



US Army Corps
Of Engineers
Wilmington District

PUBLIC NOTICE

Issue Date: July 15, 2005
Comment Deadline: August 15, 2005
Corps Action ID #: 200421569

All interested parties are hereby advised that the Wilmington District, Corps of Engineers (Corps) has received an application for work within jurisdictional waters of the United States. Specific plans and location information are described below and shown on the attached plans. This Public Notice and all attached plans are also available on the Wilmington District Web Site at www.saw.usace.army.mil/wetlands

Applicant:

City of Raleigh
Attn: Mr. Carl R. Dawson Jr.
Public Works Department
Post Office Box 590
City of Raleigh, NC 27602-0590

Authority

The Corps will evaluate this application and decide whether to issue, conditionally issue, or deny the proposed work pursuant to the applicable procedures of Section 404 of the Clean Water Act.

Location

The project, Northshore and Brentwood Today Dam and Lake Rehabilitation, is located on the north and south of New Hope Church Road, approximately 0.5 miles west of Capital Boulevard (U.S. Highway 1), in Raleigh, Wake County, North Carolina. Coordinates (in decimal degrees) for the site are 35.8370° North, 78.5875 ° West. The project site contains an unnamed tributary to Marsh Creek, and adjacent wetlands, in the Neuse River Basin (8-Digit Cataloging Unit 03020201).

Existing Site Conditions

Northshore and Brentwood Today are the second and third lakes in a series of four lakes that occurs along a 2-mile stretch of an unnamed tributary to Marsh Creek. Northshore Lake is approximately 7.68 acres in size and Brentwood Today Lake is approximately 4.4 acres in size. Both lakes were originally constructed more than 50 years ago as amenities to the surrounding residential developments. Below the lowest lake in the series, the tributary flows into Marsh Creek, which in turn flows into Crabtree Creek about two miles downstream. The land use in the area immediately adjacent to the lakes is

primarily medium to high-density residential subdivisions. A substantial portion of the watershed that drains into the lakes also consists of commercial and industrial areas located along the Capital Boulevard corridor.

Both Northshore Lake and Brentwood Today Lake have been experiencing significant sediment deposition over the last several decades, due in large part to development activities that have occurred in the drainage basin. The deepest portions of both lakes have an estimated 3-5 feet of sediment buildup, and the upper ends of the lakes have become very shallow. The accumulation of sediment has also led to the development of wetland areas in the headwater regions of both lakes. Additionally, both lakes have received increasing amounts of stormwater runoff as the extent of impervious surface has increased in their watershed. Spillways for both lakes have also significantly eroded and are in poor condition. The City has stated that both dams have been a safety concern for more than 20 years.

Applicant's Stated Purpose

As stated by the applicant, the project has three primary objectives: 1) to address NC Dam Safety concerns for long-term stability and downstream protection; 2) to identify opportunities for water quality enhancement of the watershed supplemental to ongoing City efforts; and 3) to preserve property value for the neighborhoods surrounding the lakes.

Project Description

The project involves the reconstruction of the dam and spillway structures for Northshore and Brentwood Today Lakes, as well as excavation and reshaping activities within both lakebeds. For Northshore Lake, the dam is proposed to be improved to meet dam safety requirements. The primary spillway structure would be enlarged and protrude into the lakebed. A 150-foot weir at elevation 265.9 would be constructed along the front edge of the spillway in order to pass expected high flows. The spillway would be notched for 25 feet down to an elevation of 263 feet, and 2-inch water-quality drawdown holes would be placed at elevation 262. The drawdown holes would pass the normal daily flows and establish the new normal pool of the lake at 262 feet, a drop of 2.5 feet from the existing normal pool of the lake. The work would result in a 1.5-foot increase in the flood storage capacity of the structure.

Approximately 1.5 acres of the lakebed would be dredged to remove accumulated sediment. Most of the dredging would occur in upper portions of the lakebed and around the perimeter of the lake. The dredging would allow the overall surface area of the lake to remain approximately equal to current conditions. Plans also call for the construction of a 0.8-acre sediment pool at the upper end of the lake just south of Comstock Road. The pool would be constructed in a spot that currently contains a house that would have to be removed. The sediment pool would be constructed to allow periodic maintenance dredging to remove sediment build-up. Additionally, a 0.7-acre headwater wetland

would be constructed just downstream of the sediment pool to help filter nutrients and contaminants. Small plunge pool structures are also proposed at the outlets of existing outfalls and channels to provide treatment for sediment and contaminant runoff.

Impacts to Waters of the U.S. associated with the rehabilitation to Northshore Lake include the temporary disturbance of 1.5 acres of lakebed for dredging, and the permanent loss of 0.08 acre of open water for construction of the spillway device. The reduction of the normal pool of the lake and construction of the sediment pool would also lead to the loss of 0.46 acre of riparian forested wetland, 0.03 acre of fringe wetland, 0.51 acre of open water, and 260 linear feet of perennial stream channel that is currently inundated by the lake.

For Brentwood Today Lake the dam would be upgraded with a new spillway. The spillway would have a 100-foot weir at elevation 245.2, with a 20-foot notch cut down to 242 feet. No change in water level is proposed to the lake. Approximately 3 acres of lakebed would be dredged to remove accumulated sediment, and a 0.4-acre sediment pool would be created where a primary tributary enters the lake along the eastern side. A smaller sediment pool is also proposed just downstream of New Hope Church Road, and a plunge pool would be constructed on the western side of the lake. The majority of existing wetlands within the lake would be preserved.

Impacts to Waters of the U.S. associated with the rehabilitation to Brentwood Today Lake include the temporary disturbance of 3 acres of lakebed for dredging, and the permanent loss of 0.04 acre of open water for construction of the spillway. Spillway construction will also impact 50 linear feet of unstable perennial stream channel that has developed in the location of the eroded spillway. The construction of the sediment pool at the tributary draining into the eastern side of the lake would also lead to the loss of 0.07 acre of forested wetlands and 80 linear feet of perennial stream channel.

The impact to jurisdictional areas resulting from the rehabilitation of both lakes totals 4.5 acres of temporary disturbance due to dredging, the loss of 0.63 acre of open waters, 0.53 acre of forested wetlands, 0.03 acre of fringe wetlands, and 390 linear feet of stream channel. Plans included with this notice that show the project details as well as the details for impacted streams and wetlands.

The applicant does not propose specific mitigation for impacts resulting from the project because one of the primary purposes of the project is to improve water quality. Additionally, as part of the project, a 0.7-acre forested wetland is proposed to be created at the upper end of Northshore Lake, and it is expected that more than 0.5 acres of wetlands will develop in portions of the exposed lakebed once the water level is lowered.

Other Required Authorizations

This notice and all applicable application materials are being forwarded to the appropriate State agencies for review. The Corps will generally not make a final permit decision until the North Carolina Division of Water Quality (NCDWQ) issues, denies, or waives

State certification required by Section 401 of the Clean Water Act (PL 92-500). The receipt of the application and this public notice in the NCDWQ Central Office in Raleigh serves as application to the NCDWQ for certification. A waiver will be deemed to occur if the NCDWQ fails to act on this request for certification within sixty days of the date of the receipt of this notice in the NCDWQ Central Office. Additional information regarding the Clean Water Act certification may be reviewed at the NCDWQ Central Office, 401 Oversight and Express Permits Unit, 2321 Crabtree Boulevard, Raleigh, North Carolina 27604-2260. All persons desiring to make comments regarding the application for certification under Section 401 of the Clean Water Act should do so in writing delivered to the North Carolina Division of Water Quality (NCDWQ), 1650 Mail Service Center, Raleigh, North Carolina, 27699-1650 Attention: Ms Cyndi Karoly by August 8, 2005.

