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FAY, SPOFFORD &  
THORNDIKE  
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September 23, 2013

Ms. Barbara Barhydt  
Development Review Services Manager  
Planning and Development Department  
City of Portland, Maine  
389 Congress Street  
Portland, Maine 04101-3509

**Subject: Canal Landing New Yard – Phase 1  
40 West Commercial Street  
Applicant: New Yard, LLC  
Amended Site Plan Application**

Dear Barbara:

On behalf of New Yard, LLC (New Yard), we are pleased to provide the accompanying Amended Site Plan Application for their proposed activities at the Canal Landing site. New Yard LLC is proposing an Amended Site Plan that will allow them to move forward with an amended building layout, which modifies the plans originally reviewed and approved by the Planning Board in December 2012. As we discussed with the staff and Planning Board during our most recent appearance before you, the West Commercial Street property is currently under consideration for expansion activities related to the International Marine Terminal (IMT). For this reason, New Yard must now consider a realignment of their initial development plans to shift one or more proposed buildings towards the westerly side of their property. As we presented, and were approved for several weeks ago, New Yard proposes to complete the following Phase 1A activities in the upcoming weeks:

- Grassing cutting and general site cleanup;
- Select brush and tree removal with observance of the tree save plan originally approved;
- Processing of salvaged concrete that will be crushed and reinforcement removed for general use as inert site fill. This quantity of material is generally less than 3,000 CY;
- Placement of a small portable temporary construction trailer with power service;
- Pile removal and/or cutting at the mud line within most of the remnant pier limits across the site waterfront. The piles will likely be stockpiled on the site for future reuse, or disposed of if unsuitable for reuse;

Ms. Barbara Barhydt  
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- Ground stabilization and restoration to the existing shorefront granite revetment west of the Unitil frontage. Numerous granite blocks need to be reset along the top of the wall and ground area behind the wall that has been eroded due to ongoing water exposure will be repaired. The plan includes minor subgrade preparation behind the wall and the placement of geotextile material followed by the restoration of granular backfill to the top of wall grade; and
- Installation of the westerly boat ramp and floats for vessel staging and extraction. This will include CIP or precast planks and slope stabilization in the vicinity of the ramp and pile reuse or replacement.

In addition, the following will continue to occur:

- New Yard will continue to use the existing shared easterly entrance off Commercial Street for site access;
- Energy East/NGL will continue to operate the existing propane distribution facility and access drive opposite Beach Street;
- Pan Am will continue to use the tracks into the Energy East/NGL site; and
- Unitil will continue remediation activities on their lands, including box waste removal and granular fill placement.

As has widely been reported, New Yard is currently cooperating with State officials for the planning of the IMT expansion, specifically including future rail access into the IMT as well as future large scale building development supporting IMT operations. These activities are largely anticipated to occur within the most easterly 15 to 18 acres of the property now under control by New Yard. Consequently, the New Yard operations will ultimately move westerly along the waterfront. Specific planning and layout for the Boat yard has yet to be worked through; however, New Yard does have the opportunity to construct an initial building(s) within an approximately 3 to 4 acre area on the far westerly side of the property now controlled by New Yard. This area has been confirmed by DOT officials as beyond any IMT expansion area now contemplated. Portland Terminal Co. (Pan Am Railways) continues to own land further west. It is contemplated that New Yard, Pan Am and the Maine Department of Transportation will collectively reach an agreement for the transfer of additional property and realignment of New Yard operations towards the west, thus allowing the IMT expansion to be realized. When these property agreements are in place, New Yard expects to submit new plans and applications for a Master Plan and phased development reaching further west. However, for this current amendment submission New Yard is only seeking approval to realign building locations on their property in order avoid activities with the prospective IMT expansion area.

