

City of Portland, Maine - Building or Use Permit Application

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

Permit No: 10-0521	Issue Date:	CBL: 321 A001001
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Location of Construction: 568 Riverside St	Owner Name: PROLERIZED NEW ENGLAND C	Owner Address: 69 ROVER STREET	Phone: 781 873-1662
Business Name:	Contractor Name: Patco Construction	Contractor Address: 1293 Main St Sanford	Phone: 2073245574
Lessee/Buyer's Name	Phone:	Permit Type: Commercial	Zone: L-7H

Past Use: Vacant Land	Proposed Use: Commercial - Build new 12,000 sq ft pre-engineered metal building for metal recycling use and office area	Permit Fee: \$4,745.00	Cost of Work: \$465,000.00	CEO District: 5
Proposed Project Description: Build new 12,000 sq ft pre-engineered metal building for metal recycling use and office area		FIRE DEPT: <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Denied <i>* See Conditions</i>	INSPECTION: Use Group: <i>F1/B</i> Type: <i>3B</i> <i>IBC-2003</i>	
		Signature: <i>(KG)</i>	Signature: <i>AMB 6/8/10</i>	
PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)				
Action: <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied				
Signature: _____ Date: _____				

Permit Taken By: Idobson	Date Applied For: 05/14/2010	Zoning Approval		
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- This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules.
- Building permits do not include plumbing, septic or electrical work.
- 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..

<input checked="" type="checkbox"/> Shoreland <i>Bdy Det</i> <input type="checkbox"/> Wetland <i>outside of shore</i> <input type="checkbox"/> Flood Zone <i>Panel 6</i> <input type="checkbox"/> Subdivision <i>well outside of</i> <input checked="" type="checkbox"/> Site Plan <i>2008-0014</i> Maj <input checked="" type="checkbox"/> Minor <input type="checkbox"/> MM <input type="checkbox"/> Date: <i>5/17/10</i>	<input type="checkbox"/> Variance <input type="checkbox"/> Miscellaneous <input type="checkbox"/> Conditional Use <input type="checkbox"/> Interpretation <input type="checkbox"/> Approved <input type="checkbox"/> Denied	<input checked="" type="checkbox"/> Not in District or Landmark <input type="checkbox"/> Does Not Require Review <input type="checkbox"/> Requires Review <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denie
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PERMIT ISSUED

JUN 8 2010

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

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK

CITY OF PORTLAND PERMIT ISSUED

BUILDING INSPECTION
PERMIT

Permit Number: 100521

JUN 8 2010

Please Read Application And Notes, If Any, Attached

This is to certify that PROLERIZED NEW ENGINEERING AND CO. LLC/Patco Construction
has permission to Build new 12,000 sq ft pre-engineered metal building for metal recycling use and office area
AT 568 Riverside St City of Portland
OSL 321 A001001

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

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

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

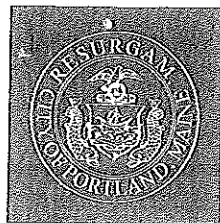
A certificate of occupancy must be procured by owner before this building or part thereof is occupied.

OTHER REQUIRED APPROVALS

Fire Dept. CAPT. R. Stanton
Health Dept. _____
Appeal Board _____
Other _____
Department Name _____

Jeanie Bowler 6/8/10
Director - Building & Inspection Services

PENALTY FOR REMOVING THIS CARD



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

Corporation Counsel
Gary C. Wood

Associate Counsel
Mary E. Costigan
Danielle P. West-Chuhta
Ann M. Freeman

September 3, 2010

Hope Creal Jacobsen, Esq.
Perkins Thompson
One Canal Plaza
P.O. Box 426
Portland, ME 04112

RE: Delivery of Scrap Metal Recycling Facilities License and Temporary Certificate of Occupancy

Dear Hope:

I have enclosed the scrap metal recycling facilities license and temporary certificate of occupancy for the Riverside site owned and operated by Schnitzer Northeast/Prolerized New England, LLC.

The Building Inspection Office and Police and Fire Departments are in agreement that the address for City purposes is 568 Riverside Street.

You will note that there are a list of building/fire code deficiencies attached to the certificate of occupancy as we discussed. John Rioux or Phil DiPierro of our Building Inspections Office will be available to you and your client for any consultation or discussion to help address those deficiencies and resolve them by September 30, 2010. In our opinion most, if not all, of them can be addressed by that date.

If they are resolved by that point in time then the City will issue a permanent certificate of occupancy. If there are still some unresolved issues, we will work with you to extend the date of the temporary certificate of occupancy so that the deficiencies can be addressed.

Please convey my thanks to David Murphy and your client for their ongoing conduct and actions throughout this complicated but important project for them and the City.

Sincerely,


Gary C. Wood

Cc: Joseph Gray
City Clerk
Ellen Sanborn
Penny Littel
Greg Mitchell
Nicole Clegg
John Rioux
Phil DiPierro
Rick Knowland

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CITY OF PORTLAND, MAINE
Department of Building Inspection

Certificate of Occupancy

LOCATION 568 Riverside St CBL 321 A001001

Issued to Prolerized New England Co. Llc/Patco Construction Date of Issue 08/31/2010

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. 10-052 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

Entire

APPROVED OCCUPANCY

Metal Recycling Facility
Use Group: F-1/ B
Type: 3B
IBC, 2003

Limiting Conditions:

This is a temporary occupancy certificate which expires on September 30, 2010 for the completion of site work and noted Building / Fire Code deficiencies, see attached.

This certificate supersedes certificate issued

Approved:

08/31/10
(Date)

[Signature]
Inspector
R for BW 202

[Signature]
Inspector of Buildings

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.

Memorandum
Department of Planning and Urban Development
Inspection Services Division



TO: Prolerized New England Co. LLC/ Patco Construction
FROM: Jon Rioux, Code Enforcement Officer
DATE: September 3, 2010
CC: Gary Wood, Corporation Counsel, & Ben Wallace, Fire Prevention Officer
RE: C. of O. for # 568 Riverside Street; CBL 321 A001001

Below, are the deficiencies noted during our walk-through inspection of 568 Riverside Street. As discussed, the following conditions of approval shall be corrected, and or met by September 30, 2010.

Life Safety Code (Fire):

1. The fire alarm does not provide occupant notification through out the building and an annunciator or the fire alarm panel must be in the entry.
2. The exterior doors must be labeled inside and out (Door 1, etc) due to the way the fire alarm system is annunciated.
3. The Knox Box must be installed and a Knox Pad lock provided at the gate. Also need building keys for the box.
4. Street numbers must be on the building and a street side sign.
5. The FDC requires a Knox locking cap.
6. Signage is required for the water flow bells.
7. A Maltese Cross sign is required above the Knox Box.
8. A Cutting and Welding License must be submitted
9. Building Code

Building, Electrical & Plumbing:

1. Second floor employee kitchen- plumbing and electrical work
2. Exterior lighting in accordance with City Code

Please feel free to contact me at 207.874.8702 if you have any questions or concerns.

RESIDENTIAL FIRE PROTECTION

September 2, 2010

Portland Fire Department
Schnitzer Northeast
Portland, Maine 04103

Attn: Ben Wallane

Re: Schnitzer Northeast
Fire Sprinkler System instalation

Please be informed that the Wet Pipe Fire Sprinkler System1 and Dry Pipe Fire Sprinkler System2 for the above project is designed, installed and tested based on the requirements of NFPA #13, FM Global, State of Maine Fire Marshall's office and Portland Fire Department requirements.

If you have any questions or concerns please contact us at (207) 946-3473

Thank you

Stan Camic

FM Global Contractor's Material & Test Certificate for Automatic Sprinkler Systems



Additional printed copies of this form are available to clients from:
 Communication Services, FM Global, 270 Central Avenue, Johnston, RI 02919

Procedure: Upon completion of work, inspection and tests shall be made by the contractor's representative and witnessed by an owner's representative. All defects shall be corrected and system left in service before contractor's personnel finally leave the job.

A certificate shall be filled out and signed by both representatives. Copies shall be prepared for approving authorities, owners and contractor. It is understood the owner's representative's signature in no way prejudices any claim against the contractor for faulty material, poor workmanship or failure to comply with approving authority's requirements or local ordinances.

Contractor Information		Date: 8-30-10				
Contractor Company Name: Residential Fire Protection						
Contractor Company Address: 64 Daggett Hill Rd. Greene, ME 04236						
FM Global Client Information		FM Global Index No.:		FM Global Account No.:		
FM Global Client Building Owner or Tenant (Y/N)?			Building Name or No.: Schnitzer Northeast			
FM Global Client Name:						
FM Global Client Address:						
Description of Occupancy Being Protected: Metal Processing						
Automatic Sprinkler System Components and Materials						
Automatic Sprinklers:						
Manufacturer	Model / Trade Name	K-Factor	Temperature Rating	SIN	Year of Manufacture	Quantity
Victaulic	V34	8.0	200	V3401	2010	84
Victaulic	V27	5.6	200	V2704	2010	16
Victaulic	V27	5.6	155	V2704	2010	4
Victaulic	V27	5.6	155	V2708	2010	45
Automatic Sprinkler Pipe:						
Manufacturer	Model / Trade Name	Product Description	Schedule	Connection Type	Max. Working Pressure	
Weatland		Galv Steel	40	Groove	300 PSI	
Weatland		Blk Steel	10	Groove	300 PSI	
Weatland		Blk Steel	40	Thread	300 PSI	

FM Global Contractor's Material & Test Certificate for Automatic Sprinkler Systems

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Automatic Sprinkler System Components and Materials (cont.)						
Automatic Sprinkler Pipe Connection:						
Manufacturer	Model / Trade Name	Product Description	Pipe Ends	Max. Working Pressure		
Grinnell		Coupling	groove			
SPF		Cast Fitting	Thread			
Automatic Sprinkler Pipe Hangers:						
Manufacturer	Model / Trade Name	Product Description	Hanger Rod Size	Component Description	Nominal Pipe Size	
Anvil	69	Band Hanger	3/8		1"-4"	
Automatic Sprinkler System Alarm-Check, Dry-Pipe or Automatic-Release Type Valves:						
Type	Manufacturer	Model	Serial Number	Quantity		
Dry	Tyco	DPV-1	0151	1		
If Automatic-Release Type Valve:						
Is the detection electronic, hydraulic and/or pneumatic? pneumatic						
Is the interlock arrangement single, double or non-interlock? N/A						
Is the air pressure in the system piping supervised? yes						
Is the Automatic-Release Valve arranged for manual operation?						
Detection for Automatic-Release Type Valves:						
Type	Manufacturer	Model	Protected Area	Linear Spacing	Area Spacing	Quantity
If the Detection for Automatic-Release Type Valve is electric:						
Is the circuitry supervised in accordance with Data Sheet 5-40?						
What is make and model of Automatic Release Control Panel?						
What is make and model of Solenoid Release Valve?						

FM Global Contractor's Material & Test Certificate for Automatic Sprinkler Systems

Additional printed copies of this form are available to clients from:
 Communication Services, FM Global, 270 Central Avenue, Johnston, RI 02919



Automatic Sprinkler System Components and Materials (cont.)				
Automatic Sprinkler System Control or Pressure-Reducing Type Valves:				
Type	Manufacturer	Model	Serial Number	Quantity
Automatic Sprinkler System Check or Backflow Preventer Type Valves:				
Type	Manufacturer	Model	Serial Number	Quantity
Backflow	Ames	Coll 200		1
Automatic Sprinkler System – Miscellaneous Components:				
Component	Manufacturer	Model	Quantity	
Waterflow Alarm	Potter	VSF-4	1	
Quick Opening Device				
Pressure Gauge	Landsdale		2	
Fire Department Connection	Croker	5"	1	
Relief Valve				
Test Connection				
Drain Valve	AGF	1000	1	
Automatic Sprinkler System – Other Components:				
Component	Manufacturer	Model	Quantity	
Air Compressor	Jenny	F13S-BS	1	
Pressure Switch	Potter	PS-10	1	
Pressure Switch	Potter	PS-40	1	
Stortz Guard	Knox	2002	1	

FM Global Contractor's Material & Test Certificate for Automatic Sprinkler Systems

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Automatic Sprinkler System Tests

Hydrostatic Tests: Hydrostatic tests shall be conducted at not less than 200 psi (13.8 bar) or 50 psi (3.5 bar) above any static pressure in excess of 150 psi (10.3 bar) for 2 hours. Hydrostatically test any anti-freeze solution sprinkler systems equipped with pendent sprinklers with the anti-freeze solution being used. Differential dry-pipe valves clappers shall be left open during the test to prevent damage. Modify the automatic sprinkler as needed to ensure there is no pressure drop over the 2 hour timeframe.

The sprinkler piping for all wet-pipe automatic sprinkler systems as well as anti-freeze solution automatic sprinkler systems equipped with pendent sprinklers have been hydrostatically tested at 200 psi for 2 hours with 0 psi drop.

Pneumatic Tests: Pneumatic tests shall be conducted at not less than 40 psi (2.8 bar) air pressure. Ensure pressure tanks are arranged for their normal water level and air pressure conditions. Modify the automatic sprinkler system as needed to ensure there is no more than a 1.5 psi (0.1 bar) pressure drop over a 24 hour timeframe.

The sprinkler piping for all dry-pipe and similar automatic sprinkler systems have been pneumatically tested at psi for 2 hours with 0 psi drop.

Waterflow Alarm Tests: Tests shall be conducted on all automatic sprinkler system alarm devices to ensure that an alarm signal is activated no more than 60 seconds after initiating waterflow through the Inspector's Test Connection or similar device.

A total of 2 waterflow alarm devices were tested. A total of 0 waterflow alarm devices activated an alarm signal in more than 60 seconds.

Dry Pipe System or Automatic-Release Type System Testing:

Time to Achieve Minimum Required Sprinkler Pressure

System No./Name	Water Pressure Below Valve	System Air Pressure	Min. Pressure Req. at Sprinkler	Required Water Delivery Time	Time to Achieve Minimum Required Sprinkler Pressure	
					Without Q.O.D.	With Q.O.D.
2 Dry	75	42		45	12 Secs	

If Automatic-Release Type Valve:

Was valve operated manually as well as automatically?

If Detection is electronic, were all detection units tested?

Pressure-Reducing Valve Testing:

Location	Make	Model	Setting	Static Pressure		Residual Pressure		Flow Rate
				Inlet	Outlet	Inlet	Outlet	

FM Global Contractor's Material & Test Certificate for Automatic Sprinkler Systems

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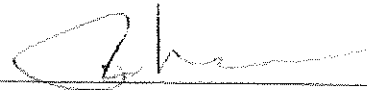
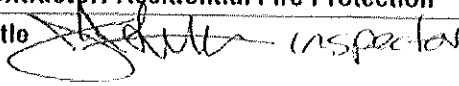


Automatic Sprinkler System Tests (cont.)			
Blank Testing Gaskets:			
Number Used	Location	Number Removed	
None			
Welded Pipe Connections:			Yes or No?
Do you certify as the sprinkler contractor that the welding procedures used for the connection of sprinkler piping materials complied with the minimum requirements of AWS B2.1, ASME Section IX <i>Welding and Brazing Qualifications</i> , or other applicable qualification standards as required by the AHJ?			yes
Do you certify that all welding procedures used for the connection of sprinkler piping materials was conducted by welders or welding operators qualified in accordance with the minimum requirements of AWS B2.1, ASME Section IX <i>Welding and Brazing Qualifications</i> , or other applicable qualification standards as required by the AHJ?			yes
Do you certify that the welding was carried out in compliance with a documented quality control procedure to ensure that all discs and field-cut pipe coupons were retrieved from the sprinkler system piping, that openings in piping are smooth, that slag and other welding residue were removed, and that internal diameters of piping were not penetrated?			yes
Drain Tests:			
System Name/No.	Static Pressure	Residual Pressure	Static Pressure Afterwards
System 1 Wet	75	65	75
System 2 Dry	75	65	75
Underground Mains:			
All underground mains and lead-in connections to automatic sprinkler system risers shall be flushed before connection is made to automatic sprinkler system piping.			
Was this verified on Form FM85B? By Others		If No, what form was used?	
What contractor flushed the underground mains and lead-ins? By Others			

FM Global Contractor's Material & Test Certificate for Automatic Sprinkler Systems

Additional printed copies of this form are available to clients from:
 Communication Services, FM Global, 270 Central Avenue, Johnston, RI 02919



Automatic Sprinkler System Tests (cont.)	
Instruction Materials:	Yes or No?
Has the person in charge of the fire equipment been instructed as to the location of all the automatic sprinkler system control valves and the care and maintenance of this new equipment?	Yes
Have copies of the appropriate instructions and care of maintenance charts been left on the premises?	Yes
If the answer to either of these questions is "No", explain:	
Date Sprinkler System Left in Service With All Control Valves Open:	
Signatures:	
The Property Owner or their authorized agent:	
Signature and Title 	Date 8-30-10
The Sprinkler Contractor: Residential Fire Protection	
Signature and Title 	Date 8-30-10
Additional Explanations, Comments and/or Notes:	

Jeanie Bourke - 568 Riverside Street, Prolerized - Building Permit

From: Phillip DiPierro
To: Code Enforcement & Inspections
Date: 6/7/2010 12:54 PM
Subject: 568 Riverside Street, Prolerized - Building Permit

Hi all, this project meets minimum DRC site plan requirements for the issuance of the building permit. Please see UI for sign off.

Phil



10-6955 Letter of Certification

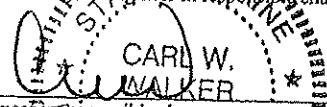
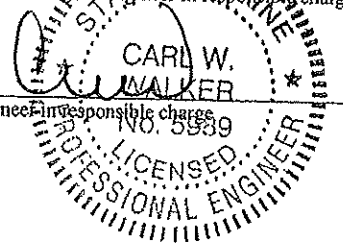
Date: 5/12/2010
Time: 11:42 AM
Page: 2 of 2

Building design loads and governing building code is provided by the Builder and is not validated by Varco Pruden Buildings, a division of BlueScope Buildings North America, Inc. The Builder is responsible for contacting the local Building Official or project Design Professional to obtain all code and loading information for this specific building site.

The design of this building is in accordance with Varco Pruden Buildings, a division of BlueScope Buildings North America, Inc. design practices which have been established based upon pertinent procedures and recommendations of the Standards listed in the Building Code or later editions.

This certification DOES NOT apply to the design of the foundation or other on-site structures or components not supplied by Varco Pruden Buildings, a division of BlueScope Buildings North America, Inc., nor does it apply to unauthorized modifications to building components. Furthermore, it is understood that certification is based upon the premise that all components will be erected or constructed in strict compliance with pertinent documents for this project. Varco Pruden Buildings, a division of BlueScope Buildings North America, Inc. DOES NOT provide general review of erection during or after building construction unless specifically agreed to in the contract documents.

The undersigned engineer in responsible charge certifies that this building has been designed in accordance with the contract documents as indicated in this letter.


Engineer in responsible charge


Date: _____ Engineers Seal:



Certificate of Design Application

From Designer:

Carl W. Walker

Date:

5/12/10

Job Name:

Schnitzer Northeast

Address of Construction:

568 Riverside Street

2003 International Building Code

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

Building Code & Year 2003 IBC Use Group Classification (s) F-1

Type of Construction Type II B

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

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

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

Structural Design Calculations

Submitted for all structural members (106.1 - 106.11)

Design Loads on Construction Documents (1603)

Floor Area Use	Loads Shown
<u>Process</u>	<u>250 psf</u>
<u>2nd floor office</u>	<u>80 psf</u>

- 20 psf Live load reduction
- 60 psf Roof live loads (1603.1.2, 1607.11)
- 37.8 psf Roof snow loads (1603.7.3, 1608)
- 1 FE (1.0) Ground snow load, P_g (1608.2)
- 1 If $P_g > 10$ psf, flat-roof snow load S_f
- 1 If $P_g > 10$ psf, snow exposure factor, C_e
- Hanted (1.0) If $P_g > 10$ psf, snow load importance factor, I_s
- 37.8 psf Roof thermal factor, C_t (1608.4)
- "C" 7.56 Sloped roof snowload, P_s (1608.4)
- Seismic design category (1616.3)
- Basic seismic force resisting system (1617.6.2)
- Response modification coefficient, R_f and
- deflection amplification factor, C_d (1617.6.2)
- Analysis procedure (1616.6, 1617.5)
- Design base shear (1617.4, 16175.5.1)

Wind loads (1603.1.4, 1609)

- 95 mph Design option utilized (1609.1.1, 1609.6)
- 1.0 Basic wind speed (1809.3)
- C 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 (7603.1.1, 1609.6.2.1)

Earth design data (1603.1.5, 1614-1623)

- 1, C Design option utilized (1614.1)
- 40/10 Seismic use group ("Category")
- D, 4 Spectral response coefficients, S_D & S_1 (1615.1)
- Site class (1615.1.5)

Flood loads (1803.1.6, 1612)

- Flood Hazard area (1612.3)
- Elevation of structure

Other loads

- 3psf collateral Concentrated loads (1607.4)
- Partition loads (1607.5)
- Misc. loads (Table 1607.8, 1607.6.1, 1607.7, 1607.12, 1607.13, 1610, 1611, 2404)

See attachment from UP Buildings



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: <u>568 Riverside Street</u>		
Total Square Footage of Proposed Structure/Area <u>12,000 s.f.</u>		Square Footage of Lot <u>12.9 Acres</u>
Tax Assessor's Chart, Block & Lot Chart# <u>321</u> Block# <u>A-1</u> Lot# <u>A-1</u> <u>Map 322</u> <u>A-2</u> <u>A-4</u>	Applicant *must be owner, Lessee or Buyer* Name <u>Prolerized New England Company, LLC</u> Address <u>69 Rover St.</u> City, State & Zip <u>Everett, MA 02149</u>	Telephone: <u>(781) 873-1662</u>
Lessee/DBA (If Applicable) <u>N/A</u>	Owner (if different from Applicant) Name <u>Same</u> Address City, State & Zip	Cost Of Work: \$ <u>465,000.00</u> C of O Fee: \$ <u>4670</u> Total Fee: \$ <u>469670</u>
Current legal use (i.e. single family) <u>raw land</u> If vacant, what was the previous use? <u>" "</u> Proposed Specific use: <u>Metal Recycling and office</u> Is property part of a subdivision? <u>No</u> If yes, please name _____ Project description: <u>12,000 s.f. pre-engineered metal building, with two story wood-framed office area.</u>		
Contractor's name: <u>Patco Construction, Inc.</u> Address: <u>1293 Main St.</u> City, State & Zip <u>Sanford, ME 04073</u> Telephone: <u>324-5574</u> Who should we contact when the permit is ready: <u>Dennis Waters</u> Telephone: <u>651-0798</u> Mailing address: <u>same</u>		

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

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

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

RECEIVED

MAY 14 2010

Signature: Dennis M. A. Date: 5/13/10

This is not a permit; you may not commence ANY work until the permit is issued
Dept. of Building Inspections
City of Portland Maine



Certificate of Design

Date: MAY 12, 2010

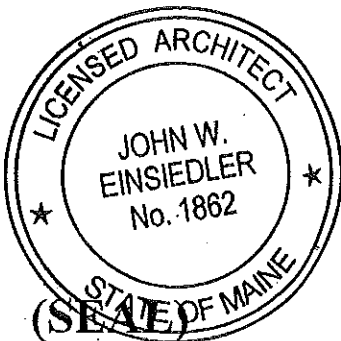
From: JOHN W. EINSIEDLER, R.A.

These plans and / or specifications covering construction work on:

SCHNITZER NORTHEAST RIVERSIDE STREET

Have been designed and drawn up by the undersigned, a Maine registered Architect Engineer according to the ~~2003~~ ²⁰⁰⁹ *International Building Code* and local amendments.

NOTE: *NON STRUCTURAL COMPONENTS ONLY*



Signature: *[Handwritten Signature]*

Title: SOLE OWNER / ARCHITECT

Firm: JOHN W. EINSIEDLER, R.A.

Address: 148 SEA ROAD

KEENEWUNK, ME 04043

Phone: 207-985-9760

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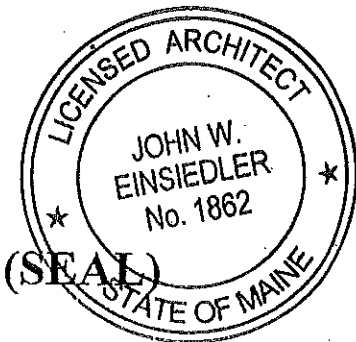
Accessibility Building Code Certificate

Designer: JOHN W. EINSIEDLER, R.A.

Address of Project: 568 RIVERSIDE STREET PORTLAND, MAINE

Nature of Project: METAL RECYCLING FACILITY

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



Signature: *[Handwritten Signature]*

Title: SOLE OWNER / ARCHITECT

Firm: JOHN W. EINSIEDLER, R.A.

Address: 148 SEA ROAD
KENNEBUNK, ME 04043

Phone: 207-985-9760

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

City of Portland, Maine - Building or Use Permit

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

Permit No: 10-0521	Date Applied For: 05/14/2010	CBL: 321 A001001
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Location of Construction: 568 Riverside St	Owner Name: PROLIERIZED NEW ENGLAND C	Owner Address: 69 ROVER STREET	Phone: 781 873-1662
Business Name:	Contractor Name: Patco Construction	Contractor Address: 1293 Main St Sanford	Phone: (207) 324-5574
Lessee/Buyer's Name	Phone:	Permit Type: Commercial	

Proposed Use: Commercial - Build new 12,000 sq ft pre-engineered metal building for metal recycling use and office area	Proposed Project Description: Build new 12,000 sq ft pre-engineered metal building for metal recycling use and office area
--	---

Dept: Zoning Status: Reviewer: Marge Schmuckal Approval Date: 05/17/2010
 Note: Ok to Issue:

- 1) This permit is being approved on the basis of plans submitted. Any deviations shall require a separate approval before starting that work.
- 2) Separate permits shall be required for any new signage.
- 3) This property shall remain as a metal recycling facility with accessory offices. Any change of use requires a separate application for review and approvals PRIOR to any change.
- 4) There is a reminder that in the submitted Noise Impact Assessment Study, there is an admission that if the excavator is operated any closer than 85 feet from a property line, the construction of a barrier would be required. It was previously stated during site plan review that the minimum acoustical barrier be constructed as part of the main development and prior to the issuance of a temporary and/or permanent certificate of occupancy (6/4/2008). This condition is still in force.

