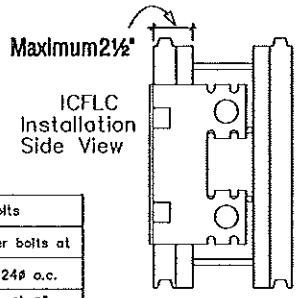
DATE / REVISION	12-01-04 / 1	DETAIL SHEET
SCALE	AS NOTED	14
FILE NAME	BBDTL-14.AEC	

ICFLC LEDGER CONNECTOR SYSTEM

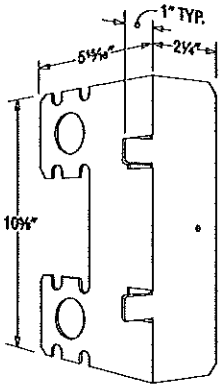
The ICFLC ledger connector system is engineered to solve the challenges of mounting steel ledgers on insulated concrete form (ICF) walls. As ICF gains in popularity as a viable alternative to residential wood construction, the problem of attaching floor joists to an ICF wall becomes a concern for the contractor. Simpson's ledger connector system is easy, quick and versatile to use. The perforations in the leg of the ICFLC permit the concrete to flow around it anchoring the ICFLC securely within the block. The exposed flange provides a structural surface for mounting a steel ledger.

MATERIAL: 14 gauge. FINISH: Galvanized.

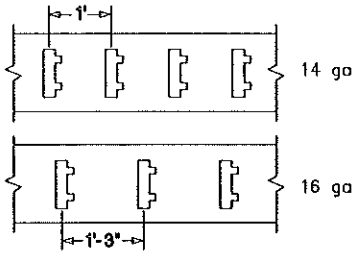
Anchor Bolt Size	Allowable Bolt Load (lbs)	
	Ledger Gauge	
	14	16
1/2"	2165	1750
5/8"	2705	2190



ICFLC Installation Side View



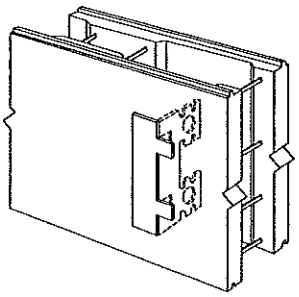
ICFLC



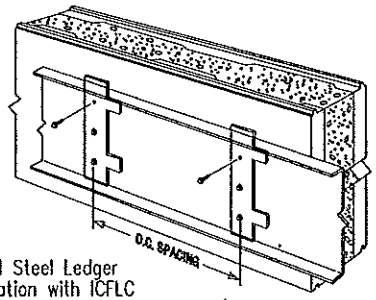
SPACING ON DIFFERENT GAUGE STEEL LEDGERS:
This example shows ICFLC spacing to replace 1/2" diameter Anchor Bolts installed at 12ø o.c. on 14 ga and 16 ga steel ledgers.

Ledger (gauge)	ICFLC Spacing to Replace Anchor Bolts			
	1/2" diameter bolts at		5/8" diameter bolts at	
	12ø o.c.	24ø o.c.	12ø o.c.	24ø o.c.
14 (0.075)	1'	2'	0-9"	1'-6"
16 (0.060)	1'-3"	2'-3"	1'	2'

1. Maximum allowable load for ICFLC is 2060 lbs. Allowable load is based on a safety factor of 3.
2. No load duration increase is allowed.
3. Engineer of record may specify different ICFLC spacing based on load requirements.
4. Use three 1..ø-14x3..ø, #3 drill point screws (not provided). Minimum screw shear capacity is 750 lbs.
5. Minimum steel ledger specification is ASTM A-653 Sq Grade 50.
6. Allowable lateral capacity, parallel to the ledger and ICF wall, is 200 lbs at 1.." deflection with no increase allowed. Use interaction equation for combined lateral and vertical loading to be less than 1.0. Some ICF systems may allow horizontal installation of the ICFLC to achieve higher lateral loads in addition to the ICFLC installed for the vertical loads.



ICFLC Installation



Typical Steel Ledger Installation with ICFLC (Minimum 16 gauge steel ledger)
Requires 3 screws at each location. Follow Table for on center spacing.

NOTE:

DETAIL SHEETS 15a AND 15b CONTAIN SPECIFICATIONS AND DETAILS AS PROVIDED BY SIMPSON STRONG-TIE INC. - "BuildBlock" INC. ASSUME NO LIABILITY FOR THE USE OF ANY INFORMATION PROVIDED BY THE MANUFACTURER. IT SHALL BE THE USERS RESPONSIBILITY TO VERIFY THE CURRENT STATUS AND APPLICATION CHANGES WITH THE MANUFACTURER

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NOTE:

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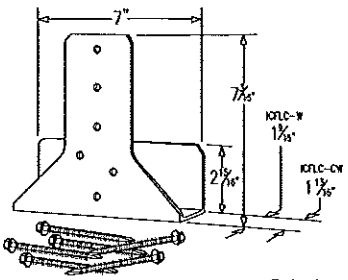
SIMPSON LEDGER SYSTEM		
DATE / REVISION	12-01-04 / 1	DETAIL SHEET 15
SCALE	AS NOTED	
FILE NAME	BBDTL-15.AEC	

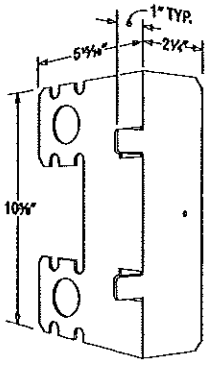
Construction shall be built in accordance with all applicable local and national building codes. All drawings are subject to change without notice.

ICF LEDGER CONNECTOR SYSTEM

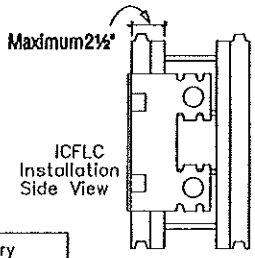
The ICFLC, ICFLC-W, & ICFLC-CW ledger connector system is engineered to solve the challenges of mounting steel or wood ledgers on insulated concrete form (ICF) walls. Simpson's ledger connector system is easy, quick and versatile to use. The perforations in the embedded leg of the ICFLC permit the concrete to flow around it anchoring the ICFLC securely within the concrete. The exposed flange provides a structural surface for mounting either a wood or a steel ledger.
MATERIAL: ICFLC.14 gauge; ICFLC-W and ICFLC-CW.16 gauge.
FINISH: Galvanized.
INSTALLATION: . Snap chalk line for bottom of ledger.
- . Mark required on center spacing.
- . Cut vertical kerfs at marks.
- . Insert ICFLC
- . Place concrete.
- . For Steel Ledger: Position steel ledger against ICFLC.
  - . Attach with three 1/4-14x3/4" #3 drill pt. screws (not provided) Minimum screw shear capacity is 750 lbs.
- . For Wood Ledger: Slip ICFLC-W underneath wood ledger.
  - . Attach the 6 D3 screws (provided) partially into ledger, starting at the bottom of the ICFLC-W.
  - . Position the ICFLC-W or ICFLC-CW with the ledger against the ICFLC, and drive the screws through the wood and the ICFLC.



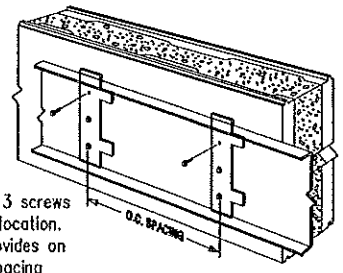
ICFLC-W and ICFLC-CW Patent Pending



ICFLC



ICFLC Installation Side View



Requires 3 screws at each location. Table provides on center spacing

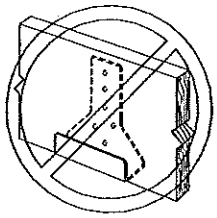
Typical Steel Ledger Installation with ICFLC (Minimum 16 gauge steel ledger)

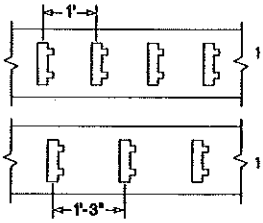
CODES: See page 10 for Code Listing Key Chart.

COMPARISON CHART

Bolts	ICFLC
12" o.c. spacing	Better o.c. spacing in most cases
Pressure-treated wood ledger	Pressure-treating is not necessary
Labor intensive	Quick and installs in less than half the time.
Protrusions are a safety issue	Flush mount – no protrusions to hook on.

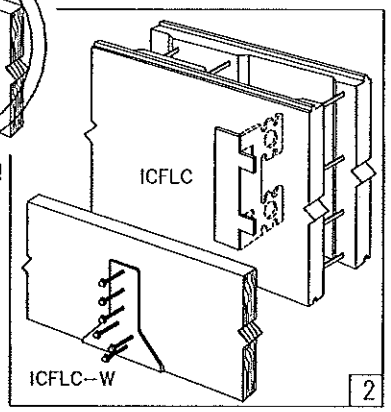
WARNING: Industry studies show that hardened fastener can experience performance problems in wet environments. Accordingly, use this product in dry environments only


MISINSTALLATION!



SPACING ON DIFFERENT GAUGE STEEL LEDGERS:

This example shows ICFLC spacing to replace 1/2" diameter Anchor bolts installed at 12" o.c. on 14ga and 16 ga steel ledgers. This is for vertical loading applications only.

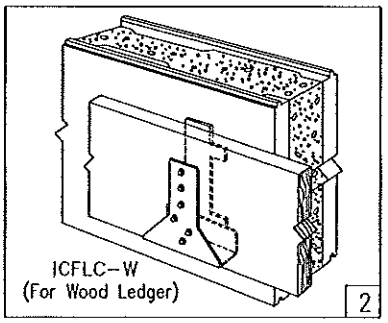


These table address vertical load applications only.

Ledger Type	Model No.	Allowable Down Load[2] (lbs.)	Spacing to Replace Anchor Bolts [3,4,6] 1/2" Dia. Bolts at 12"	24"	36"	48"	5/8" Dia. Bolts at 12"	24"	36"	48"	Code Ref.
DF/SPF	ICFLC w/ICFLC-W	1920	4'	4'	4'	4'	3'-9"	4'	4'	4'	160
LVL	ICFLC w/ICFLC-CW	1920	4'	4'	4'	4'	3'-6"	4'	4'	4'	
(0.054") 16ga[1]	ICFLC	2060	1'-3"	2'-3"	—	—	1'	2'	—	—	
(0.068") 14ga[1]	ICFLC	2060	1'	2'	—	—	9"	1'-6"	—	—	

Ledger Type	Model No.	Allowable Down Load[2] (lbs.)	Spacing to Replace Anchor Bolts [3,4,6] (2) 5/8" Dia. Bolts at 12"	24"	36"	48"	(2) 3/4" Dia. Bolts at 12"	24"	36"	48"	Code Ref.
DF/SPF	ICFLC w/ICFLC-W	1920	1'-9"	3'-9"	4'	4'	3'-6"	4'	4'	4'	160
LVL	ICFLC w/ICFLC-CW	1920	1'-9"	3'-9"	4'	4'	2'-9"	4'	4'	4'	
(0.054") 16ga[1]	ICFLC	2060	—	—	—	—	—	—	—	—	
(0.068") 14ga[1]	ICFLC	2060	—	—	—	—	—	—	—	—	

1. Minimum steel ledger specification is A-653 SQ Grade 50.
2. No Load duration increase is allowed.
3. Spacing is based on vertical load only.
4. For steel ledger, spacing is based on a combination of ledger gauge and anchor bolt diameter. Spacing is closer for a 14 gauge ledger in order to achieve the equivalent bolt/ ledger capacity.
5. Minimum concrete compressive strength (F'c) is 2500 psi.
6. The designer may specify different spacing based on the load requirements.
7. Allowable lateral capacity, parallel to the ledger and ICF wall, is 200 lbs at 1/8" deflection with no increase allowed. Use interaction equation for combined lateral and vertical loading to be less than 1.0. Some ICF systems may allow horizontal installations of the ICFLC to achieve higher lateral loads in addition to the ICFLC installed in vertical loads.



Typical Wood Ledger Installation with ICFLC and ICFLC-W (ICFLC-CW (for LVL Ledger) similar)

BB BuildBlock BUILDING SYSTEMS, LLC
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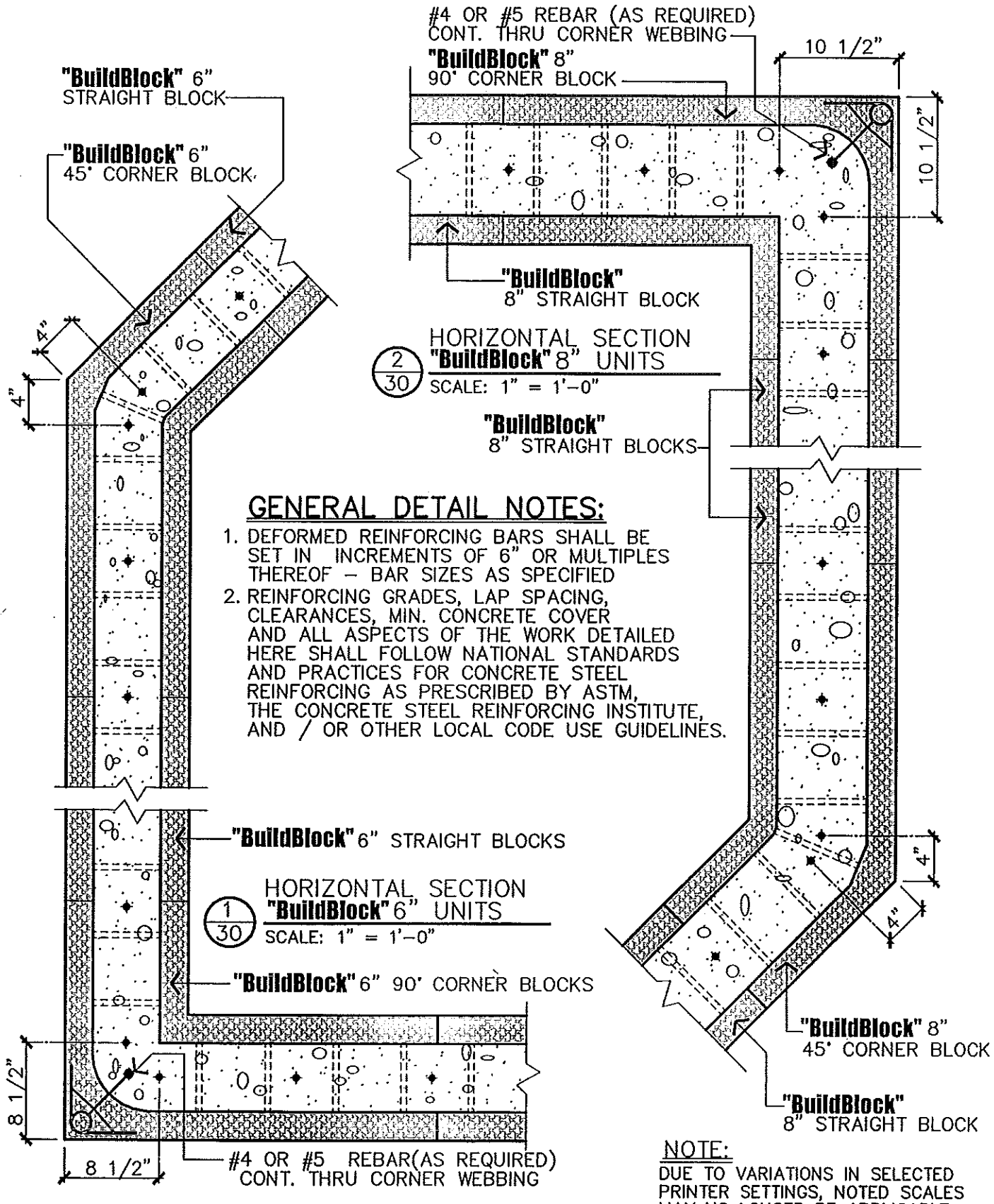
Toll Free 1-866-222-2575

SIMPSON LEDGER SYSTEM		
DATE / REVISION	12-01-04 / 1	DETAIL SHEET 15a
SCALE	AS NOTED	
FILE NAME	BBDTL-15a.AEC	



GENERAL DETAIL NOTES:

1. DEFORMED REINFORCING BARS SHALL BE SET IN INCREMENTS OF 6" OR MULTIPLES THEREOF – BAR SIZES AS SPECIFIED
2. REINFORCING GRADES, LAP SPACING, CLEARANCES, MIN. CONCRETE COVER AND ALL ASPECTS OF THE WORK DETAILED HERE SHALL FOLLOW NATIONAL STANDARDS AND PRACTICES FOR CONCRETE STEEL REINFORCING AS PRESCRIBED BY ASTM, THE CONCRETE STEEL REINFORCING INSTITUTE, AND / OR OTHER LOCAL CODE USE GUIDELINES.

