
FINAL ENVIRONMENTAL ASSESSMENT

**CHANGE IN LAND USE
DESIGNATION TO ALLOW
RESIDENTIAL DEVELOPMENT OF
THE BAT CREEK PENINSULA**

TELLICO RESERVOIR

LOUDON AND MONROE COUNTIES, TENNESSEE

TENNESSEE VALLEY AUTHORITY

MARCH 7, 1994

**FINAL
ENVIRONMENTAL ASSESSMENT**

**CHANGE IN LAND USE DESIGNATION
TO ALLOW RESIDENTIAL DEVELOPMENT
OF THE
BAT CREEK PENINSULA,
TELLICO RESERVOIR,
LOUDON AND MONROE COUNTIES, TENNESSEE**

**TELLICO RESERVOIR DEVELOPMENT AGENCY
59 EXCELLENCE WAY
VONORE, TENNESSEE 37885-9641**

March 7, 1994

**THIS ASSESSMENT WAS PREPARED BY
THE TENNESSEE VALLEY AUTHORITY,
NORRIS, TENNESSEE 37828**

Index No: 168

**Title: Change In Land Use Designation To
Allow Residential Development of Bat
Creek Peninsula, Tellico Reservoir.**

TABLE OF CONTENTS

1.0	PURPOSE OF AND NEED FOR ACTION	1
1.1	Introduction	1
1.2	Purpose and Proposed Action	1
1.3	The Decision	3
1.4	The Scoping Process	3
1.4.1	Major Issues Identified	3
1.4.2	Issues Eliminated from Detailed Analysis	4
1.4.2.1	Developer's Ability	4
1.4.2.2	Noise	5
1.5	Necessary Federal Permits	5
2.0	ALTERNATIVES	7
2.1	Introduction	7
2.2	Alternative 1	7
2.3	Alternative 2	7
2.4	Alternative 3	7
2.5	Comparison of Alternatives	9
2.5.1	Alternative 1	9
2.5.2	Alternative 2	10
2.5.3	Alternative 3	10
3.0	AFFECTED ENVIRONMENT	11
3.1	Introduction	11
3.2	Transportation System	11
3.2.1	Highways	11
3.2.2	Navigation and Rail Access	11

3.3	Socioeconomic Conditions	11
3.4	Recreation	12
3.5	Biological Setting	12
3.5.1	Terrestrial Biology	12
3.5.2	Aquatic Biology	13
3.5.3	Wetlands	14
3.6	Air Quality	15
3.7	Water Quality	15
3.7.1	Reservoir Water Quality	15
3.7.2	Groundwater	15
3.8	Utilities and Services	16
3.8.1	Water Supply	16
3.8.2	Wastewater Treatment	16
3.8.3	Solid Waste Disposal	16
3.8.4	Fire and Police Protection and Emergency Medical Services	16
3.8.5	Electrical Service	16
3.8.6	Schools	17
3.9	Cultural and Historic Resources	17
3.10	Floodplains	17
3.11	High-quality Farmlands	17
3.12	Visual Setting	18
4.0	ENVIRONMENTAL CONSEQUENCES	19
4.1	Introduction	19
4.2	Effects on Transportation	19
4.2.1	Highways	19
4.2.2	Navigation	19

4.3	Effects on Socioeconomic Conditions	19
4.3.1	Alternative 1	19
4.3.2	Alternatives 2 and 3	20
4.4	Effects on Recreation	20
4.4.1	Alternative 1	20
4.4.2	Alternative 2	21
4.4.3	Alternative 3	21
4.5	Effects on Biological Resources	22
4.5.1	Terrestrial Effects	22
4.5.1.1	Alternative 1	22
4.5.1.2	Alternative 2	23
4.5.1.3	Alternative 3	23
4.5.2	Aquatic Effects	24
4.5.2.1	Alternative 1	24
4.5.2.2	Alternatives 2 and 3	24
4.5.3	Effects on Wetlands	25
4.5.3.1	Alternative 1	25
4.5.3.2	Alternative 2	25
4.5.3.3	Alternative 3	26
4.6	Effects on Air Quality	26
4.6.1	Alternative 1	26
4.6.2	Alternative 2	26
4.6.3	Alternative 3	27
4.7	Effects on Water Quality	27
4.7.1	Alternative 1	27
4.7.2	Alternative 2	27
4.7.3	Alternative 3	27

4.8	Effects on Utilities and Services	28
4.8.1	Potable Water Supply and Wastewater Treatment	28
4.8.2	Solid Waste Disposal	28
4.8.3	Fire and Police Protection and Emergency Medical Services	28
4.8.4	Electrical Service	29
4.8.5	Schools	29
4.9	Effects on Historic Resources	29
4.9.1	Alternative 1	29
4.9.2	Alternative 2	29
4.9.3	Alternative 3	30
4.10	Effects on Floodplains	30
4.11	Effects on High-quality Farmland	30
4.12	Effects on Aesthetics	30
4.12.1	Alternative 1	30
4.12.2	Alternative 2	30
4.12.3	Alternative 3	31
4.13	Unavoidable Adverse Environmental Effects	31
4.14	Relationship of Short-term Uses and Long-term Productivity	31
4.15	Irreversible and Irretrievable Resource Commitments	31

APPENDICES

- A. Development Standards for the Tellico Project**
- B. Important Correspondence**
- C. Development Proposal for Royal Bay at Tellico Lake**
- D. Summary of Results from the June, 22, 1993 Public Workshop**
- E. Responses to Comments on the Draft Environmental Assessment**
- F. List of Preparers**
- G. Permissible Private Water Use Facilities**
- H. References**

Chapter 1

1.0 PURPOSE OF AND NEED FOR ACTION

1.1 Introduction

In 1982 the Tennessee Valley Authority (TVA) conveyed approximately 11,000 acres or 4,450 hectares (ha) of Tellico Reservoir property to the Tellico Reservoir Development Agency (TRDA) under the terms of Contract No. TV-60000A. TRDA is a public corporation created by the Tennessee Legislature in April 1982 (Chapter 679, codified as Section 64-1-701 et seq., Tennessee Code Annotated). TRDA's mandate is to plan programs and implement activities for the comprehensive development of the Tellico Reservoir project area. A land use plan and development standards were incorporated into that contract to guide development and management of industrial, residential, commercial, and recreational activities on Tellico Reservoir project lands. The Development Standards for the Tellico Project, Attachment B to Contract No. TV-60000A, are included as Appendix A. Under the terms of Contract No. TV-60000A, TVA approval is required for any changes in land use designation.

A 1,060-acre (429-ha) parcel on the Bat Creek peninsula (see Figure 1), located between Bat Creek and the Little Tennessee River at river mile 12.5 to 16.1, was a part of the project lands transferred to TRDA. At the time of transfer, the land was designated for industrial development. TRDA has determined that the highest and best use of the Bat Creek property is for residential development (cf. October 2, 1991, letter from Larry W. Colaw to Billy J. Bond in Appendix B). Consequently, TRDA requested TVA concurrence in changing the land use designation from industrial to residential. This request is provided in Appendix B, letter from Larry W. Colaw to Charles D. Buffington.

1.2 Purpose and Proposed Action

TVA has elected to prepare this environmental assessment on the proposal. This will serve to document TVA's consideration of the potential environmental impacts associated with the proposed change in land use designation and will provide a means of obtaining public input. If TVA agrees to the change, a developer selected by TRDA is ready to begin a multi-phase residential project.

The proposed action by TVA is to approve or deny a change in land use designation for the Bat Creek peninsula from its current industrial designation to residential. This change in designation would affect property on the tract above the 820-foot (249.9-m) contour elevation. TVA will retain fee simple ownership of all shoreline property below the 820-foot (249.9-m) contour.

Because the action to change the designation would lead to residential development of the peninsula, the proposed residential development has also been evaluated for its potential environmental effects. Potential effects to the shoreline properties below the 820-foot (249.9-m) contour due to residential development (specifically, the effects of the issuing of recreation easements and permitting private water-use facilities) were addressed also.

The developer, Tellico Lake Properties, LP, has presented TVA and TRDA with a preliminary residential development plan for the Bat Creek peninsula. That plan, although not definitive, adequately represents the type and scope of the proposed residential development. As proposed, this development would involve the creation of approximately 2000 homesites, the construction of an 18-hole golf course with clubhouse, and recreation facilities in the form of a community park, equestrian park, dry storage facilities for boats, and a clubhouse with restaurant facilities. The developer has allocated acreage for a school site on the property. The preliminary residential development proposal is provided as Appendix C. A map showing the developer's preliminary proposal is provided as Figure 2.

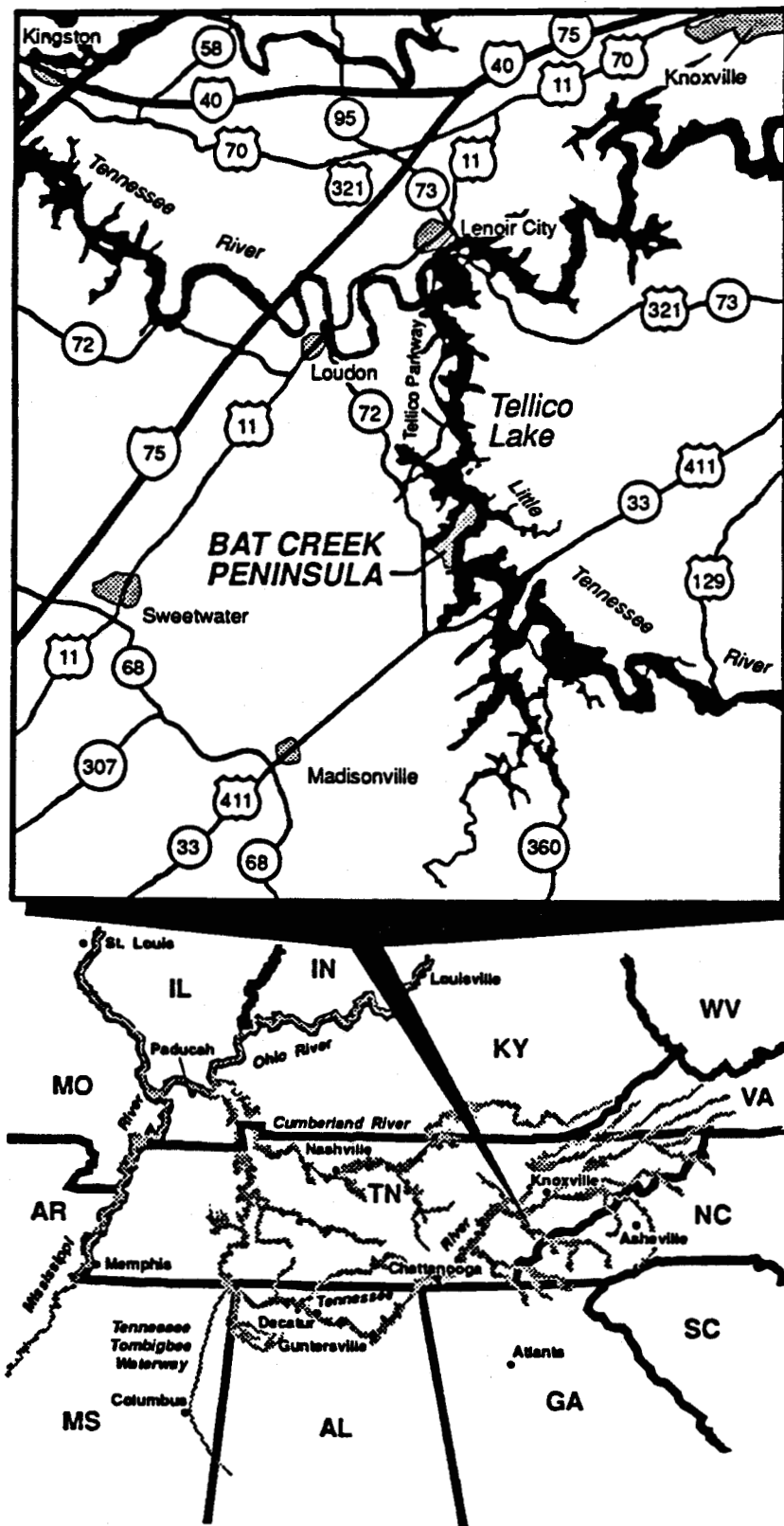
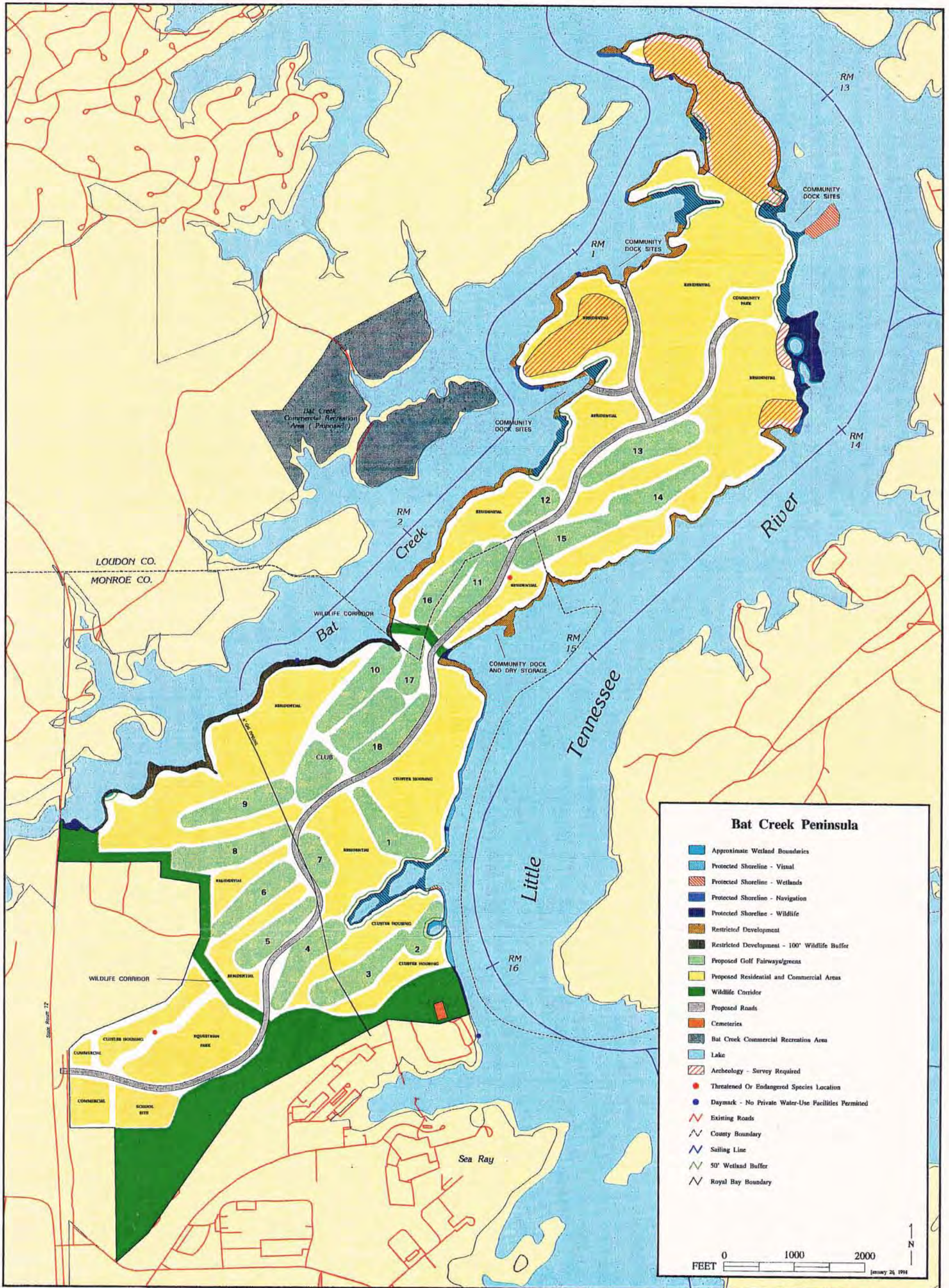


Figure 1. Vicinity map of the Bat Creek peninsula, Monroe and Loudon Counties, Tennessee.