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Work not currently contemplated until more definitive direction on the IMT expansion is determined includes the following activities:

- No significant earthmoving activities except for surface grading and leveling on the westerly end of the site;
- No permanent underground utilities will be installed within the east side of the site; limited utilities including water and power will be delivered into the new building pad areas;
- No permanent buildings will be constructed on the easterly end of the site;
- The permanent boat yard surface will not be placed on the easterly side of the property;
- The travel lift basin will not be constructed; and
- The easterly boat ramp will not be constructed.

New Yard's current objective is to install a 120' x 160' tension fabric or prefabricated metal building just to the east side of the existing concrete pad, located at the west side of the site. The concrete pad was formerly a clay storage site, thus it is hoped that the pad can be beneficially reused for a second building in the future. The tension building will have a metal framework supported by a concrete foundation. The structure will have a clear height of nearly 47'-10". Building drawings accompany this submission. The proposed building will be unheated and contain a dry sprinkler system for fire protection. Multiple overhead doors and man doors will be provided around the building perimeter. The building is primarily for temporary vessel maintenance and storage. The interior floor area will consist of a gravel surface that will be pitched from west to east. The intent is to allow the proposed floor to transition at grade with the existing concrete slab, located adjacent the building location. Utilities to be extended into the building include only a 6" water main for the sprinkler system and power and communications lines to be extended off Commercial Street. The building will not have any domestic plumbing nor will it have bathroom facilities.

The accompanying site plans illustrate the scope of work now currently contemplated. For ease of review will have limited the submission materials to simply the plan view drawings as we will continue to rely on the approved details and related supporting documents. Items currently under construction include Phase 1A activities. New Yard is now seeking an Amended Site Plan for their building location, in order to allow new building construction to proceed expediently. New Yard has a building scheduled for delivery in October so they are hopeful that Planning Board approval can be granted in October in order to allow building construction to begin shortly thereafter.

We appreciate the Planning Authority's consideration on these matters and look forward to meeting with the Planning Board once again. New Yard is anxious to move ahead but recognizes that it is essential to provide solutions for the IMT expansion and the rail extension into the IMT.

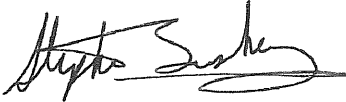
FAY, SPOFFORD & THORNDIKE

Ms. Barbara Barhydt  
September 23, 2013  
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If you have any questions or require any additional information, please contact our office.

Sincerely,

FAY, SPOFFORD & THORNDIKE, LLC



Stephen Bushey, P.E., C.P.E.S.C.  
Senior Engineer

SRB/smk

Enclosures: Amended Site Plans

c: Bill Needelman, City Planning  
Phin Sprague, New Yard LLC  
Bob Flight, New Yard LLC  
Peter Plumb, Murray, Plumb and Murray



## Level III – Preliminary and Final Site Plans Development Review Application Portland, Maine

Planning and Urban Development Department  
Planning Division

Portland's Planning and Urban Development Department coordinates the development review process for site plan, subdivision and other applications under the City's Land Use Code. Attached is the application form for a Level II: Preliminary or Final Site Plan. Please note that Portland has delegated review from the State of Maine for reviews under the Site Location of Development Act, Chapter 500 Stormwater Permits, and Traffic Movement Permits.

**Level III: Site Plan Development includes:**

- New structures with a total floor area of 10,000 sq. ft. or more except in Industrial Zones.
- New structures with a total floor area of 20,000 sq. ft. or more in Industrial Zones.
- New temporary or permanent parking area(s) or paving of existing unpaved parking areas for more than 75 vehicles.
- Building addition(s) with a total floor area of 10,000 sq. ft. or more (cumulatively within a 3 year period) except in Industrial Zones.
- Building addition(s) with a total floor area of 20,000 sq. ft. or more in Industrial Zones.
- A change in the use of a total floor area of 20,000 sq. ft. or more in any existing building (cumulatively within a 3 year period).
- Multiple family development (3 or more dwelling units) or the addition of any additional dwelling unit if subject to subdivision review.
- Any new major or minor auto business in the B-2 or B-5 Zone, or the construction of any new major or minor auto business greater than 10,000 sq. ft. of building area in any other permitted zone.
- Correctional prerelease facilities.
- Park improvements: New structures greater than 10,000 sq. ft. and/or facilities encompassing 20,000 sq. ft. or more (excludes rehabilitation or replacement of existing facilities); new nighttime outdoor lighting of sports, athletic or recreation facilities not previously illuminated.
- Land disturbance of 3 acres or more (includes stripping, grading, grubbing, filling or excavation).