Essential Fish Habitat

This notice initiates the Essential Fish Habitat (EFH) consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act. The Corps' initial determination is that the proposed project will not adversely impact EFH or associated fisheries managed by the South Atlantic or Mid Atlantic Fishery Management Councils or the National Marine Fisheries Service.

Cultural Resources

The Corps has consulted the latest published version of the National Register of Historic Places and is not aware that any registered properties, or properties listed as being eligible for inclusion therein are located along the project corridor or will be affected by the proposed work. Presently, unknown archeological, scientific, prehistoric, or historical data may be located within the project area and/or could be affected by the proposed work.

Endangered Species

The Corps has reviewed the project area, examined all information provided by the applicant and consulted the latest North Carolina Natural Heritage Database. Based on available information, the Corps has determined pursuant to the Endangered Species Act of 1973, that the proposed project will have no effect on federally listed endangered or threatened species or their formally designated critical habitat.

Evaluation

The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects

thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, flood plain values (in accordance with Executive Order 11988), land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people. For activities involving the discharge of dredged or fill materials in waters of the United States, the evaluation of the impact of the activity on the public interest will include application of the Environmental Protection Agency's 404(b)(1) guidelines.

Commenting Information

The Corps is soliciting comments from the public; Federal, State and local agencies and officials, including any consolidate State Viewpoint or written position of the Governor; Indian Tribes and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment (EA) and/or an Environmental Impact Statement (EIS) pursuant to the National Environmental Policy Act (NEPA). Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider the application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing. Requests for a public hearing shall be granted, unless the District Engineer determines that the issues raised are insubstantial or there is otherwise no valid interest to be served by a hearing.

Written comments pertinent to the proposed work, as outlined above, will be received by the Corps of Engineers, Wilmington District, until 5pm, August 15, 2005. Comments should be submitted to Todd Tugwell, Raleigh Regulatory Field Office, 6508 Falls of the Neuse Road, Suite 120, Raleigh, NC 27615.

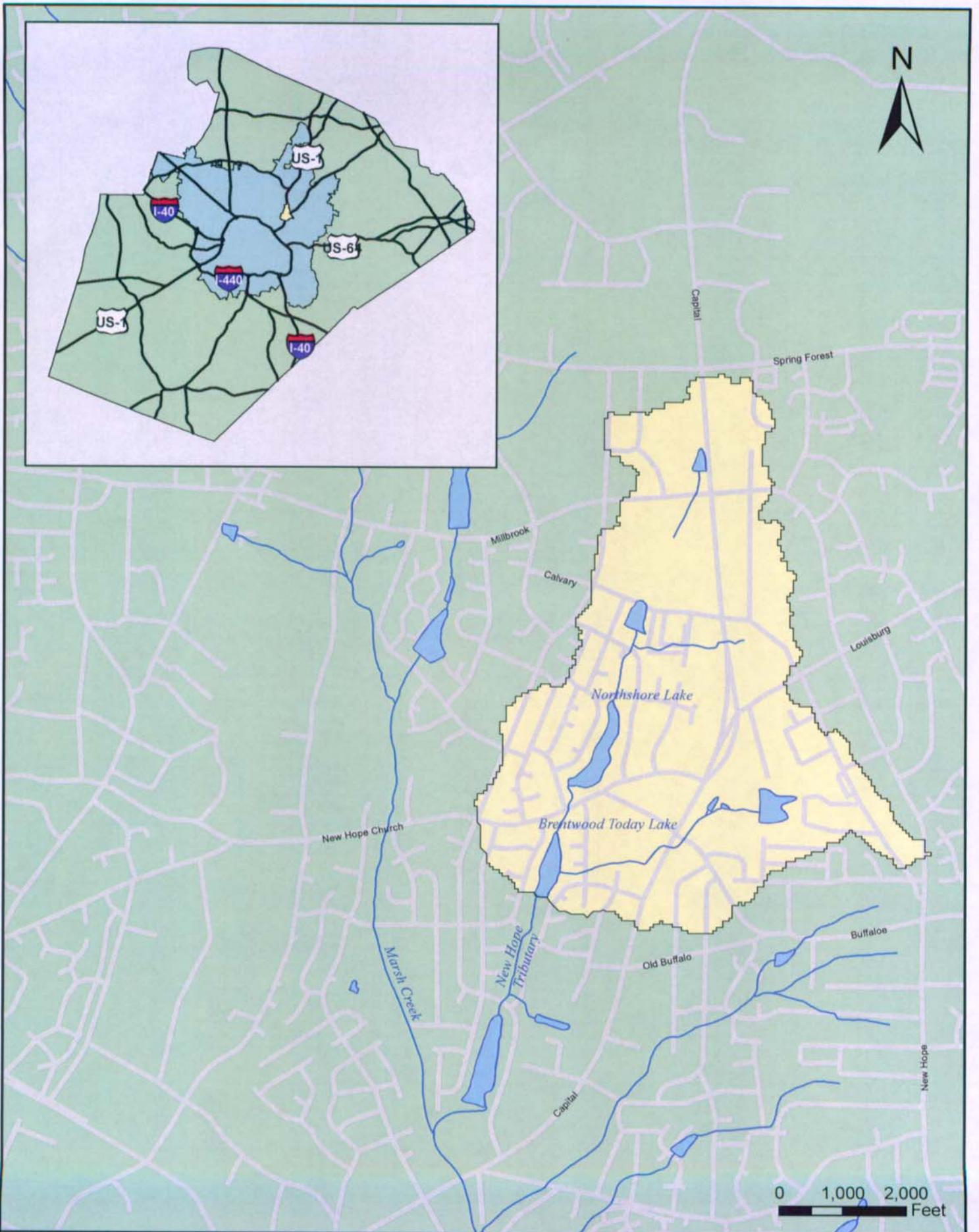


Figure 1
Project Vicinity Map

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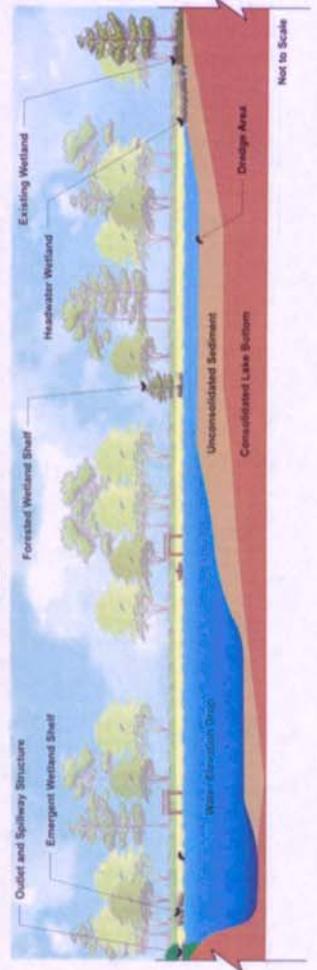
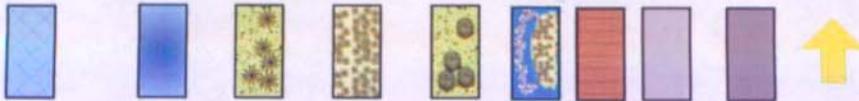


