

NEW HAVEN CITY PLAN COMMISSION INLAND WETLANDS REVIEW

RE: 49 AKA 50, 60, 200 BROOKSIDE AVENUE & 205 WILMOT ROAD (MBPs 364/1193/00200, 364/1192/00100, 364/1190/00300, 364/1190/00301), Inland Wetlands and Watercourses Application for Alteration and Filling of Wetlands to construct 433 residential housing units, Infrastructure Improvements and related uses in PDU and RM-1 Zones (Property Owner: Housing Authority of New Haven; Applicant: Michaels Development I, LP).

REPORT: 1433-01

INLAND WETLANDS FINDING: Approve with Conditions

CONDITIONS OF APPROVAL

1. The applicant shall record on the City land records an original copy of this Inland Wetlands Report (to be provided by the City Plan Department) and shall furnish a copy of the recorded document (showing volume and page number) to the City Plan Department, within 60 days of publication of Board of Aldermen approval of the Planned Development designation prior to any activity within the wetlands, watercourses, or wetlands setback area.
2. Detailed Plan submission shall include:
 - Engineered plans of the arch span bridge over Belden Brook.
 - Operations Plan for clearing the watercourses of silt and debris in the vicinity of Solomon Crossing and in Wilmot (Farm) Brook.
 - Revised Stormwater Management Plan.
3. Applicant shall provide to the City Plan Department, with a copy to the City Engineer, an Annual Report on the Stormwater Facility Maintenance Plan for the overall project on the anniversary of this approval (November 18, 2009).

Submission: Inland Wetlands Application 08/20/09, Letter from Ethan Stewart, Soil Scientist dated 10/25/05, Stormwater Management Plan by DTC issued 08/28/09: existing hydrology, proposed hydrology, water quality volume calculations, post development site description, stormwater quality Design and Analysis, Hydraulic sizing of structures, SESC measures, post construction stormwater facility operation and maintenance.

Plan Set by DTC 08/28/09: Existing Conditions Plan, Site Layout Plan, Site Grading and Drainage Plan, Site Utility Plan, Soil Erosion and Sediment Control Phasing, Soil Erosion and Sediment Control Plan, SESC Narrative, SESC Details, Landscape Plan, Stormwater Pond Landscape Treatment, GNHWPCA and CNH Standard details, Construction Details, Revised Plan received 10/07/09 with Grading, Drainage, Erosion Control Plan for Wetlands area north of Solomon Crossing, Roadway Profile, Channel Improvement Plan and Details, Proposed Bridge Elevation.

Revised Wetlands Letter from Ethan Stewart, DTC 10/07/09, Inland Wetlands Impact Assessment 10/09 by DTC, Hydraulic Analysis Report Solomon Crossing over Belden Brook 10/09.

Application fee of \$240.00.

Other materials considered: PDD Application and General Plans including Architectural Plans received 08/28/09

Previous City Actions: 6 PDU Application and General Plan Approvals with conditions (CPC 1420-06, 09/17/08; CPC 1421-21, 1421-22, 1421-23, 1421-24, 1421-25, 10/15/08); Cooperation Agreement (CPC 1426-14, 03/18/09); PDU #118 (WR #5) Amendment (CPC 1426-31, 03/18/09); PDU #s 111A, 112, 113, 114, 115, 118: Amendments (see CPC 1428-22, 23, 24, 25, 26, 27 05/20/09), Inland Wetlands, Detailed Plan Review and Site Plan Review for Phase I (CPC 1428-08, 06/17/09), Schedule Hearing on Inland Wetland & PDD Application (CPC 1432-07, 09/16/09).

