NEW HAVEN CITY PLAN COMMISSION MINOR AMENDMENT OF FLOOD PLAIN VARIANCE AND MINOR AMENDMENT TO PDD #53

RE: **475 LONG WHARF DRIVE.** Minor amendment to Flood Plain Variance and minor amendment to PDD #53. (Owner: City of New Haven; Applicant: University of New Haven; Agent: Joseph P. Williams of Shipman & Goodwin LLP.)

REPORT: **1541-02**

ACTION: Approval with Conditions

STANDARD CONDITIONS OF APPROVAL

1. The applicant shall record on the City land records an original copy of this Site Plan Review report (to be provided by the City Plan Department) and shall furnish written evidence to the City Plan Department that the document has been so recorded (showing volume and page number), prior to City Plan signoff on final plans.

Submission: NARRATIVE and drawings attached. Application fee: waived. Received February 16, 2018.

- Letter to Chair Mattison dated February 15, 2018. Received February 16, 2018.
- Drawings:
  - A-2.0 First Floor Plan. Dated October 27, 2017.
  - A-2.1 Mezzanine Floor Plan. Dated October 27, 2017.
  - A-2.2 Enlarged First Floor Plan. Dated October 27, 2017.
  - A-2.4 Second Floor Plan. Dated October 27, 2017.
  - UNH Marine Science Aquarium by Aquatic Enterprises Inc. No date.
  - Product Cut Sheets by Aquatic Enterprises Inc. for UNH Raceway System, UNH Circular Tank System, UNH Incoming Water System, UNH Glass Tank Rack, UNH Reservoir LSS.
- Excel Worksheet Revised Feb 15, 2018: Flood Planning for First Floor Equipment and Material.

PROJECT SUMMARY:
Project: University of New Haven Aquaculture Center in Canal Dock Boathouse
Address: 475 Long Wharf Drive
Site Size: approximate lease area within Boathouse is 3800 SF
Zone: PDD #53
Financing: private
Owner: City of New Haven
Applicant: University of New Haven
Agent: Joe Williams of Shipman and Goodwin

BACKGROUND
Previous CPC Actions:

- CPC 1454-01: Flood Plain Variance and PDD Modification for construction of Platform and new Community Boathouse at Canal Dock.
- CPC 1456-02: Detailed Plan Review, Site Plan Review and Coastal Site Plan Review for Construction of Community Boathouse on Platform at Canal Dock.

Zoning:
The Site Plan as submitted meets the requirements of the New Haven Zoning Ordinance for PDD #53.

Discussion

The Community Boathouse at Canal Dock received its original approval under two City Plan Commission actions: an original Flood Variance and PDD Modification under 1454-01 and Detailed Plan Review, Site Plan Review and Coastal Site Plan Review under 1456-02. The original approval and flood variance (1454-01) contemplated undifferentiated space in the area now being considered for an aquaculture center to be operated by the University of New Haven. The Detailed Plan Review approvals (1456-02) illustrate the same space as boat bays "to be leased to the University of New Haven for its marine program". In neither application was the detail of the actual marine program discussed.

The University of New Haven proposes under this application to clarify the use by its marine program (minor amendment to PDD #53). Drawings and the narrative detail accompanying the application flush out the actual design of the space within the boathouse to include a marine laboratory and support spaces.

In addition the applicant seeks to modify the Flood Variance (a/k/a Flood Damage Prevention, or "FDP" variance, per New Haven Technical Ordinance Title IV, the Flood Damage Prevention Ordinance) originally granted for the undifferentiated space. Given that the platform of the boathouse structure remains the same, it is only the interior fit-out of the space that has changed. The Flood Variance was originally necessary because the structure (platform) is located well below the Base Flood Elevation of 13.0; the first floor elevation sits at elevation 10.21. Thus staff feels it is appropriate to ask the applicant to demonstrate that the fit-out of the space as a marine laboratory/aquaculture center merits a modification of the original variance under the Flood Damage Prevention Ordinance Section 7.5 "Considerations for Granting FDP Variances." The applicant's discussion of the relevant points is attached.

The original Flood Variance was premised on the fact that the uses within the boathouse are functionally-dependent. That fact is only strengthened by the additional application materials. Given the nature of the original variance, and the fact that the proposed changes (or additional detail) are entirely to components inside the building , staff felt that apprising the Commission of the proposed changes in light of the increased detail of use would be appropriate (as opposed to entirely new application for Flood Variance). In other words, the exterior structure and platform (elevation) of the boathouse being the same, as long as the applicant can demonstrate continuing compliance with all facets of the FDP variance considerations, a minor modification is appropriate.

The FINDINGS from the original Flood Plain Variance bear repeating here (underlined):

Flood Variance Request: The applicant has requested the following variances from the flood regulations due to the functionally dependent use of the project:
Section 5.3.2.2 "Electrical, plumbing and other utility connections are prohibited below the base flood elevation."

The building will require new electric, plumbing and other utility services to support the uses inside including HVAC, lighting, water for domestic and fire protection, and sanitary sewer from floor drains and bathrooms. Utility services will be fed from below grade landward of the bulkhead and below the platform before penetrating the building slab for distribution within the building. Based upon the elevation of the platform, these services would be below the base flood elevation, however, would be protected by the use of concrete chaseways below the slab. It should also be noted that the existing utility infrastructure within Long Wharf Drive is located below the base flood elevation. Electrical and mechanical systems and the elevator will be provided in compliance with mechanical and electrical codes and building code for construction in a flood prone area and based upon a base flood elevation of 14.0 NGVD. In addition to structural support of the 2nd floor, the stairs, stair shafts and elevator shaft will be designed to survive VE Zone forces. First floor wall construction and materials below the base flood elevation will be resistant to damage from flood waters. Construction will be concrete block with closed cell foam insulation or sandwich panel systems of water resistant panels and closed cell foam insulation, i.e. no voids.