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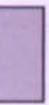


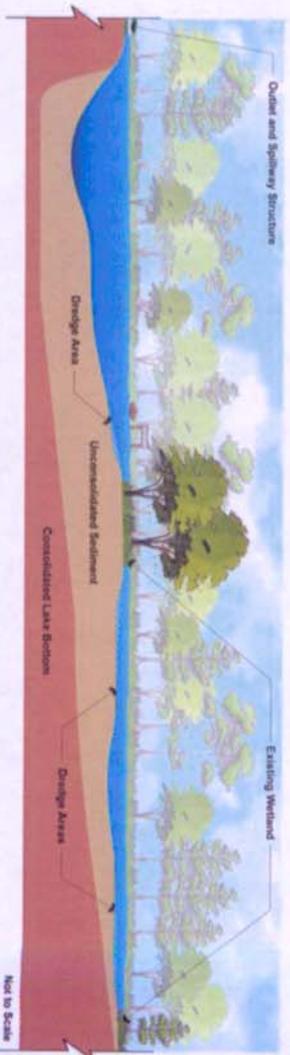
Figure 2: NORTSHORE LAKE RECOMMENDED PLAN

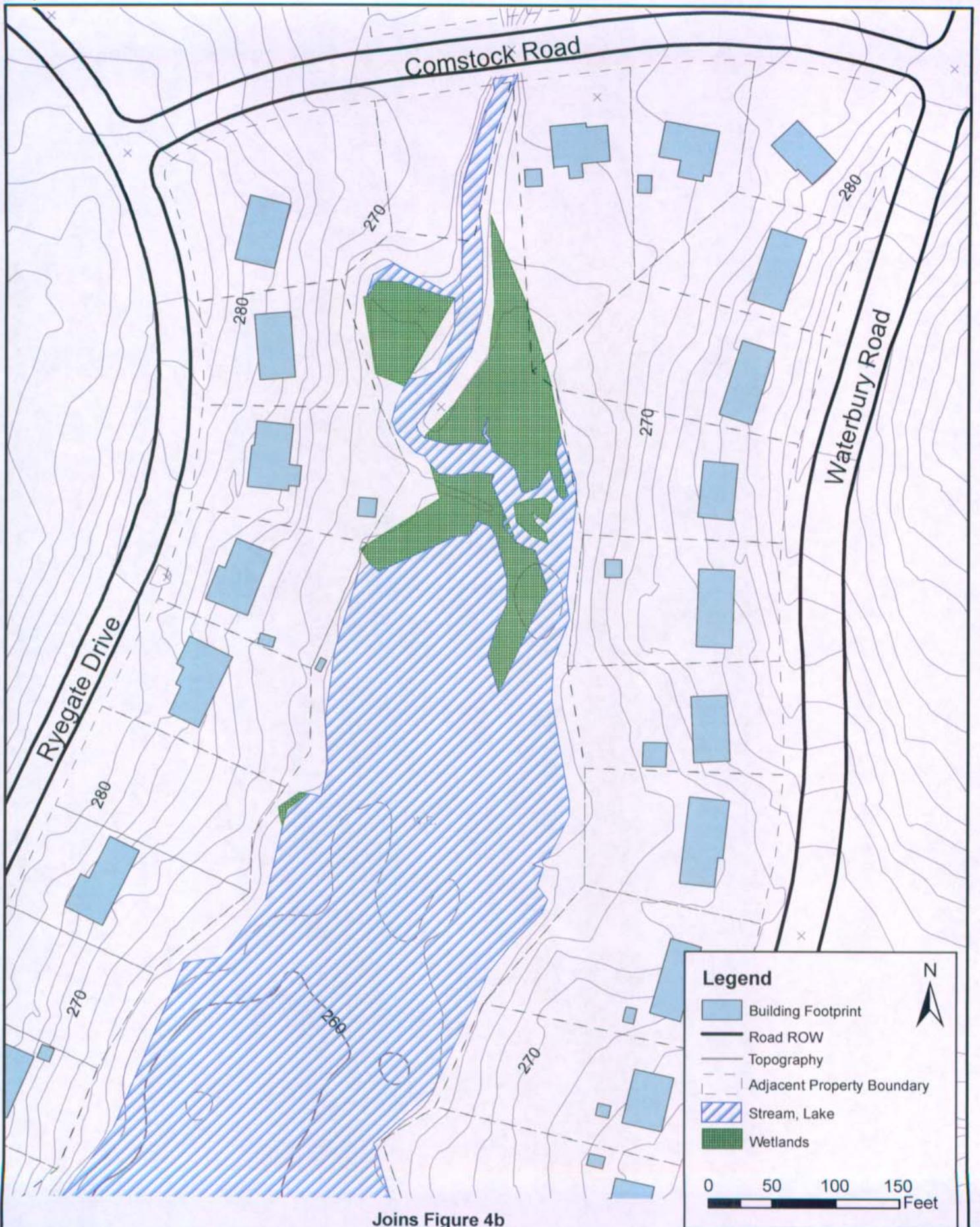
- Drop water elevation 2.5' to 262' contour.
- Dredge 2.5 acres of the shallow portion of the lake to provide 2-4' water depths and to maintain shoreline at existing locations.
- Create maintained sediment pool just downstream of Comstock Road (0.8 ac).
- Create headwater wetlands below sediment pool and above lake to mitigate for wetland losses (0.7 ac).
- Create emergent wetland shelf - ~0.5' of inundation with herbaceous and shrubby vegetation (0.1 ac).
- Create forested wetland shelf - ~1-1.5' of inundation with obligate tree species (<0.1 ac).
- Create plunge pools at point-source pipes.
- Raise and level crest of dam structure to Elevation 268.
- Construct new drop chute spillway structure.
- Replace spillway channel to the waterfall (leave waterfall as an energy dissipater).
- Construction Access



**Figure 3: BRENTWOOD TODAY
LAKE RECOMMENDED PLAN**

-  No change in water elevation. Dredge 3.0 acres of the shallow portion of the lake to provide 2-4' water depths and to maintain shoreline at existing locations.
-  Small areas of wetlands may be impacted in constructing the sediment pool; EEP Fund payment may be utilized for mitigation credit or on-site wetlands may be constructed around the pool.
-  Create maintained sediment pool on eastern tributary (0.4 ac).
-  Create plunge pool at point-source pipe west of the wetland peninsula.
-  Create off-line sediment pool just below New Hope Church Rd (0.1 ac).
-  Construct new drop chute spillway structure.
-  Replace spillway channel with a concrete flume and energy-dissipater at outlet.
-  Wetland preservation
-  Construction Access