Other Permits required: DEP Permit for Brookside Bridge over Belden Brook

PROJECT SUMMARY:

Project: West Rock Development of Brookside and Rockview Residential Communities

Address: 49 AKA 50, 60, 200 Brookside Avenue, 205 Wilmot Road

MBPs: 49 (364/1190/00301), 60 (364/1190/00301), (200 Brookside (364/1193/00200), 205 Wilmot (364/1192/00100))

Site Size: +/- 97.9 acres
Inland Wetlands area: +/- 26.3 acres
Zone: RM-1, PDUs 111a, 112, 113, 114, 11, 118 (portion), Flood Zone
Project Cost: \$175,000,000
Unit Count: 433
Owner: Housing Authority of New Haven **Phone:** 203-498-8800
Applicant: Peter Wood, Michaels Development I, LP **Phone:** 203-870-9195
Agent: same
Engineers: Andrew Bevilacqua, DTC **Phone:** 203-239-4200
Architect: Kenneth Boroson Architects **Phone:** 203-624-0662
City Lead: City Plan Dept. **Phone:** 203-946-6379

BACKGROUND

In cooperation with the Housing Authority of New Haven, Michaels Development Company 1, LP proposes to construct a new residential development on land owned by the Housing Authority in the northwestern corner of the City, adjacent to the Town of Hamden. In order to redevelop the site, Michaels proposes designation of a Planned Development District (PDD) of approximately 100 acres, the developable portion of a 212 acre tract currently owned and maintained by the Housing Authority. The land was formerly the site of the Brookside (296 units) and Rockview (195 units) Housing Projects owned and managed by the Housing Authority. Once the Housing Authority determined it would redevelop the area, occupants were relocated and demolition of these units and related utilities is complete.

In order to initiate work on the demolition and subsequent infrastructure improvements, Michaels has previously received approvals from the Board of Zoning Appeals and the City Plan Commission for Planned Development Unit designation of 6 areas in the Brookside portion of the site known as Phase I of the project. Once a PDD is approved by the Board of Aldermen for the overall site, the PDUs will be "sunsetting".

The project will be phased dependent primarily on the availability of development financing from both private and public sources. Phase I will consist of infrastructure improvements including new roadways and utilities, partly funded by the City of New Haven and the Housing Authority. It will also include repair or replacement of an existing bridge on Brookside Avenue as required by the Commission in CPC Report 1428-08. The roadway system will be enhanced by a vehicular bridge connecting the eastern and western portions of the site. The overall project will consist of 433 residential units, including rental, elderly and homeownership units, along with a maintenance building in Phase I and a renovated and expanded community center in Phase IV. (See accompanying CPC Report 1433-02 for the review of Planned Development District Application and General Plans).

INLAND WETLANDS REVIEW

It should be noted that for Phase I of this project, approved in the form of six individual Planned Development Units, the Commission considered the impact on the eastern wetlands as a part of the Detailed Plan Review (CPC1428-08) excerpt which follows:

"The Phase I Brookside site has two wetland areas adjacent to it, one to its east and one to its west. ...the stormwater management plan has been designed to take advantage of the wetlands for eventual receipt of filtered stormwater by using large bioswales, one on either side of Phase I. Wetlands activity will include removal of an existing stormwater outfall and introduction of a new outfall downstream of the eastern stormwater quality basin.

Several of the existing buildings being demolished are located within 50' of the flagged wetlands. All new buildings and roadways will be located outside of the buffer area. Work within the buffer area will be removal of existing intrusions, removal of debris, installation of Soil Erosion and Sediment Control measures such as silt fences, and installation of stormwater quality basins.

Following completion of the project, ongoing maintenance of the outfalls into the wetlands buffer and wetlands as well as maintenance of a continuous flow in Wintergreen Brook in the vicinity of the Brookside Avenue Bridge will be required elements of a stormwater maintenance plan.

Determination of Wetlands Classification: The Commission has reviewed the options for classification, as stated in Section 6 of the Regulations and has determined that the wetlands application qualifies as a Class B Application. The activity proposed will not have substantial adverse effect on the regulated area or any other part of the inland wetlands and watercourses system. The current Inland Wetlands application is deemed complete and formally received by the Commission at the hearing on May 20, 2009.