NOTE:
DUE TO VARIATIONS IN SELECTED PRINTER SETTINGS, NOTED SCALES MAY NO LONGER BE APPLICABLE

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VERTICAL REINFORCING		
DATE / REVISION	12-01-04 / 1	DETAIL SHEET
SCALE	AS NOTED	30
FILE NAME	BBDTL-30.AEC	

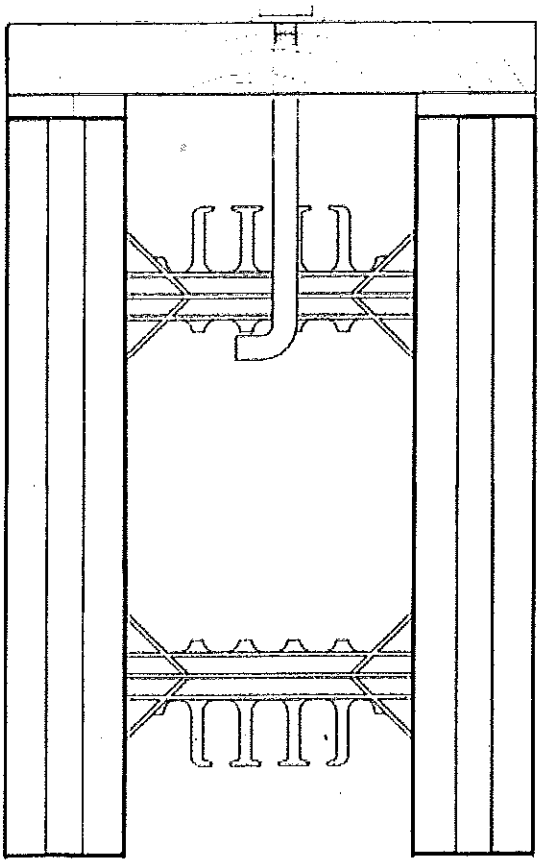
5.3 Anchor Bolts

Making the transition from a concrete wall to a wood-framed roof will require the placement of no smaller than 8" anchor bolts between 2 to 4 feet apart (see anchor bolt engineering diagram). The placement can be site, code, or regionally specific, based on wind and other load requirements, so you consult your local building requirements and engineers.

Tips for placing anchor bolts:

- Before the pour, determine where you will be placing anchor bolts and mark the forms near the top of the wall accordingly.
- Use **FritzPak FR1** in the pump truck when you near the top 12" of the job to give your team of finishers and anchor bolt placers time to do their jobs.
- Have a man available to start anchor bolts right behind your finish man.
- Have a finish man to level out and trowel the top of the wall.

This picture shows a 10" anchor bolt set in the wall 2½" from the concrete to accept a 2x12 treated dimensional lumber top plate with ½" bolt relief above the nut. Anchor bolts have been used in ICF form construction since day one and have many applications. (See the CAD Details 6 through 14a and 23-24 for ideas and technical placement.) The IRC 2000 requires 7" embedment into the concrete.



You can also use anchor bolts to:

- Secure rim joists
- Place perpendicular to vertical walls to attach heavy gauge steel angle for brick ledges or other areas creating bearing support. See CAD Details 14, 29 and 35.

To form a solid concrete bearing point in the face of the wall:

- Cut a round or square hole in the wall between two webs.
- Secure anchor bolt to a piece of plywood or dimensional lumber larger than the hole.
- Secure plywood to the ICF wall with the anchor bolt inserted into the hole. The wood keeps the concrete from spilling out into the floor and you have anchor bolts in the void ready to become surrounded by concrete. These can be made to any size for major supports or attachment anchors. See CAD Details 14, 29 and 35.

8.1 Window And Door Bucking Options

There are many options for bucking out an opening in a BuildBlock wall. We will address the three most popular methods: inside mounted dimensional lumber, outside mounted dimensional lumber, and the **VBUCK® Vinyl Block-Out System**.

Treated Wood

There are two ways to use treated dimensional lumber to buck a BuildBlock wall opening.

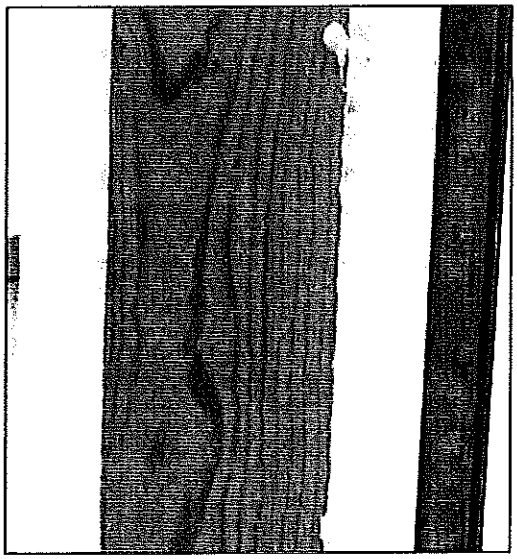
Inside Mount

- The first is referred to as an inside mount. Rip the 2x material to fit into the void of the wall. Use foam adhesive and screws with plastic cap washers inserted from the side to secure the buck.

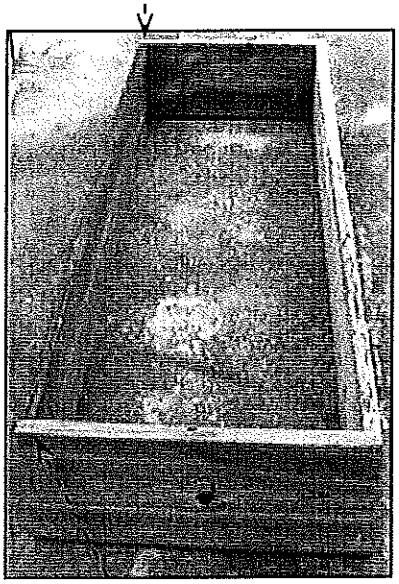
Outside Mount

- The second method is called an outside mount. This would be utilizing the entire dimensional lumber width over the entire profile width of the block. Match or rip width of the lumber to the block width.

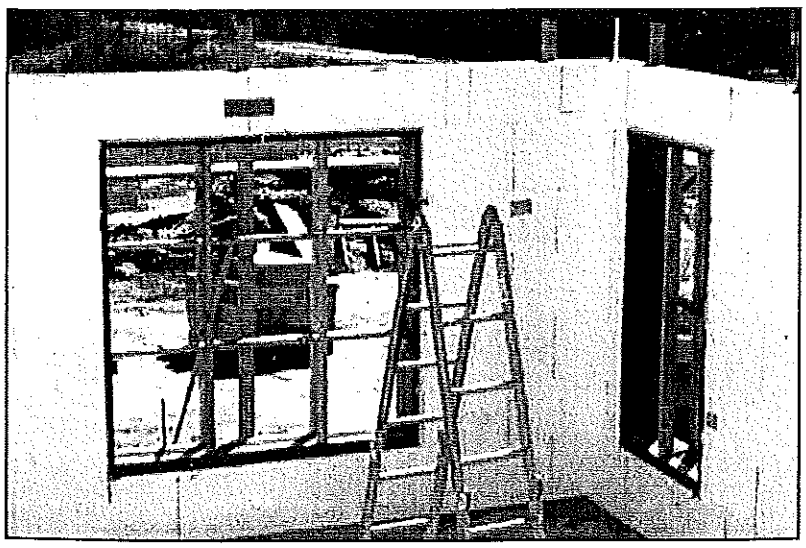
With both methods, it is recommended that you use 6" galvanized ring shank nails set through the wood into the void area so the concrete can capture the nails and the bucks remain adhered to the concrete when the bracing is removed. Alternate these left and right of center every 8" to 12" up and down the buck.



***Note:** Always stack the **header** on top of the side legs for maximun support.*



***Note: Bottom** seal must be installed inside the outside legs. Not correct in photo above.*



8.2 Buck Construction

When using wood for bucks, BuildBlock recommends 2x6, 2x8, 2x10 or 2x12 treated lumber as the best choice. The outside dimension of the BuildBlock 11" form is closest to 2x12 dimensional lumber. You can rip 2x material to fit the forms whether you place your bucks inside the foam cavity or to the side of the blocks.

Bucks will be subject to a significant downward and side-to-side pressure. Build the bucks as you would a header in a door or window opening so the top plate rests on the sides. Openings in BuildBlock walls need to be designed with the proper reinforcement rebar on all sides and, most importantly, the top (referred to as the lintel). See our lintel engineering chart or Prescriptive method details.

Door Buck Construction

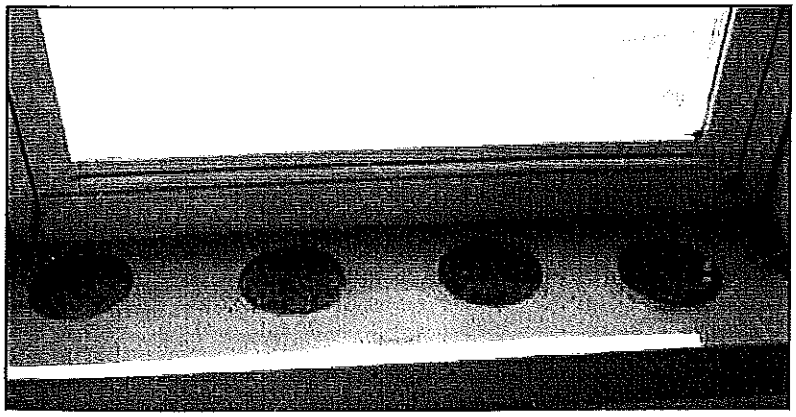
Make sure the inside dimension is large enough to allow for your door system jambs and shimming to plumb your installation. Door bucks will usually only have three parts – two sides and a top. To keep the bottom aligned, a temporary support may be used when bucks are placed to the outside of the forms.

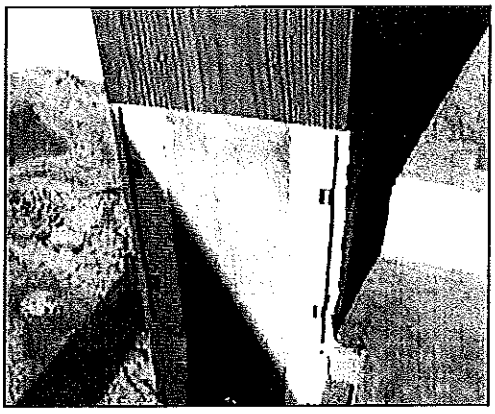
Window Buck Construction

Window bucks differ from doors in that they have a bottom. If using wood, you can use treated 2x4s on the bottom, spread out to the outside, allowing a space in the middle to fill under the openings with concrete. The bottom piece needs to fit inside the sides to act as a brace for concrete pressure.

If using VBUCK, a 4" hole saw on 10" centers will make ample holes for you to fill the underside of the opening in order to eliminate voids in this area. After the pour, clean the bucks when the concrete is fresh. It's much easier to do now than later, and you'll have a nice clean opening when you are finished. The other trades following you will be all smiles!

Keep your inside dimension or rough opening large enough to allow for proper window placement and shimming if necessary. It's very difficult to make an opening larger when your window doesn't fit. A little extra space goes a long way.

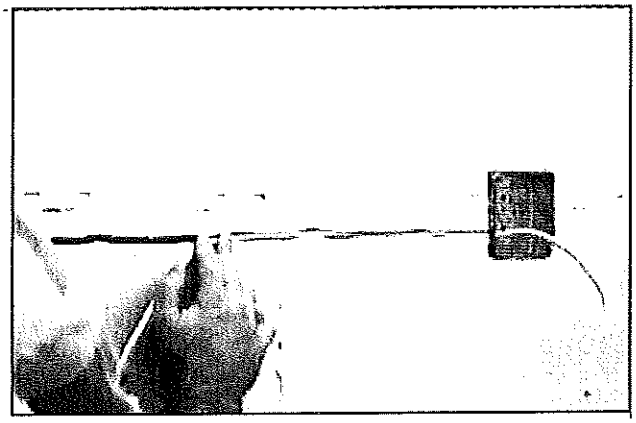




Note: *All bucks placed to the outside need to be angle braced like the V-BUCK on page 46 to keep them square and true.*

Electrical And Plumbing

Electrical and plumbing service is easy to add to BuildBlock walls. The picture to the right shows a man placing romex inside a horizontal chase cut into the foam using a hot knife. I have seen other tools used such as routers and even chain saws to make chases. The important thing to notice is when making a horizontal chase. It can best be done where the blocks connect to one another. Vertical runs can be made in the foam between the ties. You have 2¼" of foam to remove to make a hole for a box. Most boxes are 2¾" deep, so that leaves you a ½" sheetrock return. (¼" more foam could be removed if you have a 3" deep box.)

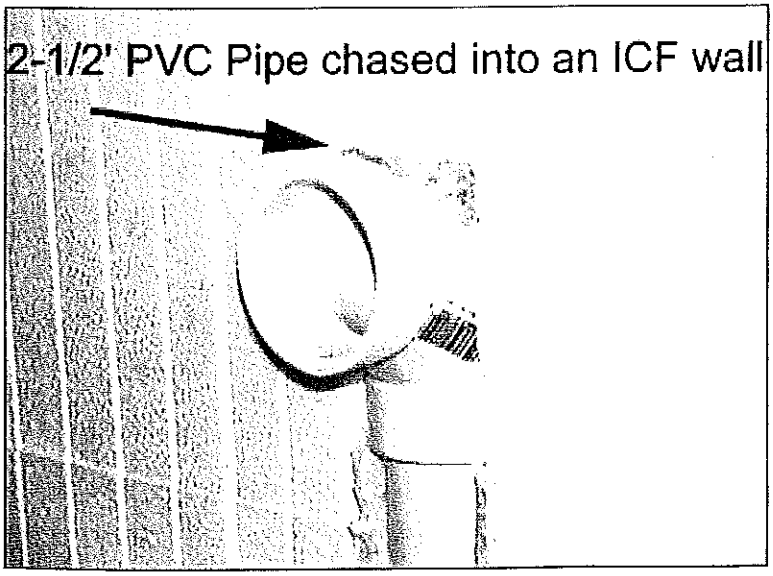


There is 1" of space between vertical webs at each horizontal block course connection to allow wiring and small plumbing to run horizontally through a wall.

NOTE: Check (or ask your electrician to check) the new NEC code book for **electric box connectivity to ICF walls.** If they are no longer permitting you to connect the box to the concrete, you must use a tab side mounted box and attach the box to one of the tabs. Additional gluing will secure the box better.

Plumbing is achieved in the same manner by creating chases in the foam and using adhesive foam to secure pipe in place. Keep in mind you will not be able to use a pipe diameter larger than 2½" in the walls, from the foam to the concrete. For larger pipe runs, choose an inside wood framed wall. (2" schedule 40 pipe is approximately 2½ OD.)

It is not recommended that you run plumbing in the void of an ICF wall and then pour concrete around it unless necessary. It has a tendency to create voiding and is unrecoverable should the pipe fail. If using plumbing inside a wall cavity, extra vibrating will be required to allow for proper consolidation.



When planning your project it is always wise to consult with any trade that the ICF wall will impact. This helps each trade prepare for their respective installations and alterations, if any, to those methods or materials more suited for ICF job sites.

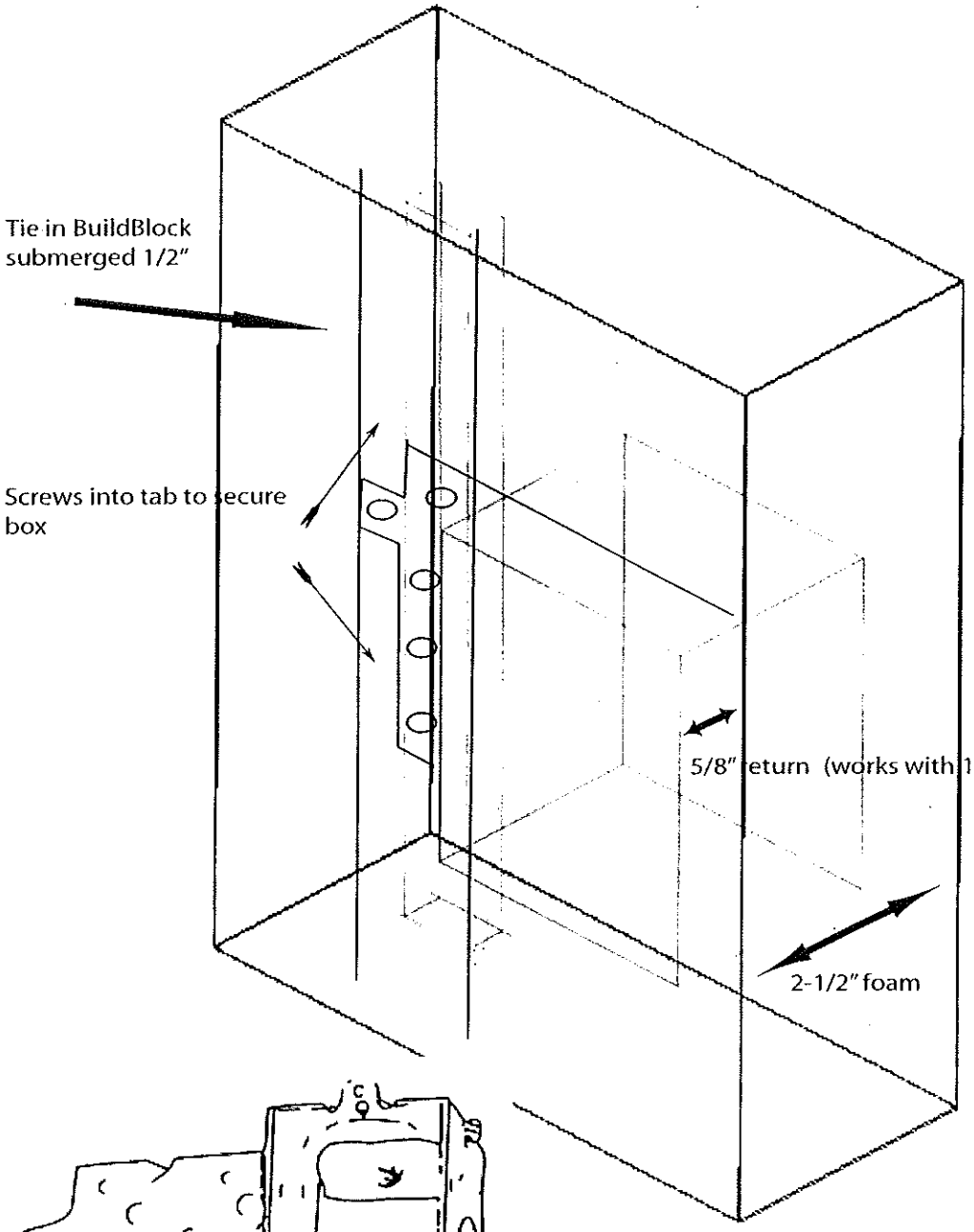
Note: Place all wiring as deep into the foam as possible to meet code requirements and keep inspectors happy. Check local requirements.