The Land Use Code (including Article V), the Technical Manual, and the Design Manual are available on the City's web site at <http://www.portlandmaine.gov/planning/default.asp>

**Planning Division**  
Fourth Floor, City Hall  
389 Congress Street  
(207) 874-8721 or 874-8719

**Office Hours**  
Monday thru Friday  
8:00 a.m. – 4:30 p.m.



<b>Engineer</b> Name: FST, LLC Address: 778 Main Street, Suite 8 City/State :So. Portland, ME Zip Code: 04106	<b>Engineer Contact Information</b> Work # 207-775-1121 Cell # 207-756-9359 Fax# 207-879-0896 e-mail: sbushey@fstinc.com
<b>Surveyor</b> Name: Owen Haskell Inc. Address: 390 US Route 1, Unit 10 City/State : Falmouth, ME Zip Code: 04105	<b>Surveyor Contact Information</b> Work # 207-774-0424 Cell # Fax# 207-774-0511 e-mail: jswan@owenhaskell.com
<b>Architect</b> Name: TFH Architects Address: 80 Middle Street City/State : Portland, ME Zip Code: 04101	<b>Architect Contact Information</b> Work # 207-775-6141 Cell # Fax# 207-773-0194 e-mail:
<b>Attorney</b> Name: Murray, Plumb and Murray Peter Plumb, Esq. Address: 75 Pearl Street, Suite 300 City/State : Portland, ME Zip Code: 04101	<b>Attorney Contact Information</b> Work # 207-773-5651 Cell # Fax# 207-773-8023 e-mail: pplumb@mpmlaw.com

**APPLICATION FEES:**

**Check all reviews that apply. (Payment may be made by Cash or Check payable to the City of Portland.)**

<p><b>Level III Development (check applicable reviews)</b></p> <p><input type="checkbox"/> Less than 50,000 sq. ft. (\$500.00)</p> <p><input type="checkbox"/> 50,000 - 100,000 sq. ft. (\$1,000)</p> <p><input type="checkbox"/> 100,000 – 200,000 sq. ft. (\$2,000)</p> <p><input type="checkbox"/> 200,000 – 300,000 sq. ft. (\$3,000)</p> <p><input type="checkbox"/> over \$300,00 sq. ft. (\$5,000)</p> <p><input type="checkbox"/> Parking lots over 11 spaces (\$1,000)</p> <p><input type="checkbox"/> After-the-fact Review (\$1,000.00 plus applicable application fee)</p> <p><b>Plan Amendments (check applicable reviews)</b></p> <p><input type="checkbox"/> Planning Staff Review (\$250)</p> <p><input checked="" type="checkbox"/> Planning Board Review (\$500)</p> <hr/> <p>The City invoices separately for the following:</p> <ul style="list-style-type: none"> <li>• Notices (\$.75 each)</li> <li>• Legal Ad (% of total Ad)</li> <li>• Planning Review (\$40.00 hour)</li> <li>• Legal Review (\$75.00 hour)</li> </ul> <p>Third party review fees are assessed separately. Any outside reviews or analysis requested from the Applicant as part of the development review, are the responsibility of the Applicant and are separate from any application or invoice fees.</p>	<p><b>Other Reviews (check applicable reviews)</b></p> <p><input type="checkbox"/> Traffic Movement (\$1,000)</p> <p><input type="checkbox"/> Stormwater Quality (\$250)</p> <p><input type="checkbox"/> Subdivisions (\$500 + \$25/lot)</p> <p># of Lots ___ x \$25/lot = _____</p> <p><input type="checkbox"/> Site Location (\$3,000, except for residential projects which shall be \$200/lot)</p> <p># of Lots ___ x \$200/lot = _____</p> <p><input type="checkbox"/> Other _____</p> <p><input type="checkbox"/> Change of Use</p> <p><input type="checkbox"/> Flood Plain</p> <p><input type="checkbox"/> Shoreland</p> <p><input type="checkbox"/> Design Review</p> <p><input type="checkbox"/> Housing Replacement</p> <p><input type="checkbox"/> Historic Preservation</p>
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**PROJECT DATA**

