CITY OF PORTLAND, MAINE
Department of Building Inspection

Certificate of Occupancy

LOCATION 167 FORE ST **CBL** 020 F001001

Issued to OCEAN GATEWAY GARAGE LLC /Ledgewood Constructi **Date of Issue** 06/30/2008

This is to certify that the building, premises, or part thereof, at the above location, built – altered – changed as to use under Building Permit No. 07-1013 , has had final inspection, has been found to conform substantially to requirements of Zoning Ordinance and Building Code of the City, and is hereby approved for occupancy or use, limited or otherwise, as indicated below.

PORTION OF BUILDING OR PREMISES	APPROVED OCCUPANCY
Garage Area	Parking Garage Use Group S2 Type 2B IBC 2003

Limiting Conditions: 720 parking spaces. Retail space is not approved for occupancy at this time. Temporary until September 30, 2008 for site work conditions.

This certificate supersedes certificate issued

Approved:

6/30/08 Elaine Bowker per MC. Elaine Bowker 6/30/08

(Date) *Inspector* *Inspector of Buildings*

JMB
Per Greg Cass P.F.D.

Notice: This certificate identifies lawful use of building or premises, and ought to be transferred from owner to owner when property changes hands. Copy will be furnished to owner or lessee for one dollar.

CITY OF PORTLAND, MAINE
Department of Building Inspection

Certificate of Occupancy

LOCATION 167 FORE ST **CBL** 020 F001001

Issued to Ocean Gateway Garage Llc /Ledgewood Construction **Date of Issue** 12/16/2009

This is to certify that the building, premises, or part thereof, at the above location, built – altered – changed as to use under Building Permit No. 07-1013 has had final inspection, has been found to conform substantially to requirements of Zoning Ordinance and Building Code of the City, and is hereby approved for occupancy or use, limited or otherwise, as indicated below.

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1 India St Rear
Robi Marine

India St (Rear)
AKA
Robi Marine

TO: Inspections Department

FROM: Philip DiPierro, Development Review Coordinator

DATE: October 21, 2009

RE: C. of O. for #1 Fore Street, Ocean Gateway Garage (Id#2005-0271)(CBL 019 A 001001)

After visiting the site, I have the following comments:

Site work for the Parking Garage Phase only of the project, is complete:

At this time, **I recommend issuing a permanent Certificate of Occupancy for the Parking Garage only.**

Cc: Barbara Barhydt, Development Review Services Manager
Tammy Munson, Inspection Services Manager
File: Urban Insight

From: Philip DiPierro
To: Code Enforcement & Inspections
Date: Wed, Oct 21, 2009 1:12 PM
Subject: Permanent CO for the Ocean Gateway Parking Garage

Hi all, this phase of the project, site plan #2005-0271, meets minimum site plan requirements for the issuance of a permanent CO. This is a conversion of a Temp. CO that was issued last year to the Permanent CO. Please see attached and UI for sign off.

Please contact me with any questions. Thanks.

phil

CC: Needelman, William

Statement of Special Inspections

Project:	**Ocean Gateway Parking Garage**
Location:	Portland, Maine
Owner:	Ocean Gateway Garage LLC
Owner's Address:	2 Market Street, Suite 500, Portland ME 04101
Architect of Record:	Scott Simons Architects
Structural Engineer of Record:	Simon Design Engineering, LLC

This *Statement of Special Inspections* is submitted as a condition for permit issuance in accordance with the Special Inspection requirements of the International Building Code. It includes a Schedule of Special Inspection Services applicable to this project as well as the name of the Special Inspector and the identity of other approved agencies intended to be retained for conducting these inspections.

The Special Inspector shall keep records of all inspections and shall furnish inspection reports to the Building Official, Structural Engineer of Record, and Architect of Record. 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, Structural Engineer of Record, and Architect of Record. The Special Inspection program does not relieve the Contractor of his or her responsibilities.

Interim reports shall be submitted to the Building Official, Owner, Structural Engineer of Record, and Architect of Record.

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

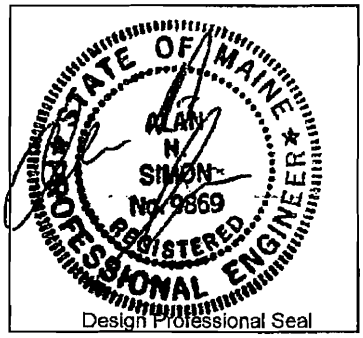
Job site safety, and means and methods of construction are solely the responsibility of the Contractor.

Interim Report Frequency: Monthly

Prepared by:

Alan H. Simon, P.E.

Signature 06/21/07 date



Design Professional Seal

Owner's Authorization:

Signature date

Building Official's Acceptance:

Signature date

Schedule of Special Inspection Services

The following sheets comprise the required schedule of special inspections for this project. The construction divisions which require special inspections for this project are as follows:

X	Soils and Foundations		Cold-Formed Steel Framing
X	Cast-In-Place Concrete	X	Spray Fire Resistive Material
X	Precast Concrete		Wood Construction
X	Masonry		Exterior Insulation and Finish System
X	Structural Steel		Special Cases

Inspection Agents	Firm	Address
1. Special Inspector Richard Libardoni	Intercontinental Developers Inc.	1270 Soldiers Field Rd. Boston, MA
2. Testing Laboratory	John Turner Consulting Inc	19 Dover Street Dover NH 03820
3. Testing Laboratory Wayne Chadbourne	Haley & Aldrich, Inc.	75 Washington Avenue Suite 203 Portland, Maine 04101-2617
4. Testing Laboratory	John Turner Consulting Inc	19 Dover Street Dover NH 03820

Note: The qualifications of all personnel performing Special Inspection activities are subject to the approval of the Building Official.

The inspection and testing agent shall be engaged by the Owner or the Owner's Agent, and not 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.

The credentials of al inspectors and testing technicians shall be provided if requested.

It is recommended that the person administering the Special Inspections program be a Professional Engineer experienced in the design of buildings.

Key for Minimum Qualifications of Inspection Agents (where indicted on Schedule)	
PE	Professional Engineer
EIT	Engineer in Training
ACI	American Concrete Institute Certified Concrete Field Testing Technician
AWS	American Welding Society Certified Welding Inspector
ASNT	American Society of Non-Destructive Testing – Level II or III

Qualifications of inspection agents may be indicted on the Schedule in instances where the Structural Engineer deems such requirements are appropriate.

Item	Agent No. (Qualif.)	Scope
1. Shallow Foundations	3 (EIT)	Inspect bearing surfaces for conformance to the requirements of the structural drawings, specifications, and/or geotechnical report
2. Controlled Structural Fill	3 (EIT)	Test material for conformance to specifications or geotechnical report. Perform laboratory compaction tests in accordance with the specifications to determine optimum water content and maximum dry density. Provide full-time inspection of the installation. Perform field density tests of the in-place fill.
3. Deep Foundations	3 (EIT)	Inspect documents identifying pile material and certifying grade of material for conformance to the Contract Documents, and that the identification is maintained from the point of manufacture to the point of delivery to the site. Perform full time inspection of installation. Maintain accurate records for each pile. Monitor dynamic pile load tests and modify pile capacity/installation as required. Record final location of each pile in plan.
4. Other	N/A	

Item	Agent No. (Qualif.)	Scope
1. Mix Design	4 SER	Review mix designs.
2. Material Certification	4 (ACI) SER	Review for conformance to specifications.
3. Reinforcement Installation	4	Inspect reinforcing for size, quantity, condition and placement.
4. Post-Tensioning Operations	N/A	Inspect tensioning and anchorage of tendons. Inspect grouting off bonded tendons.
5. Batching Plant	4 (ACI)	Review Plant quality control procedures and batching and mixing methods.
6. Formwork Geometry	4	Inspect form sizes.
7. Concrete Placement	4	Observe concrete placement operations. Verify conformance to specifications including cold-weather and hot-weather placement procedures. Perform slump, density and air content tests at point of discharge.
8. Evaluation of Concrete Strength	4	Test and evaluate in accordance with the specifications.
9. Curing and Protection	4	Observe procedures for conformance to the specifications.
10. Other		

Item	Agent No. (Qualif.)	Scope
1. Material Certification	4 SER	Review for conformance to specifications.
2. Mixing of Mortar and Grout	4	Inspect field-mixing procedures for conformance to the specifications.
3. Installation of Masonry	4	Inspect placement for conformance to the specifications.
4. Reinforcement Installation	4	Inspect reinforcing steel for size, quantity, condition and placement for conformance to approved submittals and Contract Documents. Inspect welding of reinforcement and review welder's certifications.
5. Grouting Operations	4	Inspect grouting procedures for conformance with the specifications. Inspect cells prior to grouting.
6. Weather Protection	4	Inspect protection for cold and hot weather for conformance with the specifications.
7. Evaluation of Masonry Strength	4	Verify strength in accordance with the specifications.
8. Anchors and Ties	4	Inspect anchorage of masonry to other construction for conformance to the Contract Documents.
9. Other		

Item	Agent No. (Qualif.)	Scope
1. Fabricator Certification/ Quality Control Procedures	2 (PE) [SER]	Review each Fabricator's quality control procedures. Inspect in-plant fabrication, or review Fabricator's approved Independent Inspection Agency's reports.
2. Material Certification	2 (PE) [SER]	Review for conformance to the specifications.
3. Open Web Steel Joists	N/A	Inspect for size, placement, bridging, bearing and connection to structure. Visually inspect all welds of a minimum of 5% of the joists, randomly selected.
4. Bolting	2 (PE)	Test and inspect bolted connections in accordance with specifications. Verify bolt size and grade.
5. Welding	2 (AWS)	Check welder qualifications. Visually inspect fillet welds and test full-penetration field welds in accordance with specifications.
6. Shear Connectors	2 (PE)	Inspect for size and placement. Test for proper weld attachment.
7. Structural Details	2 (PE)	Review for conformance to the specifications.
8. Metal Deck	2 (PE)	Verify gage, width, and type. Inspect placement, laps, welds, side lap attachment and screws or other mechanical fasteners. Check welder qualifications.
9. Other		

Item	Agent No. (Qualif.)	Scope
1. Material Specifications	4	Review for conformance to contract documents.
2. Laboratory Tested Fire Resistance Design	4	Review for conformance to contract documents.
3. Schedule of Thickness	4	Review for conformance to contract documents.
4. Surface Preparation	4	Inspect surface preparation and review for conformance to contract documents and approved submittals.
5. Application	4	Verify installation procedures. Review for conformance to contract documents and approved submittals.
6. Curing and Ambient Condition	4	Verify curing procedures and review for conformance to contract documents and approved submittals.
7. Thickness	4	Verify applied thickness and review for conformance to contract documents and approved submittals.
8. Density	4	Verify applied density and review for conformance to contract documents and approved submittals.
9. Bond Strength	4	Verify bond strength and review for conformance to contract documents and approved submittals.
10. Other		

Form # P 04

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK

CITY OF PORTLAND

B[illegible]SPECTION

PERMIT

Permit Number: 071013

Please Read Application And Notes, If Any, Attached

PERMIT ISSUED

OCT 10 2007

CITY OF PORTLAND

This is to certify that OCEAN GATEWAY GARA[illegible] LLC /I[illegible] Constructi[illegible]

has permission to New 212, 000 Sq ft 720 Stall[illegible]king Ga[illegible]e w/ 5[illegible]0 Retail[illegible]ce

AT 167 FORE ST [illegible] 020 F001001

provided that the person or persons, [illegible]m or [illegible]ation [illegible]epting this permit shall comply of the provisions of the Statutes of M[illegible]ine and of th[illegible]ances of the City of Portland reg the construction, maintenance and u[illegible] of buildings and st[illegible]ctures, and of the application o this department.

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

N[illegible]ficatio[illegible] inspec[illegible]n must g[illegible]n and w[illegible]n permis[illegible]n procu b[illegible]re this [illegible]ding or [illegible]t thereo la[illegible]ed or c[illegible]losed-in, H[illegible]R NOTICE IS REQUIRED.

A certificate of occupancy procured by owner before th ing or part thereof is occupi

OTHER REQUIRED APPROVALS

Fire Dept. Greg Gast

Health Dept. _____

Appeal Board _____

Other _____

Department Name

Director - Building & Inspection Services

PENALTY FOR REMOVING THIS CARD

Scanned

TO: Inspections Department

FROM: Philip DiPierro, Development Review Coordinator

DATE: June 30, 2008

RE: C. of O. for #1 Fore Street, Ocean Gateway Garage (Id#2005-0271)(CBL 019 A 001001)

After visiting the site, I have the following comments:

Site work incomplete:

1. A plan for the design and application specifications for the mural on the north wall shall be provided to the Planning Authority for review and approval prior to July 30, 2008 and the mural will be installed prior to September 30, 2008.
2. Referencing the Bartlett Design lighting memo dated June 30, 2008 - Upon installation of the approved street lighting fixtures: the temporary lighting "A" fixtures will be removed; the "B" fixtures along Fore Street will be replaced with "D" fixtures as previously approved; the single "B" fixture along the west façade of the building may remain; and, a plan for reducing the under-canopy lighting illumination levels must be submitted for review and approval by the Planning Authority.,
3. Complete the installation and pinning of all monumentation,
4. 3 tree grates need adjustment/leveling,
5. Caulking of curb joints where necessary,
6. Install, repair, and/or replace sidewalk bricks where necessary,
7. Submit "As Built" drawings,
8. Miscellaneous site work,

I anticipate this work can be completed by **September 30, 2008**.
At this time, **I recommend issuing a temporary Certificate of Occupancy.**

Cc: Barbara Barhydt, Development Review Services Manager
Jeanie Bourke, Inspection Services Manager
File: Urban Insight

REPORT OF STRUCTURAL STEEL INSPECTION

CLIENT:	**Intercontinental Developers Inc.** **Attn: Mr. Richard Libardoni** **1270 Soldiers Road** **Boston, MA 02135-100**	**PROJECT:**	**Ocean Gateway Garage** **Portland, ME**
DATE:	**June 19, 2008**	**REPORT #:**	**07-SIS-117-080**

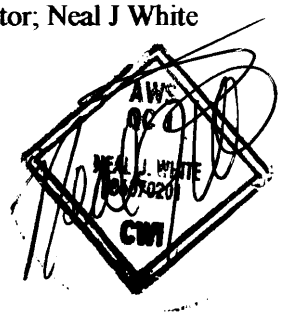
As requested, a site visit was made on this date to conduct a final inspection of structural steel framing.

All outstanding discrepancies were corrected and re-inspected.

This completes structural steel inspection on this project. Inspections were conducted in accordance with the Statement of Special Inspections and verbal directive form the Structural Engineer.

All work inspected conforms to contract documents and is acceptable.

Inspector; Neal J White



JOHN TURNER CONSULTING, INC.
T 603.749.1841 F 603-516-6851
19 DOVER STREET, DOVER, NH 03820

BUILDING PERMIT INSPECTION PROCEDURES

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

to schedule your inspections as agreed upon

Permits expire in 6 months, if the project is not started or ceases for 6 months.

The Owner or their designee is required to notify the inspections office for the following inspections and provide adequate notice. Notice must be called in 48-72 hours in advance in order to schedule an inspection:

By initializing at each inspection time, you are agreeing that you understand the inspection procedure and additional fees from a "Stop Work Order" and "Stop Work Order Release" will be incurred if the procedure is not followed as stated below.

A Pre-construction Meeting will take place upon receipt of your building permit.

✓	**Footing/Building Location Inspection:**	Prior to pouring concrete
✓	**Re-Bar Schedule Inspection:**	Prior to pouring concrete
✓	**Foundation Inspection:**	Prior to placing ANY backfill
✓	**Framing/Rough Plumbing/Electrical:**	Prior to any insulating or drywalling
✓	**Final/Certificate of Occupancy:**	Prior to any occupancy of the structure or use. NOTE: There is a $75.00 fee per inspection at this point.

Certificate of Occupancy is not required for certain projects. Your inspector can advise you if your project requires a Certificate of Occupancy. All projects **DO** require a final inspection

✓ **If any of the inspections do not occur, the project cannot go on to the next phase, REGARDLESS OF THE NOTICE OR CIRCUMSTANCES.**

✓ **CERIFICATE OF OCCUPANICES MUST BE ISSUED AND PAID FOR, BEFORE THE SPACE MAY BE OCCUPIED**

x Amanda Shean _____

Signature of Applicant/Designee Date

_____ 10.18.07

Signature of Inspections Official Date

CBL: 20 F 1 Building Permit #: 071013

City of Portland, Maine - Building or Use Permit Application

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

Permit No:	Issue Date:	CBL:
07-1013		020 F001001

Location of Construction:	Owner Name:	Owner Address:	Phone:
167 FORE ST	OCEAN GATEWAY GARAGE LL	2 MARKET ST STE 500	
Business Name:	**Contractor Name:**	**Contractor Address:**	**Phone**
	Ledgewood Construction	27 Maine St. So. Portland	2077671866
Lessee/Buyer's Name	**Phone:**	**Permit Type:** Commercial	**Zone:** B-5b

Past Use:	Proposed Use:
Vacant Land Per permit# 070309 & connected with the following CBLs 35 India (20C023) & 2 Buildings (Robbie Marine) 1 india (019 B02000) Old (019 A001 & 019 A014) 20 C009 = 020 F001 Please	New 720 Stall Parking Garage 212, 000 Sq ft w/ 5,070 Retail Space (tenant Fit-up(s) to to be applied for at a later date) Foundation permit ONly under #06-1824

Permit Fee:	Cost of Work:	CEO District:
$100,475.00	$10,037,612.00	1

FIRE DEPT: ✓ Approved / Denied — Signature: [signature]

INSPECTION: Use Group: S-2 Type: 2B — 10/14/07 — Signature: [signature]

Proposed Project Description:
New 212, 000 Sq ft 720 Stall Parking Garage w/ 5,070 Retail Space

PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)

Action: Approved / Approved w/Conditions / Denied

Signature: Date:

Permit Taken By:	Date Applied For:
ldobson	08/20/2007

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

Zoning Approval

Special Zone or Reviews	Zoning Appeal	Historic Preservation
Shoreland N/A	Variance	✓ Not in District or Landmark
Wetland	Miscellaneous	Does Not Require Review
Flood Zone Panel 14 Zone C	Conditional Use	Requires Review
Subdivision	X Interpretation concerning height	Approved
X Site Plan 2006-0235	X Approved	Approved w/Conditions
Maj X Minor MM	Denied	Denied
ok with conditions Date: 8/22/07	Date: 1/10/07	Date:

PERMIT ISSUED
OCT 10
CITY OF PORTLAND

CERTIFICATION

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

SIGNATURE OF APPLICANT | ADDRESS | DATE | PHONE

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

Schedule of Special Inspection Services

The following sheets comprise the required schedule of special inspections for this project. The construction divisions which require special inspections for this project are as follows:

- X Soils and Foundations
- X Cast-In-Place Concrete
- X Precast Concrete
- X Masonry
- X Structural Steel
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- X Spray Fire Resistive Material
- Wood Construction
- Exterior Insulation and Finish System
- Special Cases

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Statement of Special Inspections

Project:	**Ocean Gateway Parking Garage**
Location:	Portland, Maine
Owner:	Ocean Gateway Garage LLC*
Owner's Address:	2 Market Street, Suite 500, Portland ME 04101
Architect of Record:	Scott Simons Architects
Structural Engineer of Record:	Simon Design Engineering, LLC

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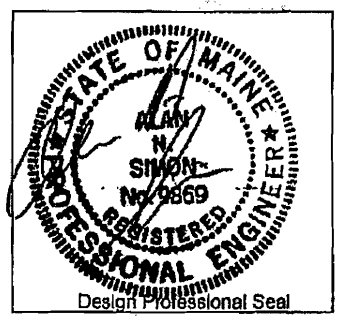
Job site safety, and means and methods of construction are solely the responsibility of the Contractor.

Interim Report Frequency: Monthly

Prepared by:

Alan H. Simon, P.E.

Signature 06/21/07 date



Design Professional Seal

Owner's Authorization:

Signature 8/15/7 date

Building Official's Acceptance:

Signature date

FROM DESIGNER: Simon Design Engineering, LLC

DATE: 12-21-06

Job Name: Ocean Gateway Parking Structure

Address of Construction:

2003 International Building Code

Construction project was designed according to the building code criteria listed below:

Building Code and Year IBC 2003 Use Group Classification(s) S-2

Type of Construction IIB

Will the Structure have a Fire suppression system in Accordance with Section 903.3.1 of the 2003 IBC: NFS - not required.

Is the Structure mixed use? NO if yes, separated or non separated (see Section 302.3) Seperated

Supervisory alarm system? ____ Geotechnical/Soils report required? (See Section 1802.2) yes

STRUCTURAL DESIGN CALCULATIONS

NO. Submitted for all structural members (106.1, 106.1.1)

DESIGN LOADS ON CONSTRUCTION DOCUMENTS (1603)

Uniformly distributed floor live loads (1603.1.1, 1607)

Floor Area Use	Loads Shown
PARKING DECK	40psf
STAIRS	100 psf / 300 lb/yd²
STORAGE	125 psf
EQUIPMENT RM	150 psf
LOBBIES	100 psf

20% Live load reduction (1603.1.1, 1607.9, 1607.10)

SNOW GOV. Roof live loads (1603.1.2, 1607.11)

Roof snow loads (7603.7.3,1608)

50psf Ground snow load, P_g (1608.2)

42 psf If P_g > 20 psf, flat-roof snow load, P_f (1608.3)

1.0 If P_f > 10 psf, snow exposure factor, C_e (Table 1608.3.1)

1.0 If P_g > 10 psf, snow load importance factor, I_s (Table 1604.5)

1.2 Roof thermal factor, C_t (Table 1608.3.2)

N/A Sloped roof snowload, P_s (1608.4)

B Seismic design category (1616.3)

OSMF Basic seismic-force-resisting system (Table 1617.6.2)

3/3 Response modification coefficient, R_I and deflection amplification factor, C_d (Table 1617.6.2)

ELFP Analysis procedure (1616.6, 1617.5)

805.9K Design base shear (1617.4, 1617.5.1)

Wind loads (1603.1.4, 1609)

ASCE 7 Design option utilized (1609.1.1, 1609.6)

100 mph Basic wind speed (1609.3)

1.00 Building category and wind importance factor, I_w (Table 1604.5, 1609.5)

D Wind exposure category (1609.4)

Ø Internal pressure coefficient (ASCE 7)

(psf) 37.2/-40.26 Component and cladding pressures (1609.1.1, 1609.6.2.2)

(psf) 31.57-37.8 Main force wind pressures (7603.1.1, 1609.6.2.1)

Flood loads (1603.1.5, 1612)

NO Flood hazard area (1612.3)

64 Elevation of structure

Earthquake design data (1603.1.5, 1614 - 1623)

____ Design option utilized (1614.1)

I Seismic use group ("Category") (Table 1604.5, 1616.2)

0.371/0.160 Spectral response coefficients, S_{DS} & S_{D1} (1615.1)

C Site class (1615.1.5)

Other loads

3000lb/4.5 sq AREA Concentrated loads (1607.4)

50plf Partition loads (1607.5)

6" Barrier Impact loads (1607.8)

____ Misc. loads (Table 1607.8, 1607.8.1, 1607.7, 1607.12, 1607.13, 1610, 1611, 2404)

PER 500 sf EFFECTIVE WIND AREA

STRUCTURAL MATERIALS (Chapters 19, 21, 22, 23)

CONCRETE (Chapter 19)

- Plain and reinforced concrete design/construction standard specified *(1901.2, 1908)*
- Construction documents *(1901.4)*
- Minimum concrete strength *(Table 1904.2.2[2])*
- Hot weather and cold weather curing specified *(1905.12,1905.13)*
- Seismic design *(1910)*
- Slab provisions *(1911)*

MASONRY (Chapter 21)

- Design method, construction standard specified *(2101.2)*
- Construction documents *(2101.3)*
- Construction materials *(2103)*
- Mortar type *(2103.7)*
- Cold weather and hot weather construction specified *(2104.3, 2104.4)*
- Seismic design *(2106)*
- Glass unit masonry *(2110)*
- Fireplaces/Heaters/Chimneys *(2111, 2112, 2113)*

STEEL (Chapter 22)

- Structural steel design/construction standard specified *(2205)*
- Open-web steel joist design/construction standard specified *(2206)*
- Steel cable structures *(2207)*
- Steel storage racks *(2208)*
- Cold-formed steel design/construction standard specified *(2209)*
- Light framed cold-formed steel design/construction standard specified *(2210)*
- Wind/seismic design of light-framed, cold-formed steel shear walls *(2211)*

WOOD (Chapter 23)

- Design method option used *(2301.2)*

MATERIAL STANDARDS / CONSTRUCTION REQUIREMENTS (2303 - 2306)

- Lumber *(2303.1.1)*
- Wood I-joists *(2303.1.2)*
- Glue laminated timbers *(2303.1.3)*
- Wood structural panels *(2303.1.4, 2304.6, 2304.7)*
- Fiber-, hard-, & particle-, boards *(2303.1.5 - 2303.1.7)*
- Decay and termite protection *(2303.1.8, 2304.11)*
- Structural composite lumber *(2303.1.9)*
- Fire-retardant-treated wood *(2303.2)*
- Hardwood plywood *(2303.3)*
- Metal plate connected trusses *(2303.4)*
- Joist hangers and connectors *(2303.5)*
- Fasteners and fastening *(2303.6, 2304.9, Table 2304.9.1)*
- Heavy timber construction *(2304.10)*
- Shear walls and diaphragms *(2305, 2306)*

CONVENTIONAL LIGHT-FRAME CONSTRUCTION (2308)

- Limitations satisfied *(2308.2)*
- Wind/Seismic requirements *(2308.2.1, 2308.2.2, 2308.11, 2308.12)*
- Braced walls *(2308.3, 2308.9.3)*
- Foundation anchorage *(2308.3.3, 2308.6)*
- Floor joists *(Tables 2308.8[1], 2308.8[2])*
- Wall studs *(Table 2308.9.1)*
- Girders *(Tables 2308.9.5, 2308.9.6)*
- Ceiling joists *(Tables 2308.10.2[1], 2308.10.2[2])*
- Roof rafters *(Tables 2308.10.3.[1] - 2308.10.3[6])*
- Roof uplift *(2308.10.1)*

Accessibility Building Code Certificate

Designer: SCOTT SIMONS ARCHITECTS

Address of Project: FORE & MIDDLE STREETS

Nature of Project: OCEAN GATEWAY PARKING GARAGE ARCHITECTURAL DRAWINGS & SPECIFICATIONS.

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.

(SEAL)

LICENSED ARCHITECT
SCOTT R. SIMONS
NO. 2084
STATE OF MAINE

Signature:

Title: President

Firm: SCOTT SIMONS ARCHITECTS

Address: 75 YORK STREET
PORTLAND, ME 04101

Phone: 207-772-4656

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

From:	MIke Nugent
To:	Lannie Dobson, Jeanie Bourke, scott@simonsarchitects.com
CC:	Spitts@ledgewoodconstruction.com
Date:	Saturday - September 29, 2007
Subject:	Re: FW: Ocean Gateway Garage 20 F001

I've completed my review have the following questions/comments:

1) Because the Code Compliance Certification for signed off on my Scott is limited to the Acrchitecturals and specs , the engineer must do a separate Cert. Form.

2) The "Page 3" Cert form does not call out the "M" use group just the "S2" please revise.

3) A separate permit for the fit up of the "M" space will be required.

4) The "Drop in Steel Stair" must meet all portions of the code for a "Normal " Stair.

5)Openess Calculations: Please provide a summary document for all 4 sides that simply say " The north elevation has XX% open areas and the code requires xx%" do the same with the linear percentages as well and this needs to be done for all 4 sides.Fill in the "xx's" of course with the actual net percentage...Subtract any doors, grills, meshes , guards etc.

6) Please help me understand how the guards will be particularly along the parking areas that abut the ramps.

7) Please provide Details and ul listing for all fire spearation assemblies.

8) Please confirm the net width of the East Stairway.

9) Please confir that the Stair treads will be at least 11 inches and the risers will not exceed 7 inches.

We're in pretty good shape to sign off before I go on vacation (Wednesday) if you get this info in on Monday. I'll Bring the permit to City Hall on Monday.

Thanks,

Mike Nugent
Consulting Plans Examiner
City of Portland

Scott Simons Architects

75 York Street
Portland, Maine 04101
phone 207 772 4656
fax 207 828 4656
www.simonsarchitects.com

MEMORANDUM

date: 8/31/2007
project: OCEAN GATEWAY GARAGE: 2005-0161
to: Steven M Pitts
Ledgewood Construction
27 Main Street
South Portland, ME 04106

phone: (207) 767-1866
fax: (207) 767-1869

subject: Inspections Conditions

1) SDE to provide Code Compliance Certificate.

2) LC to modify application

3) OK

4) The drop in metal stair meets as applicable codes. - per steve pitts 7"-11"

5) See attached openness calculations

6) See sheet A603 for typical details and section of a guard rail.

7) 1 HR & 2 HR CMU Walls UL design U905 typical.

8) Net width of East stair
Between Guards: 3'-9 ¾"
Between Handrails: 3'-2 ¼"
Handicapped emergency egress on east side is via the elevator so wider stairs are not required.

9) Stair treads and risers
Stair treads: 11" deep
Stair risers: 7" max

Certificate of Design

Date: August 7, 2007

From: Scott Simons Architects

These plans and / or specifications covering construction work on:

Ocean Gateway Garage

Architectural Drawings and Specifications

Have been designed and drawn up by the undersigned, a Maine registered Architect / Engineer according to the ***2003 International Building Code*** and local amendments.

(SEAL)

LICENSED ARCHITECT
SCOTT R. SIMONS
NO. 2064
STATE OF MAINE

Signature:

Title: President

Firm: Scott Simons Architects

Address: 75 York Street

Portland, ME 04101

Phone: 207-772-4656

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

Certificate of Design Application

From Designer: SIMON DESIGN ENGINEERING, LLC

Date: 12.21.06

Job Name: OCEAN GATEWAY GARAGE

Address of Construction: MIDDLE ST, PORTLAND, ME 04101

2003 International Building Code

Construction project was designed to the building code criteria listed below:

Building Code & Year IBC 2003 Use Group Classification (s) S-2

Type of Construction IIB

Will the Structure have a Fire suppression system in Accordance with Section 903.3.1 of the 2003 IRC HOT RQD

Is the Structure mixed use? YES If yes, separated or non separated or non separated (section 302.3) SEP.

Supervisory alarm System? _____ Geotechnical/Soils report required? (See Section 1802.2) YES

Structural Design Calculations

No. Submitted for all structural members (106.1 – 106.11)

Design Loads on Construction Documents (1603)

Uniformly distributed floor live loads (7603.11, 1807)

Floor Area Use	Loads Shown
PARKING DECK	40 psf
STAIRS	100 psf / 300#/4"
STORAGE	125 psf
EQUIP RM	150 psf
LOBBY	100 psf

Wind loads (1603.1.4, 1609)

ASCE 7 Design option utilized (1609.1.1, 1609.6)

100 mph Basic wind speed (1809.3)

1.00 Building category and wind importance Factor, I_w table 1604.5, 1609.5)

D Wind exposure category (1609.4)

ϕ Internal pressure coefficient (ASCE 7)

37.2/-40.3 psf Component and cladding pressures (1609.1.1, 1609.6.2.2)

31.5/-37.8 psf Main force wind pressures (7603.1.1, 1609.6.2.1) — PER 500 sf EFF WIND AREA

Earth design data (1603.1.5, 1614-1623)

_____ Design option utilized (1614.1)

I Seismic use group ("Category")

0.371/0.160 Spectral response coefficients, SDs & SD1 (1615.1)

C Site class (1615.1.5)

20% Live load reduction

SNOW Roof *live* loads (1603.1.2, 1607.11)

_____ Roof snow loads (1603.7.3, 1608)

50 psf Ground snow load, P_g (1608.2)

42 psf If P_g > 10 psf, flat-roof snow load P_f

1.0 If P_g > 10 psf, snow exposure factor, C_e

1.0 If P_g > 10 psf, snow load importance factor, I_r

1.2 Roof thermal factor, C_t (1608.4)

N/A Sloped roof snowload, P_s (1608.4)

B Seismic design category (1616.3)

OSMF Basic seismic force resisting system (1617.6.2)

3/3 Response modification coefficient, R_I and deflection amplification factor C_d (1617.6.2)

FELFP Analysis procedure (1616.6, 1617.5)

805.9K Design base shear (1617.4, 16175.5.1)

Flood loads (1803.1.6, 1612)

No. Flood Hazard area (1612.3)

24 Elevation of structure

Other loads

3000#/4.5"² Concentrated loads (1607.4)

50 plf Partition loads (1607.5)

_____ Misc. loads (Table 1607.8, 1607.6.1, 1607.7, 1607.12, 1607.13, 1610, 1611, 2404)

OCCUPANT NEEDS (Chapters 10, 11, 12)

MEANS OF EGRESS (Chapter 10)

OCCUPANT LOAD *(1004.1.2 and Table 1004.1.2)*

Location	Floor Area	+	Sq.ft./ person	=	Occt. load	Other occt. loads	Total
1ST RETAIL AREA	3800 SQ.FT.	÷	60				64
1ST PARKING AREA	15,000 SQ.FT.	÷	200				75
2ND	30,383	÷	200				152
THRU							152
7TH							152
							152
							152
							152

CAPACITY OF EGRESS COMPONENTS *(1005.1 and Table 1005.1)*

Egress width (inch/occupant)

Stairways .2 - 30" REQUIRED PER FLOOR

Other egress components .15 - 22" REQUIRED PER FLOOR.

CAPACITY

Location	Stairways	Other egress components
ALL	EAST 44" WEST 56"	36" DOORS

NUMBER OF EXITS *(1018.1, 1018.2)*

Location	Required	Shown
ALL	2	2

MEANS OF EGRESS (continued)

GENERAL MEANS OF EGRESS

- ✓ Design requirements *(1003.2 - 1003.7)*
- ✓ Means of egress illumination *(1006)*
- ✓ Exit signs *(1011)*
- ✓ Accessible means of egress *(1007)*
- ✓ Means of egress doors *(1008.1-1008.1.2)*
- NA Special doors/Gates/Turnstiles *(1008.1.3, 1008.2, 1008.3)*
- ✓ Door landings/Thresholds/Arrangement *(1008.1.4 -1008.1.7)*
- ✓ Door hardware *(1008.1.8, 1008.1.9)*
- ✓ Stairways *(1009)*
- ✓ Handrails *(1009.11)*
- ✓ Roof access *(1009.12)*
- ✓ Ramps *(1010)*
- ✓ Guards *(1012)*

EXIT ACCESS

- ✓ Door number and arrangement *(1013.2, 1014.1, 1014.2)*
- > 300' or Exit access travel distance *(1013.3, 1015.1)*
- NA Aisles *(1013.4)*
- o/A Egress balconies *(1013.5, 1015.3)*
- N/A Corridors *(1016)*
- N/A Air movement in corridors *(1016.4)*

EXITS / EXIT DISCHARGE

- ✓ Exits/Exit doors *(1017, 1018)*
- ✓ Interior exit stairways *(1019)*
- ✓ Exit passageways *(1020)*
- ✓ Horizontal exits *(1021)*
- ✓ Exterior exit ramps/stairways *(1022)*
- ✓ Exit discharge *(1023)*

OTHER MEANS OF EGRESS

- N Miscellaneous egress requirements *(1014.3 - 1014.6)*
- N Bleachers *(1024.1.1)*
- ✓ Assembly exits & egress *(1024.2 - 1024.5)*
- N Assembly aisles & features *(1024.6 -1024.15)*
- N Emergency escape and rescue *(1025)*

ACCESSIBILITY* (Chapter 11)

PER STATE FIRE + SEE ARCH CERT FORM

- ✓ Scoping requirements *(1103)*
- ✓ Accessible route *(1104)*
- ✓ Accessible entrances *(1105)*
- ✓ Parking and passenger loading *(1106)*
- ✓ Dwelling units and sleeping units *(1107)*
- ✓ Special occupancies *(1108)*
- ✓ Features and facilities *(1109)*
- ✓ Signage *(1110)*

*Also see Accessibility Plan Review Record

INTERIOR ENVIRONMENT (Chapter 12)

_____ Ventilation openings *(1203)*

_____ Temperature control *(1204)*

_____ Lighting *(1205)*

_____ Yards or courts *(1206)*

_____ Sound transmission *(1207)*

_____ Interior space dimensions *(1208)*

_____ Access to unoccupied spaces *(1209)*

_____ Surrounding materials *(1210, 2509)*

BUILDING ENVELOPE (Chapters 13*, 14, 15)

*See Energy Conservation Code Plan Review Record

EXTERIOR WALLS (Chapter 14)

_____ Performance requirements *(1403)*

_____ Materials *(1404)*

_____ Exterior wall coverings/MCM's *(1405, 1407)*

_____ Combustible material restrictions *(1406)*

ROOF ASSEMBLIES AND ROOFTOP STRUCTURES (Chapter 15)

N/A Weather protection *(1503)*

_____ Flashing *(1503.2, 1507.2.9, 1507.3.9, 1507.5.6, 1507.7.6, 1507.8.7, 1507.9.8)*

_____ Performance requirements *(1504)*

_____ Fire classification *(1505)*

N/A Materials *(1506)*

_____ Roof coverings *(1507)*

_____ Roof insulation *(1508)*

_____ Rooftop structures *(1509)*

_____ Reroofing *(1510)*

STRUCTURAL SYSTEMS (Chapters 16, 17, 18)

STRUCTURAL DESIGN (Chapter 16)

STRUCTURAL DESIGN CALCULATIONS

_____ Submitted for all structural members *(106.1, 106.1.1)*

DESIGN LOADS ON CONSTRUCTION DOCUMENTS (1603)

Uniformly distributed floor live loads *(1603.1.1, 1607)*

Floor Area Use	Loads Shown

_____ Live load reduction *(1603.1.1, 1607.9, 1607.10)*

_____ Roof live loads *(1603.1.2, 1607.11)*

Roof snow loads *(1603.1.3, 1608)*

_____ Ground snow load, P_g *(1608.2)*

_____ If P_g > 10 psf, flat-roof snow load, P_f *(1608.3)*

_____ If P_g > 10 psf, snow exposure factor, C_e *(Table 1608.3.1)*

_____ If P_g > 10 psf, snow load importance factor, I_s *(Table 1604.5)*

_____ Roof thermal factor, C_t *(Table 1608.3.2)*

_____ Sloped roof snowload, P_s *(1608.4)*

DESIGN LOADS (continued)

Wind loads *(1603.1.4, 1609)*

- Design option utilized *(1609.1.1, 1609.6)*
- Basic wind speed *(1609.3)*
- Building category and wind importance factor, I_w *(Table 1604.5, 1609.5)*
- Wind exposure category *(1609.4)*
- Internal pressure coefficient *(ASCE 7)*
- Component and cladding pressures *(1609.1.1, 1609.6.2.2)*
- Main force wind pressures *(1609.1.1, 1609.6.2.1)*

Earthquake design data *(1603.1.5, 1614 - 1623)*

- Design option utilized *(1614.1)*
- Seismic use group ("Category") *(Table 1604.5, 1616.2)*
- Spectral response coefficients, S_{DS} & S_{D1} *(1615.1)*
- Site class *(1615.1.5)*
- Seismic design category *(1616.3)*
- Basic seismic-force-resisting system *(Table 1617.6.2)*
- Response modification coefficient, *R*, and deflection amplification factor, C_d *(Table 1617.6.2)*
- Analysis procedure *(1616.6, 1617.5)*
- Design base shear *(1617.4, 1617.5.1)*

Flood loads *(1603.1.6, 1612)*

- Flood hazard area *(1612.3)*
- Elevation of structure

Other loads

- Concentrated loads *(1607.4)*
- Partition loads *(1607.5)*
- Impact loads *(1607.8)*
- Misc. loads (*Table 1607.6, 1607.6.1, 1607.7, 1607.12, 1607.13, 1610, 1611, 2404)*

QUALITY ASSURANCE (Chapter 17)

- Approvals/Research report(s) *(1703, 1703.4.2)* Report No._____
- Owner's special inspection program specified *(1704.1.1)*
- Prefabricated items *(1704.2)*
- Steel construction *(1704.3)*
- Concrete construction *(1704.4)*
- Masonry construction *(1704.5)*
- Wood construction *(1704.6)*
- Prepared fill and foundations *(1704.7, 1704.8, 1704.9)*
- Wall panels and veneers/EIFS *(1704.10, 1704.12)*
- Sprayed fire-resistant materials *(1704.11)*
- Quality assurance plan - Seismic/Wind *(1705, 1706)*
- Seismic resistance *(1707)*
- Structural testing/Observations (seismic) *(1708, 1709)*
- Testing (other) *(1710 - 1715)*

SOILS AND FOUNDATIONS (Chapter 18)

- Soils investigations/Reports *(1802.1, 1802.6)*
- Soil classification *(1802.3)*
- Excavation, grading and fill *(1803)*
- Load-bearing values *(1804)*
- Footings and foundations *(1805)*
- Retaining walls *(1806)*
- Dampproofing and waterproofing *(1807)*
- Foundations (other types) *(1808 - 1812)*

OCEAN GATEWAY GARAGE

NOTES: N.R. — Not required
N.A. — Not applicable

071013 2 of 001

ADMINISTRATION (Chapter 1)

✓ Complete construction documents *(106.1, 106.2)* ✓ Signed/sealed construction documents *(106.1. State laws vary)*

BUILDING PLANNING (Chapters 3, 4, 5, 6)

OCCUPANCY CLASSIFICATION (302.0-312.0)

Single Occupancy *(302.1)* Incidental use areas *(302.1.1)*

✓ Mixed Occupancy *(302.3)* Accessory use areas *(302.2)*

GENERAL BUILDING LIMITATIONS (Chapters 5 & 6)

Apply Case 1 to determine the allowable height and area and permitted types of construction for a building containing a single occupancy or nonseparated mixed occupancies. Apply Case 2 to determine the allowable height and area and permitted types of construction for a building containing separated mixed occupancies.

AREA MODIFICATIONS TO TABLE 503

% of Allowable tabular area, A_t *(Table 503)* 100%

% Increase for frontage I_f *(506.2)* ___ %

% Increase for automatic sprinklers, I_s *(506.3)* ___ %

Total percentage factor = ___ %

Conversion factor ___ 100 ONLY

Total percentage factor ÷ 100%

Frontage *(506.2)* ___ North ___ East ___ South ___ West

Total Frontage *(F)* ___ ft. Perimeter *(P)* ___ ft.

Width of open space *(W)* = ___

% Frontage increase (I_f) = ___ *(506.2)*

$$I_f = 100\left[\frac{F}{P} - 0.25\right]\frac{W}{30}$$

CASE 1 — SINGLE OCCUPANCY OR NONSEPARATED USES (302.3.1)

Using Table 503, identify the allowable height and area of the single occupancy or the most restrictive of the nonseparated mixed occupancies. Construction types that provide an allowable tabular area equal to or greater than the adjusted building area and allowable heights (as modified by Section 504) equal to or greater than the actual building height are permitted.

DETERMINE CONSTRUCTION TYPE

Actual building area 30,383 ft²

ALLOWABLE PER TABLE 406.3.5

~~Adjusted~~ building area 50,000 ft²
actual building area ÷ conversion factor

Actual building height ___ feet 7 TIERS stories

Allowable building height ALLOWABLE ___ feet 8 TIERS stories

Permitted types of construction 2B + UP

Type of construction assumed for review *(602.1.1)* 2B

CHECK ALLOWABLE AREA (506.4)

Allowable area per floor (A_a)

___ × ___ = ___ ft²
conversion factor tabular area *(Table 503)*

Total floor area (all stories) ___ ft²

Allowable floor area (all stories)

___ × ___ = ___ ft²
Allowable area per floor (A_a) number of stories (maximum 3)

Compliance verified (Single Occ. or Nonsep.) ✓

EXTERIOR WALLS (continued) NO OPENINGS

☑ NORTH WALL Opening protection *(704.8, 704.12, 704.14)*

☑ ✓ EXEMPT Vertical fire spread protection *(704.9, 704.10)*

☑ ✓ Parapets *(704.11)*

FIRE BARRIERS (706)

☐ Shaft enclosures *(706.3.1)* NEED

☐ Exit enclosures *(706.3.2, 706.3.3)*

☐ Horizontal exits *(706.3.4)*

☐ Incidental use areas *(706.3.5)*

☐ Mixed occupancy and fire area separations *(706.3.6, 706.3.7)*

SHAFTS (707)

☐ Exceptions *(707.2)*

☐ Construction *(707.3 - 707.14)*

OTHER FIRE RESISTANT CONSTRUCTION

☐ Fire walls *(705)*

☐ Fire partitions *(708)*

☐ Smoke barriers *(709)*

Smoke partitions *(710)*

Penetrations *(712)*

Fire resistant joint systems *(713)*

Opening protectives *(715)*

Dampers *(716)*

Concealed spaces *(717)*

Thermal and sound-insulating materials *(719)*

INTERIOR FINISHES (Chapter 8)

NONE

Smoke development *(803.1)*

Flame spread *(803.1)*

Non-textile finish *(803.2)*

NONE

Floor finish *(804)*

Decorations and trim *(805)*

FIRE PROTECTION (Chapter 9)

AUTOMATIC SPRINKLER SYSTEMS (903)
(Where required)

Assembly (A-1, A-2, A-3, A-4, A-5) *(903.2.1)*

Educational (E) *(903.2.2)*

Factory/Industrial (F-1) *(903.2.3)*

High-hazard (H-1, H-2, H-3, H-4, H-5) *(903.2.4)*

Institutional (I-1, I-2, I-3, I-4) *(407.5, 903.2.5)*

Mercantile (M) *(903.2.6)*

Residential (R) *(903.2.7)*

Storage/Repair garage (S-1) *(903.2.8)*

✓ STANDPIPE ONLY Parking garages *(903.2.9)* NO SPRINKLERS NOT REQUIRED

Windowless story *(903.2.10.1)*

Rubbish and linen chutes *(903.2.10.2)*

Buildings over 55 ft. high *(903.2.10.3)*

Incidental use areas *(302.1.1)*

THEY PROVIDING ARE SPRINKLER NOT REQUIRED

N/A

Additional required systems *(Table 903.2.13)*

International Fire Code *(IFC 903.2.13)*

AUTOMATIC SPRINKLER SYSTEMS* (903)
(Design)

N/A

Shop drawings *(106.1.1.1)*

NFPA 13 system *(903.3.1.1)*

NFPA 13R system *(903.3.1.2)*

NFPA 13D system *(903.3.1.3)*

Quick-response and residential heads *(903.3.2)*

Actuation *(903.3.4)*

Water suply *(903.3.5)*

Hose connections *(903.3.6, 903.3.7)*

Sprinkler monitoring and alarms *(903.4, 907.13)*

* Also see Fire Code Sprinkler Plan Review Record

ALTERNATIVE AUTOMATIC FIRE-EXTINGUISHING SYSTEMS (904)

- Installation *(904.3)*
- Wet-chemical systems *(904.5)*
- Dry-chemical systems *(904.6)*
- Foam systems *(904.7)*
- Carbon dioxide systems *(904.8)*
- Halon systems *(904.9)*
- Clean-agent systems *(904.10)*
- Commercial cooking systems *(904.2.1, 904.11)*

STANDPIPE SYSTEMS (905)

- Installation standards *(905.2)*
- Building height *(905.3.1)*
- Group A *(905.3.2)*
- Covered malls *(905.3.3)*
- Stages *(905.3.4)*
- Underground buildings *(905.3.5)*
- Helistops/heliports *(905.3.6)*
- Hose connections and locations *(905.1, 905.4, 905.5, 905.6)*
- Cabinets *(905.7)*
- Dry standpipes *(905.8)*
- Valve supervision *(905.9)*

PORTABLE FIRE EXTINGUISHERS (906)

- Required locations - IFC *(906.1)*

FIRE ALARM AND DETECTION SYSTEMS (907) (Where required)

- Construction documents *(907.1.1)*
- Assembly (A-1, A-2, A-3, A-4, A-5) *(907.2.1)*
- Business (B) *(907.2.2)*
- Educational (E) *(907.2.3)*
- Factory (F-1, F-2) *(907.2.4)*
- High-hazard (H-1, H-2, H-3, H-4, H-5) *(907.2.5)*
- Institutional (I-1, I-2, I-3, I-4) *(907.2.6)*
- Mercantile (M) *(907.2.7)*
- Residential (R-1, R-2) *(907.2.8, 907.2.9)*
- Single/multiple station smoke alarms *(907.2.10)*
- High rise buildings *(907.2.12)*
- Atriums *(907.2.13)*
- Other buildings/areas *(907.2.11, 907.2.14 - 907.2.23)*

FIRE ALARM AND DETECTION SYSTEMS (907) (Design)

- Residential smoke alarm power source *(907.2.10.2)*
- Residential smoke alarm interconnection *(907.2.10.3)*
- Location/Power supply/Wiring *(907.3 - 907.5)*
- Activation/Presignal/Zones *(907.6 - 907.8)*
- Alarm notification appliances *(907.9)*
- Detectors *(907.10 - 907.12)*
- Monitoring *(907.14)*

EMERGENCY ALARM SYSTEMS (908)

- Detection system applicable *(908.1 - 908.6)*

SMOKE CONTROL SYSTEMS (909)

- Where required *(402.9, 404.4, 405.5, 408.8, 410.3.7.2, 1019.1.8, 1024.6.2.1)*
- Design requirements *(909.1 - 909.4)*
- Smoke barriers *(909.5)*
- Pressurization method *(909.6)*
- Airflow method *(909.7)*
- Exhaust method *(909.8)*
- Equipment/Power *(909.10, 909.11)*
- Detection and control *(909.12 - 909.18)*
- Smokeproof enclosures *(909.20)*
- Underground buildings *(909.21)*

SMOKE AND HEAT VENTS (910)

- Requirements *(910.1 - 910.3)*
- Mechanical alternative *(910.4)*

FIRE COMMAND CENTER (911)

- Features *(911.1)*

HIGH-RISE BUILDINGS (403)

- Automatic sprinkler system *(403.2)*
- Fire-resistance rating reduction *(403.3)*
- Automatic fire detection *(403.5)*
- Emergency voice/alarm systems *(403.6)*
- Fire department communication *(403.7)*
- Fire command center *(403.8)*
- Elevators *(403.9)*
- Standby power *(403.10)*
- Emergency power *(403.11)*
- Stairway doors *(403.12)*
- Smokeproof exit *(403.13)*

ATRIUMS (404)

- Atrium use *(404.2)*
- Automatic sprinkler system *(404.3)*
- Smoke control *(404.4)*
- Enclosure *(404.5)*
- Standby power *(404.6)*
- Interior finish *(404.7)*
- Travel distance *(404.8)*

OTHER SPECIAL USE AND OCCUPANCY

- NA — Underground structures *(405)*
- Motor vehicle related occupancies *(406, 508)*
- Group I-2 *(407)*
- Group I-3 *(408)*
- Motion picture projection rooms *(409)*
- Stages and platforms *(410)*
- Special amusement buildings *(411)*
- Aircraft-related occupancies *(412)*
- Combustible storage *(413)*
- Hazardous materials *(307.9, 414)*
- Groups H-1, H-2, H-3, H-4, and H-5 *(415)*
- Application of flammable finishes *(416)*
- Drying rooms *(417)*
- Organic coatings manufacturing *(418)*

FIRE PROTECTION (Chapters 6, 7, 8, 9)

FIRE-RESISTANCE-RATED CONSTRUCTION (Tables 601 & 602 and Chapter 7)

Note: Entry in ☐ indicates required rating in hours. NC indicates noncombustible construction required.

2B — Construction classification *(602)*

COMBUSTIBILITY (602.2, 602.3, 602.4, 602.5, 603)

2 (0) NONE — Exterior walls

0 — Interior elements

0 — Roof

FIRE-RESISTANCE RATINGS AND FIRE TESTS (703)

- Ratings / Combustibility *(703.2, 703.4)*
- Alternative methods *(703.3, 718, 720, 721)*

EXTERIOR BEARING WALLS ARE 2HR
NO WALLS JUST COLUMNS

BUILDING ELEMENTS (Table 601)

- [0] 0 — Structural frame *(714)*
- [0] 0 — Interior bearing walls
- [0] 0 — Interior nonbearing walls
- [0] 0 — Floor construction *(711)*
- [0] 0 — Roof construction *(711)*

EXTERIOR WALLS (507, Table 602, 704, 706.6)

	North	East	South	West
Fire separation distance	0	HANCOCK ST.	FOREST	>30'
Bearing	[1] 1	[0] 0	[0] 0	[0] 0
Nonbearing	[0] 1	[0] 0	[0] 0	[0] 0

PowerProducts™
"THE POWER SOURCE"
Division of New England Detroit Diesel-Allison, Inc.

Power Products
81 Bay State Road
Wakefield, MA 01880
Tel 781-246-1811
Fax 781-246-5321

Branch
432 Warren Avenue
Portland, ME 04103
Tel 207-797-5950
Fax 207-797-5953

June 26, 2008

Mr. Joe Bradley
E.S. Boulos
45 Bradley Drive
Westbrook, Maine 04092

Subject: Ocean Gateway Garage

Dear Joe,

The Kohler Model 100 RZG Emergency Generator Set System (S/N # 2199551) meets all UL2200 and NFPA 110 requirements for emergency back up power for this site. The complete system was tested on June 11, 2008 and meets all Kohler design requirements for factory warranty application.

Kohler built the standby system to the engineer's specifications and requirements.

Sincerely,

Tom Peacock\
Power Generation Sales

DEAN & ALLYN, INC.

FIRE PROTECTION • SPECIAL HAZARD

8 ALLING DRIVE • P.O. BOX 709
GRAY, MAINE 04039
TEL. 207/657-5646 FAX 207/657-5647

CERTIFICATE OF COMPLIANCE

June 25, 2008

Re: Ocean Gateway
Dean & Allyn Contract Number: C0707723
Ledgewood Construction Job Number: 07559

The Fire Protection systems for the Ocean Gateway project were designed and installed in accordance with current NFPA standards and State of Maine requirements.

Dean & Allyn, Inc.

Peggy D. Stewart
President

Melissa C. Elkanich
Notary Public State of Maine

MELISSA C ELKANICH
Notary Public-Maine
My Commission Expires
August 16, 2012

PROTECTION PROFESSIONALS
SINCE 1986

FIRE ALARM SYSTEMS
&
INTEGRATED SECURITY SOLUTIONS

325 U.S. Rte. 1, Falmouth, ME 04105 • Phone 207-775-5755 • Fax 207- 781-2064 • mail@protectionprofessionals.biz

City of Portland
Fire Department
Portland, Maine

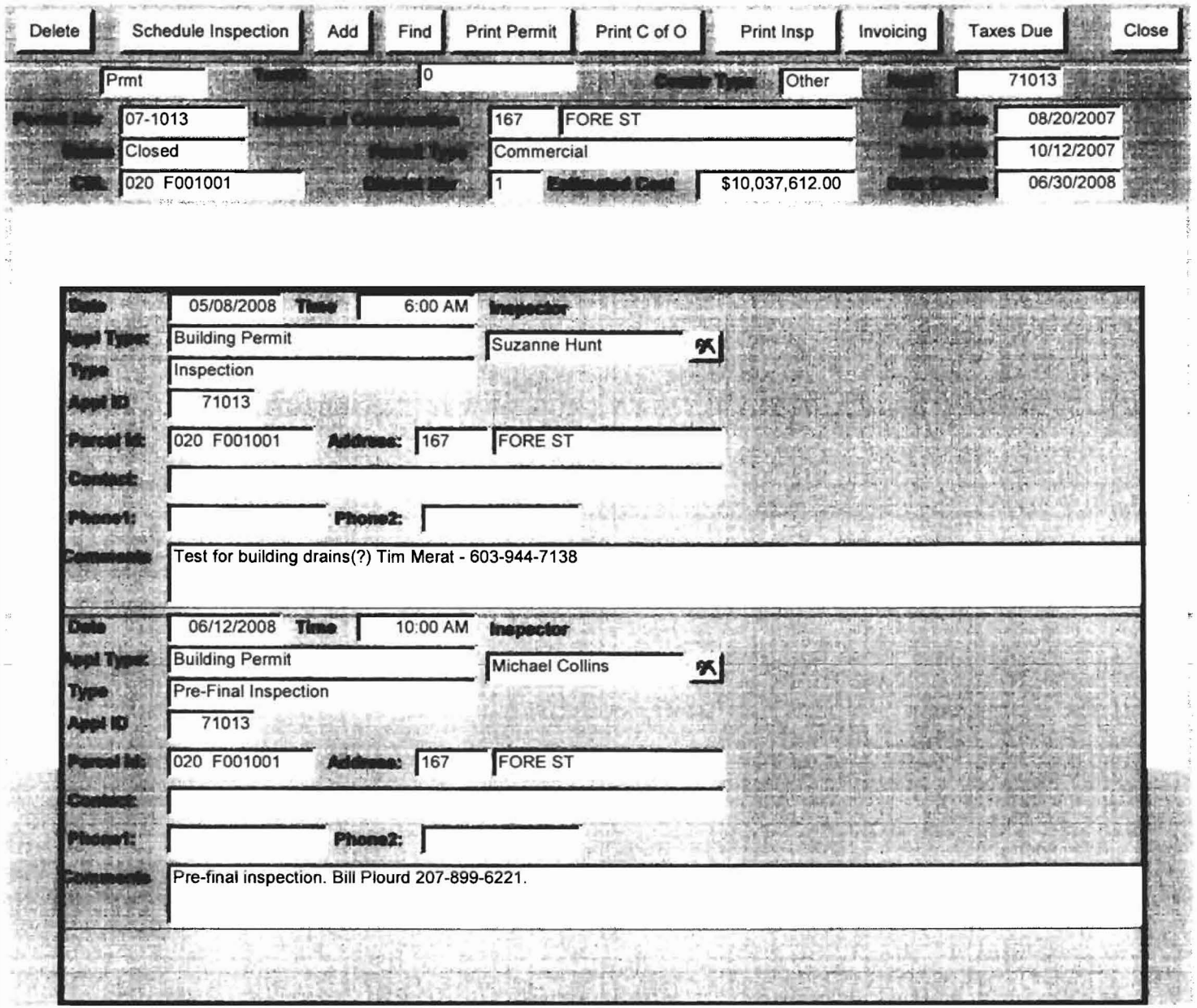
June 26, 2008

To Whom It May Concern:

This letter is to acknowledge that Protection Professionals has verified that the fire alarm system at the Ocean Gateway Garage at 163 Fore Street in Portland, Maine meets National Fire Protection Association 72 for Remote Station Systems.

Sincerely yours,

Steve Andrews
Operation Manager


Delete
Schedule Inspection
Add
Find
Print Permit
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Other
71013
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167
FORE ST
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1
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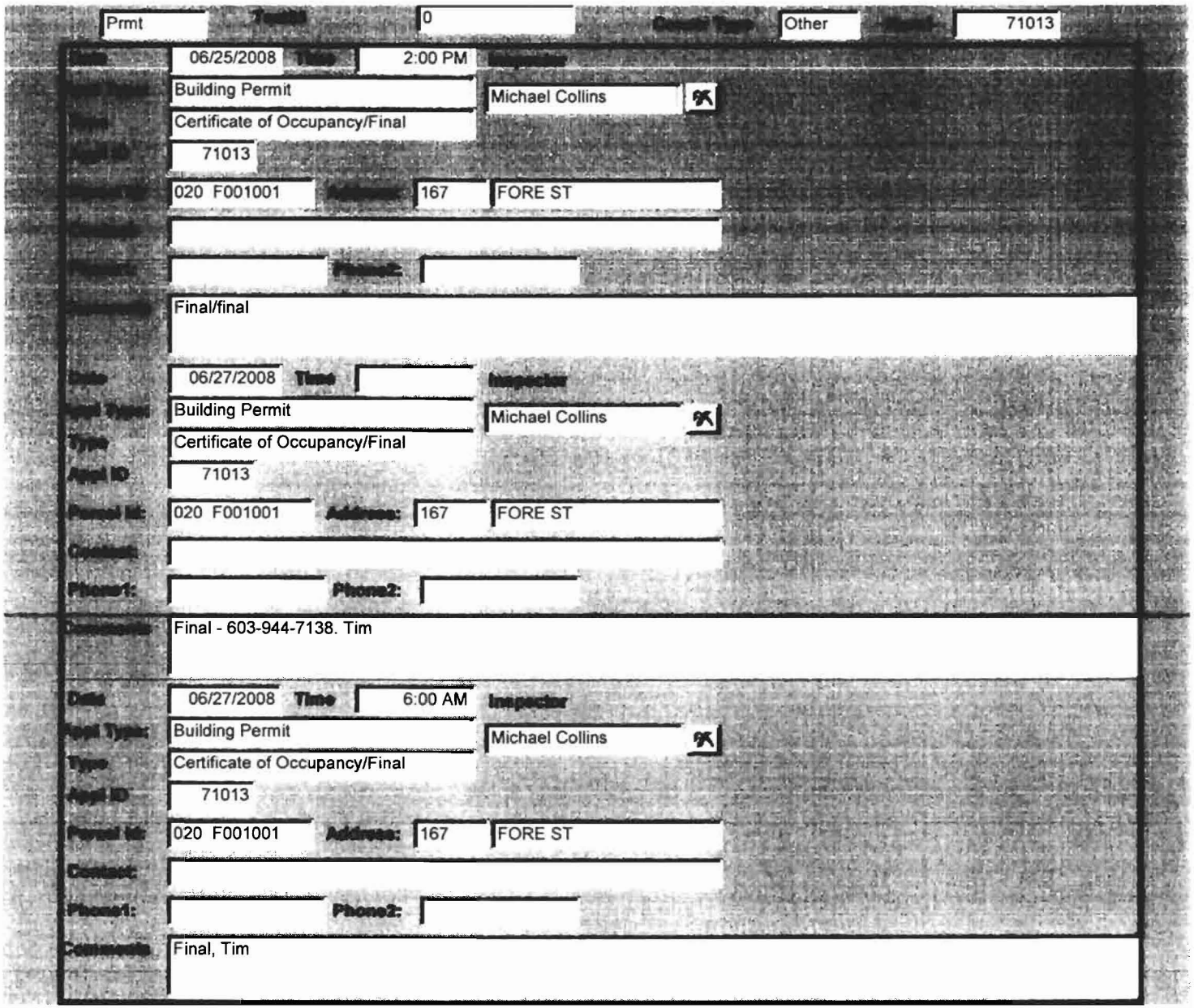
Time
6:00 AM
Inspector
Appl Type:
Building Permit
Suzanne Hunt
Type
Inspection
Appt ID
71013
Parcel Id:
020 F001001
Address:
167
FORE ST
Contact:
Phone1:
Phone2:
Comments
Test for building drains(?) Tim Merat - 603-944-7138
Date
06/12/2008
Time
10:00 AM
Inspector
Appl Type:
Building Permit
Michael Collins
Type
Pre-Final Inspection
Appt ID
71013
Parcel Id:
020 F001001
Address:
167
FORE ST
Contact:
Phone1:
Phone2:
Comments
Pre-final inspection. Bill Plourd 207-899-6221.



