DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK



## CITY OF PORTLAND BUILDING PERMIT



This is to certify that University of New England

Located At 746 STEVENS AVE

Job ID: 2012-05-4016-NEWCOM

CBL: 145- B-042-001

has permission to 18,600 Sq Ft Building / Patient Care Facility

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

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

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

**Fire Prevention Officer** 

Code Enforcement Officer / Plan Reviewer

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

### **BUILDING PERMIT INSPECTION PROCEDURES**

Please call 874-8703 or 874-8693 (ONLY)

or email: buildinginspections@portlandmaine.gov

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

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

Required Inspections:

Footings/Setbacks prior to pouring concrete

Close In Elec/Plmb/Frame prior to insulate or gyp

**Final Inspection** 

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

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



# PORTLAND MAINE

Strengthening a Remarkable City, Building a Community for Life . www.portlandmaine.gov

Director of Planning and Urban Development Jeff Levine

Job ID: 2012-05-4016-NEWCOM Located At: 746 STEVENS AVE CBL: 145- B-042-001

### **Conditions of Approval:**

### Fire

All construction shall comply with City Code Chapter 10. Permit is for core and shell only. Interior fit up will require a separate permit.

The communicating space shall comply with 101:8.6.6. A smoke assembly door shall be provided between the communicating space and corridors.

Area of Refuge shall comply with 101:7.5.4 and 101:7.2.12.

Application requires State Fire Marshal approval.

Street addresses shall be marked on the structure and shall be as approved by the City E-911 Addressing Officer. Contact Michelle Sweeney at 874-8682 for further information.

Central Station monitoring for addressable fire alarm systems shall be by point.

Any Fire alarm or Sprinkler systems shall be reviewed by a licensed contractor(s) for code compliance. Compliance letters are required.

A separate Fire Alarm Permit is required. This review does not include approval of fire alarm system design or installation.

Fire Alarm system shall be maintained. If system is to be off line over 4 hours a fire watch shall be in place. Dispatch notification required 874-8576.

The fire alarm system shall comply with the City of Portland Standard for Signaling Systems for the Protection of Life and Property. All fire alarm installation and servicing companies shall have a Certificate of Fitness from the Fire Department.

All fire alarm records required by NFPA 72 should be stored in an approved cabinet located at the FACP labeled "FIRE ALARM RECORDS".

Records cabinet, FACP, annunciator(s), and pull stations shall be keyed alike.

Fire alarm system requires a wireless master box connection per city ordinance. Master box design and installation shall in conformance with Fire Department Regulations and approved by Fire Department Electrical Division.

All smoke detectors and smoke alarms shall be photoelectric.

Compliance with NFPA 1, *Fire Code*, Annex O for In-building Public Safety Radio Enhancement Systems shall be verified by an RF Engineer.

The sprinkler system shall be installed in accordance with NFPA 13.

A separate Suppression System Permit is required. This review does not include approval of sprinkler system design or installation.

sprinkler supervisory system shall be provided in accordance with NFPA 101, *Life Safety* Code, and NFPA 72, *National Fire Alarm and Signaling Code*.

Sprinkler protection shall be maintained. Where the system is to be shut down for maintenance or repair, the system shall be checked at the end of each day to insure the system has been placed back in service.

Fire department connection type and location shall be approved in writing by fire prevention bureau. The Fire Department will require Knox locking caps on all Fire Department Connections on the exterior of the building.

System acceptance and commissioning must be coordinated with alarm and suppression system contractors and the Fire Department. Call 874-8703 to schedule.

Installation of a sprinkler or fire alarm system requires a Knox Box to be installed per city ordinance.

A firefighter Building Marking Sign is required.

Fire extinguishers are required per NFPA 1.

New elevators are required to be ADA compliant.

Emergency lights and exit signs are required. Emergency lights and exit signs are required to be labeled in relation to the panel and circuit and on the same circuit as the lighting for the area they serve.

Any cutting and welding done will require a Hot Work Permit from Fire Department.

Walls in structure are to be labeled according to fire resistance rating. IE; 1 hr. / 2 hr. / smoke proof.

A single source supplier should be used for all through penetrations.

### Zoning

- 1. Separate permits shall be required for any new signage.
- 2. This permit is being approved on the basis of plans submitted. Any deviations shall require a separate approval before starting that work.
- 3. As discussed during the review process, the property must be clearly identified prior to pouring concrete and compliance with the required setbacks must be established. Due to the proximity of the setbacks of the proposed addition, it may be required to be located by a surveyor.
- 4. This zone has maximum noise allowances. The City of Portland strictly enforces the level of sound generated on the property. Any verified noise violations shall require the owner to take mitigating measures to bring the property and the noise it generates into compliance. Separate permits are required for HVAC units. Please provide dBAs for the units when applying

### **Building**

- 1. Application approval based upon information provided by the applicant or design professional. Any deviation from approved plans requires separate review and approval prior to work.
- 2. This permit approves the core and shell only, interior fit up shall be approved as a separate review and permit.
- 3. Separate permits are required for any electrical, plumbing, sprinkler, fire alarm, HVAC systems, heating appliances, including pellet/wood stoves, commercial hood exhaust systems and fuel tanks. Separate plans may need to be submitted for approval as a part of this process.

### Lannie Dobson - UNE Patient Care Center, 1 College Street - Building Permit Issuance

Philip DiPierro From:

Code Enforcement & Inspections To:

Date: 8/7/2012 4:33 PM

Subject: UNE Patient Care Center, 1 College Street - Building Permit Issuance

Hi all, this project, site plans #2012-455 & #2012-483, the UNE Patient Care Center located at 1 College Street, meets minimum DRC site plan requirements for the issuance of the building permit. Please see 1S for sign off.

Thanks.

Phil

### Lannie Dobson - Fwd: UNE building permit

From: "JP Schwartz" < jpschwartz@AlliedCook.com>

To: <ldobson@portlandmaine.gov>

**Date:** 8/9/2012 11:40 AM

Subject: Fwd: UNE building permit

### J.P. Schwartz

Cell: (207) 415-0080

jpschwartz@alliedcook.com

AlliedCook Construction Corp. www.alliedcook.com

Sent from my iPhone

### Begin forwarded message:

From: "Matthew Cook" < Matt@AlliedCook.com>

Date: August 9, 2012 11:38:35 AM EDT

To: <tmm@portlandmaine.gov>

Cc: "JP Schwartz" < ipschwartz@AlliedCook.com>

Subject: FW: UNE building permit

<!--[if mso 9]--> <!--[endif]--> hi Tammy,

Jeanne asked for and received the missing information two weeks ago. here is her email saying she has the info needed on energy code compliance. i will forward Jeanne's email indicating where shes all set on the special inspections too.

we really need to get started on this project waiting another week for Jeanne's return from vacation when the city has received all the needed items has a real impact on our schedule, we have people sitting around waiting to go to work, anything you can do to push out this permit is appreciated.

thanks, Matt Cook Aloied Cook Construction

From: Jeanie Bourke [mailto:JMB@portlandmaine.gov]

**Sent:** Friday, July 27, 2012 9:00 AM **To:** Matthew Cook; Lita Semrau

Cc: 'Jason Pica' Subject: RE: UNE Good Morning Lita,

I was thinking that this project would be required or strive to meet a higher level of standards. I just viewed the website and it looks like they are not accepting any more applications, but it sounds like the review is in process for UNE.

I will make a copy of the webpage for the record, as it states a 20-30% increase over MUBEC standards. Do you anticipate if this is approved they will be awarded a certificate? If so, this can be submitted for the record at that time.

Thanks for the update, this information will suffice for issuance of the permit. Jeanie

Jeanie Bourke CEO/LPI/Plan Reviewer

**City of Portland** Planning & Urban Development Dept./ Inspections Division 389 Congress St. Rm 315 Portland, ME 04101 imb@portlandmaine.gov Direct: (207) 874-8715 Office: (207) 874-8703 >>> "Lita Semrau" ita@portcityarch.com> 7/27/2012 8:19 AM >>>

A Com Check has not been done for this building – we would be happy to provide a letter – also, the building has been reviewed and is on track to meet Maine Advanced Buildings Program. Please let us know if you would like more info . . .

Lita Semrau, NCARB Vice President **Port City Architecture** 65 Newbury Street Portland, ME (207) 761-9000 lita@portcityarch.com www.portcityarch.com

From: Jeanie Bourke [mailto:JMB@portlandmaine.gov]

Sent: Wednesday, July 25, 2012 8:58 AM To: Matt@AlliedCook.com; Lita Semrau

Cc: 'Jason Pica' Subject: RE: UNE

Thanks Lita, I was just about to email you. Is there a Com Check Certificate or similar letter regarding the thermal envelope and the electrical installations?

Thanks. **Jeanie** 

Jeanie Bourke CEO/LPI/Plan Reviewer

City of Portland Planning & Urban Development Dept./ Inspections Division 389 Congress St. Rm 315 Portland, ME 04101 jmb@portlandmaine.gov Direct: (207) 874-8715

Office: (207) 874-8703

>>> "Lita Semrau" < lita@portcityarch.com > 7/25/2012 8:38 AM >>> I just checked my email and it doesn't look like the letter was attached . . . here you go . . . las

Lita Semrau, NCARB Vice President **Port City Architecture** 65 Newbury Street Portland, ME (207) 761-9000 lita@portcityarch.com www.portcityarch.com

From: Lita Semrau [mailto:lita@portcityarch.com]

Sent: Tuesday, July 24, 2012 5:05 PM To: Matt@AlliedCook.com; 'Jeanie Bourke'

Cc: 'Jason Pica'; Lita Semrau

Subject: RE: UNE

Jeanie -

Here is the Maine Energy code letter . . . please let us know if there is anything else you need . . . las

Lita Semrau, NCARB Vice President **Port City Architecture** 65 Newbury Street Portland, ME (207) 761-9000 lita@portcityarch.com www.portcityarch.com

From: Kaz Safari [mailto:ksafari@edemep.com]

Sent: Tuesday, July 24, 2012 5:01 PM

To: Matt@AlliedCook.com

Cc: 'Semrau, Lita'; ede@edemep.com; 'Jason Pica'; 'Vinnie DiIorio'; 'Alan Thibeault'

Subject: UNE

Matt,

Attached is a letter for Maine Energy code requierments.

Thanks,

Kaz A Safari, P.E.

President EDE, Inc. MEP/FP Engineering 440 Totten Pond Road Waltham, MA 02451 Tel. 781-890-4555 Fax. 781-890-4611 ksafari@edemep.com

Visit our Website at: http://www.EDEMEP.com

### Lannie Dobson - Fwd: UNE PCC - Building Permit

From: "JP Schwartz" <jpschwartz@AlliedCook.com>

To: <ldobson@portlandmaine.gov>

**Date:** 8/9/2012 11:41 AM

Subject: Fwd: UNE PCC - Building Permit

### J.P. Schwartz

Cell: (207) 415-0080

jpschwartz@alliedcook.com

AlliedCook Construction Corp. www.alliedcook.com

Sent from my iPhone

### Begin forwarded message:

From: "Matthew Cook" < Matt@AlliedCook.com>

Date: August 9, 2012 11:40:30 AM EDT

To: < tmm@portlandmaine.gov>

Cc: "JP Schwartz" < ipschwartz@AlliedCook.com > Subject: FW: UNE PCC - Building Permit

<!--[if mso 9]--> <!--[endif]-->
Tammy,

here is Jeanie's email confirming that she has the special inspections info.

thanks, Matt Cook

From: Jeanie Bourke [mailto:JMB@portlandmaine.gov]

**Sent:** Tuesday, July 24, 2012 1:48 PM **To:** Matthew Cook; Dan Burne; Lita Semrau

Cc: Kathryn Leathers

Subject: RE: UNE PCC - Building Permit

Thanks Dan.

Somehow by the time the permit application made it to me those sections were missing....thanks for sending the full set.

Jeanie

Jeanie Bourke

City of Portland
Planning & Urban Development Dept./ Inspections Division
389 Congress St. Rm 315
Portland, ME 04101
jmb@portlandmaine.gov
Direct: (207) 874-8715
Office: (207) 874-8703

>>> Dan Burne <dan@beckerstructural.com> 7/24/2012 1:33 PM >>>

In regards to item 2: The SI statement does include masonry and steel checklists so I am not sure what is missing. I have re-attached. Please let me know if there is something I am not understanding or if this clears it up. Thanks.

Dan Burne

From: Matthew Cook [mailto:Matt@AlliedCook.com]

Sent: Tuesday, July 24, 2012 1:28 PM

To: Lita Semrau; Dan Burne

**Cc:** Jeanie Bourke; Kathryn Leathers **Subject:** UNE PCC - Building Permit

Lita & Dan,

I just had a conversation with Jeanie Bourke at the City (who has been copied on this email) regarding the Core & Shell building permit application for UNE. She is looking for a couple additional pieces of info before the permit can be issued. Please get these to Jeanie via email as soon as you can to get this permit released. See below:

- 1. Geotechnical Report
- 2. Special Inspections report is missing structural steel and masonry sections.
- 3. Documentation that he Core & Shell design meets the Maine Energy Code.

Thanks, Matt

Matthew D. Cook, CFO

AlliedCook Construction Corp. P.O. Box 1396 Portland, ME 04104 (207) 772-2888

www.alliedcook.com

### General Building Permit Application

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

| Location/Address of Construction: Stevens Avenue, Portland, Maine   |  |                        |  |
|---|--|------------------------|--|
| Total Square Footage of Proposed Structure/Area  18,600 sf (footage)  Square Footage of Lot  35,000sf   |  |                        |  |
| Tax Assessor's Chart, Block & Lot   | Applicant *must be owner, Lessee or Buye | r* Telephone:          |  |
| Chart# Block# Lot#  | Name AlliedCook Construction Co          | rp. 207-772-2888       |  |
| 145 B 42  | Address 8 US Rt One                      |                        |  |
|   | City, State & Zip Scarborough, ME 04     | 1074                   |  |
| Lessee/DBA (If Applicable)  | Owner (if different from Applicant)      | Cost Of                |  |
|   | Name University of New England           | Work: \$3,000,000.00   |  |
| N/A   | Address 11 Hills Beach Rd.               | C of O Fee: \$         |  |
|   | City, State & Zip Biddeford, ME 04005    | Total Fee: \$          |  |
| Current legal use (i.e. single family) New Construction  If vacant, what was the previous use?  Proposed Specific use: Patient Care Facility/College of Dentistry  Is property part of a subdivision? no  If yes, please name  Project description:  18,600sf building to house a college of dental medicine, and a patient care facility.  Core and Shell only. Fit up  Signate plant to follow. |  |                        |  |
| Contractor's name: AlliedCook Construction Corp.  |  |                        |  |
| Address: 8 US Route One   |  |                        |  |
| City, State & Zip Scarborough, ME 04074 Telephone: 207-772-288  |  |                        |  |
| Who should we contact when the permit is ready: JP Schwartz  Tele   |  | elephone: 207-415-0080 |  |
| Mailing address: PO Box 1396 Portland, ME 04104   |  |                        |  |
| Please submit all of the information outlined on the applicable Checklist. Failure to do so will result in the automatic denial of your permit.   |  |                        |  |

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

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

Signature: 1 Date: 57/16/12

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



|  | Search   |
|--|----------|
|  | L coanti |

About / Contact / Documents / Links / FAQs / Glossary / Opportunities / Sitemap

At Home / At Work / Education / Professional Training / News & Events / In Your Community

Home > At Work > High Efficiency Buildings > Maine Advanced Buildings

#### **Business Programs**

- · Cash Incentives
- · Incentive Applications
- · Competitive Program

#### **Multifamily Efficiency Program**

- · Become a Program Partner
- · Partner Orientation
- · Benchmarking Services
- · Benchmarking FAQs

**Business Energy Audits** 

**Small Business Loans** 

**Natural Gas Program** 

#### **Qualified Partners**

- · Find a Qualified Partner
- · Become a Qualified Partner
- QP Login

### Tools & Resources

- · Lighting Guide
- · All Programs Brochure (PDF)

#### **High Efficiency Buildings**

· Maine Advanced Buildings

#### Renewable Energy Programs

- · Solar Thermal
- · Solar Electric
- · Wind Energy
- Downloads & Forms

#### **Professional Training**

### Tips & Advice

Wondering where to begin to cut your electric bills?

Scan our Energy-Saving Tips for easy ways to save energy for Lighting, HVAC, hot water, office equipment and more.

Have a technical question or need help with forms?

Ask our experts. Just submit a question, and we'll get back to you!

### Maine Advanced Buildings

Efficiency Maine has temporarily suspended accepting applications for Maine Advanced Buildings projects because all funds are currently allocated. Future funding and program structure options are being reviewed as part of Efficiency Maine's Triennial Plan process.

Efficiency Maine's Maine Advanced Buildings program offers strategies and incentives to help Maine owner-builders, developers, architects and engineers design buildings that are 20-30% more energy-efficient than the Maine Energy Code requires.

Advanced Buildings is a national program to raise the standards for energy efficiency in commercial construction in North America. We've adopted their nationally tested strategies and perfected them for Maine's climate and building styles.

The heart of Maine Advanced Buildings is the Core Performance Guide, an easy-to-follow, stepby-step guide to more efficient lighting, HVAC and



insulation for new construction. It offers a complete suite of technologies and practices...while Efficiency Maine provides the local support and incentives to make it easy for Maine companies to participate.



### **Environmental Design Engineering, Inc.**

July 24, 2012

City of Portland Planning Board 389 Congress Street Portland, Maine 04101

Reference: University of New England Patient Care Center

716 Stevens Avenue Portland, Maine 04103

Subject: Mechanical system meets Maine Energy Code

To whom it may concern:

To the best of my knowledge and belief, I certify that the plans and specifications concerning the above mentioned project located at 716 Stevens Avenue, Portland, Maine are in accordance with the requirements of the Maine Building Code, the Maine Mechanical Code, all applicable provisions of NFPA and the city of Portland Planning Board and other pertinent laws and ordinances.

In addition, I certify that the Mechanical design by Environmental Design Engineering, Inc for the Shell and Core phase of the **University of New England Patient Care Center** meets the requirements of the Maine Energy code.

Respectfully,

Environmental Design Engineering, Inc.

Kaz A Safari, P.E.

President

Dept of Building Inspections

j:\2012\0212 UNE Dental PCC\Shell&Core\Letter of confirmation Maine Energy.doc







### New Commercial Permit Application Checklist

All of the following information is required and must be submitted. Checking off each item as you prepare your application package will ensure your package is complete and will help to expedite the permitting process.

One (1) complete Set of construction drawings must include:

| Note   | bear their seal.   |
|--------|--|
| -      |  |
|        | Cross sections w/framing details   |
|        | Detail of any new walls or permanent partitions  |
|        | Floor plans and elevations   |
|        | Window and door schedules  |
|        | Foundation plans with rebar specifications and required drainage and damp proofing (if applicable)  Detail egress requirements and fire separations  |
|        | Insulation R-factors of walls, ceilings, floors and U-factors of windows as per the IEEC 2003  |
|        |  |
|        | Complete the Accessibility Certificate and The Certificate of Design   |
|        | A statement of special inspections as required per the IBC 2003  |
|        | Complete electrical and plumbing layout.   |
| . 🗆    | Mechanical drawings for any specialized equipment such as furnaces, chimneys, gas equipment,   |
|        | HVAC equipment (air handling) or other types of work that may require special review.  |
|        | Reduced plans or electronic files in PDF format are required if originals are larger than 11" x 17".   |
|        | Per State Fire Marshall, all new bathrooms must be ADA compliant.  |
| Nine ( | te permits are required for internal & external plumbing, HVAC and electrical installations.  9) copies of the minor (< 10,000 sf) or major (> 10,000 sf) site plan application is ed that includes: |
| 4      |  |
|        | A stamped boundary survey to scale showing north arrow, zoning district and setbacks to a scale of $\geq 1$ " = 20' on paper $\geq 11$ " x 17"   |
|        | The shape and dimension of the lot, footprint of the proposed structure and the distance   |
| -      | from the actual property lines. Photocopies of the plat or hand draw footprints not to scale   |
|        | will not be accepted.  |
|        | Location and dimensions of parking areas and driveways, street spaces and building frontage  |
|        | Finish floor or sill elevation (based on mean sea level datum)   |
|        | Location and size of both existing utilities in the street and the proposed utilities serving the  |
|        | building   |
|        | Existing and proposed grade contours   |
|        | Silt fence (erosion control) locations   |
|        |  |

### Fire Department requirements.

| the following shall | be submitted | on a sepai | ate sheet: |  |
|---------------------|--------------|------------|------------|--|
|                     |              |            |            |  |

- Name, address and phone number of applicant and the project architect.
- ☐ Proposed use of structure (NFPA and IBC classification)
- Square footage of proposed structure (total and per story)
- Existing and proposed fire protection of structure.
- ☐ Separate plans shall be submitted for
  - a) Suppression system
  - b) Detection System (separate permit is required)
- A separate Life Safety Plan must include:
  - a) Fire resistance ratings of all means of egress
  - b) Travel distance from most remote point to exit discharge
  - c) Location of any required fire extinguishers
  - d) Location of emergency lighting
  - e) Location of exit signs
  - f) NFPA 101 code summary
- ☐ Elevators shall be sized to fit an 80" x 24" stretchet.

For questions on Fire Department requirements call the Fire Prevention Officer at (207) 874-8405.

Please submit all of the information outlined in this application checklist. If the application is incomplete, the application may be refused.

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

Permit Fee: \$30.00 for the first \$1000.00 construction cost, \$10.00 per additional \$1000.00 cost

This is not a Permit; you may not commence any work until the Permit is issued.