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

<b>Total Area of Site</b>	22.5 ac. <del>sq. ft.</del>
<b>Proposed Total Disturbed Area of the Site</b>	Phase 1A & 1B - 100,000 sq. ft.
If the proposed disturbance is greater than one acre, then the applicant shall apply for a Maine Construction General Permit (MCGP) with DEP and a Stormwater Management Permit, Chapter 500, with the City of Portland	
<b>Impervious Surface Area</b>	
Impervious Area (Total Existing)	287,704 sq. ft.
Impervious Area (Total Proposed)	255,598 sq. ft.
<b>Building Ground Floor Area and Total Floor Area</b>	
Building Footprint (Total Existing)	0 sq. ft.
Building Footprint (Total Proposed)	41,617 sq. ft.
Building Floor Area (Total Existing)	0 sq. ft.
Building Floor Area (Total Proposed)	41,617 sq. ft.
<b>Zoning</b>	
Existing	WPDZ
Proposed, if applicable	Same
<b>Land Use</b>	
Existing	LP Gas Distribution (to remain)
Proposed	Boat Maintenance Facility
<b>Residential, If applicable</b>	
N/A	
# of Residential Units (Total Existing)	
# of Residential Units (Total Proposed)	
# of Lots (Total Proposed)	
# of Affordable Housing Units (Total Proposed)	
<b>Proposed Bedroom Mix</b>	
N/A	
# of Efficiency Units (Total Proposed)	
# of One-Bedroom Units (Total Proposed)	
# of Two-Bedroom Units (Total Proposed)	
# of Three-Bedroom Units (Total Proposed)	
<b>Parking Spaces</b>	
Unspecified parking for up to 50 outside employees	
# of Parking Spaces (Total Existing)	
# of Parking Spaces (Total Proposed)	
# of Handicapped Spaces (Total Proposed)	
<b>Bicycle Parking Spaces</b>	
# of Bicycle Spaces (Total Existing)	0
# of Bicycle Spaces (Total Proposed)	Waiver Requested
<b>Estimated Cost of Project</b>	\$1 - 2 Million





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October 13, 2013

Building Inspections Office  
City of Portland, Maine  
389 Congress Street  
Portland, Maine 04101-3509  
ATTN: Marge Schmuckal

**Subject: Permit # 201302298**  
**Canal Landing New Yard – Phase 1**  
**40 West Commercial Street**  
**Applicant: New Yard, LLC**  
**Height information and Flood Hazard Development Permit Application for New Tension Fabric Structure**

Dear Marge:

We have received your email transmission dated 10/10/2013 related to a request for additional building height information as well as the flood hazard development permit application for the proposed tension fabric structure at the New Yard, 40 West Commercial Street. Regarding the additional information related to the building height and compliance with the WPDZ code requirements we offer the following evidence:

1. The proposed building will be installed on a cast in place concrete foundation wall with a top elevation at 15.0' (NGVD29). The building eave dimensional height is 20'-3 1/2" (20.29') and the clear dimensional height is 47'-10 5/16" (47.86'). From top of foundation to roof peak the estimated overall dimensional height is approximately 49'.
2. In accordance with Section 14-47 of the Code of Ordinances the overall building height is defined as the vertical measurement to a midway point between the level of the eaves and the highest point of pitched roofs. For the proposed building this is measured as follows:

