



Permitting and Inspections Department  
Michael A. Russell, MS, Director

Reviewed for Code Compliance  
Permitting and Inspections Department  
Approved with Conditions

09/28/2018

## New One- and Two-Family Dwelling (Level I – Minor Residential Development Review)

All applications for the development of a new one- or two-family dwelling requires development review by the Planning and Urban Development Department and zoning and building code review by the Permitting and Inspections Department. Reviews are conducted concurrently and all application materials shall be submitted in one package to the Permitting and Inspections Department. Please include all items listed below to ensure a timely review of the application.

### Submission Checklist

**Applications shall be submitted online via the Citizen Self Service portal. Refer to the attached documents for complete instructions. All applications shall include the following:**

- New One- and Two-Family Dwelling Submission Checklist** (this form)
- Evidence of right, title and interest** (e.g. deed, purchase and sale agreement with current deed)
- NONE  **Copies of any required state and/or federal permits**
- Written description of existing and proposed easements or other burdens**
- NONE  **Written request for waivers from individual site plan and/or technical standards**
- ResCheck** <https://www.energycodes.gov/rescheck/> certificates of compliance per the 2009 IECC
- Boundary Survey** meeting the requirements of Section 13 of the City of Portland Technical Manual
- Site Plan** with the information listed below shown on the plan (can be combined with Boundary Survey or submitted as a separate document). Photocopies of the plat or hand drawn building footprints will not be accepted. Please check all items, as applicable and show on the plan.
  - North arrow and graphic scale
  - Zoning district, setback and dimensional requirements. Show zone lines and overlay zones that apply to the property, including Shoreland Zone, Stream Protection Zone and/or Flood Zones. Highest Annual Tide (HAT) must be shown as located by a surveyor for the Shoreland Zone.
  - Existing and proposed structures showing distances from all property lines
  - Location and dimension of existing and proposed paved areas
  - Finish floor elevation (FFE)
  - Exterior building elevations for all four sides
  - Existing and proposed utilities (or septic system, where applicable)
  - Identification and proposed protection measures for any significant natural features as defined in Section 14-526(b) of the Land Use Code
- NONE  Proposed protection to or alterations of watercourses
- NONE  Proposed wetland protections or impacts
  - Natural Resources Conservation Service (NRCS) soil type
  - Existing and proposed grading and contours
  - Existing and proposed easements or public or private rights-of-way
  - Proposed storm water management and erosion controls
  - Existing vegetation to be preserved and proposed site landscaping and street trees (two trees per unit for a one- or two-family dwelling)
  - Existing and proposed curb and sidewalk for a two-family dwelling
  - Total area and limits of proposed land disturbance
- N/A  Proposed pier, dock, wharf or slope stabilization reconstruction in Shoreland Zone, if applicable
  - Proposed ground floor area of building
  - Foundation/perimeter drain and outlet



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*\*\*Additional requirements may apply for lots on unimproved streets. Contact the Planning and Urban Development Department for more information.\*\**

- A complete set of construction drawings**, including the following per the IRC 2009:

**NOTE: All plans shall be drawn to a measurable scale (e.g., 1/4 inch = 1 foot) and include dimensions.**

- Foundation plan with footing/pier size and location
- Cross sections with framing sizes and material (foundation anchor size/spacing, rebar, drainage, damp proofing, floors, walls, beams, ceilings, headers, rafters etc.)
- Floor plans, to scale, with dimensions
- Elevations, to scale, with dimensions showing height from average grade
- Detail wall/floor/ceiling partitions including listed fire rated assemblies
- Window and door schedules including egress (emergency escape), safety glazing and fire rating
- Locate egress windows and smoke/carbon monoxide detection
- Stair details, including dimensions of rise/run, head room, guards/handrails, and baluster spacing
- Insulation (R-factors) of walls, ceilings and floors and the heat loss (U-factor) of windows
- Deck construction including pier layout, framing, fastenings, anchors, guards, handrails, and stairs
- Dwelling/attached garage separation details

**\*\*Please note:** As of September 16, 2010 all new construction of one- and two-family homes are required to be sprinkled in compliance with NFPA 13D (minimum). This is required by [City Code](#). ([NFPA 101 2009 ed.](#))

**Separate permits are required for internal and external plumbing, electrical installations, heating, ventilating, sprinkler systems and air conditioning (HVAC) systems and appliances.**

## Site Plan Standards for Review of Level I: Minor Residential

Level I: Minor Residential site plan applications are subject to the following site plan standards\*, as contained in section 14-526 of Article V, Site Plan:

- **14-526 (a) Transportation Standards:**
  - 2.a. Site Access and Circulation (i) and (ii);
  - 2.c Sidewalks: *(if the site plan is a two- family or multi-family building only);*
  - 4.a. Location and required number of vehicle parking spaces:(i) and (iv)
- **14-526 (b) Environmental Quality Standards:**
  - 1. Preservation of significant natural features.
    - 2.a. Landscaping and landscape preservation
    - 2.b. Site landscaping (iii)
    - 3.a. Water quality, storm water management and erosion control: a., d., e., and f.
- **14-526 (c) Public Infrastructure and Community Safety Standards:**
  - 1. Consistency with Master Plan
  - 2. Public Safety and fire prevention
  - 3. Availability and adequate capacity of public utilities; a., c., d., and e.
- **14-526 (d) Site Design Standards:**
  - 5. Historic Resources
  - 9. Zoning related design standards

*\*Except as provided in Article III of the City Code, or to conditions imposed under Section 14-526(e) only, or to those submission requirements set forth in section 14-527 as relate solely thereto.*



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**Please note:** The total application fee for a New One- or Two-Family Dwelling application, payable upon receipt of invoice from the Permitting and Inspections Department, includes the site plan application fee, the site inspection fee and the building permit fee (based on the cost of work). A Certificate of Occupancy (CO) is required prior to legally occupying the structure. The CO may be applied for with the Permitting and Inspections Department once the work is complete and all inspections have passed. An additional fee of \$100 is required for a CO and will be invoiced after the CO is applied for. Refer to the [Building Permits and Inspections Fee Schedule](#) for current fee amounts.

#### **Development Review – Planning and Urban Development**

The City of Portland's development review process and requirements are outlined in the [Land Use Code](#) (Chapter 14), which includes the Subdivision Ordinance (Article IV, Sections 491 - 520) and the Site Plan Ordinance (Article V, Sections 521 - 540). The Land Use Code is on the City's website: [www.portlandmaine.gov](http://www.portlandmaine.gov). For additional information regarding development review, please contact the Planning and Urban Development Department:

Planning and Urban Development Department  
Fourth Floor, City Hall  
389 Congress Street  
(207) 874-8721

<http://portlandmaine.gov/314/Planning-Urban-Development>

#### **Zoning and Building Code Review – Permitting and Inspections**

For questions regarding zoning and building code review, please refer to the Permitting and Inspections Department at <http://portlandmaine.gov/1728/Permitting-Inspections>, or the contact information at the bottom of this page. For a code resource, refer to the [One & Two Family Review Guide](#).



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**MORTGAGE, SECURITY AGREEMENT, LEASE ASSIGNMENT  
AND FINANCING STATEMENT**

**KNOW ALL PERSONS BY THESE PRESENTS** that **Stroudwater Development Partners, LLC**, a limited liability company organized under the laws of the State of Maine, having a mailing address 40 South Street, Ste. 305, Marblehead, Massachusetts 01945 (hereinafter called "Grantor"), for consideration paid, the receipt and sufficiency of which is hereby acknowledged, does hereby **Give, Grant, Bargain, Sell, Assign and Convey**, with MORTGAGE COVENANTS unto **Sanford Institution for Savings**, a Maine banking institution, having a place of business at 900 Main Street, Sanford, Maine 04073-0472 (hereinafter called "Grantee"), its successors and assigns forever, to secure the payment of Three Million Seven Hundred Five Thousand Dollars (\$3,705,000.00) and Two Million Three Hundred Forty Four Thousand Dollars (\$2,344,00.00) (collectively the "Loan") with interest and other charges, as applicable, in accordance with the terms and conditions of two (2) Line of Credit Promissory Notes both of even date herewith (collectively the "Note") and all other related loan documents given by Grantor to Grantee (the related loan documents, the Note, and this Mortgage hereinafter collectively the "Loan Documents"), including a certain Performance Guarantee Letter of Credit Reimbursement Agreement governing repayment of any draws upon a certain \$1,511,913.00 Irrevocable Letter of Credit issued by Grantee to the City of Portland, Maine dated of even date herewith (hereinafter collectively referred to as the "Letter of Credit") and to secure other obligations, all as hereafter set forth, a certain lot or parcel of land with the buildings and improvements thereon situated at and near 1700 and 1714 Westbrook Street, Portland, County of Cumberland, State of Maine, and all easements and rights appurtenant thereto (the "Mortgaged Premises"), all as more particularly described in **Exhibit A** attached hereto;

**TO HAVE AND TO HOLD** the aforegranted and bargained Mortgaged Premises, and the other Collateral as provided below, with all the privileges and appurtenances thereof, to Grantee, its successors and assigns, to its and their use and behoof forever;

**PROVIDED NEVERTHELESS**, that if Grantor pays to Grantee the amount of the Loan, together with interest and other liabilities charges under the Loan Documents, as applicable, in accordance with all the terms and conditions of this Mortgage and the aforesaid Loan Documents of even date signed and given by Grantor to Grantee and shall repay when due all other advances which are made by Grantee to or for the benefit of Grantor in accordance with the provisions set forth herein and other provisions hereof, as said Note of even date and any notes or evidences of such advances may be renewed, extended and modified from time to time, and until such payment performs all of Grantor's obligations, covenants and agreements contained herein and contained in said Note, then this Mortgage deed, as also said certain Note, shall be void, otherwise shall remain in full force.

**Section 1. Security Interest in Personal Property.** The Grantor also conveys herewith a security interest in the Grantor's personal property, as provided below:

**Section 1.1. Definitions.** All capitalized terms used herein without definitions shall have the respective meanings provided therefor in the Loan Documents. The term "State," as used in this Section 1, means the state of the Grantor's organization as identified in the first paragraph of this Mortgage. All terms defined in the Uniform Commercial Code (the "UCC") of the State and used herein shall have the same definitions herein as specified therein; *provided, however*, that the term "instrument" shall be such term as defined in Article 9 of the Uniform Commercial Code of the State rather than Article 3. The term "Obligations," as used in this Section 1 and in this Mortgage, means all of the indebtedness, obligations, and liabilities of the Grantor to the Grantee, individually or collectively, whether direct or indirect, joint





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or several, absolute or contingent, due or to become due, now existing or hereafter arising under the Note or in respect to any of the Loan Documents. An "Event of Default," as used herein, shall have such meaning as described in Section 3.8 of this Mortgage.

**Section 1.2. Grant of Security Interest.** The Grantor as the debtor hereby grants to the Grantee as the secured party, to secure the payment and performance in full of all of the Obligations, a security interest in and so pledges and assigns to the Grantee the following properties, assets, and rights of the Grantor, wherever located, whether now owned or hereafter acquired or arising, and all proceeds and products thereof (all of the same being hereinafter called the "Collateral"): all personal and fixture property of every kind and nature including without limitation all goods (including inventory, equipment, and any accessions thereto), instruments (including promissory notes), documents, accounts (including health-care-insurance receivables), chattel paper (whether tangible or electronic), deposit accounts, letter-of-credit rights (whether or not the letter of credit is evidenced by a writing), commercial tort claims, securities and all other investment property, supporting obligations, any other contract rights or rights to the payment of money, insurance claims and proceeds, tort claims, and all general intangibles, including, without limitation, all payment intangibles, patents, patent applications, trademarks, trademark applications, trade names, copyrights, copyright applications, software, engineering drawings, service marks, customer lists, goodwill, and all licenses, permits, agreements of any kind or nature pursuant to which the Grantor possesses, uses, or has authority to possess or use property (whether tangible or intangible) of others or others possess, use, or have authority to possess or use property (whether tangible or intangible) of the Grantor, and all recorded data of any kind or nature, regardless of the medium of recording, including, without limitation, all software, writings, plans, specifications, and schematics. Additionally, to the extent that any such Collateral shall be purchased by Grantor with the Loan proceeds (the "Purchase Money Collateral"), Grantor hereby grants a purchase money security interest in the Purchase Money Collateral, which Purchase Money Collateral shall specifically include without limitation the items described, if any, in Section 1.5(g).

**Section 1.3. Authorization to File Financing Statements.** The Grantor hereby irrevocably authorizes the Grantee at any time and from time to time to file in any Uniform Commercial Code jurisdiction any initial financing statements and amendments or addendums thereto that: (a) indicate the Collateral (i) as all assets of the Grantor or words of similar effect, regardless of whether any particular asset comprised in the Collateral falls within the scope of Article 9 of the Uniform Commercial Code of the State or such jurisdiction, or (ii) as being of an equal or lesser scope or with greater detail; and (b) contain any other information required by Part 5 of Article 9 of the Uniform Commercial Code of the State for the sufficiency or filing office acceptance of any financing statement or amendment, including (i) whether the Grantor is an organization, the type of organization and any organization identification number issued to the Debtor and, (ii) in the case of a financing statement filed as a fixture filing or indicating Collateral as as-extracted collateral or timber to be cut, a sufficient description of real property to which the Collateral relates. The Grantor agrees to furnish any such information to the Grantee promptly upon request. The Debtor also ratifies its authorization for the Grantee to have filed in any Uniform Commercial Code jurisdiction any like initial financing statements or amendments thereto if filed prior to the date hereof.

**Section 1.4. Financing Statement.** Grantor hereby acknowledges and agrees that the within Mortgage shall be effective as a financing statement filed or recorded as a fixture filing;



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FINANCING STATEMENT

Name and Address of Debtor:	Name and Address of Secured Party:
Stroudwater Development Partners, LLC 40 South Street, Suite 305 Marblehead, Massachusetts 01945	Sanford Institution for Savings 900 Main Street Sanford, Maine 04073

(a) This financing statement covers the types (items) of property (or goods) hereinabove described; (b) the above goods are, or are to become, fixtures on real estate situated at the Mortgaged Premises, being more particularly described in Exhibit A, attached hereto, and by this reference made a part hereof; and (c) the name of the record owner of the real estate is the Grantor.

**Section 1.5. Other Actions.** Further to insure the attachment, perfection, and first priority of, and the ability of the Grantee to enforce the Grantee's security interest in the Collateral, the Grantor agrees, in each case at the Grantor's own expense, to take the following actions with respect to the following Collateral:

**Section 1.5(a). Promissory Notes and Tangible Chattel Paper.** If the Debtor shall at any time hold or acquire any promissory notes or tangible chattel paper, the Debtor shall forthwith endorse, assign, and deliver the same to the Grantee, accompanied by such instruments of transfer or assignment duly executed in blank as the Grantee may from time to time specify.

**Section 1.5(b). Deposit Accounts.** For each deposit account that the Grantor at any time opens or maintains, the Grantor shall, at the Grantee's request and option, pursuant to an agreement in form and substance satisfactory to the Grantee, either (a) cause the depositary Grantee to agree to comply at any time with instructions from the Grantee to such depositary Grantee directing the disposition of funds from time to time credited to such deposit account, without further consent of the Grantor, or (b) arrange for the Grantee to become the customer of the depositary Grantee with respect to the deposit account, with the Grantor being permitted, only with the consent of the Grantee, to exercise rights to withdraw funds from such deposit account. The Grantee agrees with the Grantor that the Grantee shall not give any such instructions or withhold any withdrawal rights from the Grantor, unless an Event of Default has occurred and is continuing, or, after giving effect to any withdrawal not otherwise permitted by the Loan Document, would occur. The provisions of this paragraph shall not apply to (i) any deposit account for which the Grantor, the depositary Grantee, and the Grantee have entered into a cash collateral agreement specially negotiated among the Grantor, the depositary Grantee, and the Grantee for the specific purpose set forth therein, (ii) deposit accounts for which the Grantee is the depositary, and (iii) deposit accounts specially and exclusively used for payroll, payroll taxes, and other employee wage and benefit payments to or for the benefit of the Grantor's salaried employees.

**Section 1.5(c). Investment Property.** If the Grantor shall at any time hold or acquire any certificated securities, the Grantor shall forthwith endorse, assign, and deliver the same to the Grantee, accompanied by such instruments of transfer or assignment duly executed in blank as the Grantee may from time to time specify. If any securities now or hereafter acquired by the Grantor are uncertificated and are issued to the Grantor or its nominee directly by the issuer thereof, the Grantor shall immediately notify the Grantee thereof and, at the Grantee's request and option, pursuant to an



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agreement in form and substance satisfactory to the Grantee, either (i) cause the issuer to agree to comply with instructions from the Grantee as to such securities, without further consent of the Grantor or such nominee, or (ii) arrange for the Grantee to become the registered owner of the securities. If any securities, whether certificated or uncertificated, or other investment property now or hereafter acquired by the Grantor are held by the Grantor or its nominee through a securities intermediary or commodity intermediary, the Grantor shall immediately notify the Grantee thereof and, at the Grantee's request and option, pursuant to an agreement in form and substance satisfactory to the Grantee, either (i) cause such securities intermediary or (as the case may be) commodity intermediary to agree to comply with entitlement orders or other instructions from the Grantee to such securities intermediary as to such securities or other investment property, or (as the case may be) to apply any value distributed on account of any commodity contract as directed by the Grantee to such commodity intermediary, in each case without further consent of the Grantor or such nominee, or (ii) in the case of financial assets or other investment property held through a securities intermediary, arrange for the Grantee to become the *entitlement holder* with respect to such investment property, with the Grantor being permitted, only with the consent of the Grantee, to exercise rights to withdraw or otherwise deal with such investment property. The Grantee agrees with the Grantor that the Grantee shall not give any such entitlement orders or instructions or directions to any such issuer, securities intermediary, or commodity intermediary, and shall not withhold its consent to the exercise of any withdrawal or dealing rights by the Grantor, unless an Event of Default has occurred and is continuing, or, after giving effect to any such investment and withdrawal rights not otherwise permitted by the Loan Documents, would occur. The provisions of this paragraph shall not apply to any financial assets credited to a securities account for which the Grantee is the securities intermediary.

**Section 1.5(d). Collateral in the Possession of a Bailee.** If any goods are at any time in the possession of a bailee, the Grantor shall promptly notify the Grantee thereof and, if requested by the Grantee, shall promptly obtain an acknowledgment from the bailee, in form and substance satisfactory to the Grantee, that the bailee holds such Collateral for the benefit of the Grantee and shall act upon the instructions of the Grantee, without the further consent of the Grantor. The Grantee agrees with the Grantor that the Grantee shall not give any such instructions unless an Event of Default has occurred and is continuing or would occur after taking into account any action by the Grantor with respect to the bailee.

**Section 1.5(e). Electronic Chattel Paper and Transferable Records.** If the Grantor at any time holds or acquires an interest in any electronic chattel paper or any "transferable record," as that term is defined in § 16 of the Uniform Electronic Transactions Act as in effect in any relevant jurisdiction, the Grantor shall promptly notify the Grantee thereof and, at the request of the Grantee, shall take such action as the Grantee may reasonably request to vest in the Grantee control under UCC § 9-105 of such electronic chattel paper or control under § 16 of the Uniform Electronic Transactions Act, as so in effect in such jurisdiction, of such transferable record. The Grantee agrees with the Grantor that the Grantee will arrange, pursuant to procedures satisfactory to the Grantee and so long as such procedures will not result in the Grantee's loss of control, for the Grantor to make alterations to the electronic chattel paper or transferable record permitted under UCC § 9-105 or, as the case may be, § 16 of the Uniform Electronic Transactions Act for a party in control to make without loss of control, unless an Event of Default has occurred and is continuing or would occur after taking into account any action by the Grantor with respect to such electronic chattel paper or transferable record.

**Section 1.5(f). Letter-of-Credit Rights.** If the Grantor is at any time a beneficiary under



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a letter of credit now or hereafter issued in favor of the Grantor, the Grantor shall promptly notify the Grantee thereof and, at the request and option of the Grantee, the Grantor shall, pursuant to an agreement in form and substance satisfactory to the Grantee, either (i) arrange for the issuer and any confirmer of such letter of credit to consent to an assignment to the Grantee of the proceeds of any drawing under the letter of credit or (ii) arrange for the Grantee to become the transferee beneficiary of the letter of credit, with the Grantee agreeing, in each case, that the proceeds of any drawing under the letter of credit are to be applied.

**Section 1.5(g). Commercial Tort Claims.** Commercial tort claims, as referenced in Section 1.2, shall specifically include without limitation such claims, if any, described as follows: \_\_\_\_\_ . In the event the foregoing is left blank, the Grantor represents and warrants that no such tort claims exist as of the date hereof. If the Grantor shall at any time hold or acquire a commercial tort claim, the Grantor shall immediately notify the Grantee in a writing signed by the Grantor of the brief details thereof and grant to the Grantee in such writing a security interest therein and in the proceeds thereof, all upon the terms of this Mortgage, with such writing to be in form and substance satisfactory to the Grantee.

**Section 1.5(h). Other Actions as to Any and All Collateral.** The Grantor further agrees to take any other action reasonably requested by the Grantee to insure the attachment, perfection and first priority of, and the ability of the Grantee to enforce, the Grantee's security interest in any and all of the Collateral including, without limitation: (a) executing, delivering and, where appropriate, filing financing statements and amendments or addendums relating thereto under the Uniform Commercial Code, to the extent, if any, that the Grantor's signature thereon is required therefor; (b) causing the Grantee's name to be noted as secured party on any certificate of title for a titled good if such notation is a condition to attachment, perfection, or priority of, or ability of the Grantee to enforce, the Grantee's security interest in such Collateral; (c) complying with any provision of any statute, regulation, or treaty of the United States as to any Collateral if compliance with such provision is a condition to attachment, perfection, or priority of, or ability of the Grantee to enforce, the Grantee's security interest in such Collateral; (d) obtaining governmental and other third-party consents and approvals, including without limitation any consent of any licensor, lessor, or other person obligated on Collateral; (e) obtaining waivers from mortgagees and landlords in form and substance satisfactory to the Grantee; and (f) taking all actions required by any earlier versions of the Uniform Commercial Code or by other law, as applicable in any relevant Uniform Commercial Code jurisdiction, or by other law as applicable in any foreign jurisdiction.

**Section 1.6. Representations and Warranties of Grantor's Legal Status.** The Grantor represents and warrants to the Grantee as follows: (a) the Grantor's exact legal name, type of organization, and jurisdiction of organization is that indicated in the first paragraph of this Mortgage; (b) the Grantor's correct organizational identification number is provided on the signature page of this Mortgage, or if no such number is provided thereon, Grantor does not have an organizational identification number; and (c) the Grantor's principal place of business or, if more than one, Grantor's chief executive office is located in the State at the address set forth in the first paragraph of this Mortgage, unless otherwise indicated as follows: \_\_\_\_\_ , and if the foregoing is left blank, no such other address exists.

**Section 1.7. Other Covenants Concerning Grantor's Legal Status.** The Grantor covenants with the Grantee as follows: (a) without providing at least 30 days prior written notice to the Grantee, the Grantor will not change its name, its place of business or, if more than one, chief executive office, or its



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mailing address or organizational identification number if it has one, (b) if the Grantor does not have an organizational identification number and later obtains one, the Grantor shall forthwith notify the Grantee of such organizational identification number, and (c) the Grantor will not change its type of organization, jurisdiction of organization, or other legal structure.

**Section 1.8. Representations and Warranties Concerning Collateral, Etc.** The Grantor further represents and warrants to the Grantee as follows: (a) the Grantor is the owner of or has other rights in the Collateral, free from any adverse lien, security interest, or other encumbrance, except for the security interest created hereunder and other liens expressly permitted and specified by the Loan Documents (the "Permitted Liens"); (b) none of the Collateral constitutes, or is the proceeds of, "farm products" as defined in § 9-102(a)(34) of the Uniform Commercial Code of the State; (c) none of the account debtors or other persons obligated on any of the Collateral is a governmental authority subject to the Federal Assignment of Claims Act or like federal, state, or local statute or rule in respect of such Collateral, (d) the Grantor holds no commercial tort claim as of the date hereof except as indicated in Section 1.5(g), if any, and (e) the Grantor has at all times operated its business in compliance with all applicable provisions of the federal Fair Labor Standards Act, as amended, and with all applicable provisions of federal, state, and local statutes and ordinances dealing with the control, shipment, storage, or disposal of hazardous materials or substances, and (f) all other information set forth on the Loan Documents pertaining to the Collateral is accurate and complete.

**Section 1.9. Covenants Concerning Collateral, Etc.** The Grantor further covenants with the Grantee as follows: (a) the Collateral, to the extent not delivered to the Grantee as may be required hereunder, will be kept at locations within the State, unless Grantor otherwise gives Grantee written notice thereof; (b) the Grantor will not remove the Collateral from the foregoing locations without providing at least 30 days prior written notice to the Grantee; (c) except for the security interest herein granted and any Permitted Liens, the Grantor shall be the owner of or have other rights in the Collateral free from any lien, security interest, or other encumbrance, and the Grantor shall defend the same against all claims and demands of all persons at any time claiming the same or any interests therein adverse to the Grantee; (d) the Grantor shall not pledge, mortgage, or create, or suffer to exist a security interest in the Collateral in favor of any person other than the Grantee, except for any Permitted Liens; (e) the Grantor will keep the Collateral in good order and repair and will not use the same in violation of law or any policy of insurance thereon; (f) the Grantor will permit the Grantee, or its designee, to inspect the Collateral at any reasonable time, wherever located; (g) the Grantor will pay promptly when due all taxes, assessments, governmental charges, and levies upon the Collateral or incurred in connection with the use or operation of such Collateral or incurred in connection with this Mortgage; (h) the Grantor shall not file any termination, amendment, addendum or other UCC filing with any state or local governmental authority that would in any manner affect the perfection of Grantee's security interest in the Collateral, without provided at least thirty (30) days prior written notice thereof to the Grantee; (i) the Grantor will continue to operate its business in compliance with all applicable provisions of the federal Fair Labor Standards Act, as amended, and with all applicable provisions of federal, state, and local statutes and ordinances dealing with the control, shipment, storage, or disposal of hazardous materials or substances; and (i) the Grantor will not sell or otherwise dispose, or offer to sell or otherwise dispose, of the Collateral or any interest therein except for: (1) sales or leases of inventory (and licenses of any general intangibles) in the ordinary course of business, and (2) so long as no Event of Default has occurred and is continuing, sales or other dispositions of obsolescent items of equipment in the ordinary course of business consistent with past practices of the Grantor.





