

## NEW HAVEN CITY PLAN COMMISSION INLAND WETLANDS REVIEW

**RE:** **BROOKSIDE AVENUE at Wintergreen Brook**, Inland Wetlands Review and Site Plan Review for Construction of new Brookside Avenue Bridge (Owner/Applicant: City Engineer).

**REPORT:** 1465-02

**INLAND WETLAND FINDING:** Approval with Conditions

### CONDITIONS of APPROVAL

1. A Maintenance and Protection of Traffic Plan shall be submitted to the City's Department of Transportation, Traffic and Parking and approved, prior to initiation of construction.
2. An individual responsible for monitoring soil erosion and sediment control measures on a daily basis shall be named and the name provided to the City Plan Department prior to initiation of site work.

**Submission:** Development Permit application including Inland Wetland application, supplemental SESC calculations and narrative dated May 4, 2012, Plans by Anchor Engineering dated 5/4/12: Typical Sections and details, Erosion Control Plan, Roadway Plan and Profile, General Bridge Plan, Construction Staging Plan (2 sheets). Wetlands Delineation by John Ianni, Highland Soils LLC 01/23/12. Inland Wetland Reporting Form. Fee waived due to City Dept. applicant.

### BACKGROUND

**Relevant City Plan Commission activity:** Authorization for Memorandum of Agreement with Greater New Haven Water Pollution Control Authority and Housing Authority to provide Funds for Initial Effort towards Costs of Replacement (City Engineer, CPC 1460-08, 01/18/12). Inland Wetlands Review for Relocation of Sanitary Sewer Line adj to bridge (1464-02, 04/18/12)

The City Engineer has filed an Inland Wetlands application for construction of a replacement bridge on Brookside Avenue over Wintergreen Brook in northwest New Haven. Brookside Avenue is the primary public roadway access to the Housing Authority of New Haven (HANH) West Rock Brookside housing development currently under construction. A recent evaluation of the existing bridge indicated an overall rating of poor and recommended that the structure be replaced. Originally the bridge replacement was to be the responsibility of HANH as an adjunct project to its new housing development, but recently the City took back the project as its own responsibility. As Wintergreen Brook is defined as a watercourse and as there are wetlands soils along the watercourse where the bridge replacement will occur, an Inland Wetlands Review by the City Plan Commission is required.

**Proposed Activity:** The phased project involves the removal of existing twin 7' x 7' culverts, bridge deck, roadway and sidewalk pavement, base materials, and wing walls and the installation of new twin 6' x 12' precast concrete culverts with related wing and end walls, storm drainage installation, utility relocations and sidewalk and road construction. Cofferdams will be installed to allow the culvert and wing wall work to be completed in the dry. New Storm drainage outlets will be completed and minor grading and reshaping of the stream embankments to incorporate the widened bridge structure.

**Sequence of Construction:** The contractor will install erosion control measures prior to clearing and grubbing the work area. As this will be a phased project in order to allow for a lane of traffic throughout the construction process, construction signs will be installed and the Stage I vehicular and pedestrian traffic patterns plan will be implemented. Gas and water lines will be cut and

capped and temporary measures put in place. Temporary cofferdams and water diversion for Stage 1 will be installed.

Stage 1 Construction will include: removal of one existing culvert and sanitary sewer (see CPC 1464-05 for sanitary sewer relocation project), installation of portions of new culverts, wing walls and end walls, installation of curbing and new roadway to base course, and construction of relocated water main.

Water flow will be maintained through the existing remaining culvert until Stage 2.

In preparation for Stage 2: construction signs will be installed and vehicular and pedestrian traffic patterns will be implemented. Water flow will be switched over to the new culvert.

Stage 2 Construction will include: Remove remainder of existing culverts and sanitary sewer, install remaining portion of new culverts, wing walls and end walls, install remainder of curbing, roadway base course.

Storm drainage and the relocated gas main will then be installed, bridge rails and guide rails will be installed, sidewalks will be reconstructed, and disturbed areas will be graded, loamed and seeded.

Sediment control barriers will be removed once new vegetation has become fully established and the site is stabilized.

Automotive and pedestrian traffic flow will be maintained at all times on Brookside Avenue. A Maintenance and Protection of Traffic Plan will be submitted to the City's Department of Transportation, Traffic and Parking prior to initiation of construction.