Prmt | 0 | Other | 71013

06/25/2008 | 2:00 PM

Building Permit | Michael Collins

Certificate of Occupancy/Final

71013

020 F001001 | 167 | FORE ST

Final/final

06/27/2008

Building Permit | Michael Collins

Certificate of Occupancy/Final

71013

020 F001001 | 167 | FORE ST

Final - 603-944-7138. Tim

06/27/2008 | Time: 6:00 AM | Inspector

Building Permit | Michael Collins

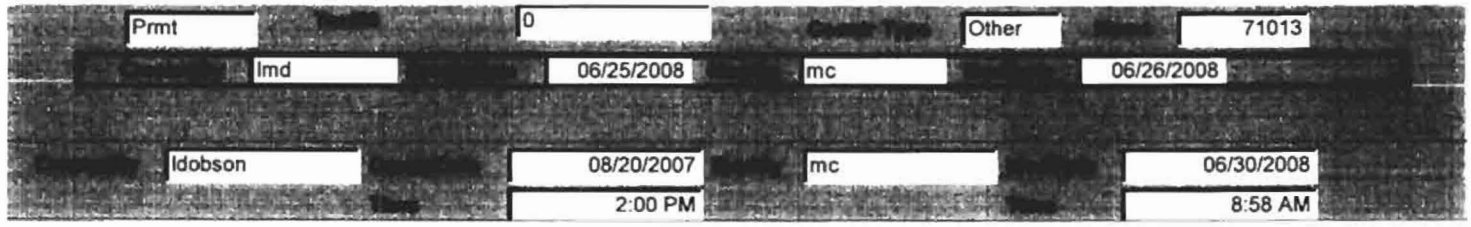
Certificate of Occupancy/Final

71013

020 F001001 | Address: 167 | FORE ST

Phone2:

Final, Tim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Other
71013
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06/25/2008
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ldobson
08/20/2007
2:00 PM
mc
06/30/2008
8:58 AM

City of Portland, Maine - Building or Use Permit

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

Permit No:	Date Applied For:	CBL:
07-1013	08/20/2007	020 F001001

Location of Construction:	Owner Name:	Owner Address:	Phone:
167 FORE ST	OCEAN GATEWAY GARAGE LL	2 MARKET ST STE 500	
Business Name:	**Contractor Name:**	**Contractor Address:**	**Phone**
	Ledgewood Construction	27 Maine St. So. Portland	(207) 767-1866
Lessee/Buyer's Name	**Phone:**	**Permit Type:**	
		Commercial	

Proposed Use:	Proposed Project Description:
New 720 Stall Parking Garage 212, 000 Sq ft w/ 5,070 Retail Space (tenant Fit-up(s) to to be applied for at a later date)	New 212, 000 Sq ft 720 Stall Parking Garage w/ 5,070 Retail Space

Dept: Zoning **Status:** Approved with Conditions **Reviewer:** Marge Schmuckal **Approval Date:** 08/22/2007

Note: **Ok to Issue:** ☑

1) separate permits shall be required for the tenant fit-ups for retail.
2) Separate permits shall be required for any new signage.
3) All previous conditions of approval are still in force.
4) This permit is being approved on the basis of plans submitted. Any deviations shall require a separate approval before starting that work.

Dept: Building **Status:** Approved **Reviewer:** Mike Nugent **Approval Date:** 10/15/2007

Note: **Ok to Issue:** ☑

Dept: Fire **Status:** Approved with Conditions **Reviewer:** Capt Greg Cass **Approval Date:** 08/23/2007

Note: **Ok to Issue:** ☑

1) Application requires State Fire Marshal approval.
2) Installation of a Fire Alarm system requires a Knox Box to be installed per city crdinance
3) Standpipe system shall comply with NFPA 14,
4) Occupancies with an occupant load of 100 persons or more require panic harware on all doors serving as a means of egress.

Dept: Fire **Status:** Approved with Conditions **Reviewer:** Cptn Greg Cass **Approval Date:** 12/29/2005

Note: **Ok to Issue:** ☐

1) Life safety plan to be submitted.
To include NFPA 101 fact sheet, ie; all rated seperations, travel distance's, life safety features.
Location of fire dept. Connections

Dept: Planning **Status:** Approved with Conditions **Reviewer:** Bill Needelman **Approval Date:** 04/25/2006

Note: **Ok to Issue:** ☐

Location of Construction:	Owner Name:	Owner Address:	Phone:
167 FORE ST	OCEAN GATEWAY GARAGE LL	2 MARKET ST STE 500	
Business Name:	**Contractor Name:**	**Contractor Address:**	**Phone**
	Ledgewood Construction	27 Maine St. So. Portland	(207) 767-1866
Lessee/Buyer's Name	**Phone:**	**Permit Type:**	
		Commercial	

1) A. ☐ Traffic Movement Permit (approved, 6 to 0, Silk absent)

The Planning Board finds that the project is in conformance with the standards of a Traffic Movement Permit subject to the following conditions of approval:

i. ☐ The applicant shall contribute $8,100.00 to the implementation of ☐ possible future improvements (including signalization) at the Middle ☐ Street/India Street intersection. The monetary contribution shall be placed in an escrow account to be applied to unspecified future transportation improvements at the subject intersection. If the escrow money is not used within ten years of the escrow agreement date, the money shall be returned to the applicant.

ii. ☐ The applicant shall conduct all work necessary for the installation of a multi way stop controlled intersection at the Middle Street/India Street intersection prior to occupancy. Plans for the installation of subject improvements shall be reviewed by the City prior to implementation.

iii. ☐ The applicant shall contribute $5,000.00 to the partial funding of a post occupancy traffic monitoring study for the eastern promenade area of the City.

B. ☐ Subdivision (approved, 6 to 0, Silk absent)

The Planning Board finds that the plan is in conformance with the subdivision standards of the land use code subject to the following condition of approval:

i. ☐ That the applicant provides recording plats (for both northerly and southerly blocks) for Planning Board signature prior to issuance of a building permit.

C. ☐ Waivers (approved, 6 to 0, Silk absent)

☐ 1. ☐ Stormwater Quantity Standard

The Planning Board finds that an increase in the stormwater flow in the City drainage system will not cause negative downstream impacts, and therefore waives the Technical Design Standards and Guidelines (Section V.B) for stormwater quantity, subject to the following condition of approval:

i. ☐ That the applicant shall design and fund a stormwater bypass at the Ocean Gateway stormwater quality unit to mitigate increased flow through the City stormwater system resulting from the subject project. The design of the bypass shall be presented to the Public Works Department for review and approval prior to issuance of the building permit.

☐ 2. ☐ Lighting Standard

The Planning Board finds that the non-cutoff decorative lighting fixtures proposed by the applicant (namely, S8, S9, S10, S11, and S12 in the lighting submission dated 4-11-06) will not cause undue glare or light trespass, and therefore waives the Technical Design Standards and Guidelines (Section XV.3), specifically the full cutoff requirement for these fixtures in the locations shown on the submitted lighting plan.

D. ☐ Site Plan (approved, 6 to 0, Silk absent)

The Planning Board finds that the plan is in conformance with the Site Plan Standards of the Land Use Code subject to the following conditions of approval:

Location of Construction:	Owner Name:	Owner Address:	Phone:
167 FORE ST	OCEAN GATEWAY GARAGE LL	2 MARKET ST STE 500	
Business Name:	**Contractor Name:**	**Contractor Address:**	**Phone**
	Ledgewood Construction	27 Maine St. So. Portland	(207) 767-1866
Lessee/Buyer's Name	**Phone:**	**Permit Type:**	
		Commercial	

i. That any additional signage be provided for Planning, Zoning and Historic Preservation staff review and approval, as applicable.

ii. The long-term landscape plan for the lot at the corner of Middle Street and Hancock Street, as shown in attachment C, shall be constructed as shown prior to final release of the project performance guarantee if no alternative development application has been approved by the City.

iii. Materials and construction details, including but not limited to paving and tree grate choices, for both short and long-term landscape plans shall be submitted to the Planning Authority and City Arborist for review and approval prior to issuance of a building permit.

iv. The applicant shall submit a revised lighting plan for the roof of the garage showing reduced illumination levels consistent with City Lighting Standards. The applicant shall also provide lighting details for the lower decks of the garage for review and approval of the Planning Authority.

v. The applicant shall submit a revised utility plan showing, limits of work and trench details for India Street utility work, and underground electrical/telephone/cable connections to Public Works for review and approval prior to issuance of a building permit.

vi. The applicant shall revise the valet area along the Commercial Street extension to show a straight curb line and sidewalk within the City right of way.

vii. The applicant shall provide rendering of the Fore Street (northerly) elevation of the southerly block for staff review. The design treatment of the service doors to the loading and parking areas shall be evaluated and the applicant shall work with Planning staff on the final treatment of these doors in order to enhance the pedestrian experience on Fore Street.

viii. Material samples for the 25 India Street office building shall be provided, and the final selection of this mix of materials be reviewed and approved by the Planning staff.

ix. That the applicant provide revised plans for the review and approval of the Planning staff showing changes to the massing of the rooftop mechanicals to bring the principal mass and height of these elements over the Fore Street frontage of the new construction, stepping them down symmetrically on the wings.

x. That the applicant receives a license from the City for any portion of the structure projecting into or over any City right of way prior to issuance of a building permit.

xi. That the applicant provides the basis for building height calculations to the Zoning Administrator prior to issuance of a building permit.

xii. That the applicant provides to the Zoning Administrator the timeframe within which the retail phase of the parking garage along Fore Street shall be constructed prior to issuance of a building permit.

Comments:

8/22/2007-mes: originall Foundation Permit only uner CBL #20-C-9 - permit #06-1824 - because of the extension of Hancock Street and land subdivision, the CBL has now changed to #20-F-001.

Location of Construction:	Owner Name:	Owner Address:	Phone:
167 FORE ST	OCEAN GATEWAY GARAGE LL	2 MARKET ST STE 500	
Business Name:	**Contractor Name:**	**Contractor Address:**	**Phone**
	Ledgewood Construction	27 Maine St. So. Portland	(207) 767-1866
Lessee/Buyer's Name	**Phone:**	**Permit Type:**	
		Commercial	

9/29/2007-ldobson: I've completed my review have the following questions/comments:

1) Because the Code Compliance Certification for signed off on my Scott is limited to the Acrchitecturals and specs , the engineer must do a separate Cert. Form.

2) The "Page 3" Cert form does not call out the "M" use group just the "S2" please revise.

3) A separate permit for the fit up of the "M" space will be required.

4) The "Drop in Steel Stair" must meet all portions of the code for a "Normal " Stair.

5)Openess Calculations: Please provide a summary document for all 4 sides that simply say " The north elevation has XX% open areas and the code requires xx%" do the same with the linear percentages as well and this needs to be done for all 4 sides.Fill in the "xx's" of course with the actual net percentage...Subtract any doors, grills, meshes , guards etc.

6) Please help me understand how the guards will be particularly along the parking areas that abut the ramps.

7) Please provide Details and ul listing for all fire spearation assemblies.

8) Please confirm the net width of the East Stairway.

9) Please confir that the Stair treads will be at least 11 inches and the risers will not exceed 7 inches.

We're in pretty good shape to sign off before I go on vacation (Wednesday) if you get this info in on Monday. I'll Bring the permit to City Hall on Monday.

Thanks,

Mike Nugent
Consulting Plans Examiner
City of Portland

this substitution is superior to what was originally approved and we understand you are comfortable with the selection.

The mural on the north side will be painted. This will be by separate contract so is not shown on this set of contract documents. I anticipate planning will want to review the selected image before it is applied to the wall.

Attached is an SK from Woodard & Curran addressing your concern over the temporary asphalt paving on India Street and the requirement to install brick pavers once the office building is complete.

The submitted materials include additional detail drawing to accompany the construction drawings you have. They include the following:

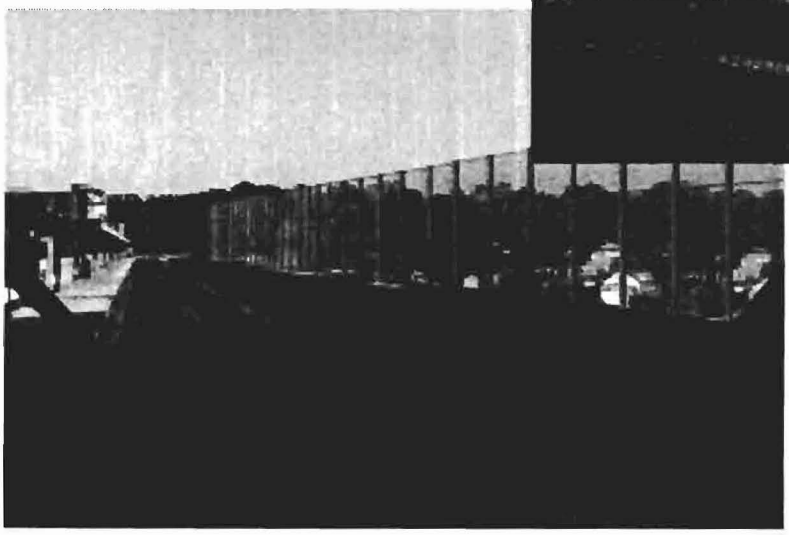
A500 Wall Sections
A501 Walls Sections
A600 Details
A601 Details
A602 Details

Also included is some product information on the Riverdale Mills vinyl coated mesh. The product name is Wirewall high security fencing. If you check their website you will see the product is used in a variety of applications.

Please review the submitted material and contact the owner or myself with any questions.

WIREWALL™ HIGH SECURITY FENCING

MAXIMUM SECURITY *Visual Appeal*



RIVERDALE

FOCUSED ON PRODUCT INNOVATIO

COMPANY HISTORY

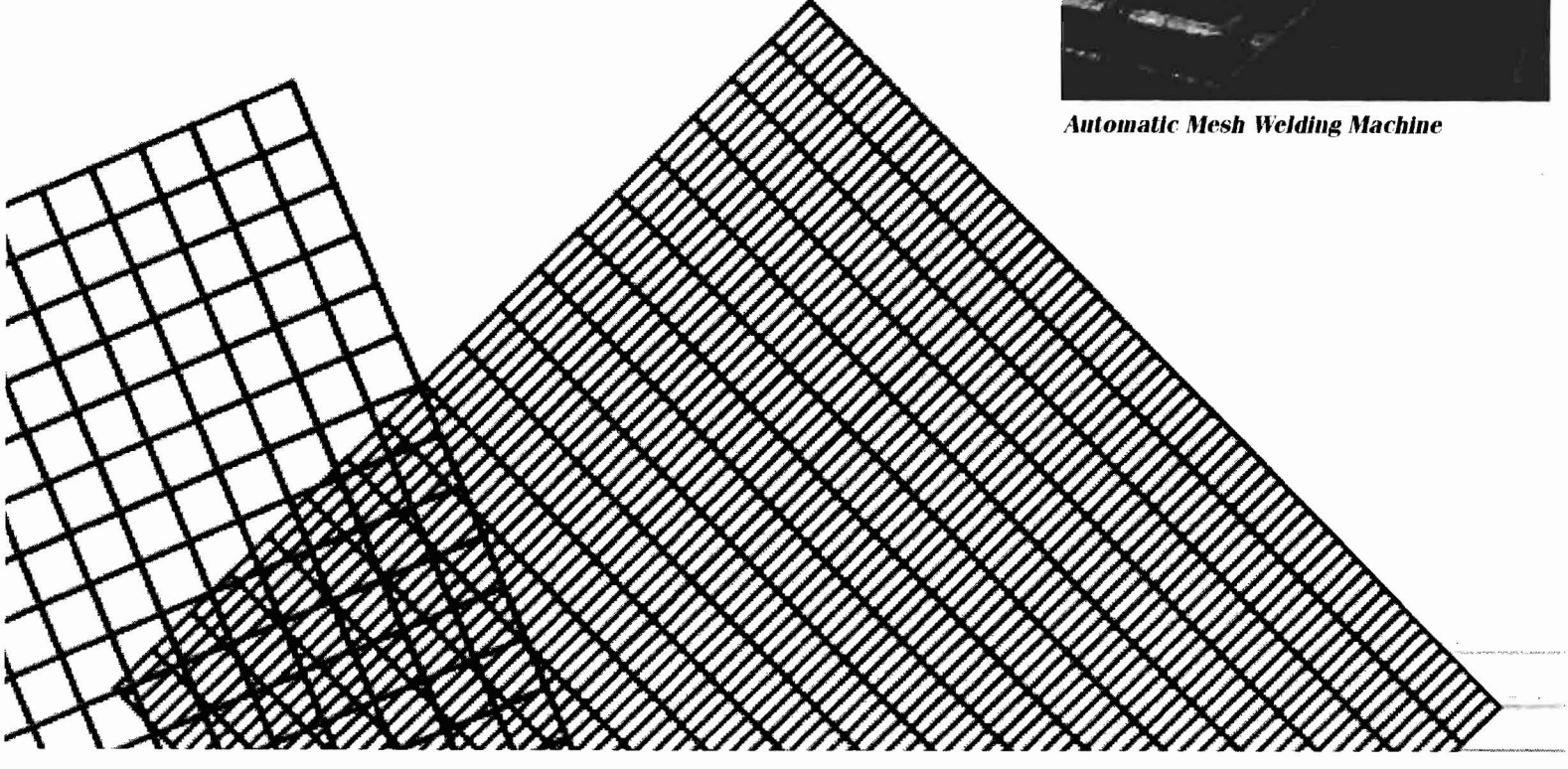
Riverdale Mills

Riverdale Mills Corporation was founded in 1979 by a team of industry experts sharing a single goal: to manufacture a more weather-resistant and corrosion-resistant welded wire mesh product. They began by engineering proprietary, custom-designed equipment that could turn out higher performance wire mesh with more consistency than had ever before been achieved by the industry. Today, Riverdale Mills produces over 20 million linear feet of wire per year in its 250,000-sq.ft. manufacturing facility housed in a completely renovated historic Central New England mill building.

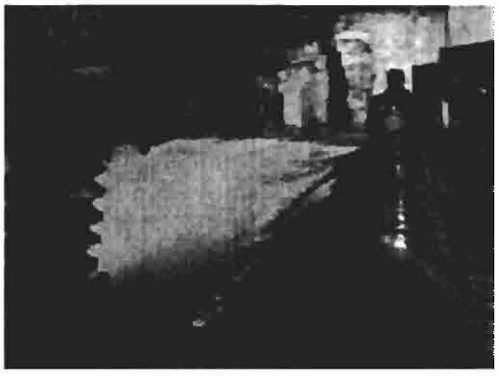
COMMITMENT TO QUALITY

Riverdale Mills welded wire mesh has set new standards for high performance, corrosion resistance, and durability. What sets us apart from other wire mesh suppliers is our ability to strictly control every aspect of the manufacturing process and to manage each step to meet the unique requirements of our customers. The result is a wire mesh product with the industry's highest tensile strength at its core, treated with our own specially formulated, highest-quality protective coatings, and galvanized with five to seven times more zinc than other manufacturers' products.

Automatic Mesh Welding Machine



I AND A COMMITMENT TO SERVICE.



Wire Mesh Being Hot Dipped Galvanized

SUPERIOR MANUFACTURING MAKES A PREFERRED PRODUCT

At Riverdale Mills, the process begins with wire rod, made to our exact specifications and quality tested in our laboratory to be sure its chemistry is free of contaminants.

Once the wire has passed inspection, the first step is to draw the rod to the exact gauge, using our state-of-the-art, computer controlled equipment to produce wire that is perfect for the application.

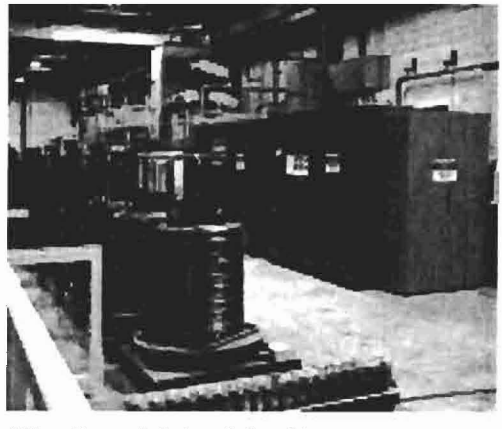
Next, the wire is welded to the desired mesh size with each weld point individually controlled, enabling us to meet stringent quality requirements and, at the same time, ensure dimensional accuracy. What's more, Riverdale wire spacing is infinitely adjustable, which means we can produce wire mesh sizes that most manufacturers cannot.

The mesh is then hot-dip galvanized using a direct-fired, 99% pure zinc bath. This unique process reduces the build-up of iron in the molten zinc, eliminating a problem long associated with galvanizing lines used by other mesh manufacturers.

In the final step we apply our own specially compounded polyvinyl chloride (PVC) or polyester coating to the welded wire mesh. The advanced polymers used in this process are measured and monitored by special equipment and testing procedures.

TOMORROW'S STANDARDS DELIVERED TODAY

Riverdale Mills' extensive research and design programs begin where the end product will be used. Our specialized design engineering team works closely with customers, listening to their needs. It's the integration of research, engineering and manufacturing that keeps Riverdale Mills on the cutting edge of technology, enabling us to provide product that meets or exceeds our customers' expectations.



Wire Strand Galvanizing Line

PRESIDENT'S MESSAGE

On May 1, 1979 the boards came off the windows of an abandoned mill building in Northbridge, Massachusetts. This building would soon come alive with a dedicated staff and newly built machinery to produce a different and better wire mesh material. So, it was December 1980, when the first of its kind was manufactured and shipped to a customer in Maine. Today, we're proud to say Riverdale wire mesh products are shipped all over the world.

Riverdale Mills has developed many unique products for use in a variety of applications. Aquamesh® wire for harsh marine environments, Geomesh™ gabions used in erosion control, and perhaps foremost, WireWall™ high security fencing for protection of personnel and property.

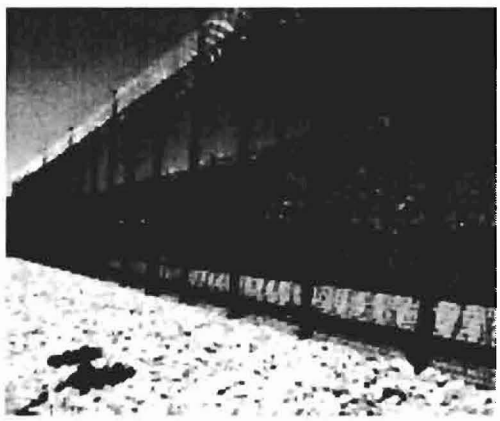
All of us at Riverdale Mills are committed to delivering excellence in service and product to our customers as we continually strive to develop new and different products for the marketplace.

Jim Knott, Sr.
President & Founder

ELIMINATING THE BARRIERS BE

WIREWALL™: THE NO BREAK-THROUGH CHOICE

Riverdale Mills WireWall high security fencing is the essential solution to hardening perimeters for property protection. It offers the benefits of masonry walls at or below the cost of other wire barriers. With WireWall fencing you get a virtually impenetrable barrier that out lasts and out performs nearly all other fencing options.



WireWall goes up in panels, saving time and equipment needed for installation.

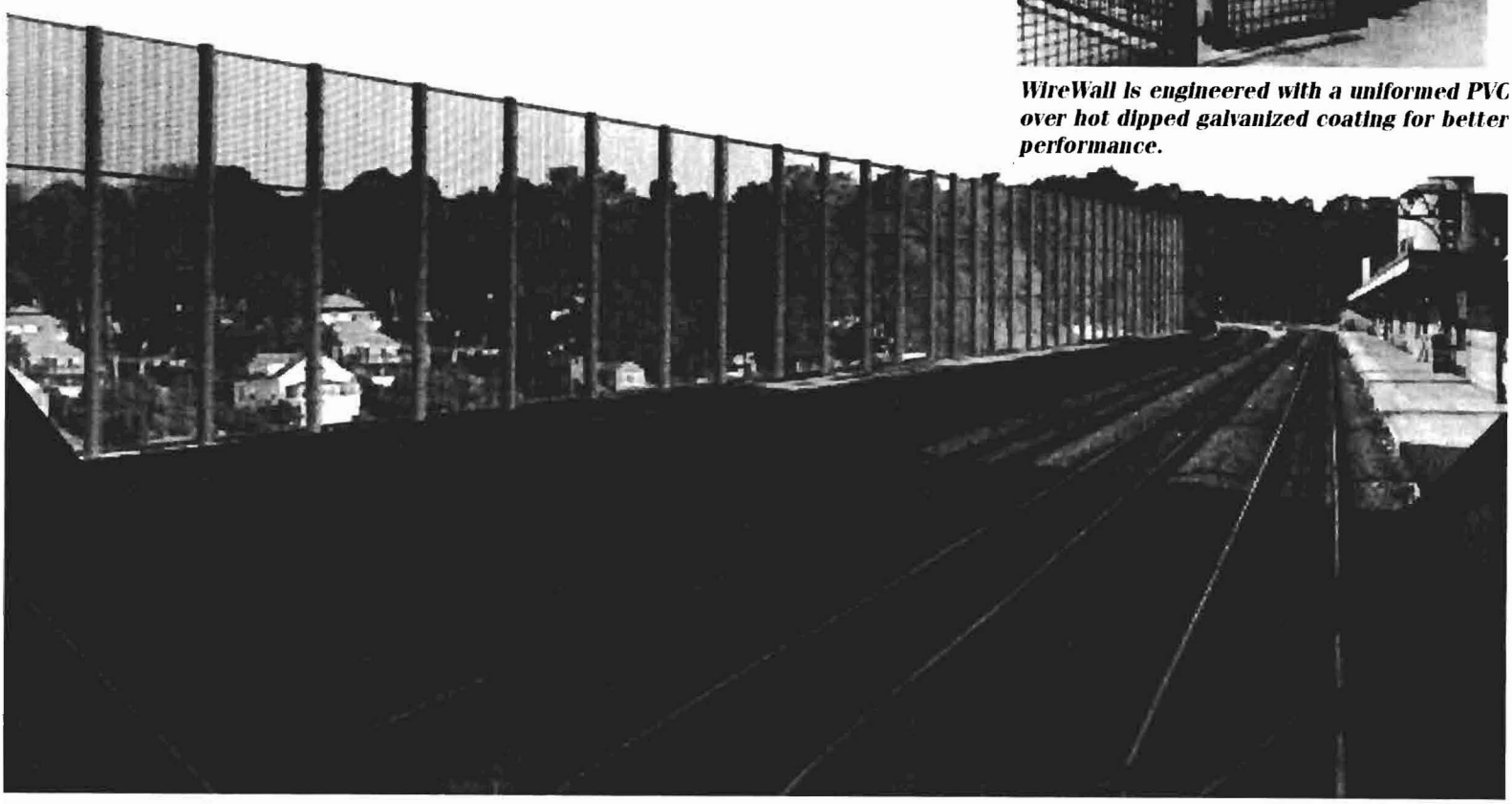
With WireWall, any would-be climber can't get a handhold or toehold.

WireWall's clean lines, variety of mesh configurations and available colors make it an aesthetically appealing choice for a wide variety of installations.

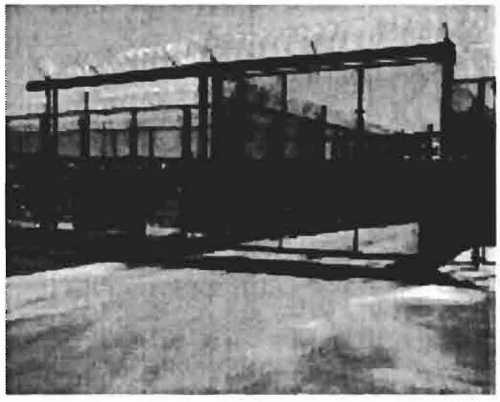
SUPERIOR DETERRANCE

Specifically developed for maximum-security prisons, WireWall welded wire mesh is a proven high performance fencing option, readily available for all types of high security applications. WireWall's unique welded mesh design and construction features narrow openings that are highly resistant to climbing or cutting. Unlike the woven pattern of chain link fencing, WireWall won't unravel or lose its stability if a cut is made.

WireWall is engineered with a uniformed PVC over hot dipped galvanized coating for better performance.



WEEN COST AND PERFORMANCE

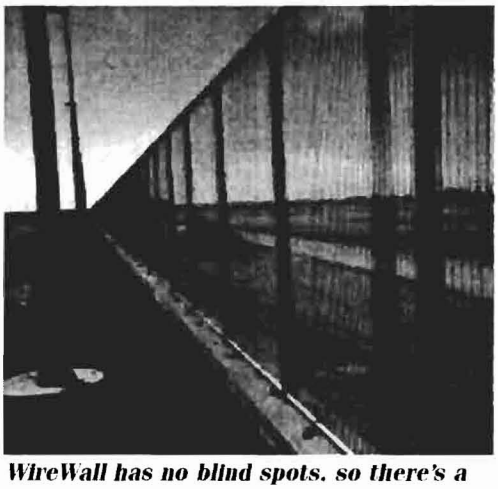


Prevent access to sensitive or dangerous areas with WireWall fencing.

What's more, military testing proved it took several minutes to cut a 2' by 2' opening in WireWall fencing versus a few seconds for chain link.

EXCEPTIONAL PERFORMANCE

WireWall fencing is ideal for correctional, military, energy and other highly sensitive sites. No other product works more dependably for containment or protection of valuable property or equipment. Its welded mesh design and construction provides unchanging structural integrity for long-lasting durability. Moreover, WireWall has no blind spots, providing a clear line of sight at any angle.



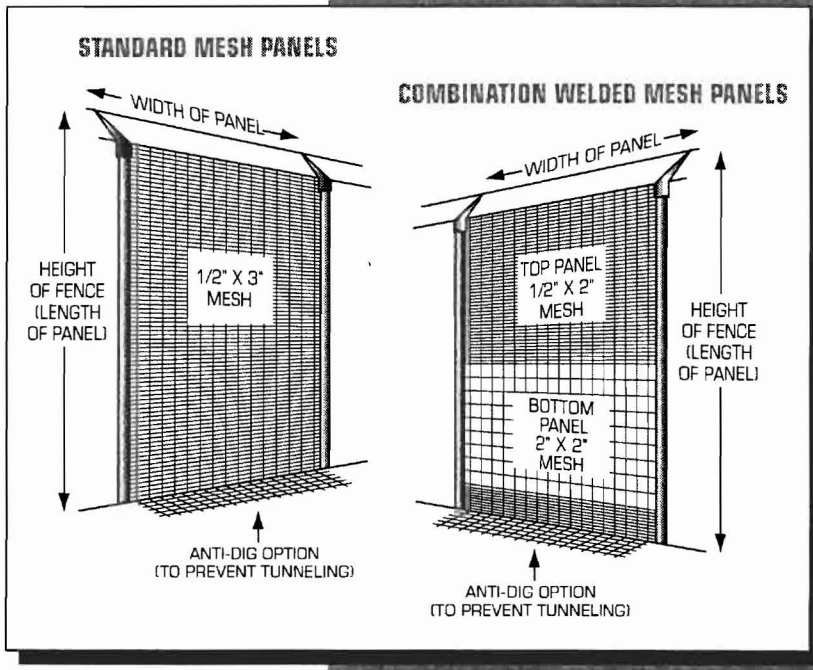
WireWall has no blind spots, so there's a clear line of sight at any angle.

WireWall features openings too narrow to allow cutters a good grip.

WireWall fencing goes up in panels, making it easier to handle and install. This greatly reduces the time, equipment and skill required for installation. And, its maintenance free design means lower maintenance costs, too.

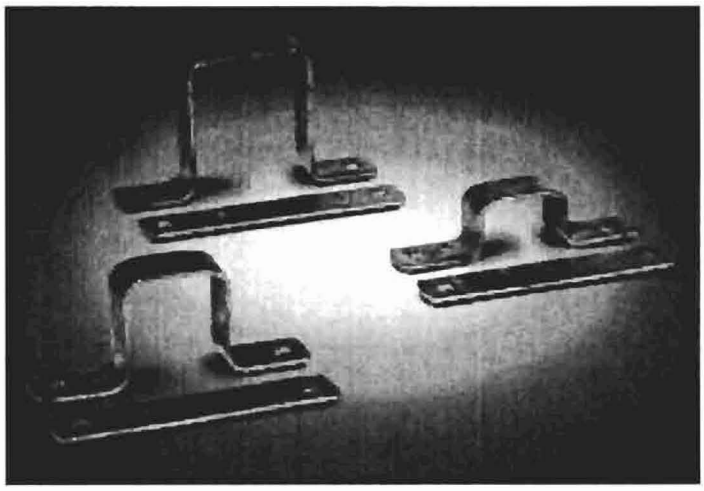
USE WIREWALL FENCING FOR:

- Airports
- Bridges and Dams
- Correctional Facilities
- Fuel Storage Depots
- Fossil Fuel Generating Plants
- Government Buildings
- Highways
- Hydroelectric Facilities
- Manufacturing Plants
- Military Bases
- Municipal Waterways
- Naval Yards
- Nuclear Power Plants
- Oil Refineries
- Rail Yards
- Secure Treatment Facilities
- Telecommunications Towers
- Utility Transformers
- Wastewater Treatment Plants



Two cost-effective mesh panel options provide increased security without added costs.

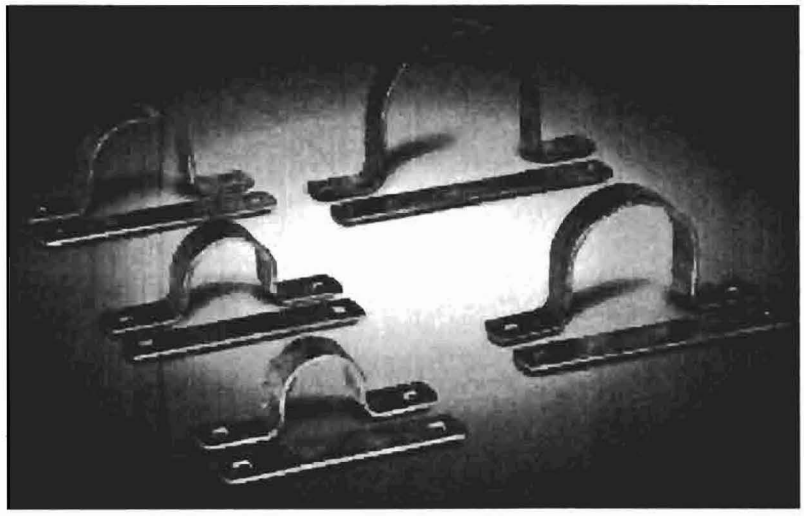
BRACKETS & INSTALLATION



C Post Bracket Sizes:
1.625" x 1.250"
1.700" x 2.250"
2.500" x 3.250"

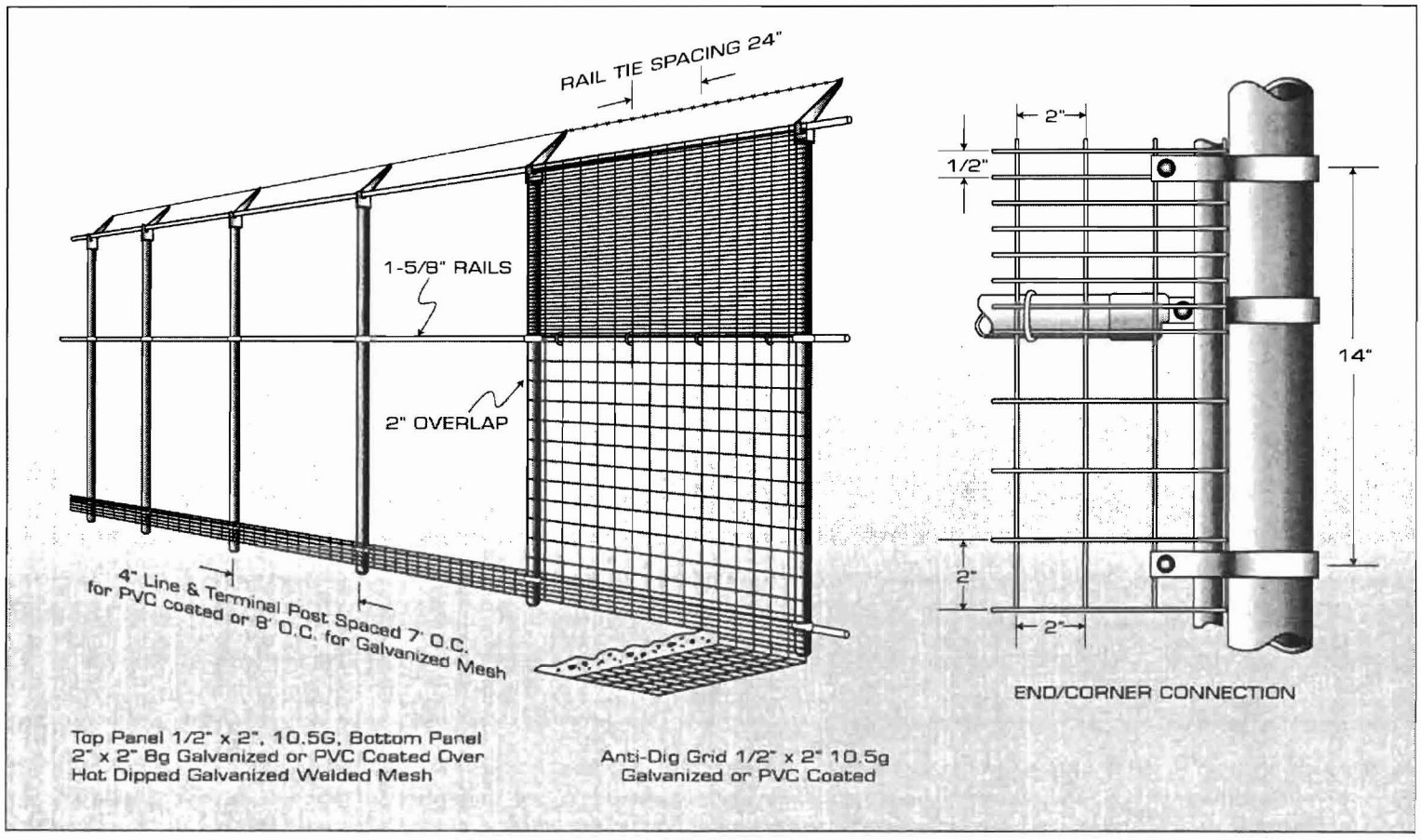
HARDWARE

WireWall fencing panels are attached to line posts, terminal posts, and gate frames with 1" x 10 gauge thick zinc-coated post brackets.



Round Post Bracket Sizes:
1.660"
1.875"
2.375"
2.875"
4.000"

Boulevards, Loop Caps, Barb Arms, Rail Ends, and Continuous Attaching Bars also available.



MEETING OR EXCEEDING ASTM SPECIFICATIONS

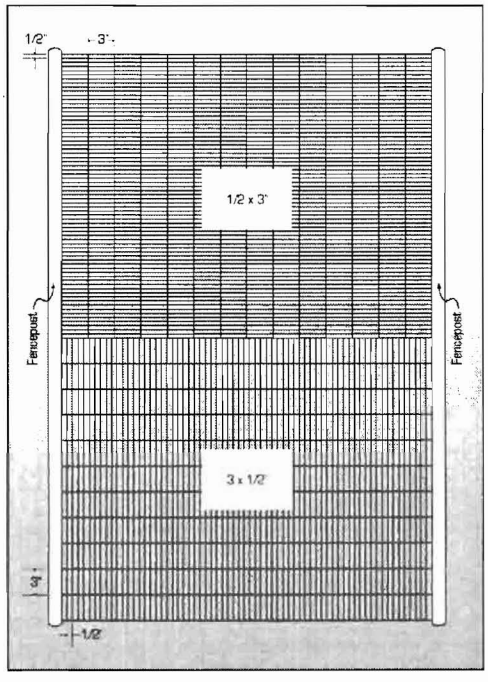
WELDED WIRE

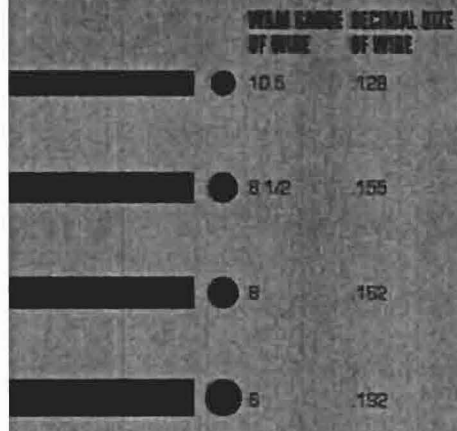
ASTM A 85	**Standard Specifications for Steel Welded Wire Fabric. Plain, for Concrete Reinforcement.**
ASTM A 370	**"Standard Test Methods and Definitions for Mechanical Testing of Steel Products."**
ASTM A 853	**"Standard Specifications for Steel Wire, Carbon, for General Use."**

ZINC COATING

ASTM A 90	**Standard Test Method for Weight of Coating on Zinc-Coated (Galvanized) Iron or Steel Articles.**
ASTM A 123	**"Standard Specifications for Zinc (Hot-Dip Galvanized) Coatings on Iron Steel Products."**

HOW TO SPECIFY WELDED WIRE MESH





PVC COATINGS

COATING PROPERTY	TEST METHOD	VALUE
Specific Gravity	ASTM D 792	Range of 1.20-1.40
Tensile Strength	ASTM D 638	2275 PSI
Elongation	ASTM D 638	1980 PSI
Hardness	ASTM D 2240	75 Min. Shore A
Salt Spray	ASTM B 117	3000 hrs. no effect
Exposure to Ultraviolet Light	ASTM 1499 ASTM G 23	3000 hrs.

WIREWALL MATERIAL OPTIONS:
High tensile carbon steel wire for superior strength: conforms to ASTM A853, Grade AISI 1008 and 1010. Stainless steel Type 304 and 316 for installations where limited or no magnetic interference is allowed.

PROTECTIVE COATINGS:
Uniform hot-dipped zinc, conforming to ASTM A123 and other standards ensuring maximum performance. PVC coatings conforming to ASTM F668, Class 2b, are fuse-bonded to prevent peeling and provide additional protection.

INSTALLATION INSTRUCTIONS

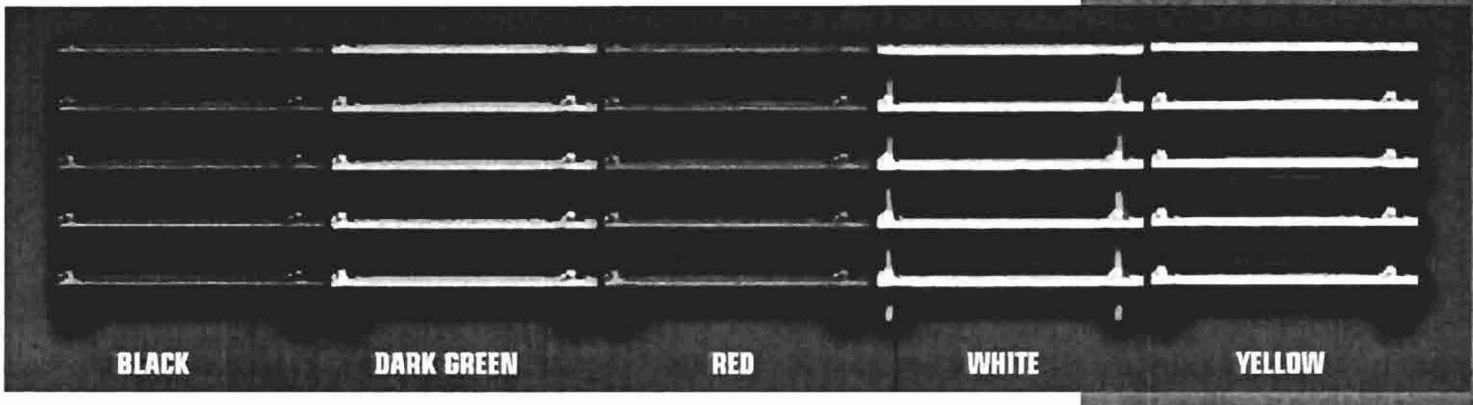
1) Clear and grade fence area. Grading shall be done to provide a straight flat and level surface. Soil or stone fill shall be thoroughly compacted.
2) Place posts apart 7, 8, or 10 feet on center depending on panel width and wind load requirements. Larger diameter corner posts are not required.
3) Ensure that posts are plumb.
4) Place panels on fence posts with a 2-3" overlap between adjacent panels. If two panels are required to achieve a specific height or pattern, ensure that there is at least a 4" overlap between the top and bottom panels.
5) Attach panels to the posts with tie wires, brackets, or boulevards. No stretching is required with welded mesh panels.
6) If a steep grade is encountered, step the panels along the grade.
7) Continue attaching panels until fence is complete.
8) Ground Fencing.
9) Done. Go to www.riverdale.com for more information.

WIREWALL™ STANDARD FENCING SPECIFICATIONS

MESH SIZE

Spacing of Horizontal Wires		Spacing of Vertical Wires		Gauge of Wire			Width of Panel		Length of Panel		APPROX. LBS PER 100 FT² Galvanized 2.0 oz/ft²	PVC coated over Galvanized
IN.	MM	IN.	MM	GAUGE	IN.	MM	IN.	MM	FT.	M		
.5"	(12.7)	2"	(50.8)	10 1/2	.128"	(3.25)	74", 86" 98", 122"	(1880), (2184) (2489), (3099)	7'-21'	(2.13)-(6.40)	135	162
.5"	(12.7)	3"	(76.2)	10 1/2	.128"	(3.25)	75", 87" 99", 123"	(1905), (2210) (2514), (3124)	7'-21'	(2.13)-(6.40)	126	153
.5"	(12.7)	3"	(76.2)	8	.162"	(4.0)	75", 87" 99", 123"	(1905), (2210) (2514), (3124)	7'-21'	(2.13)-(6.40)	205	250
2"	(50.8)	2"	(50.8)	10 1/2	.128"	(3.25)	74", 86" 98", 122"	(1880), (2184) (2489), (3099)	7'-21'	(2.13)-(6.40)	54	66
2"	(50.8)	2"	(50.8)	8	.162"	(4.0)	74", 86" 98", 122"	(1880), (2184) (2489), (3099)	7'-21'	(2.13)-(6.40)	88	106
2"	(50.8)	2"	50.8)	6	.192"	(4.88)	74" 86" 98" 122"	(1880)(2184) (2489)(3099)	7'-21'	(2.13)-(6.40)	120	150

WIREWALL AVAILABLE COLORS*

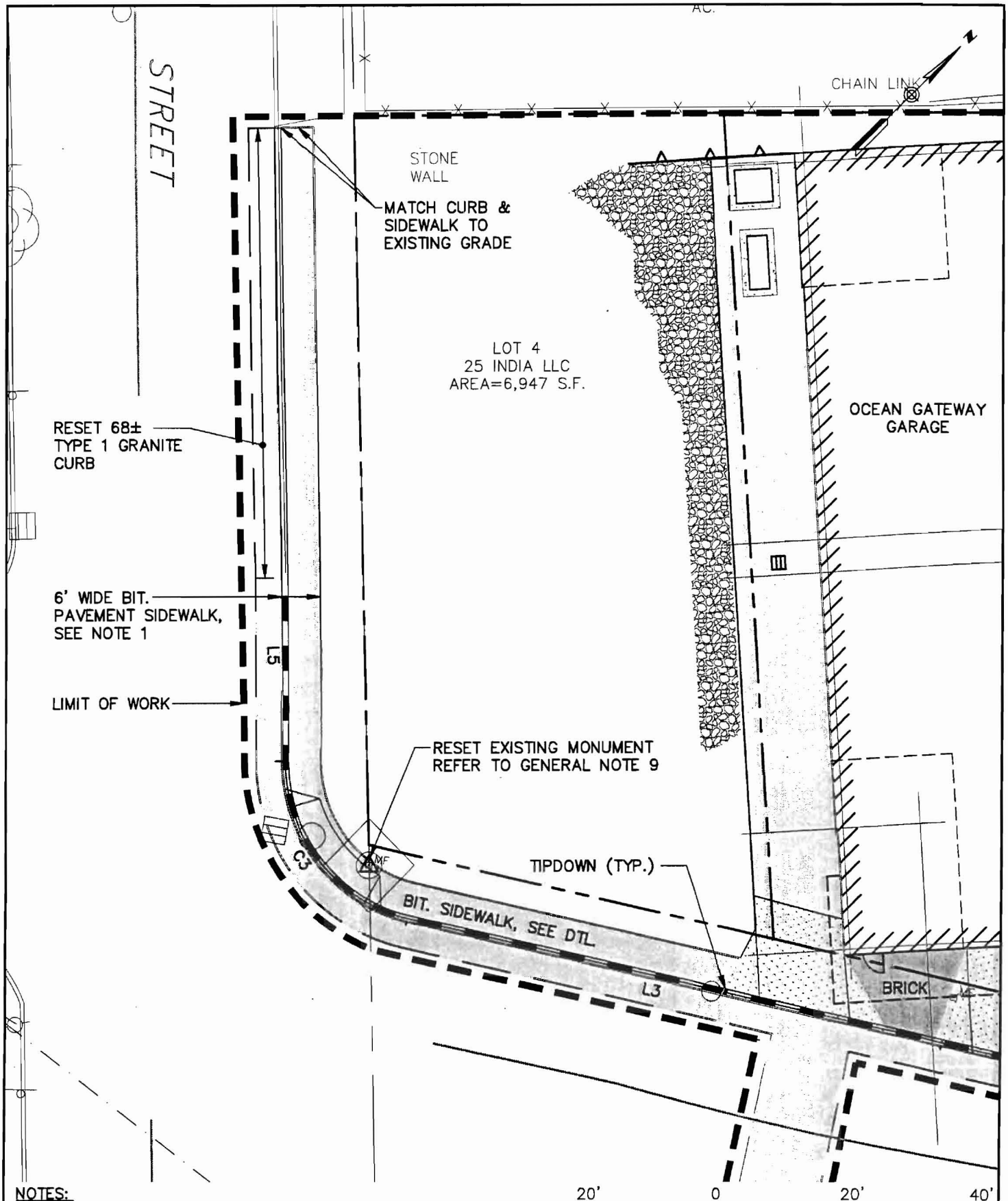


*Minimum order quantities apply for colors. Colors shown above are for reference only and may not be used as an exact representation of actual colors available.

RIVERDALE
Tel: 800.762.6374 • Outside USA 508.234.7400
Fax: 508.234.9593 • Website: www.riverdale.com
130 Riverdale Street • P.O. Box 200 • Northbridge, MA 01534

MADE IN U.S.A.

AFA



NOTES:

1. BITUMINOUS SIDEWALK ALONG FORE STREET AND INDIA STREET IS TEMPORARY. BRICK SIDEWALK, AS PER CITY APPROVED SITE PLAN, SHALL BE PROVIDED IN FUTURE PHASES OF WORK.

BAR SCALE
1" = 20'
CHECK GRAPHIC SCALE BEFORE USING

WOODARD &CURRAN
41 Hutchins Drive
Portland, Maine 04102
800.426.4262 | www.woodardcurran.com
COMMITMENT & INTEGRITY DRIVE RESULTS

INDIA/FORE STREET SIDEWALK		RIVERWALK, LLC 2 MARKET STREET, SUITE 500 PORTLAND, ME 04101	JOB NO: 203555.06 DATE:MARCH 28, 2007 SCALE: 1"=20'
DESIGNED BY: DAS	CHECKED BY: DAS	OCEAN GATEWAY PARKING GARAGE	SK-C01
DRAWN BY: DAS	20355505-SK-C01.dwg		

MEMORANDUM

To: FILE

From: Marge Schmuckal **Dept:** Zoning

Subject: Application ID: 2006-0235

Date: 12/22/2006

On 12/22/06 I met with the Steve Fraiser, architect, and Drew Swenson. The proposed amendment to the parking garage is meeting the current zoning ordinance for setbacks, coverage and height. It is noted that the front of the building has been altered from the original submittal. In no area of the new front, shall the building be setback more than 10' from the front property line.

Marge Schmuckal
Zoning Administrator

Item	Agent No. (Qualif.)	Scope
1. Mix Design	4 SER	Review mix designs.
2. Material Certification	4 (ACI) SER	Review for conformance to specifications.
3. Reinforcement Installation	4	Inspect reinforcing for size, quantity, condition and placement.
4. Post-Tensioning Operations	N/A	Inspect tensioning and anchorage of tendons. Inspect grouting off bonded tendons.
5. Batching Plant	4 (ACI)	Review Plant quality control procedures and batching and mixing methods.
6. Formwork Geometry	4	Inspect form sizes.
7. Concrete Placement	4	Observe concrete placement operations. Verify conformance to specifications including cold-weather and hot-weather placement procedures. Perform slump, density and air content tests at point of discharge.
8. Evaluation of Concrete Strength	4	Test and evaluate in accordance with the specifications.
9. Curing and Protection	4	Observe procedures for conformance to the specifications.
10. Other		

Item	Agent No. (Qualif.)	Scope
1. Material Certification	4 SER	Review for conformance to specifications.
2. Mixing of Mortar and Grout	4	Inspect field-mixing procedures for conformance to the specifications.
3. Installation of Masonry	4	Inspect placement for conformance to the specifications.
4. Reinforcement Installation	4	Inspect reinforcing steel for size, quantity, condition and placement for conformance to approved submittals and Contract Documents. Inspect welding of reinforcement and review welder's certifications.
5. Grouting Operations	4	Inspect grouting procedures for conformance with the specifications. Inspect cells prior to grouting.
6. Weather Protection	4	Inspect protection for cold and hot weather for conformance with the specifications.
7. Evaluation of Masonry Strength	4	Verify strength in accordance with the specifications.
8. Anchors and Ties	4	Inspect anchorage of masonry to other construction for conformance to the Contract Documents.
9. Other		

Item	Agent No. (Qualif.)	Scope
1. Fabricator Certification/ Quality Control Procedures	2 (PE) [SER]	Review each Fabricator's quality control procedures. Inspect in-plant fabrication, or review Fabricator's approved Independent Inspection Agency's reports.
2. Material Certification	2 (PE) [SER]	Review for conformance to the specifications.
3. Open Web Steel Joists	N/A	Inspect for size, placement, bridging, bearing and connection to structure. Visually inspect all welds of a minimum of 5% of the joists, randomly selected.
4. Bolting	2 (PE)	Test and inspect bolted connections in accordance with specifications. Verify bolt size and grade.
5. Welding	2 (AWS)	Check welder qualifications. Visually inspect fillet welds and test full-penetration field welds in accordance with specifications.
6. Shear Connectors	2 (PE)	Inspect for size and placement. Test for proper weld attachment.
7. Structural Details	2 (PE)	Review for conformance to the specifications.
8. Metal Deck	2 (PE)	Verify gage, width, and type. Inspect placement, laps, welds, side lap attachment and screws or other mechanical fasteners. Check welder qualifications.
9. Other		

Item	Agent No. (Qualif.)	Scope
1. Material Specifications	4	Review for conformance to contract documents.
2. Laboratory Tested Fire Resistance Design	4	Review for conformance to contract documents.
3. Schedule of Thickness	4	Review for conformance to contract documents.
4. Surface Preparation	4	Inspect surface preparation and review for conformance to contract documents and approved submittals.
5. Application	4	Verify installation procedures. Review for conformance to contract documents and approved submittals.
6. Curing and Ambient Condition	4	Verify curing procedures and review for conformance to contract documents and approved submittals.
7. Thickness	4	Verify applied thickness and review for conformance to contract documents and approved submittals.
8. Density	4	Verify applied density and review for conformance to contract documents and approved submittals.
9. Bond Strength	4	Verify bond strength and review for conformance to contract documents and approved submittals.
10. Other		

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: 163 FORE STREET PORTLAND, ME 04101		
Total Square Footage of Proposed Structure RETAIL 5,070 SF GARAGE 212,000 SF	Square Footage of Lot 37,626 SF	
Tax Assessor's Chart, Block & Lot Chart# 20 Block# F Lot# 1	Owner: OCEAN GATEWAY GARAGE LLC	Telephone: (207)775-2464
Lessee/Buyer's Name (If Applicable)	Applicant name, address & telephone: LEDGEWOOD CONSTRUCTION 27 MAIN ST S. PORTLAND ME 04106	Cost Of Work: $ 10037612 Fee: $ #100,396 C of O Fee: $

Current legal use (i.e. single family) Vacant lot
If vacant, what was the previous use? PARKING LOT
Proposed Specific use: PARKING GARAGE
Is property part of a subdivision? _____ If yes, please name _____
Project description: 720 Stall PG
Retail 5,070 SF

DEPT. OF BUILDING INSPECTION
CITY OF PORTLAND, ME
AUG 20 2007
RECEIVED

Contractor's name, address & telephone: LEDGEWOOD Const 27 MAIN ST. S.PORTLAND ME (207)767-1866
Who should we contact when the permit is ready: S PITTS Phone: 207 767 1866
Mailing address:
27 MAIN ST.
S. PORTLAND, ME 04106

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

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

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

Signature of applicant:	Date: 8/17/07

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

S. PITTS, LEDGEWOOD CONSTRUCTION

Applicant: Ocean Gateway Garage LLC   Date: 4/19/06

~~25 India St~~ 167 Fore St

Address: ~~25 INDIA St~~ & Fore St - Longfellow Garage   C-B-L: ~~20-C-9~~ ~~20-C-23~~   020-F-001

CHECK-LIST AGAINST ZONING ORDINANCE

foundation only - under #06-1824

#20-C-009

New CBLs because of lot Division & Extension of Hancock St

Bldg Permit #07-1013

Date - New construction

Zone Location - B-5b

Interior or corner lot - → 25 India St

Proposed Use/Work -

Sewage Disposal - City

Lot Street Frontage - 0

ok → Front Yard - Adding The retail Now - MAX front yard setback in B-5b = 10'

Rear Yard - None req

Side Yard -

Projections -

Width of Lot -

ok per mtup. → Height - APPEAL - 65' MAX - 3 floors min - for 25 India St - showing 64' to top of beam to lowest level over 3 stories high - for Longfellow Garage - 64' & 68' scaled - No backup of The Average grade

Lot Area - No min req -

Lot Coverage/ Impervious Surface - 100% allowed

Area per Family - 60 Du per Acre (43,560#) N/A

Off-street Parking -

Loading Bays - N/A

Site Plan - ~~#2005-0271~~ 2006-0235

Shoreland Zoning/ Stream Protection - N/A

Flood Plains - Panel 14 - Zone C

CITY OF PORTLAND, MAINE
ZONING BOARD OF APPEALS

APPEAL AGENDA

The Board of Appeals will hold a public hearing on Thursday, January 18, 2007 at 6:30 p.m. on the second floor, Room 209, City Hall, 389 Congress Street, Portland, Maine to hear the following appeals:

To: City Clerk
From: Marge Schmuckal, Zoning Administrator
Date: January 26, 2007
RE: Action taken by the Zoning Board of Appeals on January 18, 2007.

The meeting was called to order at 6:40pm.

Roll call as follows:
Members Present: Philip Saucier (acting chair), Catherine Alexander, Peter Coyne and Peter Thornton.
Members Absent: David Dore and Katherine Knox.

Because of Land Subdivision & Extension of Fore St CBL is Now 20-F-1

1. New Business:

A. Interpretation Appeal:

127 Fore Street, Riverwalk LLC, owner, Tax Map #020 Block C Lots 009 and 023 in the B5b Urban Commercial Business Zone. The Appellant is seeking an Interpretation Appeal regarding section 14-47 "building height" of the City of Portland Zoning Ordinance and a Zoning Determination letter given by Marge Schmuckal. The appellant is requesting the interpretation for the building height allowance for the parking garage roof deck. Representing the appeal is the applicant Scott Simons Architects. **Board voted 4-0 and granted the Interpretation Appeal.**

B. Practical Difficulty Variance Appeal:

127 Fore Street, Riverwalk LLC, owner, Tax Map #020 Block C Lots 009 and 023 in the B5b Urban Commercial Business Zone. The Appellant is seeking an Interpretation Appeal regarding section 14-47 "building height" of the City of Portland Zoning Ordinance and a Zoning Determination letter given by Marge Schmuckal. The appellant is requesting the interpretation for the building height allowance for the parking garage roof deck. Representing the appeal is the applicant Scott Simons Architects. **Board voted 4-0 and granted the Practical Difficulty Variance Appeal**

2. Other Business: Findings of Fact for 224 Shore Road, Cushings Island. **Board voted 3-0 and adopted the Findings of Fact.**

3. Adjournment: 8:00pm

Enclosure:
Agenda of January 18, 2007
Copy of Board's Decision

CC: Joseph Gray, City Manager
Alex Jaegerman, Planning Department
Lee Urban, Planning & Development Director
Deborah Marquis, Housing & Neighborhood Services

Phil Szucier (acting chair)
Catherine Alexander
Peter Coyne

CITY OF PORTLAND, MAINE
ZONING BOARD OF APPEALS

Application of "Building Height" definition to parking facility roof:

Interpretation Appeal

DECISION

Date of public hearing:
January 18, 2007

Name and address of applicant:
Scott Simons
Scott Simons Architects
75 York St
Portland, ME 04101

Location of property under appeal:
020-C-9 & 23 → CBL is now 20-F-1 because of Subdivision & Extension of Hancock St

For the Record:

Names and addresses of witnesses (proponents, opponents and others):
Stephen J. Fraser c/o Scott Simmons Architects
75 York St
Portland, ME 04101

Drew Swenson (owner)
2 market St Suite 500
Portland, ME 04101

Exhibits admitted (e.g. renderings, reports, etc.):
Architect Drawings / Slides by Simon Design Engineering

Findings of Fact and Conclusions of Law:

The Board's authority to review an interpretation of the Zoning Administration is pursuant to Section 14-472 of the zoning ordinance.

The City's Zoning Administrator issued an Interpretation on December 29, 2006, stating that the roof of the Ocean Gateway Parking Garage is to be considered a "flat roof" rather than a "pitched roof" for the purposes of calculating the structure's permitted "building height" as defined in section 14-47 of the zoning ordinance.

4-0

Appellant has demonstrated that the Interpretation of the Zoning Administrator was incorrect or improper.

Satisfied ✓ Not Satisfied ___

Reason: Definition of flat roof did not fit this example.

Decision: (check one)

✓ Option 1: The Board finds that the Appellant has satisfactorily demonstrated that the Interpretation of the City's Code Enforcement Officer was incorrect or improper, and therefore GRANTS the application.

4-0

___ Option 2: The Board finds that the Appellant has NOT satisfactorily demonstrated that the Interpretation of the City's Code Enforcement Officer was incorrect or improper, and therefore DENIES the application.

Dated: 1/18/07

Board Chair

O:\OFFICE\FORMS\Interpretation Appeal continue nonconforming office use.doc

Scott Simons Architects

75 York Street
Portland, ME 04101

ph: 207-772-4656
fax: 207-828-4656
e-mail: stephen@simonsarchitects.com

BULLETIN #1

Date:	August 10, 2007
Project name/number:	Ocean Gateway Parking Garage
Re:	Bulletin #1
From:	Stephen Fraser
To:	Drew Swenson
Cc:	Ledgewood
	Jobfile 6.6

–

POST BID BULLETIN #1

This Bulletin revises the Drawings and/or Specifications as described below and become part of the Contract Documents.

The Contractor will be held to do all work required for the full completion of the work described, including all work incidental thereto or necessary to complete the work properly, even though not specifically mentioned. The Contractor shall be responsible for all work indicated on the drawings. The original General Conditions shall govern all work unless specifically exempted or modified herein.

The Bulletin consist of the following:

Specifications:

Table of Contents	Revised Sction
02832 – Segmented Retaining Walls	Added Section
05500 – Metal Fabrications	Revised Section
05511 – Metal Stairs	Revised Section
05811 – Architectural Joint Systems	Revised Section
07412 – Manufactured Wall Panels	Deleted
08110 – Steel Doors and Frames	Revised Section
08331 – Overhead Coiling Doors	Deleted
08334 – Overhead Coiling Grilles	Revised Section
08411 – Aluminum-Framed Entrances, Storefronts, and Curtainwalls	Revised Section
08711 – Door Hardware	Revised Section
09972 – Concrete and Masonry Coatings	Revised Section
10400 – Signs	Revised Section
11150 – Entry Gates and Parking Control Systems	Revised Section
15050 – Piping Sytems	Added Section
15891 – Sheet Metal Ductwork	Added Section

The sheets at the end are tabulations of free air area on the ground floor
These are required for submission to the City. Please note the very tight tolerances.

Drawings:

Complete reissue of Contract Drawings set with revised list on the drawing Cover Sheet. Drawings revised have been dated August 10, 2007. Substantive changes have been clouded for the Contractors convenience.

Sheets A202 and A203 are elevations with free air calculation for the ground floor. These are required for submission to the City.