Step 1 Find midway point between eave height and top of structure or  
 $49.0' - 20.29' = 28.71'$  divided by 2  
 $= 14.36'$

Step 2 midway point dimensional height above top of foundation  
 $= 20.29' + 14.36' = 34.65'$  (or elevation 49.65')

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Building Inspections Office

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Step 3 Compute building height over average existing ground grade around building perimeter. In accordance with Section 14-47 of the Code of Ordinances the Average exterior grade around the building perimeter is computed to be approximately elevation 13.3' (see attached plan). The overall building height is measured as follows:

Average ground grade = elevation 13.3'

Elevation at midway point of pitched roof = elevation 49.65'

**Building height is computed as  $49.65' - 13.3' = 36.35'$**

**Conclusion: The dimensional building height as defined for pitched roofs is computed to be approximately 36.35' which is less than the maximum allowable building height in the WPDZ which is 45.0' therefore the proposed building is compliant. The accompanying figure 1 depicts the dimensional measurements and elevations used for these computations.**

3. In accordance with Section 14-320.2 (e)1.e, the overall building height above mean sea level is computed at follows:

Step 1 Foundation wall height will be set at elevation 15.0'

Step 2 Overall building dimensional height is approximately 49'

Step 3 Top of building elevation =  $15' + 49' = 64'$

**Conclusion: The top of the proposed building will be at elevation 64.0' (NGVD29) which is less than the maximum allowable of Elevation 65.0' above mean sea level.**

With respect to the Flood Hazard Development Permit application we have completed the forms and include the following information as it appears to be required on Page 3 of the application for the proposed building.

**Site Plan**

1. **show property boundaries, floodway and floodplain lines** – the previously submitted existing conditions plan for the boat ramp was annotated to identify the limits of the elevation 10.0 ft. (NGVD29) floodplain limit based on an on the ground survey.
2. **Show dimensions of the lot** – See previously submitted Existing conditions Plan
3. **Show dimensions and location of existing and/or proposed development on the site** – The accompanying proposed Grading and Drainage plan depicts the proposed development and it has been annotated to clarify the proposed building floor elevations. Generally speaking the east side overhead door entrance will be at elevation 13.0' (NGVD29). The building floor will consist of a gravel surface which will be sloped from

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west to east. The westerly floor grade will be approximately elevation 15.0'. No portion of the building floor will be less than elevation 13.0' thus meeting the minimum floor grade of elevation 12.0'.

4. **For new construction also include existing grade elevations done by a Professional Land surveyor or Engineer** – the accompanying plans have been prepared by Owen Haskell Inc. and Fay, Spofford & Thorndike, Inc., professional land surveyors and engineers respectively.
5. **For New Construction attach statement describing in detail how each applicable development standard in Article VI will be met** – See as follows:

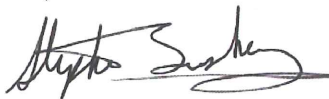
In accordance with Section 14-450.8 of the Code of Ordinances:

- (a) 1. Standard is met as the proposed project has been designed to include an engineered cast in place concrete foundation system.
  2. The standard is met as the proposed building will be constructed on cast in place and precast concrete materials.
  3. The proposed ramp and float systems have been designed by Licensed Professional Engineers and have been designed to prevent flood damage based on alignment and placement.
  4. This standard is not applicable.
  
- (f) 1. The proposed building has been set at least two (2) feet above the base flood elevation of 10.0'

Based on this accompanying information we trust that you can complete the processing of the proposed building permit and foundation permit as well as the Flood Hazard Development Permit application. If you have any questions or require any additional information, please contact our office.

