



Tuck O'Brien
City Planning Director, Planning Division

May 23, 2016

Liv Chase and Brent Adler
Sunny Time Solar LLC

Re: 48 Hancock Street – Project Number 2015-00033

Dear Ms. Chase and Mr. Adler,

This letter is to inform you that the revised Construction Management Plan submitted to the City on May 20, 2016 is acceptable to the City and that you may proceed with further construction activities consistent with your building permit, site plan approval and this correspondence.

Background

City Staff approved a Level 1 Minor Residential for the demolition and reconstruction a two-unit dwelling on November 9, 2015. This administrative approval as well as the related approval of a construction management plan for the project. A building permit for construction was issued on February 19, 2016. On May 9, 2016, as a result of concerns from several abutting neighbors in advance of the commencement of substantive building construction, the city staff contacted the applicant to discuss the concerns and request more information on the project. These issues were raised with you on April 17th by an e-mail correspondence from Dr. Long. As a result of these initial conversations, city staff requested additional information to determine whether any substantive deviations from the approved permits and plans had occurred.

On May 10, 2016, Mr. Adler submitted information to amend the construction management plan for 48 Hancock Street. The new materials included the following:

- Tony Dumais, P.E., Casco Bay Engineering, letter re: The Hawk Existing Foundation Wall, date May 3, 2016 ([Attachment 1](#))
- Amended Construction Management Plan, Liv Chase ([Attachment 2](#))
- The Hawk SOE for 48 Hancock, H.B. Fleming, Inc, Stamped by John S. Linscott IV, Maine Licensed Engineer, dated 3/16/16 ([Attachment 3](#))
- The Hawk SOE plans: Excavation Support, H.B. Fleming, Inc, stamped by John S. Linscott IV, Maine Licensed Engineer, dated 3/16/16 ([Attachment 4](#))

This submission indicated a change in the approach temporary for supportive excavation for the development. Accordingly, City Staff requested that the applicant hold off on further activities until the revised approach could be reviewed for consistency with the existing building permit, Level 1 Minor Residential Site Plan Approval and construction management plan.

In addition to the materials submitted on May 10, 2016, Staff also reviewed an e-mail from Mr. Linscott of H.B. Fleming on May 13th ([Attachment 5](#)) which responds to questions raised by Dr. Michael Long, regarding the approach to site stabilization and foundation installation by email on May 12, 2016. On May 17 2016, David Margolis-Pineo, Deputy City Engineer, Jeanie Bourke, Plan Reviewer for Inspections, and Phil DiPierro, Development Review Coordinator, met on site with Scott Linscott and Brent Adler to review the proposal to facilitate a determination of what if any remedial action would have to be taken regarding the proposed changes. The participants discussed the proposed methods to be used to stabilize the site for construction. Topics covered in that meeting include the following:

- The proposed support of excavation (SOE) will be pilings driven down to roughly 12 to 18 feet below grade. The excavation does not need to go any deeper than the original foundation. The piles are driven about 6 feet apart and in between the piles wood lags are placed to create the shoring. The proposed shoring will be temporarily braced prior to constructing the foundation, completing the construction for the Support of Excavation (SOE). The bracing is removed once the foundation is complete. The piles and lags will permanently remain in place, and the portion of the piles above grade will be cut to just below grade.
- The proposed piles are driven piles, which are installed with an impact hammer. Scott Linscott, PE stated that there is less impact to the soils when the piles are driven with an impact hammer than with a vibratory hammer. The vibratory method was used on the abutting site to install geo-piers and sheet piles.
- At the meeting the staff stated that no piles can be installed until the property lines have been confirmed. At the time of the meeting, there was only one property pin installed at the southeast corner of the lot along the Hancock Street frontage. Mr. DiPierro advised at the site meeting that the corner pin along the northeast corner of the Hancock Street frontage be installed.
- The City staff requested additional information be submitted to revise the Construction Management plan at the site visit and in Mr. O'Brien's correspondence, dated May 17, 2016 ([Attachment 6](#)).

On May 20, 2016, Brent Adler forwarded the following documents to the Planning Division to address the request for additional information. Those items are included as attachments and include the following:

- Amended Construction Management Plan ([Attachment 7](#))
- Seismograph data for 21 Ocean Avenue ([Attachment 8](#))
- C-1 Site Plan- dated May 19th ([Attachment 9](#))
- Site Plan Amendment 48 Hancock – 5/20/2016 ([Attachment 10](#))

Determination

Inspections and Planning staff have reviewed the most recent submissions and finds the assessment to be adequate in that it assures all work will be done on site and that the method is a standard practice for a Support of Excavation (SOE). Ms. Bourke found that the proposal does not require an amendment to the building permit and she states the following:

The International Residential Code (IRC) does not require a building permit for the proposed Support of Excavation (SOE) wall. This wall is being installed as a precautionary measure to temporarily retain soils for the removal of the existing foundation wall and the installation of the new foundation wall of the permitted structure. These types of temporary stabilization walls, cofferdams, stability slopes etc. are not subject to the purview of the building code, however are required to be engineered and installed per industry standards, namely, AASHTO, The American Association of State Highway and Transportation Officials, and OSHA.

The foundation wall supporting the permitted building construction will act as the retaining wall of the abutting soils. The temporary SOE is not considered a "retaining wall" per the IRC, therefore, per Sec. R105.2.3 it is work exempt from a building permit.

At the site visit and as part of this review, Ms. Bourke stated that a letter from the surveyor will be required at the footing inspection for the foundation to confirm placement within the property line. The revised construction management plan includes the following note,

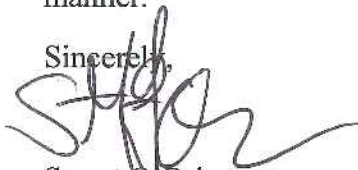
a. *Excavation at the abutting structures will be done with a combination of hand digging and a light touch with an excavator. The neighbors have been advised of this mild cut in order to properly place a footing for the foundation. At no point will the neighboring properties structures be impacted by this back cut nor at any time will the new foundation footing be placed outside of 48 Hancock street property line.*

Please be on notice that if complaints are received and confirmed regarding property encroachments, then a stop work order could be issued and in place until such time the boundary dispute is resolved by the private parties. On May 23, 2016, Mr. DiPierro and Mr. O'Brien visited the site and found that property stakes and boundary identification were installed as required by the City. According to Mr. Adler, a third party surveyor has confirmed the property boundaries for the site and the survey does not indicate any property line inconsistencies.

Based upon the City's review of the revised construction management plan #2, the proposed construction management for Support of Excavation (SOE) is adequate. The construction may proceed under the condition that a surveyor will be required at the foundation footing inspection to confirm placement within the property line. In addition, please inform the City when the final property pin has been installed for the property as discussed.

Thank you for providing additional information regarding the construction management of the site and for working with us to ensure that project was moving forward in the appropriate manner.

Sincerely,

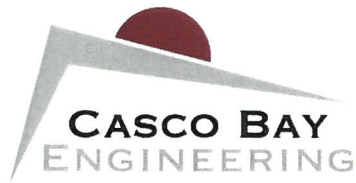


Stuart O'Brien
Planning Director

cc: Jon Jennings, City Manager
Jeff Levine, Director, Planning and Urban Development Department
Tammy Munson, Permitting and Inspections
Jon Rioux, Permitting and Inspections
Jeanie Bourke, Permitting and Inspections
Barbara Barhydt, Planning
Phil DiPierro, Planning
David Margolis-Pineo, Public Works

Attachments:

1. Tony Dumais, P.E., Casco Bay Engineering, letter re: The Hawk Existing Foundation Wall, date May 3, 2016 ([Attachment 1](#))
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CIVIL & STRUCTURAL ENGINEERING
www.cascobayengineering.com

424 Fore St., Portland, ME 04101 Phone 207.842.2800 Fax 207.842.2828

May 5, 2016

Mr. Brent Adler
Sunny Time Solar LLC
PO Box 15372
Portland, ME 04101

Re: The Hawk Existing Foundation Wall
48 Hancock Street
Portland, Maine

Project Number: 14-135

Dear Brent:

Casco Bay Engineering made a site visit to observe the existing foundation conditions at the property referenced above on May 4, 2016. The existing building has been demolished and only the uphill foundation wall/retaining wall remains. The existing foundation portion where the structure was located is a stone/brick wall that has a significant inward deflection. The condition of the mortar is poor and most stones can be easily removed from the wall by hand with little to no effort.