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**Section 2. Assignment of Leases and Rents.** As further security for payment of the indebtedness and performance of the obligations, covenants and agreements secured hereby, Grantor hereby sells, transfers, sets over and assigns to Grantee, its successors and assigns, from this date forward:

**Section 2.1. Leases and Rents.** All of Grantor's right, title and interest as Landlord in, to, and under all leases and tenancies, including the right to receive the rentals and other payments due thereunder, for the Mortgaged Premises, conveyed this date by Grantor to Grantee, whether oral or written, and including any extensions or renewals, and all rents, additional rents, and other amounts which are or may hereafter become due and owing. This assignment is given to further secure said Note from Grantor to Grantee of even date herewith. In the event the obligations of Grantor to Grantee under the Note and Mortgage Deed shall be fully performed and satisfied, the within assignment shall be void, otherwise it shall remain in force. The Grantor represents that rents due subsequent to this Mortgage and Lease Assignment have not been paid in advance by any tenant, except as may have been disclosed prior hereto to the Grantee. Grantor also hereby assigns and transfers to Grantee, all security deposits and escrows, if any, related to each and every lease assigned herein, and to each and every tenancy, whether or not pursuant to a lease.

**Section 2.1(a). Collection of Rents, Right to Enter.** Upon the occurrence of any Event of Default, Grantee may, at its option, receive and collect all the said rents and other payments due under any lease, and may also, at its option, in addition, enter upon the said Mortgaged Premises and take possession thereof by its officers, agents, or employees, for the purpose of collection of the rents, and for the operation and maintenance of said Mortgaged Premises, the Grantor hereby authorizes the Grantee in general to perform all acts necessary for the operation and maintenance of said Mortgaged Premises in the same manner and to the same extent that the Grantor might reasonably so act. Grantee shall, after payment of all proper charges and expenses, credit the rentals or other payments which it may receive by virtue of the within assignment to any amounts due Grantee by Grantor under the terms and provisions of said Note and Mortgage and the balance shall be paid by Grantee to Grantor.

**Section 2.1(b). Cancellations, Amendments, Notice to Grantee.** Grantor agrees that hereafter Grantor will not: (a) cancel, terminate or surrender any lease; (b) reduce the rent, pay, receive or anticipate rental payments before they are due under the terms of any lease; or (c) modify or amend any lease in any way, either orally or in writing without obtaining the prior written consent of Grantee, which consent will not be unreasonably withheld provided that the security interest of Grantee shall not be adversely affected.

**Section 2.1(c). No Waiver of Rights.** Grantor agrees that exercise of any right under this Assignment, including the receipt of rent and other payments due by Grantee and including any credit or disposition of such funds for Grantor's account or otherwise, shall not constitute a waiver of any rights, statutory or otherwise, of Grantee, under said Mortgage or Note, including, but not limited to, the right of foreclosure and acceleration of said Mortgage indebtedness.

**Section 2.1(d). Obligations of Grantee.** It is also understood and agreed by Grantor, that although Grantee shall have the right to perform the obligations of Grantor under any lease, this Assignment shall impose no obligation whatsoever upon Grantee to perform any obligation of the Grantor to be performed under any lease, which obligations Grantor agrees to perform.

**Section 2.2. Judgments and Awards.** All judgments, awards of damages and settlements hereafter made as a result or in lieu of any taking of the Mortgaged Premises or any interest thereon or part



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thereof under the power of eminent domain, or for any damage (whether caused by such taking or otherwise) to the Mortgaged Premises or the improvements thereon or any part thereof, including any award for change of grade or streets. Grantee may apply all such sums or any part thereof so received on the indebtedness secured hereby in such manner as it elects or, at its option, the entire amount or any part thereof so received may be released. Grantor hereby irrevocably authorizes and appoints Grantee and any attorney-in-fact of Grantee to collect and receive any such judgments, awards and settlements from the authorities or entities making the same, to appear in any proceeding therefor, to give receipts and acquittances therefor, and to apply the same to payment on account of the debt secured hereby, whether then matured or not; and the Grantor will execute and deliver to the Grantee on demand such assignments and other instruments as the Grantee may require for said purposes and will reimburse the Grantee for its cost (including reasonable counsel fees) in the collection of such judgments and settlements.

**Section 2.3. No Waiver of Remedies by Receipt.** Receipt of rents, awards, and any other monies or evidences thereof, pursuant to the provisions of this Section 2 and any disposition of the same by Grantee, shall not constitute a waiver of the right of foreclosure by Grantee in the event of default or failure of performance by Grantor of any covenant or agreement contained herein or any note secured hereby.

**Section 3. Covenants and Agreements.** Grantor covenants and agrees with Grantee as follows:

**Section 3.1. Title Covenants.** Grantor is lawfully seized of an indefeasible estate in fee simple, free from encumbrances, except as may have been specifically noted herein or in Schedule B, Part 1 of the Grantee's final title insurance policy for the Mortgaged Premises (the "Permitted Exceptions"), and has good right and power to convey the Mortgaged Premises to Grantee to hold as aforesaid, and that Grantor shall and will Warrant and Defend the same to Grantee forever against the claims and demands of all persons, except as aforesaid.

**Section 3.2. Performance.** Grantor shall pay all sums secured hereby when due, including all sums due under the said Note and shall perform all other terms and provisions set forth or referred to therein or herein; Grantor agrees that a default in the payment of said Note or a default in the terms or provisions of said Note shall constitute a default in the terms and provisions of this Mortgage entitling the Grantee to exercise any one or more of its remedies hereunder or available at law or in equity.

**Section 3.3. Payment of Taxes, Liens, Etc.** Grantor shall pay, when due, all taxes and assessments of every type or nature levied or assessed against the Mortgaged Premises and any claim, lien or encumbrance against the Mortgaged Premises which may be or become due prior to this Mortgage. Grantee, at its option, shall have the right to require that one-twelfth (1/12) of the annual estimated real estate taxes shall be paid monthly to the Grantee, to be held in a non-interest bearing account.

**Section 3.4. Insurance.** Grantor shall keep the Mortgaged Premises insured against loss or damage by fire, the perils against which insurance is afforded by the Extended Coverage Endorsement, and such other risks and perils as Grantee, in its discretion, may require from time to time, including, without limitation, insurance against flood damage and business interruption. Grantee, at its option, shall have the right to require that one-twelfth (1/12) of the annual estimated premiums for fire, liability and flood insurance coverage shall be paid monthly to the Grantee, to be held in a non-interest bearing account. The policy or policies of such insurance shall be in such form, shall contain such terms and provisions and shall be in such amounts as Grantee may require, and shall be issued by a company or companies approved by Grantee, with loss payable to Grantee its successors and assigns, and shall, at the request of Grantee,



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provide for payment of the full replacement value of the Mortgaged Premises in lieu of a specified sum, which replacement value insurance shall be in an amount at all times sufficient to keep Grantor from becoming a co-insurer, which may be evidenced by any agreed amount or similar affirmative statement from any insurer. Such policy or policies also maintain comprehensive general public liability insurance for personal injury and property damage, with contractual liability endorsement, in amounts of not less than Five Hundred Thousand Dollars (\$500,000.00) with respect to any single bodily injury (including death) or single instance of property damage, and not less than Two Million Dollars (\$2,000,000.00) with respect to any accident involving more than a single bodily injury or more than a single instance of property damage, or such greater amounts as Grantee may reasonably require from time to time; Grantor shall deliver simultaneously herewith the policies providing such public liability insurance for personal injury and property damage to the Grantee to be held by the Grantee, except that certificates of insurance, addressed to the Grantee, satisfactory in form and content to Grantee, evidencing such public liability insurance for personal property and property damage insurance may be delivered to the Grantee in lieu of the policies therefor, provided that a copy of the underlying policy is also delivered to the Grantee; the policies for such public liability, personal injury and property damage insurance shall name Grantee its successors and assigns, as an additional insured and shall be carried with such companies and shall contain such other terms and conditions as shall be satisfactory to Grantee, including an obligation upon any such insurer to notify Grantee its successors and assigns, of any cancellation of any such insurance coverage in writing thirty (30) days in advance thereof. Any and all amounts received by Grantee as payee under any of such policies may be applied by Grantee its successors and assigns, to the indebtedness secured hereby in such manner as Grantee may, in its sole discretion, elect, or, at the option of Grantee, the entire amount so received or any part thereof may be released to Grantor. Upon foreclosure of this Mortgage or other acquisition of the Mortgaged Premises or any part thereof by Grantee, such policies naming Grantee as payee shall become the absolute property of Grantee, but receipt of any insurance proceeds and any disposition of the same by Grantee shall not constitute a waiver of any rights of Grantee, statutory or otherwise, and specifically shall not constitute a waiver of the right of foreclosure by Grantee in the event of default or failure of performance by Grantor of any covenant or agreement contained herein or in any note secured hereby.

**Section 3.5. Escrow for Taxes, Insurance, Etc.** In addition to Grantee's rights described above, upon written request therefor by Grantee to Grantor, which request may be withdrawn and remade from time to time, and upon evidence that the Grantor has failed to promptly pay real estate taxes, assessments and/or water and sewer charges and/or insurance premiums when due, except as are being contested in good faith and by appropriate proceedings pursued with diligence with appropriate reserves established therefore, Grantor shall pay to Grantee on a monthly basis hereafter set forth a sum equal to the municipal and other governmental real estate taxes, other assessments next due on the real property described in this Mortgage and all premiums next due for fire and other casualty insurance required of Grantor hereunder, less all sums already paid therefor, divided by the number of months to elapse not less than one (1) month prior to the date when said taxes and assessments will become delinquent and when such premiums will become due. Such sums as estimated by Grantee shall be paid with monthly payments of interest due pursuant to the terms of the indebtedness secured by this Mortgage and such sums shall be held at no interest by Grantee to pay said taxes, assessments and premiums before the same become delinquent. Grantor agrees that should there be insufficient funds so deposited with Grantee for said taxes, assessments and premiums when due, it will upon demand by Grantee promptly pay to Grantee amounts necessary to make such payments in full; any surplus funds may be applied toward the payment of the indebtedness secured by this Mortgage or credited toward future such taxes, assessments and premiums; if Grantee shall have commenced foreclosure proceedings, the Grantee may apply such funds toward the payment of the Obligations without causing thereby a waiver of any rights, statutory or otherwise, and specifically such application shall not constitute a



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waiver of the right of foreclosure hereunder. Grantor hereby assigns to Grantee all the foregoing sums so held hereunder for such purposes.

**Section 3.6. Grantor Obligations Concerning Mortgaged Premises.** Grantor (i) shall not remove or demolish nor alter the design or structural character of any building hereafter erected upon the Mortgaged Premises unless the Grantee shall first consent thereto in writing; (ii) shall maintain the Mortgaged Premises in good condition and repair; (iii) shall not commit or suffer waste thereof; and (iv) shall comply with all laws, ordinances, regulations, covenants, conditions and restrictions affecting the Mortgaged Premises and will not suffer or permit any violation thereof.

**Section 3.7. Right of Grantee to Make Payments, Advances.** If Grantor fails to defend against or pay any claim, lien or encumbrance which is alleged to be prior to this Mortgage when due, any tax or assessment or insurance premium, or to keep the Mortgaged Premises in good repair, or shall commit or permit waste, or if there be commenced any action or proceeding affecting the Mortgaged Premises or the title thereto, then Grantee, at its option, may pay said claim, lien, encumbrance, tax, assessment or premium, with right of subrogation thereunder, may procure such abstracts or other evidence of title as it deems necessary, may make such repairs and take such steps as it deems advisable to prevent or cure such waste, and may appear in any action or proceeding and retain counsel therein, and take such action therein as Grantee deems advisable, and for any of said purposes Grantee may advance such sums of money as it deems necessary. Grantee shall have no responsibility with respect to the legality, validity and priority of any such claim, lien, encumbrance, tax, assessment and premium, and of the amount necessary to be paid in satisfaction thereof, Grantor shall pay to Grantee, immediately and without demand, all sums of money advanced by Grantee pursuant to this paragraph, together with interest on each sum advancement at the rate of interest that is three percent (3%) per annum greater than the interest rate per annum provided for under the Note of even date secured hereby, and all such sums and interest thereon shall be secured hereby.

**Section 3.8. Event of Default.** The occurrence of any Event of Default as defined in the Loan Agreement, at the option of the Grantee, be an Event of Default under this Mortgage.

**Section 3.9. Grantee Rights Upon Default.** Upon the occurrence of any Event of Default, which is not remedied within any applicable notice or cure period, Grantee may without limitation exercise one or more of the following rights:

**Section 3.9(a). Foreclosure.** Foreclose this Mortgage under any method of foreclosure authorized by applicable law as of the date hereof or at the time of the occurrence of the Event of Default, at the option of the Grantee, and exercise its rights as secured party for all or any portion of the debt secured hereby which is then due and payable, by acceleration or otherwise, subject to the continuing lien of this Mortgage for the balance not then due and payable.

**Section 3.9(b). Possession.** By its agents, servants or attorneys, take possession of and enter upon the Mortgaged Premises; whether or not such possession be taken, collect and receive the rents, issues and profits therefrom; and apply such receipts, first to the payment of the necessary expenses of operating the Mortgaged Premises (including, without limitation, charges of counsel and customary fees for management agents), and second, in the Grantee's sole discretion, to the payment of amounts due on the Note or amounts required to be paid by the Grantor under any provision hereof. The application of such receipts shall not constitute a waiver of any Event of Default.



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**Section 3.9(c). Appointment of Receiver.** Apply for and shall be entitled to the appointment of a receiver of the rents, issues and profits of the Mortgaged Premises, without notice to the Grantor, without regard to the value of the Mortgaged Premises as security for the amounts due to the Grantee or to the solvency of any person liable for the payment of such amounts, and irrespective of whether the Grantee has an adequate remedy at law.

**Section 3.9(d). Right to Cure.** The Grantee may, but shall not be obligated to, pay any amount which the Grantor has failed to pay, or perform any act which the Grantor has failed to perform hereunder, in which event the costs, disbursements, expenses and charges of counsel thereof, together with interest thereon from the date the expense is paid or incurred at the rate borne by the Note, shall be payable by the Grantor on demand and shall be secured by the lien of this Mortgage.

**Section 3.10. Power of Sale.** This Mortgage is subject to the "Statutory Power of Sale" pursuant to 33 M.R.S.A. §501-A, which is hereby granted to Grantee and is incorporated herein and made a part hereof by reference.

**Section 3.10(a). Representations Concerning Power of Sale.** Grantor agrees, warrants and represents that this Mortgage is given primarily for a business, commercial or agricultural purpose. Also, if this Mortgage is granted by a Trustee of a Trust, Grantor warrants and represents that, as of the date of this Mortgage, the real estate encumbered by the Mortgage is not used exclusively for residential purposes, the real estate has more than four (4) residential units, and none of the residential units is the principal residence of the owner of at least one-half (1/2) of the beneficial interest in the Trust.

**Section 3.10(b). Rights of Grantee Under Power of Sale.** Grantor further agrees that, upon the occurrence of any Event of Default, Grantee may sell the Mortgaged Premises, or such portion thereof as may remain subject to the Mortgage in case of any partial release thereof, either as a whole or in parcels, together with all improvements that may be thereon, by a public sale and that, notwithstanding the provisions of 14 M.R.S.A. §6203-A *et seq.*, the public sale may be conducted on or near the Mortgaged Premises then subject to the Mortgage, or if more than one parcel is then subject thereto, then on or near one of said parcels, or the principal office of Grantee, or the branch office of the Grantee nearest to the Mortgaged Premises, or at such place as may be designated for that purpose in the Mortgage, first complying with the terms of the Mortgage and the law of Maine relating to the foreclosure of a mortgage by the exercise of the "Statutory Power of Sale", as it is as of the date of the execution hereof or as it may be at the time Grantee exercises such right or rights, and provided that Grantor is within the class of persons or entities to which the Statutory Power of Sale is now or subsequently applicable as of the time of default, and Grantee may convey the same by proper deed or deeds to the purchaser or purchasers absolutely and in fee simple. Such sale shall forever bar Grantor and all persons claiming under Grantor from all right and interest in the Mortgaged Premises, whether at law or in equity.

**Section 3.10(c). Applicability.** The above described Statutory Power of Sale shall only apply if the Grantor is a "Corporation," "Partnership," "Limited Liability Company," or "Trustee of a Trust," as provided in 33 M.R.S.A. §501-A.

**Section 3.11. Exercise of Grantee's Rights.** The Grantee, in exercising any remedy provided herein which (i) relates to any tax, assessment, governmental charge or imposition, insurance premium or other amount to be paid by the Grantor under Section 3 hereof, may do so in accordance with any notice, bill, statement or estimate procured from the appropriate public office or insurer without inquiry into the





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accuracy or validity thereof, (ii) relates to any apparent or threatened adverse title, lien, statement of lien, encumbrance, claim or charge, shall be the sole judge of the legality or validity thereof, (iii) relates to any repair, maintenance or replacement expense or other amounts to be paid by the Grantor under Section 3.5 hereof, shall be the sole judge of the state of repair of the Mortgaged Premises and the necessity of incurring the expense, or (iv) relates to any other item or purpose not otherwise specifically provided for in this subparagraph, may do so whenever in their opinion such payment or performance is necessary or desirable to protect the full security intended by this Mortgage.

**Section 3.12. No Limitation of Rights.** No provision of this Mortgage (i) is or shall be deemed to be a release or impairment of the Note, the Loan Documents or of this Mortgage, (ii) shall preclude the Grantee, upon the occurrence of an Event of Default hereunder, from foreclosing this Mortgage or from enforcing its rights hereunder or under any Loan Documents, (iii) shall preclude or bar the Grantee upon foreclosure from obtaining a deficiency judgment against the Grantor, against any subsequent owner of the Mortgaged Premises who assumes the Note, or against any other person liable for the payment of the Note or the obligations evidenced thereby, (iv) shall require the Grantee to accept a part of the Mortgaged Premises (as distinguished from its entirety) as payment of the debt secured hereby, or (v) shall compel the Grantee to accept or allow any apportionment of the debt secured hereby to or among any separate parts of the Mortgaged Premises.

**Section 3.13. Delay.** No delay by Grantee in exercising any right or remedy hereunder, or otherwise afforded by law, shall operate as a waiver or preclude the exercise thereof during the continuance of any default hereunder.

**Section 3.14. Additional Rights of Grantee.** Without affecting the liability of Grantor or any other person (except any person expressly released in writing) for payment of any indebtedness secured hereby or for performance of any obligation contained herein, and without affecting the rights of Grantee with respect to any security not expressly released in writing, Grantee may at any time and from time to time, either before or after the maturity of said note and without notice or consent: (a) Release any person liable for payment of all or any part of the indebtedness or for performance of any obligation; (b) Make any agreement extending the time or otherwise altering the terms of payment of all or any part of the indebtedness, or modifying or waiving any obligation, or subordinating, modifying or otherwise dealing with the lien or charge thereof; (c) Exercise or refrain from exercising or waive any right Grantee may have; (d) Accept additional security of any kind; or (e) **Release or otherwise deal with any property, real or personal or portion thereof, securing the indebtedness, including but not limited to all or any part of the Mortgaged Premises mortgaged hereby that may be subdivided into multiple parcels, any of which may be sold. In that event and so long as there is no existing event of default and sufficient collateral to secure the Note secured hereby, and Grantor has sufficient ability to repay the remainder of the Note, Grantee shall accept a partial prepayment of the Note in accordance with the terms of the Note and shall partially release the portion of the Mortgaged Premises comprising that lot.**

**Section 3.15. Maintenance of Parking Areas and Drives, New Structures.** Grantor shall maintain and preserve the parking areas, common areas, passageways and drives, now or hereafter existing on the Mortgaged Premises, and, without prior written consent of Grantee, no building or other structure shall be erected thereon, and no new building or additions to existing buildings shall be erected on the remainder of the Mortgaged Premises.



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**Section 3.16. Assignments, Petitions, Bankruptcy.** Grantee, at its option, may accelerate the maturity of the indebtedness secured by this Mortgage, and may exercise any one or more default remedies, including foreclosure of this Mortgage if any of the following events occur, which shall also constitute Events of Default: (i) in the event any owner of the Mortgaged Premises during the period of such ownership shall make an assignment for the benefit of creditors, file a petition in bankruptcy, petition or apply to any tribunal for the appointment of a custodian, receiver or any trustee for it or a substantial part of its assets, or shall commence any proceeding under any bankruptcy, reorganization, arrangement, readjustment of debt, dissolution or liquidation law or statute of any jurisdiction, whether now or hereafter in effect; or (ii) if there shall have been filed any such petition or application, or any such proceeding shall have been commenced against such owner, in which an order for relief is entered or which remains undismissed for a period of thirty (30) days or more; or (iii) such owner by any act or omission shall indicate its consent to, approval of or acquiescence in any such petition, application or proceeding or order for relief of the appointment of a custodian, receiver or any trustee for it or any substantial part of any of its properties, or shall suffer any such custodianship, receivership or trusteeship to continue undischarged for a period of thirty (30) days or more.

**Section 3.17. Grantee's Rights as Secured Party.** The Grantor further covenants and agrees that (a) this Mortgage shall constitute a security agreement with respect to the Collateral, and Grantor hereby grants and conveys to Grantee, its successors and assigns, a security interest therein as provided in Section 1 above; (b) Upon the occurrence of any Event of Default, the Grantee may, at its discretion, require the Grantor to assemble the Collateral and make it available to the Grantee at a place reasonably convenient to both parties to be designated by the Grantee; (c) that the Grantee shall give the Grantor notice, by registered mail, postage prepaid, of the time and place of any public sale of any of the Collateral or of the time any private sale or other intended disposition thereof is to be made by sending notice to the Grantor at least five (5) days before the time of the sale or other disposition, which provisions for notice the Grantor and Grantee hereby agree are reasonable; provided, however, that nothing herein shall preclude the Grantee from proceeding as to both real and personal property in accordance with Grantee's rights and remedies in respect to the Mortgaged Premises; (d) Grantee shall have all of the remedies of a secured party under the Uniform Commercial Code as now in effect in the State of Maine, and such further remedies as may from time to time hereafter be provided in Maine for a secured party. Grantor agrees that all rights of Grantee as to said Collateral and as to said real estate, and rights and interest appurtenant thereto, may be exercised together or separately and further agrees that in exercising its power of sale as to said Collateral and as to said real estate, and rights and interest appurtenant thereto, the Grantee may sell the Collateral or any part thereof, either separately from or together with the said real estate, rights and interests appurtenant thereto, or any part thereof, all as the Grantee may in its discretion elect.

**Section 3.18. Statement of No Offsets or Defenses.** Grantor, within seven (7) days upon written request delivered in person, or within ten (10) days upon written request sent by mail, shall furnish a duly acknowledged written statement setting forth the amount of the debt secured by this Mortgage, and stating either that no offsets or defenses exist against the mortgage debts or, if such offsets or defenses are alleged to exist, the nature thereof.

**Section 3.19. Grantor's Books and Records.** Grantor shall maintain full and correct books and records showing in detail the earnings and expenses of the Mortgaged Premises; will permit the Grantee and its representatives to examine said books and records and all supporting vouchers and data at reasonable times upon request by the Grantee at the Mortgaged Premises or at such other place in the city and county in which the Mortgaged Premises are located as such books and records are customarily kept; and Grantor



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hereby agrees to furnish to Grantee within one hundred twenty (120) days after the close of each fiscal year an annual financial statement of the operation of the Mortgaged Premises reflecting income (including sources thereof) and expenses, such statement to be prepared by a certified or other competent accountant satisfactory to Grantee.

**Section 3.20. Notice to Grantee of Change in Use.** If at any time the then existing use or occupancy of the Mortgaged Premises shall, pursuant to any zoning or other law, ordinance or regulation, be permitted only so long as such use or occupancy shall continue, that Grantor shall not cause or permit such use or occupancy to be discontinued without the prior written consent of the Grantee.

**Section 3.21. Grantee Approval of Leases, Etc.** Grantor shall submit to the Grantee for Grantee's examination and approval in writing prior to the execution, delivery and commencement thereof, all leases, tenancies and occupancies of the Mortgaged Premises and any part thereof; any such leases, tenancies and occupancies, not so approved, shall not be valid; and Grantor at the Grantor's sole cost and expense, upon request of Grantee, shall cause any parties in possession of the Mortgaged Premises under any such leases, tenancies and occupancies, not so approved, to vacate the Mortgaged Premises immediately. Grantor acknowledges that Grantee may, from time to time, at its option enter upon the Mortgaged Premises and take any other action in court or otherwise to cause such parties to vacate the Mortgaged Premises; the costs and expenses of Grantee in so doing shall be paid by Grantor to Grantee on demand thereof and shall be part of the indebtedness secured by this Mortgage as costs and expenses incurred to preserve and protect the security; such rights of Grantee shall be in addition to all its other rights as Grantee, including the right of foreclosure, for breach by Grantor in the requirements of this paragraph.

**Section 3.22. Due on Sale.** It is an additional covenant and condition of this Mortgage, for breach of which foreclosure may be claimed and for breach of which all indebtedness secured hereby may be declared due and payable at once, that without Grantee's prior written consent, Grantor shall not convey, mortgage, sell, contract to sell, lease or otherwise transfer or encumber the title, ownership, right of possession or any other interest in the Mortgaged Premises, or in any part thereof, nor shall any interest in said Mortgaged Premises or any part thereof pass from Grantor either voluntarily, involuntarily, by operation of law or otherwise. This condition shall continue until all indebtedness and Obligations secured hereby are satisfied, and permission given or election not to foreclose or accelerate said indebtedness by Grantee, its successors or assigns, as to any one such transfer, shall not constitute a waiver of any rights of Grantee, its successors or assigns, as to any subsequent such transfer of title as to which this condition shall remain in full force and effect. The term "title" as used herein shall mean the estate of the Grantor subject to the lien of this Mortgage.

**Section 3.23. Subsequent Agreement.** Any agreement hereafter made by Grantor and Grantee pursuant to this Mortgage shall be superior to the rights of the holder of any intervening lien or encumbrance to the extent allowed by law.