Dept: Building Status: Approved with Conditions Reviewer: Jeanine Bourke Approval Date: 06/08/2010
 Note: Ok to Issue:

- 1) Application approval based upon information provided by applicant. Any deviation from approved plans requires separate review and approval prior to work.
- 2) All penetrations through rated assemblies must be protected by an approved firestop system installed in accordance with ASTM 814 or UL 1479, per IBC 2003 Section 712.
- 3) Separate permits are required for any electrical, plumbing, sprinkler, fire alarm HVAC systems, heating appliances, commercial hood exhaust systems and fuel tanks. Separate plans may need to be submitted for approval as a part of this process.

Dept: Fire Status: Approved with Conditions Reviewer: Capt Keith Gautreau Approval Date: 05/21/2010
 Note: Ok to Issue:

- 1) As-built documents shall be submitted in pdf to the Building Inspections Office upon completion of job.
- 2) All fire alarm records required by NFPA 72 should be stored in an approved cabinet located at the FACP labeled "FIRE ALARM RECORDS". Records cabinet, FACP, annunciator(s), and pull stations shall be keyed alike.
- 3) System acceptance and commissioning must be co-ordinated with alarm and suppression system contractors and the Fire Department. Call 874-8703 to schedule.
- 4) The Fire Department will require Knox locking caps on all Fire Department Connections on the exterior of the building.
- 5) All smoke detectors and smoke alarms shall be photoelectric. Carbon Monoxide detectors are required in the dwelling units by State law.
- 6) A separate Suppression System Permit is required for all new suppression systems or sprinkler work effecting more than 20 heads.
- 7) The sprinkler system shall be installed in accordance with NFPA 13.
- 8) All construction shall comply with NFPA 1 and 101.
- 9) Installation of a Fire Alarm system requires a Knox Box to be installed per city ordinance

Location of Construction: 568 Riverside St	Owner Name: PROLERIZED NEW ENGLAND C	Owner Address: 69 ROVER STREET	Phone: 781 873-1662
Business Name:	Contractor Name: Patco Construction	Contractor Address: 1293 Main St Sanford	Phone (207) 324-5574
Lessee/Buyer's Name	Phone:	Permit Type: Commercial	

- 10 The fire alarm system shall comply with the City of Portland Standard for Signaling Systems for the Protection of Life and Property. All fire alarm installation and servicing companies shall have a Certificate of Fitness from the Fire Department.
- 11 The Fire alarm and Sprinkler systems shall be reviewed by a licensed contractor[s] for code compliance. Compliance letters are required.
- 12 Emergency lights are required to be tested at the electrical panel on the same circuit as the lighting for the area they serve.
- 13 Sprinkler protection shall be maintained.
Where the system is to be shut down for maintenance or repair, the system shall be checked at the end of each day to insure the system has been placed back in service.
- 14 Fire Alarm system shall be maintained.
If system is to be off line over 4 hours a fire watch shall be in place.
Dispatch notification required 874-8576.
- 15 A separate Fire Alarm Permit is required for new systems; or for work effecting more than 5 fire alarm devices; or replacement of a fire alarm panel with a different model .
- 16 Fire department connection type and location shall be approved in writing by fire prevention bureau.

Comments:

5/18/2010-mes: Rick Knowland gave an ok on issuing the bldg permit when it is ready.

6/1/2010-jmb: Left vcmmsg for Dennis W. At Patco for initial items needed based on review, 1.consistency of the design application from architect and VP Buildings for use group classification, type of construction, 2.statement of SI does not include list of agents, 3. No geotech report, 4. Wall types are not consistent or not labeled, 5. Need Com Check for IECC.

6/2/2010-jmb: Received submittals regarding review on 6/2 and 6/3

6/8/2010-jmb: Review complete, received planning and DRC approval

BUILDING PERMIT INSPECTION PROCEDURES

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

or email: buildinginspections@portlandmaine.gov

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

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

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

 X **Periodic Re-Bar Schedule Inspection: Prior to pouring concrete**

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

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

 X **The final report of Special Inspections shall be submitted prior to the final inspection or the issuance of the Certificate of Occupancy**

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

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

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



R. W. Gillespie & Associates, Inc.

Geotechnical Engineering • Geohydrology • Materials Testing Services

01 October 2009

Geoffrey R. Aleva, P.E.
Civil Consultants
P.O. Box 100
South Berwick, Maine 03906-0010

Subject: Geotechnical Evaluation
Proposed Scrap Metal Recycling Facility
Portland, Maine
RWG&A Project No. 427-49

RECEIVED
JUN - 2 2010
Dept. of Building Inspections
City of Portland Maine

Dear Mr. Aleva:

R. W. Gillespie & Associates, Inc., (RWG&A) is pleased to present the results of our geotechnical evaluation for Prolerized New England Company, LLC's proposed scrap metal recycling facility located on Riverside Street in Portland, Maine. This work was performed in general accordance with RWG&A's revised proposal to you dated 08 April 2009 (note: RWG&A Proposal No. P-6512GI). The purpose of the geotechnical evaluation was to obtain information regarding subsurface soil conditions and properties on which to provide recommendations for design and construction of a stormwater management pond, truck scales, building foundations, ground floor slabs, flexible pavements inside buildings, and seismic characteristics.

The attached report presents the results of RWG&A's subsurface explorations, laboratory testing, and engineering evaluations, and provides geotechnical design recommendations. In summary, subsurface conditions generally consist of either fill or topsoil over naturally deposited silty clay and silty sand extending to refusal. Up to 3 feet of fill was encountered in explorations performed in the proposed office, processing, and bailer building; up to 6 feet of fill was encountered in boring B-8 in the proposed flat auto storage building; and, up to 14 feet of fill was encountered in explorations in the proposed stormwater management pond footprint. Groundwater was not observed in the test borings.

Existing fill should be removed in its entirety and replaced with compacted structural fill beneath proposed building locations. The proposed office, processing, and bailer building area

300 International Dr., Ste 170
Portsmouth, NH 03801
603-427-0244 • Fax 603-430-2041


Corporate Office
86 Industrial Park Rd., Ste 4
Saco, ME 04072
207-286-8008 • Fax 207-286-2882
www.rwgillespie.com

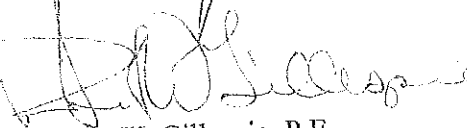
P.O. Box 289
Augusta, ME 04344
207-623-4914 • Fax 207-623-3429

should be preloaded to reduce post-construction settlement. The proposed buildings may be supported on spread and/or continuous footings bearing on structural fill and/or naturally deposited soils, and the floors may be slab-on-grade construction. Although groundwater was not observed in the test borings, surface water is expected to perch on top of naturally deposited silty clay soils near exterior finish grades and collect in perimeter foundation backfill. Therefore, perimeter foundation drainage is recommended. Test pits and proofrolling should be performed to evaluate existing fill beneath stormwater management pond subgrade

We have enjoyed working with Civil Consultants on this project. If you have any questions or if we may be of further service, please contact us.

Very truly yours,
R. W. GILLESPIE & ASSOCIATES, INC.


Scott R. Dixon, P.E., C.G.
Senior Geotechnical Engineer


Robert W. Gillespie, P.E.
Principal Geotechnical Engineer

SRD/EJW/RWG:md
In quadruplicate

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Report
of
GEOTECHNICAL EVALUATION
for
PROPOSED SCRAP METAL RECYCLING FACILITY
PORTLAND, MAINE

Prepared
for
CIVIL CONSULTANTS
SOUTH BERWICK, MAINE

Prepared
by
R. W. GILLESPIE & ASSOCIATES, INC.
SACO, MAINE

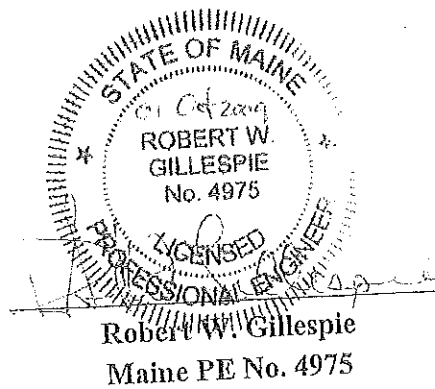


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- Appendix A. Test Boring Exploration Logs
- Appendix B. Test Pit Exploration Logs
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1.0 INTRODUCTION

1.1 Background

The proposed buildings are part of a project to redevelop an approximately 12.9 acre parcel that is located within a larger, 53.5-acre property formerly occupied by the Lucas Tree Expert Co., facility. The property is located at 636 Riverside Street. Our understanding of the current site conditions and proposed construction is based on communications with Civil Consultants and review of the following documents:

- Sheet No. C-2, titled "Site Plan," dated 14 February 2008, revised 06 November 2008, prepared by Civil Consultants.
- Sheet No. C-3, titled "Site Plan," dated 04 September 2009, of the 2009 Sitework Contract bid set plans, prepared by Civil Consultants.
- Sheet No. A-100, titled "Proposed Building Elevations," dated 02 July 2007, prepared by Civil Consultants.

Sheet C-2 shows a combined office, metal recycling processing, and bailer building in the central part of the site, a non-ferrous storage building at the east side of the site, and a flat auto storage building in the west part of the site. It is understood that the buildings will be pre-engineered, metal buildings with ground floor slabs and no below grade spaces. The plans indicate the office, processing, and bailer building will be two stories high. The non-ferrous storage and flat auto storage buildings will be three-sided structures. It is understood that the bailer area and the flat auto storage building will not be constructed as part of initial site and building development. Flexible asphalt pavements are proposed to be used in the processing and bailer areas and at the flat auto storage building. The non-ferrous storage building is proposed to have a concrete ground floor slab.

Additional building design information such as foundation locations, column spacings, structural loads, settlement tolerances of the structures or manufacturing equipment, and other special design features were not available when this report was prepared. Evaluation and recommendations presented are based on column loads of 60 kips and tolerable total settlements of 1-inch and tolerable differential settlements of 3/4-inch between adjacent columns. R.W. Gillespie & Associates, Inc. (RWG&A) should be notified if the design loads or tolerable settlement amounts (Note: as determined by the building designers) or site grading differ from those in geotechnical evaluations.

The proposed stormwater management pond is located in the west part of the site at the top of an existing fill slope pitched at about 2 horizontal to 1 vertical. The pond bottom elevation is 57 feet which is about 7 feet below current ground surface and the top of the perimeter containment berm would be at elevation 66 feet which corresponds to about 2 feet above existing grade.

RWG&A conducted test pit explorations at the site in June 2007 as part of a geotechnical investigation for design and construction of onsite pavement sections (RWG&A Project No. 427-44). Refer to the Report of Geotechnical Investigation dated 21 August 2007 for additional information. Logs of explorations from the August 2007 report are provided in Appendix B for informational purposes only.

1.2 Scope

This evaluation was performed to develop site-specific soil and laboratory data, and to make geotechnical evaluations for the proposed construction. As performed, our scope of services included the following items:

- Prepared a program of subsurface explorations to obtain information for foundation and earthwork design.
- Arranged to have the subsurface explorations performed by a local contractor. Provided technical monitoring of the exploration activities so that depths, locations, and sampling methods could be modified in response to the subsurface conditions encountered.
- Performed laboratory tests on selected soil samples recovered from the subsurface explorations to aid in soil description and for determination of engineering properties needed for foundation design and site development evaluations.
- Conducted engineering evaluations of the geotechnical aspects of foundation and slab design, and stormwater management pond design and location.
- Prepared this report presenting the findings, conclusions, and recommendations of the geotechnical evaluation.

As requested by Civil Consultants, three of the four soil borings planned for the flat auto storage building were removed from the field exploration program since the building will not be constructed as part of initial site development. It is understood that additional explorations and geotechnical evaluations will be needed prior to final design and construction of the flat auto storage building.

RWG&A's scope of services for this geotechnical evaluation did not include an Environmental Site Assessment relative to oil and hazardous materials or evidence of a potential release or threat of oil or hazardous materials on, below, or around the site, nor an assessment of their impacts on site development. Any statement in this report, or on the exploration logs, regarding odors or unusual or suspicious conditions is for informational purposes only and is not intended to constitute an environmental assessment.

2.0 SUBSURFACE EXPLORATION

The subsurface exploration program consisted of eleven test borings designated B-1 through B-8 and B-12 through B-14 drilled during 12 to 14 August 2009 by Northern Test Borings, Inc., of Gorham, Maine, using a track-mounted drill rig. The test borings were advanced to depths ranging from 17 to 42.3 feet below local ground surface. Split-barrel sampling with standard penetration testing (*ASTM D1586, Standard Test Method for Penetration Test and Split-Barrel Sampling of Soils*) was performed at approximately 5-foot intervals. Borings B-1 through B-6 and B-14 were advanced with hollow stem augers. Borings B-7, B-8, B-12, and B-13 were advanced with wash rotary techniques within steel cased and/or open boreholes. In lieu of split-barrel sampling, field vane tests (*ASTM D2573, Standard Test Method for Field Vane Shear Test in Cohesive Soil*) were performed in stiff to soft cohesive soils encountered in borings B-7, B-12, and B-13. Two thin-walled tubes samples (*ASTM D1587, Standard Practice for Thin-Walled Tube Geotechnical Sampling of Soils*) of medium stiff to soft cohesive soils were taken in boring B-7.

Exploration activities were coordinated and monitored by RWG&A personnel who prepared the exploration logs. The soils were described in general accordance with *ASTM D2488, Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)*. Logs of the test boring explorations are included in Appendix A. Logs of test pit explorations are provided in Appendix B for informational purposes only. The descriptions represent RWG&A's interpretation of subsurface conditions at the exploration location on the particular date the explorations were made. Stratification lines shown on the exploration logs represent the estimated boundaries between the different soil types encountered and approximate refusal depths; the actual transitions will be more gradual and vary over short distances.

Figure 2, *Exploration Location Plan*, shows the locations of the test boring and June 2007 test pit explorations. Exploration locations were selected by RWG&A prior to drilling and were surveyed in the field by Civil Consultants, except for boring B-1 which was estimated by RWG&A by taping and/or pacing from features visible at ground surface and shown on plans provided to us. Exploration locations should be considered accurate only to the degree implied by the methodology used to determine them.

3.0 LABORATORY TESTING

Laboratory testing was performed on select soil samples recovered from the explorations to aid in soil description and for determination of engineering properties for use in foundation design and site development analysis. The laboratory testing program consisted of sieve analyses, natural moisture content determinations, measurements of undrained shear strength using a Geonor vane tester, and a one-dimensional consolidation test. The tests were performed in general accordance with the following methods and procedures:

- *ASTM D2216, Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass.*
- *ASTM D422, Standard Test Method for Particle-Size Analysis of Soils.*
- *ASTM D2435, Standard Test Method for One-Dimensional Consolidation Properties of Soils.*

The Geonor[®] vane shear strength tests were performed in accordance with the equipment manufacturer's recommended procedures. Moisture content test results are presented on the exploration logs. Results of the other laboratory tests are presented in Appendix C, *Laboratory Test Results*. All tests were conducted at the RWG&A soil and materials testing laboratory in Saco, Maine, which is accredited by the American Association of State Highway and Transportation Officials (AASHTO) for the test performed.

4.0 SUBSURFACE CONDITIONS

4.1 Subsurface Soils

Four different soil units were encountered in the explorations: topsoil, fill, silty clay, and silty sand. In general, the conditions encountered consisted of either fill or topsoil at current ground surface underlain by silt clay marine deposits, which in turn are underlain by silty sand extending to refusal. A layer of topsoil ranging from approximately 4 to 9 inches thick was encountered at the ground surface at borings B-1, B-2, B-3, B-5, and B-6. Fill was encountered at ground surface at the remaining boring locations, and underlying topsoil at borings B-2 and B-5. Fill extended to depths below current ground surface ranging from 1.5 feet at B-2 and B-4 to 14 feet at B-13. Fill generally consisted of silty sand with gravel; fill encountered at borings B-8 and B-12 contained wood, organic matter, pieces of asphalt, and pockets of silty clay. A fill layer of sandy silt with clay was encountered from about 10 to 14 feet depth at boring B-13.

Where drilling advanced through the entire layer, naturally deposited silty clay soils of marine origin ranged from about 22 feet thick at B-1 to 33 feet thick at B-7. A layer of silty sand

underlying silty clay ranged from about 1.5 to 7 feet thick. The consistency of silty clay soils was typically stiff in the upper part of the deposit and became softer with increasing depth.

Five explorations (Note: B-1, B-7, B-8, B12, and B-13) were extended to refusal at depths of about 26.5 to 42.3 feet below current ground surface. The refusal surfaces are interpreted to represent either possible bedrock or boulders/cobbles in glacial till. Please refer to the test boring exploration logs in Appendix A for detailed descriptions at specific locations.

Buried construction debris was encountered in test pits RWG&A conducted in June 2007 as part of a geotechnical investigation for design and construction of onsite pavement sections (RWG&A Project No. 427-44). Please refer to the test pit exploration logs in Appendix B for detailed descriptions at specific locations.

4.2 Groundwater

Free water was not observed in the test borings. Although groundwater was not observed in the test borings, infiltrated surface water is expected to perch on top of naturally deposited silty clay soils near exterior finish grades and collect in perimeter foundation backfill. In general, groundwater levels at the site will fluctuate due to season, temperature, rainfall and construction activity in the area.

5.0 EVALUATION OF GEOTECHNICAL DATA

5.1 General

Engineering evaluations for this project are based on the subsurface explorations, laboratory testing data, and the conceptual construction information currently available to RWG&A. This report is considered suitable for planning and design of the office and processing building, the non-ferrous storage building, and the stormwater management pond, and considered suitable for planning of the bailer addition, flat auto storage building, and truck scales. It is recommended foundation design and construction be in compliance with the requirements of all applicable ordinances, regulations, and codes.

5.2 Proposed Construction

It is understood that the buildings will be pre-engineered, metal buildings with ground floor slabs and no below grade spaces. The plans indicate the office, processing, and bailer building will be two stories high and have a finished floor elevation at 75.5 feet, which ranges from approximately 1.5 feet to 7.5 feet above current ground surface. It is understood that flexible

asphalt pavement is planned in the processing and bailer areas. The office and processing part of the building will be approximately 60 feet by 180 feet in plan area and the bailer area will be approximately 80 feet by 100 feet in plan. The bailer area is planned as a future addition to the office and processing building.

The non-ferrous storage building will be a three-sided structure approximately 130 feet by 30 feet in plan area with five storage bins. Proposed finished floor level is elevation 74 feet which is 1 to 2 feet above existing ground surface. The east wall of the building would retain about 6 feet of fill. Plans indicate that reinforced concrete pavement is proposed at the non-ferrous storage building. The flat auto storage building will have a plan area of 50 feet by 80 feet and will be a three-sided structure. The proposed ground floor elevation of 68 feet is approximately 2 feet above current grades. Flexible asphalt pavement is planned at the flat auto storage building. The flat auto storage building is planned as a future addition to the site. Both storage buildings are planned to be unheated.

Additional building design information such as foundation locations, column spacings, structural loads, settlement tolerances of the structure or manufacturing equipment, and other special design features were not available when this report was prepared. Footing settlement for the office and processing building was estimated using a maximum column loading of 60 kips, with allowable total post-construction settlement of 1-inch and post-construction differential settlement of 3/4-inch between adjacent columns. RWG&A should be notified if the design loads or tolerable settlement amounts (Note: as determined by the building designers) or site grading differ from those in geotechnical evaluations.

The proposed stormwater management pond is located in the west part of the site at the top of a fill slope pitched at about 2 horizontal to 1 vertical. Inside slopes will be pitched no steeper than 3H:1V. The pond bottom elevation is 57 feet which is about 7 feet below current ground surface and the top of the perimeter containment berm would be at elevation 66 feet which corresponds to about 2 feet above existing grade.

5.3 Pavement Design Considerations

Loader traffic and AASHTO methods assuming one Caterpillar, Inc., Model 980 rubber-tired wheel loader, operating continuously, 12 hours per day, 6 days per week were used to evaluate pavement sections for the interior ground floor surfaces. It is RWG&A's opinion that concrete ground floor slabs designed to support proposed loading will perform better (e.g., less rutting, shoving, delaminating, etc.) and require less maintenance than flexible asphalt pavement.

The AASHTO method uses equivalent single axle loads (ESAL) to determine both rigid and flexible pavement thicknesses. The ESALs are calculated by converting given axle loads into

18,000 pound axle loads using AASHTO methods. Silty clay is expected at subgrade beneath flexible pavement inside the processing and bailer areas. Pavement sections were developed using a CBR value of 3 for silty clay. The following table shows the ESALs calculated for both 10 year and 20 year design life.

Design Life	Heavy Duty Rigid Pavement	Heavy Duty Flexible Pavement
10 Years	10,300,000	9,300,000
20 Years	20,500,000	18,600,000

The AASHTO method uses pavement serviceability index, which is an indicator of the level of service provided to users; the index is related to cracking, patching, and rut depth. An initial pavement serviceability index of 4.2 for new pavement and a terminal serviceability index of 2.0 were used in evaluations. The terminal serviceability index of 2.0 corresponds to 85 percent of drivers/passengers rating the pavement and ride condition as unacceptable.

The on-site soils are highly to moderately frost susceptible. In the event that some portions of the processing and bailer building are exposed to freezing temperatures, full-depth frost protection of interior pavements exposed to freezing temperatures would require a total pavement section of about 4 feet.

5.4 Foundation Considerations

Fill was encountered in four of the borings in the proposed office, processing, and bailer building footprint (Note: B-2, B-4, B-5, and B-7), and extended to depths of about 1.5 to 3 feet below current ground surface. Fill extended to depths of about 6 feet below current ground surface at boring B-8 in the proposed flat auto storage building footprint, and at boring B-14 near the proposed truck scales locations. Subgrade preparation prior to placement of this existing fill in areas of proposed construction, and methods used to place and compact the fill are uncertain. Existing fills encountered in explorations are not considered suitable to support shallow spread or column footing foundations. Since site preparation earthwork and building construction might occur independently of one another, and foundation dimensions and locations are uncertain at this time, RWG&A recommends that the fill beneath proposed buildings and scales should be excavated to naturally deposited, inorganic soil and replaced with compacted structural fill.

With appropriate site preparation, the naturally deposited soils or compacted structural fill are considered suitable for support of conventional spread footing foundations. Post-construction total and differential settlements of less than 1-inch and 3/4-inch between columns, respectively,

are expected in areas where less than about 5.5 feet of new fill is placed to achieve design final grades. In areas where more than about 5.5 feet of new fill is planned, the new loads from fill and building foundations are expected to induce consolidation in underlying silty clay marine deposits on the order of 1 to 2 inches. RWG&A recommends a delay in office, processing, and bailer building foundation construction following placement of new fill up to proposed finished floor level to reduce post-construction settlement. It is estimated that a preload duration of approximately 1 to 2 months would be needed.

Settlement platforms should be used to determine the amount and rate of settlement that occurs and to verify conclusion of the preload period. Two suggested settlement platform locations, with each location consisting of a deep and surface settlement platform pair, are indicated on Figure 2; typical installation details of the settlement platforms are shown on Figure 3. It should be noted that the above preload duration does not include the time to place the fill. The estimated preload duration is approximate; the actual duration may be shorter or longer. To the extent practicable, it is recommended that the preload fill be placed early in the construction schedule and left in place as long as possible.

The future location of planned buildings should be considered relative to the locations of currently planned site improvements. Construction activities expected for future building additions, such as overexcavation and replacement of unsuitable fill soils beneath buildings and preloading, should be considered in project planning. Future earthwork should not be allowed to disturb or undermine existing structures or the stormwater management pond.

5.5 Foundation Drainage

Although groundwater was not observed in the subsurface explorations, it is anticipated that infiltrated surface water and/or seasonal high groundwater will tend to perch on native soils and collect around building foundations. It is recommended perimeter footing drains be provided around the proposed buildings and scales to reduce accumulation of water and fugitive moisture.

5.6 Interior Areas Exposed to Freezing Temperatures

Due to open-sided construction at the non-ferrous and flat auto storage buildings, it is anticipated that interior locations might be exposed to freezing temperatures; portions of the processing and bailer building, such as near traffic entrances, might also be exposed to freezing temperatures. Footings in these buildings exposed to freezing temperatures should be constructed 4 feet below finish floor for frost protection. Interior floor surfaces exposed to freezing temperatures where frost heaving would be problematic should be underlain by a minimum of 4 feet of structural fill or recommended pavement section base materials.

5.7 Stormwater Management Pond

Proposed grading for the stormwater management pond indicates that cuts for pond subgrade will extend into uncontrolled fill containing pervious sands (Note: encountered at borings B-12 and B-13). The pond bottom and sides should be lined with textured low linear density polyethylene (LLDPE) underlain by 18 inches of compacted clay. Liner design and construction considerations include venting of gases below the liner due to fluctuating groundwater levels below the liner, protection against uplift due to hydrostatic pressure from groundwater, liner protection against damage during construction and maintenance, pipe and other structure penetrations through the liner, and stability of fill overlying the liner.

Based on grading provided on site plans, the pitch of the existing fill slope located west of the proposed pond footprint varies from about 1.6H:1V (Note: horizontal to vertical) to 1.9H:1V. This slope is susceptible to shallow surface sloughing at its current pitch. Alternatives to improve slope stability include decreasing slope pitch, excavating and replacing existing fill with compacted and/or reinforced fill, and placing a layer of riprap on the slope surface. Based on communications with Civil Consultants, it is understood that grading the existing slope to 2H:1V and placing a layer of riprap is the preferred alternative for slope protection.

5.8 Construction Considerations

Site Preparation: Up to 3 feet of fill was encountered in explorations performed in the proposed office, processing, and bailer building; up to 6 feet of fill was encountered in boring B-8 in the proposed flat auto storage building and boring B-14 at the truck scales locations; and, up to 14 feet of fill was encountered in explorations in the proposed stormwater management pond footprint. The composition of, and methods used to place and compact the fill are uncertain. Fill containing organic material was encountered in borings B-8 and B-12. RWG&A recommends that existing fill be removed in its entirety and replaced with compacted structural fill beneath proposed buildings in a zone extending at a 1H:1V line down and outward from building perimeter to the top of the naturally deposited, inorganic soil or a minimum of 10 feet laterally from the building perimeter, whichever is greater.

RWG&A recommends that test pits and proofrolling be performed to evaluate existing fill beneath the stormwater management pond subgrade to evaluate if fill is suitable to remain in place or needs to be excavated and replaced with suitable materials. Identified areas of loose fill, organic material, and/or areas that yield excessively during proof rolling should be over excavated and replaced with structural fill. Test pits should also be backfilled with compacted fill

Both existing fill and native soils have high fines (i.e., silty and clay particles) contents and are expected to be susceptible to disturbance by construction traffic where exposed at subgrade prior to

fill placement or foundation construction. It is the Contractor's responsibility to maintain the integrity of exposed subgrade soils for subsequent construction activities. Exposed subgrade soils disturbed prior to foundation construction should be removed and replaced with compacted structural fill.