Sincerely,

FAY, SPOFFORD & THORNDIKE, LLC



Stephen Bushey, P.E., C.P.E.S.C.  
Senior Engineer

SRB/smk

Enclosures: Amended Site Plans

c: Bill Needelman, City Planning

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**FAY, SPOFFORD & THORNDIKE**

Building Inspections Office

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Phin Sprague, New Yard, LLC  
Bob Flight, New Yard, LLC  
Peter Plumb, Murray, Plumb and Murray

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October 15, 2013

Mr. William Needelman, Planner  
Planning and Development Department  
City of Portland, Maine  
389 Congress Street  
Portland, Maine 04101-3509

**Subject: Canal Landing New Yard – Phase 1  
40 West Commercial Street  
Applicant: New Yard, LLC  
Amended Site Plan Application- Responses to staff and peer review comments**

Dear Bill:

On behalf of New Yard, LLC (New Yard), we are responding to your email transmission dated October 10, 2013 that contained staff review comments related to the Amended Site Plan application. Specifically, you have requested an update to the proposed landscape plan as well as information pertaining to the Fire Safety compliance review. The peer review engineer also has requested additional information on Stormwater management. We offer the following for each of these informational requests.

### **Landscape Plan**

New Yard is currently proposing a very limited scope of Landscape enhancement for the property based on the uncertainty of future development activity associated with the IMT expansion, new rail service corridor and related future Boat Yard programming. As it stands under the current amended development proposal, New Yard is proposing to clear approximately 4 acres of existing ground area within the westerly end of the current property limits. This cleared area is necessary to facilitate the placement of the proposed tension fabric structures as well as to create approximately 3 acres of boat yard operations and maintenance area. This area represents a substantial reduction of the area to be originally approved for use out of the approximately 22.98 acres that New Yard currently controls. This area is considered to be the minimum area necessary to meet the initial boat yard needs, while also avoiding construction within areas that are likely to otherwise become redeveloped as the IMT expansion program becomes better defined through design, permitting and construction. In addition, New Yard is anticipating that their complete development program is also likely to expand further west. The planning effort is currently reliant on prospective agreements between the involved parties, including New Yard, Pan Am Railways and the Maine Department of Transportation. Once

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Mr. William Needelman

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New Yard is able to provide adequate right, title and interest to additional westerly land they fully expect to once again file permits with the City of Portland and related regulatory bodies for a Master Planned development that will include a well-defined landscape plan for their entire development area. In the meantime, New Yard is seeking cooperation from the City to simply pursue a modest vegetation management plan based on some tree and vegetation preservation. The accompanying plan outlines these tree and vegetation preservation limits. During upcoming permitting for a revised New Yard proposal to the west we intend to provide a more fully developed landscape plan by Mohr & Seredin. Meanwhile we are amenable to a condition of approval that may relate to future landscape needs as both the IMT and New Yard projects become fully defined and planned.

**Fire Safety Compliance**

As part of the original project review and approval, New Yard retained Fire Risk Management, Inc. to complete a Fire Protection review of the site plans. FST, Inc has reviewed this information with respect to the current modified development layout and we offer the following information.

1. The proposed tension fabric structures are similar to the proposed Storage and Repair building identified in the original development plans thus are considered Type V structures.
2. In accordance with NFPA 1 and NFPA 303 the buildings will be provided with an automatic fire sprinkler system. Per design calculations provided by Advanced Fire Protection Services, LLC, the proposed dry system will provide a System Demand at the base of the riser of 1,062 GPM at 94 psi.
3. In accordance with NFPA 1 we have provided a hydrant at the proposed boat ramp. This hydrant location will be within approximately 160 feet of the buildings fire department connections. NFPA 1 requires a hydrant must be located within 100 feet of the building fire department connections (and at least 40 ft. away from the buildings), so we have modified the plan to include an additional hydrant to meet this requirement. The accompanying Figure 1 depicts the additional hydrant location. The final plans to be submitted as part of the Performance Guarantee will include this additional hydrant.
4. NFPA 1 requires that any portion of a building can be no more than 450 ft. from an access road, when the facility is fully protected by an automatic sprinkler system. This requirement is met with the proposed layout. NFPA 1 also requires that at least one exterior door for each building be within 50 ft. of an access roadway. This too is also met.
5. Other code requirements associated with the site access that New Yard intends to comply with include:

