

JOINT
PUBLIC NOTICE

CHARLESTON DISTRICT, CORPS OF ENGINEERS
69A Hagood Avenue
Charleston, South Carolina 29403-5107
and
THE S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
Office of Environmental Quality Control
Water Quality Certification and Wetlands Programs Section
2600 Bull Street
Columbia, South Carolina 29201

REGULATORY DIVISION
Refer to: P/N #2003-1G-066-C

7 MARCH 2003

Pursuant to Sections 401 and 404 of the Clean Water Act (33 U.S.C. 1344), and the South Carolina Coastal Zone Management Act (48-39-10 et seq.) an application has been submitted to the Department of the Army and the S.C. Department of Health and Environmental Control by

BHR ACQUISITION COMPANY, LLC & WINDING RIVER, BTS, LLC
C/O MR. KEN HANCE
NEWKIRK ENVIRONMENTAL, INC.
192 EAST BAY STREET, SUITE 201
CHARLESTON, SOUTH CAROLINA 29401

for a permit to place fill material in freshwater wetlands adjacent to a tributary of

ROSE DHU CREEK

at a location, the Buckwalter southwest tract, a 1,967-acre tract of land located south of U. S. Highway 278, east of State Road 170, west of the Buckwalter Parkway and north of S.C. Highway 46, in the Town of Bluffton, Beaufort County, South Carolina (Latitude 36°02'20"— Longitude 87°00'14").

In order to give all interested parties an opportunity to express their views

NOTICE

is hereby given that written statements regarding the proposed work will be received by both of the above mentioned offices until

12 O'CLOCK NOON, MONDAY, APRIL 7, 2003

from those interested in the activity and whose interests may be affected by the proposed work.

The proposed work consists of placing fill material in 8.14 acres of contiguous jurisdictional wetlands to construct access roads and utilities into and throughout the site; placing fill material in 0.77 acres of jurisdictional wetlands for residential lot construction; placing fill material in 0.80 acres of jurisdictional wetlands for construction of a golf course practice and teaching facility; performing hand clearing in 0.76 acres of jurisdictional wetlands for golf cart bridge construction; performing hand clearing in 4.68 acres of jurisdictional wetlands for golf course fairways, tees and greens; placing fill material in 0.92 acres of jurisdictional wetlands for construction of a clubhouse and amenities center; performing hand clearing in 0.14 acres of jurisdictional wetlands for bicycle/pedestrian trails for recreation, environmental education, transportation and wildlife observation; performing clearing in 0.71 acres of jurisdictional wetlands to construct stormwater outfall structures; performing

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excavation in 6.32 acres and clearing in 1.54 acres of jurisdictional wetlands for construction of lakes and ponds associated with stormwater management, amenities, creation of habitat diversity, and emergent wetlands; and placing fill in 24.6 acres of non-jurisdictional wetlands for residential lot construction, road construction and golf course fairways, tees and greens. The total proposed impacts to contiguous jurisdictional freshwater wetlands (24.78 acres) and non-jurisdictional wetlands (24.60 acres) is 49.38 acres.

As mitigation for the proposed impacts the applicant proposes to preserve 424.02 acres of onsite wetlands; enhance the hydrology of 99.53 acres of onsite wetlands; restore vegetation in 7.0 acres of onsite wetlands; remove old roadbeds to restore 1.49 acres of wetlands; create 15.88 acres of emergent freshwater wetlands; and establish and preserve 78.49 acres of 38 foot average width upland buffers. Total onsite mitigation is 626.41 acres. All mitigation areas will be preserved in perpetuity by deed restrictive covenants and deeded to a property owners association (POA). The applicant proposes to develop the project in phases and submit final, detailed development plans for each phase to the Corps and the SC DHEC prior to beginning the proposed work under each phase. Submittals will be made at final plat approval for each phase by the local governing body. The applicant proposes to record deed restrictive covenants on all mitigation areas simultaneously with the subdivision plat of each phase of development and prior to beginning work within each phase. A more detailed description of mitigation activities, including monitoring and success criteria, is presented in the document, "Buckwalter Southwest Tract Development Compensatory Mitigation Plan", dated February 11, 2003. The purpose of the proposed work is to create an economically viable, flexible, long-term master-planned residential community with associated amenities over the next 20 years.

NOTE: Plans depicting the work described in this notice are available and will be provided, upon receipt of a written request, to anyone that is interested in obtaining a copy of the plans for the specific project. The request must identify the project of interest by public notice number and a self-addressed stamped envelope must also be provided for mailing the drawings to you. Your request for drawings should be addressed to the

**U.S. Army Corps of Engineers
ATTN: REGULATORY DIVISION
69A Hagood Avenue
Charleston, South Carolina 29403-5107.**

The District Engineer has concluded that the direct discharges into waters of the United States or their adjacent wetlands should be reviewed by the South Carolina Department of Health and Environmental Control in accordance with provisions of Section 401 of the Clean Water Act. As such, this notice constitutes a request, on behalf of the applicant, for certification that this project will comply with applicable effluent limitations and water quality standards (Section 401 of the Clean Water Act). The work shown on this application must also be certified as consistent with applicable provisions of the South Carolina Coastal Zone Management Act (15 CFR 930). The District Engineer will not process this application to a conclusion until such certifications are received. State review, permitting and certification is conducted by the S. C. Department of Health and Environmental Control. The applicant is hereby advised that supplemental information may be required by the State to facilitate the review. Persons wishing to comment or object to State certification must submit all comments in writing to the S. C. Department of Health and Environmental Control at the above address within thirty (30) days of the date of this notice.

This notice initiates the Essential Fish Habitat (EFH) consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act. Implementation of the proposed project would impact 24.78 acres of jurisdictional freshwater wetlands and 24.60 acres of non-jurisdictional wetlands (total 49.38 acres) upstream and inland of estuarine substrates and emergent wetlands utilized by various life stages of species comprising the red drum, shrimp, and snapper-grouper management complexes. Our initial determination is that the proposed action would not have a substantial individual or cumulative adverse impact on EFH or fisheries managed by the South Atlantic Fishery Management Council and the National Marine Fisheries Service (NMFS). Our final determination relative to project impacts and the need for mitigation

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measures is subject to review by and coordination with the NMFS.

Pursuant to Section 7(c) of the Endangered Species Act of 1973 (as amended), the applicant has provided a protected species survey for the property associated with the activity described above. Based upon this report, the District Engineer has determined that the project is not likely to adversely affect any Federally endangered, threatened, or proposed species or result in the destruction or adverse modification of designated or proposed critical habitat. The U.S. Fish and Wildlife Service concurred with this determination in USFWS Log # 4-6-99-364.

The District Engineer has consulted the latest published version of the National Register of Historic Places for the presence or absence of registered properties, or properties listed as being eligible for inclusion therein, and this worksite is not included as a registered property or property listed as being eligible for inclusion in the Register. Consultation of the National Register constitutes the extent of cultural resource investigations by the District Engineer, and he is otherwise unaware of the presence of such resources. Presently unknown archaeological, scientific, prehistorical, or historical data may be lost or destroyed by the work to be accomplished under the requested permit.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for a public hearing shall state, with particularity, the reasons for holding a public hearing.

The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the activity on the public interest and will include application of the guidelines promulgated by the Administrator, Environmental Protection Agency (EPA), under authority of Section 404(b) of the Clean Water Act and, as appropriate, the criteria established under authority of Section 102 of the Marine Protection, Research and Sanctuaries Act of 1972, as amended. 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 project must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the project 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, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production and, in general, the needs and welfare of the people. A permit will be granted unless the District Engineer determines that it would be contrary to the public interest. In cases of conflicting property rights, the Corps of Engineers cannot undertake to adjudicate rival claims.

The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this project. 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 and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the activity.

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If there are any questions concerning this public notice, please contact me at 843-329-8044 or toll free at 1-866-329-8187.

A handwritten signature in black ink that reads "Mary Hope Glenn". The signature is written in a cursive, flowing style.

Mary Hope Glenn
Project Manager
Regulatory Division
U.S. Army Corps of Engineers

10, 11, and 12-Project Location, Description and Purpose

The Buckwalter Southwest Tract Development site is an approximately 1,967 acre tract located south of U.S. Highway 278, east of State Road 170, west of the Buckwalter Parkway and north of SC Highway 46, in the Town of Bluffton, Beaufort County, SC. The site can be accessed off of U.S. Hwy 278 via the newly constructed Buckwalter Parkway. By way of background, the 1,967 acre project site is a portion of a $\pm 6,000$ acre tract previously owned by the Branigar Organization known as the Buckwalter Tract. In 1995, Beaufort County applied for a permit to construct the Buckwalter Parkway through this tract. The conditional permit (99-1A-324) issued to the county, required Beaufort County, in coordination with the Branigar Organization, to provide a "Landscape Scale Master Plan" for the entire Buckwalter Tract. The "Landscape Scale Master Plan" was provided to the various state and federal regulatory/review agencies May 30, 2000. The Branigar Organization also negotiated a Planned Unit Development (PUD) Agreement with the Town of Bluffton for the entire $\pm 6,000$ acre Buckwalter Tract. The development agreement has a 20 year duration with two 5-year renewal terms. The PUD identifies allowable land uses and density, but maintains flexibility for development to accommodate specific soil conditions, environmental concerns, physical constraints, market conditions and design parameters. A minimum of 10% open space is required within the PUD. The PUD requires various setbacks and buffers from roads, adjacent properties and ecologically sensitive areas. The proposed Buckwalter Southwest Tract Development is entirely consistent with both the Landscape Scale Master Plan provided to the various state and federal agencies as part of the county's Buckwalter Parkway permit and with the Town of Bluffton PUD.

The project site includes of 579.93 acres of wetlands and 1,387.45 acres of uplands. Wetlands contained within the site include 31.89 acres of isolated non-jurisdictional depressional wetlands and 548.04 acres of 404 jurisdictional hardwood forests. The site has been intensively managed for silviculture in recent history and the majority of the upland has been converted to pine plantation and the hydrology of the site has been severely impacted by silviculture activities.

The upland pine plantation habitat is dominated in the overstory by loblolly pine (*Pinus taeda*) with an approximate average age of twenty years or less. The understory species include water oak (*Quercus nigra*), live oak (*Quercus virginiana*), sweetgum (*Liquidambar styraciflua*), southern red oak (*Quercus falcata*), post oak (*Quercus stellata*), eastern red cedar (*Juniperus virginiana*), hickory (*Carya tomentosa*), black oak (*Quercus velutina*), and red bay (*Persea borbonia*). The shrub species includes wax myrtle (*Myrica cerifera*), sparkle berry (*Vaccinium aboreum*), American beautyberry (*Callicarpa americana*), coast pepperbush (*Clethra alnifolia*), fetterbush (*Lyonia lucida*), winged sumac (*Rhus copallina*), and gallberry (*Ilex glabra*). The herbaceous species present include bracken fern (*Pteridium aquilinum*), muscadine (*Vitis rotundifolia*), cinnamon fern (*Osmunda cinnamomea*), honeysuckle (*Lonicera japonica*), broomsedge (*Andropogon virginicus*), dwarf palmetto (*Sabal minor*), dog fennel (*Eupatorium capillifolia*), and blackberry (*Rubus spp.*). These areas have been managed for short rotation timber production and portions of these areas have been clear cut within the past five years.

The gum pond habitat type is dominated by swamp tupelo (*Nyssa biflora*), red maple (*Acer rubrum*), sweetgum, red bay, persimmon (*Diospyros virginiana*), water oak, loblolly pine, and slash pine (*Pinus elliotii*) in the overstory. The understory saplings and shrub species include red maple, persimmon, sweetgum, buttonbush (*Cephalanthus occidentalis*), fetter bush, blueberry (*Vaccinium spp.*), coast pepperbush, wax myrtle, myrtle holly (*Ilex myrtifolia*), giant cane (*Arundinaria gigantea*), gallberry,

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and tupelo. The herbaceous layer is dominated by Virginia chain-fern (*Woodwardia virginica*), netted chain fern (*Woodwardia areolata*), maiden cane (*Panicum hemitomon*) cinnamon fern, and sedges (*Carex spp.*). A limited number of these areas are emergent wetland areas dominated by maiden cane. The hydrology in a portion of these areas has been altered by historical silvicultural ditching and past logging activities. The damage from logging activities includes rutting from harvesting equipment, the removal of overstory canopy trees and minor ditching in the isolated wetland areas.

The 1,967 acre site includes a large bottomland hardwood forest wetland area that extends north-south through the property. These areas are dominated in the overstory by willow oak (*Quercus phellos*), swamp chestnut oak (*Quercus michauxii*), laurel oak (*Quercus laurelifolia*), red maple, swamp tupelo, yellow-poplar (*Liriodendron tulipifera*), green ash (*Fraxinus pennsylvanica*), water oak, red bay, sweetgum, swamp cottonwood (*Populus heterophylla*), sweet bay (*Magnolia virginiana*), American holly (*Ilex opaca*), loblolly pine, and slash pine. The average age of the mature trees is approximately 50 years or older. The understory species include water oak, wax myrtle, sweetgum, fetterbush, dwarf palmetto, buttonbush, blueberry, eastern false willow (*Baccharis halimifolia*), and needle palm (*Rhapidophyllum hystrix*). Herbaceous species include cinnamon fern, giant cane (*Arundinaria gigantea*), netted chain fern, sedges, smartweed (*Polygonum spp.*), cinnamon fern, royal fern (*Osmunda regalis*), green briar (*Smilax laurifolia*), blackberry, cat-tail (*Typha latifolia*), plume grass (*Erianthus giganteus*), broomsedge (*Andropogon spp.*) and Virginia chain-fern. The majority of these areas have been clear cut in the past ten years. The clear cut areas are dominated by sapling hardwood species and herbaceous growth. The hydrology in portions of this habitat type has been affected by historical silvicultural ditching, and timber harvesting and construction of silviculture roads with inadequate culverts.

The applicants and owners, BHR Acquisition Co., LLC and Winding River BTS 1, LC, plan to construct a viable, long term, master planned residential community on the project site, including, single family residential uses, two golf courses, golf course clubhouse, golf practice and teaching facility, amenities center, pedestrian/bicycle trails, canoe trails, community park/open space areas and neighborhood commercial. The applicants anticipate development of the proposed project over a \pm 20 year time frame and are requesting the US Army Corps of Engineers (COE) to consider this application for a 20 year permit.

In order to accomplish the above stated project purpose, the applicants propose to fill 8.14 acres of contiguous, 404 jurisdictional wetlands to construct access roads into and throughout the site, fill 2.49 acres of 404 jurisdictional wetlands for various other site development activities as indicated on the master plan, fill 24.60 acres of isolated, non-jurisdictional wetlands to accommodate various residential and golf course development activities, excavate 6.32 acres of contiguous, 404 jurisdictional wetlands for stormwater management, creation of canoe trails and fisheries habitat, convert 1.54 acres of forested wetlands to emergent wetlands adjacent to proposed excavation and clear 6.29 acres of contiguous 404 jurisdictional wetlands for golf course construction, stormwater management purposes and pedestrian/bicycle/cart bridges. Additional pedestrian boardwalks and wildlife observation decks will be constructed as indicated on the plan, but will be located so as not to require clearing impacts in wetlands. The 8.14 acres of impact for road construction is a maximum and includes a 20% contingency to provide flexibility in final road location and design. Final road locations that vary from those presented in this application will be submitted to the COE and South Carolina Department of Health and Environmental Control (DHEC) prior to construction, to document that the

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revised plans are consistent with the intent of any issued permit. Total proposed impacts to isolated (24.60 acres) and contiguous (24.78 acres) freshwater wetlands is 49.38 acres.

Proposed compensatory mitigation for project impacts includes preservation/enhancement/restoration of 532.04 acres of wetland resources onsite by establishing 78.49 acres of adjacent upland buffers, restoration of natural, historic hydrology and vegetation, and removal of existing causeway fills. Buffers are proposed to be an average of \pm 38 feet in width. Additionally, 15.88 acres of emergent freshwater wetlands will be created adjacent to contiguous 404 jurisdictional wetlands contained within the site or within lagoons to be constructed as part of the master development plan. Specific mitigation activities include 424.02 acres of wetland preservation and enhancement by buffering, 99.53 acres of hydrology enhancement, 7.00 acres of vegetative restoration, 1.49 acres of road restoration, 15.88 acres of wetland creation and 78.49 acres of buffers. Total on site mitigation acreage is 626.41. All mitigation areas will be preserved in perpetuity by deed restrictive covenant and deeded to a Property Owners Association (POA). As the project will be developed in phases, the applicant proposes to submit final, detailed development plans to the US Army Corps of Engineers and South Carolina Department of Health and Environmental Control for each phase, prior to beginning work under the requested permit in each phase. Submittals will be made at final plat approval for each phase by the local governing body. Deed restrictive covenants will be recorded on all mitigation areas simultaneously with the subdivision plat of each phase of development and prior to beginning work within each phase. A more detailed description of proposed compensatory mitigation activities, including monitoring and success criteria, is presented in the Buckwalter Southwest Tract Development Compensatory Mitigation Plan, which is attached as an addendum to this application.

Avoidance, Minimization, Project Justification and Alternatives:

Comprehensive wetland master plan permitting provides an opportunity for evaluation of cumulative impacts, and encourages avoidance and minimization of impacts to significant wetland systems that are capable of providing wetland functions after site development is complete. During this process, compensatory mitigation is also identified and established in advance of project impacts.

Comprehensive master plan permitting also provides the developer, local government and state and federal regulatory/review agencies with certainty as to how development will/can proceed and allows for the most efficient use of economic and land resources. For example, master planning aids developers and local governments in planning financing and construction of infrastructure, including roads, drainage systems, sewer, water and other utility services, resulting in lower development costs, lower costs for providing public services, and, ultimately, lower housing costs for consumers. The alternative is "piece-meal" development. The master planning concept is key to accomplishing the purpose of the proposed Buckwalter Southwest Tract Development project which is to create an economically viable, flexible, long term, master-planned residential community, with associated amenities, on the project site.

BHR Acquisition Co., LLC and Winding River BTS 1, LC began the planning process for development of the project site with the goal of avoiding and minimizing overall project impacts, including potential impacts to water quality, freshwater wetlands and archaeological and cultural resources. To this end, significant resources have been expended on various plans, surveys, assessments and reports, including a wetland delineation and survey, threatened and endangered species assessment, archaeological and cultural resources survey, soils investigation, topographic surveys, preliminary engineering reports,

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land planning and marketing analysis. Prior to finalizing the wetland master plan submitted with this application, the applicants met with the COE August 13, 2002 to discuss the proposed project and conducted a pre-application site visit and plan review October 21, 2002, which was attended by personnel from the various state and federal regulatory/review agencies, including South Carolina Department of Natural Resources, US Fish & Wildlife Service, South Carolina Department of Health and Environmental Control-Environmental Quality Control, South Carolina Department of Health and Environmental Control-Ocean and Coastal Resource Management, and the US Army Corps of Engineers. The agencies recommended several revisions to project plans during the October 21st meeting, including, expanding buffer widths, minimizing wetland impacts, installing adequate culverts under proposed wetland road crossings, removing additional existing roads through wetlands, and documenting proposed enhancement of hydrology within wetlands to be preserved. The wetland master plan and mitigation plan submitted in support of this application has incorporated significant plan revisions in response to agency comments received at the October 21, 2002 pre-application meeting. Specifically, the proposed master plan has been revised to reduce total impacts by ± 15 acres including, 3.56 acres of fill in 404 jurisdictional wetlands for golf course practice and teaching facility, 2.06 acres of fill in 404 jurisdictional wetlands for road construction, 4.33 acres of pond construction in 404 jurisdictional wetlands and 5.09 acres of fill in isolated non-jurisdictional wetlands. Additionally, total proposed mitigation has been increased by ± 28 acres.

The wetland master plan proposed with this application identifies wetlands and conceptual development, and represents a considerable effort on the part of the applicants to avoid and minimize overall environmental impacts and proposes adequate, onsite compensatory mitigation for those impacts that cannot be avoided. Requested impacts (49.38 acres) are small relative to the total site area (1,967 acres), representing approximately 2.5 percent of the total project site. Ninety-two percent of wetland resources contained within the site are to be preserved and/or enhanced. An additional 17.37 acres, representing approximately 3% of total wetlands, are being restored or created on site. Fifty percent of proposed impacts to wetland resources are to non-jurisdictional wetlands. The master plan demonstrates avoidance and minimization of impacts to significant wetland resources to the maximum extent practicable so that important wetland functions are maintained while providing for reasonable and necessary access, utilities services, stormwater management and necessary flexibility for constructing an economically viable residential development and associated amenities. Additional avoidance and minimization is demonstrated by the optimum location of road crossings, providing adequate culverts under road crossings, combining utilities with road construction activities, designing necessary stormwater management facilities to enhance hydrology and diversity of significant wetland systems, and minimizing impacts associated with golf course construction to large contiguous wetland systems. Specific needs for requested impacts are as follows:

- 1) 8.14 acres of fill in 404 jurisdictional wetlands to construct roads and utilities into and throughout the project site;
- 2) 0.77 acres of fill in 404 jurisdictional wetlands for residential lot construction;
- 3) 0.80 acres of fill in 404 jurisdictional wetlands for construction of a golf course practice and teaching facility;

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- 4) 0.76 acres of hand clearing in 404 jurisdictional wetlands for golf cart bridge construction;
- 5) 4.68 acres of hand clearing in 404 jurisdictional wetlands for golf course fairways, tees and greens;
- 6) 0.92 acres of fill in 404 jurisdictional wetlands for construction of a clubhouse and amenities center;
- 7) 0.14 acres of hand clearing in 404 jurisdictional wetlands for bicycle/pedestrian trails for passive recreation, environmental education, transportation and wildlife observation;
- 8) 0.71 acres of clearing in 404 jurisdictional wetlands to construct stormwater outfall structures;
- 9) 6.32 acres of excavation and 1.54 acres of clearing in 404 jurisdictional wetlands to construct lakes and ponds associated with stormwater management, creation of amenities for outdoor recreation activities, including canoeing, fishing and wildlife observation, creation of habitat diversity, including wading bird habitat and fisheries habitat, and creation of emergent wetland shelves and terraces to improve water quality and sheet flow through the wetland system, and
- 10) 24.6 acres of fill in isolated, non-jurisdictional wetlands for residential lot construction, road construction and golf course fairway, tees and green construction.

Proposed compensatory mitigation will enhance and restore the overall function of significant wetland systems on site, including water quality and wildlife habitat, through buffers, hydrology enhancements, increased diversity and vegetative restoration. There are no feasible alternatives to the proposed activity which will reduce overall adverse impacts and achieve the project purpose of constructing an economically viable, master planned, residential community with associated amenities on the project site over an approximately 20 year time frame.