Construction Dewatering: The on-site soils are very sensitive to disturbance when wet. To reduce disturbance of exposed subgrade soils, it will be important to divert runoff, provide positive grading to shed seepage and runoff from flat areas, and compact exposed soils to reduce rutting, ponding, and surface water infiltration.

Groundwater was not observed in the explorations. If required, RWG&A anticipates groundwater control can be accomplished through the use of ditches, sumps, and open pumping. Temporary detention ponds, trenches, ditches, and dewatering sumps should not be made within or near areas to be filled.

Use of On-site Soils: It is anticipated that the surficial topsoil will be stripped and either incorporated into proposed landscaped areas, where practical, or hauled off-site. Topsoil and organic materials are not considered suitable for use as common fill.

The on-site, inorganic fill soils are considered suitable for use as common fill beneath landscaped areas, but are not suitable for use beneath or within 10 feet of buildings. Structural fill should be used as fill beneath the proposed and future buildings up to design floor slab or interior pavement section base.

The naturally deposited soils from foundation and pond excavations will generally consist of sandy, silty, clayey soils that are not suitable for use in pavement sections or as structural fill but, with proper moisture conditioning and earthwork handling, might be used as common fill in landscaped areas. If on-site fill or naturally deposited soil is proposed for use other than common fill, the soil should be stockpiled separately and tested to determine if it meets specification requirements for its intended use.

The sandy, silty, clayey soils are moisture sensitive due to their high fines content and will be difficult to place and compact when they are wet. Moisture-density relationships should be established during construction to provide guidance for appropriate working moisture contents. Working moisture content for moisture sensitive soils typically ranges from about minus three to plus one percent of optimum moisture content.

6.0 RECOMMENDATIONS

The recommendations presented below are provided for use in planning and design of new building foundations, ground floor slab, and interior pavements at the office and processing building and the non-ferrous storage building, and of the stormwater management pond at Prolerized New England Co., LLC's proposed scrap metal recycling facility. The recommendations are considered suitable for planning of the bailer addition, flat auto storage building, and truck scales. RWG&A recommends foundation design and construction be in compliance with the requirements of all applicable ordinances, regulations, and rules. Currently, it is understood that the adopted building code for the City of Portland and for this project is the 2003 *International Building Code*[®] (IBC 2003)

6.1 Site Preparation

1. All topsoil, peat, organic material, debris, rubbish, frozen soils, muck, loose, or disturbed soils and other unsuitable materials should be removed from areas within 10 feet of proposed buildings. Topsoil may be stockpiled outside the construction area for reuse in landscaped areas. Unsuitable materials include uncontrolled fills (i.e., fills placed without systematic densification and moisture control to an acceptable in-place density), asphaltic pavement, and deleterious substances.

The existing fill beneath proposed buildings and scale foundations should be excavated down to naturally deposited, inorganic soil and replaced with compacted structural fill in a zone defined by a 1H:1V line extending down and outward from building perimeter to the top of the naturally deposited, inorganic soil or a minimum of 10 feet laterally from the building perimeter, whichever is greater. Excavations in naturally deposited silty clay should be made with equipment fitted with smooth-edged buckets

A combination of test pits and proof rolling should be performed in the proposed stormwater management pond area to evaluate existing on-site fill for reuse either as fill to remain in place, or as fill to be excavated, placed, and compacted at other locations. Test pits should be performed at a frequency of one per every 2,000 square feet of the pond footprint and be advanced to naturally deposited, inorganic soil. Identified areas of loose fill, organic material, and/or areas that yield excessively during proof rolling should be over excavated and replaced with compacted structural fill.

After the topsoil and unsuitable fill have been removed from the proposed building areas, the subgrade should be compacted with several passes each way with a vibratory, smooth drum compactor and be proof rolled with a fully loaded dump truck prior to the placement

of new fill. If high groundwater is present during subgrade preparation, then the subgrades should be compacted with a smooth drum roller in the "static" mode only. Naturally deposited silty clay should not be proofrolled. Soft areas or areas that yield excessively during proofrolling should be overexcavated and replaced with compacted structural fill.

2. Site grading should provide positive drainage away from constructed facilities both during and after construction.
3. Depending on the depths of excavations and season, dewatering might be needed. It should be practical to dewater excavations extending to 1 foot below groundwater by open pumping methods. Excavations deeper than 1 foot below groundwater may require the use of side trenches within or adjacent to excavations, or other dewatering methods. Surface runoff and infiltration of groundwater should be controlled so that excavation, filling, and foundation construction can be completed in-the-dry.

6.2 Site Filling

4. The on-site inorganic soils are not suitable for use in pavement sections or as structural fill but may be used as common fill in landscaped areas. In addition, the on-site inorganic soils are generally highly frost susceptible and moisture sensitive and will be difficult to place and compact. The moisture content will need to be tightly controlled for placement and compaction to the required density without excessive weaving, pumping, or other types of instability.
5. Common fill should consist of inorganic mineral soil free of ice, loam, organic, or other unsuitable materials. Common fill may contain cobbles up to 2/3 of the lift thicknesses used to place and compact it; recommended maximum lift thickness for common fill before compaction is 12 inches.
6. Only compacted structural fill is recommended for use as fill beneath the proposed buildings up to floor section subgrade and as backfill around foundations. Compacted structural fill below the building should extend to the lateral limits defined by a 1H:1V line extending down and outward from building perimeter to the top of the naturally deposited, inorganic soil or a minimum of 10 feet laterally from the building perimeter, whichever is greater.
7. Structural fill should be a well-graded sand and gravel mixture free of roots, topsoil, loam, organic material, and any other deleterious materials, as well as clods of silt or clay, and meet the following gradation requirements:

Screen or Sieve Size	Percent Passing
6 inches	100
3 inches	70 - 100
No. 4	35-70
No. 40	5-35
No. 200	0-5

(Note: Maximum particle size should be limited to 3 inches within 2 feet of foundation walls, footings, and floor slabs.)

8. In open areas, structural fill should be placed in level, uniform lifts not exceeding 12 inches in uncompacted thickness and be compacted with self-propelled compaction equipment. In confined areas and within 4 feet of foundation walls, structural fill should be placed in lifts not exceeding 6 inches in uncompacted thickness and be compacted with hand-operated compaction equipment. All fill placed for footing and slab support should be structural fill compacted to at least 95 percent of the maximum dry density as determined by *ASTM Standard D 1557 Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m³))*.
9. Fill required for the proposed office, processing, and bailer building should be placed to subgrade level early in the construction schedule to preload underlying silty clay marine deposits and reduce post-construction settlement of building foundations. The area for preload fill placement should extend a minimum of 20 feet laterally outside the building perimeter.
10. Settlement platforms to measure the rate and amount of settlement should be installed before fill placement. Planned locations of the settlement platforms are indicated on Figure 2; details are shown on Figure 3. The deep settlement platforms should be set on undisturbed, native soil subgrade. Fill should be placed to seat the settlement platform bases prior to taking initial survey readings. Depending on fill thickness, the settlement platforms might need to be extended as the filling progresses.
11. Platform and top of fill elevations should be surveyed at each location twice per week during placement of permanent fill, and for a period of one month, followed by a frequency of twice per month thereafter for the duration of the preload. Scheduled settlement readings should be taken by RWG&A. The Owner's project surveyor might also take independent readings when requested. Survey readings should be evaluated by RWG&A to determine when the preload period can be concluded. It is estimated that a preload duration of

approximately 1 to 2 months would be needed. The Contractor should be responsible for protecting the settlement platforms from damage and vandalism.

12. The above estimated preload duration is considered approximate; the actual duration of the preload period might be shorter or longer and will depend on the amount and rate of settlement as determined by the settlement platforms. Estimated preload duration was based on fill with an average, in-place total (i.e., moist) unit weight of 125 to 135 pounds per cubic foot. Fill with a higher or lower unit weight will require re-evaluation and changes to the preload duration. In any event, the preload period should continue until RWG&A indicates in writing that it can be concluded.

6.3 Foundations

13. With proper site preparation, the proposed buildings may be supported on spread and/or continuous footings bearing on the naturally deposited materials or compacted structural fill. The footings should be proportioned for an allowable contact pressure of 1,500 pounds per square foot where silty clay is at foundation subgrade and 3,000 pounds per square foot where foundations are underlain by a minimum of 2 feet of compacted structural fill. Total settlements of less than 1-inch and differential settlements of less than 3/4-inch between adjacent columns are anticipated provided that the office and processing building and future bailer building are preloaded and adequate settlement has occurred. Minimum footing width should be in accordance with concrete design and building code requirements, and no less than 2 feet.
14. Final subgrade preparation should include recompaction of fill subgrades with hand-guided, vibratory compaction equipment. Following recompaction and prior to placement of concrete, care should be taken to limit disturbance of the bearing surfaces. Any loose, softened, or disturbed material due to construction traffic should be removed prior to placement of concrete. Native soil subgrades are moisture sensitive and expected to be susceptible to disturbance from construction traffic; these soils should not be recompacted with vibratory compaction equipment.
15. For heated buildings, it is recommended that design bottom of footing level for exterior footings bearing on structural fill or naturally deposited soil be a minimum of 4 feet below lowest adjacent ground surface exposed to freezing. At heated interior locations, footings may be designed to bear a minimum of 2 feet below top of ground floor slab. If exposure to freezing is anticipated, either during or following construction, then both exterior and interior footings should be placed a minimum of 4 feet below lowest adjacent surface exposed to freezing.

16. The integrity of natural soils and structural fill must be maintained during cold weather conditions. Footing and slab subgrades should not be allowed to freeze. The existing fill and naturally deposited soils are considered moderately to highly frost susceptible. Freezing of subgrade soils beneath footings and floor slabs may result in frost heaving and post-construction settlement. The Contractor should make every effort to prevent freezing of subgrade soils. In the event frost penetration occurs, structural fill or naturally deposited soils should be removed and replaced to the depth of the frozen soils. At no time should frozen material be placed as fill.
17. The building should be designed to withstand lateral, uplift, and overturning forces due to earthquake. The in-place soils encountered in the explorations are not considered susceptible to liquefaction. In accordance with the IBC 2003, the soil profile at the site is classified as Site Class D.
18. Lateral loads from wind and earthquake may be resisted by friction or adhesion between the bottoms of footings and supporting granular or fine-grained subgrades, respectively, and by passive earth pressures against the sides of the foundation. A friction coefficient of 0.35 should be used in design of footings constructed on compacted structural fill, and sliding resistance of 250 psf should be used in design of footings constructed on medium stiff to stiff naturally deposited, inorganic soils. An equivalent fluid pressure of 175 pcf against sides of footings should be used.
19. Only compacted structural fill should be used as backfill of footings, piers, and foundation walls.

6.4 Foundation Drainage

20. Perimeter footing drains should be installed around buildings. The drains should be installed at the exterior bottom of footing level or at least 18 inches below the adjacent finished floor level, whichever is lower. The drains should consist of 4-inch (minimum) diameter perforated pipes bedded in 2 cubic feet of MaineDOT 703.22 Underdrain Backfill material Type C per linear foot. The drainage stone should be completely wrapped in a filter fabric such as Mirafi 140N.
21. Flow from the foundation drains should be conveyed by gravity to a surface drainage feature or storm drain that will be free flowing at all times and under all conditions. Multiple outlets should be provided so as not to be dependent on a single flow path. Roof drains should not be connected to the foundation drains.

6.5 Cast-in-Place Concrete Retaining and Foundation Walls

22. Structural fill should be used as backfill next to retaining walls such as are proposed at the non-ferrous storage building. Only vibratory plate compactors and/or walk behind rollers should be used to compact backfill within 4 feet of retaining and foundation walls.
23. Retaining walls that are able to rotate may be designed for active earth pressure conditions. The walls should be designed to withstand an active equivalent fluid unit weight of 45 pounds per cubic foot ($K_a = 0.33$). Lateral load from vehicle surcharge can be accounted for by applying a uniform vertical pressure equal to 250 pounds per square foot multiplied by the active earth pressure coefficient.

The above equivalent fluid unit weights assume provisions are made to prevent the rise of water above the bottom of wall (i.e., footing drains) and that the walls are backfilled with structural fill.

24. All fully drained foundation walls with unbalanced earth pressures acting upon them should be designed to withstand an at-rest equivalent fluid unit weight of 65 pounds per square foot ($K_a = 0.5$). Any retaining walls that cannot be allowed to move or are otherwise restrained, such as ones attached to building foundations at loading docks, should be designed for at-rest conditions as well. Lateral load from vehicle surcharge can be accounted for by applying a uniform vertical pressure equal to 250 pounds per square foot multiplied by the at-rest earth pressure coefficient.
25. It is also recommended that retaining walls be designed with the resultant load within the middle third of the footing and that a maximum contact pressure at the toe of wall be no greater than the maximum allowable bearing pressures for the buildings provided above.

6.6 Ground Floor Slabs

26. Interior floor slabs may be slab-on-ground construction based on a subgrade modulus of 150 pounds per cubic inch. The slab should be underlain by a minimum of 12 inches of compacted structural fill. A vapor retarder should be provided below the floor slab to minimize moisture infiltration. It is anticipated design and construction details of the floor slab, including concrete thickness, reinforcing, bedding, control joint depth and spacing, and the vapor retarder type and thickness, will be provided by the project Structural Engineer.
27. Exterior slabs at entrances, vehicle access doors, and other locations should be underlain by a minimum of four feet of underdrain stone. Underdrain stone should consist of *State of Maine Department of Transportation Standard Specifications Revision of December 2002*, 703.22 Underdrain Backfill Material Type C. The surrounding area should be pitched to

drain away in order to reduce available moisture for ice and frost lense generation. The underdrain stone should be completely wrapped in a filter fabric to prevent the migration of fines from surrounding soils.

6.7 Ground Floors in Processing Areas

28. Paved areas inside buildings subject to loader and processing equipment should be provided with the following pavement sections. Pavement sections were developed using AASHTO design methods. Materials and placement methods should meet the current Maine Department of Transportation requirements.

Flexible Pavement

Component	Thickness in Inches	
	10 Year Design Life	20 Year Design Life
Surface Course (MDOT Type 12.5 mm)	2	2
Binder Course (MDOT Type 19 mm)	5	5
Gravel Base (MDOT 703.06 Type A)	12	14
Subbase (Structural Fill ¹)	19	22
Totals	38	43

Rigid Pavement

Component	Thickness in Inches	
	10 Year Design Life	20 Year Design Life
Concrete (5000 psi compressive strength)	9	10
Gravel Base (Structural Fill ¹)	12	12
Totals	21	22

Specifications are referenced to *State of Maine Department of Transportation Standard Specifications Revision of December 2002*.

¹ Structural Fill requirements provided in Paragraph #7 above.

29. Pavement section subgrade for new paved areas inside proposed buildings should be sloped toward adjacent foundation backfill to provide a drainage path for free water entering the pavement section.

30. Load transfer dowels or other load transfer device should be provided at rigid pavement joints.

6.8 Stormwater Management Pond

31. The detention pond should be lined with textured low linear density polyethylene (LLDPE) liner of 40-mil thickness underlain by a relatively impervious, 18-inch thick, compacted clay liner to reduce seepage through the pond bottom and embankments. The compacted clay should have a maximum permeability of 1×10^{-6} centimeter per seconds when tested in accordance with ASTM D 5084 *Standard Test Methods for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter*. The base of the clay liner should be sloped to reduce gas buildup. A venting medium such as a geonet or sand layer should be placed beneath the entire bottom and side slopes of the pond and vented to the atmosphere, as needed.

The liner should be installed in accordance with the liner supplier's specifications and applicable ASTM and industry standards. In particular, care should be taken in attaching the liner to protrusions using appropriate gaskets, seals, and boots to prevent water leakage which might lead to internal erosion and eventual failure of the embankment

32. The textured LLDPE liner should be covered with an 18-inch thick layer of soil for protection against ultraviolet light, physical degradation, damage from animals, and pond maintenance equipment. The protective soil cover should consist of a sandy material with a maximum particle size not exceeding 1-inch. Pitch of internal pond embankments should 3H:1V or flatter for soil cover stability. The liner should be extended above the maximum design pond level and provided with an anchor trench around the entire lined area. Venting should be provided to prevent gas buildup at the anchor trench turndown.
33. An underdrain should be provided below the pond liner to reduce hydrostatic pressure from high groundwater. Underdrains should consist of 4-inch diameter perforated pipe (minimum) bedded in 2 cubic feet of MaineDOT 703.22 Underdrain Backfill Material Type C per linear foot and wrapped in a filter fabric. The underdrain system should be provided with a minimum of two outlet pipes so as not to be reliant upon a single flow path. Drains should be outletted by gravity to surface drainage features or storm drains that will be free flowing under all conditions.
34. Pond fill embankments should be constructed by placement and compaction of fill in successive horizontal layers the full width of the design fill section. Each lift in the embankment should be uniform in soil composition. Prior to placement of any fill against existing embankments, the area to receive fill should be wetted or dried, as needed, recompacted, and scarified to provide for proper bonding between existing soils and new fill. Prior to placement of the next lift, the surface of the previously placed lift should be

scarified and wetted or dried, as needed, for proper bonding. Pond embankment fill should consist of material meeting the requirements of MaineDOT 703.19 Granular Borrow Material for Embankment Construction.

35. The crest of the embankment should be pitched toward the inside of the pond to direct runoff to the inside. The crest should be uniform in elevation to prevent runoff from flowing along the crest of the embankment to low places where it could concentrate and cause severe erosion.
36. The embankment slopes should be grassed immediately after final shaping. Slopes should be inspected periodically (twice per year, e.g., April and October) by a qualified representative for signs of seepage, erosion, or sloughing of the embankment. Embankments should be repaired and unstable areas addressed shortly after they occur.
37. The existing fill slope west of the pond should be cleared of vegetation and graded to a pitch of 2H:1V or flatter and covered with a layer of riprap to provide erosion protection and improve surficial slope stability. The riprap layer should be a minimum of 2 feet thick at the toe of slope and taper to a minimum thickness of 1 foot at the top of slope. Riprap should be sound, durable, angular rock with the following gradation:

Particle Size (inches)	Percent of Total Weight Smaller than Given Size
12	100
4	50
1-1/2	10

6.9 Temporary Excavations

38. Soils at this site, encountered within the anticipated depths of excavations, consist of topsoil, fill, and naturally deposited silty sand and silty clay. We anticipate that foundation and utility excavations can be accomplished using sloped, open-cut techniques. It is also anticipated that dewatering can be accomplished using sumps and open pumping methods.

The Contractor should be aware that slope height, slope inclination, and excavation depths (including utility trench excavations) should in no case exceed those specified in local, state, or federal safety regulations (e.g., OSHA Health and Safety Standards for Excavations, 29 CFR Part 1926, or successor regulations). Such regulations are strictly enforced and, if they are not followed, the Owner, Contractor, and/or earthwork and utility subcontractors could be liable for substantial penalties.

As a safety measure, it is recommended that all vehicles and spoil piles be kept a minimum lateral distance from the top of excavations equal to no less than 100 percent of the slope height. Exposed slope faces should be protected against the elements.

6.10 Geotechnical Observation

The geotechnical recommendations provided as the basis for design of this project were developed using limited numbers of observations and tests. The Owner should be sensitive to the potential need for adjustment in the field. We recommend that the Owner retain RWG&A to observe geotechnical construction aspects of the project. These services should include observing general compliance with the design concepts, specifications and recommendations, and assisting in development of design changes should subsurface conditions differ from those anticipated prior to the start of construction. Observation improves the likelihood that the design intent will be carried out during construction. In addition, it allows RWG&A to confirm its design recommendations. For this project, geotechnical observation of the following aspects is recommended:

- Observe site stripping, assess suitability of exposed subgrades, and observe test pits and proofrolling.
- Observe installation of settlement platforms provided and placed by the Contractor.
- Survey settlement platforms. Evaluate rate and amount of settlement, and determine when office and processing building construction may commence.
- Perform laboratory and field testing of structural fill and pavement base and subbase.
- Observe fill placement and compaction.
- Observe installation of pavement.

In addition to geotechnical observation, RWG&A can also provide full service construction inspection and materials testing. This would include soils, portland cement and asphaltic concrete, structural steel and welding inspections, destructive and non-destructive testing, and special inspection services in fulfillment of building code requirements.

7.0 CLOSURE

This report has been prepared for specific application to the building areas and stormwater management pond at the proposed Scrap Metal Recycling Facility in Portland, Maine, for the exclusive use of Civil Consultants. This work has been completed in accordance with generally accepted soil engineering practices. No other warranty, expressed or implied, is made. In the event

that any changes are made in the nature, design, or location of the proposed construction, the conclusions and recommendations of this report should be reviewed by RWG&A.

The recommendations presented are based on the results of widely spaced explorations. The nature of variations between the explorations may not become evident until construction has begun. If variations are encountered, it will be necessary for RWG&A to re-evaluate the recommendations presented in this report. RWG&A requests an opportunity for a general review of the final design and specifications in order to determine that earthwork and pavement recommendations have been interpreted in the manner in which they were intended.

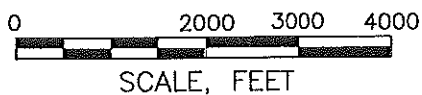
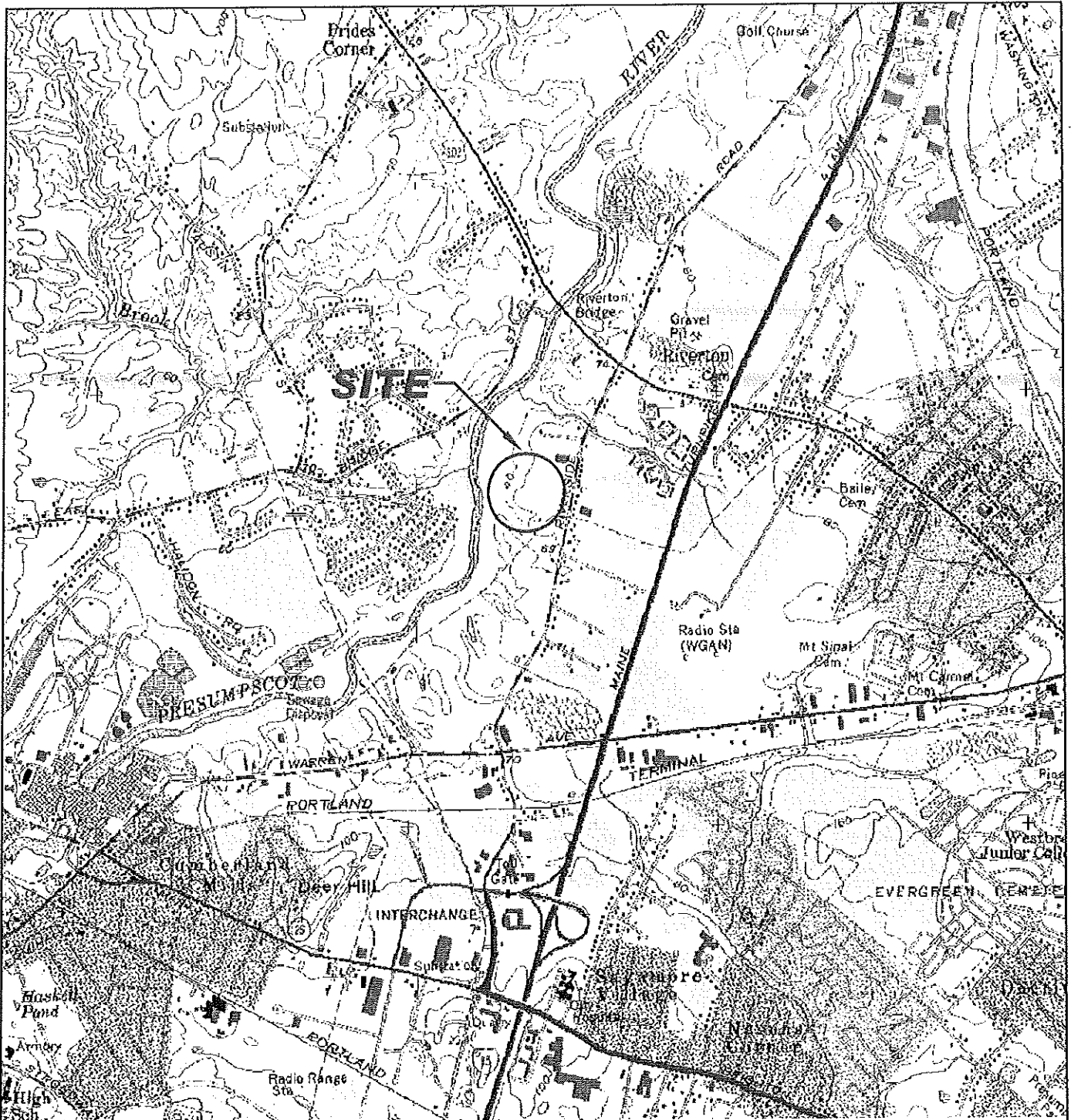


FIGURE 1
LOCUS MAP
PROPOSED SCRAP METAL
RECYCLING FACILITY
PORTLAND, MAINE

SEPTEMBER 2009

PROJECT NO. 427-49



R.W. Gillespie & Associates, Inc.
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SOURCE:

USGS 7.5-MINUTE TOPOGRAPHIC QUADRANGLES
OF PORTLAND WEST, MAINE, DATED 1978.