**Section 3.24. Acts Required of Grantee Concerning Perfection.** Grantor, at Grantor's expense, will do, execute, acknowledge and deliver to Grantee such further deeds, acts, conveyances, mortgages, assignments, transfers, and all other documents and assurances as Grantee in its discretion may require from time to time to better establish and perfect the property interests and rights created or intended by Grantee to be created hereunder or to facilitate the Grantor's performance hereunder.

#### **Section 4. Environmental Indemnity.**



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**Section 4.1. Definitions.** With respect to any hazardous substances, the following definitions shall apply herein: (a) "**Environment**" means any surface or subsurface water, water vapor, land, air, fish, wildlife, microorganisms and all other natural resources; (b) "**Environmental Law**" means any law, ordinance, rule, regulation or requirement, issued by any federal, state or local governmental or quasi-governmental authority, whether now existing or hereinafter enacted, and any judicial or administrative interpretations thereof, regulating the disposal, distribution, generation, handling, manufacture, possession, processing, production, sale, storage, transport, treatment or use of hazardous substances or relating to the protection of the Environment; (c) "**Environmental Permits**" mean all permits, licenses, approvals, authorizations, consents or registrations required by any applicable Environmental Law in connection with the ownership, use and or operation of the Mortgaged Premises, including, without limitation, those required for the disposal, distribution, generation, handling, manufacture, possession, processing, production, sale, storage, treatment, transport or use of hazardous substances; (d) "**Hazardous Substance**" means any material whatsoever, which is or may potentially be harmful to the health or safety of human or animal life or vegetation, regardless of whether such material be found on or below the surface of the ground, in any surface or underground water, airborne in ambient air or in the air inside of any structure built or located upon or below the surface of the ground, or in any machinery, equipment or inventory located or used in any such structure, including, but not limited to, all hazardous materials, hazardous substances, imminently hazardous substances, hazardous wastes, toxic substances, infectious wastes, pollutants and contaminants from time to time defined, listed, identified, designated, regulated or classified as such under any Environmental Law regardless of the quantity of any such material; (e) "**Premises**" shall include the land surface and the entire subsurface of soil, sand, gravel, stone and rock, all surface water and subsurface water, whether flowing or stagnant, the ambient air, and all structures, fixtures and buildings located, situated or erected on the land, and all machinery and equipment located at or in connection with any such structure; and (f) "**Release**" means any discharging, disposing, emitting, leaking, pumping, pouring, emptying, injecting, escaping, placing, releasing, leaching, dumping or spilling into the Environment (including the abandonment or discarding of barrels, containers and other closed receptacles).

**Section 4.2. Representations and Warranties.** The Grantor represents and warrants that to the best its knowledge:

**Section 4.2(a). No Enforcement Proceedings.** Neither the Grantor, any existing or prior tenant of the Premises, any prior owner thereof nor any other person is the subject of any civil or criminal investigation or enforcement proceeding, whether administrative or judicial, respecting: (i) any Hazardous Substance or threat of a Release on or affecting the Premises; or (ii) any violation of Environmental Law by the Grantor, any existing or prior tenant of the Premises, any prior owner thereof or any other person with respect to or affecting the Premises;

**Section 4.2(b). No Pending Litigation.** No litigation involving the Premises is pending against the Grantor, any existing or prior tenant of the Premises, any prior owner thereof or any other person in any way related to any of the aforementioned persons, or to the best of the Grantor's knowledge is any such litigation threatened which seeks to enjoin, remove or remediate a Release or threatened Release, or which seeks any remedy based upon a violation of any Environmental Law or for any injury to any person, property, animal life or vegetation caused by a Hazardous Substance or which seeks to remove or remediate a Hazardous Substance;



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**Section 4.2(c). No Environmental Notices.** Neither the Grantor, any existing or prior tenant of the Premises, any prior owner thereof, or any other person has received any notice from any governmental or quasi-governmental agency with respect to any Hazardous Substance or any threatened Release on or affecting the Premises, or any violation of Environmental Law by any of the aforementioned persons with respect to or affecting the Premises;

**Section 4.2(d). Use of Premises.** The Premises are not currently used, nor have they been used in the past, by the Grantor, prior owners, tenants or any other persons in a manner which violates any Environmental Law or which could give rise to liability for Hazardous Substances, nor do conditions exist on or affect the Premises which could violate any such law or give rise to such liability;

**Section 4.2(e). No Release.** There has not been a Release on or affecting the Premises nor is there presently the threat of a Release thereon; and

**Section 4.2(f). Compliance.** The Grantor and all tenants of the Premises are in compliance with all Environmental Laws and Environmental Permits affecting the Premises.

**Section 4.3. Covenants and Agreements.** The Grantor hereby covenants and agrees that:

**Section 4.3(a). Use of Premises by Grantor.** The Grantor shall not use or permit the use of the Premises in a manner which would violate any Environmental Law or give rise to liability for Hazardous Substances, nor shall the Grantor cause or permit conditions to exist on or affect the Premises which would violate any such law or give rise to such liability.

**Section 4.3(b). No Environmental Liens.** The Grantor shall not permit any federal, state or local environmental lien to be levied against the Premises, even if such lien is subordinate to the lien of this Mortgage.

**Section 4.3(c). Copies of Notices to Grantee.** The Grantor shall provide the Grantee with copies of any communications with or notices from any governmental or quasi-governmental authority alleging or responding to an allegation that the Premises are not in compliance with any Environmental Law, within five (5) days of the Grantor's receipt or sending thereof.

**Section 4.3(d). Permits.** The Grantor and all tenants of the Premises shall possess all required Environmental Permits and shall be in compliance with such permits.

**Section 4.3(e). No Release on Premises.** There shall be no threat of a Release on or affecting the Premises.

**Section 4.3(f). Insurance.** The Grantor shall, at the request of the Grantee, obtain and maintain in force such policies of environmental impairment liability insurance or other policies of insurance insuring against loss on account of such environmentally related risks in such amounts as the Grantee shall deem reasonably necessary, provided such insurance can be obtained at premiums which are commercially reasonable. Such policies shall be written by insurance companies which are approved by the Grantee and are qualified to do business in the State of Maine. If the Grantor fails to procure such insurance after request by the Grantee, the Grantee may procure the same and add the cost to the debt secured by this Mortgage, which shall bear interest at the rate set forth in said Note secured hereby.





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**Section 4.3(g). No Asbestos.** No asbestos shall exist on the Premises in any form, condition or quantity.

**Section 4.3(h). Environmental Law Requirements.** The Grantor and all tenants of the Premises shall comply with any obligations they may have under any Environmental Law affecting the Premises, including, but not limited to, reporting requirements.

**Section 4.3(i). Copy of Assessment to Grantee.** The Grantor shall provide the Grantee with a copy of any environmental assessment of the Premises which the Grantor may obtain, within ten (10) days of the date when the Grantor receives the assessment.

**Section 4.4. Breach.** A breach of any of the environmental representations, warranties or covenants contained herein shall constitute an Event of Default hereunder, entitling the Grantee to accelerate the indebtedness secured hereby and to exercise any and all default remedies.

**Section 4.5. Grantee's Right to Conduct Assessment.** The Grantee may cause to be conducted environmental assessments of the Premises and surrounding areas from time to time until the loan secured by this Mortgage shall be repaid in full, as it deems necessary in its sole discretion, such audits and tests to be performed by an environmental consultant chosen by the Grantee. The Grantor shall pay to the Grantee on demand the costs of such audits or tests. Any such environmental assessments shall be considered the property of the Grantee, and the Grantee shall owe no duty of confidentiality to the Grantor with respect to the contents thereof. It is hereby acknowledged by the Grantor that the Grantee shall not vouch for or assume any responsibility for the scope of detail, contents or accuracy of any such environmental assessment, and that neither the Grantor nor any other party shall have any recourse to or claim against the Grantee for any act of omission or commission of the environmental consultant. The Grantor shall fully cooperate with the environmental consultant in its preparation of the assessment, including, but not limited to, responding to questions of the consultant, providing the consultant with unlimited access at reasonable times to the Premises, the books and records of the Grantor, and employees of the Grantor, and the Grantor shall cause all tenants of the Premises to do the same. The Grantee may also from time to time, at the expense of the Grantor, procure the opinion of an attorney competent in Environmental Law when it believes such an opinion to be reasonably necessary, respecting the environmental condition of the Premises and the terms, conditions, sufficiency of, compliance with and transferability of all existing and/or required Environmental Permits.

**Section 4.6. Certification of Environmental Condition.** In addition, the Grantee shall have the right to require, from time to time, a certification by the Grantor and any tenants of the Premises that there has been no change in the environmental condition of the Premises. If there has been an asbestos monitoring plan prescribed by the consultant, the Grantor must also from time to time, at the request of the Grantee, show evidence of its compliance therewith.

**Section 4.7. Indemnification.** The Grantor shall fully indemnify and hold harmless the Grantee its successors and assigns, against: (i) any third party claims involving Hazardous Substances Releases on or affecting the Premises or violation of Environmental Laws in any way related to the Grantor or the Premises; and (ii) any fines, penalty payments, reasonable attorneys' and legal assistants' fees, sums paid in connection with any judicial or administrative investigation or proceedings, costs of cleanup assessed by a governmental or quasi-governmental agency, and similar expenditures, that relate in any way to the Grantor



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or the Premises, without regard to whether the Grantor would have ultimately been responsible for such third-party claims, fines, payments, fees, sums or costs. Any amounts which the Grantor must pay to the Grantee hereunder are payable upon demand and, if unpaid, shall bear interest per annum at the default interest rate set forth in the Note, and such amounts, with interest, shall be added to the indebtedness secured hereby and shall be secured by this Mortgage. The foregoing indemnifications shall survive the repayment of the indebtedness secured by the Mortgage and the discharge, release and/or assignment of the Mortgage.

**Section 5. Future Advances.** Upon request of Grantor, Grantee may, at its sole option, from time to time make further advances to Grantor, provided, however, that the total principal secured hereby and remaining unpaid, including any such advances shall not at any time exceed the sum of Eight Million Dollars (\$8,000,000.00), and if the foregoing is left blank, such maximum amount shall be the Loan amount unless otherwise agreed to by the parties in accordance with the terms of the Loan Documents. Grantor shall execute and deliver to Grantee a note or other agreement evidencing each and every such further advance, with such terms and conditions as Grantee may require. Grantor or any other party liable therefor shall pay, when due, all such further advances, with interest and other charges thereon, as applicable. All such further advances, and each note or agreement evidencing the same, shall be secured hereby. All provisions of this Mortgage shall apply to each further advance. Nothing herein contained, however, shall limit the amount secured by this Mortgage if such amount is increased by any amounts paid by Grantee to protect the security. The word "Grantor" as used in this paragraph includes any successor in ownership of the Premises.

**Section 6. Condominium Rider.** "Intentionally deleted"

**Section 7. Right of Redemption.** In the event that any prior mortgage exists as a Permitted Exception or otherwise, Grantor covenants and agrees that Grantor will, at all times, fully perform and comply with all agreements, covenants, terms and conditions imposed on the Grantor under any such prior mortgage(s) and if Grantor fails to do so, Grantee may (but shall not be obligated to) declare such failure to be an Event of Default hereunder and or may take any action Grantee deems necessary or desirable to prevent or to cure any default by Grantor and the performance or compliance with any of Grantor's covenants or obligations under any prior mortgage(s). Grantor hereby transfers and assigns to the Grantee, its successors and assigns, the Grantor's equity of redemption of any such prior mortgage(s), including the right to demand an accounting of said prior mortgage(s), the right to make full or partial payment upon said prior mortgage(s), and the right to demand assignment of said prior mortgage(s) and the note(s) secured by same. Any sums of money advanced by Grantee to cure Grantor's defaults under any prior mortgage(s) shall be added to the indebtedness secured hereby. Grantor shall immediately, on receiving any knowledge or notice of any default under any prior mortgage(s), give written notice to Grantee. Grantor assigns any proceeds that may belong to Grantor resulting from the foreclosure sale of the Mortgaged Premises by the holder of the prior mortgage(s).

**Section 8. Financial Statements.** In addition to the financial statements required of Grantor under Section 3.19 hereof, Grantor hereby covenants and agrees to deliver or cause to be delivered to Grantee the personal or corporate financial statements of any guarantor of the Loan as applicable, if any, as provided in the Loan Documents, and the annual financial statements of the Grantor herein, each year within one hundred twenty (120) days after the close of the Grantor's fiscal year (or calendar year if a fiscal year is not applicable); which statements shall be prepared by a certified public accountant or other person acceptable to Grantee, and shall contain such detail and be in such form as Grantee may reasonably require from time to time.



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**Section 9. Relation to Other Debts Owed by Grantor to Grantee.** The Loan shall be cross-collateralized and cross-defaulted with all other debts of the Grantor due to Grantee. Accordingly, Grantor covenants and agrees that a default by Grantor under the Loan Documents shall constitute a default under any other loan documents evidencing any other debts of the Grantor due to Grantee (the "Related Loan Documents") for which all of the rights and remedies provided thereunder to Grantee may be exercised, and likewise a default by Grantor under any of the Related Loan Documents shall constitute a default under this Mortgage for which all the rights and remedies provided hereunder to Grantee may be exercised.

**Section 10. Existence, Authority, and Organization of Grantor.** With respect to the existence, authority and organization of Grantor, the Grantor also covenants and agrees with Grantee that without Grantee's prior written consent there shall be: (a) no amendments or changes to any organizational documents of the Grantor, whether filed with the State or otherwise, including without limitation any articles of incorporation or organization, bylaws, partnership agreements, operating agreements, shareholder agreements, trust agreements, etc.; (b) no liquidation, termination or dissolution of the Grantor, (c) no transfer, pledge, assignment, sale, termination or other disposition of any assets or corporate stock, membership interest, or any other form of ownership or beneficiary interest respecting the Grantor, either voluntarily, involuntarily or by operation of law; and (d) no additional shareholders, members, partners, or other type of owner or beneficiary to said Grantor.

**Section 11. Binding on Successors and Assigns.** The covenants and agreement contained herein shall bind, and the benefits and advantages hereof shall inure to, the respective heirs, executors, administrators, successors and assigns of the Grantor and Grantee, as applicable. Wherever used, the singular number shall include the plural, the plural the singular, and the use of any gender shall be applicable to all genders.

**Section 12. Loan Commitment Letter.** Grantor shall well and truly perform, or cause to be performed, in punctual manner, all the terms, conditions and agreements that are the obligation of Grantor contained in the Loan Commitment Letter from Grantee to Grantor regarding the Loan, including any amendments thereto.

**Section 13. Lot Reserve.** Grantee shall release individual lots from the lien of this Mortgage so long as (a) there is no outstanding Event of Default under the Loan Documents and (b) The outstanding principal balance due hereunder shall be repaid at the closing of each lot sale in the following amount: \$110,000.00. Additionally, the 20% equity on unit construction costs initially injected by the Borrower will be held on deposit by Lender for use as the required 20% equity injection for the development of Lots 11 through 46.

**Section 14. Waiver of Jury Trial.** GRANTOR HEREBY IRREVOCABLY AND UNCONDITIONALLY WAIVES AND GRANTEE, BY ITS ACCEPTANCE OF THE NOTE, IRREVOCABLY AND UNCONDITIONALLY WAIVES ANY AND ALL RIGHTS TO TRIAL BY JURY IN ANY ACTION, SUIT, OR COUNTERCLAIM ARISING IN CONNECTION WITH, OUT OF, OR OTHERWISE RELATING TO THE LOAN, THE NOTE, THIS MORTGAGE, OR ANY OTHER OF THE LOAN DOCUMENTS.

**Section 15. Waiver.** GRANTOR HEREBY WAIVES ALL RIGHTS TO NOTICE, PRIOR JUDICIAL HEARING OR COURT ORDER UNDER ANY STATE OR FEDERAL LAW WITH RESPECT TO ANY AND ALL PREJUDGMENT REMEDIES GRANTEE MAY EMPLOY TO ENFORCE ITS RIGHTS AND REMEDIES HEREUNDER. FURTHER, GRANTOR HEREBY



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**WAIVES, TO THE EXTENT PERMITTED BY LAW, THE BENEFITS OF ALL VALUATION, APPRAISEMENTS, HOMESTEAD, EXEMPTION, STAY, REDEMPTION, AND MORATORIUM LAWS, WHICH ARE NOW IN FORCE OR MAY HEREAFTER BECOME LAWS.**

**Section 16. Notices.** Any notice, demand, request or other communication which is made hereunder shall be in writing and sufficient if (i) delivered by personal service, (ii) mailed by first class registered or certified United States mail, postage prepaid, return receipt requested, or (iii) delivered by overnight express United States mail or by a nationally recognized overnight courier service, to the address set forth in the first paragraph of this Mortgage or such other address which either party may provide to the other in writing. The date of receipt of any such notice shall be deemed to be, and shall be effective from: (i) the date of actual delivery of such notice if personal service is used; (ii) receipt, refusal to accept or return to sender due to impossibility of delivery if first class registered or certified United States mail is used; or (iii) one (1) day after the same is deposited in the United States mail if overnight express United States mail is used and one day after the same is delivered to an overnight courier service if such overnight courier service is used.

**Section 17. Construction.** This Mortgage shall be construed in all respects in accordance with, and governed by, the laws of the State of Maine. Wherever possible, each provision of this Mortgage shall be interpreted in such manner as to be effective and valid under applicable law, but if any provisions of this Mortgage shall be prohibited by or invalid under applicable law, such provision shall be ineffective to the extent of such prohibition or invalidity, without invalidating the remainder of such provision or the remaining provisions of this Mortgage.

**Section 18. Sealed Instrument.** This Mortgage shall take effect as a sealed instrument.



Reviewed for Code Compliance  
Permitting and Inspections Department  
Approved with Conditions

09/28/2018

IN WITNESS WHEREOF, the said Grantor hereunto sets his hand and seal this 25<sup>th</sup> day of the month of June, 2018.

WITNESS:

**Stroudwater Development Partners, LLC**  
Organization Identification Number: 20180217DC  
By: JHR Development, LLC, its Manager

By:   
\_\_\_\_\_  
J. Hilary Rockett, Jr.  
Its: Manager

STATE OF MAINE  
CUMBERLAND, SS

Before me, on this 25<sup>th</sup> day of June, 2018, personally appeared J. Hilary Rockett, Jr., the Manager of JHR Development, LLC being the Manager of Stroudwater Development Partners, LLC and acknowledged the foregoing to be his free act and deed in said capacity and the free act and deed of said company.

Before me,

\_\_\_\_\_  
~~Notary Public~~ ~~Attorney at Law~~  
Printed Name: \_\_\_\_\_  
My commission Expires: \_\_\_\_\_

**Alexandra E. Caulfield**  
Attorney at Law





09/28/2018

Stroudwater Development Partners, LLC

Exhibit A

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

Beginning at a point on the southerly side of Westbrook Street at the northwesterly corner of land now or formerly of Stroudwater Christian Church as described in a deed recorded in the Cumberland County Registry of Deeds in Book 4346, Page 315. Thence:

- 1) S 10°47'26" W by said land of Stroudwater Christian Church a distance of Three Hundred Fifty-Five and 88/100 (355.88) feet to a 1" iron pipe and the northwesterly corner of land now or formerly of Alina Waterhouse and Raymond Waterhouse as described in a deed recorded in said Registry in Book 6931, Page 136;
- 2) S 11°21'03" W by said land of Waterhouse, and by land now or formerly of Maria Shabazz and Michael A. Scannell as described in a deed recorded in said Registry in Book 23332, Page 37, a distance of Five Hundred Thirteen and 70/100 (513.70) feet to a point;
- 3) S 16°18'03" W by said land of Shabazz and Scannell, and by land now or formerly of William D. Dobrowolski as described in a deed recorded in said Registry in Book 8485, Page 143, a distance of Five Hundred Sixty-Seven and 00/100 (567.00) feet to a point, said point herein designated as "Point A";
- 4) S 16°18'03" W by said land of Dobrowolski a distance of Eight (8) feet, more or less, to the Stroudwater River;
- 5) Westerly by said Stroudwater River a distance of Two Thousand Two Hundred Fifty-Three (2253) feet, more or less, to a point at land now or formerly of Maine Turnpike Authority (MTA) as described in a deed recorded in said Registry in Book 2166, Page 135;
- 6) N 05°13'12" W by said land of MTA a distance of Eight (8) feet, more or less, to a point, said point located S 62°37'24" W a distance of One Thousand Nine Hundred Forty-One and 60/100 (1941.60) from said Point A;
- 7) N 05°13'12" W by said land of MTA a distance of Four Hundred Fourteen and 00/100 (414.00) feet to a point;
- 8) S 84°46'48" W by said land of MTA a distance of Fifty-Five and 00/100 (55.00) feet to a point;
- 9) N 05°13'11" W by said land of MTA a distance of One Thousand Three Hundred Ninety-Two and 33/100 (1392.33) feet to a point on the southerly sideline of the former location of Westbrook Street;



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- 10) S 69°04'28" E by said former location of Westbrook Street a distance of One Hundred Six and 10/100 (106.10) feet to a 5/8" capped iron rod "PLS 1328" at the northwesterly corner of land now or formerly of Linda E. Paradis and Andrew D. Green as described in a deed recorded in said Registry in Book 27478, Page 8;
- 11) S 05°10'20" E by said land of Paradis and Green a distance of Seven Hundred Thirty-Eight and 20/100 (738.20) feet to a 5/8" capped iron rod "PLS 2114";
- 12) S 83°05'15" E by said land of Paradis and Green a distance of Two Hundred Fifty-Seven and 45/100 (257.45) feet to a 5/8" capped iron rod "PLS 2114";
- 13) N 11°15'29" W by said land of Paradis and Green a distance of One Hundred Eighty-Five and 58/100 (185.58) feet to a 5/8" capped iron rod "PLS 1328";
- 14) N 11°03'25" W by said land of Paradis and Green a distance of Five Hundred Forty-Two and 24/100 (542.24) feet to a point on the southerly line of said former location of Westbrook Street;
- 15) S 77°11'28" E by said former location of Westbrook Street a distance of Seventy-Eight and 57/100 (78.57) feet to a point;
- 16) N 81°20'32" E by said former location of Westbrook Street a distance of One Hundred Ninety-One and 58/100 (191.58) feet to a point;
- 17) N 71°18'01" E by said former location of Westbrook Street a distance of Eighty and 71/100 (80.71) feet to a point on the southerly sideline of Westbrook Street;
- 18) N 71°00'32" E by said Westbrook Street a distance of Seventy-Seven and 60/100 (77.60) feet to a point;
- 19) N 70°59'53" E by said Westbrook Street a distance of One Hundred Forty-Four and 59/100 (144.59) feet to a point at the northwesterly corner of land now or formerly of Mary A. Davis and Stuart W. Tisdale, Jr.;
- 20) S 19°01'52" E by said land of Davis and Tisdale a distance of One Hundred Ninety-Nine and 93/100 (199.93) feet to a point;
- 21) N 70°58'08" E by said land of Davis and Tisdale a distance of One Hundred Fifty and 00/100 (150.00) feet to a point;
- 22) N 19°01'52" W by said land of Davis and Tisdale a distance of Two Hundred and 00/100 (200.00) feet to a point on the southerly side of said Westbrook Street;
- 23) N 70°58'08" E by said Westbrook Street a distance of One Hundred and 00/100 (100.00) feet to a point at the northwesterly corner of land now or formerly Kevin A. Regan as described in a deed recorded in said Registry in Book 31253, Page 5;



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- 24) S 19°01'52" E by said land of Regan a distance of One Hundred and 29/100 (100.29) feet to a point;
- 25) S 17°41'52" E by said land of Regan a distance of One Hundred and 00/100 (100.00) feet to a point;
- 26) N 71°32'08" E by said land of Regan a distance of Ninety-Seven and 62/100 (97.62) feet to a point;
- 27) N 17°41'52" W by said land of Regan a distance of Two Hundred and 00/100 (200.00) feet to a point on the southerly side of said Westbrook Street;
- 28) N 72°18'08" E by said Westbrook Street a distance of Twenty-Three and 17/100 (23.17) feet to a point at the northwesterly corner of land now or formerly of Jacqueline D. Day as described in a deed recorded in said Registry in Book 33513, Page 280;
- 29) S 14°41'52" E by said land of Day a distance of One Hundred Thirteen and 90/100 (113.90) feet to a point;
- 30) N 83°07'28" E by said land of Day a distance of Fifty and 47/100 (50.47) feet to a point;
- 31) S 14°41'52" E through the land of the Grantor a distance of Forty-Four and 66/100 (44.66) feet to a point;
- 32) N 70°58'08" E through said land of the Grantor a distance of Two Hundred Ten and 14/100 (210.14) feet to a 5/8" iron rod at the southeasterly corner of land now or formerly of Bruce L. Harrington as described in a deed recorded in said Registry in Book 10904, Page 302;
- 33) N 03°05'32" W by said land of Harrington a distance of One Hundred Sixty-Eight and 37/100 (168.37) feet to a 5/8" iron rod on the southerly line of said Westbrook Street;
- 34) N 72°18'08" E by said Westbrook Street a distance of Ninety-Nine and 14/100 (99.14) feet to a point at the northwesterly corner of land now or formerly of Portland Water District as described in a deed recorded in said Registry in Book 2198, Page 386;
- 35) S 17°41'52" E by said land of Portland Water District a distance of Eleven and 84/100 (11.84) feet to a point;
- 36) S 82°05'39" E by said land of Portland Water District a distance of Forty-Four and 00/100 (44.00) feet to a point;
- 37) N 07°54'21" E by said land of Portland Water District a distance of Thirty and 00/100 (30.00) feet to a point;
- 38) N 82°05'39" W by said land of Portland Water District a distance of Eight and 80/100 (8.80) feet to a point on the southerly side of said Westbrook Street;



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Permitting and Inspections Department  
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39) N 72°18'08" E by said Westbrook Street a distance of Two Hundred Seventy-Eight and 37/100 (278.37) feet to a point;

40) N 70°53'08" E by said Westbrook Street a distance of Four Hundred Twenty-Four and 55/100 (424.55) feet to the point of beginning.

Bearings are referenced to grid north, Maine State Plane Coordinate System, NAD83, West Zone.