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BHR Acquisition Co., LLC & Winding River BTS 1, LC
Buckwalter Southwest Tract Development
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ADVERSE IMPACT FACTORS FOR WETLANDS AND OTHER WATERS OF THE U.S. EXCLUDING STREAMS

FACTORS	OPTIONS					
Lost Type	Type C 0.2		Type B 2.0		Type A 3.0	
Priority Category	Tertiary 0.5		Secondary 1.5		Primary 2.0	
Existing Condition	Very Impaired 0.1	Impaired 1.0		Slightly Impaired 2.0	Fully Functional 2.5	
Duration	Seasonal 0.1	0 to 1 0.2	1 to 3 0.5	3 to 5 1.0	5 to 10 1.5	Over 10 2.0
Dominant Impact	Shade 0.2	Clear 1.0	Dredge 1.5	Drain 2.0	Impound 2.5	Fill 3.0
Cumulative Impact	0.05 x $\sum AA_i$					

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**BHR Acquisition Co., LLC & Winding River BTS 1 LC
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The following definition is reproduced here for ready reference.

Cumulative impact is an evaluation of the cumulative adverse impacts to aquatic sites for the overall project. This factor is proportional to the areas of impact. The formula used to calculate this value is $0.05 \times \sum AA$, where $\sum AA$, stands for the sum of the acres of adverse impacts to aquatic areas for the overall project. When computing this value, round to the nearest tenth decimal place using even number rounding. Thus 0.01 and 0.050 are rounded down to give a value of zero while 0.051 and 0.09 are rounded up to give 0.1 as the value for the cumulative impact factor.

Note: The cumulative impact factor for the overall project must be used in each area column on the Required Mitigation Credits Worksheet below.

Required Mitigation Credits Sample Worksheet

Factor	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6
Lost Type	2.0	3.0	3.0	3.0	3.0	3.0
Priority Category	0.5	0.5	0.5	0.5	0.5	0.5
Existing Condition	1.0	1.0	1.0	1.0	1.0	1.0
Duration	2.0	2.0	2.0	2.0	2.0	2.0
Dominant Impact	3.0	3.0	3.0	1.5	1.0	1.0
Cumulative Impact	2.5	2.5	2.5	2.5	2.5	2.5
Sum of m Factors	R ₁ =11.0	R ₂ =12.0	R ₃ =12.0	R ₄ =70.5	R ₅ =10.0	R ₆ =10.0
Impacted Area	AA ₁ =24.60	AA ₂ =8.14	AA ₃ =2.49	AA ₄ =6.32	AA ₅ =6.29	AA ₆ =1.54
R x AA =	270.6	97.7	29.9	66.4	62.9	15.4

Total Preservation Credits = $\sum (R \times AA) =$ 542.9

- Area 1 = Isolated Non-jurisdictional Wetland Fill
- Area 2 = Fill in 404 Jurisdictional Wetlands for Road Construction
- Area 3 = Fill in 404 Jurisdictional Wetlands for various other development activities
- Area 4 = Excavation in 404 Jurisdictional Wetlands
- Area 5 = Clearing in 404 Jurisdictional Wetlands
- Area 6 = Conversion of Forested 404 Jurisdictional Wetlands to Emergent Wetlands

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**RESTORATION AND ENHANCEMENT MITIGATION FACTORS FOR WETLANDS AND OTHER WATERS OF
THE U.S. EXCLUDING STREAMS**

Factors	Options				
	Minimal Enhancement 0.1	-----to-----			Excellent Restoration 4.0
Control	N.A. 0	Covenant Private 0.1	Covenant POA 0.2	Conservation Easement 0.4	Transfer Fee Title Conservancy 0.6
Temporal Lag	N.A.* 0	Over 20 -0.3	10 to 20 -0.2	5 to 10 -0.1	0 to 5 0
Credit Schedule	Schedule 5* 0	Schedule 4 0.1	Schedule 3 0.2	Schedule 2 0.3	Schedule 1 0.4
Kind	Category 5 -0.1	Category 4 0	Category 3 0.2	Category 2 0.3	Category 1 0.4
Location	Zone 5 -0.1	Zone 4 0	Zone 3 0.2	Zone 2 0.3	Zone 1 0.4

N.A. = Not Applicable

*Use this option to calculate credits for enhancement by buffering

Proposed Restoration or Enhancement Mitigation Sample Worksheet

Factor	Area 1	Area 2	Area 3	Area 4	Area 5
Net Improvement	0.1	3.5	1.9	3.0	
Control	0.2	0.2	0.2	0.2	
Temporal Lag	0	-0.3	0	-0.3	
Credit Schedule	0	0.3	0.3	0.3	
Kind	0.4	0.4	0.4	0.4	
Location	0.4	0.4	0.4	0.4	
Sum of m Factors	M ₁ =1.1	M ₂ =4.5	M ₃ =3.2	M ₄ =4.0	M ₅ =
Mitigation Area	A ₁ =78.49	A ₂ =1.49	A ₃ =99.53	A ₄ =7.00	A ₅ =
M x A =	86.3	6.7	318.5	28.0	

Total Restoration/Enhancement Credits = $\sum (M \times A) =$

439.5

- Area 1 = Buffer Enhancement
- Area 2 = Road Restoration
- Area 3 = Hydrologic Enhancement
- Area 4 = Pine Plantation Restoration

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**PRESERVATION MITIGATION FACTORS FOR WETLANDS AND OTHER WATERS OF THE U.S.
EXCLUDING STREAMS**

Factors	Options				
	Priority Category	Territory 0.1	Secondary 0.2	Primary 0.4	
Existing Condition	Impaired -0.1	Slightly Impaired 0	Fully Functional 0.1		
Degree of Threat	Low -0.1	Moderate 0.1	High 0.2		
Control	Covenant Private 0	Covenant POA 0.1	Conservation Easement 0.4	Transfer Fee Title Conservancy 0.6	
Kind	Category 5 -0.1	Category 4 0	Category 3 0.1	Category 2 0.2	Category 1 0.3
Location	Zone 5 -0.1	Zone 4 0	Zone 3 0.1	Zone 2 0.2	Zone 1 0.3

None: Preservation credit should generally be limited to those areas that qualify as Fully Functional or Slightly Impaired. Impaired sites should be candidates for enhancement or restoration credit, not preservation credit. In special circumstances when Impaired sites are allowed preservation credit (e.g. within the scope of some OCRM wetland master planned projects), a negative factor will be used to calculate credits as per the matrix table.

Proposed Preservation Mitigation Sample Worksheet

Factor	Area 5	Area 2	Area 3	Area 4	Area 5
Priority Category	0.1				
Existing Condition	-0.1				
Degree of Threat	0.2				
Control	0.1				
Kind	0.3				
Location	0.3				
Sum of m Factors	M ₁ = 0.9	M ₂ =	M ₃ =	M ₄ =	M ₅ =
Mitigation Area	A ₁ = 345.53	A ₂ =	A ₃ =	A ₄ =	A ₅ =
M x A =	311.0				

Total Preservation Credits = $\sum (M \times A) =$ 311.0

Area 5 = Preservation

2003-1G-066

**BHR Acquisition Co., LLC & Winding River BTS 1 LC
Buckwalter Southwest Tract Development
February 11, 2003**

CREATION MITIGATION FACTORS FOR WETLANDS AND OTHER WATERS OF THE U.S. EXCLUDING STREAMS

Factors	Options				
	Vegetation	N.A. 0	Natural 0.1		Planted 0.4
Soil	N.A. 0	U.S.S. 0	T.S.S. 0.1	E.S.S. 0.4	
Control	N.A. 0	Covenant Private 0	Covenant POA 0.1	Conservation Easement 0.2	Transfer Fee Title Conservancy 0.3
Temporal Lag	Over 20 -0.3	10 to 20 -0.2	5 to 10 -0.1	0 to 5 0	
Credit Schedule	Schedule 5 0	Schedule 4 0.1	Schedule 3 0.2	Schedule 2 0.3	Schedule 1 0.4
Kind	Category 5 0.1	Category 4 0.2	Category 3 0.3	Category 2 0.4	Category 1 0.5
Location	Zone 5 0.1	Zone 4 0.2	Zone 3 0.3	Zone 2 0.4	Zone 1 0.5

N.A. = Not Applicable

Proposed Creation Mitigation Sample Worksheet

Factor	Area 6	Area 2	Area 3	Area 4	Area 5
Vegetation	0.4				
Soil	0.4				
Control	0.1				
Temporal Lag	-0.3				
Credit Schedule	0.3				
Kind	0.2				
Location	0.5				
Sum of m Factors	M ₁ = 1.6	M ₂ =	M ₃ =	M ₄ =	M ₅ =
Mitigation Area	A ₁ = 15.88	A ₂ =	A ₃ =	A ₄ =	A ₅ =
M x A =	25.4				

Total Creation Credits = $\sum (M \times A) =$

25.4

Area 6 = Creation Emergent/Littoral Shelves

2003-16-066

**BHR Acquisition Co., LLC & Winding River BTS 1 LC
Buckwalter Southwest Tract Development
February 11, 2003**

**WETLANDS AND OTHER WATERS OF THE U.S. EXCLUDING STREAMS
Mitigation Summary Worksheet For Permit Application # 2003-1G-066**

I. Required Mitigation

A. Total Required Mitigation Credits =	542.9
--	-------

II. Non-Banking Mitigation Credit Summary

	Credits	Acres
B. Creation	25.4	15.88
C. Restoration and/or Enhancement (non-Buffer Enhancement)	353.2	108.02
D. Restoration and/or Enhancement (Buffer Enhancement)	86.3	78.49
E. Total No Net Loss Non-Bank Mitigation = B + C + D	464.9	202.39
F. Preservation	311.0	345.53
G. Total Proposed Non-Bank Mitigation = E + F	775.9	547.92

III. Banking Mitigation Credit Summary

	Credits	Acres
H. Creation		
I. Restoration and/or Enhancement (non-Buffer Enhancement)		
J. Restoration and/or Enhancement (Buffer Enhancement)		
K. Total No Net Loss Non-Bank Mitigation = H + I + J		
L. Preservation		
M. Total Proposed Non-Bank Mitigation = K + L		

IV. Grand Totals

	Credits	Acres
N. Total Preservation Mitigation = F + L	311.0	345.53
O. Total Non-Preservation Mitigation = E + K	464.9	202.39
P. Total Creation = B + H	25.4	15.88
Q. Total Restoration and/or Enhancement (Non-Buffer Enhancement) = C + I	353.2	108.02
R. Total Proposed Mitigation = G + M	775.9	547.92

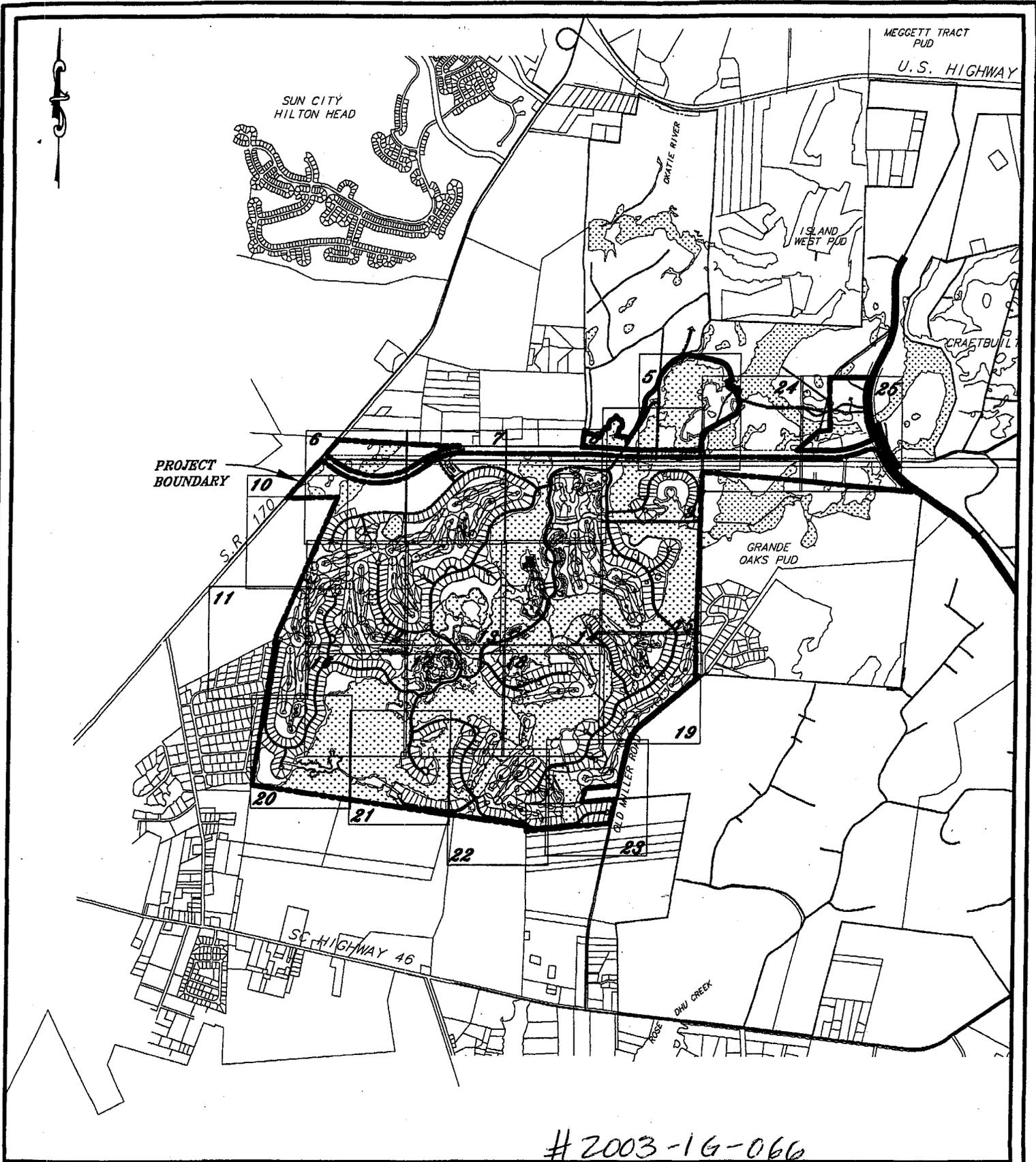
2003 - 1G - 066

**BHR Acquisition Co., LLC & Winding River BTS 1 LC
Buckwalter Southwest Tract Development
February 11, 2003**

The Total Mitigation Credits (Row R) should be equal to or greater than the total Required Mitigation Credits (Row A) for the proposed mitigation to be acceptable. The other requirements given in the SOP must also be satisfied, e.g., in the credits column, Row O must equal at least 50% of Row A and the addition of Row P and Row Q must equal at least 25% of Row A. If the answer to any of the questions below is no, then the proposed mix and/or quantity of mitigation is not in compliance with the policy and the plan should be revised or rejected, unless a variance is approved.

	Yes	No
$PMC \geq RMC$ or in words Are the credits in Row R greater than or equal to Row A?	X	
$PMC_{Non\ Preservation} \geq \frac{1}{2} RMC$ or in words Are the credits in Row O greater than or equal to 50% of Row A?	X	
$PMC_{Creation + Restoration/Enhancement\ (Non-Buffer\ Enhancement)} \geq \frac{1}{4} RMC$ or in words Are the credits in Row P plus the credits in Row Q greater than or equal to 25% of Row A?	X	

2003-1A-066



#2003-16-066

BUCKWALTER SOUTHWEST TRACT
 WETLANDS MASTER PLAN

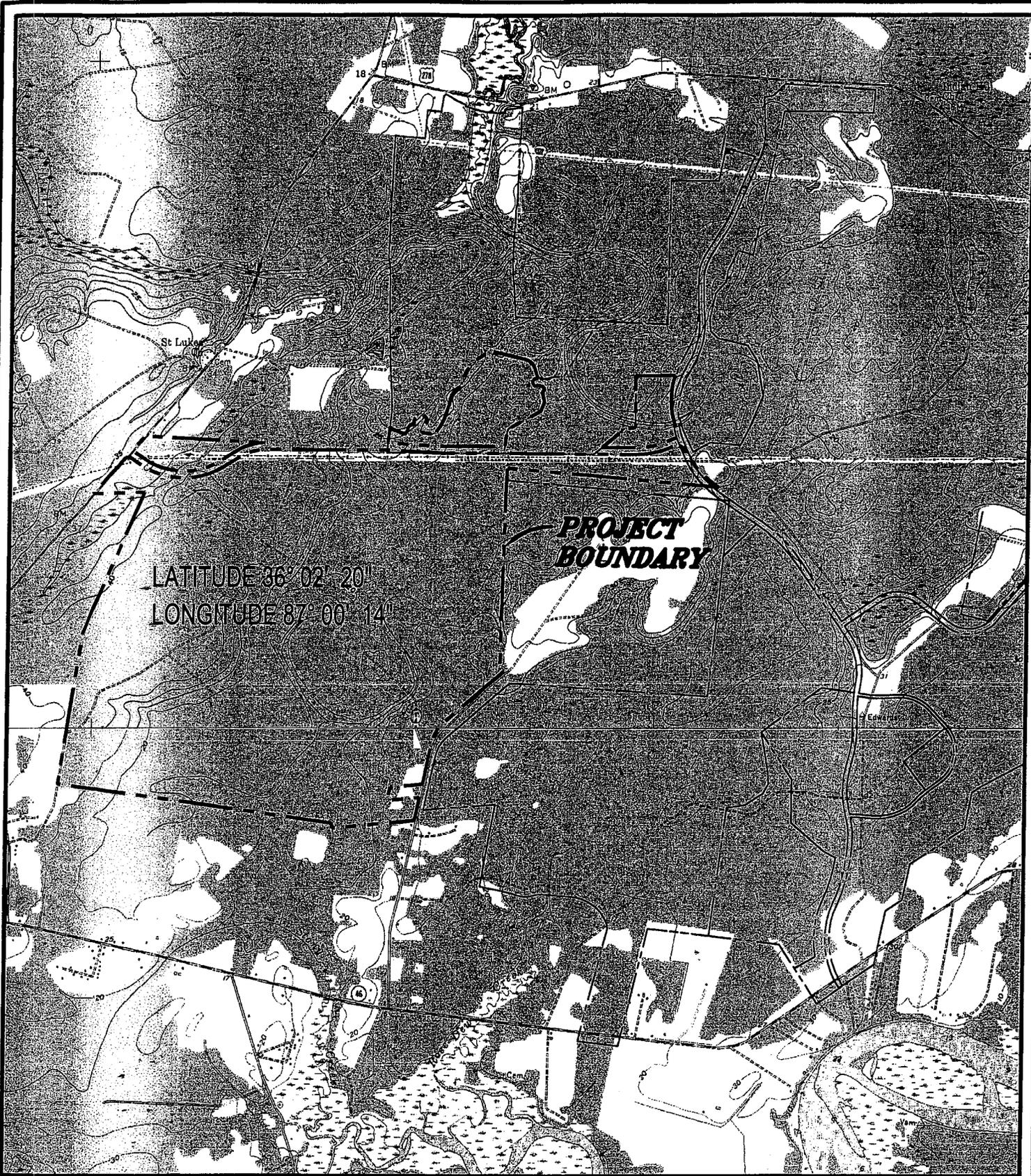
DATE: FEBRUARY 10, 2003

SHEET 1 OF 39
 SCALE: NO SCALE
 SOURCE: THOMAS & HUTTON ENGINEERING CO.

DATUM: MEAN SEA
 LEVEL

PROPOSED ACTIVITY:
 WETLAND MODIFICATION FOR
 PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
 APPLICANT: BHR AQUISITION CO., L.L.C.
 WINDING RIVER BTS 1, L.C.



BUCKWALTER SOUTHWEST TRACT
USGS QUADRANGLE- JASPER

2003-16-066

DATE: FEBRUARY 10, 2003

SHEET 2 OF 39

NO SCALE

SOURCE: THOMAS & HUTTON ENGINEERING CO.

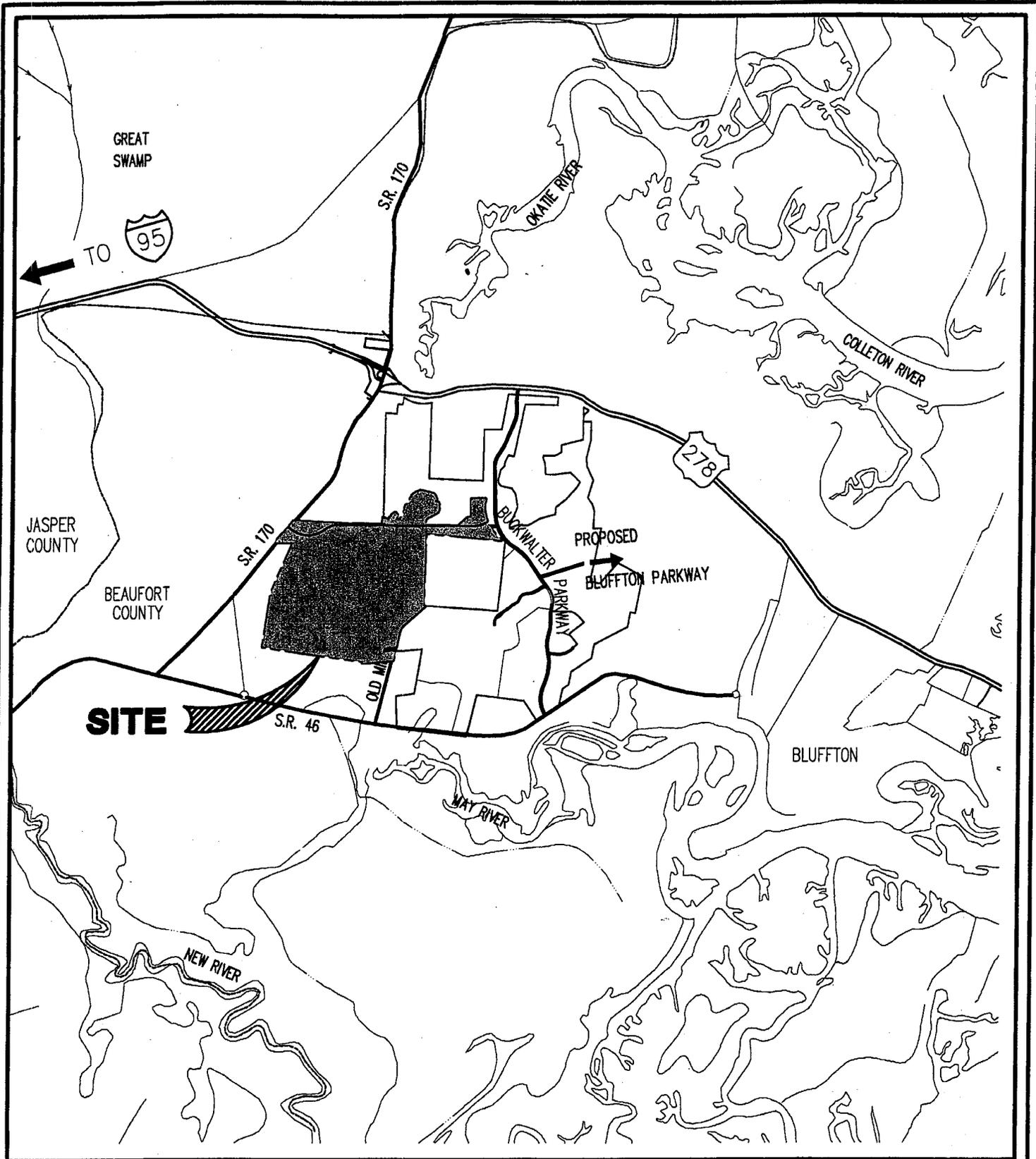
DATUM: MEAN SEA
LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR
PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.