END OF BULLETIN #1

OCEAN GATEWAY GARAGE
FREE AIR AREA CALCULATIONS

NORTH ELEVATION TOTAL ELEV: 2653.55

BRICK	40.44		BEAM	110.86	
VOIDS	1.54		FENCE	24.87	
	3.79		CURB	8.84	
	3.79		VERT	7.68	
	3.79		HOOP	0.75	
	3.79		COL	13.53	
	3.79		VERT	7.90	
	3.79		HOOP	0.75	
	3.79	30.32	VOIDS	1.54	
	3.79			3.79	
	1.54			3.79	
BEAM	126.59			3.79	
FENCE	29.96			3.79	
CURB	9.66			3.79	
VERT	8.13			3.79	
HOOP	0.67			3.79	26.53
COL	13.81			1.54	
VERT	8.26		BEAM	111.05	
HOOP	0.79		FENCE	23.84	
VOIDS	1.54		CURB	8.81	
	3.79		VERT	7.39	
	3.79		HOOP	0.77	
	3.79		COL	13.97	
	3.79		VERT	5.98	
	3.79	26.53	HOOP	0.61	
	3.79		BEAM	132.92	
	1.54		DOOR	30.76	

OCEAN GATEWAY GARAGE

DOOR SILL	11.97
FENCE	1.38
CURB	0.51
COLUMN	6.78
WALL	1201.42
	1222.06

301.32
540.13
1222.06

TOTAL 2063.51

OCEAN GATEWAY GARAGE

EAST ELEVATION TOTAL 1220.76

ELEV.	365.54
SPACE	5.24
COL	12.20
BEAM	45.01
FENCE	18.65
CURB	4.89
BRICK	83.69
BEAM	55.72
FENCE	26.16
CURB	5.50
BRICK	67.73
BEAM	55.84
FENCE	26.68
CURB	5.69
BRICK	39.07
	817.61

OCEAN GATEWAY GARAGE

SOUTH ELEVATION TOTAL 2927.58

WALL 2729.85

DOOR 39.55

TOTAL 2764.36

OCEAN GATEWAY GARAGE

WEST ELEVATION — TOTAL 1291.87

CMU WALL @ COL	734.85
FENCE POST	0.79
FENCE	3.45
FENCE POST	1.56
FENCE	5.38
FENCE POST	1.55
FENCE	5.35
FENCE POST	1.54
FENCE	5.31
FENCE POST	1.53
FENCE	5.27
FENCE POST	1.52
FENCE	5.30
FENCE	3.91
FENCE	5.18
FENCE POST	1.49
FENCE	5.15
FENCE POST	1.49
FENCE	5.17
FENCE POST	1.50
FENCE	6.02
FENCE POST	0.75
CURB	9.40
CURB	1.31
CURB	6.91

OCEAN GATEWAY GARAGE

	TOTAL AREA	CLOSED AREA
N	2653.55	2063.51
E	1220.76	817.61
S	2927.58	2764.36
W	1291.87	821.68
TOTAL	8093.76	6467.16 *

* 6475 FT² MAXIMUM CLOSED AREA ALLOWED

CALCULATIONS CRITERIA

1/2" DIA PERF MESH	53% CLOSED
3x3 12GA MESH	12.11% CLOSED
COIL OH DOORS	20% CLOSED

SEE SHEETS A202 AND A203 FOR ELEVATIONS.

CALCULATIONS COMPLETED

AUG 9, 2007

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

Garage

Signed off
via urban
- m. Sent

2006-0235
Application I. D. Number

12/8/2006
Application Date

Drew Swenson, Riverwalk, LLC.
Applicant

2 Market Street, Suite 500, Portland, ME 04101
Applicant's Mailing Address

Amendment to Plan - Longfellow Gara
Project Name/Description

India/Fore Street, Portland, Maine
Address of Proposed Site

Consultant/Agent

Applicant Ph: (207) 775-2464 **Agent Fax:**
Applicant or Agent Daytime Telephone, Fax

020 C023001
Assessor's Reference: Chart-Block-Lot

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

Proposed Building square Feet or # of Units
Acreage of Site
B5b
Zoning

Check Review Required:

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

Fees Paid: Site Plan **$250.00** Subdivision Engineer Review Date **12/11/2006**

Zoning Approval Status:

Reviewer Marge S. - Dnap

☐ **Approved** ☐ **Approved w/Conditions** See Attached ☐ **Denied**

Approval Date Approval Expiration Extension to ☐ Additional Sheets Attached

☐ Condition Compliance
signature date

Performance Guarantee ☐ **Required*** ☐ **Not Required**

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

☐ Performance Guarantee Accepted — date — amount — expiration date

☐ Inspection Fee Paid — date — amount

☐ Building Permit Issue — date

☐ Performance Guarantee Reduced — date — remaining balance — signature

☐ Temporary Certificate of Occupancy — date — ☐ Conditions (See Attached) — expiration date

☐ Final Inspection — date — signature

☐ Certificate Of Occupancy — date

☐ Performance Guarantee Released — date — signature

☐ Defect Guarantee Submitted — submitted date — amount — expiration date

☐ Defect Guarantee Released — date — signature

DEPT. OF BUILDING INSPECTION
CITY OF PORTLAND, ME
DEC 14 2006
RECEIVED

City of Portland, Maine Site Plan Checklist

Riverwalk LLC - Amendment to Longfellow Garage — 2006-0235

Project Name, Address of Project Number — Application

Received 12/8
- reviewing 12/13

Submitted () & Date (b,c)	Item	Required Information	Section 14-525
N/A	(1)	Standard boundary survey (stamped by a registered surveyor, at a scale of not less than 1 inch to 100 feet and including:	1
Referring to approved plans	(2)	Name and address of applicant and name of proposed development	a
	(3)	Scale and north points	b
	(4)	Boundaries of the site	c
	(5)	Total land area of site	d
	(6)	Topography - existing and proposed (2 feet intervals or less)	e
	(7)	Plans based on the boundary survey including:	2
	(8)	Existing soil conditions	a
	(9)	Location of water courses, marshes, rock outcroppings and wooded areas	b
yes	(10)	Location, ground floor area and grade elevations of building and other structures existing and proposed, elevation drawings of exterior facades, and materials to be used	c
	(11)	Approx location of buildings or other structures on parcels abutting the site	d
	(12)	Location of on-site waste receptacles	e
N/A	(13)	Public utilities	e
	(14)	Water and sewer mains	e
	(15)	Culverts, drains, existing and proposed, showing size and directions of flows	e
	(16)	Location and dimensions, and ownership of easements, public or private rights-of-way, both existing and proposed	f
	(17)	Location and dimensions of on-site pedestrian and vehicular access ways	g
	(18)	Parking areas	g
	(19)	Loading facilities	g
yes	(20)	Design of ingress and egress of vehicles to and from the site onto public streets	g
	(21)	Curb and sidewalks	g
	(22)	Landscape plan showing:	h
	(23)	Location of existing proposed vegetation	h
	(24)	Type of vegetation	h
	(25)	Quantity of plantings	h
N/A	(26)	Size of proposed landscaping	h
	(27)	Existing areas to be preserved	h
	(28)	Preservation measures to be employed	h
	(29)	Details of planting and preservation specifications	h
	(30)	Location and dimensions of all fencing and screening	i
	(31)	Location and intensity of outdoor lighting system	j
	(32)	Location of fire hydrants, existing and proposed	k
- describing facade changes	(33)	Written statement	c
	(34)	Description of proposed uses to be located on site	l
N/A	(35)	Quantity and type of residential, if any	l
	(36)	Total land area of the site	b2
	(37)	Total floor area and ground coverage of each proposed building and structure	b2
	(38)	General summery of existing and proposed easements or other burdens	c3
	(39)	Method of handling solid waste disposal	4
	(40)	Applicant's evaluation of availability of off-site public facilities, including sewer, water and streets	5
	(41)	Description of any problems of drainage or topography, or a representation that there are none	6
	(42)	An estimate of the time period required for completion of the development	7
	(43)	A list of all state and federal regulatory approvals to which the development may be subject to. **	8

_____	(44)	The status of any pending applications	8
_____	(45)	Anticipated timeframe for obtaining such permits	h8
_____	(46)	A letter of non jurisdiction	h8
_____	(47)	Evidence of financial and technical capability to undertake and complete the development including a letter from a responsible financial institution stating that is has reviewed the planned development and would seriously consider financing it when approved.	

f project consists of soil disturbance of over one acre, a Maine Construction General Permit is required from the Maine epartment of Environmental Protection.

: Depending on the size and scope of the proposed development, the Planning Board or Planning Authority may request additional nation, including (but not limited to):

lrainage patterns and facilities;
rosion and sedimentation controls to be used during construction;
parking and/or traffic study;
missions; and
wind impact analysis.

- an environmental impact study;
- a sun shadow study;
- a study of particulates and any other noxious
- a noise study;

comments:

City of Portland Site Plan Application

If you or the property owner owes real estate taxes, personal property taxes or user charges on any property within the City, payment arrangements must be made before permit applications can be received by the Inspections Division.

Address of Proposed Development: 1 & 33 India Street, 127 & 158 Fore St	Zone:	
Existing Building Size: sq. ft. Existing Acreage of Site: sq. ft.	Proposed Building Size: No Changes sq. ft. Proposed Acreage of Site: sq. ft.	
Tax Assessor's Chart, Block & Lot: Chart# Block# Lot# 19-A-09 & 014; 20-C-023 & 009	Property owner's mailing address: Riverwalk LLC 2 Market St., Suite 500 Portland, ME 04101	Telephone #: 207-775-2464
Consultant/Agent, mailing address, phone # & contact person: Drew Swenson 207-775-2464	Applicant's name, mailing address, telephone #/Fax#/Pager#: Drew Swenson 2 Market S., Suite 500 Portland, ME 04101	Project name: Longfellow Residence and Retail; Ocean Gateway Garage 25 India Street

Fee For Service Deposit (all applications) X (\$200.00)

Proposed Development (check all that apply)

___ New Building ___ Building Addition ___ Change of Use ___ Residential ___ Office ___ Retail
___ Manufacturing ___ Warehouse/Distribution ___ Parking lot
___ Subdivision (\$500.00) + amount of lots____ (\$25.00 per lot) \$_____ + major site plan fee if applicable
___ Site Location of Development (\$3,000.00)
(except for residential projects which shall be \$200.00 per lot_____)
___ Traffic Movement (\$1,000.00) ___ Storm water Quality (\$250.00)
___ Section 14-403 Review (\$400.00 + \$25.00 per lot)
___ Other_____

Major Development (more than 10,000 sq. ft.)

___ Under 50,000 sq. ft. (\$500.00)
___ 50,000 - 100,000 sq. ft. (\$1,000.00)
___ Parking Lots over 100 spaces (\$1,000.00)
___ 100,000 - 200,000 sq. ft. (\$2,000.00)
___ 200,000 - 300,000 sq. ft. (\$3,000.00)
___ Over 300,000 sq. ft. (\$5,000.00)
___ After-the-fact Review (\$1,000.00 + applicable application fee)

RECEIVED

RECEIVED DEC 08 2006

City of Portland
Planning Division

Minor Site Plan Review

___ Less than 10,000 sq. ft. (\$400.00)
___ After-the-fact Review (\$1,000.00 + applicable application fee)

Plan Amendments

X Planning Staff Review (\$250.00)
___ Planning Board Review (\$500.00)

~ Please see next page ~

Who billing will be sent to: (Company, Contact Person, Address, Phone #)

Submittals shall include (9) separate **folded** packets of the following:

a. copy of application
b. cover letter stating the nature of the project
c. site plan containing the information found in the attached sample plans checklist
d. 1 set of 11 x 17 plans

Amendment to Plans: **Amendment applications should include 9 separate packets of the above (a, b, & c)**

ALL PLANS MUST BE FOLDED NEATLY AND IN PACKET FORM

Section 14-522 of the Zoning Ordinance outlines the process which is available on our web site: **portlandmaine.gov**

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

Signature of applicant:	Date:
Robert J. Crawford, Attorney for Applicant	6 December 2006

This application is for site review ONLY; a building Permit application and associated fees will be required prior to construction.

207 774-1200 main
207 774-1127 facsimile
bernsteinshur.com

100 Middle Street
PO Box 9729
Portland, ME 04104-5029

BERNSTEIN SHUR

COUNSELORS AT LAW

Robert J. Crawford
207 228-7203 direct
rcrawford@bernsteinshur.com

December 9, 2006

Department of Planning & Development
Attn: William Needelman, Sr. Planner
City of Portland
Portland City Hall, 4th Floor
389 Congress Street
Portland ME 04101

Re: Longfellow Residence and Retail, Ocean Gateway Garage and 25 India Street Office Projects, Chart/Block/Lots 19-A001 and 014 and 20-C 009 and 023-Minor modifications to Garage

Dear Bill:

Enclosed please find Riverwalk, LLC's updated drawings and materials related to minor changes proposed for the Ocean Gateway Garage. The submissions are provided for planning staff review of minor changes and refinements proposed for the garage façade, covering materials and to show how the proposed retail space on the street level will be incorporated into the garage. Our understanding is that the review will be completed under authority of Section 14-525, part (g) of the Land use Ordinance of the City's Code which authorizes planning staff to approve such minor changes.

Riverwalk's architects for the garage, the firm of Scott Simons Architects, have provided plans showing and a letter of yesterday's date describing in detail the proposed changes. I also enclose an completed application form and the required $450.00 to cover the review fees.

We look forward to your comments and approval of the minor changes.

Very truly yours,

Robert J. Crawford

Cc: Drew Swenson
Stephen Fraser

Scott Simons Architects

75 York Street
Portland, Maine 04101
phone 207 772 4656
fax 207 828 4656

December 7, 2006

Bill Nedelman
Planning and Development Department
City of Portland
City Hall
389 Congress Street
Portland, ME
04101

Dear Bill,

Thank you for reviewing our amended drawings and submittal for the Ocean Gateway Garage Project. As discussed with you earlier in the fall when we reviewed some of these revisions with you, we have made a number of minor changes to maintain the overall project budget. It is our belief that these revisions are minor in nature and do not substantially effect the overall design intent, appearance, or quality of the project. According to Section 14-525 (g) of the City's Land Use Ordinance, it is our understanding that planning staff is authorized to review and approve minor amendments to a site plan without planning board review when they are not considered substantial alterations. We would like to request that the planning staff review these minor changes and that we be not be required to go back to the planning board for an additional review. We are not seeking any waivers of the conditions of approval already received for the project under the Site Plan Approval granted on May 5, 2006.

The changes we are proposing include the following:

1. Retail Space: The retail space along Fore Street, which was originally scheduled to be built as a second phase of development, is now going to be built with the garage in the first phase of development.

2. Green Screen Panels: These panels, which occur at the columns along Fore and Hancock Streets and alongside the two stair towers, were changes from the "Green Screen" wire mesh to another type of wire mesh. The new mesh has a denser weave than the Green Screen, but is in one layer vs. the two layers of the Green Screen. The new wire mesh will have welded, galvanized, and colored steel frames surrounding each panel vs. the Green Screen panels, which were more free-standing. We have also revised the shapes of these panels from slightly rounded to rectangular.

3. Guardrails: In the earlier drawings the guardrails at each level of the garage were designed to stop above the floor decks and there was a steel channel welded to the structural steel frame to cover the ends of the "T's". These steel channels have been removed and the guardrails have been revised to extend down over the edges of the precast "T's". The result is a simpler, more economical way of covering the "butt ends" of the precast "T's" that we think actually looks better.

4. Canopies: The size and location of the canopies at the two stair towers have been revised to coordinate with some of the other revisions mentioned above. They were originally designed as shallow curves; now they are shown as rectangular. The canopy on the east/main entrance stair was originally shown as aligning with the floor of the third deck (approx. 24'-8" above the sidewalk); the revised location is 5'-9" lower (approx. 19'-0" above the sidewalk), to align with the landing between the second and third floor decks.

5. Brick: The brick size has been revised from standard (2-2/3" x 4" x 8") to jumbo (4" x 4" x 8"), which we think will be fine given the large scale of the structure. The color and texture will be the same as originally submitted.

All other aspects of the design are as originally submitted. We appreciate your consideration of these minor revisions. Please feel free to call me directly if you have any questions or concerns about the project.

Sincerely,

Scott Simons
Principal

Encs.

PORTLAND MAINE

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

Lee Urban- Director of Planning and Development
Marge Schmuckal, Zoning Administrator

December 29, 2006

Stephen Fraiser
Scott Simons Architects
75 York Street
Portland, ME 04101

RE: Height Definition Review

Dear Stephen,

I am in receipt of your request to review the definition of building height in the Land Use Ordinance and how that definition is applied to buildings.

Under 14-47 the definition of "building, height of" states, "The vertical measurement from grade…to the highest point of roof beams in flat roofs; ….to a level midway between the level of the eaves and highest point of pitched roofs;….For this purpose the level of the eaves shall be taken to mean the highest level where the plane of the roof intersects the plane of the outside wall on a side containing the eaves".

The basic breakdown of measuring the height of a structure is to establish the vertical measurement between two points: (1) the beginning point is the grade and (2) the upper point is as defined and allowed in the Ordinance.

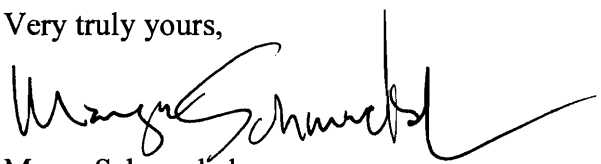
I have consistently allowed averaging the grade for the starting point. It is my understanding that this allowance is not in contention.

I do understand that open parking structures do not have standard roofs. Generally, there is just an upper parking deck with stair and elevator towers on opposing ends of the structure. Let it be noted at this time that the stair and elevator towers are allowed to go higher than the maximum height listed in the underlying zone (under section 14-430). The definitions of building height does not specifically address parking structures as a unique entity, therefore, I have applied what I consider to be the most reasonable within the given Ordinance language. I consider an open parking structure to be a flat roof structure under the ordinance and apply the method of measurement worded in the Ordinance for flat roofs. I allow the highest point of measurement to be to the highest point of the roof beams.

I have rejected the methodology of measuring a parking structure as defined for a pitched roof in the Ordinance. The description of a pitched roof portrays a roof with a high point, such as a ridge, and eaves to determine the midway point from which to measure. The ordinance does not state that you can "average" the roof height. A parking garage deck does not have eaves such as on an actual pitched roof. I consider it to be a stretch to apply a pitched roof definition for a parking deck. I would also point out that most "flat" roofs have some sort of pitch to them to rid the surface of standing water. If I were to apply a pitch roof definition to any building structure with any pitch, no matter how slight, the flat roof definition would never be used. Again, I consider that a misreading of the Ordinance. Finally, I have consistently applied the methodology of a flat roof definition for the measurement of parking deck structures. The City of Portland has had several proposed parking structures within the last several years. As Zoning Administrator I try to be consistent and fair in my application of the Ordinance.

You have the right to appeal my decision concerning use. If you wish to exercise your right to appeal, you have 30 days from the date of this letter in which to appeal. If you should fail to do so, my decision is binding and not subject to appeal. Please contact this office for the necessary paperwork that is required to file an appeal.

Very truly yours,



Marge Schmuckal
Zoning Administrator

Cc: file

From: Marge Schmuckal
To: William Needleman
Date: 12/22/2006 10:40:48 AM
Subject: Longfellow Garage

Bill,

I sat down with Steve Fraiser and Drew Swenson concerning the garage. The originally approved garage meets all the zoning requirements including height.

Yes, they are thinking of ways to expand the number of parking spaces in that garage. We have come to an agreement that the zoning ordinance allows measuring to the top of the structural beam. Previously they have given measurements to the top of the concrete on top of the structural beam. They will gain a few more parking spaces (4 perhaps) using that methodology. However, they want more. We have discussed a few options. They could appeal my interpretation of the ordinance definitions. They might try that first. They know that they would not get a variance appeal (doesn't fall under a practical difficulty variance). The other route is to amend the zoning ordinance definitions to define where to measure for parking garage structures, assuming that they are a different beast.

So right now, on the existing garage submittal, zoning is approved.

Marge

CC: John Lufkin; Lee Urban

From: Marge Schmuckal
To: William Needleman
Date: 12/27/2006 10:00:46 AM
Subject: Ocean Gateway Garage LLC

Bill,
do you have evidence of who is the owner of this property? I need the official wording of the record owner for the permit application.
Thanks
Marge

CITY OF PORTLAND

DEPARTMENT OF PLANNING & URBAN DEVELOPMENT

389 Congress Street
Portland, Maine 04101

INVOICE FOR PERMIT FEES

Application No: 7-1013 **Applicant:** OCEAN GATEWAY GARAGE LL
Project Name: **Location:** 167 FORE ST
CBL: 020 F001001 **Development Type:**
Invoice Date: 08/20/2007

Previous Balance	-	Payment Received	+	Current Fees	-	Current Payment	=	Total Due	Payment Due Date
$0.00		$0.00		$100,475.00		$100,396.00		$79.00	On Receipt

First Billing

Previous Balance **$0.00**

Fee Description	Qty	Fee/Deposit Charge
Certificate of Occupancy	1	$75.00
Building Permit Fee First $1000	1	$30.00
Building Permit Fee Add'l $1000	1	$100,370.00
		$100,475.00

Total Current Fees: + **$100,475.00**
Total Current Payments: - **$100,396.00**
Amount Due Now: **$79.00**

Detach and remit with payment

CBL 020 F001001
Application No: 7-1013
Invoice Date: 08/20/2007
Invoice No: 28671
Total Amt Due: $79.00
Payment Amount:

Bill to: OCEAN GATEWAY GARAGE LLC
2 MARKET ST STE 500
PORTLAND , ME 04101

Make checks payable to the ***City of Portland,*** ATTN: Inspections, 3rd Floor, 389 Congress Street, Portland, ME 04101.

Form # P 04

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK

CITY OF PORTLAND

BUREAU OF INSPECTION

PERMIT

Please Read Application And Notes, If Any, Attached

Permit Number: 070309

PERMIT ISSUED

APR 10 2007

CITY OF PORTLAND

This is to certify that OCEAN GATEWAY GARAGE LLC/M G Hall

has permission to Demolition of buildings to create vacant land for future project

AT 167 FORE ST 020 F001001

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

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

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

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

OTHER REQUIRED APPROVALS

Fire Dept. _____

Health Dept. _____

Appeal Board _____

Other _____
Department Name

Joanne Bruke 4/5/07
Director - Building & Inspection Services

PENALTY FOR REMOVING THIS CARD

Scanned

,rtland, Maine - Building or Use Permit Application

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

Permit No:	Issue Date:	CBL:
07-0309		020 F001001

ation of Construction:	Owner Name:	Owner Address:	Phone:
167 FORE ST	OCEAN GATEWAY GARAGE LL	2 MARKET ST STE 500	
Business Name:	**Contractor Name:**	**Contractor Address:**	**Phone**
	M C Hall	1039 Riverside St Portland	2073182100
Lessee/Buyer's Name	**Phone:**	**Permit Type:**	**Zone:**
		Demolitions	B-6

Past Use:	Proposed Use:	Permit Fee:	Cost of Work:	CEO District:
Commercial / Residential - Breakaway Restaurant -35 India (20C023) & 2 Buildings (Robbie Marine) 1 india (019 B02000) Old (019 A001 & 019 A014) 20 C009 – 020 F001 Please see permit	Vacant Land - Vacant Land - Demolition of buildings to create vacant land for new project		$0.00	1

FIRE DEPT: ☐ Approved ☐ Denied

Signature:

INSPECTION:
Use Group: 5 Type: Demolition

Signature: 4/5/07

Proposed Project Description:
Demolition of buildings to create vacant land for new project

PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)

Action: ☐ Approved ☐ Approved w/Conditions ☐ Denied

Signature: Date:

Permit Taken By:	Date Applied For:
ldobson	03/23/2007

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

PERMIT ISSUED
APR 1 0 2007
CITY OF PORTLAND

Zoning Approval

Special Zone or Reviews	Zoning Appeal	Historic Preservation
☐ Shoreland	☐ Variance	☑ Not in District or Landmark
☐ Wetland	☐ Miscellaneous	☐ Does Not Require Review
☐ Flood Zone	☐ Conditional Use	☐ Requires Review
☐ Subdivision	☐ Interpretation	☐ Approved
☐ Site Plan	☐ Approved	☐ Approved w/Conditions
Maj ☐ Minor ☐ MM ☐	☐ Denied	☐ Denied
Date: OK 3/27/07	Date:	Date:

CERTIFICATION

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

SIGNATURE OF APPLICANT ADDRESS DATE PHONE

RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE DATE PHONE

City of Portland, Maine - Building or Use Permit

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

Permit No:	Date Applied For:	CBL:
07-0309	03/23/2007	020 F001001

Location of Construction:	Owner Name:	Owner Address:	Phone:
167 FORE ST	OCEAN GATEWAY GARAGE LL	2 MARKET ST STE 500	
Business Name:	**Contractor Name:**	**Contractor Address:**	**Phone**
	M C Hall	1039 Riverside St Portland	(207) 318-2100
Lessee/Buyer's Name	**Phone:**	**Permit Type:**	
		Demolitions	

Proposed Use:	Proposed Project Description:
Vacant Land - Vacant Land - Demolition of buildings to create vacant land for new project	Demolition of buildings to create vacant land for new project

Dept: Zoning **Status:** Approved **Reviewer:** Marge Schmuckal **Approval Date:** 03/27/2007

Note: **Ok to Issue:** ☑

Dept: Building **Status:** Approved **Reviewer:** Jeanine Bourke **Approval Date:** 04/05/2007

Note: **Ok to Issue:** ☑

Dept: Fire **Status:** Approved with Conditions **Reviewer:** Cptn Greg Cass **Approval Date:** 04/04/2007

Note: **Ok to Issue:** ☑

1) See approval for #07-0307

Comments:

3/26/2007-ldobson: Fees w/ related permit 070307

4/5/2007-jmb: Pre-demo on site w/Mark, N. Utilities approved, ok to issue

Demolition of a Structure
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: 35 INDIA ST & 1 INDIA ST (REAR)		
Total Square Footage of Proposed Structure	Square Footage of Lot	
Tax Assessor's Chart, Block & Lot Chart# Block# Lot# 20 C 23	Owner:	Telephone:
Lessee/Buyer's Name (If Applicable)	Applicant name, address & telephone: M.C. HACC 1039 RIVERSIDE ST PORTLAND ME 04103 207 797 7407	Cost Of Work: $ 119 000 Fee: $

Current legal use: (i.e. garage, warehouse) EMPTY
If vacant, what was the previous use? APARTMENT / BAR-RESTAURANT - [redacted] STORAGE
How long has it been vacant?: 6 MONTHS

Project description: DEMO EXISTING STRUCTURES @ 35 INDIA ST (BREAKAWAY) AND 1 INDIA ST (REAR) ROBI MARINE -

Contractor's name, address & telephone: M. C. HALL - MARK HACC SAME AS ABOVE!

Who should we contact when the permit is ready: MARK HACC
Mailing address: Phone: 207 318 2160

Please submit all of the information outlined in the Demolition call list. Failure to do so will result in the automatic denial of your permit.

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

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

Signature of applicant: M C Hall	Date: 3-23-07

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

Demolition Call List & Requirements

Site Address: 35 INDIA ST / INDIA ST REAR Owner: _____

Structure Type: WOOD CMU - STEEL Contractor: M.C. HALL

Utility Approvals	Number	Contact Name/Date
Central Maine Power	1-800-750-4000	GARY HAWKS 3.20
Northern Utilities	797-8002 ext 6241	RICK BELMORE 797 8002 x626 3-20
Portland Water District	761-8310	
Dig Safe	1-888-344-7233	CONFIRMATION # 2007-120 5755 3.23 3.28

After calling Dig Safe, you must wait 72 business hours before digging can begin.

DPW/ Traffic Division (L. Cote)	874-8891	Lucy Cote
DPW/ Sealed Drain Permit (C. Merritt)	874-8822	Carol Merritt
Historic Preservation	874-8726	
Fire Dispatcher	874-8576	—

Additional Requirements

1) Written Notice to Adjoining Owners ✓
2) A Photo of the Structure(s) to be demolished ✓
3) Certification from an asbestos abatement company ✓

DEP – Environmental (Augusta) 287-2651 _____

U.S. EPA Region 1 – No Phone call required. Just mail copy of State notification to:

Demo / Reno Clerk
US EPA Region I (SEA)
JFK Federal Building
Boston, MA 02203

I have contacted all of the necessary companies/departments as indicated above and attached all required documentation.

Signed: _____ **Date:** 3/23/07

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

STREET EXCAVATION AND/OR
SEWER CONNECTION PERMIT

CITY OF PORTLAND, MAINE

DEPARTMENT OF PUBLIC WORKS

PERMIT NO. P005898

THIS PERMIT EXPIRES THIRTY DAYS FROM DATE OF ISSUE

DATE: 03/23/2007

PERMISSION IS HEREBY GIVEN TO M. C. Hall (NAME) 1039 Riverside St (ADDRESS)

TO OPEN 35 - 35 India St @ Fore St Street/Avenue

FOR THE PURPOSE OF Upon demolition of building - excavate and plug and grout sewer line on private property to main in street

SAID WORK SHALL BE PROPERLY DONE ACCORDING TO The Excavation Ordinance, Chapter 25 of the Municipal Code, "STREETS, SIDEWALKS AND OTHER PUBLIC PLACES." and abide by all provisions of Chapter 6, Plumbing Code and Chapter 24, Sewer Use Ordinance, of the Municipal Codes of the City of Portland, Maine. I HAVE READ AND UNDERSTOOD MY RESPONSIBILITIES AS A LICENSED EXCAVATOR AS DESCRIBED IN THE STREET EXCAVATOR ORDINANCE, SECTION 25, ARTICLE VII OF THE MUNICIPAL CODE.

THE WORK IS BEING DONE BY:

CONTRACTOR: M. C. Hall, 1039 Riverside St, Portland (ADDRESS)

PLUMBER: _____ (NAME) _____ (ADDRESS)

OWNER: _____ (NAME) _____ (ADDRESS)

NOTES: _____

DIG SAFE:

STREET EXCAVATION PERMIT
SEWER CONNECTION PERMIT
COMBINATION PERMIT

Michael J. Bobinsky
Director of Public Works

This permit does not create in the applicant any permission for him to enter or use the land of another property owner, either temporarily or permanently, for the purpose of connection with the City sewer line. Questions concerning such permission should be referred to Applicant's attorney.

Qty	Description	Rate	per	Unit	Charge	Paid	Due
2.000	Sewer permit	$50.00		Each	$100.00	$100.00	$0.00
	Totals:				$100.00	pd $100.00	$0.00

CASH
$100.00
Carol Merritt

ALL CONTRACTORS/INDIVIDUALS MUST NOTIFY THE CITY OF PORTLAND, PUBLIC WORKS DISPATCH AT 874-8493 THE MORNING OF THE EXCAVATION AND ONE HOUR BEFORE COMPACTION

White copy - Permittee's • Yellow copy - Billing • Pink copy - File

M.C. Hall

1039 Riverside Street ~ Suite 13
Portland, ME 04103
Shop: 207-797-7407
Accounting Office: 207-797-4861

March 23, 2007

City of Portland
Department of Public Works
Sewer Department

RE: Sewer/Drain Permits for 35 India Street

To Whom It May Concern:

Upon inspection of the sewers in front of the "breakaway", it was determined that capping of drains would be best achieved after the building is down and access to the drains under the bar portion of the building can be gained. I will plug and grout both drains/sewer lines with muniballs, and grout as required. Ecoclean will inspect and record the sealing of both lines.

I discussed this with Jim Sloan and he was in agreement that it would be an acceptable solution to the issues we confronted when Ecoclean inspected the 18" line closest to the breakaway.

The apartments at 35 India Street are 4" cast inside the building and 6" clay at the main, making the plug method at the main difficult, but we should be able to get a 6" plug through the line to the main.

The other drain/sewer at the "bar" runs into the sewer main on the far side of the street and was not accessible without excavation to the street or sidewalk. Once the building is down I will dig up the drain/sewer and plug-grout the line.

If I can be of further assistance, please call.

Sincerely,

Mark Hall
207-318-2100
207-797-7407

Lines will be plugged by 4.15.07

M.C. Hall

1039 Riverside Street ~ Suite 13
Portland, ME 04103
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March 23, 2007

City of Portland
Department of Public Works
Sewer Department

RE: Sewer/Drain Permits for 35 India Street

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The apartments at 35 India Street are 4" cast inside the building and 6" clay at the main, making the plug method at the main difficult, but we should be able to get a 6" plug through the line to the main.

The other drain/sewer at the "bar" runs into the sewer main on the far side of the street and was not accessible without excavation to the street or sidewalk. Once the building is down I will dig up the drain/sewer and plug-grout the line.

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207-318-2100
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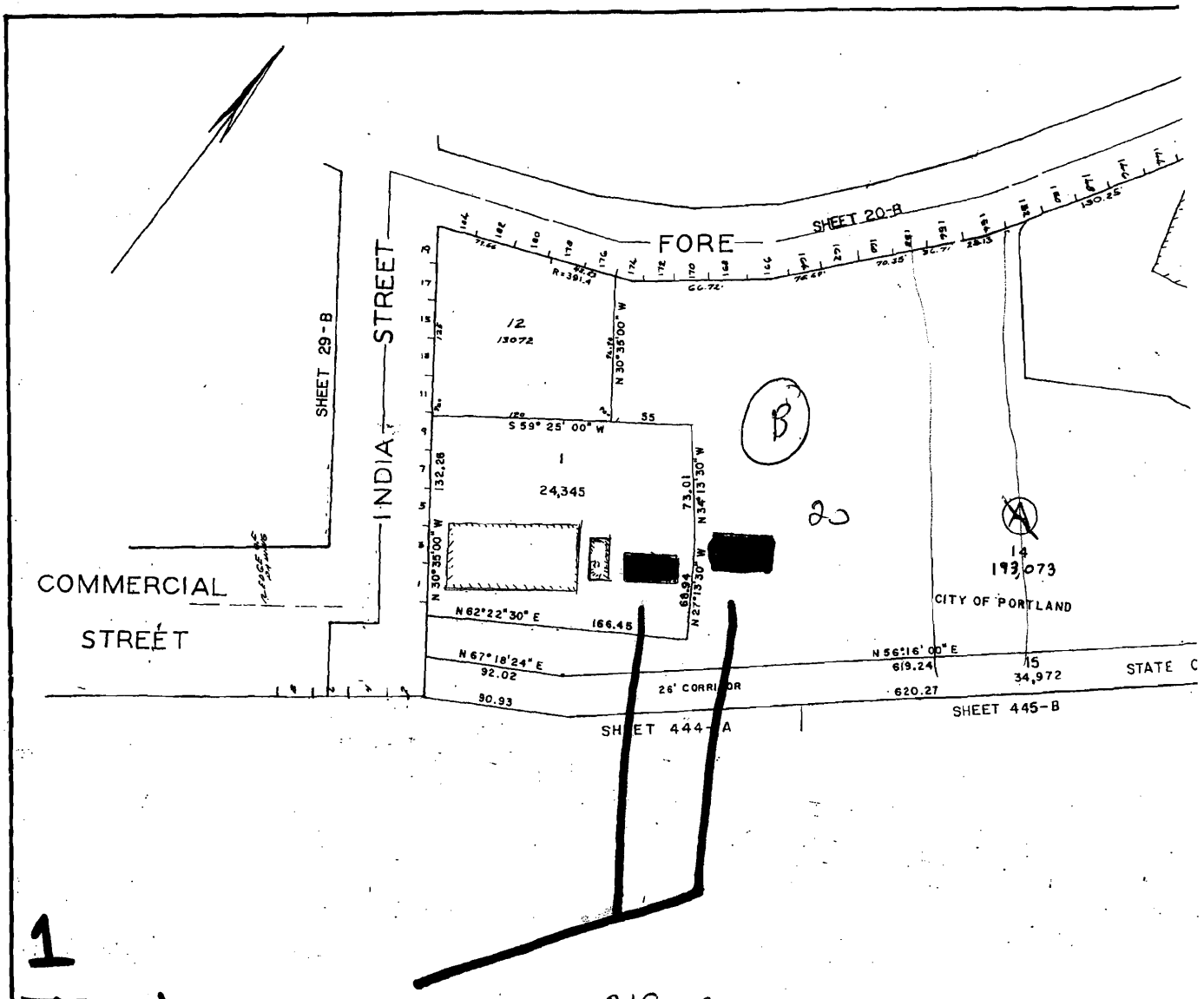


1 India St
Rear

019-B-020

2 of 1

Item	Agent No. (Qualif.)	Scope
1. Shallow Foundations	3 (EIT)	Inspect bearing surfaces for conformance to the requirements of the structural drawings, specifications, and/or geotechnical report
2. Controlled Structural Fill	3 (EIT)	Test material for conformance to specifications or geotechnical report. Perform laboratory compaction tests in accordance with the specifications to determine optimum water content and maximum dry density. Provide full-time inspection of the installation. Perform field density tests of the in-place fill.
3. Deep Foundations	3 (EIT)	Inspect documents identifying pile material and certifying grade of material for conformance to the Contract Documents, and that the identification is maintained from the point of manufacture to the point of delivery to the site. Perform full time inspection of installation. Maintain accurate records for each pile. Monitor dynamic pile load tests and modify pile capacity/installation as required. Record final location of each pile in plan.
4. Other	N/A	

Ocean Gateway Parking Garage
Open Parking Garage Calculations

Linear Open Area

Floor Level	Gross Length	Net Open Length	% Open
Ground Floor	747'-8"	193'-7 ¾"	25.9% *
First Floor	747'-8"	293'-8 1/2	39% *
Second Floor	747'-8"	528'-3"	70.6%
Third Floor	747'-8"	516'3"	69%
Forth Floor	747'-8"	528'-3"	70.6%
Fifth Floor	747'-8"	516'3"	69%

* See exception 406.3.3.1. Openings provided on East and West elevations.

Interior Open Walls

This garage has no interior walls. Typical structure between north ramp and south ramp greater then 20% open.

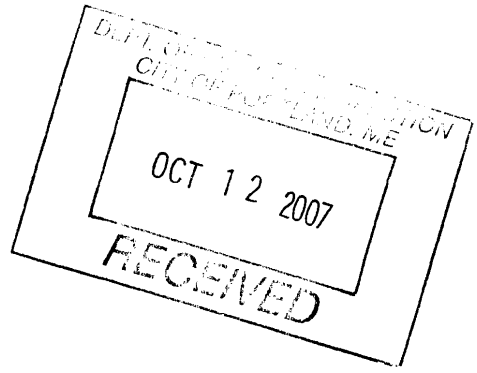
Ocean Gateway Parking Garage
Open Parking Garage Calculations

North Elevation

Floor Level	Gross Area	Net Free Area
Ground Floor	2653.55	590.04
First Floor	2590	513.64
Second Floor	2590	513.64
Third Floor	2590	513.64
Forth Floor	2590	513.64
Fifth Floor	2590	513.64

East Elevation

Floor Level	Gross Area	Net Free Area
Ground Floor	1220.76	403.15
First Floor	1208	342.70
Second Floor	1208	342.70
Third Floor	1208	342.70
Forth Floor	1208	342.70
Fifth Floor	1208	342.70



South Elevation

Floor Level	Gross Area	Net Free Area
Ground Floor	2927.58	163.22
First Floor	2592.49	126.24
Second Floor	2592.49	679.53
Third Floor	2592.49	679.53
Forth Floor	2592.49	679.53
Fifth Floor	2592.49	679.53

West Elevation

Floor Level	Gross Area	Net Free Area
Ground Floor	1291.87	470.19
First Floor	1208	463.8
Second Floor	1208	463.8
Third Floor	1208	404.7
Forth Floor	1208	463.8
Fifth Floor	1208	404.7

Combined Elevations

Floor Level	Gross Area	Net Free Area	% Open
Ground Floor	8093.76	1626.60	20%
First Floor	7598.49	1546.38	20.3%
Second Floor	7598.49	2099.67	27.6%
Third Floor	7598.49	2040.57	26.8%
Forth Floor	7598.49	2099.67	27.6%
Fifth Floor	7598.49	2040.57	26.8%

NONSTRUCTURAL MATERIALS (Chapters 24, 25, 26)

GLASS AND GLAZING (Chapter 24)

N/A Sloped glazing and skylights *(2405)*

✓ Safety glazing *(2406, 2407, 2408, 2409)*

GYPSUM BOARD AND PLASTER (Chapter 25)

✓ Gypsum board materials *(2506, Table 2506.2)*

N/A Plaster *(2507, 2508, 2510 - 2513)*

PLASTIC (Chapter 26)

FOAM PLASTIC INSULATION (2603)

Labeling *(2603.2, 2603.5.6)*

Surface-burning characteristics *(2603.3, 2603.5.4)*

Thermal barrier *(2603.4)*

Exterior walls/Roofs *(2603.5, 2603.6)*

Special approval *(2603.8)*

MISCELLANEOUS PLASTICS

Interior finish and trim *(2604)*

Plastic veneer *(2605)*

Light-transmitting plastics *(2606 - 2611)*

BUILDING SERVICES* (Chapters 27, 28, 29, 30)

ELEVATORS AND CONVEYING SYSTEMS (Chapter 30)

PAR STATE

Construction standard specified *(3001.2)*

Hoistway enclosures *(3002)*

Opening protectives *(3002.1.1)*

Emergency operations *(3003)*

Hoistway venting *(3004)*

Conveying systems *(3005)*

Machine rooms *(3006)*

* Also see Electrical (Ch.27), Mechanical (Ch.28) and Plumbing (Ch.29) Plan Review Records

SPECIAL DEVICES AND CONDITIONS (Chapters 31, 34)

SPECIAL CONSTRUCTION (Chapter 31)

Membrane structures *(3102)*

Awnings and canopies/Marquees *(3105, 3106)*

Signs *(3107)*

Radio and television towers *(3108)*

Swimming pool enclosures *(3109)*

PEDESTRIAN WALKWAYS AND TUNNELS (3104)

Construction and use *(3104.3, 3104.4)*

Separation *(3104.5, 3104.10)*

Public way *(3104.6)*

Egress/Ventilation *(3104.7 - 3104.9, 3104.11)*

EXISTING STRUCTURES (Chapter 34)

Additions, alterations, repairs *(3403)*

Fire escapes *(3404)*

Change of occupancy *(3406)*

Accessibility *(3409)*

Compliance alternatives *(3410)*

1) NEED IBC CERT FORM FROM ENGINEER.

2) NEED TO CALL OUT ALL USES ON PAGE 3 CERT FORM - ONLY ASSIGN S2 SUMMARY STATEMENT.

3) DROP IN STEEL STAIR NO!

4) ~~PLLA~~ PROVIDE. ALL 4 ELEVATION WILL CALL FOR 406.3.3.1 OPENINGS

5) NEED RATINGS + UL LISTINGS FOR ALL FSA'S

~~ALSO PROVIDE 2 HR RATING INFO FOR EXTERIOR~~ NO WALLS (OK)

6) SEPARATE TENANT FIT UP FOR M. SPACE

7) PLEASE CONFIRM THAT THE EAST STAIR IS 44" IN WIDTH

8) CONFIRM 7"/11"

From: Marge Schmuckal
To: Stephen Fraser
Date: 12/19/2006 2:54:06 PM
Subject: Re: Ocean

I have been looking at all that was submitted to me. I want to be sure that I am looking at the most current submittals. I received information data on 12/18/06 from Scott Simons which letter was actually dated 12/15/06) I also received strucutral plans (C201, A200, &A100) on the same date.

I want to meet to be sure I have the most current information, and that I am properly understanding your methodology. I am not seeing a height problem by my understanding of the Zoning Ordinance. But some of your height figures concern me that I might be missing something. I want to be sure I am understanding it correctly.

We can try to meet on Friday if you are feeling better. I know I have been fighting a cold for almost a week and don't want to get more of one. So I appreciate your call.
Marge

>>> Stephen Fraser <stephen@simonsarchitects.com> 12/19/2006 12:21:14 PM >>>
Marge I am going home sick this afternoon so I ask if we can postpone
the meeting until Friday. If you could let me know which of the two
sets of calcs submitted you are looking at I can better prepare
before hand. Thanks

Stephen Fraser
Scott Simons Architects
75 York Street
Portland, ME 04101
Tel: 207-772-4656x104
Fax: 207-8228-4656
Web: www.simonsarchitects.com
Email: stephen@simonsarchitects.com

CC: Drew Swenson; Scott Simons

From: Stephen Fraser <stephen@simonsarchitects.com>
To: Marge Schmuckal <MES@portlandmaine.gov>
Date: 12/20/2006 10:27:52 AM
Subject: Re: Ocean

12/20/06

**

I believe you have received both to the attached calculation work sheets. One is based on a flat roof interpretation using the high point at the top of building. The other takes the average height of the roof deck. Taking the average height allows the deck to be extended up further on the north side. The grades elevations are the same in both scenarios.

I am fortunately feeling better and could meet on Thursday or Friday to review this in person.

On Dec 19, 2006, at 2:54 PM, Marge Schmuckal wrote:

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> sure
> that I am looking at the most current submittals. I received
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> Stephen Fraser
> Scott Simons Architects
> 75 York Street
> Portland, ME 04101
> Tel: 207-772-4656x104
> Fax: 207-8228-4656

Ocean Gateway Garage

Average roof height deck extended to line D

Column Line Location	Grade Elevation	Roof Elevation
1A	25.8	83.05
1B	24.8	82.9
1C	24.7	81.04
1D	24.7	89.68
1E	26	87.82
1F	23.9	85.96
1G	21.9	84.1
1H	22.8	85.25
1.7H	20.9	84.56
2.3H	18.5	84.56
2.9H	16.3	85.25
3G	16.1	85.1
3F	16.625	84.67
3E	17.15	84.25
3D	17.675	83.82
3C	18.2	83.4
3B	18.2	82.97
3A	18.8	83.05
2.3A	19.2	82.09
1.7A	19.4	82.09
	411.65	**1685.61**

411.65/20
Avg Grade = 20.73'

1685.61/20
Avg Roof = 84.28'

84.28' - 20.73'
Avg Height = 63.55'

Ocean Gateway Garage

12/20/21

Flat roof height deck extended to line F.5

Column Line Location	Grade Elevation	Roof Elevation
1A	25.8	
1B	24.8	
1C	24.7	
1D	24.7	
1E	26	
1F	23.9	
1G	21.9	
1H	22.8	
1.7H	20.9	
2.3H	18.5	
2.9H	16.3	
3G	16.1	
3F	16.625	
3E	17.15	
3D	17.675	
3C	18.2	
3B	18.2	
3A	18.8	
2.3A	19.2	
1.7A	19.4	
	411.65	**85.04'**

411.65/20
Avg Grade = 20.73' Roof = 85.04'

85.04' - 20.73'
Avg Height = 64.31'

Ocean Gateway Garage

Flat roof height deck extended to line F.5

Column Line Location	Grade Elevation	Roof Elevation
1A	25.8	
1B	24.8	
1C	24.7	
1D	24.7	
1E	26	
1F	23.9	
1G	21.9	
1H	22.8	
1.7H	20.9	
2.3H	18.5	
2.9H	16.3	
3G	16.1	
3F	16.625	
3E	17.15	
3D	17.675	
3C	18.2	
3B	18.2	
3A	18.8	
2.3A	19.2	
1.7A	19.4	
	411.65	**85.04'**

411.65/20
Avg Grade = 20.73' Roof = 85.04'

85.04' - 20.73'
Avg Height = 64.31'

Ocean Gateway Garage

Flat roof height deck extended to line F.5

Column Line Location	Grade Elevation	Roof Elevation
1A	25.8	
1B	24.8	
1C	24.7	
1D	24.7	
1E	26	
1F	23.9	
1G	21.9	
1H	22.8	
1.7H	20.9	
2.3H	18.5	
2.9H	16.3	
3G	16.1	
3F	16.625	
3E	17.15	
3D	17.675	
3C	18.2	
3B	18.2	
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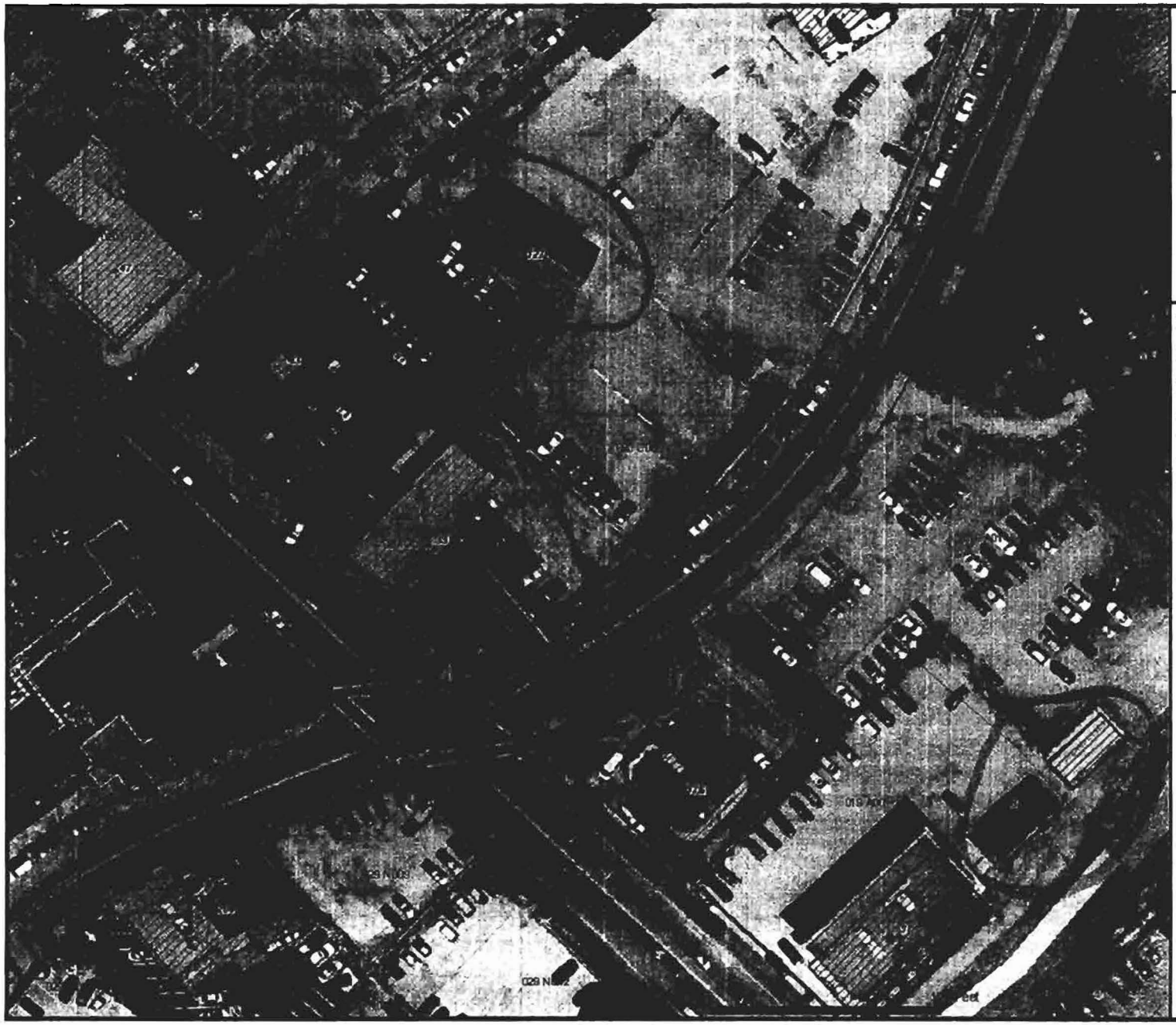


City of Portland
GIS

DISCLAIMER : This is a product of the City of Portland MIS Department. The data depicted here have been developed with cooperation from other federal, state and local agencies. The City of Portland expressly disclaims responsibility for damages or liability that may arise from the use of this map.

Abatement Professionals

590 County Road, Suite 2, Westbrook ME 04092 Tel. (207) 773-1276 - Fax (207) 772-1203

PROJECT LOG-CHRONOLOGICAL LIST OF EVENTS

Project Name/Number: Breakaway Portland Date: 7/16/07

ITEM	TIME	EVENTS
	7⁰⁰ Am	Park Truck out Back, unlock Door., EST pwr w/a Gas generator. Hook up Lights (Dance Floor) Tear Down Tent, Banner, Signs Strapping. pack All Equip in Truck. Hepa vac work Area. visual Area.
	9⁰⁰ Am	Break.
	9:15 Am	Go to Third Floor. (APT to left.) Tear Down Cont/Strapping/poly. Pack up Hepa vac work Area. Also AL on Right Side. Cont w/ Suit, resp. Hepa vac Cont. Floor As Precaution, wash out- me and Jeff Carried Gear/Equip. from left side Down to Truck.
	10:30 Am	Joined AL on (Right Side) Tear Down Cont/Strapping/poly. Pack up. Hepa vac. work Area. visual Both Apts Good To Go.
	11:55 Am	KRIS on Site Look @ JOB.
	12⁰⁰ pm	OFF Site. JOB Completed.
	*	Note: we All worked @ Shop Till 3:30 unload waste. unload Equipment And Load order for Monday

Signature: [signature] Company: Abatement Professionals

Abatement Professionals

~~232 Riverside Industrial Parkway, Portland, ME 04103~~ ~~Tel. (207) 878-5922 • Fax (207) 878-5358~~
590 County Rd Suite #2 Westbrook, Maine 04092 Tel (207) 773-1276 Fax 807) 772-1203

PROJECT LOG-CHRONOLOGICAL LIST OF EVENTS

Project Name/Number: India Street / **Date:** 2/15/07

ITEM	TIME	EVENTS
1	7:00	AP on site, crew of seven, clearing snow on sideway in front of building job site
2	8:30	Kris Ricketts on site, plowing back parking lot of work site
3	8:50	Gain Access to work areas, unloading supplies
4	9:10	Clean up, Take, morning break
5A	9:30	Back on site, start setting up regulated work area around dance floor next to the bar, building three stage decon and waste load out
5B	11:00	Kris off site
6	11:30	Ready for removal, start setting up work areas in apartments, kitchen in one unit, hallway in another unit
7	12:00	Clean up, Take, lunch break
8	12:35	Crew of four suiting up wearing APS going into regulated work area, dance floor to remove floor tile, crew of two continue setting up, one person outside work area, taking waste etc.
9	2:00	Finish removal in dance floor work area, hepa vacuuming floor, crew going into apartments to do removal of floor tile in kitchen and hallway
10	2:45	Dance Floor work area complete, hepa vacuuming hallway work area
11	3:15	Hallway work area complete

Signature: Russell Penny **Company:** Abatement Professionals

12	3:20	Kitchen area all removed needs to be hepa vacuumed
13		Loading tools and equipment into truck

Asbestos Project Notification 2004 Revision	State of Maine Department of Environmental Protection Lead & Asbestos Hazard Prevention Program 17 State House Station, Augusta, ME 04333 TEL (207) 287-2651 FAX (207) 287-7826 **Kyle Rickett**	**FORM N** **Page 2 of 6**

Project Code

APC- 07-037

13. Demolition (complete as applicable)

____ Ordered demolition (structurally unsound) by State or local government (attach copy of order and name of professional engineer who determined building structurally unsound)

XXX All other demolitions

Demolition Dates: 2/26/07 to 3/2/07

14. Procedure Used to Detect Presence of Asbestos

Testing _____ Assumed Positive XXX Tested Positive

Method _____ PLM _____ TEM

Sampled By _____

Company Abatement Professionals Corp

15. Project Clearance

Visual evaluation by: (Air Monitor (if known) and Company) Abatement Professionals Corp

Air Clearance by: (Air Monitor (if known) and Company)

_____

Note: Whenever building materials are assumed to contain asbestos, signed bulk sampling disclosure forms must be at the asbestos abatement project site and available for review by the Department.

16. Asbestos Abatement Methods (check all that apply & submit variance request (Form V) if required)

____ Regulated area with containment consisting of 2-layers 4 mil poly on walls & ceiling & 2 layers 6 mil poly on floors

____ Regulated area with containment consisting of 1-layer 6 mil poly on walls & ceiling & 2 layers 6 mil poly on floors

____ Regulated area with Exclusion zone

____ Multiple non-contiguous Glovebags (variance required)

____ Contiguous Glovebags less than 30 Ln/ft (variance required)

____ Wrap & cut- TSI in good condition (no containment)(variance required)

____ Wrap & cut- TSI not in good condition (containment required)

____ Flooring by mechanical equipment/ice scrapers/pry bars

____ Intact flooring demo by heavy equipment

____ Adhesive by grinding or bead blasting

____ Enclosure

____ Encapsulation

____ Roofing removal by mechanical saws/cutters

____ Other (specify) _____

17. Waste Transporter (Must be ME DEP licensed Non-Hazardous Waste Transporter)

Name **Waste Management Inc**

Address **PO Box 144**

City **Portland, CT 06480**

Contact **Rick Gordon**

TEL **1-800-272-3867**

18. Disposal Site

Name **Valley Landfill**

Address **PO Box 782A**

City **Irwin PA 15642**

Contact **Unknown**

TEL **1-724-744-7446**

19. Certification (Notification Submitted by)

I certify that to the best of my knowledge, the information contained in this notification is true and accurate, and that the asbestos abatement contractor will be/has been contracted to implement work practices as required by Maine DEP Chapter 425, the Asbestos Management Regulations.

Signature

Kyle Rickett
Print Name

Date **2/8/07**

Mailing Address **590 County Rd Suite #2**

City **Westbrook, Maine 04092**

Asbestos Project Notification

2004 Revision

State of Maine
Department of Environmental Protection
Lead & Asbestos Hazard Prevention Program
17 State House Station, Augusta, ME 04333
TEL (207) 287-2651 FAX (207) 287-7826

Kyle Rickett

FORM N

Page 1 of 6

Important Notice: The notification submitter must send a complete notification including any applicable fee which is postmarked at least 10 calendar days or received by the Department at least 5 working days prior to the start of an asbestos abatement project. This notification must be typewritten or easily legible. An incomplete notification is not acceptable & therefore not of record.

1. Project* Code

APC- 07-037

2. Type of Notification

XXX Standard (O)
____ Facility O&M (Annual)
____ Emergency (E)
____ Courtesy (Not Regulated)

3. Type of Activity

XXX Demolition (D)
____ Renovation (R)
____ Repair

4. Variances

____ Non-Standard (NS)
____ Standard (S)
____ Notification Waiver (10 day)

5. Asbestos Contractor

Name **Abatement Professionals Corporation**
Address **590 County Rd Suite #2**
City **Westbrook, Maine 04092**
Contact **Kyle Rickett**
TEL **207-773-1276** FAX **207-772-1203**

6. Facility Owner

Name: MC Hall
Mailing Address: 1037 Riverside St
City, State, Zip: Portland, Maine 04103
Contact: Mark Hall
TEL: 318-2100 FAX:

7. Facility Location (Where removal is to take place)

BLDG Name Breakaway Restaurant & Attached Apartment
Floor and/or Rm.# Through-out
Physical Address India St
City, State, Zip: Portland, Maine

8. Facility Description

Present Use Vacant
Prior Use Restaurant & Apartments
BLDG Size No. Floors
BLDG Age

9. Notification Fees (Required fees must accompany notification)

____ $100.00 = ACM amounts 100 SqFt/100 LnFt to 1000 SqFt/5000 LnFt.

XXX $200.00 = ACM amounts greater than 1000 SqFt/5000 LnFt.

____ Not Required or Not Included (Complete Block #9A)

9A. Notification Fee Not Included

____ Single family home exemption

____ ACM amount less than 100 SqFt/100 LnFt

____ Fees paid quarterly (Non-Scheduled O&M only)

____ BGS exemption

10. Project Work Hours

7:30 AM to 3:30 PM (Show actual hours)

Weekdays (Check all that apply)

M T W T F

Weekend (Check all that apply)

Sat Sun

11. Scheduled Dates for Asbestos Project

Project Start Date 2/15/07 Project Completion Date 2/16/07

ACM Removal Dates (from) (to)

12. Asbestos (ACM) Removal

ACM Type	Amount	Measurement
Asbestos Floortile	1500	SqFt XXX LnFt ____
		SqFt ____ LnFt ____
		SqFt ____ LnFt ____
		SqFt ____ LnFt ____
		SqFt ____ LnFt ____
		SqFt LnFt

ME DEP USE ONLY

Postmark/ FAX/ hand delivered _____
Date Received _____
Check # _____
NESHAP _____
State _____
Variance _____

Abatement Professionals

590 County Rd Suite #2 Westbrook, Maine 04092 Tel: (207) 773-1276 Fax: (207) 772-1203

The following information is to be considered as the design plan for the specific project that is being worked on.
All work will be done in accordance with OSHA & Maine DEP Chapter 425 rules and regulations

Scope of work:

LnFt of Thermal System Insulation
SqFt of FT/Mastic/Carpet/Lino
Ceiling Removal
SqFt of Boiler/Breeching
Whole Component Removal?
Other: Specify:

Project Design Information:

- ✓ Mobilize Site
- ✓ Erect "Caution " & "Keep out" Signage to regulate staging area
- ✓ Pre-Clean Work Area
- ✓ Install 1 layer Critical Barrier over all openings
  Construct 2-Layer poly Containment
- ✓ Construct 1-Layer poly Containment
  Erect "Danger Asbestos" tape to regulate work area
- ✓ Construct 3-Stage Worker Decon
- ✓ Establish Reduced Airflow in containment
  Construct Remote Decon Unit

Electrical:

Use Existing power supply
Use Power panel board
Electrician will install power
Use Roto-Phase

Worker Protection:

- ✓ Use Protective Suits
- ✓ Use Proper respirator
- ✓ Use Proper Footwear

Removal Procedures:

- ✓ Properly Wet Material being removed
- ✓ Use leak tight containers for waste
- ✓ Fine Clean Work Area
- ✓ Visual Inspection of Work Area
  Wash Floors with TSP
  Run (2) Air Samples & Take to closest lab
  Air Samples Via Independent –
- ✓ Demobilize Work Area

Abatement Professionals

590 County Rd Suite #2 Westbrook, Maine 04092 Tel: (207) 773-1276 Fax: (207) 772-1203

AIR MONITORING PROGRAM

Background Monitoring

Prevalent fiber levels in the proposed work areas shall be assessed through ambient air sampling and will involve at least two area samples per work area.

Monitoring During Asbestos Abatement

Area monitoring shall be conducted during asbestos abatement activities within the asbestos control area to include, but not limited to, sampling in the following locations:

If at any time during the abatement, airborne fiber concentrations outside of the containment exceed 0.01 fibers per cubic centimeter or air, the abatement shall cease until the contamination is identified and resolved.

Visual Inspection of the Work Areas

The work area shall not be air clearance sampled until a successful visual evaluation is completed.

The visual evaluation by the Industrial Hygienist/Air Monitor shall comply with *Maine DEP* CMR 425.10 (D)(1).

Air Clearance Sampling

The Industrial Hygienist/Air Monitor shall conduct air clearance sampling in accordance with *Maine DEP* CMR 425.10 (D)(2).

Two (2) air clearance samples shall be collected from the negative pressure enclosure.

Collection and analysis of air clearance samples will be performed in accordance with NIOSH Method #7400.

After the Industrial Hygienist/Air Analyst gives clearance, the Contractor will remove the containment polyethylene and dispose of it as contaminated waste.

The Contractor shall also remove all tools, equipment, barrier tape, signs, and waste from the work area.

Abatement Professionals

590 County Rd
Westbrook, Maine 04092
207-773-1276

Project Information

AP Contact: Kyle Rickett
Site Supervisor:

APC Project #: 07-037

Date: 2/15/07 **Start Time**: 7:30

Project Name: Breakaway Restaurant

Client: MC Hall

Contact: Mark Hall **Phone**: 318-2100

Industrial Hygiene Firm:
Contact: **Phone:**
Time & Date:

General Contractor:

Directions:

On Site Phone:
Start & End Date: 2/15/07-2/18/07

Special Equipment needed: Generator, Power Cords , Lights, Barrels

MISC. Information: We are removing the asbestos from 3 different areas of the building.

Abatement Professionals

590 County Rd Suite #2 Westbrook, Maine 04092 Tel: (207) 773-1276 Fax: (207) 772-1203

Job Site Project Information

(APC Project #: 07-037)

Building Contact:

MC Hall
Riverside St
Portland, Maine

Project Location:

Breakaway Restaurant
India St
Portland, Maine

APC Contact:

Kyle Rickett
831-4902-Cell

Abatement Professionals

590 County Road, Suite 2, Westbrook ME 04092 Tel (207) 773-1276 * Fax (207) 772-1203

March 23, 2007

MC Hall
Riverside Street
Portland, ME 04103

Dear Mr. Hall :

Please find enclosed for your review and file, submittals and project documentation generated by Abatement Professionals for the asbestos abatement project at **Breakaway Restaurant, India St, Portland.**

Thank you for selecting Abatement Professionals for this project. We look forward to working with you on future projects.