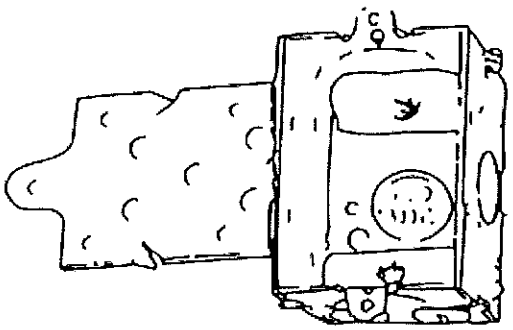
New Electrical Code Solutions

Electrical Box Detail

Compliance to new codes that do not allow metal electrical boxes to attach to concrete.

Use a side mount box and secure it to the ties in the face of the block. Use foam adhesive to stabilize other side.





Part Number
Steel City 806 SW
www.tnb.com search for 806 SW

Radiant-Floor Heating

Radiant-Floor Heating: When It Does—and Doesn't—Make Sense

During judging of the Northeast Green Building Design Competition last spring, I was struck by the number of residential entries with really stellar passive solar design and super-high-performance building envelopes. Clearly, I thought as I began reviewing the features, we've come a long way in high-performance residential green building since my first experience with passive solar in the mid-1970s. But something also seemed odd. A majority of these entries had sophisticated radiant-floor heating systems. After going to all the effort and expense to superinsulate the envelopes of these houses and provide passive solar design, did they still need $10,000 heating systems? And did those systems really make sense from a performance standpoint? I wasn't sure, and decided to dig into these questions.

I've long been a fan of the comfort delivered by radiant-floor heat, and strong arguments are often made about energy savings and indoor air quality advantages. But is this really the best match for high-performance green homes? In the most energy-efficient buildings, the answer seems to be "no," though radiant-floor heating can offer both comfort and IAQ benefits. This article provides a quick overview of radiant-floor heating, reviews the benefits of this heat-delivery approach, and reviews when these systems do—and do not—make sense in homes and small commercial buildings.

Radiant-Floor Heating Overview

Radiant-floor heating has its origin in ancient Rome, where fires were built beneath the floors of villas. Early Korean buildings were similarly heated by channeling flue gases beneath floors before venting those gases up through chimneys. Frank Lloyd Wright piped hot water, rather than air, through the floors of many of his buildings in the 1930s—a practice that has become common in custom homes today.

Radiant-floor heating turns a floor into a large-area, low-temperature radiator. In most modern radiant-floor heating systems, warm water circulates through plastic tubing either embedded in a floor slab or attached to the underside of subflooring. With slab systems, one can use either a standard concrete slab-on-grade, or a thinner, lightweight gypsum-concrete slab poured on a subfloor or over an existing finished floor. In either case, the thermal mass of the slab holds heat and radiates it slowly to the living space above.

In addition to hot water as the heat source, radiant floors can also use electricity or hot air. Due to the high cost of electricity in most areas, radiant-electric floor heating usually makes the most sense when off-peak electricity is available for charging a slab at night and during other off-peak hours. Production of electromagnetic fields (EMFs) is also a potential concern with radiant electric heating (see EBN Vol. 3, No. 2). Radiant-air floors are occasionally used in commercial buildings but are generally impractical and too expensive for residential applications.

For hydronic radiant-floor systems, copper piping has been used in the past, but most systems today use either rubber or cross-linked polyethylene (PEX) tubing—the latter being by far the most common. Design of radiant-floor heating systems is quite complex and should be done by someone with adequate training or experience. Various design manuals, manufacturer-specific installation guides, and software tools are available for use in designing and sizing radiant-floor heating systems. The length of tubing required per square foot of floor depends on such variables as tubing diameter, type of radiant-floor system (thick slab, thin slab, no slab), climate, heat load of the building, and type of boiler and controls used. Manufacturers have done a great job in recent years in packaging the various components to simplify the design of radiant-floor systems.

A key requirement for most radiant-floor heating systems is adequate insulation beneath the heated slab or beneath the tubing (when tubing is attached to the underside of a subfloor). Most manufacturers recommend a minimum of 1" (25 mm) of extruded polystyrene (XPS) for concrete slab-on-grade radiant heating systems, but significantly higher levels are justified in cold climates.

Zoning of radiant floors is usually done with advanced manifold modules that allow the water temperature to be varied in different zones. This provides flexibility for maintaining different temperatures in different rooms and for allowing differential heat delivery to spaces with and without solar gain.

Finally, sophisticated controls are often installed to ensure optimal comfort and to maximize energy performance. Some radiant-floor systems rely on separate temperature sensors outdoors, within the floor slab, and in the living space—with microprocessor control to regulate just when and where hot water should be delivered. Because of the long lag-time with concrete-slab radiant-floor heating systems, standard set-back thermostats usually are not effective, though set-back thermostats that have a built-in anticipation feature may work well for this application, says building consultant Andy Shapiro, of Montpelier, Vermont.

Benefits of Radiant-Floor Heating

Radiant-floor heating offers a number of significant benefits:

Comfort. By far, the biggest selling point for radiant-floor heating is comfort. The large radiant surface means that most of the heat will be delivered by radiation—heating occupants directly—rather than by convection (the primary mechanism of heat delivery from conventional hydronic baseboard "radiators"). Warmer surfaces in a living space result in a higher mean radiant temperature, a measure of surface temperatures in a space that influences the rate of radiant heat loss from occupants). With higher mean radiant temperatures, most people are comfortable even at lower air temperatures. Delivery of the heat at floor level with a warm floor surface also allows occupants to walk around barefoot even in winter—a very popular feature. Enhanced comfort should be a big selling point in any green home, so a strong case can be made for this heating approach.

"Until you're lived with this form of heat," says Radiant Panel Association executive director Larry Drake (who got involved with radiant heating after years of working with solar houses), "it's hard to understand how comfortable it is." He argues that with green homes in particular, after going to all the effort and expense to incorporate healthy and sustainable materials, ensuring high levels of comfort with radiant heat should be a top priority.

Energy savings. There is potential for saving energy with radiant-floor heating through several mechanisms, including lower thermostat settings, lower-temperature boiler settings, and reduced infiltration. Homeowners with radiant-floor heating are likely to be comfortable at lower air temperatures because of the elevated mean radiant temperature in such homes, the lack of significant airflow (as occurs with convective hydronic heating and forced-air heating systems), and the delivery of heat at floor level. Proponents of radiant-floor heating argue that someone normally comfortable at 72° F (22°C) will be comfortable in a building with radiant-floor heating kept at 68°F (20°C). If this is true, one would expect people with radiant-floor heating to keep their thermostats lower and thus realize significant energy savings. (See page 13 for further discussion.)

The second opportunity for energy savings with radiant-floor heating is through keeping the boiler temperature lower than is necessary with conventional baseboard hot water distribution. The typical European approach with radiant-floor heating is to circulate fairly low-temperature water on an almost-continuous basis, varying the water temperature as needed to satisfy the load. This practice might reduce heat loss into unconditioned space if boiler and piping are located in an unheated basement, but experts EBN spoke with suggest that the savings would be very small at best—especially because of the additional electricity consumption to operate pumps for long hours. Green building consultant Marc Rosenbaum, P.E., of Meriden, New Hampshire, suggests using a low-mass boiler that is fired on-demand, rather than a high-mass boiler operated almost continuously.

The third opportunity for energy savings (over forced-air heat) is that radiant-floor systems do not increase the rate of air infiltration. Standard forced-air heating systems can significantly increase or decrease air pressure in different parts of a building, which in turn can increase air infiltration/exfiltration rates—at least in a conventional, leaky building. With radiant-floor heating, as with baseboard hydronic heating, this will not happen. (A well-designed, properly balanced forced-air system should not increase infiltration.)

Potential for use of solar energy. The relatively low temperature required for circulation water in a radiant-floor heating system provides an opportunity to utilize solar hot water. This approach works best with concrete-slab systems; higher-temperature water is generally required when the tubing is attached to the underside of wooden floors. While such systems are fairly complex and expensive, radiant slabs offer one of the best ways to make use of solar energy for heating portions of a building without direct access to sunlight. Most practical are systems in which solar energy heats water in a storage tank that can then be circulated through the slab. According to an EREN Consumer Energy

Information Brief (www.eren.doe.gov) titled "Solar Radiant Floor Heating," such systems typically cost at least $14,000. Backup heat is still required and can be provided with a wood stove, through-the-wall-vented gas heater, electric resistance heat, or backup heating element in the solar storage tank.

Increased boiler life. By operating a boiler at a lower temperature, its life can be extended. Radiant-floor heating systems typically use water temperatures of 85–140°F (30–60°C), compared with baseboard hydronic systems that typically operate at 130–160°F (55–70°C). At these operating temperatures, boiler life can exceed 45 years, according to information from DOE. (Shapiro is skeptical of this claim, however, pointing out that newer boilers are made for cold-start operation and should hold up well with this temperature cycling.)

Quiet operation. Radiant hydronic floor heating is extremely quiet. Unlike forced-air heat, there is no noise from a fan or airflow through ducts; and unlike hydronic baseboard heat, there is usually no gurgle of water through baseboard radiators or creaking from expansion and contraction. The primary noise will be the sound of circulating pumps and the fan used in power-venting the boiler. With radiant-floor systems that have tubing attached to the underside of wood flooring, there may also be some creaking from expansion and contraction.

Flexible room layout. Because there are no baseboard radiators or air registers with radiant-floor heating, there is much greater freedom as to where furniture can be placed. Radiant-floor heating systems are "invisible."

Improved indoor air quality. An argument can be made for improved indoor air quality in houses with radiant-floor heat. Compared with a conventional forced-air distribution system, there is likely to be less dust circulated around the house. And unlike electric baseboard or forced-air heat, there will be no surfaces hot enough to burn dust particles—which could introduce volatile chemicals or toxic particulates into house air (even passing through filters). This concern would be greatest for people with acute chemical sensitivities. In fact, veteran builder Max Strickland, of Burkholder Construction in Travers City, Michigan, first became interested in radiant-floor heating several years ago after his wife became chemically sensitive. He's worried about "frying the air" with conventional heating systems and feels that conventional filters on forced-air systems are not effective. Strickland went on to build an American Lung Association (ALA) Health House in Travers City three years ago, and he now incorporates radiant-floor heating into all of his homes (typically 4 to 6 high-end custom houses per year).

So What's Wrong with Radiant-Floor Heating?

In the right application, radiant-floor heating is a superb heat-delivery system—in fact, perhaps the very best. You usually pay more for it, but the enhanced comfort, potential energy savings, and other benefits can easily justify the extra cost. That said, however, super-energy-efficient green buildings may not be as well-suited to radiant-floor heating. Here's why:

Economics

It can be reasonably argued that a green home in a moderate-to-cold climate should have very high levels of insulation (at least R-25 walls and R-40 ceiling/roof), extremely low infiltration rates, high-performance glazings (unit U-factors below 0.3), and at least some passive solar gain or suntempering. We're not talking about conventional houses, mind you, but high-performance green homes. Such a house will use very little heating energy—probably less than 2.0 Btu/ft2 · degree-day (41 kJ/m2 · °C), which would translate into very low heating costs. To achieve that level of energy performance requires a significant investment in the building envelope (for example, double 2x4 walls). In such a house, putting in an expensive heating system doesn't make good economic sense. As Rosenbaum notes, "It just doesn't make sense to put in a $10,000 heating system to provide $100 worth of heat per year." Investing so much money in the building envelope and still putting in an expensive radiant-floor heating system eliminates the potential for offsetting much of the extra cost in building envelope improvements through savings in the mechanical equipment—one of the key principles of integrated, whole-systems building design. In most highly energy-efficient houses, the same high level of comfort provided by a radiant-floor heating should be achievable simply by installing one or two small, quiet, high-efficiency through-the-wall gas heaters (such as those produced by Rinnai) or a few short sections of electric baseboard heat. At $1,000 to $2,000 apiece for Rinnai heaters (installed) or a few hundred dollars for electric baseboard vs. $10,000 for a typical radiant-floor heating system, savings of $6,000 to over $9,000 would be possible—and that savings could pay for most of the envelope improvements required to bring the heating load so far down that space heating (instead of distributed heat) becomes a viable option.

Even Larry Drake, a strong proponent of radiant-floor heating systems as executive director of the Radiant Panel Association in Loveland, Colorado, admits that radiant heat is more difficult to justify in high-performance buildings. "The tighter the envelope, the less the amount of savings of a radiant system," he told EBN.

Heating performance with micro-loads

Along with the economic questions about the wisdom of radiant-floor heating systems for high-performance green homes, there are building science reasons why this may not be a great fit. Heat is transferred from an exposed slab to the space at a rate of about 2 Btu/ft2 · hr · °F (11 w/m2 · °C), according to Rosenbaum. In a well-insulated house, this rate of heatflow means that even when it is very cold outside, the slab can only be a few degrees warmer than the rest of the room or the room will keep heating up. For a concrete slab to feel warm, however, it needs to be about 80°F (27°C). Thus, for most of the heating season, the greatest feature of radiant-floor heat—a warm floor—won't occur. With moderate solar gain, heat delivery from a floor slab will be even less. Because the floor is insulated underneath, it will be more comfortable to walk on than most slab floors, but the benefit will be from the insulation, not the radiant heat.

The time lag of heat movement through concrete can also be a problem. In a very well-insulated house, that lag time can result in overheating, particularly if there are other sources of heat being delivered to the space, such as passive solar. If a concrete slab is "charged" with heat during the early morning hours and the surface is warmed to the point where it cannot readily absorb solar radiation striking it, that solar heat will more directly heat the air, increasing the risk of overheating. The same thing happens to a much greater extent in high-performance passive solar homes with masonry heaters because the surface of an operating masonry heater is at a higher temperature. In such houses, occupants usually need to check weather forecasts—if they load up the masonry heater firebox in the morning and it turns out to be a bright, sunny day, the space will very likely overheat. A radiant floor maintains a much lower surface temperature than a masonry heater, so the floor will effectively "turn off" as the room warms up with solar gain. "If the floor temperature is 76°F," says Rosenbaum, "then the radiant system can't heat the place to hotter than that." Therefore, this isn't a huge problem with radiant-floor heating systems, but it may mean that homeowners will have to open windows periodically in the winter and their overall energy savings from solar energy will not be as great.

Shapiro counsels against the use of radiant slabs in areas of houses with passive solar heat. "It's a waste of energy," he says, though just how much waste occurs is unclear.

The risk of overheating with concrete-slab radiant-floor heating systems in very energy-efficient buildings leads some designers to incorporate sophisticated control systems. Rather than a simple room thermostat, many radiant-floor designers install control systems that also adjust the circulating water temperature based on outside air temperature and the temperature of the slab. It can also be important to have different zones in a concrete-slab radiant-floor heating system—so that less heat can be delivered, for example, to portions of the slab that are warmed by solar gain. However, according to Rosenbaum, a radiant-floor slab is somewhat self-regulating when it comes to solar gain. If the floor slab begins absorbing solar heat and warms up, it will extract less heat from the circulating water; that heat will return to the boiler and can be circulated to nonsolar zones.

Heat loss into the ground

With slab-on-grade radiant-floor heating systems, there is potential for significant heat loss into the ground. According to Paul Torcellini, Ph.D., P.E., of the National Renewable Energy Laboratory, even with insulation under the slab, 20% of the heat entering the slab can be lost into the ground. This reduces the overall efficiency of the radiant-slab system, offsetting the potential savings described above. Typical manufacturer recommendations for 1" (25 mm) of XPS insulation beneath a radiant slab are clearly inadequate; even 2" (50 mm) may not be enough. Shapiro recommends up to 4" (100 mm) in cold climates. In place of ozone-depleting XPS, one can use high-density expanded polystyrene (minimum 1.5 pcf, 24 kg/m3 foam recommended).

It is ironic that most people want radiant floor heat because they don't like a cold floor, yet there has long been resistance to insulating beneath concrete floor slabs—which would dramatically reduce the cold-floor problem. They solve the problem with an expensive radiant-floor heating system (including rigid insulation under the slab) when the rigid insulation alone would solve most of the problem. (To be fair to radiant-floor heating proponents, the only way to make a slab floor actually warm to the touch is to provide radiant-floor heating—because the high conductivity of concrete makes a slab feel cool even when it is at or slightly above room temperature.)

Challenges with cooling

Most radiant-floor heating systems cannot provide cooling, and most homes and small commercial buildings are being built today to provide cooling—even in relatively cool climates. This is why forced-air systems are far more popular than hydronic heating systems nationwide—the ducts used for forced-air heating can also be used to deliver chilled air (see further discussion under "Radiant-Floor Heating vs. Forced-Air Heating" below). One of the problems in turning a floor into a heat sink is the risk of condensation on the cool surface. (Condensation occurs when a surface temperature drops below the dew point—which can be quite high in more humid parts of the country.)