BUCKWALTER SOUTHWEST TRACT
 WETLANDS MASTER PLAN (LOCATION MAP)

#2003-16-066

DATE: FEBRUARY 10, 2003

SHEET 3 OF 39

SCALE: NO SCALE

SOURCE: THOMAS & HUTTON ENGINEERING CO.

DATUM: MEAN SEA
 LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR
 PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
 TOWN OF BLUFFTON

APPLICANT: BHR ACQUISITION CO., L.L.C.
 WINDING RIVER BTS 1, L.C.

LEGEND

ACREAGE SUMMARY

TOTAL TRACT ACREAGE	1967.44 AC
TOTAL NON-JURISDICTIONAL WETLAND ACREAGE	31.89 AC
TOTAL 404 JURISDICTIONAL WETLAND ACREAGE	548.04 AC

WETLAND IMPACTS

<u>NON-JURISDICTIONAL WETLANDS TO BE FILLED</u>	<u>404 JURISDICTIONAL WETLANDS TO BE IMPACTED</u>
WETLANDS TO BE FILLED 24.60 AC	WETLAND ROAD CROSSING 6.78 AC
	20 PERCENT ROAD CROSSING CONTINGENCY 1.36 AC
<hr/> TOTAL NON-JURISDICTIONAL WETLAND IMPACTS 24.60 AC	TOTAL ROAD CROSSING + 20% CONTINGENCY 8.14 AC
	WETLANDS TO BE FILLED FOR VARIOUS LAND DEVELOPMENT ACTIVITIES 2.49 AC
	WETLANDS TO BE HAND CLEARED 5.58 AC
	STORMWATER MANAGEMENT 0.71 AC
	LAGOON EXCAVATION 6.32 AC
	EMERGENT WETLAND CONVERSION 1.54 AC
	GOLF CART BRIDGE(10' WIDE) 3588 LF (LINEAR FOOTAGE CART BRIDGE IN WETLAND)
	<hr/> TOTAL 404 JURISDICTIONAL WETLAND IMPACTS 24.78 AC

WETLAND MITIGATION

FRESHWATER WETLAND PRESERVATION & ENHANCEMENT BY BUFFERING 424.02 AC	SINGLE FAMILY BUFFER AVERAGE WIDTH 65.14 AC MINIMUM WIDTH 37.03 LF 10 LF
FRESHWATER WETLAND ENHANCEMENT OF HYDROLOGY 99.53 AC	COMMERCIAL/GOLF BUFFER AVERAGE WIDTH 13.35 AC MINIMUM WIDTH 41.55 LF 15 LF
PINE PLANTATION RESTORATION 7.00 AC	<hr/> COMMERCIAL/GOLF/SINGLE FAMILY BUFFER TOTAL BUFFER ACRES 78.49 AC TOTAL AVERAGE WIDTH 38.16 LF
ROAD RESTORATION 1.49 AC	
UPLAND WETLAND BUFFER (SEE BUFFER NOTES) 78.49 AC	
CREATION WETLAND TERRACE 4.74 AC	
CREATION LITTORAL ZONES 11.14 AC	
<hr/> TOTAL MITIGATION ACRES 626.41 AC	

BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN (LEGEND)

2003-16-066

DATE: FEBRUARY 10, 2003

DATUM: MEAN SEA
LEVEL

SHEET 4 OF 39

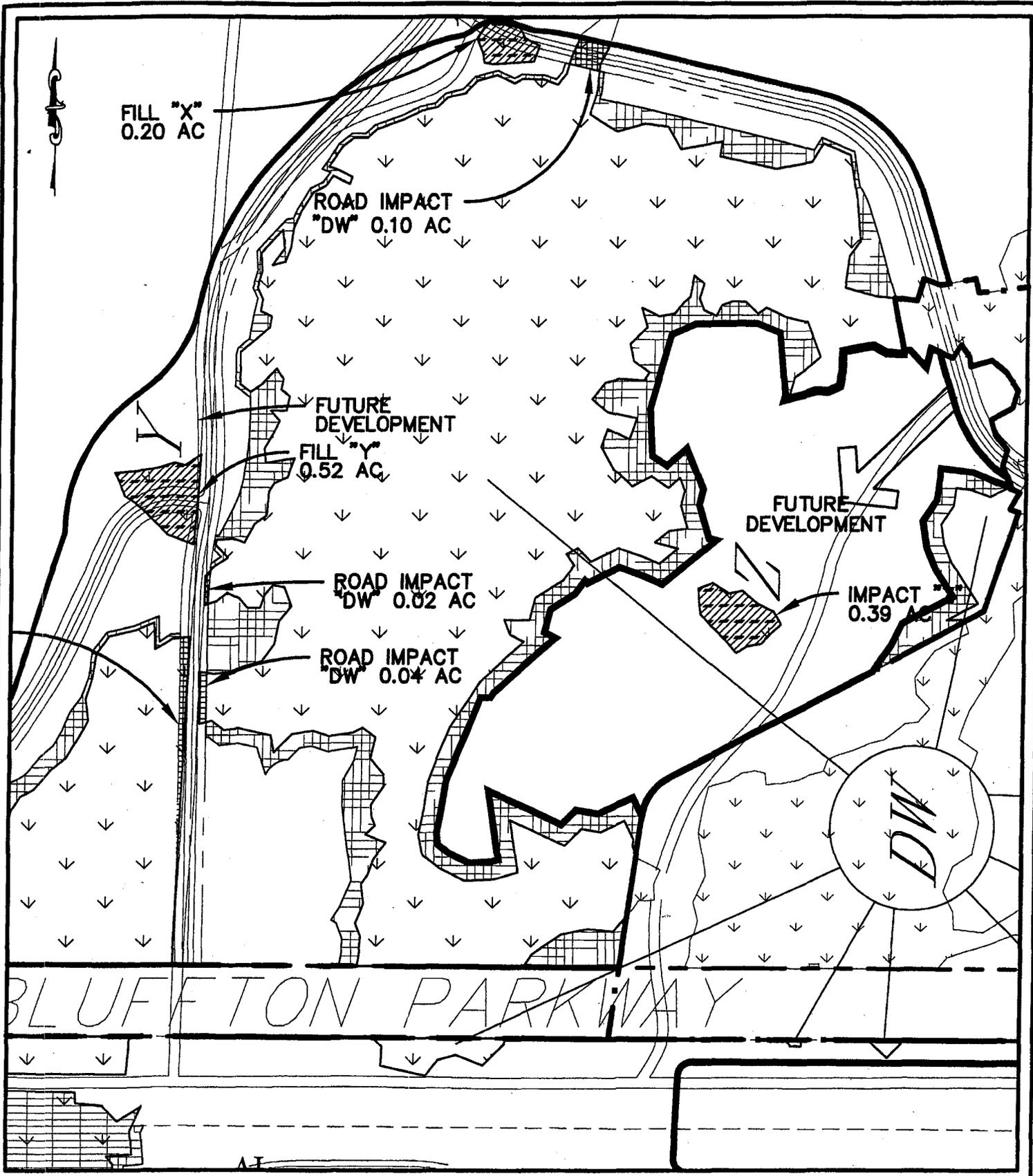
SOURCE: THOMAS & HUTTON ENGINEERING CO.

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR
PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR ACQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

#2003-19-066

DATE: FEBRUARY 10, 2003

SHEET 5 OF 39
SCALE: 1"=300'

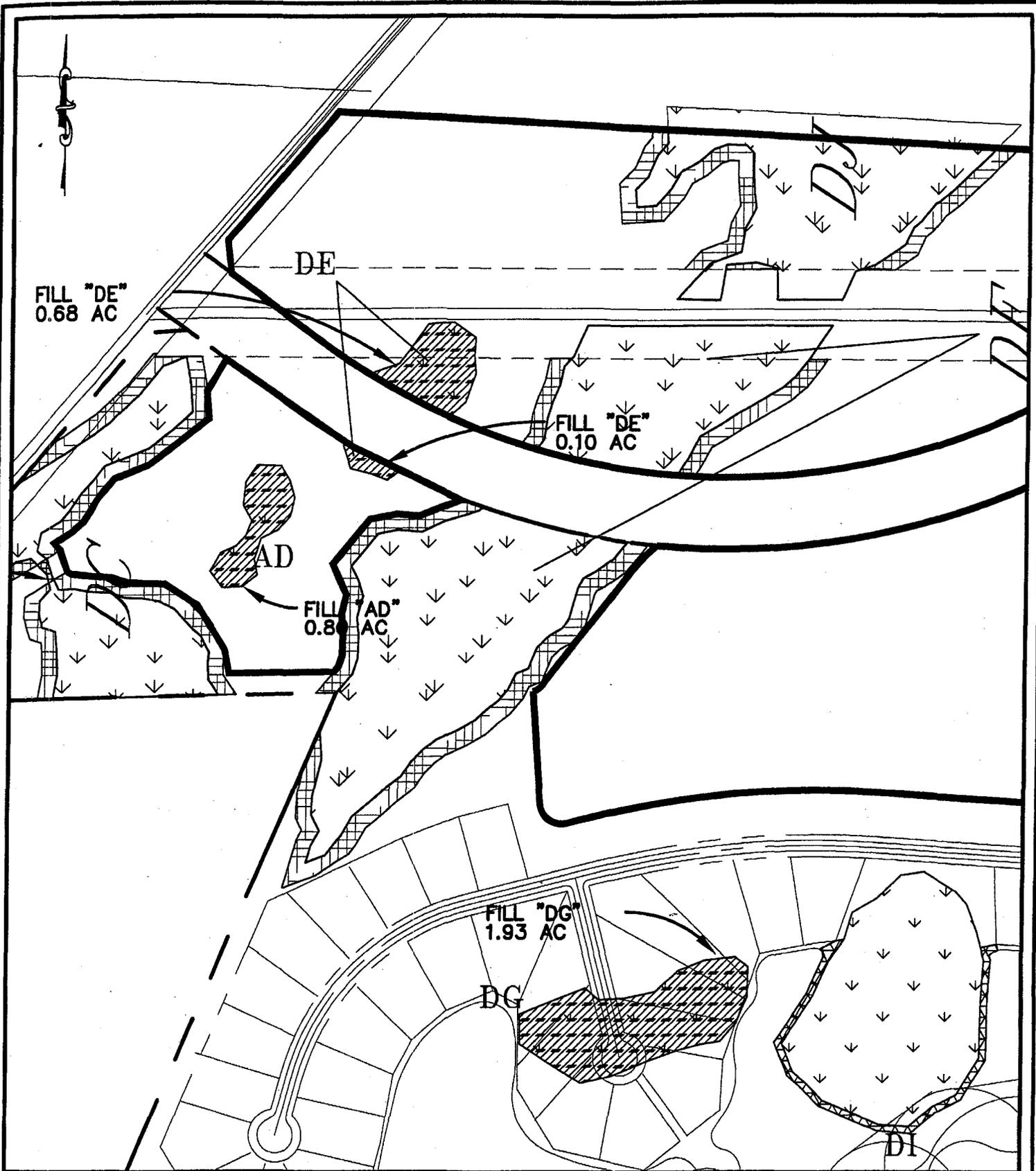
DATUM: MEAN SEA
LEVEL

SOURCE: THOMAS & HUTTON ENGINEERING CO.

PROPOSED ACTIVITY:
WETLAND MODIFICATION FOR
PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

2003-169-066

DATE: FEBRUARY 10, 2003

SHEET 6 OF 39

SCALE: 1"=300'

SOURCE: THOMAS & HUTTON ENGINEERING CO.

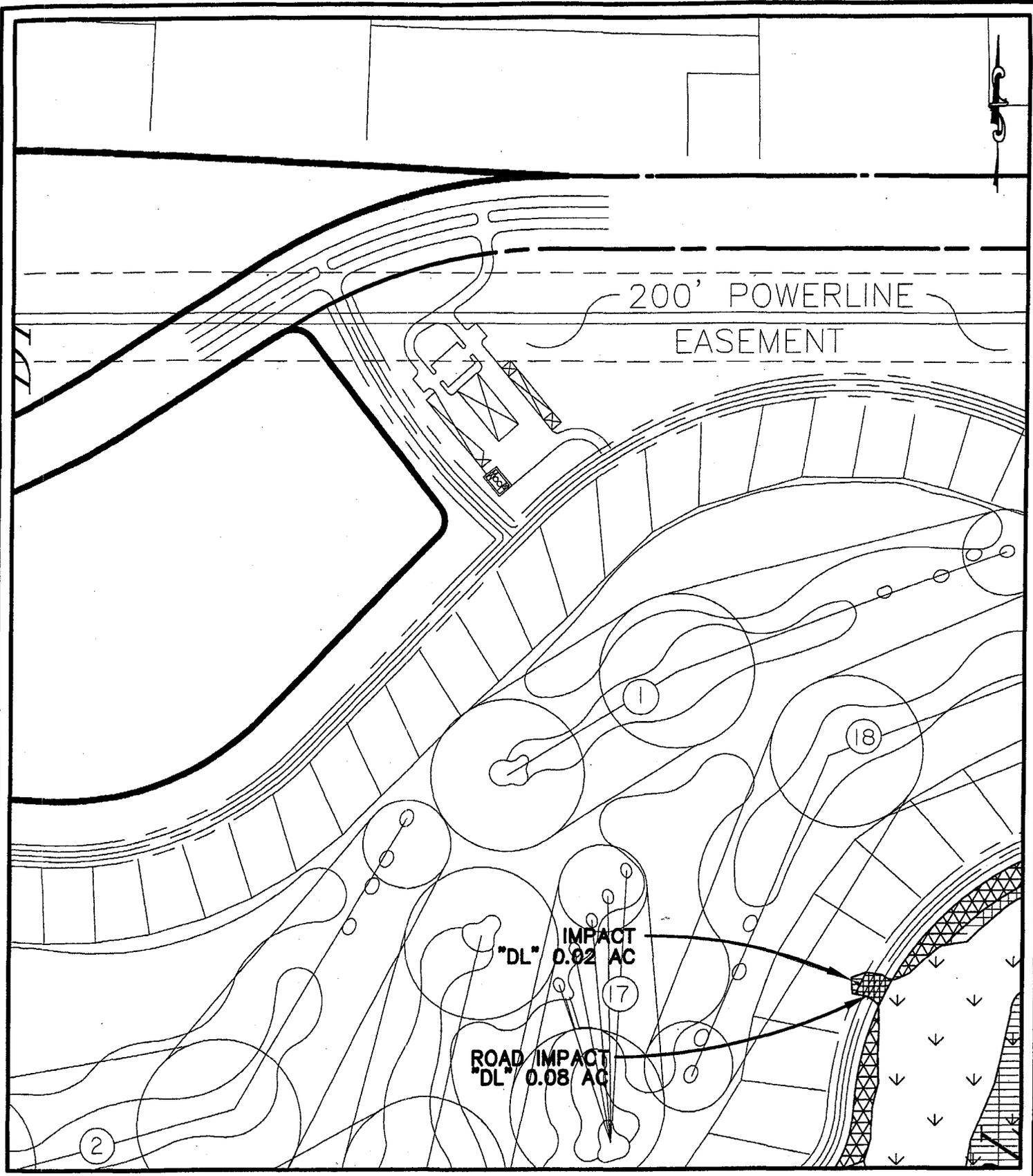
DATUM: MEAN SEA
LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR
PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR ACQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

#2003-19-066

DATE: FEBRUARY 10, 2003

DATUM: MEAN SEA
LEVEL

SHEET 7 OF 39
SCALE: 1"=300'

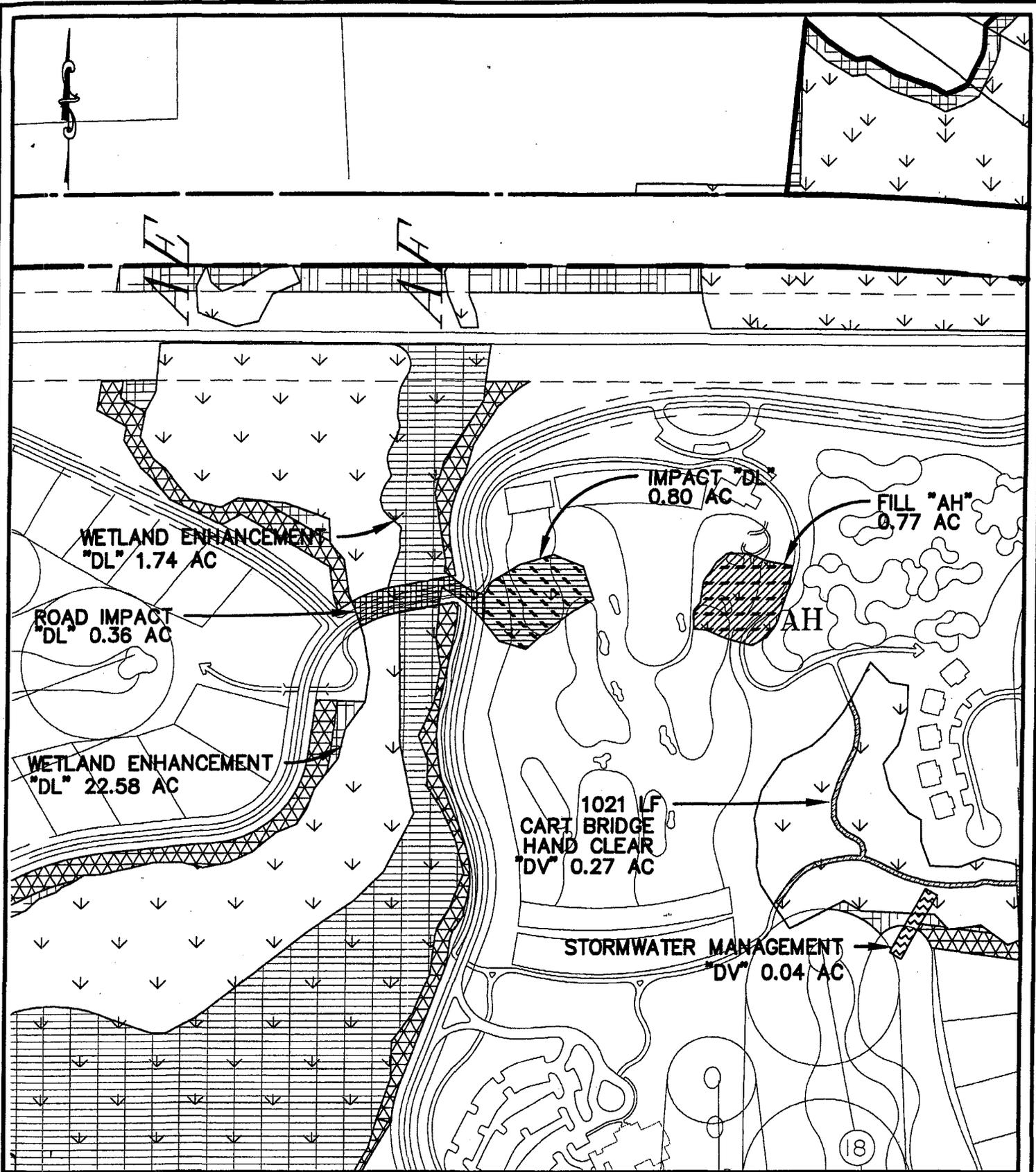
SOURCE: THOMAS & HUTTON ENGINEERING CO.

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR
PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

#2003-1G-066

DATE: FEBRUARY 10, 2003

SHEET 8 OF 39

SCALE: 1"=300'

SOURCE: THOMAS & HUTTON ENGINEERING CO.