Sincerely,

Robert W. Rickett, Jr.
President

RWRJ/kan

ENCLOSURES

ABATEMENT PROFESSIONALS

FACSIMILE TRANSMITTAL SHEET

To: Mark Hall	**From:** Robert W. Rickett, Jr. - President
FAX NUMBER: 874-8716	**Date:** 3-23-07
COMPANY:	**TOTAL NO. OF PAGES INCLUDING COVER:** 10
PHONE NUMBER:	**RE:**

☐ URGENT ☐ FOR REVIEW ☐ PLEASE COMMENT ☐ PLEASE REPLY ☐ PLEASE RECYCLE

NOTES/COMMENTS:

[Click here and type any comments]

CONFIDENTIAL

590 COUNTY ROAD, SUITE 2
WESTBROOK, MAINE 04092
PHONE 207-773-1276 FAX 207-772-1203

City of Portland, Maine - Building or Use Permit Application

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

2071

PERMIT ISSUED
DEC 29
CITY OF PORTLAND

Permit No:	Issue Date:	CBL:
06-1824		~~020 C009001~~

Location of Construction:	Owner Name:	Owner Address:	Phone:
127 FORE ST	Ocean Gateway Garage LLC	2 Market St. Suite 500	
Business Name:	**Contractor Name:**	**Contractor Address:**	**Phone**
	Gilbane / Michael Poulin	900 Elm St Manchester	6056900076
Lessee/Buyer's Name	**Phone:**	**Permit Type:**	**Zone:**
		Foundation Only/Commercial	B5b

Past Use:	Proposed Use:	Permit Fee:	Cost of Work:	CEO District:
Vacant Land	Parking Garage 6 story Foundation only		$855,835.00	1

FIRE DEPT: ☐ Approved ☐ Denied

Signature:

INSPECTION:
Use Group: Type:

Signature:

Proposed Project Description:
6 story parking garage, Foundation only

PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)

Action: ☐ Approved ☐ Approved w/Conditions ☐ Denied

Signature: Date:

Permit Taken By:	Date Applied For:
dmartin	12/26/2006

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

Zoning Approval

Special Zone or Reviews	Zoning Appeal	Historic Preservation
☐ Shoreland N/A	☐ Variance	☑ Not in District or Landmark
☐ Wetland	☐ Miscellaneous	☐ Does Not Require Review
☐ Flood Zone Panel 14 Zone C	☐ Conditional Use	☐ Requires Review
☐ Subdivision	☐ Interpretation	☐ Approved
☑ Site Plan #2006-0235	☐ Approved	☐ Approved w/Conditions
Maj ☐ Minor ☐ MM ☐ ok with conditions	☐ Denied	☐ Denied
Date: 12/27/06	Date:	Date:

CERTIFICATION

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

SIGNATURE OF APPLICANT | ADDRESS | DATE | PHONE

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

Form # P 04

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK

CITY OF PORTLAND

BUILDING INSPECTION

Please Read Application And Notes, If Any, Attached

Permit Number: 061824

PERMIT ISSUED
NOV - 29 2006
CITY OF PORTLAND

This is to certify that Ocean Gateway Garage LLC / Albane / Michael Poulin

has permission to 6 story parking garage, Foun ion only

AT 127 FORE ST L 020 C009001

provided that the person or persons rm or tion a epting this permit shall comply with all of the provisions of the Statutes of ine and of the ances of the City of Portland regulating the construction, maintenance and e of buildings and uctures, and of the application on file in this department.

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

ification f inspe on mus e n and w en perm on proc d re this lding o rt there s ed or rwi osed-in 4 UR NO REQUIRED.

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

OTHER REQUIRED APPROVALS

Fire Dept. _____

Health Dept. _____

Appeal Board _____

Other _____
Department Name

PERMIT ISSUED
DEC 29 2006
CITY OF PORTLAND

_____
Director - Building & Inspection Services

PENALTY FOR REMOVING THIS CARD

Scanned

Statement of Special Inspections

2071

Project:	**Ocean Gateway Parking Garage**
Location:	Portland, Maine
Owner:	Ocean Gateway Garage LLC
Owner's Address:	2 Market Street, Suite 500, Portland ME 04101
Architect of Record:	Scott Simons Architects
Structural Engineer of Record:	Simon Design Engineering, LLC

This *Statement of Special Inspections* is submitted as a condition for permit issuance in accordance with the Special Inspection requirements of the International Building Code. It includes a Schedule of Special Inspection Services applicable to this project as well as the name of the Special Inspector and the identity of other approved agencies intended to be retained for conducting these inspections.

The Special Inspector shall keep records of all inspections and shall furnish inspection reports to the Building Official, Structural Engineer of Record, and Architect of Record. 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, Structural Engineer of Record, and Architect of Record. The Special Inspection program does not relieve the Contractor of his or her responsibilities.

Interim reports shall be submitted to the Building Official, Owner, Structural Engineer of Record, and Architect of Record.

A *Final Report of Special Inspections* documenting completion of all required Special Inspections and correction of any discrepancies noted in the inspections shall be submitted 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: Monthly

Prepared by:

Alan H. Simon, P.E.

Signature date

Design Professional Seal

Owner's Authorization:

Signature date

Building Official's Acceptance:

Signature date

Schedule of Special Inspection Services

The following sheets comprise the required schedule of special inspections for this project. The construction divisions which require special inspections for this project are as follows:

- X Soils and Foundations
- X Cast-In-Place Concrete
- X Precast Concrete
- X Masonry
- X Structural Steel
- Cold-Formed Steel Framing
- X Spray Fire Resistive Material
- Wood Construction
- Exterior Insulation and Finish System
- Special Cases

Inspection Agents	Firm	Address
1. Special Inspector Richard Libardoni	Intercontinental Developers Inc.	1270 Soldiers Field Rd. Boston, MA
2. Testing Laboratory .	TBD.	
3. Testing Laboratory Wayne Chadbourne	Haley & Aldrich, Inc.	75 Washington Avenue Suite 203 Portland, Maine 04101-2617
4. Testing Laboratory	TBD	

Note: The qualifications of all personnel performing Special Inspection activities are subject to the approval of the Building Official.

The inspection and testing agent shall be engaged by the Owner or the Owner's Agent, and not 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.

The credentials of al inspectors and testing technicians shall be provided if requested.

It is recommended that the person administering the Special Inspections program be a Professional Engineer experienced in the design of buildings.

Key for Minimum Qualifications of Inspection Agents (where indicted on Schedule)	
PE	Professional Engineer
EIT	Engineer in Training
ACI	American Concrete Institute Certified Concrete Field Testing Technician
AWS	American Welding Society Certified Welding Inspector
ASNT	American Society of Non-Destructive Testing – Level II or III

Qualifications of inspection agents may be indicted on the Schedule in instances where the Structural Engineer deems such requirements are appropriate.

Item	Agent No. (Qualif.)	Scope
1. Shallow Foundations	3 (EIT)	Inspect bearing surfaces for conformance to the requirements of the structural drawings, specifications, and/or geotechnical report
2. Controlled Structural Fill	3 (EIT)	Test material for conformance to specifications or geotechnical report. Perform laboratory compaction tests in accordance with the specifications to determine optimum water content and maximum dry density. Provide full-time inspection of the installation. Perform field density tests of the in-place fill.
3. Deep Foundations	3 (EIT)	Inspect documents identifying pile material and certifying grade of material for conformance to the Contract Documents, and that the identification is maintained from the point of manufacture to the point of delivery to the site. Perform full time inspection of installation. Maintain accurate records for each pile. Monitor dynamic pile load tests and modify pile capacity/installation as required. Record final location of each pile in plan.
4. Other	N/A	

Item	Agent No. (Qualif.)	Scope
1. Mix Design	4 SER	Review mix designs.
2. Material Certification	4 (ACI) SER	Review for conformance to specifications.
3. Reinforcement Installation	4	Inspect reinforcing for size, quantity, condition and placement.
4. Post-Tensioning Operations	N/A	Inspect tensioning and anchorage of tendons. Inspect grouting off bonded tendons.
5. Batching Plant	4 (ACI)	Review Plant quality control procedures and batching and mixing methods.
6. Formwork Geometry	4	Inspect form sizes.
7. Concrete Placement	4	Observe concrete placement operations. Verify conformance to specifications including cold-weather and hot-weather placement procedures. Perform slump, density and air content tests at point of discharge.
8. Evaluation of Concrete Strength	4	Test and evaluate in accordance with the specifications.
9. Curing and Protection	4	Observe procedures for conformance to the specifications.
10. Other		

Item	Agent No. (Qualif.)	Scope
1. Material Certification	4 SER	Review for conformance to specifications.
2. Mixing of Mortar and Grout	4	Inspect field-mixing procedures for conformance to the specifications.
3. Installation of Masonry	4	Inspect placement for conformance to the specifications.
4. Reinforcement Installation	4	Inspect reinforcing steel for size, quantity, condition and placement for conformance to approved submittals and Contract Documents. Inspect welding of reinforcement and review welder's certifications.
5. Grouting Operations	4	Inspect grouting procedures for conformance with the specifications. Inspect cells prior to grouting.
6. Weather Protection	4	Inspect protection for cold and hot weather for conformance with the specifications.
7. Evaluation of Masonry Strength	4	Verify strength in accordance with the specifications.
8. Anchors and Ties	4	Inspect anchorage of masonry to other construction for conformance to the Contract Documents.
9. Other		

Item	Agent No. (Qualif.)	Scope
1. Fabricator Certification/ Quality Control Procedures	2 (PE) [SER]	Review each Fabricator's quality control procedures. Inspect in-plant fabrication, or review Fabricator's approved Independent Inspection Agency's reports.
2. Material Certification	2 (PE) [SER]	Review for conformance to the specifications.
3. Open Web Steel Joists	N/A	Inspect for size, placement, bridging, bearing and connection to structure. Visually inspect all welds of a minimum of 5% of the joists, randomly selected.
4. Bolting	2 (PE)	Test and inspect bolted connections in accordance with specifications. Verify bolt size and grade.
5. Welding	2 (AWS)	Check welder qualifications. Visually inspect fillet welds and test full-penetration field welds in accordance with specifications.
6. Shear Connectors	2 (PE)	Inspect for size and placement. Test for proper weld attachment.
7. Structural Details	2 (PE)	Review for conformance to the specifications.
8. Metal Deck	2 (PE)	Verify gage, width, and type. Inspect placement, laps, welds, side lap attachment and screws or other mechanical fasteners. Check welder qualifications.
9. Other		

Item	Agent No. (Qualif.)	Scope
1. Material Specifications	4	Review for conformance to contract documents.
2. Laboratory Tested Fire Resistance Design	4	Review for conformance to contract documents.
3. Schedule of Thickness	4	Review for conformance to contract documents.
4. Surface Preparation	4	Inspect surface preparation and review for conformance to contract documents and approved submittals.
5. Application	4	Verify installation procedures. Review for conformance to contract documents and approved submittals.
6. Curing and Ambient Condition	4	Verify curing procedures and review for conformance to contract documents and approved submittals.
7. Thickness	4	Verify applied thickness and review for conformance to contract documents and approved submittals.
8. Density	4	Verify applied density and review for conformance to contract documents and approved submittals.
9. Bond Strength	4	Verify bond strength and review for conformance to contract documents and approved submittals.
10. Other		

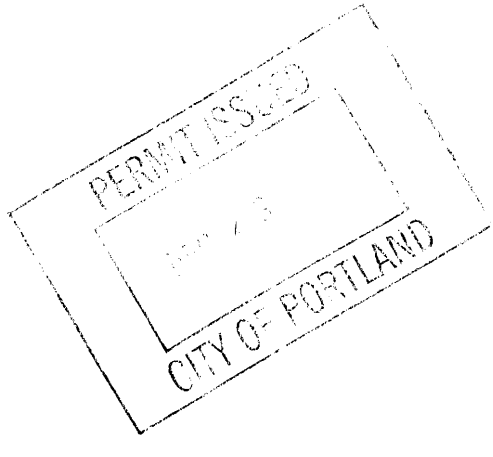
Location of Construction:	Owner Name:	Owner Address:	Phone:
127 FORE ST	Ocean Gateway Garage LLC	2 Market St. Suite 500	
Business Name:	**Contractor Name:**	**Contractor Address:**	**Phone**
	Gilbane / Michael Poulin	900 Elm St Manchester	(603) 699-0076
Lessee/Buyer's Name	**Phone:**	**Permit Type:**	
		Foundation Only/Commercial	

Dept: Fire **Status:** Open **Reviewer:** Greg Cass **Approval Date:**
Note: **Ok to Issue:** ☐

Dept: DRC **Status:** Open **Reviewer:** **Approval Date:**
Note: **Ok to Issue:** ☐

Dept: Planning **Status:** Approved with Conditions **Reviewer:** Bill Needelman **Approval Date:** 12/28/2006
Note: **Ok to Issue:** ☑

Comments:
12/27/2006-mes: Still needs a final sign off from Planning PRIOR to issuing the foundation permit - Also owes $75 on the fee



From: Jeanie Bourke
To: Drew Swenson; Mike Nugent; nsmith@bernsteinshur.com; William Needelman
Date: 12/29/2006 11:13:22 AM
Subject: RE: Riverwalk Performance Guarantee/Foundation permit

Treasury has confirmed from that the wire was received....the permit can be picked up!!

Jeanie Bourke
Inspection Services Division Director

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

>>> "Drew Swenson" <dswenson@swensonandco.com> 12/29 10:21 AM >>>

CITY OF PORTLAND, MAINE
Department of Building Inspections

20 ____

Received from _____

Location of Work _____

Cost of Construction $ _____

Permit Fee $ _____

Building (IL) ___ Plumbing (I5) ___ Electrical (I2) ___ Site Plan (U2) ___

Other _____

CBL: _____

Check #: _____ **Total Collected $** _____

THIS IS NOT A PERMIT

No work is to be started until PERMIT CARD is actually posted upon the premises. Acceptance of fee is no guarantee that permit will be granted. PRESERVE THIS RECEIPT. In case permit cannot be granted the amount of the fee will be refunded upon return of the receipt less $10.00 or 10% whichever is greater.

WHITE - Applicant's Copy
YELLOW - Office Copy
PINK - Permit Copy

that it may be picked up.

City of Portland, Maine - Building or Use Permit

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

Permit No:	Date Applied For:	CBL:
06-1824	12/26/2006	020 C009001

Location of Construction:	Owner Name:	Owner Address:	Phone:
127 FORE ST	Ocean Gateway Garage LLC	2 Market St. Suite 500	
Business Name:	**Contractor Name:**	**Contractor Address:**	**Phone**
	Gilbane / Michael Poulin	900 Elm St Manchester	(603) 699-0076
Lessee/Buyer's Name	**Phone:**	**Permit Type:**	
		Foundation Only/Commercial	

Proposed Use:	Proposed Project Description:
Parking Garage 6 story Foundation only	6 story parking garage, Foundation only

Dept: Zoning **Status:** Approved with Conditions **Reviewer:** Marge Schmuckal **Approval Date:** 12/27/2006

Note: **Ok to Issue:** ☑

1) This permit is for the FOUNDATION ONLY - Separate permits SHALL be required for work beyond the foundation work.

2) This permit is being approved on the basis of plans submitted. Any deviations shall require a separate approval before starting that work.

3) The B-5b Zone requires that any structure shall not be setback NO MORE THAN 10 feet from the front property line. This foundation approval is based upon compliance with the maximum front setback of 10 feet.

Dept: Building **Status:** Approved with Conditions **Reviewer:** Mike Nugent **Approval Date:** 12/29/2006

Note: **Ok to Issue:** ☑

1) Attached are my post permit, pre construction conditions Per MJN:

1) Stamped structural plans with full construction details must be submitted and approved prior to commencement of construction.
2) The statement of Special Inspections must be signed by all applicable parties prior to the commencement of construction.
3) The proposal submitted by the selected piling installer must be reviewed and approved by the project engineer. Any variations from the approved construction documents must be documented and approved.
4) This permit is for a foundation only.Due to the limited information submitted, this review was limited to height and area limitations (table 406.3.5) and relevant portions of chapters 16, 17 and 18 of the 2003 IBC. All other chapter reviews will occur when the information is made available. For the puposes of this review it is assumed that the garage will meet the "openings" requirement found in section 406.3.3.1 of the 2003 IBC.
5) A summary statement from the project engineer shall be provided that establishes compliance with Section 1808 of the 2003 IBC. It shall specify compliance with all applicable sections of the code including but not limited to: the nine items specified in Section 1808.2.2 of the IBC, with specific attention given to the testing criterea outlined on page 14 of the Haely and Aldrich report. If the testing criterea varies from that specified in ASTM D 1143 ot ASTM D4945. This variation needs to be reviewed and approved prior to implimentation.

Dept: Public Works **Status:** Open **Reviewer:** **Approval Date:**

Note: **Ok to Issue:** ☐

Dept: Zoning **Status:** Approved with Conditions **Reviewer:** Marge Schmuckal **Approval Date:** 12/22/2006

Note: **Ok to Issue:** ☑

Dept: Parks **Status:** Open **Reviewer:** **Approval Date:**

Note: **Ok to Issue:** ☐

PERMIT ISSUED
DEC 29 2006
CITY OF PORTLAND

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: MIDDLE / FORE STREETS PORTLAND ME		
Total Square Footage of Proposed Structure: 216,662 SF +/-	Square Footage of Lot: 48,742 SF +/-	
Tax Assessor's Chart, Block & Lot: Chart# 20 Block# C Lot# 9 — 127 FORE STREET LOT	Owner: OCEAN GATEWAY GARAGE LLC	Telephone: 207 775-2464
Lessee/Buyer's Name (If Applicable): N/A	Applicant name, address & telephone: OCEAN GATEWAY GARAGE LLC, DREW SWENSON, MANAGER, 2 MARKET ST, SUITE 500, PORTLAND ME 04101, 207-775-2464	Cost Of Work: $ 855,835 Fee: $ 8,590.00 C of O Fee: $ 75.00 Due

Current Specific use: SURFACE PARKING LOT

If vacant, what was the previous use? —

Proposed Specific use: _____

Project description: SIX STORY 709-725 SPACE PARKING ~~GARAGE~~ GARAGE WITH 5,000 SF +/- RETAIL SPACE ON GROUND FLOOR

Contractor's name, address & telephone: GILBANE BUILDING CO. 207 772-3725, 1121 COMMERCIAL ST, PORTLAND ME 04101

Who should we contact when the permit is ready: DREW SWENSON

Mailing address: OCEAN GATEWAY GARAGE LLC, 2 MARKET STREET, SUITE 500, PORTLAND, ME 04101 — Phone: 207 775-2464

Please submit all of the information outlined in the Commercial Application 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 visit us on-line at www.portlandmaine.gov, stop by the Building Inspections office, room 315 City Hall or call 874-8703.

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

Signature of applicant: _____ Date: 12/26/06

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

DEPT. OF BUILDING INSPECTION
CITY OF PORTLAND, ME
DEC 26 2006
RECEIVED

Attached are my post permit, pre construction conditions:

1) Stamped structural plans with full construction details must be submitted and approved prior to commencement of construction.
2) The statement of Special Inspections must be signed by all applicable parties prior to the commencement of construction.
3) The proposal submitted by the selected piling installer must be reviewed and approved by the project engineer. Any variations from the approved construction documents must be documented and approved.
4) This permit is for a foundation only.Due to the limited information submitted, this review was limited to height and area limitations (table 406.3.5) and relevant portions of chapters 16, 17 and 18 of the 2003 IBC. All other chapter reviews will occur when the information is made available. For the puposes of this review it is assumed that the garage will meet the "openings" requirement found in section 406.3.3.1 of the 2003 IBC.
5) A summary statement from the project engineer shall be provided that establishes compliance with Section 1808 of the 2003 IBC. It shall specify compliance with all applicable sections of the code including but not limited to: the nine items specified in Section 1808.2.2 of the IBC, with specific attention given to the testing criterea outlined on page 14 of the Haely and Aldrich report. If the testing criterea varies from that specified in ASTM D 1143 ot ASTM D4945. This variation needs to be reviewed and approved prior to implimentation.

>>> William Needelman 12/28/06 3:41 PM >>>
To all:

Regarding the issuance of the foundation only building permit for the Ocean Gateway Garage:

Planning sign-off is waiting for receipt of the performance guarantee (the signed escrow agreement is in, but Finance is waiting for the wire transfer of the funds.)

After issuance of the foundation permit, the applicant is still required to fulfill outstanding conditions of approval - all of which can occur during foundation construction.

I will be out tomorrow, and as of +/-2:00 this afternoon, the $ wire had not come to finance. I have left messages on Drew's office and cell voice mails.

Again, as soon as the City has the $ in hand, the Planning is fine with the foundation-only permit.

I will be in on Jan. 2.

Thank you.

Bill
874-8722

>>> "Nathan Smith" <nsmith@bernsteinshur.com> 12/27/2006 1:55:42 PM >>>

Duane,
Riverwalk will be wiring $885,835 to the City for a Performance Guarantee on the Ocean Gateway Garage, etc. Project. Could you please send me wiring instructions. I will be working out the details of the guarantee with Elizabeth Boynton.
Thanks
Nathan

Nathan Smith

Bernstein Shur

100 Middle Street

PO Box 9729

Portland, ME 04104-5029

207 774-1200 main

207 774-1127 facsimile

nsmith@bernsteinshur.com

www.bernsteinshur.com

Portland, ME | Augusta, ME | Manchester, NH

CC: 'Alan Simon'; Alex Jaegerman ; Barbara Barhydt; 'Barry Sheff'; 'Charles Young'; 'David Senus'; Donna Martin; Douglas' 'Butler; Duane Kline; Elizabeth Boynton; 'Fred Forsley'; Gayle Guertin; Jay Reynolds; Jennifer Dorr; Joe Gray ; John Lufkin; John' 'Monaghan; Lannie Dobson; Lee Urban; Marge Schmuckal; mikem@intercontinental.net; 'Nick Iselin'; 'Patrick Carroll'; 'Richard Libardoni'; sandy@seaglasscapital.com; 'Sarah Lynch'; 'Scott Simons'; 'Stephen Fraser'; 'Steve Brackett'; 'Thomas Gorrill'; Wayne' 'Chadbourne

BUILDING PERMIT INSPECTION PROCEDURES

Please call 874-8703 or 874-8693 to schedule your ~~inspections~~ as agreed upon

Permits expire in 6 months, if the project is not started or ceases for 6 months.

The Owner or their designee is required to notify the inspections office for the following inspections and provide adequate notice. Notice must be called in 48-72 hours in advance in order to schedule an inspection:

By initializing at each inspection time, you are agreeing that you understand the inspection procedure and additional fees from a "Stop Work Order" and "Stop Work Order Release" will be incurred if the procedure is not followed as stated below.

A Pre-construction Meeting will take place upon receipt of your building permit.

✓	**Footing/Building Location Inspection:**	Prior to pouring concrete
✓	**Re-Bar Schedule Inspection:**	Prior to pouring concrete
✓	**Foundation Inspection:**	Prior to placing ANY backfill
_____	~~**Framing/Rough Plumbing/Electrical:**~~	~~Prior to any insulating or drywalling~~
_____	~~**Final/Certificate of Occupancy:**~~	~~Prior to any occupancy of the structure~~ or use. NOTE: There is a ~~$75.00 fee~~ per ~~inspection at this point~~.

Certificate of Occupancy is not required for certain projects. Your inspector can advise you if your project requires a Certificate of Occupancy. All projects **DO** require a final inspection

_____ **If any of the inspections do not occur, the project cannot go on to the next phase, REGARDLESS OF THE NOTICE OR CIRCUMSTANCES.**

_____ **CERIFICATE OF OCCUPANICES MUST BE ISSUED AND PAID FOR, BEFORE THE SPACE MAY BE OCCUPIED**

Signature of Applicant/Designee — Date 12/29/06

Signature of Inspections Official — Date 12.29.06

CBL: 20 C 9 Building Permit #: 061824

From: Elizabeth Boynton
To: Drew Swenson; Jeanie Bourke; Mike Nugent; nsmith@bernsteinshur.com; William Needelman
Date: 12/29/2006 11:14:38 AM
Subject: RE: Riverwalk Performance Guarantee/Foundation permit

The wire transfer has arrived and Dick Lagarde has signed off on the escrow account. The permit can be issued. I will send Nate Smithy a copy of the executed performance guarantee. Happy New Year to all.

Elizabeth Boynton
Associate Corporation Counsel
City of Portland
389 Congress Street
Portland, ME 04101
207-874-8480 (tel)
207-874-8497 (fax)
liz@portlandmaine.gov

>>> "Drew Swenson" <dswenson@swensonandco.com> 12/29/2006 10:21:00 AM >>>
Thank you Mike!

I have just been informed that the wire transfer was initiated about an hour ago and it should be hitting the City account shortly.

Can someone let me know when it arrives in the bank's system, and I will then come over to pick up the foundation permit. Thank you.

On behalf of all of us on the development team, Happy New Year to everyone who has helped us and thank you for your help making this project a reality. Special thanks to everyone at City Hall who has worked so hard on this project during the holiday week. Best wishes to everyone in 2007!!!

Drew E. Swenson
Riverwalk LLC
2 Market Street, Suite 500
Portland ME 04101
Tel: 207-775-2464
Fax: 207-775-2465
Cell: 207-415-3829

-----Original Message-----
From: Mike Nugent [mailto:mjn@portlandmaine.gov]
Sent: Thursday, December 28, 2006 7:42 PM
To: nsmith@bernsteinshur.com; Jeanie Bourke; William Needelman
Cc: Alex Jaegerman ; Barbara Barhydt; Duane Kline; Donna Martin; Gayle Guertin; Jay Reynolds; Jennifer Dorr; Lannie Dobson; Lee Urban; Elizabeth Boynton; Marge Schmuckal; dswenson@swensonandco.com
Subject: Re: Riverwalk Performance Guarantee/Foundation permit

I have reviewed the Foundation Only Permit and will leave the signed permit with the Inspections Office. Upon satisfactory resolution of the performance guarantee , Lannie, Donna or Gayle should be informed to process the permit for distribution and notify the appropriate person that it may be picked up.

Attached are my post permit, pre construction conditions:

1) Stamped structural plans with full construction details must be submitted and approved prior to commencement of construction.
2) The statement of Special Inspections must be signed by all applicable parties prior to the commencement of construction.
3) The proposal submitted by the selected piling installer must be reviewed and approved by the project engineer. Any variations from the approved construction documents must be documented and approved.
4) This permit is for a foundation only.Due to the limited information submitted, this review was limited to height and area limitations (table 406.3.5) and relevant portions of chapters 16, 17 and 18 of the 2003 IBC. All other chapter reviews will occur when the information is made available. For the puposes of this review it is assumed that the garage will meet the "openings" requirement found in section 406.3.3.1 of the 2003 IBC.
5) A summary statement from the project engineer shall be provided that establishes compliance with Section 1808 of the 2003 IBC. It shall specify compliance with all applicable sections of the code including but not limited to: the nine items specified in Section 1808.2.2 of the IBC, with specific attention given to the testing criterea outlined on page 14 of the Haely and Aldrich report. If the testing criterea varies from that specified in ASTM D 1143 ot ASTM D4945. This variation needs to be reviewed and approved prior to implimentation.

>>> William Needelman 12/28/06 3:41 PM >>>
To all:

Regarding the issuance of the foundation only building permit for the Ocean Gateway Garage:

Planning sign-off is waiting for receipt of the performance guarantee (the signed escrow agreement is in, but Finance is waiting for the wire transfer of the funds.)

After issuance of the foundation permit, the applicant is still required to fulfill outstanding conditions of approval - all of which can occur during foundation construction.

I will be out tomorrow, and as of +/-2:00 this afternoon, the $ wire had not come to finance. I have left messages on Drew's office and cell voice mails.

Again, as soon as the City has the $ in hand, the Planning is fine with the foundation-only permit.

I will be in on Jan. 2.

Thank you.

Bill
874-8722

>>> "Nathan Smith" <nsmith@bernsteinshur.com> 12/27/2006 1:55:42 PM >>>
Duane,
Riverwalk will be wiring $885,835 to the City for a Performance Guarantee on the Ocean Gateway Garage, etc. Project. Could you please send me wiring instructions. I will be working out the details of the guarantee with Elizabeth Boynton.
Thanks
Nathan

Nathan Smith

Bernstein Shur

100 Middle Street

PO Box 9729

Portland, ME 04104-5029

207 774-1200 main

207 774-1127 facsimile

nsmith@bernsteinshur.com

www.bernsteinshur.com

Portland, ME | Augusta, ME | Manchester, NH

CC: 'Alan Simon'; Alex Jaegerman ; Barbara Barhydt; 'Barry Sheff'; 'Charles Young'; 'David Senus'; Donna Martin; Douglas' 'Butler; Duane Kline; 'Fred Forsley'; Gayle Guertin; Jay Reynolds; Jennifer Dorr; Joe Gray ; John Lufkin; John' 'Monaghan; Lannie Dobson; Lee Urban; Marge Schmuckal; mikem@intercontinental.net; 'Nick Iselin'; 'Patrick Carroll'; 'Richard Libardoni'; sandy@seaglasscapital.com; 'Sarah Lynch'; 'Scott Simons'; 'Stephen Fraser'; 'Steve Brackett'; 'Thomas Gorrill'; Wayne' 'Chadbourne

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From: Lee Urban
To: Jeanie Bourke; Mike Nugent; nsmith@bernsteinshur.com; William Needelman
Date: 12/29/2006 9:17:34 AM
Subject: Re: Riverwalk Performance Guarantee/Foundation permit

Thanks, everyone!!

>>> Mike Nugent 12/28/2006 7:42:12 PM >>>
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Portland, ME | Augusta, ME | Manchester, NH

CC: Alex Jaegerman ; Barbara Barhydt; Donna Martin; dswenson@swensonandco.com; Duane Kline; Elizabeth Boynton; Gayle Guertin; Jay Reynolds; Jennifer Dorr; Lannie Dobson; Marge Schmuckal

From: Marge Schmuckal
To: Ann Machado; Donna Martin; Gayle Guertin; Jeanie Bourke; Lannie Dobson; Mike Nugent
Date: 12/27/2006 9:28:27 AM
Subject: Re: Riverwalk/Longfellow garage-condos

I have this permit on my desk. - I am intending to sign off on it today for zoning. But yes, we need to wait for Bill in Planning to give the final OK.
Marge

>>> Jeanie Bourke 12/22/2006 2:10:28 PM >>>
FYI....
This project needs a permit by Dec. 31 per funding. Planning (Bill) wil lhopefully be ready to sign off by next Friday.....with performance bond.

Unfortunately they have not filed an application with us. I believe they will be coming in at the eleventh hour for a foundation only permit. Anything we can do to accomodate this approval is appreciated.

Support staff can you please send out a heads up when it arrives.....
Thanks

Jeanie Bourke
Inspection Services Division Director

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

CC: John Lufkin; Lee Urban

CAAGE

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

signed off ...

2006-0235
Application I. D. Number

12/8/2006
Application Date

Drew Swenson, Riverwalk, LLC.
Applicant

2 Market Street, Suite 500, Portland, ME 04101
Applicant's Mailing Address

Amendment to Plan - Longfellow Gara
Project Name/Description

Consultant/Agent

India/Fore Street, Portland, Maine
Address of Proposed Site

Applicant Ph: (207) 775-2464 **Agent Fax:**
Applicant or Agent Daytime Telephone, Fax

020 C023001
Assessor's Reference: Chart-Block-Lot

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

Proposed Building square Feet or # of Units

Acreage of Site

B5b
Zoning

Check Review Required:

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

Fees Paid: Site Plan **$250.00** Subdivision ____ Engineer Review ____ Date **12/11/2006**

Zoning Approval Status:

Reviewer Marge S— [signature]

☐ **Approved** ☐ **Approved w/Conditions** See Attached ☐ **Denied**

Approval Date ____ Approval Expiration ____ Extension to ____ ☐ Additional Sheets Attached

☐ Condition Compliance ____ signature ____ date

Performance Guarantee ☐ **Required*** ☐ **Not Required**

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

☐ Performance Guarantee Accepted ____ date ____ amount ____ expiration date

☐ Inspection Fee Paid ____ date ____ amount

☐ Building Permit Issue ____ date

☐ Performance Guarantee Reduced ____ date ____ remaining balance ____ signature

☐ Temporary Certificate of Occupancy ____ date ☐ Conditions (See Attached) ____ expiration date

DEPT. OF BUILDING INSPECTION
CITY OF PORTLAND, ME
DEC 14 2006
RECEIVED

☐ Final Inspection ____ date ____ signature

☐ Certificate Of Occupancy ____ date

☐ Performance Guarantee Released ____ date ____ signature

☐ Defect Guarantee Submitted ____ submitted date ____ amount ____ expiration date

☐ Defect Guarantee Released ____ date ____ signature

Applicant: Ocean Gateway Garage LLC Date: 4/19/06

Address: 25 India St & Fore St - Longfellow Garage C-B-L: 20-C-9, 20-C-23

CHECK-LIST AGAINST ZONING ORDINANCE

Date - New construction foundation only - #20-C-009

Zone Location - B-5b

Interior or corner lot - 25 India St

Proposed Use/Work -

Sewage Disposal - city

Lot Street Frontage -

Front Yard - MAX forty-2nd setback in B-5b = 10'

Rear Yard - None req

Side Yard - None req

Projections -

Width of Lot -

Height - 65' max 3 floors min - for 25 India St - showing 64' to top of beam to lowest level over 3 stories high - for Longfellow Garage - 64' & 68' scaled - No back up of the Average grade

Lot Area - No min req -

Lot Coverage/Impervious Surface - 100% allowed

Area per Family - 40 Du per Acre (43,560#) N/A

Off-street Parking -

Loading Bays - N/A

Site Plan - #2005-0271

Shoreland Zoning/Stream Protection - N/A

Flood Plains - Panel 4 - Zone C

FROM DESIGNER: Simon Design Engineering, LLC

DATE: 12-21-06

Job Name: Ocean Gateway Parking Structure

Address of Construction:

2003 *International Building Code*

Construction project was designed according to the building code criteria listed below:

Building Code and Year IBC 2003 Use Group Classification(s) S-2

Type of Construction IIB

Will the Structure have a Fire suppression system in Accordance with Section 903.3.1 of the 2003 IBC: NFS - not required.

Is the Structure mixed use? yes if yes, separated or non separated (see Section 302.3) seperated

Supervisory alarm system? Geotechnical/Soils report required?(See Section 1802.2) yes

STRUCTURAL DESIGN CALCULATIONS

NO. Submitted for all structural members *(106.1, 106.1.1)*

DESIGN LOADS ON CONSTRUCTION DOCUMENTS *(1603)*

Uniformly distributed floor live loads *(1603.1.1, 1607)*

Floor Area Use	Loads Shown
PARKING DECK	40psf
STAIRS	100 psf / 300# 4"x4"
STORAGE	125 psf
EQUIPMENT RM	150 psf
LOBBIES	100 psf

Wind loads *(1603.1.4, 1609)*

ASCE 7 Design option utilized (1609.1.1, 1609.6)

100 mph Basic wind speed *(1609.3)*

1.00 Building category and wind importance factor, I_w (Table *1604.5*, 1609.5)

D Wind exposure category *(1609.4)*

0 Internal pressure coefficient *(ASCE 7)*

(psf) 37.2/-40.2 Component and cladding pressures *(1609.1.1, 1609.6.2.2)*

(psf) 31.5/-37.8 Main force wind pressures *(1609.1.1, 1609.6.2.1)*

Earthquake design data *(1603.1.5, 1614 - 1623)*

Design option utilized *(1614.1)*

I Seismic use group ("Category") *(Table 1604.5, 1616.2)*

0.371/0.160 Spectral response coefficients, S_{DS} & S_{D1} *(1615.1)*

C Site class *(1615.1.5)*

20% Live load reduction *(1603.1.1, 1607.9, 1607.10)*

SNOW GOV. Roof live loads *(1603.1.2, 1607.11)*

Roof snow loads *(7613.7.3,1608)*

50psf Ground snow load, P_g (1608.2)

42 psf If P_g > 20 psf, flat-roof snow load, P_f *(1608.3)*

1.0 If P_g > 10 psf, snow exposure factor, C_e *(Table 1608.3.1)*

1.0 If P_g > 10 psf, snow load importance factor, I_s *(Table 1604.5)*

1.2 Roof thermal factor, C_t *(Table 1608.3.2)*

N/A Sloped roof snowload, P_s *(1608.4)*

B Seismic design category *(1616.3)*

OSMF Basic seismic-force-resisting system *(Table 1617.6.2)*

3/3 Response modification coefficient, R_I and deflection amplification factor, C_d *(Table 1617.6.2)*

ELFP Analysis procedure *(1616.6, 1617.5)*

805.9K Design base shear *(1617.4, 1617.5.1)*

Flood loads *(1603.1.6, 1612)*

NO Flood hazard area *(1612.3)*

6.9 Elevation of structure

Other loads

3000lb/4.5"x4" AREA Concentrated loads (1607.4)

50psf Partition loads (1607.5)

6K Barrier Impact loads *(1607.8)*

Misc. loads *(Table 1607.8, 1607.9.1, 1607.7, 1607.12, 1607.13, 1610, 1611, 2404)*

PER 500 sf EFFECTIVE WIND AREA

Drew E. Swenson, CPA, JD, LLM
2 Market Street, Suite 500
Portland, Maine 04101

dswenson@swensonandco.com
tel: 207-775-2464
fax: 207-775-2465

Drew Swenson

Real Estate Development &
Financial Advisory Services

December 26, 2006

City of Portland
Planning and Development Department
389 Congress Street
Room 308
Portland ME 04101

Re: Ocean Gateway Garage Excavation & Foundation Permit

Dear Sir or Madam:

Enclosed please find all the material required for the above-referenced permit application. Please also find a check in the amount of $8,580 for the permit application fee.

If you have any questions or additional informational needs, please contact me 207-415-3829.

Sincerely,

Drew E. Swenson
Principal, Ocean Gateway Garage LLC

SECTION 05300
STEEL DECK

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS:

A. Requirements for the General Conditions, DIVISION I, are hereby made a part of this Section to the same extent as if repeated herein.

B. The Fabricator/Erector shall coordinate this work with that of other trades affecting, or affected by the work included under this Section and shall cooperate with such trades, and the General Contractor to assure the steady and timely progress of the work.

C. The Fabricator/Erector agrees to accept the results of tests secured from a qualified testing laboratory engaged by the Owner.

D. When referred to, Standard Specifications of Technical Societies, manufacturers' associations, and federal agencies shall be the latest edition and include all amendments current as of the date of issue of these Specifications.

1.2 SCOPE OF WORK:

A. The work under this Section includes the furnishing of all labor, materials, tools, equipment and services required for the complete installation of all metal deck indicated on the Drawings or specified herein. Shop Drawings, fabrications, transportation and erection are here included. The work also includes provision of reinforcing at unframed roof openings, specifically reinforcing roof drain openings, flashing, cell closures, closure plates, pour stops, sheet metal work required to contain concrete, and sump pans at roof drains over all areas shown on the Drawings.

B. Related Work Specified Elsewhere: The following items of work are not included in this Section and are specified elsewhere:

1. SECTION 03300 - CAST-IN-PLACE CONCRETE
2. SECTION 05120 - STRUCTURAL STEEL
3. Supports and hangers for Electrical, Mechanical, and/or Plumbing work (except as shown on the Structural Drawings or noted herein) specified

under the respective Sections.

1.3 ABBREVIATIONS AND STANDARDS:

A. Abbreviations:

AISC: American Institute of Steel Construction, Inc.
AISI: American Iron and Steel Institute
ANSI: American National Standards Institute
ASCE: American Society of Civil Engineers
ASTM: American Society of Testing Materials
AWS: American Welding Society
SDI: Steel Deck Institute
UL: Underwriters Laboratories, Inc.

B. National Standards referenced herein are included to establish recognized quality only. Equivalent quality and testing standards will be acceptable subject to their timely submission, review and acceptance by the Engineer.

C. Standards: The Fabricator/Erector shall have in is possession and shall keep available in his field office the following Standards and Recommended Practices (latest editions and/or edition indicated below) to which reference may be made herein and to which he shall conform, except where otherwise required by this Specification.

1. International Building Code, 2003
2. American Society of Civil Engineers
   a. ASCE 7-98: American Society of Civil Engineers: Minimum Design Loads for Buildings and Other Structures, 1998.
3. American Welding Society
   a. AWS D1.3: Structural Welding Code - Sheet Steel
4. Steel Deck Institute
   a. SDI No. 28: Design Manual For Composite Decks, Roof Decks, and Form Deck.

1.4 DEFINITIONS:

A. Testing Agency: The Testing Agency will be selected by the General Contractor and paid for by the Owner. He will be responsible for the Owner's field inspection throughout the erection process and in that capacity will visually inspect the work, review the Fabricator/Erector's field test reports and perform such additional tests as deemed necessary to ensure conformance with the intent of the Contract Drawings and Specifications.

1.5 SUBMITTALS

A. Refer to DIVISION 1 for submittal provisions and procedures.

B. Certificate of Compliance: Submit to the Engineer each of the following:

1. Certification of Welders: Certified copies of the welder's certificates of qualification.
2. Physical Tests: Certified copies of report(s) of physical tests of an independent Testing Agency indicating ultimate and service load values for the deck being supplied.
3. Manufacturer's Tests: Certified copies of reports of manufacturer's tests made from heats at the mill for all metal deck supplied under this Section.
4. Manufacturer's literature indicating recommended installation instructions, section properties, load tables, etc.

C. Shop Drawings:

1. Shop Drawings shall show type of deck, gage of steel, locations, necessary fabrication to fit deck into job, closures, pour stops, sump pans, curb details, method of field connection to supporting structure including size, spacing, and pattern of welding, and method of fitting deck with other parts of construction.
2. The Fabricator/Erector shall verify the consistency of field dimensions with those dimensions given on the Architect's Drawings, and obtain by measurements at the site all necessary dimensions and levels.
3. Prior to submission of the Shop Drawings to the Engineer, they shall be prechecked by the Fabricator/Erector for conformity of detail with the Contract Documents and as coordinated with other work under his charge. The signature of a representative of the Fabricator/Erector indicating that the Drawings have been prechecked will be required. The Fabricator/Erector shall be wholly responsible for the conformity of dimensions and details of the Shop Drawings with the Contract Documents. Shop Drawings shall indicate where shoring of metal decking is required. The maximum allowable deflection under wet concrete is 3/8 inch.
4. Shop Drawings (four sets) shall be submitted in the form of black line prints for use by the Engineer

as work sheets for review of the Drawings.

5. After receipt of the Shop Drawings by the Engineer, they will be reviewed and necessary corrections will be marked on three copies, which will be returned. Corrections shall then be made on the Drawing(s), which shall be resubmitted. This procedure will continue until the Drawings are released for construction. The Fabricator/Erector shall then deliver to the Engineer the quantity and type of prints specified in DIVISION 1 for his record and the use of his personnel.
6. At least one copy of each released Shop Drawing shall be kept available in the Fabricator/Erector's field office and Drawings not bearing evidence of release for construction by the Engineer shall not be kept on the job.

1.6 GUARANTEE/WARRANTY:

A. Attention is directed to DIVISION 1 regarding Guarantees and Warranties under this Section.

B. Manufacturers shall provide their standard guarantees for work under this Section; however, such guarantees shall be in addition to and not in lieu of all other liabilities, which the manufacturer and/or Fabricator/Erector may have by law or other provisions of the Contract Documents.

PART 2 - PRODUCTS

2.1 MATERIALS:

A. Deck shall be formed of steel conforming to ASTM A446, Grade A (minimum yield strength 33,000 psi) with a zinc coating conforming to ASTM A525, coating class G90 or as indicated on the Drawings, 18-gage minimum or as indicated on the Drawings.

1. Metal floor deck shall be one of the following products or approved equivalent:
   a. Vulcraft: 2" VLI
   b. United Steel Deck, Inc.: 2" Lok-Floor
2. Metal roof deck shall be one of the following products or approved equivalent:
   a. Vulcraft: 3" Type N or 1½" Type B
   b. United Steel Deck, Inc.: 3" Type NS or 1½" Type B

B. Accessories: Closures, hanger tabs for suspended

acoustical ceilings, and other accessories shall be provided as necessary for complete installation. Hanger tabs shall each support 100 pounds minimum load and provide for fastening of hanger wire for suspended ceiling. Tabs shall be a maximum of 1'-0" on center in each direction.

C. Cell closure flexible strips and fillers shall be of material in compliance with applicable Building Code governing class of construction. Sump pans and frames for drains blocking infills at curb of mechanical units.

D. Provide metal closure strips at edges of all slabs and openings that will serve as pour stops for concrete. Closures shall be of same quality as metal deck unless otherwise indicated as "plate" and be sufficient to span or cantilever from steel beams (16-gage minimum).

PART 3 - EXECUTION

3.1 INSPECTION:

A. Examine all work prepared by others to receive work of this Section and report any defects affecting installation to the Fabricator/Erector for correction. Commencement of work will be construed as complete acceptance of preparatory work by others.

3.2 FABRICATION:

A. Fabricate deck units in accordance with the AISI "Specifications for the Design of Cold Formed Steel Structural Members" and approved Shop Drawings. Locate openings for penetrations where indicated and provide supports framing and edge reinforcement for all openings.

B. Floor Deck: Form units in lengths to span three or more support spacings with flush ends and interlocking side laps. All decking shall be detailed and fabricated to be unshored during concrete placement unless otherwise noted on the Contract Drawings. Depth, rib spacing, and gage as specified or shown on the Contract Drawings.

C. Roof Deck: Form units in lengths to span three or more supports spacings with flush ends and nested side laps. Depth, rib spacing, and gage as specified or called out on the Contract Drawings.

D. Closures: Form to provide tight fit at open ends of

cells or flutes and at sides of deck.

3.3 PRODUCT DELIVERY, STORAGE AND, HANDLING:

A. Steel deck delivery should be scheduled to arrive at the job site as required for erection.

B. Storage: Store off the ground with one end elevated to provide for drainage. Protect against condensation with a ventilated waterproof covering.

C. Care should be taken not to bend or mar decking.

3.4 INSTALLATION:

A. Install in accordance with manufacturer's recommendations, except as modified or extended herein. Welding shall be in accordance with AWS D1.3.

B. Placing Deck Units: Place deck units on supporting steel framework and adjust to final position with ends bearing minimum 2-1/2 inches on supporting members.

1. Place deck units end to end before they are permanently fastened.
2. Align cells over entire length of run.
3. Do not stretch or compress side lap interlocks.
4. Place units flat and square, and secure to adjacent framing without warp or deflection.
5. Units less than full width used to complete deck coverage shall not be less than 6 inches wide.
6. Where possible, steel deck shall span three or more supports.

C. Fastening Deck Units

1. Secure units to supporting members with 3/4-inch minimum diameter fusion welds. Maximum spacing 12" on center at each beam or girder support except as otherwise noted on the Contract Drawings.
2. Tack weld end closures at 4'-0" on center maximum.
3. Tack weld side closures at 3'-0" on center maximum.
4. Side Laps:
   a. Composite Deck: Button punch side laps between adjacent decks at intervals not to exceed 2'-0".
   b. Non-composite Deck: Fasten side laps between adjacent deck units with #12 TEK Screws at 6" on center maximum such that tight fit is created between the two units.
5. All welding shall be done by competent experienced

welding personnel.

D. Cut and fit deck units around projection through roof. Make cuts neat, square, and trim. Grind smooth all rough edges.

3.5 PROTECTION:

A. Do not use deck for storage or working platforms until permanently secured in position.

B. Assure that construction loads do not exceed carrying capacity.

C. During erection, distribute all construction live loads by appropriate means to prevent damage to the previously installed components.

3.6 CLEANING AND TOUCH-UP:

A. Remove oil, grease, dirt, or debris from deck and leave work ready for further construction.

B. Wirebrush clean all welds and scars and touch-up with zinc-rich paint.

END OF SECTION

MEMORANDUM

To: FILE

From: Marge Schmuckal **Dept:** Zoning

Subject: Application ID: 2006-0235

Date: 12/22/2006

On 12/22/06 I met with the Steve Fraiser, architect, and Drew Swenson. The proposed amendment to the parking garage is meeting the current zoning ordinance for setbacks, coverage and height. It is noted that the front of the building has been altered from the original submittal. In no area of the new front, shall the building be setback more than 10' from the front property line.

Marge Schmuckal
Zoning Administrator

Section 02220 – Demolition

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK:

A. Demolition includes modification, removal, relocation, and/or disposal of items as shown on Drawings or as specified. This includes, but is not limited to, the following:

1. Removal and replacement of utilities as required to accommodate new construction.

2. Removal and replacement of hot bituminous and cement concrete pavement as required to accommodate new construction.

3. Removal of granite curbing within project area as specified on the Drawings.

4. Coring of holes of diameter required and at locations required to accommodate utilities and piping as necessary for new construction.

5. Removal of buildings including foundations and below-grade foundation walls.

6. All other demolition work required to allow complete installation of the Project.

1.02 SUBMITTALS:

A. Submit proposed methods and disposal plans for demolition to OWNER and ENGINEER for review prior to start of work as specified.

B. Submit schedule indicating proposed sequence of demolition to OWNER and ENGINEER and for review prior to start of work. Include coordination for shutoff, capping and continuation of utility services as required, together with details for dust and noise control protection.

1.03 JOB CONDITIONS:

A. Permits: CONTRACTOR shall obtain all required permits for demolition.

B. Condition of Structures: The OWNER assumes no responsibility for actual condition of structures to be demolished.

1. Conditions existing at time of inspection for bidding purposes will be maintained by OWNER in so far as practicable. However, variations within structure may occur by OWNER's removal and salvage operations prior to start of demolition work.

C. Partial Removal: Items must be removed from structure as work progresses. Salvaged items must be transported from site as they are removed.

D. Explosives: Use of explosives will not be permitted.

A. General: Perform selective demolition work in a systematic manner. Use such methods as required to complete work indicated on Drawings or as specified in accordance with demolition schedule and applicable regulations.

B. Provide services for effective air and water pollution controls (water sprinkling, temporary enclosures, and other suitable methods) to limit dust and dirt rising and scattering in air to lowest practical level. Comply with governing regulations, permits, laws, and ordinances pertaining to environmental protection.

C. Completely fill below grade areas and void resulting from demolition work. Provide fill material as shown on the Drawing or as specified.

D. Saw-cut asphalt and concrete paved surfaces before removal. Joint cut should be neat and straight.

3.03 PIPE CORING:

A. General: Core holes for all pipe protrusions through existing concrete structures to allow watertight installation of pipe and link seal or pipe sleeve as required. Double link seals shall be installed at all pipe protrusions through concrete walls containing liquid or saturated conditions on either side.

3.04 SALVAGED MATERIALS:

A. General: Where shown on the Drawings or specified as Salvage, Property of OWNER, or Deliver to OWNER, carefully remove indicated items, clean, store, and turn over to OWNER in area designated by ENGINEER or OWNER.

B. Any unanticipated items of significant historic or commercial value discovered in the demolition work shall remain the property of OWNER. CONTRACTOR will have the option to take possession of all other demolition materials or to dispose of them suitably. No materials assigned to CONTRACTOR may remain on site without written authorization from ENGINEER or OWNER.

3.05 BUILDINGS

A. CONTRACTOR shall assess and remove and dispose of all components coated with lead based paints and asbestos containing materials in accordance with all applicable local, state and federal regulations. Cost for assessing, removing, and disposing of all lead based paints and asbestos containing materials shall be the responsibility of the CONTRACTOR.

B. Lead-based paint components such as piping, supports, railings, or other fastened components that can be removed by unbolting or whole in an intact condition without burning, cutting, scraping, grinding, crushing, crumbling, sanding or other actions creating dust and potential exposure hazards shall be removed and disposed in such a manner. In the event components can not be removed without potential dust exposure, then requirements under OSHA 29 CFR 1926.62 shall be followed for training, personal monitoring, and personal protection.

C. Asbestos containing materials, if removed whole and intact (without scraping, sanding, grinding, or by mechanical means) to prevent crumbling or generating dusts, can be removed by a non-licensed contractor and disposed of as miscellaneous non-friable waste. Asbestos containing materials in a friable condition (crumbling, pulverized or reduced to dust) shall be removed by a

Section 02230 – Site Clearing

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK:

A. Work covered by this Section includes site clearing and grubbing as required to perform the Work as shown on Drawings.

B. The CONTRACTOR shall limit the area of clearing and grubbing to the minimum area possible to allow for the proper installation of the Work and to preserve all plantings, trees, shrubs, grass and natural vegetation to the maximum possible extent.

1.02 RELATED WORK: Includes, but not limited to, the following:

A. Slope Protection and Erosion Control: Section 02370.

1.03 QUALITY ASSURANCE:

A. Confine clearing and grubbing operations to within the following limits:

1. All areas where Work is required to be done, but, to the minimum extent possible to properly install the Work.

2. Within the Grading Limits as shown on the Drawings.

B. No trees, plants, shrubs, flowers or vegetables shall be removed or trimmed without the prior permission of the ENGINEER, except where otherwise specified.

C. Protection of Existing Trees and Vegetation: Protect existing trees and other vegetation indicated to remain in place, against unnecessary cutting, breaking or skinning of roots, skinning and bruising of bark, smothering of trees by stockpiling construction materials or excavated materials within drip line, excess foot or vehicular traffic, or parking of vehicles within drip line. Provide temporary guards to protect trees and vegetation to be left standing.

1.04 STORAGE AND HANDLING:

A. Store trees, plants and shrubs in protected areas and give ample water to keep them in a thriving condition for subsequent replanting.

B. Obstruction of roads, driveways, sidewalks, gutters and drainage ditches, swales and channels with stored materials is not permitted.

1.05 JOB CONDITIONS:

A. The locations of trees, plantings, vegetation, sidewalks, curbs and other living and nonliving items, as shown on the Drawings, have been determined by actual surveys at the time surveys were made. Since that time, the condition of things may have changed. Remove and replace all obstacles and obstructions, as required to complete the Work, whether shown on the Drawings or not, at no extra cost to OWNER.

B. Explosives are not permitted for clearing and grubbing operations.

C. Use all means necessary to protect existing objects not indicated to be removed. In the event of damage, make all necessary repairs and replacements and restore to its original condition, as acceptable to ENGINEER.

overly compacting the root mass.

d. Prepare trees to be transplanted by pruning branches back and by pruning roots and watering seven (7) days prior to digging.

3.03 PERFORMANCE:

A. Clearing and Grubbing:

1. Clearing consists of cutting and disposing of all trees, down timber, stubs, brush, bushes, snags, rubbish, debris, and other objectionable matter and materials and the removal and storage of fences, signs, walks, guard rails, curbs and other items to be restored.

2. Grubbing consists of the removal and disposal of all stumps, roots, duff, foundations and other objectionable matter and materials to a minimum of 12 inches below original ground surface.

3. All operations shall be done in a manner so that present growth will blend with the limits of construction and a natural appearance will be attained.

4. Employ whatever measures are necessary to avoid erosion.

B. Topsoil:

1. Topsoil is defined as friable loam surface soil found in a depth of not less than 4 inches from the original ground surface. Satisfactory topsoil is reasonably free of subsoil, clay lumps, stones, and other objects over 2-inches in diameter, and without weeds, roots, and other objectionable material.

2. Strip topsoil within limits as designated on Drawings or required to whatever depths encountered in a manner to prevent mixing with underlying subsoil or objectionable material.

3. Where trees are indicated to be left standing, stop topsoil stripping a sufficient distance to prevent damage to main root system.

4. Stockpile topsoil in storage piles in areas shown or where directed. Construct storage piles to freely drain surface water. Cover storage piles as necessary to prevent windblown dust and erosion.

5. Surplus loam and topsoil not required for completion of the Work shall remain the property of the OWNER. Stockpile this material on-site and maintain and protect until Work is complete.

C. Trees and Plantings:

1. In grassed, planted and open areas do not remove or trim trees or plantings without the prior permission of ENGINEER. Remove and preserve small trees, plantings, flowers and similar vegetation for reuse.

2. If it is impractical to fell trees as a whole, remove them in sections according to standard practices of professional tree removal. Fall trees to the center of the area being cleared to minimize damage to trees that are to be left standing.

3. Immediately after felling a tree, remove branches, cut trunk and limbs and remove all materials from the site and dispose of in a lawful manner.

4. Property OWNER shall have the right to cut and remove any wood in advance of the CONTRACTOR'S operations. All other timber and wood which is removed shall become the property of CONTRACTOR.

Section 02240 – Dewatering

PART 1 - GENERAL

1.01 Description of Work

A. Provide, install, and maintain all necessary material and equipment used to keep excavation free of standing or flowing water and to transport water to a suitable discharge point.

B. Provide measures to dispose of water in accordance with all local, state and federal regulations. Notify the City of Portland Environmental Engineering Department prior to conduction dewatering operations.

C. Related Work elsewhere includes:

Earthwork: Section 02300
Slope Protection and Erosion Control: Section 02370
Water System Distribution: Section 02510
Sewers and Drains: Section 02600
Stormwater Treatment Systems: Section 02631

1.02 Submittals

A. At least 2 weeks prior to the start of construction in any areas of anticipated dewatering, submit to the Engineer and City of Portland Environmental Engineering Department, a written plan for removal, storage, treatment, and disposal of groundwater from excavations. Do not proceed with construction in any of these areas until the plan has been reviewed and approved by the Engineer and City of Portland Environmental Engineering Department.

PART 2 – PRODUCTS (not applicable)

PART 3 - EXECUTION

3.01 General:

A. Only trained personnel are authorized to conduct dewatering, storage, and discharge operations.

3.02 Dewatering Excavations:

A. Perform all work in the dry. Prevent surface water or groundwater from flowing into excavations and from flooding project site and surrounding area. Do not allow water to accumulate in excavations.

B. Provide and maintain pumps, well points, sumps, hoses, filters, and all other dewatering system components necessary to convey water away from excavations.

C. Minimize the suspended solids content in the water by lining the excavation collection area with crushed stone and placing the pump intake in a perforated bucket.

D. Convey water removed from excavations to a frac tank. Do not use trench excavations as temporary drainage ditches. Do not allow silt laden water to discharge to gutters or storm drainage system. Do not discharge water directly to the storm or sanitary sewer.

E. Any damages to existing facilities or new work resulting from the failure of the Contractor to maintain the work areas in a dry condition shall be repaired by the Contractor, as directed by the Engineer, at no additional expense to the Owner. Pumping shall be continuous where specified or directed or as necessary to protect the work and to maintain satisfactory progress.

Section 02250 – Shoring and Bracing

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK:

A. Work included:

Shoring and bracing necessary to protect existing buildings, utilities, all existing improvements, and excavation against movement due to caving, to meet OSHA safety requirements of shoring and bracing, and to provide cofferdams.

Maintenance of shoring and bracing.

Removal and disposal of shoring and bracing, as required.

B. Shoring and bracing systems include, but are not limited to, permanent and temporary measures.

C. Steel sheet piling: Provide steel sheet piling, to be removed following completion of Work, where shown on the Drawings, where directed by the ENGINEER, or where otherwise required by CONTRACTOR to complete the work. Payment will be incidental to installation of piping and manholes. Piling shall remain in place when directed by the ENGINEER. Payment for piling to remain in place will be made by Change Order.

Steel sheet piling may be left in place at the CONTRACTOR'S option if approved by the ENGINEER. No additional payment will be made for this piling.

No payment will be made for steel sheet piling used for the CONTRACTOR'S convenience.

D. Movable box: Provide where a shoring system is required but sheet piling is not called for. Cost of movable box system is incidental to other work items.

E. Related Work Specified Elsewhere Includes:

Earthwork: Section 02300

1.02 QUALITY ASSURANCE:

A. Design: Assign design of shoring and bracing to a Professional Engineer registered in the state of Maine.

B. Regulations: Comply with local codes and OSHA requirements.

1.03 SUBMITTALS:

A. Certificate of Design: Submit certification of design for shoring and bracing system signed by a Professional Engineer registered in the state of Maine.

1.04 JOB CONDITIONS:

A. Before starting work, check and verify governing dimensions and elevations. Survey condition of adjoining properties with ENGINEER. Take photographs, recording any prior settlement or cracking of structures, pavements, and other improvements. Prepare a list of such damages,

C. Cut off sheet piling to be left in place at least two feet below finish grade. Indicate location of any sheet piling cut off and left in place on as-built drawings, as required by OWNER.

End of Section

Section 02300 - Earthwork

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK:

A. Work included: All excavating, filling, backfilling, and removal of materials. Earthwork for utilities is included in this section.

B. Related Work Specified Elsewhere:

Existing Subsurface Conditions: Section 02010

Shoring and Bracing: Section 02250

Slope Protection and Temporary Erosion Control: Section 02370

Dewatering: Section 02240

1.02 PROTECTION:

A. Paved Surfaces: Do not operate equipment that will cause damage on paved surfaces. Any damage to existing roads or other paved surfaces caused by construction equipment shall be repaired at no additional cost to OWNER.

B. Maintain Excavations with approved barricades, lights, and signs to protect life and property until excavation is filled and graded to a condition acceptable to the ENGINEER.

C. Protect structures, utilities, monitoring wells, property monuments, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations. The CONTRACTOR shall be responsible for actual cost of repair or replacement of any items damaged as a result of construction activities, including any professional services required for inspection of repairs and replacement.

1.03 QUALITY ASSURANCE:

A. Testing and Inspection: OWNER shall be responsible for all testing, unless otherwise noted. The cost for retesting due to failed tests shall be the responsibility of the CONTRACTOR.

The CONTRACTOR shall be responsible for coordinating with ENGINEER to allow for testing to be performed at the frequencies specified. A minimum of 48 hours notice for in-place testing shall be given to allow proper scheduling by ENGINEER.

B. Materials Testing Firm: Company specializing in in-situ testing of compacted fills with a minimum of five years documented experience. Company to be acceptable by ENGINEER and OWNER. Materials testing firm to be independent of CONTRACTOR.

1.04 JOB CONDITIONS:

A. Site Information: The CONTRACTOR may make his own borings, hand probes, explorations, and observations to determine soil, water levels, and other subsurface conditions at no additional cost to OWNER. Coordinate with OWNER prior to start of additional investigative work.

B. Existing Utilities: Locate existing underground utilities in areas of excavation work. If utilities are indicated to remain in place, provide adequate means of support and protection during

B. Gravel/Aggregate Base: Hard, durable gravel contained only particles passing the 2-inch sieve. Equal to MDOT 703.06a, Type A material. Sieve analysis by weight:

Sieve Size	% Passing by Weight
2"	100
1/2"	45 - 70
1/4"	30 - 55
No. 40	0 - 20
No. 200	0 – 5

C. Aggregate Subbase: Sand or gravel of hard, durable particles; equal to MDOT 703.06b Type D material. Aggregate subbase shall not contain particles that will not pass the 6-inch sieve. The part that passes the 3-inch sieve shall meet the following gradation requirements:

Sieve Size	% Passing by Weight
1/4"	25 - 70
No. 40	0 - 30
No. 200	0 - 7

D. Subbase Fill: Sand or gravel of hard, durable particles; equal to MDOT 703.06 Type F material. Subbase fill shall not contain particles that will not pass the 6-inch sieve. The part that passes the 3-inch sieve shall meet the following gradation requirements:

Sieve Size	% Passing by Weight
1/4"	60 - 100
No. 40	0 - 50
No. 200	0 - 7

E. 3/4" Crushed Stone: Durable, clean angular rock fragments obtained by breaking and crushing rock material.

Sieve Size	% Passing by Weight
1"	100
3/4"	90 - 100
3/8"	20 - 55
No. 4	0 - 10
No. 200	0 - 1.5

F. Sand: Sand shall be well-graded coarse sand without excessive fines and free from loam, clay, and organic matter. Beach sand shall not be used. The grading requirements are as follows:

Sieve Size	% Passing by Weight
3/8"	100
No. 4	95 - 100
No. 16	50 - 85
No. 50	10 - 30
No. 100	2 - 10

stand without undermining pavement. Remove all topsoil, organic matter and fill materials containing debris within limits of paved areas.

F. Excavation for Structures: Conform to elevations and dimensions shown within a tolerance of plus or minus 0.10 foot, and extending a sufficient distance from footings and foundations to permit placing and removal of concrete formwork, installation of services, other construction, and for inspection.

In excavating for footings and foundations, take care not to disturb bottom of excavation. Excavate by hand to final grade just before concrete formwork and reinforcement is installed. Trim bottoms to required lines and grades to leave solid base to receive other Work. When excavating in clay material, use a smooth-edged bucket to avoid disturbance of the bottom of the excavation. Use shoring and bracing where sides of excavation will not support itself.