At the rear of the property, the wall transitions to a concrete retaining wall. This wall is also in very poor condition and several large cracks can be seen at various locations along the face. There also exists a significant void at the base of the wall at the rear end where large pieces of concrete are not present. It is more probable than not that no steel rebar exists in the retaining wall.

It is my professional opinion that the structural integrity of the entire uphill foundation and retaining walls are severely compromised and therefore should not be used for any superstructure support.

Please let us know if you have any questions.

Sincerely,

Tony Dumais, P.E.
Casco Bay Engineering



Picture 1: Crumbling Stone Foundation Wall



Picture 2: Deflection of Stone Foundation Wall



Picture 3: Large Void in Retaining Wall



Picture 4: Large Crack in Retaining Wall

The following is a Construction Management Plan for 48 Hancock Street Portland, ME.

1. Sidewalks will be closed in front of the 48 Hancock Street site for the majority of the project. Six foot high fence panels and site signage will define the perimeter of the site at the Hancock St sidewalks. Pedestrian traffic will be directed across Hancock Street with signage at the nearest existing crosswalks with curb cuts for ADA compliance the same location that Seaport Lofts has directed pedestrian traffic away from the already fenced off sidewalks East of the 48 Hancock street lot. See attached site construction management plan for more detail.

2. Jersey barriers or fence panels will provide safety at the curb edge when excavations are open for the building foundation work. We anticipate this being a 2 week period. The major site and foundation work will be a 4 – 6 week duration overall.

3. The General Contractor will arrange for payments for on street parking at spaces in front of the 48 Hancock Street site. Material deliveries will be limited to early morning hours after 7. The General Contractor will be responsible for winter maintenance of temporary facilities inside the fenced area of the site.

4. We do not foresee any street cuts being required as exiting utilities will be reused at the property lines. Unitil will submit required street opening documents to bring natural gas to the building.

5. The overall project duration is expected to be approximately 6 months. Exterior site finishes i.e. pavers, loam/seedling and landscaping will be completed in the Fall of 2016.

6. HB Fleming has designed a temporary excavation support system that will be used to build close to the property line without disturbing neighboring structures. The structure will consist of +/-85' of driven soldier pile wall. The

Soldier piles will be driven at 6' spacing. The gap between the piles will be filled with timber lagging to form a continuous wall. Included will be 12' returns on each end to allow for a 1.5:1 slope from the existing grade. The design will also include 3 raking braces that will be used to brace the wall and prevent deflection in the event that marine clay is present at or below the bottom of excavation. Once the foundation wall is constructed, the raking braces will be removed and the piles will be cut off just below grade.

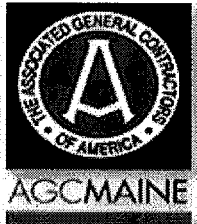
A pre construction survey will be conducted by BECC Co, a geotechnical firm specializing in construction vibration. BECC will provide video documentation of all neighboring structures willing to participate prior to any start of work and will conduct vibration monitoring throughout the site to ensure that any effects will be kept well below the safe guidelines recommended by the Federal Government for occupied residences.

7. The construction of the project at 48 Hancock street will be panalized and constructed via a crane staged on one half of Hancock Street. The general contractor will pay the appropriate fees for blocking the street. The process will take up to 2 days.

8. The exterior siding will be installed via a 65 foot boom lift positioned on Hancock street. At no point will the neighbors property be required for the installation of the maintenance free siding.

Should you have any questions or comments relative to this site construction management plan, please feel free to call. Thank you.

Liv Chase
Owner/Project designer



H.B. FLEMING, INC.
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89 Pleasant Ave. South Portland, ME 04106
Phone 207-799-8514 Fax 207-799-8538
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PILE DRIVING

BRIDGES

SUBMARINE PIPELINES

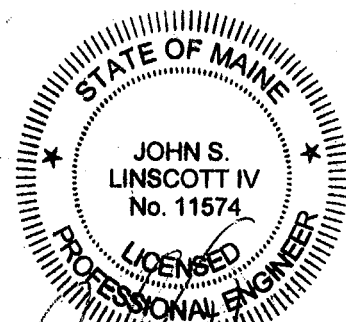
The Hawk SOE

for
Brent Adler
and
Liv Chase

48 Hancock St

Portland, ME

3/16/2016



John S. Linscott IV
"Scott" P.E.
3/16/16

Page: 1

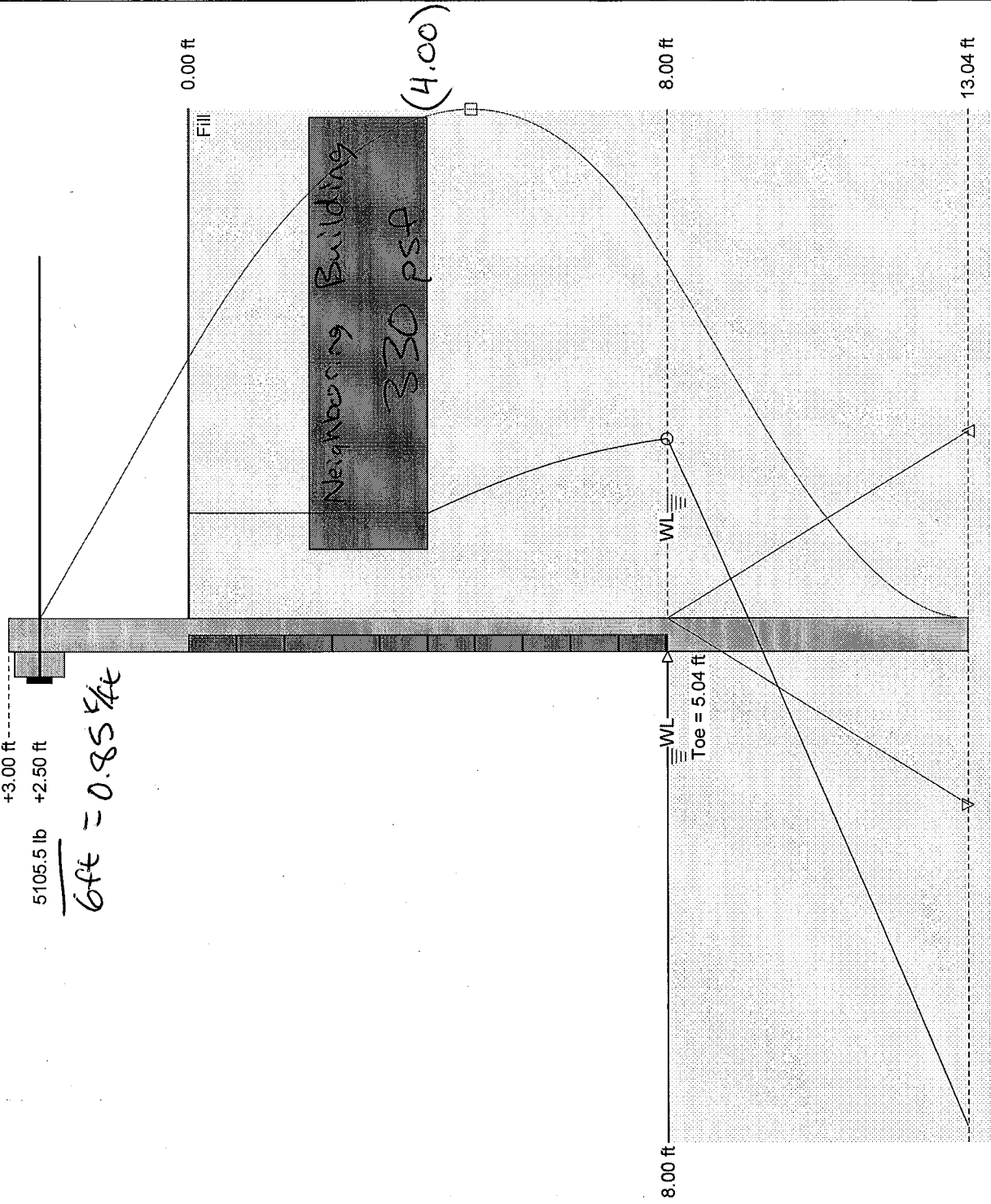
Date: 3.15.16

Pile: HP 10X42
Lagging: 3"X6" Hemlock Lagging
Works: Temporary
Pressure: Terzaghi
Analysis: Net Pressure
FOS: 1.20