Radiant cooling (generally with ceiling panels) is used quite commonly in Europe, where humidity levels are generally not as high as in eastern North America and where the comfort envelope of building occupants (the temperature range at which they are comfortable) is wider than here. That said, there is some interesting research underway in the U.S. on radiant cooling. This concept is being tried out, for example, at an architecture school studio at Penn State University. Chilled water is circulated through ceiling panels to provide radiant cooling, with 100% fresh air used for ventilation. The key is that the

ventilation air is dehumidified before delivery to the conditioned space, thus eliminating the potential for condensation on the radiant ceiling panels. This system is saving energy in two ways: because pumping water requires less energy than moving air, and because the chilled water has to remove only the sensible heat loads—not the latent loads. With the 100% outside-air supply, the total amount of circulated air is reduced by about 80%, compared with conventional recirculating systems.

Predicted vs. actual savings

The final concern with radiant-floor heating systems is that much of the assumed energy savings may not be occurring. There is very little hard data to back up the common claim that radiant-floor heating systems save a lot of energy because people with this form of heat are comfortable at lower temperatures and thus keep their thermostats lower. In fact, the only study we could find shows this not to be the case.

Last winter, the Canada Mortgage and Housing Corporation (CMHC) carried out a study of 75 houses in Nova Scotia: 50 with radiant-floor heating and 25 with other heat distribution systems—research that was first reported in the December 2001 issue of the Journal of Light Construction. These houses were visited during daylight hours on weekends, and thermostat settings were recorded. Thermostat settings in the houses with radiant-floor heating averaged 68.7°F (20.4°C), while settings in the control houses averaged only 67.6°F (19.8°C). Although the sample size was small, this study shows no evidence that homeowners with radiant-floor heating keep their thermostat settings lower; in fact, it shows the opposite. Don Fugler of CMHC, who managed the research project, told EBN that they launched the study after a radiant-floor heating product manufacturer contacted CMHC asking for more detail on standard information the agency had been giving out about the energy savings from radiant-floor heat. He cautions that this was a very superficial study, but that it points out the need for additional research into the common claim about energy savings.

Larry Drake of the Radiant Panel Association says that the CMHC study was very interesting and the conclusions being drawn from it are misleading. "To assume that people don't feel comfortable at lower temperature is conjecture," he said. He argues that the relationship between comfort and mean radiant temperature has been well established by ASHRAE for decades. He speculates that if homeowners with radiant heat have opted to keep their thermostats about where they keep them without radiant heat, they have opted to increase their level of comfort rather than going for the energy savings. He also suggests that homeowners may tend to set their thermostats numerically, irrespective of comfort—so that if they used to keep their thermostats at 70°F and then put in radiant-floor heating, they may well still keep their thermostats at 70° (and end up being more comfortable).

Andy Shapiro prefers not to make claims about energy savings with radiant-floor heat. "Radiant heat can be a wonderful amenity in a house," he says, "but to sell it as an energy saver stretches the point."

Radiant-Floor Heating vs. Forced-Air Heating

Many people who opt for radiant-floor heating do so because they don't like forced-air heat. There is a common perception that forced-air heating systems dry out air and generate dust. "Nothing could be farther from the truth with a properly installed forced-air system," says Betsy Pettit, AIA, of Building Science Corporation in Westford, Massachusetts. Forced-air systems, she argues, offer the benefit of being "all things to all systems." A forced-air system can provide heat, air conditioning, ventilation, and filtration—all through a single system of ducts and with shared fans. A radiant-floor heating system, on the other hand, only does one thing, according to Pettit, and it does it at a cost that is typically higher than that of a forced-air system serving those multiple functions. "For me it's just a hard sell," she told EBN. "If you insulate the slab and if you build your building envelope correctly—that is to say, leak-free —you can be more comfortable for less money with a ducted distribution system," she says.

Pettit could think of no tract-home builders in the U.S. who install radiant-floor heating, though there are many custom and spec builders who are very happy with radiant-floor heat. Max Strickland confirms that cost is indeed higher for radiant-floor heat—typically 50% higher than for forced-air—but he notes that if you provide the same level of zoning with forced-air, the costs would be much closer. He deals with air conditioning in houses that have radiant-floor heat by putting in ductless mini-split air conditioners made by Sanyo or Mitsubishi, which he says are very efficient. Larry Drake adds that in addition to using ductless mini-split systems, some builders of houses with radiant-floor heat also often put in high-velocity duct systems for air conditioning, in which very small, 3" (75 mm) round ducts can be run through wall cavities. Drake was unaware of any large tract-home builders who have adopted radiant-floor heating over forced-air systems.

When and Where Radiant-Floor Heating Makes Sense

It has been pointed out that radiant-floor heating systems may not be the best choice for extremely well-insulated, passive solar homes. So when do they make sense?

- In houses and small commercial buildings with conventional levels of insulation and standard insulated-glass windows—especially those in climates with minimal cooling loads —where the extra comfort of radiant heat is desired and the budget allows.
- In buildings with large open spaces and tall ceilings.
- In buildings where air-flushing is common, such as garages, fire stations, airplane hangars, and industrial spaces (because the large-area radiant floor allows quick

recovery).

- When cost is not an issue and satisfying most or all of the heating load with solar energy is a high priority.
- When building occupants have acute chemical sensitivity or allergies—in which case there may be concern that dust could be distributed through a forced-air system or that high surface temperatures from a gas burner or electric heating element will burn dust particles and cause health problems.

Final Thoughts

It's hard to express doubts about something that's really popular. Like ground-source heat pumps, radiant-floor heating has a loyal and zealous following of builders, designers, and homeowners who consider it to be the best heating option around—and appropriate in almost any situation.

One of the reasons radiant-floor heating is so popular is that it is so much more comfortable than what most of us have experience with: older, drafty houses where there is significant floor-to-ceiling temperature stratification. If more people realized that the same—or at least a similar—level of comfort could be achieved simply by creating a really well-insulated, tight building envelope, we could be keeping a lot of people extremely comfortable while also saving a huge amount of energy, without needing radiant-floor heat. "A house with a good enough envelope to be called green—well-insulated and tight—will have a very high level of comfort no matter what type of heating system is used," says Shapiro, "as long as that heating system is well designed."

In homes with conventional levels of insulation and typical glazings, radiant-floor heating is an extremely comfortable heat-distribution option. It does not contribute to IAQ problems, and it might well even save a little energy if homeowners can be convinced to turn down their thermostats to a level that will provide the same level of comfort as a house without radiant heat. But in an extremely well-insulated, green home, radiant-floor heating usually is not the best option. If you've gone to all the effort and spent all the money to achieve a truly stand-out energy-conserving envelope with passive solar gain, why not offset that cost by dramatically reducing the cost of the heating system?

– Alex Wilson

For more information:
Radiant Panel Association
P.O. Box 717
Loveland, CO 80539
800/660-7187, 970/613-0100
970/613-0098 (fax)
www.radiantpanelassociation.org
For subscription information contact: Environmental Building News, 122 Birge St., Suite 30, Brattleboro, VT 05301 (USA). E-mail: ebn@BuildingGreen.com. Web site: www. BuildingGreen.com

Jeanie Bourke - Re: 41 Bayberry Lane

From: Rachel Conly <raconly@yahoo.com>
To: JMB@portlandmaine.gov
Date: 8/5/2010 3:54 PM
Subject: Re: 41 Bayberry Lane

Thanks, Jeanie. Have a great vacation!

Rachel

Sent from my iPhone

On Aug 5, 2010, at 2:58 PM, "Jeanie Bourke" <JMB@portlandmaine.gov> wrote:

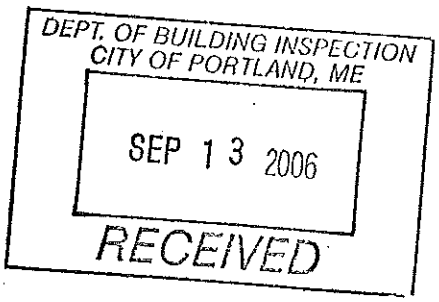
> Rachel,
> Yes, there is quite a history here.....the permit you refer to is from 2006 and is expired, there is also an expired foundation permit from 2001.
>
> The city will not drop the violation charges based on a building permit as there are more than just construction material issues.
>
> I will leave this for you and Suzanne to discuss as I am going on vacation after today.
> Thanks
>
> >>> rachel conly <raconly@yahoo.com> 8/5/2010 10:12 AM >>>
> Hi Jeanie,
>
> I have a client who made a submission for a permit a year or two ago. His name is Rob Lieber and his land is on 41 Bayberry Lane (CBL#89-J-5) on Peaks Island. I was wondering if that permit is still floating around somewhere in the land of "permit intake". Rob told me that the submission had actually been reviewed and he had received comments requesting further information about a ledger, but unfortunately, he did not follow up in a timely manner. He would now like to move forward with the submission, and we are simply wondering if we need to start from the beginning and make a new submission, or if we can pick up where he left off. The property is currently vacant and he is proposing a very small single family residence. He seems to have all his paper work in line. He has a septic design and a survey, etc.
>
> The other half of the story is that Rob has a great deal of building materials on the property that he has been collecting over the years in order to build this project. A neighbor made a formal complaint to the city and Rob has now been notified by Suzanne Hunt and a lawyer, representing the City of Portland, that he must remove everything from the property by August 23rd. Rob is hoping that if he completes the permit submission that the city's order will be dropped. Could you please let me know your thoughts and make a recommendation about how we should proceed? Also, could you please send me Suzanne's e-mail address? I would like to contact her to let her know we are working on it.

Thank you, Hope you are having a nice day, Rachel

Rachel Conly
Architectural Designer
207-766-5625

41 Bayberry Lane, Peaks Island.

Lot of Record



The following information on Lots 89-J-2, 89-J-4, 89-J-5 and 89-J-6 on Peaks Island, Maine have been prepared by me, Robert Lieber. All information has been researched at both the City of Portland's Tax Assesor's office and Comberland County's Registry of Deed's. Inclosed is photo copies of Deed's and Tax card's supplied to me at those offices.

Robert Lieber

9-13-06

Lot 89-J-5 Grantor - Casco Bay Island District Association
Grantee - John Feeney Sr.
Lorraine Feeney
11-10-72

Grantor John Feeney Sr
Lorraine Feeney
Grantee Appy Curtis
Robert Lieber
9-30-98

Grantor Amy Curtis
Grantee Robert Lieber
12-4-99

Lot 89-J-6 Grantor - Casco Bay Island District Association
Grantee - Lionel Plante
3-21-79

Grantor - Lionel Plante
Grantee - Katherine Donithorne
5-14-80

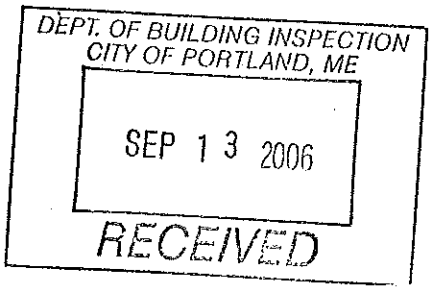
Grantor Katherine Donithorne
Grantee Claire Filliettaz
Monique Levesque
8-31-82

Grantor Claire Filliettaz
Monique Levesque
Grantee Garry Fox
Maureen Fox
4-24-00

Lot 89-J-2 Grantor - Casco Bay Island District Association

Grantee - Arlene B. Feingold
Lawrence Weiner
Benjamin Weiner

11-16-72



Grantor - Arlene B Feingold
Lawrence Weiner
Benjamin Weiner

Grantee Anita Edwards
Terrence Edwards

3-16-99

Lot 89-J-4 Grantor - Casco Bay Island District Association

Grantee - Beatrice Chapman

12-12-72

Grantor - Beatrice Chapman

Grantee - Roger Cassidy Jr

9-21-81

Bayberry Lane Peaks Island Maine — 89-I-1

DATE OF OWNERSHIP	NAME OF OWNER	APPROX. AREA	VALUATION LAND	VALUATION BUILDINGS	DATE OF VALUATION
1973	Kilday Elizabeth A & John C Jts	21119	125	—	1973
1975	Luther David S & Marilyn Packard	27119	980		1974
		27119	1330		1975
		27119	4990		1984

Bayberry Lane — 89-J-5

DATE OF OWNERSHIP	NAME OF OWNER	APPROX. AREA	VALUATION LAND	VALUATION BUILDINGS	DATE OF VALUATION
1973	Feeney John E Sr & Lorraine L Jts	28468	150	—	1973
		28468	1020		1974
		28468	1300		1975
		28468	5240		1984

Bayberry Lane — 89-J-2

DATE OF OWNERSHIP	NAME OF OWNER	APPROX. AREA	VALUATION LAND	VALUATION BUILDINGS	DATE OF VALUATION
1973	Feingold Arlene B Etals Jts	22783	125	—	1973
		22783	910		1974
		22783	1280		1975
		22783	4370		1984

Reservoir Rd — 89-J-4

DATE OF OWNERSHIP	NAME OF OWNER	APPROX. AREA	VALUATION LAND	VALUATION BUILDINGS	DATE OF VALUATION
1973	Chapman Beatrice M (Metheun MA) NR	29068	150		1973
1982	Cassidy Roger D Jr(31 Hampstead St)	29068	1040		1974
		29068	1320		1975
		29068	4650		1984
		29068	5230	23950	1989
		29069	5230	25700	1991

Reservoir Rd — 89-J-6

DATE OF OWNERSHIP	NAME OF OWNER	APPROX. AREA	VALUATION LAND	VALUATION BUILDINGS	DATE OF VALUATION
1973	Casco Bay Island Development Assn.	37957	200		1973
1979	Plante Lionel (Resevoir Rd Pl)	37957	1210		1974
1981	Donithorne Katherine	37957	5470		1984
1983	Levesque Monique C & Fillietaz Claire M jts				

89-J-4

This FINANCING STATEMENT is presented to a filing officer for filing pursuant to the Uniform Commercial Code: 26994 | 3 Maturity date (if any): 281

1 Debtor(s) (Last Name First) and address(es)

[redacted]
Tad Baldwin / SUSAN
RFD 1, Box 793
Orrs Is., ME 04066

2 Secured Party(ies) and address(es)

Sears
Cooks Corner
Brunswick, me

For Filing Officer (Date, Time, Number, and Filing Office)

REGISTRY OF DEEDS CUMBERLAND ss. MAINE
FILED OCT 1 1981
AT 8 H 30 M A M
#7529 BK. 4862 PG. 281

4 This financing statement covers the following types (or items) of property

3 82032 422 15P T

NCP

Ted Baldwin
RFD 1 Box 792
Orrs Island, ME 04066

ASSIGNEE OF SECURED PARTY
Name and Address

Check [X] if covered   [ ] Proceeds of Collateral are also covered   [ ] Products of Collateral are also covered   No. of additional Sheets presented:

Filed with: ~~Town of Brunswick~~ REG. OF DEEDS PORTLAND

Date 9/15/81

X Ted D. Baldwin
By Susan L. Baldwin
Signature(s) of Debtor(s)

Sears Roebuck & Co
By P. McNelly
Signature(s) of Secured Party(ies)

Filing Officer Copy—Alphabetical

FORM U.C.C. 1   Approved by Secretary of State, STATE OF MAINE

() HODGS MANNING & PRINTING INC., LEWISTON, ME

(101)
Quitclaim Deed
(With Covenant)
27032

Know all Men by these Presents,

That I, Beatrice M. Chapman of Portland, in the County of Cumberland and State of Maine,

in consideration of one dollar and other valuable consideration

paid by Roger D. Cassidy, Jr. of Methuen, in the County of Essex and Commonwealth of Massachusetts,

and whose mailing address is 31 Hampstead Street, Methuen, Massachusetts 01844,

the receipt whereof I do hereby acknowledge, do hereby remise, release, bargain, sell and convey and forever quit-claim unto the said Roger D. Cassidy, Jr., his

heirs and assigns forever,

~~xxxxxxxxxxxxxxxxxxxxxxxxxxxxx~~

A certain lot or parcel of land located on Peaks Island, in the City of Portland, County of Cumberland and State of Maine, and bounded and described as follows:

Being Lot Number 29 as shown on Plan of Oceanside Project, Peaks Island, Maine, North Gate Subdivision dated September 12, 1972, and recorded in the Cumberland County Registry of Deeds in Plan Book 92, Page 39.

Being the same premises conveyed to the Grantor herein by Casco Bay Island Development Association, by deed dated December 12, 1972, and recorded in said Registry of Deeds in Book 3337, Page 317.

This deed is made subject to all exceptions and restrictions as referred to in the aforesaid deed.

282

To have and to hold, the same, together with all the privileges and appurtenances thereunto belonging, to the said Roger D. Cassidy, Jr., his heirs and assigns, to their own use and behoof forever.

And I do **covenant** with the said grantee, his heirs and assigns, that I will warrant and forever defend the premises to the said grantee, his heirs and assigns forever, against the lawful claims and demands of all persons claiming by, through, or under me.

In Witness Whereof, I, the said Beatrice M. Chapman, being a widow, ~~and~~ ~~wife~~ ~~of~~ ~~the~~ ~~Grantor~~ ~~in~~ ~~the~~ ~~foregoing~~ ~~and~~ ~~conveying~~ ~~right~~ ~~by~~ ~~dower~~ ~~in~~ ~~the~~ ~~granted~~ ~~premises~~, have hereunto set my hand and seal this 21st day of September, in the year of our Lord one thousand nine hundred and eighty-one.

Signed, Sealed and Delivered
in presence of

Beatrice M. Chapman

State of Maine, Cumberland } ss. September 21, 1981.

Personally appeared the above named Beatrice M. Chapman and acknowledged the above instrument to be her free act and deed.