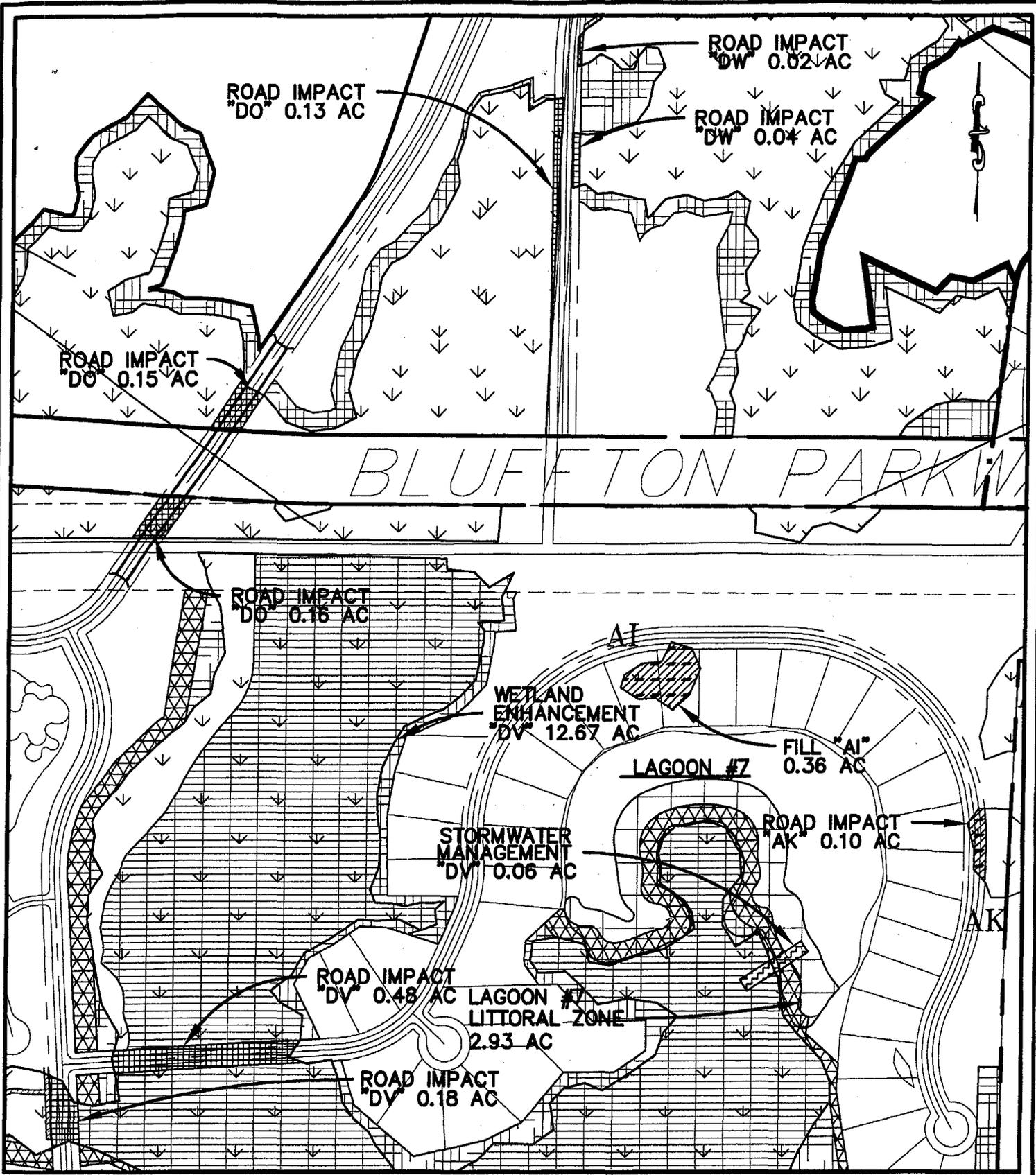
DATUM: MEAN SEA
LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR
PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR ACQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

DATE: FEBRUARY 10, 2003

SHEET 9 OF 39

SCALE: 1"=300'

SOURCE: THOMAS & HUTTON ENGINEERING CO.

#2003-161-066

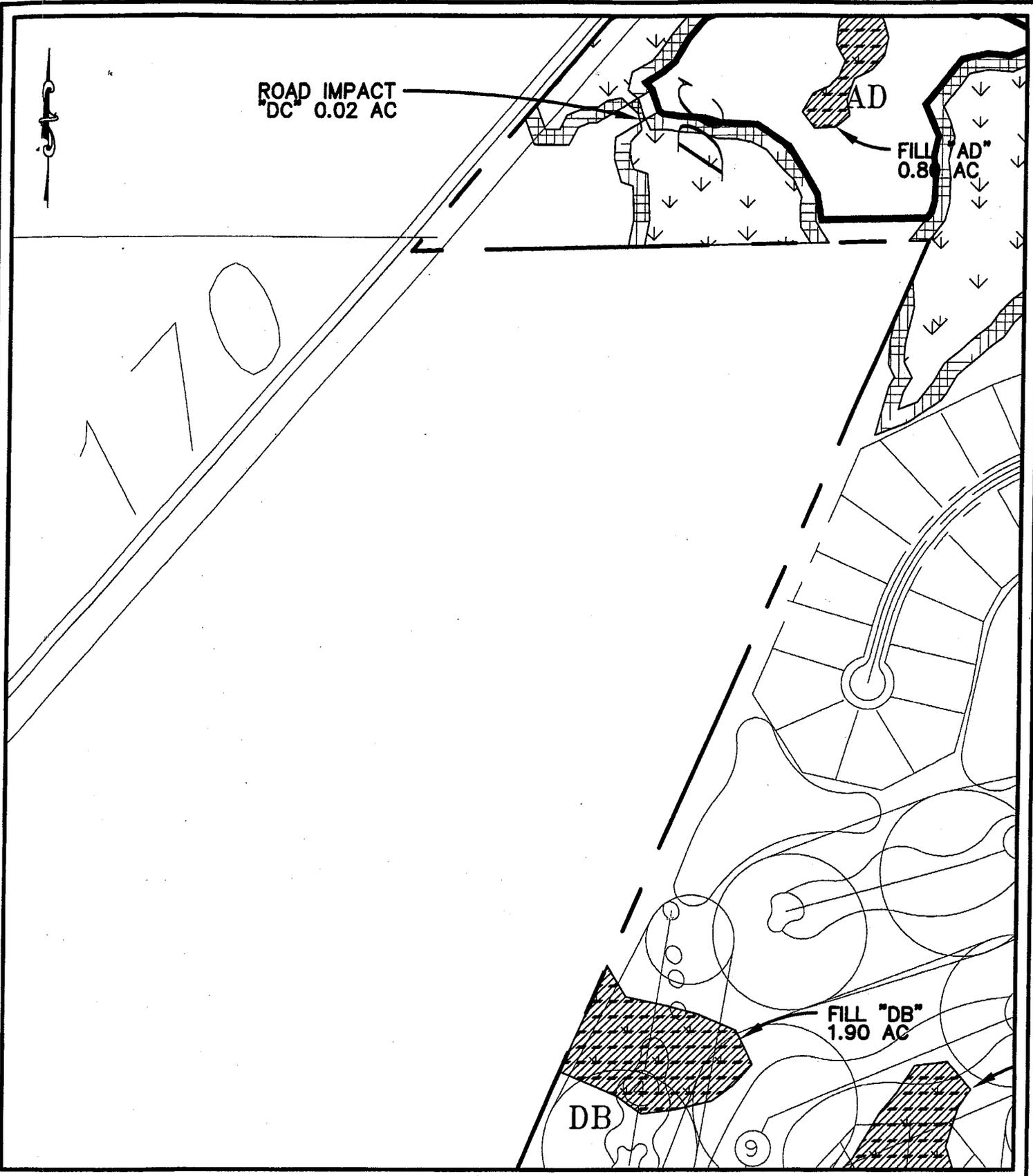
DATUM: MEAN SEA
LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR
PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR ACQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.L.C.



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

DATE: FEBRUARY 10, 2003

SHEET 10 OF 39

SCALE: 1"=300'

SOURCE: THOMAS & HUTTON ENGINEERING CO.

#2003-161-066

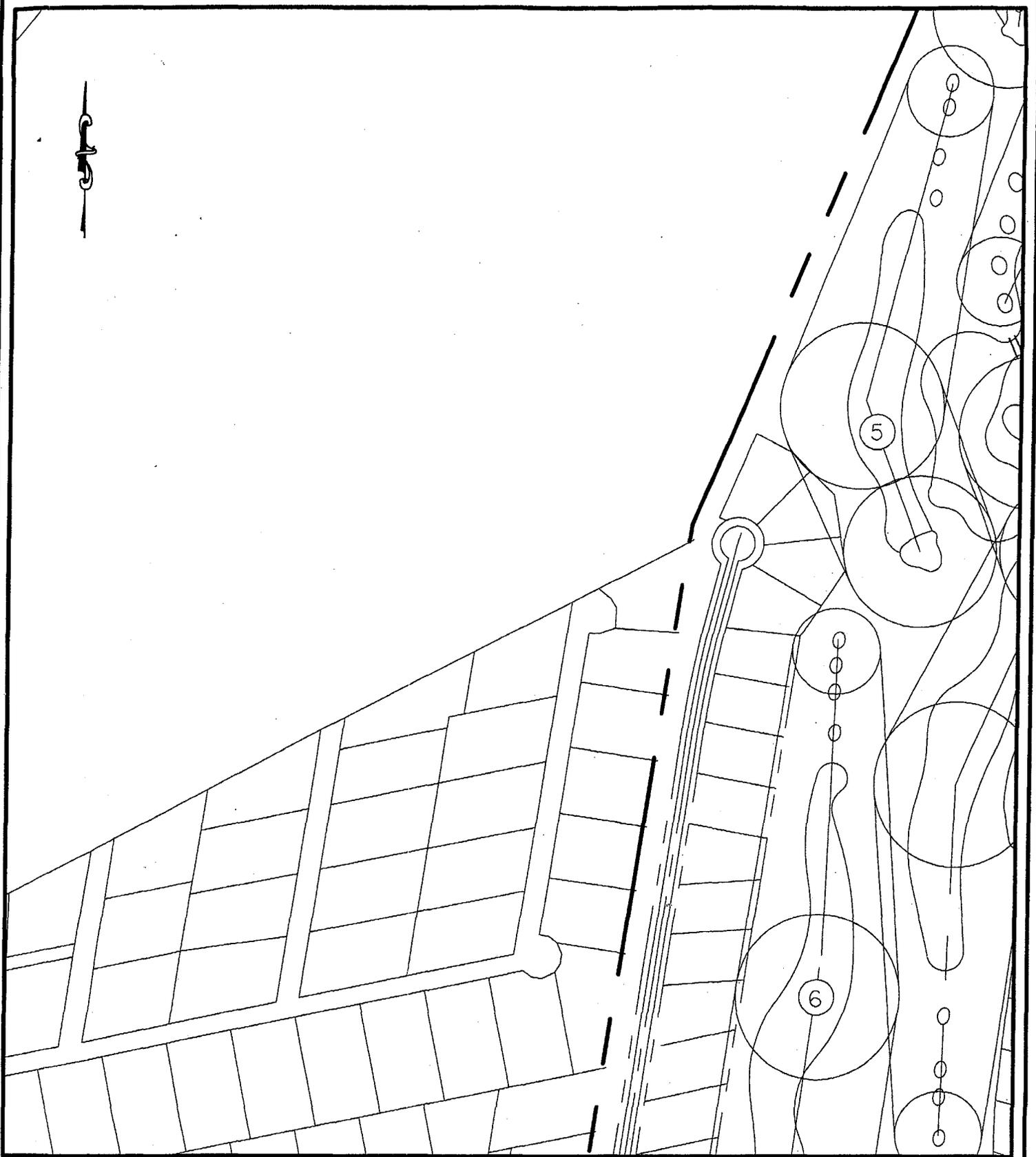
DATUM: MEAN SEA
LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR
PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

DATE: FEBRUARY 10, 2003

SHEET 11 OF 39

SCALE: 1"=300'

SOURCE: THOMAS & HUTTON ENGINEERING CO.

#2003-1G-066

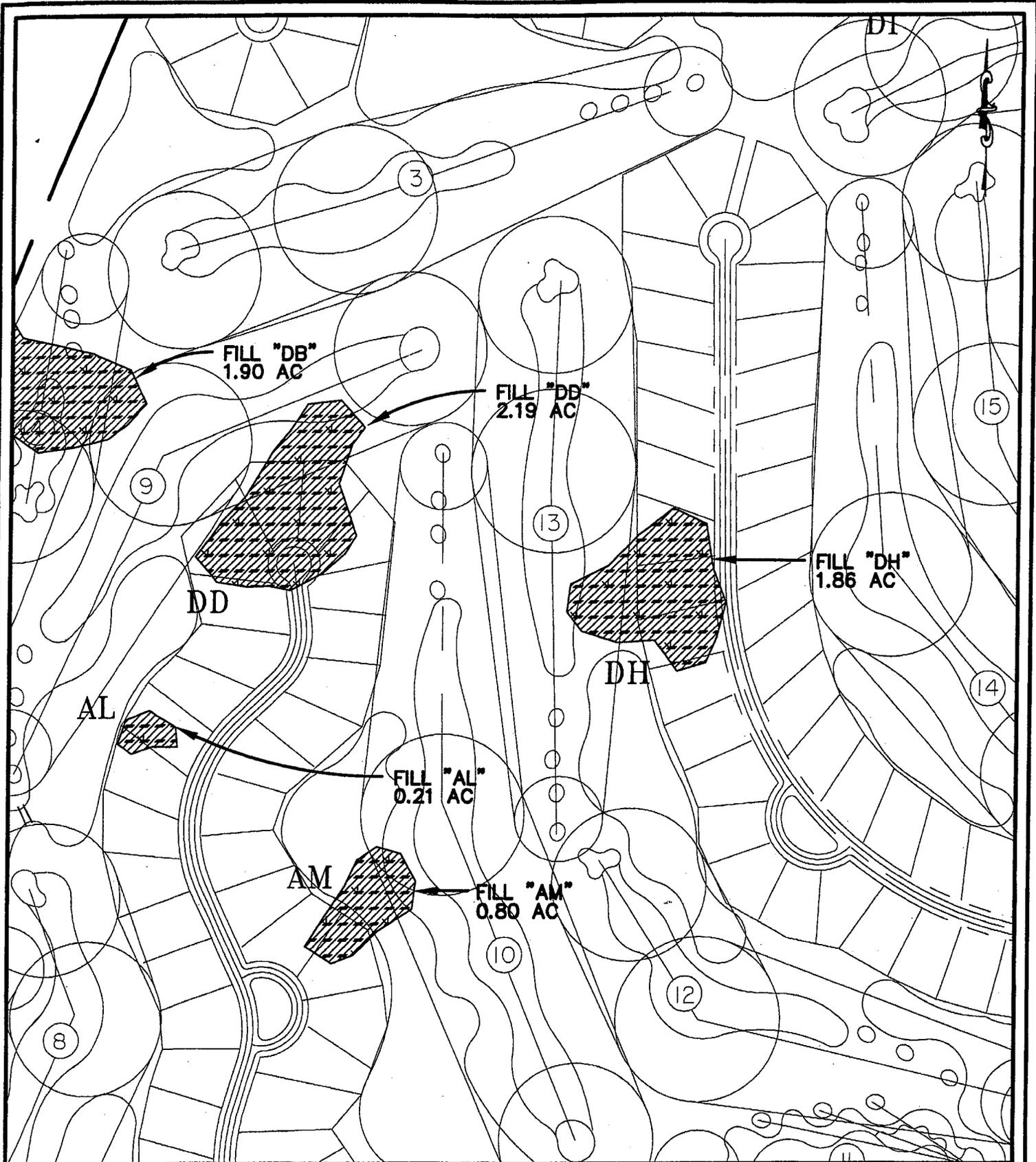
DATUM: MEAN SEA
LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR
PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR ACQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

DATE: FEBRUARY 10, 2003

SHEET 12 OF 39
SCALE: 1"=300'

SOURCE: THOMAS & HUTTON ENGINEERING CO.

#2003-16-066

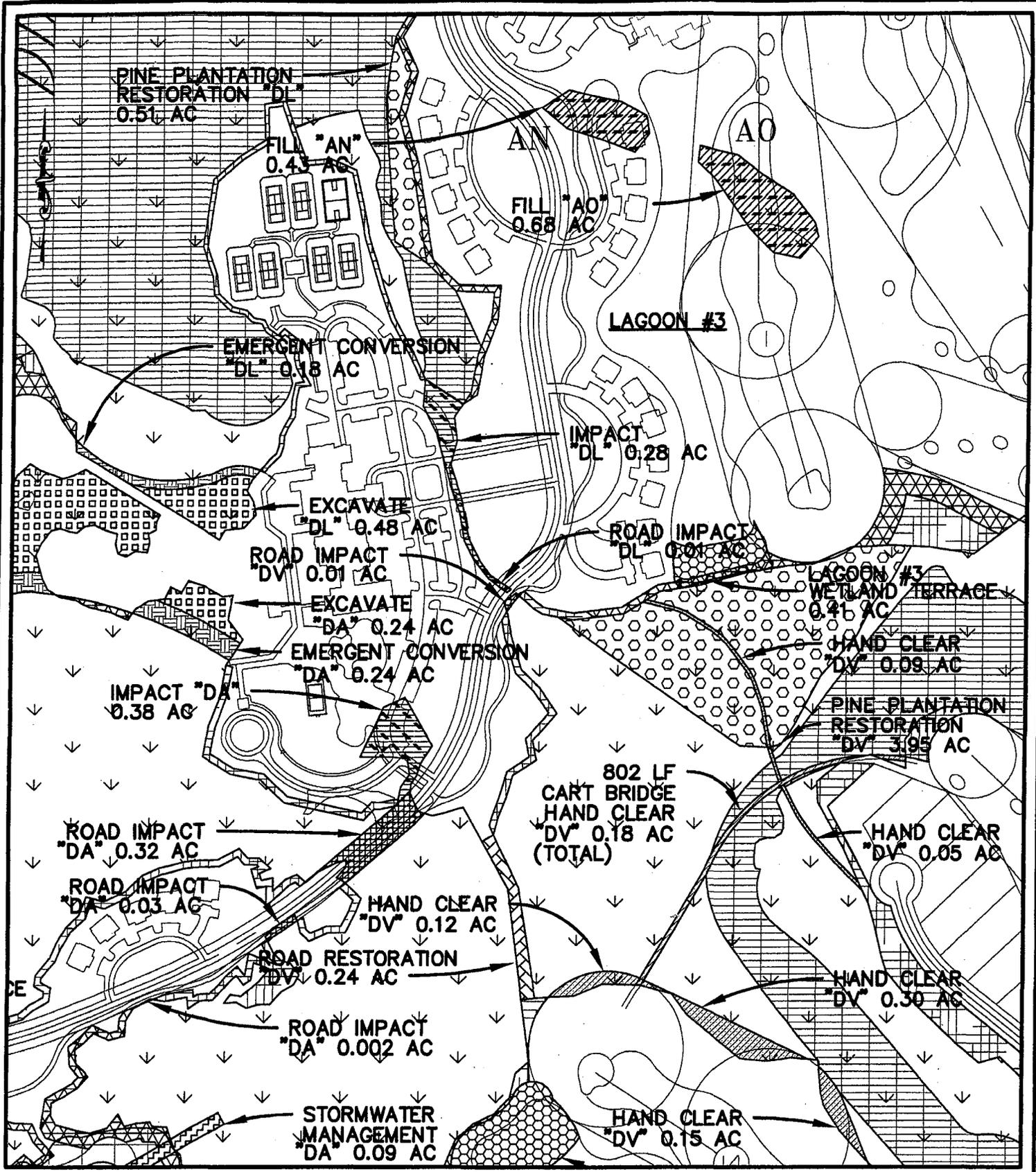
DATUM: MEAN SEA
LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR
PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR ACQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

DATE: FEBRUARY 10, 2003

SHEET 14 OF 39
SCALE: 1"=300'
SOURCE: THOMAS & HUTTON ENGINEERING CO.

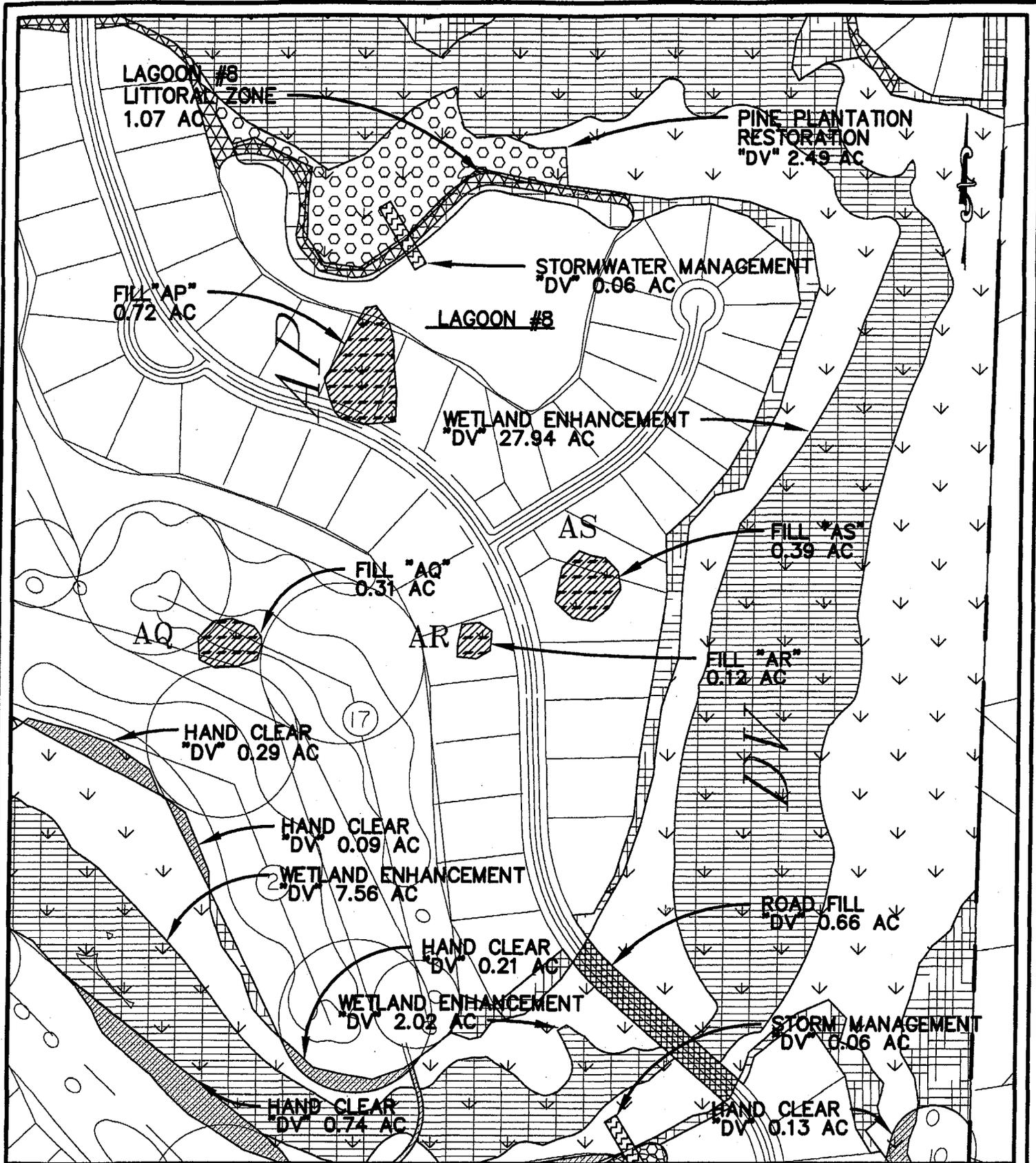
#2003-16-066

DATUM: MEAN SEA LEVEL

PROPOSED ACTIVITY:
WETLAND MODIFICATION FOR
PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

DATE: FEBRUARY 10, 2003

SHEET 15 OF 39

SCALE: 1"=300'

SOURCE: THOMAS & HUTTON ENGINEERING CO.