Being the properties now or formerly of Onex Company as described in a deed recorded in the Cumberland County Registry of Deeds in Book 14598, Page 346 and land now or formerly of Diversacorp as described in a deed recorded in said Registry in Book 33834, Page 269 with the exception of land to be conveyed to Jacqueline D. Day and Bruce L. Harrington.

Reference is herein made to a Plan of Existing Conditions of Camelot Farm made for Diversacorp LLC by Titcomb Associates dated June 16, 2017 and revised February 21, 2018.

Received  
Recorded Register of Deeds  
Jun 25, 2018 03:15:07P  
Cumberland County  
Nancy A. Lane

After recording return to:  
Jason G. Howe, Esq. *SM*  
Bergen & Parkinson, LLC  
62 Portland Road, Suite 25  
Kennebunk, ME 04043

Doc#: 8080 Bk:33834 Pg: 269



Reviewed for Code Compliance  
Permitting and Inspections Department  
Approved with Conditions

09/28/2018

Space Above This Line For Recording Data

**WARRANTY DEED**

KNOW ALL PERSONS BY THESE PRESENTS, that **JUDITH A. CAMINITI**, f/k/a Judith C. Green, having a mailing address of 67 Goose Cove Road, Trenton, ME 04605, FOR CONSIDERATION PAID, hereby grants to **DIVERSACORP, LLC**, a Maine limited liability company whose mailing address is 5 Stone Pony Circle, Saco, Maine, with Warranty Covenants, a certain lot or parcel of land, together with any improvements thereon and all rights appurtenant thereto, commonly know and designated as 1714 Westbrook Street, Portland, Maine; being more particularly described as follows:

SEE EXHIBIT A ATTACHED HERETO AND  
INCORPORATED HEREIN BY REFERENCE

IN WITNESS WHEREOF, Judith A. Caminiti, f/k/a Judith C. Green, has hereunder set her hand and seal as of this 17 day of February, 2017.

WITNESS *[Signature]*

*Judith A. Caminiti*  
Judith A. Caminiti

STATE OF MAINE  
York County, ss.

Date: 2/17/17

Personally appeared the above-named Judith A. Caminiti, being formerly known as Judith C. Green, and acknowledged the foregoing instrument to be her free act and deed.

Before me,

*[Signature]*  
Attorney at Law / Notary Public

Print:  
[SEAL]

**Jason G. Howe**  
ATTORNEY AT LAW

(Exhibit A Below)

MAINE REAL ESTATE TAX PAID





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Permitting and Inspections Department  
Approved with Conditions

09/28/2018

**EXHIBIT A**  
(1714 Westbrook St., Portland)

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

BEGINNING on the southeasterly side of Westbrook Street at a fir stump marked at the corner of land now or formerly of one Leavitt;

THENCE southeasterly by said Westbrook Street, ten (10) chains and sixty-three (63) links to land formerly of Solomon Conant, et als;

THENCE southerly by said Conant land twenty (20) chains eighty-seven (87) links to the Stroudwater River, across said river to land formerly of James Trickey, et als;

THENCE westerly by said River by said Trickey land and land formerly of George B. Leavitt to a stake;

THENCE by Leavitt land North 12° East (subject to variations since established) twenty-seven (27) chains and ninety-two (92) links to the first mentioned bounds, containing thirty (30) acres, more or less.

Excepting from the above-described premises those portions conveyed to Maine Turnpike Authority by Maurice S. Tomlinson, et al, by deed dated February 11, 1954, and recorded in the Cumberland County Registry of Deeds in Book 2166, Page 135; and by deed dated September 2, 1954, and recorded in said Registry of Deeds in Book 2166, Page 135.

Excepting from the above-described premises the parcel with a house thereon conveyed to Andrew D. Green and Judith C. Green by deed dated March 4, 1994, and recorded in the Cumberland County Registry of Deeds in Book 11319, Page 55.

Excepting from the above-described premises the 1 acre parcel conveyed to Andrew D. Green by deed dated December 20, 2004, and recorded in the Cumberland County Registry of Deeds in Book 22163, Page 81. Regarding this exception, further reference is made to a certain Agreement Concerning Marital Property recorded in said Registry in Book 22163, Page 80, and a certain Abstract of Divorce recorded in said Registry in Book 22735, Page 32.

Received  
Recorded Register of Deeds  
Feb 21, 2017 09:42:37A  
Cumberland County  
Nancy A. Lane



Reviewed for Code Compliance  
Permitting and Inspections Department  
Approved with Conditions

09/28/2018

After recording return to:

Jason G. Howe, Esq.  
Bergen & Parkinson, LLC  
62 Portland Road, Suite 25  
Kennebunk, ME 04043

\_\_\_\_\_ Space Above This Line For Recording Data \_\_\_\_\_

**EASEMENT DEED**

(Open Space Easement – 1700 Westbrook Lot)

KNOW ALL PERSONS BY THESE PRESENTS, that **STROUDWATER DEVELOPMENT PARTNERS, LLC**, a Maine limited liability company with a place of business in Portland, Maine and mailing address of 40 South Street, Suite 305, Marblehead, MA 01945 (the “Grantor”), FOR CONSIDERATION PAID, hereby GRANTS to the **CITY OF PORTLAND**, a Maine body corporate and politic, with a mailing address of City Hall, 389 Congress Street, Portland, Maine (the “Grantee” or the “City”), a non-exclusive open space easement for the purpose described below, over portions of Grantor’s property at or about 1700 Westbrook Street, in Portland, Maine, said easement area being the area shown as “Open Space Lot 100”, comprised of 22.8 acres, more or less, within the ROS zone, all as shown on three final subdivision plats (Phase I, Phase II, and Phase III) to be recorded hereafter in the Cumberland County Registry of Deeds.

The purpose of the open space easement granted herein is to provide public pedestrian access to meaningful areas of undeveloped open space along the Stroudwater River corridor. Land within the Easement area may be disturbed, graded, regarded, seeded, or otherwise managed by Grantor for all purposes necessary for development of the Camelot Farm lot located generally at 1700 Westbrook Street, Portland, Maine, or in any fashion otherwise permitted by land-use and zoning laws, but in all cases, the disturbance shall be in form and scope which is the least intrusive as commercially reasonable. This easement is not a conservation easement. Neither Grantor nor Grantee has any obligation to maintain the Easement Area, except as Grantor may be required to repair or replant areas disturbed during development. The Easement Area shall remain publicly accessible, free of permanent buildings, permanent fences, and other permanent structures. Notwithstanding this general exclusion on the placement of structures within the Easement Area, Grantee may, at its own expense, place, erect, or otherwise install one (1) bridge within the Easement Area in order to tie together existing portions of the Portland Trails system, and may perform any and all acts of routine maintenance necessary to keep said bridge in good repair.

Grantor shall not permit any use, condition, or state of disrepair that would be contrary to or otherwise materially inhibit access to or use of the Easement Area. The parties agree that this Easement shall in no way impair any restrictions or requirements imposed by local ordinance, state statute, or federal law, as the same relate to activities within the Easement Area. Nothing in this easement shall prevent the pipeline company having prior rights through the Easement Area from exercising its rights to the pipeline. Nothing in this open space easement shall inhibit the public access easement granted prior hereto to Portland Trails for access to and from said Stroudwater River.

This easement is given for recreational use and the Grantor and Grantee claim to the maximum extent permitted by law, all the rights and protections against liability in accordance with the Maine Tort Claims Act, Title 14 MRS § 8101 et seq, Title 14 MRS §159-A, and other applicable law.

TO HAVE AND TO HOLD the aforegranted and bargained public access easement, with all privileges and appurtenances thereof, to the Grantee, its successors and assigns, to its and their use and



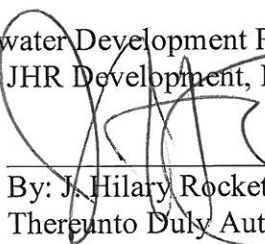
09/28/2018

behoof, forever.

IN WITNESS WHEREOF, Stroudwater Development Partners, LLC, the Grantor has caused this instrument to be executed by J. Hilary Rockett, Jr., its Manager, thereunto duly authorized, as of the date of notarization below.

~~Stroudwater Development Partners, LLC~~  
By: JHR Development, LLC, its Manager

Witness 


  
By: J. Hilary Rockett, Jr., its Manager  
Thereunto Duly Authorized

STATE OF MAINE  
York County, ss.

Date: 5/17/18

Personally appeared the above-named J. Hilary Rockett, Jr., in his capacity as Manager of JHR Development, LLC, being the manager of Stroudwater Development Partners, LLC, and acknowledged the foregoing instrument to be his free act and deed duly authorized in said capacity, and thereby, the free act and deed of Stroudwater Development Partners, LLC.

Before me,

  
\_\_\_\_\_  
Attorney at Law / Notary Public  
Print: \_\_\_\_\_

Jason C. Hawn, Esq





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Permitting and Inspections Department  
Approved with Conditions

09/28/2018

*After recording return to:*  
Jason G. Howe, Esq.  
Bergen & Parkinson, LLC  
62 Portland Road, Suite 25  
Kennebunk, ME 04043

----- (space above line for recording) -----

## RECIPROCAL STORMWATER MAINTENANCE AND EASEMENT AGREEMENT

THIS RECIPROCAL STORMWATER MAINTENANCE AND EASEMENT AGREEMENT (the "Agreement") is entered into by and between **STROUDWATER DEVELOPMENT PARTNERS, LLC**, a Maine limited liability company with a place of business in Portland, Cumberland County, Maine, and a mailing address of 62 Portland Road, Suite 25, Kennebunk, ME 04043 ("Stroudwater" or the "HOA") and **THE CITY OF PORTLAND**, a Maine municipal corporation, located in Portland, Cumberland County, Maine, and having a mailing address of 389 Congress Street, Portland, ME 04101 (the "City").

### W I T N E S S E T H

WHEREAS, Stroudwater is the owner of certain real property located at 1700 Westbrook Street, Portland, Maine (the "Property"); and

WHEREAS, Stroudwater has received final subdivision approval from the City for the construction of a residential subdivision on the Property, commonly referred to as "Stroudwater Preserve," as shown on a certain Site Plan recorded in the Cumberland County Registry of Deeds in Plan Book \_\_\_, Page \_\_\_ (the "Plan"); and

WHEREAS, the Plan includes an associated Grading & Drainage Plan (Sheet C-31, C-32), dated November 21, 2017, prepared by Acorn Engineers (the "Drainage Plan"); and

WHEREAS, Sheets C-11 and C-12 of the Plan, as well as a certain document entitled "Stormwater Drainage System Maintenance Agreement for Stroudwater Preserve," recorded in the Cumberland County Registry of Deeds in Book \_\_\_, Page \_\_\_, (the "SMA") delegate specific responsibility for installation and future maintenance, including excavation and extraction (the "Maintenance") of specific Focal Point units and associated infrastructures (the "BMPs") between Stroudwater and the City (the "Responsible Parties") (the particular BMPs for which each Responsible Party has responsibility shall be referred to herein as the "Stroudwater BMPs" and the "City BMPs" respectively); and

WHEREAS, when installed, each BMP will be located partially on real property owned by Stroudwater, and partially within a certain right-of-way dedicated for acceptance by the City,



09/28/2018

thereby requiring the Responsible Parties to enter the real property of each other in order to perform the responsibilities required within the SMA; and

WHEREAS, the Responsible Parties desire to enter into an agreement to allow each Responsible Party to enter onto the real property of the other Responsible Party to perform Maintenance, as required by the SMA;

NOW THEREFORE, in consideration of the mutual covenants contained herein the parties hereto agree as follows:

1. The sole and exclusive purpose of this Agreement is to allow the Responsible Parties to complete the Maintenance as assigned in the Plan, irrespective of the underlying fee ownership of the land within which each BMP passes.

2. Stroudwater hereby conveys an easement to the City, its heirs, agents, and employees, on and over the portion of the Property within which portions of the City BMPs lay, for the purpose of construction, installation and maintenance of said City BMPs, including but not limited to excavation, extraction, and associated earthmoving reasonably necessary to properly repair and maintain said City BMPs.

3. The City hereby conveys an easement to Stroudwater, its heirs, successors, and assigns, on and over the portion of the City's right-of-way within which portions of the Stroudwater BMPs lay, for the purpose of construction, installation and maintenance of said Stroudwater BMPs, including but not limited to excavation, extraction, and associated earthmoving, reasonably necessary to properly repair and maintain said Stroudwater BMPs. Notwithstanding the above, nothing outlined herein is intended to relieve Stroudwater of its obligations to comply with applicable local rules and ordinances when conducting work in the City's right-of-way.

4. This Agreement shall run with the land.

5. Prior to the utilization of any right or privilege under this Agreement, the Responsible Party exercising said right of privilege shall give reasonable notice to the other Responsible Party. Stroudwater shall obtain any necessary permits or other approvals prior to commencing any work in the City's right-of-way.

*[Signatures to Follow]*





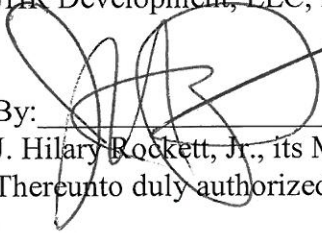
Reviewed for Code Compliance  
Permitting and Inspections Department  
Approved with Conditions

09/28/2018

**IN WITNESS WHEREOF**, the parties hereto have set their hands and seals of the dates set forth next to each signature below.

STROUDWATER DEVELOPMENT PARTNERS, LLC

By: JHR Development, LLC, its Manager

By:   
J. Hilary Rockett, Jr., its Manager  
Thereunto duly authorized

STATE OF MAINE  
York County, ss.

Date: 5/17/18

Personally appeared the above-named J. Hilary Rockett, Jr., in his capacity as Manager of JHR Development, LLC, being the manager of Stroudwater Development Partners, LLC, and acknowledged the foregoing instrument to be his free act and deed duly authorized in said capacity, and thereby, the free act and deed of Stroudwater Development Partners, LLC.

Before me,



Notary Public/Attorney at Law

Print name: \_\_\_\_\_

*Jason A. Heun, Esq.*



Reviewed for Code Compliance  
Permitting and Inspections Department  
Approved with Conditions

09/28/2018

**CITY OF PORTLAND, MAINE**

By: \_\_\_\_\_  
Brendan O'Connell, its  
Director of Finance

Date: \_\_\_\_\_

STATE OF MAINE  
CUMBERLAND, ss.

Personally appeared the above-named Brendan O'Connell, Director of Finance for the City of Portland, Maine and acknowledged the foregoing instrument to be his free act and deed in his said capacity.

Before me,

\_\_\_\_\_  
Notary Public/Attorney at Law  
Print name: \_\_\_\_\_



09/28/2018

**STORMWATER DRAINAGE SYSTEM  
MAINTENANCE AGREEMENT  
FOR  
STROUDWATER PRESERVE**

**IN CONSIDERATION OF** the subdivision plan approval granted by the Planning Board of the City of Portland to the proposed residential subdivision, commonly referred to as “Stroudwater Preserve” (the “Approval”) located at 1700 Westbrook Street, Portland, Maine and shown on the Site Plan recorded in the Cumberland County Registry of Deeds in Plan Book \_\_\_, Page \_\_\_ (the “Plan”) and associated Grading & Drainage Plan (Sheet C-31, C-32), dated November 21, 2017 prepared by Acorn Engineering (hereinafter, the “Premises”) and pursuant to a condition thereof, Stroudwater Development Partners, LLC, a Maine limited liability company with a principal place of business in Portland, Maine, and having a mailing address of 62 Portland Road, Suite 25, Kennebunk, ME 04043, the owner of the Premises, does hereby agree, for itself, its successors and assigns (the “Owner”), as follows:

Maintenance Agreement

Owner, its successors and assigns, will, at its own cost and expense and at all times in perpetuity, maintain in good repair and in proper working order Detention Basins 1 and 2, and associated infrastructures, as well as nine (9) Focal Point units and associated infrastructures, as listed in the Final Subdivision Plan (Sheet C-11 and C-12) and as further identified on the Grading & Drainage Plans (Sheet C-31 and C-32), and on the Stormwater Exhibit, attached hereto as **Exhibit B** (collectively “Owner Stormwater BMPs”). Said Owner Stormwater BMPs shall be maintained in strict compliance with the approved Stormwater Inspection & Maintenance Plan and Stormwater Maintenance and Inspection Log, dated November 21, 2017, copies attached as **Exhibit A and C** respectively and the annual inspection and reporting requirements of Chapter 32 of the Portland City Code.

The City of Portland will, at its own cost and expense, and at all times in perpetuity, maintain in good repair and in proper working order all Focal Points, catch basins and storm drains for which primary responsibility is delegated to the City, as listed in the Final Subdivision Plat (Sheet C-11 and C-12), and as further identified on the Grading and Drainage Plans (Sheet C-31 and C-32), and on **Exhibit B** (collectively the City Stormwater BMPs”).

Owner further agrees, at its own cost, to keep a Stormwater Maintenance and Inspection Log in the forms attached as Exhibit C. Such log shall be made available for inspection by the City of Portland upon reasonable notice and request.

This agreement is for the benefit of the City of Portland and all persons in lawful possession of the Premises and abutters thereto. The City of Portland and said persons in lawful possession may enforce this Agreement by an action at law or in equity in any court of competent jurisdiction; further, that after giving the Owner written notice and a stated time to perform, the said City of Portland, by its authorized agents or representatives, may, but is not obligated to, enter upon said Premises to maintain, repair, or replace said stormwater system, including but not limited to the porous pavement, catch basins, storm drain pipes, underdrain pipes, and other drainage structures





09/28/2018

thereon in the event of any failure or neglect thereof, the cost and expense thereof to be reimbursed in full to the said City of Portland by the Owner upon written demand. Any funds owed to the City under this paragraph shall be secured by a lien on the property.

This Agreement shall not confer upon the City of Portland or any other person the right to utilize said stormwater system for public use or for the development of any other property. Except as may be required to comply with the terms of this Agreement, Owner shall bear no financial responsibility by virtue of this Agreement for enlarging the capacity of said system.

This Agreement shall also not be construed to allow any change or deviation from the requirements of the subdivision and/or site plan most recently and formally approved by the Planning Board of the City of Portland.

This agreement shall bind the undersigned only so long as it retains any interest in said Premises, and shall run with the land and be binding upon the Owner's successors and assigns as their interests may from time to time appear. Owner may assign its obligations to the homeowners' association, whose members are the owners of the Premises, whereupon Owner's obligations under this Agreement will be assumed by that homeowners' association and the Owner will be released from this Agreement.

The Owner agrees to provide a copy of this Agreement to any successor or assign and to forward to the City an Addendum signed by any successor or assign in which the successor or assign states that the successor or assign has read the Agreement, agrees to all its terms and conditions and the successor or assign will obtain and forward to the City's Department of Public Works and Department of Planning and Urban Development a similar Addendum from any other successor or assign.

For the purpose of this agreement and release "Owner" is any person or entity who is a successor or assign and has a legal interest in part, or all, of the real estate and any building. The real estate shown by chart, block and lot number in the records on file in the City Assessor's office shall constitute "the property" that may be entered by the City and liened if the City is not paid all of its costs and charges following the mailing of a written demand for payment to the owner pursuant to the process and with the same force and effect as that established by 36 M.R.S.A. §§ 942 and 943 for real estate tax liens.

Any written notices or demands required by the agreement shall be complete on the date the notice is attached to one or more doors providing entry to any buildings or residential units and mailed by certified mail, return receipt requested or ordinary mail or both to the owner of record as shown on the tax rolls on file in the City Assessor's Office.

If the property has more than one owner on the tax rolls, service shall be complete by mailing it to only the first listed owner. The failure to receive any written notice required by this agreement shall not prevent the City from entering the property and performing maintenance or repairs on the stormwater system, or any component thereof, or liening it or create a cause of action against the City.

[SIGNATURES ON FOLLOWING PAGE]

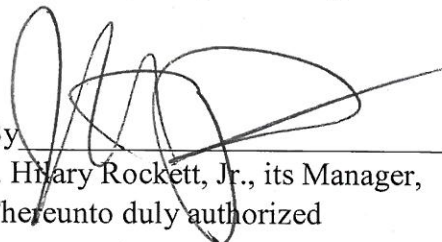


Reviewed for Code Compliance  
Permitting and Inspections Department  
Approved with Conditions

09/28/2018

Dated at Portland, Maine this 17 day of May, 2018.

STROUDWATER DEVELOPMENT PARTNERS, LLC  
By: JHR Development, LLC, its Manager

By   
J. Hilary Rockett, Jr., its Manager,  
Thereunto duly authorized

STATE OF MAINE  
York County, ss.

Date: 5/17/18

Personally appeared the above-named J. Hilary Rockett, Jr., in his capacity as Manager of JHR Development, LLC, being the manager of Stroudwater Development Partners, LLC, and acknowledged the foregoing instrument to be his free act and deed duly authorized in said capacity, and thereby, the free act and deed of Stroudwater Development Partners, LLC

Before me,


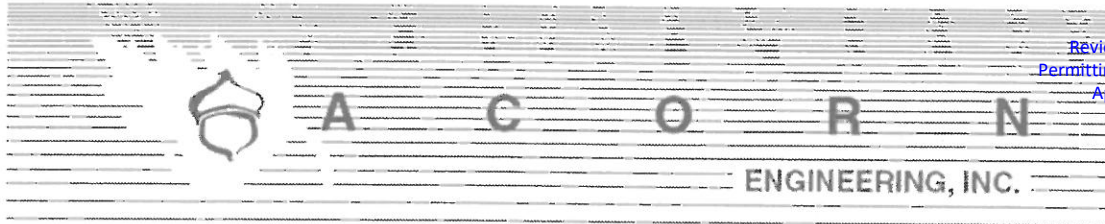
  
\_\_\_\_\_  
Notary Public/Attorney at Law  
Print name: Jason G. Han, Esq.

Exhibit A: Stormwater Inspection & Maintenance Plan

Exhibit B: Grading & Drainage Plan

Exhibit C: Stormwater Maintenance and Inspection Log





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Permitting and Inspections Department  
Approved with Conditions

09/28/2018

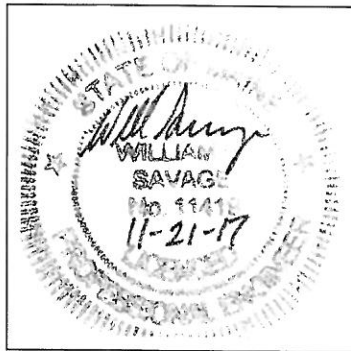
## POST CONSTRUCTION - STORMWATER INSPECTION & MAINTENANCE PLAN

Prepared For:

**Stroudwater Development Partners, LLC  
62 Portland Road, Suite 25  
Kennebunk, Maine 04043**

Prepared By:

**Acorn Engineering, Inc.  
158 Danforth Street  
Portland, Maine 04102**



November 2017



09/28/2018

## **RESPONSIBLE PARTY**

The owner, Stroudwater Development Partners, LLC, and/or their successor shall be responsible for contracting with a qualified stormwater professional to implement the Inspection and Maintenance Plan. The qualified stormwater professional shall maintain a stormwater log (report) summarizing inspections, maintenance, and corrective action taken. The Qualified Stormwater Professional shall annually submit the Stormwater Log to the Department of Public Works prior to June 30<sup>th</sup>.

The following is an example of a qualified stormwater professional that the association may contract through.

Organization: Will Savage, PE  
Acorn Engineering, Inc  
Portland, Maine

Phone: (207) 775-2655

### Qualifications:

- Maine Professional Engineering License #11419
- Maine DEP - Certified in Maintenance & Inspection of Stormwater BMP's Cert. #14
- Certified Erosion, Sediment and Storm Water Inspector (CESSWI) Cert. #0293
- Certified Professional in Erosion and Sediment Control (CPESC) Cert. #4620

The inspection and maintenance criteria is based upon the Maine DEP - Stormwater Management for Maine, Volume III: BMPs Technical Design Manual. Refer to the Grading and Drainage Plan for the location of the BMPs

## **PURPOSE**

This Inspection and Maintenance Plan has been individually tailored to this parcel's stormwater infrastructure, site characteristics, and their respective opportunities and limitations related to reducing the pollutant load on the receiving watershed. The maintenance of a parcel's impervious surfaces and stormwater infrastructure is critical to extending the long-term performance and effectiveness of Best Management Practices (BMPs). The Inspection and Maintenance Plan represents the parcel's minimum activities to meet the permit requirements. The parcel shall still be subject to any applicable Civil Site Plans, Permit Applications, Erosion and Sedimentation Control Plans Reports, Stormwater Management Plans, Inspection and Maintenance Manuals, and all Municipal, State, and Federal rules.



09/28/2018

## OPERATION AND MAINTENANCE ACTIVITY

### Detention Ponds:

The maintenance of the detention ponds shall be in accordance with the following activities identified below and the most recent version of the Maine DEP Volume III BMPs Technical Design Manual Chapter 3 – Detention Basins for Flooding Control.

- The inlet and outlet of the basin should be checked periodically to ensure that flow structures are not blocked by debris. Inspections should be conducted monthly during wet weather conditions (March to November). Flow structures should be easily accessible for inspection and the removal of debris blockage during storm conditions.
- Embankments should be maintained to preserve their integrity as impoundment structures, including: mowing, control of woody vegetation, rodent, and outlet maintenance and repair. Basins should be mowed no more than twice a year during the growing season to maintain maximum grass heights less than 12 inches. All accumulated trash and debris should be removed.

### Storm Drains:

The storm drain shall be annually inspected for the presence of accumulated sediment or debris. Any sediment shall be removed as required.

- The equipment shall meet the following minimum specifications; power jet and water source for washing down the storm drain, vacuum attachment for catch basin cleaning, and a liquid handling method to dewater the material.
- Inspect and legally dispose of accumulated sediment and debris within the storm drains between basins. Liquids must be decanted on-site and returned to the catch basin.

### FocalPoints:

The maintenance for the FocalPoints shall be in accordance with the attached “FocalPoint Operations & Maintenance” document. Additionally, the downstream catch basins and drainage manholes shall be inspected to confirm the structures are operation properly.

- Dig out silt (if any) and mulch and remove trash and foreign items.
- After removal of mulch and debris, measure distance from the top of the FocalPoint HPMBS engineered media soil to the flow line elevation of the adjacent overflow conveyance. If this distance is greater than that specified on the plans (typ. 6”-12”), add media (not top soil or other) to recharge to the distance specified.
- Mulch should be replaced with aged, double shredded hardwood mulch with fines removed.
- The plant should be replaced if dead or dying. If the plant is alive, prune as necessary to encourage growth in the correct directions.
- The area around the unit should be cleaned. All debris should be disposed of correctly.