G. Excavation for Utility Trenches: Excavate to widths shown on the Drawings and depths indicated or required to establish indicated slope and invert elevations.

Produce an evenly graded, flat trench bottom at the subgrade elevation required for installation of pipe and bedding material. Place backfill material directly into trench or excavation. Do not stockpile material to be used as backfill along edges of trenches. Load excavated material directly into trucks, unless otherwise permitted by the ENGINEER.

H. Unauthorized Excavation: Removal of materials beyond indicated subgrade elevations or dimensions without specific direction of ENGINEER. Unauthorized excavation, as well as remedial work directed by ENGINEER, including refilling, shall be at CONTRACTOR's expense.

I. Refilling Unauthorized Excavation: For trenches, use 3/4-inch crushed stone. Elsewhere, backfill and compact unauthorized excavations as specified for authorized excavations of same classification, unless otherwise directed by ENGINEER.

J. Excavation of Unsuitable Materials: When excavation has reached required subgrade elevations, notify ENGINEER who will make an inspection of conditions. If unsuitable bearing materials are encountered at required subgrade elevations, carry excavations deeper as directed by ENGINEER and replace excavated material as specified. Removal of unsuitable material and its replacement as directed by ENGINEER will be paid for as Excavation Below Normal Grade unless material has been made unsuitable by CONTRACTOR's operations. In this instance, removal and replacement will be performed at CONTRACTOR's expense.

K. Material Storage: Stockpile and maintain suitable surplus excavated materials for re-use as backfill within the Project limits, as directed by ENGINEER. Place, grade and shape stockpiles for proper drainage. Locate and retain soil materials away from edge of excavations.

3.02 BLASTING

A. General: Obtain approval of OWNER and ENGINEER before blasting. All blasting for utilities shall be paid as Utility Trench Blasting. All blasting related to footings, foundations and other site elements NOT related to utilities shall be paid as Open Blasting.

B. Pre-blast Survey shall be the responsibility of the CONTRACTOR. Provide pre-blast survey prior to any blasting or blasting related operations. A written report of the preblast survey will be provided to the OWNER by the CONTRACTOR and will be available for review by the City of Portland. A copy of the blasting plan will be submitted to the City of Portland and OWNER for review and approval prior to the initiation of the site preparation work.

All owners of buildings, dwellings or residences located within 500-feet of the blasting location shall be notified, in writing, by the CONTRACTOR a minimum of 30 days prior to the scheduled

11. Seismographic and airblast records, which shall include: type of instrument, sensitivity, and calibration signal or certification of annual calibration; exact location of instrument and the date, time, and distance from the blast; and the vibration and/or airblast level recorded.

E. All blasting shall be performed in accordance with all pertinent provisions of the "Manual of Accident Prevention in Construction", issued by the Associated General Contractors of America, Inc., of the "Construction Safety Rules and Regulations", as adopted by the State Board of Construction Safety, Augusta, Maine, and the Maine Department of Transportation "Standard Specifications" Section 105.2.6, Use of Explosives. Blasting through the overburden will not be allowed.

F. Drilling Equipment will be equipped with suitable dust control apparatus that must be kept in repair and used during all drilling operations.

G. Open Blasting shall pertain to all blasting required for the placement of foundations, footings, and other project elements not specifically identified in paragraph H, Utility Trench Blasting. Vertical pay limits for all Open Blasting shall be one (1) foot below the base of structural elements to be placed. Horizontal pay limits for all Open Blasting shall be two (2) feet beyond each outside edge of structural elements to be placed. Blasting for placement of underdrain piping and associated appurtenances depicted along building footings will be considered Open Blasting.

H. Utility Trench Blasting shall pertain to all blasting required for the placement of any pipe, utility structure, or associated appurtenances. Utilities associated with the site shall include water distribution and service, sanitary sewer collection and service, storm sewer collection, underground electrical service, telecommunications, data, and geothermal related elements, as indicated on the drawings. All blasting required for the placement of utilities outside the horizontal and vertical pay limits defined by Open Blasting described in paragraph G, shall be paid as Utility Trench Blasting. Pay limits for piping and utility structures shall be as depicted on the contract drawings.

3.03 STABILITY OF EXCAVATIONS:

A. General: Slope sides of excavations to comply with OSHA Regulations and Local Codes. Shore and brace where sloping is not possible due to space restrictions or stability of material excavated. Maintain sides and slopes of excavations in safe condition until completion of backfilling.

B. Refer to Section 02250 for shoring and bracing requirements.

3.04 DEWATERING:

A. Refer to Section 02240 for dewatering requirements

3.05 BACKFILL AND FILL:

A. General: Place suitable soil material in layers to required elevations as shown on the Drawings. Fill, backfill, and compact to produce minimum subsequent settlement of the material and provide adequate support for the surface treatment or structure to be placed on the material. Place material in approximately horizontal layers of beginning at lowest area to be filled. Do not impair drainage.

B. Ground Surface Preparation: Remove vegetation, debris, unsuitable soil materials, obstructions, and deleterious materials from ground surface prior to placement of fills. Remove material to the full extent of root penetration. Scarify surfaces so that fill material will bond with existing surface.

that is too wet to compact to required density. Compact each horizontal layer of fill and slope as Work progresses.

B. Degree of Compaction: Compact to the following minimum densities:

FILL AND BACKFILL LOCATION	DENSITY
Under structure foundations and slab on grade	95% of max.
Top 3 feet under pavement	95%
Below top 3 feet under pavement	92%
Structural fills	95%
Pipe Bedding	95%
Adjacent to structure foundation walls, retaining walls, and tank walls	92% - 95%
Trenches through Gravel areas	95%
Trenches through other non-paved areas	90%
Embankments/Landscaped Areas	90%

Maximum density: ASTM D1557.
Field density tests: ASTM D1556 (sand cone) or ASTM D2167 (rubber balloon), or ASTM D2922 (nuclear methods).

C. Testing: Determine actual in-place densities using field tests as directed by the ENGINEER. Tests will be made by an independent laboratory. Costs for initial tests will be paid by OWNER. Perform additional work to obtain proper compaction if in-place densities do not meet specified densities. Costs of re-testing shall be borne by CONTRACTOR.

D. Minimum Number of Tests: For areas to be paved and building subgrade, a minimum of one (1) test per 2,000 square feet (sf) per lift of material, but in no case less than three (3) tests. For trenches, a minimum of one (1) test per 100 lineal feet (lf) per lift of material. Other areas shall be tested at a minimum frequency of one (1) field test per 10,000 sf per lift of material, unless otherwise directed by ENGINEER.

3.07 GRADING:

A. Grading: Uniformly grade areas within limits of grading under this section, including adjacent transition areas. Smooth finish surface within specified tolerances and compact with uniform levels or slopes between points where elevations are shown, or between such points and existing grades.

B. Grading Outside Structure Lines: Grade areas adjacent to structure to drain away from structures and to prevent ponding.

C. Finish surfaces free from irregular surface changes and as follows:

Lawn or Unpaved Areas: Finish areas to receive topsoil to within not more than 0.10' above or below required subgrade elevations.

Pavements: Shape surface of areas under pavement to line, grade and cross-section, with finish surface not more than 1/2 inch above or below required subgrade elevation.

Section 02370 – Slope Protection and Erosion Control

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK:

A. Provide and maintain devices to control erosion, siltation, sedimentation and dust that occur during construction operations. Undertake every reasonable precaution and do whatever is necessary to avoid erosion of soil and to prevent silting of wetland areas, drainage ditches, streams, and lakes.

B. Provide measures to control dust caused whether on or off the Project site.

C. Deficiencies in erosion control measures indicated by failures or erosion shall be immediately corrected by providing additional measures or different techniques to correct the situation and prevent subsequent erosion.

D. Exposure of soils on embankments, excavations, and graded areas shall be kept as short as possible. Initiate seeding and other erosion control practices as soon as reasonably possible.

E. Provide erosion control measures in any ditch, swale or channel before water is allowed to flow in the waterway.

F. Mechanized Equipment will not be permitted in water courses unless specifically required in the Contract Documents.

G. Remove and dispose of all devices upon soil stabilization.

1.02 QUALITY ASSURANCE:

A. Conform to all requirements of applicable federal, state and local permits, and Contract Documents, and conform to the recommendations of the Standards (see Part D below) whether the measures are specifically noted herein, or not.

B. Conform to all requirements of the MeDEP Construction General Permit/Stormwater Permit-by-Rule.

C. Meet with the ENGINEER to discuss erosion control requirements prior to the start of construction.

D. Standards: "Maine Erosion and Sedimentation Control BMPs" prepared by the Maine Department of Environmental Protection, dated March 2003, or most recent version.

1.03 SUBMITTALS:

A. Erosion Control Program: Prepare and submit to ENGINEER for approval prior to construction startup.

PART 2 - PRODUCTS

2.01 MATERIALS:

3. Erosion Control Blanket Anchors: Wooden pegs or metal staples as recommended by the manufacturer for the installation of the erosion control blanket. The fasteners shall not be longer than 9 inches.

H. Mulches:

1. Long fibered hay or straw in dry condition and which are relatively free of weeds and foreign matter detrimental to plant life.

2. Mulch binder: An asphalt emulsion mulch binder of type acceptable to the ENGINEER.

3. Mulch netting: Plastic or nylon mesh netting with approximate openings of 1/4- to 1-inch; or other netting approved by the ENGINEER.

I. Temporary Seed: Seed variety and applied rate are selected based upon the date of application, and as determined by the following table. Equivalent seed mixture based on its suitability for use in controlling erosion of the various soil types and slopes may be used as approved by the ENGINEER.

Dates	Seed	Applied Rate
4-1 to 7-1 8-15 to 9-15	Annual Ryegrass	0.9 lb/1000 ft^2
5-15 to 8-15	Sudan grass	0.9 lb/1000 ft^2
9-15 to 10-15	Winter Rye	3.0 lb/1000 ft^2

J. Sod:

1. Grown from certified seed of adapted varieties to produce high quality sod free of any serious thatch, weeds, insects, diseases and other pest problems.

2. At least one year old and not older than three years. Cut with a 1/2- to 1-inch layer of soil.

K. Drains:

1. Flexible drains consisting of collapsible neoprene pipe, minimum 8-inch diameter.

2. Corrugated metal pipe and inlet of a gauge consistent with the loading conditions, minimum 12-inch diameter.

L. Polyethylene Liner: U.V. Resistant, minimum thickness 6 mils.

M. Woven Filter Fabric: Provide Mirafi 600X woven textile or equal.

N. Non-Woven Fabric: Equal to Propex 4545 by Amoco Fabrics Co., or approved equal.

O. Siltation Fence: MIRAFI Environfence, Amoco 1380 Silt Stop, or approved equal.

P. Hay Bale Barrier: Rectangular shaped bales of hay or straw weighting at least 40 pounds per bale; free from noxious weed seeds and rough or woody materials.

Q. Catch Basin Inlet Sediment Barrier: As per contract drawings or approved equal.

5. Hay mulch should cover the ground enough to shade it, but the mulch should not be so thick that a person standing cannot see ground through the mulch.

6. Remove matted mulch or bunches.

E. Temporary Erosion Control Matting:

1. Surface Preparation:

   a. Conform to grades and cross sections for slopes and ditches shown on the Drawings.
   b. Finish to a smooth and even condition with all debris, roots, stones, and lumps raked out and removed.
   c. Loosen soil surface to permit bedding of the matting.
   d. Unless otherwise directed, apply seed prior to placement.

2. Installation:

   a. Place strips lengthwise in the direction of the flow of water.
   b. Where strips are laid parallel or meet as in a tee, overlap at least 4 inches.
   c. Overlap ends at least 6 inches in a shingle fashion.
   d. The up-slope end of each strip of the matting shall be turned down and buried to a depth of not less than 6 inches with the soil firmly tamped against it.
   e. The ENGINEER may require that any other edge exposed to more than normal flow of water be buried in a similar manner.
   f. Build check slots at right angles to the direction of the flow of water. Space so that one check slot or one end occurs within each 50 feet of slope length. Construct by placing a tight fold of the matting at least 6 inches vertically into the ground, and tamp the same as up-slope ends.
   g. Bury edges of matting around the edges of catch basins and other structures.
   h. When ordered, additional seed shall be spread over matting, particularly at those locations disturbed by building the slots. Matting shall then be pressed onto the ground with a light lawn roller or by other satisfactory means.
   i. Drive staples vertically into the ground flush with the surface.
   j. On slopes flatter than 4:1, space staples not more than 3 feet and one row, alternately spaced, down the center.
   k. On grades 4:1 or steeper, place staples in the same three rows, but spaced 2 feet apart.
   l. On all overlapping or butting edges, double the number of staples, with the spacing halved; all ends of the matting and all required check slots shall likewise have staples spaced every foot.

F. Temporary Seeding:

1. Seed with appropriate seeds and application rates from the table in paragraph 2.01I of this Section. Seed shall be sown at the rate indicated, on the pure live seed basis.

2. Mulch areas where temporary seeding has been applied. Do not mulch seeded areas where matting will be immediately installed.

3. If temporary seeding does not achieve adequate growth by December 1, an additional layer of mulch shall be applied at that time.

A. Inspect erosion control practices immediately after each rainfall and at least daily during prolonged rainfall or snowmelt for damage. Provide maintenance and make appropriate repairs or replacement at no additional cost to the OWNER, until Project acceptance or as required to comply with maintenance requirements if longer.

B. Remove silt from silt fence when it has reached one foot above grade or prior to expected heavy runoff or siltation.

C. Repair matting if any staples become loosened or raised, or if any matting becomes loose, torn, or undermined, make satisfactory repairs immediately.

D. Following temporary and/or final seeding, the CONTRACTOR shall inspect the work area semimonthly until the seedlings have vegetated 85% - 90% of the area. Reseeding shall be carried our by the CONTRACTOR with follow-up inspections in the event of any failures until vegetation is adequately established.

End of Section

SECTION 02380

FOUNDATION PILES

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division I Specification Sections, apply to this Section.

B. Examine all Drawings and all other Sections of the Specifications for requirements therein affecting the work of this Section.

C. Coordinate work with that of all other trades affecting or affected by the Work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract.

1.2 DESCRIPTION OF WORK

A. The Work of this Section includes, but is not limited to, furnishing all labor, materials, equipment, and incidentals necessary to complete the following work:

1. Furnishing and installing the following types of end-bearing steel H-piles at the locations shown on the Drawings: XXX-kip allowable design compression capacity XXXXX be driven to a minimum XXX-kip ultimate capacity.
2. Conducting computer wave equation analyses by WEAP (Wave Equation Analyses for Piles) prior to mobilization and import of pile materials to the site to demonstrate that: (a) the proposed hammer and driving system delivers the required energy per blow to the pile and that driving stresses in the piles with the proposed hammer-pile-soil systems will not exceed the allowable tensile and compressive stresses of the piles during driving; and (b) for Contractor-proposed alternate hammer-pile-soil systems to confirm or determine end-bearing driving criteria to achieve allowable design compression capacity of the pile (as stated above).
3. Installing indicator piles at designated production pile locations and performing Dynamic Pile (PDA) Testing on all of the indicator piles at locations shown on the Drawings. PDA testing

shall be conducted prior to the start of production pile driving to evaluate the driving energy transferred to the pile during installation, stresses induced in the piles during driving, anticipated pile lengths, and performance of the pile driving equipment. Indicator piles are to be driven at a minimum of XXX (X) designated production pile locations.

4. Perform CAPWAP analyses on a minimum of three of the indicator piles at locations determined by the Geotechnical Engineer.
5. Installing production piles based on the WEAP analyses and the results of the dynamic testing.
6. Cutting off piles at design cut-off elevations and disposing pile cut-offs at approved off-site locations. Preparing the exposed end of the pile to receive the structural connection to the floor slab and/or pile cap.

1.3 RELATED WORK SPECIFIED ELSEWHERE

A. Section XXXXX

B. Section XXXXX

C. Section XXXXX

D. Section XXXXX

1.4 DEFINITIONS AND REFERENCE STANDARDS

A. Owner: XXXXX

B. Architect: XXXXX

C. Structural Engineer: XXXXX

D. Geotechnical Engineer: Haley & Aldrich, Inc., Portland, Maine

E. Engineer: Authorized representatives of the Architect or Owner. For the work covered under this Section, this term will include Haley & Aldrich, Inc.

F. Contractor: Person or organization identified in the Agreement as being responsible for the Work under this Section. The term Contractor shall also refer to an authorized representative(s) of the Contractor.

G. ASTM: Specifications of the American Society for Testing and Materials, latest edition.

H. AWS: AWS D1.1 Structural Welding Code - Steel, latest edition.

I. AISC: Specification of the American Institute of Steel Construction, latest edition.

J. AASHTO: Specification of the American Association of State Highway and Transportation Officials, latest edition.

K. ACI: Specification of the American Concrete Institute, latest edition.

L. PCI: Specification of the Prestressed Concrete Institute, latest edition.

M. OSHA: Occupational Health and Safety Administration.

N. IBC Code: International Building Code (2003 edition).

1.5 PROJECT CONDITIONS

A. Site, Subsurface Soil, and Groundwater Conditions

1. Subsurface investigation data are available from the Owner in the report entitled "Report on Subsurface Explorations and Foundation Design Recommendations, Eastern Waterfront Development Proposed Parking Garage and Office Building, Portland, Maine," prepared by Haley & Aldrich, Inc., dated 08 November 2005.
2. Refer to Section XXXXX for additional information.

B. Potential Obstructions

1. The Contractor is advised that the fill soils at the site may contain obstructions, which may include, but are not limited to former and existing utilities, concrete and other foundations and floor slabs from previous structures, and other materials which may interfere with new foundation locations and require removal. The Contractor shall notify the Geotechnical Engineer immediately if conditions are determined to conflict with proposed pile locations.
2. Obstructions are defined as any man-made objects located within 15 ft of existing ground surface that prevent installation of new piles at the design locations and to the required depths.
3. Pre-drilling of foundation piles may be required at pile locations prior to pile installation as described herein. Work associated with removal and backfill of obstructions by use of powered

excavators will be performed by others. The Contractor shall pre-drill where necessary to clear underground structures and obstructions prior to pile installation. Pre-excavations shall be backfilled and compacted in a controlled manner prior to pile installation in accordance with Section XXXXX using on-site fill materials with objects larger than 4 in. removed.

C. Review of Existing Information:

1. Prior to submitting a bid, the Contractor shall review and understand the information contained in the referenced reports, Contract Documents, and other applicable resources. The referenced reports are made available to the Contractor for information only. The subsurface and environmental conditions information presented in these documents, as applicable, are for information only and shall not be interpreted as a warranty of subsurface or environmental conditions whether interpreted from written text, boring logs, chemical test results, or other data.
2. The Contractor shall draw its own conclusions regarding site conditions based upon site visit(s) and from available sources, for which the Owner and its consultants assume no responsibility. The Contractor shall assume that subsurface conditions between subsurface explorations could differ from conditions shown in the records of the explorations.

D. Protection of Adjacent Property and Utilities:

1. The Contractor shall protect adjacent structures (above ground and buried) from damage associated with pile driving and other related operations. Damage due to pile driving or other construction activities shall be repaired immediately by the Contractor at its own expense.

1.6 QUALITY ASSURANCE

A. Comply with all rules, regulations, laws and ordinances of the State of Maine, City of Portland, OSHA and of all other authorities having jurisdiction. All labor, materials, equipment, permits and services necessary to make the work comply with such requirements shall be provided by the Contractor.

B. Field Monitoring and Testing:

1. In accordance with the requirements of the IBC Code, the Geotechnical Engineer will provide full-time monitoring of the Contractor's pile driving operations. No piles shall be driven except in the presence of the Geotechnical Engineer.
2. The Geotechnical Engineer will prepare and maintain pile driving records which include the following information:

    a. Project name and number.
    b. Name of Contractor.
    c. Pile location and number.
    d. Design pile capacity.
    e. Type and size of hammer used.
    f. Material type, dimensions, and thickness of any pile driving cushion between the hammer and pile.
    g. Rate of operation of pile driving equipment.
    h. Pile dimensions.
    i. Elevation of tip.
    j. Elevation of butt before and after cut-off.
    k. Ground elevation.
    l. Number of blows for each foot of penetration and final penetration resistance.
    m. Pile location deviation.
    n. Pile uplift and redrive information.
    o. Unusual occurrences during pile driving.

C. The Contractor shall fully cooperate with the Geotechnical Engineer and the Owner's other representatives to facilitate other work.

D. Certification of quality and source of pile materials to be used in the work shall be furnished, in a form acceptable to the Geotechnical Engineer, at the time of delivery of materials to the site. Pile materials shall also be subject to on-site inspection by the Geotechnical and/or Structural Engineer for conformance with specifications.

E. Approvals given by the Geotechnical Engineer or Owner shall not relieve the Contractor of its responsibility for performing the work in accordance with the Contract Documents, nor shall they be construed to relieve the Contractor from its full responsibility for the means and methods of construction and for safety on the construction site.

F. The Contractor shall employ a Professional Engineer registered in the State of Maine who specializes in geotechnical engineering to perform WEAP Analyses for all pile driving systems and types of piles, to conduct

PDA testing, and to perform related CAPWAP analyses. The Registered Professional Engineer shall have not less than 5 years experience within the last 10 years in making consulting engineering recommendations, design, or supervising installation of pile foundations, and shall have completed WEAP analyses, PDA testing and CAPWAP analyses on not less than five unrelated, independent projects, in which piles were successfully installed using the pile driving criteria developed from the wave equation analyses and the load test results.

G. Qualifications of Contractor:

1. Shall have at least 3 years experience within the last 10 years in pile driving of similar type and complexity as the indicated pile foundations.
2. Shall have completed not less than 3 successful pile foundations of similar type and complexity as the indicated pile foundations within the last year.

H. All welding shall be performed by operators who have been previously qualified by tests as prescribed in the "AWS Standard Code for Welding in Building Construction". Evidence that welders meet qualification requirements shall be submitted to the Geotechnical Engineer before welding has begun. Monitoring of welding and welds may be performed by an independent testing agency employed by the Owner. The Contractor shall fully cooperate with the agency to facilitate inspection, notifying it at least one working day in advance when welding operations are to be performed. Welds that do not conform to applicable specifications shall be repaired as directed by the Owner or its authorized representative.

1.7 SUBMITTALS

A. General:

1. The Contractor shall submit the information specified herein to the Geotechnical Engineer for review. All submittals and data shall be legible, provided in English, and stamped by a Professional Engineer registered in the State of Maine and retained by the Contractor.
2. The Contractor shall adhere to the approved submittal schedule, making every effort for timely submissions and allowing adequate time for the Geotechnical Engineer to review, evaluate and respond to the Contractor. The Contractor is responsible for scheduling specified submittals

and re-submittals so as to prevent delays in the work.

3. Unless otherwise specified, submittals shall be made not less than three weeks before the start of the work. No work shall be started until the necessary review and approvals have been given.

B. Shop Drawings:

1. Shop Drawings showing pile sizes, pile tip and splice details, reinforcing, and other items pertinent and as applicable to particular pile design and handling.
2. Shop Drawings and design calculations for all items pertinent to pile manufacturing and handling/installation.
3. Shop drawing showing pile layout and pile numbering.

C. Pile Driving and Dynamic Load Test Equipment:

1. Manufacturer's literature, including technical and performance literature for pile driving hammer(s), cushions, hoses, and other equipment for piles.
2. Details of equipment and procedures for pre-excavation and pre-drilling.
3. Qualifications and experience of Contractor's Professional Engineer performing the PDA testing and CAPWAP analyses.
4. Description of dynamic testing equipment and procedures.
5. Complete reports of PDA measurements/analyses and CAPWAP analyses performed during the indication pile program at least three working days prior to the commencement of the scheduled production pile driving.

D. Pile Design/Manufacture:

1. Name and address of pile manufacturer/supplier.
2. With each delivery of steel piles and steel reinforcing, mill certificates containing results of material tests conducted by a certified laboratory, including the chemical composition, yield point and ultimate strength of the steel. The Owner may reject any delivery of steel materials that is not accompanied with applicable mill certificates.

E. Wave Equation (WEAP) Analyses:

1. Qualifications and experience of Contractor's Professional Engineer performing the WEAP analyses.
2. The Contractor shall propose final driving criteria (blow count) as the minimum number of hammer blows for each inch of the final 6 in. of pile penetration in the bearing stratum. The proposed criteria shall be submitted to the Geotechnical Engineer for review and acceptance. Piles shall not be installed prior to acceptance of the criteria by the Geotechnical Engineer.
3. Results of WEAP analyses, performed and stamped by a Registered Professional Engineer in the State of Maine, which demonstrate that the equipment, cushions and cap are capable of obtaining the required pile load capacity in accordance with the IBC Code without damage to the particular pile type due to driving stresses. The WEAP analysis shall model bearing conditions in soil and bedrock, and anticipated pile lengths across the site and at a minimum shall consider XXXXX and XXXXX pile types. The submittal shall also include any additional applicable assumptions used in the analyses.

    a. Analyses over a range of final pile penetration resistance, from to X to XX blows per inch.
    b. The minimum allowable toe quake used in the analyses shall be X.XX.
    c. The minimum allowable toe damping used in the analyses shall be X.XX.
    d. The maximum allowable compressive stress in the pile during driving shall not exceed XX percent of the steel yield strength.
    e. The maximum allowable tensile stress in the pile during driving shall not exceed XX percent of the steel yield strength.
    f. The minimum resistance from the pile tip shall be XX percent.
    g. The hammer efficiency shall be selected based on the wave equation program default for the selected hammer.

4. Prior to installing indicator piles, submit a tabular summary of anticipated indicator pile lengths. The tabular summary shall include pile designation and estimated length as determined from the anticipated tip elevation and cutoff elevation. Within five days after completion of driving indicator piles, submit a tabular summary of anticipated pile lengths at each column location or other point of structure support.

F. Pile Dynamic (PDA) Testing:

1. Report summarizing the results of the PDA testing conducted by the Contractor's Engineer.

G. As Driven Pile Location Data:

1. Submit final as driven pile location plan, certified by a Registered Land Surveyor, within 2 weeks of completion of pile driving.

1.8 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Refer to General provisions of the Contract Documents for requirements pertaining to Product Delivery, Storage and Handling.

B. The Contractor shall deliver piles at approved times and in sequence to assure continuity of pile driving.

C. Piles shall be handled, transported, stacked, and protected to prevent damage.

D. Piles shall be clearly marked with the length of the pile prior to delivery.

1.9 LINES AND GRADES

A. The Contractor shall stake the pile locations and establish all elevations required. A baseline and benchmark located on or close to the site will be provided by the Owner. The Contractor shall be responsible for the maintenance and protection of the baseline and benchmark, and all pile location stakes.

B. The Contractor shall employ a licensed Registered Land Surveyor, familiar with pile installation, who shall establish lines and levels. The Contractor shall be responsible for the correct location of piles, as well as keeping up to date records of the amount of uplift of individual piles, and establishing actual pile locations.

C. Within two weeks after the completion of all pile driving, the Contractor shall provide for the Engineer a plan, certified by said Surveyor, showing the as driven location of all piles. Drawings shall include the following:

1. Column lines and north arrow.
2. Each pile identified by a separate number.

3. Elevation of each top of pile prior to cutting, to nearest 0.1 foot.
4. Deviation in inches, to the nearest one fourth inch, from plan location at cutoff elevation.

PART 2 - PRODUCTS

2.1 GENERAL

A. Pile materials shall be new and of uniform quality. Manufactured or assembled pile materials shall be of sufficient strength and rigidity to withstand all driving stresses.

B. Length of piles to be ordered shall be determined by the Contractor. Ordering, delivery and use of piles shall be planned and performed in such a manner that minimizes delays or interruption of driving and precludes the need for splices.

2.2 STEEL H-PILES

A. Steel H-piles shall be Grade 50, having a minimum yield point of 50,000 psi. Accompanying certificates shall state the chemical composition and yield point of the steel. The piles shall be identified to permit rapid correlation with the appropriate mill certificates.

B. H-piles shall be of sufficient strength and rigidity to withstand all driving and handling stresses and to maintain initial shape within the tolerances specified hereinafter. Pile materials shall be new and of uniform quality.

2.3 SPLICES

A. Full length piles shall be used wherever practicable.

B. If full length piles cannot be used, only one splice per pile shall be allowed.

C. A full penetration butt weld shall be used for the entire cross-section of the pile.

D. Welding shall not be done when the temperature in the immediate vicinity of the weld is below 0°F, when the surfaces are damp or exposed to rain, snow or high wind, or when the welders are exposed to inclement weather.

E. The pile shall be preheated to and maintained at 150°F minimum within 6 in. of the weld during welding.

F. The maximum electrode size shall be 3/16 in.

2.4 Pile Tip/Driving Shoe

A. Fit and weld cast steel, prefabricated pointed pile tip to tip of pile with a 5/16-in. groove weld or equivalent along each flange. Welding shall be performed as outlined herein.

2.5 Pile Length Markings

A. Permanently mark the entire length of each pile with horizontal lines (perpendicular to long axis of pile) measured from the pile tip at 12-in. intervals. In addition, footage shall be marked and designated at 5-ft intervals, starting from the tip of the pile.

PART 3 - EXECUTION

3.1 SEQUENCE OF OPERATIONS AND EQUIPMENT REQUIREMENTS

A. Prior to production pile installation, the Contractor shall drive a minimum of X indicator piles at production pile locations, at the locations shown on the Drawings. The Contractor's Engineer shall perform dynamic (PDA) testing during installation of each indicator pile to aid in estimating the required pile lengths and to evaluate hammer performance, acceptable driving stresses, and to confirm the final driving criteria based on the measured hammer energy transferred to the pile. Depending on the results of the PDA testing the Geotechnical Engineer may adjust indicator pile locations.

B. The Contractor shall coordinate its pile installation operations with other work on the site.

3.2 PILE DRIVING CRITERIA

A. The Contractor shall furnish and install H-piles to depths within glacial till or bedrock and to the approved final penetration resistance that will develop the required design compression capacity as specified herein.

B. Contractor shall drive piles to not less than an approved final penetration resistance over the final 6 in. of driving as determined by the WEAP analyses and confirmed by the PDA testing.

C. To limit the potential for overstressing of the pile during driving, if less than 1/2 in. of penetration is achieved under 10 successive hammer blows, driving

should be stopped and the pile shall be evaluated by the Geotechnical Engineer in accordance with requirements of the "Obstruction" paragraph specified herein.

3.3 INDICATOR PILE INSATLLATION

A. XX indicator piles shall be driven by the Contractor using the proposed pile driving equipment to the final driving criteria identified herein and as supported by the Contractor's approved WEAP analyses.

B. Indicator piles will consist of both XXXXX and XXXXX pile sizes.

C. No piles shall be driven except in the presence of the Geotechnical Engineer.

3.4 DYNAMIC PILE(PDA) TESTING

A. During driving of the indicator piles, the Contractor's Engineer shall conduct PDA testing on all indicator piles to evaluate the performance of the hammer/pile driving system, calculate stresses in the pile during driving, assess the structural integrity of the pile, and evaluate pile capacity/pile driving criteria. The Contractor's Engineer shall perform CAPWAP analyses on three of the piles as selected by the Geotechnical Engineer. CAPWAP shall be performed on both XXXXX and XXXXX piles.

B. The Contractor shall plan adequate time for PDA testing to be performed during driving of the indicator piles.

C. If based on the results of the PDA testing, the Geotechnical Engineer determines the hammer is not working adequately, the hammer will be repaired or replaced by the Contractor at no additional cost to the Owner. In this instance, the Contractor shall redrive all previously driven piles and possibly additional indicator piles and repeat the dynamic testing, as required by the Geotechnical Engineer, at no additional cost to the Owner.

D. If, at any time during production pile driving, the Contractor proposes to change the pile installation equipment (including the individual hammer or hammer type) from that used to install the indicator piles, PDA testing shall be performed by the Contractor's Engineer at the Contractor's expense to confirm that the new hammer can transfer the minimum required energy to the pile and that pile stresses are within

acceptable limits. Dynamic testing of a minimum of an additional X piles will be required in this case.

3.5 PRODUCTION PILE INSTALLATION

A. Piles shall be installed with approved modern equipment in good working order. The proposed pile installation equipment and methods shall be subject to approval of the Geotechnical Engineer and approval shall be secured before the start of installation.

B. The leads of the pile driving rig shall be fixed at two points; the points shall be at least half the length of the leads apart in order to maintain the pile and hammer in axial alignment at the correct plan location during the entire driving operation. The leads shall extend down to the lowest point at which the hammer must operate.

C. At the Contractor's option, an approved vibratory hammer may be used to install piles through overburden soils (i.e., fill, organic deposits, marine clay) into glacial till or to the top of bedrock. If piles are initially installed using a vibratory hammer, impact driving to final bearing shall be completed within four hours of the vibratory advance.

D. Piles shall be driven with a single-acting, double-acting, or differential-acting steam, hydraulic, air, or diesel hammer as approved based on the WEAP analyses, PDA testing and CAPWAP analyses. When the determination of the final driving resistance is being made, the steam, hydraulic, air or diesel hammer shall be operated at a speed not less than 95 percent of the maximum blows per minute for which the hammer is rated by the manufacturer. The Contractor shall maintain the boiler or air pressure recommended by the manufacturer and shall employ the proper size hose and connections. When the determination of final driving resistance is being made with a diesel hammer, the energy being delivered to the pile shall be determined as the product of the weight of the ram times the observed or equivalent stroke for open diesel hammers; for closed diesel hammers, the energy shall be that indicated by an output gauge calibrated to measure total hammer energy. The Geotechnical Engineer will monitor hammer performance of an open-ended diesel using a saximeter which measures the rate of hammer operation.

E. Special Requirement for Diesel Hammers: In the case of a diesel hammer, the Contractor shall provide an apparatus approved by the Geotechnical Engineer to measure gas pressures inside the hammer and total hammer energy for closed hammers, or ram bounce height in the case of open hammers.

F. An aluminum micarta cushion block, or other cushion material consistent with WEAP analyses and PDA testing and if approved by the Geotechnical Engineer, shall be used in the hammer for driving piles. Cushions shall be replaced when burned or otherwise worn.

G. Hammers used to install production piles shall be the same physical equipment used to install the indicator piles.

H. The use of followers will not be permitted unless authorized in writing by the Geotechnical Engineer.

I. Piles shall be installed systematically such that XXXXX piles are installed at indicated locations and are not mixed with XXXXX. The Contractor shall replace or supplement any piles that are misplaced by size as required by the Structural Engineer.

J. Piles that are unsatisfactory as installed shall be removed, or repaired at no additional cost to the Owner.

K. Pre-drilling:

1. As directed by the Geotechnical Engineer based on the results of the indicator pile program, the Contractor shall perform pre-drilling at production pile location to a minimum depth of 15 ft. Pre-drilling shall consist of drilling a 15-in. minimum diameter hole, using rotary augers. If pre-drilling is needed, the Contractor shall submit details of the equipment and methods to the Geotechnical Engineer for approval.
2. Piles shall be installed to the full depth of the hole immediately after completion of pre-drilling.
3. If the Contractor elects to pre-drill to greater depths, it will be considered incidental to its work, at no additional cost to the Owner. Deeper pre-drilling shall be subject to approval by the Geotechnical Engineer.

L. Driving:

1. As part of preparation for driving, each pile shall be marked as specified herein.

2. All piles shall be driven at the indicated locations and orientations. The Contractor shall utilize a pile alignment system such as templates or other measures to position the piles at the correct location. Pile location and orientation shall be checked during driving and appropriate measures taken, as necessary, to maintain the correct pile position.
3. Each pile shall be driven to end-bearing into the glacial till or bedrock (below the marine clay) to a minimum ultimate capacity (compression) of XXX kips (XXX-kip allowable design capacity) for XXXXX piles, and to a minimum ultimate capacity of XXX-kips (XXX-kip allowable design capacity) for XXXXX piles.
4. Pile driving shall be continuous and without interruption for the final 5 ft of penetration. If pile driving is interrupted during the final 5 ft of driving, the Geotechnical Engineer shall be the sole judge of whether the pile driving resistance is impacted by frictional resistance above the bearing stratum.
5. Pile driving resistance shall be constant or increasing during achievement of the final driving criteria.
6. During pile driving, the maximum compressive and tensile stresses in the piles shall not exceed 90 percent of the steel yield strength.
7. When driving piles through soft soils or in pre-drilled holes, the hammer ram velocity at impact shall be reduced to avoid damage of the pile due to tensile stresses in the piles.
8. Immediately after a pile in a pile group is driven, the Contractor will establish a reference point and its elevation on the pile for the purpose of checking uplift (heave) of the pile tip as additional piles are driven.
9. After all piles within the radius of uplift have been driven, the Contractor shall determine the elevation of the reference points on each of the piles in the group. If uplift of 0.04 ft or more has occurred, the pile shall be redriven to its original elevation, and deeper if necessary, to the specified final driving resistance. After redriving each pile, the Contractor will re-establish the elevation of the reference point. Redriving shall be repeated as often as necessary until the measured uplift on any pile is less than 0.04 ft.
10. The radius of uplift shall be initially assumed to be 30 ft. This radius may be expanded or contracted by the Geotechnical Engineer based on actual field measurements and is defined as the

maximum distance between piles such that pile driving causes uplift of 0.04 ft or more in the affected pile.

11. Piles in a group shall be driven commencing at the edge of the group and working toward the opposite edge. All piles in any one group shall be driven before moving to other locations, unless otherwise acceptable to the Geotechnical Engineer.

M. Obstructions:

1. The Contractor shall make reference to the test boring logs, available plans and other information (e.g. Historic Sanborn Maps) showing the site conditions. The Contractor is advised that obstructions are present.
2. Obstructions, if encountered, shall be dealt with as follows:

   a. Obstructions shall be defined as former and existing utilities, concrete and other foundations, floor slabs from previous structures and other man-placed material which prevent pile installation. Naturally occurring cobbles and boulders encountered at depths greater than 15 ft below existing ground surface will not be considered obstructions.
   b. If a pile is obstructed as defined herein, the Contractor shall immediately notify the Geotechnical Engineer who shall determine whether the location is to be excavated or if the pile(s) shall be moved or additional piles installed. If directed by the Geotechnical Engineer, the Contractor shall attempt to remove and redrive undamaged, obstructed pile(s), after the obstruction has been removed, at no additional cost to the Owner.

N. Vibration Control:

1. Limit pile-driving induced ground vibrations (maximum peak particle velocity) to less than 0.5 in./sec at all nearby buildings, as measured by the Geotechnical Engineer.
2. If pile-driving induced vibrations exceed the level specified above, the Contractor shall adapt and modify pile driving procedures and equipment to limit vibrations below the specified level, at no additional cost to the Owner.
3. Vibration monitoring will be performed by the Geotechnical Engineer as necessary to determine compliance with this criterion.

O. Cutting Off Piles:

1. Pile tops shall be cut off square and within 1 in. of the elevations shown on the Drawings. The pile cut-offs shall be stockpiled in a designated area of the site and shall be removed from the site by the Contractor at no additional cost to the Owner.
2. If piles are driven below the design elevation and can not be satisfactorily built-up in the opinion of the Structural and Geotechnical Engineers, these piles shall be cutoff a minimum of 1 ft below the design bottom of the pile cap and abandoned at no cost to the Owner. Additional piles required to compensate for an abandoned pile shall be driven as directed by the Geotechnical and Structural Engineers, at no additional cost to the Owner.
3. Prepare all pile types to receive connection to pile cap and/or floor slab.

3.6 SPLICING AND WELDING

A. A maximum of one splice per pile shall be allowed. Splices shall develop 100 percent of the pile strength in compression, tension and bending.

B. Pile splices shall be located so as to permit continuous driving through the glacial till and bedrock, and to final end bearing.

C. All welding shall be performed in accordance with the applicable provisions of the AWS Code. Ultrasonic testing of welds at pile splices shall be performed by an independent testing agency approved by the Owner, at the Contractor's expense. Testing shall be in conformance with ASTM E164. The Contractor shall cooperate with the testing agency to facilitate inspection. Welds which do not conform to applicable specifications shall be repaired at no additional cost to the Owner.

3.7 TOLERANCES AND CRITERIA FOR ACCEPTANCE

A. Location: Piles shall be driven as close as practicable to the plan location. A maximum lateral deviation from the correct location measured in any direction at cut-off elevation will be 3 in. for all piles. A maximum deviation from design cut-off elevation equal to 1 in. will be permitted.

B. Plumbness: The pile plumbness, as measured on the projection of the pile above ground, shall not deviate by greater than ten percent from the vertical

alignment. Pulling piles into alignment or position will not be permitted.

C. Piles that are damaged below cut-off elevation during driving will be rejected. If, upon comparing pile performance during driving with that of other driven piles, and based on the Geotechnical Engineer's knowledge of subsurface conditions, the Geotechnical Engineer determines that a pile has been unacceptably damaged; the Geotechnical Engineer may reject the pile.

D. Piles indicating sudden or peculiar decrease in penetration resistance during driving will be assumed to be broken or damaged, and will be rejected unless the Geotechnical Engineer's review of available data indicates that sudden decrease in driving resistance is due to natural subsurface conditions and continued acceptable driving behavior is observed.

E. Piles that are rejected because of damage, mislocation or misalignment, or failure to meet the driving criteria due to causes other than obstructions as defined herein, shall be cut off a minimum of 1 ft below the design bottom of the pile cap and abandoned, and additional piles shall be driven as directed by the Geotechnical Engineer at no additional cost to the Owner.

I. When otherwise acceptable installed piles exceed the specified tolerances, the Structural Engineer will analytically determine the total loads on individual piles, based on a survey by the Contractor's Surveyor. If the load on any pile exceeds 110 percent of the specified load capacity, corrections shall be made by adding piles, or other procedures, in accordance with a design provided by the Structural Engineer.

J. The installation of replacement piles and other corrective measures shall in all cases be in accordance with designs provided by the Structural Engineer.

K. Any increased costs for redesign and for construction caused by rejected piles or piles exceeding tolerances not caused by obstructions shall be the responsibility of the Contractor.

L. Vibration levels will be monitored as necessary by the Geotechnical Engineer during pile driving.

END OF SECTION

REPORT ON SUBSURFACE EXPLORATIONS AND FOUNDATION DESIGN RECOMMENDATIONS EASTERN WATERFRONT DEVELOPMENT PROPOSED PARKING GARAGE AND OFFICE BUILDING PORTLAND, MAINE

by

Haley & Aldrich, Inc.
Portland, Maine

for

Riverwalk, LLC
Portland, Maine

File No. 30322-000
8 November 2005

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8 November 2005
File No. 30322-000

Riverwalk, LLC
2 Market Street, Suite 500
Portland, Maine 04101

Attention: Mr. Drew Swenson
Manager

Subject: Report on Subsurface Explorations and Foundation Design Recommendations
Eastern Waterfront Development
Proposed Parking Garage and Office Building
Portland, Maine

Ladies and Gentlemen:

This report presents the results of our subsurface explorations for the proposed Parking Garage and Office Building, which are part of the Eastern Waterfront Development project in Portland, Maine. This report also provides foundation design recommendations for the proposed Parking Garage. Design loading information for the Office Building was not available at the time this report was prepared. Specific foundation and other geotechnical recommendations for the Office Building will be provided under separate cover once this information is available.

This work was performed in accordance with our proposal dated 23 September 2005 and your subsequent authorization.

SUMMARY

We recommend that the proposed garage structure be supported using high-capacity, steel H-piles, driven to bearing in the underlying bedrock. We recommend that an earth-supported bituminous concrete pavement be used for the lower level parking area and an earth-supported, concrete slab-on-grade be used for the garage entrance area in the lower level. We recommend that an underslab and perimeter foundation drainage system be installed beneath the bituminous concrete pavement section, and adjacent to the north, east and west foundation walls, respectively.

To insure the recommendations stated herein are incorporated into the design as intended, we recommend that Haley & Aldrich be involved in preparing the geotechnical Contract

Documents, reviewing geotechnical related submittals, and performing on-site monitoring of the geotechnical construction activities in the field on behalf of the Owner. Specific recommendations for foundation design and construction are presented below.

ELEVATION DATUM

The project elevation datum and elevations referenced herein are in feet and reference Portland City Datum (PCD). Portland City Datum relates to the National Geodetic Vertical Datum of 1929 (NGVD 29) as follows:

Elevation in feet (PCD) = Elevation in ft (NGVD 29) + 0.02 ft

SITE LOCATION & EXISTING SITE CONDITIONS

The general location of the project site is shown on Figure 1, Project Locus. The site is generally bound by Middle Street to the north, the Breakaway Tavern and India Street to the west, Fore Street to the south the Shipyard Brewing Company to the east. The majority of the site is either gravel covered or paved. The site is currently used as a surface parking lot. A single story, prefabricated metal building is present in the northwest corner of the site, and a three-story brick building is present in the western portion of the site adjacent to India Street. Existing site grades range from El. 15 along Fore Street to El. 27 along Middle Street.

The project site is shown on Figure 2, Site and Subsurface Exploration Location Plan.

PROPOSED DEVELOPMENT

Based on the preliminary site development plans provided by you, we understand that the site development will include the following elements:

- A six-story above-grade parking garage (approximately 700-vehicle capacity) situated on the southern half of the site. The structure will be approximately 250 ft by 120 ft in plan. The finished floor elevation (FFE) of the lowest level floor slab will vary from approximately El. 16.5 in the southern portion of the garage to El. 20.5 along the northern edge of the garage. An elevator pit (base at El. 11) is planned in the southeast corner of the footprint. Vehicular access into the garage is planned at two locations: the primary access will be off of Middle Street from the north; and the secondary access will be off of Fore Street, in the southwest corner of the garage. It is not certain at this time whether the Middle Street ramp will enter into the lowest parking level or the first floor level. Bay spacing is planned at approximately 25 ft by 60 ft. Design column loads (dead plus factored live) provided by Simon Design Engineering, LLC (SDE) range from 600 kips at the exterior corner columns, to 1,100 kips at the southern and northern exterior columns, and to as much as 2,150 kips for

the interior columns. Axial uplift and lateral foundation loading information were not provided by SDE.

- A six-story office building situated between the proposed parking garage and India Street on the western portion of the site (i.e., the current location of the Breakaway Tavern building). Design information (e.g., design loads, FFE of the lowest level floor slab and column configuration) were not available at the time this report was prepared.

- An approximately 200 ft, long, 30-ft wide public roadway extending Hancock Street from Middle Street down to Fore Street

A plan showing the proposed site grading adjacent to the garage and office buildings, along the proposed ramps into the garage, and for Hancock Street Extension was also not available at the time this report was prepared.

SUBSURFACE EXPLORATIONS

Two separate subsurface exploration programs were undertaken in order to assess subsurface soil, rock and groundwater conditions at the site. All test borings were drilled by Maine Test Borings, Inc. (MTB) of Brewer, Maine. Haley & Aldrich personnel were present on site to monitor the explorations and prepare logs detailing the subsurface conditions encountered at each test boring location.

Previous Explorations

A preliminary phase subsurface exploration program was undertaken in 2004. The primary purpose of this program was to define the general subsurface conditions in sufficient detail to allow for a preliminary assessment of the type and the approximate length of pile foundations required to support the proposed structures. Six explorations, designated HA04-1 through HA04-6, were advanced to depths ranging from 30 to 60 ft below ground surface (BGS) on 6 February 2004. Due to time constraints and the preliminary nature of the program, the majority of the explorations were advanced by driving a solid-stem, 2-in. diameter rod probe (with a 300-lb hammer dropping 18 in.), through the soil overburden to refusal at depth. Please note that only a few soil samples were collected (and SPT "N-values" recorded) during this program.

Approximate exploration locations are shown on Figure 2. Exploration locations were estimated by taping distances from existing site features. Test boring logs are provided in Appendix A. Ground surface elevations at exploration locations shown on the boring logs are approximate, and were estimated using site topographic information provided by Woodard & Curran.

Recent Explorations

The design-phase subsurface exploration program was undertaken in September and October 2005. The primary purpose of this program was to collect subsurface soil, rock and groundwater data for use in design-level environmental and geotechnical studies. Please note that Woodard & Curran was responsible for collecting, transporting and testing soil and water samples for environmental evaluations. Ten test borings, designated HA05-1 through HA05-10, were drilled from depths ranging from 6.7 to 67.0 ft BGS. All explorations were monitored full-time by a Haley & Aldrich geologist/engineer. Typically the shallow test borings were used for environmental sampling and determination of near surface soil conditions for reuse purposes. Deeper test borings were primarily drilled to obtain information for use in geotechnical/foundation evaluations.

Test borings were advanced using either steel casing or hollow stem augers, depending on the depth and purpose of each boring. Soil samples were typically obtained at 3- to 5-ft intervals by driving a 1 3/8-in. I.D. split-spoon sampler with a 140-lb weight dropped 30 in., as indicated on the test boring logs. The number of hammer blows required to advance the sampler for each 6-in. interval was recorded and is provided on the test boring logs. The SPT N-value is the total number of the hammer blows required to advance the sampler through the middle 12 in. of the 24-in. sampling interval. The soil samples were collected and preserved in glass jars.

Field vane shear tests were conducted in selected borings to provide information on the undrained shear strength characteristics of the marine clay deposit at the site. Results of the vane shear tests are provided on the boring logs in Appendix B.

Borings HA05-1, HA05-3 and HA05-5 penetrated between 3.8 and 5.5 ft into bedrock using a diamond tipped core barrel.

An observation well was installed in one of the completed boreholes (HA05-2) to facilitate groundwater monitoring and sampling at the site. The well installation and monitoring reports are provided in Appendix C.

The test borings were typically backfilled with the drill spoils at the completion of the exploration program. The soil and rock samples were returned to our office and reviewed by a Haley & Aldrich geologist to confirm field classifications, and the samples were reviewed to determine whether laboratory testing was appropriate.

Boring locations shown on Figure 2 are approximate and were determined by taping distances from existing site features. Ground surface elevations at boring locations shown on the boring logs are approximate, and were estimated using site topographic information provided by

Woodard & Curran.

Explorations by Others

We have obtained information from a test boring drilled approximately 80 ft west of the project site. We understand that this boring, located northwest of the intersection of Fore and India Streets, encountered refusal on possible bedrock at a depth of 44 ft BGS (approximately El. -23).

SUBSURFACE SOIL, BEDROCK AND GROUNDWATER CONDITIONS

Generally, the subsurface conditions encountered at the site consisted of the following geologic units, presented in order of increasing depth BGS:

- Bituminous Concrete/Concrete
- Man-placed fill
- Marine Deposit (primarily clay with some sand and silt lenses)
- Glacial Till
- Bedrock

Refer to the previous test boring logs (Appendix A), recent test boring logs (Appendix B), Table I and Figures 3 and 4 (subsurface profiles) for a more detailed description and summary of soil conditions encountered. A brief description of each of the deposits encountered is provided below.

Bituminous Concrete/Concrete: A relatively thin layer of bituminous concrete (asphalt pavement; 4 to 8 in. thick) and concrete (11 to 23 in.) was encountered generally at boring locations along Fore Street and in the north and west portions of the site. Gravel surfaced areas were found in the central and southern portions of the site.

Fill: Fill was encountered in all but one (HA05-8) boring location at the site. The fill generally ranged in thickness from 2.5 to 10 ft within the limits of the proposed garage footprint. The material generally consisted of brown or black, poorly graded SAND with gravel. Brick fragments and organic matter were present at several boring locations. The deposit was typically medium dense to dense with SPT N-values ranging from 10 to 50 blows per foot (bpf). A 4-ft thick layer of fill consisting of CLAY was encountered in boring HA05-5.

Marine Deposit: A 20 to 40-ft thick marine deposit was encountered in all of the borings located within the garage footprint. The upper 5 to 10 ft of the deposit typically consisted of gray, medium stiff to very stiff lean CLAY (CL) and is referred to herein as the clay crust. The remainder of the deposit generally consisted of gray, soft to medium stiff, lean CLAY

(CL). The SPT N-values in the crust ranged from 5 to 20 bpf while N-values in the remainder of the deposit ranged from weight of hammer (WOH) to 2 bpf. The undrained shear strength of the marine clay deposit as measured by the in-situ vane shear test typically ranged from 800 to 1,300 psf in the clay crust, and from 400 to 700 psf in the softer clay below the crust. In general, the deposit became thicker (i.e., 20 to 40 ft) from west to east (toward Hancock Street Extension), and from north to south (i.e., from 15 to 35 ft; toward Fore Street).

A thin layer (2 to 3.5 ft thick) of marine SAND was encountered above the marine CLAY at two of the test borings within the garage footprint (HA05-1 and HA05-3). The top of the marine deposit was typically encountered between 3 and 8 ft BGS (El. 12 to El. 19) within the garage footprint.

A thin layer (2.5 ft thick) of organic silt was encountered above the marine deposit in HA05-5 at a depth of 7 ft BGS. This deposit consisted of soft sandy SILT with wood fibers.

Glacial Till: A 15 to 30-ft thick deposit of glacial till was encountered in all the of the test borings drilled with in the garage footprint. This deposit generally consisted of silty SAND with varying amounts of silt and gravel. The encountered soils are typically medium dense to dense with N-values typically ranging between 10 and 40 blows per foot (bpf). The top of the till within the garage footprint varied significantly and was encountered at depths ranging between 20 and 40 ft BGS. In general, the deposit became thicker (i.e., 15 to 35 ft) from south to north (toward Middle Street).

Bedrock: Bedrock was cored at three of the recent test boring locations (HA05-1, HA05-3 and HA05-5). In general the cored bedrock is described as hard to moderately hard, fresh to slightly weathered SCHIST/ PHYLITTE. A 4-ft thick highly weathered zone was encountered at El. 51.5 in boring HA05-1. The top of rock surface is generally consistent across the site and varies between El. -35 (northwest corner of the garage footprint) and El. -45 (central and southeast portion of the garage footprint). Measured core recovery (REC) values ranged between 75 and 100 percent. Calculated rock quality designation (RQD) values ranged between 0 (at HA05-1) and 85 percent. REC and RQD values are provided on the test boring logs.

Groundwater levels measured in the observation well installed in HA05-2(OW) in October 2005 ranged from 2.5 to 3 ft BGS (El. 18.5 to El. 19). Multiple water level readings were taken during the past month (including several in one day) to determine the affect that the tides have on static groundwater levels within the garage footprint. During the monitoring period, the groundwater level did not appear to be affected by tidal fluctuations. Observation well installation and groundwater monitoring reports are included in Appendix C.

LABORATORY TESTING

A laboratory testing program was undertaken to classify the in-situ fill soils, to help assess the potential for soil reuse during site development. The laboratory testing program consisted of one grain size analyses. The results are summarized in the table below.

Test Boring (Sample No.)	Sample Depth	Soil Type	Percent Gravel	Percent Sand (coarse/med./fine)	Percent Fines	USCS Classification
HA05-1 (S1/S2)	0 to 4.0 ft	Fill	43.0	42.0 (11.0/17.0/14.0)	15.0	Silty gravel with sand (GM)

Please note that this soil sample contained approximately 15 percent asphalt pieces. Results of the laboratory testing are included in Appendix D. The potential for reusing these soils as common and structural fill at the site is discussed in the Construction Considerations section of this report.

GEOTECHNICAL ENGINEERING RECOMMENDATIONS

Geotechnical design recommendations provided below were formulated in accordance with the requirements of the 2003 International Building Code (IBC).

Please note that the recommendations provided below relate to the proposed garage structure only. Specific loading information for the office building was not available at the time this report was prepared. Foundation recommendations for the office building will be provided under separate cover once design information (i.e., FFE, column design loads, column spacing, site grading, etc.) is available.

Foundation Design Recommendations

Based on the magnitude of the axial compression design loads provided by SDE and the nature/density of the marine and glacial soils above the rock, it is our opinion that supporting the building in the marine and glacial till soils is not feasible, both in terms of allowable bearing capacity and tolerable building settlements. We therefore recommend that the proposed garage structure be supported on pile foundations penetrating through the overburden soils and driven to end bearing in the underlying rock.

As part of our analyses, we considered supporting the garage structure using both closed-ended, concrete filled steel pipe piles driven to refusal in the glacial till (displacement piles), and steel H-piles driven to refusal in bedrock. It is our opinion, based on the subsurface conditions and the magnitude of design loads, that the use of steel H-piles is technically feasible and the more cost effective foundation system. We estimate that the total cost (and total pile linear footage) of the longer, higher capacity H-piles driven into rock is approximately 40

percent less than the shorter, lower-capacity pipe piles.

We also considered supporting the structure on drilled shafts socketed into bedrock but the preliminary estimated costs of this foundation system was significantly greater than that estimated for end-bearing piles.

Static pile capacity analyses were performed to determine the geotechnical capacity of several different sizes of H-piles. Based on the condition of the bedrock, the magnitude of the design loads, and pile availability, we recommend that HP14x89 piles with an axial design capacity equal to 300 kips be used to support the garage. This design capacity value does not take into account a reduction in pile cross sectional area for steel degradation since the soils and groundwater at the site are not considered to be corrosive/saline.

Piles should be fabricated from Grade 50 (50 ksi) steel and should be outfitted with steel driving shoes/points in order to protect the pile tips from damage during driving in the rock. The piles should be installed to a minimum ultimate geotechnical capacity equal to the design capacity multiplied by 2.25 (675 kips). Per the requirements of IBC, three or more piles should be installed at discrete pile cap locations to provide lateral stability in all directions.

We anticipate that piles will advance 5 to 10 ft into the bedrock prior to achieving end bearing. Based on this and an average, assumed pile cut-off level equal to El. 16, pile lengths should vary between 55 and 70 ft. Based on these anticipated pile lengths, pile splices will be needed. Piles should be spaced at least 3.5 ft on center when groups are required. The bottoms of pile caps should be founded a minimum of 4.5 ft below the lowest surface exposed to freezing.

The installation/driving criterion for the piles is a function of pile hammer selected by the Contractor to install the piles. This criterion should the determined by the Contractor's engineer (using wave equation analysis; WEAP) and reviewed/approved by Haley & Aldrich prior to construction. The requirements of this analysis should be outlined in the pile specification. The installation/driving criterion provided by the Contractor will determine the number of hammer blows required to drive the pile over the final 6 in. of driving, which will result in the pile achieving the required minimum ultimate geotechnical capacity (2.25 x pile design capacity). If abrupt refusal is encountered, driving should be terminated when the pile penetration is less than ½-in. for 10 consecutive hammer blows.

Prior to installation, one of the H-piles could be statically load tested to twice the pile design capacity. However, it is our opinion, that dynamic pile testing could be used in lieu of a static pile load test. Dynamic testing is more cost effective than static load testing, provides reliable pile capacity information and is accepted by the IBC Code. We recommend that the Contractor monitor the installation of a minimum of ten production piles (i.e., indicator piles) using the Case-Goble Pile Driving Analyzer (PDA) equipment. The dynamic testing will: 1.) verify that the pile ultimate capacity is achieved; 2.) confirm the bearing capacity value for rock used in

the pile design; and 3.) confirm that the stresses in the pile do not exceed allowable limits during driving (i.e., 0.90f_y, or 45 ksi for grade 50 steel piles). CAPWAP analysis should be performed on at least two of the indicator piles installed during the PDA testing program. Use of dynamic testing alone will likely require approval from the City of Portland building official.

Please note that installation of driven piles is a vibration and noise producing activity. If the potential vibration and noise caused by driving piles is not acceptable to City of Portland officials, then the use of drilled shafts could become a more feasible option, since shaft installation is a relatively low vibration and low-noise producing activity.

Ground Floor Slab

We recommend that a bituminous concrete surface be constructed for the floor slab in the lowest level parking area. We recommend that the bituminous surface bear directly on subbase and base course material placed on top of the in-situ fill materials or marine deposit (likely present in the northwest corner of the footprint). Details of the recommended pavement section and recommended subgrade preparation procedures are provided below. Please note that it is possible that bituminous concrete placed within a partially enclosed space inside a building footprint may be considered a potential fire hazard and may not be allowed by the building official.

We recommend that the ground floor slab in the garage entrance area at the lower level be designed as an earth-supported, concrete slab-on-grade bearing on a minimum of 6 in. of compacted granular fill (CGF).

All previous construction debris (e.g., foundation walls, slabs, footings and underground utilities) should be removed from within the building limits prior to construction.

Resistance of Lateral Design Building Loads

We recommend that structure lateral loads be resisted by passive earth pressures acting against pile caps and grade beams. The net passive resistance (passive minus active) provided by the fill surrounding grade beams and pile caps can be calculated using an equivalent fluid weight (triangular distribution) of 300 pounds per cubic foot (pcf). The soil within 1 ft of ground surface should be ignored unless it is confined by a slab or bituminous concrete. If the horizontal distance between adjacent grade beams or walls is less than twice the height of the subject structural element (measured from bottom of element to bottom of slab/ground surface), the passive pressure must be discounted proportionately to the distance (full pressure at twice the height away) to accommodate for interaction of the elements.

If passive earth pressures are not enough to provide adequate lateral resistance, we will need to

conduct more detailed analyses of the lateral load carrying capacity of the piles at the site. Installation of battered piles may also be considered. A minimum factor of safety for sliding equal to 2.0 should be achieved for resistance of permanent lateral loads.

Sidewalks

Concrete sidewalks provided around the exterior of the buildings should be supported on a minimum of 1.5 ft of CGF or subbase gravel. The soils at the site are considered to be frost-susceptible and the purpose of placing free-draining granular soil below the sidewalks is to help control the potential for post-construction differential heaving and cracking.

Foundation Drainage System

Due to the proximity of the water table to the proposed lower level, we recommend that a permanent foundation drainage system be installed to protect the below grade portions of the building and the bituminous concrete slab from hydrostatic pressures and infiltration of surface water or groundwater. The foundation drainage system for the building should discharge by gravity where practicable into an appropriate receptor (possibly the local storm drain system).

The system should consist of perimeter foundation drains along the backfilled side of below-grade building foundation walls where the interior floor level is below the exterior finished grades (likely along the east, north and west sides of the garage). The drain should consist of a 4-in. diameter continuous perforated PVC or corrugated HDPE drainpipe, surrounded by a minimum of 6-in. of ¾-in. crushed stone and a non-woven, 4-oz. filter/separation fabric, placed outside of the foundation wall. Pipe perforations should be oriented downward. The invert of the drain pipe should be positioned above the bearing level of pile caps/grade beams, and at least 12 in. below the adjacent floor slab surface.

The system should also include underslab drains installed beneath the bituminous concrete slab in the interior portion of the garage. We recommend that the underdrain system consist of a network of 4-in. diameter perforated PVC or corrugated HDPE drain pipes, oriented north-south (perpendicular to the long axis of the garage). We recommend that one pipe be installed in each column bay (seven pipe sections total). Each pipe section should be surrounded by a minimum of 4-in. of ¾-in. crushed stone and a non-woven, 4-oz. filter/separation fabric, and should be placed below the base and subbase material for pavement sections. The underslab drain pipes should be conveyed outside the garage footprint by making "box-out" penetrations in the southern foundation wall (adjacent to Fore Street).

Pipe cleanouts should be provided at system corners (for both perimeter and underslab drain piping) to allow for future maintenance. See Figure 5 for a schematic plan and details of the recommended foundation drainage system.

As an additional measure, surface runoff should be directed away from the building. In

general, the finished ground surface immediately around the building should be sloped downward away from the structure to divert surface runoff. To limit surface water infiltration into the drainage system, it is recommended that the upper 8 in. of backfill within 10 ft of the building, in unpaved areas, consist of topsoil or other soil having low permeability.

We can provide a foundation drainage plan along with the appropriate drain system details for inclusion in the contract documents once the location and elevations of the grade beams, pile caps, below slab utilities and sump (if required) are finalized.

Dampproofing/Waterproofing

In general, we recommend that dampproofing be placed on the outside face of foundation walls where the adjacent interior space is below the level of the exterior ground surface.

The base slab for the elevator pit (bearing at approximately El. 11) should either be designed to resist hydrostatic uplift loads based on a groundwater level at El. 16, or should be permanently drained. If the slab is designed to resist uplift loads, we recommend that the walls and slab for the elevator pit be waterproofed up to El. 16 and dampproofed above El. 16. If the slab is not designed to resist uplift loads, an underslab drainage system should be constructed beneath the pit slab. The system should consist of a minimum of 6 in. of crushed stone placed over a separation geotextile fabric (e.g., Mirafi 140N). The drain system should provide a discharge outlet for the water collected in the system (e.g., connection to the storm drain system or a sump inside/outside the building).