**Figure 4a Existing Conditions
Northshore Lake**

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Joins Figure 4a

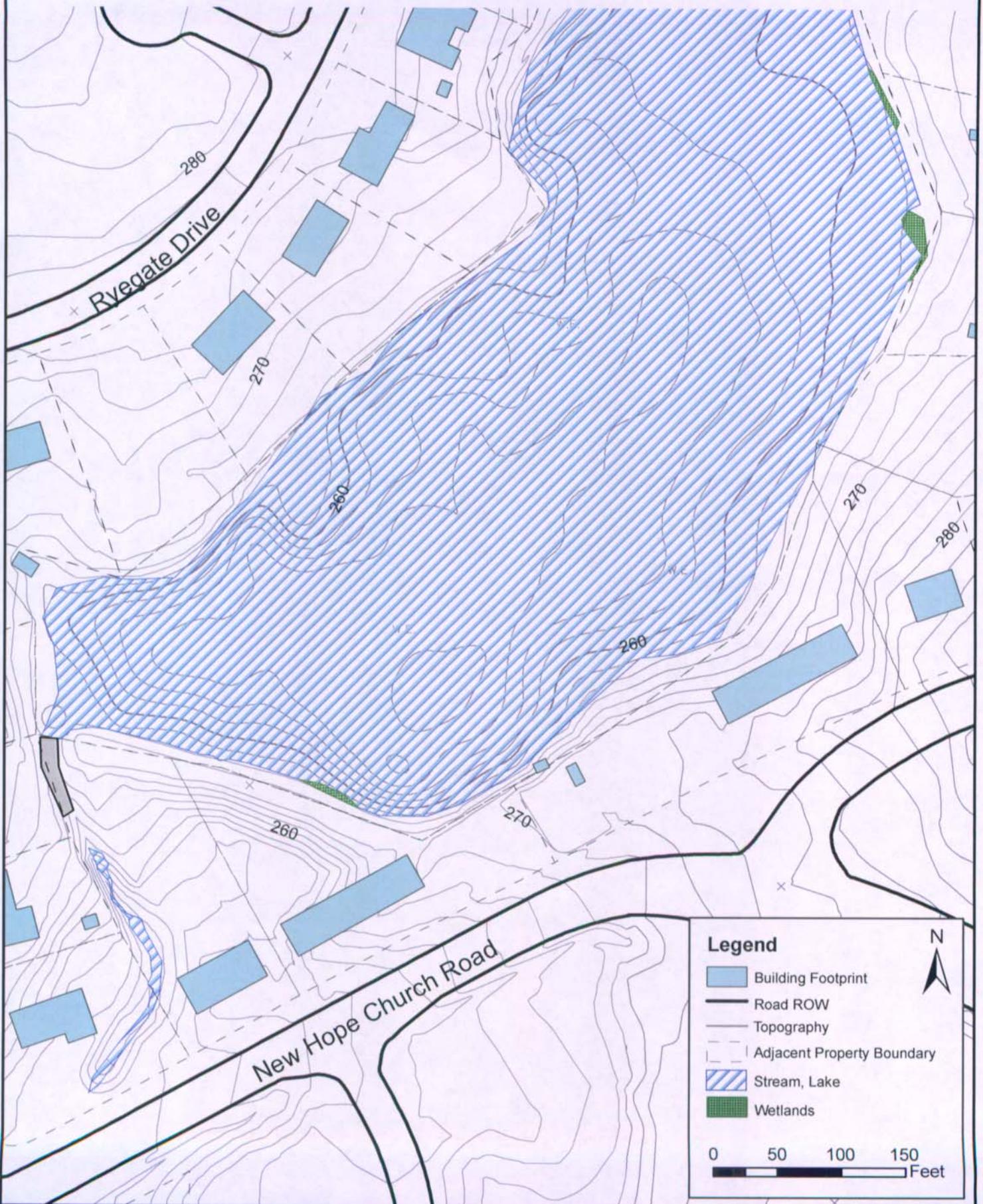


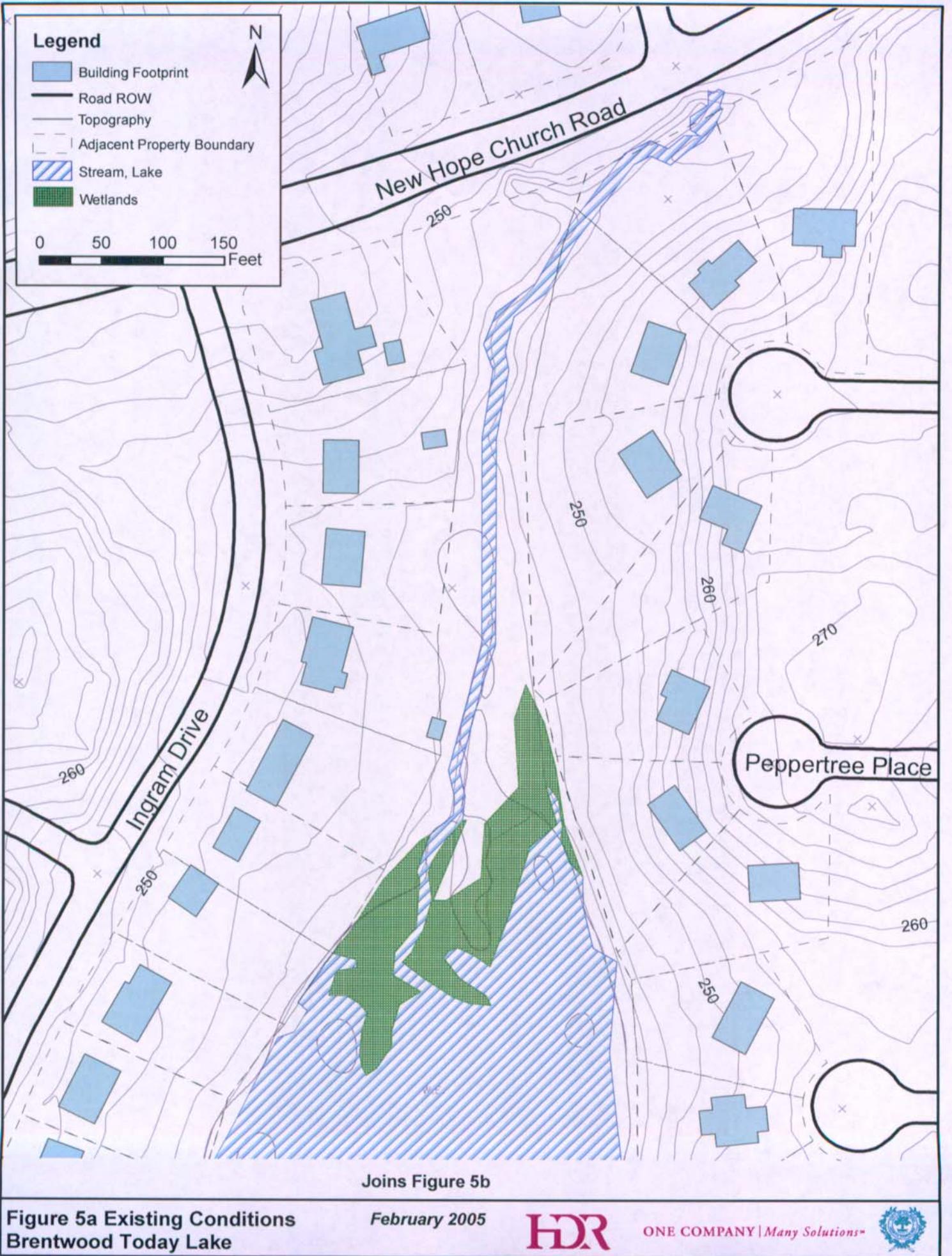
Figure 4b Existing Conditions
Northshore Lake