11

С

251, .087

Scismic use group ("Category")

Site class (1615.1.5)

Spectral response coefficients, SDs & SDI (1615.1)

### Certificate of Design Application

PURT City ARChitecture From Designer: 5/10/12 Date: University of New England - Patient Care Clinic Job Name: Address of Construction: -2003-International Building Code Construction project was designed to the building code criteria listed below: 2009 NFPA Building Code & Year 2009 IBC Use Group Classification (s) BOSINGS YES FOR 2009 18C Type of Construction Will the Structure have a Fire suppression system in Accordance with Section 903.3.1 of the 2003 IRC Mo If yes, separated or non separated or non separated (section 302.3) Sepa Is the Structure mixed use? Supervisory alarm System? Geotechnical/Soils report required? (See Section 1802.2) Yes N/A Structural Design Calculations Live load reduction 20 psf Completed Roof live loads (1603.1.2, 1607.11) Submitted for all structural members (106.1 - 106.11) 46 psf + Drift Roof snow loads (1603.7.3, 1608) Design Loads on Construction Documents (1603) 60 psf Ground snow load, Pg (1608.2) Uniformly distributed floor live loads (7603.11, 1807) 46 psf + Drift Floor Area Use Il interior spaces Loads Shown 100 psf If Py > 10 psf, flat-roof snow load pr 1.0 If Pg > 10 psf, snow exposure factor, (; 1.0 If Pg > 10 psf, snow load importance factor, L 1.1 Roof thermal factor, (1608.4) 46 psf Sloped roof snowload, p.(1608.4) В Wind loads (1603.1.4, 1609) Seismic design category (1616.3) OBF Mthd 2 Design option utilized (1609.1.1, 1609.6) Basic seismic force resisting system (1617.6.2) 100 mph 3.0, 3.0 Basic wind speed (1809.3) Response modification coefficient, g, and 11, 1.0 Building category and wind importance Pactor, buble 1604.5, 1609.5) deflection amplification factor(2 (1617.6.2) B EquivLatForce Wind exposure category (1609.4) Analysis procedure (1616.6, 1617.5) +/- 0.18 Internal pressure coefficient (ASCE 7) 190 K Design base shear (1617.4, 16175.5.1) 18-30 psf Component and cladding pressures (1609.1.1, 1609.6.2.2) Flood loads (1803.1.6, 1612) 17 psf Main force wind pressures (7603.1.1, 1609.6.2.1) N/A Flood Hazard area (1612.3) Earth design data (1603.1.5, 1614-1623) -N/A Elevation of structure EquivLatForce Design option utilized (1614.1)

Other loads

Concentrated loads (1607.4)

Misc. loads (Yable 1607.B, 1607.6.1, 1607.7, 1607.12, 1607.13, 1610, 1611, 2404

Partition loads (1607.5)

1000 lb.

Included

Misc MEP



### Accessibility Building Code Certificate

Designer:

PORT City Architecture

Address of Project:

716 Stevens Avenue

Nature of Project:

Clinics and lab space for UNE's College of Dental Medicino

The technical submissions covering the proposed construction work as described above have been designed in compliance with applicable referenced standards found in the Maine Human Rights Law and Federal Americans with Disability Act. Residential Buildings with 4 units or more must conform to the Federal Fair Housing Accessibility Standards. Please provide proof of compliance if applicable.



Signature

Title: VICE PROSIS

Firm:

PORT City Architectur

Address:

165 Hewbury St

PORTLAND, ME

Phone:

207-761-9000

For more information or to download this form and other permit applications visit the Inspections Division on our website at www.portlandmaine.gov



(SEAL)

Date:

### Certificate of Design

May 14/2012

|                          | •   |
|--------------------------|---|
| From:                    | PORT CITY ARChitecture  |
|                          |   |
| These plans and / or sp  | pecifications covering construction work on:                  |
| New Pat                  | ent Care Center For the College                               |
| of Dental D<br>New Engla | Medicine for the University of                                |
| Have been designed an    | d drawn up by the undersigned, a Maine registered Architect / |
|                          | the 2003 International Building Code and local amendments.    |
| LITA SEMRAU NO. 2667     | * Signature   |

Phone: PORT CITY ARChitecture

Address: Les Hewbury St

PortLAND, ME

Phone: 207-7/61-9000

Vice President

For more information or to download this form and other permit applications visit the Inspections Division on our website at www.portlandmaine.gov

Title:

|     | Applicant: UNE Dantal CARE PAtient Contr Date: 4/26/12   |
|-----|--|
|     | Applicant: UNE Dontal CAR PAtient Conta Date: 4/26/12  Address:   College AVE C-B-L: 145-B-24-42   |
|     | CHECK-LIST AGAINST ZONING ORDINANCE  |
|     | Date-existing  |
|     | Zone Location - RS (04'-4" × 179'-4")  |
|     | Interior or corner lot 3 to Stevens to construct New bullding or College Cunworst, where 3 existing bldgs Now exist (todamolish and Proposed User Work - conditional USE to PB for Expansion, pennits) |
|     | Proposed Use Work - Condutional USE to PB for EXDE SEP. Dennits  |
|     | Servage Disposal - City  |
|     | Lot Street Frontage - 50 min + 50 8 hom  |
|     | alegest is Front From external Prop. Comes = 30 - 30' Scaled   |
|     | Rear Yard - 3d mm 76'Scalad (Parky etc)  |
|     | Side Yard-mombetween buildings on 5 te-20min - 21scald<br>Subjections - 30'min - 30'scaled<br>Projections -  |
|     | Width of Lot - 60 min - wellower   |
|     | Height-55 may Allowed _ 44 Shown Lover 10 Acres = yes +15  |
|     | Lot Area - 2 peres min - 14 peres given  |
|     | Lot Coverage Impervious Surface - 40% MAX - Not close  |
|     | Area per Family - N  |
|     | Off-street Parking - To be deturned by PB  |
|     | Loading Bays - NA -  |
|     | Site Plan - # 2012 - 483   |
|     | Shoreland Zoning/Stream Protection - NA  |
|     | Flood Plains - Panelof tac X   |
| 14- | 425-Arch. Features ok uto Set Backs (Piller brupouts)  |

City of Portland Code of Ordinances Sec. 14-118

d.

- e. In the case of community halls:
  - i. The structure was in existence as of January 4, 2010;
  - ii. The structure was built for institutional or other non-residential uses;
  - iii. The structure is operated by, or operated subject to the control of, a not-for-profit entity in accordance with its not-for-profit purposes; and
  - iv. A parking management plan is submitted
     for review and approval by the planning
     board; and
- f. In the case of private club or fraternal organizations: any such establishment serving alcoholic beverages or in possession of a license for serving alcoholic beverages shall be located on a large lot, as specified in the minimum lot size provisions of this section.
  - A college, university or trade school may build principal structures to a height of fifty-five (55) feet, not including the USM overlay zone, if the following standards can be met:
    - (i) Lot size: 10 acres which may include adjacent land owned by the institution on both sides of a public street.
  - (ii) Minimum setback between buildings onsite: 20 feet.
  - (iii)Minimum setback from external property
     boundary: 30 feet, except that parking
     garages over 35 feet in height must be
     located 50 feet from external property
     boundaries when adjacent to an adjoining

City of Portland Code of Ordinances Land Use Chapter 14 Rev.9-15-11

Sec. 14-118 residential use.



(iv) The area between the structure and adjoining residential uses must be adequately screened with appropriate landscaping or other features to buffer the building and effects thereof (i.e. noise, light, etc) from abutting properties.

(c) Other:

- Off-street parking of passenger cars as provided in section 14-344 (board of appeals may authorize parking in certain residential zones) of this article;
- Utility substations such as water and sewage pumping stations and standpipes, electric power substations, transformer stations, and telephone electronic equipment enclosures and other similar structures, provided that such uses are suitably screened and landscaped so as to ensure compatibility with the surrounding neighborhood;
- 3. Day care facilities or home babysitting services not permitted as a home occupation under section 14-410, and nursery schools and kindergartens subject to the following conditions:
  - a. The facility shall be located in a structure in which there is one (1) or more occupied residential units or in an existing accessory structure, unless the facility is located in a principal structure that has not been used as a residence in whole or in part within the five (5) years immediately preceding the application for a day care or home babysitting use or in a nonresidential structure accessory to the principal nonresidential use.
  - b. The maximum capacity shall be twelve (12) children for facilities located in residential or existing structures accessory thereto, unless the additional standards in

comment 4/26/17

4/18/12

### City of Portland **Development Review Application** Planning Division Transmittal form

**Application Number:** 

4/17/2012 12:00:00

CBL:

**Project Name:** 

2012-40-145-B(24) Patient Care Center - Dentsl Bldg

Address:

Project

**Description:** 

Zoning:

R-5

Other Reviews

Conditional Use

Required:

Review Type:

Level III Site Plan w/Conditional Use

### **Distribution List:**

| Planner          | Shukria Wiar         | Parking               | John Peverada        |
|------------------|----------------------|-----------------------|----------------------|
| Zoning           | Marge Schmuckal      | Design Review         | Alex Jaegerman       |
| Traffic Engineer | Tom Errico           | Corporation Counsel   | Danielle West-Chuhta |
| Civil Engineer   | David Senus          | Sanitary Sewer        | John Emerson         |
| Fire Department  | Chris Pirone         | Inspections           | Tammy Munson         |
| City Arborist    | Jeff Tarling         | Historic Preservation | Deb Andrews          |
| Engineering      | David Margolis-Pineo | DRC Coordinator       | Phil DiPierro        |
|                  |                      | Outside Agency        |                      |

Comments needed by (7 days later): April 25, 2012

Demos for 3 existing Bldgs 1-746 Stevens AVE # 2012-06-4349 750 Stevens AVE # 2012-06-4350 1 Collage AVE # 2012-06-4351

### Marge Schmuckal - UNE use research for the Stevens Ave property

From: Marge Schmuckal

To: ALEX JAEGERMAN; Barbara Barhydt; Shukria Wiar

Date: 1/26/2012 10:22 AM

Subject: UNE use research for the Stevens Ave property

Hi,

This is what I found:

<u>1 College Ave/740 Stevens Ave:</u> The most recent permit was in 1958 and the permit claims it was for a "dwelling" - I assume that is for 1 dwelling. It was not further characterized.

746 Stevens Ave: The most recent permit was for professional offices as a use (Sept., 1994)

750 Stevens Ave: the most recent permit was approved for "student housing".

I hope this helps everyone

Marge

### Marge Schmuckal - 1 College Ave - UNE

From:

Marge Schmuckal

To:

Barbara Barhydt; Shukria Wiar

Date:

6/22/2012 12:53 PM

Subject: 1 College Ave - UNE

1 College Avenue - 145-B-42 2012-483 R-5 Zone 6/22/2012

I have had further discussions with the Architect, Lita Semrau concerning some of the architectural features shown on the building. 14-425 allows the architectural features to extend not more than 24" into a required set back. The architectural features shown extend approximately 8" into the required setback of 30' and are allowable.

Further review of the newer plans show the required setbacks are being met. The maximum building height is also being met.

It is understood that the parking requirement is being reviewed by the Planning Board under the conditional use and site plan standards.

Separate permits are required for any new signage.

Marge Schmuckal Zoning Administrator

### Marge Schmuckal - 1 College Ave

From: Marge Schmuckal

To: Shukria Wiar

Date: 4/26/2012 4:47 PM

Subject: 1 College Ave

One Solution does not have a place for me to zoning comments at this time.

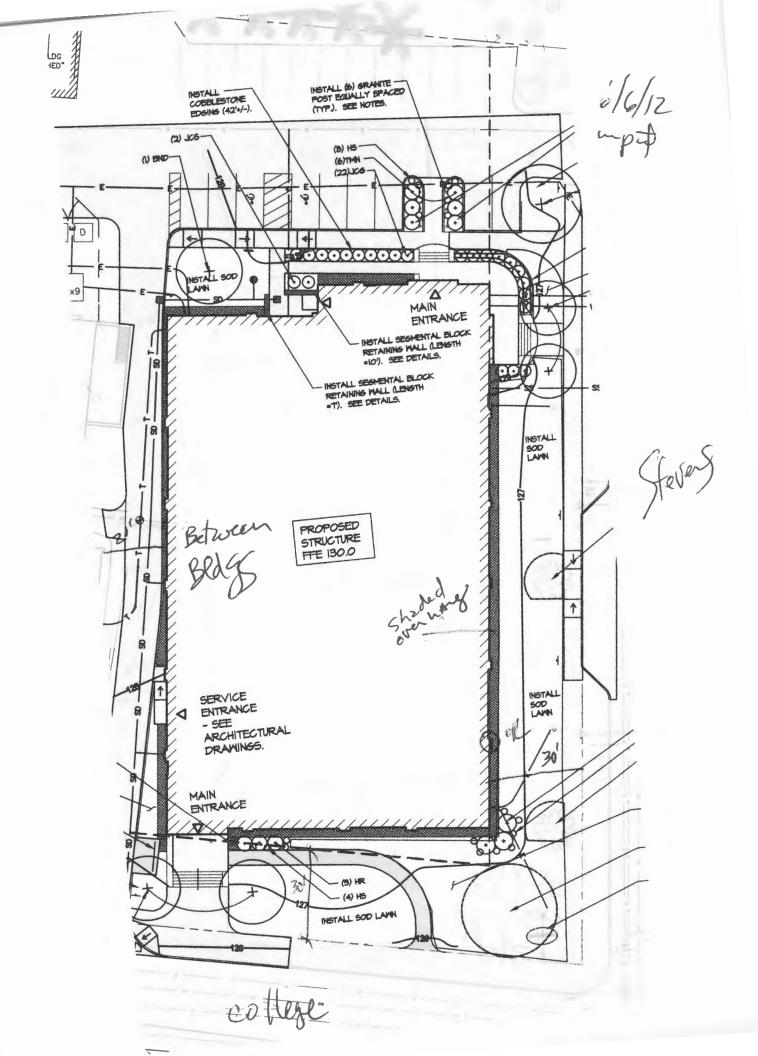
1 College Avenue - 145-B-042 2012-483 R-5 Zone 4/26/2012

This project is in the R-5 Zone which allows university/college uses under a conditional use appeal to the Planning Board. The conditional use has separate requirements for university/colleges over 10 acres in size which I believe this project could be meeting. The site plan for the new building is covering the buildings to be demolished and is very difficult to read. Property lines are also a little difficult to read, although some setbacks are shown on the plan. It should be fleshed out more. I was also aware that some structural details may be encroaching on the setbacks. Those details may be allowable under zoning, but I would first like to see what those architectural features are before I make a final decision on this.

Parking requirements were not fully addressed within this application. I am aware that there is a proposal under the master plan to provide parking as part of an intermodal transportation facility on the old Pike Industries lot. No specific plans have been submitted.

I am expecting more information in the future to review before any final determinations on this project.

Marge Schmuckal Zoning Administrator



### Marge Schmuckal - RE: UNE Patient Care Center

From: Marge Schmuckal

To: 'Jason Pica'; Lita Semrau

Date: 6/8/2012 10:35 AM

Subject: RE: UNE Patient Care Center

CC: 'Alan Thibeault'; 'Tom Saucier'; Kathy Leathers; Matt@alliedcook.com;...

#### Hi Lita.

That is what we discussed and I have agreed upon. I just want to add that I am not approving any specific signage on the proposed sign band at this time. That would be a separate review.

Marge

### >>> "Lita Semrau" < lita@portcityarch.com> 6/8/2012 10:27 AM >>>

Marge – it was great to talk to you this morning . . . I just wanted to sum up our conversation about UNE's Patient Care Center:

- You have reviewed and are okay with the 18" two story architectural feature with an 8" maximum signage band on the east side of the building as shown in the building section and plans we will not picking up any additional square footage.
- You have reviewed and are okay with the 8" architectural features we call out as "Piers" and are located on all four sides of the building (they are within the building set backs on three sides)
- You have reviewed and understand that the receiving ramp is within the setbacks so it is not an issue
- You have reviewed and would like us to separate the South stairs from the building more that the indicated 4" which we will be happy to do

Please let us know if there is anything else you need from any of us and have a great weekend las

Lita Semrau, NCARB
Vice President
Port City Architecture
65 Newbury Street
Portland, ME
(207) 761-9000
lita@portcityarch.com
www.portcityarch.com

From: Jason Pica [mailto:jason@portcityarch.com]

Sent: Tuesday, June 05, 2012 10:31 AM

To: MES@portlandmaine.gov

Cc: Semrau, Lita; Alan Thibeault; Tom Saucier

Subject: FW: UNE Patient Care Center

Good Morning, Lita will be in meetings all day today, she asked me to forward this on to you. Thanks

From: Lita Semrau [mailto:lita@portcityarch.com]

Sent: Tuesday, June 05, 2012 9:55 AM

To: jason pica

Subject: Fwd: UNE Patient Care Center

Lita Semrau **Port City Architecture** 207.761.9000 Office 207.756.4333 Cell www.portcityarch.com

### Begin forwarded message:

From: "Marge Schmuckal" < MES@portlandmaine.gov>

Date: June 5, 2012 9:18:03 AM EDT

To: "Lita Semrau" < lita@portcityarch.com>

Cc: <mark@portcityarch.com>, "Alan Thibeault" <AThibeault.ucpo.ucdomain@une.edu>

**Subject: Re: UNE Patient Care Center** 

Hi Lita.

All I saw was the full submission that was with the permit application. I quickly passed that on without any review because you are still submitting the site plan info. It will come back to me before the permit is issued. Can you e-mail or drop off the specific areas of concern to me so that I can take a closer look and answer your questions? thank you,

Marge

>>> "Lita Semrau" ita@portcityarch.com> 6/5/2012 8:24 AM >>>

Good morning . . . we are currently wrapping up our final submission to the Planning Board for UNE's Patient Care Center (formally known as the College of Dental Medicine) today and I am just checking on that status of the Architectural features and if you are okay with them as was discussed previously with Mark in my office . . .

- All the architectural features including any canopies are 2'-0" or less in depth including any signage bands
- None of them pick up any additional floor square footage

Would love to wrap this up quickly so if you have any questions, please call or email Mark or me . . . THANK YOU, las

Lita Semrau, NCARB Vice President **Port City Architecture** 65 Newbury Street Portland, ME (207) 761-9000 lita@portcityarch.com www.portcityarch.com

No virus found in this message. Checked by AVG - www.avg.com

### Marge Schmuckal - Re: UNE Demolition permits

From: Alex Jaegerman

To: Barbara Barhydt; Marge Schmuckal; Philip DiPierro; Shukria Wiar

Date: 7/2/2012 1:59 PM

Subject: Re: UNE Demolition permits

CC: Danielle West-Chuhta; Greg Mitchell

I do not recall a letter of non-applicability for housing replacement. However, we have determined that there are two dwellings that are being displaced by the project under the conditional use standards, one to be demolished on Stevens Ave. and one on College Street to be used as a student study and waiting area for the parking shuttle. The other two buildings were determined to be in institutional use prior to June 1, 1983, which is well before the Housing Replacement date of July 1, 2002, so the result is the same for those buildings, i.e. they do not count toward residential loss as per the ordinance. The Housing Replacement ordinance requires loss of three or more qualified dwellings within 5 years, so the loss of these two dwellings does not trigger this ordinance.

This finding should be captured in writing, either a letter to UNE or a memo to file. If time urgent, we can prepare that quickly, but it seems there are other hurdles to overcome. If they ask for a demo permit prior to performance guarantee, we should discuss that.

Alex.

Alexander Jaegerman, FAICP Planning Division Director 389 Congress Street, Suite 400 Portland, ME 04101

Phone: (207)874-8724

>>> Shukria Wiar 7/2/2012 1:33 PM >>>

Hello:

I have drafted the approval letter for the UNE project and have forwarded to the PB Chairperson for sign off. We will forward that to you when it is finalized. As for the approval regarding the Housing Ordinance, I am not familiar with such an approval letter and will discuss with Barbara when she gets back from vacation.

Planning Division cannot sign off on the demo since we have not received final plans and a performance guarantee has not been posted yet. These items need to be in place before we sign off. Having said this, the applicant can request authorization for site work prior to posting the performance guarantee under Section 14-532. The letter can be addressed to Alex with a full description as to what work they want to do.

Thanks.

### Shukria

>>> Marge Schmuckal 7/2/2012 1:03 PM >>>

I have three demo permits for the exiting buildings that UNE wants to demolish to make way for the dental building. I have never received an approval from planning that the Replacement Housing Ordinance was not in effect for these buildings. Can I get a copy of that approval?

Also is it alright for us to issue the building permits for demo? Marge

### Site Design Associates

### Consulting Engineering and Land Planning

June 5, 2012

Ms. Shukria Wiar Planner Planning Division 389 Congress St., Fourth Floor Portland, ME 04101

RE: University of New England – Patient Care Center Application #2012-483; CBL 145-B-024 1 College Street Response to Staff Comments

### Dear Shukria:

We have prepared the following plans and supporting documentation in response to your application review memorandum dated May 4, 2012. On behalf of University of New England (UNE), Site Design Associates (SDA) is pleased to submit one original and electronic copies of the following information for your review and comment.

- Intermodal Facility Conceptual Site Plan
- Stormwater Management Plan and Inspection and Maintenance Plan
- Letter from Maine Historic Preservation Commission
- Photometric Plan
- Lighting Catalog Cut Sheets
- Architectural Renderings
- Project Plans one set full sized

| 0 | C-100 | Existing Conditions & Demolition Plan                  | Rev E |
|---|-------|--|-------|
| 0 | C-101 | Site Plan  | Rev E |
| 0 | C-102 | Grading, Drainage, and Erosion Control Plan            | Rev E |
| 0 | C-103 | Site Utilities Plan                                    | Rev E |
| 0 | C-104 | Landscape Plan   | Rev E |
| 0 | C-300 | Erosion & Sedimentation Control Notes and Site Details | Rev E |
| 0 | C-301 | Site Details   | Rev E |
| 0 | C-302 | Site Details   | Rev E |
| 0 | C-303 | Site Details   | Rev E |
| 0 | A1.11 | First Floor Plan                                       |       |
| 0 | A1.12 | Second Floor Plan                                      |       |

City of Portland Staff comments are shown below in *italics*, our responses to comments are in **bold**.

1. Zoning Administrator -

a. This project is in the R-5 zone which allows university/college uses under a conditional use appeal to the planning board. The conditional use has separate requirements for university/colleges over 10 acres in size which I believe this project would be meeting. The site plan for the new building is covering the buildings to be demolished and is very difficult to read. Property lines are also difficult to read, although some setbacks are shown on the plan. It should be fleshed out more. I am also aware that some structural details may be encroaching on setbacks. Those details may be allowable under zoning, but I would first like to see what those architectural features are before I make a final decision on this.

The site plans have been reprinted to better define the property line information. The site plans show 30 foot setbacks from Stevens Avenue and College Street, and a 20 foot setback from Linnell Hall, the closest building on the campus. There are architectural features such as pilasters, roof overhangs, and a concrete pad at the service entrance which will encroach into the setbacks. The architects have discussed this with the zoning administrator and have followed her direction in their design. They are currently working with the zoning administrator to verify that these architectural features, as designed, are allowed within the setbacks.

b. Parking requirements were not fully addressed within this application. I am aware that there is a proposal under the master plan to provide parking as part of an intermodal transportation facility on the old Pike Industries lot. No specific plans have been submitted.

The current site plan application includes a proposal to establish an intermodal transportation facility on the recently acquired Pike Industries parcel on Bishop Street. An existing structure will be modified for use as a shelter, and a shuttle bus will operate regularly between the intermodal facility and the campus. As noted on the conceptual site plan included with this submission, 300 spaces have been shown on that site. As part of its master planning process, UNE developed an estimate of 274 spaces as the overall parking deficit for the 2016-17 academic year. This includes the 124 spaces estimated to accommodate the new PCC, and the parking displaced by the PCC. The deficit will be addressed through the establishment of the intermodal transportation facility.