Reviewed for Code Compliance  
Permitting and Inspections Department  
Approved with Conditions

09/28/2018

**INSPECTION AND MAINTENANCE TABLE**

<b>Inspection and Maintenance Frequency</b>	<b>Spring or Yearly</b>	<b>Summer</b>	<b>Fall</b>	<b>As Necessary</b>
Catch Basin	X			X
Detention Ponds	X		X	X
Storm Drains		X		X
FocalPoints	X		X	X









Reviewed for Code Compliance  
 Per State and Inspections Department  
 Approved with Conditions  
**09/28/2018**

1. THE APPLICANT HAS PROVIDED THE FOLLOWING INFORMATION TO THE BOARD OF ZONING ADJUSTMENT AND PLANNING IN CONNECTION WITH THE SUBMISSION OF THIS APPLICATION FOR REVIEW AND APPROVAL:

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2. THE APPLICANT HAS PROVIDED THE FOLLOWING INFORMATION TO THE BOARD OF ZONING ADJUSTMENT AND PLANNING IN CONNECTION WITH THE SUBMISSION OF THIS APPLICATION FOR REVIEW AND APPROVAL:

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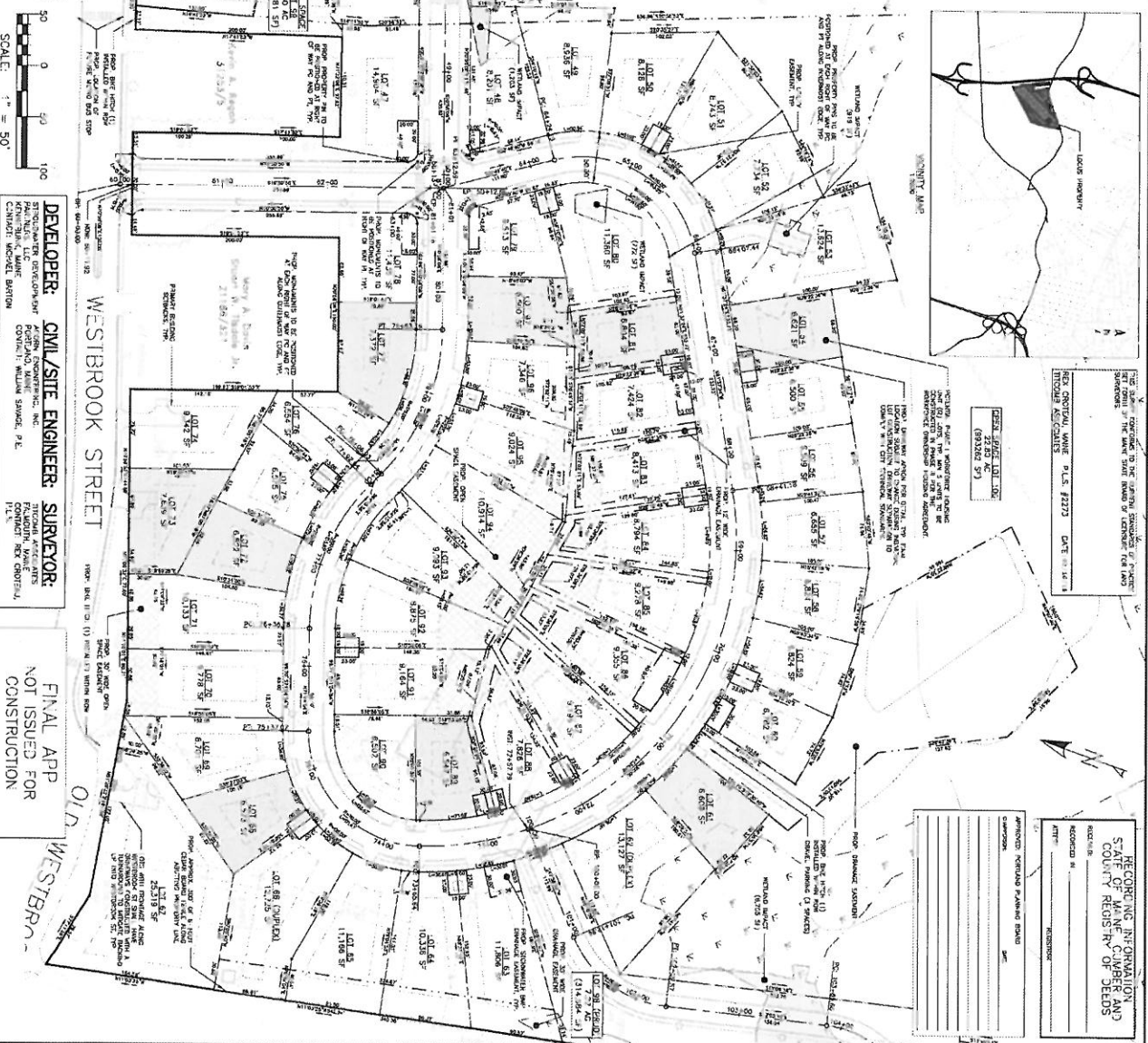
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ACORN ENGINEERING, INC.

SUBMISSION PLAT - PHASE I

STROUDWATER PRESERVE

STROUDWATER DEVELOPMENT PARTNERS, LLC

KITNEYBUNK, MA 04043

DATE: 09/28/2018

SCALE: 1" = 50'

DRAWN BY: [Name]

C-12

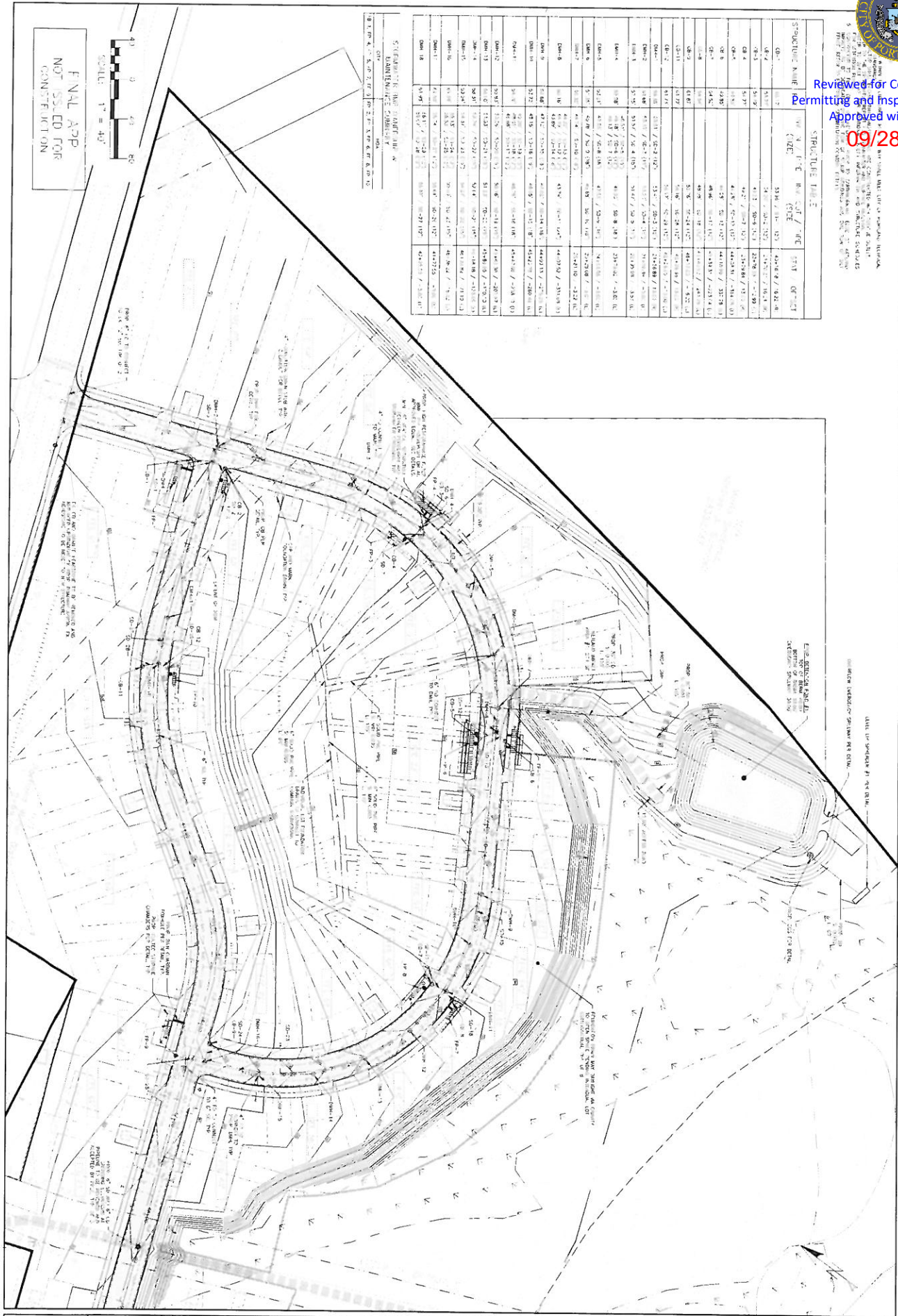




Reviewed for Code Compliance  
 Permitting and Inspections Department  
 Approved with Conditions  
**09/28/2018**

STRUCTURE LEGEND

STRUCTURE NAME	TYPE	FINISH	CONCRETE	STEEL	FOUNDATION
001	1" x 12" RC	12"	12"	12"	12"
002	1" x 12" RC	12"	12"	12"	12"
003	1" x 12" RC	12"	12"	12"	12"
004	1" x 12" RC	12"	12"	12"	12"
005	1" x 12" RC	12"	12"	12"	12"
006	1" x 12" RC	12"	12"	12"	12"
007	1" x 12" RC	12"	12"	12"	12"
008	1" x 12" RC	12"	12"	12"	12"
009	1" x 12" RC	12"	12"	12"	12"
010	1" x 12" RC	12"	12"	12"	12"
011	1" x 12" RC	12"	12"	12"	12"
012	1" x 12" RC	12"	12"	12"	12"
013	1" x 12" RC	12"	12"	12"	12"
014	1" x 12" RC	12"	12"	12"	12"
015	1" x 12" RC	12"	12"	12"	12"
016	1" x 12" RC	12"	12"	12"	12"
017	1" x 12" RC	12"	12"	12"	12"
018	1" x 12" RC	12"	12"	12"	12"
019	1" x 12" RC	12"	12"	12"	12"
020	1" x 12" RC	12"	12"	12"	12"



FINAL APP  
 NOT ISSUED FOR  
 CONSTRUCTION



	<b>C-31</b> DRAWING NO.		PROJECT NAME <b>GRADING &amp; DRAINAGE PLAN - PHASE 3</b>	SHEET NO. <b>01</b>
			CLIENT <b>STROUDWATER DEVELOPMENT PARTNERS, LLC</b>	DATE <b>09/28/2018</b>
SCALE <b>1" = 40'</b>	DRAWN BY <b>AMS</b>	CHECKED BY <b>AMS</b>	PROJECT NO. <b>152 DASHLEY ST PORTLAND, MAINE 04102</b>	SHEET TOTAL <b>01 OF 03</b>







# STORMWATER MAINTENANCE AND INSPECTION AGREEMENT: INSPECTION LOG

Reviewed for Code Compliance  
 Permitting and Inspections Department  
 Approved with Conditions  
 09/28/2018

<b>Detention Ponds:</b>		<b>Latitude:</b>	43.658204° N
<b>Location:</b> 1700 Westbrook Street, Portland, ME 04102		<b>Longitude:</b>	-70.32915° W
<b>Description of Located Point:</b> Recorded Construction Documents		<b>Inspector:</b>	
<b>Days since last precipitation:</b>		<b>Date of Inspection:</b>	
<b>Quantity of last precipitation (in):</b>		<b>Weather Conditions:</b>	
		<b>MEDEP Permit #</b>	N/A
		<b>Design Drawings:</b>	YES

Maintenance Items	Inspect In Spring	Inspect In Fall	Inspect As Necessary		Maintenance Requested (Date)	Maintenance Completed (Date)	Summary of Maintenance Required
-------------------	-------------------	-----------------	----------------------	--	------------------------------	------------------------------	---------------------------------

**Inlets, Outlets, Culverts & Storm Drains**

Inlet and outlet are free of obstruction, accumulated sediment and debris	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
Embankments maintained: Mowing, control of woody vegetation, rodent control and outlet maintenance and repair	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
Outlet control structure is free of debris and orifices are flowing freely	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			

**General**

Access to facility is adequate	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
Photographs of most recent site inspection are included	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			Photographs are attached.

Additional Comments:





# STORMWATER MAINTENANCE AND INSPECTION AGREEMENT: INSPECTION LOG

Reviewed for Code Compliance  
Permitting and Inspections Department  
Approved with Conditions

43.658204° N  
09/28/2018  
-70.32915° W

<b>STORMWATER PIPE:</b>	
<b>Location:</b> 1700 Westbrook Street, Portland, ME 04102	<b>Latitude:</b>
	<b>Longitude:</b>
<b>Description of Located Point:</b> Recorded Construction Documents	<b>Inspector:</b>
	<b>Date of Inspection:</b>
	<b>Weather Conditions:</b>
<b>Days since last precipitation:</b>	<b>MEDEP Permit #</b> N/A
<b>Quantity of last precipitation (in):</b>	<b>Design Drawings:</b> YES

Maintenance Items	Inspect In Spring	Inspect In Fall	Inspect As Necessary		Maintenance Requested (Date)	Maintenance Completed (Date)	Summary of Maintenance Required
-------------------	-------------------	-----------------	----------------------	--	------------------------------	------------------------------	---------------------------------

**Inlets, Outlets, Culverts & Storm Drains**

Pipe/culvert is free of obstruction, accumulated sediment and debris	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
Pipe inlet and outlet is free of obstruction, accumulated sediment and debris	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
Pipe/culvert, inlet and outlet is free of collapses and structural damage	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
Outlet and inlet are properly conveying stormwater and no erosion is visible	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			

**General**

Access to facility is adequate	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
Photographs of most recent site inspection are included	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				Photographs are attached.

<b>Additional Comments:</b>	
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# STORMWATER MAINTENANCE AND INSPECTION AGREEMENT: INSPECTION LOG



Reviewed for Code Compliance  
Permitting and Inspections Department  
Approved with Conditions

43 6582049 N11  
09/28/2018  
-70.32915° W

<b>FocalPoint Systems:</b>			
<b>Location:</b> 1700 Westbrook Street, Portland, ME 04102	<b>Latitude:</b>		
	<b>Longitude:</b>		
<b>Description of Located Point:</b> Recorded Construction Documents - FocalPoint	<b>Inspector:</b>		
	<b>Date of Inspection:</b>		
	<b>Weather Conditions:</b>		
<b>Days since last precipitation:</b>	<b>MEDEP Permit #</b>	N/A	
<b>Quantity of last precipitation (in):</b>	<b>Design Drawings:</b>	YES	

Maintenance Items	Inspect In Spring	Inspect In Fall	Inspect As Necessary		Maintenance Requested (Date)	Maintenance Completed (Date)	Summary of Maintenance Required
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**Inlets, Outlets, Culverts & Storm Drains**

Inspection and cleaning of FocalPoint and surrounding area	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
Removal of debris and trash	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
Replace mulch	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
Inspection of plant	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			

**General**

Access to facility is adequate	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
Photographs of most recent site inspection are included	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			Photographs are attached.

**Additional Comments:**



# REScheck Software Version 4.6.5 Compliance Certificate



Reviewed for Code Compliance  
Permitting and Inspections Department  
Approved with Conditions  
**09/28/2018**

**Project** Sweet Cherry Pie .v4

Energy Code: **2009 IECC**  
Location: **Portland, Maine**  
Construction Type: **Single-family**  
Project Type: **New Construction**  
Conditioned Floor Area: **2,373 ft2**  
Glazing Area: **17%**  
Climate Zone: **6 (7378 HDD)**  
Permit Date:  
Permit Number:

**Construction Site:**  
Lot 29 Stroudwater Preserve  
Portland, ME

**Owner/Agent:**  
Stroudwater Development  
Partners, LLC  
Kennebunk, ME

**Designer/Contractor:**  
Diversacorp  
Saco, ME

## Compliance: Passes using UA trade-off

Compliance: **8.2% Better Than Code** Maximum UA: **269** Your UA: **247**

The % Better or Worse Than Code Index reflects how close to compliance the house is based on code trade-off rules. It DOES NOT provide an estimate of energy use or cost relative to a minimum-code home.

## Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	U-Factor	UA
Floor: All-Wood Joist/Truss:Over Unconditioned Space	945	30.0	0.0	0.033	31
Ceiling 2nd Fl: Flat Ceiling or Scissor Truss	1,276	49.0	0.0	0.026	33
Ceiling 2nd Fl: Cathedral Ceiling	151	38.0	0.0	0.027	4
Wall -Front Elev: Wood Frame, 16" o.c.	228	21.0	0.0	0.057	9
Window (4): Vinyl/Fiberglass Frame:Double Pane	57			0.300	17
Door (1): Solid	20			0.200	4
Wall -Right Elev: Wood Frame, 16" o.c.	571	21.0	0.0	0.057	29
Window (5): Vinyl/Fiberglass Frame:Double Pane	56			0.300	17
Wall -Rear Elev: Wood Frame, 16" o.c.	625	21.0	0.0	0.057	25
Window (7): Vinyl/Fiberglass Frame:Double Pane	139			0.300	42
Door (1): Glass	41			0.230	9
Wall -Left Elev: Wood Frame, 16" o.c.	383	21.0	0.0	0.057	21
Window (2): Vinyl/Fiberglass Frame:Double Pane	20			0.300	6



*Compliance Statement:* The proposed building design described here is consistent with the building plans, specifications, and other calculations submitted with the permit application. The proposed building has been designed to meet the 2009 IECC requirements in REScheck Version 4.6.5 and to comply with the mandatory requirements listed in the REScheck Inspection Checklist.

Reviewed for Code Compliance  
Permitting and Inspections Department  
Approved with Conditions

09/28/2018

\_\_\_\_\_  
Name - Title

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date



# REScheck Software Version 4.6.5

# Inspection Checklist

Energy Code: 2009 IECC

Reviewed for Code Compliance  
Permitting and Inspections Department  
Approved with Conditions

09/28/2018

Requirements: 0.0% were addressed directly in the REScheck software



Text in the "Comments/Assumptions" column is provided by the user in the REScheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Pre-Inspection/Plan Review	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
103.2 [PR1] <sup>1</sup> 	Construction drawings and documentation demonstrate energy code compliance for the building envelope.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
103.2, 403.7 [PR3] <sup>1</sup> 	Construction drawings and documentation demonstrate energy code compliance for lighting and mechanical systems. Systems serving multiple dwelling units must demonstrate compliance with the commercial code.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.6 [PR2] <sup>2</sup> 	Heating and cooling equipment is sized per ACCA Manual S based on loads per ACCA Manual J or other approved methods.	Heating: Btu/hr _____ Cooling: Btu/hr _____	Heating: Btu/hr _____ Cooling: Btu/hr _____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

### Additional Comments/Assumptions:

1 High Impact (Tier 1)	2 Medium Impact (Tier 2)	3 Low Impact (Tier 3)
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Section # & Req.ID	Foundation Inspection	Complies?	Comments/Assumptions
303.2.1 [FO11] <sup>2</sup> 	A protective covering is installed to protect exposed exterior insulation and extends a minimum of 6 in. below grade.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Reviewed for Code Compliance Permitting and Inspections Department Approved with Conditions <b>09/28/2018</b>
403.8 [FO12] <sup>2</sup> 	Snow- and ice-melting system controls installed.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

**Additional Comments/Assumptions:**

1 High Impact (Tier 1)	2 Medium Impact (Tier 2)	3 Low Impact (Tier 3)
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Section # & Req.ID	Framing / Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
402.1.1, 402.3.4 [FR1] <sup>1</sup>	Door U-factor.	U- ____	U- ____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Reviewed for Code Compliance Permitting and Inspections Department Approved with Conditions <b>09/28/2018</b> See the Envelope Assemblies table for values.
402.1.1, 402.3.1, 402.3.3, 402.5 [FR2] <sup>1</sup>	Glazing U-factor (area-weighted average).	U- ____	U- ____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
303.1.3 [FR4] <sup>1</sup>	U-factors of fenestration products are determined in accordance with the NFRC test procedure or taken from the default table.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
402.4.4 [FR20] <sup>1</sup>	Fenestration that is not site built is listed and labeled as meeting AAMA/WDMA/CSA 101/I.S.2/A440 or has infiltration rates per NFRC 400 that do not exceed code limits.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
402.4.5 [FR16] <sup>2</sup>	IC-rated recessed lighting fixtures sealed at housing/interior finish and labeled to indicate $\leq 2.0$ cfm leakage at 75 Pa.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.2.1 [FR12] <sup>1</sup>	Supply ducts in attics are insulated to $\geq R-8$ . All other ducts in unconditioned spaces or outside the building envelope are insulated to $\geq R-6$ .	R- ____ R- ____	R- ____ R- ____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.2.2 [FR13] <sup>1</sup>	All joints and seams of air ducts, air handlers, filter boxes, and building cavities used as return ducts are sealed.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.2.3 [FR15] <sup>3</sup>	Building cavities are not used for supply ducts.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.3 [FR17] <sup>2</sup>	HVAC piping conveying fluids above 105 °F or chilled fluids below 55 °F are insulated to $\geq R-3$ .	R- ____	R- ____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.4 [FR18] <sup>2</sup>	Circulating service hot water pipes are insulated to R-2.	R- ____	R- ____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.5 [FR19] <sup>2</sup>	Automatic or gravity dampers are installed on all outdoor air intakes and exhausts.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

**Additional Comments/Assumptions:**

1 High Impact (Tier 1)	2 Medium Impact (Tier 2)	3 Low Impact (Tier 3)
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Section # & Req.ID	Insulation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
303.1 [IN13] <sup>2</sup>	All installed insulation is labeled or the installed R-values provided.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Reviewed for Code Compliance Permitting and Inspections Department Approved with Conditions <b>09/28/2018</b>
402.1.1, 402.2.5, 402.2.6 [IN1] <sup>1</sup>	Floor insulation R-value.	R-_____ <input type="checkbox"/> Wood <input type="checkbox"/> Steel	R-_____ <input type="checkbox"/> Wood <input type="checkbox"/> Steel	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
303.2, 402.2.6 [IN2] <sup>1</sup>	Floor insulation installed per manufacturer's instructions, and in substantial contact with the underside of the subfloor.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
402.1.1, 402.2.4, 402.2.5 [IN3] <sup>1</sup>	Wall insulation R-value. If this is a mass wall with at least 1/2 of the wall insulation on the wall exterior, the exterior insulation requirement applies.	R-_____ <input type="checkbox"/> Wood <input type="checkbox"/> Mass <input type="checkbox"/> Steel	R-_____ <input type="checkbox"/> Wood <input type="checkbox"/> Mass <input type="checkbox"/> Steel	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
303.2 [IN4] <sup>1</sup>	Wall insulation is installed per manufacturer's instructions.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

**Additional Comments/Assumptions:**

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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Section # & Req.ID	Final Inspection Provisions	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
402.1.1, 402.2.1, 402.2.2 [F11] <sup>1</sup>	Ceiling insulation R-value. Where > R-30 is required, R-30 can be used if insulation is not compressed at eaves. R-30 may be used for 500 ft <sup>2</sup> or 20% (whichever is less) where sufficient space is not available.	R-____ <input type="checkbox"/> Wood <input type="checkbox"/> Steel	R-____ <input type="checkbox"/> Wood <input type="checkbox"/> Steel	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
303.1.1.1, 303.2 [F12] <sup>1</sup>	Ceiling insulation installed per manufacturer's instructions. Blown insulation marked every 300 ft <sup>2</sup> .			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
402.2.3 [F13] <sup>1</sup>	Attic access hatch and door insulation ≥ R-value of the adjacent assembly.	R-____	R-____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
402.4.2, 402.4.2.1 [F17] <sup>1</sup>	Building envelope tightness verified by blower door test result of <7 ACH at 50 Pa. This requirement may instead be met via visual inspection, in which case verification may need to occur during Insulation Inspection.	ACH 50 = ____	ACH 50 = ____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.2.2 [F14] <sup>1</sup>	Post construction duct tightness test result of ≤8 cfm to outdoors, or ≤12 cfm across systems. Or, rough-in test result of ≤6 cfm across systems or ≤4 cfm without air handler. Rough-in test verification may need to occur during Framing Inspection.	____ cfm	____ cfm	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.1.1 [F19] <sup>2</sup>	Programmable thermostats installed on forced air furnaces.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.1.2 [F110] <sup>2</sup>	Heat pump thermostat installed on heat pumps.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.4 [F111] <sup>2</sup>	Circulating service hot water systems have automatic or accessible manual controls.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
404.1 [F16] <sup>1</sup>	50% of lamps in permanent fixtures are high efficacy lamps.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
401.3 [F17] <sup>2</sup>	Compliance certificate posted.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
303.3 [F118] <sup>3</sup>	Manufacturer manuals for mechanical and water heating equipment have been provided.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Reviewed for Code Compliance  
 Permitting and Inspections Department  
 Approved with Conditions  
**09/28/2018**

**Additional Comments/Assumptions:**

- 1 High Impact (Tier 1)    2 Medium Impact (Tier 2)    3 Low Impact (Tier 3)



Reviewed for Code Compliance  
Permitting and Inspections Department  
Approved with Conditions

09/28/2018

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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Reviewed for Code Compliance  
Permitting and Inspections Department  
Approved with Conditions

09/28/2018



# 2009 IECC Energy Efficiency Certificate

Insulation Rating	R-Value
-------------------	---------

Above-Grade Wall	21.00
Below-Grade Wall	0.00
Floor	30.00
Ceiling / Roof	49.00
Ductwork (unconditioned spaces):	_____

Glass & Door Rating	U-Factor	SHGC
---------------------	----------	------

Window	0.30	
Door	0.23	

Heating & Cooling Equipment	Efficiency
-----------------------------	------------