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Joins Figure 5a

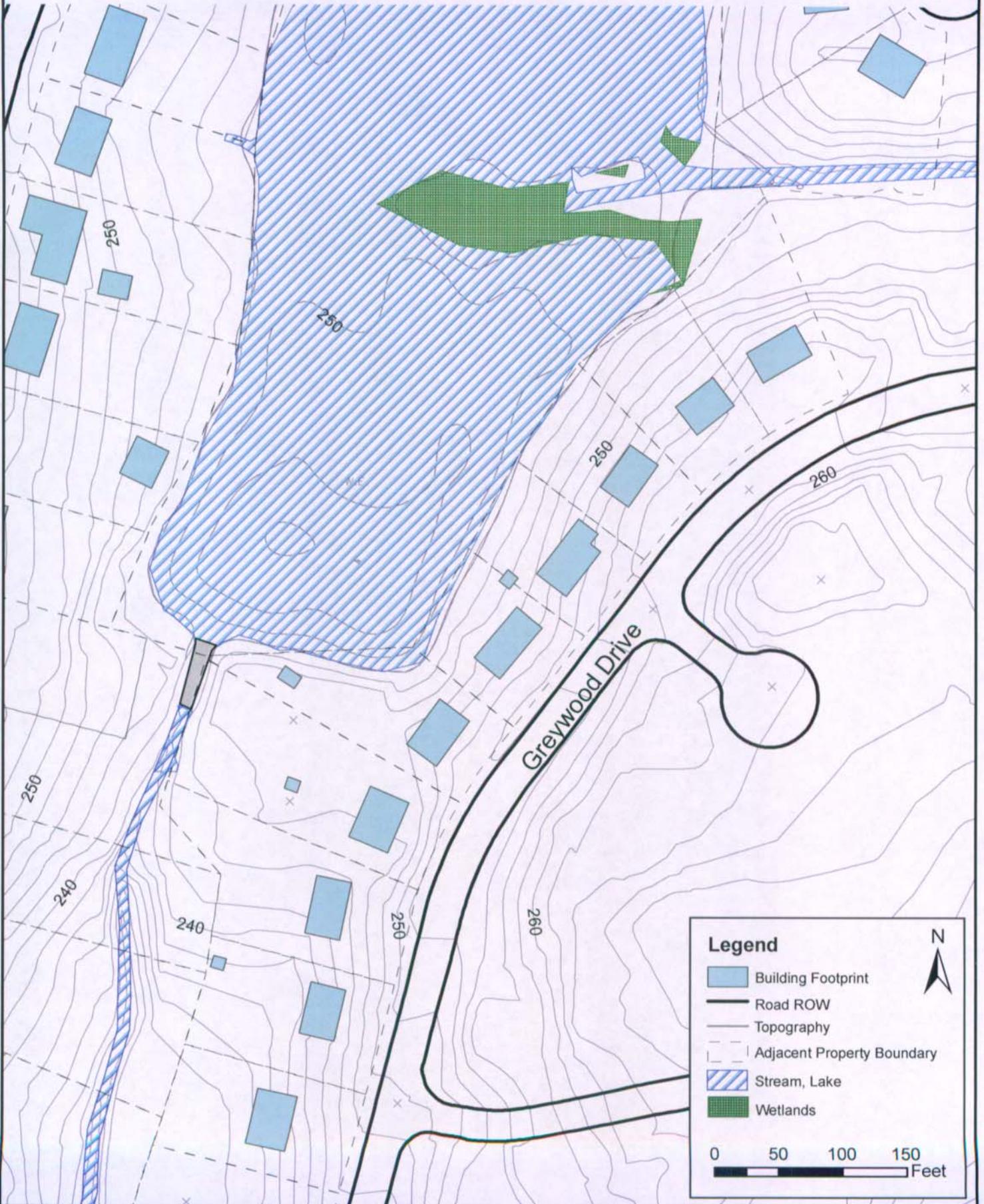


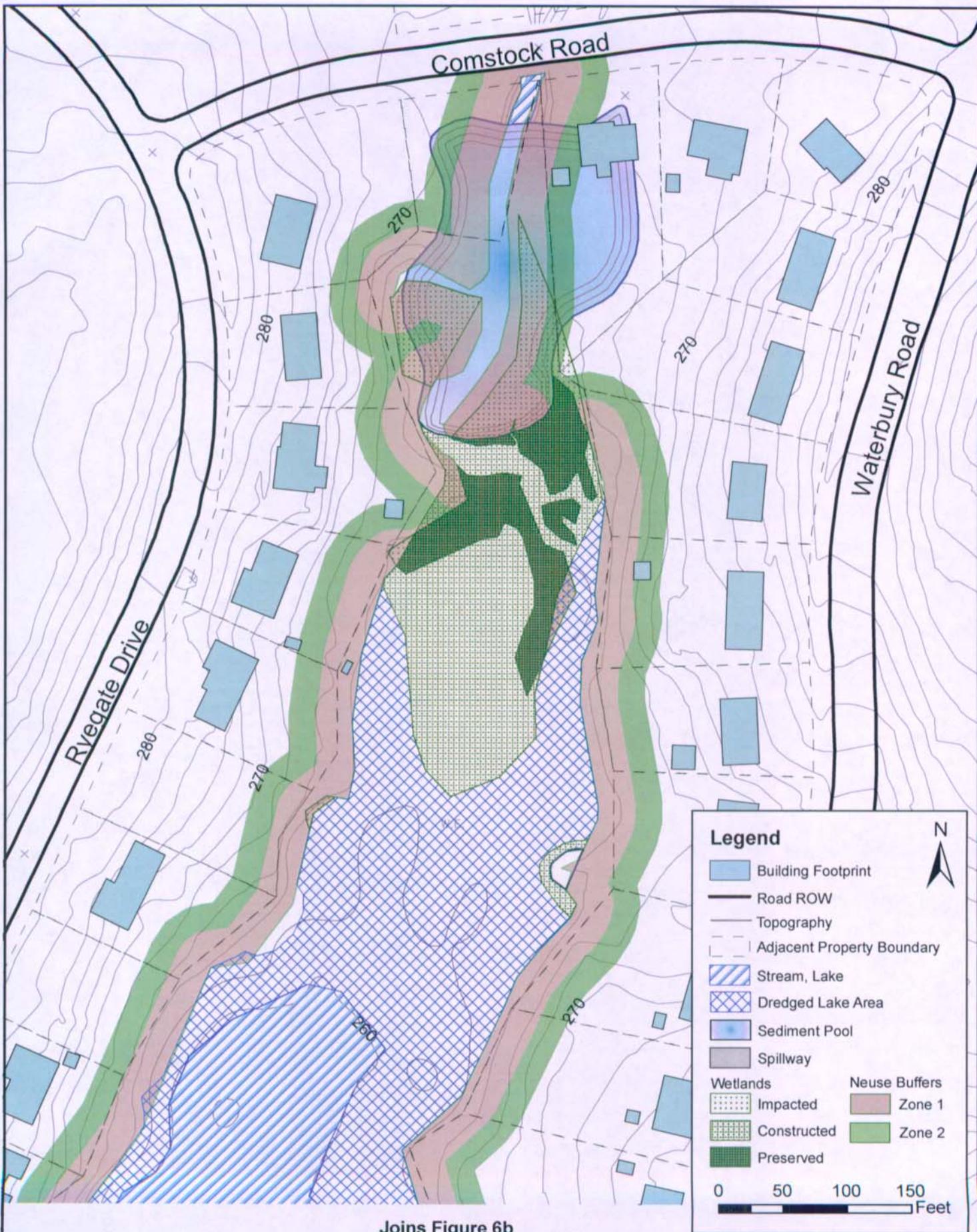
Figure 5b Existing Conditions
Brentwood Today Lake