LEGEND:

- ⊕ B-1 TEST BORING LOCATIONS BY RWG&A DURING AUGUST 2009 (RWG&A PROJECT NO. 427-49)
- ⊕ TP-10 TEST PITS PERFORMED BY RWG&A DURING JUNE 2007 (RWG&A PROJECT NO. 427-44)
- ⊕ SP-15 SETTLEMENT PLATFORM INSTRUMENTATION LOCATIONS AND DESIGNATIONS (SHALLOW AND DEEP)

SOURCES:

1. SHEET C-3 AND SHEET C-4 TITLED "SITE PLAN" AND "GRADING PLAN" BY CIVIL CONSULTANTS, BOTH DATED 04 SEPTEMBER 2009
2. SHEET C-4 TITLED "GRADING PLAN" BY CIVIL CONSULTANTS, DATED 14 FEBRUARY 2009, REVISED 30 JUNE 2008.
3. SHEET C-1 TITLED "EXISTING CONDITIONS" BY CIVIL CONSULTANTS, DATED 30 APRIL 2007, REVISED 17 JULY 2007

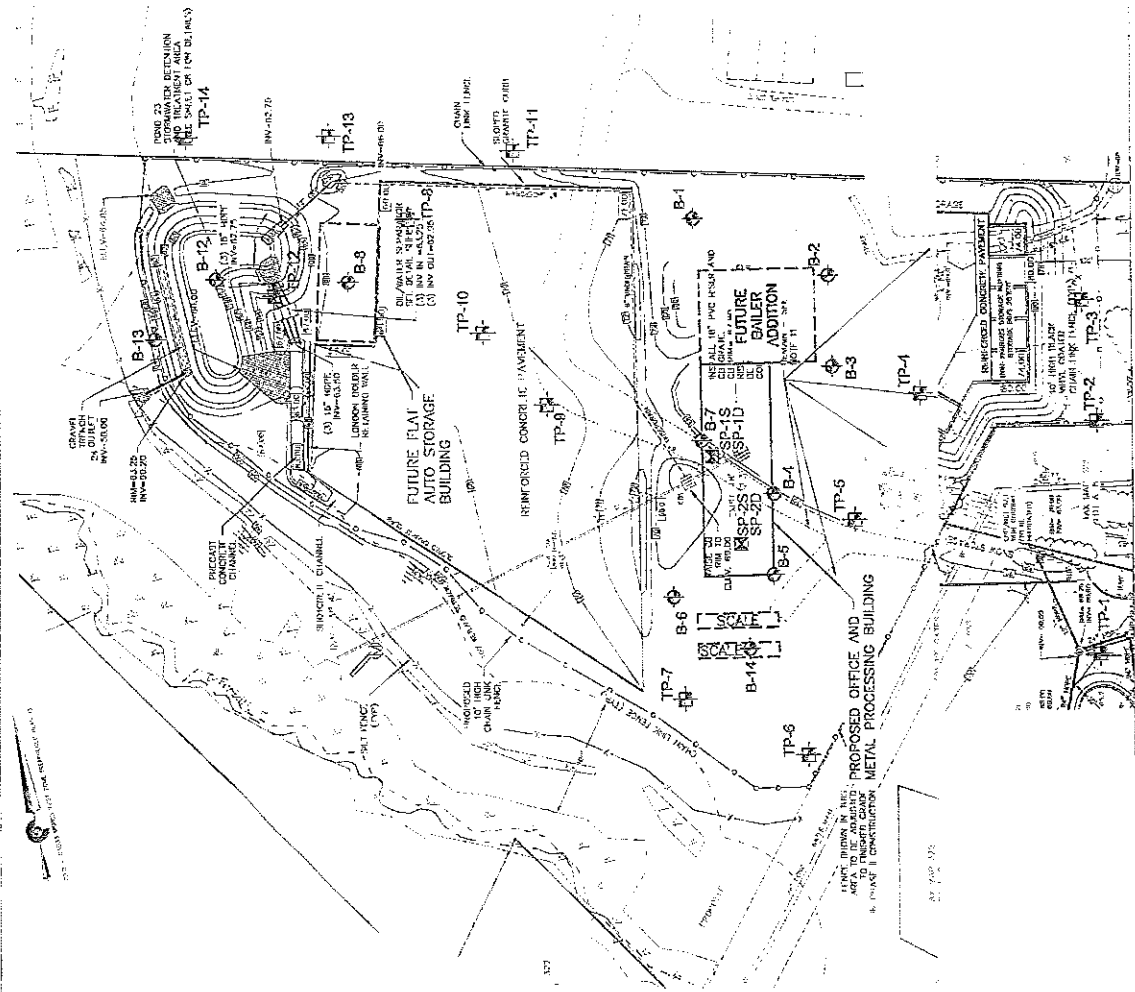


FIGURE 2
EXPLORATION LOCATION PLAN
PROPOSED SCRAP METAL RECYCLING FACILITY
PORTLAND, MAINE

OCTOBER 2009 PRODUCT NO. 427-49

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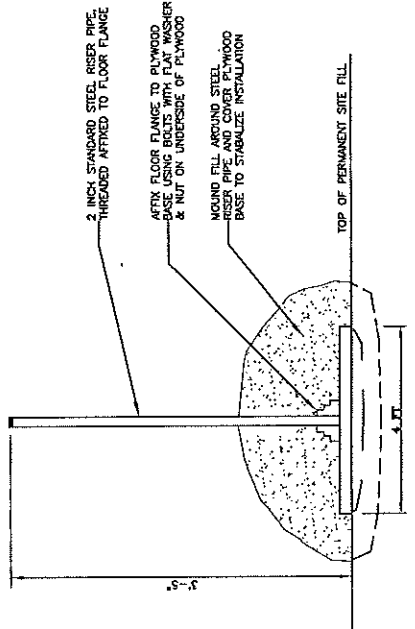
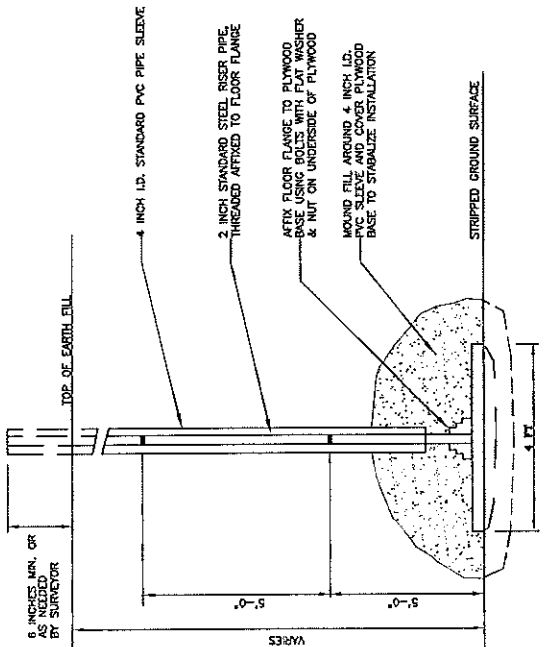
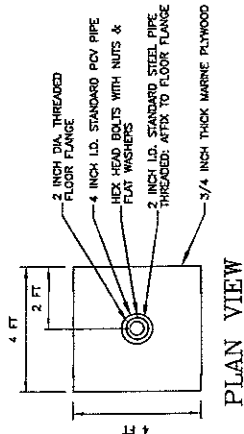
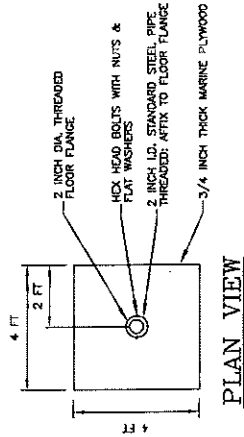


FIGURE 3
SETTLEMENT PLATFORM DETAIL
PROPOSED SCRAP METAL RECYCLING FACILITY
PORTLAND, MAINE

OCTOBER 2009 PROJECT NO. 427-49



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APPENDIX A

TEST BORING
EXPLORATION LOGS

Geotechnical Evaluation
Proposed Scrap Metal Recycling Facility
Portland, Maine



R.W. Gillespie & Associates, Inc.
 Geotechnical Engineering • Geohydrology • Materials Testing Services

Boring Log: B-1
 Total Depth (ft): 26.5
 Sheet 1 of 1

Project Name: Metal Recycling and Stormwater Management
 RWG&A Project No. 427-49
 Location: Portland, Maine
 Client: Civil Consultants, Inc.
 RWG&A Representative: G. Morrell
 Boring Location: See Exploration Location Plan
 Boring Abandonment Method: Backfilled with cuttings
 Observed Water Depth: Not Obs.

Drilling Contractor: Northern Test Boring
 Drill Rig: Diedrich D-50 Track
 Driller Rep.: Mike Nadeau
 Date Started: 08/13/09
 Date Completed: 08/13/09
 Surface Elevation: ()
 Drilling Method: 4 1/4" HSA
 Casing Type: n/a

DEPTH, FT.	SYMBOL SAMPLES	DESCRIPTION OF MATERIAL	SAMPLE RECOVERY, IN.	BLOWS PER 6"	SPT-N BLOWS PER FT.	MOISTURE CONTENT %	LAB TESTS
0	S-1	TOPSOIL AND ORGANICS. SILTY CLAY (Cl.); Stiff to soft, moist to wet, silty clay, brownish olive to blueish gray.	18	6 4 7 8	11		
5	S-2	Pocket Penetrometer: Undrained Shear Strength, Su = 3.5 ksf. Pocket Penetrometer: Undrained Shear Strength, Su = 3.5 ksf.	24	6 6 8 9	14	27.4	MC
10	S-3	Pocket Penetrometer: Undrained Shear Strength, Su = 2.5 ksf. Pocket Penetrometer: Undrained Shear Strength, Su = 2.75 ksf.	24	2 3 3 4	6		
15	S-4		24	2 2 2 2	4		
20	S-5		24	1 2 2 2	4		
25	S-6	SILTY SAND (SM); Medium dense, wet, fine to medium sand, some silt, light brown.	12	7 9 50/4	59		
		Bottom of exploration at 26.5 ft; auger refusal, possible bedrock.					
30							

Notes:



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Boring Log: B-2

Total Depth (ft): 27

Sheet 1 of 1

Project Name: Metal Recycling and Stormwater Management
 RWG&A Project No. 427-49
 Location: Portland, Maine
 Client: Civil Consultants, Inc.
 RWG&A Representative: G. Morrell
 Boring Location: See Exploration Location Plan
 Boring Abandonment Method: Backfilled with cuttings
 Observed Water Depth: Not Obs.

Drilling Contractor: Northern Test Boring
 Drill Rig: Diedrich D-50 Track
 Driller Rep.: Mike Nadeau
 Date Started: 08/13/09
 Date Completed: 08/13/09
 Surface Elevation: ()
 Drilling Method: 4 1/4" HSA
 Casing Type: n/a

DEPTH, FT.	SYMBOL SAMPLES	DESCRIPTION OF MATERIAL	SAMPLE RECOVERY, IN.	BLOWS PER 6"	SPT-N BLOWS PER FT.	MOISTURE CONTENT %	LAB TESTS
0	S-1	TOPSOIL AND ORGANICS.	24	2	8		
		SAND (FILL); Loose, moist, fine to medium sand, trace silt, light brown.		3			
		SILTY CLAY (CL); Stiff to soft, moist, silty clay, mottled, brownish olive to blueish gray.		5			
				6			
5	S-2		24	5	18		
				8			
				10			
				12			
10	S-3		24	4	8		
				4			
				4			
				5			
15	S-4		20	1	3		
				2			
				1			
				2			
20	S-5		24	1	4		
				2			
				2			
				1			
25	S-6		24	1	3		
				2			
				1			
				2			
				2			
				1			
				2			
30		Bottom of exploration at 27 ft; not refusal.					

Notes:



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Boring Log: B-3
 Total Depth (ft): 27
 Sheet 1 of 1

Project Name: Metal Recycling and Stormwater Management
 RWG&A Project No. 427-49
 Location: Portland, Maine
 Client: Civil Consultants, Inc.
 RWG&A Representative: G. Morrell
 Boring Location: See Exploration Location Plan
 Boring Abandonment Method: Backfilled with cuttings
 Observed Water Depth: Not Obs.

Drilling Contractor: Northern Test Boring
 Drill Rig: Diedrich D-50 Track
 Driller Rep.: Mike Nadeau
 Date Started: 08/13/09
 Date Completed: 08/13/09
 Surface Elevation: ()
 Drilling Method: 4 1/4" HSA
 Casing Type: n/a

DEPTH, FT.	SYMBOL SAMPLES SAMPLE NUMBER	DESCRIPTION OF MATERIAL	SAMPLE RECOVERY, IN.	BLOWS PER 6"	SPT-N BLOWS PER FT.	MOISTURE CONTENT %	LAB TESTS
0	S-1	TOPSOIL AND ORGANICS. SILTY CLAY (CL); Stiff to soft, moist, silty clay, mottled, brownish olive to blueish gray.	12	2 2 2 2	4	35.3	MC
5	S-2		24	5 7 8 10	15		
10	S-3		24	3 4 3 3	7		
15	S-4		24	2 1 1 2	2		
20	S-5		24	1 2 1 1	3		
25	S-6		20	1 1 1 1	2		
Bottom of exploration at 27 ft; not refusal.							
30							

Notes:



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Boring Log: B-4
 Total Depth (ft): 27
 Sheet 1 of 1

Project Name: Metal Recycling and Stormwater Management
 RWG&A Project No. 427-49
 Location: Portland, Maine
 Client: Civil Consultants, Inc.
 RWG&A Representative: G. Morrell
 Boring Location: See Exploration Location Plan
 Boring Abandonment Method: Backfilled with cuttings
 Observed Water Depth: Not Obs.

Drilling Contractor: Northern Test Boring
 Drill Rig: Diedrich D-50 Track
 Driller Rep.: Mike Nadeau
 Date Started: 08/14/09
 Date Completed: 08/14/09
 Surface Elevation: ()
 Drilling Method: 4 1/4" HSA
 Casing Type: n/a

DEPTH, FT.	SYMBOL SAMPLES	SAMPLE NUMBER	DESCRIPTION OF MATERIAL	SAMPLE RECOVERY, IN.	BLOWS PER 6"	SPT-N BLOWS PER FT.	MOISTURE CONTENT %	LAB TESTS
0		S-1	GRAVELLY SAND (FILL); Medium dense, moist, fine to medium sand, little gravel, trace silt, light brown.	6	11 10 9	19		
			SILTY CLAY (CL); Stiff to soft, moist, silty clay, mottled, brownish olive to blueish gray.		7			
5		S-2		24	6 7 9 8	16		
10		S-3		24	4 4 4 5	8		
15		S-4		24	1 1 1 1	2		
20		S-5		24	1 1 2 1	3		
25		S-6		24	1 2 1 2	3		
			Bottom of exploration at 27.0 ft; not refusal.					

Notes:



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Boring Log: B-5
 Total Depth (ft): 27
 Sheet 1 of 1

Project Name: Metal Recycling and Stormwater Management
 RWG&A Project No. 427-49
 Location: Portland, Maine
 Client: Civil Consultants, Inc.
 RWG&A Representative: G. Morrell
 Boring Location: See Exploration Location Plan
 Boring Abandonment Method: Backfilled with cuttings
 Observed Water Depth: Not Obs.

Drilling Contractor: Northern Test Boring
 Drill Rig: Diedrich D-50 Track
 Driller Rep.: Mike Nadeau
 Date Started: 08/14/09
 Date Completed: 08/14/09
 Surface Elevation: ()
 Drilling Method: 4 1/4" HSA
 Casing Type: n/a

DEPTH, FT.	SYMBOL SAMPLES	SAMPLE NUMBER	DESCRIPTION OF MATERIAL	SAMPLE RECOVERY, IN.	BLOWS PER 6"	SPT-N BLOWS PER FT.	MOISTURE CONTENT %	LAB TESTS
0		S-1	TOPSOIL AND ORGANICS.	12	1	3		
			SAND (FILL); Loose, moist, fine to medium sand, trace silt, light brown.		2			
					1			
					1			
			SILTY CLAY (CL); Stiff to soft, moist, silty clay, mottled, brownish olive to blueish gray.					
5		S-2	Pocket Penetrometer: Undrained Shear Strength, Su = 3.0 ksf. Pocket Penetrometer: Undrained Shear Strength, Su = 3.0 ksf.	24	6	17		
					8			
					9			
					6			
10		S-3	Pocket Penetrometer: Undrained Shear Strength, Su = 2.0 ksf. Pocket Penetrometer: Undrained Shear Strength, Su = 2.0 ksf.	24	3	7		
					4			
					3			
					3			
15		S-4		24	2	3		
					2			
					1			
					2			
20		S-5		24	1	3		
					2			
					1			
					2			
25		S-6		20	1	3		
					1			
					2			
					1			
30			Bottom of exploration at 27.0 ft; not refusal.					

Notes:



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Boring Log: B-6
 Total Depth (ft): 27
 Sheet 1 of 1

Project Name: Metal Recycling and Stormwater Management
 RWG&A Project No. 427-49
 Location: Portland, Maine
 Client: Civil Consultants, Inc.
 RWG&A Representative: G. Morrell
 Boring Location: See Exploration Location Plan
 Boring Abandonment Method: Backfilled with cuttings
 Observed Water Depth: Not Obs.

Drilling Contractor: Northern Test Boring
 Drill Rig: Diedrich D-50 Track
 Driller Rep.: Mike Nadeau
 Date Started: 08/14/09
 Date Completed: 08/14/09
 Surface Elevation: ()
 Drilling Method: 4 1/4" HSA
 Casing Type: n/a

DEPTH, FT.	SYMBOL SAMPLES	SAMPLE NUMBER	DESCRIPTION OF MATERIAL	SAMPLE RECOVERY, IN.	BLOWS PER 6"	SPT-N BLOWS PER FT.	MOISTURE CONTENT %	LAB TESTS
0		S-1	TOPSOIL AND ORGANICS. SILTY CLAY (CL); Stiff to soft, moist, silty clay, mottled, brownish olive to blueish gray.	24	7 8 10 12	18	7.2	MC
5		S-2	Pocket Penetrometer: Undrained Shear Strength, $S_u = 3.5$ ksf. Pocket Penetrometer: Undrained Shear Strength, $S_u = 3.0$ ksf.	24	3 5 6 6	11		
10		S-3	Pocket Penetrometer: Undrained Shear Strength, $S_u = 2.5$ ksf. Pocket Penetrometer: Undrained Shear Strength, $S_u = 2.75$ ksf.	24	3 6 6 6	12		
15		S-4		24	3 3 2 3	5		
20		S-5		24	2 2 2 2	4		
25		S-6		24	2 2 2 2	4		
27.0			Bottom of exploration at 27.0 ft; not refusal.					

Notes:



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Boring Log: B-7
 Total Depth (ft): 37.7
 Sheet 1 of 2

Project Name: Metal Recycling and Stormwater Management
 RWG&A Project No. 427-49
 Location: Portland, Maine
 Client: Civil Consultants, Inc.
 RWG&A Representative: G. Morrell
 Boring Location: See Exploration Location Plan
 Boring Abandonment Method: Backfilled with cuttings
 Observed Water Depth: Not Obs.

Drilling Contractor: Northern Test Boring
 Drill Rig: Diedrich D-50 Track
 Driller Rep.: Mike Nadeau
 Date Started: 08/13/09
 Date Completed: 08/13/09
 Surface Elevation: ()
 Drilling Method: 4" Tri-cone Wash Rotary
 Casing Type: 4" casing

DEPTH, FT.	SYMBOL	SAMPLE NUMBER	DESCRIPTION OF MATERIAL	SAMPLE RECOVERY, IN.	BLOWS PER 6"	SPT-N BLOWS PER FT.	MOISTURE CONTENT %	LAE TESTS
0		S-1	GRAVEL (FILL); Medium dense, moist, gravel, fine to medium sand, trace silt, reddish brown, with pockets of sandy clay, trace gravel.	20	4 6 8 9	14		
			SILTY CLAY (CL); Stiff to soft, moist to wet, silty clay, brownish olive to blueish gray.					
5		S-2	Pocket Penetrometer: Undrained Shear Strength, $S_u = 3.0$ ksf. Pocket Penetrometer: Undrained Shear Strength, $S_u = 3.0$ ksf.	24	6 10 7 2	17	2.8	MC
10		S-3		24	4 4 4 4	8	4.8	MC
15		S-4	Field Vane (In-situ): Undrained Shear Strength: $S_u = 1.92$ ksf, Residual = 0.43 ksf. Field Vane (In-situ): Undrained Shear Strength: $S_u = 2.11$ ksf, Residual = 0.05 ks.f	24			39.2	MC
20		U-1		24			40.9	CON GV
25		S-5	Field Vane (In-situ): Undrained Shear Strength: $S_u = 0.88$ ksf, Residual = 0.08 ksf Field Vane (In-situ): Undrained Shear Strength: $S_u = 0.82$ ksf, Residual = 0.09 ksf Field Vane (In-situ): Undrained Shear Strength: $S_u = 1.09$ ksf, Residual = 0.17 ksf Field Vane (In-situ): Undrained Shear Strength: $S_u = 1.35$ ksf, Residual = 0.09 ksf			24	36.3	MC
30								

Notes: Sample Numbers S-4 and S-5 obtained after performing field vane tests.



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Boring Log: B-7

Total Depth: 37.7

Sheet 2 of 2

Project Name: Metal Recycling and Stormwater Management
 Location: Portland, Maine
 Client: Civil Consultants, Inc.
 Observed Water Depth: Not Obs.

RWG&A Project No. 427-49
 Surface Elevation: ()
 Casing Type: 4" casing

DEPTH, FT.	SYMBOL SAMPLES	DESCRIPTION OF MATERIAL	SAMPLE RECOVERY, IN.	BLOWS PER 6"	SPT-N BLOWS PER FT.	MOISTURE CONTENT %	LAB TESTS
30	U-2		24.0				GV
35	S-6	SILTY SAND (SM); Medium dense, wet, fine to medium sand, some silt, grayish blue.	24	4 2 4 6	6		
40		Bottom of exploration at 37.7 ft; rollercone refusal, possible bedrock.					
45							
50							
55							
60							

Notes: Sample Numbers S-4 and S-5 obtained after performing field vane tests.



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Boring Log: B-8
 Total Depth (ft): 37.5
 Sheet 1 of 2

Project Name: Metal Recycling and Stormwater Management
 RWG&A Project No. 427-49
 Location: Portland, Maine
 Client: Civil Consultants, Inc.
 RWG&A Representative: G. Morrell
 Boring Location: See Exploration Location Plan
 Boring Abandonment Method: Backfilled with cuttings
 Observed Water Depth: Not Obs.

Drilling Contractor: Northern Test Boring
 Drill Rig: Diedrich D-50 Track
 Driller Rep.: Milke Nadeau
 Date Started: 08/12/09
 Date Completed: 08/12/09
 Surface Elevation: ()
 Drilling Method: 4" Tri cone Wash Rotary
 Casing Type: 4" casing

DEPTH, FT.	SYMBOL	SAMPLE NUMBER	DESCRIPTION OF MATERIAL	SAMPLE RECOVERY, IN.	BLOWS PER 6"	SPT-N BLOWS PER FT.	MOISTURE CONTENT %	LAB TESTS
0		S-1	GRAVELLY SILTY SAND (FILL); Medium dense, moist, fine to medium sand, with pockets of silty clay, trace fine gravel, light brown and blueish gray, with wood fibers.	24	4 4 10 10	14	14.1	GS MC
5		S-2	SILTY CLAY (CL); Stiff to soft, moist, silty clay, mottled, brownish olive to blueish gray.	24	5 9 8 7	17	21.5	MC
10		S-3	Pocket Penetrometer: Undrained Shear Strength, $S_u = 2.75$ ksf. Pocket Penetrometer: Undrained Shear Strength, $S_u = 2.5$ ksf.	24	3 3 5 6	8	29.3	MC
15		S-4	Pocket Penetrometer: Undrained Shear Strength, $S_u = 2.25$ ksf. Pocket Penetrometer: Undrained Shear Strength, $S_u = 2.25$ ksf.	24	3 3 4 5	7		
20		S-5		18	3 1 2 1	3		
25		S-6		24	woh woh woh woh			
30								

Notes:



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Boring Log: B-8
 Total Depth: 37.5
 Sheet 2 of 2

Project Name: Metal Recycling and Stormwater Management
 Location: Portland, Maine
 Client: Civil Consultants, Inc.
 Observed Water Depth: Not Obs.

RWG&A Project No. 427-49
 Surface Elevation: ()
 Casing Type: 4" casing

DEPTH, FT.	SYMBOL	SAMPLES	SAMPLE NUMBER	DESCRIPTION OF MATERIAL	SAMPLE RECOVERY, IN.	BLOWS PER 6"	SPT-N BLOWS PER FT.	MOISTURE CONTENT %	LAB TESTS
30			S-7.		24	woh woh woh woh			
35			S-8	SILTY SAND (SM); Medium dense, wet, fine to medium sand, some silt, light brown.	18	woh woh 6 8	6		
40				Bottom of exploration at 37.5 ft; rollercone refusal, possible bedrock.					
45									
50									
55									
60									

Notes:



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Boring Log: B-12
 Total Depth (ft): 42
 Sheet 1 of 2

Project Name: Metal Recycling and Stormwater Management
 RWG&A Project No. 427-49
 Location: Portland, Maine
 Client: Civil Consultants, Inc.
 RWG&A Representative: G. Morrell
 Boring Location: See Exploration Location Plan
 Boring Abandonment Method: Backfilled with cuttings
 Observed Water Depth: Not Obs.

Drilling Contractor: Northern Test Boring
 Drill Rig: Diedrich D-50 Track
 Driller Rep.: Mike Nadeau
 Date Started: 08/12/09
 Date Completed: 08/12/09
 Surface Elevation: ()
 Drilling Method: 4" Tri cone Wash Rotary
 Casing Type: 4" casing

DEPTH, FT.	SYMBOL	SAMPLE NUMBER	DESCRIPTION OF MATERIAL	SAMPLE RECOVERY, IN.	BLOWS PER 6"	SPT-N BLOWS PER FT.	MOISTURE CONTENT %	LAE TESTS
0		S-1	GRAVELLY SILTY SAND (FILL); Medium dense, moist, fine to medium sand, with pockets and layers of silty clay, trace fine gravel, dark brown and blueish gray, with wood fibers, organics and asphalt.	24	8 9 9 10	18		
5		S-2		12	3 4 5 8	9	18.1	GS MC
10		S-3		18	2 3 4 5	7		
15		S-4	SILTY CLAY (CL); Stiff to soft, moist to wet, silty clay, brownish olive to blueish gray.	22	4 10 12 11	22		
20		S-5		24	5 6 8 9	14		
25		S-6	Pocket Penetrometer: Undrained Shear Strength, $S_u = 2.75$ ksf. Pocket Penetrometer: Undrained Shear Strength, $S_u = 2.75$ ksf.	24	3 3 4 3	7		
30								

Notes: Sample S-7 obtained after performing field vane tests.



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Boring Log: B-12

Total Depth: 42

Sheet 2 of 2

Project Name: Metal Recycling and Stormwater Management
 Location: Portland, Maine
 Client: Civil Consultants, Inc.
 Observed Water Depth: Not Obs.