Heating System: <u>Furance</u>	<u>95%</u>
Cooling System: <u>AC</u>	14 Seer
Water Heater: <u>Rinnai on demand</u>	<u>.82</u> Energy Factor

Name: Michael Barton Date: 09/27/2018

**Comments**

No Comment



Lot Address: <u>1700 Westbrook St, Portland, ME 04103</u>		Lot Number: <u>29</u> CBL: <u>229</u> A002001	
Submission Requirement	Comments	Meets Criteria?	
<b>Survey</b> (clear and legible)- stamped by a licensed surveyor		Reviewed for Code Compliance Permitting and Inspections Department Approved with Conditions <b>09/28/2018</b>	
<ul style="list-style-type: none"> <li>Name and address of the property owner, the applicant and name of the proposed development, and with references to the Deed Book and Page at the Cumberland County Registry of Deeds.</li> </ul>		Y	
<ul style="list-style-type: none"> <li>North arrow.</li> </ul>		Y	
<ul style="list-style-type: none"> <li>Scale of not less than one (1) inch to fifty (50) feet.</li> </ul>	1" = 20'	Y	
<ul style="list-style-type: none"> <li>A graphic scale (scale bar).</li> </ul>		Y	
<ul style="list-style-type: none"> <li>Plan Size: Where possible, it is preferred that plans not exceed a maximum size of 24" x 36".</li> </ul>	11" X 17"	Y	
<ul style="list-style-type: none"> <li>Site Boundaries: The full parcel boundaries must be shown on the survey.</li> </ul>		Y	
<ul style="list-style-type: none"> <li>Total land area of the site.</li> </ul>		Y	
<ul style="list-style-type: none"> <li>Flood Zone statement, where applicable, based on FEMA, FIRM Flood Insurance Rate Maps.</li> </ul>	Plans note that no house lots are within the floodplain as defined by FEMA maps	N/A	
<ul style="list-style-type: none"> <li>Existing streets, rights-of-way, restrictions or easements on the site.</li> </ul>	Open space and drainage easements have been provided	Y	
<ul style="list-style-type: none"> <li>A revision block with a number and date indicating the revision status. The revision block shall be located in the title block or adjacent to it.</li> </ul>		Y	
<ul style="list-style-type: none"> <li>Property Corners: Location and descriptions of all property corners set or found, proposed to be set, and all granite survey monuments set. Where no property markers exist, the City of Portland requires that the property markers be installed, and that a licensed surveyor set and confirm the proposed building corner locations on site, prior to the issuance of a building permit.</li> </ul>	Min two (2) state coordinates are provided on C-01 Site Plan	Y	
<ul style="list-style-type: none"> <li>Boundary Survey plans, based on State of Maine Professional Licensing Boards' legal requirements, shall bear the seal of a Professional Land Surveyor licensed to practice in the State of Maine.</li> </ul>	C-01 Site Plan and C-02 Site Notes are both stamped by a PLS	Y	
<ul style="list-style-type: none"> <li>City Vertical Datum: It shall be stated on all plans that the City of Portland established vertical datum of NGVD 1929 is used or manhole rim elevation data is used for all information shown on the plan.</li> </ul>	C-01 Site Plan and C-02 Site Notes both note the following per discussion with William Nixon (DPW): "Elevation and contour information based on NAVD 88. To convert the elevation data to NGVD 1929 datum, add 0.70 feet to the NAVD 88 value."	Y	
<ul style="list-style-type: none"> <li>All plans shall state the Official City of Portland Benchmark used as supplied by the Department of Public Services Engineering Division Archivist.</li> </ul>	Benchmark information is provided on the Existing Conditions Plan developed for Stroudwater Preserve as noted on C-02 Site Notes	N/A	
<ul style="list-style-type: none"> <li>It may be required, especially in areas of old subdivision plans and areas not previously subdivided, that the survey show tie bearings and distances to the nearest street line corner, or to the nearest City of Portland survey monument. Survey tie line precision shall be an inverse line with the bearing to the nearest second and the distance to the nearest hundredth of a foot. This requirement is to aid in adding and verifying the property location on the City of Portland digital GIS base map.</li> </ul>		N/A	
<ul style="list-style-type: none"> <li>All current conveyances of lots, parcels, easements, and other forms of right, title, and/or interest shall be shown on both the survey plan (as submitted and as amended), with references to the Deed Book and Page at the Cumberland County Registry of Deeds.</li> </ul>	Book/Page for the recorded Phase I Subdivision Plan is noted on C-02 Site Notes	Y	
<ul style="list-style-type: none"> <li>Street Status: The Status of the street shall be shown; IE Accepted City Street, Continued Paper Street, Discontinued City Street, Vacated Paper Street, or new Proposed Street as per the project submission.</li> </ul>	The subdivision streets are to be built to City standards and anticipated to be accepted by the City	Y	



Site Plan		
<ul style="list-style-type: none"> <li>Show the existing and proposed structures, as applicable, and the distances from all property lines.</li> </ul>		Y Reviewed for Code Compliance
<ul style="list-style-type: none"> <li>Show the existing and proposed paved areas.</li> </ul>		Permitting and Inspections Department
<ul style="list-style-type: none"> <li>Identify the zoning district to the site plan.</li> </ul>		Approved with Conditions
<ul style="list-style-type: none"> <li>Show the ground floor areas and the finished floor elevation to the site plan.</li> </ul>		09/28/2018 Y
<ul style="list-style-type: none"> <li>Provide exterior building elevation drawings for all 4 sides.</li> </ul>	<b>Elevation drawings have been provided within the architectural construction drawings</b>	Y
<ul style="list-style-type: none"> <li>Show locations of all proposed utilities from the street to the structure, including the septic system, to the site plan.</li> </ul>		Y
<ul style="list-style-type: none"> <li>Identify on the site plan and show the proposed protection measures for any significant natural features, as identified in Section 14-526 (b) of the Land Use Ordinance.</li> </ul>		N/A
<ul style="list-style-type: none"> <li>Identify and show proposed impacts and protection measures for alterations of the watercourse.</li> </ul>	<b>Lot 29 is not located near wetlands</b>	N/A
<ul style="list-style-type: none"> <li>Identify and show proposed impacts and protection measures for the wetlands.</li> </ul>		N/A
<ul style="list-style-type: none"> <li>Identify the soil type on the site plan.</li> </ul>		Y
<ul style="list-style-type: none"> <li>Show the existing and proposed grading contours so that they match with the building elevations.</li> </ul>		Y
<ul style="list-style-type: none"> <li>Identify the location, dimensions and ownership of easements, public or private rights of way, both existing and proposed.</li> </ul>		Y
<ul style="list-style-type: none"> <li>Show on the grading plan that neighboring properties are not negatively impacted by stormwater surface drainage, ie. adding drip edge around the foundation, berming and swaling so that stormwater is directed to the front of the site towards the street, etc.</li> </ul>	<b>Flow lines and spot grades illustrate the proposed runoff direction per the Stormwater Management Report calculations noted on C-02 Site Notes</b>	Y
<ul style="list-style-type: none"> <li>Identify the required erosion control measures ie. silt fence or erosion control mix (erosion control plan) in the appropriate areas.</li> </ul>	<b>C-01 Site Plan includes proposed silt fence location, catch basin protection, and seeding plan. C-02 Site Notes references the subdivision's approved Erosion &amp; Sedimentation Report</b>	Y
<ul style="list-style-type: none"> <li>Identify on the site plan the existing vegetation that is to be preserved.</li> </ul>		Y
<ul style="list-style-type: none"> <li>Identify the required 2 street trees along the street frontage, meeting the City's minimum arboricultural standards.</li> </ul>	<b>Street trees and species are defined by the approved subdivision Landscape Plan (L-01) as noted on C-02 Site Notes</b>	Y
<ul style="list-style-type: none"> <li>Show the location, area, and limits of the proposed site disturbance.</li> </ul>		Y
<ul style="list-style-type: none"> <li>Show on the site plan where the foundation drain will outlet.</li> </ul>		Y

Project: Sweet Cherry Pie - 29 Stroudwater

Location: B1 & B2: Valley Beams @ Garage Gable

Hip/Valley Beam

[2009 International Residential Code(2012 NDS)]

1.5 IN x 11.25 IN x 3.6 FT (Actual 4.3 FT)

#2 - Spruce-Pine-Fir - Dry Use

Section Adequate By: 999.8%

Controlling Factor: Shear

artform



Reviewed for Code Compliance  
Permitting and Inspections Department  
Approved with Conditions

StruCalc Version 10.0.1.6

9/18/2018 12:40:41 PM

09/28/2018

DEFLECTIONS		Center
Live Load	0.00	IN L/MAX
Dead Load	0.00	in
Total Load	0.00	IN L/MAX
Live Load Deflection Criteria: L/240		Total Load Deflection Criteria: L/180

REACTIONS		
	A	B
Live Load	130 lb	65 lb
Dead Load	59 lb	33 lb
Total Load	189 lb	98 lb
Bearing Length	0.30 in	0.15 in

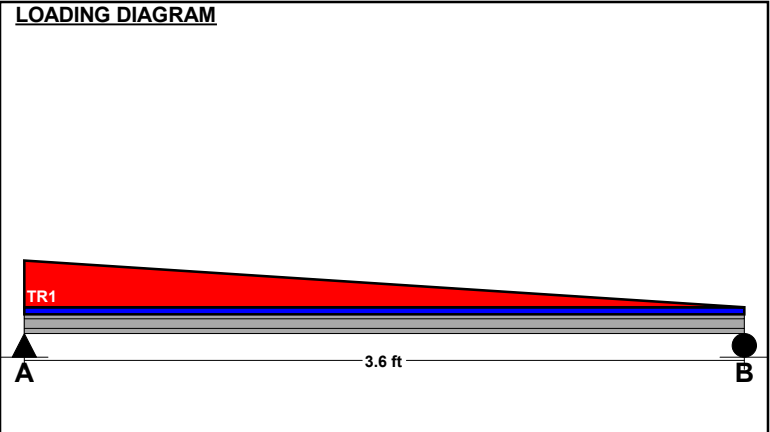
BEAM DATA	
Span Length	3.6 ft
Unbraced Length-Top	3.8 ft
Unbraced Length-Bottom	0 ft
Roof Pitch Side One:	12.112
Roof Pitch Side Two:	9.912
Roof Duration Factor	1.15
Beam End Elevation Difference	2.3ft

MATERIAL PROPERTIES			
#2 - Spruce-Pine-Fir			
	Base Values	Adjusted	
Bending Stress:	Fb = 875 psi	Fb' = 860 psi	
	Cd=1.15 Cl=0.85 CF=1.00		
Shear Stress:	Fv = 135 psi	Fv' = 155 psi	
	Cd=1.15		
Modulus of Elasticity:	E = 1400 ksi	E' = 1400 ksi	
Comp. $\perp$ to Grain:	Fc $\perp$ = 425 psi	Fc $\perp$ ' = 425 psi	

**Controlling Moment:** 132 ft-lb  
1.8 ft from left support  
Created by combining all dead and live loads.

**Controlling Shear:** 159 lb  
At support.  
Created by combining all dead and live loads.

Comparisons with required sections:	Req'd	Provided
Section Modulus:	1.84 in3	31.64 in3
Area (Shear):	1.53 in2	16.88 in2
Moment of Inertia (deflection):	1.06 in4	177.98 in4
Moment:	132 ft-lb	2267 ft-lb
Shear:	159 lb	1747 lb



HIP/VALLEY LOADING	
Roof Live Load:	LL = 60 psf
Roof Dead Load:	DL = 15 psf
Side 1 Rafter Length:	RL1 = 2.3 ft
Tributary Width based on half span of rafters.	
Side 2 Rafter Length:	RL2 = 2.8 ft
Tributary Width based on half span of rafters.	

SLOPE/PITCH ADJUSTED LENGTHS AND LOADS	
Adjusted Beam Length:	Ladj = 4.27 ft
Beam Self Weight:	BSW = 3 plf

TRAPEZOIDAL LOADS - CENTER SPAN	
Load Number	One
Left Live Load	108.2 plf
Left Dead Load	36.6 plf
Right Live Load	0 plf
Right Dead Load	0 plf
Load Start	0 ft
Load End	3.6 ft
Load Length	3.6 ft

**NOTES**



Project: Sweet Cherry Pie - 29 Stroudwater

Location: B3: Roof & Ceiling - Gable over Garage  
 Combination Roof And Floor Beam  
 [2009 International Residential Code(2012 NDS)]  
 ( 3 ) 1.75 IN x 11.25 IN x 11.8 FT  
 1.9E Microllam - iLevel Trus Joist  
 Section Adequate By: 142.5%  
 Controlling Factor: Deflection



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**CAUTIONS**

\* Laminations are to be fully connected to provide uniform transfer of loads to all members

**DEFLECTIONS**

Center

Live Load 0.16 IN L/892  
 Dead Load 0.08 in  
 Total Load 0.24 IN L/582  
 Live Load Deflection Criteria: L/360 Total Load Deflection Criteria: L/240

**REACTIONS**

A B

Live Load 2552 lb 2552 lb  
 Dead Load 1357 lb 1357 lb  
 Total Load 3909 lb 3909 lb  
 Bearing Length 0.99 in 0.99 in

**BEAM DATA**

Center

Span Length 11.8 ft  
 Unbraced Length-Top 0 ft  
 Roof Pitch 10 :12  
 Floor Duration Factor 1.00  
 Roof Duration Factor 1.15  
 Notch Depth 0.00

**MATERIAL PROPERTIES**

1.9E Microllam - iLevel Trus Joist

	Base Values	Adjusted
Bending Stress:	Fb = 2600 psi Cd=1.15 CF=1.01	Fb' = 3016 psi
Shear Stress:	Fv = 285 psi Cd=1.15	Fv' = 328 psi
Modulus of Elasticity:	E = 1900 ksi	E' = 1900 ksi
Comp. ⊥ to Grain:	Fc - ⊥ = 750 psi	Fc - ⊥' = 750 psi

**Controlling Moment:** 11459 ft-lb

5.9 ft from left support

Created by combining all dead and live loads.

**Controlling Shear:** -3909 lb

At support.

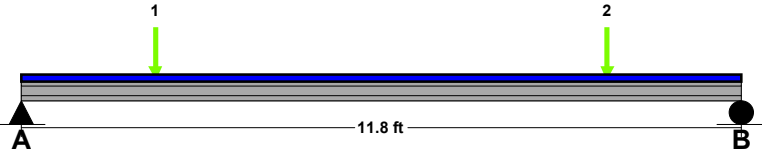
Created by combining all dead and live loads.

**Comparisons with required sections:**

	Req'd	Provided
Section Modulus:	45.59 in3	110.74 in3
Area (Shear):	17.89 in2	59.06 in2
Moment of Inertia (deflection):	256.86 in4	622.92 in4
Moment:	11459 ft-lb	27837 ft-lb
Shear:	-3909 lb	12905 lb

**NOTES**

**LOADING DIAGRAM**



**ROOF LOADING**

	Side 1	Side 2
Roof Live Load	RLL = 60 psf	34 psf
Roof Dead Load	RDL = 15 psf	15 psf
Roof Tributary Width	RTW = 4 ft	1.4 ft

**FLOOR LOADING**

	Side 1	Side 2
Floor Live Load	FLL = 20 psf	0 psf
Floor Dead Load	FDL = 15 psf	0 psf
Floor Tributary Width	FTW = 6.7 ft	0 ft

Wall Load WALL = 0 plf

**BEAM LOADING**

Roof Uniform Live Load:	wL-roof = 288 plf
Roof Uniform Dead Load:	wD-roof = 105 plf
Floor Uniform Live Load:	wL-floor = 134 plf
Floor Uniform Dead Load:	wD-floor = 101 plf
Beam Self Weight:	BSW = 18 plf
Combined Uniform Live Load:	wL = 422 plf
Combined Uniform Dead Load:	wD = 224 plf
Combined Uniform Total Load:	wT = 646 plf

**POINT LOADS - CENTER SPAN**

Load Number	One	Two
Live Load	65 lb	65 lb
Dead Load	33 lb	33 lb
Location	2.2 ft	9.6 ft

Project: Sweet Cherry Pie - 29 Stroudwater

Location: B4 & B5 Rafter support for B3

Multi-Loaded Multi-Span Beam

[2009 International Residential Code(2012 NDS)

( 4 ) 1.75 IN x 11.25 IN x 17.5 FT (13.7 + 3.8) (Actual 20.7 FT)

1.9E Microllam - iLevel Trus Joist

Section Adequate By: 208.4%

Controlling Factor: Moment



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**CAUTIONS**

\* Laminations are to be fully connected to provide uniform transfer of loads to all members

**DEFLECTIONS**

	Center	Right
Live Load	0.13 IN L/1499	-0.01 IN L/5797
Dead Load	0.07 in	-0.01 in
Total Load	0.20 IN L/955	-0.01 IN L/3731
Live Load Deflection Criteria:	L/360	Total Load Deflection Criteria: L/240

**REACTIONS**

	A	B	C
Live Load	1001 lb	4332 lb	90 lb
Dead Load	612 lb	2525 lb	-902 lb
Total Load	1613 lb	6857 lb	-812 lb
<b>Uplift (1.5 F.S)</b>	<b>0 lb</b>	<b>0 lb</b>	<b>-2630 lb</b>
Bearing Length	0.31 in	1.31 in	0.00 in

**BEAM DATA**

	Center	Right
Span Length	13.7 ft	3.8 ft
Unbraced Length-Top	0 ft	0 ft
Unbraced Length-Bottom	13.7 ft	3.8 ft
Beam End Elevation Difference		11 ft
Live Load Duration Factor		1.00
Notch Depth		0.00

**MATERIAL PROPERTIES**

1.9E Microllam - iLevel Trus Joist

	Base Values	Adjusted
Bending Stress:	Fb = 2600 psi Cd=1.00 Cl=0.99 CF=1.01	Fb' = 2594 psi
Shear Stress:	Fv = 285 psi Cd=1.00	Fv' = 285 psi
Modulus of Elasticity:	E = 1900 ksi	E' = 1900 ksi
Comp. $\perp$ to Grain:	Fc $\perp$ = 750 psi	Fc $\perp$ ' = 750 psi

**Controlling Moment:**

-10350 ft-lb

13.699 Ft from left support of span 2 (Center Span)

Created by combining all dead loads and live loads on span(s) 2, 3

**Controlling Shear:**

-3344 lb

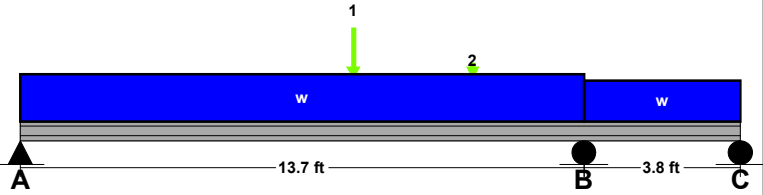
13.546 Ft from left support of span 2 (Center Span)

Created by combining all dead loads and live loads on span(s) 2, 3

**Comparisons with required sections:**

	Req'd	Provided
Section Modulus:	47.88 in3	147.66 in3
Area (Shear):	17.6 in2	78.75 in2
Moment of Inertia (deflection):	208.8 in4	830.57 in4
Moment:	-10350 ft-lb	31915 ft-lb
Shear:	-3344 lb	14963 lb

**LOADING DIAGRAM**



**UNIFORM LOADS**

	Center	Right
Uniform Live Load	60 plf	50 plf
Uniform Dead Load	15 plf	15 plf
Beam Self Weight	25 plf	25 plf
Total Uniform Load	100 plf	90 plf

**POINT LOADS - CENTER SPAN**

Load Number	One	Two
Live Load	2552 lb	130 lb
Dead Load	1357 lb	59 lb
Location	8.1 ft	11 ft

**NOTES**

Project: Sweet Cherry Pie - 29 Stroudwater

Location: B6 & B7: Valley Beams @ Porch Gable

Hip/Valley Beam

[2009 International Residential Code(2012 NDS)

1.5 IN x 11.25 IN x 4.0 FT (Actual 5.1 FT)

#2 - Spruce-Pine-Fir - Dry Use

Section Adequate By: 811.0%

Controlling Factor: Shear



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DEFLECTIONS		Center	
Live Load	0.00	IN L/MAX	
Dead Load	0.00	in	
Total Load	0.00	IN L/MAX	
Live Load Deflection Criteria: L/240		Total Load Deflection Criteria: L/180	

REACTIONS		A	B
Live Load	160 lb	80 lb	
Dead Load	86 lb	47 lb	
Total Load	246 lb	127 lb	
Bearing Length	0.39 in	0.20 in	

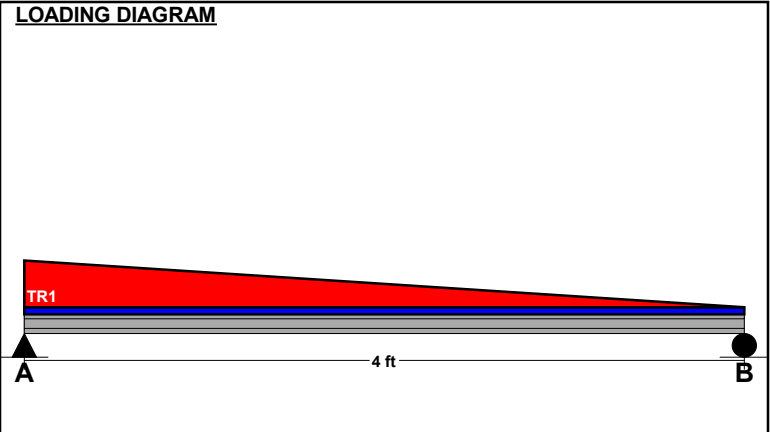
BEAM DATA	
Span Length	4 ft
Unbraced Length-Top	4 ft
Unbraced Length-Bottom	0 ft
Roof Pitch Side One:	12 :12
Roof Pitch Side Two:	16 :12
Roof Duration Factor	1.15
Beam End Elevation Difference	3.2 ft

MATERIAL PROPERTIES			
#2 - Spruce-Pine-Fir			
	Base Values	Adjusted	
Bending Stress:	Fb = 875 psi	Fb' = 805 psi	
	Cd=1.15 Cl=0.80 CF=1.00		
Shear Stress:	Fv = 135 psi	Fv' = 155 psi	
	Cd=1.15		
Modulus of Elasticity:	E = 1400 ksi	E' = 1400 ksi	
Comp. ⊥ to Grain:	Fc ⊥ = 425 psi	Fc ⊥' = 425 psi	

**Controlling Moment:** 191 ft-lb  
2.0 ft from left support  
Created by combining all dead and live loads.

**Controlling Shear:** 192 lb  
At support.  
Created by combining all dead and live loads.

Comparisons with required sections:	Req'd	Provided
Section Modulus:	2.84 in <sup>3</sup>	31.64 in <sup>3</sup>
Area (Shear):	1.85 in <sup>2</sup>	16.88 in <sup>2</sup>
Moment of Inertia (deflection):	1.84 in <sup>4</sup>	177.98 in <sup>4</sup>
Moment:	191 ft-lb	2123 ft-lb
Shear:	192 lb	1747 lb



HIP/VALLEY LOADING	
Roof Live Load:	LL = 60 psf
Roof Dead Load:	DL = 15 psf
Side 1 Rafter Length:	RL1 = 3.3 ft
Tributary Width based on half span of rafters.	
Side 2 Rafter Length:	RL2 = 2.4 ft
Tributary Width based on half span of rafters.	

SLOPE/PITCH ADJUSTED LENGTHS AND LOADS	
Adjusted Beam Length:	Ladj = 5.12 ft
Beam Self Weight:	BSW = 3 plf

TRAPEZOIDAL LOADS - CENTER SPAN	
Load Number	One
Left Live Load	119.9 plf
Left Dead Load	45.6 plf
Right Live Load	0 plf
Right Dead Load	0 plf
Load Start	0 ft
Load End	4 ft
Load Length	4 ft

**NOTES**

Project: Sweet Cherry Pie - 29 Stroudwater

Location: B8: Roof & Ceiling - Gable over Porch  
 Combination Roof And Floor Beam  
 [2009 International Residential Code(2012 NDS)]  
 ( 3 ) 1.75 IN x 20.0 IN x 19.5 FT  
 1.9E Microllam - iLevel Trus Joist  
 Section Adequate By: 174.8%  
 Controlling Factor: Moment



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**CAUTIONS**

\* Laminations are to be fully connected to provide uniform transfer of loads to all members

**DEFLECTIONS**

Center

Live Load 0.18 IN L/1276  
 Dead Load 0.12 in  
 Total Load 0.31 IN L/767  
 Live Load Deflection Criteria: L/360 Total Load Deflection Criteria: L/240

**REACTIONS**

A B

Live Load 3640 lb 3641 lb  
 Dead Load 2414 lb 2427 lb  
 Total Load 6054 lb 6068 lb  
 Bearing Length 1.54 in 1.54 in

**BEAM DATA**

Center

Span Length 19.5 ft  
 Unbraced Length-Top 0 ft  
 Roof Pitch 10 :12  
 Floor Duration Factor 1.00  
 Roof Duration Factor 1.15  
 Notch Depth 0.00

**MATERIAL PROPERTIES**

1.9E Microllam - iLevel Trus Joist

	Base Values	Adjusted
Bending Stress:	Fb = 2600 psi Cd=1.15 CF=0.93	Fb' = 2789 psi
Shear Stress:	Fv = 285 psi Cd=1.15	Fv' = 328 psi
Modulus of Elasticity:	E = 1900 ksi	E' = 1900 ksi
Comp. ⊥ to Grain:	Fc - ⊥ = 750 psi	Fc - ⊥' = 750 psi

**Controlling Moment:** 29601 ft-lb

9.75 ft from left support

Created by combining all dead and live loads.

**Controlling Shear:** -6068 lb

At support.

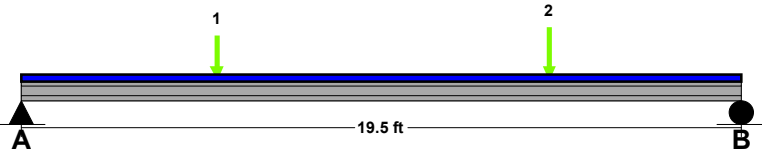
Created by combining all dead and live loads.