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Joins Figure 6b



Joins Figure 6a

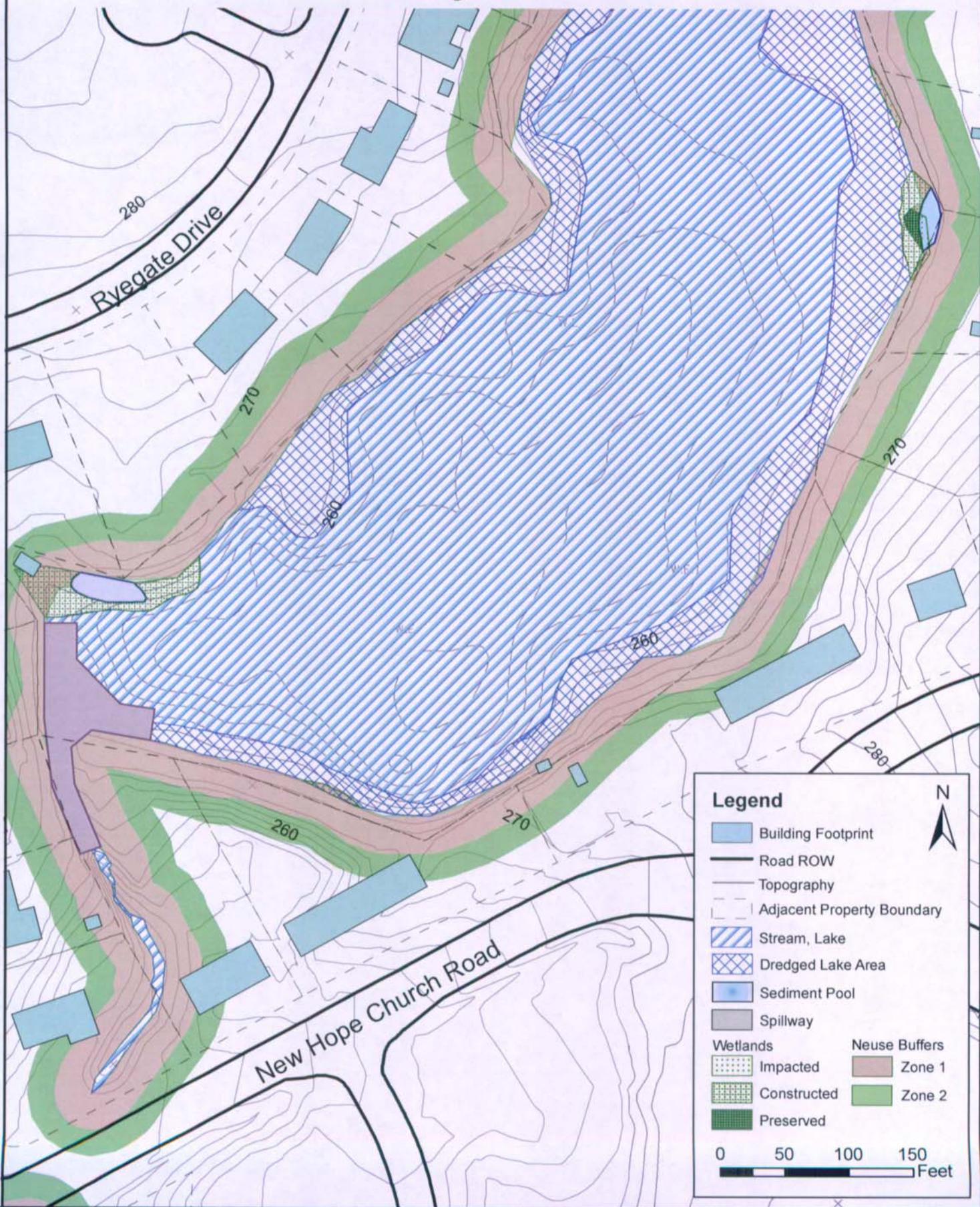


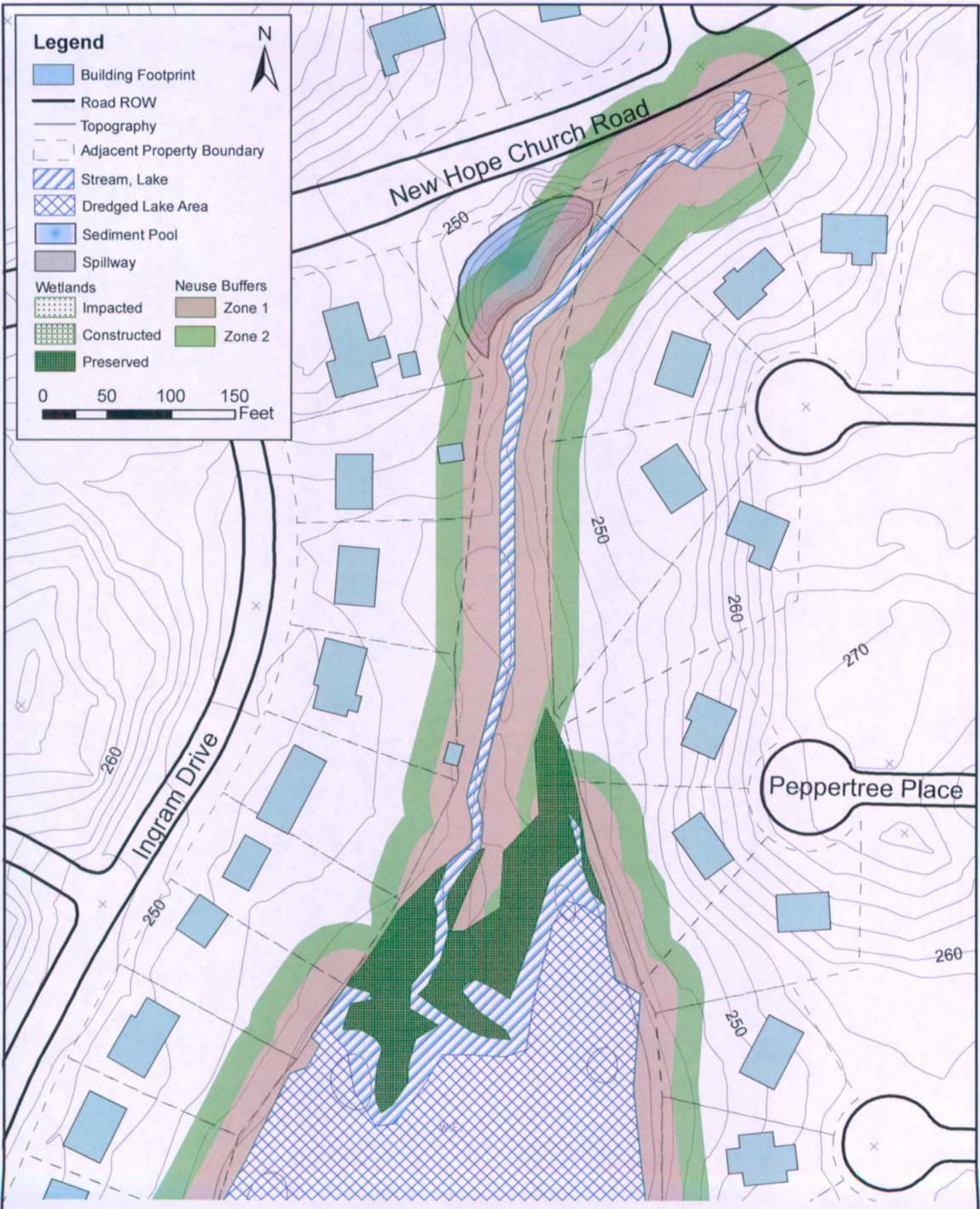
Figure 6b Proposed Conditions
Northshore Lake