The need for vapor barriers beneath the floor slab in the garage entrance area should be evaluated based on building design consideration/requirements. If vapor barriers are used in this area, the floor slab design should be coordinated with the vapor barrier installation, as it may impact concrete curing and curling.

Seismic Design Considerations

We recommend that the parking garage be designed in accordance with the seismic requirements of the latest edition of the IBC Code as outlined below. Due to the nature and thickness of overburden soils and the depth to bedrock, the site is considered to be "Site Class C". We recommend the following values be used by the project structural engineer to determine the design spectral response acceleration parameters (S_{DS} and S_{D1}) and to calculate the base shear for purposes of seismic design.

- Mapped Spectral Response Accelerations for Short Periods: S_S = 0.37 g
- Mapped Spectral Response Accelerations for 1-second Periods: S_1 = 0.10 g
- Site Coefficient for Short Periods: F_a = 1.2
- Site Coefficient for 1-second Periods: F_V = 1.7

Please note that "g" refers to acceleration due to gravity.

We do not consider the soils present at this site to be liquefaction susceptible.

Lateral Earth Pressures on Below-Grade Foundation Walls/Retaining Walls

We recommend that any exterior below-grade foundation walls retaining soil on one side and restrained at the top should be designed for static lateral earth pressures using an equivalent fluid unit weight of 60 lbs. per cubic foot (pcf). Cantilever walls (i.e., walls that are free to rotate at the top) should be designed using an equivalent fluid unit weight of 40 pcf. These fluid weights assume a free-draining granular backfill is placed adjacent to the wall (with moist unit weight equal to 120 pcf) and that a perimeter foundation drain system is installed recommended herein (i.e., no unbalanced hydrostatic pressures exist; "drained condition").

In particular, we anticipate that the northern garage wall, specifically adjacent to the Micucci property will need to be designed to permanently resist lateral earth pressures up to approximately El. 26.

Recommended Pavement Sections

The near surface soils (marine deposits) are considered to be frost-susceptible. Consequently, there is some risk that newly paved areas could experience some frost heaving and vertical misalignment where they are directly underlain by these soils within the depth of frost penetration. To avoid risk of any frost-induced heaving, full-depth (4.5 ft frost depth potential) non-frost susceptible pavement sections would be required, which is not common practice in this area. The recommendations provided below assume some risk of such misalignment is tolerable, as is normal local practice.

Recommendations for bituminous pavement sections for auto traffic for the parking garage and garage ramps and for Hancock Street Extension are provided below based upon the Maine DOT Standard Specification, Highways and Bridges (December 2002):

Standard-Duty Flexible Pavement (parking garage and garage ramps):

Pavement:	3 in. bituminous concrete, placed in two 1-1/2-in. thick layers
Base:	3 in. screened or crushed gravel
Subbase:	12 in. sand or gravel subbase course

Heavy-Duty Flexible Pavement (Hancock Street Extension and loading docks):

Pavement:	4 in. bituminous concrete, placed in two 2-in. thick layers
Base:	6 in. screened or crushed gravel

Subbase: 14 in. sand or gravel subbase course

Base and subbase course materials should conform to the following gradations:

Screened or Crushed Gravel - Maine DOT Standard Specification, Highways and Bridges; Section 703.06a, Type A.

Sand or Gravel Subbase - Maine DOT Standard Specification, Highways and Bridges; Section 703.06b, Type D. Type D aggregate should be modified to a maximum 4-in. size. CGF may be substituted for the subbase course material, but the maximum particle size should be reduced to 4 in.

Debris and organic matter found in the fill soils encountered at roadway subgrade level should be removed from within the limits of the proposed parking area and site roadways.

Subbase materials should be placed and compacted in maximum 8-in. thick loose lifts to at least 95 percent of the maximum dry density as determined by ASTM D1557. Base course material should be placed in one lift and compacted with a minimum of two passes with self-propelled vibratory compaction equipment. Procedures and equipment for compaction of base and subbase materials should be as recommended in this report for CGF.

The pavement recommendations also assume that a stable, firm subgrade is achieved beneath the base and subbase courses, and that subgrades are prepared as recommended in the Construction Considerations section of this report.

Hancock Street Extension

Please note that the proposed site grading plan for Hancock Street Extension was not available at the time this report was prepared. The following table summarizes the estimated amounts of cut/fill that will likely be required to construct Hancock Street Extension, based on the anticipated site grading. Also provided is the subgrade materials that are anticipated to be found during roadway construction.

Please note that prior to placement of construction of roadway embankments, all topsoil, debris and organic matter encountered at roadway subgrade level should be removed from within the limits of the roadway.

Hancock Street Extension Location	Estimated Cut Depth/Fill Height [1]	Anticipated Subgrade Soils
within 20 ft of Fore Street	2 to 3 ft cut	Marine Clay
20 to 110 ft from Fore Street	0 to 2 ft cut	Fill
110 to 160 ft from Fore Street	0 to 3 ft fill	Fill or Marine Clay
within 25 ft of Middle Street	minimal cut/fill required	Fill

Note 1. Cut depths shown are measured relative to existing site grades. Additional excavation for installation of the roadway pavement section (approximately 2 ft) will be required and is not included in the estimates shown in this table.

CONSTRUCTION CONSIDERATIONS

The primary purpose of this section is to comment on items related to excavation, earthwork, pile driving, dewatering and related geotechnical aspects of proposed construction. It is written primarily for the geotechnical engineer having responsibility for preparation of geotechnical related plans and specifications. Since it identifies potential construction problems related to foundations and earthwork, it will also aid personnel who monitor the construction activity. Prospective contractors for this project must evaluate the construction problems on the basis of their own knowledge and experience in the Portland, Maine area, and on the basis of similar projects in other localities, taking into account their proposed construction methods, procedures, equipment and personnel.

Please note that the construction considerations provided below relate to the proposed garage structure only. Specific loading information for the office building was not available at the time this report was prepared. Construction considerations for the office building will be provided under separate cover once design information (i.e., FFE, column design loads, column spacing, site grading, etc.) is available.

Pile Load Testing Program

A static pile load test would normally be performed for piles with the design capacities required for this project if they were being driven to bearing in soil. However, we anticipate that the piles will be driven to practicable refusal in the bedrock. Therefore, we do not believe that a static load test is needed. Additionally, we have pile installation records from another recent project in the vicinity of the site which confirms that similar pile capacities were achieved with the same size pile in similar subsurface and pile bearing conditions.

We do however recommend that a dynamic load testing program be implemented. A minimum of ten pre-selected piles should be monitored during installation with a pile driving analyzer (PDA) to evaluate hammer system efficiencies, driving stresses in the pile and pile capacities. The selected piles should be allowed to stand a minimum of 24 hours after completion of initial driving and should then be re-driven (restrike) while being monitored with the PDA to assess the set-up/relaxation characteristics of the rock. If the results of a PDA/CAPWAP analysis show that the minimum safety factor of 2.25 has been achieved using the driving criteria established by the WEAP analysis, then this driving criteria would be used for the remainder of the production piles without the use of PDA, and would be considered sufficient "evidence" that the piles have developed the required design capacity.

Pile Installation

Some cuts (up to 7 ft in the northwest corner of the garage) and fills (up to 3 ft in the southeastern portion of the garage) will be required to reach the proposed garage FFE. We recommend that the site be graded to a level corresponding to a few feet below the design pile cut off elevation prior to mobilizing the pile driving equipment to the site. In particular, we recommend that the fill required to raise the grade in the vicinity of column lines F-4 and G-4 be placed as soon as possible to initiate any settlement that may occur in this area as a result of fill placement. We also recommend that the piles driven at column lines F-4 and G-4 be installed last to minimize the amount of vertical soil "downdrag" load on the piles. Downdrag results when the soil adjacent to an installed pile (typically the soft, compressible marine clay soils) moves downward relative to the pile (in this case, caused by recompression of the soft marine clay/silt soils under the weight of the fill material). This relative movement of the soils induces a downdrag load on the pile. By allowing the soil to settle prior to pile installation, the downdrag loads on the piles will be minimized/eliminated.

Obstructions (i.e., concrete foundation walls, footings, slabs and boulders in the naturally deposited soils) could be encountered during pile installation. If encountered, obstructions will likely be located at shallow depths within the in-situ fill soils near existing ground surface and should be removed by the Contractor at no additional cost to the Owner.

As previously stated, pile driving is a noise and vibration inducing activity. We recommend that seismographs be used to monitor vibrations and noise levels during pile driving and other vibration inducing activities (e.g., hoe-ramming, if needed). We also recommend that an existing conditions video survey of structures and buildings of concern adjacent to the site be conducted prior to the start of construction. A complete record of the condition of both the interior and exterior walls/facades of adjacent structures can be useful to help mitigate potential damage claims (from abutters) that may arise during construction activities.

Excavation

Excavation will be required for general site grading, and for construction of the garage building foundations, the elevator pit, garage ramp from Middle Street, underground utilities and the southern portion of Hancock Street Extension. We anticipate that excavation of as much as 7 ft BGS will be required to reach the proposed FFE in the northwest portion of the garage footprint. An additional 3 to 4 ft of excavation will be required in this area to allow construction of the pile caps and grade beams (specifically in the vicinity of column lines A-2, A-1, B-1, C-1 and D-1).

We recommend that all topsoil, debris and organic matter encountered within the limits of the proposed garage, garage ramps and Hancock Street Extension be stripped and removed from the site, prior to placing fill.

We expect that excavation of the in-situ soils (mostly fill and marine deposits) can be accomplished using normal earth-moving equipment. We do not anticipate that bedrock will be encountered during excavation for this site development. Obstructions will likely be encountered during excavation in the in-situ fill soils. We recommend that the contract documents require the contractor to include provisions for obstruction removal in their earthwork bid.

Temporary Excavation Support System

Based on the anticipated elevation of the bottom of pile cap/grade beam in the northwestern portion of the garage footprint (approx. El. 13) and the proximity of the garage wall to the Micucci parcel (less than 5 ft), an excavation support system will be required along the property line from column line A-1 to column line D-1 (approximately 110 lf). We anticipate that this system will need to retain between 7 and 12 ft of soil during construction of the garage.

The excavation support system should be designed and detailed by the Contractor's engineer as part of the submittal process in the project specifications. We anticipate that either a soldier pile and lagging or interlocking steel sheet pile system will be the most cost effective and technically feasible excavation support systems for the soil conditions at the site and for the relatively small range of wall heights. We anticipate that the system could be a cantilevered (i.e., not braced) system.

A sloped open-cut excavation could be made in this area; however, this would require obtaining a temporary construction easement from the adjacent property owner (Micucci).

Construction Dewatering

Based on recently measured groundwater levels at the site, we anticipate that construction dewatering during construction of the pile caps, grade beams and elevator pit will be required. Due the relatively shallow excavation depths and the low permeability of the underlying marine soils, we expect that the required dewatering could be performed using open sumps and temporary ditches within the excavations. Sumps should be provided with filters suitable to prevent pumping of fine grained soil particles. Rainwater or snowmelt should be directed away from exposed soil bearing surfaces.

Dewatering and discharge of dewatering effluent should be performed in accordance with all applicable local, state and federal regulations. Dewatering discharge should be recharged on site if possible. However, due to the size of the site and the relatively shallow depth to water,

we anticipate that on-site recharge will not be feasible and that dewatering discharge will need to be directed to the local storm drain system. Sedimentation tanks and other treatment methods may be required for legal disposal of the effluent.

Preparation and Protection of Bearing Surfaces

Pile Caps/Grade Beams

We recommend that the excavation work be conducted in a manner that minimizes disturbance to the natural soils when excavating to bearing level for pile caps and grade beams. It may be necessary to over-excavate and replace locally weak, disturbed or otherwise unacceptable foundation bearing soils using crushed stone or concrete mudmats.

Slabs-on-Grade

All topsoil, debris and organic matter (if encountered) should be removed from beneath concrete slabs-on-grade (in the garage entrance area). We recommend that the soils within a minimum of 6 in. of the bottom of the slab be removed and replaced with CGF. Based on the proposed grading, we anticipate that in-situ fill soils will be present at subgrade level beneath the garage entrance area. We recommend that fill subgrade surfaces in this area be proofrolled with a minimum four passes of a self-propelled static roller or heavy hand-guided vibratory compactor until firm prior to placement of fill.

Pavement Areas

All topsoil, debris and organic matter within 3 ft of finished pavement grade should be removed from within the limits of garage footprint and ramps, and within Hancock Street Extension. To minimize disturbance, we recommend that marine soils (particularly clay) exposed at subgrade level not be proofrolled. If fill material is encountered at subgrade level, we recommend that these surfaces be proofrolled with a minimum four passes of a self-propelled static roller or heavy hand-guided vibratory compactor until firm. Prior to placing subbase and base course material, the pavement subgrade should be prepared in the manner stated above and should be approved by a geotechnical engineer.

Filling and Backfilling

Up to 3 ft of site filling will be required in southeast portion of the garage footprint to reach FFE. In general, we recommend that CGF be used within the garage footprint beneath the slab, parking areas and adjacent to footings, pile caps and grade beams.

We anticipate that 2 to 3 ft of filling will be required to construct the portion of Hancock Street Extension in the northwest corner of the site (near the intersection of Middle and Hancock Streets). CGF should be used beneath the roadway subbase and base material in this area.

Placement of compacted fills should not be conducted when air temperatures are low enough (approximately 30 degrees F., or below) to cause freezing of the moisture in the fill during or before placement. Fill materials should not be placed on snow, ice or uncompacted frozen soil. Compacted fill should not be placed on frozen soil. No fill should be allowed to freeze prior to compaction. At the end of each day's operations, the last lift of fill, after compaction, should be rolled by a smooth-wheeled roller to eliminate ridges of uncompacted soil.

Compacted Granular Fill

Compacted granular fill (CGF) placed beneath building slabs, adjacent to pile caps/grade beams, beneath sidewalks, adjacent to foundation/retaining walls, and beneath garage ramps/parking areas should consist of a mineral bank-run sand and gravel, free of organic material, snow, ice, or other unsuitable materials and should be well-graded within the following limits:

Sieve Size	Percent Finer by Weight
6 in. (1)	100
No. 4	30 - 80
No. 40	10 - 50
No. 200	0 – 8

(1) Cobbles or boulders having a size exceeding 2/3 of the loose lift thickness should be removed prior to compaction.

Other materials could be acceptable for CGF beneath footings, and should be evaluated by the geotechnical engineer on a case-by-case basis if proposed by the Contractor.

CGF should be placed in lift thicknesses not exceeding 12 in. loose measure. Compaction equipment in open areas should consist of self-propelled vibratory rollers such as a BoMag BW-60S. In confined areas, hand-guided equipment such as a large vibratory plate compactor should be used and the loose lift thickness should not exceed 9 in.

A minimum of four systematic passes of the compaction equipment should be used to compact each lift. Cobbles or boulders having a size exceeding 2/3 of the loose lift thickness should be removed prior to compaction.

Common Fill

The existing in-situ fill material and the marine soils are acceptable for use as common fill, if any is needed. Common fill should consist of mineral sandy soil, free from organic matter, plastic, metal, wood, ice, snow or other deleterious material and should have the characteristic

that it can be readily placed and compacted. Common fill imported to the site should have a maximum of 80 percent passing the No. 40 sieve and a maximum of 30 percent finer than the No. 200 sieve. The largest particle size for common fill should not exceed 2/3 of the loose lift thickness. Silty common fill soils may require moisture control during placement and compaction. Common fill should be placed in maximum 12 in. thick loose lifts using compaction equipment as described above for CGF.

Compaction Requirements

A summary of recommended compaction requirements is as follows:

Location	Minimum Compaction Requirements
Adjacent to pile caps/grade beams, beneath building slabs and adjacent to foundation walls	95 percent
Beneath parking areas, roadways and sidewalks	92 percent up to 3 ft below finished grade 95 percent in the upper 3 ft
Landscaped areas	90 percent nominal compaction

Minimum compaction requirements refer to percentages of the maximum dry density determined in accordance with ASTM D1557.

Reuse of Excavated On-Site Soils for Backfill

In-Situ Fill Material

Based on visual inspection of the fill samples and the results of the grain size test performed on one fill sample, we believe that the fill materials could be suitable for reuse as CGF to raise site grades beneath pavement sections for parking areas and roadways. We do not recommend that fill be used as base/subbase for pavement sections. Approved fill soils should be free of oversize material, organic material, refuse and debris, and should be able to achieve the minimum compaction requirements outlined above. These materials may also be used as common fill in landscaped areas.

Confirmation on the suitability of the excavated fill material for reuse as CGF should be made in the field based on the following information: 1.) visual inspection of the soils once they are excavated and stockpiled; and 2.) the results of additional laboratory testing on the stockpiled soil (grain size and compaction). It is possible that some of the excavated in-situ fill material may not be acceptable for reuse as CGF.

Marine Soils

Marine clay soils excavated during construction are not considered suitable for reuse as CGF.

These materials may be used as common fill in landscaped areas if they can be placed and compacted adequately as stated herein.

Preparation of Contract Documents and Submittal Reviews

The contract drawings and specifications should be written so that the requirements of the documents are consistent with the design intent of the geotechnical recommendations outlined herein. Therefore, we recommend that Haley & Aldrich be retained to prepare the specifications and contract drawings related to the following topics:

- Earthwork
- Construction Dewatering
- Temporary Lateral Support of Excavation
- Pile Installation and Testing
- Foundation Drainage System Plan and Details

The contract specifications will require the Contractor and the Contractor's engineer to perform analyses and submit results to the designers for review. We recommend that Haley & Aldrich be allowed to review the geotechnical-related submittals to ensure that the Contractor's analyses/submittals are in accordance with the intent of the design.

Construction Monitoring

The foundation and earthwork recommendations contained herein are based on the known and predictable behavior of a properly engineered and constructed foundation. Monitoring of the foundation construction is required to enable the geotechnical engineer to keep in contact with procedures and techniques used in construction, and to comply with Section 1808.2.10 of the IBC Code. Therefore, it is recommended that an individual representing the Owner (Owner's Rep.), qualified by geotechnical training and experience be present at the site to provide full-time monitoring during the earthwork and foundation construction activities listed below.

- Installation of the excavation support system.
- Excavation to subgrade levels and subgrade inspection prior to construction of grade beams/footings.
- Placement and compaction testing of CGF.
- Dynamic testing of the indicator piles and review of the PDA results.
- Installation of the production piles.
- Installation of the foundation drainage system.
- Backfilling adjacent to foundation walls and beneath the building slab.
- Inspection of the slab and pavement subgrade prior to slab construction/pavement installation.

We plan on providing these services.

LIMITATIONS OF RECOMMENDATIONS

This report is prepared for the exclusive use of Riverwalk, LLC relative to the proposed Parking Garage/Office Building development in Portland, Maine. There are no intended beneficiaries other than Riverwalk, LLC. Haley & Aldrich shall owe no duty whatsoever to any other person or entity on account of the Agreement or the report. Use of this report by any person or entity other than Riverwalk, LLC for any purpose whatsoever is expressly forbidden unless such other person or entity obtains written authorization from Riverwalk LLC. and from Haley & Aldrich. Use of this report by such other person or entity without the written authorization of Riverwalk LLC and Haley & Aldrich shall be at such other person's or entities sole risk, and shall be without legal exposure or liability to Haley & Aldrich.

Use of this Report by any person or entity, including by Riverwalk, LLC, for a purpose other than relative to the proposed Parking Garage/Office Building project in Portland, Maine is expressly prohibited unless such person or entity obtains written authorization from Haley & Aldrich indicating that the Report is adequate for such other use. Use of this Report by any other person or entity for such other purpose without written authorization by Haley & Aldrich shall be at such person's or entities sole risk, and shall be without legal exposure or liability to Haley & Aldrich.

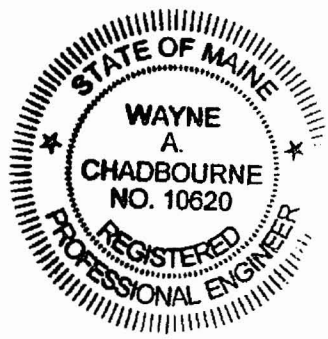
The analyses and recommendations are based, in part, upon the data obtained from the referenced subsurface explorations. The nature and extent of variations between explorations may not become evident until construction. If variations then appear, it may be necessary to reevaluate the recommendations of this report.

The planned construction will be supported on or in the soil at the site and below grade structures may be close to or penetrate the design groundwater level for the project. Recommendations for foundation and/or floor drainage, moisture protection, and/or waterproofing have been included herein, when appropriate. These recommendations address the conventional geotechnical engineering-related aspects of design and construction and are not intended to provide an environment that would prohibit infestation of mold or other biological pollutants. Our work scope did not include the development of criteria or procedures to minimize the risk of mold or other biological pollutant infestations in or near any structure.

We appreciate the opportunity to provide geotechnical engineering consulting services on this project. Please do not hesitate to call if you have any questions or comments.

Sincerely yours,
HALEY & ALDRICH, INC.

Wayne A. Chadbourne, P.E.
Senior Engineer



James W. Weaver, P.E.
Vice President

Enclosures:

Table 1:	Subsurface Explorations
Figure 1:	Project Locus
Figure 2:	Site & Subsurface Exploration Location Plan
Figure 3:	Subsurface Profile A-A
Figure 4:	Subsurface Profile B-B
Figure 5:	Proposed Foundation Drainage System - Schematic Plan and Details
Appendix A:	Logs of Previous Test Borings
Appendix B:	Logs of Recent Test Borings
Appendix C:	Observation Well Installation & Groundwater Monitoring Reports
Appendix D:	Laboratory Test Results

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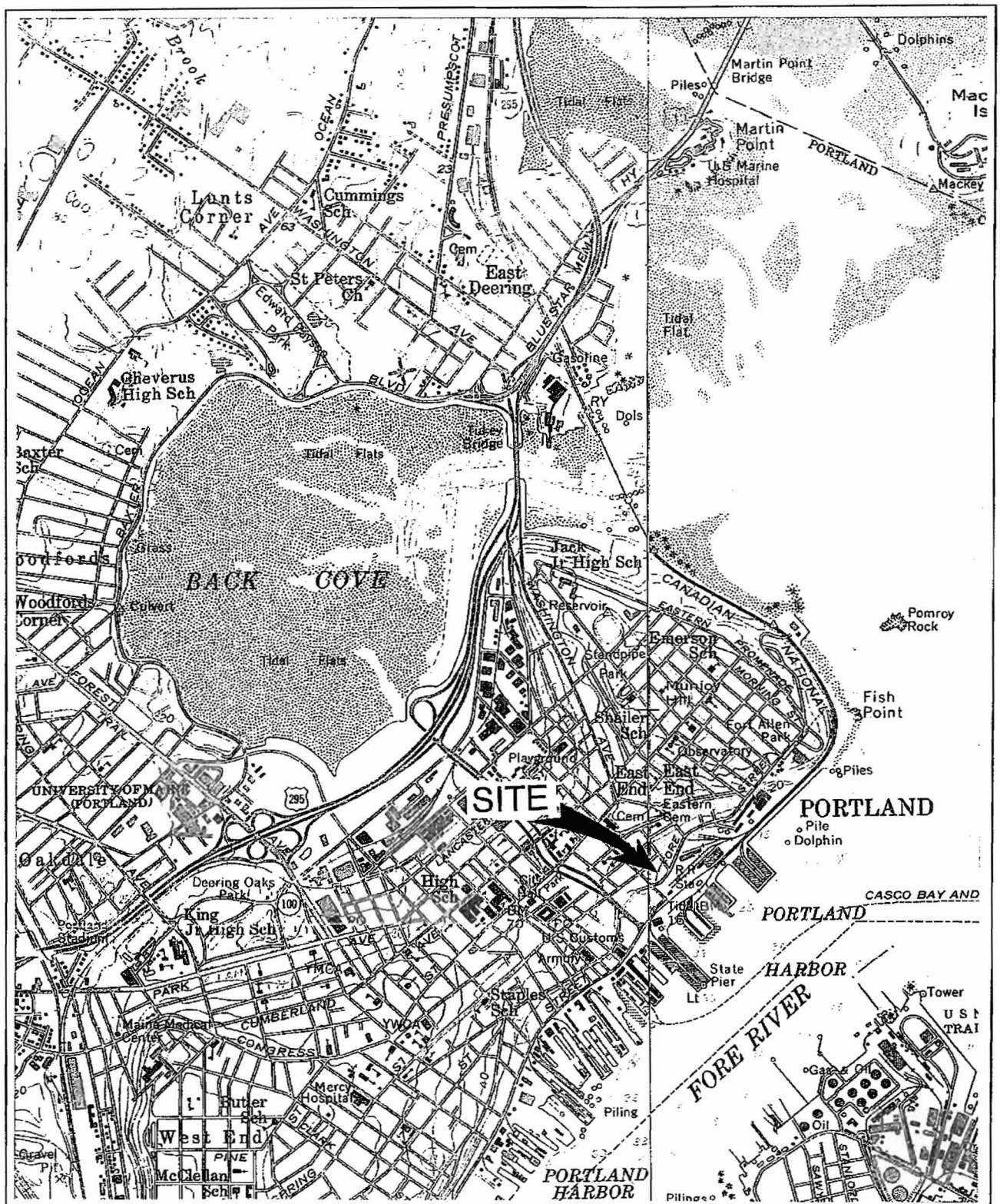
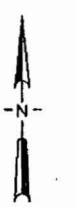
TABLE I
Subsurface Explorations
Eastern Waterfront Development
Proposed Fore Street Parking Garage
Portland, Maine

Test Boring No.	Estimated Ground Surface Elevation[1,2]	Thickness of Strata (ft)					Elevation of Top of Bedrock[1]	Elevation of Bottom of Exploration[1]
		Bituminous Concrete/ Concrete	Fill	Organic Deposit	Marine Deposit	Glacial Till		
HA04-1	20.0	0.4	7.6	NE	11.8	11.7	-11.5	-11.5
HA04-2	21.0	1.2	2.3	NE	15.2	33.2	-30.9	-30.9
HA04-3	21.0	NE	7.0	NE	16.7	29.3	-32.0	-32.0
HA04-4	20.0	NE	7.0	NE	30.9	20.9	-38.8	-38.8
HA04-5	18.5	0.2	5.3	NE	27.0	19.5	-33.5	-33.5
HA04-6	16.0	0.3	10.2	NE	23.9	9.6	-28.0	-28.0
HA05-1	23.0	NE	4.0	NE	18.5	33.2	-32.7	-37.3
HA05-2(OW)	21.5	0.9	6.1	NE	33.0	NE	-18.5	-18.5
HA05-3	18.5	NE	3.5	NE	40.3	12.3	-37.6	-42.8
HA05-4	20.0	0.3	2.3	NE	35.4	>29.0	-	-47.0
HA05-5	15.5	0.7	6.8	2.5	31.0	14.7	-40.2	-44.0
HA05-6	20.0	0.3	7.2	NE	>3.0	NE	-	9.5
HA05-7	20.5	NE	7.5	NE	>4.5	NE	-	8.5
HA05-8	22.0	1.9	NE	NE	>5.1	NE	-	15.0
HA05-9	22.0	NE	4.9	NE	>2.0	NE	-	15.1
HA05-10	19.0	0.6	2.6	NE	>3.5	NE	-	12.3

Notes:
1. Ground surface elevations reference Portland City Datum.
2. Ground surface elevations are approximate and were determined by interpolating between existing elevation contours.



SITE COORDINATES: N 43° 37' 0" W 70° 15' 33"



QUADRANGLE LOCATION

HALEY & ALDRICH

UNDERGROUND ENGINEERING & ENVIRONMENTAL SOLUTIONS

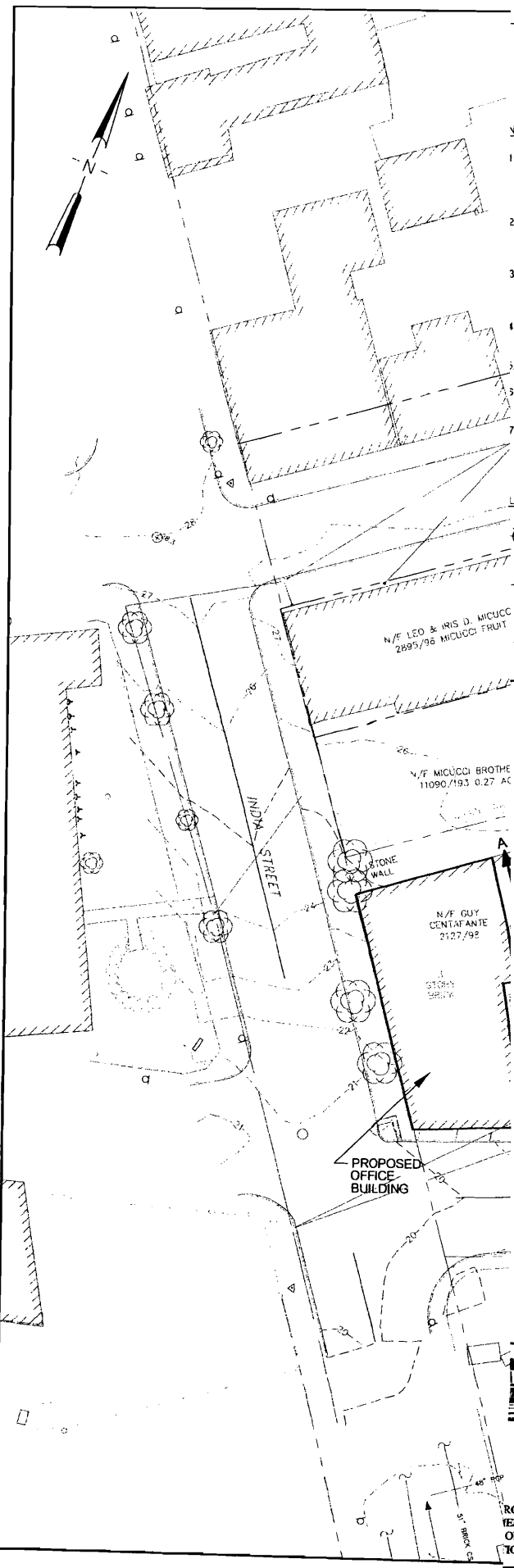
EASTERN WATERFRONT DEVELOPMENT
FORE STREET
PORTLAND, MAINE

PROJECT LOCUS

SCALE:1:24000

OCTOBER 2005

FIGURE 1



NOTES:

1. EXISTING SITE FEATURES, CONTOURS OF EXISTING GROUND SURFACE ELEVATION AND THE LOCATION AND ORIENTATION OF EXISTING STRUCTURES, UTILITIES AND ROADWAYS ARE TAKEN FROM THE ELECTRONIC AUTOCAD FILE 203555-X00C.DWG", PREPARED BY WOODARD & CURRAN, NEW YORK, RECEIVED ON 28 OCTOBER 2005.
2. LOCATION AND ORIENTATION OF PROPOSED STRUCTURES AND ROADWAYS ARE TAKEN FROM THE ELECTRONIC AUTOCAD FILE "SITE PLAN_10.27.05_2000.DWG", PROVIDED BY WOODARD & CURRAN, RECEIVED ON 28 OCTOBER 2005.
3. LOCATION OF THE "HA04" AND "HA05" SERIES OF TEST BORINGS ARE APPROXIMATE AND WERE DETERMINED IN THE FIELD BY TAPING DISTANCES FROM EXISTING SITE FEATURES.
4. THE "HA04" AND "HA05" SERIES OF TEST BORINGS WERE MONITORED IN THE FIELD BY HALEY & ALDRICH, INC. PERSONNEL
5. ELEVATIONS ARE IN FEET AND REFERENCE PORTLAND CITY DATUM.
6. REFER THE REPORT APPENDICES FOR LOGS OF THE "HA04" AND "HA05" SERIES OF TEST BORINGS.
7. REFER TO FIGURES 3 AND 4 FOR SUBSURFACE PROFILE A-A AND B-B, RESPECTIVELY.

LEGEND:

HA05-1	DESIGNATION AND APPROXIMATE LOCATION OF TEST BORING DRILLED BY MAINE TEST BORINGS, INC. OF BREWER, MAINE BETWEEN 26 SEPTEMBER AND 6 OCTOBER 2005
HA04-1	DESIGNATION AND APPROXIMATE LOCATION OF TEST BORING DRILLED BY MAINE TEST BORINGS, INC. OF BREWER, MAINE ON 6 FEBRUARY 2004
(OW)	DENOTES OBSERVATION WELL INSTALLED IN COMPLETED TEST BORING
21	ELEVATION CONTOUR OF EXISTING GROUND SURFACE
A	DESIGNATION, LOCATION AND ORIENTATION OF SUBSURFACE PROFILE

0 30 60 90 120

SCALE IN FEET

30322-000 D01

LEY & DRICH

RGROUND EERING & ONMENTAL TIONS

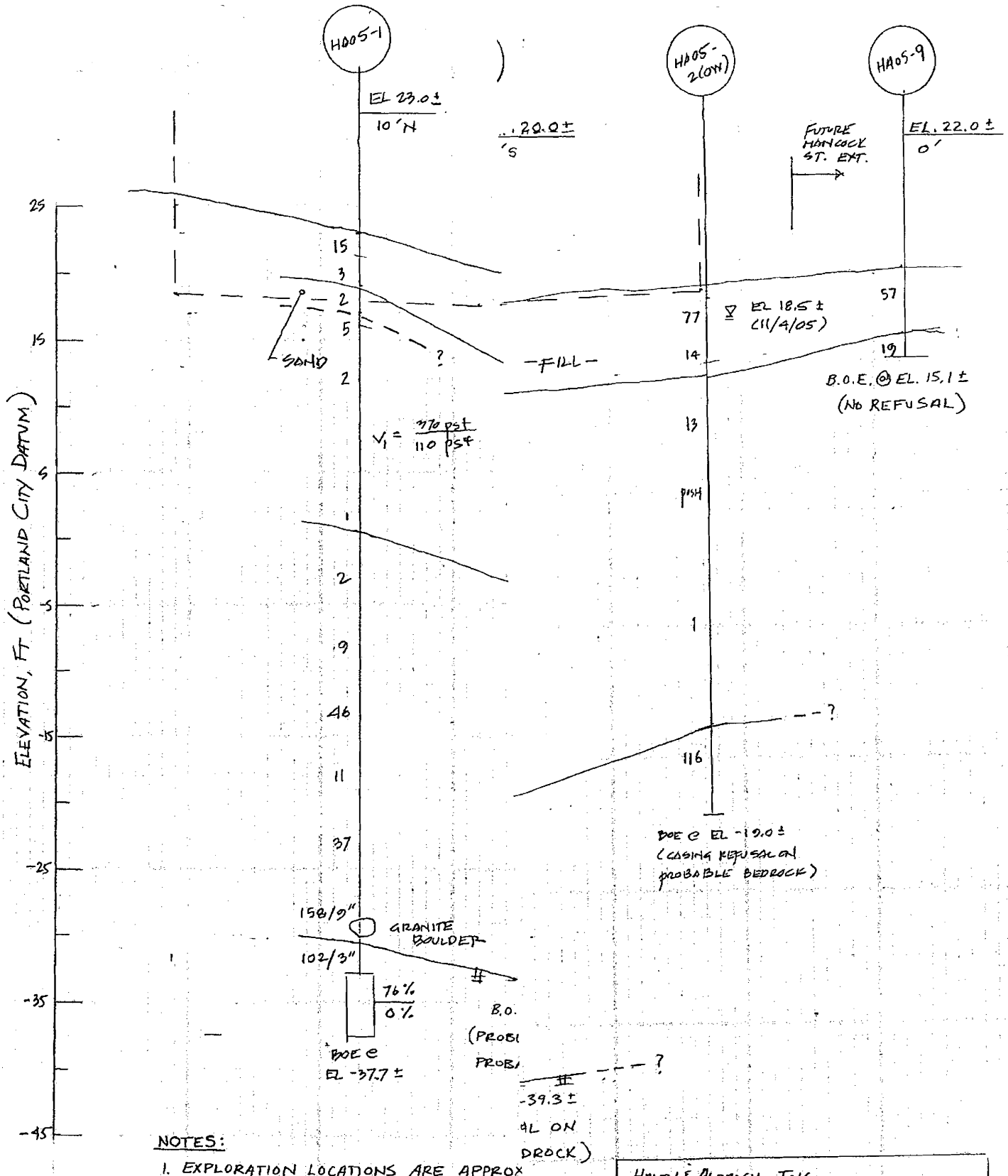
EASTERN WATERFRONT DEVELOPMENT
PROPOSED PARKING GARAGE AND OFFICE BUILDING
PORTLAND, MAINE

SITE AND SUBSURFACE EXPLORATION LOCATION PLAN

SCALE: AS SHOWN

NOVEMBER 2005

FIGURE 2



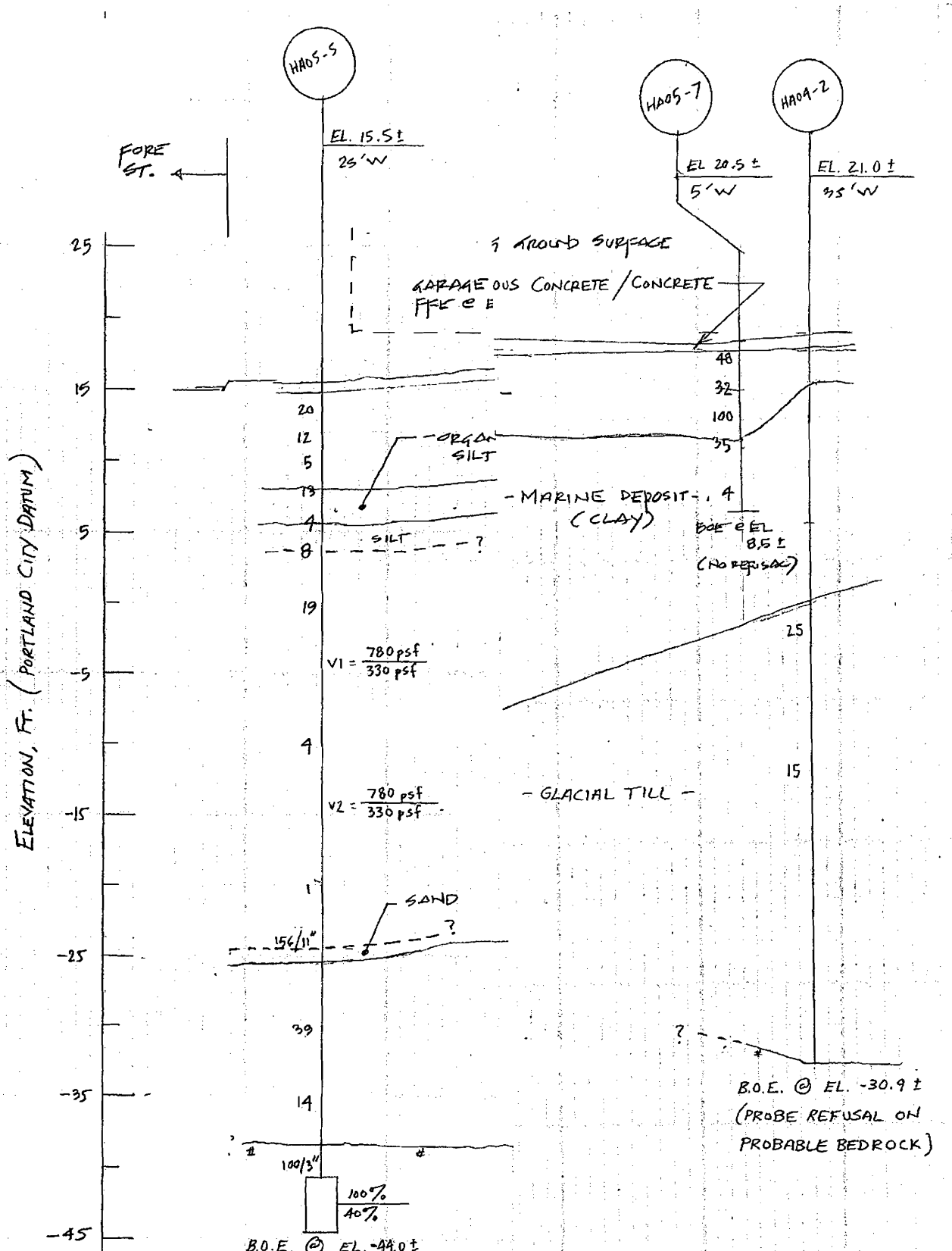
NOTES:

1. EXPLORATION LOCATIONS ARE APPROX DETERMINED IN THE FIELD BY TAPING EXISTING SITE FEATURES.
2. GROUND SURFACE ELEVATIONS ARE :EFORMED :ENGTH WERE DETERMINED BY USING TOPOGE PROVIDED BY WOODARD & CURRAN. :N

HALEY & ALDRICH, INC.
EASTERN WATERFRONT DEVELOPMENT
PROPOSED FORE ST. PARKING GARAGE
PORTLAND, MAINE
JOB No. 30322-000

SUBSURFACE PROFILE A-A
SCALE: H: 1" = 20'
V: 1" = 10'

FIGURE 3



NOTES:

1. EXPLORATION LOCATIONS AR DETERMINED IN THE FIEL FROM EXISTING SITE FEA
2. GROUND SURFACE ELEV AND WERE DETERMINED E INFORMATION PROVIDED

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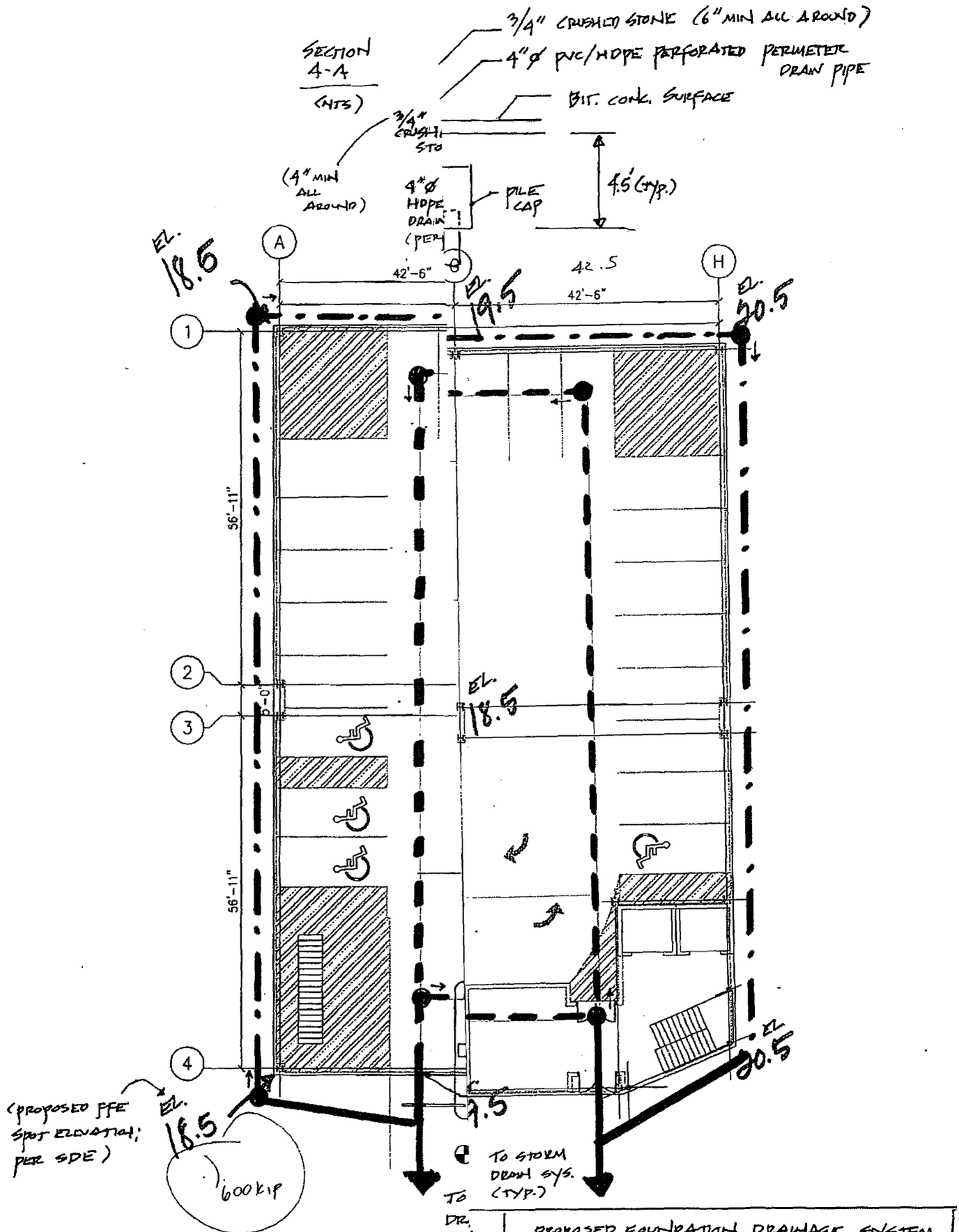
HALEY & ALDRICH, INC.
EASTERN WATERFRONT DEVELOPMENT
PROPOSED FORE ST. PARKING GARAGE
PORTLAND, MAINE
JOB NO. 30322-000

SUBSURFACE PROFILE B-B
SCALE: H: 1" = 15'
V: 1" = 10'

FIGURE 4



PROPOSED FOUNDATION DRAINAGE SYSTEM
SCHEMATIC PLAN AND DETAILS

NOV 2005

FIGURE 5

APPENDIX A

Logs of Previous Test Borings

HALEY & ALDRICH

TEST BORING REPORT

Boring No. HA04-1

Project Eastern Waterfront Development, Portland, ME
Client Riverwalk, LLC
Contractor Maine Test Borings, Inc.

File No. 30322-000
Sheet No. 1 of 2
Start February 6, 2004
Finish February 6, 2004
Driller G. Rudnicki
H&A Rep. T. Erickson
Elevation 20.0 +/-
Datum Portland City
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HSA	SS	-	Rig Make & Model: Mobile Drill B47 ATV Rig
Inside Diameter (in.)	3.0	1.375	-	Bit Type: Cutting Head
Hammer Weight (lb.)	-	140	-	Drill Mud: None
Hammer Fall (in.)	-	30	-	Casing: -
				Hoist/Hammer: Winch/Safety Hammer

Depth (ft.)	SPT[1]	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size[2], structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							-CONCRETE-										
					0.4		NOTE: Fill from 0.4-8.0 ft. as indicated by auger spoils. NOTE: Fill changes at 3 ft. from dark brown to light-brown with similarstructure of sand and gravel, some brick and slag present from 0.4-2.0 ft.										
5							-FILL-										
							NOTE: Probable strata change to lean clay at 8 ft. as indicated by auger spoils pile.										
				NO WELL INSTALLED	8.0												
10							NOTE: Rod probes starting at 10 ft. due to time constraints: no samples taken (see page 2 of log) NOTE: Probable marine deposit, lean clay from 8-19.8 ft. Probable change to glacial till at 19.8 ft.										
							-MARINE DEPOSIT-										
15																	
20																	

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft.) to: Bottom of Casing	Bottom of Hole	Water
02-06-04	13:40	0.2	0	4.8	DRY

Sample Identification

O Open End Rod
T Thin Wall Tube
U Undisturbed Sample
S Split Spoon
G Geoprobe
V In-Situ Vane Shear

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (lin. ft.) 31.5
Rock Cored (lin. ft.) -
Samples

Boring No. HA04-1

Field Tests: Dilatancy: R-Rapid, S-Slow, N-None Plasticity: N-Nonplastic, L-Low, M-Medium, H-High
Toughness: L-Low, M-Medium, H-High Dry Strength: N-None, L-Low, M-Medium, H-High, V-Very High

[1]SPT = Sampler blows per 6 in. [2]Maximum particle size (mm) is determined by direct observation within the limitations of sampler size (in millimeters).

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

USCS_TB4 USCSLIB4.GLB USCSTB+CORE4.GDT G:\PROJECTS\30322\970\30322-970.GPJ Nov 4, 05

HALEY & ALDRICH

TEST BORING REPORT

Boring No. HA04-1
File No. 30322-000
Sheet No. 2 of 2

Depth (ft.)	SPT[1]	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size[2], structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20					19.8												
							-GLACIAL TILL-										
25																	
30							NOTE: Probe refusal at 31.5 ft.										
					31.5		-BOTTOM OF EXPLORATION-										

Probe Information: AW Rod Probe (300 lb. hammer/18 in. fall)

Depth	Probe Advancement
10-19'	Push
19-20'	6 blows/ft.
20-21'	10 blows/ft.
21-22'	13 blows/ft.
22-23'	13 blows/ft.
23-24'	17 blows/ft.
24-25'	9 blows/ft.
25-26'	5 blows/ft.
26-27'	3 blows/ft.
27-28'	2 blows/ft.
28-29'	3 blows/ft.
29-30'	5 blows/ft.
30-31'	2 blows/ft.
31-31.5	100 blows/6 in.

[1]SPT = Sampler blows per 6 in. [2]Maximum particle size (mm) is determined by direct observation within the limitations of sampler size.
NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

HALEY & ALDRICH

TEST BORING REPORT

Boring No. HA04-2

Project Eastern Waterfront Development, Portland, ME
Client Riverwalk, LLC
Contractor Maine Test Borings, Inc.

File No. 30322-000
Sheet No. 1 of 3
Start February 6, 2004
Finish February 6, 2004
Driller G. Rudnicki
H&A Rep. T. Erickson
Elevation 21.0 +/-
Datum Portland City
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	-	SS	-	Rig Make & Model: Mobile Drill B47 ATV Rig
Inside Diameter (in.)	-	1.375	-	Bit Type: Cutting Head
Hammer Weight (lb.)	-	140	-	Drill Mud: None
Hammer Fall (in.)	-	30	-	Casing: -
				Hoist/Hammer: Winch/Safety Hammer

Depth (ft.)	SPT[1]	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size[2], structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			-CONCRETE-										
					1.2		NOTE: Reinforced with rebar from 1-1.2 ft.										
							NOTE: Frozen subbase (gravel) from 1.2-2.4 ft. -FILL- NOTE: Drill cuttings indicate a probable strata change at 3.5 ft. to a gray-brown, lean CLAY with some sand.										
					3.5		-MARINE DEPOSIT-										
5																	
					7.0		NOTE: Lean clay turns from gray-brown to gray at 7 ft. and is highly plastic. -MARINE DEPOSIT-										
10																	
15							NOTE: Probable strata change at 18.7 ft. due to change in drill action.										
					18.7												
20																	

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft.) to: Bottom of Casing	Bottom of Hole	Water
02-06-04	13:00	0.2	0	16	9

Sample Identification

O Open End Rod
T Thin Wall Tube
U Undisturbed Sample
S Split Spoon
G Geoprobe
V In-Situ Vane Shear

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (lin. ft.) 51.9
Rock Cored (lin. ft.) -
Samples 2S

Boring No. HA04-2

Field Tests: Dilatancy: R-Rapid, S-Slow, N-None Plasticity: N-Nonplastic, L-Low, M-Medium, H-High
Toughness: L-Low, M-Medium, H-High Dry Strength: N-None, L-Low, M-Medium, H-High, V-Very High

[1]SPT = Sampler blows per 6 in. [2]Maximum particle size (mm) is determined by direct observation within the limitations of sampler size (in millimeters).

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

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TEST BORING REPORT

Boring No. HA04-2
File No. 30322-000
Sheet No. 2 of 3

Depth (ft.)	SPT[1]	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size[2], structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20	2 20 5 6	S1 18	20.0 22.0			SM	Medium dense, light gray, silty, clayey SAND (SM), mps= 0.75 in., very loosely bonded, no odor, wet. -GLACIAL TILL-	5	20	20	20	15	20				
30	8 10 5 5	S2 24	30.0 32.0			SP-SM	Medium dense, light gray, poorly graded SAND with silt and gravel (SP-SM), mps=0.75 in., loosely bonded, no odor, wet. -GLACIAL TILL- NOTE: Rod probes starting ay 32 ft. due to time restraints: no samples taken (see page 3 of log)	5	10	20	35	20	10				
40																	
45																	

[1]SPT = Sampler blows per 6 in. [2]Maximum particle size (mm) is determined by direct observation within the limitations of sampler size.
NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

HALEY & ALDRICH

TEST BORING REPORT

Boring No. HA04-2
File No. 30322-000
Sheet No. 3 of 3

Depth (ft.)	SPT[1]	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size[2], structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
50						SM	NOTE: Probe refusal at 51.9 ft.										
					51.9		-BOTTOM OF EXPLORATION-										

Probe Information: AW Rod Probe (300 lb. hammer/18 in. fall)

Depth	Probe Advancement
32-33'	2 blows/ft.
33-34'	2 blows/ft.
34-35'	WOH
35-36'	WOH
36-37'	15 blows/ft.
37-38'	23 blows/ft.
38-39'	26 blows/ft.
39-40'	8 blows/ft.
40-41'	6 blows/ft.
41-42'	6 blows/ft.
42-43'	4 blows/ft.
43-44'	8 blows/ft.
44-45'	4 blows/ft.
45-46'	18 blows/ft.
46-47'	18 blows/ft.
47-48'	15 blows/ft.
48-49'	23 blows/ft.
49-50'	12 blows/ft.
50-51'	19 blows/ft.
51-51.9'	100 blows/6 in.

[1]SPT = Sampler blows per 6 In. [2]Maximum particle size (mm) is determined by direct observation within the limitations of sampler size.

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

HALEY & ALDRICH

TEST BORING REPORT

Boring No. HA04-3

Project Eastern Waterfront Development, Portland, ME
Client Riverwalk, LLC
Contractor Maine Test Borings, Inc.

File No. 30322-000
Sheet No. 1 of 3
Start February 6, 2004
Finish February 6, 2004
Driller G. Rudnicki
H&A Rep. T. Erickson
Elevation 21.0 +/-
Datum Portland City
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HSA	SS	-	Rig Make & Model: Mobile Drill B47 ATV Rig
Inside Diameter (in.)	3.0	1.375	-	Bit Type: Cutting Head
Hammer Weight (lb.)	-	140	-	Drill Mud: None
Hammer Fall (in.)	-	30	-	Casing: -
				Hoist/Hammer: Winch/Safety Hammer

Depth (ft.)	SPT[1]	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size[2], structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			NOTE: Auger spoils indicates sandy GRAVEL from 0.0-4.0 ft. (frozen from 0.0-2.5 ft.) -FILL-										
					4.0		NOTE: Ash, wood, brick and cinders present from 4-7 ft. -FILL-										
5					7.0		NOTE: Gray-brown, lean CLAY from 7-9 ft. -MARINE DEPOSIT-										
					9.0		NOTE: Gray, lean clay starting at 7 ft. -MARINE DEPOSIT- NOTE: HSA used from 0.0-10.0 ft. Rod probes starting at 10.0 ft. due to time constraints; no samples taken (see page 3 of log).										
10																	
15																	
20																	

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft.) to: Bottom of Casing	Bottom of Hole	Water
02-06-04	14:25	0.1	0	9	DRY

Sample Identification

O Open End Rod
T Thin Wall Tube
U Undisturbed Sample
S Split Spoon
G Geoprobe
V In-Situ Vane Shear

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (lin. ft.) 53.0
Rock Cored (lin. ft.) -
Samples -

Boring No. HA04-3

Field Tests: Dilatancy: R-Rapid, S-Slow, N-None
Toughness: L-Low, M-Medium, H-High
Plasticity: N-Nonplastic, L-Low, M-Medium, H-High
Dry Strength: N-None, L-Low, M-Medium, H-High, V-Very High

[1]SPT = Sampler blows per 6 in. [2]Maximum particle size (mm) is determined by direct observation within the limitations of sampler size (in millimeters).

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

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TEST BORING REPORT

Boring No. HA04-3
File No. 30322-000
Sheet No. 2 of 3

Depth (ft.)	SPT[1]	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size[2], structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20																	
					23.7		NOTE: Probe action indicates probable strata change at 23.7 ft.										
25							-GLACIAL TILL-										
30																	
35																	
40																	
45																	

[1]SPT = Sampler blows per 6 in. [2]Maximum particle size (mm) is determined by direct observation within the limitations of sampler size.

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

HALEY & ALDRICH

TEST BORING REPORT

Boring No. HA04-3
File No. 30322-000
Sheet No. 3 of 3

Depth (ft.)	SPT[1]	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size[2], structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
50							-GLACIAL TILL-										
					53.0		NOTE: Probe refusal at 53 ft. -BOTTOM OF EXPLORATION-										

Probe Information: AW Rod Probe (300 lb. hammer/18 in. fall)

Depth	Probe Advancement
10-22'	Push
23-24'	5 blows/ft.
24-25'	6 blows/ft.
25-26'	7 blows/ft.
26-27'	6 blows/ft.
27-28'	8 blows/ft.
28-29'	5 blows/ft.
29-30'	9 blows/ft.
30-31'	16 blows/ft.
31-32'	12 blows/ft.
32-33'	18 blows/ft.
33-34'	32 blows/ft.
34-35'	14 blows/ft.
35-36'	33 blows/ft.
36-37'	19 blows/ft.
37-38'	18 blows/ft.
38-39'	17 blows/ft.
39-40'	13 blows/ft.
40-41'	22 blows/ft.
41-42'	22 blows/ft.
42-43'	19 blows/ft.
43-44'	23 blows/ft.
44-45'	30 blows/ft.
45-46'	30 blows/ft.
46-47'	36 blows/ft.
47-48'	33 blows/ft.
48-49'	26 blows/ft.
49-50'	41 blows/ft.
50-51'	28 blows/ft.
51-52'	58 blows/ft.
52-53'	85 blows/ft.

[1]SPT = Sampler blows per 6 in. [2]Maximum particle size (mm) is determined by direct observation within the limitations of sampler size.
NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

HALEY & ALDRICH

TEST BORING REPORT

Boring No. HA04-4

Project Eastern Waterfront Development, Portland, ME
Client Riverwalk, LLC
Contractor Maine Test Borings, Inc.

File No. 30322-000
Sheet No. 1 of 3
Start February 6, 2004
Finish February 6, 2004
Driller G. Rudnicki
H&A Rep. T. Erickson
Elevation 20.0 +/-
Datum Portland City
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HSA	SS	-	Rig Make & Model: Mobile Drill B47 ATV Rig
Inside Diameter (in.)	3.0	1.375	-	Bit Type: Cutting Head
Hammer Weight (lb.)	-	140	-	Drill Mud: None
Hammer Fall (in.)	-	30	-	Casing: -
				Hoist/Hammer: Winch/Safety Hammer

Depth (ft.)	SPT[1]	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size[2], structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							NOTE: Very dense sand and gravel from 0.0-4.5 ft. -FILL-										
5					7.0		NOTE: Drill cuttings indicate a probable strata change at 7 ft.										
10	3 3 3 5	S1 21	10.0 12.0	NO WELL INSTALLED		CL	Medium stiff, olive-brown, lean CLAY (CL), mps=2.0 mm., infrequent sand seams from 10-10.6 ft, laminated, no odor, moist. -MARINE DEPOSIT-				5	5	90	S	L	L	
15																	
20																	

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft.) to: Bottom of Casing	Bottom of Hole	Water
02-06-04	11:05	0.3	0	18.5	12

Sample Identification

O Open End Rod
T Thin Wall Tube
U Undisturbed Sample
S Split Spoon
G Geoprobe
V In-Situ Vane Shear

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (lin. ft.) 58.8
Rock Cored (lin. ft.) -
Samples 2S

Boring No. HA04-4

Field Tests: Dilatancy: R-Rapid, S-Slow, N-None Plasticity: N-Nonplastic, L-Low, M-Medium, H-High
Toughness: L-Low, M-Medium, H-High Dry Strength: N-None, L-Low, M-Medium, H-High, V-Very High

[1]SPT = Sampler blows per 6 in. [2]Maximum particle size (mm) is determined by direct observation within the limitations of sampler size (in millimeters).

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

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TEST BORING REPORT

Boring No. HA04-4
File No. 30322-000
Sheet No. 2 of 3

Depth (ft.)	SPT[1]	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size[2], structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20																	
25																	
30																	
35							NOTE: Drill action indicates a probable strata change at 37.9 ft.										
					37.9												
40	9 8 9 12	S2 20	40.0 42.0				Medium dense, light-gray, poorly graded GRAVEL with sand (GP), mps = 1.25 in., no structure, no odor, wet. -GLACIAL TILL- NOTE: Rod probes starting at 42 ft. due to time constraints: no samples taken (see page 3 of log)	20	55	5	10	5	5				
45																	

[1]SPT = Sampler blows per 6 in. [2]Maximum particle size (mm) is determined by direct observation within the limitations of sampler size.

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

HALEY & ALDRICH

TEST BORING REPORT

Boring No. HA04-4
File No. 30322-000
Sheet No. 3 of 3

Depth (ft.)	SPT[1]	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size[2], structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
50							-GLACIAL TILL-										
55							NOTE: Probe refusal at 58.8 ft.										
					58.8		-BOTTOM OF EXPLORATION-										

Probe Information: AW Rod Probe (300 lb. hammer/18 in. fall)

Depth	Probe Advancement
42-43'	42 blows/ft.
43-44'	35 blows/ft.
44-45'	10 blows/ft.
45-46'	18 blows/ft.
46-47'	10 blows/ft.
47-48'	15 blows/ft.
48-49'	9 blows/ft.
49-50'	8 blows/ft.
50-51'	14 blows/ft.
51-52'	17 blows/ft.
52-53'	12 blows/ft.
53-54'	15 blows/ft.
54-55'	17 blows/ft.
55-56'	65 blows/ft.
56-57'	23 blows/ft.
57-58'	21 blows/ft.
58-58.8'	100 blows/9 in.

[1]SPT = Sampler blows per 6 in. [2]Maximum particle size (mm) is determined by direct observation within the limitations of sampler size.
NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

HALEY & ALDRICH

TEST BORING REPORT

Boring No. HA04-5

Project Eastern Waterfront Development, Portland, ME
Client Riverwalk, LLC
Contractor Maine Test Borings, Inc.

File No. 30322-000
Sheet No. 1 of 3
Start February 6, 2004
Finish February 6, 2004
Driller G. Rudnicki
H&A Rep. T. Erickson
Elevation 18.5 +/-
Datum Portland City
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HSA	SS	-	Rig Make & Model: Mobile Drill B47 ATV Rig
Inside Diameter (in.)	3.0	1.375	-	Bit Type: Cutting Head
Hammer Weight (lb.)	-	140	-	Drill Mud: None
Hammer Fall (in.)	-	30	-	Casing: -
				Hoist/Hammer: Winch/Safety Hammer

Depth (ft.)	SPT[1]	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size[2], structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0					0.2		-BITUMINOUS CONCRETE- NOTE: Auger spoils pile indicates brown and red-brown, gravelly SAND with 20-50% brick fragments. -FILL-										
5				NO WELL INSTALLED	5.5		NOTE: Probable change to brown and gray-brown, lean CLAY at 5.5 ft. -MARINE DEPOSIT-										
10					9.5		NOTE: Probable change to gray, lean CLAY at 9.5 ft. -MARINE DEPOSIT- NOTE: Probe auger strating at 10 ft. due to time constraints: no samples taken.										
15																	
20																	

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft.) to: Bottom of Casing	Bottom of Hole	Water
02-06-04	15:30	0.2	0	8.5	DRY

Sample Identification

O Open End Rod
T Thin Wall Tube
U Undisturbed Sample
S Split Spoon
G Geoprobe
V In-Situ Vane Shear

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (lin. ft.) 52
Rock Cored (lin. ft.) -
Samples -

Boring No. HA04-5

Field Tests: Dilatancy: R-Rapid, S-Slow, N-None
Toughness: L-Low, M-Medium, H-High
Plasticity: N-Nonplastic, L-Low, M-Medium, H-High
Dry Strength: N-None, L-Low, M-Medium, H-High, V-Very High

[1]SPT = Sampler blows per 6 in. [2]Maximum particle size (mm) is determined by direct observation within the limitations of sampler size (in millimeters).

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

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HALEY & ALDRICH

TEST BORING REPORT

Boring No. HA04-5
File No. 30322-000
Sheet No. 2 of 3

Depth (ft.)	SPT[1]	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size[2], structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20							-MARINE DEPOSIT-										
25																	
30							NOTE: Probable strata change to glacial till at 32.5										
					32.5		-GLACIAL TILL-										
35																	
40																	
45																	

[1]SPT = Sampler blows per 6 in. [2]Maximum particle size (mm) is determined by direct observation within the limitations of sampler size.