Inland Wetlands Planning Considerations: The Commission has considered all criteria and believes that execution of the project will not impact the regulated area. The improvements will cure some existing erosion problems and will enhance public access and enjoyment of the wetlands by adding bicycle paths and pedestrian walks on the perimeter. There will be no loss of wetlands as a result of this project. The applicant and/or its successors shall be responsible for assuring that the project is constructed in a manner that is in keeping with "Best Management Practices" and that Soil Erosion and Sediment Control measures are implemented during the construction period to alleviate any short term impacts.

Finding: The City Plan Commission, acting as the Inland Wetlands Commission, finds that there is no preferable location of the proposed activity on the site, nor are there further technical improvements required in the plans. The proposed construction will result in little if any reduction of the natural capacity of the watercourse to support desirable biological life, prevent flooding, supply water, and facilitate drainage. All of the required findings have been satisfied. The Commission approves the Plans for activity within the wetlands and buffer area as well as a Stormwater Management Plan which includes maintenance of stormwater outfalls and Wintergreen Brook in the vicinity of the Brookside Avenue crossing."

Determination of Classification for Planned Development District and Remaining Phases:

The Commission has reviewed the options for classification, as stated in Section 6 of the City's Inland Wetland and Watercourses Regulations and has determined that the wetlands application qualifies as a Class C Application, as the proposed filling activity and other activity within Belden Brook may have an effect on the regulated area and other downstream areas of the inland wetlands and watercourses system. The current Inland Wetlands application was received at the Commission meeting of September 16, 2009 at which time it was scheduled for a public hearing on October 21, 2009. Additional materials requested to be submitted have since been received on October 8, 2009.

Overview: The existing West Rock property contains considerable wetlands resources around the periphery and through the middle of the development site. The sites of the original Brookside and Rockview projects are separated by a ravine with Belden Brook flowing through it. Wetlands are composed of three separate wetland corridors, each of which is associated with a watercourse. The first wetland area forms the easterly border of the development and is associated with Wilmot (Farm) Brook. The second area runs through the center of the development site between the Brookside and Rockview neighborhoods and is associated with Belden Brook. The third area forms the westerly boundary of the site and is associated with Wintergreen Brook. The proposed development is designed to fit primarily into the area outside of the 50' setback from wetlands, but in certain areas there are intrusions into the setback. There is a new bridge and roadway (Solomon's Crossing) proposed to connect the Brookside and Rockview sections, spanning Belden Brook, which impacts some wetlands.

As stated in the application, the proposed redevelopment activities will result in impacts to Inland Wetlands as follows:

- **Direct impact of approximately 0.20 acres of Inland Wetlands due to the construction of a new bridge and associated embankment over Belden Brook to link the Rockview and Brookside neighborhoods;**
- **Direct impact of 0.01 acres of Inland Wetlands associated with a new stormwater outfall within the Phase I project area (approved as part of PDU approval).**
- **Impact of 1.84 acres of upland review area (area within 50' of wetland boundary) associated with the proposed bridge crossing and construction of stormwater quantity/quality basins at several locations throughout the development.**

Wetlands Delineation: Diversified Technology Consultants, Inc. conducted a limited site inspection and map review of the reference property to evaluate the wetland and watercourse delineation completed by soil scientist David Lord of Soil Resource Consultants, Meriden, CT. who identified and demarcated the wetland boundary on the eastern (Brookside) portion of the property in 2004. The system is primarily broadleaved deciduous woodland wetland. The system encompasses the western portion of the property investigated. The wetland soil is primarily somewhat poorly drained silt loam which formed from alluvial deposits. These field delineations were verified by DTC on October 21, 2005.

Mr. Lord also delineated in 2004 the wetland boundary of the western portion of the site (on former Rockview development). These wetlands are primarily somewhat poorly drained silt loams which formed from alluvial deposits; they were reviewed by DTC from the State of Connecticut Soil Survey and topographic map. Three types of wetland soils were identified from the Soils Survey (not by field identification) within the wetland boundaries as follows:

Wilbraham and Menlo soils: extremely stony; a poorly drained soil originating from glacial till.