	Maximum	d (ft)
○	302.3 psf	8.00
□	24895.8 flb	4.73
△	314.7 psf	13.04
△	314.7 psf	13.04

+3.00 ft
5105.5 lb +2.50 ft

$6ft = 0.85 \frac{ft}{ft}$



Size Soldier Pile

$$M_{\max} = 24.9 \text{ k.ft}$$

$$S_{x,\text{req}} = \frac{(24.9 \text{ k.ft})(12 \text{ in/ft})}{(0.70)(50 \text{ ksi})}$$

$$S_{x,\text{req}} = 8.54 \text{ in}^3$$

$$\underline{\text{HP10x42 (min)}} \quad S_x = 43.4 \text{ in}^3$$

Size Lagging

$$t_{\min} = \frac{(6 \text{ ft})(12 \text{ in/ft})}{2} \left[\frac{(3)(0.6)(302 \text{ psf}) \left(\frac{1 \text{ ft}^2}{144 \text{ in}^2} \right)}{(1200 \text{ psi})} \right]^{1/2}$$

$$t_{\min} = 2.02 \text{ in}$$

3" x 6" Hemlock Lagging

Size Wales

using $M_{all} = (S_x)(0.70)(F_y)$

	S_x (in ³)	M_{all} (K-ft)
HP12x53	66.7	195
HP14x73	107	312
HP14x89	131	382
HP14x117	172	502

Calculate max unsupported span distance using:

$$M_{all} = \frac{wl^2}{2} \text{ for cantilever}$$

$$M_{all} = \frac{wl^2}{8} \text{ for spans w/ out corner braces}$$

$$M_{all} = \frac{wl^2}{10} \text{ for spans w/ corner braces}$$

$$w = 0.85 \text{ K/ft}$$

	$\frac{wl^2}{2}$	$\frac{wl^2}{8}$	$\frac{wl^2}{10}$
HP12x53	21.4'	42.8'	47.8'
HP14x73	27.1'	54.2'	60.6'
HP14x89	30.0'	60.0'	67.0'
HP14x117	34.4'	68.7'	76.8'

Size Rating Braces

For Rating Brace RB1:

$$w = 0.85 \text{ k/ft}$$

$$A_{\text{trib}} = 30.8'$$

$$P = (0.85 \text{ k/ft})(30.8')(1.414) = 37.0^{\text{k}}$$

$$L = 30', K = 1 \rightarrow KL = 30'$$

$$\underline{\text{HP10} \times 42 \text{ (min)}} \quad P_n / \Omega_c = 83.5^{\text{k}}$$

For Rating Brace RB2:

$$w = 0.85 \text{ k/ft}$$

$$A_{\text{trib}} = 32.6'$$

$$P = (0.85 \text{ k/ft})(32.6')(1.414) = 39.2^{\text{k}}$$

$$L = 30', K = 1 \rightarrow KL = 30'$$

$$\underline{\underline{\text{HP10} \times 42 \text{ (min)}}} \quad P_n / \Omega_c = 83.5^{\text{k}}$$

Table 4-2 (continued)
Available Strength in
Axial Compression, kips
HP-Shapes

$F_y = 50$ ksi



Shape	HP12x		HP10x		HP8x	
	lb/ft	Design	lb/ft	Design	lb/ft	Design
0	55	ASD	63	ASD	57	ASD
6	326	LFRD	42	LFRD	36	LFRD
7	518	ASD	57	ASD	47	ASD
8	508	LFRD	63	LFRD	57	LFRD
9	497	ASD	74	ASD	66	ASD
10	465	LFRD	88	LFRD	77	LFRD
11	472	ASD	101	ASD	88	ASD
12	459	LFRD	116	LFRD	101	LFRD
13	461	ASD	131	ASD	114	ASD
14	436	LFRD	147	LFRD	128	LFRD
15	417	ASD	164	ASD	143	ASD
16	399	LFRD	181	LFRD	158	LFRD
17	382	ASD	199	ASD	174	ASD
18	365	LFRD	217	LFRD	190	LFRD
19	348	ASD	236	ASD	207	ASD
20	332	LFRD	255	LFRD	224	LFRD
22	286	ASD	317	ASD	282	ASD
24	265	LFRD	382	LFRD	350	LFRD
26	254	ASD	451	ASD	420	ASD
28	243	LFRD	524	LFRD	493	LFRD
30	233	ASD	601	ASD	570	ASD
32	224	LFRD	681	LFRD	651	LFRD
34	215	ASD	764	ASD	737	ASD
36	207	LFRD	850	LFRD	827	LFRD
38	199	ASD	939	ASD	919	ASD
40	191	LFRD	1031	LFRD	1014	LFRD

Properties	
P_{max} , kips	123
P_{min} , kips	218
P_{avg} , kips	221
L_p , ft	15.5
L_r , ft	31.1
A_g , in ²	18.4
I_x , in ⁴	472
I_y , in ⁴	153
r_x , in	5.17
r_y , in	2.88
Z_x , in ³	11200
Z_y , in ³	3630
$\phi_c = 0.90$	

*Shape is slender for compression with $F_y = 50$ ksi.
 Note: Heavy line indicates $\phi_c F_y$ equal to or greater than 200.