RWG&A Project No. 427-49

Surface Elevation: ()

Casing Type: 4" casing

DEPTH, FT.	SYMBOL SAMPLES	SAMPLE NUMBER	DESCRIPTION OF MATERIAL	SAMPLE RECOVERY, IN.	BLOWS PER 6"	SPT-N BLOWS PER FT.	MOISTURE CONTENT %	LAB TESTS
30		S-7	Field Vane: Undrained Shear Strength: $S_u = 1.04$ ksf, Residual = 0.08 ksf. Field Vane: Undrained Shear Strength: $S_u = 0.82$ ksf, Residual = 0.10 ksf.				37	MC
35		S-8	SILTY SAND (SM); Medium dense, wet, fine to medium sand, some silt, trace fine gravel, gray.	18	1 1 1 1	2		
40		S-9		18	10 8 6 <u>60/6</u>	14		
			Bottom of exploration at 42 ft; split barrel refusal, possible bedrock.					

Notes: Sample S-7 obtained after performing field vane tests.



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Boring Log: B-13
 Total Depth (ft): 42.3
 Sheet 1 of 2

Project Name: Metal Recycling and Stormwater Management
 RWG&A Project No. 427-49
 Location: Portland, Maine
 Client: Civil Consultants, Inc.
 RWG&A Representative: G. Morrell
 Boring Location: See Exploration Location Plan
 Boring Abandonment Method: Backfilled with cuttings
 Observed Water Depth: Not Obs.

Drilling Contractor: Northern Test Boring
 Drill Rig: Diedrich D-50 Track
 Driller Rep.: Mike Nadeau
 Date Started: 08/12/09
 Date Completed: 08/12/09
 Surface Elevation: ()
 Drilling Method: 4" Tri cone Wash Rotary
 Casing Type: 4" Casing

DEPTH, FT.	SYMBOL SAMPLES	SAMPLE NUMBER	DESCRIPTION OF MATERIAL	SAMPLE RECOVERY, IN.	BLOWS PER 6"	SPT-N BLOWS PER FT.	MOISTURE CONTENT %	LAB TESTS
0		S-1	GRAVELLY SILTY SAND (FILL); Medium dense to loose, moist to wet, fine to medium sand, trace fine gravel, dark brown.	18	5 5 5 5	10		
5		S-2		3	1 1 1 1	2		
10		S-3	SANDY SILT (FILL); Medium stiff, clayey silt, some sand, few gravel, blueish gray.	18	2 2 3 4	5	18.7	GS MC
15		S-4	SILTY CLAY (CL); Stiff to soft, moist to wet, silty clay, brownish olive to blueish gray. Pocket Penetrometer: Undrained Shear Strength, $S_u = 3.5$ ksf. Pocket Penetrometer: Undrained Shear Strength, $S_u = 3.0$ ksf.	24	4 4 10 11	14	24.7	MC
20		S-5	Pocket Penetrometer: Undrained Shear Strength, $S_u = 3.25$ ksf. Pocket Penetrometer: Undrained Shear Strength, $S_u = 3.0$ ksf.	24	4 6 9 13	15	28.7	MC
25		S-6	Pocket Penetrometer: Undrained Shear Strength, $S_u = 2.5$ ksf. Pocket Penetrometer: Undrained Shear Strength, $S_u = 2.5$ ksf.	24	4 5 6 7	11	32.8	MC
30								

Notes:



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Boring Log: B-13

Total Depth: 42.3

Sheet 2 of 2

Project Name: Metal Recycling and Stormwater Management
 Location: Portland, Maine
 Client: Civil Consultants, Inc.
 Observed Water Depth: Not Obs.

RWG&A Project No. 427-49
 Surface Elevation: ()
 Casing Type: 4" Casing

DEPTH, FT.	SYMBOL SAMPLES	SAMPLE NUMBER	DESCRIPTION OF MATERIAL,	SAMPLE RECOVERY, IN.	BLOWS PER 6"	SPT-N BLOWS PER FT.	MOISTURE CONTENT %	LAB TESTS
30			Field Vane: Undrained Shear Strength: $S_u = 3.2$ ksf, Residual = 0.56 ksf. Field Vane: Undrained Shear Strength: $S_u = 2.4$, Residual = 0.5 ksf.					
35		S-7	SILTY SAND (SM); Medium dense, wet, fine to medium sand, some silt, trace fine gravel, grayish blue.	18	2 4 6 7	10		
40		S-8		6	18 14 7 6	21		
			Bottom of exploration at 42.3 ft; rollercone refusal, possible bedrock.					
45								
50								
55								
60								

Notes:



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Boring Log: B-14
 Total Depth (ft): 17
 Sheet 1 of 1

Project Name: Metal Recycling and Stormwater Management
 RWG&A Project No. 427-49
 Location: Portland, Maine
 Client: Civil Consultants, Inc.
 RWG&A Representative: G. Morrell
 Boring Location: See Exploration Location Plan
 Boring Abandonment Method: Backfilled with cuttings
 Observed Water Depth: Not Obs.

Drilling Contractor: Northern Test Boring
 Drill Rig: Diedrich D-50 Track
 Driller Rep.: Mike Nadeau
 Date Started: 08/14/09
 Date Completed: 08/14/09
 Surface Elevation: ()
 Drilling Method: 4 1/4" HSA
 Casing Type: n/a

DEPTH, FT.	SYMBOL	SAMPLE NUMBER	DESCRIPTION OF MATERIAL	SAMPLE RECOVERY, IN.	BLOWS PER 6"	SPT-N BLOWS PER FT.	MOISTURE CONTENT %	LAE TESTS
0		S-1	GRAVELLY SILTY SAND (FILL); Medium dense, moist, silty fine to medium sand, few gravel, light brown.	18	7 7 7 6	14	12.9	GS MC
5		S-2	SILTY CLAY (CL); Stiff, moist, silty clay, mottled, brownish olive.	24	3 3 4 5	7		
10		S-3	Pocket Penetrometer: Undrained Shear Strength, $S_u = 3.5$ ksf. Pocket Penetrometer: Undrained Shear Strength, $S_u = 3.0$ ksf.	24	6 5 8 8	13		
15		S-4	Pocket Penetrometer: Undrained Shear Strength, $S_u = 2.5$ ksf. Pocket Penetrometer: Undrained Shear Strength, $S_u = 2.0$ ksf.	24	4 4 5 6	9		
17.0			Bottom of exploration at 17.0 ft; not refusal.					
20								
25								
30								

Notes:

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APPENDIX B

**TEST PIT
EXPLORATION LOGS**

Geotechnical Evaluation
Proposed Scrap Metal Recycling Facility
Portland, Maine



R.W. Gillespie & Associates, Inc.
Geotechnical Engineering • Geology • Materials Testing Services

TEST PIT LOG

PROJECT	Proposed Metal Recycling Facility	Test Pit No.	TP-1
CLIENT	Civil Consultants, Inc.	PROJECT NO.	427-44
LOCATION	Portland, Maine	DATE	06/29/07
EXCAVATION METHOD	Volvo SE210 Excavator	ELEVATION	67
DEPTH TO - Water:	Not Obs.	LOGGER	GSM
	When checked:	Caving:	

Depth (ft)	Symbol	Bulk Sample	USCS	Description	Lab Tests	Moisture Content
0			FILL	FILL; Silty clay, stiff, silty sand, trace gravel, brick, rock, organic, moist, olive brown.		
5			JT	TOPSOIL AND ORGANIC MATERIAL (24 inches).		
10			CL	SILTY CLAY (CL); Very stiff, silty clay, moist, olive gray mottling.		
				Bottom of Exploration at 10'; Not refusal.		
15						

NOTES



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TEST PIT LOG

PROJECT	Proposed Metal Recycling Facility	Test Pit No.	TP-2
CLIENT	Civil Consultants, Inc.	PROJECT NO.	427-44
LOCATION	Portland, Maine	DATE	06/29/07
EXCAVATION METHOD	Volvo SE210 Excavator	ELEVATION	71
DEPTH TO - Water:	Not Obs.	LOGGER	GSM
	When checked:	Caving:	

Depth (ft)	Symbol	Bulk Sample	USCS	Description	Lab Tests	Moisture Content
0			JT	TOPSOIL AND ORGANIC MATERIAL (10 inches).		
			CL	SILTY CLAY (CL); Very stiff, silty clay, moist, gray.		
5						
10				Bottom of Exploration at 10'; Not refusal.		
15						

NOTES



R.W. Gillespie & Associates, Inc.
 Geotechnical Engineering, Geology & Geology, Materials Testing Services

TEST PIT LOG

PROJECT Proposed Metal Recycling Facility

CLIENT Civil Consultants, Inc.

LOCATION Portland, Maine

EXCAVATION METHOD Volvo SE210 Excavator

DEPTH TO - Water: Not Obs. When checked:

Test Pit No. TP-3
 PROJECT NO. 427-44

DATE 06/29/07

ELEVATION 71

LOGGER GSM

Caving:

Depth (ft)	Symbol	Bulk Sample	USCS	Description	Lab Tests	Moisture Content
0			JT	TOPSOIL AND ORGANIC MATERIAL (12 inches).		
			SM	SILTY SAND (SM); Medium to fine sand, little silt, moist, reddish brown.		
			CL	SILTY CLAY (CL); Very stiff, silty clay, moist, olive gray.		
5						
10				Bottom of Exploration at 10'; Not refusal.		
15						

NOTES



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TEST PIT LOG

PROJECT		Proposed Metal Recycling Facility	Test Pit No.	TP-4
CLIENT		Civil Consultants, Inc.	PROJECT NO.	427-44
LOCATION		Portland, Maine	DATE	06/29/07
EXCAVATION METHOD		Volvo SE210 Excavator	ELEVATION	71
DEPTH TO - Water:		Not Obs. When checked:	LOGGER	GSM
			Caving:	

Depth (ft)	Symbol	Bulk Sample	USCS	Description	Lab Tests	Moisture Content
0			JT	TOPSOIL AND ORGANIC MATERIAL (12 inches).		
			SM	SILTY SAND (SM); Medium to fine sand, little silt, moist, light brown.		
- 5			CL	SILTY CLAY (CL); Very stiff, silty clay, moist, gray.		
10				Bottom of Exploration at 10'; Not refusal.		
15						

NOTES



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TEST PIT LOG

PROJECT	Proposed Metal Recycling Facility	Test Pit No.	TP-5
CLIENT	Civil Consultants, Inc.	PROJECT NO.	427-44
LOCATION	Portland, Maine	DATE	06/29/07
EXCAVATION METHOD	Volvo SE210 Excavator	ELEVATION	70
DEPTH TO - Water:	Not Obs.	LOGGER	GSM
	When checked:	Caving:	

Depth (ft)	Symbol	Bulk Sample	USCS	Description	Lab Tests	Moisture Content
0			JT	TOPSOIL AND ORGANIC MATERIAL (6 inches).		
			SM	SILTY SAND (SM); Medium to fine sand, little silt, moist, reddish brown.		
5			CL	SILTY CLAY (CL); Hard to very stiff, silty clay, moist, olive gray. Pocket Penetrometer: Undrained Shear Strength: Su >5.0 ksf.		
10				Bottom of Exploration at 8'; Not refusal.		
15						

NOTES



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TEST PIT LOG

PROJECT	Proposed Metal Recycling Facility	Test Pit No.	TP-6
CLIENT	Civil Consultants, Inc.	PROJECT NO.	427-44
LOCATION	Portland, Maine	DATE	06/29/07
EXCAVATION METHOD	Volvo SE210 Excavator	ELEVATION	68
DEPTH TO - Water:	Not Obs.	LOGGER	GSM
	When checked:	Caving:	

Depth (ft)	Symbol	Bulk Sample	USCS	Description	Lab Tests	Moisture Content
0			FILL	FILL; Silty sand, medium to fine sand, little silt, moist, light brown.		6
			FILL	FILL; Silty sand, silty clay, with organics, wood fibers.	GS	
			JT	TOPSOIL AND ORGANIC MATERIAL (6 inches).		
5			CL	SILTY CLAY (CL); Very stiff, moist, olive gray.		
10				Bottom of Exploration at 10'; Not refusal.		
15						

NOTES



R.W. Gillespie & Associates, Inc.
 Geotechnical Engineering • Geology • Materials Testing Services

TEST PIT LOG

PROJECT Proposed Metal Recycling Facility

CLIENT Civil Consultants, Inc.

LOCATION Portland, Maine

EXCAVATION METHOD Volvo SE210 Excavator

DEPTH TO - Water: Not Obs. When checked: .

Test Pit No.	TP-7
PROJECT NO.	427-44
DATE	06/29/07
ELEVATION	70
LOGGER	GSM

Caving:

Depth (ft)	Symbol	Bulk Sample	USCS	Description	Lab Tests	Moisture Content
0			FILL	FILL; Sand, medium to fine sand, little gravel, little silt, moist, brown.	GS	3
5			JT	TOPSOIL AND ORGANIC MATERIAL (6 inches).		
			CL	SILTY CLAY (CL); Hard to very stiff, silty clay, moist, olive. Pocket Penetrometer: Undrained Shear Strength: $S_u > 5.0$ ksf. Pocket Penetrometer: Undrained Shear Strength: $S_u > 5.0$ ksf.		
10			CL			
15				Bottom of Exploration at 12'; Not refusal.		

NOTES



R.W. Gillespie & Associates, Inc.
 Geotechnical Engineering • Geology • Materials Testing Services

TEST PIT LOG

PROJECT Proposed Metal Recycling Facility

CLIENT Civil Consultants, Inc.

LOCATION Portland, Maine

EXCAVATION METHOD Volvo SE210 Excavator

DEPTH TO - Water: Not Obs. When checked:

Test Pit No. TP-8

PROJECT NO. 427-44

DATE 06/29/07

ELEVATION 67

LOGGER GSM

Caving:

Depth (ft)	Symbol	Bulk Sample	USCS	Description	Lab Tests	Moisture Content
0			OL	Wood chips (6 inches).		
			FILL	FILL; Silty sand, medium to fine sand, little silty clay, trace gravel, trace organics, moist, light brown to gray.		
5			SM	SILTY SAND (SM); Medium to fine sand and silt, trace organic, moist, brown.		
			CL	SILTY CLAY (CL); Very stiff, silty clay, moist, olive brown. Pocket Penetrometer: Undrained Shear Strength: $S_u > 5.0$ ksf.		
10				Bottom of Exploration at 10'; Not refusal.		
15						

NOTES



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 Geotechnical Engineering • Geology • Materials Testing Services

TEST PIT LOG

PROJECT	Proposed Metal Recycling Facility	Test Pit No.	TP-9
CLIENT	Civil Consultants, Inc.	PROJECT NO.	427-44
LOCATION	Portland, Maine.	DATE	06/29/07
EXCAVATION METHOD	Volvo SE210 Excavator	ELEVATION	66
DEPTH TO - Water:	Not Obs.	LOGGER	GSM
	When checked:	Caving:	

Depth (ft)	Symbol	Bulk Sample	USCS	Description	Lab Tests	Moisture Content
0			FILL	FILL; Medium to fine silty sand, with silty clay, moist, light brown to blue gray.		
5			CL	SILTY CLAY (CL); Hard to very stiff, silty clay, moist, olive brown.		
10				Bottom of Exploration at 8'; Not refusal.		
15						

NOTES



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TEST PIT LOG

PROJECT	Proposed Metal Recycling Facility	Test Pit No.	TP-10
CLIENT	Civil Consultants, Inc.	PROJECT NO.	427-44
LOCATION	Portland, Maine	DATE	06/29/07
EXCAVATION METHOD	Volvo SE210 Excavator	ELEVATION.	66
DEPTH TO - Water:	Not Obs.	LOGGER	GSM
	When checked:	Caving:	

Depth (ft)	Symbol	Bulk Sample	USCS	Description	Lab Tests	Moisture Content
0			FILL	FILL; Gravel, medium to fine sand, trace silt, moist, brown.		
			FILL	FILL; Gravel, mixed with asphalt, concrete, silty sand, moist, gray. Geotextile observed at 0.8'.		
5			CL	SILTY CLAY (CL); Hard to very stiff, silty clay, moist, olive brown.		
10				Bottom of Exploration at 8'; Not refusal.		
15						


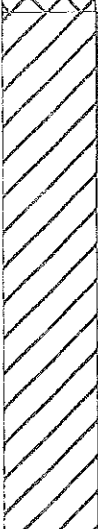
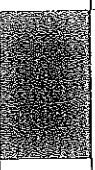
NOTES



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 Geotechnical Engineering • Geology • Geology • Materials Testing Services

TEST PIT LOG

PROJECT	Proposed Metal Recycling Facility	Test Pit No.	TP-11
CLIENT	Civil Consultants, Inc.	PROJECT NO.	427-44
LOCATION	Portland, Maine	DATE	06/29/07
EXCAVATION METHOD	Volvo SE210 Excavator	ELEVATION	70
DEPTH TO - Water:	Not Obs.	LOGGER	GSM
	When checked:	Caving:	

Depth (ft)	Symbol	Bulk Sample	USCS	Description	Lab Tests	Moisture Content
0			FILL	FILL; Silty sand, medium to fine sand, silt, brick, rock, roots, wood, moist, brown blue.		
5			CL	SILTY CLAY (CL); Stiff to very stiff, silty clay, moist, olive brown.		
10				Bottom of Exploration at 12'; Not refusal.		
15						

NOTES



R.W. Gillespie & Associates, Inc.
 Geotechnical Engineering / Geology / Materials Testing Services

TEST PIT LOG

PROJECT	Proposed Metal Recycling Facility	Test Pit No.	TP-12
CLIENT	Civil Consultants, Inc.	PROJECT NO.	427-44
LOCATION	Portland, Maine	DATE	06/29/07
EXCAVATION METHOD	Volvo SE210 Excavator	ELEVATION	65
DEPTH TO - Water:	Not Obs.	LOGGER	GSM
	When checked:	Caving:	

Depth (ft)	Symbol	Bulk Sample	USCS	Description	Lab Tests	Moisture Content
0			FILL	FILL; Silty sand with gravel, medium dense, medium to fine sand, little to some silt, trace gravel, moist, brown.		
5			FILL	FILL; Silty sand, dense, medium to fine sand, some silt, moist, gray. Mixed with silty clay, stiff, moist, blue gray.		
10			FILL	FILL; Silty clay and medium to fine sand, little rock, brick, concrete. Difficult to excavate.		
15				Bottom of Exploration at 11'; Not refusal.		

NOTES



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Geotechnical Engineering • Geology • Materials Testing Services

TEST PIT LOG

PROJECT	Proposed Metal Recycling Facility	Test Pit No.	TP-13
CLIENT	Civil Consultants, Inc.	PROJECT NO.	427-44
LOCATION	Portland, Maine	DATE	06/29/07
EXCAVATION METHOD	Volvo SE210 Excavator	ELEVATION	67
DEPTH TO - Water:	Not Obs.	LOGGER	GSM
	When checked:	Caving:	

Depth (ft)	Symbol	Bulk Sample	USCS	Description	Lab Tests	Moisture Content
0			OL	Wood chips (8 inches).		
0 - 5			FILL	FILL; Medium to fine silty sand and silty clay, mixed with brick, rock, concrete, trace wood fibers and organics, moist, blue gray. Difficult to excavate.		
5 - 10			FILL	FILL; Sand, medium to fine sand, some to little silt, trace organics, moist to wet, brown.		
10 - 11			CL	SILTY CLAY (CL); Very stiff, silty clay, moist, olive gray.		
11 - 15				Bottom of Exploration at 11'; Not refusal.		

NOTES



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 Geotechnical Engineering • Geotechnical Investigation • Materials Testing Services

TEST PIT LOG

PROJECT Proposed Metal Recycling Facility

CLIENT Civil Consultants, Inc.

LOCATION Portland, Maine

EXCAVATION METHOD Volvo SE210 Excavator

DEPTH TO - Water: Not Obs. When checked:

Test Pit No. TP-14

PROJECT NO. 427-44

DATE 06/29/07

ELEVATION 66

LOGGER GSM

Caving:

Depth (ft)	Symbol	Bulk Sample	USCS	Description	Lab Tests	Moisture Content
0			FILL	FILL; Silty sand, medium to fine sand, some silt, trace gravel, moist, blue gray. Railroad tie encountered from 4' to 4.5'.		
5						
10				Bottom of Exploration at 10'; Not refusal.		
15						

NOTES

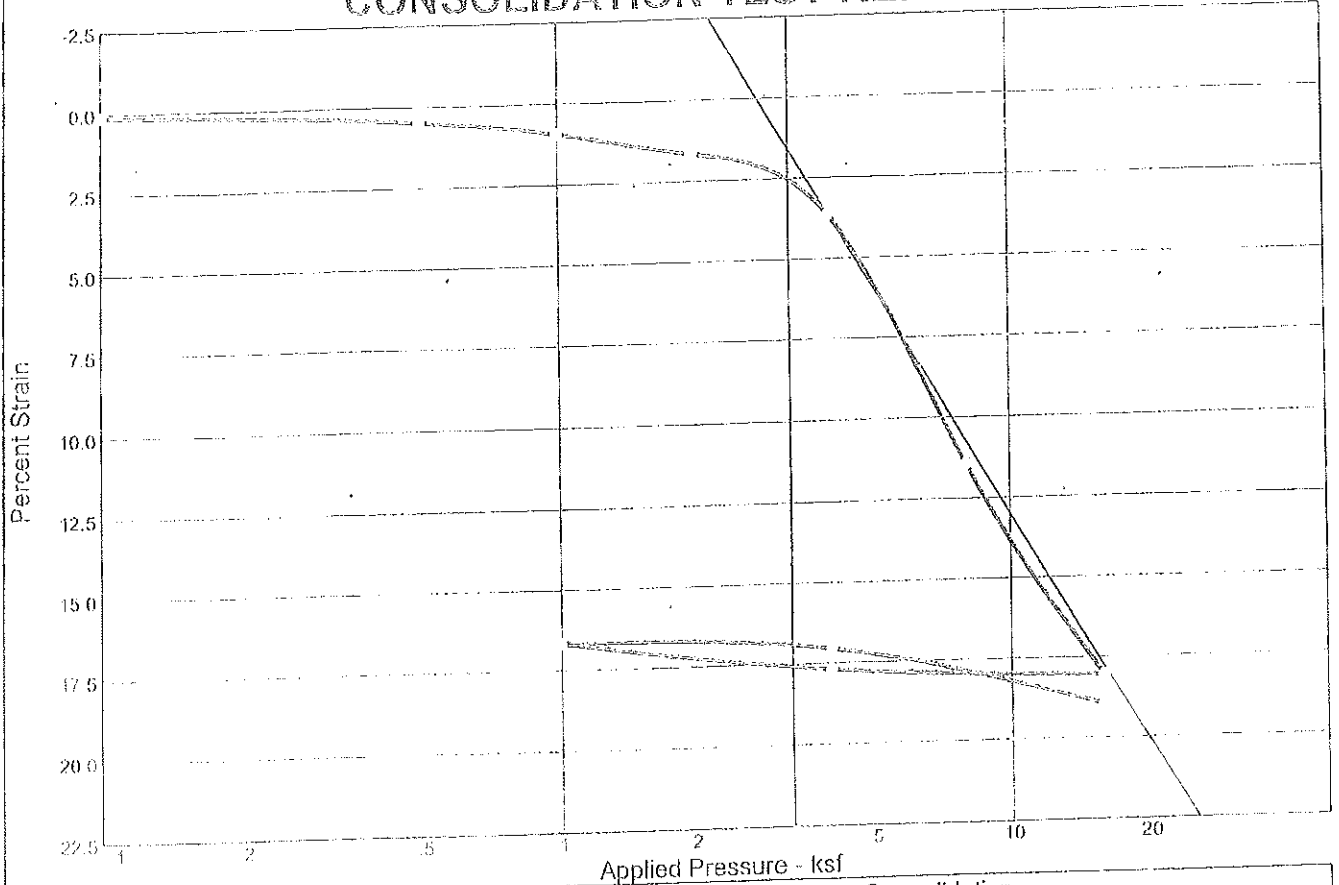
R. W. Gillespie & Associates, Inc.