#2003-16-066

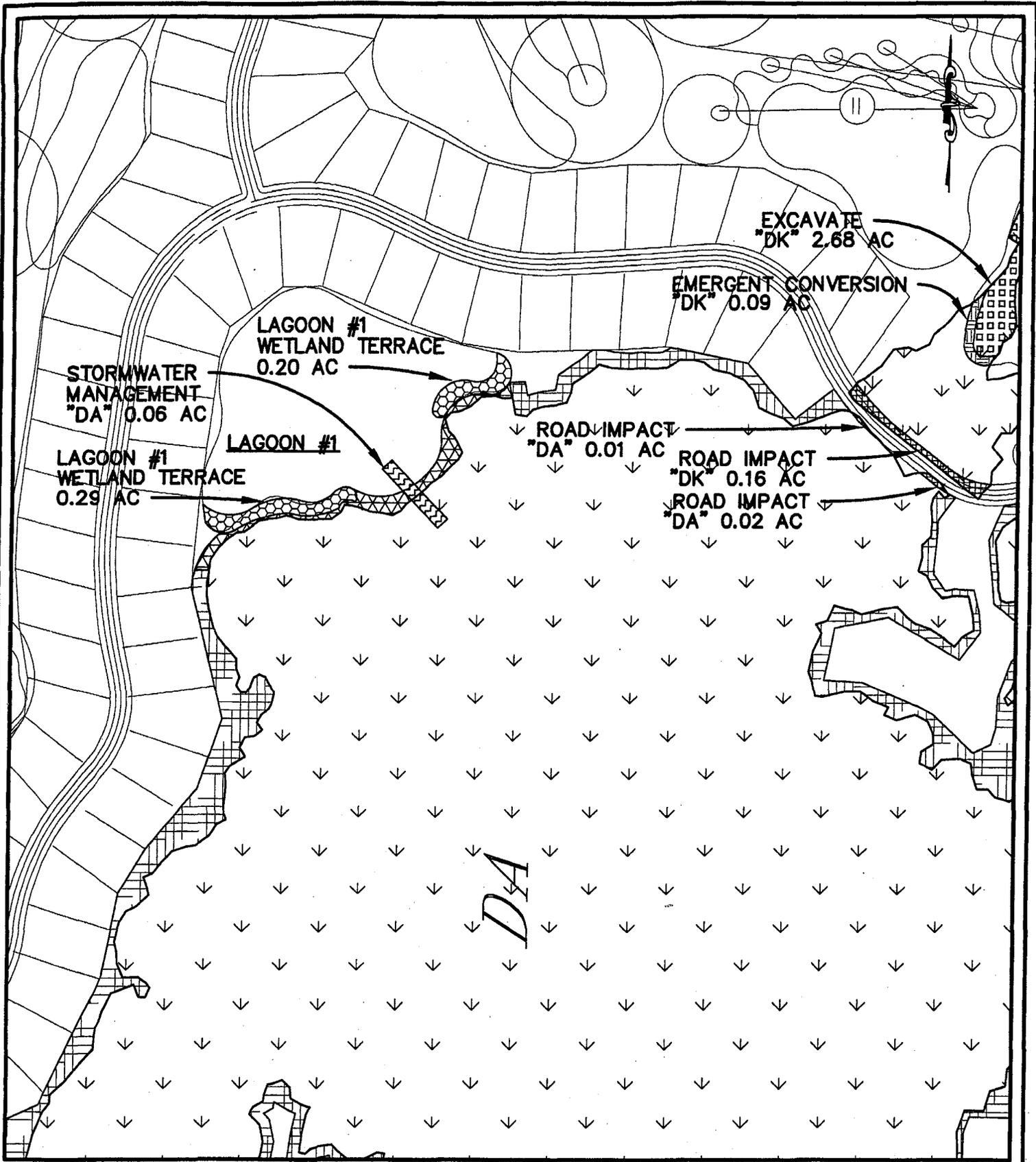
DATUM: MEAN SEA
LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR
PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S.C.
TOWN OF BLUFFTON

APPLICANT: BHR ACQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

DATE: FEBRUARY 10, 2003

SHEET 16 OF 39

SCALE: 1"=300'

SOURCE: THOMAS & HUTTON ENGINEERING CO.

#2003-16-066

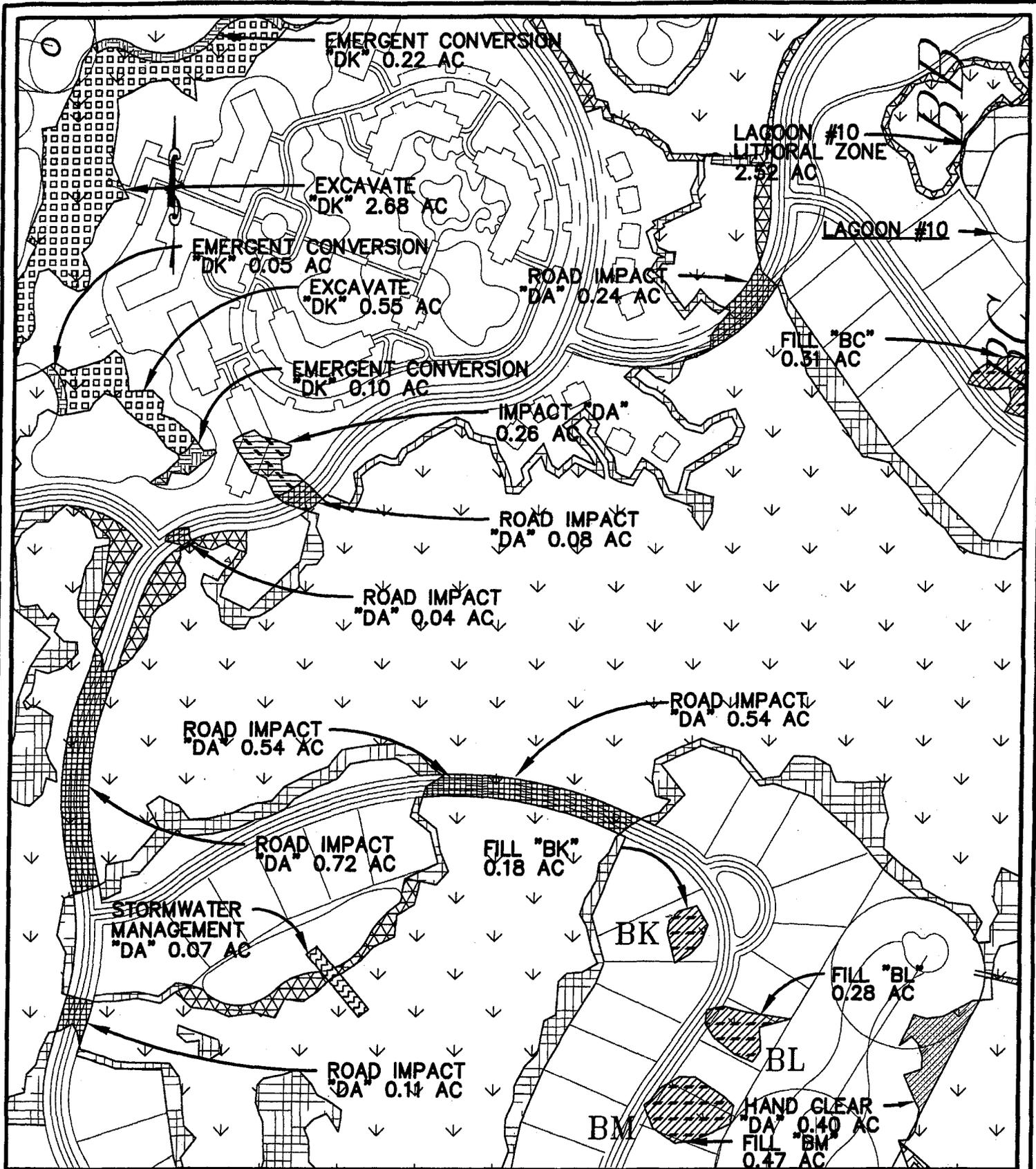
DATUM: MEAN SEA
LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR
PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

FEBRUARY 10, 2003

SHEET 17 OF 39

SCALE: 1"=300'

SOURCE: THOMAS & HUTTON ENGINEERING CO.

#2003-16-066

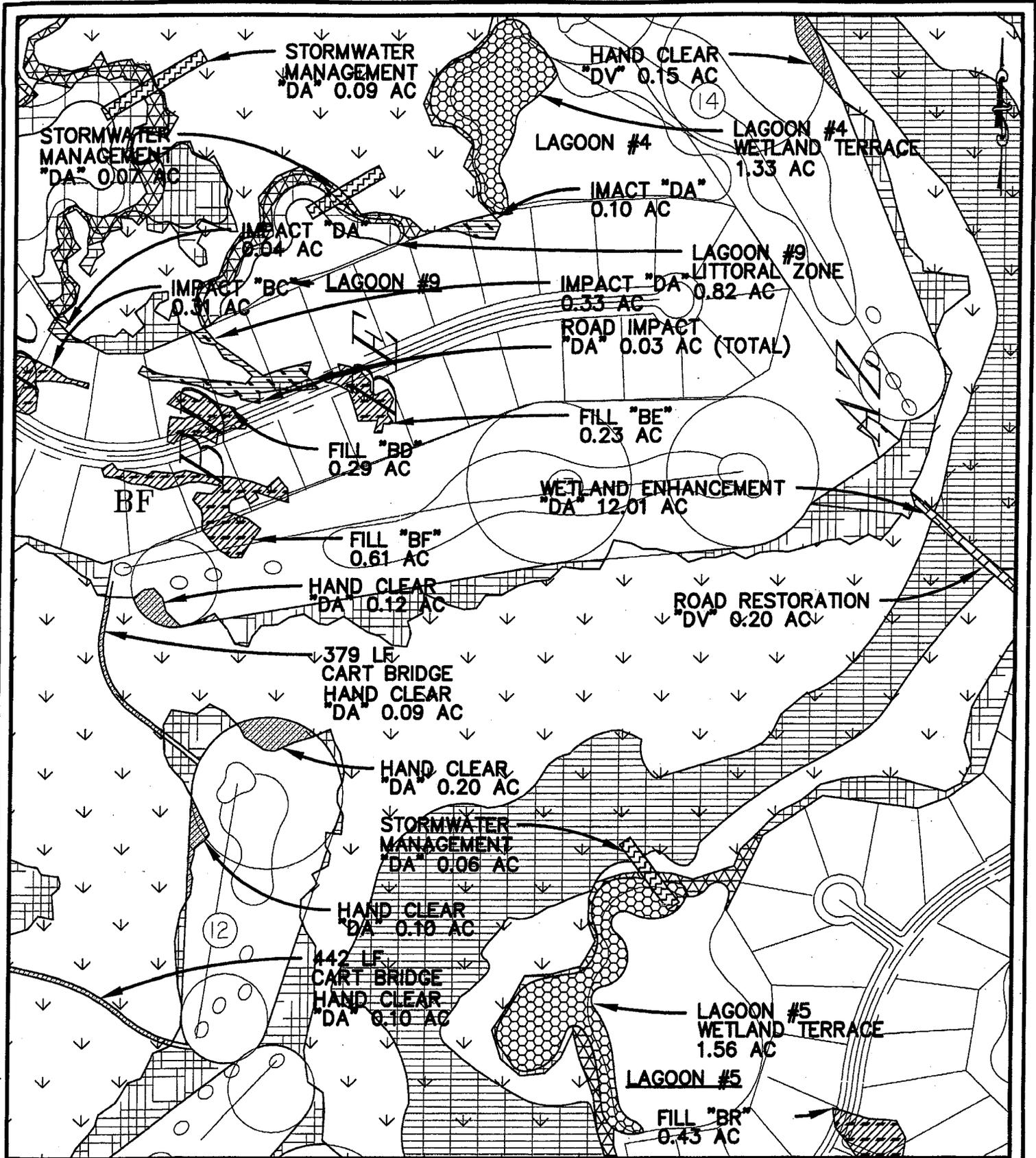
DATUM: MEAN SEA
LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR
PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR ACQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

DATE: FEBRUARY 10, 2003

SHEET 18 OF 39

SCALE: 1"=300'

SOURCE: THOMAS & HUTTON ENGINEERING CO.

#2003-19-066

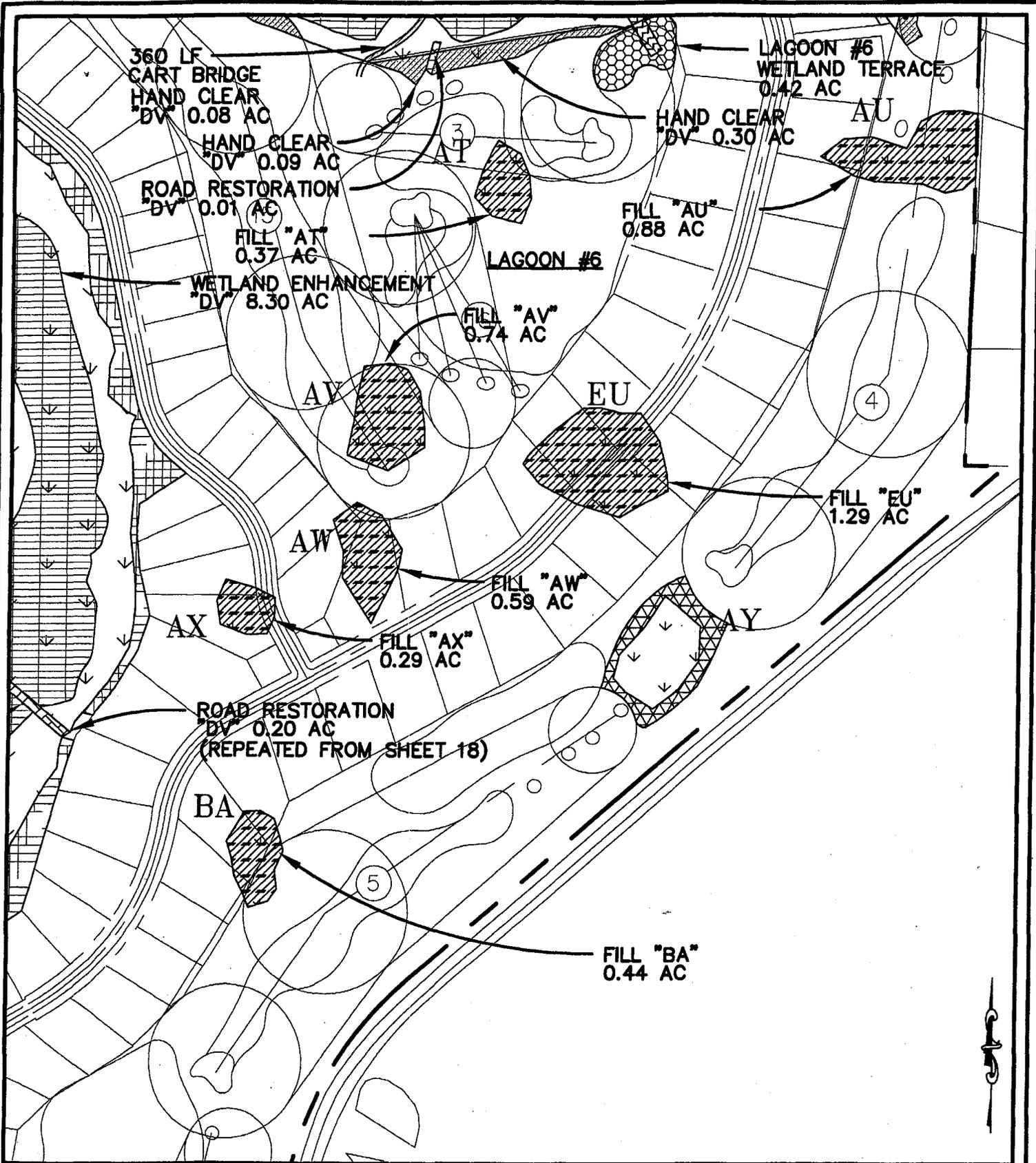
DATUM: MEAN SEA
LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR
PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

DATE: FEBRUARY 10, 2003

SHEET 19 OF 39

SCALE: 1"=300'

SOURCE: THOMAS & HUTTON ENGINEERING CO.

#2003-19-066

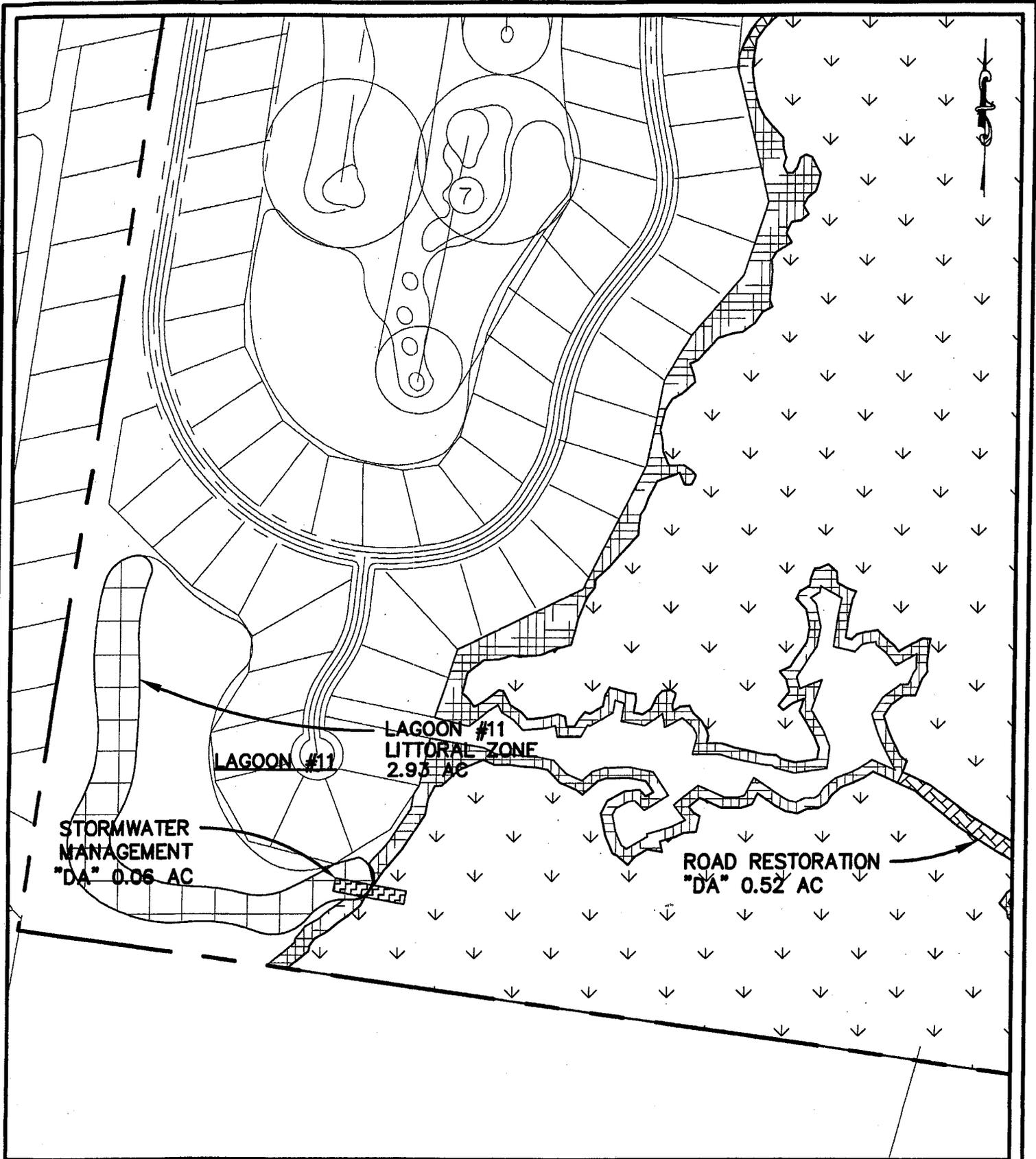
DATUM: MEAN SEA
LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR
PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

DATE: FEBRUARY 10, 2003

SHEET 20 OF 39

SCALE: 1"=300'

SOURCE: THOMAS & HUTTON ENGINEERING CO.

#2003-19-066

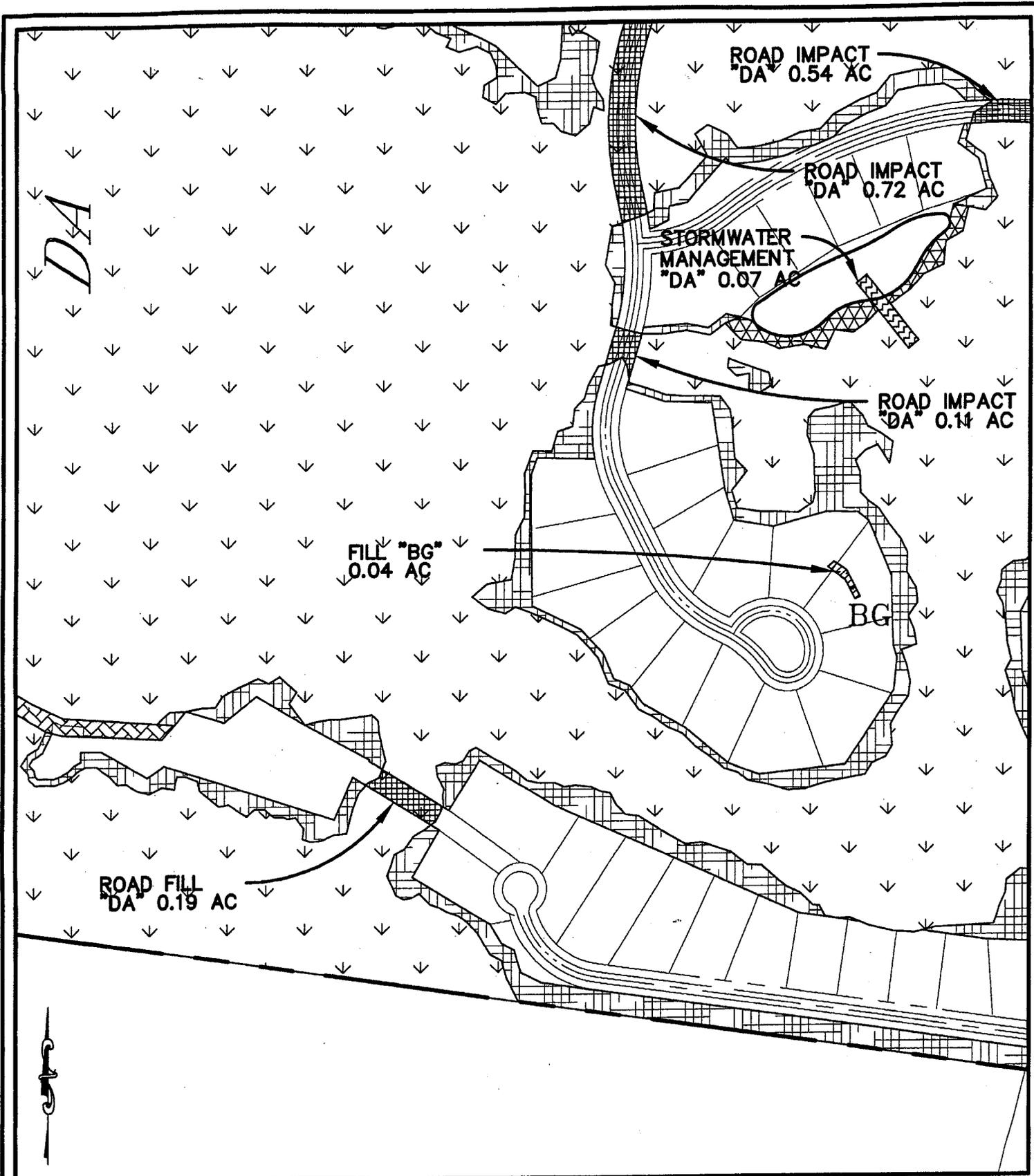
DATUM: MEAN SEA
LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR
PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

DATE: FEBRUARY 10, 2003

SHEET 21 OF 39

SCALE: 1"=300'

SOURCE: THOMAS & HUTTON ENGINEERING CO.