Figure 2. Proposed residential development, Bat Creek peninsula.



1.3 The Decision

The decision which TVA must make is whether or not to agree to a change in land use designation from industrial to residential for the Bat Creek peninsula property. TVA realizes fully that a decision to concur in the change of designation will result in imminent residential development of the Bat Creek tract.

1.4 The Scoping Process and Public Involvement

A public workshop was held in Vonore, Tennessee, on June 22, 1993, to familiarize the public with the proposed action by TVA, and the proposed residential project, and to obtain public input on issues and concerns associated with the proposal. Invitations to that meeting were mailed to over 750 area residents, officials, organizations, and agencies. A press release was distributed to 20 local newspapers and area radio and television stations. Approximately 60 persons attended the workshop and provided comments in facilitated work groups.

Comments on the proposal were also solicited from the Tennessee Wildlife Resources Agency (TWRA) and the U.S. Fish and Wildlife Service (USFWS). TWRA's response is presented in Appendix B. USFWS provided its comments orally to TVA.

Internal scoping within TVA also occurred. This and experience in working with other developers resulted in the list of issues discussed and the mitigation measures proposed.

A public meeting was held on January 22, 1994, at the Tellico West Industrial Properties near Vonore to solicit public comments on the Draft Environmental Assessment. The Draft was mailed to interested parties prior to the meeting and additional copies were available at the meeting. Comments and responses are provided in Appendix E.

1.4.1 Major Issues Identified

Results of the public meeting at Vonore, Tennessee, are documented in Appendix D. The following list summarizes the significant issues and concerns identified at that meeting.

- Possible road damage to the Tellico Parkway, including upkeep, from additional traffic loads and maintenance of the Parkway.
- Effects on community/county infrastructure, especially utilities and services such as fire prevention, street maintenance, schools, sewage, etc.
- Potential economic impacts, including effects on the tax base of Loudon and Monroe Counties; the potential for commercial/retail development; and property values.
- Concern about the loss of public lands resulting from the residential development i.e., loss of opportunity for public use of the peninsula. (TRDA currently allows informal recreation use on all planned lands until they are sold for the designated use.)
- Potential impacts on public recreation, especially hunting, fishing, and boating.
- Possible effects on wildlife, water quality, and scenic quality.
- A preference for residential development over industrial.
- Potential impacts on existing planned residential areas on Tellico Reservoir.

Concerns provided by TWRA and USFWS are listed below.

- Potential loss of terrestrial and wetland wildlife habitat.
- Potential loss of aquatic habitats due to shoreline development, especially from construction of seawalls or retaining walls.
- Potential impacts on threatened and endangered species.
- Potential loss of interim recreational opportunities, especially on those properties above the 820-foot (249.9-m) contour.

Additional issues were identified by TVA staff. These issues dealt mainly with the potential effects from proposed residential development. Additional issues resulting from that meeting are included in the following list.

- Potential air quality impacts.
- Possible effects on water quality (both groundwater and Tellico surface waters) due to construction, wave action, development runoff, effluents, herbicide and pesticide use, etc.
- Effects on the local road network.
- Potential effects on archaeological and historical resources.
- Potential noise impacts.
- Development within floodplains.
- Possible wetlands impacts.
- Possible loss of prime farmland.
- Potential visual impacts.
- Possible effects on terrestrial habitats.
- Potential impacts on aquatic habitats.
- General socioeconomic effects, including the economic impact of the No Action Alternative and the loss of industrial siting capacity.
- Relationship of the proposed development to the Tellico Reservoir Plan.

1.4.2 Issues Eliminated From Detailed Analysis

1.4.2.1 Developer's Ability

Concern about the developer's ability to execute the master plan and the developer's financial ability to purchase the property was voiced at the June 22, 1993, public meeting and in mail received after that meeting. Following review of the developer's managerial and financial capability, TRDA has determined the developer to be capable and intends to proceed with negotiations with Tellico Lake Properties, LP.

1.4.2.2 Noise

Current ambient noise conditions in the vicinity of the Bat Creek peninsula are typical of rural and rural/residential areas. The industries adjoining the Bat Creek property at the Tellico West Industrial Park (MasterCraft, Sea Ray, and Carlex Glass) are not significant noise sources with respect to the Bat Creek peninsula. The Development Standards contained in Contract No. TV-60000A provide specific noise regulation measures to ensure acceptable noise levels regardless of the type of development. Residential development is not expected to produce a significant increase in unacceptable noise levels. Thus, with such noise safeguards in place, and considering the likelihood that residential noise levels would normally be acceptable, noise was not considered to be a significant issue and was not analyzed in detail.

1.5 Necessary Federal Permits

Approval under Section 26a of the TVA Act of 1933, as amended, is required for the construction of water-use facilities such as boat docks and ramps included in the developer's proposal. Individual landowners located on the residential development must also secure Section 26a approval before constructing any private water-use facilities below the 820-foot (249.9-m) contour. Any such necessary approvals will be requested and reviewed separately from this action.

Recreation easements will be required from TVA to access and construct water-use facilities on the shoreline property below the 820-foot (249.9-m) contour retained in fee simple by TVA. Applications for such easements are normally made in conjunction with Section 26a requests. Consistent with other residential developments on Tellico Reservoir, TVA would require purchase of easements at fair market value.

Depending on the nature of the action, some activities associated with residential or industrial development of the site could require approval by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act or under Section 10 of the Rivers and Harbors Act of 1899.

A 401 Water Quality Certification from the Tennessee Department of Health, Division of Water Pollution Control may be required for some development activities. Any physical alteration of waters of the State, including wetlands, requires an Aquatic Resource Alteration Permit (ARAP) from the Tennessee Division of Water Pollution Control, unless that activity is already covered under 401 Certification of a federal permit. Physical alterations include such activities as filling, draining, relocation, channelization, damming, culverting, and excessive shoreline disturbance. A Notice of Intent to be covered under the General Nonpoint Pollution Discharge Elimination System (NPDES) Permit for Stormwater Associated with Construction must be filed with the Division of Water Pollution Control for any land disturbance over five acres.

Chapter 2

2.0 ALTERNATIVES

2.1 Introduction

This chapter describes the three alternatives that have been identified. These are: Alternative 1—the No Action Alternative; Alternative 2—approval of the change in land use designation with no additional conditions imposed on the developer beyond those required by Contract No. TV-60000A; and Alternative 3—approval of the change in land use designation conditioned upon the adoption of additional mitigative measures by the developer. These alternatives are discussed in the following sections. The potential environmental consequences associated with each alternative are described in Chapter 4.

2.2 Alternative 1

Alternative 1 is the No Action Alternative. Under the No Action Alternative, TVA would not agree to a change in land use designation from industrial to residential and the site would retain its current industrial land use designation. Adoption of this alternative would preclude the proposed residential development of the Bat Creek peninsula.

Alternative 1 would not preclude industrial development. Any future industrial development on the peninsula could be undertaken in accordance with the Development Standards for the Tellico Project contained in Contract No. TV-60000A between TVA and TRDA. These standards are provided as Appendix A. Industrial development would be subject to applicable state and federal regulations.

2.3 Alternative 2

Alternative 2 calls for approval by TVA of the change in land use designation from industrial to residential for the Bat Creek peninsula. Under Alternative 2, the proposed residential development of the peninsula could proceed under guidelines and environmental safeguards imposed by the Development Standards for the Tellico Project contained in Contract No. TV-60000A. Existing state and federal regulations would also apply under this alternative. No additional mitigations or development standards beyond those contained in the Development Standards or required by other applicable state or federal regulations would be imposed upon the developer.

Under Alternative 2, any permits granted under Section 26a of the TVA Act and recreation easements for private water-use facilities would be subject to approval under existing policy and regulations including the guidelines for permissible private water use facilities as shown in Appendix G. If the perspective developer does not pursue a general Section 26a permit and/or recreational easements, requests for these approvals would be reviewed on a case-by-case basis.

2.4 Alternative 3

Under Alternative 3, TVA would approve the change in land use designation of the Bat Creek peninsula from industrial to residential, provided the developer complies with additional development standards and land use designations determined by TRDA and TVA to enhance environmental protection. These measures would be in addition to the Development Standards for the Tellico Project contained in Attachment B to Contract No. TV-60000A.

These additional measures are designed to maintain navigation safety; better protect water quality; promote aesthetic quality; and protect recreational quality, wetlands, and sensitive wildlife habitat. Specifically, the following requirements would apply to the upland areas (i.e., property above the 820-foot [249.9-m] contour).

- Potential adverse effects on historic properties will be taken into account in accordance with the requirements of Section 106 of the National Historic Preservation Act and the Regulations of the Advisory Council on Historic Preservation.
- The approximately 60 acres (24.3 ha) of grasshopper sparrow habitat on the Bat Creek peninsula will be replaced in kind elsewhere on public lands in the Tellico Reservoir vicinity.
- A wildlife movement corridor along the shoreline from the SR 72 bridge to Bat Creek Mile 2.2 (as shown on Figure 2) will be established. This shoreline corridor will have a minimum width of 100 feet (30 m) and will be perpetuated by means of deed restrictions. Pedestrian access to private or community docking facilities may be permitted at specified locations within this corridor. However, no more than two such access paths will be permitted within any 240-foot (73-m) segment. Hiking trails, golf cart paths, or trails may be permitted, provided they are routed to minimize potential impacts to wildlife populations utilizing the corridors. Removal of canopy and understory vegetation will be kept to a minimum and, where permitted, vegetation removal shall be consistent with current TVA guidelines.
- Two additional permanent wildlife movement corridors will be established as shown on Figure 2. These corridors will have a minimum width of 150 feet (45.7 m). This requirement will be included as a deed restriction.
- Protection of the visual quality of the bluff lying behind the two visual protection zones between Little Tennessee River Mile 15.2 and Mile 16.1 will be addressed in the master plan provided by the developer.
- The developer will be required to either avoid disturbing the identified archaeological sites, or reduce the effects to non adverse levels in accordance with the requirements of Section 106 of the National Historic Preservation Act.

Under Alternative 3, general section 26a approval and recreation easements could be issued to the prospective developer, or these could be reviewed and granted on a case-by-case basis, depending on the plans of the developer. Permissible private water use/boat dock facilities are provided in Appendix G. These requests would be subject to existing policy as well as the following requirements and conditions.

- Docks would be prohibited on those shoreline areas as shown in Figure 2.
- Along the shoreline protected for navigation (see Figure 2), docks may be permitted but will require review by TVA Navigation Staff. Existing navigation review policy would be in effect in these designated areas.
- Along shoreline protected for navigation, boardwalks may be permitted along the shoreline except within 50 feet (15.2 m) of navigation aids or safety landings. No docks or permanent boat mooring will be permitted in these areas.
- Where permitted by TVA, shoreline stabilization will be accomplished by riprap and/or shoreline vegetation plantings with native vegetation (willows, buttonbush, etc.); retaining walls are prohibited.
- Existing shoreline vegetation will be preserved below the 820-foot (249.9-m) contour. Mowing or lawn maintenance below that elevation contour is prohibited unless approved in writing by TVA.

- TVA shoreline properties will be managed to maintain and develop a vegetated zone which will (1) provide a visually pleasing shoreline, (2) protect water quality by filtering runoff from adjacent developed areas, and (3) provide habitat for wildlife. Pathways may be permitted across this zone to access private or communal docking facilities. Cleared corridor access to individual private docks will not exceed 6 feet (1.8 m) in width. Cleared access to communal docks will not exceed 10 feet (3 m) in width. Vegetation management on TVA shoreline properties will be done in compliance with TVA shoreline management policy.
- Docks may not be recessed into the shoreline (i.e., excavated into the bank).
- No nonwater-use or access facilities below the 820-foot (249.9-m) contour will be permitted.
- A maximum of 400 wet or dry community storage spaces will be permitted; however, fuel sales, boat/motor repair or sales, materials or provisions sales and other amenities typically provided at commercial marinas are prohibited. Community dock facilities in the Bat Creek embayment are limited to a maximum of 200 spaces, including any dry storage spaces associated with Bat Creek. Community dock spaces on the Little Tennessee River side of the peninsula are limited to a maximum of 50. Recommended locations for these docks are shown on Figure 2.

To enhance water quality, the following measures would be required under Alternative 3.

- Dredging is discouraged but may be considered in some areas (consistent with any state, TVA, and/or USACE requirements) if no other practical alternative for access is available.
- TRDA will require of the developer as part of the master plan, a drainage and sediment control plan. This plan will address measures to control or prevent sedimentation and water quality degradation from construction activities, golf course and lawn runoff, and other potential sources of water quality problems.

2.5 Comparison of Alternatives

2.5.1 Alternative 1

Adoption of Alternative 1 (the No Action Alternative) would result in the Bat Creek site retaining its industrial land use designation. Residential development would not occur. No industrial development is anticipated in the near future. Thus, for the short term, the site would retain virtually all of its current characteristics. Outdoor recreation opportunities including hunting, fishing, and boating would remain unaffected in the immediate future. Except for areas undergoing noticeable natural vegetative changes, wildlife habitats, visual setting and overall character of the peninsula are expected to remain relatively unchanged until the area is developed for industrial uses.

Potential environmental impacts resulting from possible future industrial development of the site are difficult to predict and would depend on the nature of the industry or industries locating on the site and the degree of conformity with the applicable Tellico Development Standards. Industrial development of the peninsula resulting from adoption of Alternative 1 would probably have more impact on the local road network than the other two alternatives, due to the potential increase in truck traffic. With the establishment of relatively stable long-term jobs, industrial development would probably result in slight increases in per capita income and the potential for retail development in the area. The number of industrial jobs created is unknown and would depend on the workforce requirements of the industry locating on the site. Industrial development would create acceptable increases in demand for utilities and community services (e.g., electricity, sewerage, potable water, fire protection, and schools).

2.5.2 Alternative 2

Under Alternative 2, TVA would agree to a change in land use designation for the Bat Creek peninsula from industrial to residential. Thus, residential development of the Bat Creek peninsula would result from the adoption of Alternative 2. Environmental protection of archaeological resources and water quality from potential adverse construction impacts would be afforded by the conditions of Contract No. TV-60000A.