Bash Silt Loam and Saco Silt Loam: somewhat poorly drained soils originating from alluvial deposits.

The wetlands flaggings are shown on the submitted plans.

Stormwater Management System: The Stormwater Management System for the Planned Development District adheres essentially to the same concept as Phase I, with collection of stormwater from inlets to a stormwater trunk and discharge to water quality basins with eventual overflow to the wetlands.

It should be noted that a future storm sewer network and detention basin is proposed for future development of Ribicoff Apartments, an elderly complex not part of this Planned Development. Drainage computations were included in the current stormwater management plan for this future development.

Post construction Stormwater Facility Operation and Maintenance: Once the project is complete, the Stormwater Management Plan includes a Plan for maintaining the stormwater improvements. These measures include the following:

- Vacuum sweeping of impervious surfaces annually in April.
- Maintenance of outfalls by inspecting for proper function, clean out of debris, leaves and sediment on a monthly basis.
- Roof runoff management by clearing of leaves, debris for gutters, inspect and repair of system bi--annually and as needed.
- Inspect for proper function of sediment forebays, clearing of debris, leaves and sediment.
- Vegetation Control by mowing inside basins and over berms annually after seasonal dieoff
- Litter Control by weekly inspection and pickup of lawns and curbside areas.

Implementation of this Plan is required and will be performed by the developer of its successor. Therefore the Commission requires annual reporting on the Post construction Stormwater Facility Operation and Maintenance Plan.

PUBLIC HEARING

Joy Ford, Planner, introduced the Inland Wetlands components of the project, noting the Commission should review and approve the wetlands application prior to any zoning approval. She noted the Commission had classified the application as a Class C application requiring a public hearing with particular findings to be made.

Attorney Gregory Pepe, representing the applicant, said there would be minimal intrusion into significant wetlands on a site roughly 212 acres, where less than 100 acres were to be developed with less than 2 acres of disturbance.

Andy Bevilacqua, Diversified Technology Consultants, delivered a PowerPoint presentation. He noted the direct impact to the approximate 26 acres of wetlands within the 100 acre development was .2 acres and the impact to the inland wetland setback was 1.8 acres. The design philosophy followed the standards of Phase I using stormwater basins adjacent to the wetlands to provide improved water quality. The basins were separated from the wetlands by 2' berms and eventually they would appear as wetlands, planted with wetlands vegetation. Stormwater from the site would collect in sediment forebays where sediment would fall out, with micropools for longer storage. The system was designed to accommodate a 100 year storm. The prior development had no stormwater management whatsoever, so the proposed measures would substantially improve the stormwater management situation and stormwater quality. There was one outfall into wetlands.

The largest impact was the new bridge connecting the two project parts. It included retaining walls and a sediment basin on the Rockview side with access to it. Mr. Bevilacqua reviewed the alternate locations for the crossing, options A & B involving steeper roads and more fill and option C, the preferred alternative which provided for easier access and less fill. He then reviewed the options for the type of crossing which including Option A using twin 12x9 box culverts, Option H, a 50' span bridge with abutments, and the preferred Option F, a 42' arc bridge with some minor channel realignment, retaining walls and clear areas for animal passage. The bridge would be a town road with sidewalk. There was a considerable reduction in wetland impact with the retaining walls.

Mitigation measures included significant wetland plantings to filter the stormwater, essentially creating additional wetlands in the process.

To address previous comments by the City Engineer, the large deep basins on the Rockview side had been diminished in depth and height. The bridge alignment had been coordinated with an improved stream channel so it wouldn't trap debris. A management plan had been developed for maintaining the stormwater management basins to be executed by Michaels Development. Chair Mattison asked how maintenance would be monitored. Peter Wood of Michaels Development said Michaels would execute an operating agreement between itself and the Housing Authority (owner of the property) to require a maintenance plan for the stormwater management system within the development including catchbasins and detention basins.