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Joins Figure 7b

**Figure 7a Proposed Conditions
Brentwood Today Lake**

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Joins Figure 7a



Legend

- Building Footprint
- Road ROW
- Topography
- Adjacent Property Boundary
- Stream, Lake
- Dredged Lake Area
- Sediment Pool
- Spillway

Wetlands

- Impacted
- Constructed
- Preserved

Neuse Buffers

- Zone 1
- Zone 2

0 50 100 150 Feet

N

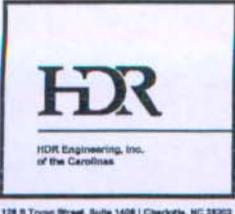
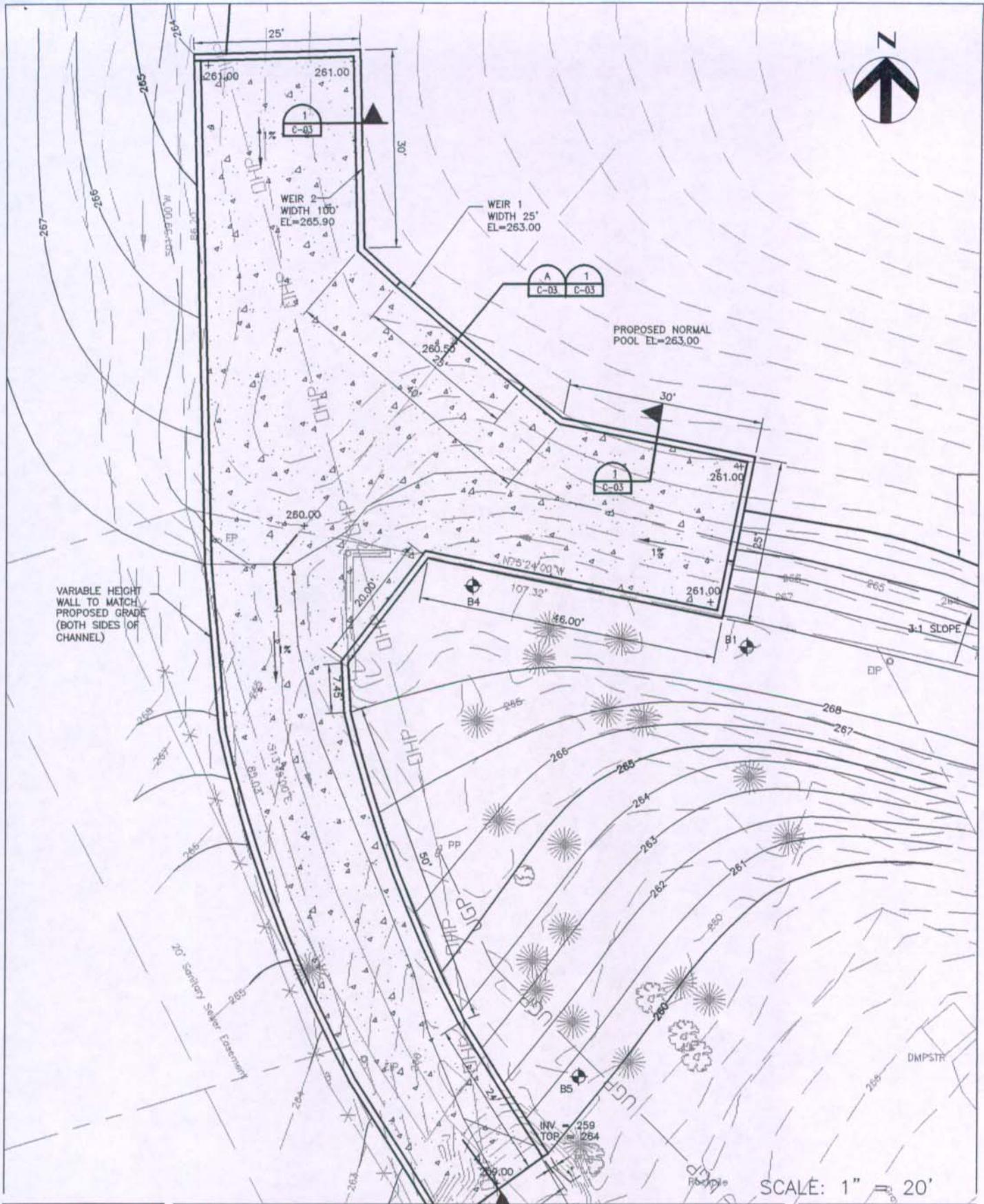
Figure 7b Proposed Conditions
Brentwood Today Lake