As with industrial development, residential development of the peninsula would eventually result in the loss of wildlife habitats and informal recreational opportunities (including hunting) on the upland areas (i.e., lands above the 820-foot [249.9-m] contour). Residential development would likely alter the appearance of the site somewhat but would have less effect than some types of more visually apparent industrial development. Residential land-use is not expected to have a significant adverse effect on the local road system. New construction jobs required for residential development would have an economic effect similar to the industrial jobs resulting under Alternative 1. Although there is expected to be a need for construction-related jobs until the year 2008, these jobs would be more temporary in nature than industrial jobs. The number of residential construction jobs created would depend on the rate of expansion of the development. The influx of new residents to the area would likely increase local economic activity as shown in a recent study of economic impacts of Tellico Village (Siegel and Leuthold, 1992). The potential for retail development would grow slightly with the increase in the local area population and the demand for locally available goods and services.

Adoption of Alternative 2 would likely result in more extensive shoreline alteration than the other two alternatives, due to the lack of limitation on the issuance of recreation easements and Section 26a permits for private water-use facilities. This increased alteration could have potentially adverse impacts upon wetlands, visual character, water quality, and fish and wildlife habitats, including grasshopper sparrow habitat. The grasshopper sparrow is listed by the State of Tennessee as a threatened species.

2.5.3 Alternative 3

As with Alternative 2, residential development of the Bat Creek site could proceed under Alternative 3. Additional protective measures beyond those required under Contract No. TV-60000A and other appropriate regulations would be incorporated into the proposed development through a supplement to Contract No. TV-60000A between TRDA and TVA. These additional mitigative measures and deed restrictions would provide further environmental safeguards.

Potential effects on scenic character would be approximately the same as under Alternative 2. Adoption of Alternative 3 would have less impact than Alternative 2 on upland wildlife due to the establishment of wildlife travel corridors and a greenbelt along the south property line. Potential effects on the local economy and the road system are expected to be similar to those resulting under Alternative 2.

Residential development under Alternative 2 or 3 would result in additional demands on community infrastructure, especially for utilities and services. These demands are expected to be met without significant reductions in the level of service.

The restriction of the amount of waterfront access and water-use facilities under Alternative 3 would substantially reduce potential adverse effects on water quality and riparian wildlife habitats, and would provide additional visual protection of the shoreline. Under Alternative 3, grasshopper sparrow habitat would be replaced on public lands elsewhere in the Tellico Reservoir area.

Chapter 3

3.0 AFFECTED ENVIRONMENT

3.1 Introduction

The Bat Creek peninsula is a 1,060-acre (429-ha) parcel lying between Bat Creek and the Little Tennessee River from river mile 12.5 to 16.1. The peninsula is oriented southwest to northeast and is crossed by the Loudon-Monroe County, Tennessee, boundary. The property is located approximately 5 miles (8 km) north of the town of Vonore, Tennessee. The site is accessible from State Route 72, which is located on the west side of the property.

TRDA currently permits agricultural use of about 500 acres (202 ha) through license agreements for rowcropping and pasturing. Former and current land uses include row crops, pasture, and forest. Topography varies from hilly in the southern portions to gently rolling hills farther out on the peninsula. The peninsula is approximately 3 miles (4.8 km) long, averages about one-half mile (0.8 km) wide, and has about 9.2 miles (14.8 km) of shoreline. The property is bordered on the south by Tellico West Industrial Properties.

3.2 Transportation System

3.2.1 Highways

The entrance to the proposed development is on State Route (SR) 72 about 3 miles (4.8 km) south of the Tellico Parkway and about 3 miles north of US 411 in Vonore. Access to Interstate Highway 75 is either 11 miles (17.7 km) north along SR 72 through Loudon or 13 miles (20.9 km) north via the Tellico Parkway/US 321 through Lenoir City. Average daily traffic (ADT) on the parkway near SR 72 was 2,200 vehicles per day in 1992. On SR 72 between the site and Loudon, the ADT increased slightly to 2,270, while the volume on the highway in Vonore at the intersection with US 411 was 5,690. These traffic volumes are very low relative to the capacity of the roads. In April 1993 TVA observed that the Tellico Parkway needed repaving but was not in danger of imminent deterioration. The Parkway's condition compares favorably with other roads in Loudon County. Negotiations are underway for the Tennessee Department of Transportation (TDOT) to accept ownership and maintenance of the Parkway through a transfer agreement between TRDA and TDOT.

3.2.2 Navigation and Rail Access

A 9-foot (2.7-m) navigation channel is maintained past the site. This channel is part of the 10,000-mile (16,090-km) interconnected inland waterway system including the Tennessee-Tombigbee Waterway and Mississippi River. There is currently no regular commercial navigation on Tellico Reservoir. However, there is a public use port in Vonore which has received occasional barge shipments in the past. The nearest rail access is about 3 miles (4.8 km) away at Vonore.

3.3 Socioeconomic Conditions

The site is split by the Loudon-Monroe County line with about half of the site in each county. However, the Tellico Reservoir area is defined as all of Loudon and Monroe Counties and about one-third of Blount County. The population of this area was 68,837 in 1990. Residents age 65 and over make up about 14

percent of the population, slightly higher than the state average of 12.7 percent or the national average of 12.6 percent. The area is predominately white (98 percent), while the state is 83 percent white. Per capita income in the entire three-county area was \$14,713 in 1991 compared to the state's \$16,478 and the Nation's \$19,091.

3.4 Recreation

The Bat Creek peninsula is currently undeveloped. Current TRDA policy is to extend informal recreation privileges, including hunting, to the public on undeveloped industrial lands. Until such time that development (industrial or residential) might occur or public use is otherwise excluded, it provides interim opportunities for hunting and limited recreation. The entire peninsula is a popular hunting area for local hunters and is used throughout the fall/winter hunting seasons. Most hunters pursue small game, especially eastern cottontails. Other common upland game species in the area include white-tailed deer, gray squirrel, northern bobwhite quail, mourning doves, and foxes.

TRDA unsuccessfully gated access to the property in 1993 to control four-wheel-drive use and unauthorized dumping on the property. However, pedestrian access is permitted by TRDA.

The 3-mile-long (4.8-km) Bat Creek embayment is a popular recreational boating area and is used heavily during the recreation season for a variety of water-related activities, including fishing, skiing, and boating. These activities are expected to increase on the reservoir as a result of incoming users from Fort Loudoun Reservoir and continued residential development around the lake.

A tract of land owned by TRDA directly across Bat Creek from the peninsula (Figure 2) is allocated for commercial recreation development under Contract No. TV-60000A. TRDA does not anticipate developing the proposed site on Bat Creek in the immediate future.

3.5 Biological Setting

3.5.1 Terrestrial Biology

Portions of the 9.2 miles (14.8 km) of shorelands around the Bat Creek peninsula contain areas of mature forest where more recent human influences have been relatively limited. Areas of younger forest cover, including mixed hardwood and Virginia pine (and planted loblolly) stands, are also present along portions of the shoreline. Some reaches support early successional communities, particularly where backlying land is farmed. In some areas, these open lands extend to the shoreline. The uplands are a mosaic of agricultural lands (row crop, pasture, and hay), naturally reverting old fields, densely vegetated fence and hedge rows and depressions (some sinkholes), hardwood woodlots, mixed hardwood-pine, and nearly pure Virginia (natural) and planted loblolly pine stands. Most of the uplands have been cleared of forest for agriculture.

At present, Bat Creek peninsula provides habitat for a variety of wildlife species. Forested areas provide food and den sites for various species and form corridors for animal movements. Early successional open lands provide excellent small game habitat, as well as serve the needs for many nongame species. Early successional forest stands provide good escape and security cover and will likely increase in habitat value as they mature.

The peninsula's hardwood forests, although fragmented and limited in area, support numerous neotropical migrant bird species (i.e., migratory birds that overwinter in Central and South America), including the yellow-billed cuckoo, woodthrush, red-eyed vireo, Kentucky warbler, and summer tanager. Permanent bird residents of these woodlands include a few species of woodpeckers, blue jay, Carolina chickadee,

and white-breasted nuthatch. Birds common in early successional shrub habitats include eastern kingbirds, prairie warbler, indigo bunting, field and song sparrows, and American goldfinch. Birds utilizing a variety of habitat types include the turkey vulture, red-tailed and red-shouldered hawks, American crow, and northern cardinal.

Common bird species of the shoreline forest habitats include the green-backed heron, yellow-billed cuckoo, eastern kingbird, prothonotary warbler, common yellowthroat, red-winged blackbird, and common grackle. Spotted sandpipers occur along shoreline areas during the spring and early fall. Numerous species of reptiles and amphibians also use shoreline, adjacent areas of riparian habitat, and upland habitats on the peninsula.

No federally listed, proposed, or candidate endangered or threatened species of terrestrial animals are known to occur on or regularly utilize the Bat Creek peninsula above or below the 820-foot (249.9-m) contour.

However, bald eagles (*Haliaeetus leucocephalus*), listed by USFWS as endangered, occur throughout the year on Tellico Reservoir and have recently nested near the upper end of the reservoir. In the Bat Creek area, wooded shorelines probably receive infrequent fall and winter use by migrating bald eagles. However, they are not known to nest in the Bat Creek vicinity.

Ospreys (*Pandion haliaeetus*), listed by the state of Tennessee as endangered, use the Bat Creek area during spring and fall migrations. Due to expanding populations along neighboring reservoirs, nesting by this species is likely to occur in the Bat Creek area within the next few years.

Grasshopper sparrows (*Ammodramus savannarum*), listed by the state of Tennessee as threatened, were formerly common in grassland habitats in the surrounding area and historically nested on the Bat Creek properties. However, residential and industrial development have eliminated many areas of suitable habitat. This neotropical migrant uses lush meadows and hay fields for nesting and foraging from late April through the end of September. Suitable habitat for this species occurs on the peninsula, and grasshopper sparrows were observed during a May 1993 site inspection. This small population utilizes about 60 acres (24 ha) of suitable habitat on the peninsula.

No federal or state listed (proposed or candidate) terrestrial plants are reported from at least a 10 mile (16 km) radius.

3.5.2 Aquatic Biology

The Little Tennessee River portion of Tellico Reservoir in the vicinity of the proposed Bat Creek residential development is characterized by shallow overbank areas on the downstream portion of the peninsula with steeper bluff banks adjacent to the most upstream section of the peninsula. Resident sport fish communities utilize the gravel sections of the overbank for spawning and the gravel and clay banks as nursery areas. The deeper bluff and rock sections of the shoreline provide good adult feeding and holding areas.

Compared to the main body of Tellico Reservoir, the Bat Creek embayment is characterized by increased fertility due to the Bat Creek watershed. The fish community in Bat Creek embayment is characteristic of those found in fertile embayments of tributary impoundments of the Tennessee River. The sport fish community of the embayment is extensive and provides considerable recreational opportunities. Major sport fish populations include largemouth bass, crappie, and bluegill sunfish. Channel catfish also provide ample fishing opportunities. Bat Creek is an important spawning and nursery area for largemouth bass, bluegill, and crappie. There are 11 other major embayment areas on Tellico Reservoir that provide similar spawning and nursery habitat.

Prior to filling Tellico Reservoir, this reach of the Little Tennessee River supported a wide variety of aquatic species, including at least eight types of animals now listed or being considered for endangered or threatened status. The federally threatened snail darter (Percina tanasi) and the federally proposed endangered Anthony's river snail (Atheamnia anthoni) were both recorded from the area but are no longer thought to be residents since the closure of Tellico Dam. Federal candidate species with collection records in the Bat Creek development area include the hellbender (Cryptobranchus alleganiensis), verrucose river snail (Lithasia verrucosa), mainstream river snail (Leptoxis praerosa), blue sucker (Cyctepus elongatus), and the Howe's dragonfly (Ophiogomphus howei). Closure of Tellico Dam in 1979 and the resulting habitat changes likely eliminated many or all of these populations. The blotchside logperch (Percina burtoni), listed in Tennessee as in need of management, is also considered eliminated from this section of river. Only the blue sucker, the verrucose snail, and the mainstream snail may continue to exist near the Bat Creek peninsula. If these three species still exist in the reservoir, they would occur in the vicinity of the old river channel, which is not expected to be affected by the proposed development.

There are pre-impoundment reports of state-listed aquatic plants within several kilometers of the Bat Creek site. However, these plants typically require river-type habitats, and it is doubtful that these populations have persisted following the closing of Tellico Dam.

3.5.3 Wetlands

Wetlands occurring along the 9.2-mile (14.8-km) Bat Creek peninsula shoreline have been characterized and classified using the hydrogeomorphic system developed by Brinson (1993). This approach is based on geomorphic setting, water source, and hydrodynamics and is used to identify and group functionally similar wetland areas.

According to this system, the emergent and scrub-shrub plant communities scattered along the shoreline are classified as "fringe" wetlands. Such wetlands are generally found within the fluctuation zone of rising and falling water levels adjoining the main water body, i.e., the operating zone of Tellico Reservoir. The majority of the fringe wetlands occur between the 812- and 815-foot (247.5- and 248.4-m) contour elevation. Fringe wetland vegetation includes typical species such as common cattail, woolgrass, buttonbush, and black willow. Other common wetland species include soft rush, silky dogwood, and river alder.

A different type of wetland has developed in association with the three ponds located below the 820-foot (249.9-m) contour at Little Tennessee River Mile 15.8. They are surrounded by a narrow band of fringe wetlands and also support submersed aquatic vegetation. This wetland type is best classified using the system developed by Cowardin et al. (1979) as follows:

System - Lacustrine
Subsystem - Littoral
Class - Aquatic Bed
Water Regime Modifier - Permanently Flooded
Special Modifiers - Impounded

Bat Creek peninsula fringe wetlands stabilize the shoreline and disperse the energy of waves and currents, thus reducing erosion and resuspension of sediments. This helps maintain water clarity and improves water quality. These wetlands also filter runoff from uphill, trapping sediments and nutrients.

Fringe and littoral zone (i.e., overbank area) wetlands also provide habitats that support a diverse array of wetland-dependent wildlife including wood ducks, Canada geese, and mallards; great blue and green-backed herons; red-winged blackbirds, swamp sparrows, mink, muskrat, and raccoon; and a variety of reptiles and amphibians. These systems also support the food chain by incorporating nutrients for decomposed organic debris. This process supports plant and animal communities within the wetland, adjoining uplands, and in adjacent waterbodies. Because of the scarcity of such habitats locally, associated values are considered important.

In 1991 recognizing the need for sanctuary for migrant-wintering waterfowl, TWRA extended its agreement with TRDA and TVA to continue management of the Bat Creek Waterfowl Refuge. This refuge extends from the SR 72 bridge at Bat Creek to the mouth of the creek and contains approximately 625 acres (253 ha) of TVA shoreland and adjacent surface water. Over the last few years, the Refuge has failed to attract and hold waterfowl as expected. TWRA has announced its intention to discontinue the Refuge before the 1994 waterfowl season.