Of the 124 spaces generated by the PCC, 31 will be needed for patient parking spaces. As noted on the previously submitted site plans, 33 spaces at the main entrance located at the north end of the building will be allocated for this patient parking demand.

### 2. Tom Errico - Traffic and Parking

a. I concur with the estimate of new traffic volume generation and the conclusion that the project will not require an amended Traffic Movement Permit.

### No response required.

b. Further details need to be provided on the provision of the Pike satellite parking lot as it relates to shuttle bus operations. My final conclusion will be presented in the future.

Please see the discussion above and the conceptual site plan included with this submission. It is expected that the shuttle will run at least 3 times per hour. In the event that someone must access the lot from the campus during non-operational hours, UNE Campus Security will provide transportation via its existing "Safe Ride Program."

c. The existing parking lot abutting the proposed building currently provides parking for UNE. The applicant should provide information on existing users.

Please see discussion in response to zoning administrator comments.

d. My preliminary conclusion is that I concur with the parking generation estimate of needing an additional 124 parking spaces. I need to review this more before rendering my final conclusion.

### Acknowledged.

e. I continue to review the need for the drop off space on Stevens Avenue. The applicant should provide feedback on providing the drop-off space along the existing curb line and restrict usage. I would note that depending on the outcome of this issue, changes to parking regulations may require city council action.

We are open to suggestions and look forward to receiving the comments. We felt that given the clinical use within the building, providing a drop off would minimize impacts on Stevens Avenue traffic when a drop off is occurring.

f. The project illustrates a new crosswalk on college Street. The city prefers a perpendicular alignment and so I need to review this further. I would ask that the applicant provide a summary of pedestrian origin and destination movements to and from the proposed building and how these movements will be accommodated.

We understand the City's preference; however, the crosswalk is actually connecting two existing walks, and the alignment of these walks is not proposed to be altered as part of this project.

3. Stormwater - Ashley Auger, Engineer in Training, and David Sensus, P.E.

a. Basic Standards: The applicant has provided sufficient erosion and sedimentation control notes and details; however, the site plan should show the location of sediment barriers, stabilized construction exit(s), and catch basin inlet protection. In addition, the applicant must provide an Inspection and Maintenance Plan for their proposed stormwater management systems in accordance with Chapter 500 and City Code of Ordinances Chapter 32 guidance.

Drawing C-102 now shows the catch basin inlet protection. The site likely will be internally drained, similar to the College of Pharmacy. The plans do provide for the installation of a filter barrier if it is required but it is not shown on the drawings. We have not shown a stabilized construction entrance. It has been our experience with construction projects on this campus, that tracking onto Stevens Avenue has not been problematic. Existing pavement will remain to the extent possible, and the existing pavement and underlying gravels will be stable.

An Inspection and Maintenance Plan is included with this submission.

b. General Standards: In accordance with Section 5 of the City of Portland Technical standards, the Applicant must submit a Stormwater Management Plan pursuant to MaineDEP Chapter 500 guidance to address conformance with the general standards. The Applicant has not provided a Stormwater Management Plan that addresses runoff calculations; sizing of the infiltration system; soil data including soil classification at system subgrade depth, infiltration capacity at system subgrade depth, depth to groundwater, and presence of bedrock. We request that this additional information be provided so that we may perform a review of the stormwater management approach for the project. Additional detail must also be provided on the infiltration system, including sediment pretreatment details showing the underdrain piping system between the drainage rings, and overflow connections to the City's stormdrain system.

We have provided supporting documentation for the storm system design with this submission. We are unclear as to what the concern is regarding sediment pre-treatment. Since the majority of runoff to be infiltrated is from existing and proposed roof areas, we are not concerned with sediment pre-treatment in this case. Runoff from a very small portion of the service drive will be collected in a catch basin and conveyed to the infiltration system. The detail for the catch basins reflects a 3 foot deep sump and a Casco trap, which we believe will provide adequate pre-treatment for this relatively small area.

As noted in the Stormwater Management Report, there is excess storage capacity in the infiltration system, and no overflow is provided. Any ponding would occur in the historic green area, but we do not anticipate that this will occur.

c. Urban Impaired Stream Standard

Not applicable.

d. Flooding standard: The applicant notes that a 2008 approval for the College of Pharmacy resulted in a reduction of 6,000 sf of impervious area on the campus, and therefore the combination of the two projects will result in a net decrease of 1,600 s.f. of impervious area on the campus. A reduction in impervious area in 2008 does not count toward meeting the stormwater requirements for this project. However, if the applicant can show, (through pre and post development hydrology and pipe flow calculations) that the net result of the two projects will decrease flow to the City's storm drain system, we would recommend a waiver from the flooding standards for this specific project. (pending DPS review and approval)

We disagree with the peer reviewer's opinion regarding a reduction in impervious area not being credited to this project. However, the point becomes moot, since the entire roof area of the new structure will be collected in roof drains and conveyed to the infiltration system, thereby significantly reducing the contributing area from the PCC site to the city system in Stevens Avenue and College Street. The predevelopment drainage area to the city systems in College Street and Stevens Avenue is 23,500 sf, while the post development area draining to the municipal systems will be 14,160 sf. We believe that based upon this information, a waiver of the flooding standard is clearly warranted.

e. In accordance with MaineDEP Chapter 500 guidance, infiltration from a stormwater infiltration system is considered de minimis and does not require an individual waste discharge license if the standards in Chapter 500, appendix D are met. The applicant must provide a Stormwater Management Report that addresses how the proposed system will meet the Appendix D requirements, or the proposed system is required to be registered with and meet all other requirements of the MaineDEP's Underground Injection Control Program.

See the Stormwater Management Report.

f. The applicant proposes a private storm drain crossing on College, a publicly owned right-of-way. The Applicant must receive approval from the city of Portland DPS and must obtain an easement from the City for this pipe crossing.

### Acknowledged.

g. The Stormwater Management Plan should acknowledge Condition #2 of the December 1, 2011 UNE-Armory Parking Project Site Plan Conditions of approval. This condition provides specific requirements for meeting the general Standards and Urban Impaired stream Standard for the UNE-Armory Parking Project by providing quality treatment and mitigation of 7,343 sq. ft. of paved surface on campus or on the Armory Site

We are unclear as to how that condition is associated with this project, which is located on a separate parcel of land and was the subject of a separate and distinct application process. Please provide additional clarification.

h. City Standard details should be added for all work proposed within the City Right-of-Way, including sidewalk, pipe trench, pavement repair, and curbing

Acknowledged.

### 4. David Margolis-Pineo:

 Proposed "Drop Off" on Stevens Avenue will eliminate parking and may need council approval.

### Acknowledged.

b. Note that the sidewalk material policy for Stevens Avenue is concrete and College Street is asphalt. Since it appears that less than half of the sidewalk areas will not be disturbed, the applicant may choose to stay with brick walks.

Plans have been revised to conform with the sidewalk material policy.

c. The proposed 12" drain line under College Street shall meet City of Portland's Technical manual pipe material standards.

Acknowledged.

### 5. Fire department:

a. Hydrants are to be located within 100' of the Fire Department Connections but no closer than 40'

### Acknowledged.

b. All construction shall comply with City Code Chapter 10.

Acknowledged.

### 6. Planning Staff:

a. The applicant will need to submit final capacity letters for the proposed utilities.

We believe the sewer capacity is the only outstanding utility. We are working with Frank Brancely to obtain the wastewater capacity permit, and will provide a copy when available.

b. The applicant will need to show the snow loading area on the site plan or submit hot it is to be handled if removed from the site.

The snow storage area is shown on the Site Plan. This area has been used for snow storage since Alexander Hall was constructed. If the capacity of this area is exceeded, snow would be removed from the site.

c. In order to aid the Board in its deliberations, historic preservation staff shall provide a written analysis of the proposed development. This information will be available for the public hearing.

In addition, we have included a copy of the findings of the Maine Historic Preservation Commission, which has concluded this project will have no adverse impact on historic properties.

d. The applicant has not submitted a lighting and photometric plan. A plan needs to be submitted that shows the locations of proposed lighting fixtures. The catalogue cuts will also need to be submitted for review and approval by the planning division; these fixtures will be cut-off.

A photometric plan and catalogue cuts for the fixtures are included with this submission.

e. Mechanical equipment, such as HVAC, is being proposed with the building. He applicant will need to submit catalogue cuts, as well as noise decibels for review. The applicant will be responsible for any kind of mitigation if the mechanical units do not meet the standards.

The models and brands of mechanical equipment will not be known until bids are received. Therefore, we request that the Planning Board consider including this as a condition of approval.

f. The applicant will need to show all the traffic signage and way finding on the site plans.

Acknowledged.

### 7. Planning Board:

a. The primary discussion and comment from the planning board centered on the appearance of the building from Stevens Avenue. As we discussed with the Board on May 8<sup>th</sup>, the building program dictates that the public entrance be located on the north end of the building, while the student entrance will be located on the south end of the building, addressing the historic green and campus.

As noted on the current site plans and renderings, we have provided a set of stairs on the northeasterly side of the building accessing the main entrance in order to "address" Stevens Avenue. By adding the stairs and walkways, the façade is broken up and given a rhythm to match the site and surrounding context similar to other adjacent buildings. This also gives convenient access to the patient entry from the Stevens Avenue drop-off point and bus stops.

b. In regards to the intermodal transportation facility, as we discussed with staff and the planning board, the former Pike Industries site has been undergoing a transformation since UNE's recent purchase. Equipment is being removed, and the stockpiles of material will be removed as well. At this time, we have been unable to schedule the necessary topographic surveys to allow the submission of a complete site plan for the intermodal facility.

For this reason, we have included a conceptual site plan in this submission. The plan demonstrates the parking is feasible and shows the existing connector road to be used by shuttles to the campus.

We are requesting that the planning board consider a conditional approval of the PCC site plan, to provide for staff review and approval of the final intermodal facility plan on the former Pike property. This would allow construction of the PCC to commence and to meet the fall 2013 opening date, assuming the project is approved by the planning board.

A neighborhood meeting is scheduled for this Thursday, June 7<sup>th</sup>, at 6:00 pm, at in Room 109 of the College of Pharmacy building. A primary goal for this meeting is to hear concerns of the neighbors in regards to potential construction impact, in order to utilize this information to finalize the construction plan and address as many of the concerns as practical.

We look forward to meeting with the Planning Board to discuss the Patient Care Center project. Please contact me with any questions or comments concerning these

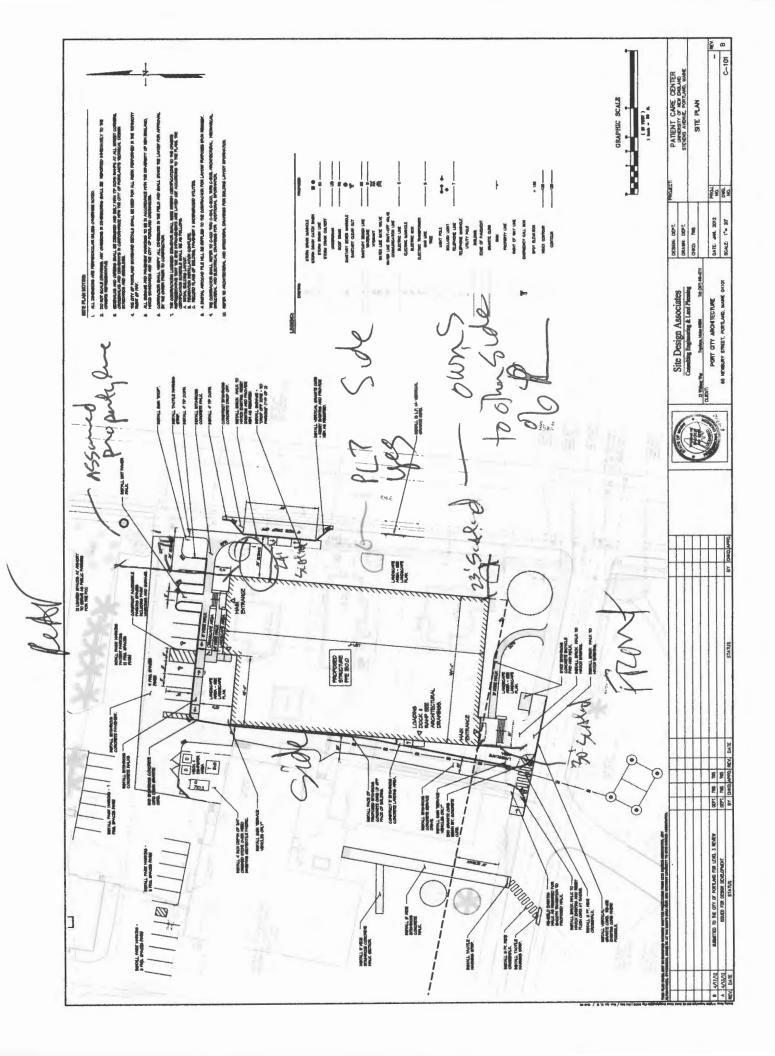
Sincerely,

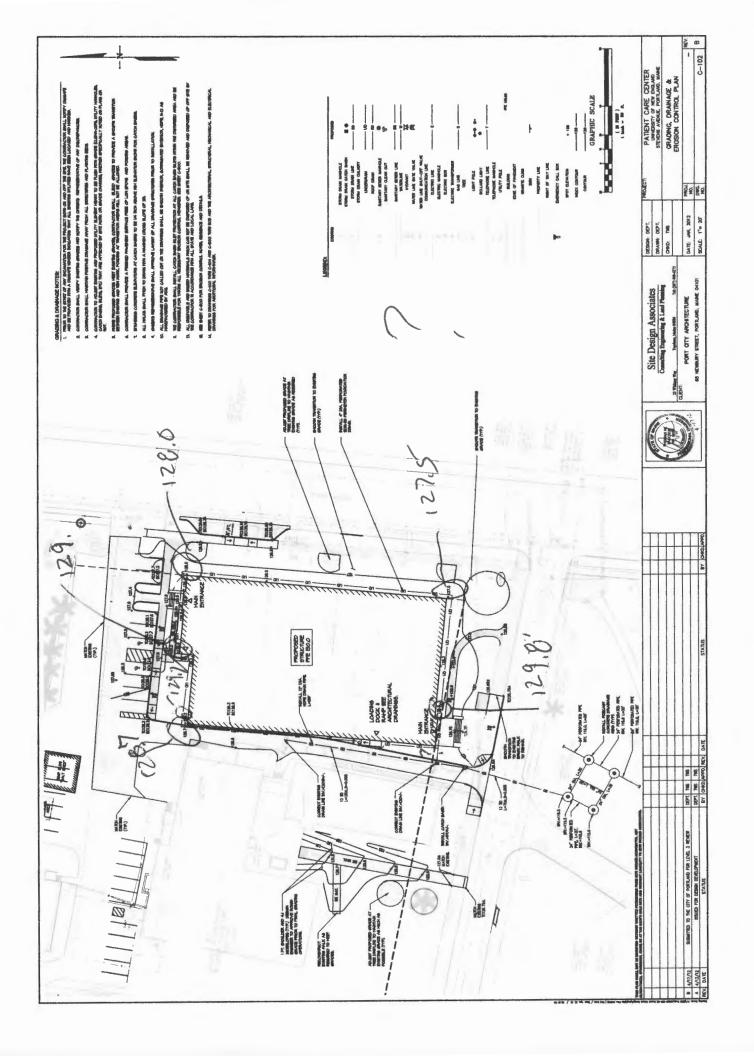
Site Design Associates

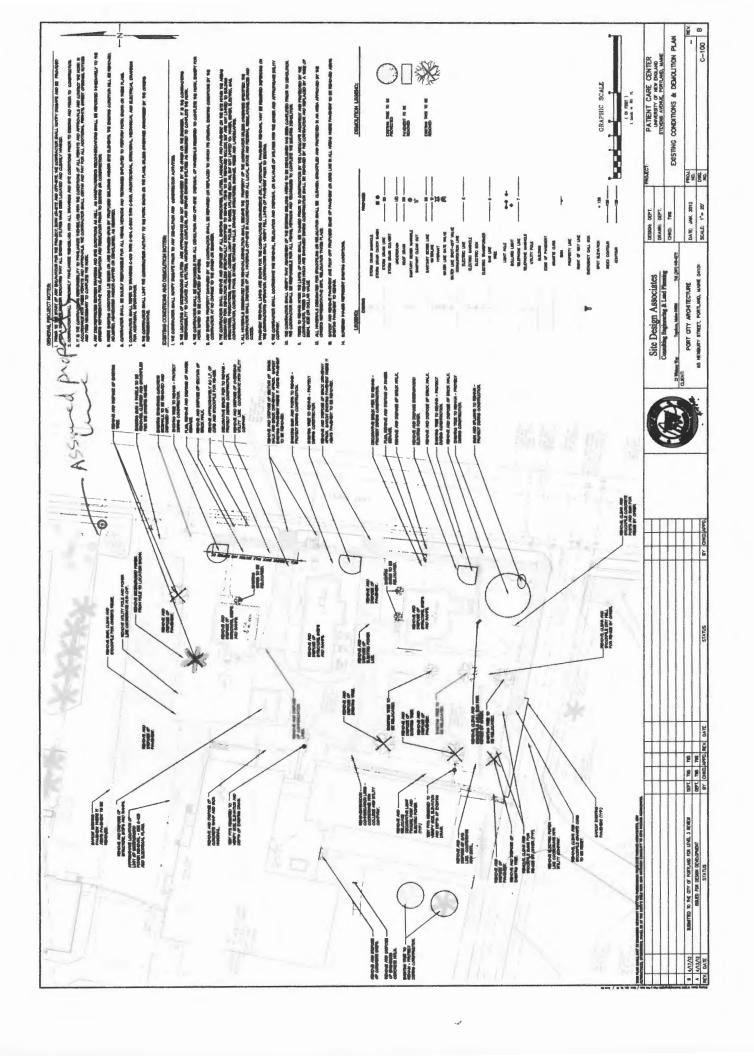
Tom Saucier, P.E.

President

cc: Alan Thibeault, UNE Lita Semrau, Port City Architecture



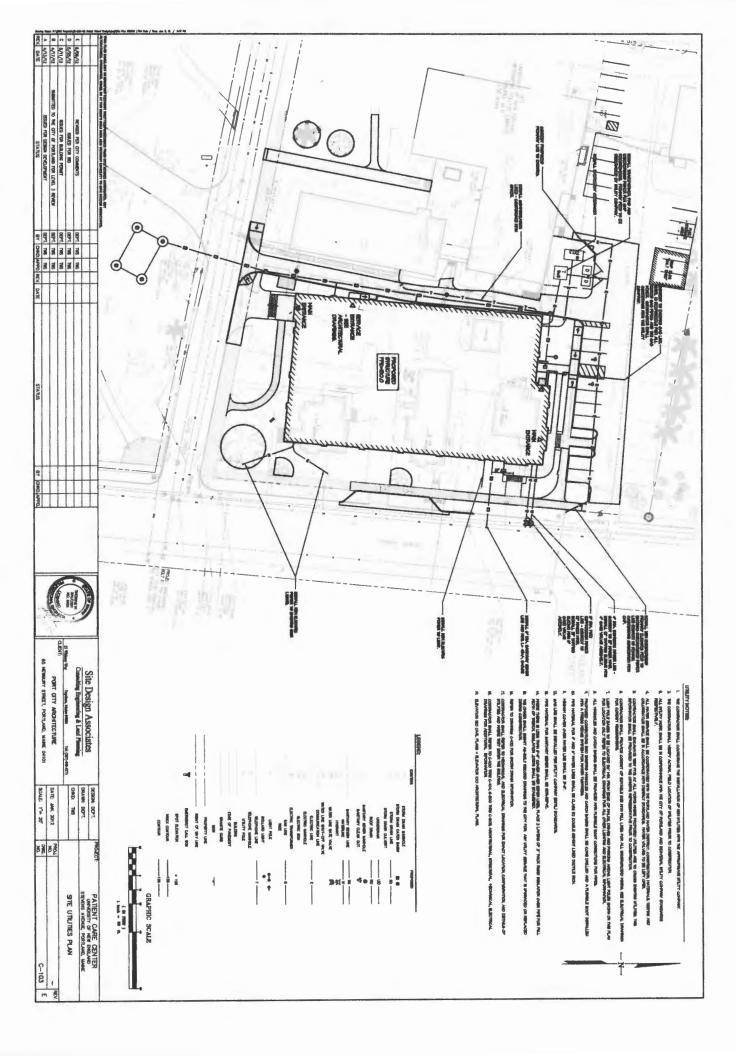


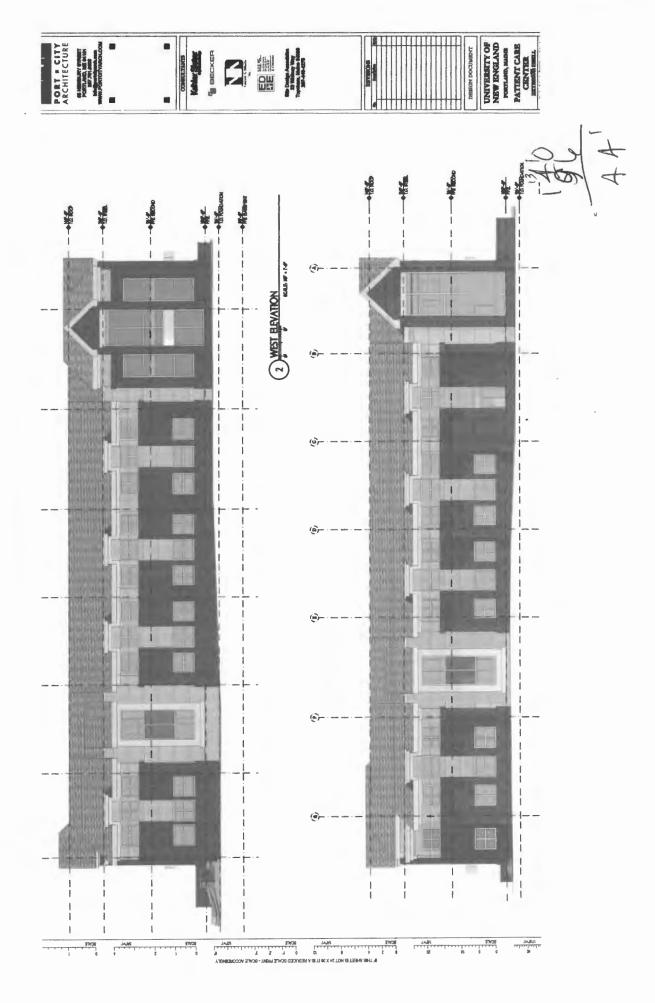


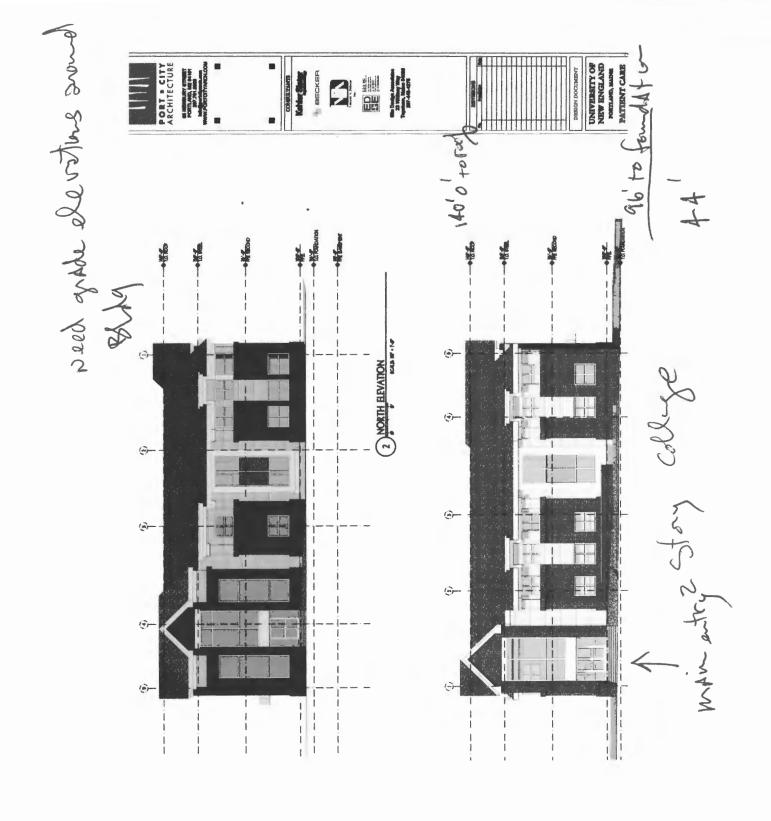
Ger enty COLERANT PORT - CITY ARCHITECTURE