Table 4-2 (continued)
Available Strength in
Axial Compression, kips
HP-Shapes

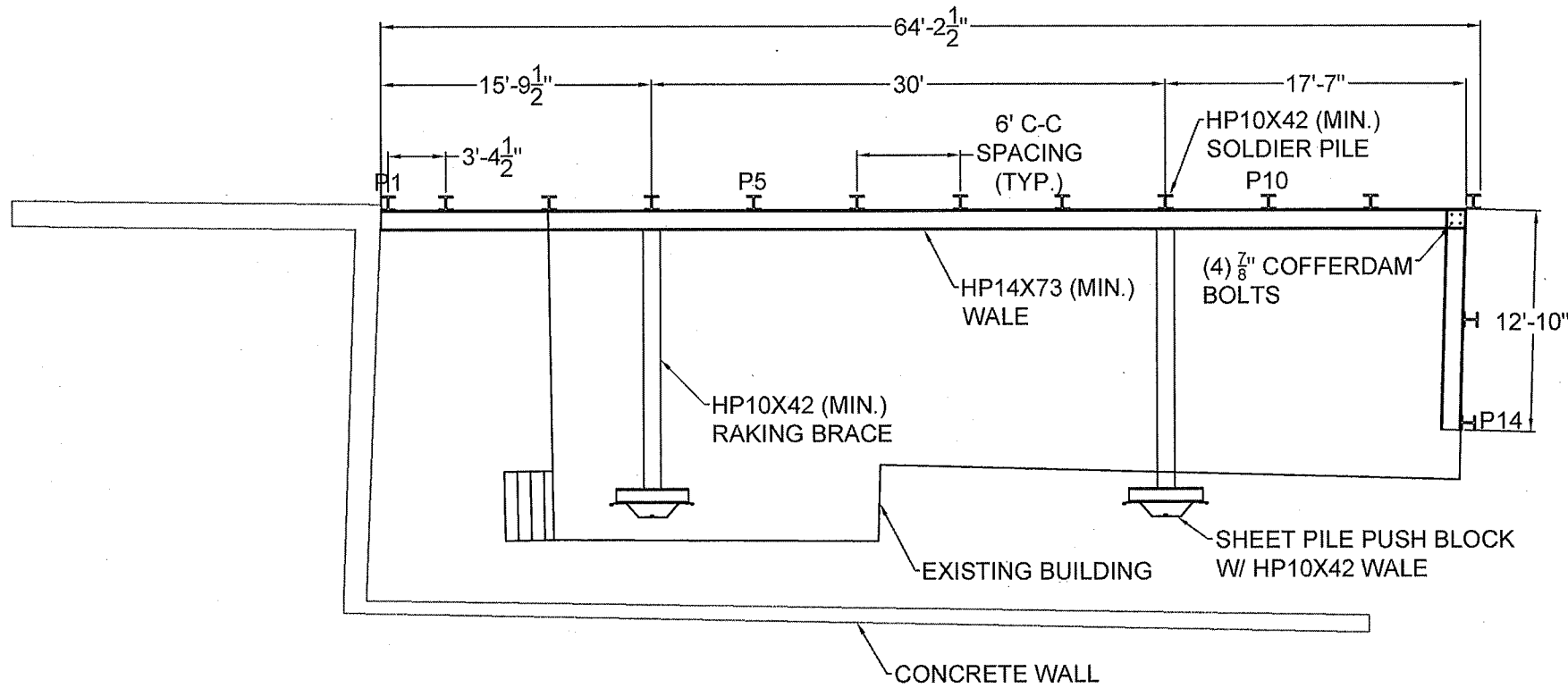
$F_y = 50$ ksi



Shape	HP14x		HP12x	
	lb/ft	Design	lb/ft	Design
0	1030	ASD	84	ASD
6	3066	LFRD	74	LFRD
7	4990	ASD	89	ASD
8	4770	LFRD	102	LFRD
9	4500	ASD	117	ASD
10	4300	LFRD	131	LFRD
11	4000	ASD	147	ASD
12	3800	LFRD	164	LFRD
13	3500	ASD	181	ASD
14	3200	LFRD	199	LFRD
15	2900	ASD	217	ASD
16	2600	LFRD	236	LFRD
17	2400	ASD	255	ASD
18	2190	LFRD	274	LFRD
19	1990	ASD	294	ASD
20	1790	LFRD	314	LFRD
22	1500	ASD	381	ASD
24	1300	LFRD	451	LFRD
26	1190	ASD	524	ASD
28	1090	LFRD	601	LFRD
30	990	ASD	681	ASD
32	890	LFRD	764	LFRD
34	800	ASD	850	ASD
36	710	LFRD	939	LFRD
38	620	ASD	1031	ASD
40	530	LFRD	1125	LFRD

Properties	
P_{max} , kips	158
P_{min} , kips	293
P_{avg} , kips	351
L_p , ft	17.8
L_r , ft	35.6
A_g , in ²	26.1
I_x , in ⁴	1040
I_y , in ⁴	380
r_x , in	6.36
r_y , in	3.53
Z_x , in ³	20900
Z_y , in ³	6100
$\phi_c = 0.90$	

*Shape is slender for compression with $F_y = 50$ ksi.
 Note: Heavy line indicates $\phi_c F_y$ equal to or greater than 200.



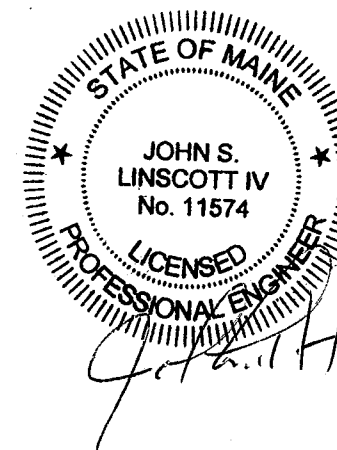
PLAN VIEW
SCALE: 1" = 10'

General Notes:

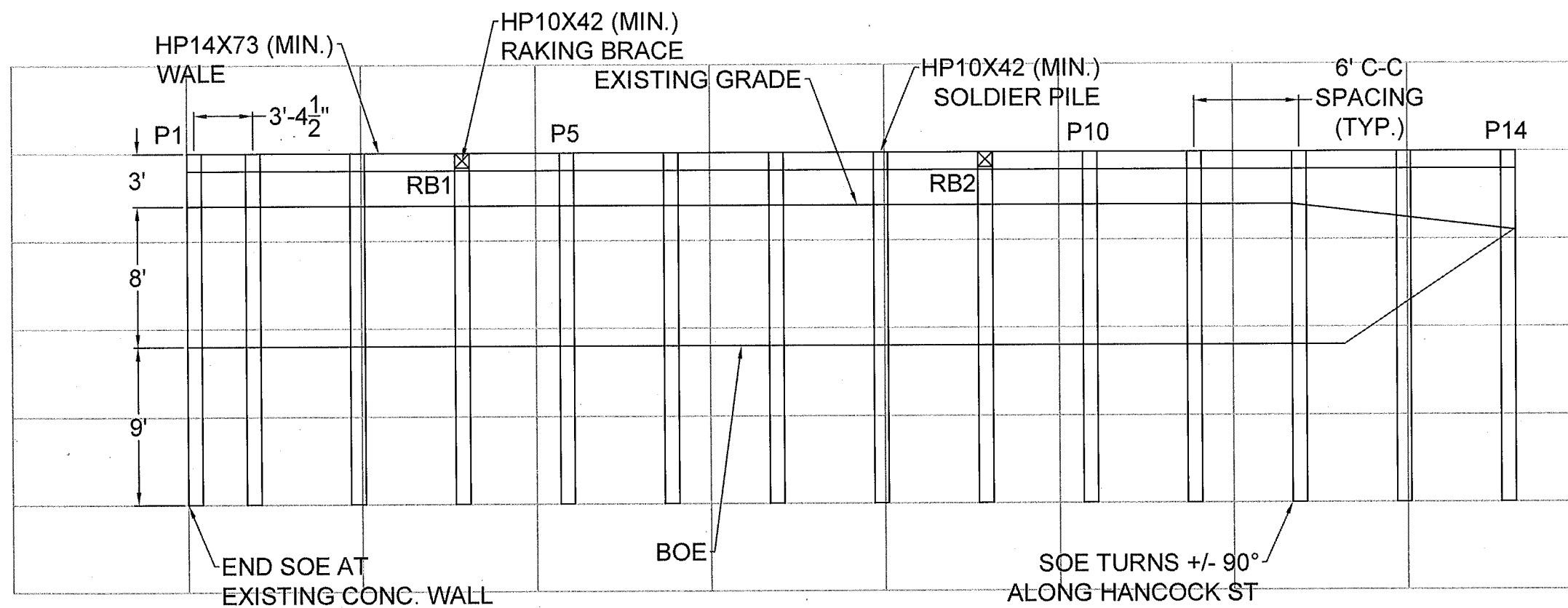
1. Piles and framework will conform to ASTM A572 Gr. 50 requirements.
2. All bolts will be $\frac{7}{8}$ " \varnothing ASTM A325 or SAE Gr.5.
3. All welds will be made by AWS certified welders.

Construction Procedure:

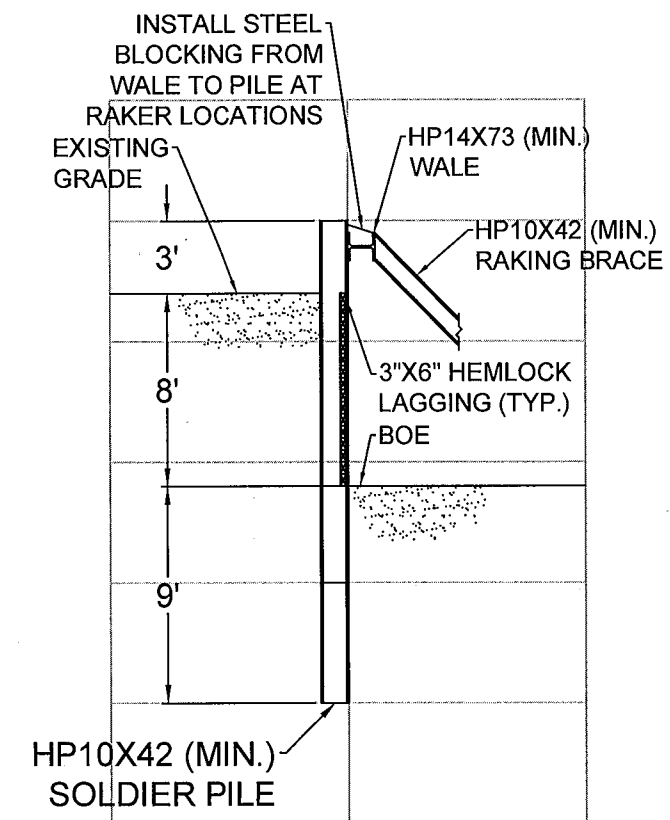
1. Drive soldier piles
2. Install upper frame and raking braces
3. Install lagging as existing building is removed to BOE
4. Place concrete foundation
5. Remove upper frame
6. Cut piles below grade