3.6 Air Quality

Air quality in the two counties (Loudon and Monroe) containing the Bat Creek peninsula is quite good. Both counties are designated as being in attainment for all National Ambient Air Quality Standards (NAAQS). This means that air quality in these counties is better than required for compliance with the NAAQS. Knoxville, Tennessee, the nearest metropolitan area, is about 25 miles (40 km) away and is also in attainment for all NAAQS. The nearest nonattainment area is in Copperhill, located about 22 miles (60 km) away in Polk County, Tennessee. Even though the Copperhill area is designated nonattainment for the sulfur dioxide NAAQS, the most recent air quality data (1990-1992) in Polk County indicate that the NAAQS are being attained.

3.7 Water Quality

3.7.1 Reservoir Water Quality

Water quality in Tellico Reservoir is generally good and meets Environmental Protection Agency (EPA) and Tennessee water quality criteria and guidelines in all but a few cases. Water flowing into the reservoir from impoundments and unregulated streams retains many of the characteristics of the mountain streams in the area. These basic characteristics make the reservoir suitable for almost all designated water uses, including domestic and industrial water supply, fish and aquatic life, swimming and other water-contact recreation, livestock watering and wildlife, irrigation, and navigation.

The waters of Tellico Reservoir are soft, poorly buffered, slightly acidic to near neutral, and low in dissolved solids, suspended solids, color, turbidity, and most metals. Available nutrients, particularly phosphorus, are low in the reservoir. Bacteria concentrations are generally low and meet state criteria for water-contact recreation. Tellico is one of the more desirable and attractive impoundments in the region from a water quality perspective (Tennessee Valley Authority, 1983).

Unfavorable conditions in Tellico Reservoir include typical sediment runoff following storms, low dissolved oxygen in the hypolimnion (deeper water layers) during the summer, some contaminated sediment, and PCB (polychlorinated biphenyls) contamination of some fish species. Deep water in Tellico is basically stagnant, resulting in low dissolved oxygen in the lower levels during the summer. The sediment upstream of the dam has elevated ammonia levels. The State of Tennessee advises people not to eat catfish from Tellico Reservoir because of high PCB concentrations (Tennessee Valley Authority, 1993).

3.7.2 Groundwater

Groundwater in the area is generally of good quality and serves as the source for public water supplies. Among those utilities that depend, at least in part, on springs or wells are Loudon, Piney, Dixie Lee, Tellico Plains, and Sweetwater. The depth, yield, quality, and vulnerability of groundwaters depend on the geologic formation. The Bat Creek area is underlain by a mixture of sandstone, shale and limestone strata. In shale, the depth to water bearing zones is generally less than 200 feet (61 m). In limestone and sandstone, the zones can be more than 400 feet (122 m) deep.

3.8 Utilities and Services

3.8.1 Water Supply

There is currently no public potable water service on the Bat Creek peninsula. Potable water to the Bat Creek site would be provided by the Tellico Area Services System (TASS). The utility obtains raw water from Tellico Reservoir at Little Tennessee River Mile 19.2 (east bank). The existing water treatment plant has a capacity of approximately 3.5 million gallons per day (mgd) (0.15 m³/s) with a future expansion capacity of up to 7.0 mgd (0.31 m³/s). Current water demand is approximately 2.0 mgd (0.09 m³/s).

3.8.2 Wastewater Treatment

Wastewater treatment and disposal for the site would be provided by TRDA, which operates a 0.75 mgd (0.033-m³/s) treatment plant discharging to Tellico Reservoir at Little Tennessee River Mile 16.2 (west bank). The plant presently treats approximately 0.3 mgd (0.013 m³/s) of primarily industrial wastewater. The plant routinely meets state (NPDES) treatment requirements but experiences periods of low nutrient levels for biological processes due to industrial wastewater inflows.

3.8.3 Solid Waste Disposal

Solid wastes would be taken by a private contract hauler to either the Loudon or Monroe County landfills. The Loudon County landfill is approximately 20 (32 km) miles northwest of the site. This landfill is nearing capacity but an expansion is planned. With the expansion it is expected to receive between 26,000 tons (23,587 metric tons) and 39,000 tons (35,380 metric tons) per year and will have a 10-year life (the length of capacity assurance required of all counties under a new state law) at that rate. The Monroe County landfill is approximately 15 miles (24 km) to the south. According to the East Tennessee Development District, it received about 25,000 tons (22,680 metric tons) in 1991 and has about two more years of life at that rate. Future waste management plans are uncertain but may include development of a transfer station and disposal at other area landfills willing to accept the waste. These plans will also have to assure capacity for 10 years.

3.8.4 Fire and Police Protection and Emergency Medical Services

Currently, there is little need for fire protection on the Bat Creek Peninsula. The Vonore Fire Department is located in the Tellico West Industrial Properties adjacent to the Bat Creek property. Police protection for the peninsula is currently provided by the Loudon and Monroe County Sheriff Departments, with each serving in their respective jurisdictions. The peninsula falls within the service area of the Vonore Rescue Squad, which has a mutual aid agreement with the Loudon County Rescue Squad to serve the Loudon County portion of the peninsula.

3.8.5 Electrical Service

The Bat Creek peninsula is in the electrical service area of the Loudon Utilities Board, which also provides natural gas service. Recently, new additions to the electrical distribution facilities have been completed. The major improvements, a new substation and a new switching station, will provide more reliable electrical service to the area, including Tellico Village.

3.8.6 Schools

The Bat Creek peninsula is within the Loudon and Monroe County school districts. Students on the Loudon County end of the peninsula would likely attend public schools in Loudon, unless arrangements could be made with Monroe County. Monroe County residents of the proposed residential development would send students to schools in Vonore.

3.9 Cultural and Historic Resources

Two archaeological surveys of the Bat Creek peninsula area have been conducted. In 1980 the University of Tennessee conducted a survey of Industrial Area II (Davis, 1980; 1990). Approximately 65 localities of prehistoric archaeological remains and 26 localities of historic structures or archaeological remains were identified (Carnes, 1980). Another archeological survey (Davis et al., 1982) recommends that four individual archaeological sites and one Archaeological Resource Protection Area containing four sites be protected from development on the Bat Creek peninsula. In 1987 the area was resurveyed with the particular goal of identifying upland burial mounds (Hall, 1987a; 1987b). However, no additional sites were identified in that survey.

All standing structures on the Bat Creek peninsula were demolished during construction of the Tellico Reservoir. Therefore, there are no significant historic structures on the site. One of the archaeological sites recommended for preservation by Davis et al. (1982:47) is a historic site associated with a demolished structure.

3.10 Floodplains

The 100-year floodplain in the vicinity of the Bat Creek peninsula is that area located below elevation 815 feet (248.4 m). All development activities, except for water-use facilities, would be located above the 820-foot (249.9-m) contour. TVA retains fee simple ownership of shoreline below the 820-foot (249.9-m) contour.

3.11 High-Quality Farmland

High-quality farmland is an important resource for the production of the Nation's food and fiber. It can consist of several categories of soils, but only prime farmland and additional farmland of statewide importance are present on Tellico Reservoir lands. Prime farmland is land with the best characteristics for producing crops with minimum inputs and without intolerable soil erosion. Additional farmland of statewide importance is land especially suited to specific crops and which has been designated by the state Department of Agriculture.

Maps compiled for studies of the Tellico project indicate that less than 25 percent, or about 200 acres (81 ha), of the site is high-quality farmland. Most of this is in the central and southern parts of the site. Data on prime farmland specific to the site have not been obtained, but a previous study for a larger area including the site indicated that about 9 percent of that area was prime farmland. Tellico Project lands as a whole contain about 9 percent prime farmland and about 19 percent additional farmland of statewide importance. Thus, the site is similar to, or perhaps has slightly lower quality farmland than overall Tellico Project lands.

The site contains a very small amount of high-quality farmland compared to the total in Loudon and Monroe Counties. According to the Soil Conservation Service, Loudon County has about 18,000 acres (7,285 ha) of prime farmland and about 70,000 acres (28,330 ha) of additional farmland of statewide importance, while Monroe County has about 52,000 acres (21,045 ha) of prime farmland and about 78,000 acres (31,560 ha) of additional farmland of statewide importance, for a total of about 218,000 acres (88,225 ha) of high-quality farmland.

Most of the site has been licensed by TRDA in recent years for growing corn and soybeans and for pasture. Currently, about 500 acres (202 ha) are licensed, and the only large areas not licensed are in the southeastern corner toward the reservoir and the northwest corner near old SR 72.

3.12 Visual Setting

The Bat Creek tract is composed of rolling-to-slightly-steep farmland. Its combination of hay fields, pasture, and abandoned fields is divided by fence rows and mixed patches of pine, cedar, and hardwood and is highlighted by the lake. Approximately 1 mile of wooded bluff-like limestone outcrop provides the greatest visual diversity along the southeastern facing shoreline between Little Tennessee River Mile 15 and 16.

The tract is most frequently seen by boaters on the reservoir. These recreationists are a combination of fishermen, skiers, pleasure boaters, and persons on anchored craft in surrounding coves. The frequency of these viewers is greatest during summer months on weekends and during weekday evenings. Highway views of portions of the tract are seen by motorists crossing Bat Creek on Highway 72 and by travelers on frontage, subdivision, and side roads on both shores of the reservoir. The easternmost portion of the peninsula is directly visible to the lot and homeowners on the western sloping face of the Foothills Pointe Subdivision on the opposite lakeshore at River Mile 13.5. Some visibility of the tract is obtained from the adjoining industrial sites as well as from various observation points along the Bat Creek and Red Knobs. The tract is screened almost entirely from view of the existing Tellico Village residential development by the Bat Creek Knobs and Jackson Bend Island. Portions of the tract are also visible to a few residents located on surrounding hillsides, generally at distances over a mile (0.4 km).

Chapter 4

4.0 ENVIRONMENTAL CONSEQUENCES

4.1 Introduction

The environmental consequences that would result from adopting each of the three alternatives are discussed in this chapter. The chapter is organized by potentially affected resources. Important potential effects associated with the three alternatives will be discussed for each of these resources.

4.2 Effects on Transportation

4.2.1 Highways

If the site is retained for industrial use (i.e., Alternative 1) and development occurs, both automobile and truck traffic would be generated. Automobile traffic would be concentrated during normal rush hours, but the truck traffic would likely be spread across a 24-hour work period. Use of the site for residential development would produce comparable levels of automobile traffic and essentially no truck traffic after the construction period. Alternatives 2 and 3 are equivalent in terms of highway impacts to the local road network because the additional mitigative conditions under Alternative 3 would not affect the volume or timing of traffic flow due to residential development.

Residential development would have less impact on the Tellico Parkway and other local highways than industrial development. This is mainly due to the truck traffic industries would generate. One pass by a legally loaded truck is the equivalent of over 600 automobile passes in terms of pavement damage. One truck is the volumetric equivalent of about five cars on roads similar to those in this area. However, given the low current traffic volumes, the volumetric effect of trucks would be a relatively minor impact.

4.2.2 Navigation

If the site is retained for industrial use and an industry requiring water transportation located on the site, there would be little or no impact on commercial navigation because very little barge traffic currently occurs. Similarly, residential development is not expected to affect commercial navigation for the same reason. Impacts on recreational water traffic are discussed in Section 4.4.

4.3 Effects on Socioeconomic Conditions

4.3.1 Alternative 1

If the site is retained for industrial use and development occurs, many of the jobs created would probably be filled by residents of the Tellico Reservoir area. This retention of current residents would have the effect of lowering the average age of the population because younger residents would have more opportunity to find work in the area. This would contribute to population growth staying in line with existing projections. Most likely, an industry locating on the site would pay the prevailing wage for manufacturing, which would slightly raise the area's per capita income. For the property taxes generated by such a development to provide a net increase to the area, the site would have to possess one or more special features not available at competing sites in the area; otherwise, industry would locate on a competing site. Competing sites include two existing industrial parks, Tellico West Industrial Properties and Niles Ferry Industrial Park, which have 1,130 acres (457 ha). An additional 5,000 acres (2,025 ha) are available for industrial development in the East Tennessee area (East Tennessee Development District, 1993).

The potential for increased retail development in the local area around the Bat Creek peninsula would depend on the workforce characteristics and the number of employees of the prospective industry. Generally, retail development would increase as the local demand for goods and services increases.

4.3.2 Alternatives 2 and 3

The proposed residential development calls for staged development of 200 lot increments at one-year intervals until about year 2008. However, initiation of any subsequent stage depends on the developer having sold at least 50 percent of the previous stage. This has the general effect of lessening any impacts to the public and private infrastructure by creating a gradual growth in demand. It also minimizes the potential for diminishing the value of existing Tellico area residential development because the market is not "flooded" with new lots.

Construction jobs created during the residential development period would likely be filled by area residents. Although these jobs would be somewhat more temporary, construction jobs would last through at least the year 2008. Siegel and Leuthold (1992:12) estimated residential construction workers at Tellico Village earned approximately \$19,000 per year.

New residents would add to the baseline population projected for the area. At least 50 percent would be retirement age and consequently raise the average age of the area's population. New residents would tend to have high levels of disposable incomes.

Per capita tax revenue from the Bat Creek development would be higher than other non-waterfront developments typical of the surrounding area due to the type and scale of the development. The large share of retired people would result in their payment of property taxes for schools with no additional demand for the facilities or services. They would create a higher demand for health services, especially in the private sector. Some lots will be purchased by people wanting access to the golf course. To the extent that these persons do not build homes within the residential development, additional tax revenues would be generated without commensurate demands for community services.

Retail development follows established market demands created by additional population. The increasing population resulting from residential development is expected to result in the growth of some small businesses in the vicinity. However, the influx of major shopping facilities (e.g., malls, grocery chains, etc.) is unlikely due to a lack of a large customer base.

4.4 Effects on Recreation

4.4.1 Alternative 1

The current industrial land use designation offers limited outdoor recreation potential in the near term. In the event industry locates on the peninsula, the potential for future land-based recreational opportunities would be eliminated. However, in the short term, unless excluded, the general public would be able to continue a variety of activities including hunting, wildlife observation, and nature study.

In the long term, if a barge-using industry locates on the peninsula, the terminal would likely be located on the Little Tennessee River side of the peninsula, resulting in no direct impacts to recreational boating traffic in Bat Creek. Barge traffic generated by such an industry is not expected to exceed an average of one tow per day. Because barge traffic operates 24 hours a day, seven days a week, many of the tows would not traverse Tellico Reservoir during peak recreational boating periods. The number of barge tows passing through Fort Loudoun's lock in 1992 averaged 0.45 per day. Based on anticipated barge traffic patterns, a Bat Creek industry requiring the use of barges would not adversely impact recreational boating activities on Tellico Reservoir.

4.4.2 Alternative 2

The development of 2,000 residential lots and associated infrastructure and facilities would eventually eliminate current informal recreation and hunting use of the peninsula and could generate a demand for high levels of residential-related private water-use facilities. Planned recreation amenities include a golf course, clubhouse, swimming and tennis facilities, community center (approximately 2 acres [0.8 ha]), five mini-parks (minimum of 1 acre [0.4 ha] each), and two 20-acre (8.1-ha) waterfront parks/playgrounds. An equestrian park of approximately 20 acres (8.1 ha), which could include picnic and trail facilities, is also being considered. Not less than 20 percent of the total property is proposed to be common property, golf course, and open space, excluding street rights-of-way.