College







# Site Design Associates

## **Consulting Engineering and Land Planning**

April 17, 2012

Ms. Barbara Barhydt
Development Review Services Manager
Planning Division
389 Congress St., Fourth Floor
Portland, ME 04101

RE: University of New England - Westbrook College Campus Site Plan & Conditional Use Application for: Patient Care Center

#### Dear Barbara:

On behalf of University of New England (UNE), Site Design Associates (SDA) is pleased to submit one original paper copy and one CD containing the files of the Site Plan Application and Conditional Use Application for the referenced project. We have enclosed a check in the amount of \$600 for the following project review fees:

#### Site Plan Application

Major Development under 50,000 s.f. - \$500

#### Conditional Use Application

Conditional Use - \$100

#### This submission contains the following information:

- Site Plan Application and Check List (Attachment 1)
- Conditional Use Application and Narrative(Attachment 2)
- Letter of Agent Authorization (Attachment 3)
- Project Description (Attachment 4)
- Deed (Attachment 5)
- Zoning Compliance and Applicable Design Standards(Attachment 6)
  - Traffic (Attachment 7)
  - Financial Capacity (Attachment 8)
  - Utility Letters (Attachment 9)
  - Fire Safety Summary and City Technical Manual, Chapter 3, Compliance (Attachment 10)
  - Stormwater Management Plan (Attachment 11)
  - Solid Waste (Attachment 12)
  - Construction Management Plan (Attachment 13)
  - The following project drawings(one full size and 1 reduced set):
    - C-100 Existing Conditions & Demolition Plan
    - C-101 Site Plan

- C-102 Grading, Drainage, and Erosion Control Plan
- C-103 Site Utilities Plan
- C-104 Landscape Plan
- C-300 Erosion & Sedimentation Control Notes and Site Details
- C-301 Site Details
- C-302 Site Details
- Architectural Elevations
- Boundary Survey

We realize that there is some outstanding information which includes:

- Exterior Lighting Plan
- HVAC equipment certification

As noted in the application, the lighting will conform with ordinance standards and the requirements outlined in the Technical Manual. HVAC equipment will be high efficiency roof mounted gas fired boilers conforming with all state and federal regulations. This information is currently being developed and will be submitted as soon as it is available.

We are in hopes that you can place these applications on the next available Planning Board agenda so that we may introduce the project to the Planning Board.

We look forward to meeting with the Planning Board to discuss the Patient Care Center project. Please contact me with any questions or comments concerning these

Sincerely,

Site Design Associates

Tom Saucier, P.E.

President

cc: Alan Thibeault, UNE

#### **PROJECT DATA**

The following information is required where applicable, in order complete the application.

| Total Area of Site  | 14 acres   |   |  |  |  |
|---|--|---|--|--|--|
| Proposed Total Disturbed Area of the Site                       | 37,000 sq. ft.   |   |  |  |  |
| (If the proposed disturbance is greater than one acre, then the | applicant shall apply for a Maine Construction General | Permit                                  |  |  |  |
| (MCGP) with DEP and a Stormwater Management Permit, Chap        | oter 500, with the City of Portland                    |   |  |  |  |
| Impervious Surface Area   |  |   |  |  |  |
| Total Existing Impervious Area                                  | 310,300 (-6000 sf since COP in 2006)                   | sq. ft                                  |  |  |  |
| Total Proposed Impervious/Paved Area                            | 314,700 (-1600 sf since COP in 2006)                   | sq. ft                                  |  |  |  |
| Net Change in Impervious Area                                   | 4,400  | sq. ft                                  |  |  |  |
| Building Ground Floor Area and Total Floor Area                 |  |   |  |  |  |
| Existing Building Footprint                                     | 4459   | sq. ft                                  |  |  |  |
| Proposed Building Footprint                                     | 18,200   | sq. ft                                  |  |  |  |
| Net Change in Building Footprint                                | 13,741   | sq. fi                                  |  |  |  |
| Existing Total Building Floor Area                              | 10,000 +/-   | sq. ft                                  |  |  |  |
| Proposed Total Building Floor Area                              | 39,500 +/-   | sq. ft.                                 |  |  |  |
| Net Change in Building Floor Area                               | 29,500+/-  | sq. ft                                  |  |  |  |
| Zoning  |  |   |  |  |  |
| Existing  | R-5  |   |  |  |  |
| Proposed, if applicable   | N/A  |   |  |  |  |
| Land Use  |  |   |  |  |  |
| Existing  | Institutional - College/University                     | *************************************** |  |  |  |
| Proposed  | Same   |   |  |  |  |
| Residential, If applicable                                      | N/A  |   |  |  |  |
| Existing Number of Residential Units                            |  |   |  |  |  |
| Proposed Number of Residential Units                            |  |   |  |  |  |
| Net Change in Residential Units                                 |  |   |  |  |  |
| Proposed Number of Lots   |  |   |  |  |  |
| Proposed Number of Affordable Housing Units                     |  |   |  |  |  |
| Proposed Bedroom Mix:   |  |   |  |  |  |
| Number of Efficiency Units                                      |  |   |  |  |  |
| Number of One-Bedroom Units                                     |  |   |  |  |  |
| Number of Two-Bedroom Units                                     |  |   |  |  |  |
| Number of Three-Bedroom Units                                   |  |   |  |  |  |
| Parking Spaces  | See narratives   |   |  |  |  |
| Total Existing Number of Parking Spaces                         |  |   |  |  |  |
| Total Proposed Number of Parking Spaces                         |  |   |  |  |  |
| Net Change in Parking Spaces                                    |  |   |  |  |  |
| Number of Handicapped Spaces                                    |  |   |  |  |  |
| Bicycle Parking Spaces  |  |   |  |  |  |
| Fotal Existing Number of Bicycle Spaces                         | 0  |   |  |  |  |
| Total Proposed Number of Bicycle Spaces                         | 9  |   |  |  |  |
| Net Change  | 9  |   |  |  |  |
|   |  |   |  |  |  |

## PROJECT DESCRIPTION

### **Overview**

The Patient Care Center at University of New England's Portland campus will be a significant asset to the existing UNE Portland campus, and the City of Portland. The project, located just north of the recently completed College of Pharmacy on Stevens Avenue, will introduce a new Dental Medicine curriculum to the University. The program will, as part of the curriculum, incorporate a low-cost Dental Teaching Clinic (including Urgent Care) that is open to the public, thus fulfilling the increasing need for dental care in the State of Maine. A future build-out within the proposed structure will provide a low-cost health clinic which will focus on interprofessional care and treatment that is open to the public as well as UNE faculty, students, and staff.

#### Site and Context

Due to its location on Stevens Avenue, and the demographics of its program, it is important this project address its connection to the existing campus, and a connection to its public use. The building's size, massing and materials will reflect the collegiate vernacular of the surrounding campus, while addressing the pedestrian nature of its urban neighborhood.

Students, faculty and resident dentists will be accessing the building from the existing campus to the south. This entrance addresses the pedestrian nature of the campus.

While the connection to the existing campus is important, the connection to public access is equally important. This facility will address its public entrance on the North side with the use of an inviting, light-filled entrance atrium and main building signage. This entrance will be both vehicular and pedestrian focused, with the adjacent public parking lot to serve the Clinical portion of the program.

### **Building** Use

This new development will consist of a two-story building, with each story having 18,200+/-square feet each, and a small Mechanical basement of 3,100 +/- square feet, for a total building area of 39,500+/- square feet. This new Dental Medicine curriculum comprises several main components including simulation areas and comprehensive care areas. The IPE Clinic serves as a teaching clinic and is a primary use of the first floor of the building. Also included on the first floor are the patient simulation and teaching areas, which are mainly for the use of the first and second-year students.

The second level of the building contains the comprehensive care areas. These areas are for upper-level students working on live patients rather than simulators. A specialty care area is also on the second floor for post-graduation students and resident dentists. In addition to the exam areas, it is the specialty care area that includes the Imaging (X-ray) and the urgent care facilities.

Each entrance to the building (the campus entrance and the public entrance), will have stairwells and elevators, with the public entrance having an open railed two-story lobby for clear wayfinding. It is anticipated to have the mechanical units hidden in the center of the flat portion

of the roof, with the remainder of the mechanical equipment located in the basement.

#### **Building Construction**

A steel structure with composite metal decks for the floor structures will be utilized for this building. Insulated exterior panels will also be used to aid in expediting construction times. A combination of brick, precast concrete, and cementitious panels will be installed over the insulated panels, to maintain the collegiate vernacular of the university. Several large window elements will be used bring in natural light further into the interior of the building and to add definition to the elevations. Pitched roofs around the perimeter will assist in enhancing the vernacular of the surrounding campus and neighborhood. The pitched roofs will also aid in hiding the rooftop HVAC units. An entrance atrium area will be used to signify the main entrance and distinguish the public from the campus entrance.

#### Conclusion

It is the desire of the University that, along with the College of Pharmacy, this new Patient Care Center will provide the "bookends" to the beautiful historic green in the center of the campus. The pitched roofs, along with the brick exterior will maintain the classic campus atmosphere. The size, massing, and building elements will fit both within the existing campus and the surrounding neighborhood. The landscaping will provide additional outdoor student areas and enhance Stevens Avenue. This new Dental Medicine curriculum will be a welcomed addition to the University and will help to provide needed dental care in the state of Maine, as well as bringing many students and faculty to Portland to live and work. We believe that this development will affect the site, the University, and the City of Portland in an extremely positive way.

## **Zoning Compliance and Applicable Design Standards**

The project, located just north of the recently completed College of Pharmacy on Stevens Avenue, will introduce a new Dental Medicine curriculum to the University. The program will, as part of the curriculum, incorporate a low-cost Dental Teaching Clinic (including Urgent Care) that is open to the public, thus fulfilling the increasing need for dental care in the State of Maine. A future build-out within the proposed structure will provide a low-cost health clinic which will focus on interprofessional care and treatment that is open to the public as well as UNE faculty, students, and staff.

As noted in the previous Conditional Use section, the project is allowed in the R-5 zone as a conditional use. The project meets the minimum lot size (10 acres for a building over 35 feet in height), setbacks (30 feet from external boundaries), and height restrictions (less than 55 feet total height).

Section 14-526 of the Land Use Ordinance outlines the standards for Site Plan Approval. The following discussion will outline how this project will comply with the site plan standards.

14-526. (a) Transportation — As noted in the trip generation analysis included as Attachment 7, the project is expected to generate 69 new trips (24 entering and 45 exiting) the site during the peak hour. The report also indicates that the peak hour will occur some time after 12:00 noon, but before the peak hour of the adjacent street, Stevens Avenue. For these reasons, it appears there will be minimal impact on the levels of service at any intersection in the vicinity of the project.

As noted in the revised master plan submitted to the city, UNE has recently acquired the 19 acre former Pike property at the end of Bishop Street. This property directly abuts UNE's property, and can be accessed through the campus by an existing roadway to Bishop Street. UNE has undertaken preliminary studies and had several discussions with city staff regarding the use of this property for parking. A shuttle service to the campus would be provided via the existing access road.

It is UNE's understanding that the zoning will allow for the use of this existing impervious surface as parking. On a concurrent track with the site plan review process for the PCC, UNE is continuing to work with city staff to develop a plan for parking on this parcel. An added benefit from a traffic standpoint is that parking at the parcel and riding the shuttle into the campus will remove traffic from the congested Morrill's Corner intersection.

The existing curb cut from Stevens Avenue will serve as the public access to the site. No new curb cuts will be created. Sight distances at the access point conform with local and state standards. Two existing curb cuts will be removed along Stevens Avenue.

Existing sidewalks are located along both the Stevens Avenue and College Street frontages. As shown on the drawings, UNE is proposing modifications along Stevens Avenue to provide a drop-off area along Stevens Avenue at the main public entrance. The sidewalks in this area will

be improved as required. The drop-off will be signed to prohibit parking, and will provide a drop area for both private and commercial vehicles. Stevens Avenue will be widened in this area to accommodate the drop-off.

Bus stops are located at two locations along the campus frontage and provide adequate public transit access.

In regards to parking, the public entrance of the proposed building will be located on the north end. As noted in the trip generation analysis of Attachment 7, the parking demand for the clinical use will be 31 spaces. It is our understanding the city's consulting traffic engineer has reviewed the parking generation analysis and generally concurs with the results. As noted on the site plan, 21 spaces will be striped on the north end of the building. These, when combined with the 12 leased spaces at the armory site which directly abut this parking, will provide for a total of 33 spaces for the public parking.

As previously noted, UNE is currently developing a plan to provide parking at the recently acquired Pike property on Bishop Street, in order to eliminate the parking deficits projected in their long term parking analysis. This will offer a number of benefits, including reduced traffic at Morrill's corner, and the opportunity to park on existing impervious surfaces. Preliminary studies indicate that there is adequate space available to eliminate the parking deficit projections. We will continue to work with city staff on this alternative to parking on Gulliver's Field.

A bike rack pad is provided at the southerly building entrance, where the primarily non-public or student/faculty entrance is located. This rack will accommodate up to 9 bikes.

A Transportation Demand Management plan for the campus is currently under review by the staff and planning board. Reference is made to that plan with this submission.

14-526. (b) Environmental Quality Standards — The plan is to preserve existing trees on site to the extent practicable. Any trees designated to remain which are damaged during construction will be replaced.

Given the developed nature of the site in an urban setting, there are no threatened or endangered plant or animal species or habitat located on the project site. There are no wetlands or vernal pools on or proximate to the site.

This project involves the demolition of several wood frame structures and existing parking areas on the campus in order to construct an approximately 18,200 sf footprint building. A portion of runoff from the building site at the corner of College Street and Stevens Avenue drains to the existing city systems in those streets via overland flow. At this point in time, it appears the building will result in a net increase of approximately 4400 sf of impervious area on the development site.

However, when the College of Pharmacy was permitted in 2008, the city approved stormwater management plan demonstrated a reduction in impervious area of 6000 sf on the campus. With this project, the extent of impervious area on the campus will continue to be 1600 sf less than prior to the College of Pharmacy project. Both sites are tributary to the same system in Stevens

#### Avenue.

As a further benefit of this project, an infiltration system will be constructed to replace existing infiltration systems displaced by the construction, and to collect runoff from the roof of the proposed building. This will serve to further reduce runoff from the UNE property on the existing storm and sanitary sewers in Stevens Avenue.

Therefore, construction of this project should not adversely affect the receiving stormdrain systems, as runoff rates and quantities will be less than existing rates.

14-526. (c) Public Infrastructure and Community Safety Standards – The development as proposed is consistent with the master plan recently submitted to the city by UNE. Attachment 10 includes a narrative regarding the community safety standards.

See Attachment 9 for utility letters. The proposed building will connect with the existing sanitary sewer system in the westerly side of Stevens avenue. Water service will also be provided from Stevens Avenue, while gas service will be via an existing service extending into the site. Power will be provided form an existing underground connection to Stevens Avenue. A new transformer and backup generator will be installed in an enclosure as noted on the project drawings.

14-526. (d) Site Design Standards – The bulk, height, and location of the building will not result in health or safety problems from a reduction in ventilation to abutting structures, nor will it result in changes to the existing wind climate. There will be no adverse impact of shadows on abutting public open space. All neighboring structures are owned by UNE. No view corridors will be impacted.

A historic district, the campus green, is located southerly of College Street. The building design is currently being reviewed by the Maine Historic Preservation Commission and will be subject to input from the city's historic preservation staff and board.

All exterior lighting will meet city Technical Manual requirements. Lighting levels in the parking area and along walks will be in accordance with IESNA standards for security and safety. All fixtures will be cutoff and shielded as required to avoid spill over into the adjacent streets.

All HVAC equipment will meet applicable state and federal emissions standards. The HVAC units will be high efficiency gas fired condensing units. The HVAC and air handling units will be located on the roof, and will be screened from public view.

Noise standards will not be exceeded.

In regards to signage, the existing sign at the intersection of College Street and Stevens Avenue will remain. Signage will be located on the building canopy, similar to the signage at the College of Pharmacy. Regulatory signage will comply with the applicable MUTCD standards.

#### Marge Schmuckal - FW: UNE Patient Care Center

From:

"Jason Pica" <jason@portcityarch.com>

To:

<MES@portlandmaine.gov>

Date:

6/5/2012 10:32 AM

Subject:

FW: UNE Patient Care Center

CC:

"Semrau, Lita" < lita@portcityarch.com>, "Alan Thibeault" < A Thibeault@une...

Attachments: UNE PCC MARKUPS 6.5.12.pdf

Good Morning, Lita will be in meetings all day today, she asked me to forward this on to you. Thanks

From: Lita Semrau [mailto:lita@portcityarch.com]

Sent: Tuesday, June 05, 2012 9:55 AM

To: jason pica

Subject: Fwd: UNE Patient Care Center

Lita Semrau Port City Architecture 207.761.9000 Office 207.756.4333 Cell www.portcityarch.com

#### Begin forwarded message:

From: "Marge Schmuckal" < MES@portlandmaine.gov>

Date: June 5, 2012 9:18:03 AM EDT

To: "Lita Semrau" < lita@portcityarch.com>

Cc: <mark@portcityarch.com>, "Alan Thibeault" <AThibeault.ucpo.ucdomain@une.edu>

**Subject: Re: UNE Patient Care Center** 

#### Hi Lita,

All I saw was the full submission that was with the permit application. I quickly passed that on without any review because you are still submitting the site plan info. It will come back to me before the permit is issued. Can you e-mail or drop off the specific areas of concern to me so that I can take a closer look and answer your questions? thank you,

Marge

>>> "Lita Semrau" <lita@portcityarch.com> 6/5/2012 8:24 AM >>>

Marge -

Good morning . . . we are currently wrapping up our final submission to the Planning Board for UNE's Patient Care Center (formally known as the College of Dental Medicine) today and I am just checking on that status of the Architectural features and if you are okay with them as was discussed previously with Mark in my office . . .

- All the architectural features including any canopies are 2'-0" or less in depth including any signage bands
- None of them pick up any additional floor square footage

Would love to wrap this up quickly so if you have any questions, please call or email Mark or me . . . THANK YOU, las

Lita Semrau, NCARB
Vice President
Port City Architecture
65 Newbury Street
Portland, ME
(207) 761-9000
lita@portcityarch.com
www.portcityarch.com

No virus found in this message. Checked by AVG - www.avg.com

Version: 2012.0.2178 / Virus Database: 2433/5046 - Release Date: 06/05/12

of with set bais met Canopy extends 2'0" at worse Case - 800 1/230 41"Sepperation WRAP COLUMNS AND BEAMS INDICATED WITH SHE GIME & FIRE CAUCH ITYPE 186 23' - 1' 25'-4" urchited IST FLOOR PLANS Ć, Cir Cir Feature BRUCE extens pier extends o" on South + noeth scale 187 FLOOR FFE another 8 A1.01
- 302 300 A1.01
- 302 300 A1.01 See Section 3.04 OK

Steps & Stans Look like me Than 50 ft

City of Portland Code of Ordinances Sec. 14-414 Land Use Chapter 14 Rev.9-15-11

#### Sec. 14-411. - Sec. 14-420. Reserved.

DIVISION 25. SPACE AND BULK REGULATIONS AND EXCEPTIONS

#### Sec. 14-421. Generally.

The requirements of this article shall be subject to the space and bulk regulations and exceptions of this division. (Code 1968, § 602.19.A)

#### Sec. 14-422. Reduction of lot area prohibited.

No lot shall be so reduced that yards, lot width, lot frontage, lot area, area per dwelling unit, and space for off-street parking and/or off-street loading shall be less than the minimum required under this article.