**Comparisons with required sections:**

	Req'd	Provided
Section Modulus:	127.35 in3	350 in3
Area (Shear):	27.77 in2	105 in2
Moment of Inertia (deflection):	1095.79 in4	3500 in4
Moment:	29601 ft-lb	81353 ft-lb
Shear:	-6068 lb	22943 lb

**NOTES**

**LOADING DIAGRAM**



**ROOF LOADING**

	Side 1	Side 2
Roof Live Load	RLL = 60 psf	34 psf
Roof Dead Load	RDL = 15 psf	15 psf
Roof Tributary Width	RTW = 4 ft	1.8 ft

**FLOOR LOADING**

	Side 1	Side 2
Floor Live Load	FLL = 10 psf	0 psf
Floor Dead Load	FDL = 15 psf	0 psf
Floor Tributary Width	FTW = 6.4 ft	0 ft
Wall Load	WALL = 0 plf	

**BEAM LOADING**

Roof Uniform Live Load:	wL-roof = 301 plf
Roof Uniform Dead Load:	wD-roof = 113 plf
Floor Uniform Live Load:	wL-floor = 64 plf
Floor Uniform Dead Load:	wD-floor = 96 plf
Beam Self Weight:	BSW = 33 plf
Combined Uniform Live Load:	wL = 365 plf
Combined Uniform Dead Load:	wD = 242 plf
Combined Uniform Total Load:	wT = 607 plf

**POINT LOADS - CENTER SPAN**

Load Number	One	Two
Live Load	80 lb	80 lb
Dead Load	47 lb	74 lb
Location	5.3 ft	14.3 ft



Project: Sweet Cherry Pie - 29 Stroudwater

Location: B9: Ceiling Beam @ Bedrooms

Uniformly Loaded Floor Beam

[2009 International Residential Code(2012 NDS)

( 2 ) 1.75 IN x 16.0 IN x 16.0 FT

1.9E Microllam - iLevel Trus Joist

Section Adequate By: 117.0%

Controlling Factor: Moment

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**CAUTIONS**

\* Laminations are to be fully connected to provide uniform transfer of loads to all members

**DEFLECTIONS**

Center

Live Load 0.16 IN L/1202

Dead Load 0.13 in

Total Load 0.29 IN L/660

Live Load Deflection Criteria: L/360 Total Load Deflection Criteria: L/240

**REACTIONS**

A

B

Live Load 1968 lb 1968 lb

Dead Load 1616 lb 1616 lb

Total Load 3584 lb 3584 lb

Bearing Length 1.37 in 1.37 in

**BEAM DATA**

Center

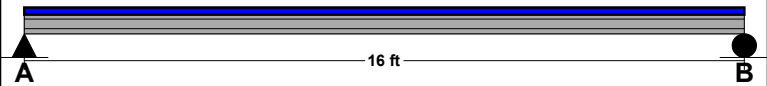
Span Length 16 ft

Unbraced Length-Top 0 ft

Floor Duration Factor 1.00

Notch Depth 0.00

**LOADING DIAGRAM**



**MATERIAL PROPERTIES**

1.9E Microllam - iLevel Trus Joist

Base Values

Adjusted

Bending Stress: Fb = 2600 psi Fb' = 2500 psi  
Cd=1.00 CF=0.96

Shear Stress: Fv = 285 psi Fv' = 285 psi  
Cd=1.00

Modulus of Elasticity: E = 1900 ksi E' = 1900 ksi  
Comp.  $\perp$  to Grain: Fc  $\perp$  = 750 psi Fc  $\perp$ ' = 750 psi

**Controlling Moment:** 14336 ft-lb

8.0 ft from left support

Created by combining all dead and live loads.

**Controlling Shear:** 3584 lb

At support.

Created by combining all dead and live loads.

**Comparisons with required sections:**

Req'd

Provided

Section Modulus: 68.81 in3 149.33 in3

Area (Shear): 18.86 in2 56 in2

Moment of Inertia (deflection): 434.54 in4 1194.67 in4

Moment: 14336 ft-lb 31114 ft-lb

Shear: 3584 lb 10640 lb

**FLOOR LOADING**

Side 1

Side 2

Floor Live Load FLL = 20 psf 20 psf

Floor Dead Load FDL = 15 psf 15 psf

Floor Tributary Width FTW = 6 ft 6.3 ft

Wall Load WALL = 0 plf

**BEAM LOADING**

Beam Total Live Load: wL = 246 plf

Beam Total Dead Load: wD = 185 plf

Beam Self Weight: BSW = 18 plf

Total Maximum Load: wT = 448 plf

**NOTES**

Project: Sweet Cherry Pie - 29 Stroudwater

Location: B10: 2nd Fl @ Living

Multi-Span Floor Beam

[2009 International Residential Code(2012 NDS)]

( 5 ) 1.75 IN x 9.25 IN x 19.7 FT (3.7 + 16)

1.9E Microllam - iLevel Trus Joist

Section Adequate By: 91.9%

Controlling Factor: Moment

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**CAUTIONS**

\* Laminations are to be fully connected to provide uniform transfer of loads to all members

**DEFLECTIONS**

	Left		Center	
Live Load	-0.01	IN L/3544	0.24	IN L/787
Dead Load	-0.01	in	0.13	in
Total Load	-0.02	IN L/2531	0.38	IN L/507
Live Load Deflection Criteria:	L/360		Total Load Deflection Criteria: L/240	

**REACTIONS**

	A	B	C
Live Load	439 lb	6281 lb	2219 lb
Dead Load	-233 lb	4613 lb	1257 lb
Total Load	206 lb	10894 lb	3476 lb
<b>Uplift (1.5 F.S)</b>	<b>-2678 lb</b>	<b>0 lb</b>	<b>0 lb</b>
Bearing Length	0.03 in	1.66 in	0.53 in

**BEAM DATA**

	Left	Center
Span Length	3.7 ft	16 ft
Unbraced Length-Top	0 ft	0 ft
Unbraced Length-Bottom	0 ft	16 ft
Floor Duration Factor	1.00	
Notch Depth	0.00	

**MATERIAL PROPERTIES**

1.9E Microllam - iLevel Trus Joist

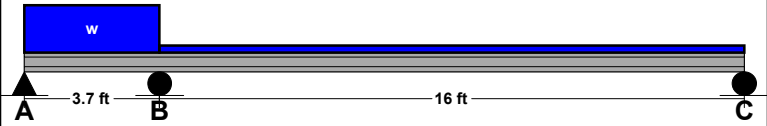
	Base Values	Adjusted
Bending Stress:	Fb = 2600 psi Cd=1.00 Cf=0.99 CF=1.04	Fb' = 2679 psi
Shear Stress:	Fv = 285 psi Cd=1.00	Fv' = 285 psi
Modulus of Elasticity:	E = 1900 ksi	E' = 1900 ksi
Comp. ⊥ to Grain:	Fc - ⊥ = 750 psi	Fc - ⊥' = 750 psi

**Controlling Moment:** -14517 ft-lb  
Over left support of span 2 (Center Span)  
Created by combining all dead loads and live loads on span(s) 1, 2

**Controlling Shear:** -5608 lb  
4.0 Ft from left support of span 1 (Left Span)  
Created by combining all dead loads and live loads on span(s) 1, 2

Comparisons with required sections:	Req'd	Provided
Section Modulus:	65.02 in3	124.78 in3
Area (Shear):	29.52 in2	80.94 in2
Moment of Inertia (deflection):	273.22 in4	577.1 in4
Moment:	-14517 ft-lb	27857 ft-lb
Shear:	-5608 lb	15378 lb

**LOADING DIAGRAM**



**FLOOR LOADING**

	Left	Center
Floor Live Load	FLL = 30 psf	40 psf
Floor Dead Load	FDL = 15 psf	20 psf
Floor Tributary Width Side One	TW1 = 6 ft	6 ft
Floor Tributary Width Side Two	TW2 = 2.3 ft	2.7 ft
Wall Load	WALL = 512 plf	0 plf

**BEAM LOADING**

	Left	Center
Reduced Floor Live Load	30 psf	40 psf
Total Live Load	249 plf	348 plf
Total Dead Load	637 plf	174 plf
Beam Self Weight	25 plf	25 plf
Total Load	911 plf	547 plf

**NOTES**

Project: Sweet Cherry Pie - 29 Stroudwater

Location: B11: 2nd Fl @ Garage  
 Multi-Loaded Multi-Span Beam  
 [2015 International Building Code(2015 NDS)  
 ( 4 ) 1.75 IN x 20.0 IN x 23.0 FT  
 1.9E Microllam - iLevel Trus Joist  
 Section Adequate By: 114.9%  
 Controlling Factor: Moment



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**CAUTIONS**

\* Laminations are to be fully connected to provide uniform transfer of loads to all members

**DEFLECTIONS**

Center

Live Load 0.30 IN L/918  
 Dead Load 0.18 in  
 Total Load 0.48 IN L/571  
 Live Load Deflection Criteria: L/360 Total Load Deflection Criteria: L/240

**REACTIONS**

A B

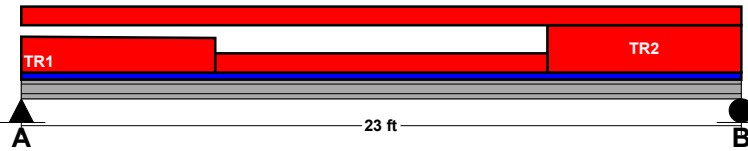
Live Load 5191 lb 5847 lb  
 Dead Load 3193 lb 3399 lb  
 Total Load 8384 lb 9246 lb  
 Bearing Length 1.60 in 1.76 in

**BEAM DATA**

Center

Span Length 23 ft  
 Unbraced Length-Top 0 ft  
 Unbraced Length-Bottom 23 ft  
 Live Load Duration Factor 1.00  
 Notch Depth 0.00

**LOADING DIAGRAM**



**MATERIAL PROPERTIES**

1.9E Microllam - iLevel Trus Joist

	Base Values	Adjusted
Bending Stress:	Fb = 2600 psi Cd=1.00 CF=0.93	Fb' = 2425 psi
Shear Stress:	Fv = 285 psi Cd=1.00	Fv' = 285 psi
Modulus of Elasticity:	E = 1900 ksi	E' = 1900 ksi
Comp. ⊥ to Grain:	Fc - ⊥ = 750 psi	Fc - ⊥' = 750 psi

**Controlling Moment:**

43892 ft-lb

11.73 Ft from left support of span 2 (Center Span)

Created by combining all dead loads and live loads on span(s) 2

**Controlling Shear:**

-9246 lb

At right support of span 2 (Center Span)

Created by combining all dead loads and live loads on span(s) 2

**UNIFORM LOADS**

Center

Uniform Live Load 0 plf  
 Uniform Dead Load 0 plf  
 Beam Self Weight 44 plf  
 Total Uniform Load 44 plf

**TRAPEZOIDAL LOADS - CENTER SPAN**

Load Number	One	Two	Three	Four
Left Live Load	371 plf	504 plf	173 plf	162 plf
Left Dead Load	203 plf	246 plf	83 plf	81 plf
Right Live Load	344 plf	504 plf	173 plf	162 plf
Right Dead Load	203 plf	246 plf	86 plf	81 plf
Load Start	0 ft	16.8 ft	0 ft	6.2 ft
Load End	6.2 ft	23 ft	23 ft	16.8 ft
Load Length	6.2 ft	6.2 ft	23 ft	10.6 ft

**Comparisons with required sections:**

	Req'd	Provided
Section Modulus:	217.16 in3	466.67 in3
Area (Shear):	48.66 in2	140 in2
Moment of Inertia (deflection):	1960.21 in4	4666.67 in4
Moment:	43892 ft-lb	94323 ft-lb
Shear:	-9246 lb	26600 lb

**NOTES**

Project: Sweet Cherry Pie - 29 Stroudwater

Location: B12: Porch Beam (Roof & Ceiling)

Multi-Span Floor Beam

[2009 International Residential Code(2012 NDS)]

( 3 ) 1.5 IN x 9.25 IN x 20.75 FT (4.8 + 10.2 + 5.8)

#2 - Spruce-Pine-Fir - Dry Use

Section Adequate By: 12.3%

Controlling Factor: Shear

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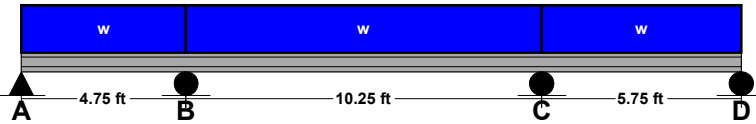
**CAUTIONS**

\* Laminations are to be fully connected to provide uniform transfer of loads to all members

**DEFLECTIONS**

	Left	Center	Right
Live Load	-0.02 IN L/3452	0.10 IN L/1278	-0.02 IN L/3141
Dead Load	0.00 in	0.05 in	0.00 in
Total Load	-0.02 IN L/2762	0.14 IN L/867	-0.02 IN L/2825
Live Load Deflection Criteria:	L/360	Total Load Deflection Criteria:	L/240

**LOADING DIAGRAM**



**REACTIONS**

	A	B	C	D
Live Load	914 lb	3737 lb	3811 lb	1056 lb
Dead Load	200 lb	2140 lb	2220 lb	370 lb
Total Load	1114 lb	5877 lb	6031 lb	1426 lb
<b>Uplift (1.5 F.S)</b>	<b>-443 lb</b>	<b>0 lb</b>	<b>0 lb</b>	<b>-186 lb</b>
Bearing Length	0.58 in	3.07 in	3.15 in	0.75 in

**BEAM DATA**

	Left	Center	Right
Span Length	4.75 ft	10.25 ft	5.75 ft
Unbraced Length-Top	0 ft	0 ft	0 ft
Unbraced Length-Bottom	4.75 ft	10.25 ft	5.75 ft
Floor Duration Factor	1.00		
Notch Depth	0.00		

**MATERIAL PROPERTIES**

#2 - Spruce-Pine-Fir

	Base Values	Adjusted
Bending Stress:	Fb = 875 psi Cd=1.00 Cf=0.99 CF=1.10 Cr=1.15	Fb' = 1094 psi
Shear Stress:	Fv = 135 psi Cd=1.00	Fv' = 135 psi
Modulus of Elasticity:	E = 1400 ksi	E' = 1400 ksi
Comp. ⊥ to Grain:	Fc - ⊥ = 425 psi	Fc - ⊥' = 425 psi

**Controlling Moment:**

-4952 ft-lb

Over right support of span 2 (Center Span)

Created by combining all dead loads and live loads on span(s) 2, 3

**Controlling Shear:**

3337 lb

At left support of span 2 (Center Span)

Created by combining all dead loads and live loads on span(s) 1, 2

**FLOOR LOADING**

	Left	Center	Right
Floor Live Load	FLL = 80 psf	80 psf	80 psf
Floor Dead Load	FDL = 30 psf	30 psf	30 psf
Floor Tributary Width Side One	TW1 = 5 ft	5 ft	5 ft
Floor Tributary Width Side Two	TW2 = 0 ft	0 ft	0 ft
Wall Load	WALL = 80 plf	80 plf	80 plf

**BEAM LOADING**

	Left	Center	Right
Reduced Floor Live Load	80 psf	80 psf	80 psf
Total Live Load	400 plf	400 plf	400 plf
Total Dead Load	230 plf	230 plf	230 plf
Beam Self Weight	8 plf	8 plf	8 plf
Total Load	638 plf	638 plf	638 plf

**NOTES**



Project: Sweet Cherry Pie - 29 Stroudwater

Location: B13: 1st floor Beam under Living

Multi-Span Floor Beam

[2009 International Residential Code(2012 NDS)

( 3 ) 1.5 IN x 9.25 IN x 20.0 FT ( 8 + 8.2 + 3.8)

#2 - Spruce-Pine-Fir - Dry Use

Section Adequate By: 55.7%

Controlling Factor: Shear

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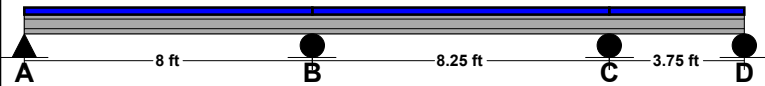
**CAUTIONS**

\* Laminations are to be fully connected to provide uniform transfer of loads to all members

**DEFLECTIONS**

	Left	Center	Right
Live Load	0.05 IN L/1791	0.04 IN L/2540	-0.01 IN L/7158
Dead Load	0.01 in	0.01 in	0.00 in
Total Load	0.07 IN L/1414	0.05 IN L/2138	-0.01 IN L/6533
Live Load Deflection Criteria: L/360 Total Load Deflection Criteria: L/240			

**LOADING DIAGRAM**



**REACTIONS**

	A	B	C	D
Live Load	1218 lb	3343 lb	2706 lb	739 lb
Dead Load	429 lb	1311 lb	921 lb	116 lb
Total Load	1647 lb	4654 lb	3627 lb	855 lb
<b>Uplift (1.5 F.S)</b>	<b>0 lb</b>	<b>0 lb</b>	<b>0 lb</b>	<b>-369 lb</b>
Bearing Length	0.86 in	2.43 in	1.90 in	0.45 in

**BEAM DATA**

	Left	Center	Right
Span Length	8 ft	8.25 ft	3.75 ft
Unbraced Length-Top	0 ft	0 ft	0 ft
Unbraced Length-Bottom	8 ft	8.25 ft	3.75 ft
Floor Duration Factor	1.00		
Notch Depth	0.00		

**MATERIAL PROPERTIES**

#2 - Spruce-Pine-Fir

	Base Values	Adjusted
Bending Stress:	Fb = 875 psi Cd=1.00 Cf=0.99 CF=1.10 Cr=1.15	Fb' = 1097 psi
Shear Stress:	Fv = 135 psi Cd=1.00	Fv' = 135 psi
Modulus of Elasticity:	E = 1400 ksi	E' = 1400 ksi
Comp. ⊥ to Grain:	Fc - ⊥ = 425 psi	Fc - ⊥' = 425 psi

**Controlling Moment:**

-3606 ft-lb

Over left support of span 2 (Center Span)

Created by combining all dead loads and live loads on span(s) 1, 2

**Controlling Shear:**

-2406 lb

At right support of span 1 (Left Span)

Created by combining all dead loads and live loads on span(s) 1, 2

**Comparisons with required sections:**

	Req'd	Provided
Section Modulus:	39.45 in <sup>3</sup>	64.17 in <sup>3</sup>
Area (Shear):	26.73 in <sup>2</sup>	41.63 in <sup>2</sup>
Moment of Inertia (deflection):	59.67 in <sup>4</sup>	296.79 in <sup>4</sup>
Moment:	-3606 ft-lb	5865 ft-lb
Shear:	-2406 lb	3746 lb

**FLOOR LOADING**

	Left	Center	Right
Floor Live Load	FLL = 40 psf	40 psf	40 psf
Floor Dead Load	FDL = 15 psf	15 psf	15 psf
Floor Tributary Width Side One	TW1 = 5.8 ft	5.8 ft	5.8 ft
Floor Tributary Width Side Two	TW2 = 3 ft	3 ft	3 ft
Wall Load	WALL = 0 plf	0 plf	0 plf

**BEAM LOADING**

	Left	Center	Right
Reduced Floor Live Load	40 psf	40 psf	40 psf
Total Live Load	350 plf	350 plf	350 plf
Total Dead Load	131 plf	131 plf	131 plf
Beam Self Weight	8 plf	8 plf	8 plf
Total Load	489 plf	489 plf	489 plf

**NOTES**

Project: Sweet Cherry Pie - 29 Stroudwater

Location: B14: 1st floor Beam under entry

Multi-Span Floor Beam

[2009 International Residential Code(2015 NDS)]

( 2 ) 1.75 IN x 9.25 IN x 16.0 FT (8.2 + 7.8)

1.9E Microllam - iLevel Trus Joist

Section Adequate By: 12.0%

Controlling Factor: Shear



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**CAUTIONS**

\* Laminations are to be fully connected to provide uniform transfer of loads to all members

**DEFLECTIONS**

	Left	Center
Live Load	0.10 IN L/1002	0.09 IN L/998
Dead Load	0.03 in	0.04 in
Total Load	0.13 IN L/765	0.13 IN L/715
Live Load Deflection Criteria:	L/360	Total Load Deflection Criteria: L/240

**REACTIONS**

	A	B	C
Live Load	2177 lb	6513 lb	2384 lb
Dead Load	1057 lb	3933 lb	1307 lb
Total Load	3234 lb	10446 lb	3691 lb
Bearing Length	1.23 in	3.98 in	1.41 in

**BEAM DATA**

	Left	Center
Span Length	8.2 ft	7.8 ft
Unbraced Length-Top	0 ft	0 ft
Unbraced Length-Bottom	7.7 ft	7.8 ft
Floor Duration Factor	1.00	
Notch Depth	0.00	

**MATERIAL PROPERTIES**

1.9E Microllam - iLevel Trus Joist

	Base Values	Adjusted
Bending Stress:	Fb = 2600 psi Cd=1.00 Cl=0.98 CF=1.04	Fb' = 2635 psi
Shear Stress:	Fv = 285 psi Cd=1.00	Fv' = 285 psi
Modulus of Elasticity:	E = 1900 ksi	E' = 1900 ksi
Comp. ⊥ to Grain:	Fc - ⊥ = 750 psi	Fc - ⊥' = 750 psi

**Controlling Moment:**

-8340 ft-lb

Over left support of span 2 (Center Span)

Created by combining all dead loads and live loads on span(s) 1, 2

**Controlling Shear:**

5492 lb

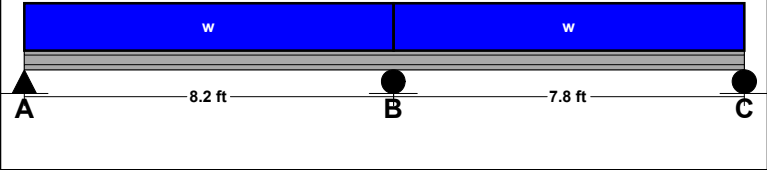
At left support of span 2 (Center Span)

Created by combining all dead loads and live loads on span(s) 1, 2

**Comparisons with required sections:**

	Req'd	Provided
Section Modulus:	37.99 in3	49.91 in3
Area (Shear):	28.91 in2	32.38 in2
Moment of Inertia (deflection):	83.29 in4	230.84 in4
Moment:	-8340 ft-lb	10958 ft-lb
Shear:	5492 lb	6151 lb

**LOADING DIAGRAM**



**FLOOR LOADING**

	Left	Center
Floor Live Load	FLL = 70 psf	80 psf
Floor Dead Load	FDL = 30 psf	40 psf
Floor Tributary Width Side One	TW1 = 2.7 ft	2.7 ft
Floor Tributary Width Side Two	TW2 = 6 ft	6 ft
Wall Load	WALL = 80 plf	80 plf

**BEAM LOADING**

	Left	Center
Reduced Floor Live Load	70 psf	80 psf
Total Live Load	609 plf	696 plf
Total Dead Load	341 plf	428 plf
Beam Self Weight	10 plf	10 plf
Total Load	960 plf	1134 plf

**NOTES**

Project: Sweet Cherry Pie - 29 Stroudwater

Location: B15: Porch Beam

Multi-Span Floor Beam

[2009 International Residential Code(2012 NDS)

( 3 ) 1.5 IN x 7.25 IN x 20.75 FT (4.8 + 10.2 + 5.8)

#2 - Spruce-Pine-Fir - Dry Use

Section Adequate By: 52.1%

Controlling Factor: Moment

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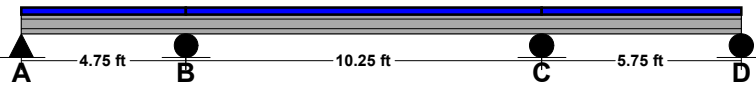
**CAUTIONS**

\* Laminations are to be fully connected to provide uniform transfer of loads to all members

**DEFLECTIONS**

	Left	Center	Right
Live Load	-0.02 IN L/2660	0.12 IN L/984	-0.03 IN L/2420
Dead Load	0.00 in	0.03 in	0.00 in
Total Load	-0.02 IN L/2342	0.16 IN L/782	-0.03 IN L/2287
Live Load Deflection Criteria:	L/360	Total Load Deflection Criteria:	L/240

**LOADING DIAGRAM**



**REACTIONS**

	A	B	C	D
Live Load	571 lb	2336 lb	2382 lb	660 lb
Dead Load	68 lb	729 lb	756 lb	126 lb
Total Load	639 lb	3065 lb	3138 lb	786 lb
<b>Uplift (1.5 F.S)</b>	<b>-315 lb</b>	<b>0 lb</b>	<b>0 lb</b>	<b>-186 lb</b>
Bearing Length	0.33 in	1.60 in	1.64 in	0.41 in

**BEAM DATA**

	Left	Center	Right
Span Length	4.75 ft	10.25 ft	5.75 ft
Unbraced Length-Top	0 ft	0 ft	0 ft
Unbraced Length-Bottom	4.75 ft	10.25 ft	5.75 ft
Floor Duration Factor	1.00		
Notch Depth	0.00		

**MATERIAL PROPERTIES**

#2 - Spruce-Pine-Fir

	Base Values	Adjusted
Bending Stress:	Fb = 875 psi Cd=1.00 Cf=0.99 CF=1.20 Cr=1.15	Fb' = 1196 psi
Shear Stress:	Fv = 135 psi Cd=1.00	Fv' = 135 psi
Modulus of Elasticity:	E = 1400 ksi	E' = 1400 ksi
Comp. ⊥ to Grain:	Fc - ⊥ = 425 psi	Fc - ⊥' = 425 psi

**FLOOR LOADING**

	Left	Center	Right
Floor Live Load	FLL = 50 psf	50 psf	50 psf
Floor Dead Load	FDL = 15 psf	15 psf	15 psf
Floor Tributary Width Side One	TW1 = 5 ft	5 ft	5 ft
Floor Tributary Width Side Two	TW2 = 0 ft	0 ft	0 ft
Wall Load	WALL = 0 plf	0 plf	0 plf

**BEAM LOADING**

	Left	Center	Right
Reduced Floor Live Load	50 psf	50 psf	50 psf
Total Live Load	250 plf	250 plf	250 plf
Total Dead Load	75 plf	75 plf	75 plf
Beam Self Weight	6 plf	6 plf	6 plf
Total Load	331 plf	331 plf	331 plf

**Controlling Moment:**

-2584 ft-lb

Over right support of span 2 (Center Span)