The National Recreation and Park Association's (NRPA) "Recreation, Park and Open Space Standards and Guidelines" recommend a community's core system of park land equal to 6.25-10.5 acres (2.5-4.2 ha) per 1000 population, with specialized park facilities such as a golf course being developed as needed. Based on a ratio of 2.17 persons per residence built (existing Tellico Village ratio), the development's potential population of about 4,340 residents should have 27-46 acres (10.9-18.6 ha) available in a core park system. The 27 acres (10.9 ha) allocated for planned community park facilities are within the lower range of the recommended NRPA standards. The development of the equestrian park land for multiple community park purposes would provide a more suitable level of core system park land to meet potential demand generated by the residential development.

This alternative would increase the demand for the development of the shoreline for private water-use facilities and dry storage berths. This could result in a potentially adverse impact on water-related recreation activities in the embayment as boating use could quickly reach a saturation point. As a result, water-related users would have to change the time of day they used the embayment or select alternative areas of the reservoir. The proliferation of private water-use facilities and dry storage berths could lower the potential demand for commercial recreation services and facilities planned on nearby TRDA property. Commercial marina services and facilities such as fuel sales, boat repair, and sales would not be allowed within the proposed Bat Creek development in accordance with restrictions currently in place for planned residential areas on Tellico.

TVA allocated approximately 50 percent of the 22,000 acres (8,900 ha) on Tellico for development purposes, with the Bat Creek peninsula being part of this land base. There are approximately 11,000 acres (4,450 ha) of public land available nearby and around the reservoir for use by those that might be displaced by residential development of the Bat Creek property. These public lands offer varying degrees of recreation opportunities but should provide ample opportunities for informal outdoor recreation.

4.4.3 Alternative 3

As with Alternative 2, the proposed residential development would eliminate current informal recreation and hunting use on the peninsula. However, under this alternative, development of residential-related water-use facilities would be controlled by limiting the combined total of community wet and dry dock berths to a maximum of 400. Community dock spaces on the Bat Creek side of the peninsula would be limited to a maximum of 200, including any dry storage facilities that might be developed on the Bat Creek side of the peninsula. Community dock spaces on the Little Tennessee River side of the peninsula would be limited to a maximum of 50. Commercial marina services and facilities such as fuel sales, boat repair, and sales are not allowed under Contract No. TV-60000A.

Development of private water-use facilities would be permitted at selected locations, subject to TVA review and approval in conformance with a set of pre-approved plans and Section 26a of the TVA Act. Three areas in Bat Creek have been identified in which private water-use facilities will not be allowed in order to reduce potential boating congestion and to maintain boating safety. The planned community park facilities identified under Alternative 2 should accommodate minimum demand generated by the residential development. The addition of the equestrian park land would provide a more sufficient core park land base to meet potential residential demand.

The limitations on development of dry storage berths, community dock spaces, and private water-use facilities under Alternative 3 would result in more managed development of the shoreline and associated recreation water-use facilities. The ratio of residential units to potential berthing requirements is similar to that being applied at Tellico Village. This could still result in a localized adverse impact on water-related recreation activities in the Bat Creek embayment if boating use eventually reaches a saturation point. If that occurred, water-related users would have to change the time of day they use the embayment or select alternative areas of the reservoir. However, this alternative should result in a longer timeframe for this to occur because fewer wet and dry slips would be available with alternative than Alternative 2. In addition, this alternative could contribute to the potential demand for commercial recreation services planned on the nearby TRDA property, eventually resulting in new facilities and services for the general public.

Impacts to current informal recreation use of the Bat Creek peninsula, including hunting, would be the same as those occurring under Alternative 2.

4.5 Effects on Biological Resources

4.5.1 Terrestrial Effects

4.5.1.1 Alternative 1

Under the No Action Alternative, no immediate or short-term adverse impacts to terrestrial habitats and wildlife are anticipated. Except for those areas where grazing is occurring near the shoreline, the excellent upland habitat and its attendant game and nongame wildlife would continue to thrive under current agricultural lands management regime, until the site is developed for industrial uses.

Generally, effects on wildlife habitat would vary, depending on the type of industry, and the actual acreage required. Possibly, if adequate amounts of habitat (or potential habitat) remained, a strategy could be implemented to retain some of the peninsula's wildlife habitat under an industrial development scenario.

Under Alternative 1, infrequent wintering bald eagle use of the wooded Bat Creek peninsula shorelines is expected to continue for the immediate future. Spring and fall osprey use would also continue. Potential impacts on these species and their use of the shorelands and adjoining overwater areas depends on the amount of shoreline clearing and overall disturbance resulting from industrial development.

In the short term (i.e., until industrial development occurs), grasshopper sparrows would likely continue their seasonal use of suitable habitat on the peninsula. Mowing existing fields or other portions of the area would perpetuate the meadows and hay fields these sparrows use for nesting and foraging. Depending on its specific location, future industrial development would be likely to eventually impact the 60 acres (24 ha) of suitable habitat known to exist on the peninsula. Because of the size and relative ease of replacement, the loss of this type of habitat could be mitigated (i.e., recreated) elsewhere on the peninsula or on other public lands the area.

In the short term (i.e., until industrial development occurs), no adverse indirect (secondary) or cumulative terrestrial wildlife or endangered species impacts are expected under the No Action Alternative. Once industrial development occurs, potential impacts on terrestrial wildlife including state-listed and important species would depend on the extent and type of development and the mitigative measures employed.

4.5.1.2 Alternative 2

The proposed land use change and subsequent residential development occurring under Alternative 2 would result in extensive upland and shorelands disturbance and eventually adversely impact the peninsula's terrestrial habitats and wildlife. Vegetation clearing and alteration, as well as a substantially increased human presence, would accelerate habitat losses, including grasshopper sparrow habitat. Because the developer is not required by current state or federal law to mitigate the loss of grasshopper sparrow habitat under Alternative 2, the grasshopper sparrow population on the site would eventually be eliminated, resulting in a reduction of the population of this state-listed species in the Tellico Reservoir area.

Under Alternative 2, infrequent wintering bald eagle use of the wooded Bat Creek peninsula shorelines is not expected to continue. Approval under Alternative 2 could likely result in the removal of a substantial amount of shoreline trees. Frequent spring and fall osprey use is not likely to continue. Locally, use of the shorelands and adjoining waters by both eagles and osprey would be adversely impacted by shoreline vegetation clearing, extensive waterfront development (e.g., docks, piers, boathouses, etc.), and year-round increased human activity.

In summary, under Alternative 2, localized direct adverse impacts on terrestrial wildlife would occur. However, adverse indirect and cumulative impacts to terrestrial wildlife and endangered species are expected to be minor and regionally insignificant.

4.5.1.3 Alternative 3

Under Alternative 3, the land use change and residential development, as proposed, could reduce the overall diversity (number of species and individuals) of terrestrial wildlife residing or seasonally occupying the Bat Creek peninsula, but as with Alternative 2, these are not likely to be significant. However, TVA has assisted TRDA and the developer in designing a strategy for further reducing direct wildlife impacts and maintaining an acceptable amount of upland and shoreline habitat, including wetlands. To offset anticipated wildlife habitat impacts, the following mitigation strategy would be employed.

As shown on the attached map (Figure 2), a minimum 100-foot-wide (30-m) wildlife movement corridor would be retained along Bat Creek (from Highway 72 to Bat Creek Mile 2.2). Pedestrian access to private or community docking facilities would be permitted at specified locations within this corridor. However, no more than two such access paths would be permitted within any 240-foot (73.2-m) segment of corridor. Proposals for hiking trails, golf cart paths, or horseback riding trails would be permitted, provided they are routed to minimize potential impacts to wildlife populations utilizing the corridors. Removal of both canopy and understory vegetation would be kept to a minimum and conducted in accordance with TVA guidelines. A minimum 50-foot-wide (15-m) buffer would be maintained around all wetlands.

This shoreline corridor would connect to a 150-foot (45-m) wildlife movement corridor at Bat Creek Mile 2.2 and extend across the peninsula to the Little Tennessee River at River Mile 15.1. No waterfront use facilities would be approved along certain designated sections of the shoreline on the Little Tennessee River side (which is mostly steep, forested slopes and bluffs) of the peninsula due to aesthetic and navigation restrictions. Although no minimum width would be specified here, wildlife habitat would be preserved upstream to the Tellico West Industrial Properties. Additionally, as shown in Figure 2, another wildlife corridor about 150 feet (45 m) wide would connect the Bat Creek side of the peninsula to a 90-acre (36-ha) tract along the site's southern border. Designated wildlife habitat and movement corridors on the peninsula would total more than 130 acres (52 ha).

Elsewhere on the peninsula, TVA's shoreline properties would be managed to develop and maintain a stable vegetated shoreline zone. Over time, this zone would (1) provide an aesthetically pleasing shoreline, (2) filter runoff from adjacent developed areas, and (3) provide wildlife habitat. Pathways would be permitted across this zone for pedestrian access to private or communal docking facilities.

Under Alternative 3, infrequent wintering bald eagle use of the wooded Bat Creek peninsula shoreline would probably continue. Spring and fall osprey use would also likely continue. Larger shoreline trees would be maintained or replaced by planting or natural succession. More broadly spaced shoreline development would likely result in reduced impacts on these species.

Under this alternative, approximately 60 acres (24 ha) of grasshopper sparrow habitat eliminated from the Bat Creek peninsula would be replaced in kind elsewhere on public lands in the Tellico Reservoir area. Thus, under Alternative 3, the loss of grasshopper sparrow habitat would be mitigated.

Under this alternative, the mix of terrestrial wildlife species would be altered. Suitable habitat for some species would be lost, while new habitat would be created for some others. However, any adverse direct impacts to terrestrial wildlife would occur on a localized basis. Indirect and cumulative impacts to terrestrial wildlife and endangered species are expected to be minor and regionally insignificant.

4.5.2 Aquatic Effects

4.5.2.1 Alternative 1

No immediate adverse effects to aquatic life are anticipated if the Bat Creek peninsula remains an industrial site. The aquatic community would remain in its current state until the property is developed for industrial use. The potential for impacts to the adjacent aquatic community depends on the nature of the industrial development. Regardless, the Grading, soil erosion, and sedimentation control standards (Section 3.080 of the Development Standards) would apply and would provide baseline protection from sedimentation impacts.

4.5.2.2 Alternatives 2 and 3

The major potential biological impact occurring from residential development of the Bat Creek peninsula under Alternative 2 would be the degradation of aquatic habitat. This could occur from destruction of riparian vegetation, dredging of shallow areas, construction impacts, drainage of fertilizer and pesticides, and the construction of retaining walls.

Due to the possibility of wide-scale shoreline development under Alternative 2, riparian vegetation could be reduced significantly under that alternative. This could cause considerable negative impacts on the shoreline aquatic communities. Under Alternative 3, retention of a riparian zone with a minimum width of 100 feet (30 m) from the 813-foot (247.8-m) elevation and, in the case of existing areas without adequate riparian vegetation, planting of appropriate types of vegetation should enhance the quality of the aquatic shoreline habitat. Additionally, willows and buttonbush could be planted in the zone from elevation 807 (246 m) to 813 feet (247.8 m) in areas susceptible to wave-induced erosion to provide both improved aquatic habitat and protection from shoreline erosion.

Under either Alternative 2 or 3, dredging could be limited based on issuance of permits. Dredging, dock construction, and excessive boating activity in the vicinity of docks can destroy fish spawning and nursery habitat. Therefore, under Alternative 3 dredging would be restricted to areas where habitat is already marginal for these biological uses.

As with Alternative 1, the Development Standards, including Section 3.080 (Grading, soil erosion, and sedimentation control standards), would apply under Alternatives 2 and 3. Under both alternatives, runoff could continue to be a potential problem after construction, due to pesticide and fertilizer contaminated drainage from lawns and the golf course, if not properly planned and managed. Fish kills and localized reduction of fish production resulting from golf course runoff contaminated by heavy application of

herbicides, pesticides, and fertilizers have been reported, though rarely (Grossmann, 1993). Although strict adherence to sedimentation and drainage control plans can reduce such impacts, the risk that they might occur cannot be entirely prevented on a water body with low water exchange rates such as the Bat Creek embayment. However, the golf course has been redesigned at TVA's suggestion to reduce potential drainage impacts. However, the two coves on the main-lake side of the peninsula at Little Tennessee River Mile 15.7 are expected to receive considerable pesticide, herbicide, and fertilizer contaminated runoff which could restrict fish reproductive success in these areas. Under either alternative, the developer will submit a drainage and sediment control plan to adequately control golf course drainage impacts as a part of the master plan.

Although retaining walls would be prohibited under Alternative 3, their use could become extensive under Alternative 2. Several studies have been completed that show these type structures are the least desirable bank stabilization with regard to biological communities. Retaining walls provide little usable habitat for aquatic insects or fish due to a lack of "nooks and crannies" which act as concealment areas. Although natural habitat is preferred, bank stabilization is necessary in areas susceptible to erosion from wave action. A preferred method to stabilize these sections is to plant emergent type vegetation such as buttonbush and willow trees in the drawdown zone to reduce the force of the waves. In addition, riprap could be placed along affected shoreline. Unlike retaining walls, riprap provides the necessary protected spaces for aquatic insects, young sport fish, and forage fish.

None of the listed or candidate aquatic species for threatened or endangered status reported from the vicinity of the proposed development is anticipated to be impacted by this development. However, the potential exists for reductions in sport fish production from the Bat Creek embayment. Although these declines would not adversely impact the sport fishery of Tellico Reservoir as a whole, it could impact conditions in Bat Creek embayment. However, these impacts would be minimized with the adherence to the Section 3.080 standards within Development Standards under Contract No. TV-60000A and the implementation of the additional measures required under Alternative 3.

4.5.3 Effects on Wetlands

4.5.3.1 Alternative 1

Under the No Action Alternative, no immediate or short-term adverse impacts to wetlands and associated wetland wildlife are anticipated. All wetlands occur below the TVA-retained 820-foot (249.9-m) contour. Although there may be some localized disturbance of shoreline areas for water access, extensive disturbance of shoreline and wetland areas from industrial development is not expected. Future industrial development-related impacts (direct or indirect) would be avoided, minimized, or mitigated under applicable federal wetlands protection regulations and/or executive orders.

Under Alternative 1, no adverse indirect or cumulative wetlands or wetland wildlife impacts are expected.

4.5.3.2 Alternative 2

The shoreline wetland areas meet the definition of wetlands as stated in Presidential Executive Order 11990 (Protection of Wetlands). Thus, a level of protection would be afforded wetland areas under Alternative 2. However, residential development resulting from the adoption of Alternative 2 could result in extensive waterfront disturbance associated with recreational lakeshore development and access. This potentially large amount of waterfront and shoreland development would likely result in significant alteration of present wetland functions and values through direct and indirect impacts. At a minimum, such development would result in adverse impacts to several biological integrity functions, especially the maintenance of suitable habitat for wetland-dependent wildlife species.