Before me,

Justice of the Peace.
~~Notary Public.~~
~~Attorney at Law.~~

OCT 1 1981
REGISTRY OF DEEDS CUMBERLAND COUNTY, MAINE
Received at 12:27 P.M., and recorded in
BOOK 4862 PAGE 281 Edmund L. Bernstein Register

89-J-6

MAINE REAL ESTATE TAX PAID

021056 BK15432PG016

KNOW ALL MEN BY THESE PRESENTS

THAT CLAIRE M. FILLIETTAZ and MONIQUE C. LEVESQUE, both of Peaks Island, County of Cumberland and State of Maine, both being unmarried, for consideration paid, grant to

GARRY S. FOX and MAUREEN O'NEILL FOX of 24 Old Sam Trott Rd., Peaks Island, County of Cumberland and State of Maine, with *warranty covenants*, as joint tenants, the land in Peaks Island, County of Androscoggin and State of Maine.

A certain lot or parcel of land, with all buildings thereon, located on Peaks Island in the City of Portland, County of Cumberland and State of Maine, which lot is shown on a plan entitled Ocean Side Project, Peaks Island, Maine, Northgate subdivision, Section 2, filed in Cumberland County Registry of Deeds in Plan Book 92, Page 39, as being bounded on the south by Brackett Avenue, easterly by Lot 28, northerly by Lot 29, and westerly by Reservoir Road.

Being the same premises conveyed to Monique C. Levesque and Claire M. Filliettaz as joint tenants by deed of Katherine Donithorne dated August 31, 1982 and recorded in the Cumberland County Registry of Deeds in Book 5029, Page 227.

Witness our hands and seals this thirteenth day of April, 2000.

M. J. Lesperance — Claire M. Filliettaz
CLAIRE M. FILLIETTAZ

M. J. Lesperance — Monique C. Levesque
MONIQUE C. LEVESQUE

THE STATE OF MAINE

Androscoggin, SS: April 13, 2000

Then personally appeared the above named CLAIRE M. FILLIETTAZ AND MONIQUE C. LEVESQUE and acknowledged the foregoing instrument to be their free act and deed.

Before me, Marie Jeanne Lesperance
MARIE JEANNE LESPERANCE
NOTARY PUBLIC

Marie Jeanne Lesperance
Notary Public Maine
My Commission Exp. 03/25/03

SEAL

RECEIVED
RECORDED REGISTRY OF DEEDS
2000 APR 24 PM 4:00
CUMBERLAND COUNTY
John B O'Brien

COTE, COTE & HAMANN, P.A. • ATTORNEYS AT LAW
84 PINE STREET • P.O. BOX 1239 • LEWISTON, MAINE 04243-1239

A st
Willew St Plan 89 Block J Lot 4 to 13 Deed date 1/13/43

STREET AND NUMBER

GRANTOR— Stevens Perley W.

GRANTEE— U. S. A.

Reference— 1702 / 435 Part of— — Same as— — Rec.— 1/13/43 Instr.— War Area— 1.41

Land and ~~buildings~~ Lots 10, 11, 12, 13, 14, 15, 16, 17, 18, 19 Four Acres

DEV. LOT NO. NAME OF DEVELOPMENT

Peaks Island

DEPT. OF BUILDING INSPECTION
CITY OF PORTLAND, ME
SEP 13 2006
RECEIVED

Atty— Albert E. Neal

# of Excep. ☐ Consid. $ 30.— U. S. R. S. $ Mortgs. ☐ Clerk Date

LOCATIONS OVER (MAKE SEPARATE CARD FOR EACH UNCONNECTED PARCEL IN DEED)

Peaks Island Plan 89 Block J Lot 5 Deed date 11-10 1972

STREET AND NUMBER

GRANTOR — Casco Bay Island Development Association

GRANTEE — Feeney, John E. Sr. & Loraine L. Jt. Ten.

Reference— 229/306/15 Part of— 98/120 Same as— Rec.— 11/14/72 Instr.— 2 Cr. Area— 28,468 sq. ft.

Land and ~~buildings~~ 28 92 39

DEV. LOT NO. NAME OF DEVELOPMENT BOOK PAGE

Description— Being lot 28 on Plan of Oceanside Project, Peaks Island, Maine, Subject to all exceptions and restrictions in deed.

F-04700
Seashore Ave
P. I.

Atty—

No. of Excep. ☒ Consid. $ U.S.R.S. $ 11.0 Mortgs. ☐ Clerk Date

LOCATIONS OVER (MAKE SEPARATE CARD FOR EACH UNCONNECTED PARCEL IN DEED)

BK14190PG250

89-J-5

WARRANTY DEED

Joint Tenancy
Maine Statutory Short Form

70166

KNOW ALL PERSONS BY THESE PRESENTS, That

MAINE REAL ESTATE TAX PAID

John E. Feeney a/k/a John E. Feeney, Sr. and Lorraine L. Feeney of Peaks Island, County of Cumberland, State of Maine, for consideration paid, grant to Amy R. Curtis and Robert A. Lieber of Peaks Island, County of Cumberland, State of Maine, whose mailing address is 500 Seashore Avenue, Peaks Island, Maine 04108 with warranty covenants, as joint tenants the land in Peaks Island, County of Cumberland, and State of Maine, described on the attached EXHIBIT A.

WITNESS our/my hand(s) and seal(s) this 30th day of September, 1998.

Signed, Sealed and Delivered in presence of:

John E. Feeney

Lorraine L. Feeney

September 30, 1998

STATE OF MAINE

COUNTY OF Cumberland

Then personally appeared the above named John E. Feeney and Lorraine L. Feeney and acknowledged the foregoing instrument to be their free act and deed.

Before me,

Notary Public
Printed Name: Michele D. Brooks
My Commission Expires: Attorney at Law

Exhibit A - Property Description

A certain lot or parcel of land located on Peaks Island in the City of Portland, County of Cumberland and State of Maine, and bounded and described as follows:

Being Lot Number 28 as shown on Plan of Oceanside Project, Peaks Island, Maine, North Gate Subdivision dated September 12, 1972, and recorded in the Cumberland County Registry of Deeds in Book 92, Page 39.

Subject to all exceptions and restrictions as described in the deed from the United States of America to Peter O. Cioffi dated August 29, 1958 and recorded in the Cumberland County Registry of Deeds in Book 2434, Page 46, so far as the same is in force and of legal effect.

Being the same premises conveyed to the Grantors herein by virtue of a warranty deed from Casco Bay Island Development Association dated November 10, 1972 and recorded in the Cumberland County Registry of Deeds in Book 3326, Page 45. Reference is also made to a deed from John E. Feeney a/k/a John E. Feeney, Sr. et al to John E. Feeney and Lorraine L. Feeney dated April 1994 and recorded in the Cumberland County Registry of Deeds in Book 11421, Page 169.

0018682 BK14612PG001

89-J-2

(WARRANTY DEED)

Know all Men by these Presents,

That WE, ARLENE B. FEINGOLD, LAWRENCE A. WEINER and BENJAMIN L. WEINER, all of 21 Hill Street, Malden Massachusetts 02148

in consideration of THIRTY-THREE THOUSAND ($33,000.00) DOLLARS

paid by TERRENCE J. EDWARDS and ANITA L. EDWARDS, both of 238 Brackett Avenue, Peaks Island, Maine 04108

the receipt whereof we do hereby acknowledge, do hereby ***give, grant, bargain, sell and convey,*** unto the said TERRENCE J. EDWARDS and ANITA L. EDWARDS, husband and wife, as joint tenants and their heirs and assigns forever,

a certain lot or parcel of land located on Peaks Island in the City of Portland, County of Cumberland and State of Maine, and bounded and described as follows:

Being Lot Number 26 as shown on Plan of Oceanside Project, Peaks Island, Maine, North Gate Subdivision dated September 12, 1972 and recorded in the Cumberland County Registry of Deeds in Plan Book 92, Page 39.

Being a portion of the premises conveyed to Casco Bay Island Development Association by Peter O. Cioffi by deed dated November 21, 1966, and recorded in said Registry in Book 2981, Page 123, and subject to all exceptions and restrictions as described in the deed from the United States of America to Peter O. Cioffi, dated August 29, 1958, and recorded in said Registry in Book 2434, Page 46, so far as the same is in force and of legal effect. For Grantor's title see deed from Casco Bay Island Development Association dated November 16, 1972, recorded in said Registry in Book 3328, Page 7.

BK14612PG002

15 Jewel Rd

To have and to hold the aforegranted and bargained premises with all the privileges and appurtenances thereof to the said TERRENCE J. EDWARDS and ANITA L. EDWARDS, their heirs and assigns to them and their use and behoove forever.

And we do COVENANT with the said Grantees, their heirs and assigns, that we are lawfully seized in fee of the premises that they are free of all encumbrances:

that we have good right to sell and convey the same to the said Grantees to hold as aforesaid: and that we and our heirs shall and will WARRANT and DEFEND the same to the said Grantees, their heirs and assigns forever, against the lawful claims and demands of all persons.

In Witness Whereof, we, the said ARELENE B. FEINGOLD, LAWRENCE A. WEINER and BENJAMIN L. WEINER, have hereunto set our hands and seals this 27th day of February, in the year of our Lord one thousand nine hundred and ninety-nine.

Signed, Sealed and Delivered
In presence of

Arelene B Feingold
Arlene B. Feingold

Lawrence A Weiner
Benjamin L. Weiner
Benjamin L. Weiner

COMMONWEALTH OF MASSACHUSETTS

Middlesex,) ss. February 27, 1999.

Personally appeared the above named Arlene B. Feingold, Lawrence A. Weiner and Benjamin L. Weiner, and acknowledged the above instrument to be their free act and deed.