Richard Miller, City Engineer, said the bridge and retaining wall details would be subject to review by the Engineering Department at the next stage, Detailed Plan Review. He would be looking for a stone fascia which would appear on both the bridge and walls. He said the hydraulics conformed to the City's standards.

Jacqueline Schulz, 62 Thorpe Drive in Hamden, said her property abutted Farm Brook which had been subject to extreme flooding, and asked how far up the Brook would be cleared and how it would be maintained in the long term. Mr. Bevilacqua said they had identified areas where debris was lodged and needed cleaning. Mr. Pepe noted brook maintenance would not be a long term responsibility of the developer. Mr. Miller said there were no controls on the debris placed by people upstream, but there now would be controls on the human contribution within the Michaels development. Clearing of the brook upstream of the development would help prevent flooding in the future.

Kristine Burton, 36 Thorpe Drive, asked whether the new project would increase flooding downstream. Mr. Miller noted the project stormwater improvements would improve the flow as seen today. Mr. Bevilacqua said their intent was to follow the primary area where the flow was carried and identify areas where debris should be removed.

As there were no speakers, Chair Mattison declared the hearing closed, and upon motion by Roland Lemar, the Commission voted unanimously (4-0) to table the item until November 18, 2009.

Application Evaluation Criteria:

In reviewing a Class B or C Application, the Commission must consider the following environmental impact criteria in its evaluation, as stated in Sections 7.2 and 7.3 of the City's Inland Wetlands and Watercourses Regulations:

- The ability of the regulated area to continue to absorb, store or purify water or to prevent flooding.

- Increased erosion problems resulting from changes in grades, ground cover, or drainage features.
- The extent of additional siltation or leaching and its effect on water quality and aquatic life.
- Changes in the volume, temperature, or course of a waterway and their resulting effects on plant, animal and aquatic life.
- Natural, historic, or economic features that might be destroyed, rendered inaccessible or otherwise affected by the proposed activity.
- Changes in suitability of the area for recreational and aesthetic enjoyment.
- Existing encroachment lines, flood plain and stream belt zoning and requirements for dam construction.
- Any change in the water effecting aquatic organisms or other wildlife, water supply and quality, or recreational and aesthetic enjoyment.
- The existing and desired quality and use of the water in and near the affected area.
- Reports from other City agencies and commissions not limited to the Environmental Advisory Council, Building Official, and City Engineer.
- The importance of the regulated area as a potential surface or ground water supply, a recharge area or purifier or surface or ground waters, a part of the natural drainage system for the watershed, a natural wildlife feeding or breeding area, its existing and potential use for recreational purposes, existence of rare or unusual concentrations of botanical species, availability of other open spaces in the surrounding area, or its value for flood control.

The Commission must consider the following **additional** criteria:

- Any evidence and testimony presented at a public hearing, should one be held.
- Alternatives which might enhance environmental quality or have a less detrimental effect, without increasing basic project costs.
- Short versus long-term impacts.
- Potential loss of irrevocable resources or property impairment.
- Suitability of action for area.
- Mitigation measures which may be imposed as conditions.

INLAND WETLANDS PLANNING CONSIDERATIONS

The applicant chose to situate this phased project in the same location as two previous developments, taking advantage of relatively flat sites which increase slightly in elevation from south to north. The relatively shallow watercourses, Wintergreen Brook and Belden Brook, flow from north to south, surrounded on both sides with extensive inland wetlands relating to the watercourses. In order to provide a more cohesive development rather than two separate developments, Michaels chose to link the two areas together by a bridge, as encouraged by City staff. In contemplating the design of such link, the design team desired to minimize wetland impacts, minimize the amount of fill needed to construct a bridge, and to maximize the distance downstream from the Hamden townline to limit the potential impact of the proposed crossing on flooding in the neighboring town.

Choosing a Feasible and Prudent Alternative: Michaels researched other alternatives for crossing points, ruling out two other crossing locations. They looked at connecting the two areas of the site in two other locations to the north of the preferred option at Solomon Crossing. Each resulted in .10 to .20 acres of wetlands filling, with 13,000 to 16,000 cubic yards of fill.. The two northern options resulted in a higher percentage of roadway slope and created a link in a location which was not effective or convenient.