Section 5.3.4.01 "All new construction or substantial improvement shall be located 25 feet landward of the reach of the mean high tide."

The proposed platform and boathouse will be constructed longitudinally seaward of the mean high tideline but this is a functionally dependent use which cannot occur if situated otherwise. Although the finished floor elevations of the platform and the building are located above the mean high tide, the supporting structure including piles and docks, will be located within the mean high tide elevation.

Section 5.3.4.02 "All new construction or substantial improvement shall be elevated so that the bottom of the lowest supporting horizontal member (excluding pilings or columns) is located no lower than the base flood level with all space below the lowest supporting member open so as not to impede the flow of water."

The first floor plan of the boathouse shows a finished floor elevation of 10.21 where the base flood elevation is 14 (NGVD 1929). There are some lavatories, junior lockers, mechanical equipment, lobby and reception area on the first floor accessory to support the boat bays where shells and other craft will be stored and launched. Non supporting breakaway walls (with aluminum louvers on the exterior) have been designed to allow storm water to flow through the first floor without impairing the supporting structure for the 2nd floor. For low energy flooding there will be flow through openings at the first flood to allow flood waters to enter and leave the building.

The elevation of the platform was governed by the adjacent grades within the street and top of the existing bulkhead as well as the dependency of the project to facilitate access to the water. All users of the building, the exterior platform spaces and docks will either be dropped off by vehicles at the front of the entrance, walk from adjacent parking spaces in the project vicinity, bike, or boat. Due to the limited distance between the street and the building entrance and the need to provide suitable accessibility to the project site and water, the platform and the building's first floor are essentially the elevation of the existing sidewalk along the street. Per section 5.1.14 of the Ordinance, the structure would need to be designed to the VE-Zone elevation since the project is within both the AE and VE Zones. Raising the platform approximately 9 feet to elevate the lowest supporting horizontal member would add significant ramps and extend the dock gangways further. This would impact accessibility, boat maneuvering, and access to the water which is the primary use of the project and the primary reason for request of variances.

In order to grant a Flood Plain Variance the Commission must consider the following factors in Section 7.5.1 of the FDP Ordinance:

- The danger that materials may be swept onto other lands to the injury of others;
- The danger to life and property due to flooding or erosion damage;
- The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
- The importance of the services provided by the proposed facility to the community;
- The necessity of the facility of a waterfront location, in the case of a functionally dependent facility;
- The availability of alternative locations which are not subject to flooding or erosion damage for the proposed use;
- The compatibility of the proposed use with existing and anticipated development;
- The relationship of the proposed use to the comprehensive plan and floodplain management program for that area;
- The safety of access to the property in times of flood for ordinary and emergency vehicles;
- The expected heights, velocity, duration, rate of rise and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site; and
- The costs of providing governmental services during and after flood conditions including maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems, and streets and bridges.

Granting of the variances will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create a nuisance, cause fraud on or victimization of the public, or conflict with existing laws or ordinances. In advance of a storm event the boathouse would be cleared of occupancy. A

community boathouse cannot be located in other than a waterfront location as it is a functionally dependent use supported by its proximity to open water. In addition, a marine classroom such as this is functionally dependent on this close proximity to the ocean in that it requires direct feeds to and from ocean water.

FLOOD PLAIN VARIANCE FINDINGS (current changes in BOLD)
The Commission hereby grants the requested variances with the following notations:

1. The boathouse is a functionally dependent use in which the use of the building is absolutely dependent on its close proximity to the water, and therefore is excluded from the elevation requirement. Acceptable methods of wet floodproofing have been incorporated into the design. **In addition, the proposed aquaculture center is also a functionally-dependent use, and adequate methods of wet floodproofing and equipment operations and maintenance have been incorporated into the design.**
2. As the lowest floor of the proposed boathouse is below the base flood elevation, the Commission in granting the requested variances notifies the applicant of the potential of high flood insurance premiums and increased risk to life and property.
3. The applicant shall record on the City land records an original copy of this Flood Plain Variance report (to be provided by the City Plan Department) and shall furnish written evidence to the City Plan Department that the document has been so recorded (showing volume and page number), prior to City Plan signoff on detailed plans for issuance of building permit.
4. A separate application for a State Building Code modification may be required.

Staff finds the additional detail provided by the applicant regarding "Considerations for Granting of FDP Variances" (attached) is satisfactory for explaining the new use as the University of New Haven's Aquaculture Center in compliance with the stated regulations. The original Flood Plain Variance Findings (above) are modified to include and incorporate the use as an aquaculture center in accordance with the submitted plans.

ACTION
The City Plan Commission approves the submitted application.

ADOPTED: February 21, 2018
Edward Mattison
Chair

ATTEST: MPL
Michael Piscitelli, AICP
Deputy Economic Development Administrator

Review of the Flood Plain Variance, based upon the application and materials submitted by the applicant, was conducted at hearing by the City Plan Commission of the City of New Haven in accordance with the Connecticut General Statutes (Section 7-148(c)(7) The Building Official hereby receives the above written findings and any conditions thereof are made conditions of the building permit.

ADOPTED: February 21, 2018

ATTEST:
Jim Turcio
Building Official