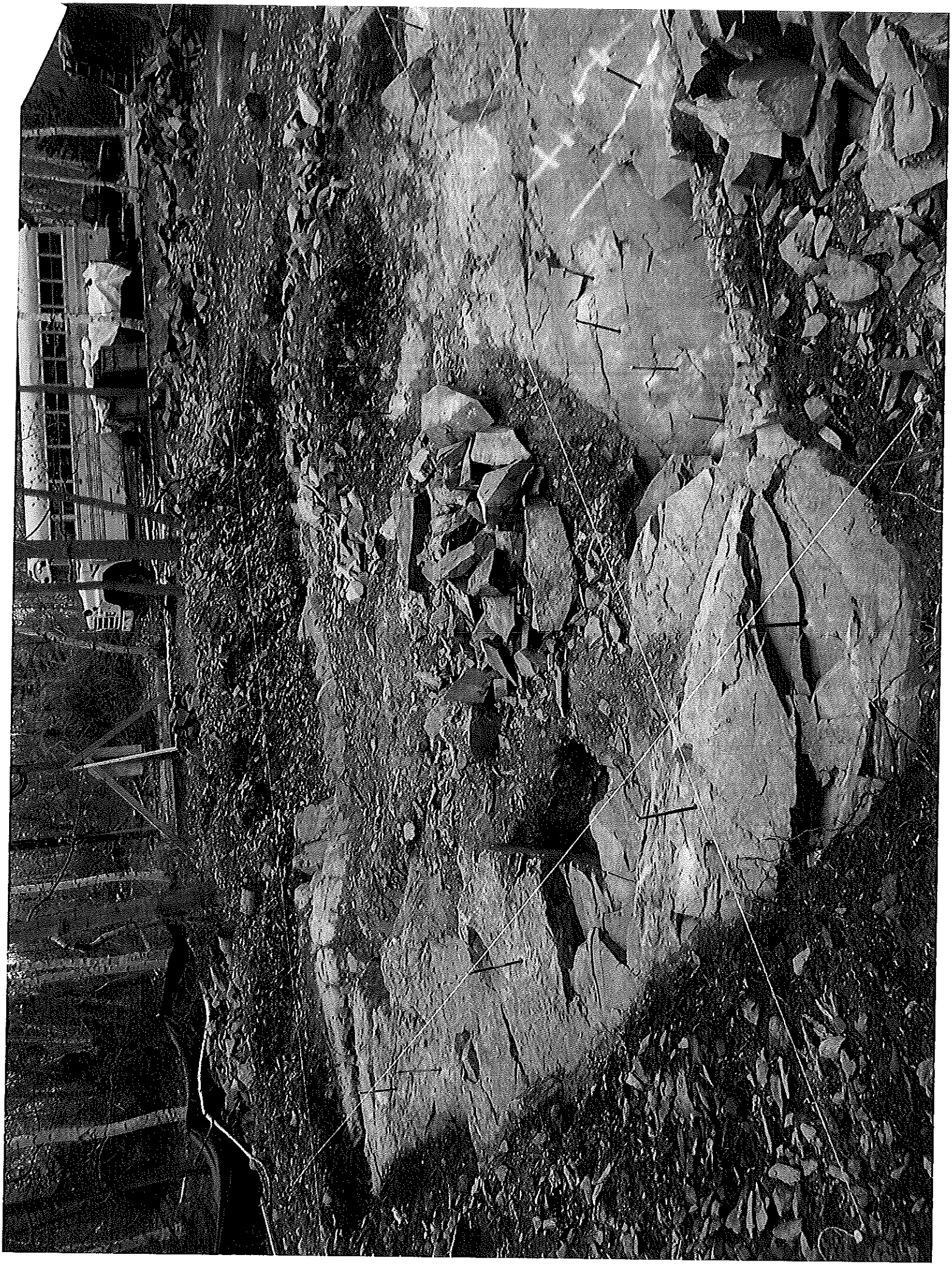
Before me,

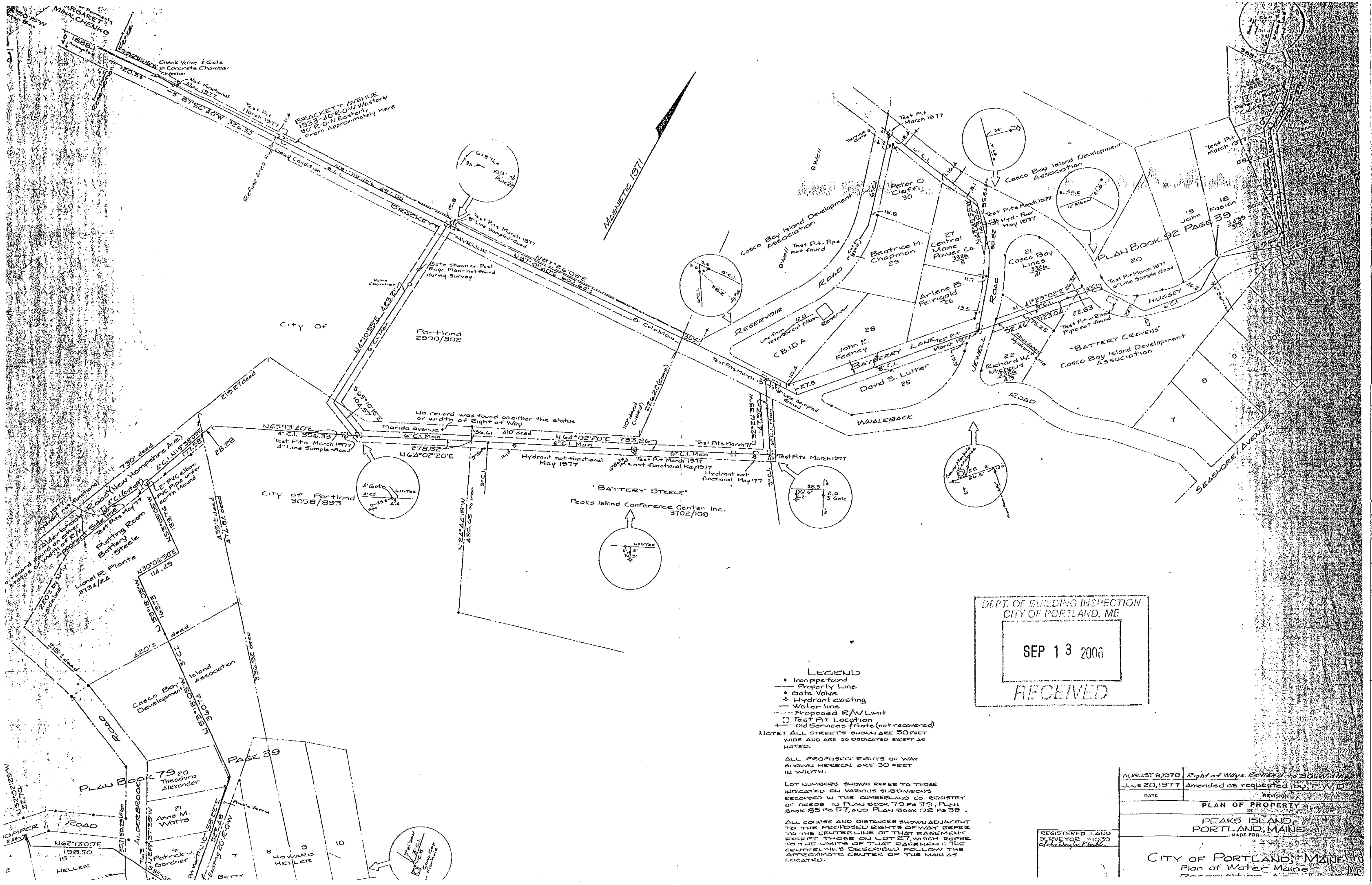
Robert N. Brown

Robert N. Brown, Notary Public
My Commission Expires: November 5, 2004

SEAL

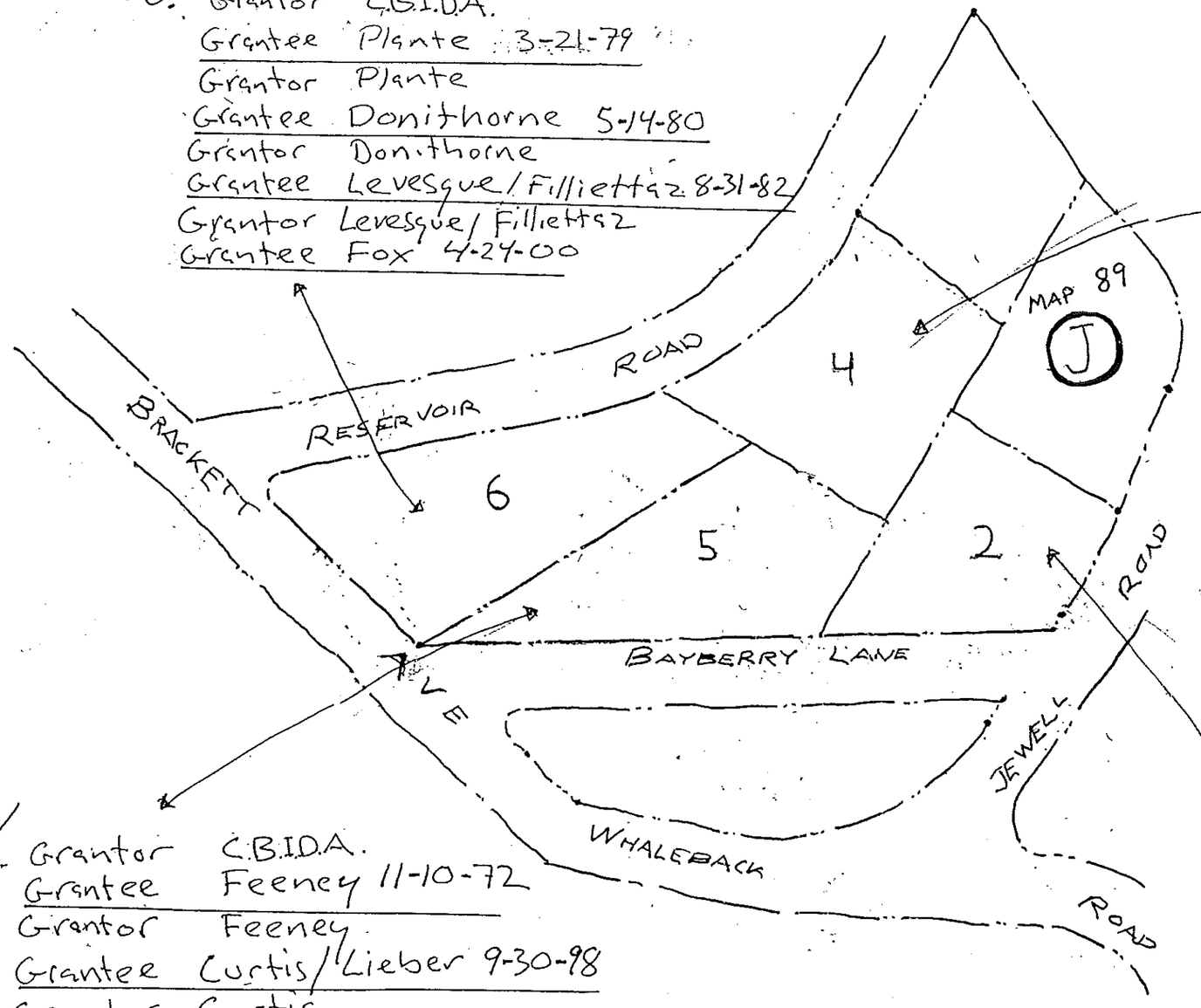
RECEIVED
RECORDED REGISTRY OF DEEDS
1999 MAR 16 PM 2:20
CUMBERLAND COUNTY
John B O'Brien





BRACKETT AVENUE
Check Valve & Gate in Concrete Chamber
BRACKETT AVENUE
City of Portland 2990/902
MAGNETIC 1971
Florida Avenue
No record was found on either the status or width of Right of Way
6" C.I. Main
N64°02'20"E 783.26
Hydrant not functional May 1977
City of Portland 3058/893
"BATTERY STEELE"
Peaks Island Conference Center Inc. 3702/108
Test Pits March 1977
RESERVOIR ROAD
Casco Bay Island Development Association
Peter O. Claff 30
Beatrice M. Chapman 29
Central Maine Power Co. 27
Arlene B. Feingold 26
John E. Feeney 28
C.B.I.D.A.
BAYBERRY LANE
David S. Luther 25
Richard W. Michaud 22
21 Casco Bay Lines
JEWELL ROAD
WHALEBACK ROAD
"BATTERY CRAVENS"
Casco Bay Island Development Association
PLAN BOOK 92 PAGE 39
19 John
18 Fasion
HUSSEY
SEASHORE AVENUE
Plotting Room Battery Steele
Lionel R. Plante 3731/24
Casco Bay Island Development Association
ROAD
PLAN BOOK 79 PAGE 39
20 Theodora Alexander
21 Anne M. Watts
Patrick J. Gardner
ALDERBROOK
HOWARD HELLER
HELLER
DEPT. OF BUILDING INSPECTION
CITY OF PORTLAND, ME
SEP 13 2006
RECEIVED
LEGEND
Iron pipe found
Property Line
Gate Valve
Hydrant existing
Water line
Proposed R/W Limit
Test Pit Location
Old Services & Gate (not recovered)
NOTE: ALL STREETS SHOWN ARE 50 FEET WIDE AND ARE SO DEDICATED EXCEPT AS NOTED.
ALL PROPOSED RIGHTS OF WAY SHOWN HEREON ARE 30 FEET IN WIDTH.
LOT NUMBERS SHOWN REFER TO THOSE INDICATED ON VARIOUS SUBDIVISIONS RECORDED IN THE CUMBERLAND CO. REGISTRY OF DEEDS IN PLAN BOOK 79 PG 39, PLAN BOOK 85 PG 57, AND PLAN BOOK 92 PG 39.
ALL COURSE AND DISTANCES SHOWN ADJACENT TO THE PROPOSED RIGHTS OF WAY REFER TO THE CENTERLINE OF THAT EASEMENT EXCEPT THOSE ON LOT 27, WHICH REFER TO THE LIMITS OF THAT EASEMENT. THE CENTERLINES DESCRIBED FOLLOW THE APPROXIMATE CENTER OF THE MAIN AS LOCATED.
AUGUST 8, 1978 Right of Ways Revised to 30' Width
JUNE 20, 1977 Amended as requested by P.W.D.
DATE REVISION
PLAN OF PROPERTY
PEAKS ISLAND, PORTLAND, MAINE
REGISTERED LAND SURVEYOR
CITY OF PORTLAND, MAINE
Plan of Water Mains

6. Grantor C.B.I.D.A.
Grantee Plante 3-21-79
Grantor Plante
Grantee Donithorne 5-14-80
Grantor Donithorne
Grantee Levesque/Fillietta 8-31-82
Grantor Levesque/Fillietta
Grantee Fox 4-24-00



4. Grantor C.B.I.D.A.
Grantee Chapman 12-12-72
Grantor Chapman
Grantee Cassidy 9-21-81

5. Grantor C.B.I.D.A.
Grantee Feeney 11-10-72
Grantor Feeney
Grantee Curtis/Lieber 9-30-98
Grantor Curtis
Grantee Lieber 12-4-99

2. Grantor C.B.I.D.A.
Grantee Feingold/Weiner 11-16-72
Grantor Feingold/Weiner
Grantee Edwards 3-16-99

GRANDFATHERED LOT OF RECORD - CONFIRMATION

1 of 6

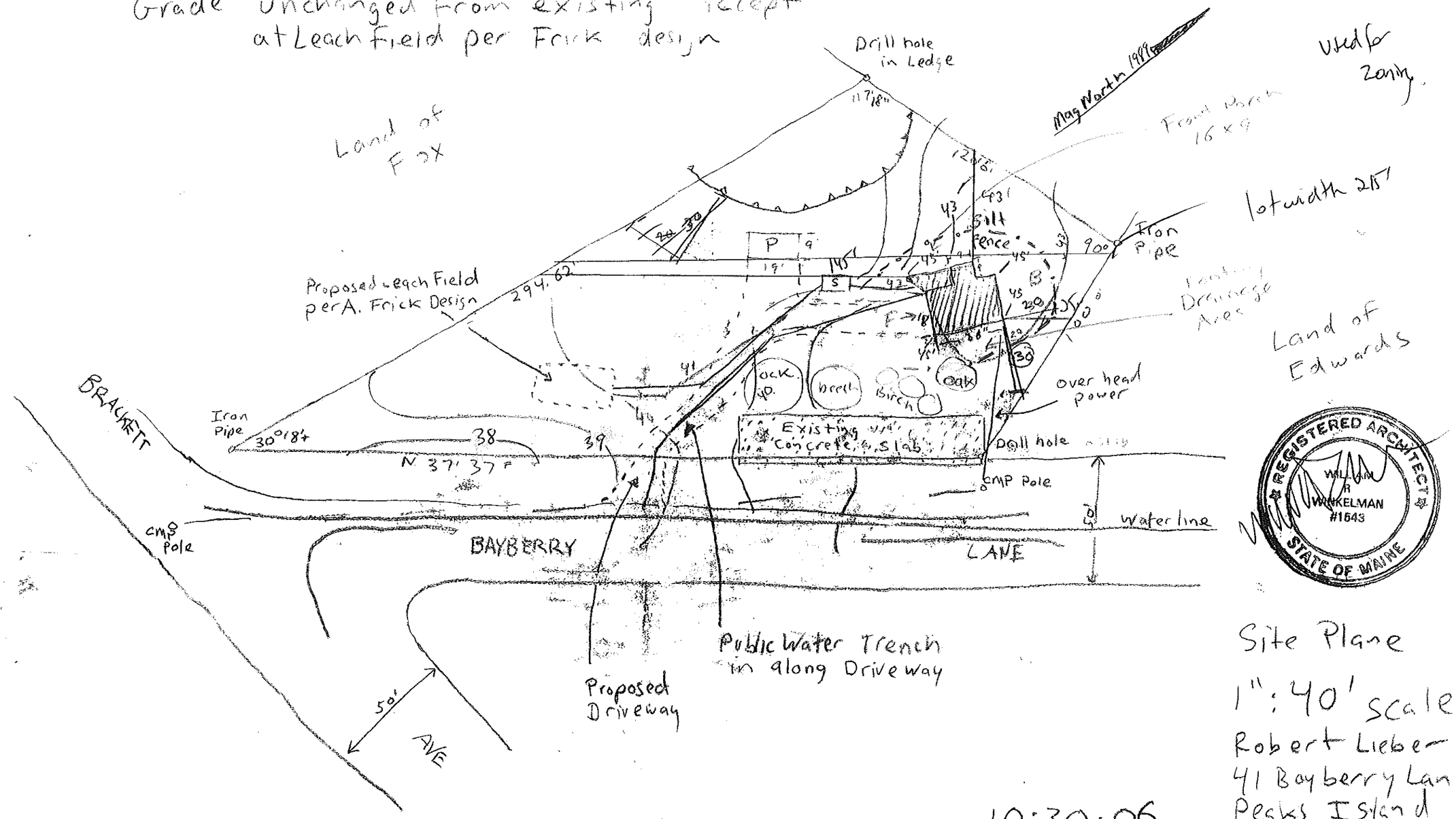
Robert Lieber
41 Bayberry Lane
Peaks Island Me

IR.1

Lot SF: 28468 @ 20% = (5,690 max coverage)

Grade unchanged from existing except at Leach Field per Frick design

Used for Zoning.



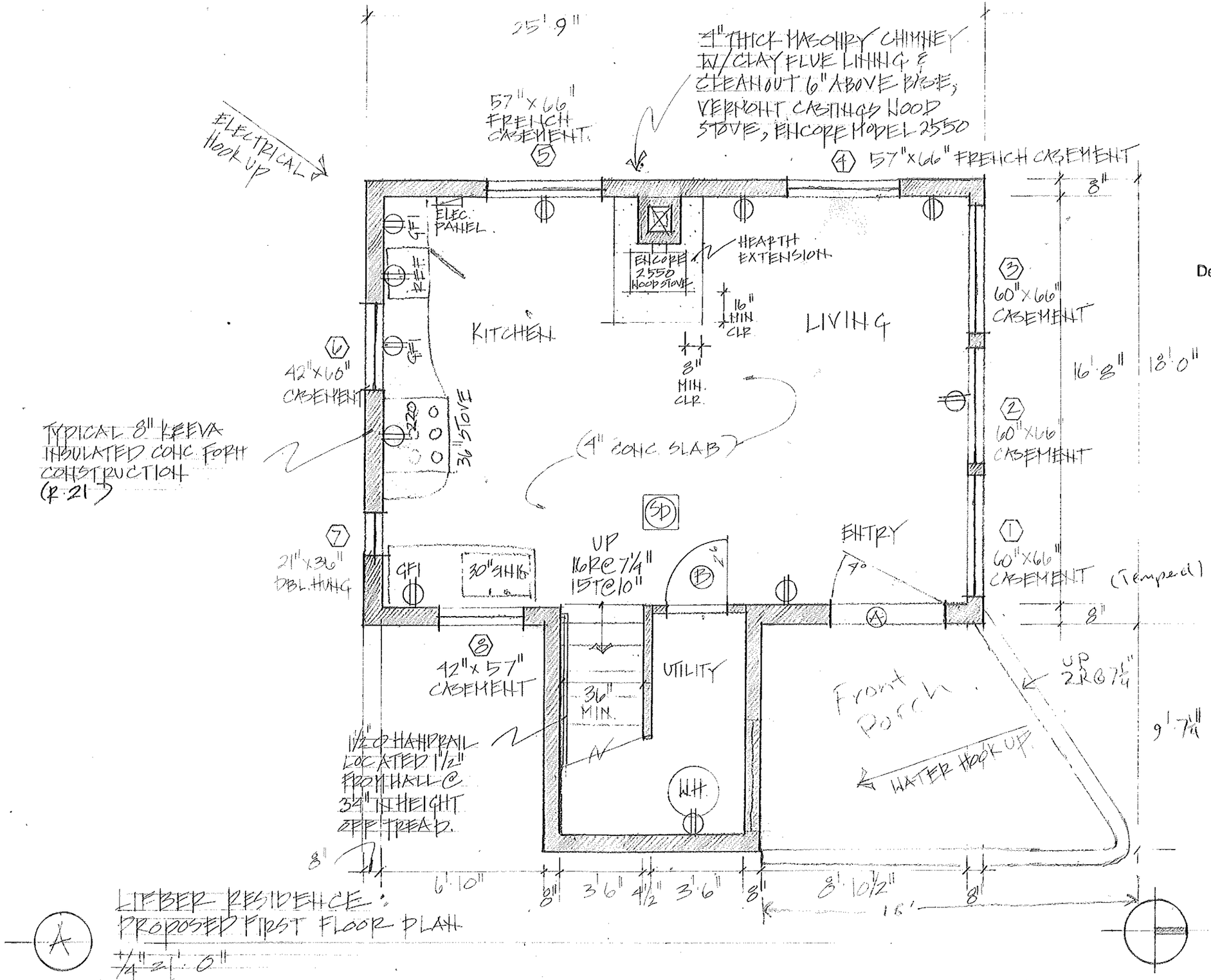
REGISTERED ARCHITECT
WILLIAM R WINKELMAN #1543
STATE OF MAINE

Site Plane

1" : 40' scale

10.30.06

Robert Lieber
41 Bayberry Lane
Peaks Island
766-5043



LIFBER RESIDENCE
PROPOSED FIRST FLOOR PLAN
¼" = 1'-0"

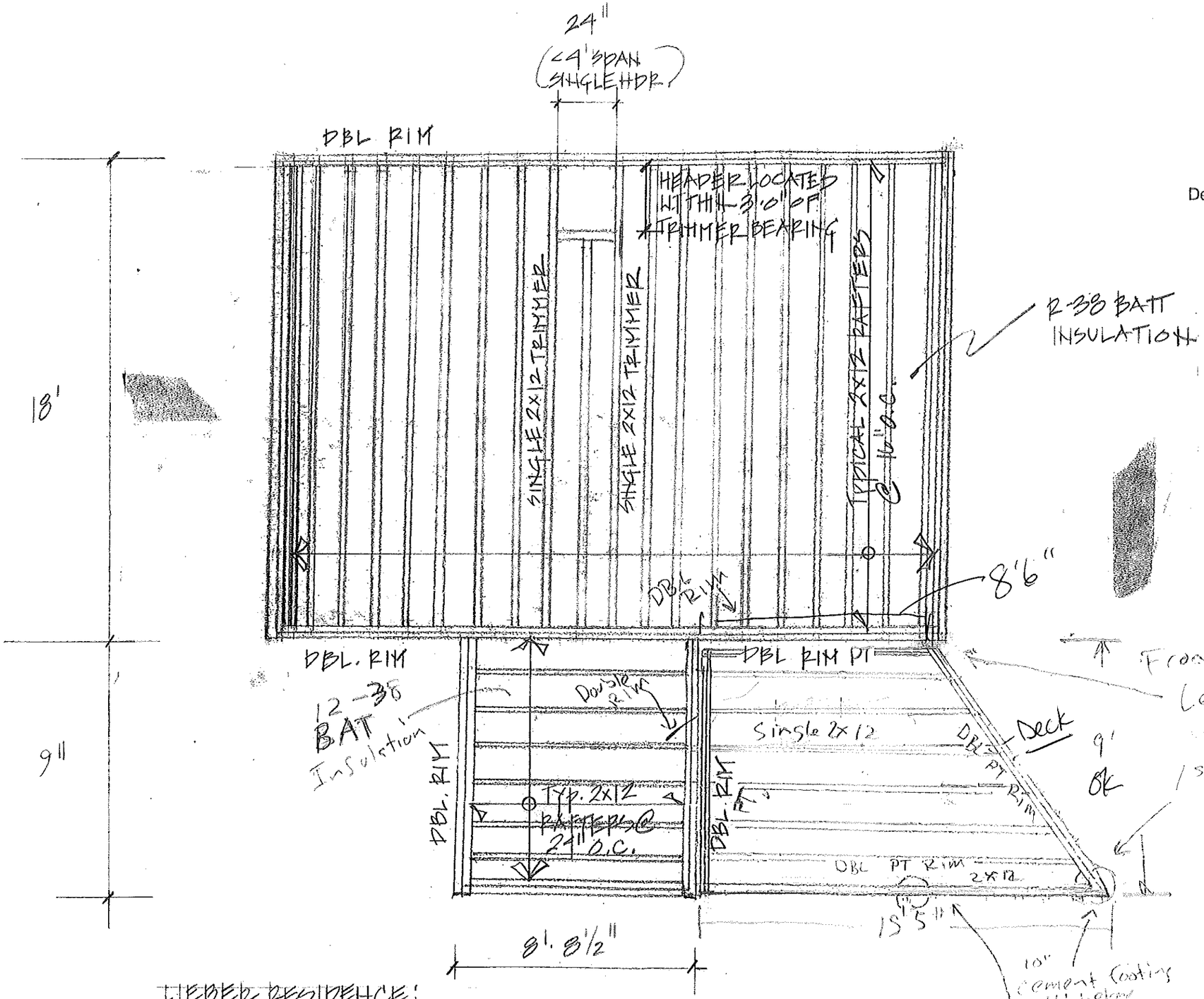
(A)

revised

RECEIVED

SEP 23 2010

Dept. of Building Inspections
City of Portland Maine



FIEDER RESIDENCE:
PROPOSED ROOF FRAMING
¼" = 1'-0"