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- a. If the site is to be “gated”, a knox box (or equivalent) will be required to support FD access.
  - b. All access road shall be a minimum of 20 ft. in width.
  - c. A minimum of 9 ft. n vertical clearance shall be provided over all access roads.
  - d. All access roads must be capable of supporting the fire apparatus.
  - e. Any Dead-end access road in excess of 150 ft. must be provided with an adequate turnaround.
  - f. To ensure that access roads remain clear, the AHJ may require that all fire access roads be “marked” to clearly show their location.
  - g. A minimum of at least two sides of all buildings must be accessible to fire apparatus.
  - h. Access must be provided to within 150 ft. of all boats stored on site.
6. Additional code requirements regarding the locations for portable fire extinguishers that New Yard intends to comply with include:
- a. Within 25 ft. of the pier/land intersection for all piers.
  - b. Ensure that the maximum travel distance to a fire extinguisher does not exceed 75 ft.
  - c. If a fueling station is to be provided, additional portable extinguishers will need to be provided within 100 ft. of the facility, with additional review under NFPA 30A.
7. In accordance with NFPA 58 related to the nearby LPG storage facility we submit that the separation distance between the existing 60,000 gal. tank on the NGL site and the proposed tension fabric structure is approximately 115 ft. which exceeds the minimum separation distance of 75 ft.
8. New Yard also intends to comply with the additional following code requirements:
- a. Ladders that are sufficient to reach the deck of all boats stored will need to be readily accessible.
  - b. All portable fuel tanks must be removed from boats prior to their being located inside a building.
  - c. Installed fuel tanks should be at least 95% full prior to a boat being moved inside a building.
  - d. The use of portable heating units in a storage/repair facility is only allowed when personnel are present.
  - e. Equipment must be readily available to remove boats from any building where they are stored or being repaired.

We trust this formation satisfies the Fire Department’s concerns on the amended site plan. If necessary we are amenable to discussing a condition of approval that might involve any further Fire Safety Compliance review that the Fire Dept. may require, in advance of the release of a building permit.

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Mr. William Needelman

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**Stormwater Management**

FST has reviewed the original Stormwater narrative prepared for the project. The basic design objective relied on the use of the “manmade pervious surface” for construction of the boat yard operation and storage area. This surface effectively minimizes stormwater runoff from routine storms and directs the flow of contributing rainfall to below ground. Based on the original stormwater narrative we offer the following amended text contained within Section 8.0 – 12.0 of the report.

**“Section 8.0 Stormwater Management Objectives****Compliance with BMP Design Criteria:****Traffic Volumes:**

Traffic volumes will continue to be low across the area. Some heavy vehicles including tractor trailer trucks and in the future the travel lift will maneuver across the crushed stone surface. However, the majority of the surface will be utilized for boat storage. The applicant proposes to manage the crushed stone surface by routing raking and grading to minimize the buildup of fine particles that might impact the materials absorptive capacity. Removal and replacement of this gravel layer may be required over time.

**Grading:**

Grades across the crushed stone area will range from 1 - 4%, thus meeting the <5% slope recommendation.

**Sediment Loading:**

The crushed stone area is not expected to receive high volumes of sediments. Over time any buildup of fines that impact the stone surface absorption capacity will be removed and replaced.

**Reservoir Course:**

The reservoir course will consist of clean MDOT 703.12 crushed stone surfacing course free of debris. The depth of the reservoir course was determined as follows:

Crushed Stone Surface	=	130,625 SF
Tension Fabric Building	=	19,200 SF
<u>Future Building</u>	=	<u>28,800 SF</u>
TOTAL	=	178,625 SF

Based on 1” of runoff across this “impervious area” yields a water quality volume of 14,885 CF.