H.B. FLEMING 89 PLEASANT AVENUE SO. PORTLAND, ME 04106 P: 207-799-8514 F: 207-799-8538 www.hbfleming.com	TITLE: Excavation Support
	PROJECT: 48 Hancock St
	LOCATION: Portland, ME
	DATE: 3/16/2016
	SCALE: AS NOTED REVISION:



ELEVATION VIEW
SCALE: 1" = 8'



TYPICAL SECTION
SCALE: 1" = 8'

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89 PLEASANT AVENUE
SO. PORTLAND, ME 04106
P: 207-799-8514 F: 207-799-8538
www.hbfleming.com

TITLE: Excavation Support
PROJECT: 48 Hancock St
LOCATION: Portland, ME
DATE: 3/16/2016
SCALE: AS NOTED REVISION:



Barbara Barhydt <bab@portlandmaine.gov>

RE: 48 Hancock construction (revised)

1 message

Scotty Linscott <scotty@hbfleming.com>

Fri, May 13, 2016 at 6:58 AM

To: Barbara Barhydt <bab@portlandmaine.gov>

Cc: Brent Adler <brentadler@gmail.com>, livchase@yahoo.com

Hi Barbara,

Thank you in advance for your time and consideration on this issue. To start, H.B. Fleming specializes in the design and installation of excavation support structures throughout New England. In a given year we perform over 30 excavation support contracts ranging in depth from 5' to 45'. The maximum excavation depth is 8' on this project. It is our understanding that excavation support falls under means and methods, and is not typically reviewed by a city or town as part of the permit as long as it does not encroach on city property (ie: soil anchors installed into a street). Further to this, general scope of the project involves putting back a foundation that is very similar in depth and location to the existing damaged one. Please review our responses below and feel free to contact me with any questions.

Regards,

Scotty

The Federal St. Townhouses Association is concerned that there has been insufficient engineering and planning for construction at 48 Hancock to protect abutters. More specifically, we believe that the placement of a SOE retaining wall will cause damage to existing retaining walls between the neighboring abutters, and that the vibration/impact produced during the pile driving may cause another landslide and/or structural damage to our homes.

H.B. Fleming has performed a detailed soil pressure distribution and structural analysis in the design of the proposed excavation support structure. Based on the field conditions, we determined that a soldier pile and lagging structure was better suited for this project than a sheetpile excavation support structure. Soldier piles are installed with an impact hammer, while sheetpiles are installed with a vibratory hammer. The impact hammer we are proposing to use produces vibrations that are well below the published vibration threshold limits for structural damage. We have 3rd party vibration data from a recent project in Kennebunkport to support this. Based on the data, the ambient vibrations from passing heavy trucks on the road exceeds that of our impact hammer.

The documents provided by the developer to the City do not adequately address these issues. Furthermore, there are a number of inconsistencies and ambiguities that raise serious questions about the construction plans.

H.B. Fleming has completed an excavation support design that is considered adequate by industry standards. Similar designs have been submitted to various engineering firms and State DOT's (Maine, New Hampshire, Massachusetts, VT) and approved without further analysis.

The construction management plan indicates that the SOE is temporary, but then says that after foundation completion, the piles will be cut below grade and remain. Does this mean that the "temporary" SOE is in fact permanent? If so, has it been engineered, reviewed and permitted as such? If not, what will support the area up-slope of the new foundation? Will the foundation of the house act as a retaining wall? Has it been engineered to do so?

The excavation support system is temporary. Based on site constraints, a small part of the structure will be cut off and left in place. This is normal when using soldier piles and lagging for excavation support, and by no means does the fact that part of it is left in place mean that the system is permanent. Current foundation plans from my understanding will not be changing and have already been approved by the City and stamped by a licensed engineer under the current building permit. All house foundations act as a retaining wall if they are back filled against. Most importantly, the proposed new foundation at 48 Hancock St is shallower than the existing foundation, meaning that they will not be excavating any deeper than the hole that is already present at the site. The purpose of the excavation support system is to support the adjacent ground during demolition of the old foundation and construction of the new foundation. The old foundation is in severely poor condition and cannot be safely removed without such a system in place.

The plans by HB Fleming show an intersection of the SOE wall with an existing retaining wall at the rear of the property. This would require cutting an old existing wall that continues to the south along the Filipos property line and then extends as an old "tabby" wall between the 113 Newbury and the Federal St. properties. (See circled area in accompanying photograph) This wall is in poor shape as pointed out in the letter submitted by Casco Bay Engineering and will likely suffer severe damage if cut to allow the SOE to intersect the rear property wall. Furthermore, once the SOE is removed, what will continue to support the property in this area?

As requested to me by the owners, we will be extending our pile system to address any safety concerns of the existing concrete wall. This wall will be below the 4' required height for permit review.

Finally, the construction management document states that vibration will be kept below Federal standards for occupied dwellings. Will this be monitored in the dwellings? Previous monitoring has been intermittent and only on the ground. What are the standards referred to?

Vibration levels will be monitored during the installation of the soldier piles. The levels will be checked within 5' of a pile being driven, which is closer than any dwelling. If any other properties would like vibration testing performed, we would be happy to set up seismographs there as well. It should be noted that the expected vibrations from this impact hammer are on the order of .1 in/ sec. This is 1/5th of the lowest industry standard published threshold values for structural damage of 0.5-2.0 in/sec

To address these concerns, I would hope that a full review of the Planning Board will take place. In addition, there should be a meeting and site walk with all abutters and concerned parties at which the plans should be presented and questions answered before lifting the Stop Work Order.

I have not been made aware of any Stop Work Order by the Homeowners.

From: Barbara Barhydt [mailto:bab@portlandmaine.gov]

Sent: Thursday, May 12, 2016 3:06 PM

To: Liv Chase; Adler, Brent; Scotty Linscott

Cc: O'Brien, Stuart

Subject: Fwd: 48 Hancock construction (revised)

Hello Scotty:

I am forwarding the comments that we received from Dr. Long regarding the retaining wall and your report. We welcome any further information you have to address these questions on behalf of your client. We will review the material as part of the amended application..

Thank you.

Barbara

Barbara Barhydt

Development Review Services Manager

Planning Division

389 Congress Street 4th Floor

Portland, ME 04101

(207) 874-8699

Fax: (207) 756-8256

bab@portlandmaine.gov

----- Forwarded message -----

From: Michael Long <mikeclong@mac.com>

Date: Thu, May 12, 2016 at 7:27 AM

Subject: 48 Hancock construction (revised)

To: "bab@portlandmaine.gov" <bab@portlandmaine.gov>, "sgo@portlandmaine.gov" <sgo@portlandmaine.gov>

Cc: Cathy Lilly <cathylilly99@gmail.com>, Dave Filipos <davidfilipos@gmail.com>, Richard Penley <rhp.penley@gmail.com>, Lindsay Ryan <lryan3@maine.rr.com>

Dear Ms. Barhydt,

The Federal St. Townhouses Association is concerned that there has been insufficient engineering and planning for construction at 48 Hancock to protect abutters. More specifically, we believe that the placement of a SOE retaining wall will cause damage to existing retaining walls between the neighboring abutters, and that the vibration/impact produced during the pile driving may cause another landslide and/or structural damage to our homes.

The documents provided by the developer to the City do not adequately address these issues. Furthermore, there are a number of inconsistencies and ambiguities that raise serious questions about the construction plans.

The construction management plan indicates that the SOE is temporary, but then says that after foundation completion, the piles will be cut below grade and remain. Does this mean that the "temporary" SOE is in fact permanent? If so, has it been engineered, reviewed and permitted as such? If not, what will support the area up-slope of the new foundation? Will the foundation of the house act as a retaining wall? Has it been engineered to do so?

The plans by HB Fleming show an intersection of the SOE wall with an existing retaining wall at the rear of the property. This would require cutting

an old existing wall that continues to the south along the Filipos property line and then extends as an old "tabby" wall between the 113 Newbury and the Federal St. properties. (See circled area in accompanying photograph) This wall is in poor shape as pointed out in the letter submitted by Casco Bay Engineering and will likely suffer severe damage if cut to allow the SOE to intersect the rear property wall. Furthermore, once the SOE is removed, what will continue to support the property in this area?