(Code 1968, § 602.19.A)

#### Sec. 14-423.Reserved.

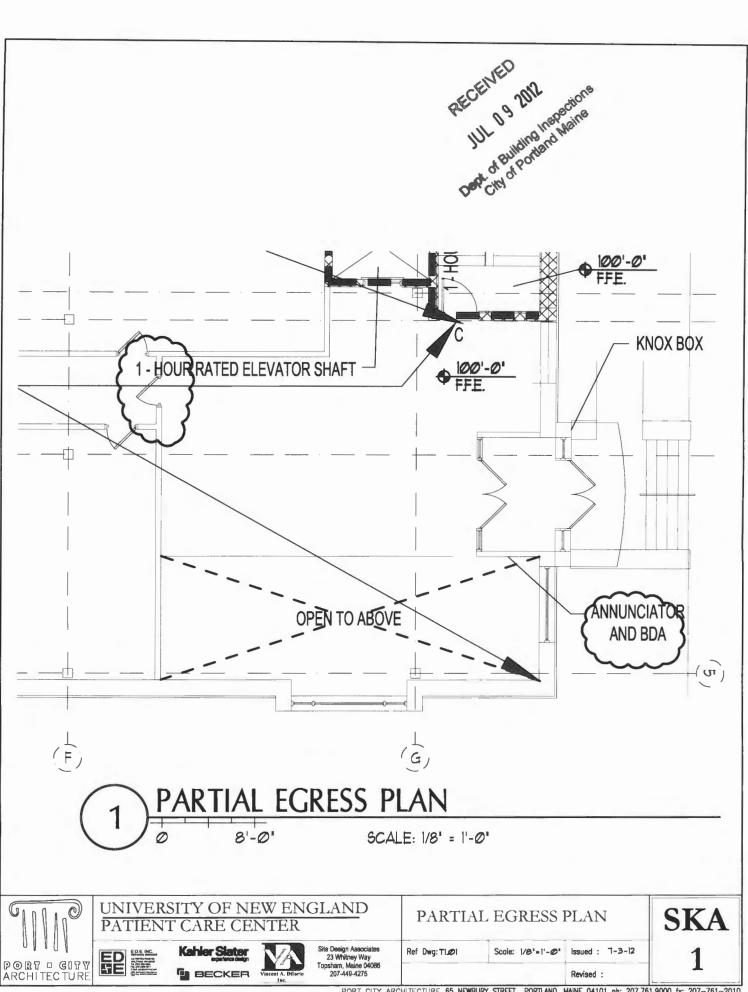
\*Editor's Note: Pursuant to Council Order No. 240-09/10, passed on June 21, 2010, Section 14-423 (Joint occupancy) was repealed in it's entirety.

#### Sec. 14-424. Required open space.

No part of a yard or other open space required about any building under this article shall be included as a part of a yard or other open space required for another building. (Code 1968, § 602.19.C)

#### Sec. 14-425. Projections in required yard areas.

Any yard may be occupied by a one-story entrance porch not enclosed, with or without a roof, if the area of the porch does not exceed fifty (50) square feet nor the projection from the building exceed six (6) feet. A basement bulkhead of similar size, but not more than twenty four (24) inches in height, is also permitted. A cornice eave, sill, canopy, chimney, or other similar architectural feature, but not including a bay window, may project into any required yard a distance of not more than two (2) feet.



Project: University of New England - Patient Care Clinic Date Prepared: May 10, 2012

University of New England

Owner:

| Structura | Statement of Special Inspections                |
|-----------|---|
| Project:  | University of New England - Patient Care Clinic |
| Location: | Portland, ME                                    |

This Statement of Special Inspections encompass the following discipline: Structural

This Statement of Special Inspections is submitted as a condition for permit issuance in accordance with the Special Inspection and Structural Testing requirements of the Building Code. It includes a schedule of Special Inspection services applicable to this project as well as the name of the Structural Special Inspection Coordinator (SSIC) and the identity of other approved agencies to be retained for conducting these inspections and tests.

The Structural Special Inspection Coordinator shall keep records of all Structural inspections and shall furnish inspection reports to the Building Code Official (BCO) and the Structural Registered Design Professional in Responsible Charge (SRDP). Discovered discrepancies shall be brought to the immediate attention of the Contractor for correction. If such discrepancies are not corrected, the discrepancies shall be brought to the attention of the Building Official and the Structural Registered Design Professional in Responsible Charge. The Special Inspection program does not relieve the Contractor of his or her responsibilities.

Interim reports shall be submitted to the Building Official and the Structural Registered Design Professional in Responsible Charge at an interval determined by the SSIC and the BCO.

A Final Report of Special Inspections documenting completion of all required Special Inspections, testing and correction of any discrepancies noted in the inspections shall be submitted to the BCO prior to issuance of a Certificate of Use and Occupancy.

Job site safety and means and methods of construction are solely the responsibility of the Contractor.

| Interim Report Frequency:  | n request of Building | Official             | or [_] per attached schedule.   |
|--|-----------------------|----------------------|---|
| Prepared by:   |                       |                      | WINTE OF Mailly   |
| Daniel S. Burne, P.E.  |                       |                      | S. F. Comment of the |
| (type or print name of the Structural Reg<br>Professional in Responsible Charge) | istered Design        | _                    | DANIEL S. BURNE No. 10910   |
| Signature Signature  |                       | 5/10/2012<br>Date    | CENSE BENTILL   |
|  |                       |                      | Design Professional Seal  |
| Owner's Authorization:   |                       | Building Code Office | cial's Acceptance:  |
| Signature  | Date                  | Signature            | Date  |
|  |                       | 1                    |   |

Project: University of New England - Patient Care Clinic

Date Prepared: May 10, 2012

## Structural Statement of Special Inspections (Continued)

| List of Ag     | ents   |   |   |
|----------------|--|---|---|
| Project:       | University of New England  | d - Patient Care Clinic                     |   |
| Location:      | Portland, ME   |   |   |
| Owner:         | University of New England  |   |   |
| This Statement | of Special Inspections enco  | mpass the following discipline: Structural  |   |
| (Note: Stateme | ent of Special Inspections fo  | or other disciplines may be included unde   | er a separate cover)  |
| This Statement | of Special Inspections / Qu  | ality Assurance Plan includes the following | building systems:   |
|                | Soils and Foundations<br>Cast-in-Place Concrete<br>Precast Concrete Syste<br>Structural Masonry Sys<br>Structural Steel<br>Wood Construction | em  | ases  |
| Special Inspe  | ection Agencies  | Firm  | Address, Telephone, e-mail  |
|                | IRAL Special<br>Coordinator (SSIC)   | Becker Structural Engineers, Inc.           | 75 York St. Portland, ME 04101 207-879-1838 info@beckerstructural.com |
| 2. Special Ins | spector (SI 1)   | Becker Structural Engineers, Inc.           | 75 York St. Portland, ME 04101 207-879-1838 info@beckerstructural.com |

Portland, ME 04101
207-879-1838
info@beckerstructural.com

3. Special Inspector (SI 2)

T.B.D.

4. Testing Agency (TA 1)

T.B.D.

5. Testing Agency (TA 2)

Note: The inspectors and testing agencies shall be engaged by the Owner or the Owner's Agent, and <u>not</u> by the Contractor or Subcontractor whose work is to be inspected or tested. Any conflict of interest must be disclosed to the Building Official, prior to commencing work.

Project: University of New England - Patient Care Clinic Date Prepared: May 10, 2012

## Structural Statement of Special Inspections (Continued)

| To be comp   | oleted by th   |  | tions (SSIC/SI 1)<br>Inspections Coordinator (SSIC/SI | 1). Note that all Agent's Final Reports  |
|--|--|--|---|--|
| Project:   | Universi   | ty of New England - Pa                                       | atient Care Clinic                                    |  |
| Location:  | Portland   | , ME   |   |  |
| Owner:   | Universi   | ty of New England  |   |  |
| Owner's Add  | dress:   | 11 Hills Beach Rd.   |   |  |
|  |  | Biddeford, ME 0400   | 5   |  |
| Architect of   | Record:  | Andy Highland  | F   | Port City Architecture   |
|  |  | (name)   |   | firm)  |
| Structural R   |  | Design<br>nsible Cha <b>rge</b> :                            | Daniel S. Burne, P.E.                                 | Becker Structural Engineers, Inc.  |
| riviessivila   | i iii Nespoi   | isible Charge.   | (name)  | (firm)   |
| the <i>Stateme</i><br>have been r<br>Interim repo        | ent of Spec<br>eported an  | dal Inspections subn<br>d resolved.                          | nitted for permit, have been perf                     | required for this project, and itemized in<br>ormed and all discovered discrepancies<br>be considered an integral part of this final |
| the Stateme  | ent of Spec<br>eported an  | dal Inspections subn<br>d resolved.                          | nitted for permit, have been perf                     | ormed and all discovered discrepancies   |
| the Statement have been report.                          | ent of Spece<br>eported an<br>rts submitt  | cial Inspections submoderesolved.  ed prior to this final re | nitted for permit, have been perf                     | ormed and all discovered discrepancies   |
| the Statement have been report.                          | ent of Spece<br>eported an<br>rts submitted<br>submitted<br>pecial Insp  | cial Inspections submoderesolved.  ed prior to this final re | nitted for permit, have been perf                     | ormed and all discovered discrepancies   |
| the Statementary been report.  Respectfully Structural S | ent of Speceported and Office an | cial Inspections submoderesolved.  ed prior to this final re | nitted for permit, have been perf                     | ormed and all discovered discrepancies   |

Project: University of New England - Patient Care Clinic
Date Prepared: May 10, 2012

Structural Statement of Special Inspections (Continued)

| Project:  |   |                             |   |
|---|---|-----------------------------|---|
|   | University of New England -   | Patient Care Clinic         |   |
| Special Inspector or<br>agent:                              |   |                             |   |
| Designation:  | (name)<br>S12   | Gir                         | rm)   |
|   |   |                             |   |
| esignated for this In:                                      | mation, knowledge and belie<br>spector/Agent in the Staten<br>vered discrepancies have be | nent of Special Inspection  | or testing required for this project, and<br>ns submitted for permit, have been |
|   |   |                             |   |
|   |   |                             |   |
| •   |   |                             |   |
|   |   |                             |   |
|   |   |                             |   |
| •   |   |                             |   |
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|   |   |                             |   |
|   |   |                             |   |
|   |   |                             |   |
|   |   |                             |   |
|   | d prior to this final report form   | n a basis for and are to be | considered an integral part of this final                                       |
| eport.<br>espectfully submitted,                            |   | a basis for and are to be   | considered an integral part of this final                                       |
| eport.<br>espectfully submitted,                            |   | n a basis for and are to be | considered an integral part of this final                                       |
| eport.<br>espectfully submitted,                            |   | n a basis for and are to be | considered an integral part of this final                                       |
| eport. espectfully submitted, pecial Inspector or Age       |   | a basis for and are to be   | considered an integral part of this final                                       |
| eport. espectfully submitted, pecial Inspector or Age       |   | n a basis for and are to be | considered an integral part of this final                                       |
| eport. espectfully submitted, pecial Inspector or Age       |   | n a basis for and are to be | considered an integral part of this final                                       |
| eport.  espectfully submitted, pecial Inspector or Age      |   |                             | considered an integral part of this final                                       |
| eport.<br>espectfully submitted,<br>pecial Inspector or Age |   | n a basis for and are to be | considered an integral part of this final                                       |

Project: University of New England - Patient Care Clinic Date Prepared: May 10, 2012 Structural Statement of Special Inspections (Continued) Special Inspector's/Agent's Final Report University of New England - Patient Care Clinic Project: Special Inspector or Agent: (name) (firm) Designation: TAI To the best of my information, knowledge and belief, the Special Inspections or testing required for this project, and designated for this Inspector/Agent in the Statement of Special Inspections submitted for permit, have been performed and all discovered discrepancies have been reported and resolved. Interim reports submitted prior to this final report form a basis for and are to be considered an integral part of this final report. Respectfully submitted, Special Inspector or Agent: (Type or print name) SEAL NOT REQUIRED FOR **TESTING AGENCY** 

Date

Licensed Professional Seal or Certification Number

Signature

Project: University of New England - Patient Care Clinic

Date Prepared: May 10, 2012

#### Structural Schedule of Special Inspections

#### Qualifications of Inspectors and Testing Technicians

The qualifications of all personnel performing Special Inspection and testing activities are subject to the approval of the Building Official. The credentials of all Inspectors and testing technicians shall be provided to the Special Inspector for their records. NOTE VERIFICATION THAT QUALIFIED INDIVIDUALS ARE AVAILABLE TO PERFORM STIPULATED TESTING AND/OR INSPECTION SHOULD BE PROVIDED PRIOR TO SUBMITTING STATEMENT. AGENT QUALIFICATIONS IN SCHEDULE ARE SUGGESTIONS ONLY; FINAL QUALIFICATIONS ARE SUBJECT TO THE DISCRETION OF THE REGISTERED DESIGN PROFESSIONAL PREPARING THE SCHEDULE.

#### Key for Minimum Qualifications of Inspection Agents:

When the Registered Design Professional in Responsible Charge or Special Inspector of Record deems it appropriate that the individual performing a stipulated test or inspection have a specific certification, license or experience as indicated below, such requirement shall be listed below and shall be clearly identified within the schedule under the Agent Qualification Designation.

PE/SE

Structural Engineer - a licensed SE or PE specializing in the design of building structures Geotechnical Engineer - a licensed PE specializing in soil mechanics and foundations

PE/GE FIT

Engineer-In-Training - a graduate engineer who has passed the Fundamentals of Engineering

examination

#### **Experienced Testing Technician**

ETT

Experienced Testing Technician - An Experienced Testing Technician with a minimum 5 years

experience with the stipulated test or inspection

#### American Concrete Institute (ACI) Certification

ACI-CFTT

Concrete Field Testing Technician - Grade 1

ACI-CCI

Concrete Construction Inspector

ACI-LTT

Laboratory Testing Technician - Grade 1&2

ACI-STT

Strength Testing Technician

#### American Welding Society (AWS) Certification

AWS-CWI

Certified Welding Inspector

AWS/AISC-SSI

Certified Structural Steel Inspector

#### American Society of Non-Destructive Testing (ASNT) Certification

ASNT

Non-Destructive Testing Technician - Level II or III.

#### International Code Council (ICC) Certification

ICC-SMSI

Structural Masonry Special Inspector

ICC-SWSI ICC-SFSI

Structural Steel and Welding Special Inspector Spray-Applied Fireproofing Special Inspector

**ICC-PCSI** 

Prestressed Concrete Special Inspector

ICC-RCSI

Reinforced Concrete Special Inspector

#### National Institute for Certification in Engineering Technologies (NICET)

NICET-CT

Concrete Technician - Levels I, II, III & IV

NICET-ST

Soils Technician - Levels I, II, III & IV

NICET-GET

Geotechnical Engineering Technician - Levels I, II, III & IV

Other

Project: University of New England - Patient Care Clinic Date Prepared: May 10, 2012

# Structural Schedule of Special Inspections SOILS & FOUNDATION CONSTRUCTION

| IBC Section 1704.7, 1704.8, 1704.9   | Y/N | EXTENT:<br>CONTINUOUS,<br>PERIODIC,<br>SUBMITTAL, OR<br>NONE | COMMENTS   | AGENT | AGENT<br>QUALIFICATION | TASK<br>COMPLETED |
|--|-----|--|------------|-------|------------------------|-------------------|
| Required Verification and Inspection of Soils:   |     |  |            |       |                        |                   |
| <ul> <li>a. Verify materials below shallow foundations are<br/>adequate to achieve the design bearing capacity.</li> </ul>   | Y   | P  | IBC 1704.7 | S12   | PE/GE, EIT or ETT      |                   |
| <ul> <li>b. Verify executations are extended to proper depth<br/>and have reached proper material.</li> </ul>  | Y   | P  | IBC 1704.7 | SI2   | PE/GE, EIT or ETT      |                   |
| <ul> <li>e. Perform classification and testing of compacted fill<br/>materials.</li> </ul>   | Y   | P  | IBC 1704.7 | TAI   | PE/GE, EIT or ETT      |                   |
| <ul> <li>d. Verify use of proper materials, densities and lift<br/>thicknesses during placement and compaction of<br/>compacted fill.</li> </ul>   | Y   | С  | IBC 1704.7 | TAI   | PE/GE, EIT or ETT      |                   |
| <ul> <li>e. Prior to placement of compacted fill, observe<br/>subgrade and verify that site has been prepared<br/>properly.</li> </ul>   | Y   | P  | IBC 1704.7 | SI2   | PE/GE, EIT or ETT      |                   |
| Required Verification and Inspection of Driven Deep<br>coundation Elements:  |     |  |            |       |                        |                   |
| <ul> <li>a. Verify element materials, sizes and lengths comply<br/>with the requirements.</li> </ul>   | N   | С  | IBC 1704.8 | TA1   | PE/GE, EIT or ETT      |                   |
| <ul> <li>b. Determine capacities of test elements and conduct<br/>additional load tests, as required.</li> </ul>   | N   | С  | IBC 1704.8 | SI2   | PE/GE, EIT or ETT      |                   |
| <ul> <li>Observe driving operations and maintain complete<br/>and accurate records for each element.</li> </ul>  | N   | С  | IBC 1704.8 | TAI   | PE/GE, EIT or ETT      |                   |
| d. Verify placement locations and plumbness,<br>confirm type and size of hammer, record number of<br>blows per foot of penetration, determine required<br>penetrations to achieve design capacity, record tip<br>and butt elevations and document any damage to<br>foundation element. | N   | С  | IBC 1704.8 | TAl   | PE/GE, EIT or ETT      |                   |
| Required Verification and Inspection of Cast-in-Place Deep<br>Joundation Elements:   |     |  |            |       |                        |                   |
| <ul> <li>Observe drilling operations and maintain complete<br/>and accurate records for each element.</li> </ul>   | N   | С  | IBC 1704.9 | TAI   | PE/GE, EIT or ETT      |                   |
| <ul> <li>b. Verify placement locations and plumbness,<br/>confirm elelment diameters, bell diameters (if<br/>applicable), lengths, embedment into bedrock (if<br/>applicable) and adequate end bearing strata capacity.</li> <li>Record concrete or grout volumes.</li> </ul>          | · N | С  | IBC 1704.9 | TA1   | PE/GE, EIT or ETT      |                   |

See Concrete, Masonry, and/or Steel Schedules for additional material inspections for deep foundation elements as applicable.

Project: University of New England - Patient Care Clinic

Date Prepared: May 10, 2012

## Structural Schedule of Special Inspections

CONCRETE CONSTRUCTION

| VERIFICATION AND INSPECTION  IBC Section 1704.4   | REQD<br>Y/N | EXTENT:<br>CONTINUOUS,<br>PERIODIC,<br>SUBMITTAL,<br>OR NONE | COMMENTS  | AGENT | AGENT<br>QUALIFICATION | TASK<br>COMPLETED |
|---|-------------|--|---|-------|------------------------|-------------------|
| Inspection of reinforcing steel, including prestressing tendons, and placement  | Y           | P  | ACI 318: 3.5,<br>7.1-7.7                        | SII   | PE/SE or EIT           |                   |
| Inspection of reinforcing steel welding in accordance with Table 1704.3, Item 5B  | N           | -  | Not applicable. Welding of Reinf Not Allowed    | •     | -                      |                   |
| <ol> <li>Inspect bolts to be installed in concrete prior to and<br/>during placement of concrete where allowable loads have<br/>been increased or where strength design is used.</li> </ol> | N           | С  | IBC 1911.5                                      | SII   | PE/SE or EIT           |                   |
| Inspection of anchors installed in hardened concrete.   | Y           | P  | IBC 1212.1                                      | SII   | PE/SE or EIT           |                   |
| 5. Verifying use of required design mix   | Y           | P  | ACI 318: Ch 4,<br>5,2-5.4                       | TAI   | ACI-CFTT or<br>ACI-STT |                   |
| At time fresh concrete is sampled to fabricate specimens for strength tests, perform slump and air content tests and determine the temperature of the concrete.                             | Y           | С  | ASTM C 172<br>ASTM C 31<br>ACI 318: 5.6,<br>5.8 | TAI   | ACI-CFTT or<br>ACI-STT |                   |
| Inspection of concrete and shotcrete placement for proper application techniques  | Y           | С  | ACI 318: 5.9,<br>5.10                           | TA1   | ACI-CFTT or<br>ACI-STT |                   |
| Inspection for maintenance of specified curing temperature and techniques   | Υ           | P  | ACI 318: 5.11-<br>5.13                          | SII   | PE/SE or EIT           |                   |
| 9. Inspection of Prestressed Concrete   |             |  | Although A                                      |       |                        |                   |
| Application of prestressing force.  | N           | С  | ACI 318: 18.20                                  | TA2   | PE/SE or EIT           |                   |
| <ul> <li>b. Grouting of bonded prestressing tendons in<br/>seismic force resisting system</li> </ul>  | N           | С  | ACI 318:<br>18.18.4                             | TAI   | ACI-CFTT or<br>ACI-STT |                   |
| 10. Erection of precast concrete members.   | N           | P  | ACI 318: Ch 16                                  | SII   | PE/SE or EIT           |                   |
| 11. Verification of in-situ concrete strength, prior to stressing of tendons in post-tensioned concrete and prior to removal of shores and forms from beans and structural slabs.           | N           | Р  | ACI 318: 6.2                                    | TAI   | ACI-CFTT or<br>ACI-STT |                   |
| <ol> <li>Inspect formwork for shape, location and dimensions<br/>of the concrete member being formed.</li> </ol>  | Y           | Р  | Limitations apply. See below                    | SII   | PE/SE or EIT           |                   |

Limitations of item 12: Special inspection includes periodic review of formwork shape, general location, and formwork dimensions that can be readily measured with conventional tape measure. Verification of building layout, building location, foundation extents, column grids, and foundation elevations is excluded.