Created by combining all dead loads and live loads on span(s) 2, 3

**Controlling Shear:**

1741 lb

At left support of span 2 (Center Span)

Created by combining all dead loads and live loads on span(s) 1, 2

**Comparisons with required sections:**

	Req'd	Provided
Section Modulus:	25.92 in <sup>3</sup>	39.42 in <sup>3</sup>
Area (Shear):	19.35 in <sup>2</sup>	32.63 in <sup>2</sup>
Moment of Inertia (deflection):	52.26 in <sup>4</sup>	142.9 in <sup>4</sup>
Moment:	-2584 ft-lb	3930 ft-lb
Shear:	1741 lb	2936 lb

**NOTES**

Project: Sweet Cherry Pie - 29 Stroudwater

Location: B16 & B17 Rafter support for B8

Multi-Loaded Multi-Span Beam

[2009 International Residential Code(2012 NDS)]

( 2 ) 1.5 IN x 11.25 IN x 10.1 FT (4.1 + 6) (Actual 14.9 FT)

#2 - Spruce-Pine-Fir - Dry Use

Section Adequate By: 784.2%

Controlling Factor: Shear



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**CAUTIONS**

\* Laminations are to be fully connected to provide uniform transfer of loads to all members

**DEFLECTIONS**

	Center	Right
Live Load	0.00 IN L/MAX	0.00 IN L/MAX
Dead Load	0.00 in	0.00 in
Total Load	0.00 IN L/MAX	0.01 IN L/MAX
Live Load Deflection Criteria:	L/360	Total Load Deflection Criteria: L/240

**REACTIONS**

	A	B	C
Live Load	113 lb	549 lb	153 lb
Dead Load	38 lb	288 lb	75 lb
Total Load	151 lb	837 lb	228 lb
<b>Uplift (1.5 F.S)</b>	<b>-13 lb</b>	<b>0 lb</b>	<b>0 lb</b>
Bearing Length	0.12 in	0.66 in	0.18 in

**BEAM DATA**

	Center	Right
Span Length	4.1 ft	6 ft
Unbraced Length-Top	0 ft	0 ft
Unbraced Length-Bottom	4.1 ft	6 ft
Beam End Elevation Difference		11 ft
Live Load Duration Factor		1.00
Notch Depth		0.00

**MATERIAL PROPERTIES**

#2 - Spruce-Pine-Fir

	Base Values	Adjusted
Bending Stress:	Fb = 875 psi Cd=1.00 Cf=0.97 CF=1.00	Fb' = 851 psi
Shear Stress:	Fv = 135 psi Cd=1.00	Fv' = 135 psi
Modulus of Elasticity:	E = 1400 ksi	E' = 1400 ksi
Comp. $\perp$ to Grain:	Fc $\perp$ = 425 psi	Fc $\perp$ ' = 425 psi

**Controlling Moment:**

-331 ft-lb

Over left support of span 3 (Right Span)

Created by combining all dead loads and live loads on span(s) 2, 3

**Controlling Shear:**

-344 lb

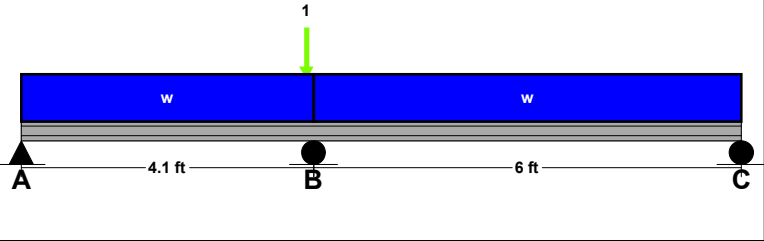
4.058 Ft from left support of span 2 (Center Span)

Created by combining all dead loads and live loads on span(s) 2, 3

**Comparisons with required sections:**

	Req'd	Provided
Section Modulus:	4.67 in3	63.28 in3
Area (Shear):	3.82 in2	33.75 in2
Moment of Inertia (deflection):	5.98 in4	355.96 in4
Moment:	-331 ft-lb	4488 ft-lb
Shear:	-344 lb	3038 lb

**LOADING DIAGRAM**



**UNIFORM LOADS**

	Center	Right
Uniform Live Load	60 plf	60 plf
Uniform Dead Load	15 plf	15 plf
Beam Self Weight	6 plf	6 plf
Total Uniform Load	81 plf	81 plf

**POINT LOADS - CENTER SPAN**

Load Number	One
Live Load	160 lb
Dead Load	86 lb
Location	4 ft

**NOTES**



Project: Sweet Cherry Pie - 29 Stroudwater

Location: FJ1: Joists over Kitchen carrying Ceiling BW

Floor Joist

[2009 International Residential Code(2015 NDS)

( 2 ) 1.5 IN x 9.25 IN x 13.5 FT @ 16 O.C.

#2 - Spruce-Pine-Fir - Dry Use

Section Adequate By: 56.8%

Controlling Factor: Deflection

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**CAUTIONS**

\* Properly connect sheathing to double joists/rafters or fully laminate to transfer diaphragm forces.

**DEFLECTIONS**

Center

Live Load 0.18 IN L/907

Dead Load 0.11 in

Total Load 0.29 IN L/564

Live Load Deflection Criteria: L/480 Total Load Deflection Criteria: L/360

**REACTIONS**

A

B

Live Load 675 lb 397 lb

Dead Load 512 lb 218 lb

Total Load 1187 lb 615 lb

Bearing Length 0.93 in 0.48 in

**SUPPORT LOADS**

A

B

Live Load 506 plf 298 plf

Dead Load 384 plf 164 plf

Total Load 890 plf 461 plf

**MATERIAL PROPERTIES**

#2 - Spruce-Pine-Fir

Base Values

Adjusted

Bending Stress: Fb = 875 psi Fb' = 1107 psi  
Cd=1.00 CF=1.10 Cr=1.15

Shear Stress: Fv = 135 psi Fv' = 135 psi  
Cd=1.00

Modulus of Elasticity: E = 1400 ksi E' = 1400 ksi

Comp. ⊥ to Grain: Fc - ⊥ = 425 psi Fc - ⊥' = 425 psi

**Controlling Moment:** 2363 ft-lb

5.81 Ft from left support of span 2 (Center Span)

Created by combining all dead loads and live loads on span(s) 2

**Controlling Shear:** 1188 lb

At left support of span 2 (Center Span)

Created by combining all dead loads and live loads on span(s) 2

**Comparisons with required sections:**

Section Modulus: Req'd 25.62 in3 Provided 42.78 in3

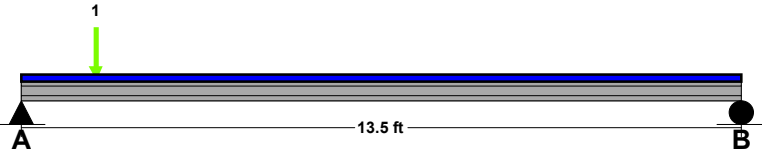
Area (Shear): 13.2 in2 27.75 in2

Moment of Inertia (deflection): 126.21 in4 197.86 in4

Moment: 2363 ft-lb 3946 ft-lb

Shear: 1188 lb 2498 lb

**LOADING DIAGRAM**



**JOIST DATA**

Center

Span Length 13.5 ft

Unbraced Length-Top 0 ft

Unbraced Length-Bottom 0 ft

Floor sheathing applied to top of joists-top of joists fully braced.

Floor Duration Factor 1.00

**JOIST LOADING**

**Uniform Floor Loading**

Center

Live Load LL = 40 psf

Dead Load DL = 20 psf

Total Load TL = 60 psf

TL Adj. For Joist Spacing wT = 80 plf

**Wall Loading**

Wall One

Live Load (⊥ to Joists): L1 = 264 plf

Dead Load (⊥ to Joists): D1 = 278 plf

Load Location X1 = 1.4 ft

**NOTES**

Project: Sweet Cherry Pie - 29 Stroudwater

Location: FJ2-3: Joists over Garage carrying Roof BW

Floor Joist

[2009 International Residential Code(2012 NDS)]

( 2 ) 1.5 IN x 9.25 IN x 10.7 FT @ 12 O.C.

#2 - Spruce-Pine-Fir - Dry Use

Section Adequate By: 36.1%

Controlling Factor: Moment



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**CAUTIONS**

\* Properly connect sheathing to double joists/rafters or fully laminate to transfer diaphragm forces.

**DEFLECTIONS**

Center

Live Load 0.12 IN L/1100

Dead Load 0.07 in

Total Load 0.18 IN L/704

Live Load Deflection Criteria: L/480 Total Load Deflection Criteria: L/360

**REACTIONS**

A

B

Live Load 370 lb 558 lb

Dead Load 203 lb 312 lb

Total Load 573 lb 870 lb

Bearing Length 0.45 in 0.68 in

**SUPPORT LOADS**

A

B

Live Load 370 plf 558 plf

Dead Load 203 plf 312 plf

Total Load 573 plf 870 plf

**MATERIAL PROPERTIES**

#2 - Spruce-Pine-Fir

Base Values

Adjusted

Bending Stress: Fb = 875 psi Fb' = 1107 psi  
Cd=1.00 CF=1.10 Cr=1.15

Shear Stress: Fv = 135 psi Fv' = 135 psi  
Cd=1.00

Modulus of Elasticity: E = 1400 ksi E' = 1400 ksi

Comp. ⊥ to Grain: Fc - ⊥ = 425 psi Fc - ⊥' = 425 psi

**Controlling Moment:** 2900 ft-lb

6.95 Ft from left support of span 2 (Center Span)

Created by combining all dead loads and live loads on span(s) 2

**Controlling Shear:** -870 lb

11.0 Ft from left support of span 2 (Center Span)

Created by combining all dead loads and live loads on span(s) 2

**Comparisons with required sections:**

Section Modulus: Req'd 31.44 in3 Provided 42.78 in3

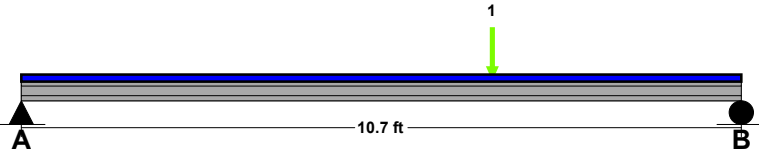
Area (Shear): 9.67 in2 27.75 in2

Moment of Inertia (deflection): 101.13 in4 197.86 in4

Moment: 2900 ft-lb 3946 ft-lb

Shear: -870 lb 2498 lb

**LOADING DIAGRAM**



**JOIST DATA**

Center

Span Length 10.7 ft

Unbraced Length-Top 0 ft

Unbraced Length-Bottom 0 ft

Floor sheathing applied to top of joists-top of joists fully braced.

Floor Duration Factor 1.00

**JOIST LOADING**

**Uniform Floor Loading**

Center

Live Load LL = 30 psf

Dead Load DL = 15 psf

Total Load TL = 45 psf

TL Adj. For Joist Spacing wT = 45 plf

**Wall Loading**

Wall One

Live Load (⊥ to Joists): L1 = 607 plf

Dead Load (⊥ to Joists): D1 = 355 plf

Load Location X1 = 7 ft

**NOTES**

Project: Sweet Cherry Pie - 29 Stroudwater

Location: H1, H2: Clg @ Rear  
 Combination Roof And Floor Beam  
 [2015 International Building Code(2015 NDS)]  
 ( 2 ) 1.75 IN x 7.25 IN x 6.3 FT  
 1.9E Microllam - iLevel Trus Joist  
 Section Adequate By: 87.2%  
 Controlling Factor: Moment



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**CAUTIONS**

\* Laminations are to be fully connected to provide uniform transfer of loads to all members

**DEFLECTIONS**

Center

Live Load 0.09 IN L/804  
 Dead Load 0.05 in  
 Total Load 0.15 IN L/511  
 Live Load Deflection Criteria: L/360 Total Load Deflection Criteria: L/240

**REACTIONS**

A B

Live Load 1764 lb 1764 lb  
 Dead Load 1011 lb 1011 lb  
 Total Load 2775 lb 2775 lb  
 Bearing Length 1.06 in 1.06 in

**BEAM DATA**

Center

Span Length 6.3 ft  
 Unbraced Length-Top 0 ft  
 Roof Pitch 5 :12  
 Floor Duration Factor 1.00  
 Roof Duration Factor 1.15  
 Notch Depth 0.00

**MATERIAL PROPERTIES**

1.9E Microllam - iLevel Trus Joist

	Base Values	Adjusted
Bending Stress:	Fb = 2600 psi Cd=1.15 CF=1.07	Fb' = 3202 psi
Shear Stress:	Fv = 285 psi Cd=1.15	Fv' = 328 psi
Modulus of Elasticity:	E = 1900 ksi	E' = 1900 ksi
Comp. ⊥ to Grain:	Fc - ⊥ = 750 psi	Fc - ⊥' = 750 psi

**Controlling Moment:** 4371 ft-lb

3.15 ft from left support

Created by combining all dead and live loads.

**Controlling Shear:** 2775 lb

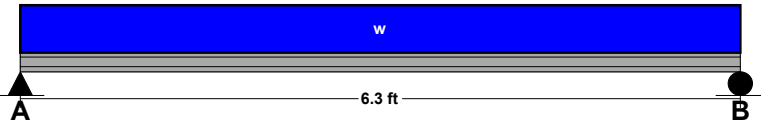
At support.

Created by combining all dead and live loads.

**Comparisons with required sections:**

	Req'd	Provided
Section Modulus:	16.38 in3	30.66 in3
Area (Shear):	12.7 in2	25.38 in2
Moment of Inertia (deflection):	52.16 in4	111.15 in4
Moment:	4371 ft-lb	8182 ft-lb
Shear:	2775 lb	5544 lb

**LOADING DIAGRAM**



**ROOF LOADING**

	Side 1	Side 2
Roof Live Load	RLL = 50 psf	0 psf
Roof Dead Load	RDL = 15 psf	0 psf
Roof Tributary Width	RTW = 8.8 ft	0 ft

**FLOOR LOADING**

	Side 1	Side 2
Floor Live Load	FLL = 20 psf	0 psf
Floor Dead Load	FDL = 15 psf	0 psf
Floor Tributary Width	FTW = 6 ft	0 ft

Wall Load WALL = 80 plf

**BEAM LOADING**

Roof Uniform Live Load:	wL-roof = 440 plf
Roof Uniform Dead Load:	wD-roof = 143 plf
Floor Uniform Live Load:	wL-floor = 120 plf
Floor Uniform Dead Load:	wD-floor = 90 plf
Beam Self Weight:	BSW = 8 plf
Combined Uniform Live Load:	wL = 560 plf
Combined Uniform Dead Load:	wD = 321 plf
Combined Uniform Total Load:	wT = 881 plf

**NOTES**

Project: Sweet Cherry Pie - 29 Stroudwater

Location: H3: 2nd Fl @ Rear  
 Combination Roof And Floor Beam  
 [2015 International Building Code(2015 NDS)]  
 ( 2 ) 1.75 IN x 7.25 IN x 6.1 FT  
 1.9E Microllam - iLevel Trus Joist  
 Section Adequate By: 6.1%  
 Controlling Factor: Moment



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**CAUTIONS**

\* Laminations are to be fully connected to provide uniform transfer of loads to all members

**DEFLECTIONS**

Center

Live Load 0.16 IN L/447  
 Dead Load 0.08 in  
 Total Load 0.24 IN L/299  
 Live Load Deflection Criteria: L/360 Total Load Deflection Criteria: L/240

**REACTIONS**

A B

Live Load 3385 lb 3385 lb  
 Dead Load 1672 lb 1672 lb  
 Total Load 5057 lb 5057 lb  
 Bearing Length 1.93 in 1.93 in

**BEAM DATA**

Center

Span Length 6.1 ft  
 Unbraced Length-Top 0 ft  
 Roof Pitch 5 :12  
 Floor Duration Factor 1.00  
 Roof Duration Factor 1.15  
 Notch Depth 0.00

**MATERIAL PROPERTIES**

1.9E Microllam - iLevel Trus Joist

	Base Values	Adjusted
Bending Stress:	Fb = 2600 psi Cd=1.15 CF=1.07	Fb' = 3202 psi
Shear Stress:	Fv = 285 psi Cd=1.15	Fv' = 328 psi
Modulus of Elasticity:	E = 1900 ksi	E' = 1900 ksi
Comp. $\perp$ to Grain:	Fc - $\perp$ = 750 psi	Fc - $\perp$ ' = 750 psi

**Controlling Moment:** 7712 ft-lb

3.05 ft from left support

Created by combining all dead and live loads.

**Controlling Shear:** 5057 lb

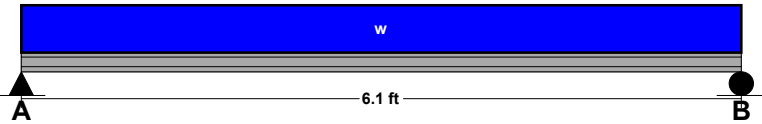
At support.

Created by combining all dead and live loads.

**Comparisons with required sections:**

	Req'd	Provided
Section Modulus:	28.9 in3	30.66 in3
Area (Shear):	23.14 in2	25.38 in2
Moment of Inertia (deflection):	89.48 in4	111.15 in4
Moment:	7712 ft-lb	8182 ft-lb
Shear:	5057 lb	5544 lb

**LOADING DIAGRAM**



**ROOF LOADING**

	Side 1	Side 2
Roof Live Load	RLL = 60 psf	34 psf
Roof Dead Load	RDL = 15 psf	15 psf
Roof Tributary Width	RTW = 8.7 ft	6.7 ft

**FLOOR LOADING**

	Side 1	Side 2
Floor Live Load	FLL = 60 psf	0 psf
Floor Dead Load	FDL = 35 psf	0 psf
Floor Tributary Width	FTW = 6 ft	0 ft
Wall Load	WALL = 80 plf	

**BEAM LOADING**

Roof Uniform Live Load:	wL-roof = 750 plf
Roof Uniform Dead Load:	wD-roof = 250 plf
Floor Uniform Live Load:	wL-floor = 360 plf
Floor Uniform Dead Load:	wD-floor = 210 plf
Beam Self Weight:	BSW = 8 plf
Combined Uniform Live Load:	wL = 1110 plf
Combined Uniform Dead Load:	wD = 548 plf
Combined Uniform Total Load:	wT = 1658 plf

**NOTES**



Project: Sweet Cherry Pie - 29 Stroudwater

Location: to get FJ1/B10

Uniformly Loaded Floor Beam

[2015 International Building Code(2015 NDS)

1.5 IN x 7.25 IN x 3.7 FT

#2 - Spruce-Pine-Fir - Dry Use

Section Adequate By: 3.2%

Controlling Factor: Shear

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<b>DEFLECTIONS</b>		Center
Live Load	0.02	IN L/2855
Dead Load	0.02	in
Total Load	0.03	IN L/1370
Live Load Deflection Criteria: L/360		Total Load Deflection Criteria: L/240

<b>REACTIONS</b>		A	B
Live Load	455 lb	455 lb	
Dead Load	493 lb	493 lb	
Total Load	948 lb	948 lb	
Bearing Length	1.49 in	1.49 in	

<b>BEAM DATA</b>		Center
Span Length	3.7	ft
Unbraced Length-Top	0	ft
Floor Duration Factor	1.00	
Notch Depth	0.00	

**MATERIAL PROPERTIES**

	Base Values	Adjusted
Bending Stress:	Fb = 875 psi Cd=1.00 CF=1.20	Fb' = 1050 psi
Shear Stress:	Fv = 135 psi Cd=1.00	Fv' = 135 psi
Modulus of Elasticity:	E = 1400 ksi	E' = 1400 ksi
Comp. $\perp$ to Grain:	Fc $\perp$ = 425 psi	Fc $\perp$ ' = 425 psi

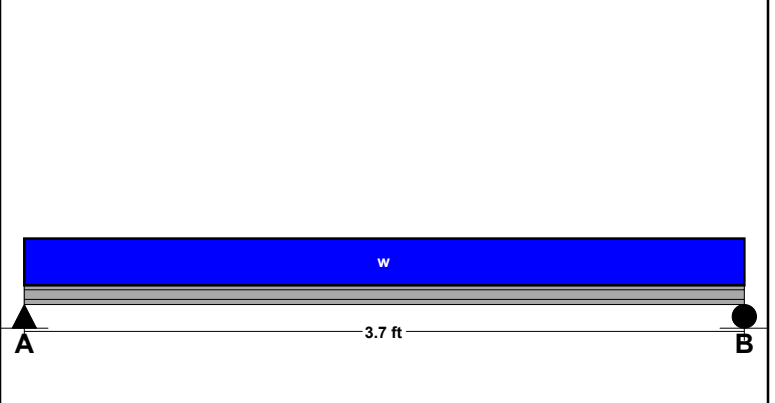
**Controlling Moment:** 877 ft-lb  
1.85 ft from left support  
Created by combining all dead and live loads.

**Controlling Shear:** -948 lb  
At support.  
Created by combining all dead and live loads.

Comparisons with required sections:	Req'd	Provided
Section Modulus:	10.02 in <sup>3</sup>	13.14 in <sup>3</sup>
Area (Shear):	10.53 in <sup>2</sup>	10.88 in <sup>2</sup>
Moment of Inertia (deflection):	8.34 in <sup>4</sup>	47.63 in <sup>4</sup>
Moment:	877 ft-lb	1150 ft-lb
Shear:	-948 lb	979 lb

**NOTES**

**LOADING DIAGRAM**



**FLOOR LOADING**

	Side 1	Side 2
Floor Live Load	FLL = 20 psf	20 psf
Floor Dead Load	FDL = 15 psf	15 psf
Floor Tributary Width	FTW = 6 ft	6.3 ft
Wall Load	WALL = 80 plf	

**BEAM LOADING**

Beam Total Live Load:	wL = 246 plf
Beam Total Dead Load:	wD = 265 plf
Beam Self Weight:	BSW = 2 plf
Total Maximum Load:	wT = 512 plf

Project: Sweet Cherry Pie - 29 Stroudwater

Location: to get FJ2

Combination Roof And Floor Beam  
[2015 International Building Code(2012 NDS)]

1.5 IN x 3.5 IN x 10.0 FT

#2 - Spruce-Pine-Fir - Dry Use

**Section Inadequate By: 5669.4%**

Controlling Factor: Deflection / Depth Required 30.99 In.

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DEFLECTIONS		Center	
Live Load	18.21	IN	L/7
Dead Load	10.64	in	
Total Load	28.85	IN	L/4
Live Load Deflection Criteria: L/360		Total Load Deflection Criteria: L/240	

REACTIONS		A	B
Live Load	3036	lb	3036 lb
Dead Load	1775	lb	1775 lb
Total Load	4811	lb	4811 lb
Bearing Length	7.55	in	7.55 in

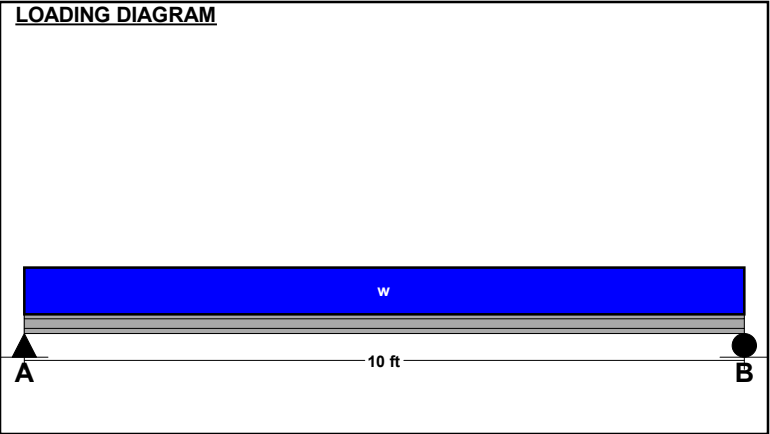
BEAM DATA		Center	
Span Length	10	ft	
Unbraced Length-Top	0	ft	
Roof Pitch	10	:	12
Floor Duration Factor	1.00		
Roof Duration Factor	1.15		
Notch Depth	0.00		

MATERIAL PROPERTIES			
#2 - Spruce-Pine-Fir			
	Base Values		Adjusted
Bending Stress:	Fb =	875 psi	Fb' = 1509 psi
		<i>Cd=1.15 CF=1.50</i>	
Shear Stress:	Fv =	135 psi	Fv' = 155 psi
		<i>Cd=1.15</i>	
Modulus of Elasticity:	E =	1400 ksi	E' = 1400 ksi
Comp. $\perp$ to Grain:	Fc - $\perp$ =	425 psi	Fc - $\perp$ ' = 425 psi

**Controlling Moment:** 12027 ft-lb  
5.0 ft from left support  
Created by combining all dead and live loads.

**Controlling Shear:** -4811 lb  
At support.  
Created by combining all dead and live loads.

Comparisons with required sections:	Req'd	Provided
Section Modulus:	95.61 in <sup>3</sup>	3.06 in <sup>3</sup>
Area (Shear):	46.48 in <sup>2</sup>	5.25 in <sup>2</sup>
Moment of Inertia (deflection):	309.2 in <sup>4</sup>	5.36 in <sup>4</sup>
Moment:	12027 ft-lb	385 ft-lb
Shear:	-4811 lb	543 lb



ROOF LOADING			
		Side 1	Side 2
Roof Live Load	RLL =	60 psf	34 psf
Roof Dead Load	RDL =	15 psf	15 psf
Roof Tributary Width	RTW =	6.7 ft	1.8 ft

FLOOR LOADING			
		Side 1	Side 2
Floor Live Load	FLL =	20 psf	0 psf
Floor Dead Load	FDL =	15 psf	0 psf
Floor Tributary Width	FTW =	7.2 ft	0 ft

WALL LOAD	
WALL =	80 plf

BEAM LOADING	
Roof Uniform Live Load:	wL-roof = 463 plf
Roof Uniform Dead Load:	wD-roof = 166 plf
Floor Uniform Live Load:	wL-floor = 144 plf
Floor Uniform Dead Load:	wD-floor = 108 plf
Beam Self Weight:	BSW = 1 plf
Combined Uniform Live Load:	wL = 607 plf
Combined Uniform Dead Load:	wD = 355 plf
Combined Uniform Total Load:	wT = 962 plf

**NOTES**