Finally, the construction management document states that vibration will be kept below Federal standards for occupied dwellings. Will this be monitored in the dwellings? Previous monitoring has been intermittent and only on the ground. What are the standards referred to?

To address these concerns, I would hope that a full review of the Planning Board will take place. In addition, there should be a meeting and site walk with all abutters and concerned parties at which the plans should be presented and questions answered before lifting the Stop Work Order.

Sincerely,

Michael C. Long MD

President

Federal St. Townhouses Association

Owner

40 Federal St.

Portland, Maine

Notice: Under Maine law, documents - including e-mails - in the possession of public officials or city employees about government business may be classified as public records. There are very few exceptions. As a result, please be advised that what is written in an e-mail could be released to the public and/or the media if requested.

--

Brent Adler

cell [207-518-7038](tel:207-518-7038)

PO Box 15372

Portland, ME 04112

From: Barbara Barhydt [mailto:bab@portlandmaine.gov]

Sent: Thursday, May 12, 2016 3:06 PM

To: Liv Chase; Adler, Brent; Scotty Linscott

Cc: O'Brien, Stuart

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Thank you.

Barbara

Barbara Barhydt
Development Review Services Manager
Planning Division
389 Congress Street 4th Floor
Portland, ME 04101
[\(207\) 874-8699](tel:(207)874-8699)
Fax: [\(207\) 756-8256](tel:(207)756-8256)
bab@portlandmaine.gov

----- Forwarded message -----

From: **Michael Long** <mikeclong@mac.com>

Date: Thu, May 12, 2016 at 7:27 AM

Subject: 48 Hancock construction (revised)

To: "bab@portlandmaine.gov" <bab@portlandmaine.gov>, "sgo@portlandmaine.gov" <sgo@portlandmaine.gov>

Cc: Cathy Lilly <cathylilly99@gmail.com>, Dave Filipos <davidfilipos@gmail.com>, Richard Penley <rhp.penley@gmail.com>, Lindsay Ryan <lryan3@maine.rr.com>

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The documents provided by the developer to the City do not adequately address these issues. Furthermore, there are a number of inconsistencies and ambiguities that raise serious questions about the construction plans.

The construction management plan indicates that the SOE is temporary, but then says that after foundation completion, the piles will be cut below grade and remain. Does this mean that the "temporary" SOE is in fact permanent? If so, has it been engineered, reviewed and permitted as such? If not, what will support the area up-slope of the new foundation? Will the foundation of the house act as a retaining wall? Has it been engineered to do

so?

The plans by HB Fleming show an intersection of the SOE wall with an existing retaining wall at the rear of the property. This would require cutting an old existing wall that continues to the south along the Filipos property line and then extends as an old "tabby" wall between the 113 Newbury and the Federal St. properties. (See circled area in accompanying photograph) This wall is in poor shape as pointed out in the letter submitted by Casco Bay Engineering and will likely suffer severe damage if cut to allow the SOE to intersect the rear property wall. Furthermore, once the SOE is removed, what will continue to support the property in this area?



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Sincerely,

Michael C. Long MD

President

Federal St. Townhouses Association

Owner

40 Federal St.

Portland, Maine

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Barbara Barhydt <bab@portlandmaine.gov>

Fwd: Follow up on our recent conversations

1 message

Stuart O Brien <sgo@portlandmaine.gov>

Mon, May 23, 2016 at 3:51 PM

To: "Barhydt, Barbara" <bab@portlandmaine.gov>, Philip DiPierro <pd@portlandmaine.gov>

----- Forwarded message -----

From: **Stuart O Brien** <sgo@portlandmaine.gov>

Date: Tue, May 17, 2016 at 5:14 PM

Subject: Follow up on our recent conversations

To: "Huckel-Bauer, Nathaniel R." <nhuckel-bauer@ddlaw.com>

On May 10, 2016, Brent Adler submitted additional information to amend the construction management plan for 48 Hancock Street. The new materials included the following:

- 1. Tony Dumais, P.E., Casco Bay Engineering, letter re: The Hawk Existing Foundation Wall, date May 3, 2016
- 2. Amended Construction Management Plan, Liv Chase
- 3. The Hawk SOE for 48 Hancock, H.B. Fleming, Inc, Stamped by John S. Linscott IV, Maine Licensed Engineer, dated 3/16/16
- 4. The Hawk SOE plans: Excavation Support, H.B. Fleming, Inc, stamped by John S. Linscott IV, Maine Licensed Engineer, dated 3/16/16

We also received an e-mail from Scotty Linscott on May 13th, which responds to questions raised by Michael Long.

We have reviewed the material submitted and suggest that the responses in the e-mail along with additional information listed below, be incorporated into one construction management plan:

1. 1. Mr. Linscott's e-mail states that they have performed a detailed soil pressure distribution and structural analysis in the design of the proposed excavation support system and that they have a third party analysis of the vibration data from a project in Kennebunk. Please include this analysis and vibration data or provide a detailed summary and a reference where it can be reviewed in the plan.
2. 2. Please show the location of the proposed SOE system on the site plan, as we seek to confirm the work is within the site's boundaries. The previously approved construction management plan included the following note, which is not included in the revised construction management Plan:

a. *Excavation at the abutting structures will be done with a combination of hand digging and a light touch with an excavator. The neighbors have been advised of this mild cut in order to properly place a footing for the foundation. At no point will the neighboring properties structures be impacted by this back cut nor at any time will the new foundation footing be placed outside of 48 Hancock street property line.*

In order for this project to proceed, we need confirmation from you that all work can be completed within the property boundaries or construction easements will be obtained as needed. Please be on notice that if complaints are received and confirmed regarding property encroachments, then a stop work order could be issued and in place until such time the boundary dispute is resolved by the private parties.

3. 3. Please stake out the property corners and lot boundaries (string lines).
4. 4. It is stated in the e-mail, that the proposed SOE system meets industry standards, so please specify the industry standards and how they are being met.
5. Finally, we support the proposed monitoring of the installation of the soldier piles and note that if there are any deviations the work will stop.

We appreciate you meeting with staff to discuss the procedure. We look forward to receiving the above referenced materials and concluding this review.

Thank you.

—

Stuart "Tuck" O'Brien
City Planning Director
Department of Planning and Urban Development
Office: (207) 874-8726
Cell: (207) 553-0255

—

Stuart "Tuck" O'Brien
City Planning Director
Department of Planning and Urban Development
Office: (207) 874-8724
Cell: (207) 553-0255

The following is a Construction Management Plan for 48 Hancock Street Portland, ME.

Revision 2

Date 5/17/2016

1. Sidewalks will be closed in front of the 48 Hancock Street site for the majority of the project. Six foot high fence panels and site signage will define the perimeter of the site at the Hancock St sidewalks. Pedestrian traffic will be directed across Hancock Street with signage at the nearest existing crosswalks with curb cuts for ADA compliance the same location that Seaport Lofts has directed pedestrian traffic away from the already fenced off sidewalks East of the 48 Hancock street lot. See attached site construction management plan for more detail.

2. Jersey barriers or fence panels will provide safety at the curb edge when excavations are open for the building foundation work. We anticipate this being a 2 week period. The major site and foundation work will be a 4 – 6 week duration overall.

3. The General Contractor will arrange for payments for on street parking at spaces in front of the 48 Hancock Street site. Material deliveries will be limited to early morning hours after 7. The General Contractor will be responsible for winter maintenance of temporary facilities inside the fenced area of the site.

4. Any curb cuts or street openings will obtain the proper permit through Public Works and Portland Water District. Until will submit required street opening documents to bring natural gas to the building.

5. The overall project duration is expected to be approximately 6 months. Exterior site finishes i.e. pavers, loam/seeding and landscaping will be completed in the Spring of 2017.

6. HB Fleming has designed a temporary excavation support system that will be used to build close to the property line without disturbing neighboring structures. The structure will consist of +/-85' of driven soldier pile wall. The Soldier piles will be driven at 6' spacing. The gap between the piles will be filled with timber lagging to form a continuous wall. Included will be 12' returns on each end to allow for a 1.5:1 slope from the existing grade. The design will also include 3 raking braces that will be used to brace the wall and prevent deflection in the event that marine clay is present at or below the bottom of excavation. Once the foundation wall is constructed, the raking braces will be removed and the piles will be cut off just below grade.