Therefore, localized impacts from extensive shoreline development, including individual private water-use facilities, and accompanying permanent shoreland alteration would be significant. However, cumulative wetlands or wetland wildlife impacts would be considered insignificant on a regional basis.

4.5.3.3 Alternative 3

In accordance with the conditions of Alternative 3, TRDA and the developer would agreed to avoid or mitigate direct wetland impacts and designate a 50-foot-wide (15-m) undisturbed vegetative buffer surrounding all identified wetlands. In accordance with Executive Order 11990, TVA would provide technical assistance and require that wetland impacts be avoided, minimized, or appropriately mitigated. Thus, approval of the land use change and the resulting residential development under Alternative 3 would not result in significant direct impacts to existing wetlands and their associated functions and values. Under this alternative, indirect and cumulative wetland and wetland wildlife impacts are expected to be minor and regionally insignificant.

4.6 Effects on Air Quality

4.6.1 Alternative 1

Until industrial development occurs on the site, there would be no adverse effects on air quality, as the site would remain in its current undeveloped state. In the long term, potential effects on air quality would be controlled by federal and state air pollution control regulations, regardless on the type of industry that would eventually locate on the site. Section 3.090 (Air and water quality, solid waste, and noise standards) of the Development Standards within Contract No. TV-60000A would apply to any development on the site.

4.6.2 Alternative 2

Under Alternative 2, the developer would be free to construct the residential development within the constraints of applicable air pollution control requirements. As with Alternative 1, the terms of Contract TV-60000A, which requires compliance with all applicable state and federal air quality standards and permitting requirements for all actions affecting property developed, would prevent air quality deterioration. Pollution from fossil-fuel combustion in construction equipment, fugitive dust emissions from operation of this equipment under dry conditions, and increased traffic during construction would cause some minor and temporary air quality degradation in the vicinity of the project. However, state air pollution rules require construction projects to use reasonable precautions to prevent fugitive dust emissions.

After construction is completed, normal residential activities such as wood stoves and fireplaces would contribute somewhat to deterioration in local air quality. In 1988 EPA promulgated standards for particulate matter (PM) emissions from various types of new residential wood heaters. However, open-masonry fireplaces are exempt.

The ambient air quality effects of wood-burning emissions from this residential development would depend on the types of combustors, their density (i.e., the number of devices per unit of land area), and the dispersion characteristics of the Bat Creek region. Presumably, any wood stove installed during construction of this project would comply with EPA's PM emission standards. Based on ambient PM data from other parts of the Valley with wood-stove densities similar to those expected in this project, PM NAAQS are expected to be protected.

4.6.3 Alternative 3

No additional conditions or measures to protect air quality impacts are proposed under Alternative 3. Therefore, potential effects on air quality under Alternative 3 are the same as for Alternative 2. In either case, PM NAAQS would likely be met. Thus, potential impacts on air quality from residential development of the peninsula are expected to be insignificant.

4.7 Effects on Water Quality

4.7.1. Alternative 1

Potential water quality impacts associated with the industrial designation depend on the type and nature of industry that may eventually locate on the site. Regardless, specific regulatory and permit requirements will limit water quality impacts. State (NPDES) discharge permits will be required for all wastewater effluents, including pretreatment requirements if effluents are discharged to a municipal or regional treatment facility like the Tellico wastewater treatment plant. In addition, an NPDES permit is required for industrial surface runoff discharges. These are not required for residential runoff. Where hazardous materials or significant contaminants are involved, industries must have a spill prevention and counter-measures plan and must meet strict federal regulations for handling, transporting, and disposing of these materials. The Development Standards for the Tellico Project also define specific requirements to reduce potentially adverse impacts.

4.7.2 Alternative 2

Concurrence with the change from industrial to residential with no additional mitigative measures beyond those imposed by existing development standards under Contract No. TV-60000A creates a substantial range of possible water quality effects. At best, low density, single-family dwellings could be developed with very little impact. However, economic considerations and the lack of conditions to protect the environment make high density development and potentially adverse impacts more likely. As with industrial development, applicable regulations and the Tellico Development Standards provide some protection against adverse impacts.

However, specific precautions and mitigation measures for a defined development plan provide a more reliable level of protection. Without limits on density, shoreline development, setbacks, buffer zones, clearing requirements, and specific best management practices, potentially adverse water quality impacts could occur. These include construction impacts, shoreline erosion, sewage overflows, oil and grease from streets, and nutrient/pesticide/herbicide runoff from lawns.

4.7.3 Alternative 3

Effects that could occur under Alternative 3 depend on the development plan and the pollution control measures incorporated in design, construction, and operation. Conceptual plans for the proposed residential development are included as Appendix C. The special conditions that exceed normal regulatory requirements and Tellico development standards would help to minimize potential water quality impacts.

Among the special conditions (discussed in detail elsewhere) that will reduce water pollution are buffer zones, wildlife movement corridors, limits on vegetation removal and construction below the 820-foot (249.8-m) contour, control of dredge and fill, restricted shoreline development areas, limits on facilities at community docks (e.g., no fuel or repair services), and limited shoreline access. The golf course will be maintained by personnel qualified for chemical (e.g., herbicide) application.

4.8 Effects on Utilities and Services

4.8.1 Potable Water Supply and Wastewater Treatment

There are no current public potable water supply demands or wastewater treatment facilities on the Bat Creek peninsula and this situation would continue in the near term under Alternative 1. Potable water and sanitary sewage demands by an industry would vary greatly, depending on the nature of the industry.

Potable water demand for the proposed residential development is an estimated 0.4 mgd (0.018 m³/s). Wastewater flows are expected to be 0.3 mgd (0.013 m³/s). These additional demands can be met by existing local utilities. The addition of domestic sewage to the present industrial wastewater flows would increase nutrients and should improve treatment plant performance.

Wastewater effects under Alternative 3 would be approximately the same as those under Alternative 2. However, in order to limit the possibility of sewage overflows to the reservoir, no sewer lines will be constructed below the 820-foot (249.8-m) contour. Sewage pumping facilities will meet all applicable state design criteria.

4.8.2 Solid Waste Disposal

The amount of solid waste generated by industrial development on the Bat Creek site and the demand for waste disposal services would vary greatly with the type of industry. However, any industry locating on the site would have to comply with all state and federal regulations regarding waste disposal.

Based on an estimated eventual residential population of about 4,340 persons, with an average waste generation rate of 0.81 tons (0.73 metric tons) per person per year (the national average), household solid wastes are projected to be about 3515 tons (3190 metric tons) per year at project completion. This is between approximately 5 and 7 percent of the waste which Monroe and Loudon Counties will be landfilling (or otherwise managing) annually in the next few years. These requirements would not adversely affect future waste disposal capacity.

4.8.3 Fire and Police Protection and Emergency Medical Services

In anticipation of development of the Bat Creek peninsula, the Vonore Fire Department has tentatively agreed to provide fire protection by subscription to the Monroe County section of the peninsula. This service could be expanded to the Loudon County section of the peninsula, pending approval by Loudon County. (Final approval was pending when this document went to press.) Response time would be approximately five minutes. The Loudon County portion of the peninsula would be served by the Loudon County Volunteer Fire Department, unless a mutual aid agreement is reached with the Vonore Fire Department. The response time would be on the order of 15 to 20 minutes from the current Loudon station.

Police protection would be provided by the respective county Sheriff's Offices. This protection would require less than one-half of a patrolman upon the completion of the entire 2,000 household residential development.

The Monroe County portion of the peninsula would be served by the Vonore Rescue Squad. Residents of the Loudon County portion of the peninsula would make their emergency calls to the Loudon County Rescue Squad, which has a mutual aid agreement with Vonore. The Loudon County dispatcher would contact the Vonore Rescue Squad to make the call. Response time would be approximately five minutes.

4.8.4 Electrical Service

Until an industry develops the site, demand for electrical service on the Bat Creek peninsula will remain nonexistent. Electrical demand required by an industry depends on type of industry, but would be met by local power distributors. Availability of adequate power supplies would be a major factor in an industry selecting the peninsula.

Likewise, with the new substation and switching station, local power distributors would be able to reliably meet the power demands from the proposed residential development with no degradation of service to existing customers. Demand for any additional facilities would be gradual because of the staged nature of the development.

4.8.5 Schools

The adoption of Alternative 1 would have little or no direct effect on local schools. In the event of future industrial development, any increase in school students would depend on the number of non-local employees relocating to the local school system.

Potential effects to the local school system due to residential development under Alternative 2 or 3 are expected to be minor. This is due to the potentially high proportion of retirement age residents (who would pay taxes but not add to the demand for school services) and the extended development period. The developer has allocated a school site near the southwestern property boundary should the need arise for additional school property.

4.9 Effects on Historic Resources

4.9.1 Alternative 1

In the short term (i.e., until industrial development occurs), no impacts on archaeological resources on the Bat Creek peninsula are expected. In the long term, industrial development of the Bat Creek peninsula could adversely affect two of the significant archaeological sites and the Archaeological Resource Protection Area. The other two archaeological sites occur mainly on TVA-retained shoreline property.

Although it does not prohibit adverse impacts to historical resources, the National Historic Preservation Act (NHPA) normally requires consideration of potential effects of specific federal actions upon such resources. The Development Standards within Contract No. TV-60000A require TVA concurrence prior to excavation, disturbance, or alteration of the physical character of any portion of the site in order to preserve the archaeological resources of the Tellico project area and to ensure that proposed development plans are compatible with preservation objectives of various laws, regulations, and executive orders.

Nevertheless, adverse impacts to historic property could occur under Alternative 1. The nature and extent of these effects could vary greatly and would depend on the amount of site disturbance by the developing industry.

4.9.2 Alternative 2

As with Alternative 1, any or all of the significant archaeological resources on the Bat Creek peninsula could be adversely affected by residential development and the associated shoreline disturbance which would occur under Alternative 2. Due to the more extensive shoreline development likely under this alternative, the potential for adverse effects would be higher under this alternative than under the No Action Alternative. Regardless, the measures required under NHPA and the Development Standards would apply under this Alternative.

4.9.3 Alternative 3

As with the other alternatives, NHPA would apply under Alternative 3. Under Section 106 of the Act, adverse effects can be considered not adverse if these sites are "preserved through the conduct of appropriate research, and such research is conducted in accordance with applicable professional standards and guidelines." Thus, although specific archaeological sites may be disturbed under Alternative 3, overall impacts to these historic resources would not be considered adverse.

4.10 Effects on Floodplains

At the Bat Creek peninsula, the 100-year floodplain extends to the 815-foot (248.4-m) contour. TVA retains fee simple ownership of the shoreline below the 820-foot (249.8-m) contour. Thus, development on the Bat Creek peninsula under any of the three alternatives would be located above the 100-year floodplain and would be consistent with the requirements of Floodplain Management Executive Order 11988. Similarly, under any of the alternatives, all water-use facilities located below the 820-foot (249.8-m) contour are routinely reviewed in accordance with Section 26a of the TVA Act to ensure that adverse floodplain impacts will be minimized during construction and operation. Therefore, no adverse floodplain impacts are anticipated.

4.11 Effects on High-quality Farmland

Impacts on high-quality farmland would be approximately the same under all three alternatives. Much of the land would be graded for construction of buildings, utilities, roads, and landscaping. Because prime farmland is usually easiest to grade and provides good foundations for many types of structures, it would probably be affected preferentially. Additional land of statewide importance is not necessarily good land for building, so more of it would probably be preserved and could be farmed in the future if the need arose. Under the Tellico Development Standards, commercial agriculture is permitted as an interim use of undeveloped areas of the tract and might continue for several years until development is complete. Home gardening is an allowed use in residential areas under the Development Standards. Even if all the high-quality farmland on the tract were physically converted, the loss would be very small in comparison to the large amount of high-quality farmland in the two counties.

4.12 Effects on Aesthetics

4.12.1 Alternative 1

The No Action Alternative (retaining the Bat Creek tract for industrial development) would produce little if any visual change in the short term. Agricultural uses would likely continue in the interim. The only increase in negative visual impact would be continued shoreline erosion from wave action. When industrial development does take place at some time in the future, some aesthetic impact would be experienced by the boating public, surrounding residents, and others with an awareness of scenic values.

4.12.2 Alternative 2

The change from industrial to residential use of the Bat Creek tract under Alternative 2 would produce a number of visual impacts both directly and indirectly. The loss of scenic shoreline, increased boat traffic, and the increased erosion of unprotected shoreline would adversely affect the scenic qualities of the peninsula. As seen on this and other area reservoirs, extensive sections of stairways down scenic rock bluffs to obtain access to large docking facilities detract from the scenic value of the landscape. The potentially extensive addition of dockage and water craft would detract aesthetically from the lake setting.

4.12.3 Alternative 3

Residential development of the Bat Creek tract with the implementation of mitigative measures by the developer would reduce visual aesthetic impacts to the viewing public. Visual protection of approximately 4500 feet (1372 m) of limestone bluff along the main channel by prohibiting the removal of vegetation from the water line to the crest of the bluff and by banning water use facilities would reduce the impacts. Limitations on the number and type of docking and water use facilities would permit a visual mix of natural and developed shoreline. The preservation of existing shoreline vegetation below the 820-foot (249.9-m) contour with the allowance of only a narrow corridor for water use facility access would aid in preserving the visual quality of the land base for the lake user. The protection of wetland areas, the grouping of community dock facilities, the restriction of individual water use facilities to shoreline areas not warranting visual protection, and the control of shoreline erosion by visually acceptable means would likely reduce visual impacts to an acceptable level.

4.13 Unavoidable Adverse Environmental Impacts

Selection of any of the alternatives would inevitably result in some localized adverse environmental effects. The magnitude of these effects would be minimized by strict adherence to the Development Standards in Contract No. TV-60000A and by adoption of the additional mitigation standards under Alternative 3. However, any development actions will create temporary increases in sediment, herbicides and pesticides entering water courses, dust and vehicle emissions, increase in noise, loss of wildlife habitat and food sources, loss of outdoor recreational activities (especially hunting), and changes in the visual landscape to a less natural appearance. Disturbance of archaeological sites is likely under industrial or residential development, but would be especially so with extensive residential development.

These adverse effects would be localized, and restricted to a portion of the Bat Creek peninsula or the immediate area. Some adverse effects, such as those related to construction, would cease or abate over time. Although these impacts cannot be totally eliminated, they can be minimized or mitigated to acceptable levels.

4.14 Relationship of Short-term Uses and Long-term Productivity

The relationship between short-term uses of the human environment and maintenance and/or enhancement of long-term productivity is complex and involves trade-offs and changes in environmental characteristics. Short-term uses are those that generally occur on an annual basis. Those would include use of the peninsula for agricultural production and informal public outdoor recreation. Agricultural use would be lost and informal outdoor recreational opportunities on the site would be lost or substantially changed to activities which would occur in a developed setting. The upland areas would be converted to private use and would no longer be available for agricultural production or informal outdoor recreation over the long term. Visual changes would result in long-term loss of a more natural setting to reservoir users. However, long-term productivity would occur from economic development, recreational, and employment opportunities for residents, employees, and guests.