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Dividing the water quality volume (14,885 CF) by the crushed stone area (130,625 SF) yields a depth of 1.37 inches.

Assuming a void space of 40% within the stone layer (1.37"/0.4) yields a required crushed stone thickness of 3.42 inches. As such a minimum **depth of 4 inches** for the stone layer will be needed in the section. The typical Boat yard surface section depicts this surfacing depth.

Pretreatment Layer

A pretreatment layer will be achieved by providing a 15"-20" subbase gravel layer (MDOT Type D) beneath the crushed stone surfacing course.

Separation to Groundwater:

Based on the test pit data included in previous subsurface explorations, the groundwater table throughout the site is six to nine feet below existing grade.

Infiltration Testing:

The applicant is seeking a waiver from the infiltration testing requirement. The applicant has observed the existing site after heavy rain events and observed ponding for only a couple of hours thus indicative of favorable absorption capacity for the in situ soils. The existing site has a surface gravel/sand layer and it is expected that the proposed stone surface will not negatively impact the infiltration properties below.

Flooding Standard:

Due to the direct discharge to the Fore River, a waiver from the flooding standard is being requested.

Larger Storm events larger will be directed via sheet flow to one of the following:

- The northerly edge of the amended development area will be conveyed to edge area adjacent the existing rail tracks. A drainage path will be maintained around the northerly and easterly perimeter of the project area to convey excess runoff from the site and from the NGL site towards the river.
- The westerly side of the site will be uniformly distributed toward the area identified for future development off the site.
- Between the buildings and the shoreline, any excess runoff will simply sheet flow across the yard area towards the existing revetment.

**Chapter 500 Treatment Percent Compliance**

The proposed redevelopment project creates approximately 4.1 acres of improved surface area that will generally be tributary to the proposed boat yard surface area, thus offering nearly 100%

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treatment of the improved site. Hence, the strategies proposed herein meets the minimum requirements stated in the General Standards.

**Boatyard Activity Planning**

A major issue associated with boatyard and marine related use is the proximity to the shorefront. Any pollutants that are generated on the site may eventually reach the water. As such, the applicant will implement thoughtful planning and processes to avoid toxic pollutants including organic chemicals and heavy metals from spills.

Activities such as hull prep, sandblasting, painting, washing, engine repairs and maintenance will be performed in accordance with the guidelines set forth in the MeDEP Brightworks manual. Storage, handling and disposal of waste material from these activities will also be carried out in accordance with the manual and utilize local waste companies who specialize in this environment. A plan will also be in place to manage spills if and when they occur. This plan will identify potential spill sources, hazardous materials stored, prevention measures (including training, security, etc.), spill emergency procedures (including health and safety measures, notification information, spill containment, etc.), emergency phone numbers, location of spill containment and control materials and a drainage plan. The applicant is a current boatyard operator and is very familiar with the guidelines and requirements set forth in the Brightworks Manual. They have successfully complied with these requirements for many years and they are confident that similar operations will be maintained at the proposed site.

**Erosion Control**

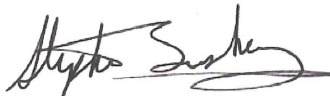
The Erosion Control Narrative, Plan, and Details prepared for the original project approval continue to apply to the amended site plan and will be complied with as required. “

We appreciate the Planning Authority's consideration on these matters and look forward to meeting with the Planning Board at their October 22, 2013 meeting.

If you have any questions or require any additional information, please contact our office.

Sincerely,

FAY, SPOFFORD &amp; THORNDIKE, LLC



Stephen Bushey, P.E., C.P.E.S.C.  
Senior Engineer

SRB/smk

Enclosures: Figure 1 – additional hydrant location  
Amended Landscape Plan – Phase 1B

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- c: Bill Needelman, City Planning
- Phin Sprague, New Yard LLC
- Bob Flight, New Yard LLC
- Peter Plumb, Murray, Plumb and Murray

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