Project: University of New England - Patient Care Clinic Date Prepared: May 10, 2012

# Structural Schedule of Special Inspections MASONRY CONSTRUCTION – LEVEL 1

| VERIFICATION AND INSPECTION  IBC Section 1704.5  | REQD<br>Y/N | EXTENT:<br>CONTINUOUS,<br>PERIODIC,<br>SUBMITTAL,<br>OR NONE | COMMENTS                                       | AGENT | AGENT<br>QUALIFICATION | TASK<br>COMPLETED |
|--|-------------|--|--|-------|------------------------|-------------------|
| Compliance with required inspection provisions of the construction documents and the approved submittals shall be verified.  | Y           | P  | ACI530.1, 1.5                                  | SII   | PE/SE or EIT           |                   |
| <ol> <li>Verification of f'<sub>m</sub> and f'<sub>AAC</sub> prior to construction except where<br/>specifically exempted by this code.</li> </ol>                       | Y           | P  | ACI531.1, 1.4B                                 | TAI   | ACI-CFTT or<br>ACI-STT |                   |
| Verification of slump flow and VSI as delivered to the site for self-consolidating grout.  | Y           | С  | ACI530.1, 1.5B.1.b.3                           | TA1   | ACI-CFTT or<br>ACI-STT |                   |
| <ol> <li>As masonry construction begins, the following shall be verified<br/>to ensure compliance:</li> </ol>  |             |  |  |       |                        |                   |
| a. Proportions of site-prepared mortar.  | Y           | P  | ACI530.1, 2.6A                                 | TAI   | ACI-CFTT or<br>ACI-STT |                   |
| b. Construction of mortar joints.  | Y           | P  | ACI530.1, 3.3B                                 | TA1   | ACI-CFTT or<br>ACI-STT |                   |
| c. Location of reinforcement and connectors.   | Y           | P  | ACI530.1, 3.4, 3.6A                            | SII   | PE/SE or EIT           |                   |
| d. Prestressing technique.   | N           | P  | ACI530.1, 3.6B                                 | SII   | PE/SE or EIT           |                   |
| Grade and size of prestressing tendons and anchorages.   | N           | P  | ACI530.1, 2.4B,<br>2.4H                        | SII   | PE/SE or EIT           |                   |
| 5. During construction the inspection program shall verify:  |             |  |  |       |                        |                   |
| a. Size and location of structural elements.   | Y           | P  | ACI530.1, 3.3F                                 | SII   | PE/SE or EIT           |                   |
| b. Type, size and location of anchors, including other details of anchorage of masonry to structural members, frames or other construction.                              | Y           | Р  | ACI530, 1.2.2(e), 2.1.4, 3.1.6                 | SII   | PE/SE or EIT           |                   |
| <ul> <li>Specified size, grade and type of reinforcement, anchor<br/>bolts, prestressing tendons and anchorages.</li> </ul>  | Y           | P  | ACI530, 1.12,<br>ACI530.1, 2.4,<br>3.4         | S11   | PE/SE or EIT           |                   |
| d. Welding of reinforcing bars.  | Z           | -  | Not applicable. Welding of Reinf Not Allowed   | -     | •                      |                   |
| <ul> <li>e. Preparation, construction and protection of masonry<br/>during cold weather (temperature below 40°F) or hot<br/>weather (temperature above 90°F).</li> </ul> | Y           | P  | IBC 2104.3,<br>2104.4; ACI530.1,<br>1.8C, 1.8D | SII   | PE/SE or EIT           |                   |
| f. Application and measurement of prestressing force.  | N           | С  | ACI530.1, 3.6B                                 | TA2   | PE/SE or EIT           |                   |
| <ol><li>Prior to grouting, the following shall be verified to<br/>ensure compliance:</li></ol>   | Kon A       |  |  |       |                        |                   |
| a. Grout space is clean.   | Y           | Р  | ACI530.1, 3.2D                                 | SII   | PE/SE or EIT           |                   |
| <ul> <li>Placement of reinforcement and connectors and<br/>prestressing tendons and anchorages.</li> </ul>   | Y           | P  | ACI530, 1.12,<br>ACI530.1, 3.4                 | SII   | PE/SE or EIT           |                   |
| <ul> <li>Proportions of site-prepared grout and prestressing<br/>grout for bonded tendons.</li> </ul>  | N           | Р  | ACI530.1, 2.6B                                 | TA1   | ACI-CFTT or<br>ACI-STT |                   |
| d. Construction of mortar joints.  | Y           | P  | ACI530.1, 3.3B                                 | TAI   | ACI-CFTT or<br>ACI-STT |                   |
| 7. Grout placement shall be verified to ensure compliance.   | Y           | С  | ACI530.1, 3.5                                  | TAI   | ACI-CFTT or<br>ACI-STT |                   |
| a. Grouting of prestressing bonded tendons.  | N           | С  | ACI530.1, 3.6C                                 | TAI   | ACI-CFTT or<br>ACI-STT |                   |
| Preparation of any required grout specimens, mortar specimens and/or prisms shall be observed.   | Y           | С  | IBC 2105.2.2,<br>2105.3; ACI530.1, 1.4         | TAI   | ACI-CFTT or<br>ACI-STT |                   |

Project: University of New England - Patient Care Clinic Date Prepared: May 10, 2012

Structural Schedule of Special Inspections - STEEL CONSTRUCTION

| VERIFICATION AND INSPECTION IBC Section 1704.3  | REQD<br>Y/N | EXTENT:<br>CONTINUOUS,<br>PERIODIC,<br>SUBMITTAL, OR<br>NONE | COMMENTS   | AGENT  | AGENT<br>QUALIFICATION | TASK<br>COMPLETED |
|---|-------------|--|--|--------|------------------------|-------------------|
| Material verification of high-strength bolts, nuts  |             | / 1  |  |        |                        |                   |
| and washers:  a. Identification markings to conform to ASTM standards specified in the approved construction documents.   | Y           | Р  | Applicable<br>ASTM<br>material<br>standards, AISC<br>360, A3.3 | TAI    | AWS/AISC-SSI           |                   |
| <ul> <li>Manufacturer's certificate of compliance required.</li> </ul>  | Y           | S  |  | SII    | PE/SE or EIT           |                   |
| Inspection of high-strength holting     a. Snug-tight joints  | Y           | P  |  | TAl    | AWS/AISC-SSI           |                   |
| <ul> <li>b. Pretensioned and slip-critical joints using turn-of-nut<br/>with matchmaking, twist-off bolt or direct tension indicator<br/>methods of installation.</li> </ul>  |             | Р  | AISC LRFD<br>Section M2.5                                      | TAI    | AWS/AISC-SSI           |                   |
| c. Pretensioned and slip-critical joints using turn-of-nut<br>without matchmaking or calibrated wrench methods of<br>installation.  | N           | С  | IBC Sect<br>1704.3.3   | TAl    | AWS/AISC-SSI           |                   |
| <ol> <li>Material verification of structural steel and cold-formed steel deck;</li> </ol>   |             |  |  |        |                        | -                 |
| <ul> <li>For structural steel, identification markings to conform<br/>to AISC 360.</li> </ul>   | Y           | P  | AISC 360, M5.5   | SII    | PE/SE or EIT           |                   |
| <ul> <li>b. For other steel, identification markings to conform to<br/>ASTM standards specified in the approved construction<br/>documents.</li> </ul>  | Y           | P  | Applicable<br>ASTM material<br>standards                       | SII    | PE/SE or EIT           |                   |
| c. Manufacturer's certified test reports.   | Y           | S  |  | SII    | PE/SE or EIT           |                   |
| Material verification of weld filler materials:   |             |  |  | -      |                        |                   |
| identification markings to conform to AWS specification in the approved construction documents.   | Y           | Р  | AISC 360, M5.5   | TAI    | AWS/AISC-SSI           |                   |
| Manufacturer's certificate of compliance required.  | Y           | S  |  | SI1    | PE/SE or EIT           |                   |
| <ol><li>Submit current AWS D1.1 welder certificate for all field welders<br/>who will be welding on this project.</li></ol>   | Y           | S  | AWS D1.I   | SI1    | PE/SE or EIT           |                   |
| Inspection of welding (IBC 1704.3.1):     a. Structural steel and cold-formed deck:   |             |  |  | 77.4.1 |                        |                   |
| Complete and partial joint penetration groove welds.  | N           | С  |  | TA1    | AWS-CWI                |                   |
| 2) Multipass fillet welds.  | N           | С  | 4 5  | TA1    | AWS-CWI                |                   |
| 3) Single-pass fillet welds> 5/16"  | N           | С  | AWS DI.1   | TAI    | AWS-CWI                |                   |
| 4) Plug and slot welds  | N           | С  |  | TA1    | AWS-CWI                |                   |
| 5) Single-pass fillet welds≤ 5/16"  | Y           | P  |  | TAI    | AWS-CWI                |                   |
| <ol><li>Floor and deck welds</li></ol>  | Y           | P  | AWS D1.3   | TAL    | AWS-CWI                |                   |
| b. Reinforcing steel:   |             |  |  |        |                        |                   |
| <ol> <li>Verification of weldability of reinforcing steel other<br/>than ASTM A706.</li> </ol>  | N           | - 1  | Not applicable.  |        | •                      |                   |
| <ol> <li>Reinforcing steel-resisting flexural and axial forces in<br/>intermediate and special moment frames, and boundary<br/>elements of special structural walls of concrete and shear<br/>reinforcement.</li> </ol> | N           | С  | AWS DI.4   | TAI    | AWS-CWI                |                   |
| 3) Shear reinforcement  | N           | С  | ACI 318: 3.5.2   | TA1    | AWS-CWI                |                   |
| Other reinforcing steel.  | N           | P  |  | TAI    | AWS-CWI                |                   |
| 7. Inspection of steel frame joint details for compliance (IBC Sect 1704.3.2) with approved construction documents:   |             |  |  |        |                        |                   |
| a. Details such as bracing and stiffening.  | Y           | P  |  | SII    | PE/SE or EIT           |                   |
| b. Member locations.  | Y           | P  | IBC 1704.3.2   | SII    | PE/SE or EIT           |                   |
| c. Application of joint details at each connection.   | Y           | P  |  | SII    | PE/SE or EIT           |                   |

Project: University of New England - Patient Care Clinic Date Prepared: May 10, 2012

# Structural Schedule of Special Inspection Services FABRICATION AND IMPLEMENTATION PROCEDURES – STRUCTURAL STEEL

| VERIFICATION AND INSPECTION  IBC Section 1704.2   | REQD<br>Y/N | EXTENT:<br>CONTINUOUS,<br>PERIODIC,<br>SUBMITTAL,<br>OR NONE | COMMENTS   | AGENT | AGENT<br>QUALIFICATION | TASK<br>COMPLETED |
|---|-------------|--|--|-------|------------------------|-------------------|
| Fabrications Procedures: Review of fabricator's written procedural and quality control manuals and periodic auditing of fabrication practices by an approved special inspection agency. At the completion of fabrication, the approved fabricator shall submit a certificate of compliance to the building code official stating that the work was performed in accordance with the approved construction documents.  -OR-  2. AISC Certification | Y           | S  | Fabricator<br>shall submit<br>one of the two<br>qualifications | SII   | PE/SE or EIT           |                   |
| 3. At completion of fabrication, the approved fabricator<br>shall submit a certificate of compliance to the building<br>code official stating that the work was performed in<br>accordance with the approved construction documents.  | Y           | S  | IBC 1704.2.2   | SII   | PE/SE or EIT           |                   |

Date Prepared: May 10, 2012 SEISMIC RESISTANCE CHECK LIST [IBC 1705.3] Seismic Design Category FOR SEISMIC DESIGN CATEGORY C OR HIGHER: Structural: ☐ The seismic-force-resisting systems ☐ Steel Braced Frames and associated connections/anchorage (Not required for SDC C, R=3) ☐ Steel Moment Frames and associated connections (Not required for SDC C, R=3) ☐ Shear walls: ☐ CMU ☐ Wood ☐ Concrete ☐ Diaphragms: ☐ Floor ☐ Roof Other: WIND RESISTANCE CHECK LIST [IBC 1705.4] Wind Exposure Category APPLICABLE NOT REQUIRED REQUIRED WIND RESISTANCE REQUIREMENTS NOT

In wind exposure Category B, where the 3-second-gust basic wind speed is 120 miles per hour

In wind exposure Categories C and D, where the 3-second-gust basic wind speed is 110 mph (49 m/sec) or greater.

Project: University of New England - Patient Care Clinic

(mph) (52.8 m/sec) or greater.

 $\boxtimes$ 

 $\bowtie$ 

Project: University of New England - Patient Care Clinic

Date Prepared: May 10, 2012

## Fabricator's Certificate of Compliance

section 1704.2 of the International Building Code must submit a Fabricator's Certificate of Compliance at the completion of fabrication. Project: University of New England - Patient Care Clinic Fabricator's Name: Address: Certification or Approval Agency: Certification Number: Date of Last Audit or Approval: Description of structural members and assemblies that have been fabricated: Structural steel beams, columns, braces and associated connections and fasteners. I hereby certify that items described above were fabricated in strict accordance with the approved construction documents. Date Signature Title

Each approved fabricator that is exempt from Special Inspection of shop fabrication and implementation procedures per

Attach copies of fabricator's certification or building code evaluation service report and fabricator's quality control manual

Project: University of New England - Patient Care Clinic Date Prepared: May 10, 2012

### **End of Structural Statement of Special Inspections**



# **Geotechnical Report**

# UNE Dental School Building Stevens Avenue Portland, Maine

Prepared for:

University of New England

Prepared by:

Summit Geoengineering Services Project #11296 January 2012





January 31, 2012 Summit #11296

Al Thibeau University of New England 11 Hills Beach Road Biddeford, Maine 04005

Reference:

Geotechnical Investigation, Proposed Dental School Building

Stevens Avenue, Portland, Maine

Dear Al;

We have completed the geotechnical investigation for the proposed new dental school building at the Portland Campus. Our scope of services included performing 5 test borings at the site and preparing this report summarizing our findings and geotechnical recommendations.

## 1.0 Project Description

The project consists of the construction of a new building on the UNE campus at 750 Stevens Avenue in Portland. The building has a footprint of approximately 18,000 square feet. We understand that a parking level will be constructed beneath the building. The parking level will be at a depth of approximately 4 feet below the existing grade (elevation 23 feet +/-) and will have a paved surface. The location of the proposed building is currently occupied by three wood frame structures, two garages, parking lots, and lawns.

Column loads are estimated to range from 215 kips to 610 kips with a live load to dead load ratio of approximately 50% to 60%. Columns will be spaced from 15 to 35 feet.

## 2.0 Subsurface Exploration and Laboratory Testing

Summit Geoengineering Services (SGS) observed the subsurface conditions with the drilling of 5 borings on January 12, 2012. The borings were located by taping from existing buildings. Northern Test Borings, under contract to SGS, advanced the borings using 2½-inch hollow stem augers. Two borings were performed to a depth of 22 feet and three borings were advanced to refusal, ranging from 16.1 to 27.4 feet. Standard penetration tests (SPT) with split spoon samples were obtained at 5-foot intervals. A 1-inch diameter PCV groundwater observation well was installed in boring B-3.

Summit was onsite to coordinate and observe the boring explorations. The location of the borings is shown on Boring Location Plan in Appendix A. Logs of the explorations are included in Appendix B.

The sample taken at a depth of 5 to 7 feet in B-4 was tested for grain size analysis in accordance with ASTM 422. The results of this test are presented in Appendix A.

## 3.0 Subsurface Conditions

The subsurface conditions generally consist of *topsoil* overlying *glacial marine deposits* overlying *glacial till* explored to a depth of 16.8 to 27.4 feet. Bedrock was encountered at borings B-1, B-2, and B-4 at depths of 27.4 feet, 20.4 feet, and 16.8 feet, respectively. The subgrade is further described into 3 layers as follows:

The topsoil ranged from 6 to 12 inches in thickness consisting of dark brown silt with little sand and rootlets and is visually classified as ML in accordance with the Unified Soil Classification System (USCS). The topsoil was generally loose to compact and damp to frozen.

The glacial marine deposit consisted of light brown to tan medium-fine sand with a trace to little silt and is visually classified as SM or SP in accordance with the Unified Soil Classification System (USCS). The sample taken in B-4 at a depth of 5 to 7 feet contained 97.9% sand and 2.1% silt. This sample has a USCS classification of SP. SPT-N values for the sand ranged from 4 to 38 blows per foot (bpf) and averaged 20 bpf, indicating compact to dense conditions. The glacial marine deposits were generally damp.

The glacial till, encountered in B-1, B-2, and B-4, ranged from brown medium-fine to medium-coarse sand with little silt and gravel to brown silty clay with some sand and little gravel. The glacial till is visually classified as SM and CL in accordance with the Unified Soil Classification System (USCS). SPT-N values for the sand ranged from 54 to 62 blows per foot (bpf), indicating very dense / hard conditions. The glacial marine deposits were generally damp

Bedrock was encountered at borings B-1, B-2, and B-4 at depths of 27.4 feet, 20.4 feet, and 16.8 feet, respectively. Refusal was not encountered in the other explorations. Bedrock mapping by the Maine Geological Survey indicates the bedrock is part of the Berwick Formation consisting of fine-grained gray quartz-plagioclase biotite gneiss.

Groundwater was not observed in our explorations. Groundwater was measured at a depth of 20.3 feet in the observation well at B-3 on January 25, 2012.

# 4.0 Foundation Design Recommendations

Based on the proposed finished exterior grade (paved parking lot) and the required frost protection depth, the footings for the new building will be constructed on the native sandy glacial marine deposit. With proper preparation, this soil is suitable to support the proposed building on conventional spread footing foundations.

### A. Allowable Bearing Pressure

We recommend that the foundations be designed using an allowable bearing pressure of 4,000 psf for interior and exterior isolated and continuous footings. For the proposed footing loads, the

total settlement associated with the above bearing pressure ranges from  $\frac{1}{2}$ " to  $\frac{3}{4}$ ". Due to the uniformity of the subsurface conditions, differential settlement will be negligible, on the order of 0.1%.

We recommend that the subgrade soil in the building footprint be prepared as follows:

- Remove topsoil, pavement, and existing building foundations in their entirety from within the building footprint. Voids left after the removal of existing foundations can be backfilled with the existing sandy glacial marine soil. This soil should be compacted to 95% of its maximum dry density where it is placed within the building footprint. Outside the building footprint the compaction requirement can be reduced to 90%.
- After removal and backfilling of removed foundations, the soil within the building footprint is proofrolled prior to excavating for the footings. Proofrolling should consist of making a minimum of 5 passes in 2 perpendicular directions using a large vibratory roller with a minimum operating weight of 10 tons.
- Exterior footings are constructed to a depth of 4 feet below exterior grade for frost protection.
- Footing trenches are excavated using a smoothed edge bucket to minimize
  disturbance to the native soil. The footing subgrade should be proofrolled to redensify the disturbed soil. Proofrolling should consist of making a minimum of 5
  passes using a large walk behind vibratory roller. Wet and soft areas, if encountered,
  should be removed and replaced with crushed stone.

We recommend the following parameters be used for the existing sandy glacial marine soil in the design of subsurface structures.

| ESIGN PARAMETERS – EXISTING SANDY GLACIAL MARINE SOIL |                 |  |  |  |  |
|---|-----------------|--|--|--|--|
| Total Natural (moist) Unit Weight (γ <sub>t</sub> )   | 125 pcf         |  |  |  |  |
| Saturated (buoyant) Unit Weight (γ <sub>s</sub> )     | 63 pcf          |  |  |  |  |
| Friction Coefficient (f)                              | 0.45            |  |  |  |  |
| Passive Earth Pressure Coefficient (K <sub>p</sub> )  | 3.1             |  |  |  |  |
| Active Earth Pressure Coefficient (Ka)                | 0.33            |  |  |  |  |
| Friction Angle (f <sub>c</sub> )                      | 30 <sup>0</sup> |  |  |  |  |
| Cohesion (c)  | 0               |  |  |  |  |

### B. Frost Protection

The design air freezing index for the Portland area is approximately 1,200 degree F days (10 year, 90% probability). Based on this, exterior footings on the existing granular fill soil should be constructed at a minimum depth of 4 feet below the exterior finished grade.

We recommend that the exterior of the foundation walls be backfilled with soil meeting the following gradation specification:

| FOUNDATION BACKFILL (FB) |               |  |  |  |  |
|--------------------------|---------------|--|--|--|--|
| Sieve Size               | Percent finer |  |  |  |  |
| 3 inch                   | 100           |  |  |  |  |
| 1/4 inch                 | 60 to 100     |  |  |  |  |
| No. 40                   | 0 to 50       |  |  |  |  |
| No. 200                  | 0 to 7        |  |  |  |  |

Reference: MaineDOT Specification 703.06, Type F

The maximum particle size should be limited to 6 inches. The Foundation Backfill should be compacted to a minimum of 95 percent of its maximum dry density, determined in accordance with ASTM D1557. This compaction requirement can be reduced to 90% in landscaped areas.

The interior of foundation walls should be backfilled with Structural Fill as described below.

### C. Building Slab

We recommend the building slab be constructed on a minimum 12-inch thick layer of Structural Fill (SF). The maximum particle size should be limited to 6 inches and meet the following gradation specifications passing the 3-inch sieve:

| STRUCTURAL FILL (SF) |               |  |  |  |  |
|----------------------|---------------|--|--|--|--|
| Sieve Size           | Percent finer |  |  |  |  |
| 3 inch               | 100           |  |  |  |  |
| 1/4 inch             | 0 to 70       |  |  |  |  |
| No. 200              | 0 to 10       |  |  |  |  |

Reference: MDOT Specification 703.20, Gravel Borrow

SF should be placed in 6 to 12-inch lifts and should be compacted to 95 percent of its maximum dry density determined in accordance with ASTM D1557.

An alternative is to construct the slab on 6 inches of  $\frac{3}{4}$  inch crushed stone. The crushed stone can be placed directly on the proofrolled subgrade. It should be compacted using a vibratory roller sufficiently to lock the aggregate particles together.

For the conditions described above, the slab can be designed using a subgrade modulus of 175 pci.

We recommend the subgrade be proof-rolled as described in Section 4A of this report.

### D. Groundwater Control

Groundwater was not observed in the explorations performed at the site. The water level was measured at a depth of 20.3 feet in the observation well at boring B-3 on January 25, 2012. This measurement was taken with an electronic depth meter. Based on this we anticipate that groundwater will be well below the bottom of the building footings and perimeter underdrains are not strictly necessary.

It is generally good practice to install underdrains to account for unanticipated changes in regional hydrogeology and to control potential infiltration of surface or roof runoff water into the foundation backfill. We recommend exterior grades slope away from the building footprint to reduce runoff water from infiltrating the Foundation Backfill.

Perimeter underdrains, if used, should consist of 4 inch rigid perforated PVC placed adjacent to the exterior footings and surrounded by a minimum of 6 inches of crushed stone wrapped in filter fabric to prevent clogging from the migration of the fine soil particles in the foundation backfill soils. The underdrain pipe should be outlet to a location where it will be free flowing. Where exposed at the ground surface, the ends of pipes should be screened or otherwise protected from entry and nesting of wildlife, which could cause clogging.

### E. Seismic Design

Based on the depth to bedrock, the soil descriptions, and the blow counts obtained in the test borings, the soil at the site is classified as Seismic Site Class C in accordance with the International Building Code (IBC). We recommend the following seismic design coefficients be used:

| SUBGRADE SITE SEISMIC DESIGN COEFFICIENTS - IBC          |              |  |  |  |  |  |
|--|--------------|--|--|--|--|--|
| Seismic Coefficient                                      | Site Class C |  |  |  |  |  |
| Short period spectral response (S <sub>S</sub> )         | 0.314        |  |  |  |  |  |
| 1 second spectral response (S <sub>1</sub> )             | 0.077        |  |  |  |  |  |
| Site coefficient (Fa)                                    | 1.2          |  |  |  |  |  |
| Site Coefficient (F <sub>v</sub> )                       | 1.7          |  |  |  |  |  |
| Design short period spectral response (S <sub>DS</sub> ) | 0.251        |  |  |  |  |  |
| Design 1 second spectral response (S <sub>DS</sub> )     | 0.087        |  |  |  |  |  |

The sandy glacial marine are not susceptible to liquefaction based on their density.

### 5.0 Earthwork Considerations

Voids remaining after the removal of existing building foundations can be backfilled with the existing sandy glacial marine soil. This soil should be compacted to 95% of its maximum dry density where it is placed within the building footprint. Outside the building footprint the compaction requirement can be reduced to 90%.