4.15 Irreversible and Irretrievable Resource Commitments

The fuel and energy used to create either industrial or residential development of the property would be irreversibly lost. Many of the construction materials would also represent irreversible losses, but some would likely be recycled during and after the life of the development. Neither the energy expended nor the construction materials used are expected to be locally or regionally significant. Also, given the abundance of similar land use/land cover types in the region, loss of agricultural potential, wildlife habitat, and interim informal recreation use is not considered significant.

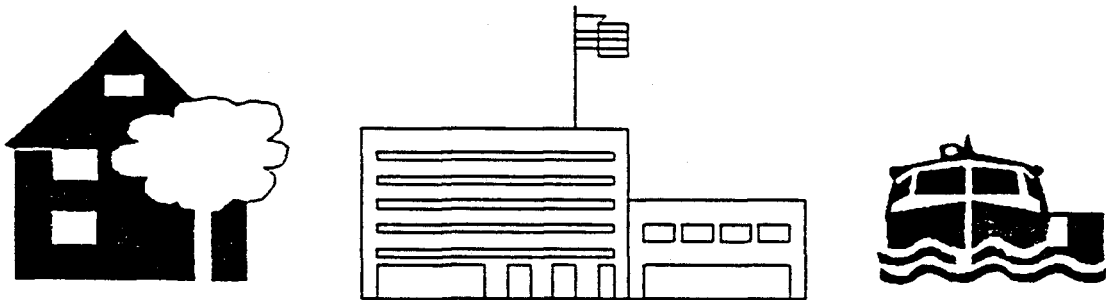
Appendix A

The Development Standards for the Tellico Project,

Attachment B to Contract No. TV-60000A.

Tellico Reservoir Development Agency

Development Standards For The Tellico Project



CONTRACT NO. TV-60000A

ATTACHMENT B

THE DEVELOPMENT STANDARDS
FOR THE TELlico PROJECT

TABLE OF CONTENTS

		<u>Page</u>
ARTICLE 1	GENERAL PURPOSE	
Section 1.010.	Purpose	1
Section 1.020.	Authority	1
Section 1.030.	Applicability	2
Section 1.040.	Title	2
ARTICLE 2	LAND USE DISTRICTS	
Section 2.010.	Classification	3
Section 2.020.	Development plan	3
Section 2.030.	Interim use district	3
Section 2.040.	Residential development district	4
Section 2.050.	Commercial recreation planned unit development district	5
Section 2.060.	Industrial development district	6
Section 2.070.	Public use recreation areas	7
Section 2.080.	Cultural/public use/open space district	7
ARTICLE 3	GENERAL PROVISIONS	
Section 3.010.	Scope	9
Section 3.020.	Only one principal building on any lot	9
Section 3.030.	Lot must abut a public street	9
Section 3.040.	Reductions in lot area prohibited	9
Section 3.050.	Obstruction to vision at street intersection prohibited	9
Section 3.060.	Access control standards	9
Section 3.070.	Accessory use standards	10
Section 3.080.	Grading, soil erosion, and sedimentation control standards	10
Section 3.090.	Air and water quality, solid waste, and noise standards	13
Section 3.100.	Roads, streets, and trails standards	15
Section 3.110.	Flood hazard reduction standards	16
Section 3.120.	Archaeological resources	20

ARTICLE 4

SUPPLEMENTARY PROVISIONS APPLYING
TO SPECIFIC DISTRICTS

Section 4.010.	Scope	21
Section 4.020.	Offstreet loading and unloading standards	21
Section 4.030.	Temporary use standards	22
Section 4.040.	Customary home occupations	22
Section 4.050.	Fallout shelter standards	22
Section 4.060.	Gasoline service station standards	23
Section 4.070.	Swimming pool standards	23
Section 4.080.	Residential subdivision development standards	23
Section 4.090.	Standards for planned unit developments in the residential district	40
Section 4.100.	Standards for signs, billboards, and other advertising structures	49
Section 4.110.	Mobile homes prohibited	52
Section 4.120.	Automobile wrecking, junk, and salvage yards prohibited	52
Section 4.130.	Development standards for cemeteries	52
Section 4.140.	Commercial recreation planned unit development standards	53
Section 4.150.	Energy efficiency standards for residential buildings	54
Section 4.160.	Public use recreation areas	54
Section 4.170.	Industrial development standards	55
Section 4.180.	Interim use district standards	69
Section 4.190.	Reservoir access procedures and private water use facility standards	70
Section 4.200.	Offstreet parking standards	71

ARTICLE 5

DEFINITIONS

Section 5.010.	Scope	74
Section 5.020.	Definitions of general terms	74

ARTICLE 6

ADMINISTRATION AND ENFORCEMENT

Section 6.010.	Administration of development standards	89
Section 6.020.	Building permits	89
Section 6.030.	Temporary use permits	90
Section 6.040.	Certificate of occupancy	90

		<u>Page</u>
ARTICLE 6 (cont.)		
Section 6.050.	Remedies	90
Section 6.060.	Validity	90
Section 6.070.	Interpretation	90
Section 6.080.	Design review	90
Section 6.090.	Covenants running with the land	91
Section 6.100.	Hold harmless	91
Section 6.110.	Construction of these standards	91
Section 6.120.	Correction of violations	92

ARTICLE 1

GENERAL PURPOSE

SECTION

1.010.	Purpose
1.020.	Authority
1.030.	Applicability
1.040.	Title

1.010. Purpose. The purpose of these development standards is to promote the public health, safety, convenience, and general welfare; to ensure development based upon all applicable environmental requirements and sound land use practices; and to foster the orderly development of the Tellico Reservoir project through the proper development, maintenance, management, and sale of land acquired by the Tennessee Valley Authority (TVA) for the project by:

- A. Encouraging the most appropriate and environmentally sound use of land.
- B. Preventing overcrowding of land.
- C. Conserving the value of land and buildings.
- D. Reducing traffic hazards and congestion.
- E. Preventing the undue concentration of population.
- F. Providing for adequate light, air, privacy, and solar access.
- G. Reducing hazards from fire, flood, and other dangers.
- H. Assisting in the economic provision, utilization, and expansion of all services needed by the public, including, but not limited to, roads, water and sewer service, recreation, schools, and emergency services.
- I. Enhancing the natural, manmade, and historical amenities of the project area.

1.020. Authority. These development standards are promulgated pursuant to the authority of The Tellico Reservoir Development Agency Act of 1982 and Contract No. TV-60000A between TVA and The Tellico Reservoir Development Agency (Agency). They are an integral part of the agreement, being subject to its terms and conditions, and are subject to change or modification only as provided therein.

1.030. Applicability. These development standards and the land uses set out herein are applicable to all land and interests in land conveyed by TVA, on behalf of the United States, to Agency pursuant to the provisions of Contract No. TV-60000A; provided, however, that with respect to planned unit development for residential purposes proposed for tracts containing 1,000 acres or more by a single developer, such development can, upon request of Agency, be carried out in accordance with a master plan prepared and submitted to Agency and approved by TVA. In such event, and for all purposes of Contract No. TV-60000A, said master plan will govern the development, maintenance, management, and sale of all land encompassed within an approved master plan on the same basis as under the development standards. The districts are based on The Tellico Land Use Plan, as approved by the Tellico Area Planning Council.

1.040. Title. These standards shall be known as The Development Standards for the Tellico Project. They apply to the land use districts as discussed in Article V.

ARTICLE 2

LAND USE DISTRICTS

SECTION

- 2.010. Classification
- 2.020. Development plan
- 2.030. Interim use district
- 2.040. Residential development district
- 2.050. Commercial recreation planned unit development district
- 2.060. Industrial development district
- 2.070. Public use recreation areas
- 2.080. Cultural/public use/open space district

2.010. Classification. For the purpose of these standards, the following land use development districts are hereby established:

- A. Interim Use District
- B. Residential Development District
- C. Commercial Recreation Planned
Unit Development District
- D. Industrial Development District
- E. Public Use Recreation Areas
- F. Cultural/Public Use/Open Space
District

2.020. Development plan. The location and boundaries of the development districts established by these standards are as shown on Attachment A to Contract No. TV-60000A, as it may be modified in accordance with the provisions of Contract No. TV-60000A and as more specifically defined by the metes and bounds descriptions contained in the deeds of conveyances from TVA, on behalf of the United States, to Agency.

2.030. Interim use district

A. District description

All undeveloped transferred land is assigned to the interim use district.

B. Uses permitted

In the interim use district the following uses and their accessory uses are permitted.

1. The growing and harvesting of crops.
2. Grazing of livestock.

3. Forestry activities and related services.
4. Fisheries and related services.
5. Utility facilities necessary for the provision of public services.
6. Wildlife management, including habitat management, wildlife observation, primitive camping, seasonal hunting subject to State and Federal regulations, and related activities.

C. Uses prohibited

In the interim use district, all uses except those uses specifically permitted are prohibited.

2.040. Residential development district

A. District description

The residential development district provides areas which are suitable for residential subdivision development and planned unit development. Residential subdivision development in this district shall follow the standards set forth in section 4.080. If a planned unit development is proposed, the standards set forth in section 4.090 shall apply.

B. Uses permitted

In the residential development district, the following uses are permitted:

1. Detached single-family dwellings and duplex dwellings as part of an approved subdivision developed according to standards as set out in section 4.080.
2. Home gardening.
3. Public and private recreation facilities.
4. Utility facilities necessary for the provision of public services.
5. Planned unit developments as defined in section 4.090.
6. Cemeteries subject to the provisions of section 4.130.
7. Public buildings and community centers.
8. Customary home occupations as defined in section 4.040.

C. Uses prohibited

In the residential development district, all uses except those uses or their accessory uses specifically permitted are prohibited.

2.050. Commercial recreation planned unit development district

A. District description

The commercial recreation planned unit development district provides large areas which are suitable for development of varied facilities for intensive commercial recreation. The uses of land may range from undeveloped open space to developed resort areas depending on the market demand and compatibility with adjacent land uses.

B. Uses permitted

In the commercial recreation planned unit development district, the following uses and their accessory uses are permitted on Tract No. XTELR-13:

1. Undeveloped open space.
2. Undeveloped and developed campgrounds.
3. Golf courses.
4. Cabins, including privately owned cabins in zones A and C only.
5. Lodges and resorts.
6. Marinas, subject to the provisions of section 4.140 C.
7. Restaurants.
8. Stores
9. Indoor and outdoor recreation centers, including gymnasiums and swimming pools.
10. Condominiums in zones A and C only.
11. Interval ownership of cabins in all three zones and of condominiums in zones A and C only.
12. Utility facilities necessary for the provision of public services.
13. Recreation vehicle interval or fee simple ownership lots and pads in zones A and C only.

C. Uses prohibited

In the commercial recreation planned unit development district, all uses except those uses or their accessory uses specifically permitted are prohibited.

2.060. Industrial development district

A. District description

The industrial development district provides areas which are suitable for industrial development. Development in this district must follow the standards set forth in section 4.170.

B. Uses permitted

In the industrial development district, the following uses are permitted:

1. Manufacturing, assembling, and warehousing for distribution purposes.
2. Transportation, utility, and service facilities may be permitted subject to the review and approval of the Committee which is defined in section 6.080.
3. Retail sale of products manufactured or handled at wholesale by the owner or lessee.
4. Recreation and training facilities providing service to the users of the property.
5. Retail sale of food, beverage, and other such convenience items to persons employed on the property, as long as these items are not offered for sale to the general public.
6. Temporary structures.
7. Utility facilities necessary for the provision of public services.
8. Other industrial uses not listed above, including all industrial development on tracts of more than 20 acres, will be subject to TVA's prior review and approval.

C. Uses prohibited

In the industrial development district, the following uses are expressly prohibited:

1. Temporary or permanent residential use.
2. Retail sale of products not manufactured or handled at wholesale by the owner or lessee.
3. Wreck, junk, or salvage yards and similar activities.

2.070. Public use recreation areas

A. District description

The public use recreation areas are suitable for outdoor recreational use and to give boat access to the reservoir.

B. Uses permitted

In the public use recreation areas, the following uses and their accessory uses are permitted, subject to the standards in section 4.160:

1. Boat launching.
2. Picnicking.
3. Day use.
4. Fishing.
5. Camping.
6. Lake swimming.
7. Utility facilities necessary for the provision of public services.

C. Uses prohibited

In the public use recreation areas, all uses except those uses or their accessory uses specifically permitted are prohibited.

2.080. Cultural/public use/open space district

A. District description

The cultural/public use/open space district is comprised of transferred land to be managed so as to protect and enhance the cultural resources and scenic amenities of the project area; provide a buffer between incompatible or contrasting land uses; provide areas for passive or informal recreational purposes such as primitive camping, picnicking, hiking, fishing, and hunting; and permit complementary agricultural, forestry, and wildlife utilization of this land. Where cultural or scenic resources exist, appropriate activities may also be conducted to ensure that these resources are developed, interpreted, and protected and public access is accordingly limited or controlled.

B. Uses permitted

In the cultural/public use/open space district, the following uses are permitted:

1. Hiking.
2. Picnicking.
3. Parking in designated areas adjacent to existing roadways.
4. Utility facilities necessary for the provision of public services.
5. Use of motor vehicles for agricultural use, forestry, emergency purposes, and construction and maintenance of utilities and trails.
6. Agricultural and forestry activities as prescribed in section 4.180.
7. Cultural resource development, interpretation, and protection.

C. Uses prohibited

In the cultural/public use/open space district, all uses except those uses specifically permitted are prohibited.

ARTICLE 3

GENERAL PROVISIONS

SECTION

- 3.010. Scope
- 3.020. Only one principal building on any lot
- 3.030. Lot must abut a public street
- 3.040. Reductions in lot area prohibited
- 3.050. Obstruction to vision at street intersection prohibited
- 3.060. Access control standards
- 3.070. Accessory use standards
- 3.080. Grading, soil erosion, and sedimentation control standards
- 3.090. Air and water quality, solid waste, and noise standards
- 3.100. Roads, streets, and trails standards
- 3.110. Flood hazard reduction standards
- 3.120. Archaeological resources

3.010. Scope. These provisions shall apply to all land conveyed to Agency pursuant to Contract No. TV-60000A.

3.020. Only one principal building on any lot. Only one principal building and its customary accessory buildings may be erected on any lot.

3.030. Lot must abut a public street. No building shall be erected on a lot which does not abut at least one publicly approved and accepted street as provided for in section 4.080 C.3.b.

3.040. Reductions in lot area prohibited. No lot, even though it may consist of one or more adjacent lots of record, shall be reduced in area so that yards, lot area per family, lot width, building area, or other requirements of these development standards or Contract No. TV-60000A are not maintained. This section shall not apply when a portion of a lot is acquired for a public purpose.

3.050. Obstruction to vision at street intersection prohibited. On a corner lot in any land use district, within the area formed by the center lines of the intersecting or intercepting streets and a line joining points on such center lines at a distance of 75 feet from their intersection, there shall be no obstruction to vision between the height of 3½ feet and a height of 10 feet above the average grade of each street at the center line thereof. The requirements of this section shall not be construed to prohibit any necessary retaining wall.