**Soil Erosion and Sediment Control Plan:** A total of 1560 cubic yards of material will be removed, 20 CY will be moved and 1090 CY will be added to the site. Silt fencing will be placed so the banks do not erode into the brook. Some measures from the sewer replacement project may remain in place for this project. Soil stockpiles will be surrounded by silt fencing. Other measures may be installed as the contractor sees fit. The City Engineer as the applicant is responsible for monitoring the soil erosion and sediment control measures to assure there is no soil or runoff entering City catch basins or the storm sewer system. Once a contractor is chosen, an individual responsible for monitoring soil erosion and sediment control measures on a daily basis shall be named and the name provided to the City Plan Department prior to initiation of site work. Such individual is also responsible for assuring there is no dust gravitation off site by controlling dust generated by vehicles and equipment, both during the demolition and construction phases. Soil stockpiles shall be protected from dust gravitation and soil erosion. All SESC measures are required to be designed and constructed in accordance with the latest Standards and Specifications of the *Connecticut Guidelines for Soil Erosion and Sediment Control*.

Should soil erosion problems develop (either by wind or water) following issuance of permits for site work, the contractor is responsible for notifying the City Engineer within twenty-four hours of any such situation with a plan for immediate corrective action.

**Site access:** Access to the work site will be from Brookside Avenue both east and west of the existing culvert bridge.

**Final stabilization:** The slopes of the brook will be constructed with riprap, vegetation and a geotextile fabric to stabilize stream banks.

**Other Permits Required:** An ACOE general permit is pending.

**Flood Zone:** The site is located within Zone A on Flood Insurance Rate Map 09009C0429H, effective December 17, 2010. Zone A is Special Flood Hazard Areas subject to inundation by the 1% Chance Flood where no base flood elevations have been determined.

**Project Timetable:** The project is expected to be initiated following permitting, in the fall of 2012, and will be completed as quickly as possible, by fall 2013.

**Determination of Inland Wetland Classification:** The Commission has reviewed the options for classification, as stated in 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 Wetland application is deemed complete and formally received by the Commission at its meeting of May 16, 2012.

**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:

- 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.

**Required Findings for a Class B Application:**

The Commission must make the following findings for a Class B Application:

1. There is no preferable location on the subject parcel or no other available location could reasonably be required;
2. No further technical improvements in the plan or safeguards for its implementation are possible, or taking into account the resources of the applicant, could reasonably be required; and

3. The activity and its conduct will result in little if any reduction of the natural capacity of the wetlands or watercourses to support desirable biological life, prevent flooding, supply water, facilitate drainage, and provide recreation and open space.

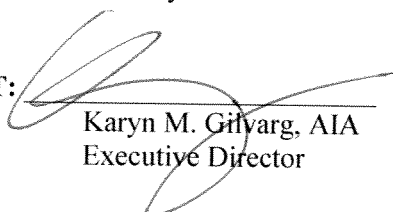
#### **INLAND WETLAND PLANNING CONSIDERATIONS**

Approximately .013 acres of wetlands will be permanently altered by this project, and following completion 0.087 acres of watercourse will be restored. As noted in the wetland delineation, *“Brookside Avenue was originally constructed through the floodplain of the Wintergreen Brook. The road was raised above the floodplain with fill material and a cross culvert was building where the Brook crossed the fraud.....The wetland delineation generally follows the toe of fill material along the embankment of Brookside Avenue. In places additional fill has been placed along the road embankment and these areas are no classified as wetlands....The delineation generally follows the existing well drained Brook channel on the south side of Brookside Avenue... Wintergreen Brook is a perennial watercourse and is considered to be Waters of the United States and is subject to jurisdiction on the Federal level”* Wintergreen Brook has been subject to siltation and loading with debris for a number of years which, combined with the constricted flow through the narrow culvert, has caused flooding of the roadways and surrounding area due to diminution of stormwater storage capacity and ability for stormwater to flow freely. The Commission has considered all criteria and believes that execution of the project with the expanded size of culvert will not adversely impact the regulated area, but will instead improve the flow of water, reduce flooding and restore hydraulic drainage capacity of the channel for water flowing smoothly through the area. Once the project is complete, there should be improved flow and lesser impact on the wetlands areas and buffer areas along the banks.

#### **INLAND WETLAND 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, nor are there mitigation measures to be imposed as conditions. The proposed new construction will increase 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. An Inland Wetland Permit may be issued with Conditions (see page 1).

**ADOPTED:** May 16, 2012  
Edward Mattison  
Chair

**ATTEST:**   
Karyn M. Gilvarg, AIA  
Executive Director