A pre construction survey will be conducted by BECC Co, a geotechnical firm specializing in construction vibration. BECC will provide video documentation of all neighboring structures willing to participate prior to any start of work and will conduct vibration monitoring throughout the site to ensure that any effects will be kept well below the safe guidelines recommended by the Federal Government for occupied residences.

7. Excavation at the abutting structures will be done with a combination of hand digging and a light touch with an excavator. The neighbors have been advised of this mild cut in order to properly place a footing for the foundation. At no point will the neighboring properties structures be impacted by this back cut nor at any time will the new foundation footing be placed outside of 48 Hancock street property line.

8. The construction of the project at 48 Hancock street will be panelized and constructed via a crane staged on one half of Hancock Street. The general contractor will pay the appropriate fees for blocking the street. The process will take up to 5 days.

9. The exterior siding will be installed via a 65 foot boom lift positioned on Hancock street. At no point will the neighbors property be required for the installation of the maintenance free siding.

Should you have any questions or comments relative to this site construction management plan, please feel free to call. Thank you.

Liv Chase, Owner/Project designer

Contractor: HB Fleming
Job Location: 21 Ocean Ave

Time	Activity
1030	Set up at 21 Ocean Ave
1630	Pick Up



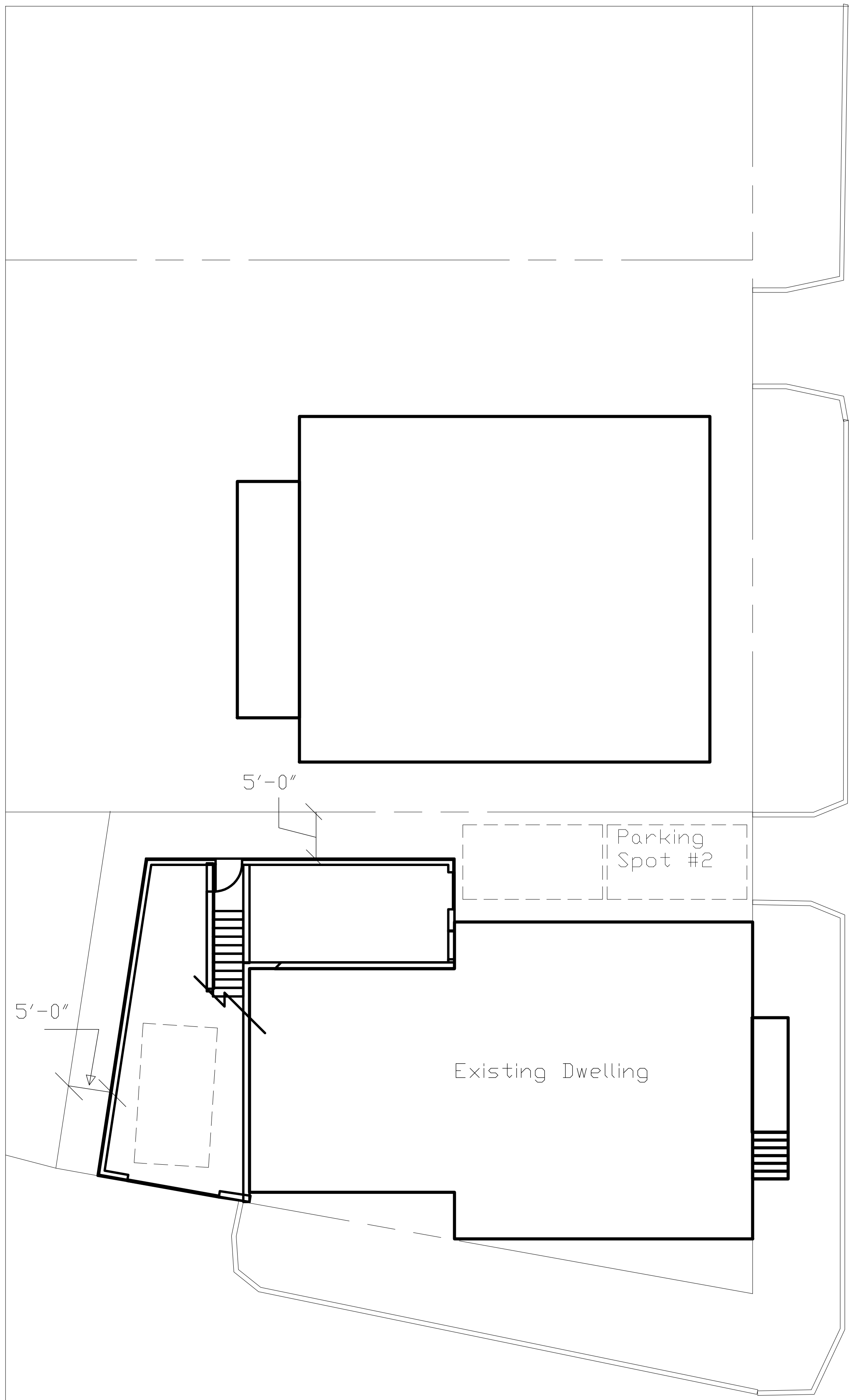
SEISMOGRAPH UNIT: MicroMate
 SERIAL: UM6043
 CALIBRATED:
 MODE/SETTINGS: Histogram Combo

Vibration Consultant:

Time Interval	PPV (in/sec)	Frequency (Hz)	Sound Level (dB)	Seismograph Location	Activity
1057-1102	0.019	73	95.64	21 Ocean Ave	Baseline
1102-1131	0.080	18	112.3	21 Ocean Ave	Drive Pile with Drop Hammer
1131-1204	0.163	20	114.4	21 Ocean Ave	Drive Pile with Drop Hammer
1204-1255	0.153	19	119.4	21 Ocean Ave	Drive Pile with Drop Hammer
1256-1351	0.022	11	107.5	21 Ocean Ave	Baseline
1416-1430	0.204	27	123.4	21 Ocean Ave	Drive Pile with Drop Hammer
1431-1529	0.116	18	116.3	21 Ocean Ave	Drive Pile with Drop Hammer
1529-1617	0.190	20	120.3	21 Ocean Ave	Drive Pile with Drop Hammer