APPENDIX C

LABORATORY TESTING

Geotechnical Evaluation
Proposed Scrap Metal Recycling Facility
Portland, Maine

CONSOLIDATION TEST REPORT



Coefficients of Consolidation and Secondary Consolidation

No.	Load (ksf)	C_v (ft.2/day)	C_α	No.	Load (ksf)	C_v (ft.2/day)	C_α	No.	Load (ksf)	C_v (ft.2/day)	C_α
1	0.10	1.86		11	16.00	0.61					
2	0.50	0.90									
3	1.00	0.67									
4	2.00	1.27									
5	4.00	0.29									
6	8.00	0.07									
7	16.00	0.13									
8	4.00	1.92									
9	1.00	1.48									
10	4.00	0.44									

Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P_c (ksf)	C_c	Initial Void Ratio
Saturation	Moisture							
94.9 %	40.9 %	78.9			2.77	3.68	0.52	1.193

MATERIAL DESCRIPTION

Clay

USCS

AASHTO

Project No. 427-49 Client: Civil Consultants, Inc.
Project: Metal Recycling Building & Stormwater Management Pond

Source: B-7 Sample No.: U-1 Elev./Depth: 20'-22'

R.W. Gillespie & Associates, Inc.
Saco, Maine

Remarks:

Lab No. 10939A

/s/

Laboratory Vane Shear Test Results

Project: Metal Recycling Buildings Client: Civil Consultants, Inc.
 Project No.: 427-49 Location: Portland, ME

Boring No.	B-7		Lab No.	10939a
Sample No.	U-1 (20'-22')			
Test No.	S_u (Undisturbed)	S_u (Residual)	Moisture Content	
1	627 psf	209 psf	45.3%	
2	752 psf	167 psf	44.9%	
3	752 psf	104 psf	42.8%	
4	741 psf	83 psf		

MTC

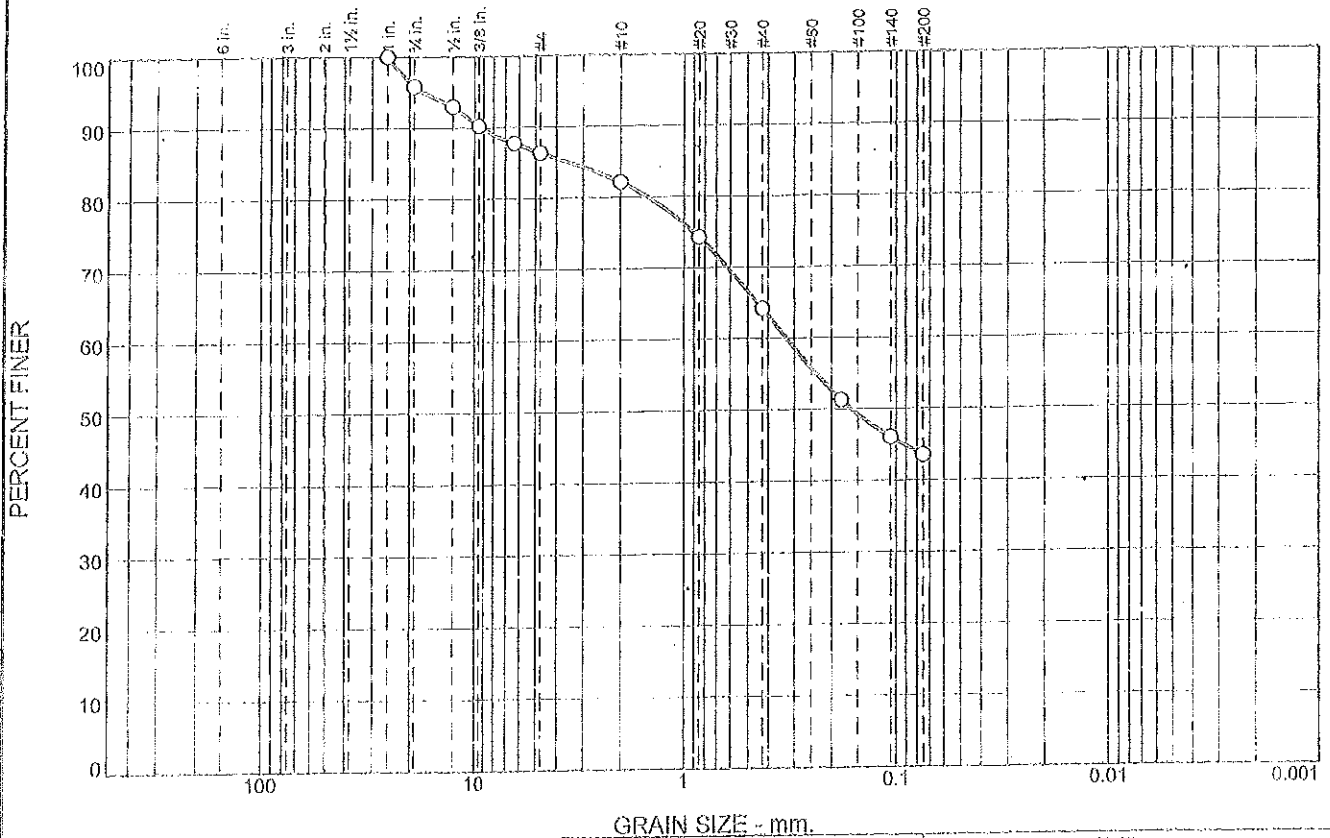
Laboratory Vane Shear Test Results

Project: Metal Recycling Buildings Client: Civil Consultants, Inc.
 Project No.: 427-49 Location: Portland, ME

Boring No.	B-7		Lab No.	10939b
Sample No.	U-2 (30'-32')			
Test No.	S_u (Undisturbed)	S_u (Residual)	Moisture Content	
1	689 psf	42 psf	39.0%	
2	710 psf	63 psf	32.9%	
3	501 psf	63 psf	33.9%	
4	668 psf	63 psf	37.9%	
5			38.4%	
6			40.4%	
7			40.6%	

MEC

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	4.2	9.4	4.2	18.0	20.6	43.6	

SIEVE SIZE	PERCENT FINER	SPEC. # PERCENT	PASS? (X=NO)
1"	100.0		
3/4"	95.8		
1/2"	93.0		
3/8"	90.2		
1/4"	87.8		
#4	86.4		
#10	82.2		
#20	74.3		
#40	64.2		
#80	51.3		
#140	46.1		
#200	43.6		

Soil Description

silty sand

PL= **Atterberg Limits** PI=

Coefficients

D₈₅= 3.4748 D₆₀= 0.3267 D₅₀= 0.1607

D₃₀= D₁₅= D₁₀=

C_u= C_c=

USCS= SM **Classification** AASHTO=

Remarks

Moisture Content: 14.1%

(no specification provided)

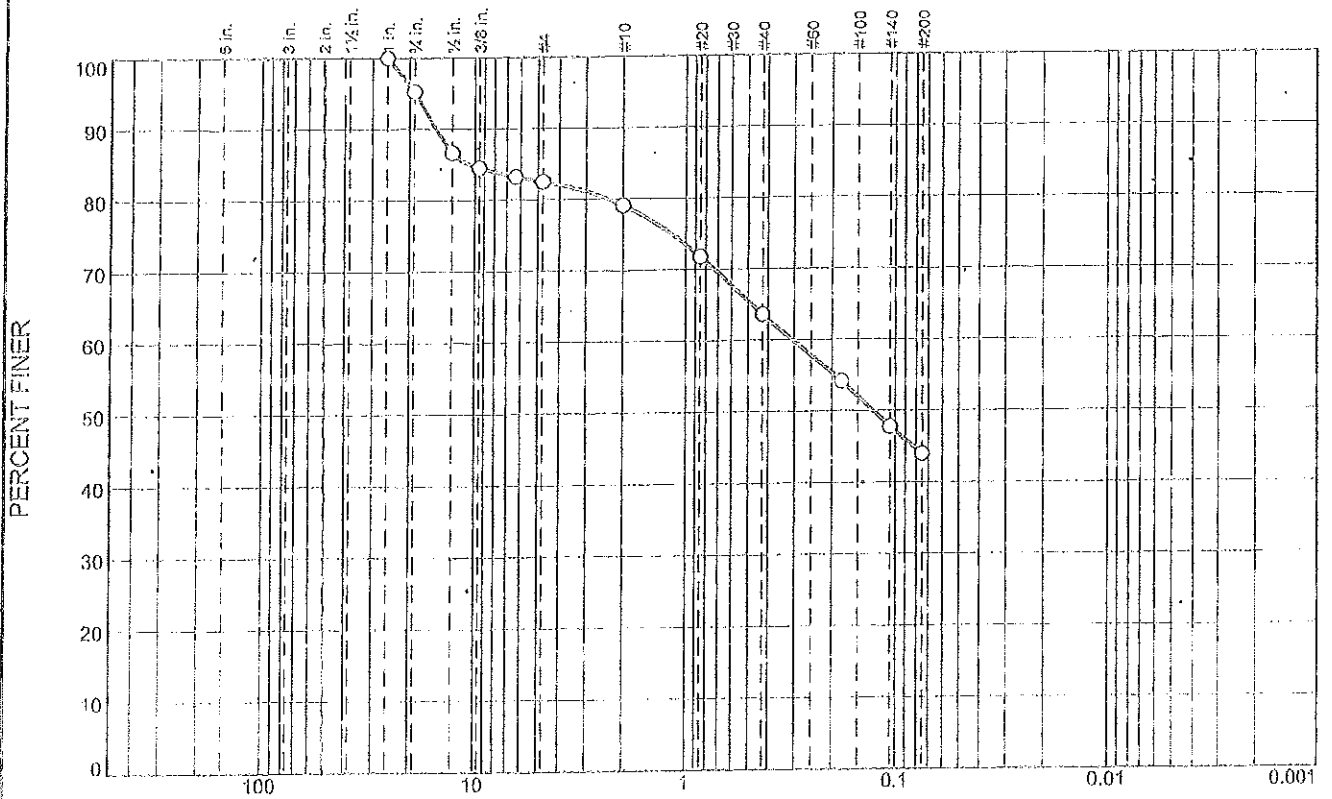
Sample No.: S-1 & S-2 Source of Sample: B-8 Date: 9/10/09

Location: Portland, Maine Elev./Depth: 0'-2' & 5'-7'

R.W. Gillespie & Associates, Inc. Saco, Maine	Client: Civil Consultants, Inc. Project: Metal Recycling Building & Stormwater Management Pond Project No: 427-49 Figure 10955P
---	--

Tested By: JJH Checked By: MTG *MTG*

Particle Size Distribution Report



GRAIN SIZE - mm

% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	4.8	12.6	3.5	15.5	19.6	44.0	

SIEVE SIZE	PERCENT FINER	SPEC. ^A PERCENT	PASS? (X=NO)
1"	100.0		
3/4"	95.2		
1/2"	86.7		
3/8"	84.5		
1/4"	83.2		
#4	82.6		
#10	79.1		
#20	71.8		
#40	63.6		
#80	54.2		
#140	47.8		
#200	44.0		

Soil Description

silty sand with gravel

Atterberg Limits

PL= LL= PI=

Coefficients

D₈₅= 10.5717 D₆₀= 0.3058 D₅₀= 0.1272

D₃₀= D₁₅= D₁₀=

C_u= C_c=

Classification

USCS= SM AASHTO=

Remarks

Moisture Content: 18.1%

* (no specification provided)

Sample No.: S-2 & S-3
 Location: Portland, Maine

Source of Sample: B-12

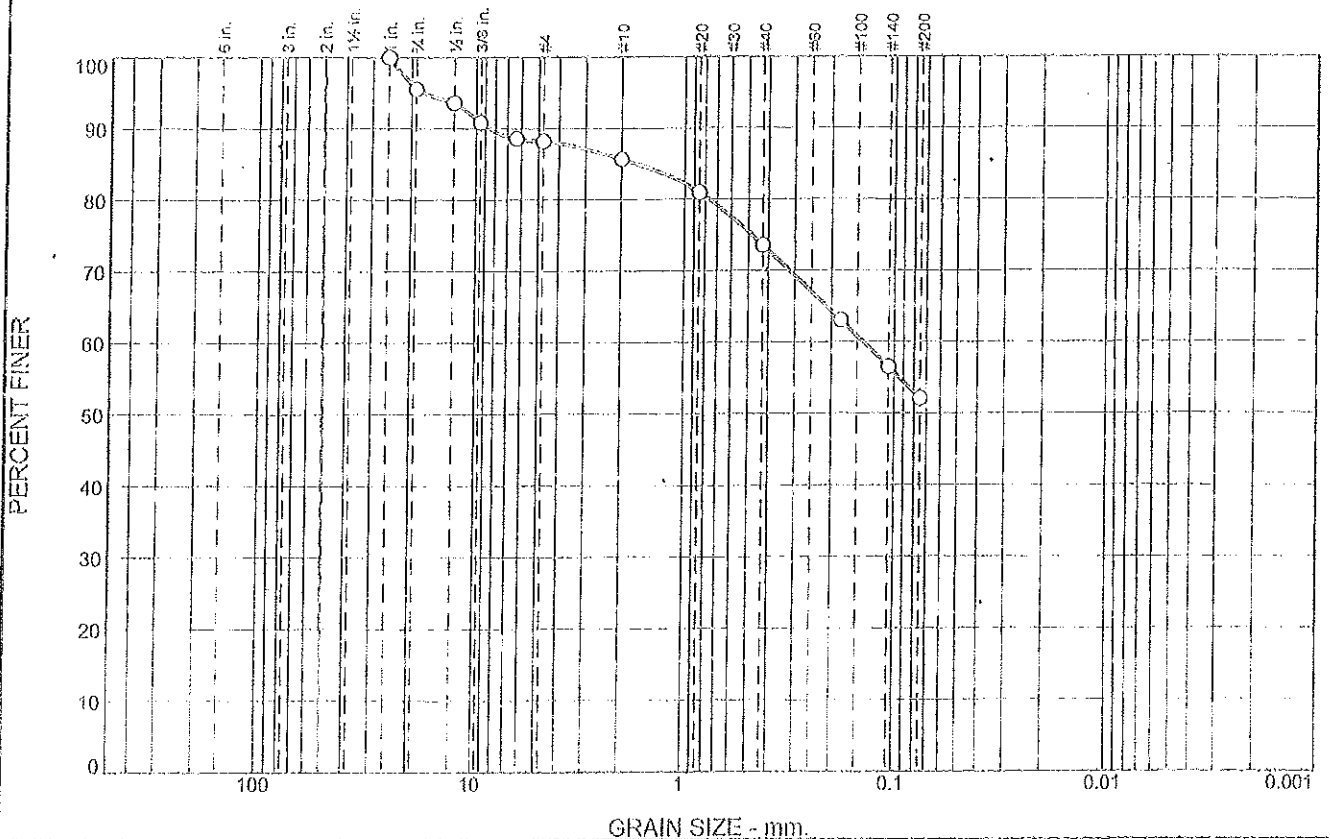
Date: 9/10/09
 Elev./Depth: 5'-7' & 10'-12'

R.W. Gillespie & Associates, Inc. Saco, Maine	Client: Civil Consultants, Inc. Project: Metal Recycling Building & Stormwater Management Pond Project No: 427-49 Figure 109550
--	--

Tested By: JJH

Checked By: MTG *MTG*

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	4.5	7.3	2.6	12.0	21.5	52.1	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1"	100.0		
3/4"	95.5		
1/2"	93.6		
3/8"	90.9		
1/4"	88.6		
#4	88.2		
#10	85.6		
#20	81.0		
#40	73.6		
#80	63.1		
#140	56.5		
#200	52.1		

Soil Description

sandy silt

Atterberg Limits

PL= LL= PI=

Coefficients

D₈₅= 1.6995 D₆₀= 0.1402 D₅₀=
D₃₀= D₁₅= D₁₀=
C_u= C_c=

Classification

USCS= ML AASHTO=

Remarks

Moisture Content: 18.7%

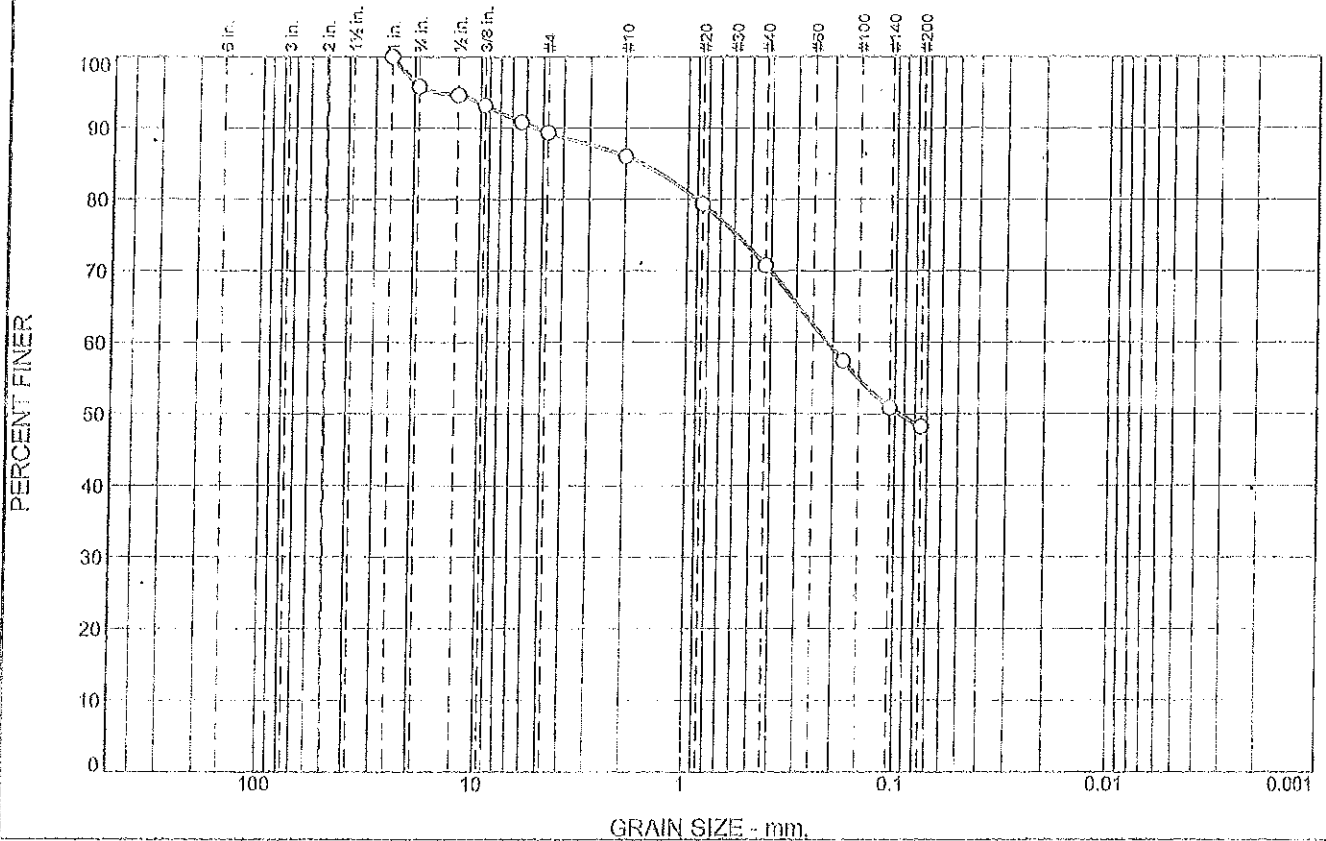
* (no specification provided)

Sample No.: S-3 Source of Sample: B-13 Date: 9/10/09
Location: Portland, Maine Elev./Depth: 10'-12'

R.W. Gillespie & Associates, Inc. Saco, Maine	Client: Civil Consultants, Inc. Project: Metal Recycling Building & Stormwater Management Pond Project No: 427-49 Figure 10955G
--	--

Tested By: JJH Checked By: MTG *MTG*

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	4.2	6.4	3.3	15.3	22.5	48.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1"	100.0		
3/4"	95.8		
1/2"	94.6		
3/8"	93.2		
1/4"	90.8		
#4	89.4		
#10	86.1		
#20	79.4		
#40	70.8		
#80	57.4		
#140	50.9		
#200	48.3		

<u>Soil Description</u>		
silty sand		
<u>Atterberg Limits</u>		
PL=	LL=	PI=
<u>Coefficients</u>		
D ₈₅ = 1.6598	D ₆₀ = 0.2131	D ₅₀ = 0.0955
D ₃₀ =	D ₁₅ =	D ₁₀ =
C _u =	C _c =	
<u>Classification</u>		
USCS= SM	AASHTO=	
<u>Remarks</u>		
Moisture Content: 12.9%		

(no specification provided)

Sample No.: S-1 & S-2
Location: Portland, Maine

Source of Sample: B-14

Date: 9/10/09
Elev./Depth: 0'-2' & 5'-7'

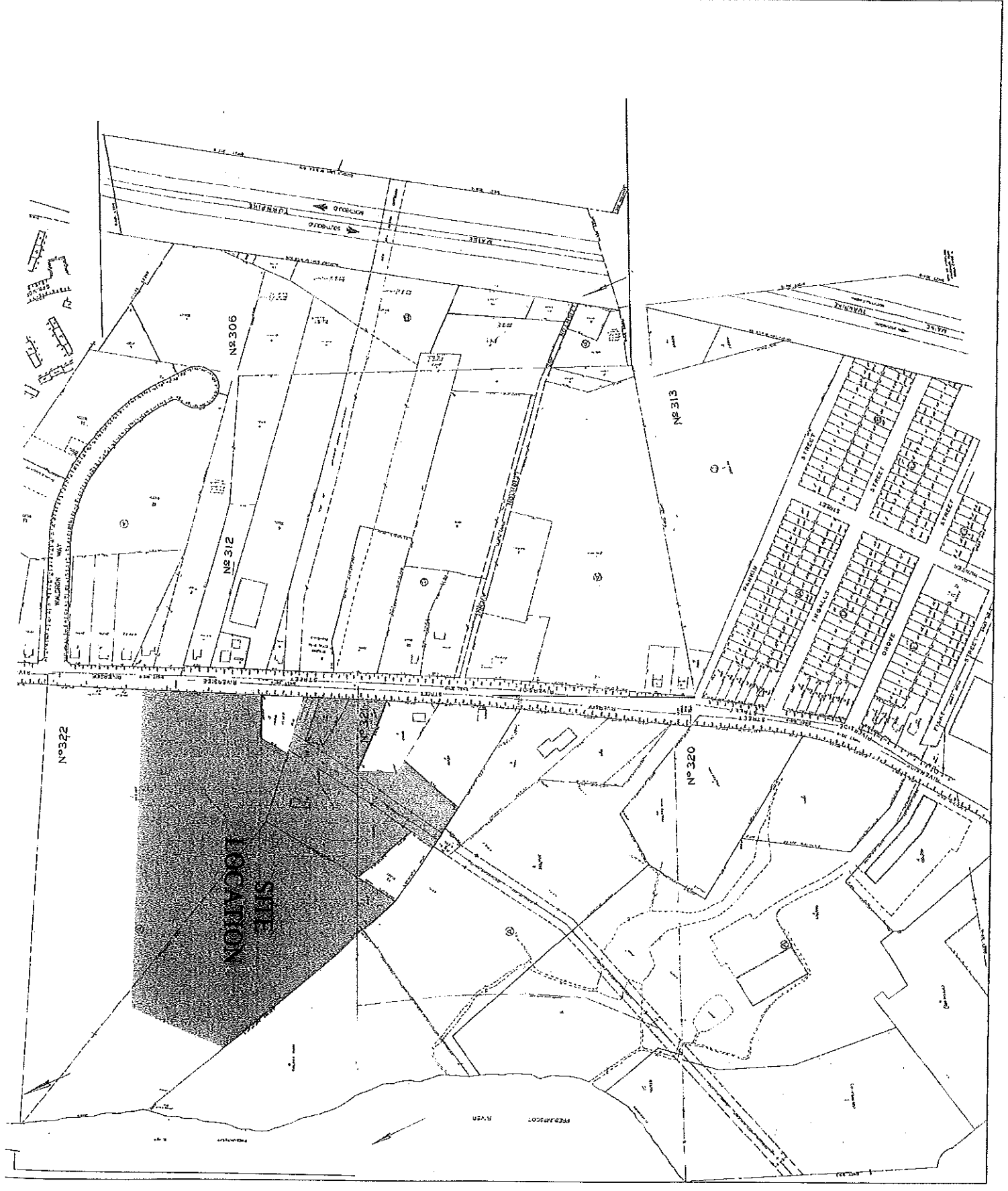
R.W. Gillespie & Associates, Inc. Saco, Maine	Client: Civil Consultants, Inc. Project: Metal Recycling Building & Stormwater Management Pond Project No: 427-49 Figure 10955Q
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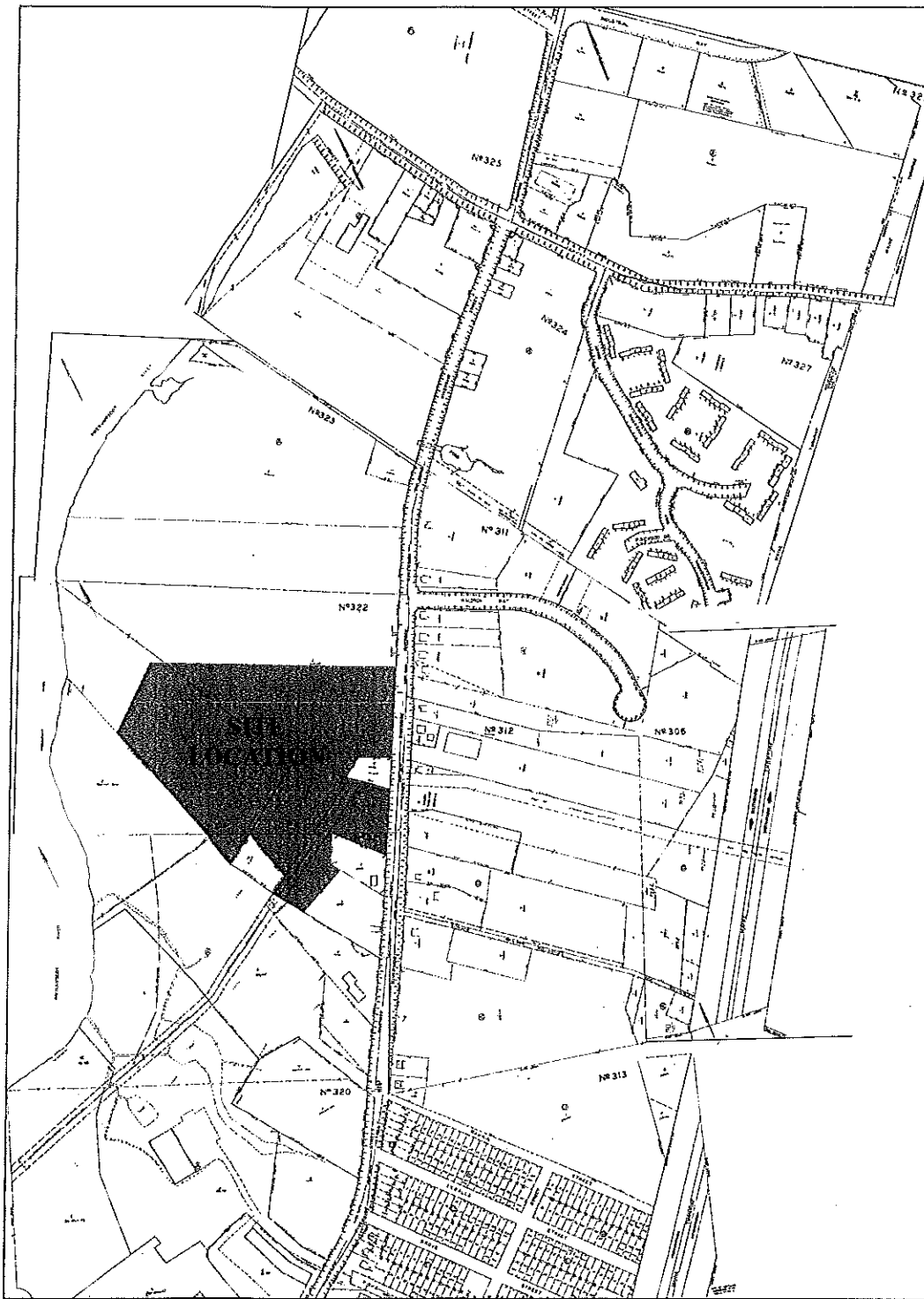
Tested By: JJH

Checked By: MTG *MTG*

Receiver Name	ID	Land Use Limiting Value		rel. Axis		Lr w/o Noise Control		dL req.		Lr w/ Noise Control		Exceeding		passive NC
		Day dB(A)	Night dB(A)	Station Distance m	Height m	Day dB(A)	Night dB(A)	Day dB(A)	Night dB(A)	Day dB(A)	Night dB(A)	Day dB(A)	Night dB(A)	
A - Northeast Corner		0	0			60.6	60.6	60.6	60.6	0.0	0.0	-	-	-
B - Westernmost		0	0			55.9	55.9	55.9	55.9	0.0	0.0	-	-	-
C		0	0			55.8	55.8	55.8	55.8	0.0	0.0	-	-	-
D	RST	0	0			65.6	65.6	65.6	65.6	0.0	0.0	-	-	-
E - R5 Zone Line	RST	0	0			52.6	52.6	52.6	52.6	0.0	0.0	-	-	-
F	RST	0	0			64.4	64.4	64.4	64.4	0.0	0.0	-	-	-