February 2005



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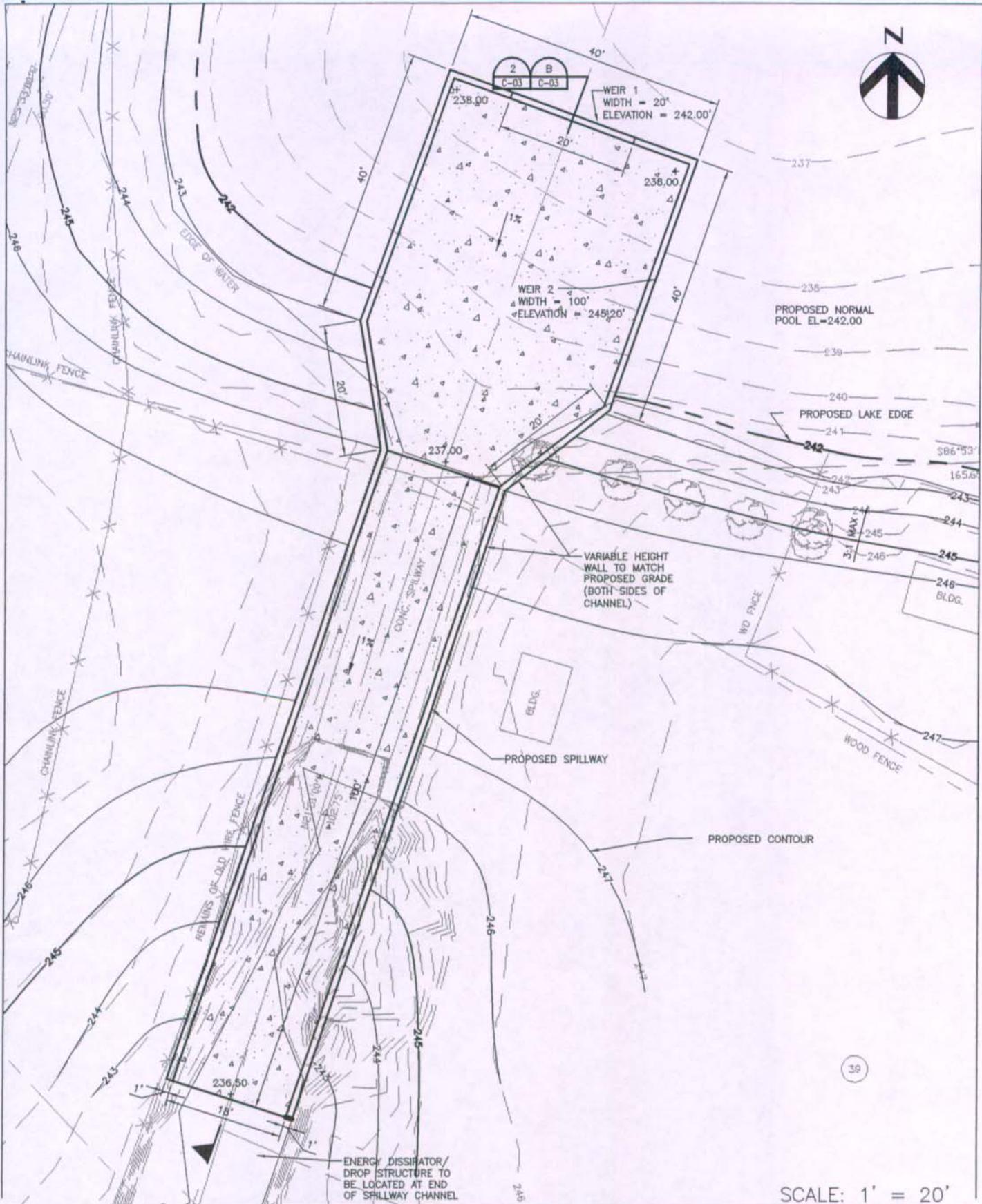




**NORTHSHORE LAKE
PRELIMINARY SPILLWAY IMPROVEMENTS**

FINAL REPORT

DATE	02/2005
FIGURE	FIGURE 3.1



**BRENTWOOD TODAY LAKE
PRELIMINARY SPILLWAY IMPROVEMENTS**

FINAL REPORT

DATE

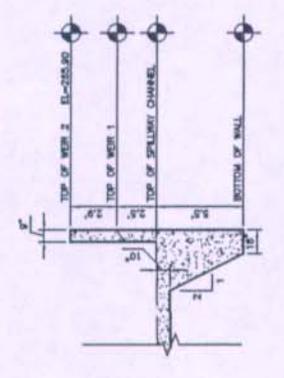
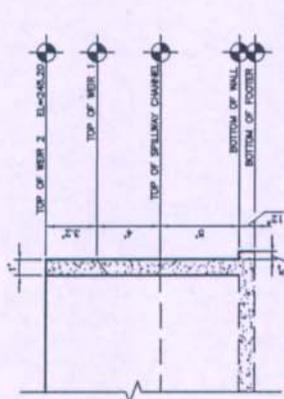
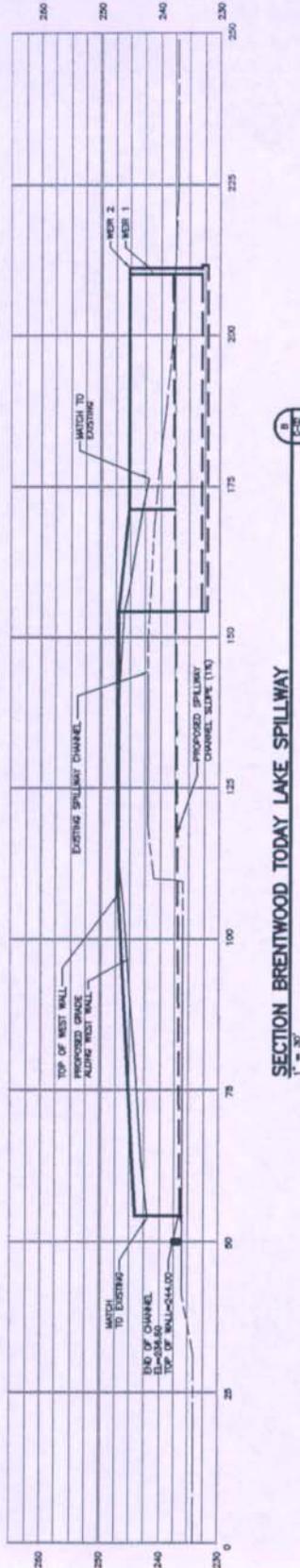
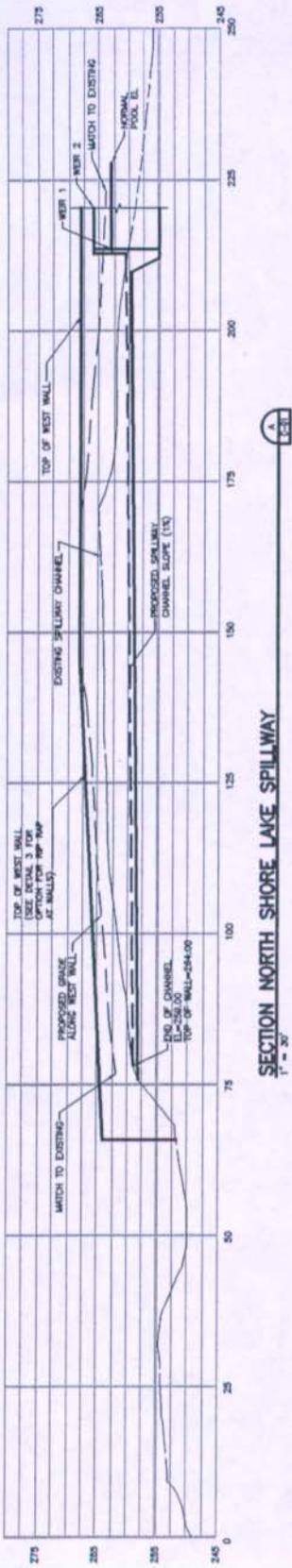
02/2005

FIGURE

FIGURE 3.2



HDR Engineering, Inc.
of the Carolinas



BRENTWOOD TODAY LAKE WEIR DETAIL (1" = 1')

NORTH SHORE LAKE WEIR DETAIL (1" = 1')

NORTH SHORE LAKE & BRENTWOOD TODAY LAKE SPILLWAY PROFILES AND DETAILS



FINAL REPORT

DATE 02/05
FIGURE 3.3

RECEIVED

JUN 30 2005

RALEIGH REGULATORY FIELD OFFICE