DATE: 5-3-2016

WEATHER/COMMENTS: Cloudy, 50s

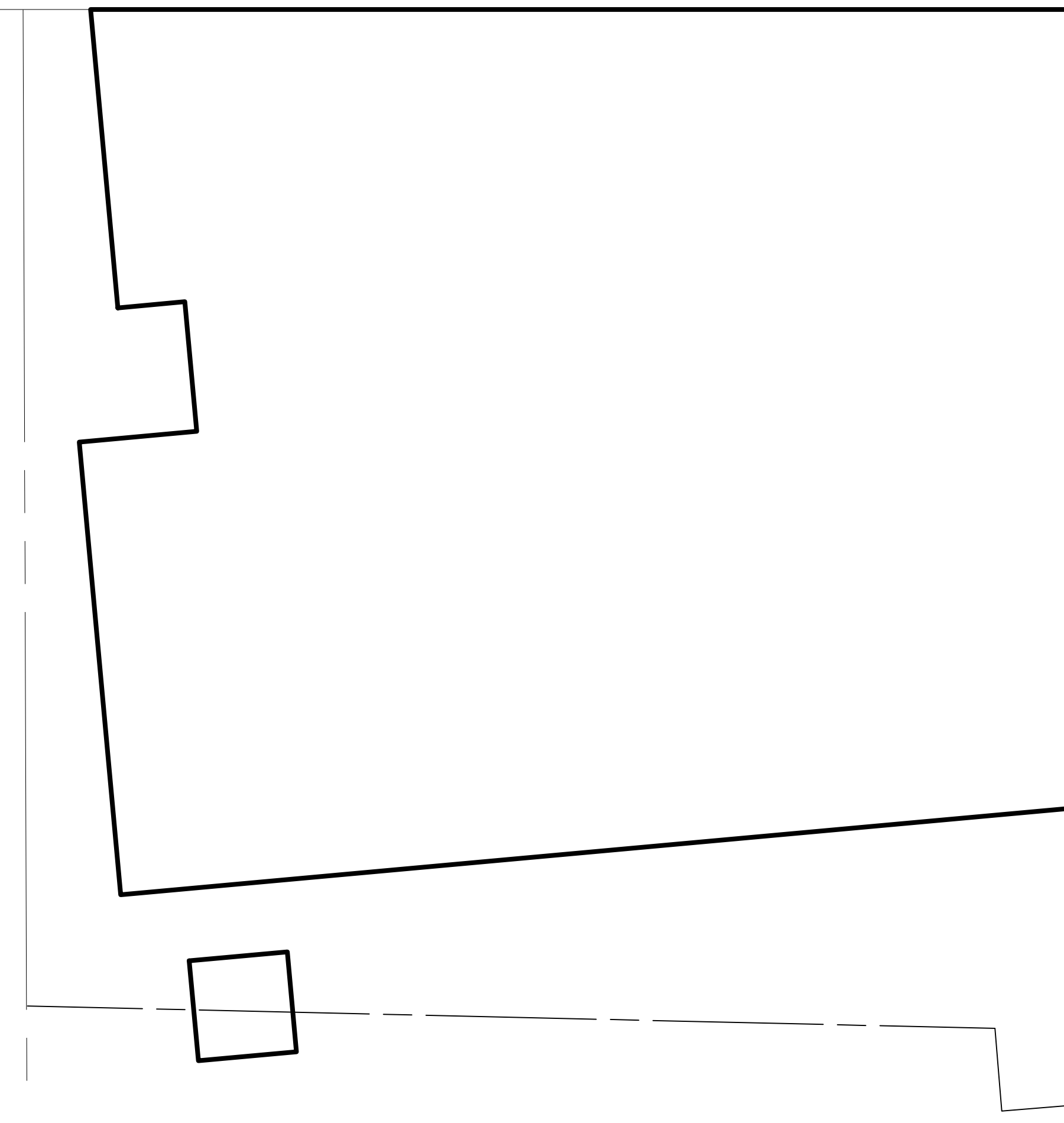


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15' wide Driveway

Hot mix asphalt apron

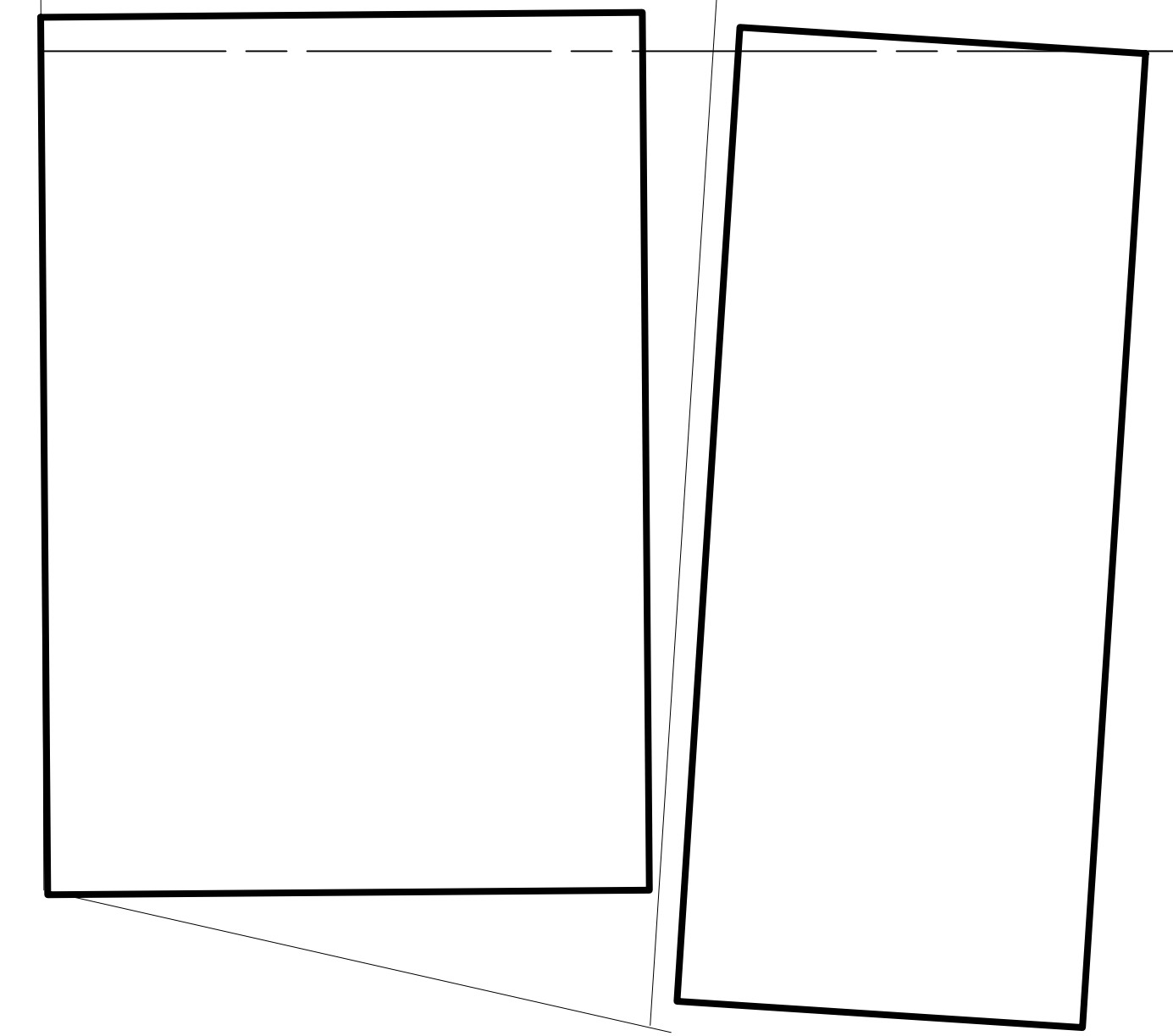
Street Tree



48 HANCOCK STREET

SOE Piles @ 6' OC

BOUNDARY LINE
(all work contained within boundary
of the site)



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48 HANCOCK STREET PORTLAND, ME

REVISED SITE PLAN
MAY 19, 2016

Date: 5/20/2016

RE: Site Plan Amendment 48 Hancock

Please find Ms Chase as well as Mr. Linscott's answers to questions related to the amended site plan for 48 Hancock Street based on a visit to the site on May 17th

1. Mr. Linscott's e-mail states that they have performed a detailed soil pressure distribution and structural analysis in the design of the proposed excavation support system and that they have a third party analysis of the vibration data from a project in Kennebunk. Please include this analysis and vibration data or provide a detailed summary and a reference where it can be reviewed in the plan.

The vibration data is attached to this plan. Please note that all levels are well below the lowest published threshold criteria for construction vibrations of .5 in/sec.

2. Please show the location of the proposed SOE system on the site plan, as we seek to confirm the work is within the site's boundaries.

Attached

In order for this project to proceed, we need confirmation from you that all work can be completed within the property boundaries or construction easements will be obtained as needed. Please be on notice that if complaints are received and confirmed regarding property encroachments, then a stop work order could be issued and in place until such time the boundary dispute is resolved by the private parties.

Based on our existing survey plan and a recent survey confirming pin location and any discrepancies, we can confirm, with this information all work will be within our property lines. Please be advised that we have not been made aware of any disputes regarding our survey plan to date.

3. Please stake out the property corners and lot boundaries (string lines).

String lines and stakes will be in place prior to H.B. Fleming starting work.

4. It is stated in the e-mail, that the proposed SOE system meets industry standards, so please specify the industry standards and how they are being met.

The excavation support system was designed starting with a soil pressure distribution that was derived using the “Terzaghi” soil pressure formula. This is one of three typical formulas used to determine the soil pressure that is acting on the wall. From there each structural member was analyzed. Specifically, the timber lagging was analyzed using the NDS wood design construction manual and the Steel members were all analyzed using the ASD steel design manual. These are standard design manuals that are used for both above and below grade construction. They take into account the specific species of wood and size of member or grade and shape/ section of steel when sizing members.