#2003-19-066

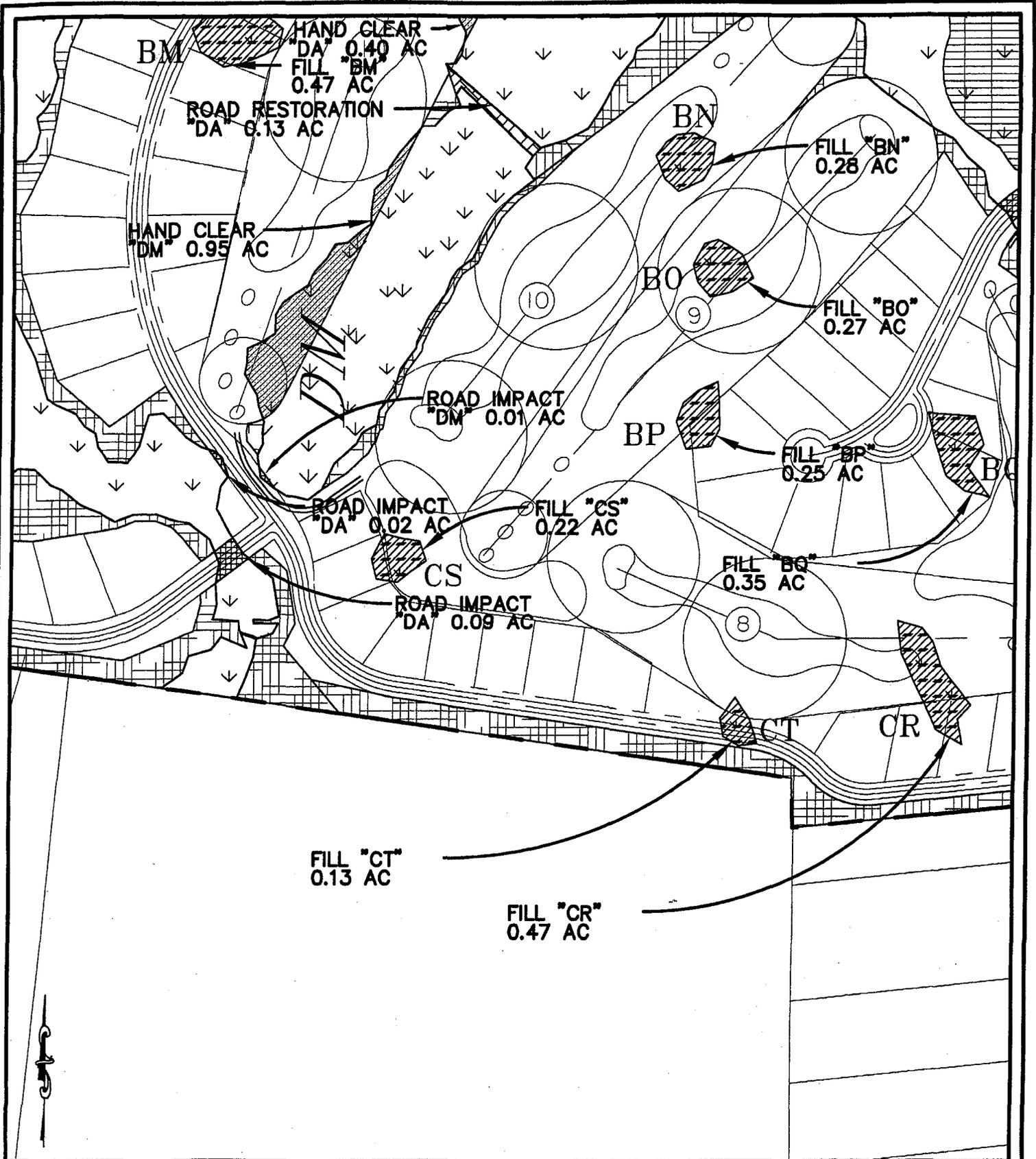
DATUM: MEAN SEA
LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR
PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR ACQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

#2003-19-066

DATE: FEBRUARY 10, 2003

SHEET 22 OF 39
SCALE: 1"=300'

SOURCE: THOMAS & HUTTON ENGINEERING CO.

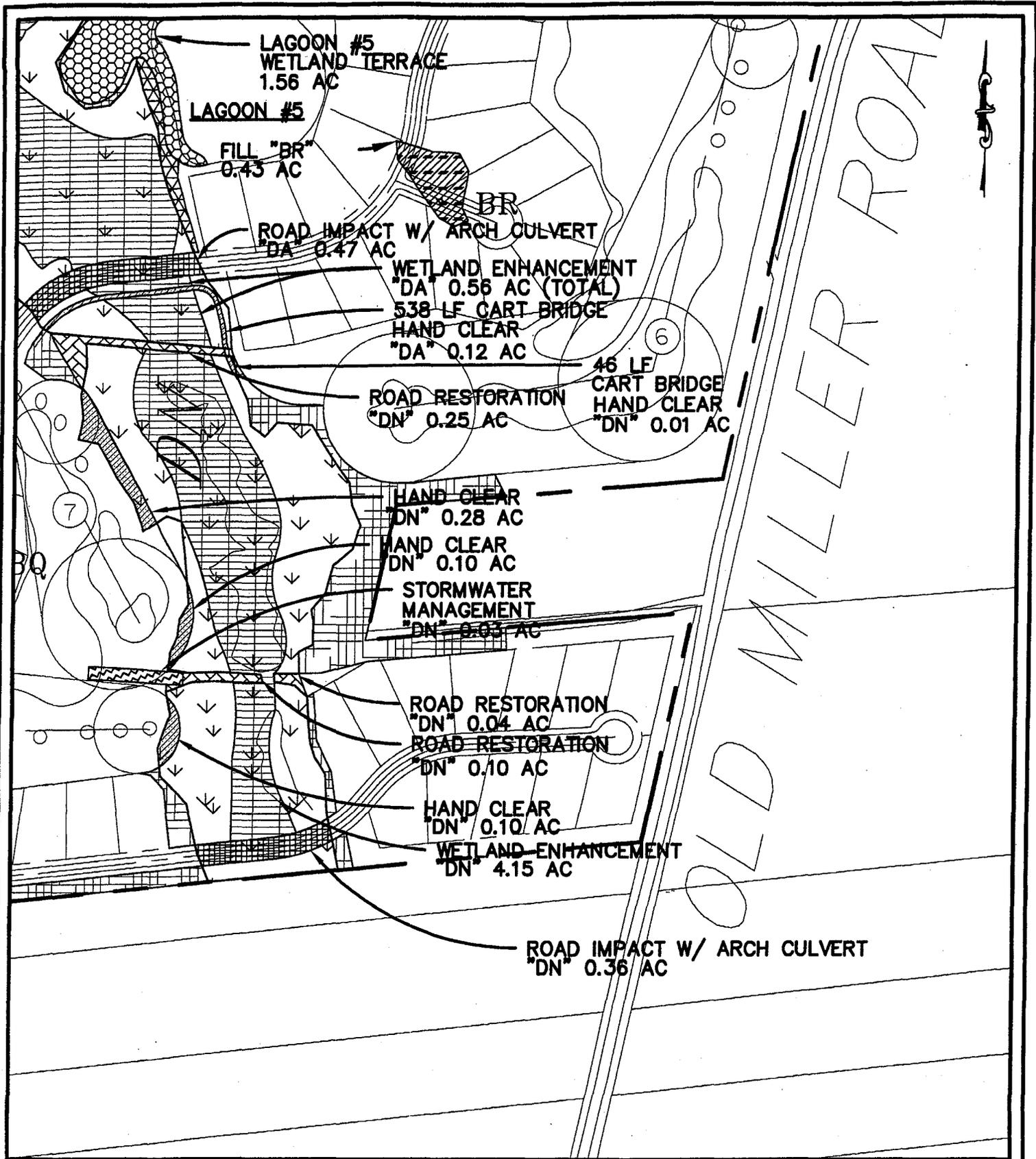
DATUM: MEAN SEA
LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR
PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR ACQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

DATE: FEBRUARY 10, 2003

SHEET 23 OF 39

SCALE: 1"=300'

SOURCE: THOMAS & HUTTON ENGINEERING CO.

#2003-19-066

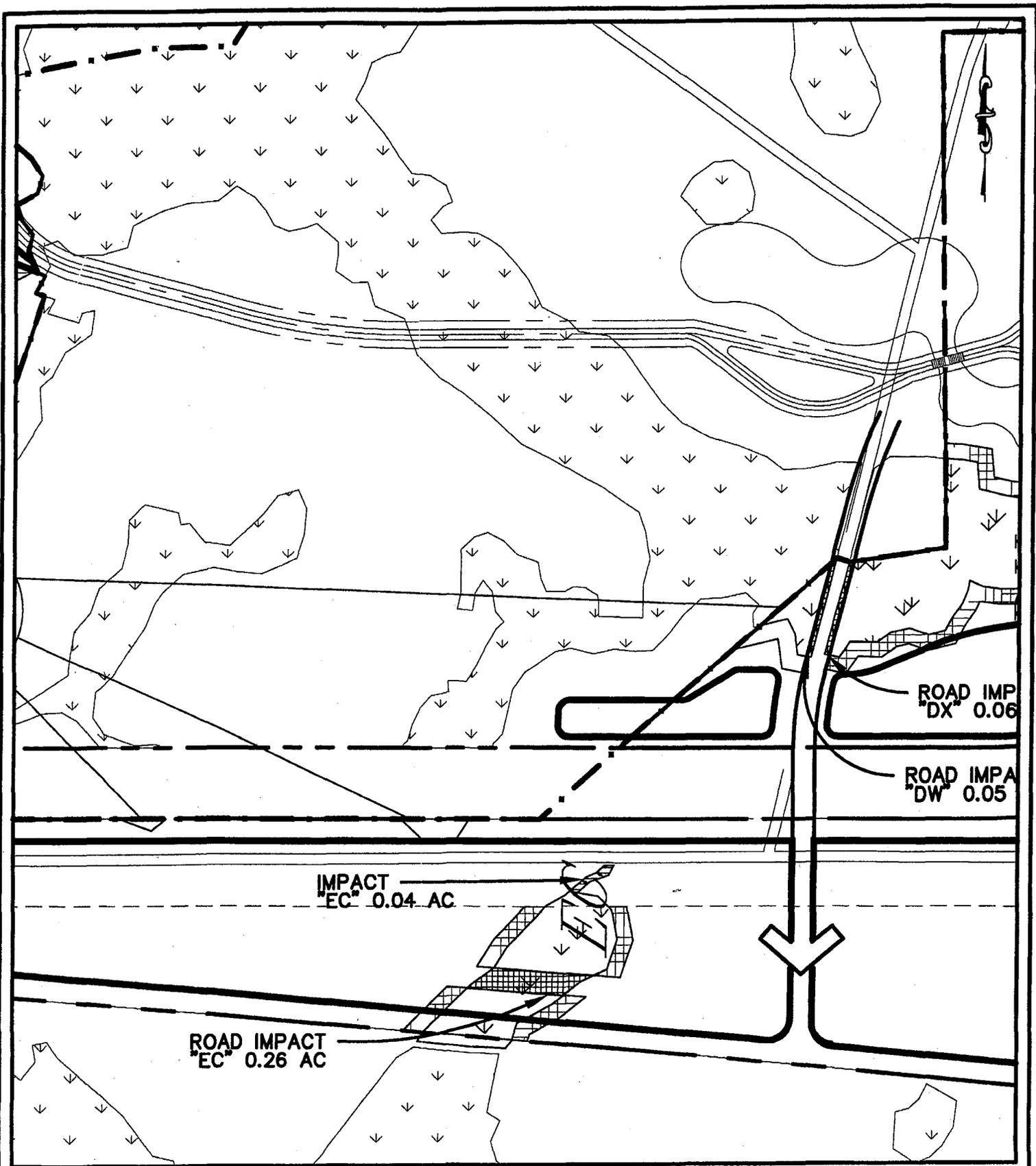
DATUM: MEAN SEA
LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR
PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR ACQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.



**BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN**

DATE: FEBRUARY 10, 2003

SHEET 24 OF 39

SCALE: 1"=300'

SOURCE: THOMAS & HUTTON ENGINEERING CO.

#2003-16-066

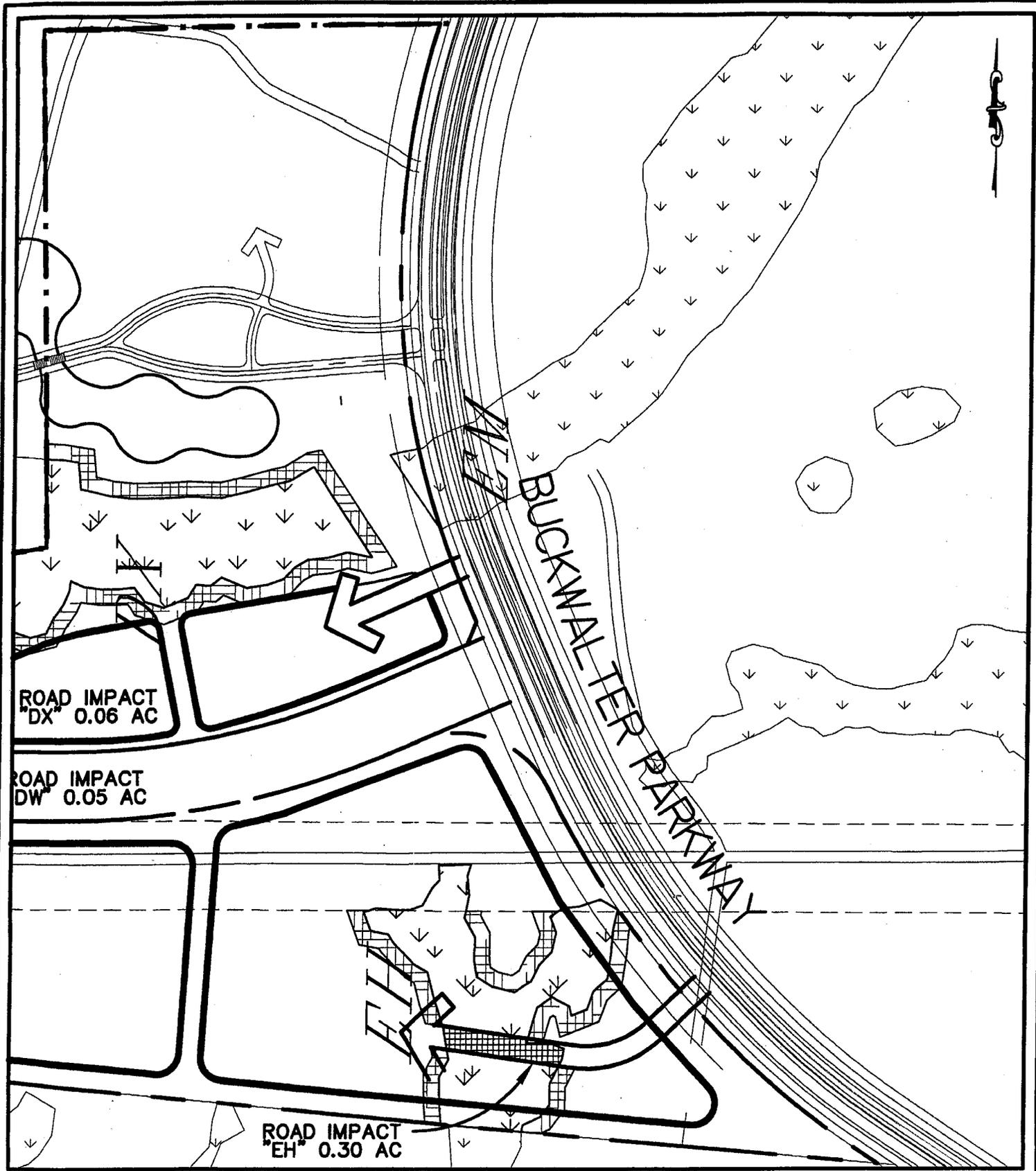
DATUM: MEAN SEA
LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR
PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

DATE: FEBRUARY 10, 2003

SHEET 25 OF 39

SCALE: 1"=300'

SOURCE: THOMAS & HUTTON ENGINEERING CO.

#2003-161-066

DATUM: MEAN SEA
LEVEL

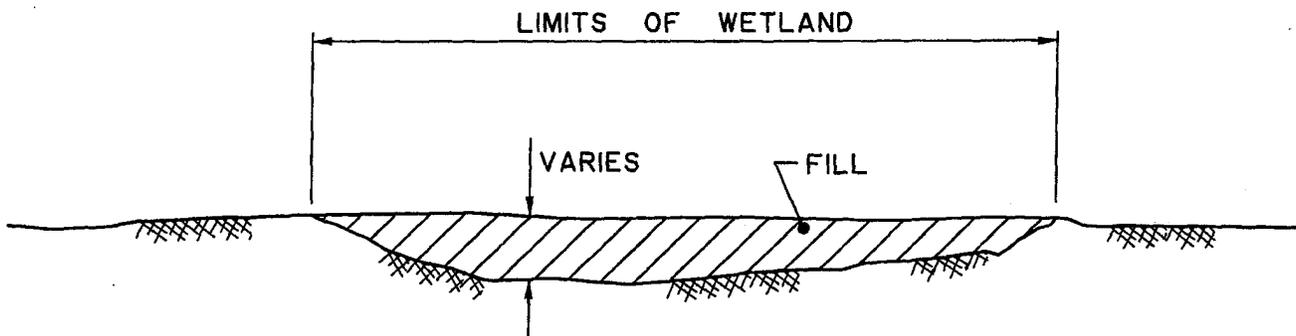
PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR
PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.

TOTAL CU. YDS. OF IMPACT = 24,103 CY.
TOTAL CU. YDS. OF EXCAVATION = 61,178 CY.



WETLAND FILL SECTION

NOT TO SCALE

BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

#2003-14-066

DATE: FEBRUARY 10, 2003

DATUM: MEAN SEA
LEVEL

SHEET 26 OF 39

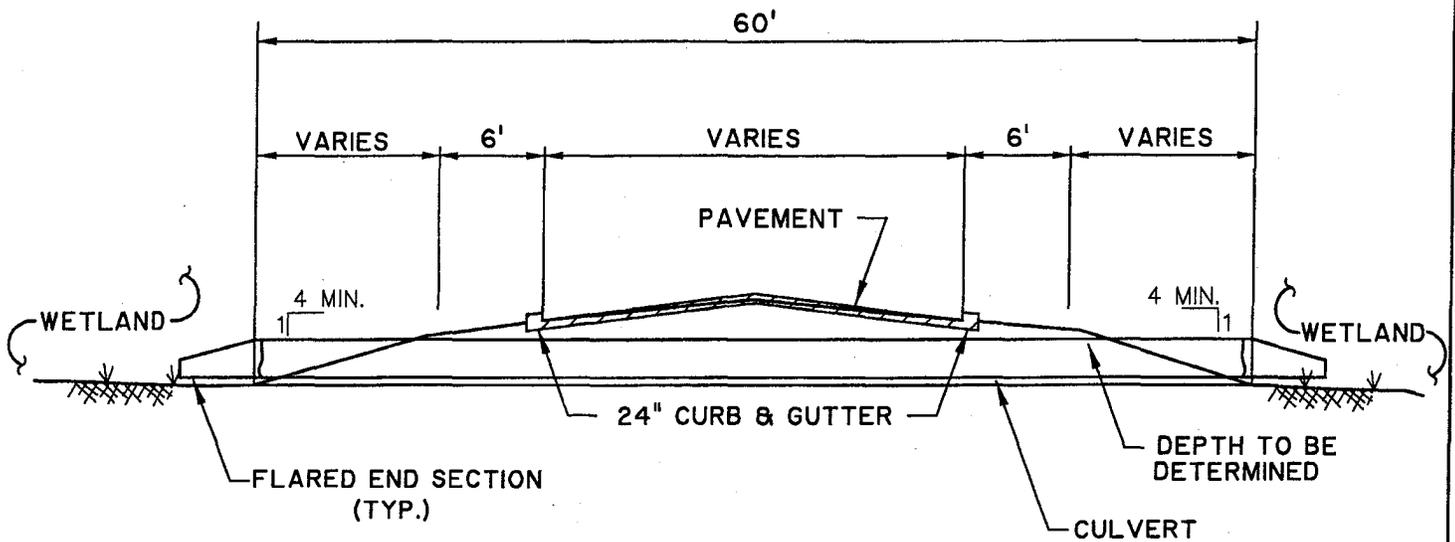
SOURCE: THOMAS & HUTTON ENGINEERING CO.