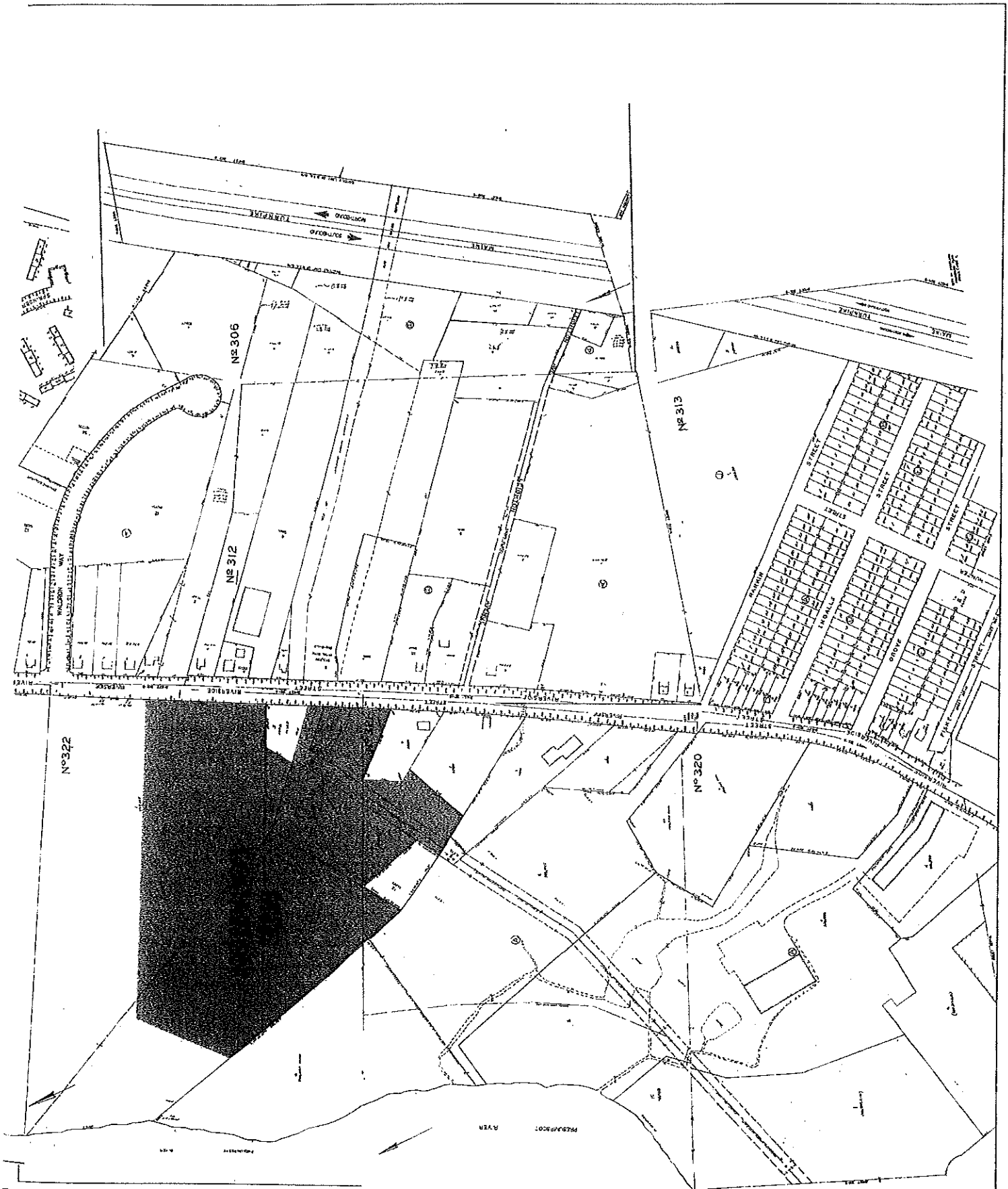
<p><i>PORTION OF PORTLAND TAX MAPS MAPS 311, 313, 312, 306, 327A, 324, 327, 323, 322, 320, 321 & 325</i></p>		<p>PREPARED FOR:</p>	<p><i>Prolierized New England LLC d/b/a Schnitzer Northeast Scrap Metal Recycling Facility Riverside Street, Portland, Maine</i></p>
<p>JOB NO: 06-769.00</p>	<p>Scale: reduced</p>	<p>DATE: September 2007</p>	

J:\aaa\2006\0676900\TAXMAPmini.doc



**CIVIL
 CONSULTANTS**

P.O. Box 100 South Berwick, Maine 03908 207-384-2550



7/10/07 Marge - Jane Adolf
Greg Cass - Rick Kn. DMF - Lee Ur - Marge
John McPhee

From: Lori Paulette
To: Alex Jaegerman ; Daniel Feeney; Gregory Cass; James Adolf; James Carmody;
John Rague; Lee Urban; Marge Schmuckal; Michael Bobinsky; Rick Knowland
Date: 6/29/2007 9:31:07 AM
Subject: Confirmed for 11:30 on Tuesday, July 10-NEMR/Schnitzer Steel

Riverside St

MEMETAL in Aub

Good morning,

322-A-1, 2 & 4

Thanks everyone - it looks like the majority can meet at 11:30 on Tuesday, the 10th. We'll have this meeting in Lee's office (or the Planning Conference Room - in any case, the meeting will be on the 4th floor here in City Hall).

Thanks!

They want to be the bench mark for this industry

PAT Murphy - Schnitzer Steel
Dir. of Operations

CC: Jane Ward; Melissa Graffam

2 13 Acre - lot
Carrying out a lot
Jeannie Smickler
Carl Beal -

19,000 sq Bldg - Drains to back of bldg
Hope Jacob Sen - Attorney
crushed cars inside

New Access - 4 Lane in bound
hose shoe / bins / out door storage
→ Rick asked to show a conceptual plan of the piles

FLAT Storage Auto Storage Bldg → on pavement
Non-flammable Storage Bldg ≈ 60' x 100' → 12" to 16" floor thickness

No min lot size -

Impervious - 85% MAX -

wet cars - mercury - oil -
antifreeze still in

Front: principle; Accessory: 25'

Apply to PB 1st - complete shop
City Council Approves The License -
may submit end of July or Begin
of August -

REAR: principle; accessory - 35' min -

Side: principle; accessory 35' min

Pavement setback: 10' from property lines

Street frontage: 60'

max height: 36' to eave shown / 19'-20' otherwise - 75' max allowed

total paved = 5 acres - employee parking out front

14-523(12) environmental issues

All in I-H

I-H

This page contains a detailed description of the Parcel ID you selected. Press the **New Search** button at the bottom of the screen to submit a new query.

Current Owner Information

Card Number 2 of 2
 Parcel ID 322 A001001
 Location 636 RIVERSIDE ST
 Land Use RETAIL & PERSONAL SERVICE

Owner Address THE TRUST FOR PUBLIC LAND
 33 UNION ST 4TH FLOOR
 BOSTON MA 02108

Book/Page 23759/299
 Legal 322-A-1 323-A-5
 321-A-11
 RIVERSIDE ST 568-648
 1345428 SF

Current Assessed Valuation

Land	Building	Total
\$786,000	\$933,610	\$1,719,610

Building Information

Bldg #	Year Built	# Units	Bldg Sq. Ft.	Identical Units
2	1991	1	0	1

Total Acres	Total Buildings	Sq. Ft.	Structure Type	Building Name
30.887	16960		PREFAB WAREHOUSE	

Exterior/Interior Information

Section	Levels	Size	Use
1	01/01	3250	MULTI-USE SALES
2	01/01	1250	MULTI-USE OFFICE

Height	Walls	Heating	A/C
12	METAL-LIGHT	HOT AIR	CENTRAL
16	METAL-LIGHT	HOT AIR	CENTRAL
		NONE	NONE
		NONE	NONE
		NONE	NONE
		NONE	NONE
		NONE	NONE
		NONE	NONE

Building Other Features

Line	Structure Type	Identical Units
	SPRINKLER - WET	1

Yard Improvements

Year Built	Structure Type	Length or Sq. Ft.	# Units
1996	UTILITY FRAME	8	1

From: <coconnor@perkinsthompson.com>
To: <rwk@portlandmaine.gov>
Date: 6/26/2007 10:04:53 AM
Subject: Schnitzer Steel -- Riverside Street

6/27/07

Good morning Rick,

Thanks for your help. Section 14-266(J) provides:

Any permitted outdoor storage of materials shall be done in such a manner as to prevent the breeding and harboring of insects or vermin, to prevent the transfer of such materials from the site by natural causes or forces and to contain fumes, dust or other materials which constitute a fire hazard. This storage shall be accomplished within enclosed containers or by one (11) or more of the following methods: raising materials above ground, separating materials, preventing stagnant water, or by some other means. No outdoor storage shall be permitted between the front of any building on the site and the street, except for storage for plant and tree nurseries or lumber yards.

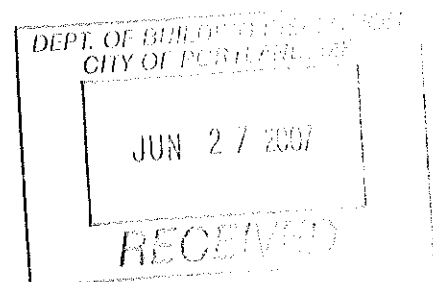
(Emphasis added). As you know, Schnitzer Steel is developing its proposed site plan for the new Riverside recycling facility. We are asking whether recycling bins can be located between a building located well back from the street and the 100 foot setback line, if the bins are well-screened from the street? If not, can the recycling bins be housed in a roofed structure that would be an accessory building?

I would appreciate the Staff's preliminary response to this interpretation question. I understand that you will discuss it with Marge tomorrow.

Thank you.

Cath O'Connor

Catherine O'Connor
Attorney
PERKINS|THOMPSON
ONE CANAL PLAZA, PO BOX 426
PORTLAND, ME 04112-0426
207.774.2635 x210
FAX 207.871.8026
www.perkinsthompson.com <<http://www.perkinsthompson.com/>>
coconnor@perkinsthompson.com



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From: Rick Knowland
To: Marge Schmuckal
Date: 6/26/2007 11:20:42 AM
Subject: Fwd: Schnitzer Steel -- Riverside Street

Marge, Help. Any thoughts. We can discuss this at Wednesdays staff review meeting. Also at friday's prep meeting.

>>> <coconnor@perkinsthompson.com> Tuesday, June 26, 2007 >>>
Good morning Rick,

Thanks for your help. Section 14-266(J) provides:

Any permitted outdoor storage of materials shall be done in such a manner as to prevent the breeding and harboring of insects or vermin, to prevent the transfer of such materials from the site by natural causes or forces and to contain fumes, dust or other materials which constitute a fire hazard. This storage shall be accomplished within enclosed containers or by one (1) or more of the following methods: raising materials above ground, separating materials, preventing stagnant water, or by some other means. No outdoor storage shall be permitted between the front of any building on the site and the street, except for storage for plant and tree nurseries or lumber yards.

(Emphasis added). As you know, Schnitzer Steel is developing its proposed site plan for the new Riverside recycling facility. We are asking whether recycling bins can be located between a building located well back from the street and the 100 foot setback line, if the bins are well-screened from the street? If not, can the recycling bins be housed in a roofed structure that would be an accessory building?

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Jeanie Bourke - 568 Riverside Street

From: "Dennis Waters" <dwaters@patco.com>
To: <jmb@portlandmaine.gov>
Date: 6/3/2010 3:26 PM
Subject: 568 Riverside Street
CC: "Jon Bell" <jbell@patco.com>
Attachments: Certificate of Design.pdf; Comcheck.pdf

Jeanie,

I have attached the corrected Certificate of Design form (Use Group : F-1 and B, Type III B construction) as well as the completed COMcheck certificates that we talked about yesterday afternoon.

As far as the building's occupant load, I was told 15 people max on first floor and 10 people max on second floor. The percentage of female employees is expected to be less than 20% of that.

You may have heard that a pre-construction meeting has been scheduled for Monday morning at 9:00.

If you need any additional information please let me know.

Thanks,
Dennis

Dennis Waters

Patco Construction, Inc.
1293 Main Street
Sanford, Maine 04073
(207)324-5574 ext.24
(207)651-0798 (cell)
<http://www.patco.com>

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JUN - 3 2010
Dept. of Building Inspections
City of Portland Maine



Certificate of Design Application

From Designer: Carl W. Walker
 Date: 5/12/10
 Job Name: Schnitzer Northeast
 Address of Construction: 568 Riverside Street

2003 International Building Code
 Construction project was designed to the building code criteria listed below:

Building Code & Year 2003 IBC Use Group Classification (s) F-1, B
 Type of Construction Type III B
 Will the Structure have a Fire suppression system in Accordance with Section 903.3.1 of the 2003 IRC yes
 Is the Structure mixed use? yes If yes, separated or non separated or non separated (section 302.3) separated
 Supervisory alarm System? yes Geotechnical/Soils report required? (See Section 1802.2) yes

Structural Design Calculations

Submitted for all structural members (106.1 - 106.11) N/A Live load reduction

Design Loads on Construction Documents (1603)

Uniformly distributed floor live loads (7603.11, 1607)
 Floor Area Use Loads Shown
Process 250 psf
2nd floor office 80 psf

20 psf Roof live loads (1603.1.2, 1607.11)
37.80 psf Roof snow loads (1603.7.3, 1608)
60 psf Ground snow load, P_g (1608.2)
37.8 psf If $P_g > 10$ psf, flat-roof snow load P_f
1 FE (1.0) If $P_g > 10$ psf, snow exposure factor, e
1 If $P_g > 10$ psf, snow load importance factor, i
Heated (1.0) Roof thermal factor, t_r (1608.4)
37.8 psf Sloped roof snowload, P_s (1608.4)
C Seismic design category (1616.3)
braced frames Ductile seismic force resisting system (1617.6.2)
3.0 Response modification coefficient, R_d and deflection amplification factor, C_d (1617.6.2)
E.L.F. Analysis procedure (1616.6, 1617.5)
 Design base shear (1617.4, 1617.5.1)

Wind loads (1603.1.4, 1609)

yes Design option utilized (1609.1.1, 1609.6)
95 mph Basic wind speed (1809.3)
1.0 Building category and wind importance Factor, I_w (table 1604.5, 1609.5)
C Wind exposure category (1609.4)
"enclosed" Internal pressure coefficient (ASCE 7)
15.2 Component and cladding pressures (1609.1.1, 1609.6.2.2)
15.2 Main force wind pressures (7603.1.1, 1609.6.2.1)

Flood loads (1803.1.6, 1612)
N/A Flood Hazard area (1612.3)
N/A Elevation of structure

Earth design data (1603.1.5, 1614-1623)

yes Design option utilized (1614.1)
I, C Seismic use group ("Category")
40/10 Spectral response coefficients, S_D & S_1 (1615.1)
D, 4 Site class (1615.1.5)

Other loads
3psf collateral Concentrated loads (1607.4)
N/A Partition loads (1607.5)
N/A Misc. loads (Table 1607.8, 1607.6.1, 1607.7, 1607.12, 1607.13, 1610, 1611, 2404)

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JUN - 3 2010

Dept. of Building Inspections
 City of Portland Maine

Schedule of Inspection and Testing Agencies

This Statement of Special Inspections / Quality Assurance Plan includes the following building systems:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Soils and Foundations | <input type="checkbox"/> Spray Fire Resistant Material |
| <input checked="" type="checkbox"/> Cast-in-Place Concrete | <input checked="" type="checkbox"/> Wood Construction |
| <input type="checkbox"/> Precast Concrete | <input type="checkbox"/> Exterior Insulation and Finish System |
| <input checked="" type="checkbox"/> Masonry | <input type="checkbox"/> Mechanical & Electrical Systems |
| <input checked="" type="checkbox"/> Structural Steel | <input type="checkbox"/> Architectural Systems |
| <input type="checkbox"/> Cold-Formed Steel Framing | <input type="checkbox"/> Special Cases |

Special Inspection Agencies	Firm	Address, Telephone, e-mail
1. Special Inspection Coordinator	Patco Construction	1293 Main St. Squidford, Me. 04093 (209) 324-5974 dwaters@patco.com
2. Inspector	R.W. Gillespie	86 Industrial Park Rd. Saco, Me. 04072 (209) 286-8008 mgrady@rwg-a.com
3. Inspector	Ted Greenlaw	183 Columbia, Rd. Hanover, MA 02339 (781) 826-8369 tedgreenlawpc@yahoo.com
4. Testing Agency	R.W. Gillespie	same
5. Testing Agency		
6. Other		

Note: The Inspectors and testing agencies 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.

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JUN - 2 2010
Dept. of Building Inspections
City of Portland Maine

LETTER OF TRANSMITTAL

(207) 324-5574 Fax (207) 324-1643

TO City of Portland
Planning & Development

DATE	6/2/10	JOB NO.
ATTENTION	Jeanie Bourke	
RE:	568 Riverside Street	

hand carried

WE ARE SENDING YOU Attached Under separate cover via _____ the following items:

Shop drawings Prints Plans Samples Specifications
 Copy of letter Change order _____

COPIES	DATE	NO.	DESCRIPTION
1	10/1/09		R.W. Gillespie Geotechnical Report
1			List of agents from Statement of Special Inspections (page 2 of 7 was omitted)
1	5/10/10	A-2	First Floor Plan with wall types labeled correctly ("layer" was turned off when AutoCad print was run)

THESE ARE TRANSMITTED as checked below:

- For approval Approved as submitted Resubmit _____ copies for approval
 For your use Approved as noted Submitted _____ copies for distribution
 As requested Returned for corrections Return _____ corrected prints
 For review and comment _____
 FOR BIDS DUE _____ PRINTS RETURNED AFTER LOAN TO US

RECEIVED

JUN - 2 2010

REMARKS

Jeanie,
 This information is in response to your voicemail of 6/1/10.
 I need to talk to you about your question with regards to
 the Certificate of Design Application.
 D.O.U. COMcheck, Should have tomorrow.

Thanks,

COPY TO _____

SIGNED: *Dennis Waters*

PATCO CONSTRUCTION, INC.

1293 Main Street
SANFORD, MAINE 04073

LETTER OF TRANSMITTAL

(207) 324-5574 Fax (207) 324-1643

TO City of Portland
Inspections

DATE	5/13/10	JOB NO.
ATTENTION		
RE:		

hand carried

WE ARE SENDING YOU Attached Under separate cover via _____ the following items:

- Shop drawings Prints Plans Samples Specifications
 Copy of letter Change order _____

COPIES	DATE	NO.	DESCRIPTION
1	5/13/10		Building permit application w/forms attached
1	5/13/10		check # for \$4,670. ⁰⁰
			1st \$1000. ⁰⁰ @ \$30. + \$467K @ \$10/K = \$4,670. ⁰⁰
1	5/13/10		Complete drawing set
1	5/13/10		CD with all drawings
1	5/13/10		Statement of Special Inspections
2	5/13/10		Fire Dept. checklist
1	5/13/10		Set of architectural drawings for Fire Dept.

THESE ARE TRANSMITTED as checked below:

- For approval Approved as submitted Resubmit _____ copies for approval
 For your use Approved as noted Submit _____ copies for distribution
 As requested Returned for corrections Return _____ corrected prints
 For review and comment _____
 FOR BIDS DUE _____ PRINTS RETURNED AFTER LOAN TO US

REMARKS _____

COPY TO _____

SIGNED: Dennis Waters

Statement of Special Inspections

Project: Schnitzer Northeast Recycling Building
 Location: 568 Riverside St., Portland, Maine
 Owner: Prolerized New England Company, LLC
 Design Professional in Responsible Charge: Ted Greenlaw P.E.

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

- Structural Mechanical/Electrical/Plumbing
 Architectural Other: _____

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

Interim reports shall be submitted to the Building Official and the Registered Design Professional in Responsible Charge.

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

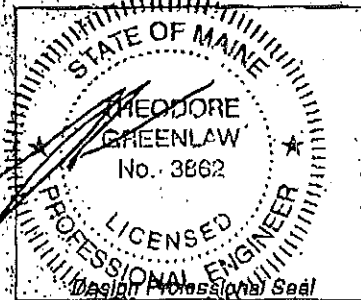
or per attached schedule.

Prepared by:

Theodore Greenlaw
 (type or print name)

[Signature]
 Signature

5-14-10
 Date



Owner's Authorization:

Building Official's Acceptance:

Signature

Date

Signature

Date

Soils and Foundations

Item	Agency # (Qualif.)	Scope
1. Shallow Foundations	PE/GE (2) RWG	Inspect soils below footings for adequate bearing capacity and consistency with geotechnical report. Inspect removal of unsuitable material and preparation of subgrade prior to placement of controlled fill
2. Controlled Structural Fill	PE/GE (2) RWG	Perform sieve tests (ASTM D422 & D1140) and modified Proctor tests (ASTM D1557) of each source of fill material. Inspect placement, lift thickness and compaction of controlled fill. Test density of each lift of fill by nuclear methods (ASTM D2922) Verify extent and slope of fill placement.
3. Deep Foundations N/A	PE/GE	Inspect and log pile driving operations. Record pile driving resistance and verify compliance with driving criteria. Inspect piles for damage from driving and plumbness. Verify pile size, length and accessories. Inspect installation of drilled pier foundations. Verify pier diameter, bell diameter, lengths, embedment into bedrock and suitability of end bearing strata.
4. Load Testing		
4. Other:		

Cast-In-Place Concrete

Item	Agency # (Qualif.)	Scope
1. Mix Design	(RWG) ② ACI-CCI ICC-RCSI	Review concrete batch tickets and verify compliance with approved mix design. Verify that water added at the site does not exceed that allowed by the mix design.
2. Material Certification N/A		
3. Reinforcement Installation	(RWG) ② ACI-CCI ICC-RCSI	Inspect size, spacing, cover, positioning and grade of reinforcing steel. Verify that reinforcing bars are free of form oil or other deleterious materials. Inspect bar laps and mechanical splices. Verify that bars are adequately tied and supported on chairs or bolsters.
4. Post-Tensioning Operations N/A	ICC-PCSI	Inspect placement, stressing, grouting and protection of post-tensioning tendons. Verify that tendons are correctly positioned, supported, tied and wrapped. Record tendon elongations.
5. Welding of Reinforcing N/A	AWS-CWI	Visually inspect all reinforcing steel welds. Verify weldability of reinforcing steel. Inspect preheating of steel when required.
6. Anchor Rods	② (RWG)	Inspect size, positioning and embedment of anchor rods. Inspect concrete placement and consolidation around anchors.
7. Concrete Placement	(RWG) ④ ACI-CCI ICC-RCSI	Inspect placement of concrete. Verify that concrete conveyance and depositing avoids segregation or contamination. Verify that concrete is properly consolidated.
8. Sampling and Testing of Concrete	(RWG) ④ ACI-CFTT ACI-SIT	Test concrete compressive strength (ASTM C31 & C39), slump (ASTM C143), air-content (ASTM C231 or C173) and temperature (ASTM C1064).
9. Curing and Protection	(RWG) ② ACI-CCI ICC-RCSI	Inspect curing, cold weather protection and hot weather protection procedures.
10. Other:		

Structural Steel

Item	Agency # (Qualif.)	Scope
1. Fabricator Certification/ Quality Control Procedures <input type="checkbox"/> Fabricator Exempt N/A	AWS/AISC SSI ICC-SWSI	Review shop fabrication and quality control procedures.
2. Material Certification N/A	AWS/AISC SSI ICC-SWSI	Review certified mill test reports and identification markings on wide-flange shapes, high-strength bolts, nuts and welding electrodes
3. Open Web Steel Joists N/A		Inspect installation, field welding and bridging of joists.
4. Bolting	(RWG) (2) AWS/AISC SSI ICC-SWSI	Inspect installation and tightening of high-strength bolts. Verify that splines have separated from tension control bolts. Verify proper tightening sequence. Continuous inspection of bolts in slip-critical connections.
5. Welding N/A	AWS-CWI ASNT	Visually inspect all welds. Inspect pre-heat, post-heat and surface preparation between passes. Verify size and length of fillet welds. Ultrasonic testing of all full-penetration welds.
6. Shear Connectors N/A	AWS/AISC SSI ICC-SWSI	Inspect size, number, positioning and welding of shear connectors. Inspect studs for full 360 degree flash. Ring test all shear connectors with a 3 lb hammer. Bend test all questionable studs 15 degrees.
7. Structural Details (RWG or Greenlaw)	(2 or 3) PE/SE	Inspect steel frame for compliance with structural drawings, including bracing, member configuration and connection details.
8. Metal Deck (RWG or Greenlaw)	(2 or 3) AWS-CWI	Inspect welding and side-lap fastening of metal roof and floor deck.
9. Other:		

Masonry

Required Inspection Level: 1 2

Page 6 of 7

Item	Agency # (Qualif.)	Scope
1. Material Certification N/A		
2. Mixing of Mortar and Grout	② RWG ICC-SMSI	Inspect proportioning, mixing and retempering of mortar and grout.
3. Installation of Masonry	② RWG ICC-SMSI	Inspect size, layout, bonding and placement of masonry units.
4. Mortar Joints	② RWG ICC-SMSI	Inspect construction of mortar joints including tooling and filling of head joints.
5. Reinforcement Installation	② RWG ICC-SMSI AWS-CWI	Inspect placement, positioning and lapping of reinforcing steel. Inspect welding of reinforcing steel.
6. Prestressed Masonry N/A	ICC-SMSI	Inspect placement, anchorage and stressing of prestressing bars.
7. Grouting Operations	② RWG ICC-SMSI	Inspect placement and consolidation of grout. Inspect masonry clean-outs for high-lift grouting.
7. Weather Protection	② RWG ICC-SMSI	Inspect cold weather protection and hot weather protection procedures. Verify that wall cavities are protected against precipitation.
9. Evaluation of Masonry Strength	④ RWG ICC-SMSI	Test compressive strength of mortar and grout cube samples (ASTM C780). Test compressive strength of masonry prisms (ASTM C1514).
10. Anchors and Ties	② RWG ICC-SMSI	Inspect size, location, spacing and embedment of dowels, anchors and ties.
11. Other:		

Wood Construction Associated with interior wood framed second floor. Page 7 of 7

Item	Agency # (Qualif.)	Scope
1. Fabricator Certification/ Quality Control Procedures <input type="checkbox"/> Fabricator Exempt	N/A	Inspect shop fabrication and quality control procedures for wood truss plant.
2. Material Grading	② RWG	
3. Connections	② RWG	
4. Framing and Details	② RWG	
5. Diaphragms and Shearwalls	N/A	Inspect size, configuration, blocking and fastening of shearwalls and diaphragms. Verify panel grade and thickness.
6. Prefabricated Wood Trusses	N/A	Inspect the fabrication of wood trusses.
7. Permanent Truss Bracing	N/A	
8. Other:		

City of Portland Fire Department Checklist for:
568 Riverside Street, Portland, Maine
May 13, 2010

Owner: Prolerized New England Company, LLC
69 Rover Street
Everett, MA 02149
(781) 873-1662

Applicant: Patco Construction, Inc
1293 Main Street
Sanford, ME 04073
Dennis Waters
(207) 324-5574

Architect: Parallel Edge Architecture
John Einsiedler
148 Sea Road
Kennebunk, ME 04043
(207) 985-9760

Use: IBC – F-1, Factory Industrial, Low Hazard
NFPA – 13, Ordinary Hazard, Group II

Size: 12,000 sf – First Floor
1,800 sf – Second Floor
13,800 sf – Total

Fire Protection: Complete automatic fire suppression system to be installed. Wet system in all areas except unheated “Dismantling Area”. Drawings to be submitted by Residential Fire Protection when complete.