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

HALEY & ALDRICH

TEST BORING REPORT

Boring No. HA04-5
File No. 30322-000
Sheet No. 3 of 3

Depth (ft.)	SPT[1]	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size[2], structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
50							-GLACIAL TILL-										
					52.0		NOTE: Probe auger refusal at 52 ft. -BOTTOM OF EXPLORATION-										

Probe Information: AW Rod Probe (300 lb. hammer/18 in. fall)

Depth	Probe Advancement
10-32'	Push
32-33'	9 blows/ft.
33-34'	13 blows/ft.
34-35'	11 blows/ft.
35-36'	17 blows/ft.
36-37'	13 blows/ft.
37-38'	19 blows/ft.
38-39'	20 blows/ft.
39-40'	26 blows/ft.
40-41'	16 blows/ft.
41-42'	18 blows/ft.
42-43'	25 blows/ft.
43-44'	31 blows/ft.
44-45'	30 blows/ft.
45-46'	46 blows/ft.
46-47'	65 blows/ft.
47-48'	65 blows/ft.
48-49'	60 blows/ft.
49-50'	71 blows/ft.
50-51'	72 blows/ft.
51-52'	75 blows/ft.

[1]SPT = Sampler blows per 6 in. [2]Maximum particle size (mm) is determined by direct observation within the limitations of sampler size.
NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

HALEY & ALDRICH

TEST BORING REPORT

Boring No. HA04-6

Project Eastern Waterfront Development, Portland, ME
Client Riverwalk, LLC
Contractor Maine Test Borings, Inc.

File No. 30322-000
Sheet No. 1 of 2
Start February 6, 2004
Finish February 6, 2004
Driller G. Rudnicki
H&A Rep. T. Erickson
Elevation 16.0 +/-
Datum Portland City
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HSA	SS	-	Rig Make & Model: Mobile Drill B47 ATV Rig
Inside Diameter (in.)	3.0	1.375	-	Bit Type: Cutting Head
Hammer Weight (lb.)	-	140	-	Drill Mud: None
Hammer Fall (in.)	-	30	-	Casing: -
				Hoist/Hammer: Winch/Safety Hammer

Depth (ft.)	SPT[1]	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size[2], structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED	0.3		-BITUMINOUS CONCRETE-										
							NOTE: Samples will only be taken at perceived strata changes.										
5	2 2 7 12	S1 4	5.0 7.0			ML	Stiff, dark-gray sandy SILT (ML), mps=1.25 in., no structure, strong fuel odor, wet, sheen seen in sample (petroleum), 70% brick and brick fragments.	5			5	25	65	R	-	-	-
							-FILL-										
10	9 6 6 12	S2 1	10.0 12.0			ML	Stiff, dark gray-brown, sandy SILT (ML), mps=4.0 mm., no structure, fuel odor, wet, petroleum sheen visible, poor recovery.			5	5	20	70	R	-	-	-
					10.5		-FILL-										
							NOTE: When auger plug was removed at 10 ft., lean clay was seen on tip, probable strata change near 10-10.5 ft.										
15	5 2 2 2	S3 22	15.0 17.0			CL	Soft, olive-brown, lean CLAY with sand (CL), mps=2.0 mm., frequent sand partings laminated, no odor, moist.				5	15 -	80	S	L	L	-
							-MARINE DEPOSIT-										
					16.6		NOTE: Lean clay becomes gray and highly plastic at 16.6 ft.					5	95	N	L	H	-
							-MARINE DEPOSIT-										
20																	

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft.) to: Bottom of Casing	Bottom of Hole	Water
02-06-04	09:00	0.2	0	17	4.5

Sample Identification

O Open End Rod
T Thin Wall Tube
U Undisturbed Sample
S Split Spoon
G Geoprobe
V In-Situ Vane Shear

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (lin. ft.) 44
Rock Cored (lin. ft.) -
Samples 6S

Boring No. HA04-6

Field Tests: Dilatancy: R-Rapid, S-Slow, N-None Plasticity: N-Nonplastic, L-Low, M-Medium, H-High
Toughness: L-Low, M-Medium, H-High Dry Strength: N-None, L-Low, M-Medium, H-High, V-Very High

[1]SPT = Sampler blows per 6 in. [2]Maximum particle size (mm) is determined by direct observation within the limitations of sampler size (in millimeters).

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

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TEST BORING REPORT

Boring No. HA04-6
File No. 30322-000
Sheet No. 2 of 2

Depth (ft.)	SPT[1]	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size[2], structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20																	
25							-MARINE DEPOSIT-										
30							NOTE: Drill action indicates a probable strata change at 34.4 ft.										
35	3 8 10 12	S4 24	35.0 37.0		34.4	SM	Medium dense light gray, silty SAND with gravel (SM), mps=0.75 in., no structure, no odor, wet. -GLACIAL TILL-	10	10	15	30	15	20				
40	9 11 17 15	S5 17	40.0 42.0			SM	Medium dense, light gray, silty SAND with gravel (SM), mps=0.25 in., loosely bonded, no odor, wet. -GLACIAL TILL-		15	15	35	20	15				
	2 5 7 9	S6 22	42.0 44.0		42.0	SP	Medium dense, light gray, poorly graded SAND (SP), mps=4.0 mm., no structure, no odor, wet, appears to be a sand layer within glacial till. -GLACIAL TILL-										
					44.0		-BOTTOM OF EXPLORATION-										

[1]SPT = Sampler blows per 6 in. [2]Maximum particle size (mm) is determined by direct observation within the limitations of sampler size.
NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

APPENDIX B

Logs of Recent Test Borings

HALEY & ALDRICH

TEST BORING REPORT

Boring No. HA05-1

Project Eastern Waterfront Development Portland, ME
Client Riverwalk, LLC
Contractor Maine Test Borings, Inc.

File No. 30322-000
Sheet No. 1 of 3
Start September 28, 2005
Finish September 29, 2005
Driller B. Enos
H&A Rep. B. Steinert
Elevation 23.0+/-
Datum Portland City
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	NW	SS	NQ	Rig Make & Model: B-53 Mobile Drill Trailer
Inside Diameter (in.)	3.0	1 3/8	1.9	Bit Type: Roller Bit
Hammer Weight (lb.)	300	140	-	Drill Mud: None
Hammer Fall (in.)	30	30	-	Casing: Driven
				Hoist/Hammer: Winch/Safety Hammer

Depth (ft.)	SPT[1]	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size[2], structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	4 8 7 6	S1 8	0.0 2.0	NO WELL INSTALLED		SW	Medium dense, dark-brown to black, well graded SAND (SW), mps=25 mm., no odor, moist, roots and brick fragments present.		10	15	25	40	10				
	7 2 1 4	S2 7	2.0 4.0			SW	-FILL- Very loose, dark-brown to black, well graded SAND (SW), mps=25 mm., no odor, wet, roots and brick fragments present.		10	15	30	15	30				
5	1 1 1 2	S3 4	4.0 6.0		4.0	SM	-FILL- Very loose, gray, silty SAND (SM), mps=0.25 mm., no odor, wet.				10	70	20				
							-MARINE DEPOSIT-										
	1 2 3 5	S4 21	6.0 8.0		6.0 6.5	SC CL	Loose, gray, clayey SAND (SC), mps=0.42 mm. Medium stiff, gray lean CLAY (CL), mps=0.075mm., no odor, wet, mottled.					60	40 100				
							-MARINE DEPOSIT-										
10	WOH 1 1 WOH	S5 24	10.0 12.0			CL	Very soft, gray, lean CLAY (CL), mps=0.075 mm., no odor, wet.						100				
							-MARINE DEPOSIT-										
15							shear strength. V1 = 15.0-15.6 ft. Su = 370 psf/ 110 psf (remolded)										
					17.5												
20	WOH 1 WOH 1	S6 8	20.0 22.0			CL	Very soft, gray, lean CLAY (CL), mps=25 mm., no odor, wet, 25 mm. piece of gravel in top of spoon. -MARINE DEPOSIT-						100				
					22.5		NOTE: Advance casing and wash out to 25 ft. Coarse sand and gravel observed in wash water.										
25																	

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft.) to: Bottom of Casing	Bottom of Hole	Water
9-29-05	07:28	-	55	60.3	14.2

Sample Identification

O Open End Rod
T Thin Wall Tube
U Undisturbed Sample
S Split Spoon
G Geoprobe
V In-Situ Vane Shear

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (lin. ft.) 55.7
Rock Cored (lin. ft.) 4.6
Samples 13S, 2C

Boring No. HA05-1

Field Tests: Dilatancy: R-Rapid, S-Slow, N-None Plasticity: N-Nonplastic, L-Low, M-Medium, H-High
Toughness: L-Low, M-Medium, H-High Dry Strength: N-None, L-Low, M-Medium, H-High, V-Very High

[1]SPT = Sampler blows per 6 in. [2]Maximum particle size (mm) is determined by direct observation within the limitations of sampler size (in millimeters).

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

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HALEY & ALDRICH

TEST BORING REPORT

Boring No. HA05-1
File No. 30322-000
Sheet No. 2 of 3

Depth (ft.)	SPT[1]	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size[2], structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
25	4 2 WOH 4	S7 15	25.0 27.0			SM	Very loose, gray silty SAND (SM), mps=19 mm., no odor, very wet. -GLACIAL TILL- NOTE: Advanced casing and wash out to 30 ft. Coarse sand and gravel observed in wash water.		5	10	30	35	20				
30	21 4 5 8	S8 12	30.0 32.0			SM	Loose, gray silty SAND (SM), mps=19 mm., no odor, very wet. -GLACIAL TILL-			10	30	40	20				
35	8 15 31 9	S9 14	35.0 37.0			SM	Dense, gray silty SAND (SM), mps=38 mm. in tip of spoon, no odor, very wet. -GLACIAL TILL-			10	30	40	20				
40	15 6 5 5	S10 14	40.0 42.0			SM	Medium dense, gray silty SAND (SM), mps=38 mm., slightly bonded, no odor, very wet. -GLACIAL TILL-			10	30	40	20				
45	10 16 21 31	S11 16	45.0 47.0			SM	Dense, gray silty SAND (SM), mps=38 mm., slightly bonded, no odor, very wet. -GLACIAL TILL-			10	30	40	20				
50	21 58 100(3 in.)	S12	50.0 52.0			SM	Very dense, gray silty SAND (SM), mps=38 mm., slightly bonded, no odor, very wet. -GLACIAL TILL-			10	30	40	20				
					51.5		NOTE: Advance casing to 51.3 ft., wash out to 51.1 ft.										
					52.9		Cored through granite boulder at 51.5-52.9 ft. (C1). -WEATHERED ROCK-										
55	22 102(3 in.)	S13 9	55.0 55.7				Split spoon refusal at 55.7 ft.										
					55.7		Begin NQ rock core (55.7 ft). See Core Boring Report HA05-1 for details.										

[1]SPT = Sampler blows per 6 in. [2]Maximum particle size (mm) is determined by direct observation within the limitations of sampler size.
NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. HA05-1

HALEY & ALDRICH

CORE BORING REPORT

Boring No. HA05-1
File No. 30322-000
Sheet No. 3 of 3

Depth (ft)	Drilling Rate Min./ft	Run No.	Depth (ft)	Recovery/RQD in.	Recovery/RQD %	Weathering	Well Diagram	Elev./ Depth (ft)	Visual Description and Remarks
									SEE TEST BORING REPORT FOR OVERBURDEN DETAILS
50									
55									Top of bedrock at 55.7 ft. Begin NQ rock core.
	8	C2	55.7 60.3	42/0	76/0		NO WELL INSTALLED	55.7	Moderately hard, fresh, gray to green, fine grained SCHIST. Primary joints dipping at horizontal to low angles, extremely close to very close, undulating, very tight to moderately wide, some soil infilling in joints.
	6								
	6								
	3								
60	4							60.3	-BOTTOM OF EXPLORATION-

NOTE: Hole open to 57.4 ft. after pulling core barrel. Water measured at 14.2 ft.

TEST BORING REPORT

Boring No. HA05-2(OW)

Project Eastern Waterfront Development Portland, ME
Client Riverwalk, LLC
Contractor Maine Test Borings, Inc.

File No. 30322-000
Sheet No. 1 of 2
Start September 28, 2005
Finish September 28, 2005
Driller R. Idano
H&A Rep. K. Stone
Elevation 21.5+/-
Datum Portland City
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	NW	SS	-	Rig Make & Model: B-53 Mobile Drill Trailer
Inside Diameter (in.)	3.0	1 3/8	-	Bit Type: Roller Bit
Hammer Weight (lb.)	300	140	-	Drill Mud: None
Hammer Fall (in.)	30	30	-	Casing: Driven
				Hoist/Hammer: Winch/Doughnut Hammer

Depth (ft.)	SPT[1]	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size[2], structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							-CONCRETE-										
	~~50(3 in.)~~	S1	1.1		0.9												
	21	3	1.3			SP	Concrete dust in spoon. Drilled to 1.5 ft. and sampled.	5	10	10	10	65					
	38	S2	1.5				NOTE: NW casing pushed from 0.9 to 4.5 ft.										
	39	14	3.5				Very dense, brown to gray, poorly graded SAND with gravel (SP), mps=25 mm., no odor, dry.										
	33						Spoon refusal at 3.9 ft. Drilled through obstruction and sampled at 4.5										
	~~50(5 in.)~~	S3	3.5														
		5	3.9														
5	13	S4	4.5		4.5	SM	Medium dense, dark-brown to brown, silty SAND (SM), mps=2.0 mm., no odor, moist.				10	65	25				
	10	11	6.5				-FILL-										
	4																
	7																
					7.0												
10	9	S5	10.0			CL	Very stiff to stiff, olive-brown to gray, lean CLAY (CL), mps=0.075 mm., no odor, wet.						100				
	8	18	12.0				-MARINE DEPOSIT-										
	5																
	4																
15	PUSH	S6	15.0			CL	Very soft, gray, lean CLAY (CL), mps=0.43 mm., frequent shells present, occasional sand partings, no odor, wet.						100				
	PUSH	24	17.0				-MARINE DEPOSIT-										
	PUSH																
	PUSH						V1=15.3-16 ft., Su=410 psf/ 150 psf (remolded)										
20							V2=20.3-21 ft. Su=740 psf/ 190 psf (remolded)										
25																	

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft.) to: Bottom of Casing	Bottom of Hole	Water
9-28-05	16:45	0.25	35.0	37.5	5.8
9-28-05	17:00	0.5	15	35.9	5

Sample Identification

O Open End Rod
T Thin Wall Tube
U Undisturbed Sample
S Split Spoon
G Geoprobe
V In-Situ Vane Shear

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (lin. ft.) 40.0
Rock Cored (lin. ft.) -
Samples 8S

Boring No. HA05-2(OW)

Field Tests: Dilatancy: R-Rapid, S-Slow, N-None
Toughness: L-Low, M-Medium, H-High
Plasticity: N-Nonplastic, L-Low, M-Medium, H-High
Dry Strength: N-None, L-Low, M-Medium, H-High, V-Very High

[1]SPT = Sampler blows per 6 in. [2]Maximum particle size (mm) is determined by direct observation within the limitations of sampler size (in millimeters).

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

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HALEY & ALDRICH

TEST BORING REPORT

Boring No. HA05-2(OW)
File No. 30322-000
Sheet No. 2 of 2

Depth (ft.)	SPT[1]	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size[2], structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
25	WOR WOR 1 2	S7 24	25.0 27.0			CL	Very soft, gray, lean CLAY, mps=19 mm., trace gravel present, no odor, wet.	5					95				
							-MARINE DEPOSIT-										
30							V3=30.3-31 ft. Su=740 psf/ 150 (remolded)										
					32.8												
35	87 58 58 48	S8 8	35.0 37.0			SP	Very dense, gray, poorly graded SAND (SP), mps=28 mm., stratified with coarse to fine sand, no odor, wet.		5	10	35	50					
							NOTE: Casing refusal at 40 ft.										
							-GLACIAL TILL-										
40					40.0		-BOTTOM OF EXPLORATION-										
							Installed observation well in completed borehole. See Observation Well Installation Report HA05-2 (OW) for details.										

[1]SPT = Sampler blows per 6 in. [2]Maximum particle size (mm) is determined by direct observation within the limitations of sampler size.

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

HALEY & ALDRICH

TEST BORING REPORT

Boring No. HA05-3

Project Eastern Waterfront Development Portland, ME
Client Riverwalk, LLC
Contractor Maine Test Borings, Inc.

File No. 30322-000
Sheet No. 1 of 3
Start September 26, 2005
Finish September 27, 2005
Driller R. Idano
H&A Rep. K. Stone
Elevation 18.5+/-
Datum Portland City
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	NW	SS	NQ	Rig Make & Model: B-53 Mobile Drill Trailer
Inside Diameter (in.)	3.0	1 3/8	1.9	Bit Type: Roller Bit
Hammer Weight (lb.)	300	140	-	Drill Mud: None
Hammer Fall (in.)	30	30	-	Casing: Driven
				Hoist/Hammer: Winch/Doughnut Hammer

Depth (ft.)	SPT[1]	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size[2], structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	25 31 31 25	S1 15	0.0 2.0			SP	Very dense, light to dark-brown, poorly graded SAND with gravel (SP), mps=25 mm., no odor, dry. -FILL- NOTE: NW casing pushed from 0-5 ft.	5	10	10	20	55				
					3.5												
5	1 2 4 12	S2 19	5.0 7.0			SM	Medium stiff, olive-brown, silty SAND (SM), mps=0.43 mm., no odor, moist. -MARINE DEPOSIT-					70	30				
					7.0												
10	4 8 9 13	S3 22	10.0 12.0	NO WELL INSTALLED		CL	Very stiff, olive-brown to gray, lean CLAY (CL), mps=0.075 mm., no odor, wet. -MARINE DEPOSIT-						100				
					13.0												
15	PUSH PUSH PUSH PUSH	S4 20	15.0 17.0			CL	Medium stiff, gray, lean CLAY (CL), mps=0.075 mm., occasional black staining, no odor, wet. -MARINE DEPOSIT- V1=15.3-16 ft. Su=700 psf/ 220 psf (remolded)						100				
20	WOH WOH WOH WOH	S5 24	20.0 22.0				Soft, gray, lean CLAY (CL), mps=0.075mm., slight black staining, no odor, wet. -MARINE DEPOSIT-						100				
25																	

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft.) to: Bottom of Casing	Bottom of Hole	Water
9-27-05	15:50	-	56.0	56.7	11.5

Sample Identification

O Open End Rod
T Thin Wall Tube
U Undisturbed Sample
S Split Spoon
G Geoprobe
V In-Situ Vane Shear

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (lin. ft.) 56.1
Rock Cored (lin. ft.) 5.6
Samples 10S, 4C

Boring No. HA05-3

Field Tests: Dilatancy: R-Rapid, S-Slow, N-None
Toughness: L-Low, M-Medium, H-High
Plasticity: N-Nonplastic, L-Low, M-Medium, H-High
Dry Strength: N-None, L-Low, M-Medium, H-High, V-Very High

[1]SPT = Sampler blows per 6 in. [2]Maximum particle size (mm) is determined by direct observation within the limitations of sampler size (in millimeters).

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

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HALEY & ALDRICH

TEST BORING REPORT

Boring No. HA05-3
File No. 30322-000
Sheet No. 2 of 3

Depth (ft.)	SPT[1]	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size[2], structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
25						CL	V2= 25.3-26 ft. Su=440 psf/ 190 psf (remolded)										
30	WOH WOH WOH 1	S6 24	30.0 32.0			CL	Soft, gray, lean CLAY (CL), mps=0.43 mm., occasional fine sand layers, no odor, wet. -MARINE DEPOSIT-						100				
35							V3=35.3-36 ft. Su=890 psf/ 370 psf (remolded)										
40	WOR WOH WOH WOH	S7 24	40.0 42.0			CL	Medium stiff, gray, lean CLAY (CL), mps=0.43mm., occasional fine sand layers, no odor, wet. -MARINE DEPOSIT-						100				
					43.8												
45	63 15 13 12	S8 15	45.0 47.0			SM	Medium dense, gray silty SAND with gravel (SM), mps=25 mm., moderately bonded, no odor, wet. -GLACIAL TILL-	5	10			60	25				
50	23 13 15 15	S9 7	50.0 52.0			SM	Medium dense, gray silty SAND with gravel (SM), mps=25 mm., moderately bonded, no odor, wet. -GLACIAL TILL-	5	10			60	25				
55	36 100(7 in)	S10 0	55.0 56.1				NOTE: Split spoon refusal at 56.1 ft. Small rock fragments present in tip of spoon. Drove casing to 56.1 ft. Advanced roller bit to 56.7 ft.										
					56.7		Begin NQ rock core. See Core Boring Report HA05-3 for details.										
60																	

[1]SPT = Sampler blows per 6 in. [2]Maximum particle size (mm) is determined by direct observation within the limitations of sampler size.
NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. HA05-3

HALEY & ALDRICH

CORE BORING REPORT

Boring No. HA05-3
File No. 30322-000
Sheet No. 3 of 3

Depth (ft)	Drilling Rate Min./ft	Run No.	Depth (ft)	Recovery/RQD in.	Recovery/RQD %	Weathering	Well Diagram	Elev./ Depth (ft)	Visual Description and Remarks
									SEE TEST BORING REPORT FOR OVERBURDEN DETAILS
50									
									Top of bedrock at 56.1 ft. Begin NQ rock core at 56.7 ft
		C1	56.7	4/0	100/0			56.7	Hard, gray, fresh to slightly weathered, aphanitic to fine grained SCHIST. Joints horizontal to moderately dipping, very close to close, planar to undulating, rough, open.
55		C2	57.1 ~~57.1~~	6/0	100/0				
		C3	57.6 57.6 58.8	15/13	100/86				
		C4	58.8 62.3	38/25	90/66				
60							NO WELL INSTALLED		
								62.3	-BOTTOM OF EXPLORATION-

HALEY & ALDRICH

TEST BORING REPORT

Boring No. HA05-4

Project Eastern Waterfront Development Portland, ME
Client Riverwalk, LLC
Contractor Maine Test Borings, Inc.

File No. 30322-000
Sheet No. 1 of 3
Start September 29, 2005
Finish September 29, 2005
Driller B. Enos
H&A Rep. B. Steinert
Elevation 20.0+/-
Datum Portland City
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	NW	SS	-	Rig Make & Model: B-53 Mobile Drill Truck
Inside Diameter (in.)	3.0	1 3/8	-	Bit Type: Roller Bit
Hammer Weight (lb.)	300	140	-	Drill Mud: None
Hammer Fall (in.)	30	30	-	Casing: Driven
				Hoist/Hammer: Winch/Safety Hammer

Depth (ft.)	SPT[1]	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size[2], structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							-BITUMINOUS CONCRETE-										
	6 6 4 3	S1 10	0.4 2.4		0.3	SP	Loose to medium dense, dark-brown to black, poorly graded SAND (SP), mps=6.4 mm., no odor, damp, brick fragments present, heavy black staining at tip of spoon.			20	50	20	10				
							-FILL-										
	8 4 4 6	S2 15	2.4 4.4		2.6	CL	Medium stiff, olive-gray, mottled, lean CLAY (CL), mps=0.075 mm., no odor, damp.						100				
							-MARINE DEPOSIT-										
5	8 10 11 11	S3 18	4.4 6.4														
	9 10 9 9	S4 3	6.4 8.4			CL	Very stiff, olive-gray, mottled, lean CLAY (CL), mps=0.075 mm., no odor, damp.						100				
							-MARINE DEPOSIT-										
	2 2 2 2	S5 24	8.4 10.4			CL	Very stiff, olive-gray, mottled, lean CLAY (CL), mps=0.075 mm., trace sand, no odor, damp.						100				
10							-MARINE DEPOSIT-										
						CL	NOTE: Brick fragments and glass observed in cuttings. Soft to medium stiff, olive-gray, mottled, lean CLAY (CL), mps=0.075 mm., no odor, damp.						100				
							-MARINE DEPOSIT-										
				NO WELL INSTALLED	13.0												
15							V1 = 15.0-15.6 ft. Su = 1300 psf/ 90 psf (remolded)										
20	WOR WOR WOH WOH	S6 24	20.0 22.0			CL	Very soft, gray, lean CLAY (CL), mps=0.042 mm., no odor, wet, trace fine sand at tip of spoon.						10	90			
							-MARINE DEPOSIT-										
25																	

Water Level Data					
Date	Time	Elapsed Time (hr.)	Depth (ft.) to: Bottom of Casing	Bottom of Hole	Water

Sample Identification	
O	Open End Rod
T	Thin Wall Tube
U	Undisturbed Sample
S	Split Spoon
G	Geoprobe
V	In-Situ Vane Shear

Well Diagram	
	Riser Pipe
	Screen
	Filter Sand
	Cuttings
	Grout
	Concrete
	Bentonite Seal

Summary	
Overburden (lin. ft.)	67.0
Rock Cored (lin. ft.)	-
Samples	14S

Boring No. HA05-4

Field Tests: Dilatancy: R-Rapid, S-Slow, N-None
Toughness: L-Low, M-Medium, H-High
Plasticity: N-Nonplastic, L-Low, M-Medium, H-High
Dry Strength: N-None, L-Low, M-Medium, H-High, V-Very High

[1]SPT = Sampler blows per 6 in. [2]Maximum particle size (mm) is determined by direct observation within the limitations of sampler size (in millimeters).

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

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HALEY & ALDRICH

TEST BORING REPORT

Boring No. HA05-4
File No. 30322-000
Sheet No. 2 of 3

Depth (ft.)	SPT[1]	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size[2], structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
25							V2 = 25-25.6 ft. Su = 630 psf / 40 psf (remolded)										
30	WOR WOH WOH 4	S7 24	30.0 32.0			CL	Very soft, gray, lean CLAY (CL), mps=0.042 mm., no odor; wet, sand and silt present from 31-32 ft. -MARINE DEPOSIT-					10 30	90 70				
35	4 4 5 5	S8 12	35.0 37.0														
					36.5	SP	Loose, gray, poorly graded SAND with gravel (SP), mps=19 mm., no odor, wet. -MARINE DEPOSIT-		15	5		75	10				
40	35 44 56 50	S9 0	40.0 42.0		38.0		No recovery, possibly pushing stone at tip of spoon.										
45	9 13 10 12	S10 16	45.0 47.0			SM	Medium dense, gray, silty SAND with gravel (SM), mps=19 mm., no odor, wet. -GLACIAL TILL-		15	5	20	30	30				
50	7 9 11 15	S11 16	50.0 52.0			SM	Medium dense, gray, silty SAND with gravel (SM), mps=25 mm., no odor, wet. -GLACIAL TILL-		15	5	20	30	30				
55	14 13 15 15	S12 0	55.0 57.0				No recovery.										
60	20 22 26 35	S13 24	60.0 62.0			SM	Dense, gray, silty SAND with gravel (SM), mps=19 mm., no odor, wet. -GLACIAL TILL-		15	5	20	30	30				

[1]SPT = Sampler blows per 6 in. [2]Maximum particle size (mm) is determined by direct observation within the limitations of sampler size.

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

HALEY & ALDRICH

TEST BORING REPORT

Boring No. HA05-4
File No. 30322-000
Sheet No. 3 of 3

Depth (ft.)	SPT[1]	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size[2], structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
65	30 37 60 80	S14	65.0 67.0			SM	Very dense, gray, silty SAND with gravel (SM), mps=19 mm., no odor, wet. -GLACIAL TILL-		15	5	20	30	30				
					67.0		-BOTTOM OF EXPLORATION- NOTE: Hole caved in to 32 ft. after pulling casing. Backfilled hole with cuttings, sand and cold patch at surface.										

[1]SPT = Sampler blows per 6 in. [2]Maximum particle size (mm) is determined by direct observation within the limitations of sampler size.
NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

HALEY & ALDRICH

TEST BORING REPORT

Boring No. HA05-5

Project Eastern Waterfront Development Portland, ME
Client Riverwalk, LLC
Contractor Maine Test Borings, Inc.

File No. 30322-000
Sheet No. 1 of 3
Start September 29, 2005
Finish September 30, 2005
Driller R. Idano
H&A Rep. K. Stone
Elevation 15.5+/-
Datum Portland City
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	NW	SS	NQ	Rig Make & Model: B-53 Mobile Drill Trailer
Inside Diameter (in.)	3.0	1 3/8	1.9	Bit Type: Roller Bit
Hammer Weight (lb.)	300	140	-	Drill Mud: None
Hammer Fall (in.)	30	30	-	Casing: Driven
				Hoist/Hammer: Winch/Doughnut Hammer

Depth (ft.)	SPT[1]	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size[2], structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				NO WELL INSTALLED			-BITUMINOUS CONCRETE-										
	12 10 10 11	S1 6	0.9 2.9		0.7	SP	Medium dense, brown, poorly graded SAND with gravel (SP), mps=25 mm., no odor, dry, concrete dust present. -FILL-	10	25	5	5	55					
	9 6 6 5	S2 3	2.9 4.9		3.4	CL	Stiff, olive-brown to gray, sandy, lean CLAY (CL), mps=0.43 mm., no odor, moist.					30	70				
5	7 3 2 5	S3 3	5.0 7.0			CL	Medium stiff, olive-brown to gray, sandy, lean CLAY (CL), mps=0.43 mm., no odor, wet.					30	70				
	7 8 5 5	S4 2	7.0 9.0		7.5		Very little material recovered, glass fragments and wood fibers present, petroleum odor and sheen. -FILL-										
	2 2 2 3	S5 19	9.0 11.0			ML	Soft, dark-brown, sandy SILT (ML), mps=0.43 mm., wood fibers present, organic odor, wet.					25	75				
10					10.0		-ORGANIC DEPOSIT-										
	1 4 4 4	S6 13	11.0 13.0		11.6	ML	Soft, olive-brown to gray, sandy, SILT (ML), mps=0.43 mm., no odor, wet. -MARINE DEPOSIT-					25	75				
						CL	Medium stiff, gray, lean CLAY (CL), mps=0.43 mm., occasional fine sand layers, no odor, wet. -MARINE DEPOSIT-						100				
15	5 8 11 14	S7 24	15.0 17.0			CL	Very stiff, gray to olive-brown, lean CLAY (CL), mps=0.075 mm., mottled, slightly blocky, no odor, wet. -MARINE DEPOSIT-						100				
20							V1= 20.3-21 ft. Su= 780 psf/ 330 psf (remolded)										
25																	

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft.) to: Bottom of Casing	Bottom of Hole	Water
9-30-05	9:00	0.25	55.7	59.9	44.0
9-30-05	9:45	0.75	-	39.9	5

Sample Identification

O Open End Rod
T Thin Wall Tube
U Undisturbed Sample
S Split Spoon
G Geoprobe
V In-Situ Vane Shear

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (lin. ft.) 56.1
Rock Cored (lin. ft.) 3.8
Samples 13S, 1C

Boring No. HA05-5

Field Tests: Dilatancy: R-Rapid, S-Slow, N-None
Toughness: L-Low, M-Medium, H-High
Plasticity: N-Nonplastic, L-Low, M-Medium, H-High
Dry Strength: N-None, L-Low, M-Medium, H-High, V-Very High

[1]SPT = Sampler blows per 6 in. [2]Maximum particle size (mm) is determined by direct observation within the limitations of sampler size (in millimeters).

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

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HALEY & ALDRICH

TEST BORING REPORT

Boring No. HA05-5
File No. 30322-000
Sheet No. 2 of 3

Depth (ft.)	SPT[1]	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size[2], structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
25	WOR 1 3 2	S8 24	25.0 27.0			CL	Medium stiff, gray, lean CLAY (CL), mps=0.43 mm., occasional sand partings, no odor, wet. -MARINE DEPOSIT-						100				
30							V2= 30.3-31 ft. Su= 780 psf/ 330 psf (remolded)										
35	WOR WOR 1 2	S9 24	35.0 37.0			CL	Medium stiff, gray, lean CLAY (CL), mps=0.43 mm., occasional sand partings, no odor, wet. -MARINE DEPOSIT- NOTE: Attempted vane shear test at 40 ft., but unable to push vane into material.						100				
40	7 6 50(5 in.)	S10 10	40.0 41.4		40.0	SP	Medium dense, gray, poorly graded SAND (SP), mps=0.43 mm., no odor, wet.					100					
					41.0		-MARINE DEPOSIT-										
45	59 24 15 24	S11 8	45.0 47.0			SP	Dense, gray, poorly graded SAND with gravel (SP), mps=32 mm., no odor, wet. -GLACIAL TILL-	10	10	5	20	55					
50	15 8 6 6	S12 16	50.0 52.0			SC	Medium dense, gray, clayey SAND with gravel (SC), mps=19 mm., no odor, wet. -GLACIAL TILL-		15	10	10	35	30				
					53.0	ML	Hard, gray, sandy SILT with gravel (ML), mps=32 mm., bonded, no odor wet. -GLACIAL TILL- NOTE: Split spoon refusal on probable bedrock at 55.7 ft. Advanced roller bit to 56.1 ft.	10	20			15	55				
55	55 100(3 in.)	S13 3	55.0 55.7		56.1		NOTE: Begin NQ rock core. See Core Boring Report HA05-5 for details.										

[1]SPT = Sampler blows per 6 in. [2]Maximum particle size (mm) is determined by direct observation within the limitations of sampler size.

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

HALEY & ALDRICH

CORE BORING REPORT

Boring No. HA05-5
File No. 30322-000
Sheet No. 3 of 3

Depth (ft)	Drilling Rate Min./ft	Run No.	Depth (ft)	Recovery/RQD in.	Recovery/RQD %	Weathering	Well Diagram	Elev./ Depth (ft)	Visual Description and Remarks
									SEE TEST BORING REPORT FOR OVERBURDEN DETAILS
55							NO WELL INSTALLED		Top of bedrock at 55.7 ft. Begain NQ rock core at 56.1 ft.
	3	C1	56.1 59.9	45/18	100/40			56.1	Hard, gray, fresh, slightly weathered aphanitic to fine grained PHYLLITE. Joints dipping at low to high angles, very close to close, planar to undulating, rough, tight to partly open, near vertical secondary joint, quartz veins.
	3								
	3							59.9	-BOTTOM OF EXPLORATION-

HALEY & ALDRICH

TEST BORING REPORT

Boring No. HA05-6

Project Eastern Waterfront Development Portland, ME
Client Riverwalk, LLC
Contractor Maine Test Borings, Inc.

File No. 30322-000
Sheet No. 1 of 1
Start September 28, 2005
Finish September 28, 2005
Driller R. Idano
H&A Rep. K. Stone
Elevation 20.0+/-
Datum Portland City
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HSA	SS	-	Rig Make & Model: B-53 Mobile Drill Trailer
Inside Diameter (in.)	2.5	1 3/8	-	Bit Type: Cutting Head
Hammer Weight (lb.)	-	140	-	Drill Mud: None
Hammer Fall (in.)	-	30	-	Casing: -
				Hoist/Hammer: Winch/Doughnut Hammer

Depth (ft.)	SPT[1]	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size[2], structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							-BITUMINOUS CONCRETE-										
	16 22 20 17	S1 14	0.5 2.5		0.3	SP	Dense, brown, poorly graded SAND with gravel (SP), mps=19 mm., no odor, dry.		15	10	25	50					
	11 12 11 9	S2 15	2.5 4.5			SP	Medium dense, brown, poorly graded SAND (SP), mps=13 mm., no odor, dry.		10	5	20	65					
							-FILL-										
5	6 5 9 6	S3 0	4.5 6.5		4.5		No recovery. Wet at 4.5 ft.										
	9 5 3 4	S4 13	6.5 8.5			SP	Medium dense, dark-brown, poorly graded SAND (SP), mps=13 mm., no odor, wet.		5	15	20	60					
					7.5	CL	-FILL-										
	WOH 1 WOH 2	S5 16	8.5 10.5				Medium, stiff, gray, lean CLAY (CL), mps=0.075 mm., no odor, wet.						100				
10						CL	Very soft, gray, lean CLAY (CL), mps= 0.43 mm., some sand particles in the clay, no odor, wet.					5	95				
					10.5		-MARINE DEPOSIT-										
							-BOTTOM OF EXPLORATION-										

NO WELL INSTALLED

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft.) to: Bottom of Casing	Bottom of Hole	Water
9-28-05	10:00	0.2.5	10.0	10.0	9.0

Sample Identification

O Open End Rod
T Thin Wall Tube
U Undisturbed Sample
S Split Spoon
G Geoprobe
V In-Situ Vane Shear

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (lin. ft.) 10.5
Rock Cored (lin. ft.) -
Samples 5S

Boring No. HA05-6

Field Tests: Dilatancy: R-Rapid, S-Slow, N-None Plasticity: N-Nonplastic, L-Low, M-Medium, H-High
Toughness: L-Low, M-Medium, H-High Dry Strength: N-None, L-Low, M-Medium, H-High, V-Very High

[1]SPT = Sampler blows per 6 in. [2]Maximum particle size (mm) is determined by direct observation within the limitations of sampler size (in millimeters).

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

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TEST BORING REPORT

Boring No. HA05-7

Project Eastern Waterfront Development Portland, ME
Client Riverwalk, LLC
Contractor Maine Test Borings, Inc.

File No. 30322-000
Sheet No. 1 of 1
Start September 26, 2005
Finish September 26, 2005
Driller R. Idano
H&A Rep. K. Stone
Elevation 20.5+/-
Datum Portland City
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HSA	SS	-	Rig Make & Model: B-53 Mobile Drill Trailer
Inside Diameter (in.)	2.5	1 3/8	-	Bit Type: Cutting Head
Hammer Weight (lb.)	-	140	-	Drill Mud: None
Hammer Fall (in.)	-	30	-	Casing: -
				Hoist/Hammer: Winch/Doughnut Hammer

Depth (ft.)	SPT[1]	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size[2], structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	21	S1	0.0	NO WELL INSTALLED		SP	Dense, brown to dark-brown, poorly graded SAND with gravel (SP), mps=28 mm., no odor, moist.	5	15	15	30	35					
	26	8	2.0														
	22																
	25																
	38	S2	2.0			SP	Dense, brown to dark-brown, poorly graded SAND with gravel (SP), mps=28 mm., no odor, moist.	5	15	15	30	35					
	22	12	4.0														
	10				3.0	SC	-FILL-			5	5	70	20				
	15																
	14	S3	4.0		4.0	SW	Dense, brown, clayey SAND (SC), mps=4.75 mm., no odor, moist, wood fiber present.		10	10	15	40	25				
5	50	6	6.0				-FILL-										
	50						Very dense, brown, well graded SAND with silt (SW), mps=19 mm.,										
	37																
	23	S4	6.0		6.0	SP	no odor, moist, wood fibers present.	5	5	15	35	40					
	18	7	8.0				-FILL-										
	17						Dense, brown, poorly graded SAND (SP), mps=32 mm., no odor, wet.										
	7				7.5		-FILL-										
10																	
	1	S5	10.0			CL	Soft, gray, lean CLAY (CL), mps=0.43 mm., occasional black						100				
	2	24	12.0				staining, occasional sand parting, no odor, wet.										
	2						-MARINE DEPOSIT-										
	1																
					12.0		-BOTTOM OF EXPLORATION-										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft.) to: Bottom of Casing	Bottom of Hole	Water
9-26-05	14:30	0.25	10.0	10.0	9.7
9-26-05	14:35	0.30	-	4	DRY

Sample Identification

O Open End Rod
T Thin Wall Tube
U Undisturbed Sample
S Split Spoon
G Geoprobe
V In-Situ Vane Shear

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (lin. ft.) 12.0
Rock Cored (lin. ft.) -
Samples 5S

Boring No. HA05-7

Field Tests: Dilatancy: R-Rapid, S-Slow, N-None Plasticity: N-Nonplastic, L-Low, M-Medium, H-High
Toughness: L-Low, M-Medium, H-High Dry Strength: N-None, L-Low, M-Medium, H-High, V-Very High

[1]SPT = Sampler blows per 6 in. [2]Maximum particle size (mm) is determined by direct observation within the limitations of sampler size (in millimeters).

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

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HALEY & ALDRICH

TEST BORING REPORT

Boring No. HA05-8

Project Eastern Waterfront Development Portland, ME
Client Riverwalk, LLC
Contractor Maine Test Borings, Inc.

File No. 30322-000
Sheet No. 1 of 1
Start September 26, 2005
Finish September 26, 2005
Driller R. Idano
H&A Rep. K. Stone
Elevation 22.0+/-
Datum Portland City
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	SSA	SS	-	Rig Make & Model: B-53 Mobile Drill Trailer
Inside Diameter (in.)	-	1 3/8	-	Bit Type: Cutting Head
Hammer Weight (lb.)	-	140	-	Drill Mud: None
Hammer Fall (in.)	-	30	-	Casing: Solid Stem Auger Probe
				Hoist/Hammer: Winch/Doughnut Hammer

Depth (ft.)	SPT[1]	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size[2], structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0																	
	50	S1	0.9				-CONCRETE-										
	45	14	2.9														
	7				1.9	CL	Very stiff, gray to olive-brown, lean CLAY (CL), mps=0.043 mm., moderately mottled, moderately blocky, no odor, dry.					5	95				
	12																
	4	S2	2.9														
	5	24	4.9		3.5	CL	Medium stiff, gray, lean, CLAY (CL), mps=0.43 mm., frequent sand partings, no odor, moist.						100				
	4																
5	3																
	WOH	S3	5.0			CL	Soft, gray, sandy, lean CLAY (CL), mps=0.43 mm., shells present, no odor, moist.					25	75				
	1	20	7.0				-MARINE DEPOSIT-										
	2																
	1				7.0		-BOTTOM OF EXPLORATION-										

NO WELL INSTALLED

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft.) to: Bottom of Casing	Bottom of Hole	Water
9-26-05	13:30	0.25	-	7.0	-

Sample Identification

O Open End Rod
T Thin Wall Tube
U Undisturbed Sample
S Split Spoon
G Geoprobe
V In-Situ Vane Shear

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (lin. ft.) 7.0
Rock Cored (lin. ft.) -
Samples 3S

Boring No. HA05-8

Field Tests: Dilatancy: R-Rapid, S-Slow, N-None
Toughness: L-Low, M-Medium, H-High
Plasticity: N-Nonplastic, L-Low, M-Medium, H-High
Dry Strength: N-None, L-Low, M-Medium, H-High, V-Very High

[1]SPT = Sampler blows per 6 in. [2]Maximum particle size (mm) is determined by direct observation within the limitations of sampler size (in millimeters).

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

HALEY & ALDRICH

TEST BORING REPORT

Boring No. HA05-9

Project Eastern Waterfront Development Portland, ME
Client Riverwalk, LLC
Contractor Maine Test Borings, Inc.

File No. 30322-000
Sheet No. 1 of 1
Start September 26, 2005
Finish September 26, 2005
Driller R. Idano
H&A Rep. K. Stone
Elevation 22.0+/-
Datum Portland City
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	SSA	SS	-	Rig Make & Model: B-53 Mobile Drill Trailer
Inside Diameter (in.)	-	1 3/8	-	Bit Type: Cutting Head
Hammer Weight (lb.)	-	140	-	Drill Mud: None
Hammer Fall (in.)	-	30	-	Casing: Solid Stem Auger Probe
				Hoist/Hammer: Winch/Doughnut Hammer

Depth (ft.)	SPT[1]	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size[2], structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0																	
	6 27 30 43	S1 13	0.9 2.9			SP	Dense, brown, poorly graded SAND with gravel (SP), mps=28 mm., no odor, moist. -FILL-	5	10	10	30	45					
					2.9	SM	NOTE: Driller missed sample from 2.9-4.9 ft. Sample collected from auger flights.				25	60	15				
5	8 8 11 14	S2 20	4.9 6.9	NO WELL INSTALLED	4.9	CL	Brown, silty SAND (SM), mps=2.0 mm., no odor, moist. -FILL- Very stiff, olive-brown to gray, lean CLAY (CL), mps=0.075 mm., slightly blocky, mottled, no odor, moist. -MARINE DEPOSIT-						100				
					6.9		-BOTTOM OF EXPLORATION-										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft.) to: Bottom of Casing	Bottom of Hole	Water
9-26-05	15:17	0.25	-	6.5	4.5

Sample Identification

O Open End Rod
T Thin Wall Tube
U Undisturbed Sample
S Split Spoon
G Geoprobe
V In-Situ Vane Shear

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (lin. ft.) 6.9
Rock Cored (lin. ft.) -
Samples 2S

Boring No. HA05-9

Field Tests: Dilatancy: R-Rapid, S-Slow, N-None; Plasticity: N-Nonplastic, L-Low, M-Medium, H-High
Toughness: L-Low, M-Medium, H-High; Dry Strength: N-None, L-Low, M-Medium, H-High, V-Very High

[1]SPT = Sampler blows per 6 in. [2]Maximum particle size (mm) is determined by direct observation within the limitations of sampler size (in millimeters).

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

USCS_TB4 USCSLIB4.GLB USCST8+CORE4.GDT G:\GINT5\PROJECTS\30322\30322-000.GPJ Nov 4, 05

HALEY & ALDRICH

TEST BORING REPORT

Boring No. HA05-10

Project Eastern Waterfront Development Portland, ME
Client Riverwalk, LLC
Contractor Maine Test Borings, Inc.

File No. 30322-000
Sheet No. 1 of 1
Start September 28, 2005
Finish September 28, 2005
Driller R. Idano
H&A Rep. K. Stone
Elevation 19.0 +/-
Datum Portland City
Location See Plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	SSA	SS	-	Rig Make & Model: B-53 Mobile Drill Trailer
Inside Diameter (in.)	-	1 3/8	-	Bit Type: Cutting Head
Hammer Weight (lb.)	-	140	-	Drill Mud: None
Hammer Fall (in.)	-	30	-	Casing: Solid Stem Auger Probe
				Hoist/Hammer: Winch/Doughnut Hammer

Depth (ft.)	SPT[1]	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Elev./Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description (Density/consistency, color, GROUP NAME, max. particle size[2], structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0							-CONCRETE-										
	22 27 19 15	S1 15	0.7 2.7		0.6	SP	Dense, brown, poorly graded SAND with gravel (SP), mps=19 mm., slight black staining, no odor, dry.		15	10	10	55	10				
	10 10 6 10	S2 12	2.7 4.7		2.7 3.2	SP CL	Medium dense, brown, poorly graded SAND (SP), mps=19 mm., no odor, dry. -FILL- Very stiff, olive-brown, lean CLAY (CL), mps=0.075 mm., no odor, moist, with brick fragments.			10	15	75	100				
5	6 6 8 10	S3 17	4.7 6.7	NO WELL INSTALLED	4.7	CL	Stiff, olive-brown, lean CLAY (CL), mps=0.075 mm., no odor, moist. -MARINE DEPOSIT-						100				
					6.7		-BOTTOM OF EXPLORATION-										

Water Level Data					
Date	Time	Elapsed Time (hr.)	Depth (ft.) to: Bottom of Casing	Bottom of Hole	Water
9-28-05	11:45	0.25	-	4.7	DRY

Sample Identification	
O	Open End Rod
T	Thin Wall Tube
U	Undisturbed Sample
S	Split Spoon
G	Geoprobe
V	In-Situ Vane Shear

Well Diagram: Riser Pipe, Screen, Filter Sand, Cuttings, Grout, Concrete, Bentonite Seal

Summary	
Overburden (lin. ft.)	6.7
Rock Cored (lin. ft.)	-
Samples	3S

Boring No. HA05-10

Field Tests: Dilatancy: R-Rapid, S-Slow, N-None
Toughness: L-Low, M-Medium, H-High
Plasticity: N-Nonplastic, L-Low, M-Medium, H-High
Dry Strength: N-None, L-Low, M-Medium, H-High, V-Very High

[1]SPT = Sampler blows per 6 in. [2]Maximum particle size (mm) is determined by direct observation within the limitations of sampler size (in millimeters).

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

USCS_TB4 USCSLIB4.GLB USCSTB+CORE4.GDT G:\GINT5\PROJECTS\30322\30322-000.GPJ Nov 4, 05

APPENDIX C

Observation Well Installation & Groundwater Monitoring Reports

HALEY & ALDRICH

OBSERVATION WELL INSTALLATION REPORT

Well No. OW-2
Boring No. HA05-2(OW)

PROJECT	Eastern Waterfront Developement	H&A FILE NO.	30322-000
LOCATION	Portland, Maine	PROJECT MGR.	W. Chadbourne
CLIENT	Riverwalk, LLC	FIELD REP.	B. Steinert
CONTRACTOR	Maine Test Borings, Inc.	DATE INSTALLED	10/13/2005
DRILLER	R. Idano	WATER LEVEL	NA*

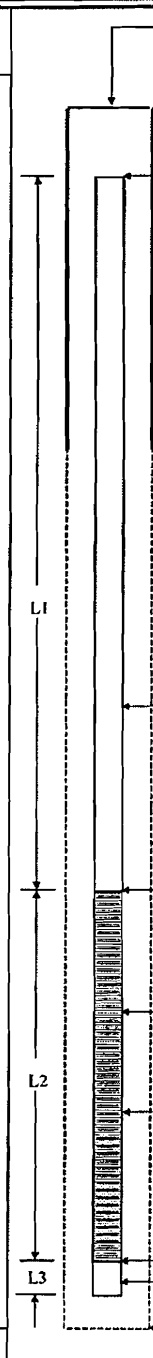
Ground El. 21.5 +/- ft
El. Datum Portland City

Location See Plan

☐ Guard Pipe
☑ Roadway Box

SOIL/ROCK CONDITIONS	BOREHOLE BACKFILL
Bituminous Concrete	
0.9	
7.0	
	Filter Sand
Marine Deposit	
40 (Bottom of Exploration)	19

(Numbers refer to depth from ground surface in feet)



(Not to Scale)

Type of protective cover/lock	PVC Cap
Depth of top of roadway box below ground surface	0.0 ft
Depth of top of riser pipe below ground surface	0.1 ft
Type of protective casing:	Steel
Length	0.5 ft
Inside Diameter	4.0 in
Depth of bottom of guard pipe/roadway box	0.5 ft

Type of Seals	Top of Seal (ft)	Thickness (ft)
Concrete	-	-
Bentonite Seal	-	-

Type of riser pipe:	Schedule 40 PVC
Inside diameter of riser pipe	1.0 in
Type of backfill around riser	Filter Sand/Chips/Cuttings/Cement
Diameter of borehole	3.0 in
Depth to top of well screen	5.0 ft
Type of screen	Schedule 40 PVC
Screen gauge or size of openings	0.010 in
Diameter of screen	1.0 in
Type of backfill around screen	Filter sand
Depth of bottom of well screen	15.0 ft
Bottom of Silt trap	15.1 ft
Depth of bottom of borehole	40.0 ft

4.9	+	10.0 ft	+	0.1 ft	=	15.0 ft
Riser Pay Length (L1)		Length of screen (L2)		Length of silt trap (L3)		Pay length

COMMENTS: *Well filled with water at completion.

Form 2007

HALEY & ALDRICH

GROUNDWATER MONITORING REPORT

OW/PZ NUMBER
HA05-2(OW)

PROJECT	Eastern Waterfront Developement	H&A FILE NO.	30322-000
LOCATION	Portland, Maine	PROJECT MGR.	W. Chadbourne
CLIENT	Riverwalk, LLC	FIELD REP.	B. Steinert
CONTRACTOR	Maine Test Borings, Inc.	DATE	10/10/2005
ELEVATION SUBTRAHEND	21.5 +/- (Portland City Datum)		

Date	Time	Elapsed Time (days)	Depth of Water from Ground Surface	Elevation of Water	Remarks	Read By
10/14/2005	12:00	8	4.2	17.3	Reading taken by Woodard & Curran	W&C
10/17/2005	7:00	11	2.8	18.7		BCS
10/17/2005	12:45	11	2.6	18.9		BCS
10/17/2005	17:00	11	2.6	18.9	Bailed water out after measurement.	BCS
10/18/2005	6:45	12	3.0	18.5		BCS
10/18/2005	14:10	12	2.8	18.7		BCS
11/4/2005	14:00	29	2.9	18.6		ARB

APPENDIX D

Laboratory Test Results

Form # P 04

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK

CITY OF PORTLAND

BUILDING INSPECTION

Please Read Application And Notes, If Any, Attached

PERMIT

Permit Number: 061687

PERMIT ISSUED

DEC 29 2006

CITY OF PORTLAND

This is to certify that SHIPYARD BREWING COMPANY LIMITED LIABILITY COM

has permission to Demo entire bldg

AT 127 FORE ST 020 C009001

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

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

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

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

OTHER REQUIRED APPROVALS

Fire Dept. _____

Health Dept. _____

Appeal Board _____

Other _____
Department Name

Jeanie Bourke 11/22/06
Director - Building & Inspection Services

PENALTY FOR REMOVING THIS CARD

Scanned

City of Portland, Maine - Building or Use Permit Application

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

Permit No:	Issue Date:	CBL:
06-1687		020 C009001

Location of Construction:	Owner Name:	Owner Address:	Phone:
127 FORE ST	SHIPYARD BREWING COMPAN	86 NEWBURY ST	
Business Name:	**Contractor Name:**	**Contractor Address:**	**Phone**
	M C Hall	1039 Riverside St Portland	2073182100
Lessee/Buyer's Name	**Phone:**	**Permit Type:**	**Zone:**
		Demolitions	B5b

Past Use:	Proposed Use:	Permit Fee:	Cost of Work:	CEO District:
Commercial	Commercial Demo entire bldg	$520.00	$50,000.00	1

FIRE DEPT: ☐ Approved ☐ Denied

Signature:

INSPECTION:
Use Group: Type:
Demolition Only
Signature: 11/22/06

Proposed Project Description:
Demo entire bldg

PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)

Action: ☐ Approved ☐ Approved w/Conditions ☐ Denied

Signature: Date:

Permit Taken By:	Date Applied For:
dmartin	11/20/2006

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

Zoning Approval

Special Zone or Reviews	Zoning Appeal	Historic Preservation
☐ Shoreland	☐ Variance	☑ Not in District or Landmark
☐ Wetland	☐ Miscellaneous	☐ Does Not Require Review
☐ Flood Zone	☐ Conditional Use	☐ Requires Review
☐ Subdivision	☐ Interpretation	☐ Approved
☐ Site Plan	☐ Approved	☐ Approved w/Conditions
Maj ☐ Minor ☐ MM ☐	☐ Denied	☐ Denied
Date: OK 11/20/06 tm	Date:	Date:

CERTIFICATION

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

SIGNATURE OF APPLICANT | ADDRESS | DATE | PHONE

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

City of Portland, Maine - Building or Use Permit

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

Permit No:	Date Applied For:	CBL:
06-1687	11/20/2006	020 C009001

Location of Construction:	Owner Name:	Owner Address:	Phone:
127 FORE ST	SHIPYARD BREWING COMPAN	86 NEWBURY ST	
Business Name:	**Contractor Name:**	**Contractor Address:**	**Phone**
	M C Hall	1039 Riverside St Portland	(207) 318-2100
Lessee/Buyer's Name	**Phone:**	**Permit Type:**	
		Demolitions	

Proposed Use:	Proposed Project Description:
Commercial Demo entire bldg	Demo entire bldg

Dept: Zoning **Status:** Approved **Reviewer:** Ann Machado **Approval Date:** 11/20/2006

Note: **Ok to Issue:** ☑

Dept: Building **Status:** Approved **Reviewer:** Jeanine Bourke **Approval Date:** 11/22/2006

Note: **Ok to Issue:** ☑

Comments:

11/22/2006-jmb: Received approval from Northern Utilities, ok to issue

PERMIT ISSUED

DEC 29

CITY OF PORTLAND

From: <MAllen@NiSource.com>
To: <JMB@portlandmaine.gov>
Date: 11/22/2006 10:40:54 AM
Subject: Re: 127 Fore st

Jeanie- Here are clear at this location. Thanks for the information.
Mark Allen

"Jeanie Bourke" <JMB@portlandmaine.gov> 11/21/2006 11:02 AM
To: Mark Allen/NCS/Enterprise@NiSource
cc:
Subject: Re: 127 Fore st

Thanks, they would like to start tomorrow

Jeanie Bourke
Inspection Services Division Director

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

>>> <MAllen@NiSource.com> 11/20/2006 5:12:06 PM >>>

We will have someone check out the building, just to be sure. I'll get
back to you.

"Jeanie Bourke" <JMB@portlandmaine.gov> 11/20/2006 03:44
To: Mark Allen/NCS/Enterprise@NiSource
cc: "Arthur Rowe " <AXR@portlandmaine.gov>, "Chris Hanson" <CSH@portlandmaine.gov>, "Jeanie Bourke"

Demolition of A Structure
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: 127 Fore St.		
Total Square Footage of Proposed Structure: 4000 Sq ft 4 floors	Square Footage of Lot: [illegible]	
Tax Assessor's Chart, Block & Lot Chart# Block# Lot#	Owner: Shipyard Brewing LLC	Telephone:
Lessee/Buyer's Name (If Applicable)	Applicant name, address & telephone: M C Hall 1039 Riverside St Portland Me 04103	Cost Of Work: $ 150,000.00 Fee: $

Current Specific use: Commercial

If vacant, what was the previous use? _____

How long has it been vacant?: _____

Project description:

Demo entire BLDG -

Contractor's name, address & telephone:

Who should we contact when the permit is ready: MARK HALL

Mailing address: 1039 Riverside St
Portland Me 04103

Phone: 207 318 2100

DEPT. OF BUILDING INSPECTION
CITY OF PORTLAND, ME
NOV 20 2006
RECEIVED

Please submit all of the information outlined in the Demolition call list. 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 visit us on-line at www.portlandmaine.gov, stop by the Building Inspections office, room 315 City Hall or call 874-8703.

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

Signature of applicant: M C Hall	Date: 11/10/06

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

Demolition Call List & Requirements

Site Address: 77 Newbury BLDG6 Owner: SHIPYARD BREWING LLC

Structure Type: BRICK/WOOD Contractor: M.C. HALL

Utility Approvals	Number	Contact Name/Date
Central Maine Power	1-800-750-4000	B. Briggs 11/18/06
Northern Utilities	797-8002 ext 6241	Mark Allen 11/10/06
Portland Water District	761-8310	Tony Alves 11/10/06
Dig Safe	1-888-344-7233	Brenda 11/10/06
		# 2006 4600 349

After calling Dig Safe, you must wait 72 business hours before digging can begin.

DPW/ Traffic Division (L. Cote)	874-8891	out voice mail full haven't tried Boss
DPW/ Sealed Drain Permit (C. Merritt)	874-8822	DAVID MERCLE. 11/10/06
Historic Preservation	874-8726	Deb Andrews 11/18/06
Fire Dispatcher	874-8576	Williams 11/10/06

Greg V.... 651.9836

Additional Requirements

1) Written Notice to Adjoining Owners
2) A Photo of the Structure(s) to be demolished
3) Certification from an asbestos abatement company

DEP – Environmental (Augusta) 287-2651 Sandy Moody 11/8/06

U.S. EPA Region 1 – No Phone call required. Just mail copy of State notification to:

Demo / Reno Clerk
US EPA Region I (SEA)
JFK Federal Building
Boston, MA 02203

I have contacted all of the necessary companies/departments as indicated above and attached all required documentation.

Signed: _____ **Date:** _____

Abatement Professionals

590 County Road, Suite 2, Westbrook ME 04092 Tel (207) 773-1276 * Fax (207) 772-1203

Asbestos Visual Clearance Certificate

Inspection/Test Date: 11/15/06 APC Project # 06-399

Client: MC Hall

Project Address: Shipyard Brewing Company

Project Description: **whole component removal of AC floortile and roof felt**

A complete visual inspection was conducted in the area (s) noted on the state Notification form as the abatement location (s). Abatement Professionals Corporation visually inspected the areas for visible and accessible asbestos dust and debris.

Abatement Parameter: **1500** Linear feet and/or 8000 SqFt

Abatement parameter outline the asbestos containing material removed form the project noted.

The visual Inspection and clearance was conducted in accordance with the State of Maine Chapter 425 Asbestos Management regulations

Based on the visual inspection conducted, Abatement Professionals Corporation certifies the area [✓] **does** [ ] **does not** meet the criteria for clearance as stated in Chapter 425 of the Asbestos Management Regulations visual clearance.

Authorizing Signature: Rob Rickett

Printed: Rob Rickett

Maine DEP Certification Number: AS 0782 AM 0370

PLUMBING APPLICATION

Parking Garage -

Department of Health and Human Services
Division of Environmental Health

PROPERTY ADDRESS

Town or Plantation	
Street Subdivision Lot #	

PROPERTY OWNERS NAME

Last: First:

Applicant Name:	
Mailing Address of Owner/Applicant (If Different)	

2007-2186

PORTLAND PERMIT # 10336 TOWN COPY

Date Permit Issued: 7/16/07

$ 360 ☐ If Double Fee Charged FEE

L.P.I. #

Local Plumbing Inspector Signature

~~2006~~ 2007

Owner/Applicant Statement

I certify that the information submitted is correct to the best of my knowledge and understand that any falsification is reason for the Local Plumbing Inspectors to deny a Permit.

Signature of Owner/Applicant Date

Caution: Inspection Required

I have inspected the installation authorized above and found it to be in compliance with the Maine Plumbing Rules.

Local Plumbing Inspector Signature 6/13/07 Date Approved

PERMIT INFORMATION

This Application is for

1. ☑ NEW PLUMBING
2. ☐ RELOCATED PLUMBING

Type of Structure To Be Served: Parking Garage

1. ☐ SINGLE FAMILY DWELLING
2. ☐ MODULAR OR MOBILE HOME
3. ☐ MULTIPLE FAMILY DWELLING
4. ☐ OTHER – SPECIFY _____

Plumbing To Be Installed By:

1. ☑ MASTER PLUMBER
2. ☐ OIL BURNERMAN
3. ☐ MFG'D. HOUSING DEALER/MECHANIC
4. ☐ PUBLIC UTILITY EMPLOYEE
5. ☐ PROPERTY OWNER

LICENSE # M5691

Hook-Up & Piping Relocation Maximum of 1 Hook-Up	Column 2 Number	Column 2 Type of Fixture	Column1 Number	Column1 Type of Fixture
HOOK-UP: to public sewer in those cases where the connection is not regulated and inspected by the local Sanitary District.		Hosebib / Sillcock		Bathtub (and Shower)
OR		Floor Drain		Shower (Separate)
HOOK-UP: to an existing subsurface wastewater disposal system.		Urinal		Sink
PIPING RELOCATION: of sanitary lines, drains, and piping without new fixtures.		Drinking Fountain		Wash Basin
		Indirect Waste		Water Closet (Toilet)
		Water Treatment Softener, Filter, etc.		Clothes Washer
		Grease / Oil Separator		Dish Washer
		Roof Drain		Garbage Disposal
OR		Bidet		Laundry Tub
TRANSFER FEE [$6.00]		Other: _____		Water Heater
		Fixtures (Subtotal) Column 2		Fixtures (Subtotal) Column 1
				Fixtures (Subtotal) Column 2
				Total Fixtures
				Fixture Fee
				Transfer Fee
				Hook-Up & Relocation Fee
				Permit Fee (Total)

SEE PERMIT FEE SCHEDULE FOR CALCULATING FEE

Form # P 01

ELECTRICAL PERMIT
City of Portland, Me.