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR
PROPOSED DEVELOPMENT

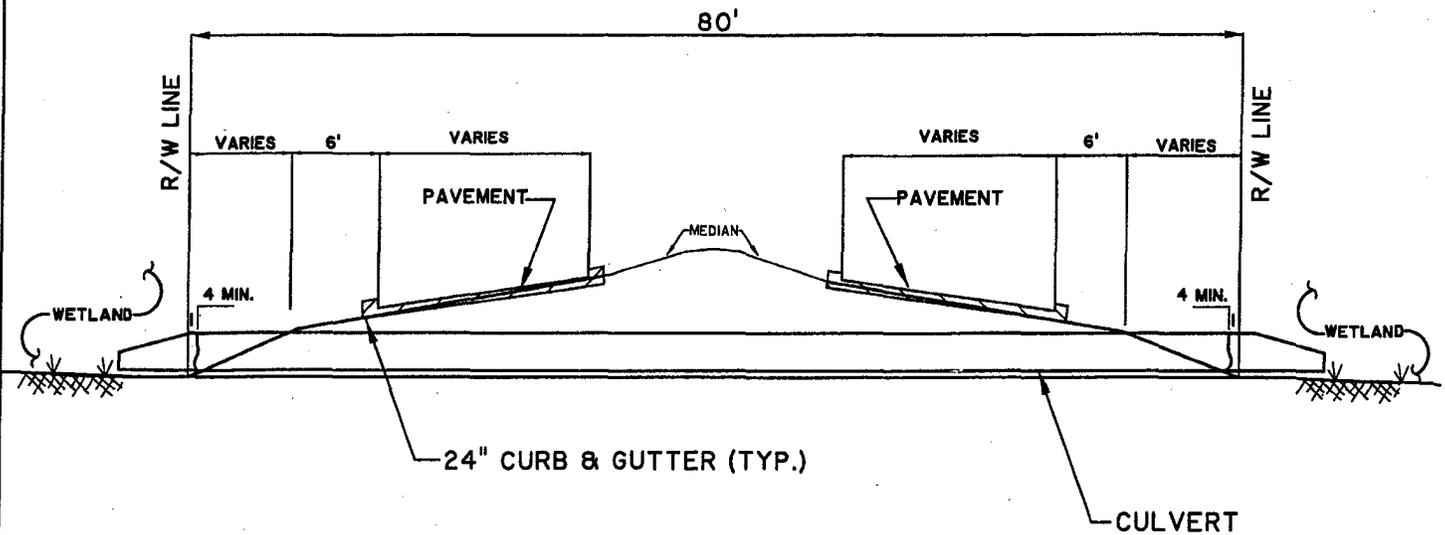
COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR ACQUISITION CO., L.L.C.
WINDING RIVER BTS I, L.C.



TYPICAL WETLAND CROSSING W/ PIPE ROAD SECTION

NOT TO SCALE



TYPICAL WETLAND CROSSING W/ PIPE BOULEVARD SECTION

NOT TO SCALE

BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

#2003-16-066

DATE: FEBRUARY 10, 2003

DATUM: MEAN SEA
LEVEL

SHEET 27 OF 39

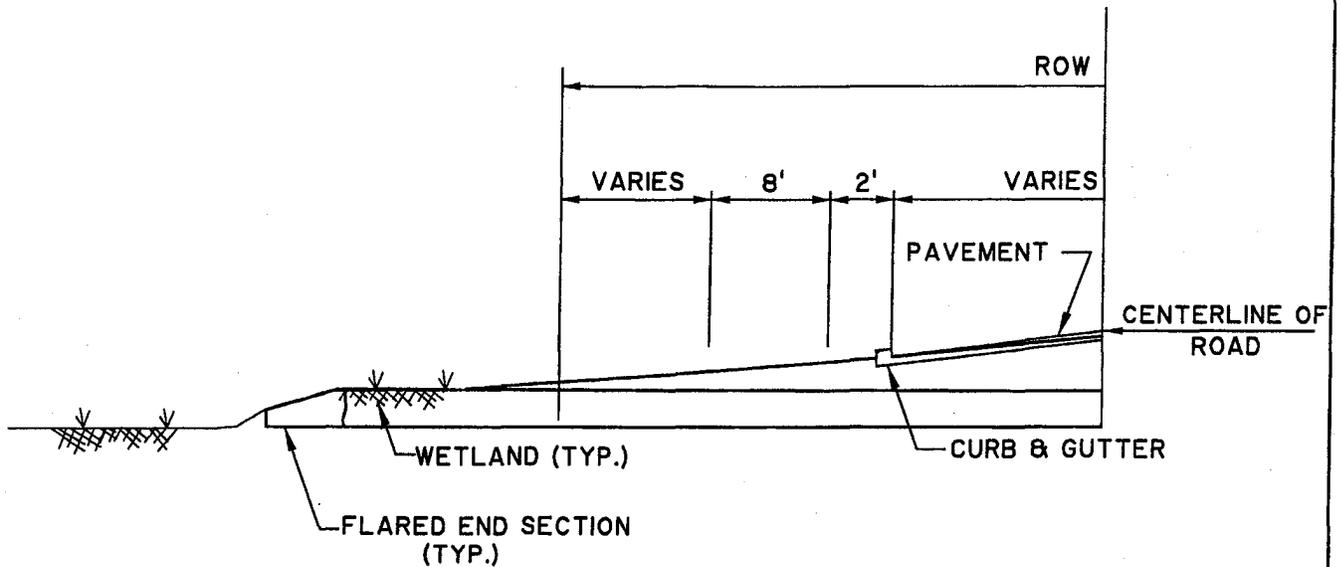
SOURCE: THOMAS & HUTTON ENGINEERING CO.

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR
PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR ACQUISITION CO., L.L.C.
WINDING RIVER BTS I, L.C.



PIPING TO WETLAND

NOT TO SCALE

BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

#2003-16-066

DATE: FEBRUARY 10, 2003

DATUM: MEAN SEA
LEVEL

SHEET 28 OF 39

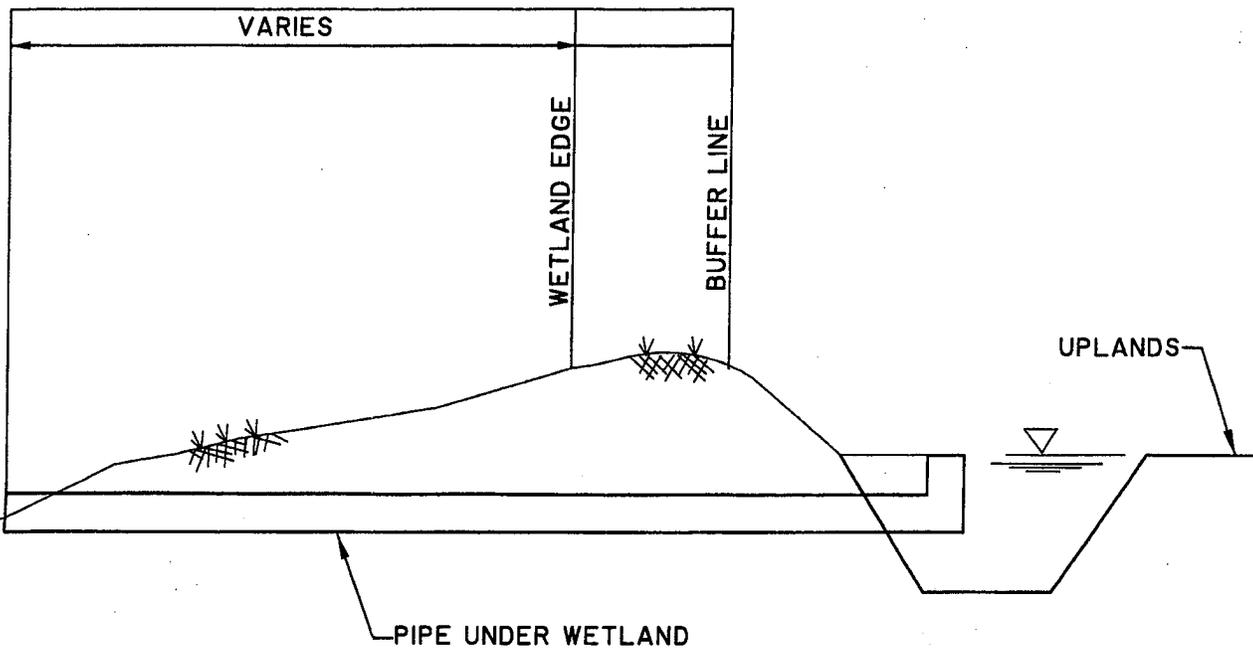
SOURCE: THOMAS & HUTTON ENGINEERING CO.

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR
PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR ACQUISITION CO., L.L.C.
WINDING RIVER BTS I, L.C.



TYPICAL STORMWATER MANAGEMENT IMPACT

NOT TO SCALE

BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

#2003-1G-066

DATE: FEBRUARY 10, 2003

DATUM: MEAN SEA
LEVEL

SHEET 29 OF 39

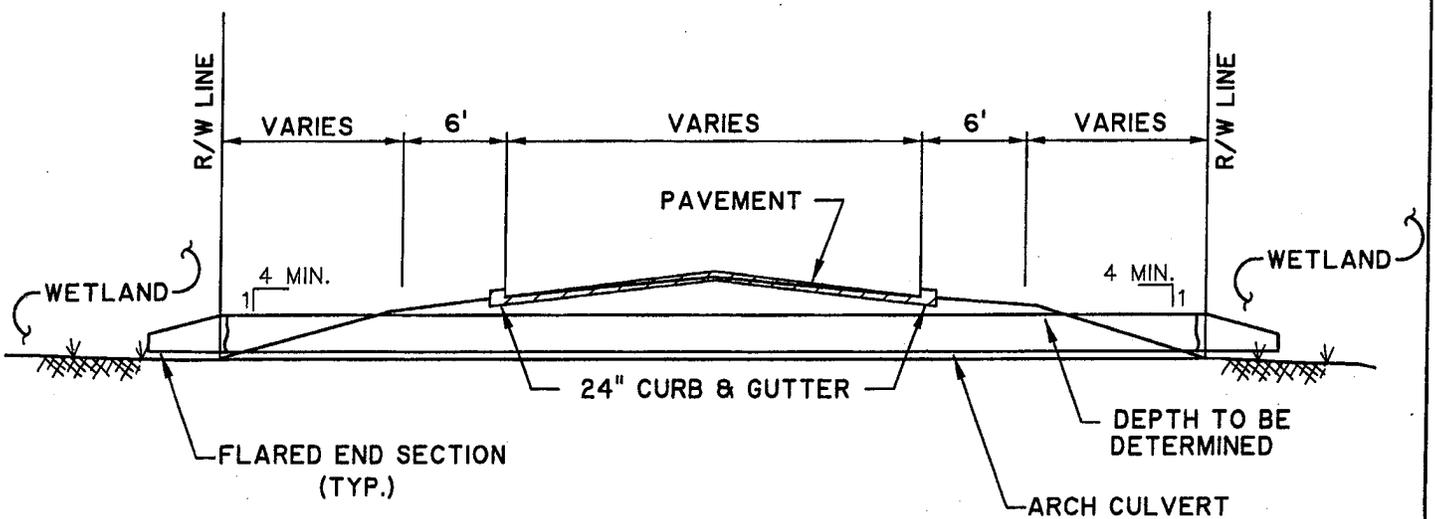
SOURCE: THOMAS & HUTTON ENGINEERING CO.

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR
PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR ACQUISITION CO., L.L.C.
WINDING RIVER BTS I, L.C.



ARCH CULVERT ROAD CROSSING

NOT TO SCALE

BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

#2003-16-066

DATE: FEBRUARY 10, 2003

DATUM: MEAN SEA
LEVEL

SHEET 30 OF 39

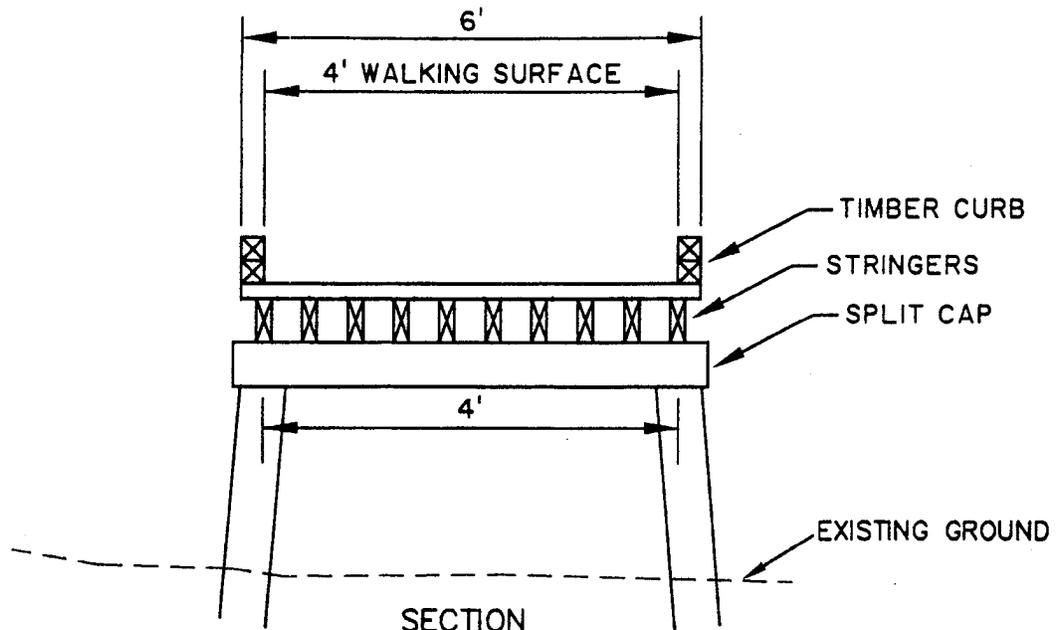
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PROPOSED ACTIVITY:

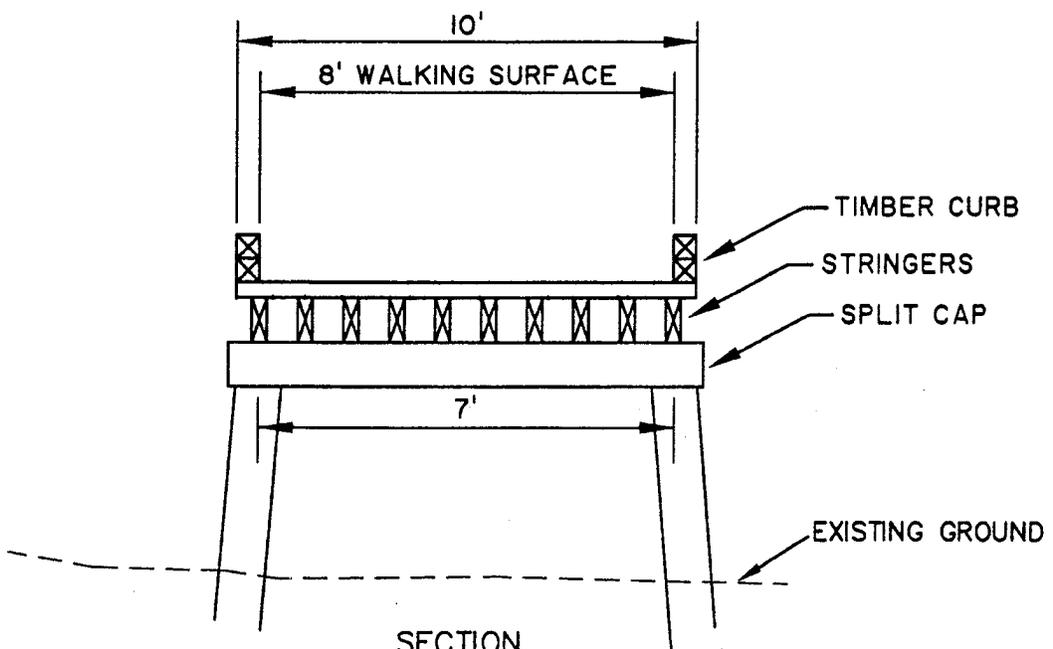
WETLAND MODIFICATION FOR
PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR ACQUISITION CO., L.L.C.
WINDING RIVER BTS I, L.C.



SECTION
4' BOARDWALK BRIDGE
PERVIOUS NATURE "WILDERNESS TRAIL"
 NOT TO SCALE



SECTION
CART BRIDGE
 NOT TO SCALE

BUCKWALTER SOUTHWEST TRACT
 WETLANDS MASTER PLAN

DATE: FEBRUARY 10, 2003

SHEET 31 OF 39

SOURCE: THOMAS & HUTTON ENGINEERING CO.

#2003-10-066

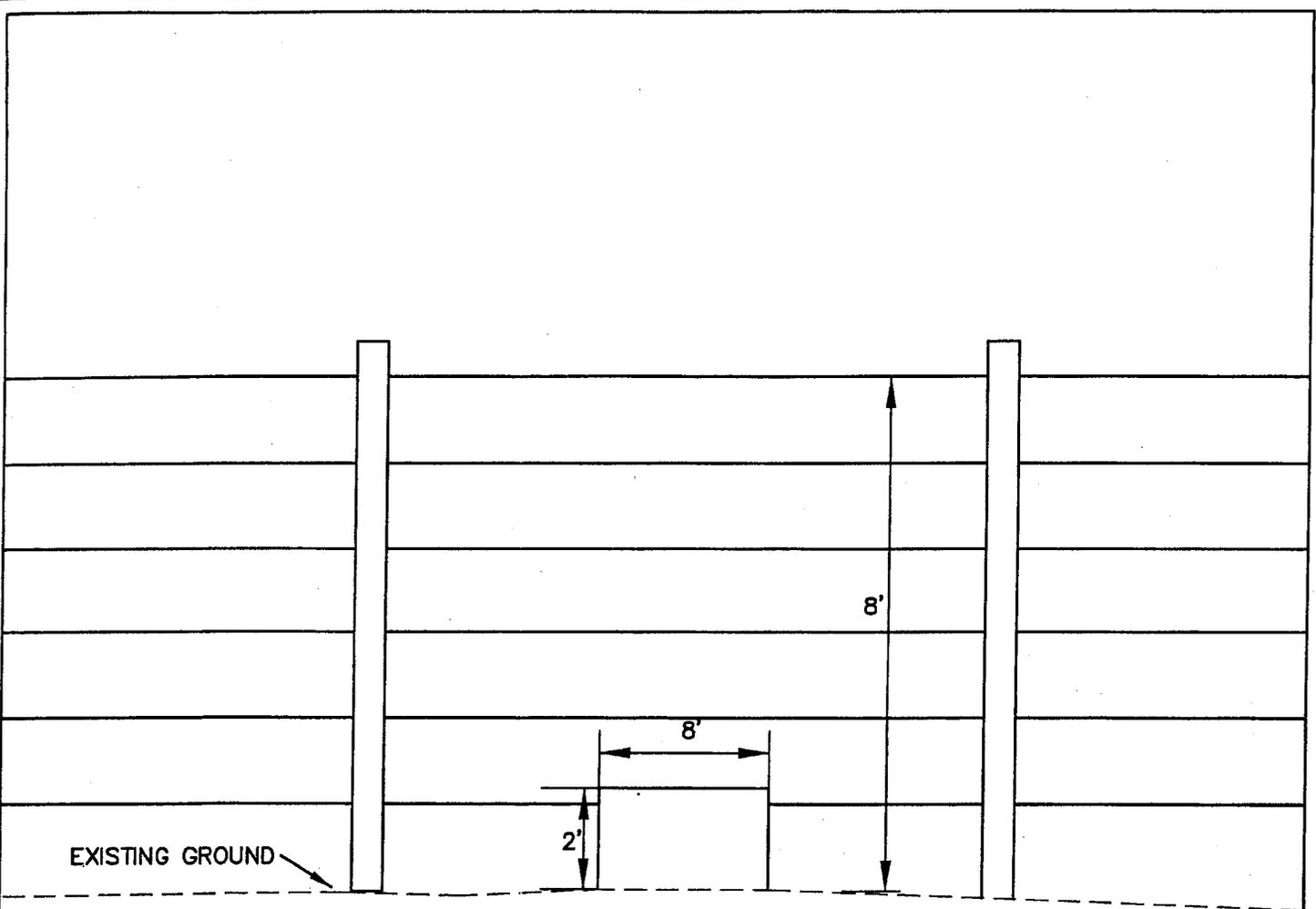
DATUM: MEAN SEA
 LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR
 PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
 TOWN OF BLUFFTON

APPLICANT: BHR ACQUISITION CO., L.L.C.
 WINDING RIVER BTS I, L.C.



SECTION

FENCE DETAIL

NOT TO SCALE

BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

DATE: FEBRUARY 10, 2003

SHEET 32 OF 39

SOURCE: THOMAS & HUTTON ENGINEERING CO.

#2003-16-066

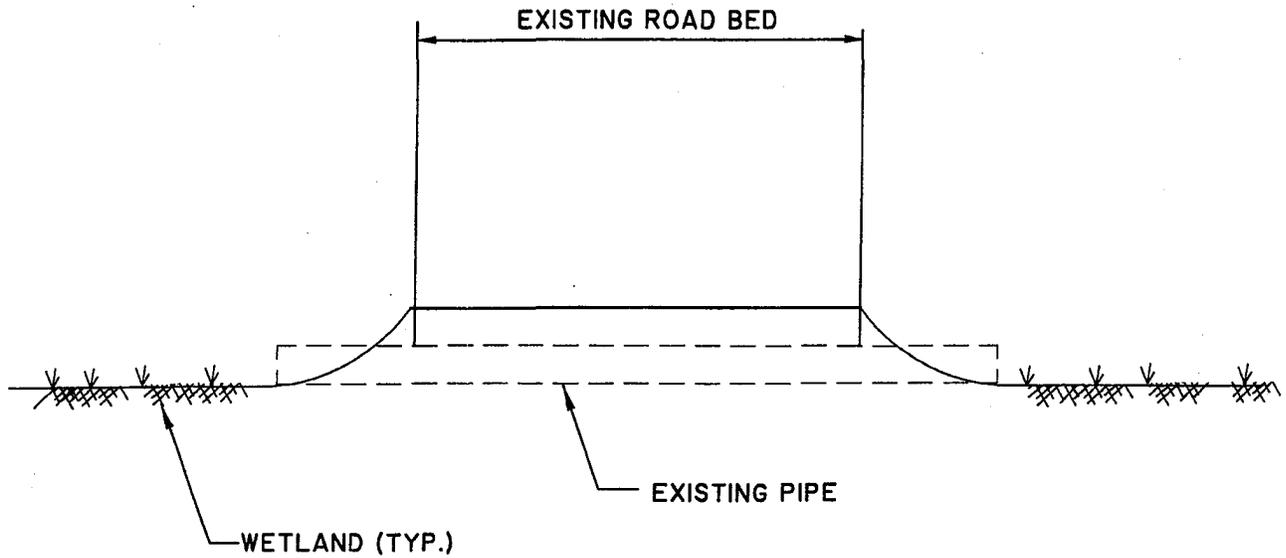
DATUM: MEAN SEA
LEVEL

PROPOSED ACTIVITY:

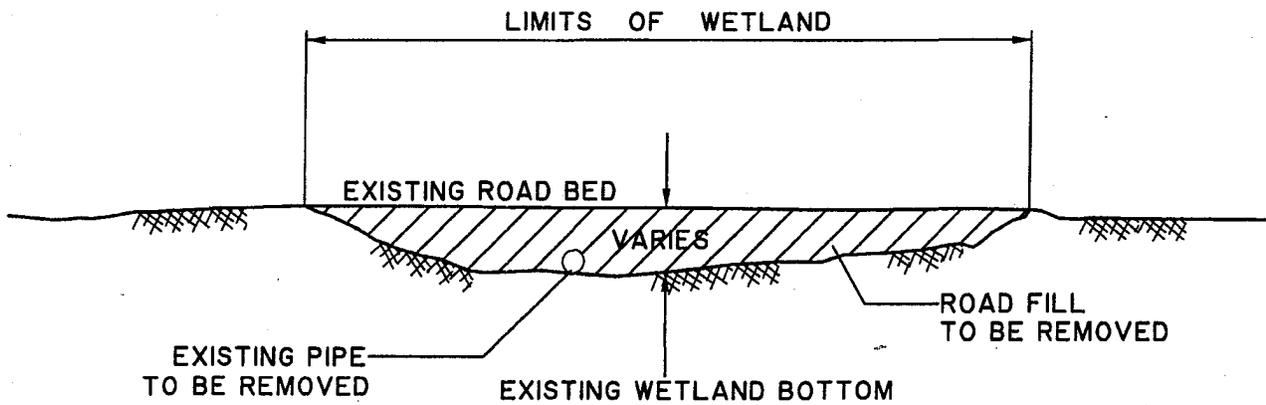
WETLAND MODIFICATION FOR
PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR ACQUISITION CO., L.L.C.
WINDING RIVER BTS I, L.C.