Groundwater will not be an issue during construction of the footings. We recommend that surface water be diverted away from open excavations and that the footing trenches be kept dry.

We recommend that the building footprint be proofrolled as described in section 4.0A prior to placing SF or constructing foundations.

The existing glacial marine deposit may is too fine to meet the specifications for Foundation Backfill or Structural Fill.

Utility trenching and general excavations below 4 feet should be sloped no greater than 1.5H to 1V (OSHA type C) in the native sand. These slopes are based on the current OSHA Excavation Guidelines.

We recommend that a qualified geotechnical consultant be retained to monitor and test soil materials used during construction and confirm that soil conditions and construction methods are in consistence with this report.

## 7.0 Closure

Our recommendations are based on professional judgment and generally accepted principles of geotechnical engineering. Some changes in subsurface conditions, building elevations, and loads from those presented in this report may occur. Should these conditions differ materially from those described in this report, Summit should be notified so that we can re-evaluate our recommendations.

We appreciate the opportunity to serve you during this phase of your project. If there are any questions or additional information is required, please do not hesitate to call.

Sincerely yours,

Summit Geoengineering Services,

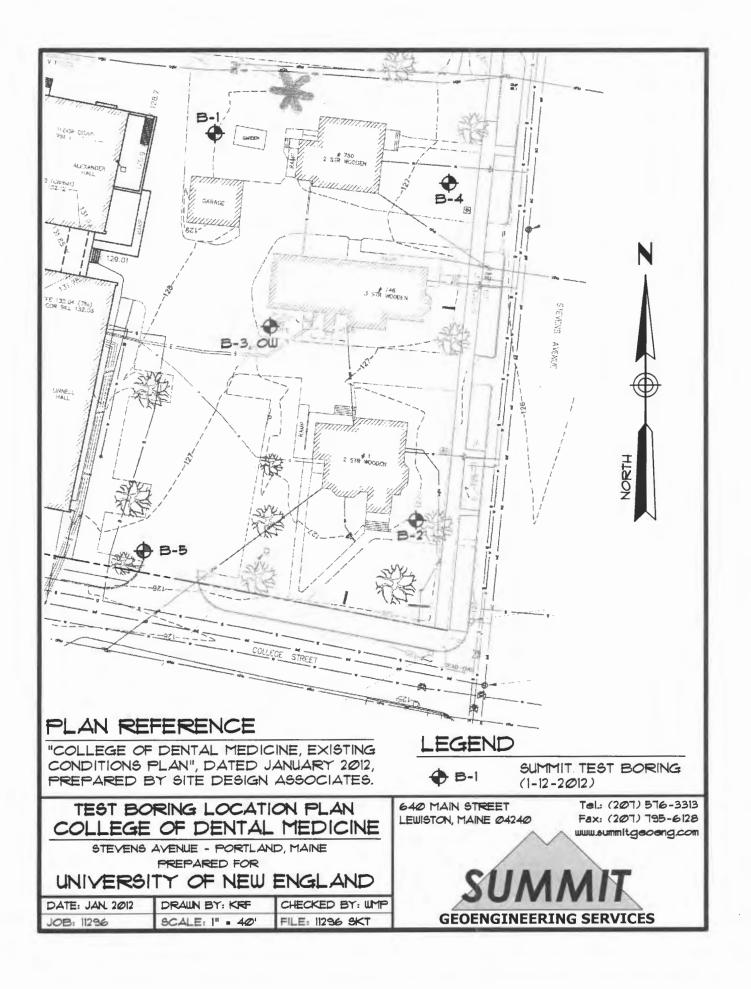
William M. Peterlein, P.E.

President & Principal Engineer



# APPENDIX A

EXPLORATION LOCATION PLAN



# APPENDIX B

# **EXPLORATION LOGS**

## EXPLORATION REPORT COVER SHEET

The exploration report has been prepared by the geotechnical engineer from both field and laboratory data. Differences between field logs and exploration reports may exist.

It is common practice in the soil and foundation engineering profession that field logs and laboratory data sheets not be included in engineering reports, because they do no represent the engineer's final opinion as to appropriate descriptions for conditions encountered in the exploration and testing work. The field logs will be retained in our office for review. Results of laboratory tests are generally shown on the borings logs or are described in the text of the report as appropriate.

### Drilling and Sampling Symbols:

SS = Split Spoon

ST = Shelby Tube - 2" OD, disturbed

UT = Shelby Tube - 3" OD, undisturbed

HSA = Hollow Stem Auger CS = Casing – size as noted

Sv = Vane Shear

PP = Pocket Penetrometer

RX = Rock Core - size as noted

Hyd = Hydraulic advance of probes

WOH = Weight of Hammer

WOR = Weight of Rod

GS = Grain Size Data

PI = Plasticity Index

LL = Liquid Limit

w = Natural Water Content

USCS = unified Soil Classification System

### Water Level Measurements:

Water levels indicated on the boring logs are the levels measured in the boring at the times indicated. In pervious soils, the indicated elevations are considered reliable groundwater levels. In impervious soils, the accurate determination of groundwater elevations may not be possible, even after several days of observations; additional evidence of groundwater elevations via observation or monitoring wells must be sought.

### Gradation Description and Terminology:

Boulders:

Over 8 inches

Trace:

Less than 5%

Cobbles:

8 inches to 3 inches

Little:

5% to 15%

Gravel:

3 inches to No.4 sieve

Some:

15% to 25%

Sand:

No.4 to No. 200 sieve

Silty, Sandy, etc.:

Greater than 25%

Silt:

No. 200 sieve to 0.005 mm

Clay:

less than 0.005 mm

### Density of Granular Soils and Consistency of Cohesive Soils:

| CONSISTENCY OF CO    | HESIVE SOILS | DENSITY OF GRANULAR SOILS |                  |  |  |  |
|----------------------|--------------|---------------------------|------------------|--|--|--|
| SPT N-value blows/ft | Consistency  | SPT N-value blows/ft      | Relative Density |  |  |  |
| 0 to 2               | Very Soft    | 0 to 3                    | Very Loose       |  |  |  |
| 3 to 4               | Soft         | 4 to 9                    | Loose            |  |  |  |
| 5 to 8               | Firm         | 10 to 29                  | Compact          |  |  |  |
| 9 to 16              | Stiff        | 30 to 49                  | Dense            |  |  |  |
| 17 to 32             | Very Stiff   | 50 to 80                  | Very Dense       |  |  |  |
| >32                  | Hard         |                           |                  |  |  |  |

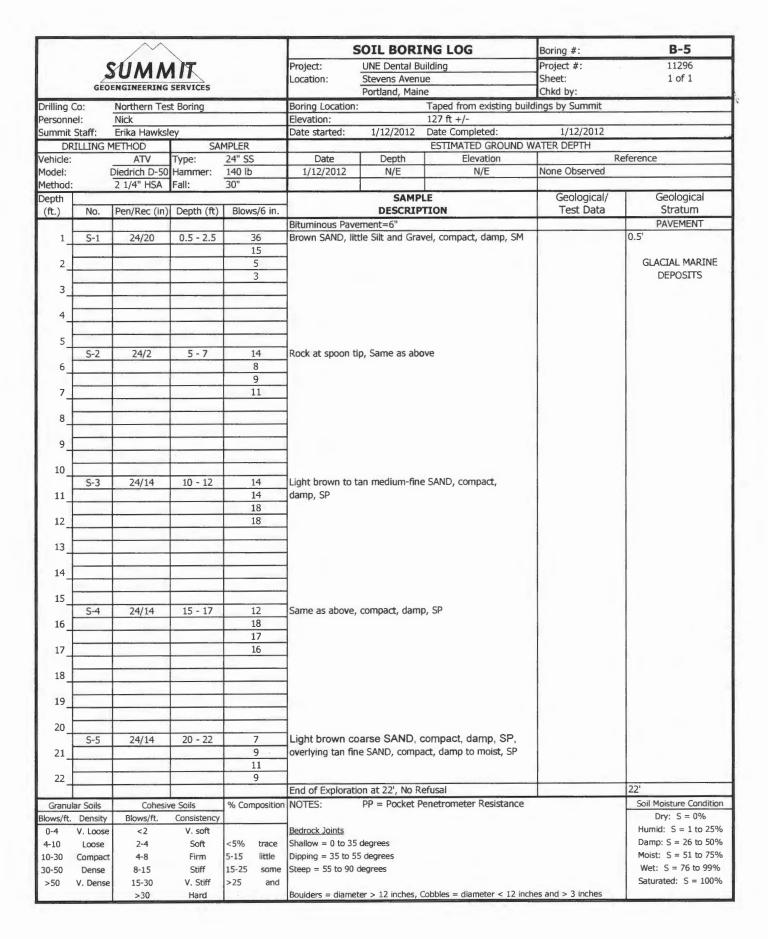
| \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ |                  |                          | SOIL BORING LOG  |                           |                                  | Boring #:    | B-1                        |                     |  |
|--|------------------|--------------------------|------------------|---------------------------|----------------------------------|--------------|----------------------------|---------------------|--|
| SUMMIT                                 |                  |                          |                  | E Dental Bui              |                                  | Project #:   | 11296                      |                     |  |
| SUMMIN                                 |                  | Location: Stevens Avenue |                  |                           | Sheet:                           | 1 of 2       |                            |                     |  |
| GEOENGINEERING SERVICES                |                  |                          |                  | tland, Maine              |                                  | Chkd by:     |                            |                     |  |
| Drilling Co: Northern Test Boring      |                  |                          | Boring Location: |                           | Taped from existing bu           |              |                            |                     |  |
| ersonr                                 |                  | Nick                     |                  |                           | Elevation:                       |              | 128 ft +/-                 |                     |  |
| ummit                                  | Staff:           | Erika Hawksl             | ey               |                           | Date started: 1,                 | /12/2012     | Date Completed:            | 1/12/2012           |  |
| DF                                     | RILLING N        | METHOD                   | SA               | MPLER                     |                                  |              | ESTIMATED GROUND           | WATER DEPTH         |  |
| ehicle:                                |                  | ATV                      | Туре:            | 24" SS                    | Date                             | Depth        | Elevation                  |                     | eference                                   |
| lodel:                                 |                  | Diedrich D-50            |                  | 140 lb                    | 1/12/2012                        | N/E          | N/E                        | None Observed       |  |
| lethod                                 |                  | 2 1/4" HSA               | Fall:            | 30"                       |                                  |              |                            |                     |  |
| epth                                   |                  | In (n (i )               | D 11 (0)         | I ni                      |                                  | SAMPL        |                            | Geological/         | Geological                                 |
| (ft.)                                  | No.              | Pen/Rec (in)             |                  | Blows/6 in.               |                                  | DESCRIPT     |                            | Test Data           | Stratum                                    |
|  | S-1              | 24/20                    | 0 - 2            | 5                         | Brown SILT, rootlets             |              |                            | Lawn                | TOPSOIL<br>0.7'                            |
| 1_                                     |                  |                          |                  | 5                         | Dark brown SILT, tra<br>damp, ML | ace Sand and | organics, loose,           |                     | 0.7  |
| 2                                      |                  |                          |                  | 4                         | damp, ML                         |              |                            |                     | GLACIAL MARINE                             |
| ۷-                                     | _                |                          |                  |                           |                                  |              |                            |                     | DEPOSITS                                   |
| 3                                      | -                |                          |                  |                           | 1                                |              |                            |                     | 52.002.0                                   |
|  |                  |                          |                  |                           | 1                                |              |                            |                     |  |
| 4                                      |                  |                          |                  |                           |                                  |              |                            |                     |  |
|  |                  |                          |                  |                           |                                  |              |                            |                     |  |
| 5_                                     |                  |                          |                  |                           |                                  |              |                            |                     |  |
|  | S-2              | 24/21                    | 5 - 7            | 6                         |                                  |              | ne to medium-coarse        |                     |  |
| 6_                                     |                  |                          |                  | 8                         | SAND, little Silt, com           | ipact, damp, | SM                         |                     |  |
| _                                      |                  |                          |                  | 10                        |                                  |              |                            |                     |  |
| 7_                                     |                  |                          |                  | 8                         |                                  |              |                            |                     |  |
| 8                                      | -                |                          |                  |                           |                                  |              |                            |                     |  |
| ٥_                                     |                  |                          |                  |                           |                                  |              |                            |                     |  |
| 9                                      |                  |                          |                  |                           |                                  |              |                            |                     |  |
| _                                      |                  |                          |                  |                           | 1                                |              |                            |                     |  |
| 10                                     |                  |                          |                  |                           | 1                                |              |                            |                     |  |
| _                                      | S-3              | 24/22                    | 10 - 12          | 7                         | Tan to light brown fir           | ne to mediu  | m-fine SAND, little        |                     |  |
| 11_                                    |                  |                          |                  | 8                         | Silt, compact, damp,             |              |                            |                     |  |
|  |                  |                          |                  | 9                         |                                  |              |                            |                     |  |
| 12_                                    |                  |                          |                  | 11                        |                                  |              |                            |                     |  |
|  |                  |                          |                  |                           | 1                                |              |                            |                     |  |
| 13_                                    |                  |                          |                  |                           |                                  |              |                            |                     |  |
| 14                                     |                  |                          |                  |                           | -                                |              |                            |                     |  |
| 14_                                    |                  |                          |                  |                           |                                  |              |                            |                     |  |
| 15                                     |                  |                          |                  |                           |                                  |              |                            |                     |  |
|  | S-4              | 24/20                    | 15 - 17          | 10                        | Tan to light brown m             | nedium-fine  | SAND, little Silt.         |                     |  |
| 16                                     |                  |                          |                  | 12                        | compact, damp, SM                |              | ,                          |                     |  |
| -                                      |                  |                          |                  | 15                        |                                  |              |                            |                     |  |
| 17_                                    |                  |                          |                  | 15                        |                                  |              |                            |                     |  |
|  |                  |                          |                  |                           |                                  |              |                            |                     |  |
| 18_                                    |                  |                          |                  |                           |                                  |              |                            |                     |  |
| 40                                     |                  |                          |                  |                           |                                  |              |                            |                     |  |
| 19_                                    |                  |                          |                  |                           |                                  |              |                            |                     |  |
| 20                                     |                  |                          |                  |                           |                                  |              |                            |                     |  |
| 20_                                    | 5-5              | 24/20                    | 20 - 22          | 14                        | Tan to light brown m             | nedium-coan  | se SAND, Itrace Silt.      |                     |  |
| 21                                     |                  | /                        |                  | 17                        | dense, damp to mois              |              | ,                          |                     |  |
| Ī                                      |                  |                          |                  | 19                        |                                  |              |                            |                     |  |
| 22_                                    |                  |                          |                  | 27                        |                                  |              |                            |                     |  |
|  |                  |                          |                  |                           |                                  |              |                            |                     |  |
|  | lar Soils        | Cohesiv                  |                  | % Composition             | NOTES: PP                        | = Pocket Pe  | netrometer Resistance      |                     | Soil Moisture Conditio                     |
|  | Density          | Blows/ft.                | Consistency      |                           |                                  |              |                            |                     | Dry: S = 0%                                |
| 0-4                                    | V. Loose         |                          | V. soft          | 504                       | Bedrock Joints                   |              |                            |                     | Humid: S = 1 to 25%                        |
| 4-10                                   | Loose            | 2-4                      | Soft             | <5% trace                 | Shallow = 0 to 35 degree         |              |                            |                     | Damp: S = 26 to 50%                        |
| .0-30<br>:0-50                         | Compact<br>Dense | 4-8<br>8-15              | Firm<br>Stiff    | 5-15 little<br>15-25 some | Dipping = 35 to 55 deg           |              |                            |                     | Moist: S = 51 to 759<br>Wet: S = 76 to 99% |
| >50                                    | V. Dense         | 1                        | V. Stiff         | 15-25 some > 25 and       | Steep = 55 to 90 degre           |              |                            |                     | Saturated: S = 100%                        |
| - 50                                   | 7. Delise        | >30                      | Hard             | and and                   | Boulders = diameter >            | 12 inches Co | obbles = diameter < 12 inc | thes and > 3 inches | Juliu (Cu. 5 - 100 /                       |

| <u> </u> |                  |               | SOIL BORING LOG   |                    |  | Boring #:         | B-1                       |                       |   |
|----------|------------------|---------------|---|--------------------|--|-------------------|---------------------------|-----------------------|---|
| SUMMIT   |                  |               | Project: UNE Dental Building Project #: Location: Stevens Avenue Sheet: |                    |  |                   | 11296                     |                       |   |
|          |                  |               |   |                    |  |                   | 2 of 2                    |                       |   |
|          | GEO              | ENGINEERING   | SERVICES  |                    |  | Portland, Main    |                           | Chkd by:              |   |
| rilling  | Co:              | Northern Tes  | t Boring  |                    | Boring Location:                         |                   | Taped from existing       | buildings by Summit   |   |
| ersonn   |                  | Nick          |   |                    | Elevation:                               |                   | 128 ft +/-                |                       |   |
| ummit    |                  | Erika Hawksl  |   | 40.50              | Date started:                            | 1/12/2012         | Date Completed:           | 1/12/2012             |   |
| ehicle:  |                  | METHOD<br>ATV | Type:   | MPLER<br>24" SS    | Date                                     | Depth             | ESTIMATED GROUN Elevation |                       | Reference                                 |
| lodel:   |                  | Diedrich D-50 |   | 140 lb             | 1/12/2012                                | N/E               | N/E                       | None Observed         | Kelefelice                                |
| 1ethod:  |                  |               | Fall:   | 30"                | -,,                                      |                   |                           |                       |   |
| Depth    |                  |               |   |                    |  | SAMP              |                           | Geological/           | Geological                                |
| (ft.)    | No.              | Pen/Rec (in)  | Depth (ft)  | Blows/6 in.        |  | DESCRIP           | TION                      | Test Data             | Stratum                                   |
| 22       |                  |               |   |                    |  |                   |                           |                       | GLACIAL MARINE<br>DEPOSITS                |
| 23_      | -                |               |   |                    | 1  |                   |                           |                       | DEPOSITS                                  |
| 24       |                  |               |   |                    | 1  |                   |                           |                       |   |
|          |                  |               |   |                    |  |                   |                           |                       | 24'+/-                                    |
| 25_      |                  |               |   |                    |  |                   |                           |                       | GLACIAL TILL                              |
| 30       | S-6              | 24/20         | 25 - 27   | 23                 |  |                   | e Gravel, very dense,     |                       |   |
| 26_      |                  |               |   | 30<br>32           | moist, SP, overly<br>little Silt and Gra |                   |                           |                       |   |
| 27       |                  |               |   | 27                 | The Sile and Gra                         | ivel, very delise | , moisy sin               |                       |   |
|          |                  |               |   |                    |  |                   |                           |                       |   |
| 28_      |                  |               |   |                    | Auger Refusal at                         | 27.4', Probable   | e Bedrock                 |                       | 27.4'                                     |
| 20       |                  |               |   |                    | -  |                   |                           |                       | PROBABLE BEDROC                           |
| 29_      |                  |               |   | -                  | -  |                   |                           |                       |   |
| 30       |                  | -             |   |                    | 1  |                   |                           |                       |   |
| _        | -                |               |   |                    |  |                   |                           |                       |   |
| 31_      |                  |               |   |                    | 1  |                   |                           |                       |   |
|          |                  |               |   |                    |  |                   |                           |                       |   |
| 32_      |                  |               |   |                    | -  |                   |                           |                       |   |
| 33       |                  |               |   |                    | 1  |                   |                           |                       |   |
| 33_      |                  |               |   |                    |  |                   |                           |                       |   |
| 34_      |                  |               |   |                    | ]  |                   |                           |                       |   |
|          |                  |               |   |                    |  |                   |                           |                       |   |
| 35_      |                  |               |   |                    | -  |                   |                           |                       |   |
| 36       |                  |               |   |                    | 1  |                   |                           |                       |   |
| -        |                  |               |   |                    | 1  |                   |                           |                       |   |
| 37_      |                  |               |   |                    | ]  |                   |                           |                       |   |
|          |                  |               |   |                    |  |                   |                           |                       |   |
| 38_      |                  |               |   |                    | -  |                   |                           |                       |   |
| 39       |                  |               |   |                    | 1  |                   |                           |                       |   |
|          |                  |               |   |                    | ]  |                   |                           |                       |   |
| 40_      |                  |               |   |                    |  |                   |                           |                       |   |
| 4.       |                  |               |   |                    |  |                   |                           |                       |   |
| 41_      |                  |               |   |                    | 1  |                   |                           |                       |   |
| 42       |                  |               |   |                    |  |                   |                           |                       |   |
| _        |                  |               |   |                    | ]  |                   |                           |                       |   |
| 43_      |                  |               |   |                    |  |                   |                           |                       |   |
| 44       |                  |               | -   |                    | -  |                   |                           |                       |   |
| 44_      |                  |               |   |                    | 1  |                   |                           |                       |   |
| Granul   | ar Soils         | Cohesiv       | e Soils   | % Composition      | NOTES:                                   | PP = Pocket Pe    | enetrometer Resistanc     | ce                    | Soil Moisture Condition                   |
|          | Density          | Blows/ft.     | Consistency   |                    |  |                   |                           |                       | Dry: S = 0%                               |
| 0-4      | V. Loose         |               | V. soft   |                    | Bedrock Joints                           |                   |                           |                       | Humid: S = 1 to 25%                       |
| 4-10     | Loose            | 2-4           | Soft  | <5% trace          | Shallow = 0 to 35                        | _                 |                           |                       | Damp: S = 26 to 50%                       |
| 10-30    | Compact          | 1             | Firm  | 5-15 little        | Dipping = 35 to 55                       | -                 |                           |                       | Moist: S = 51 to 75%                      |
| 30-50    | Dense<br>V Dense | 8-15<br>15-30 | Stiff<br>V. Stiff   | 15-25 some >25 and | Steep = 55 to 90 d                       | iegrees           |                           |                       | Wet: S = 76 to 99%<br>Saturated: S = 100% |
| >50      | V. Dense         | >30           | V. Stiff<br>Hard  | -23 dild           | Boulders - diamet                        | er > 12 inches (  | obbles = diameter < 12    | inches and > 3 inches | Saturated: 3 - 10070                      |