To the Chief Electrical Inspector, Portland Maine:
The undersigned hereby applies for a permit to make electrical installations in accordance with the laws of Maine, the City of Portland Electrical Ordinance, National Electrical Code and the following specifications:

Date 10.16.2007
Permit # 2007 4766
CBL# 20 F001

LOCATION: 163 FORE STREET **METER MAKE & #**
CMP ACCOUNT # 44180170 7001 **OWNER** RIVERWALK LLC
TENANT RIVERWALK LLC **PHONE #** 775-2464

								TOTAL	EACH FEE
OUTLETS	101	Receptacles	18	Switches		Smoke Detector		.20	23.80
FIXTURES		Incandescent	421	Fluorescent		Strips		.20	84.20
SERVICES		Overhead	1	Underground		TTL AMPS	<800	15.00	15.00
		Overhead		Underground			>800	25.00	
Temporary Service		Overhead		Underground		TTL AMPS		25.00	
								25.00	
METERS		(number of)						1.00	
MOTORS	10	(number of)						2.00	20.00
RESID/COM	9	Electric units						1.00	9.00
HEATING		oil/gas units		Interior		Exterior		5.00	
APPLIANCES		Ranges		Cook Tops		Wall Ovens		2.00	
		Insta-Hot		Water heaters		Fans		2.00	
		Dryers		Disposals		Dishwasher		2.00	
		Compactors		Spa		Washing Machine		2.00	
		Others (denote)						2.00	
MISC. (number of)		Air Cond/win						3.00	
	1	Air Cond/cent				Pools		10.00	10.00
		HVAC		EMS		Thermostat		5.00	
		Signs						10.00	
		Alarms/res						5.00	
	1	Alarms/com						15.00	15.00
		Heavy Duty(CRKT)						2.00	
		Circus/Carnv						25.00	
		Alterations						5.00	
		Fire Repairs						15.00	
	1	E Lights						1.00	
	1	E Generators						20.00	20.00
PANELS		Service	15	Remote		Main		4.00	60.00
TRANSFORMER	4	0-25 Kva						5.00	20.00
	2	25-200 Kva						8.00	16.00
		Over 200 Kva						10.00	
						TOTAL AMOUNT DUE			293.00
		MINIMUM FEE/COMMERCIAL 55.00				**MINIMUM FEE**	**45.00**		

OCT 12 2007

CONTRACTORS NAME ES BOULOS Co. **MASTER LIC. #** MC0016185
ADDRESS 45 BRADLEY DRIVE, WESTBROOK. **LIMITED LIC. #**
TELEPHONE 207-464-3706
JOB# OGPC07-101
C1610 1

SIGNATURE OF CONTRACTOR

White Copy - Office • Yellow Copy - Applicant

NOTES:

1. EXISTING SITE FEATURES, CONTOURS OF EXISTING GROUND SURFACE ELEVATION AND THE LOCATION AND ORIENTATION OF EXISTING STRUCTURES, UTILITIES AND ROADWAYS ARE TAKEN FROM THE ELECTRONIC AUTOCAD FILE 203555-X00C.DWG", PREPARED BY WOODARD & CURRAN, NEW YORK, RECEIVED ON 28 OCTOBER 2005.
2. LOCATION AND ORIENTATION OF PROPOSED STRUCTURES AND ROADWAYS ARE TAKEN FROM THE ELECTRONIC AUTOCAD FILE "SITE PLAN_10.27.05_2000.DWG", PROVIDED BY WOODARD & CURRAN, RECEIVED ON 28 OCTOBER 2005.
3. LOCATION OF THE "HA04" AND "HA05" SERIES OF TEST BORINGS ARE APPROXIMATE AND WERE DETERMINED IN THE FIELD BY TAPING DISTANCES FROM EXISTING SITE FEATURES.
4. THE "HA04" AND "HA05" SERIES OF TEST BORINGS WERE MONITORED IN THE FIELD BY HALEY & ALDRICH, INC. PERSONNEL
5. ELEVATIONS ARE IN FEET AND REFERENCE PORTLAND CITY DATUM.
6. REFER THE REPORT APPENDICES FOR LOGS OF THE "HA04" AND "HA05" SERIES OF TEST BORINGS.
7. REFER TO FIGURES 3 AND 4 FOR SUBSURFACE PROFILE A-A AND B-B, RESPECTIVELY.

LEGEND:

- HA05-1 — DESIGNATION AND APPROXIMATE LOCATION OF TEST BORING DRILLED BY MAINE TEST BORINGS, INC. OF BREWER, MAINE BETWEEN 26 SEPTEMBER AND 6 OCTOBER 2005
- HA04-1 — DESIGNATION AND APPROXIMATE LOCATION OF TEST BORING DRILLED BY MAINE TEST BORINGS, INC. OF BREWER, MAINE ON 6 FEBRUARY 2004
- (OW) — DENOTES OBSERVATION WELL INSTALLED IN COMPLETED TEST BORING
- 2 — ELEVATION CONTOUR OF EXISTING GROUND SURFACE
- A A — DESIGNATION, LOCATION AND ORIENTATION OF SUBSURFACE PROFILE

0 30 60 90 120
SCALE IN FEET

HALEY & ALDRICH
UNDERGROUND ENGINEERING & ENVIRONMENTAL SOLUTIONS

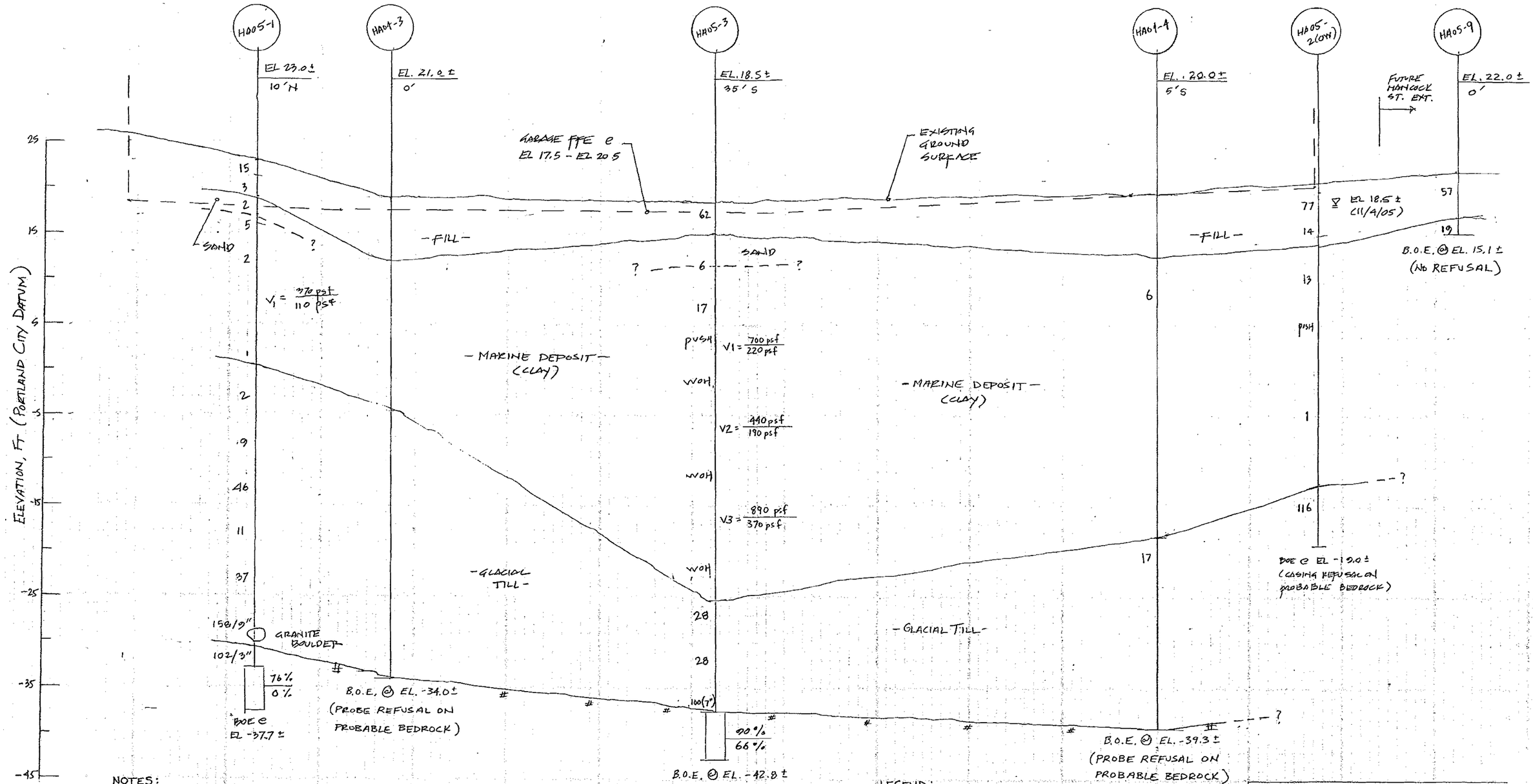
EASTERN WATERFRONT DEVELOPMENT
PROPOSED PARKING GARAGE AND OFFICE BUILDING
PORTLAND, MAINE

SITE AND SUBSURFACE EXPLORATION LOCATION PLAN

SCALE: AS SHOWN NOVEMBER 2005

30322-000 D01

FIGURE 2



NOTES:

1. EXPLORATION LOCATIONS ARE APPROXIMATE AND WERE DETERMINED IN THE FIELD BY TAPING DISTANCES FROM EXISTING SITE FEATURES.
2. GROUND SURFACE ELEVATIONS ARE APPROXIMATE AND WERE DETERMINED BY USING TOPOGRAPHIC INFORMATION PROVIDED BY WOODARD & CURRAN.

LEGEND:

20 - SPT "N-VALUE" (blows/ft)

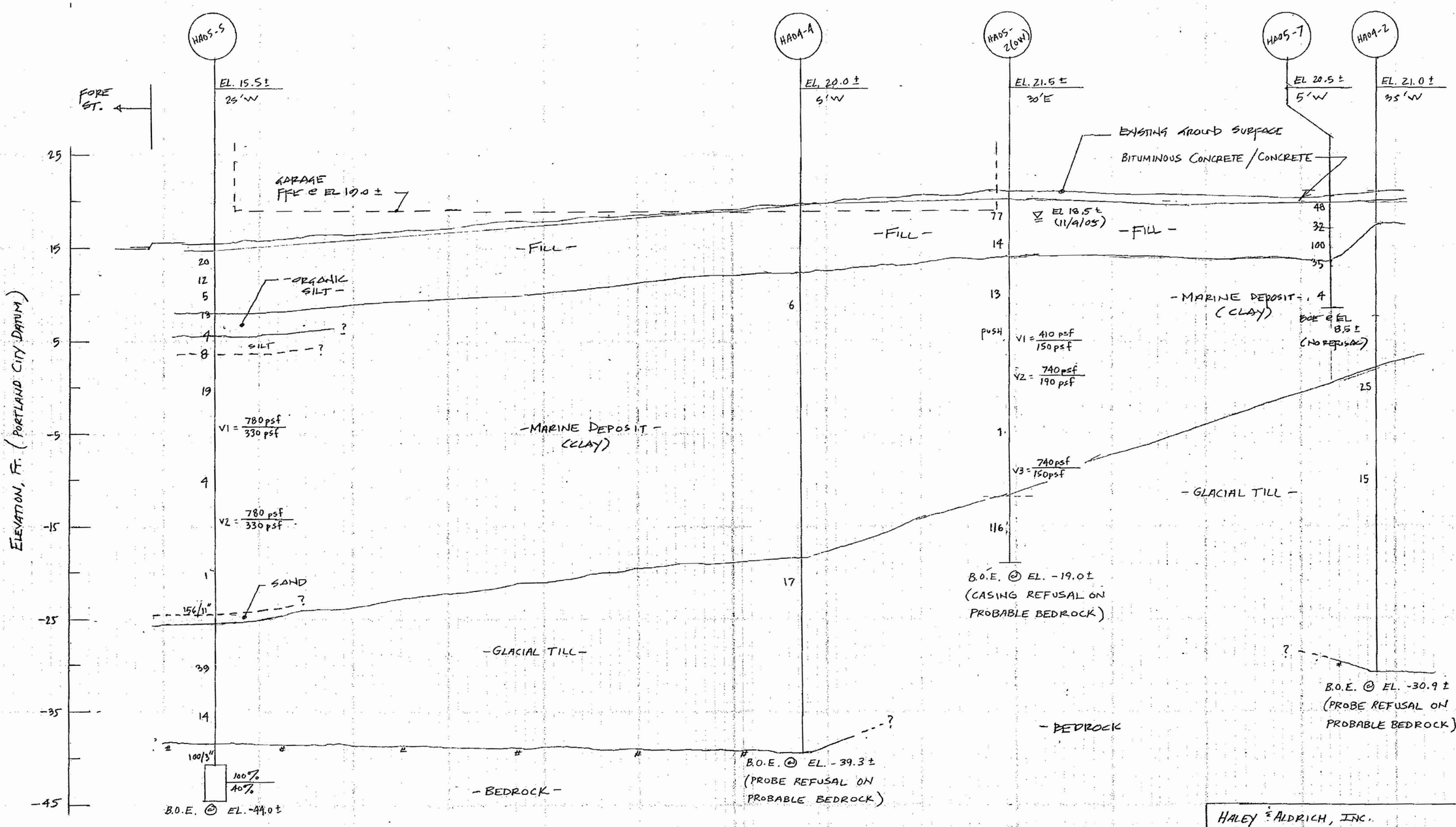
V1 = 890 psf / 370 psf — DENOTES IN-SITU VANE SHEAR TEST PERFORMED UNDRAINED STRENGTH/REMOLDED STRENGTH

76% / 0% — DENOTES PERCENT RECOVERY/PERCENT RQD FOR ROCK CORE RUN

HALEY & ALDRICH, INC.
EASTERN WATERFRONT DEVELOPMENT
PROPOSED FORE ST. PARKING GARAGE
PORTLAND, MAINE
JOB NO. 30322-000

SUBSURFACE PROFILE A-A
SCALE: H: 1" = 20'
V: 1" = 10'

FIGURE 3



NOTES:

1. EXPLORATION LOCATIONS ARE APPROXIMATE AND WERE DETERMINED IN THE FIELD BY TAPING DISTANCES FROM EXISTING SITE FEATURES.
2. GROUND SURFACE ELEVATIONS ARE APPROXIMATE AND WERE DETERMINED BY USING TOPOGRAPHIC INFORMATION PROVIDED BY WOODARD & CURRAN.

LEGEND:

20 - SPT "N-VALUE" (blows/ft)

V1 = 780 psf / 330 psf - DENOTES IN-SITU VANE SHEAR TEST PERFORMED, UNDRAINED STRENGTH / REMOLDED STRENGTH

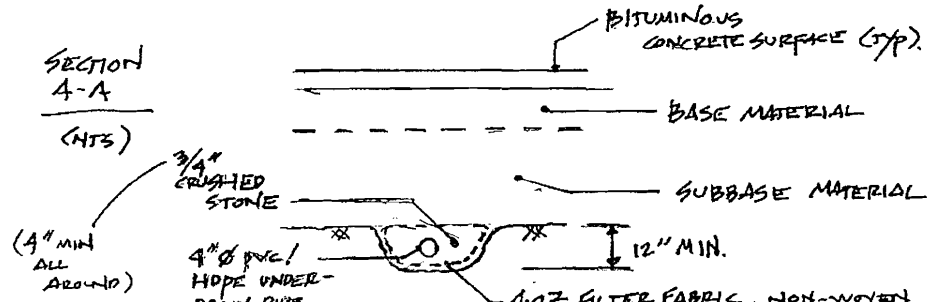
100% / 40% - DENOTES PERCENT RECOVER / PERCENT RQD FOR ROCK CORE RUN

HALEY & ALDRICH, INC.
EASTERN WATERFRONT DEVELOPMENT
PROPOSED FORE ST. PARKING GARAGE
PORTLAND, MAINE
JOB NO. 30322-000

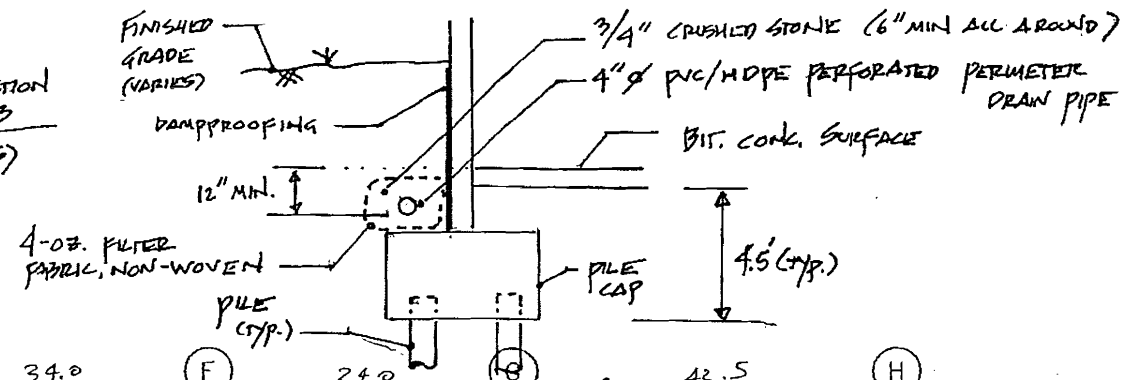
SUBSURFACE PROFILE B-B
SCALE: H: 1" = 15'
V: 1" = 10'

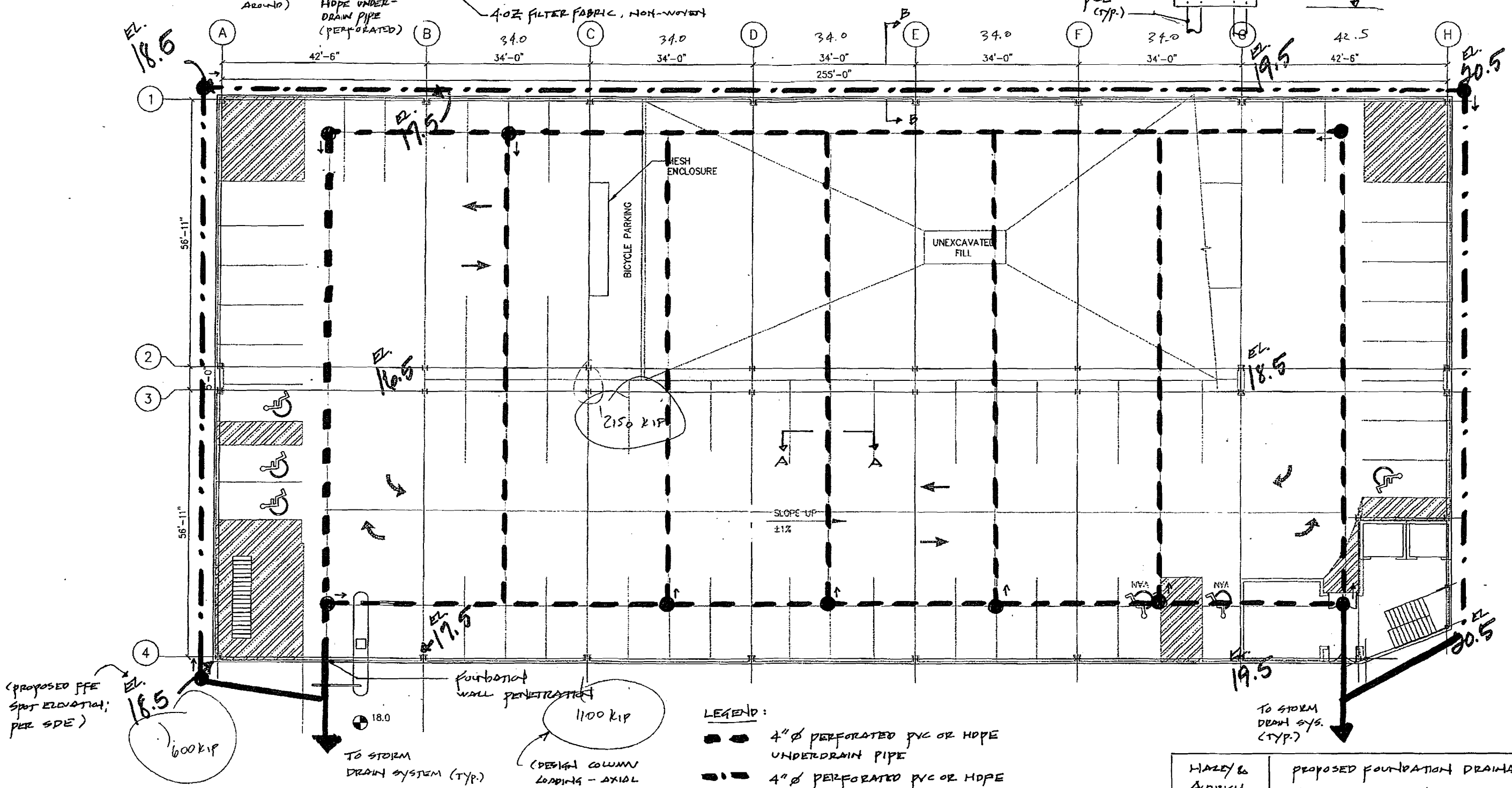
FIGURE 4

SECTION 4-A
(NTS)



SECTION B-B
(NTS)



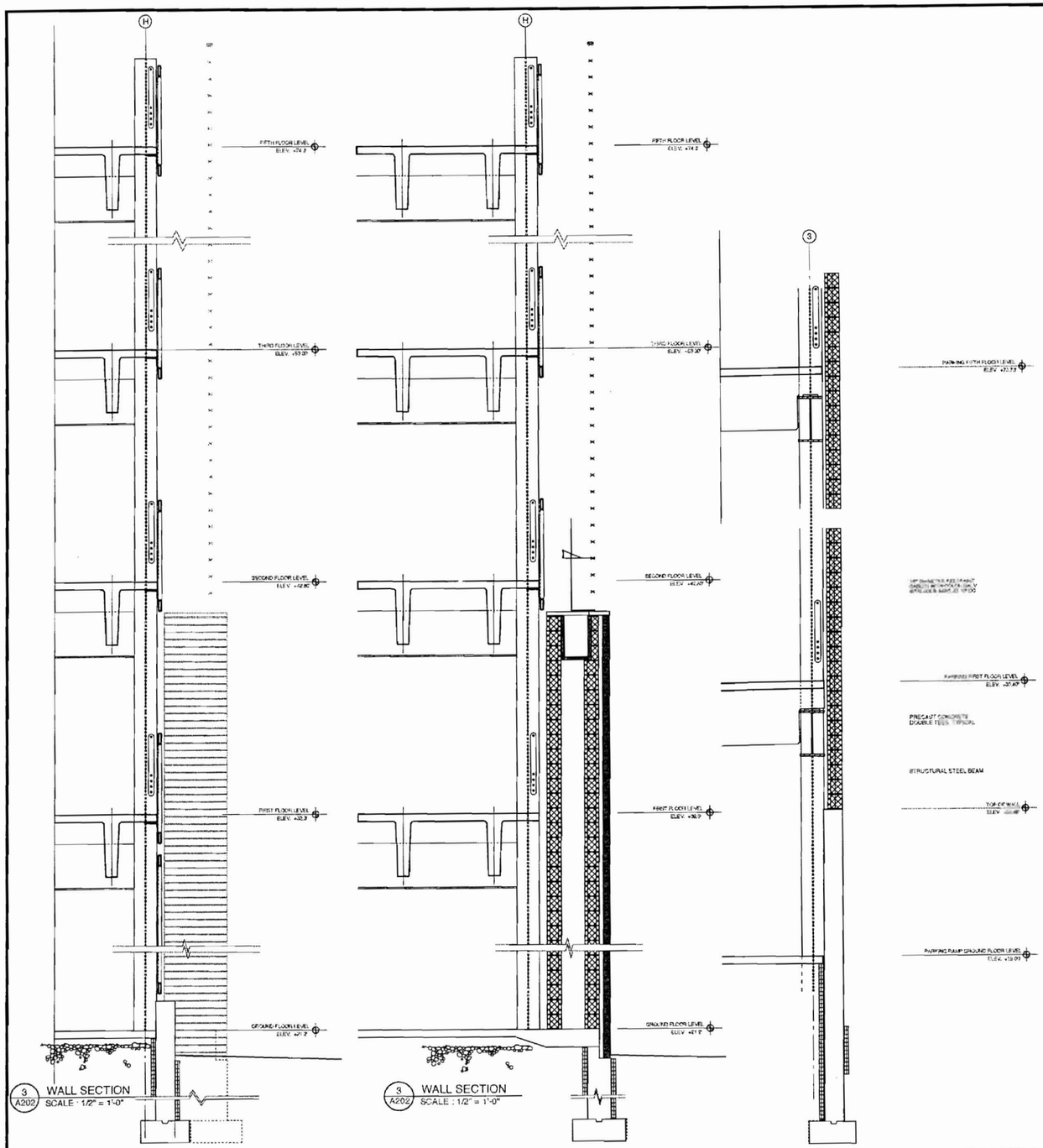


LEGEND:

- 4"Ø PERFORATED PVC OR HDPE UNDERDRAIN PIPE
- 4"Ø PERFORATED PVC OR HDPE PERIMETER DRAIN PIPE
- 4"Ø SOLID PVC OR HDPE PIPE
- PROPOSED CLEANOUT LOCATION AND CLEANOUT DIRECTION

HALEY & ALDRICH	PROPOSED FOUNDATION DRAINAGE SYSTEM SCHEMATIC PLAN AND DETAILS NOV 2005

FIGURE 5



3 A202 WALL SECTION
SCALE : 1/2" = 1'-0"

3 A202 WALL SECTION
SCALE : 1/2" = 1'-0"

SIMON DESIGN ENGINEERING LLC

WOODARD & CURRAN
Engineering • Science • Operations

Scott Simons Architects

PROJECT
OCEAN GATEWAY
PARKING GARAGE
MIDDLE STREET
PORTLAND, MAINE

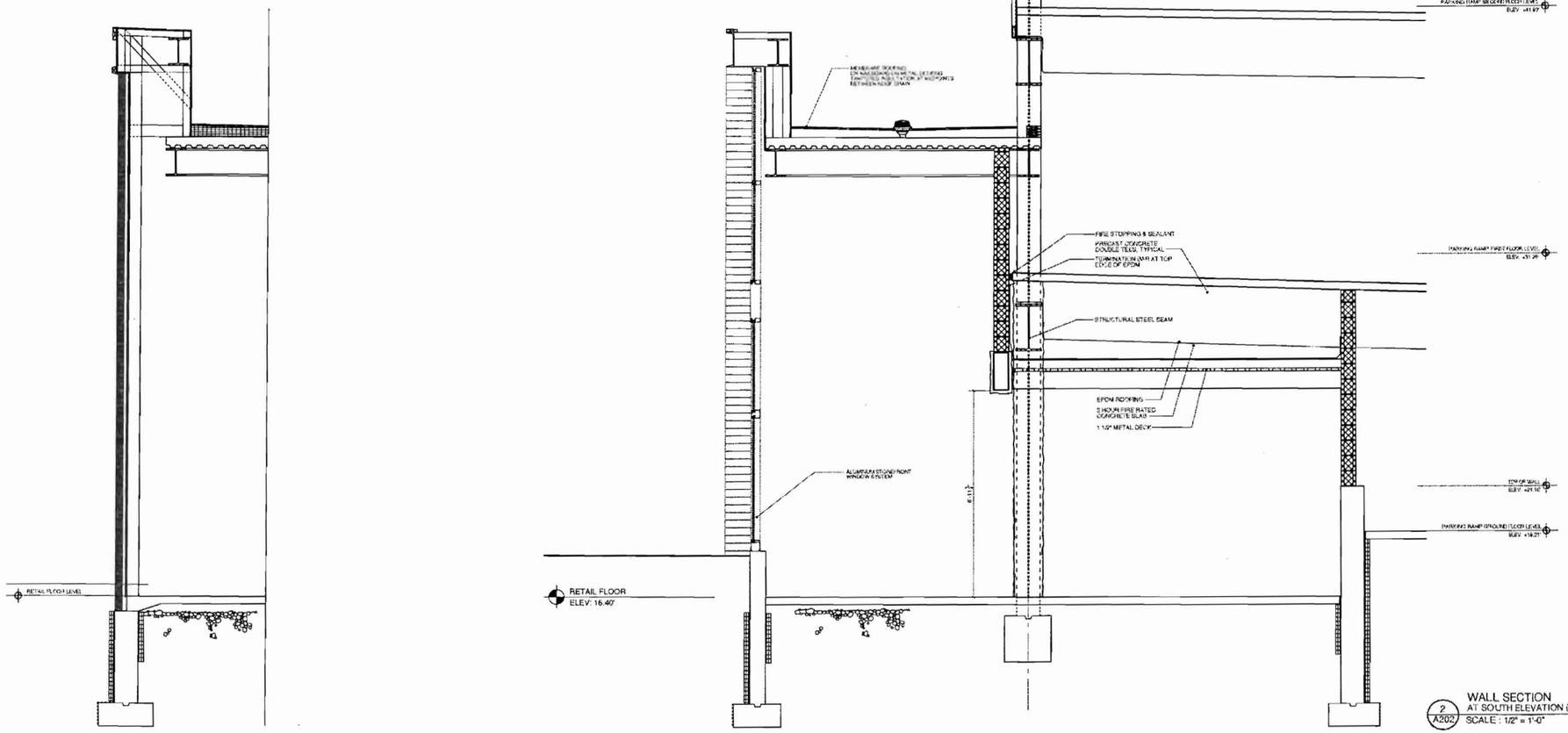
TITLE
WALL SECTIONS

△ REVISION /DATE:

STATUS:
PLANNING REVIEW SUBMISSION

DATE: 12-07-2006
PROJECT NO. 2005-0181
SCALE: 3/4" = 1'-0

DWG NO.
A501



2 / A202 WALL SECTION
AT SOUTH ELEVATION (FORE STREET)
SCALE : 1/2" = 1'-0"

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PROJECT
OCEAN GATEWAY
PARKING GARAGE
MIDDLE STREET
PORTLAND, MAINE

TITLE
WALL SECTIONS

△ REVISION /DATE:

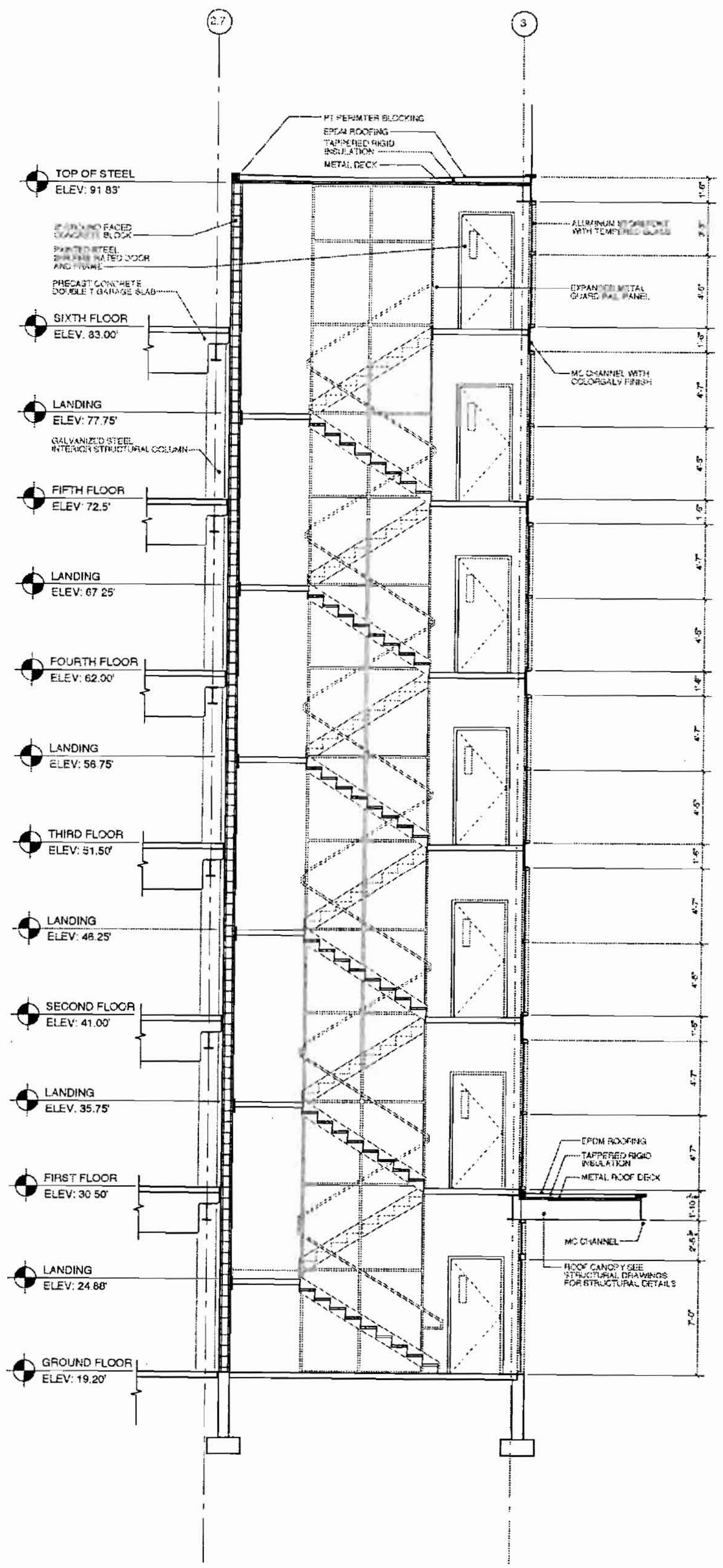
STATUS:
PLANNING REVIEW SUBMISSION

DATE:
12-07-2006

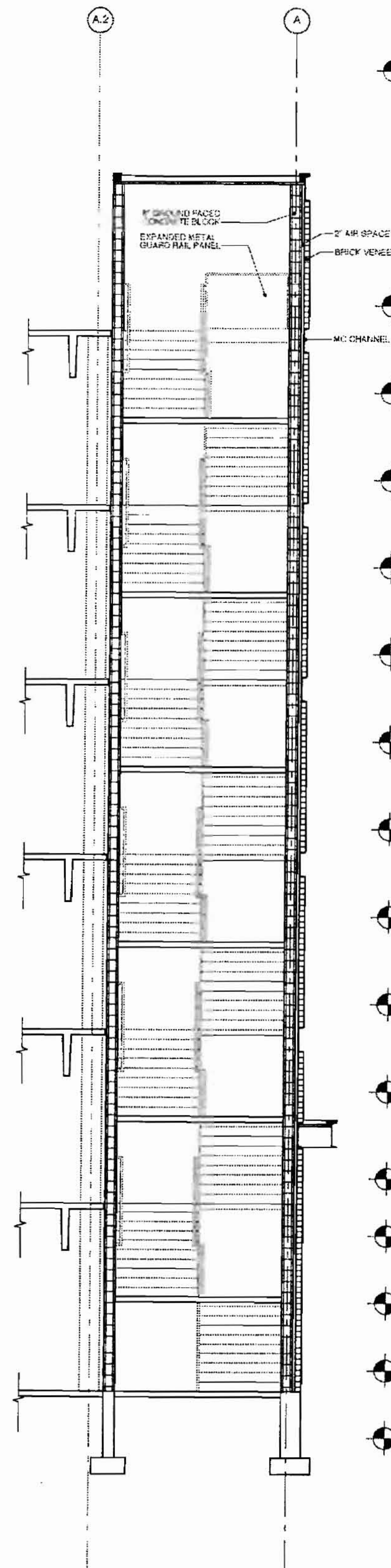
PROJECT NO.
2005-0181

SCALE:
3/4" = 1'-0

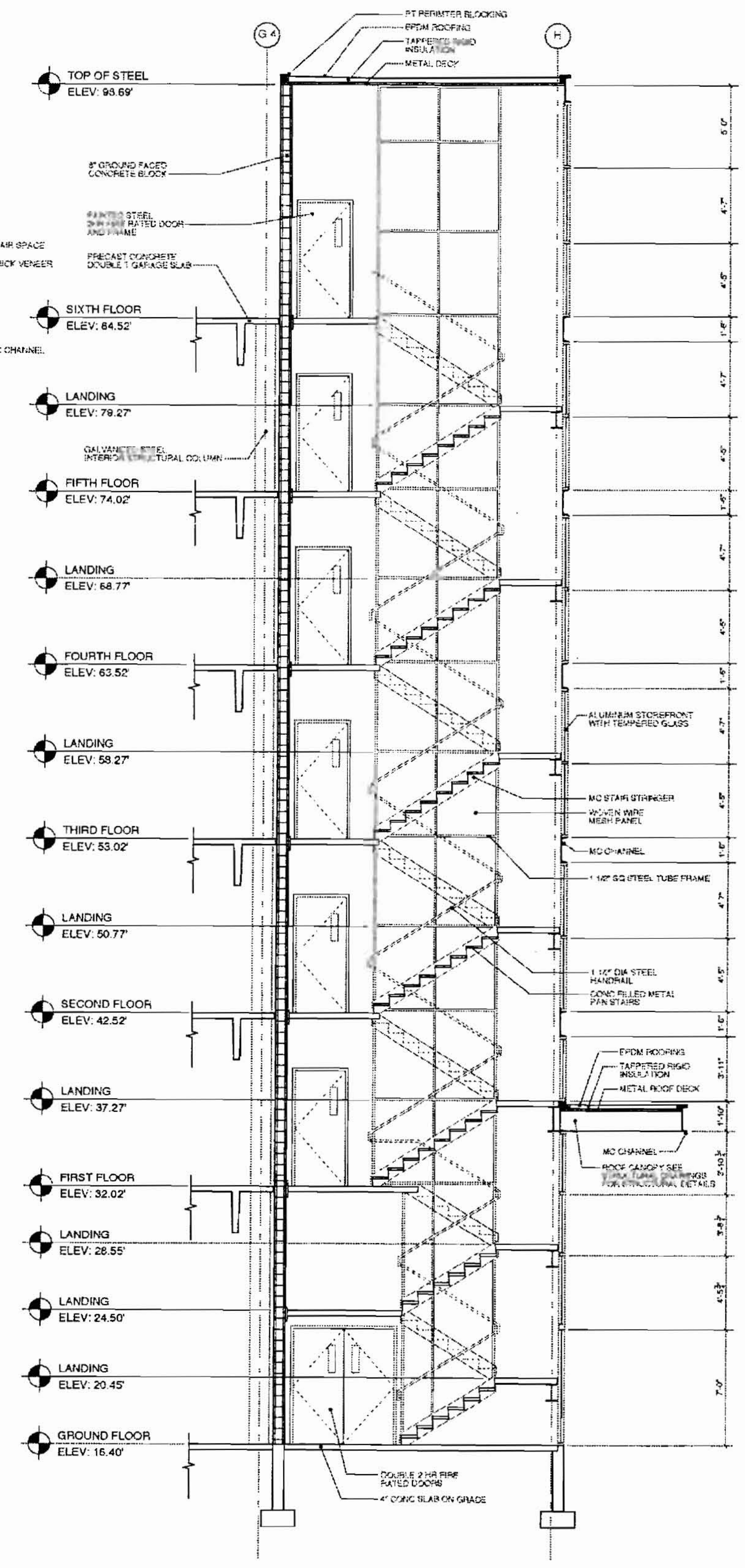
DWG NO.
A500



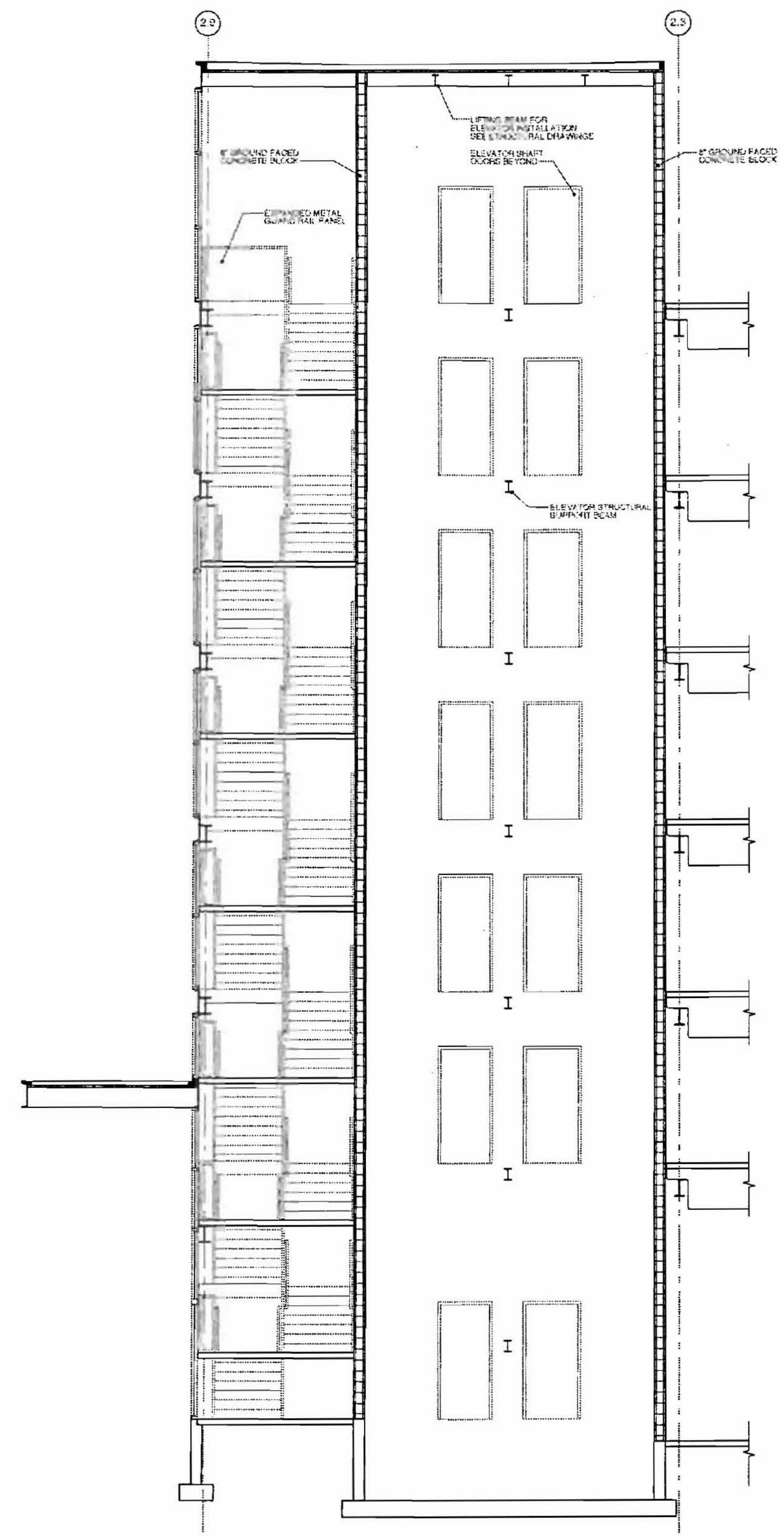
1 WEST STAIR N-S SECTION
A100 SCALE: 1/4" = 1'-0"



2 WEST STAIR E-W SECTION
A100 SCALE: 1/4" = 1'-0"



3 EAST STAIR W-E SECTION
A100 SCALE: 1/4" = 1'-0"



4 EAST STAIR S-N SECTION
A100 SCALE: 1/4" = 1'-0"

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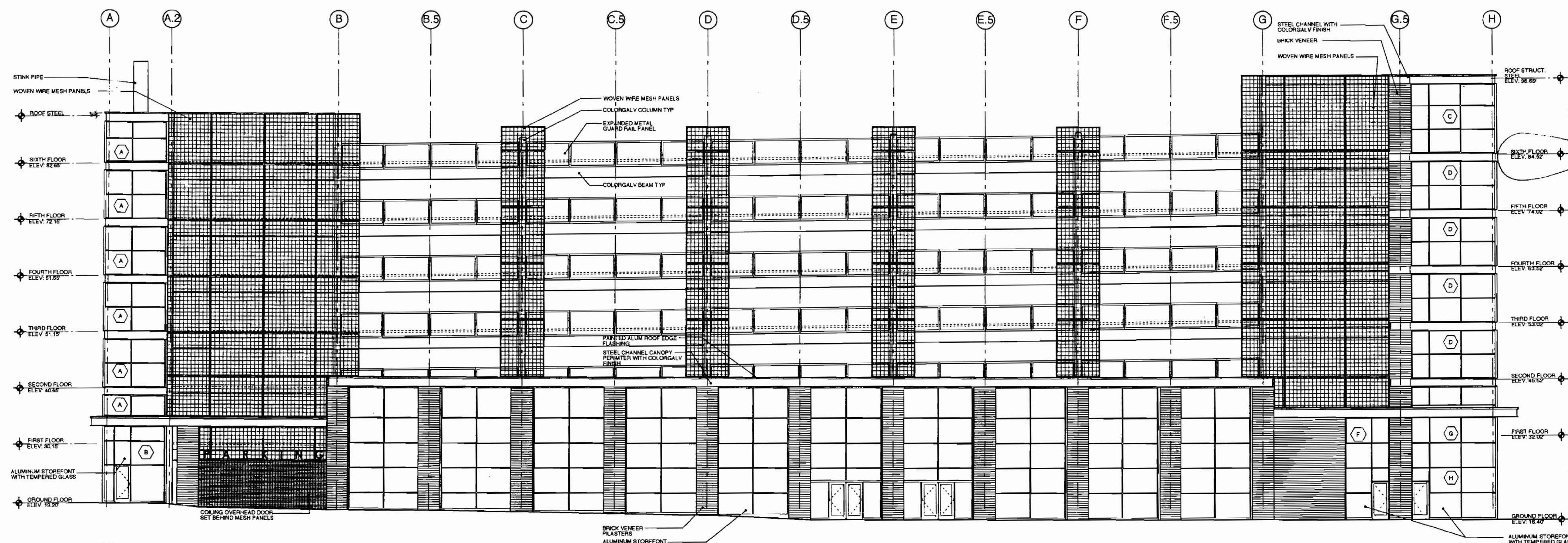
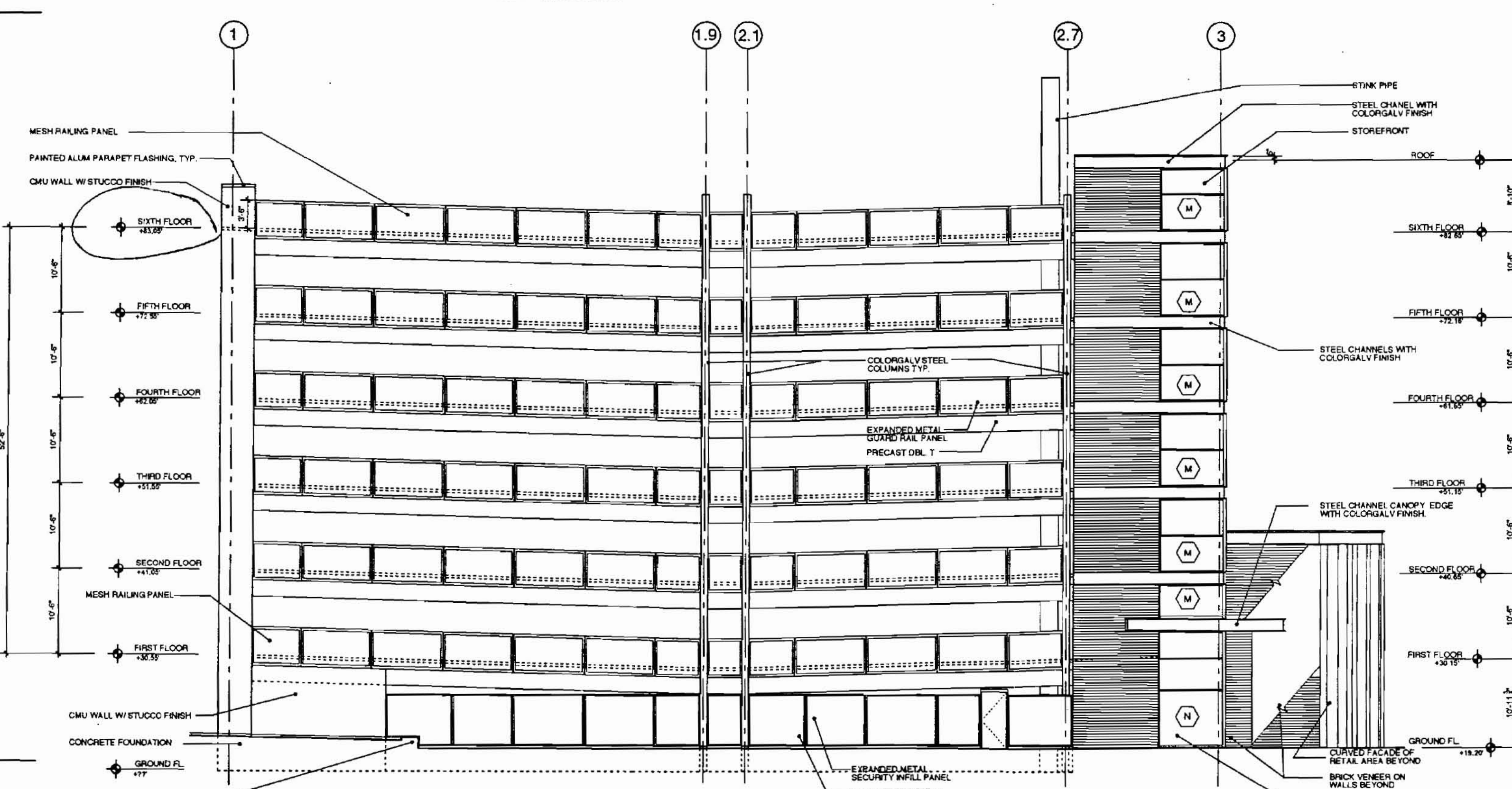


1 A201 SOUTH ELEVATION
SCALE : 1/8" = 1'-0"

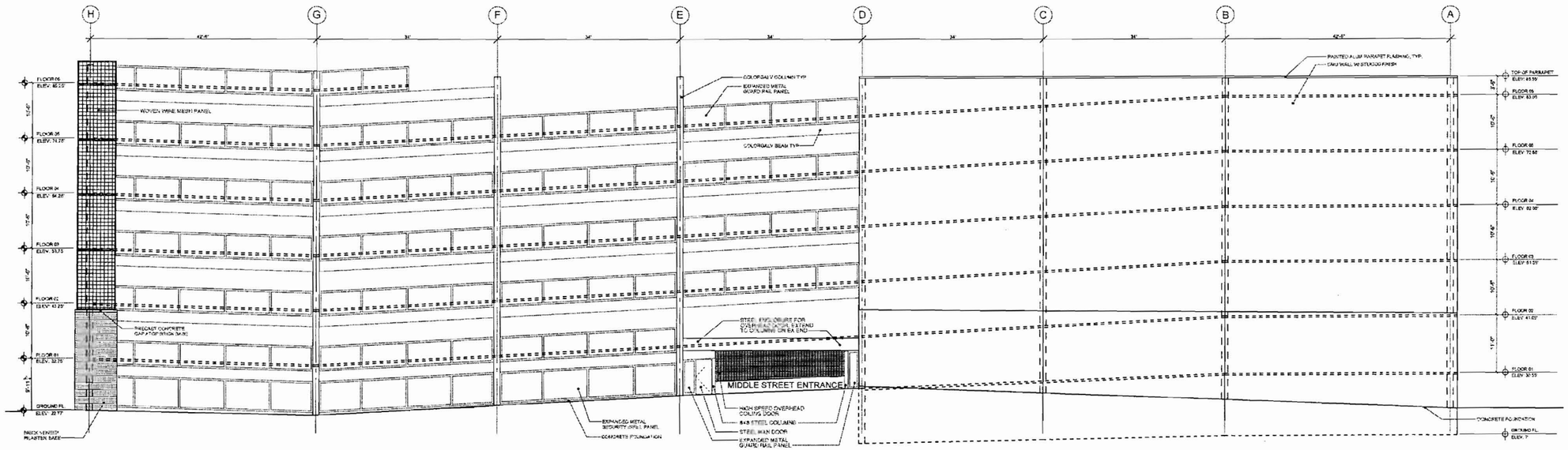


2 A201 WEST ELEVATION
SCALE : 1/8" = 1'-0"

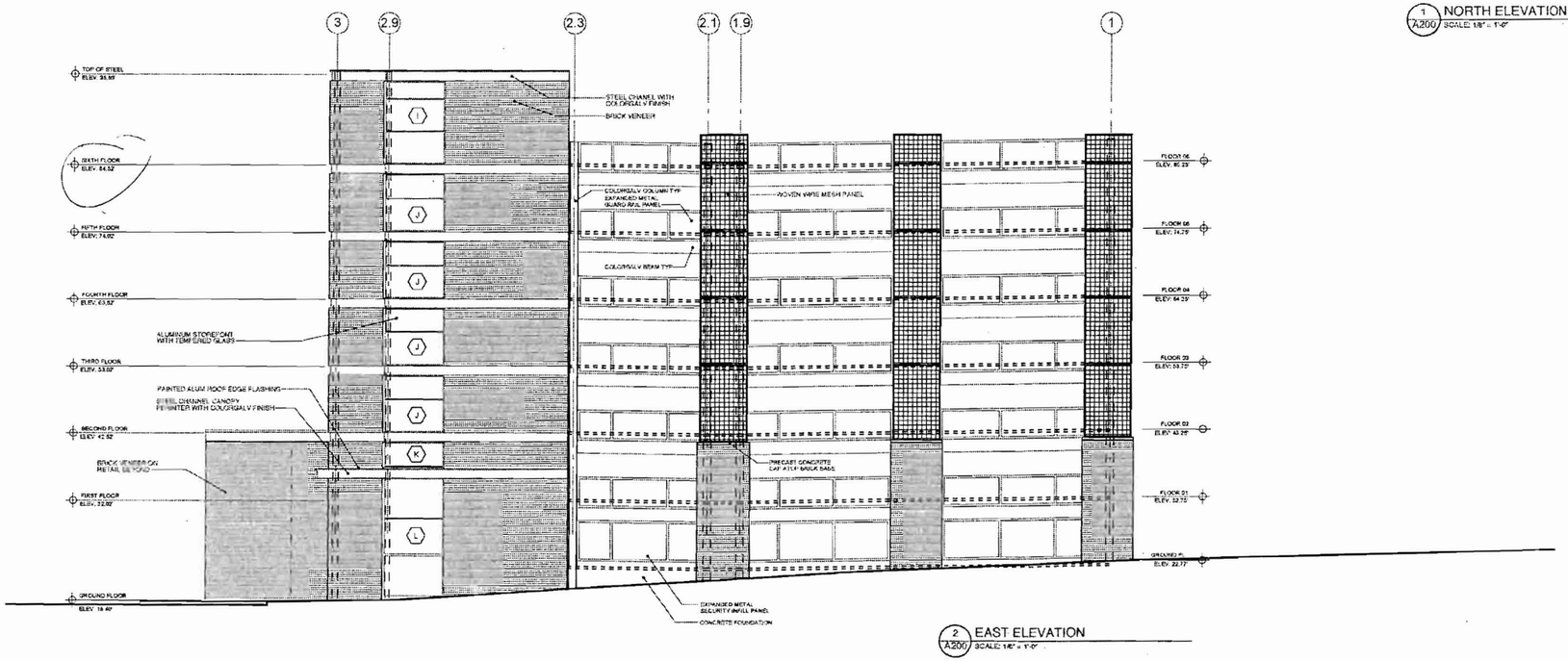
12/14/06

SIMON DESIGN ENGINEERING LLC	WOODARD & CURRAN Engineering · Science · Operations	Scott Simons Architects	PROJECT: OCEAN GATEWAY PARKING GARAGE, MIDDLE STREET, PORTLAND, MAINE	TITLE: SOUTH & WEST ELEVATIONS	REVISION /DATE: ; STATUS: PLANNING REVIEW SUBMISSION

DATE: 12-07-2006
PROJECT NO: 2005-0161
SCALE: 1/8" = 1'-0
DWG NO. A201



1 A200 NORTH ELEVATION
SCALE: 1/8" = 1'-0"



2 A200 EAST ELEVATION
SCALE: 1/8" = 1'-0"

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PROJECT
OCEAN GATEWAY PARKING GARAGE
MIDDLE STREET
PORTLAND, MAINE

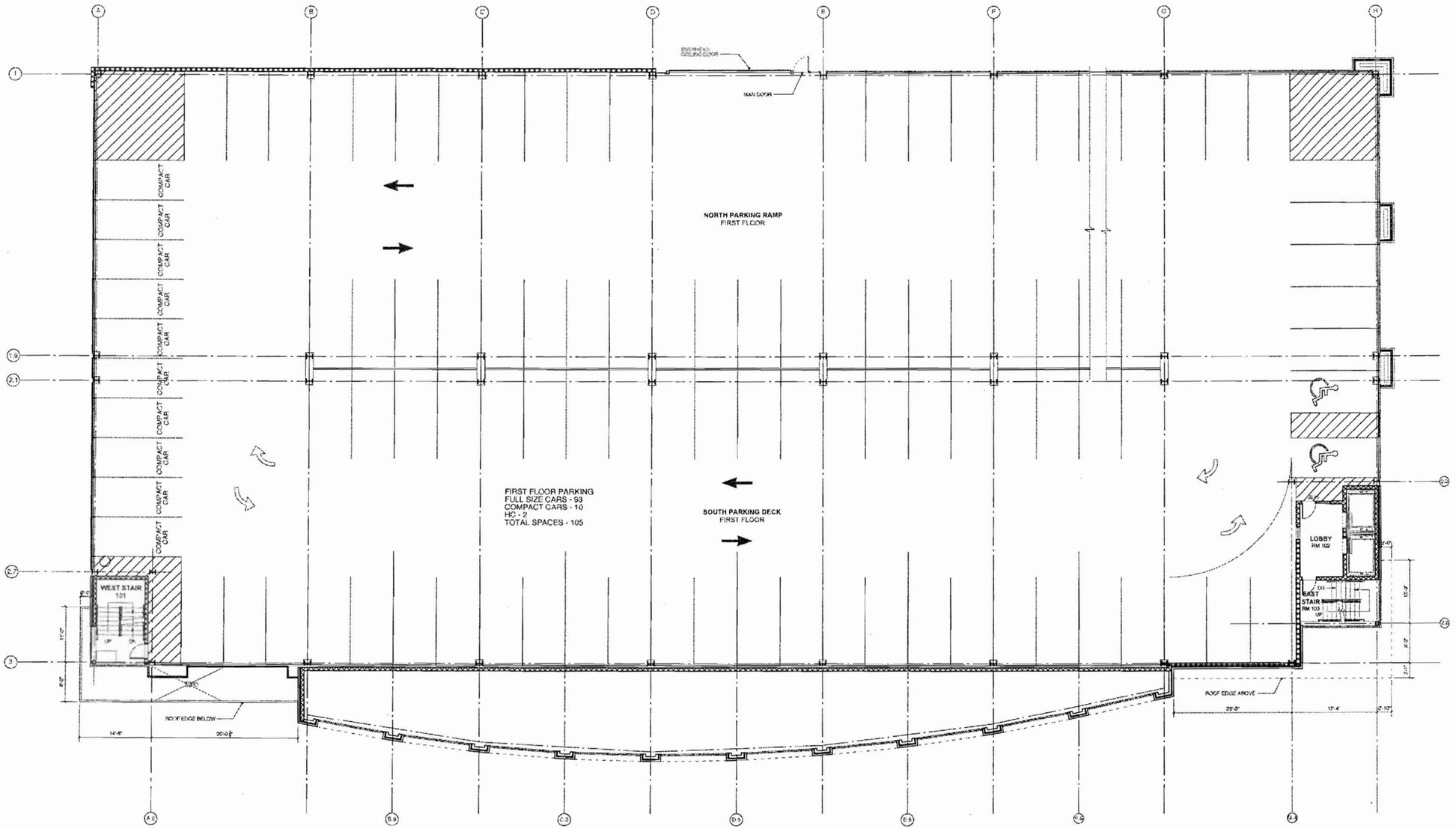
TITLE
NORTH & EAST ELEVATIONS

△ REVISION /DATE:

STATUS:
PLANNING REVIEW SUBMISSION

DATE:
12-07-2006
PROJECT NO.
2005-0181
SCALE:
1/8" = 1'-0

DWG NO.
A200



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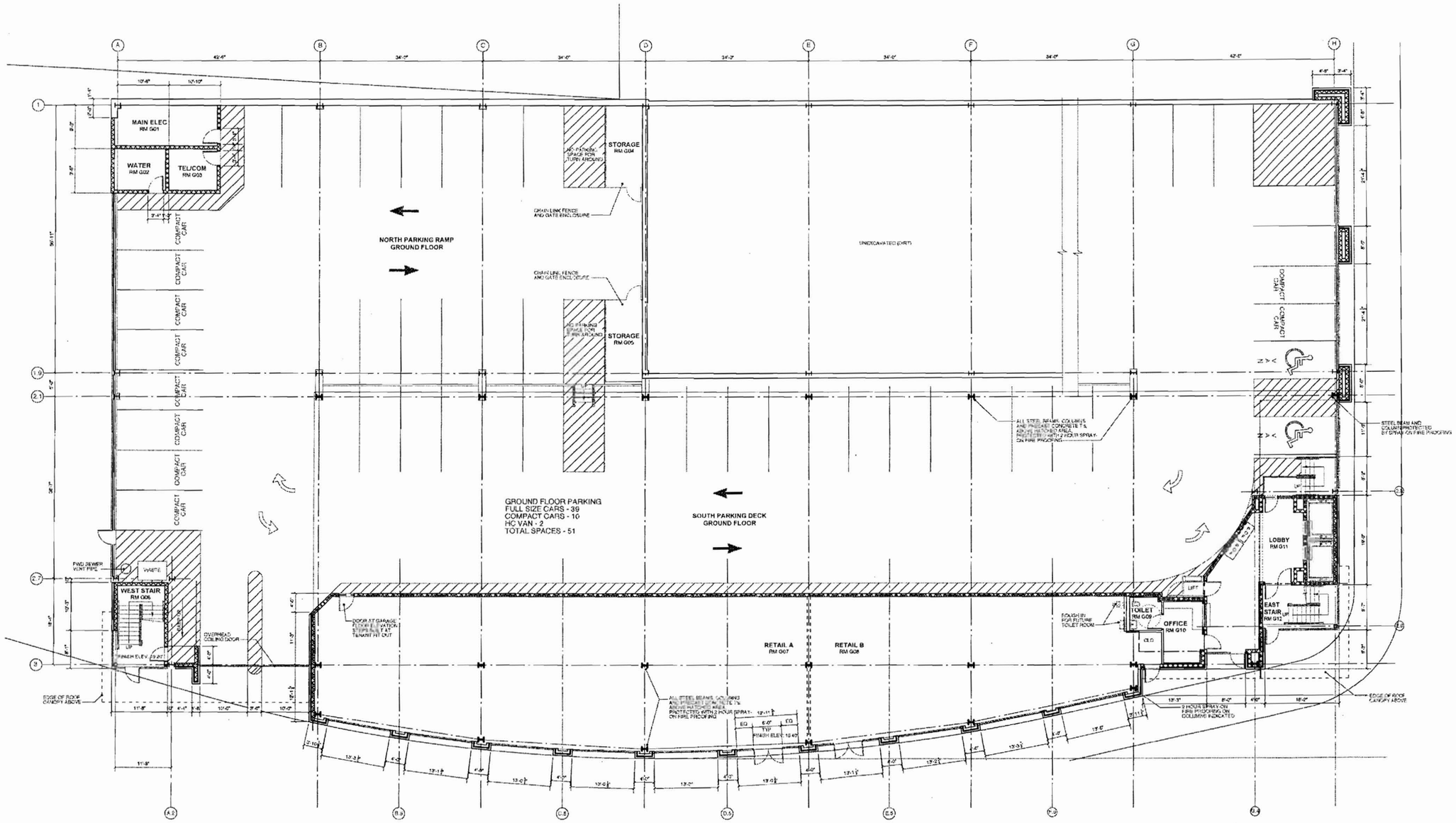
PROJECT
OCEAN GATEWAY
PARKING GARAGE
MIDDLE STREET
PORTLAND, MAINE

TITLE
FIRST FLOOR PLAN

△ REVISION /DATE:

STATUS:
PLANNING REVIEW SUBMISSION

DATE: 12-07-2006
PROJECT NO. 2005-0151
SCALE: 1/8" = 1'-0
DWG NO. **A101**



GROUND FLOOR - 51
FIRST FLOOR - 105
SECOND FLOOR - 109
THIRD FLOOR - 109
FOURTH FLOOR -109
FIFTH FLOOR - 109
ROOF - 107
TOTAL SPACES - 699

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PROJECT
OCEAN GATEWAY PARKING GARAGE
MIDDLE STREET
PORTLAND, MAINE

TITLE
GROUND FLOOR PLAN

△ REVISION /DATE:

STATUS:
PLANNING REVIEW SUBMISSION

DATE:
12-07-2006

PROJECT NO.
2005-0161

SCALE:
1/8" = 1'-0"

DWG NO.
A100

OCEAN GATEWAY GARAGE

December 07, 2006

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