The Solomon Crossing option is the most reasonable and prudent alternative as it requires over 3,300 CY (20%) less soil material be handled during construction, lessening the risk for soil erosion occurring and less disturbance to the Rockview portion of the site. Placing the crossing further downstream puts the risk for flooding upstream at a minimum, both in New Haven and in Hamden to its north. Slopes are flatter for the proposed roadway and sidewalks between the two neighborhoods, particularly for those with disabilities.

Rather than the twin box culverts originally proposed in this crossing, the precast concrete arch type bridge spanning the wetlands will minimize the need for channel relocation and wetlands impacts, allowing for more natural channel conditions, and the potential for maintaining wildlife passage in the channel.

A no-build alternative was considered not reasonable considering one of the main objectives of the proposed development was to provide a cohesive residential neighborhood with smooth circulation and connections throughout.

Mitigation Measures for wetlands impacts: To mitigate the wetlands impacts, several measures have been incorporated into the design to reduce wetlands impacts, help create new wetlands areas and improvement the overall water quality leaving the development. These are as follows:

- Construction of extensive retaining walls on either side of the proposed roadway section (Solomon Crossing) to limit the overall impact to wetland and buffer areas and reduce the quantity of soil materials required. The use of retaining walls reduces overall wetland impact from over 0.6 acres to the currently proposed 0.2 acres.
- Construction of stormwater detention basins to decrease proposed peak site runoff to levels similar to an undeveloped site. Since these sites have historically been developed in residential neighborhoods without runoff controls, the net peak site runoff due to this new development is significantly reduced from historic levels. This reduction results in lower peak storm related flows in the surrounding wetlands and watercourses, and a corresponding reduction in storm related erosion and flooding.
- Construction of stormwater quality basins to provide improved stormwater quality leaving the developed site. These basins consist of sediment forebays for removal of gross particles for the stormwater flow, as well as a series of vegetated micropools, which further remove sediments as well as nutrients. The resulting stormwater leaving the site is expected to carry a significantly reduced sediment and nutrient load when compared with the prior development. These improvements will have a positive effect on water quality in the surrounding wetlands and watercourses.
- Planting of the bottom of the proposed detention/water quality basins with wetland seed mix in an effort to promote creation of approximately .69 acres of new wetland areas on the site will help in offsetting the effects of the proposed wetland filling activities, and will serve to compensate for some of the proposed loss of functional capabilities of these lost wetland areas.

INLAND WETLAND FINDING:

Required Findings for a Class C Application:

For a Class C Application, it must make written findings which shall attest the following:

1. That no feasible and prudent alternative exists;
2. That no preferable location on the subject parcel or elsewhere can reasonably be required.
3. That no further modification of the proposed activity can reasonably be required taking into account the resources of the applicant, to further reduce any adverse environmental impacts.
4. That the public benefit of the proposed activity justifies any possible degradation of the regulated area.

If the Commission has made a finding that the proposed activity may have a significant impact on wetlands or watercourses and has held a public hearing pursuant to this finding, a permit shall not be issued unless the Commission finds on the basis of the record that a feasible and prudent alternative does not exist.

The City Plan Commission, acting as the Inland Wetlands Commission, has carefully considered the required application evaluation criteria and alternatives proposed by the applicant, and finds that no feasible and prudent alternative exists, that no preferable location on the subject parcel or elsewhere can reasonably be required, that no further modification of the proposed activity can reasonably be required taking into account the resources of the applicant to further reduce any adverse environmental impacts, and that the public benefit of the proposed activity justifies any possible degradation of the regulated area.

The Commission therefore approves the Inland Wetlands Application with the conditions noted on page 1.

ADOPTED: November 18, 2009
Edward Mattison
Chair

ATTEST: 
Karyn M. Gilvarg, AIA
Executive Director