SECTION
 NOT TO SCALE



NOTE: EXISTING PIPE VARIES

ROAD RESTORATION PROFILE

NOT TO SCALE

BUCKWALTER SOUTHWEST TRACT
 WETLANDS MASTER PLAN

#2003-15-066

DATE: FEBRUARY 10, 2003

DATUM: MEAN SEA
 LEVEL

SHEET 33 OF 39

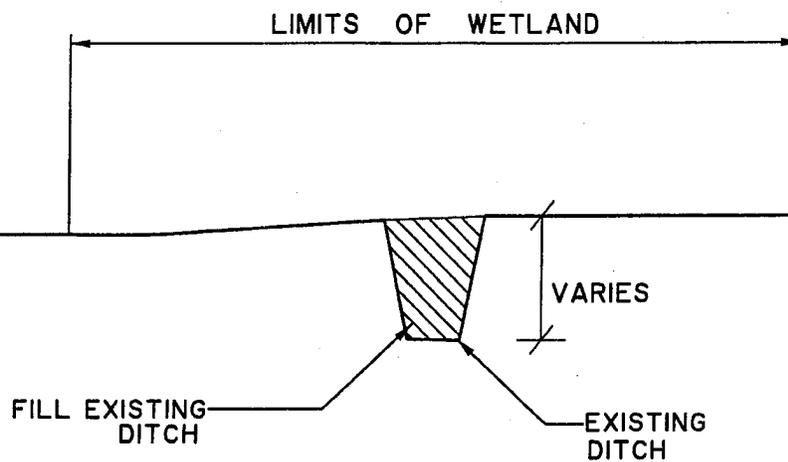
SOURCE: THOMAS & HUTTON ENGINEERING CO.

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR
 PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
 TOWN OF BLUFFTON

APPLICANT: BHR ACQUISITION CO., L.L.C.
 WINDING RIVER BTS I, L.C.



DITCH PLUG SECTION

NOT TO SCALE

BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

#2003-16-066

DATE: FEBRUARY 10, 2003

DATUM: MEAN SEA
LEVEL

SHEET 34 OF 39

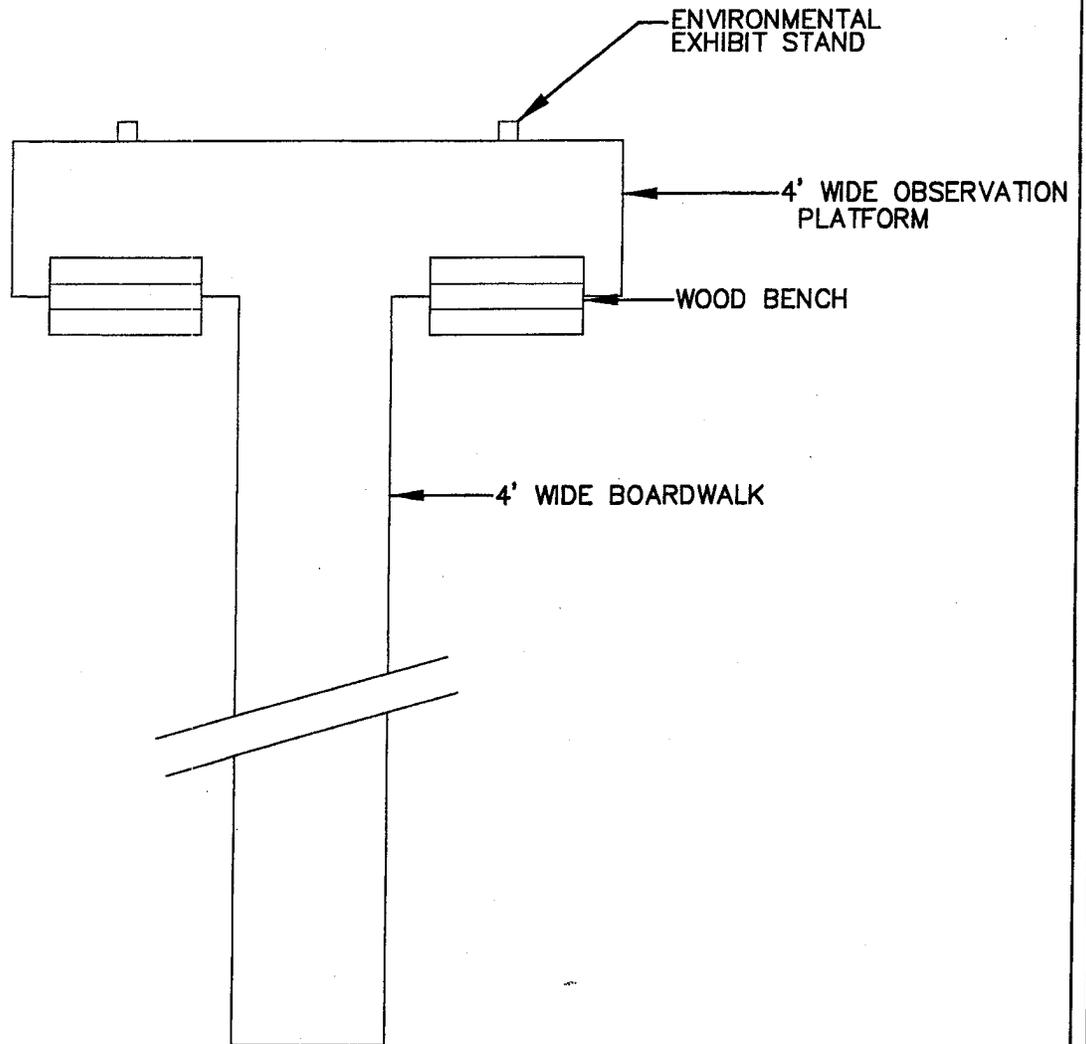
SOURCE: THOMAS & HUTTON ENGINEERING CO.

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR
PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR ACQUISITION CO., L.L.C.
WINDING RIVER BTS I, L.C.



OVERLOOK /OBSERVATION DECK SECTION

NOT TO SCALE

BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

DATE: FEBRUARY 10, 2003

SHEET 35 OF 39

SOURCE: THOMAS & HUTTON ENGINEERING CO.

#2003-1G-066

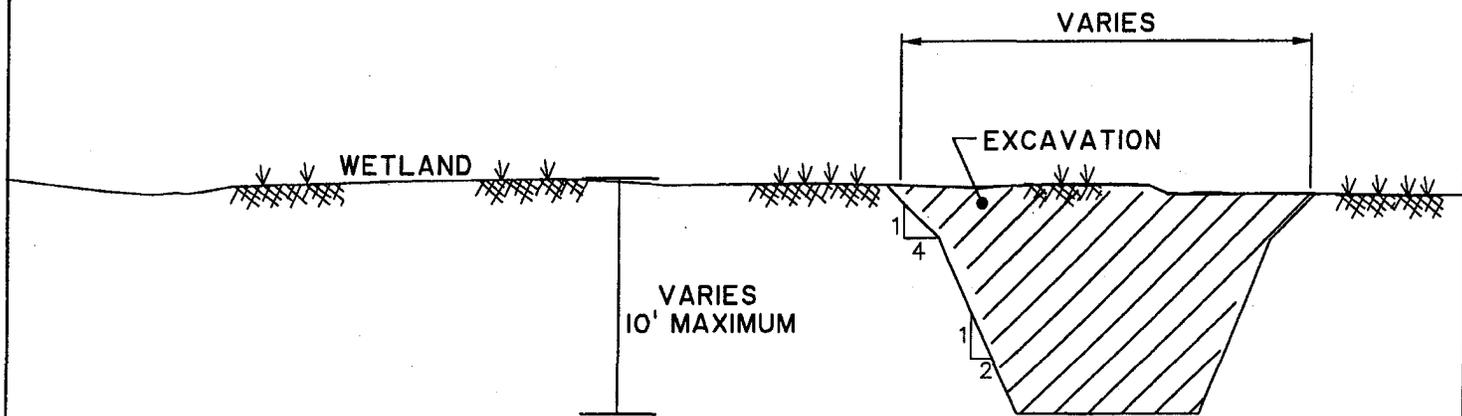
DATUM: MEAN SEA
LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR
PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS I, L.C.



WETLAND EXCAVATION DETAIL

NOT TO SCALE

BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

#2003-16-066

DATE: FEBRUARY 10, 2003

DATUM: MEAN SEA
LEVEL

SHEET 36 OF 39

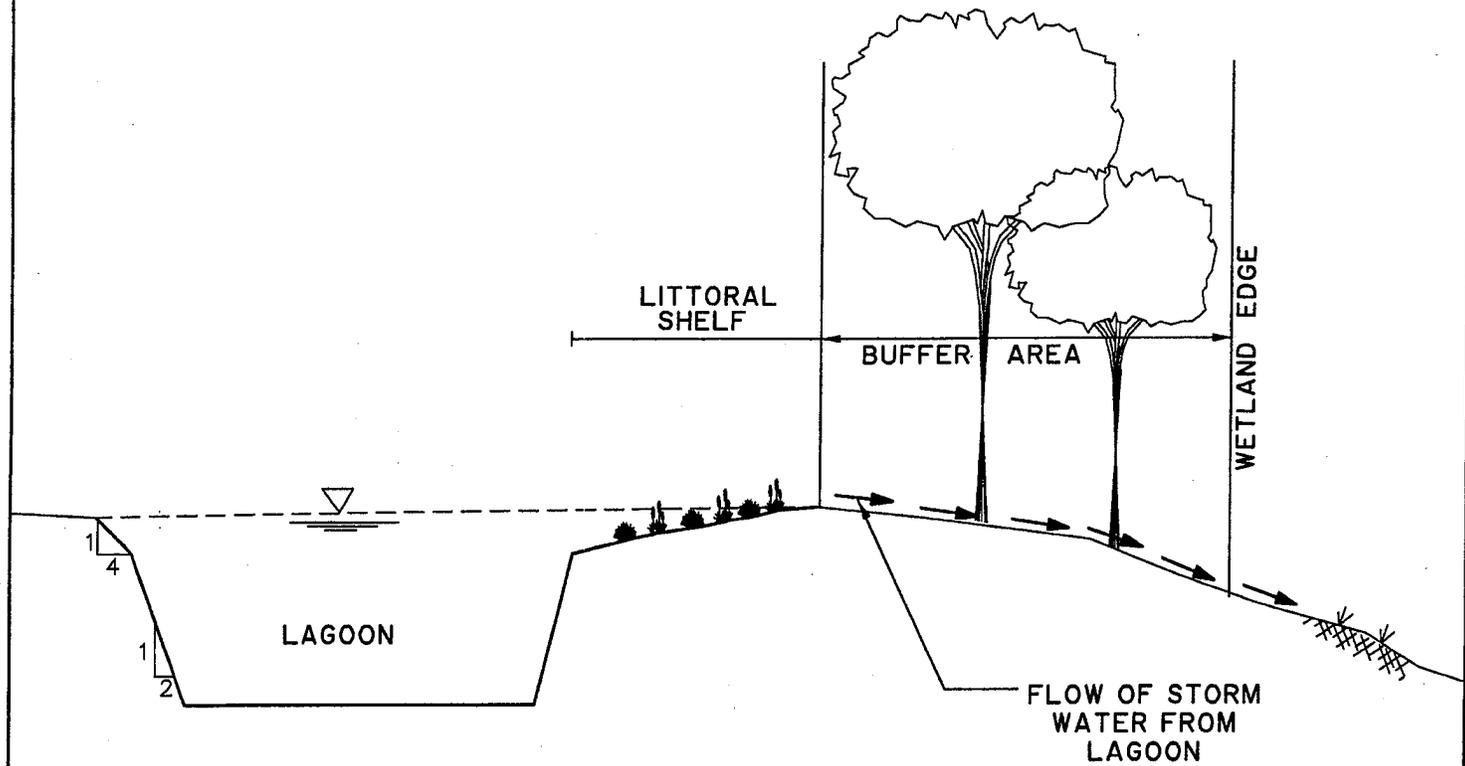
SOURCE: THOMAS & HUTTON ENGINEERING CO.

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR
PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR ACQUISITION CO., L.L.C.
WINDING RIVER BTS I, L.C.



WETLAND TERRACE DETAIL
 NOT TO SCALE

BUCKWALTER SOUTHWEST TRACT
 WETLANDS MASTER PLAN

#2003-16-066

DATE: FEBRUARY 10, 2003

DATUM: MEAN SEA
 LEVEL

SHEET 37 OF 39

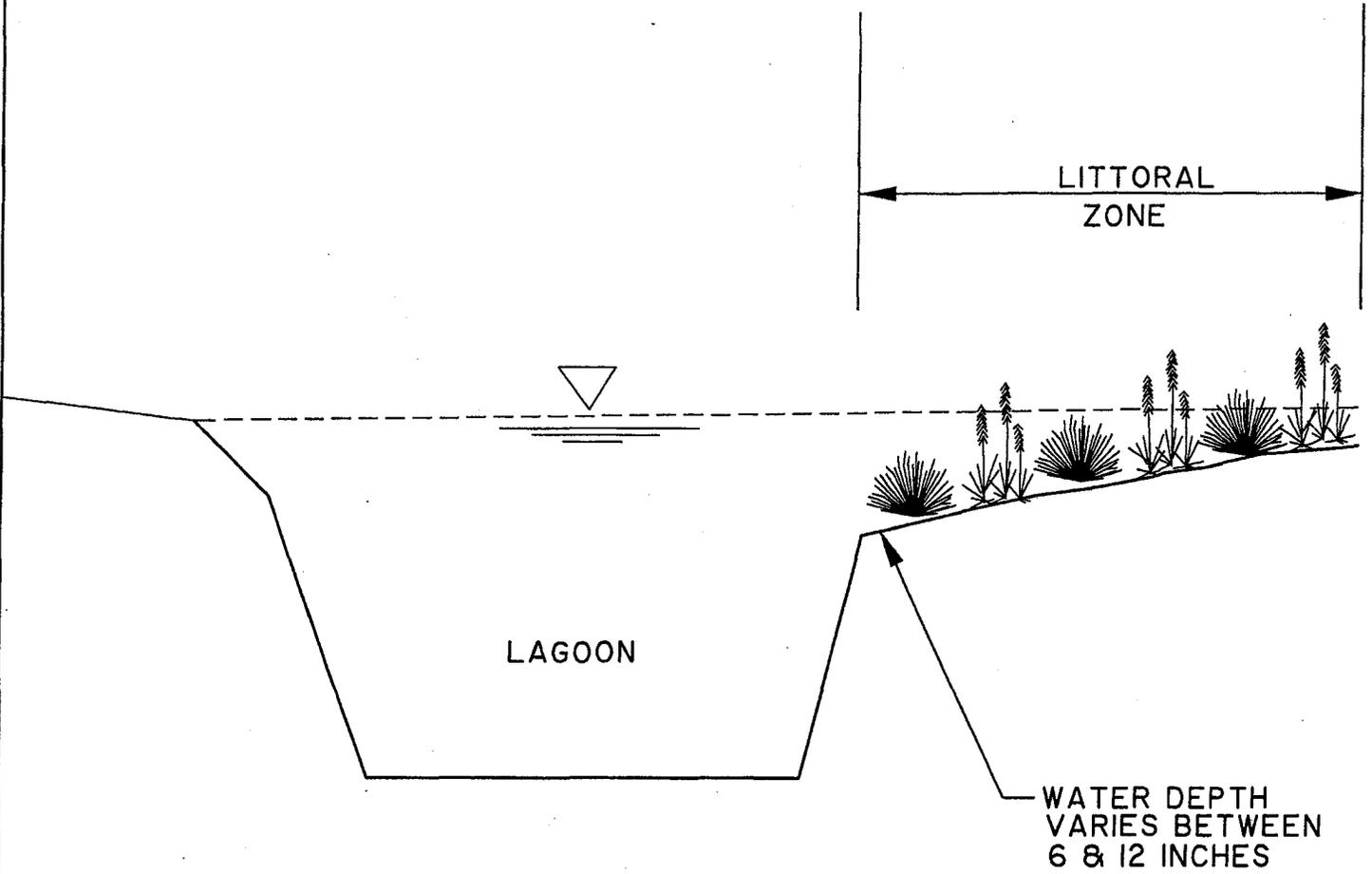
SOURCE: THOMAS & HUTTON ENGINEERING CO.

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR
 PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
 TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
 WINDING RIVER BTS I, L.C.



LITTORAL ZONE DETAIL

NOT TO SCALE

BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

DATE: FEBRUARY 10, 2003

SHEET 38 OF 39

SOURCE: THOMAS & HUTTON ENGINEERING CO.

#2003-19-066

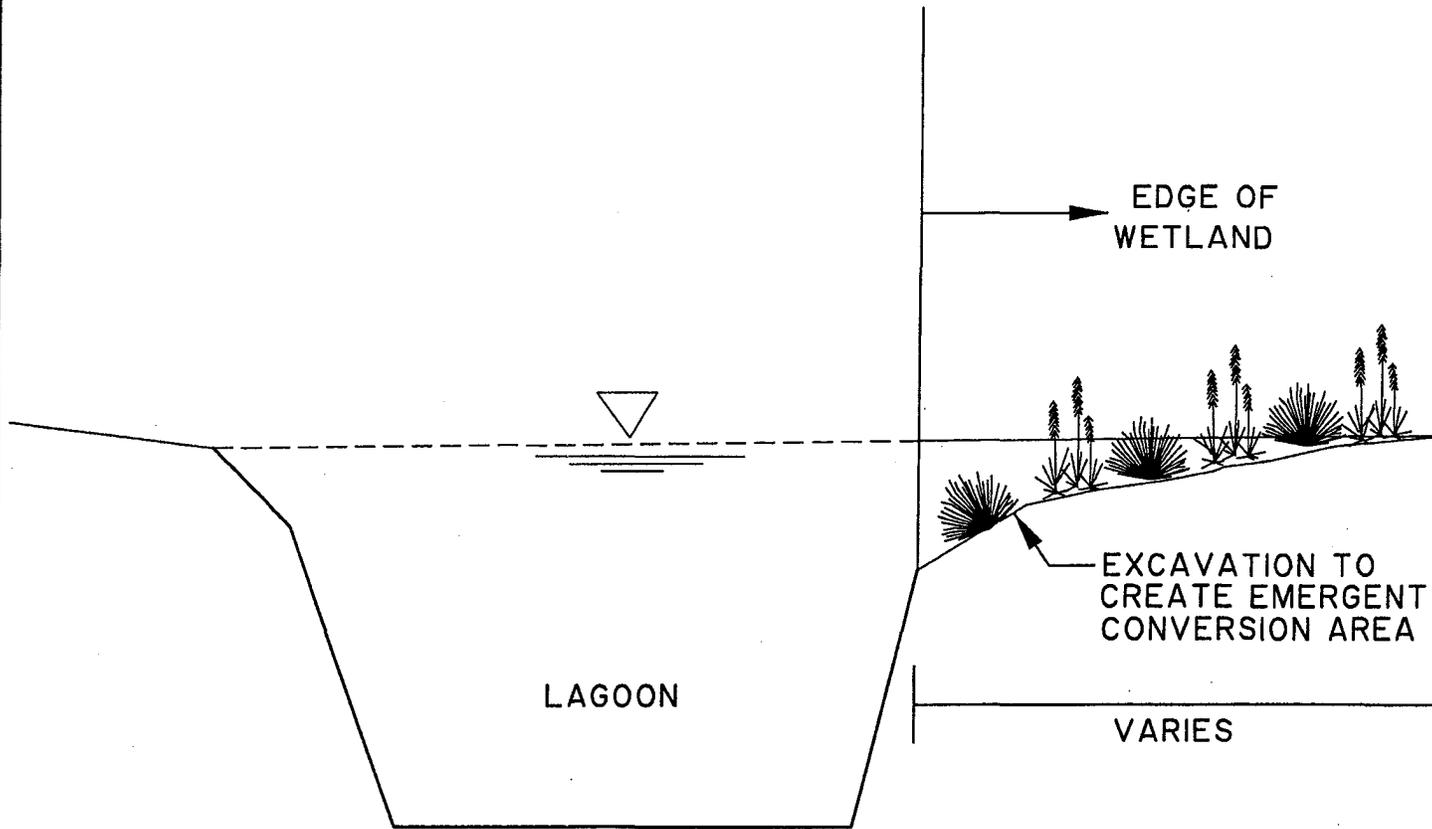
DATUM: MEAN SEA
LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR
PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR ACQUISITION CO., L.L.C.
WINDING RIVER BTS I, L.L.C.



WETLAND EMERGENT CONVERSION DETAIL

NOT TO SCALE

BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

#2003-16-066

DATE: FEBRUARY 10, 2003

DATUM: MEAN SEA
LEVEL

SHEET 39 OF 39

SOURCE: THOMAS & HUTTON ENGINEERING CO.

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR
PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR ACQUISITION CO., L.L.C.
WINDING RIVER BTS I, L.C.