| <u> </u>                          |           |                             |             | SOIL BOR              | ING LOG                          | Boring #:                               | B-2                 |                          |
|-----------------------------------|-----------|-----------------------------|-------------|-----------------------|----------------------------------|---|---------------------|--------------------------|
| SUMMIT                            |           |                             |             | Project: UNE Dental B | Building                         | Project #:                              | 11296               |                          |
|                                   | *         | O IVI IV                    |             |                       | Location: Stevens Aven           | ue                                      | Sheet:              | 1 of 1                   |
|                                   | GEO       | ENGINEERING                 | SERVICES    |                       | Portland, Mai                    | ne                                      | Chkd by:            |                          |
| Drilling Co: Northern Test Boring |           |                             |             | Boring Location:      | Taped from existing buil         | ldings by Summit                        |                     |                          |
| ersonn                            |           | Nick                        |             |                       | Elevation:                       | 127 ft +/-                              |                     |                          |
| ummit                             |           | Erika Hawksl                |             |                       | Date started: 1/12/2012          | Date Completed:                         | 1/12/2012           |                          |
|                                   | RILLING N |                             |             | MPLER                 |                                  | ESTIMATED GROUND                        |                     |                          |
| ehicle:                           |           | ATV                         | Туре:       | 24" SS<br>140 lb      | Date Depth<br>1/12/2012 N/E      | Elevation<br>N/E                        | None Observed       | eference                 |
| dethod:                           |           | Diedrich D-50<br>2 1/4" HSA | Fall:       | 30"                   | 1/12/2012 N/E                    | IN/E                                    | None Observed       |                          |
| Depth                             |           | 2 1/1 1/3/                  | ı alı.      | 50                    | SAME                             | DI F                                    | Geological/         | Geological               |
| (ft.)                             | No.       | Pen/Rec (in)                | Depth (ft)  | Blows/6 in.           | DESCRI                           |   | Test Data           | Stratum                  |
| (10.)                             | S-1       | 24/20                       | 0 - 2       | 10                    | Dark brown SILT, rootlets, littl |   |                     | TOPSOIL                  |
| 1                                 |           | 7,50                        |             | 2                     | damp to frozen, ML               | , |                     |                          |
|                                   | 1         |                             |             | 2                     | Brownish orange medium-fine      | SAND, little Silt, loose,               |                     | 1'                       |
| 2_                                |           |                             |             | 2                     | damp, SM                         |   |                     |                          |
|                                   |           |                             |             |                       |                                  |   |                     | GLACIAL MARINE           |
| 3_                                |           |                             |             |                       |                                  |   |                     | DEPOSITS                 |
| 4                                 |           |                             |             |                       |                                  |   |                     |                          |
| 4_                                |           |                             |             |                       |                                  |   |                     |                          |
| 5                                 |           |                             |             |                       |                                  |   |                     |                          |
| _                                 | S-2       | 24/24                       | 5 - 7       | 4                     | Brownish-orange medium-fine      | SAND, little Silt, loose,               |                     |                          |
| 6                                 |           |                             |             | 3                     | damp, SM                         |   |                     |                          |
|                                   |           |                             |             | 3                     | Light brown to tan fine SAND,    | little Silt, loose, damp,               |                     |                          |
| 7_                                |           |                             |             | 5                     | SM                               |   | 1                   |                          |
|                                   |           |                             |             |                       |                                  |   |                     |                          |
| 8_                                |           |                             |             |                       |                                  |   |                     |                          |
| 9                                 |           |                             |             |                       | -                                |   |                     |                          |
| 9_                                |           |                             |             |                       | 1                                |   |                     |                          |
| 10                                |           |                             |             |                       |                                  |   |                     |                          |
|                                   | S-3       | 24/20                       | 10 - 12     | 11                    | Light brown to tan medium-fin    | e SAND, little Silt,                    |                     |                          |
| 11                                |           |                             |             | 12                    | compact, damp, SM                | ,,                                      |                     |                          |
| 1                                 |           |                             |             | 19                    |                                  |   | 1                   |                          |
| 12_                               |           |                             |             | 23                    |                                  |   | 1910                |                          |
|                                   |           |                             |             |                       |                                  |   |                     |                          |
| 13_                               |           |                             |             |                       |                                  |   |                     |                          |
| 14                                |           |                             |             |                       |                                  |   |                     |                          |
| 14_                               |           |                             |             |                       |                                  |   |                     |                          |
| 15                                |           |                             |             |                       | 1                                |   |                     |                          |
|                                   | S-4       | 24/18                       | 15 - 17     | 12                    | Same as above, compact, dam      | np, SM                                  |                     |                          |
| 16_                               |           |                             |             | 17                    |                                  |   |                     |                          |
|                                   |           |                             |             | 21                    |                                  |   |                     |                          |
| 17_                               |           |                             | -           | 19                    |                                  |   |                     |                          |
| 10                                |           |                             |             |                       |                                  |   |                     |                          |
| 18_                               |           |                             |             |                       |                                  |   |                     |                          |
| 19                                |           |                             |             |                       |                                  |   |                     |                          |
|                                   |           |                             |             | 1                     |                                  |   |                     |                          |
| 20_                               |           |                             |             |                       |                                  |   |                     |                          |
|                                   | S-5       | 5/5                         | 20 - 20.4   | 50/5"                 | Same as above, light brown       |   |                     |                          |
| 21_                               |           |                             |             |                       | Brown Silty CLAY, some Sand,     | little Gravel, very dense,              |                     | 20.2'                    |
| 22                                |           |                             |             |                       | damp, CL                         | de Bedusel                              |                     | GLACIAL TILL             |
| 22_                               |           |                             |             |                       | Auger Refusal at 20.4', Probat   | ne bedrock                              |                     | 20.4'<br>PROBABLE BEDROC |
| Grani                             | lar Soils | Cohesiv                     | e Soils     | % Composition         | NOTES: DD = Docket               | Penetrometer Resistance                 |                     | Soil Moisture Condition  |
|                                   | Density   | Blows/ft.                   | Consistency | 70 COMPOSITION        | FF - FOCKEL                      | chetrometer resistance                  |                     | Dry: S = 0%              |
| 0-4                               | V. Loose  |                             | V. soft     |                       | Bedrock Joints                   |   |                     | Humid: S = 1 to 25%      |
| 4-10                              | Loose     | 2-4                         | Soft        | <5% trace             | Shallow = 0 to 35 degrees        |   |                     | Damp: S = 26 to 50%      |
| 10-30                             | Compact   | 1                           | Firm        | 5-15 little           | Dipping = 35 to 55 degrees       |   |                     | Moist: S = 51 to 75%     |
| 30-50                             | Dense     | 8-15                        | Stiff       | 15-25 some            | Steep = 55 to 90 degrees         |   |                     | Wet: S = 76 to 99%       |
| >50                               | V. Dense  | 15-30                       | V. Stiff    | >25 and               |                                  |   |                     | Saturated: S = 100%      |
|                                   |           | >30                         | Hard        |                       | Boulders = diameter > 12 inches, | Cobbles = diameter < 12 inc             | thes and > 3 inches |                          |

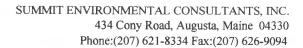
|                         |            | //                    |             |                | SOIL BORING LOG  |                   |                           | Boring #:                | B-3                                       |
|-------------------------|------------|-----------------------|-------------|----------------|--|-------------------|---------------------------|--------------------------|---|
| SUMMIT                  |            |                       | Project: (  | JNE Dental Bui | lding  | Project #:        | 11296                     |                          |   |
| GEOENGINEERING SERVICES |            |                       |             |                |  |                   | 1 of 1                    |                          |   |
|                         | GEO        | ENGINEERING           | SERVICES    |                | Ī  | Portland, Maine   |                           | Chkd by:                 |   |
| rilling                 | Co:        | Northern Tes          | t Boring    |                | Boring Location: Taped from existing buildings by Summit |                   |                           |                          |   |
| ersonn                  | el:        | Nick                  |             |                | Elevation:   |                   | 127 ft +/-                |                          |   |
| ummit                   |            | Erika Hawksl          |             |                | Date started:  | 1/12/2012         | Date Completed:           | 1/12/2012                |   |
|                         | ULLING M   |                       |             | MPLER          |  |                   | ESTIMATED GROUND          |                          |   |
| ehicle:                 |            | ATV                   | Type:       | 24" SS         | Date   | Depth             | Elevation                 |                          | Reference                                 |
| 1odel:                  |            | Diedrich D-50         |             | 140 lb         | 1/12/2012  | . N/E             | N/E                       |                          | ell, No water observed                    |
| 1ethod:                 |            | 2 1/4" HSA            | Fall:       | 30"            | 1/25/2012  | 20.3              | 106.7 ft +/-              | Measurement in w         |   |
| Depth                   | No         | Don/Dos (in)          | Donth (A)   | Blows/6 in.    |  | SAMPL<br>DESCRIPT |                           | Geological/<br>Test Data | Geological<br>Stratum                     |
| (ft.)                   | No.<br>S-1 | Pen/Rec (in)<br>24/20 | 0 - 2       | 10             | Brown CTLT rootl   |                   | damp to frozen, ML        | Lawn                     | TOPSOIL                                   |
| 1                       | 5-1        | 24/20                 | 0-2         | 6              | Dark brown SILT,   |                   |                           | Lawii                    | 0.5'                                      |
| 1                       |            |                       |             | 4              | to compact, damp   |                   | a organics, 100sc         |                          | 0.5                                       |
| 2                       |            |                       |             | 4              | to compact, damp   | 1022117           |                           |                          | GLACIAL MARINE                            |
|                         |            |                       |             |                |  |                   |                           |                          | DEPOSITS                                  |
| 3                       |            |                       |             |                | 1  |                   |                           |                          |   |
| _                       |            |                       |             |                |  |                   |                           |                          |   |
| 4_                      |            |                       |             |                |  |                   |                           |                          |   |
|                         |            |                       |             |                |  |                   |                           |                          |   |
| 5_                      |            |                       |             |                |  |                   |                           |                          |   |
|                         | S-2        | 24/18                 | 5 - 7       | 7              | -  |                   | to fine SAND, little      |                          |   |
| 6_                      |            |                       |             | 7              | Silt, compact, dan                                       | np, SM            |                           |                          |   |
| 7                       |            |                       |             | 10             |  |                   |                           |                          |   |
| 7_                      |            |                       |             | 10             | -  |                   |                           |                          |   |
| 8                       |            |                       |             |                | -  |                   |                           |                          |   |
| 0_                      |            |                       |             |                | 1  |                   |                           |                          |   |
| 9                       |            |                       |             |                | 1  |                   |                           |                          |   |
|                         |            |                       |             |                | 1  |                   |                           |                          |   |
| 10                      |            |                       |             |                |  |                   |                           |                          |   |
| _                       | S-3        | 24/20                 | 10 - 12     | 7              | Light brown to tar                                       | n medium-fine     | to medium-coarse          |                          |   |
| 11_                     |            |                       |             | 10             | SAND, little Silt, compact, damp, SM                     |                   |                           |                          |   |
|                         |            |                       |             | 15             |  |                   |                           |                          |   |
| 12_                     |            |                       |             | 24             |  |                   |                           |                          |   |
|                         |            |                       |             |                |  |                   |                           |                          |   |
| 13_                     |            |                       |             | -              |  |                   |                           |                          |   |
| 14                      |            |                       |             |                | -  |                   |                           |                          |   |
| 14_                     |            |                       |             |                |  |                   |                           |                          |   |
| 15                      | -          |                       |             |                | 1  |                   |                           |                          |   |
| 13_                     | S-4        | 24/16                 | 15 - 17     | 15             | Light brown coars  | e SAND, trace     | Silt, compact, damp,      |                          |   |
| 16                      |            |                       |             | 14             |  |                   | ND, little Silt, compact, |                          |   |
|                         |            |                       |             | 16             | damp, SM   |                   |                           |                          |   |
| 17_                     |            |                       |             | 19             |  |                   |                           |                          |   |
|                         |            |                       |             |                |  |                   |                           |                          |   |
| 18_                     |            |                       |             |                | 1  |                   |                           |                          |   |
| 10                      |            |                       |             |                |  |                   |                           |                          |   |
| 19_                     |            |                       |             |                |  |                   |                           |                          |   |
| 20                      |            |                       |             |                | 1  |                   |                           |                          |   |
| 20_                     | S-5        | 24/16                 | 20 - 22     | 11             | Light brown to ta  | an medium-fi      | ne SAND, little Silt,     |                          |   |
| 21                      | - 5 5      | - 1/ 10               | _,          | 12             | compact, damp to   |                   | ,                         |                          |   |
| -                       |            |                       |             | 12             |  |                   |                           |                          |   |
| 22_                     |            |                       |             | 12             |  |                   |                           |                          |   |
|                         |            |                       |             |                | End of Exploration                                       |                   |                           |                          | 22'                                       |
| Granu                   | lar Soils  | Cohesiv               | e Soils     | % Composition  | NOTES: F   | PP = Pocket Pe    | netrometer Resistance     |                          | Soil Moisture Condition                   |
| ows/ft.                 | Density    | Blows/ft.             | Consistency |                |  |                   |                           |                          | Dry: S = 0%                               |
| 0-4                     | V. Loose   | <2                    | V. soft     |                | Bedrock Joints   |                   |                           |                          | Humid: S = 1 to 25%                       |
| 4-10                    | Loose      | 2-4                   | Soft        | <5% trace      | Shallow = 0 to 35 do                                     |                   |                           |                          | Damp: S = 26 to 50%                       |
| .0-30                   | Compact    | 4-8                   | Firm        | 5-15 little    | Dipping = 35 to 55 (                                     |                   |                           |                          | Moist: S = 51 to 75%                      |
| 30-50                   | Dense      | 8-15                  | Stiff       |                | Steep = 55 to 90 de                                      | grees             |                           |                          | Wet: S = 76 to 99%<br>Saturated: S = 100% |
| >50                     | V. Dense   | 15-30                 | V. Stiff    | >25 and        |  |                   |                           |                          | r participated: $S = 100%$                |

| <u> </u>                          |           |               |                           |                  | S  | OIL BORIN           | Boring #:             | B-4               |   |
|-----------------------------------|-----------|---------------|---------------------------|------------------|--|---------------------|-----------------------|-------------------|---|
| CALALANT                          |           |               |                           | UNE Dental Build |  | Project #:          | 11296                 |                   |   |
| SUMMIT                            |           |               |                           |                  |  |                     | 1 of 1                |                   |   |
|                                   | GEO       | ENGINEERING   | SERVICES                  |                  |  |                     |                       |                   |   |
| Drilling Co: Northern Test Boring |           |               |                           |                  | Boring Location:                         |                     | aped from existing bu | Chkd by:          |   |
| ersonn                            |           | Nick          | ic borning                |                  | Elevation:                               |                     | 27 ft +/-             | manigo by current |   |
| ummit                             |           | Erika Hawksk  | ev                        |                  | Date started:                            |                     | ate Completed:        | 1/12/2012         |   |
|                                   | RILLING N |               |                           | MPLER            |  |                     | STIMATED GROUND       |                   |   |
| ehicle:                           |           | ATV           | Туре:                     | 24" SS           | Date                                     | Depth               | Elevation             |                   | Reference   |
| lodel:                            |           | Diedrich D-50 |                           | 140 lb           | 1/12/2012                                | N/E                 | N/E                   | None Observed     |   |
| 1ethod:                           |           |               | Fall:                     | 30"              |  |                     |                       |                   |   |
| Depth                             |           |               |                           |                  |  | SAMPLE              |                       | Geological/       | Geological  |
| (ft.)                             | No.       | Pen/Rec (in)  | Depth (ft)                | Blows/6 in.      |  | DESCRIPTI           |                       | Test Data         | Stratum   |
| (141)                             | S-1       | 24/18         | 0-2                       | 3                | Brown SILT, root                         |                     | amp to frozen, ML     | Lawn              | TOPSOIL   |
| 1                                 |           | 2.710         |                           | 2                |  |                     | se, damp to frozen, M |                   | 0.5'  |
| -                                 |           |               |                           | 2                |  | ,,                  |                       |                   |   |
| 2                                 |           |               |                           | 3                | 1  |                     |                       |                   | GLACIAL MARINE  |
|                                   |           |               | -                         |                  |  |                     |                       |                   | DEPOSITS  |
| 3                                 |           |               |                           |                  | i  |                     |                       |                   |   |
| _                                 |           |               |                           |                  | 1  |                     |                       |                   |   |
| 4                                 |           |               |                           |                  |  |                     |                       |                   |   |
| -                                 |           |               |                           |                  |  |                     |                       |                   |   |
| 5                                 |           |               |                           |                  |  |                     |                       |                   |   |
| _                                 | S-2       | 24/20         | 5-7                       | 5                | 1  |                     |                       |                   |   |
| 6                                 |           | /             |                           | 7                | Light brown to ta                        | n medium-fine to    | o fine SAND, little   |                   |   |
| _                                 |           |               |                           | 10               | Silt, compact, da                        | mp, SM              |                       |                   |   |
| 7                                 |           |               |                           | 11               | 1  |                     |                       |                   |   |
| _                                 |           |               |                           |                  | 1  |                     |                       |                   |   |
| 8                                 |           |               |                           |                  | 1  |                     |                       |                   |   |
|                                   |           |               |                           |                  |  |                     |                       |                   |   |
| 9                                 |           |               |                           |                  | 1  |                     |                       |                   |   |
| _                                 |           |               |                           |                  | 1  |                     |                       |                   |   |
| 10                                |           | ,             |                           |                  | 1  |                     |                       |                   |   |
| -                                 | S-3       | 24/20         | 10 - 12                   | 12               | Light brown to ta                        | n medium-fine S     | AND, Little Silt,     |                   |   |
| 11                                |           |               |                           | 14               | compact to dens                          | e, damp, SM         |                       |                   |   |
| _                                 |           |               |                           | 16               |  |                     |                       |                   |   |
| 12                                |           |               |                           | 17               | 1  |                     |                       |                   |   |
|                                   |           |               |                           |                  | ]  |                     |                       |                   |   |
| 13_                               |           |               |                           |                  |  |                     |                       |                   |   |
|                                   |           |               |                           |                  |  |                     |                       |                   |   |
| 14_                               |           |               |                           |                  | ]  |                     |                       |                   |   |
|                                   |           |               |                           |                  |  |                     |                       |                   |   |
| 15_                               |           |               |                           |                  |  |                     |                       |                   |   |
| 1                                 | S-4       | 21/14         | 15 - 16.8                 | 19               | Brown fine SAND                          | , little Silt and G | ravei, very dense,    |                   | 15'+/-  |
| 16_                               |           |               |                           | 24               | damp, SM                                 |                     |                       |                   | GLACIAL TILL  |
|                                   |           |               |                           | 30               |  |                     |                       |                   |   |
| 17_                               |           |               |                           | 50/3"            |  |                     |                       |                   |   |
|                                   |           |               |                           |                  | Auger Refusal at                         | 16.8', Probable B   | Bedrock               |                   | 16.8'   |
| 18_                               |           |               |                           |                  |  |                     |                       |                   | PROBABLE BEDROO   |
|                                   |           |               |                           |                  |  |                     |                       |                   |   |
| 19_                               |           |               |                           |                  |  |                     |                       |                   |   |
|                                   |           |               |                           |                  |  |                     |                       |                   |   |
| 20_                               |           |               |                           |                  |  |                     |                       |                   |   |
|                                   |           |               |                           |                  |  |                     |                       |                   |   |
| 21_                               |           |               |                           |                  | -  |                     |                       |                   |   |
|                                   |           |               |                           |                  | -  |                     |                       |                   |   |
| 22_                               |           |               |                           |                  |  |                     |                       |                   |   |
|                                   |           |               |                           |                  |  |                     |                       |                   |   |
|                                   | lar Soils | Cohesiv       |                           | % Composition    | NOTES:                                   | PP = Pocket Pen     | etrometer Resistance  |                   | Soil Moisture Conditio  |
| lows/ft.                          | Density   | Blows/ft.     | Consistency               |                  |  |                     |                       |                   | Dry: S = 0%   |
|                                   | V. Loose  | !             | V. soft                   |                  | Bedrock Joints                           |                     |                       |                   | Humid: S = 1 to 25%   |
|                                   |           | 2-4           | Soft                      | <5% trace        | Shallow = 0 to 35                        | degrees             |                       |                   | Damp: S = 26 to 50%   |
|                                   | Loose     | 1             |                           |                  |  |                     |                       |                   |   |
| 4-10<br>10-30                     | Compact   | 4-8           | Firm                      | 5-15 little      | Dipping = 35 to 55                       |                     |                       |                   | Moist: S = 51 to 75%  |
|                                   |           | 4-8<br>8-15   | Firm<br>Stiff<br>V. Stiff |                  | Dipping = 35 to 55<br>Steep = 55 to 90 d |                     |                       |                   | Moist: S = 51 to 759<br>Wet: S = 76 to 99%<br>Saturated: S = 1009 |



# APPENDIX C

# LABORATORY TESTING





## **GRAIN SIZE ANALYSIS - ASTM D422**

PROJECT NAME:

**UNE** Dental

January 23, 2012

PROJECT #:

14381 / 11296

CLIENT:

DATE:

CLIENT SOIL DES:

Summit Geoengineering Services

SUMMIT SAMPLE:

S2

SOURCE:

B4 5-7'

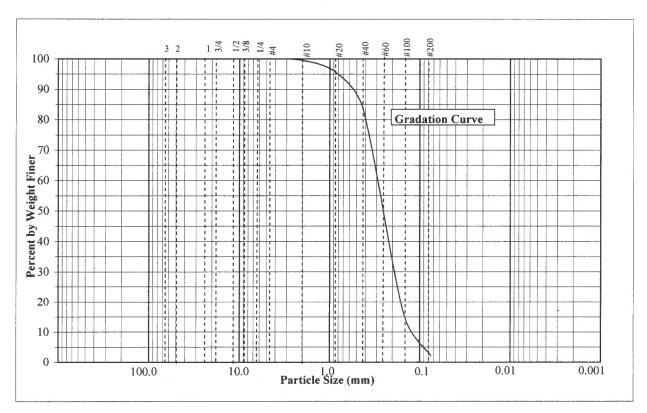
INTENDED USE: SPECIFICATION: Investigation

TECHNICIAN:

M. Gilman

## **DATA**

| <b>PARTICI</b> | E SIZE mm  | % BY WT FINER |
|----------------|------------|---------------|
| 76.20          | (3 in)     | 100.0         |
| 50.80          | (2 in)     | 100.0         |
| 38.10          | (1-1/2 in) | 100.0         |
| 25.40          | (1 in)     | 100.0         |
| 19.05          | (3/4 in)   | 100.0         |
| 12.70          | (1/2 in)   | 100.0         |
| 9.53           | (3/8 in)   | 100.0         |
| 6.35           | (1/4 in)   | 100.0         |
| 4.75           | (No. 4)    | 100.0         |
| 2.00           | (No. 10)   | 99.5          |
| 0.85           | (No. 20)   | 95.5          |
| 0.43           | (No. 40)   | 83.5          |
| 0.15           | (No. 100)  | 15.9          |
| 0.08           | (No. 200)  | 2.1           |
|                |            |               |



**REMARKS:** 

Moisture Content = 5.4%

Reviewed:

Darrell A. Gilman, CMT Manager

Date:

1/24/12