RECEIVED

SEP 23 2010

Dept. of Building Inspections
City of Portland Maine

11/5/10
See specs for open web Roof Trusses

25'-9"
8"
11'-0"
4½"
13'-0½"
8"
(H) 57"x30" FRENCH CASEMENT
(13) 57"x30" FRENCH CASEMENT
8"
7'-8"
4½"
18'-0"
8'-7½"
9'-0"
STUDY
2" CLR TO COMBUSTIBLE
(12) 57"x30" FRENCH CASEMENT
(5D) 3° POCKET
BEDROOM
3° POCKET (E)
(D) W/D
MIN. DOOR
15" MIN.
15" MIN.
(15) (EGRESS) 42"x30" CASEMENT
TYP. INTERIOR WALLS 2x4 STUDS ½" GYP. BD.
42"
(5D)
PKL 16 RC 7¼" 15 TC 10"
3° BATH
(C) POCKET
(11) (TEMPERED) 30"x30" CASEMENT
8"
(16) (EGRESS) 42"x30" CASEMENT
(10) (TEMPERED) 42"x30" FIXED
TYPICAL FLOOR 2x6 T&G DECKING
1½" Ø HANDRAIL LOCATED 1½" FROM WALL @ 34" HEIGHT OFF TREAD
6" MIN
6" MIN
(9) 960" ABOVE STAIR TREADS FIXED 48"x30"
8"
6'-10"
8"
3'-6"
4½"
3'-6"
8"
8'-10½"
8"
LIEBER RESIDENCE
PROPOSED SECOND FLOOR PLAN
¼" = 1'-0"
A

RECEIVED

SEP 23 2010

Dept. of Building Inspections
City of Portland Maine

CHIMNEY
+22'. 3"
RIDGE WEST
ELEVATION
+20'. 3"

+19' 2¼"
TOP PLATE
WEST
ELEVATION

+9'. 0"
CEILING
FIRST FLOOR

FINISHED FIRST
FLOOR
±0'-0"

-0'-6"
GRADE

TYPICAL 12" O.H.

24" ABOVE ANY
ELEVATION
WITHIN 10'0"

(16)
EGRESS

TYPICAL 8"
KEEVA INSULATED
CONC. FORM

(10)

(8)

(A)

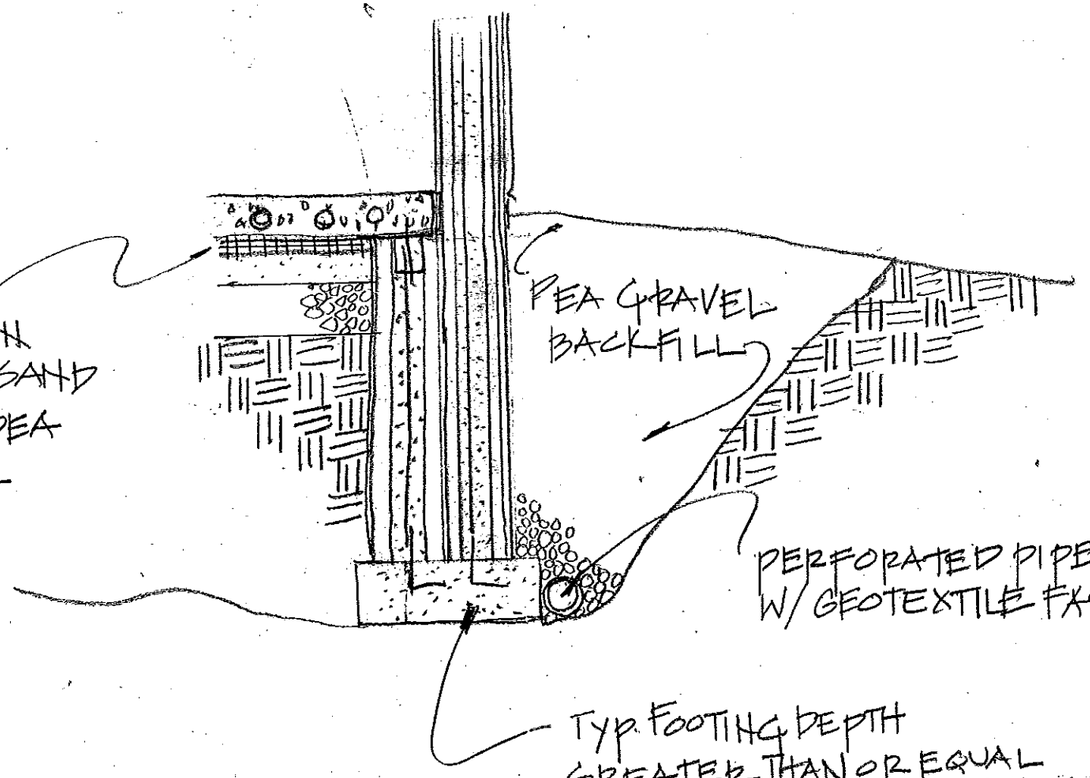
16'-0"

side view
of
front porch
decked with
spruce on
PT 2x12's

LIEBER RESIDENCE:
PROPOSED WEST ELEVATION

A

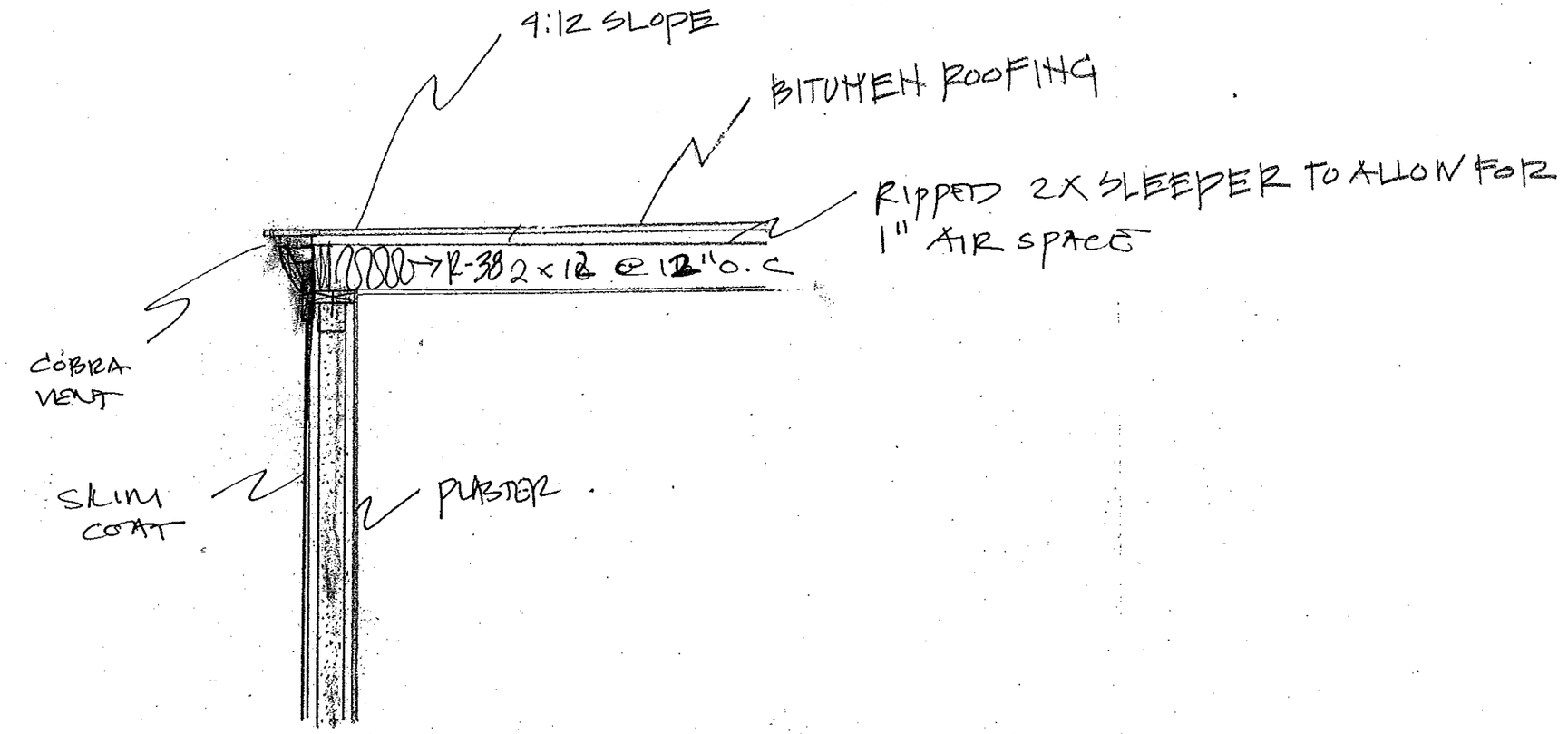
1/4" = 1'-0"



LIEBER RESIDENCE

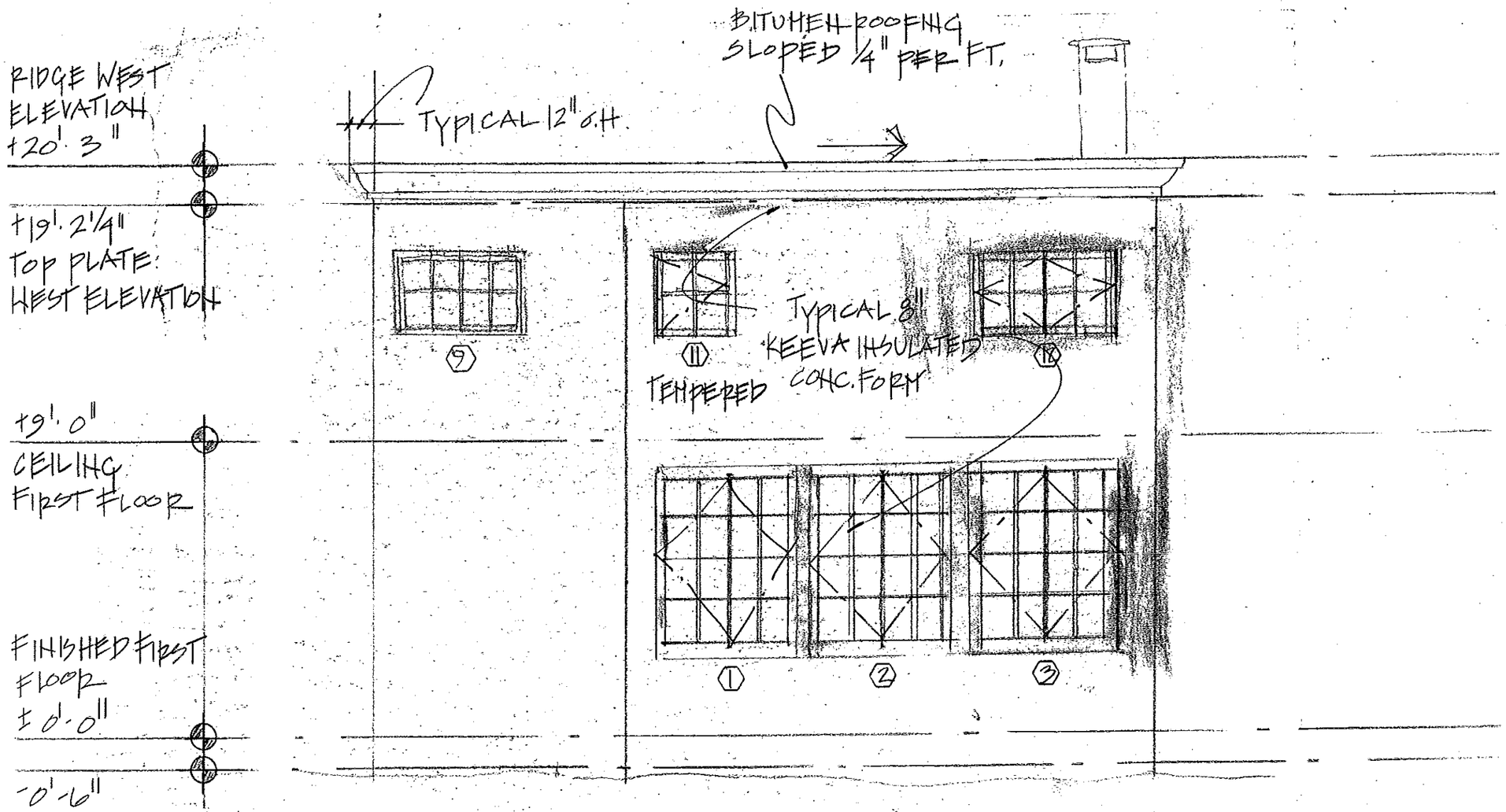
FOOTING DETAIL

1"=1'.0"



LIEBER RESIDENCE
EAVE DETAIL/VENTING
3/4" = 1'-0"