Fire Alarm: Separate permit application

Life Safety Drawing: Attached

Elevator: None required

Applicant: PNE Comments ^{1/24}
Polarized New ENGLAND Co. Date: 2/20/08
Address: 568 Riverside St C-B-L: 322-A-1, 2, 4
322-A-1, 11, 12

CHECK-LIST AGAINST ZONING ORDINANCE

Date - (WAS ^{part of} Lucas Tree) - Now ~~owned~~ by The Trust for Public Land
Zone Location - I-H permit #10-0521

Interior or corner lot - I-W Allow recycling facilities
Proposed Use/Work - metal recycling facility (recycling scrap metals)
ferrous & nonferrous processing

Sevage Disposal - 18,800 sq ft & 50x100' Flat Auto Storage Bldg
32' x 155' Non ferrous Storage Bldg

Lot Street Frontage - 60' min - 135' +
Front Yard - 25' min - 100' AT The closest 4/21/10 170' AT closest

Rear Yard - 35' min - 272' AT The closest 4/21/10 - 270' AT closest

Side Yard - 35' min - 25' to the Nonferrous storage Bldg up front
Other Bldgs 0' (4/21/10 78') - 52' in rear

Projections -

Width of Lot - N/A
Height - 75' MAX - 50' to the Ridge of the highest portion

ES Plan
Diff. Than
All other
vs
CZ
Site Plan
Lot Area - NO MIN. - 12.9 Acres on the site plan
13.2 Acres given

Lot Coverage/Impervious Surface - 85% MAX - 42% given
ferrous & concrete in back

Area per Family - N/A
Off-street Parking - 18,800 sq ft / 1,000 = 18.8 or 19 pty req - 19 pty shown
4/21/10 same
not the 20 stated

Loading Bays -
No Bldg elevations - got from Rick 3/6/08

Site Plan - # 2008-0014 Major
Shoreland Zoning/Stream Protection - Presump Scott River in rear Bldg & Development
outside of Shoreland

Flood Plains - Panel 6 - Zone S X
Bike Racks
& AE - Developed Area & Bldgs well outside the AE

Noise Considerations - see back side
Plantment set backs - 10' req from boundary lines - 15' setback AT closest

Noise: 7:00 AM - 10:00 PM - 75 dBA ^{at max SPL on the site 4' above the surface}
10:00 PM - 7:00 AM - 55 dBA AS

Pg 3 - 1 m
The Noise Section
states that they
will be open only
during
the
time hours
earlier than 7:00 AM

measured at or within the boundaries of
the Res. Zone

Tab #19 is "Noise Impact Assessment Study"

appears to be meeting the noise
guidelines

MEMORANDUM

To: FILE

From: Marge Schmuckal

Dept: Zoning

Subject: Application ID: 2008-0014

Date: 4/21/2010

The revised plans received 4/14/10 are meeting the I-H Zone requirements. There is a reminder that perhaps the Noise Impact Assessment Study to be updated with the changes that have occurred on the current plans. My previous comments regarding the acoustical barrier is still in force. The minimum acoustical barrier should be constructed as part of the main development and prior to the issuance of a temporary and/or permanent certificate of occupancy.

MEMORANDUM

To: FILE

From: Marge Schmuckal

Dept: Zoning

Subject: Application ID: 2008-0014

Date: 6/4/2008

I did find the Noise Impact Assessment Study attached in the submittal. It appears that the operation as stated can meet the maximum noise requirements within the I-H Zone. However, there is an admission that if the excavator is operated any closer than 85 feet from a property line, the construction of a barrier would be required. It is my opinion that there should be a design for the worst case scenario at the beginning of the project. An excavator operator will not be concerned about how far from the property line he/she might be working. He/she will be concerned about the job at hand and operate where necessary. It should be a requirement that the minimum acoustical barrier be constructed as part of the main development and prior to the issuance of a temporary and/or permanent certificate of occupancy.

Marge Schmuckal
Zoning Administrator

MEMORANDUM

To: FILE

From: Marge Schmuckal

Dept: Zoning

Subject: Application ID: 2008-0014

Date: 2/28/2008

This property is located within the I-H Industrial Zone.

There are several concerns. The "nonferrous storage building" up front only has 25' side setbacks instead of the the required 35' side setbacks. All other front and rear setbacks are being met.

The impervious surface requiremet of 85% is being met (42% given)

There are two given site plans that do not match: "ES" and "C2". I would want a clarification as to which plan is correct. Most of the given plans match "C2" for building locations and parking. "ES" has a different location for the flat auto storage building and shows 20 parking spaces instead of 19.

The applicant has not addressed the I-H noise requirements. Because of the nature of this business, the noise requirements will be an important denominator to address early on..

✓ No building elevations were included within this application. The maximum height in the I-H Zone is 75'. Rick GAVE me the elevation

Marge Schmuckal
Zoning Administrator

3/7/08

TOM E.
DAN G.
mike F.
greg C.
BARBARA
Rick MARGE

Needs Bike RACKS

Tom Erico - No queing study given the 20% increase of metal? related to office
requesting sidewalk waiver - pushing the fencing back
telephone pole in the entry/exit island \$10,000 to move
Hours of operations? 6 to 6^{open} 7 → 4 deliveries
How many employees
Snow storage area not real should melt into the storm drains
.22 Acres are untreated
Section 18 page -

11/4/09

PERKINS THOMPSON
ATTORNEYS & COUNSELORS AT LAW

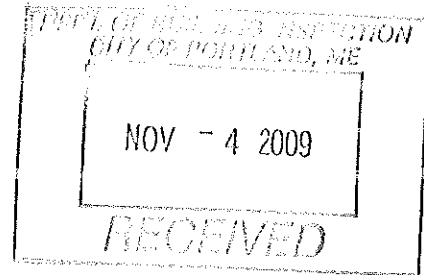
ESTABLISHED 1871

ONE CANAL PLAZA
PO BOX 426
PORTLAND ME 04112
TEL 207.774.2635
FAX 207.871.8026

www.perkinsthompson.com

October 30, 2009

VIA EMAIL AND FIRST CLASS MAIL



Mr. Rick Knowland
Portland Planning Director
Department of Planning and Development
389 Congress Street
Portland ME 04101

Re: Prolerized New England Company LLC Scrap Metal Recycling Facility

Dear Rick:

On behalf of Prolerized New England Company LLC and further to our conversation on Wednesday, this letter is to summarize our understanding of the proposed timing to satisfy the various outstanding specific conditions of approval that were attached to our site plan approval, granted by the Planning Board in July 2008, as formalized in an approval letter dated September 9, 2008 from Chair Janice Tevanian to Mr. Carl Beal, civil engineer.

Under separate cover, Carl Beal will be delivering today multiple sets of the revised site plan to your office for your review. As you know, we are under a tight timeframe in which to begin construction, due to the weather, so would appreciate it if all remaining issues could be resolved, and the performance guarantee amount approved within the next week, if possible.

Following is a description of each of the 10 specific conditions of approval, and how we either understand they have been addressed, or how we propose to address them:

1. As we discussed, most of the items in Condition 1 are designed to address any potential issues that may arise post-construction. However, we understand the City would like to review our Annual Monitoring Plan of Vehicle Queuing that will identify potential issues and mitigation measures, which shall be added to the current operations management plan. Per our discussion, we propose to submit a draft of the Annual Traffic Monitoring Plan by January 1, 2010 to the City for its review.

2. The landscape plan was revised and approved by the City Arborist in October of 2008. Due to the inclusion of a larger screening berm at the northeast corner of the site and a reduction in the size of the building, the landscaping at the berm has been revised.

DOUGLAS S. CARR
PHILIP C. HUNT
JOHN S. LUTON
PEGGY L. MCGEEHEE
MELISSA HANLEY MURPHY
JOHN A. GIRALDO
JOHN A. HOBSON
JAMES N. KATSIARICAS
TIMOTHY P. BENOIT
GORDON SCANNELL, JR.
FRED W. BOFF II
MARK P. SNOW
WILLIAM J. SHELS
DAVID B. MCCONNELL
PAUL D. PIETROPAOLI
HOPE CREAL JACOBSEN
RANDY J. CRESWELL
JENNIFER H. PINCUS
DAWN M. HARMON
CHRISTOPHER M. DARGIE
ANTHONY J. MANHART
STEPHANIE A. WILLIAMS
PETER J. McDONELL
KEITH J. DUNLAP
SARA N. MOPPIN
JEFFREY A. COHEN

OF COUNSEL

THOMAS SCHULTEN
OWEN W. WELLS
ANDREW A. CADOT
JULIANNE C. RAY

Please refer to drawing L2. Both drawing L1 & L2 will be submitted by Carl Beal as part of the revised plan packet.

3. The site plan has been revised in accordance with the comments of Dan Goyette and will be submitted by Carl Beal as part of the revised plan packet.
4. As we discussed, during the Planning Board hearing, any potential noise mitigation measures were intended to be addressed by this condition after operations have been in effect long enough to be able to accurately measure the sound from regular operations, so this condition will be met post-construction. As the building design is not final, we propose that the building elevations for the flat auto storage and non-ferrous storage buildings be submitted to confirm conformance with the L-H height requirement at the time that the building design is finalized in 2010.
5. We understand that the Fire Department review will occur in connection with the Planning Department's review next week, with a focus on traffic circulation/egress/ingress, although it is our recollection that the Fire Department reviewed those issues during the application process before the Planning Board, so we would hope such a review would be completed quickly. To the extent there are outstanding issues in connection with location and design of storage of any flammable liquids used in the ordinary course of operations, again, those locations and designs are not final and, if necessary, would need to be submitted for review in 2010, when there is greater certainty about the details of the building design.
6. The Portland Water District has approved a sewer easement for the property, although a final location for the easement has not been determined. Given that the exact building location and design may change slightly during the final design stages in 2010, we would propose that this easement be finalized and submitted prior to a building permit issuing in 2010.
7. Our understanding is that the City has the operations procedures manual, which was submitted during the Planning Board application process, and that there are no issues with that manual.
8. As we discussed, we propose to submit a drainage maintenance agreement with the City by June 1, 2010. A stormwater facilities review would be more appropriately scheduled following construction of the detention/treatment pond in the time prior to the 2010 building permit being issued, or perhaps post-construction depending on the nature of the review. Stormwater monitoring is obviously a post-construction issue, including the annual report to the City on that subject.
9. As we discussed, a note encapsulating the condition about reducing light during non-operating hours will be added to the site plan C2, as part of the revised site plan packet to be delivered by Carl Beal.
10. The performance guarantee shall be extended to three years for landscaping (only). The amount estimated to be needed to implement the landscaping plan shall be retained in the letter

Mr. Rick Knowland

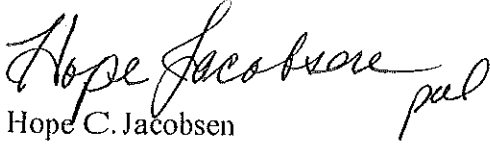
October 30, 2009

Page 3

of credit, accordingly, as the original letter of credit is reduced to correspond to completed construction. (The letter of credit will not be reduced to be less than the estimate to execute the landscaping plan.)

Thank you, Rick, for your ongoing assistance in this project. Please let me know if you have any further comments or desire to discuss these further. We look forward to your review of the plans, and to commencing construction very soon.

Very truly yours,

A handwritten signature in cursive script that reads "Hope Jacobsen" with a small flourish at the end.

Hope C. Jacobsen

cc: Carl V. Beal, P.E.

Institute (ANSI) or its successor body. Measurements shall be made at all major lot lines of the site, at a height of at least four (4) feet above the ground surface. In measuring sound levels under this section, sounds with a continuous duration of less than sixty (60) seconds shall be measured by the maximum reading on a sound level meter set to the A weighted scale and the fast meter response (L maxfast). Sounds with a continuous duration of sixty (60) seconds or more shall be measured on the basis of the energy average sound level over a period of sixty (60) seconds (LEQ₁).

where to
meas sound 3.

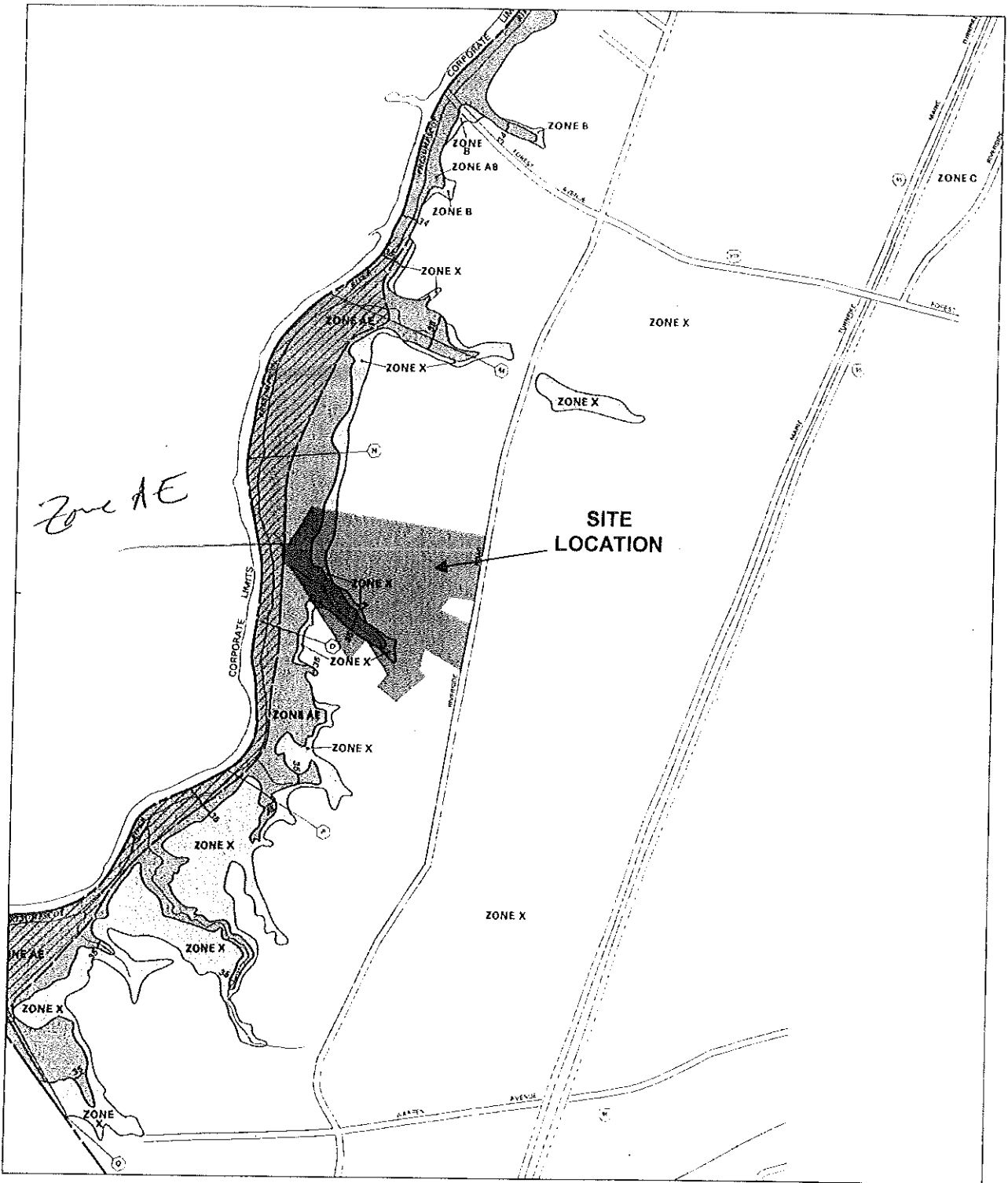
Maximum permissible sound levels: The maximum permissible sound level of any continuous, regular or frequent source of sound produced by an activity shall be as follows:

- a. Seventy-five (75) dBA between the hours of 7:00 a.m. and 10:00 p.m. ^w
- b. Fifty-five (55) dBA between the hours of 10:00 p.m. and 7:00 a.m., as measured at or within the boundaries of any residential zone. ^{where to meas sound}

In addition to the sound level standards established above, all uses located within this zone shall employ best practicable sound abatement techniques to prevent tonal sounds and impulse sounds or, if such tonal and impulse sounds cannot be prevented, to minimize the impact of such sounds in residential zones.

4. *Exemptions:*

- a. Noises created by construction and maintenance activities between 7:00 a.m. and 10:00 p.m. are exempt from the maximum permissible sound levels set forth in subsection (a)3 of this section. Construction activities on a site abutting any residential use between the hours of 10:00 p.m. of one (1) day and 7:00 a.m. of the following day shall not exceed fifty (50)



PORTION OF PORTLAND FLOOD MAP
 Panel 1B 6C
panel 6 to zone X

PREPARED FOR:

Prolierized New England LLC
 d/b/a Schnitzer Northeast
 Scrap Metal Recycling Facility
 Riverside Street, Portland, Maine

JOB NO: 06-769.00

Scale: reduced

DATE: September 2007



Noise Impact Assessment Study
Prolerized New England Company, LLC
d/b/a Schnitzer Northeast Metal Recycling Facility
Portland, ME

*Riverside Street
Portland, ME*

Prepared for:


Civil Consultants
293 Main Street, PO Box 100
South Berwick, Maine 03908

Prepared by:

Epsilon Associates, Inc.
3 Clock Tower Place, Suite 250
Maynard, MA 01754

October 15, 2007

Epsilon
ASSOCIATES INC.

ENGINEERS  ENVIRONMENTAL CONSULTANTS

PLUMBING APPLICATION

Department of Health and Human Services
Division of Environmental Health

PROPERTY ADDRESS

Town or Plantation: Portland
 Street Subdivision Lot #: 368 Riverside St

PROPERTY OWNERS NAME

Last: Schnitzer First: Northwest
 Applicant Name: Conrad Pillsbury
 Mailing Address of Owner/Applicant (If Different): 119 York St Kennebunk

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: [Signature] Date: 6-11-10

PORTLAND

Date Permit Issued: 6/11/10
 Local Plumbing Inspector Signature: [Signature]

PERMIT # 11302 TOWN COPY

\$ 1,114.44 Double Fee FEE Charged
 L.P.I. # 10811

2010 8148

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

Date Approved

PERMIT INFORMATION

This Application is for

- 1. NEW PLUMBING
- 2. RELOCATED PLUMBING

Type of Structure To Be Served:

- 1. SINGLE FAMILY DWELLING
- 2. MODULAR OR MOBILE HOME
- 3. MULTIPLE FAMILY DWELLING
- 4. OTHER - SPECIFY Commercial

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 # L0219

Hook-Up & Piping Relocation Maximum of 1 Hook-Up	Number	Column 2 Type of Fixture	Number	Column 1 Type of Fixture
<input type="checkbox"/> HOOK-UP: to public sewer in those cases where the connection is not regulated and inspected by the local Sanitary District. OR <input type="checkbox"/> HOOK-UP: to an existing subsurface wastewater disposal system.	12	Hosebib / Sillcock	1	Bathub (and Shower)
	1	Floor Drain	1	Shower (Separate)
<input type="checkbox"/> PIPING RELOCATION: of sanitary lines, drains, and piping without new fixtures.	12	Urinal	12	Sink
	1	Drinking Fountain	1	Wash Basin
OR <input type="checkbox"/> TRANSFER FEE [\$6.00]	1	Indirect Waste	1	Water Closet (Toilet)
	1	Water Treatment Softener, Filter, etc.	1	Clothes Washer
OR <input type="checkbox"/> TRANSFER FEE [\$6.00]	1	Grease / Oil Separator	1	Dish Washer
	1	Roof Drain	1	Garbage Disposal
OR <input type="checkbox"/> TRANSFER FEE [\$6.00]	1	Bidet	1	Laundry Tub
	1	Other: _____	1	Water Heater
		Fixtures (Subtotal) Column 2	15	Fixtures (Subtotal) Column 1
			18	Fixtures (Subtotal) Column 2
			23	Total Fixtures
				Fixture Fee
				Transfer Fee
				Hook-Up & Relocation Fee
				Permit Fee (Total)

SEE PERMIT FEE SCHEDULE FOR CALCULATING FEE

RECEIVED JUN 14 2010
 Dept. of Building Inspections
 City of Portland Maine

144

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 _____
 Permit # 2010-4465
 CBL# 321-A-1

LOCATION: 568 Riverside St METER MAKE & # _____
 CMP ACCOUNT # _____ OWNER _____
 TENANT Schnitzer PHONE # 207-324-5574

TOTAL EACH FEE

Category	Quantity	Description	Unit	Rate	Total		
OUTLETS	35	Receptacles	18	Switches	Smoke Detector	.20	10.60
FIXTURES		Incandescent	44	Fluorescent	Strips	.20	8.80
SERVICES		Overhead	1	Underground	TTL AMPS <800	15.00	15.
		Overhead		Underground	>800	25.00	
Temporary Service		Overhead		Underground	TTL AMPS	25.00	
METERS	1	(number of)				1.00	1.00
MOTORS		(number of)				2.00	
RESID/COM		Electric units				1.00	
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	
		Air Cond/cent			Pools	10.00	
	2	HVAC		EMS	Thermostat	5.00	10.00
	1	Signs				10.00	10.00
		Alarms/res				5.00	
		Alarms/com				15.00	
		Heavy Duty(CRKT)				2.00	
		Circus/Carnv				25.00	
		Alterations				5.00	
		Fire Repairs				15.00	
		E Lights				1.00	
		E Generators				20.00	
PANELS	*	Service	1	Remote		4.00	12.00
TRANSFORMER		0-25 Kva				5.00	
	1	25-200 Kva				8.00	800
		Over 200 Kva				10.00	
					TOTAL AMOUNT DUE		171.40
					MINIMUM FEE	45.00	15.40

RECEIVED
 JUL 16 2010
 Dept of Building Inspections
 City of Portland Maine

CONTRACTORS NAME JAMES R FLANAGAN MASTER LIC. # M560016628
 ADDRESS PO. BOX 853 MILTON NH LIMITED LIC. # _____
 TELEPHONE 603-652-7664

SIGNATURE OF CONTRACTOR [Signature]
 White Copy - Office • Yellow Copy - Applicant

NOTE

The illustration below is showing several suggested applications for the Boise EWP products. It is not intended to show an actual house under construction.

NO MIDSPAN BRIDGING IS REQUIRED FOR BCI® JOISTS

FOR INSTALLATION STABILITY, Temporary strut lines (1x4 min.) 8' on center max. Fasten at each joist with 2-8d nails minimum.

Dimension lumber is not suitable for use as a rim board in BCI® floor systems.

BCI® rim joist. See page 6.

Boise Rimboard. See pages 6 and 25.

For load bearing cantilever details, see page 8.

BCI® Joist blocking or 2x4 "squash" block on each side required when supporting a load-bearing wall above.

When installing Boise EWP products with treated wood, use only connectors/fasteners that are approved for use with the corresponding wood treatment.

VERSA-LAM® header or a BCI® Joist header.

1 1/2" knockout holes at approximately 12" o.c. are pre-punched.

See page 7 for allowable hole sizes and location.

VERSA-LAM® LVL beam.

Endwall blocking as required per governing building code.

BCI® Joist Blocking is required when BCI® Joists are cantilevered.

BCI® Joists, VERSA-LAM® and ALLJOIST® must be stored, installed and used in accordance with the Boise EWP Installation Guide, building codes, and to the extent not inconsistent with the Boise EWP Installation Guide, usual and customary building practices and standards. VERSA-LAM®, ALLJOIST®, and BCI® Joists must be wrapped, covered, and stored off of the ground on stickers at all times prior to installation. VERSA-LAM®, ALLJOIST® and BCI® Joists are intended only for

applications that assure no exposure to weather or the elements and an environment that is free from moisture from any source, or any pest, organism or substance which degrades or damages wood or glue bonds. Failure to correctly store, use or install VERSA-LAM®, ALLJOIST®, and BCI® Joist in accordance with the Boise EWP Installation Guide will void the limited warranty.

SAFETY WARNING

DO NOT ALLOW WORKERS ON BCI® JOISTS UNTIL ALL HANGERS, BCI® RIM JOISTS, RIM BOARDS, BCI® BLOCKING PANELS, X-BRACING AND TEMPORARY 1x4 STRUT LINES ARE INSTALLED AS SPECIFIED BELOW. SERIOUS ACCIDENTS CAN RESULT FROM INSUFFICIENT ATTENTION TO PROPER BRACING DURING CONSTRUCTION. ACCIDENTS CAN BE AVOIDED UNDER NORMAL CONDITIONS BY FOLLOWING THESE GUIDELINES:

- Build a braced end wall at the end of the bay, or permanently install the first eight feet of BCI® Joists and the first course of sheathing. As an alternate, temporary sheathing may be nailed to the first four feet of BCI® Joists at the end of the bay.
- All hangers, BCI® rim joists, rim boards, BCI® blocking panels, and x-bracing must be completely installed and properly nailed as each BCI® Joist is set.
- Install temporary 1x4 strut lines at no more than eight feet on center as additional BCI® Joists are set. Nail the strut lines to the sheathed area, or braced end wall, and to each BCI® Joist with two 8d nails.
- The ends of cantilevers must be temporarily secured by strut lines on both the top and bottom flanges.
- Straighten the BCI® Joists to within 1/8 inch of true alignment before attaching strut lines and sheathing.
- Remove the temporary strut lines only as required to install the permanent sheathing.
- Failure to install temporary bracing may result in sideways buckling or roll-over under light construction loads.
- Do not stack construction materials (sheathing, drywall, etc) in the middle of BCI® Joist spans, contact Boise EWP Engineering for proper storage and shoring information.