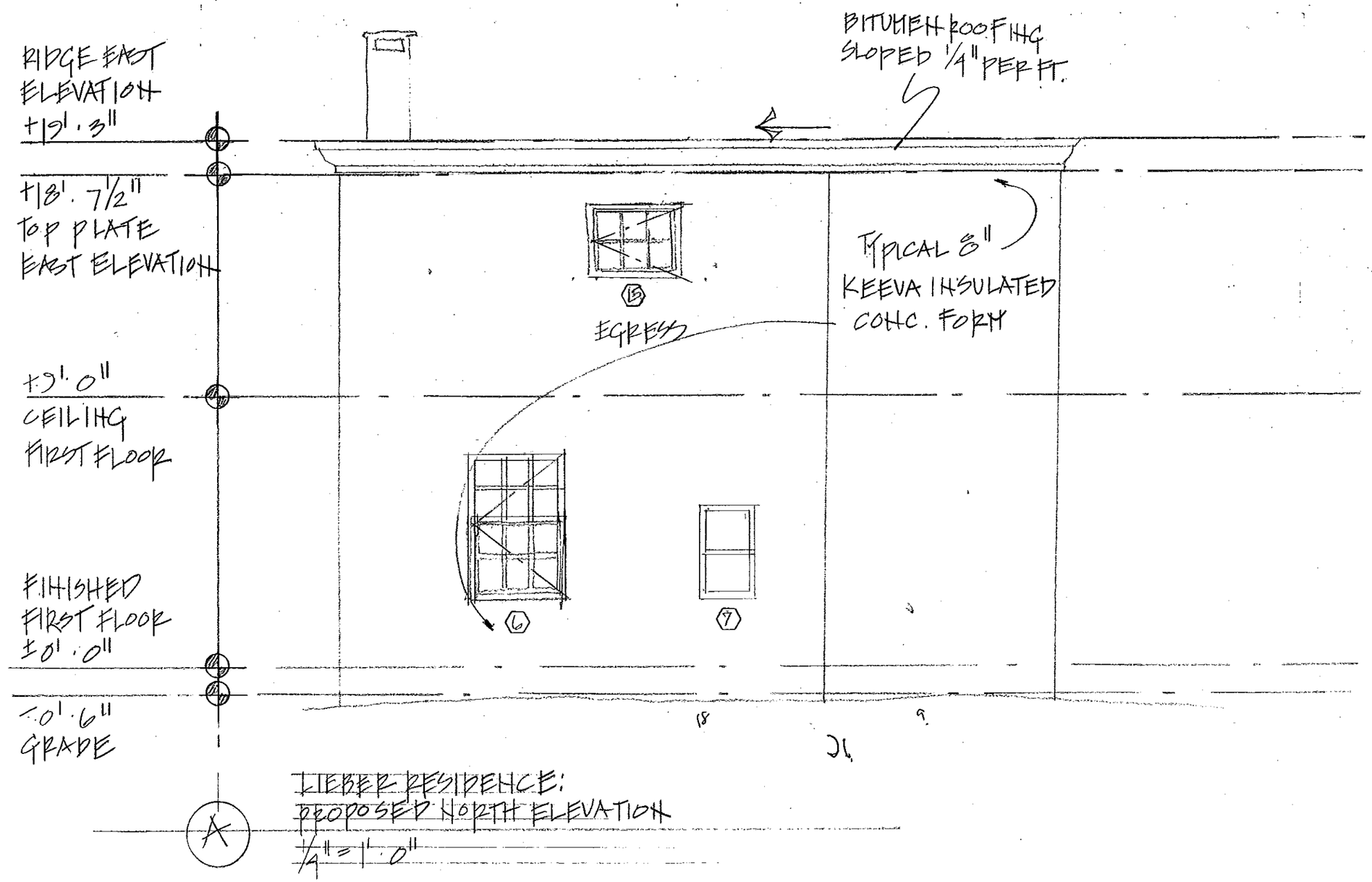
D1D



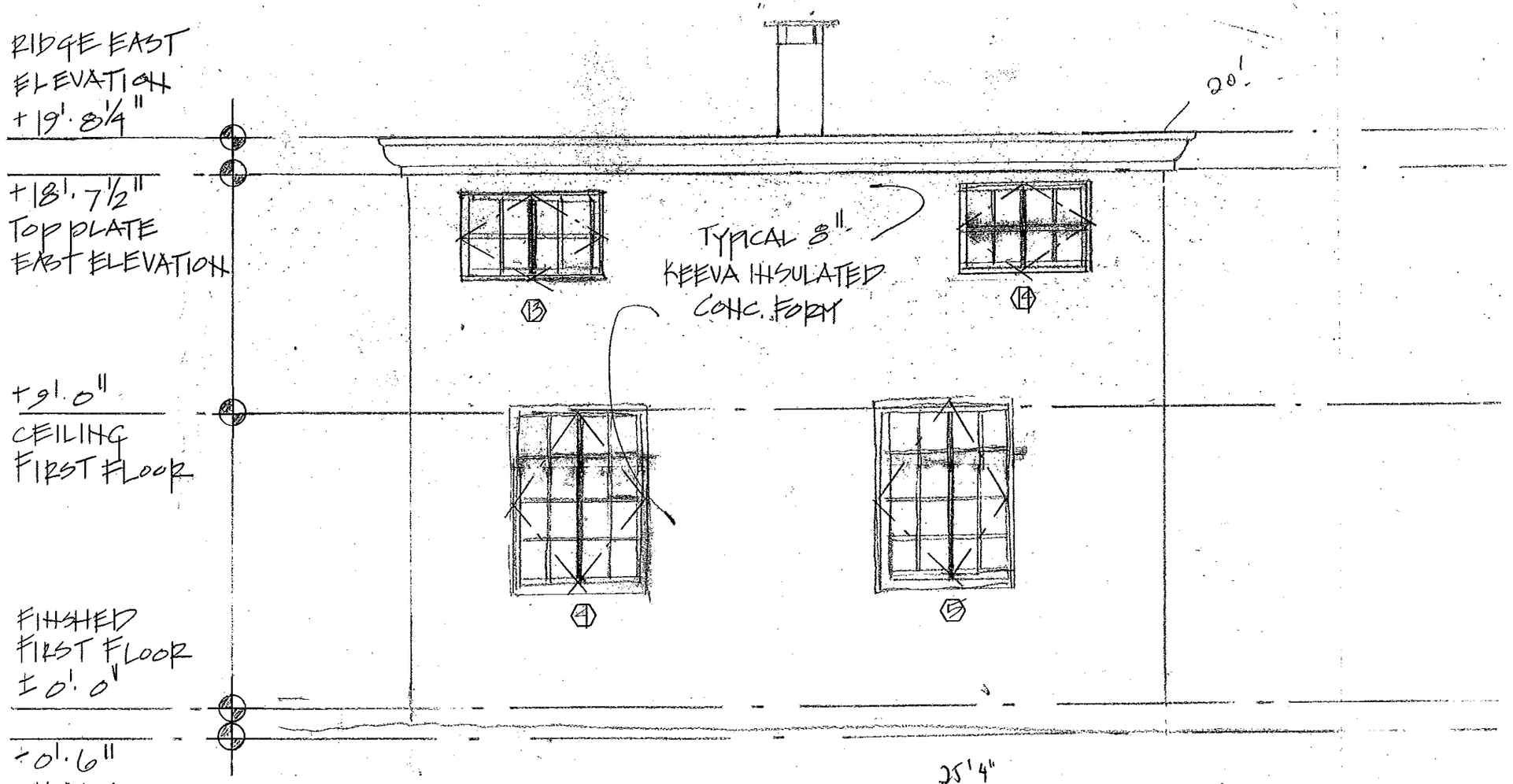
LIEBER RESIDENCE:
PROPOSED SOUTH ELEVATION

A

1/4" = 1'-0"

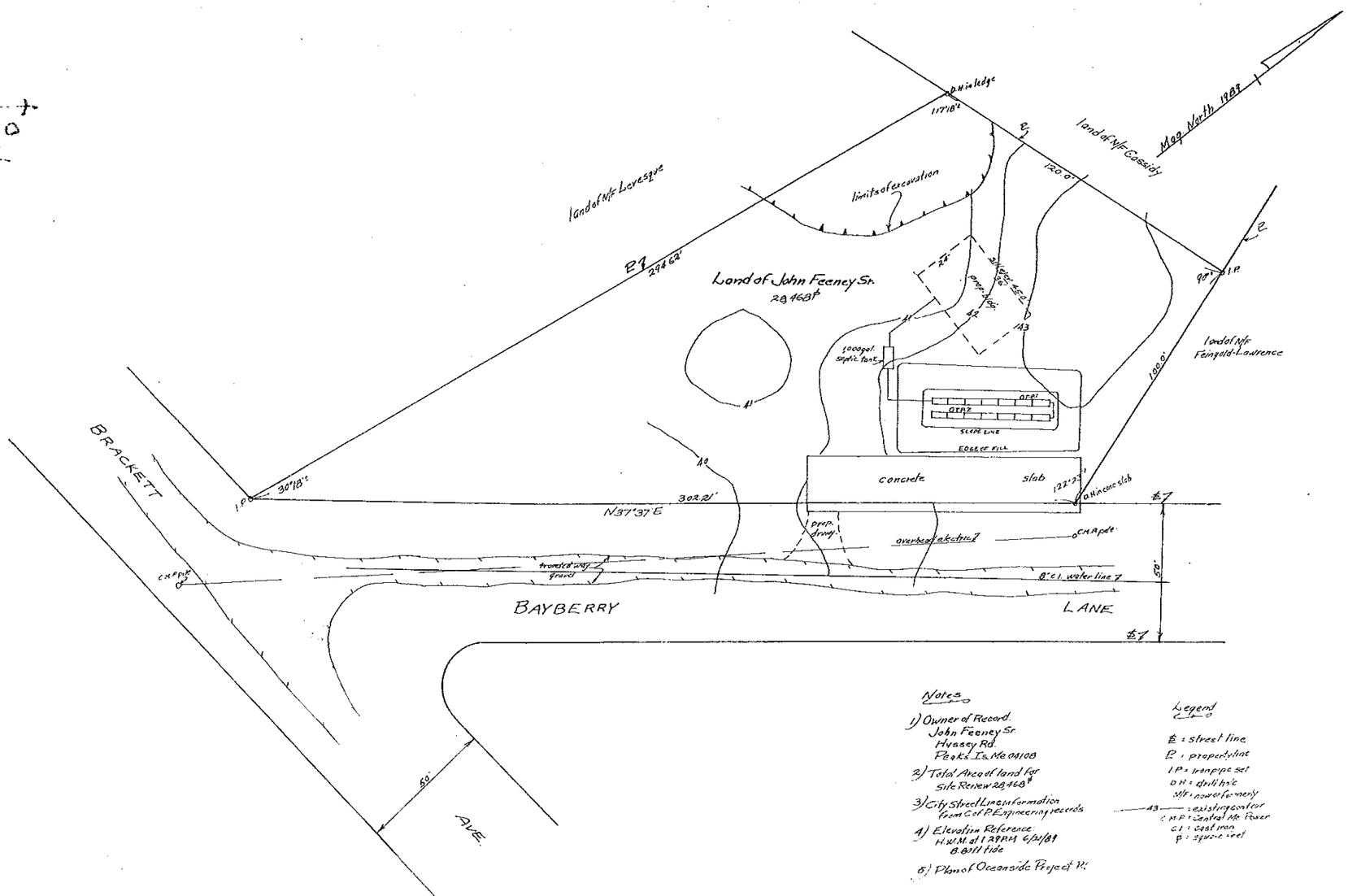


LIEBER RESIDENCE:
PROPOSED NORTH ELEVATION
1/4" = 1'. 0"



A

LIEBER RESIDENCE
PROPOSED EAST ELEVATION
1/4" = 1'. 0"



Notes

1) Owner of Record.
John Feeney Sr.
Hussey Rd.
Peaks Is. Me 04108

2) Total Area of land for Site Review 28,468 ±

3) City Street Line information from C of P Engineering records

4) Elevation Reference:
H.W.M. at 1:29 PM 6/21/89
B.B.M.I. tide

5) Plan of Oceanside Project ?:

Legend

℄ : street line
P : property line
I.P. : iron pipe set
D.H. : drill hole
Mfr : owner formerly
43 : existing contour
C.M.P. : Central Me Power
C.I. : cast iron
sq. : square feet

original – not for This Proposal
* bounday survey not reflect proposed buildg

E Lloyd C Jones

BOUNDARY AND TOPOGRAPHIC SURVEY OF LAND IN PEAKS ISLAND PORTLAND, MAINE

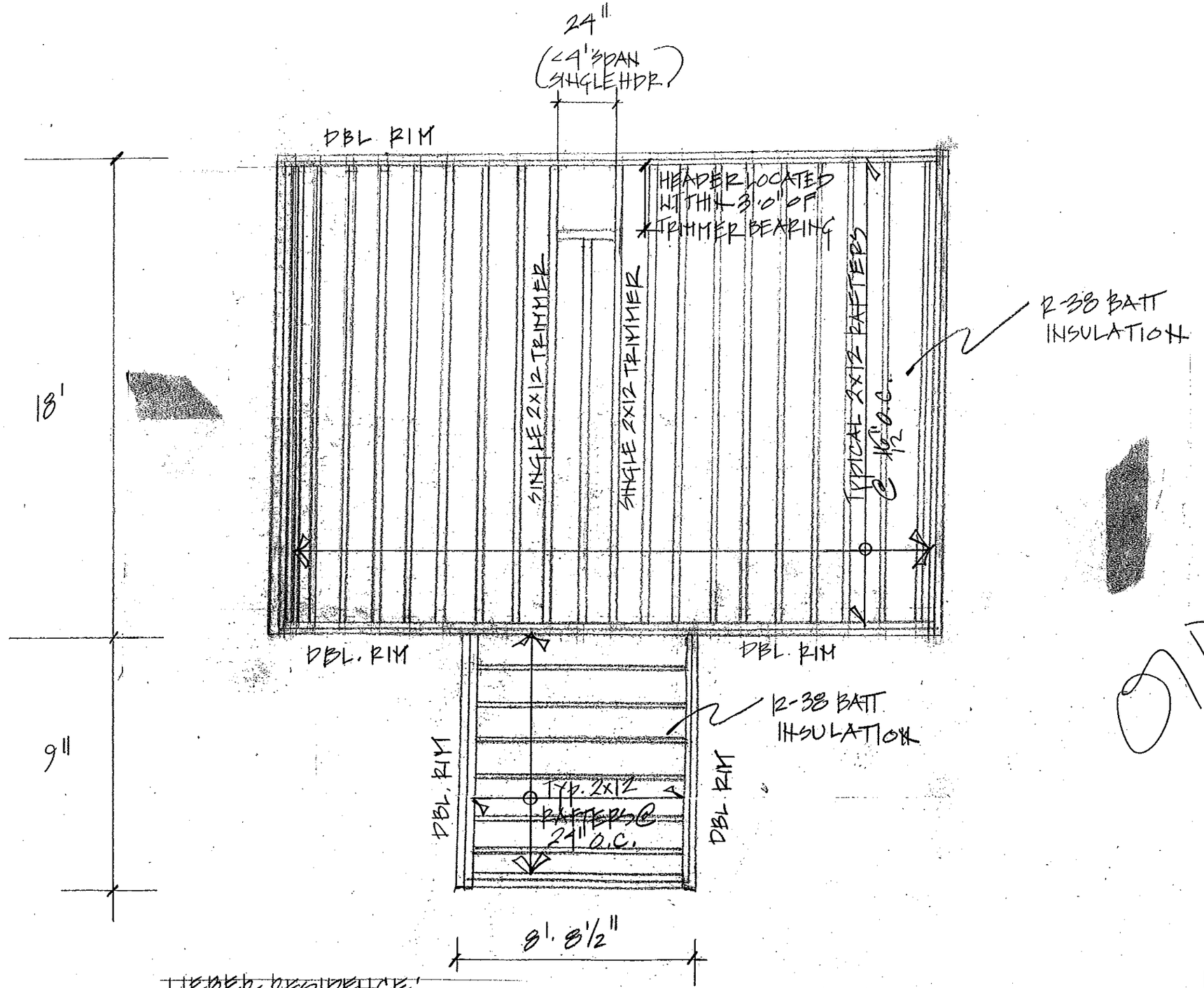
MADE FOR

JOHN FEENEY SR.

Lloyd E. Jones - R.L.S.

Scale 1"=20' DATE 6/89

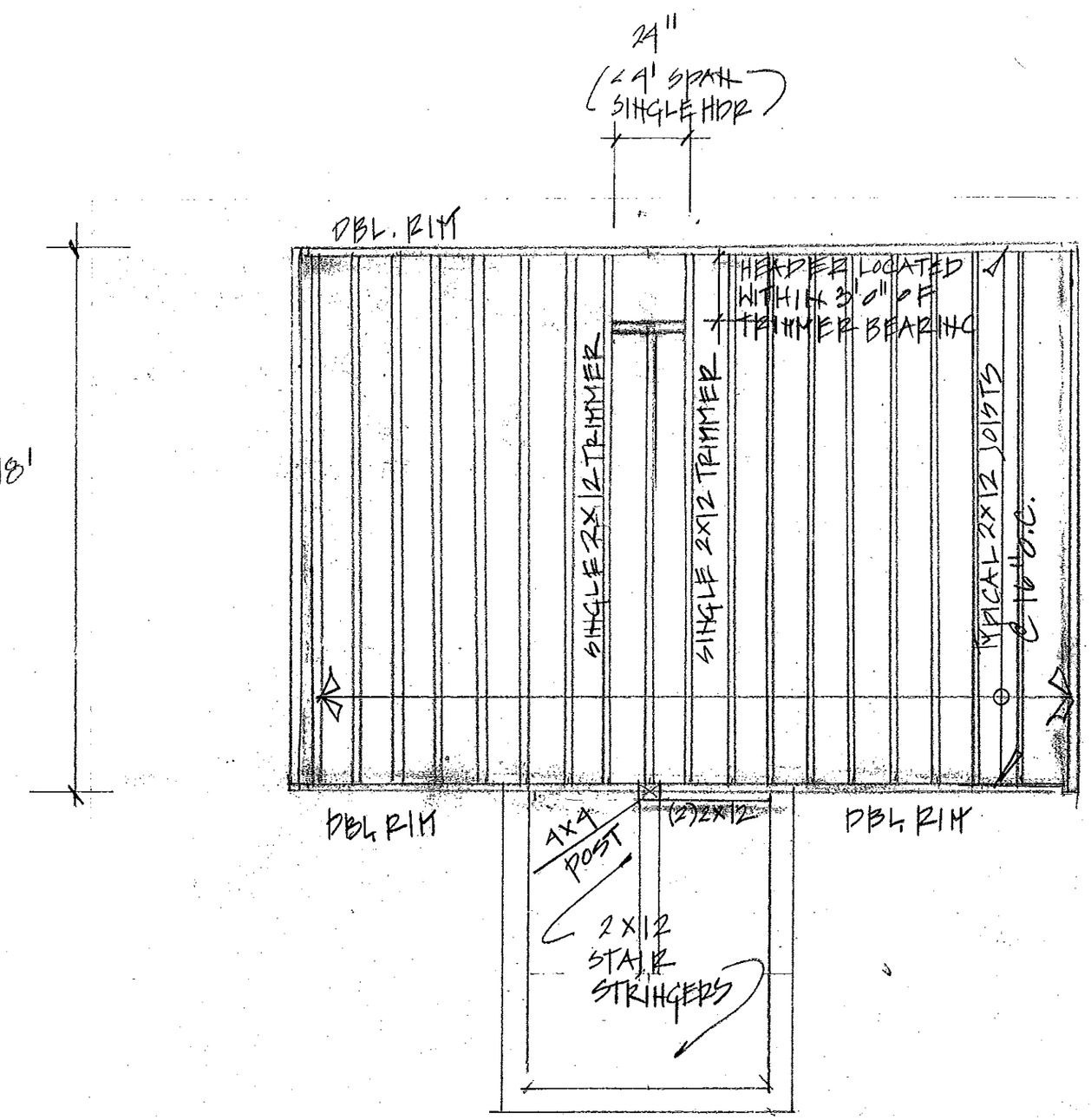
Assessors Plan B9 Lot 7



X

LIEBER RESIDENCE
PROPOSED ROOF FRAMING
¼" = 1'-0"

01D



See spec for open web floor trusses

~~LIEBER RESIDENCE:~~
~~PROPOSED 2ND FLOOR FRAMING~~
~~1/4"=1'-0"~~