3.060. Access control standards. In order to promote the safety of motorists and pedestrians and to reduce traffic congestion and conflict, the following regulations shall apply:

- A. A point of access for vehicles onto a street shall not exceed 30 feet in width. All points of access shall be so constructed as to provide for proper drainage.
- B. There shall be no more than two points of access to any one public street for each 400 feet of lot frontage or fraction thereof; provided, however, that lots less than 100 feet in width shall have no more than one point of access to any one public street.
- C. No point of access shall be allowed within 20 feet of the right of way line of any public intersection.
- D. No curbs on county streets or rights of way shall be cut or altered without written approval of appropriate government authority.
- E. Where two driveways are provided for one lot frontage, the clear distance between driveways shall not be less than 25 feet.
- F. Cases requiring variances relative to the above provisions due to topographic limitations shall be considered as provided in section 6.010; provided, however, that no curb cuts for offstreet automobile storage or parking space shall be permitted where the arrangement would require that vehicles back directly into a public street.
- G. Access to the Tellico Parkway shall be from public streets only.

3.070. Accessory use standards. The uses of land, buildings, and other structures permitted in each of the districts established by these standards are designated by listing the principal uses. In addition to such principal uses, accessory uses which are customarily incidental to the permitted principal uses are also permitted in each district. Each accessory use shall:

- A. Be customarily incidental to the principal use established on the same lot.
- B. Be subordinate to and serve such principal use.
- C. Be subordinate in area, intent, and purpose to such principal use.
- D. Contribute to the comfort, convenience, or necessity of users of such principal use.

3.080. Grading, soil erosion, and sedimentation control standards.

- A. Any person engaged in any land-disturbing activity, including cutting, filling, borrowing, stockpiling, or other

activity where material or ground cover is removed, shall employ such reasonable measures as are needed to protect all public and private property from injury by such activities and to avoid causing by such activities any contamination, building up of sedimentation, reduction of drainage capacities, or flooding. Such person shall conform to the following practices:

1. Identify critical areas - Onsite areas which are subject to severe erosion and offsite areas which are especially vulnerable to damage from erosion and/or sedimentation are to be identified and receive special attention.
 2. Limit time of exposure - All land-disturbing activities are to be planned and conducted to limit exposure to the shortest feasible time.
 3. Limit exposure areas - All land-disturbing activities are to be planned and conducted to minimize the size of the area to be exposed at any one time.
 4. Control upgrade surface water - Surface water runoff originating upgrade of exposed areas should be controlled to reduce downgrade erosion and sediment loss during the period of exposure.
 5. Control sedimentation - All land-disturbing activities are to be planned and conducted so as to minimize offsite sedimentation damage.
- B. Any land-disturbing activity conducted on property developed, maintained, managed, or sold by Agency shall be in accordance with the following requirements:
1. Existing natural vegetation shall be retained to the maximum extent feasible, consistent with the purpose of such activity.
 2. No land-disturbing activity shall be permitted in proximity to the 820 msl contour above Tellico Reservoir, the 750 msl contour above Watts Bar Reservoir, or any other watercourse unless a buffer zone is provided along the margin of the watercourse of sufficient width to confine visible siltation or sediment deposit within the 50 feet of the buffer zone nearest the land-disturbing activity provided that this subsection shall not apply to a land-disturbing activity in connection with the construction of facilities to be located on, over, or under the Tellico Reservoir or natural watercourse requiring separate TVA approval.

3. The angle for graded slopes and fills shall be no greater than the angle which can be retained by vegetative cover or other adequate erosion control devices or structures. In any event, slopes left exposed will, within 30 working days of completion of any phase of grading, be planted or otherwise provided with a ground cover, devices, or structures sufficient to restrain erosion.
4. Whenever land-disturbing activity is undertaken on a tract comprising more than one acre, if more than one contiguous acre is uncovered, a ground cover sufficient to restrain erosion must be planted or otherwise provided within 30 working days on that portion of the tract upon which further active construction is not being undertaken, including the watershed and drainage basin of a functioning sediment control basin.
5. A vegetative cover bond will be required whenever land-disturbing activity is undertaken on a tract comprising more than one acre. The bond shall accompany the erosion and sedimentation control plan and shall be of sufficient amount to ensure that the work items set forth in the plan can be implemented should the developer fail to do so.

C. Erosion control plans required

1. Any site which may have exposed or disturbed more than one acre of earth shall have a valid erosion and sedimentation control plan, approved by the Executive Director, for that particular site before commencement of work or grading. In the review and approval process the Executive Director will follow the requirements outlined in "Best Management Practices" of section 208 of the Non-Point Source Water Pollution Act as a guide. The erosion and sedimentation control plan may be submitted as part of the preliminary plat or as part of a separate drainage plan.
2. Exclusions. No soil erosion or sedimentation control plans shall be required for:
 - a. Nursery operations, such as the removal and/or transplanting of cultivated sod, shrubs, and trees.
 - b. Garden plots, lawn preparation, or landscaping activities on existing lots or parcels unless the possibility for erosion and sedimentation or alteration of drainage is such to necessitate soil erosion or sedimentation control plans.
 - c. Agricultural land management practices such as plowing or cultivation.

- d. Sanitary landfills operated and conducted in accordance with the requirements, rules, and ordinances adopted by Agency and the State of Tennessee.
 - e. Single lots of one acre or less or single one-lot subdivisions upon which no more than one acre of land will be graded.
 - f. Offsite borrow or disposal areas when the person conducting the permitted grading is not the person obtaining the borrow and/or disposal of the waste.
3. Notification of grading. Prior to commencing any site grading on a tract exceeding one acre, its developer shall give suitable notification to the Executive Director of the anticipated starting date. If, after such notification, all land-disturbing activity is interrupted for 60 days or more, suitable renotification must be given before said grading work continues.

3.090. Air and water quality, solid waste, and noise standards.
The following air and water quality, solid waste, and noise standards shall apply:

A. Air quality

All applicable State and Federal air quality standards and permitting requirements will be met for actions affecting property developed, maintained, managed, or sold by Agency.

B. Water quality

All applicable State and Federal water quality standards and permitting requirements will be met for actions affecting property developed, maintained, managed, or sold by Agency.

- 1. Provisions, principles, and guidelines outlined in the "TVA Water Quality Management Plan for Tellico Reservoir" will be followed by Agency in evaluation of water quality matters. Application of these provisions, principles, and guidelines shall be made by Agency in consultation with TVA on a case-by-case basis.
- 2. Use of conventional septic tank soil absorption systems shall not be permitted on property developed, maintained, managed, or sold by Agency. Disposal methods utilizing innovative, alternative TVA-approved onsite disposal technology and package treatment plants will be permitted. Use and management of innovative, alternative disposal technology will require case-by-case review and approval by Agency, TVA, and appropriate State officials.

C. Solid waste

The Resource Conservation and Recovery Act of 1976, the Solid Waste Disposal Act Amendments of 1980, and other applicable Federal, State, and local laws and regulations promulgated to implement solid waste management shall apply to property developed, maintained, managed, or sold by Agency. Reuse, recycling, and disposal of waste generated on transferred land shall be confined to the industrial development district.

D. Noise

The following noise standards shall be applicable to the industrial development district:

1. Acceptable Industrial Noise Levels (measured at property boundary).

<u>Descriptor</u>	<u>Industrial</u>
L_n	65 dB
L_d	70 dB
L_{dn}	75 dB
L_{10}	75 dB
L_1	80 dB
$L_{0.1}$	85 dB

2. Three adjustments should be applied to the above levels.

- a. Incremental change - Complaints tend to increase proportionally to the difference between the base-line community noise level and the new level due to added industrial activity. Where calculated projections or actual measurements indicate a new level which is within the above values but which is more than 6 dB above the original background level, the project should be reevaluated to determine if the noise level can be reduced.
- b. Pure tones - Pure tones are more annoying than broad-band noise. The levels given above assume broad-band noise. Where pure tones are generated, the above levels should be reduced by 5 dB.

- c. Noise quality - Community noise tends to vary in level, particularly during the daytime hours. The less variation, the less annoying the noise is for a given average level. Thus, intermittent noises such as pile drivers, shift sirens, paging whistles, etc., are most likely to cause complaints and should be controlled as much as possible. The most restrictive standards will apply in cases where deed provisions or covenants are in conflict.

3.100. Roads, streets, and trails standards

A. Construction standards and inspections

1. Residential development district and commercial recreation planned unit development district. The construction standards for streets and roads, including curbs and gutters in these districts, shall be equal to or greater than those standards and specifications set forth in the current Loudon County Subdivision Regulations or required by the American Association of State Highway and Transportation Officials (AASHTO) or Tennessee Department of Transportation (TDOT) standards.
2. Industrial development district. Streets and roads in this district shall be designed in accordance with acceptable engineering practice and specifications and standards of AASHTO and constructed in accordance with TDOT Standard Specifications for Bridges and Highways.
3. Tellico Parkway. The Tellico Parkway shall be a controlled access road requiring approval of TVA for location of access points and maintained in accordance with applicable county maintenance specifications. Intersections of public access roads shall be designed and built according to AASHTO and TDOT standards.
4. Bicycle trails, paths, and lanes. Bicycle trails, paths, and lanes shall be designed and built according to the 1981 AASHTO guidelines in Guide for Development of New Bicycle Facilities.

B. Minimum width impracticable

In cases where topography or other physical conditions make a street, road, or trail of the required minimum width impracticable, Agency may modify the above requirements. Through proposed neighborhood or local business areas, the street right of way width shall be increased 10 feet on each side to provide for movement of vehicles into and out of necessary offstreet parking areas without interference to traffic.

C. Inspections

During the construction of any subdivision roads, where such roads will be public roads to be maintained by a county, the developer and/or the developer's contractor shall be required to keep the particular county road engineer advised as to the progress being made. Such roads shall meet the standards required by these subdivision regulations or any regulations adopted by the county, whichever is higher. In addition, the following inspections and/or approvals shall be required:

1. After clearing and stripping.
2. Approval of the drainage plan.
3. After grading and drainage are completed.
4. After the stone base is in place.
5. During and after application of all asphaltic materials.

D. Inspection responsibility

The developer or its representative will be responsible for notifying the particular county road engineer of each inspection. When the plat is submitted to Agency for final approval, the county road engineer shall be requested to make a final inspection. The engineer's findings and recommendations as to approval of the roads shall be reported in writing to Agency. In lieu of road improvements being completed upon request for final approval of the plat, Agency shall ask the advice of the county road engineer in regard to the amount of the bond, certified check, or other means to be accepted by Agency to guarantee such road improvements. The bond, check, or other means of guarantee shall not be released by Agency until the county road engineer has recommended approval as to the acceptability of the roads upon completion of construction.

3.110. Flood hazard reduction standards

A. Purpose of section

This section establishes standards for the use of those portions of transferred land located within floodways and flood fringe areas, preventing encroachments which will increase floodheights and thereby protecting persons and property from the dangers of periodic flooding. The standards shall apply to the lands below the elevation of the TVA Structure Profile on the Little Tennessee River and the lands below the elevation of the 100-year flood where the Structure Profile is at a lower elevation or is not defiled.

B. Use of floodways

In floodways, the following uses may be permitted subject to review and approval of Agency in accordance with section 3.110 E:

1. Private and public water use facilities (e.g., fixed or floating boat docks, fixed or floating boathouses, floats, fixed piers, rafts, floating ski jumps and slalom courses, and bouy lines for swimming areas).
2. Commercial recreation boat dock and water use facilities (e.g., docks, fixed piers, floats, fixed or floating boat slips, fixed or water-related dock buildings but not including habitable structures, fuel-handling facilities, floodproof buildings for dry boat storage, and minor dredging for boat channels and harbors).
3. Picnic tables, benches, grills, and fences.
4. Underground, overhead, or anchored utility and related lines and support structures (e.g., cable TV, electric, pipeline, sewer, telephone, and water).
5. Water intake structures.
6. Outfalls.
7. Mooring and loading facilities for barge terminals.
8. Agricultural use.
9. Minor grading and fills (e.g., slopes for boat launching ramps, public highways, railroad crossings, pedestrian walkways and crossings, private driveways, retaining walls and riprap for bank stabilization, and parking lots).
10. Bridges and culverts for pedestrian, highway, and railroad crossings.

C. Uses prohibited

In floodways, all uses, except those uses or their accessory uses permitted by Agency, are prohibited. All dwelling units are specifically prohibited in floodways.

D. Use of flood fringe areas

In flood fringe areas the following uses are permitted:

1. No building or structure shall be erected, and no existing building or structure shall be extended or moved, unless the main floor of said building or structure is placed at least one foot above the elevation of the TVA Structure Profile on the Tellico Reservoir or the 100-year flood, as appropriate. No basement floor shall be constructed below or at a lower elevation than the main floor.
2. Foundations of all structures shall be designed to withstand flood conditions.
3. Land may be filled within these flood fringe areas provided such fill extends 25 feet beyond the limits of any structures erected thereon.

E. Approval of Agency

1. No permit shall be issued for the construction of any building or for any use within the floodways or flood fringe areas until Agency gives its approval in writing for such construction and use. Such construction and/or use may also require approval from TVA pursuant to Section 26a of the TVA Act. Any proposed development below the elevation of the Structure Profile shall also be subject to TVA approval under Section 26a of the TVA Act.
2. Any proposed development or structure above the elevation of the Structure Profile or where the Structure Profile is not defined shall be analyzed by the developer to determine whether it is in the floodway or flood fringe area of the 100-year flood. The developer shall submit its determination to TVA for review. TVA shall submit all proposals meeting TVA's standards to Agency. Based on the developer's analysis, TVA comments, and its own assessment, Agency shall review each development proposal for which there is no practicable alternative to siting in the floodplain. In its review, Agency shall apply the following standards, keeping in mind that the purpose of these regulations is to prevent encroachment into the floodway that will unduly increase floodheights and endanger life and property and to ensure that any development in the remainder of the floodplain is reasonably protected from flood damage:
 - a. All facilities permitted within the floodway or flood fringe areas should be designed and constructed to withstand flooding with minimum damage.
 - b. All development will adhere to the minimum standards of the National Flood Insurance Program published at 44 C.F.R., §§ 60.1-60.8 (1981), any

future amendments thereto, and Executive Order Nos. 11988 and 11990 and comply with local floodplain management regulations. In accordance with these minimum standards, proposed actions will be evaluated to ensure that development will not significantly increase 100-year flood elevations and will not involve placement of fill or other flow obstructions in the floodway portion of the floodplain unless compensatory adjustments are also included.

- c. Construction and maintenance will be scheduled during dry periods to the extent practicable.
- d. Existing vegetation (ground cover and canopy) will be left in place and undisturbed to the maximum extent practicable.
- e. Best management practices will be used as a minimum to control surface water runoff and erosion. These practices are described in Guidelines for Erosion and Sediment Control Planning and Implementation (EPA Environmental Protection Technology Series Report No. EPS-R2-72-015, August 1972). Disturbed areas will be reseeded as soon as possible with species adapted to existing conditions.
- f. Dredge spoil will be disposed of properly in accordance with local, State, and Federal regulations at an inland site outside identified floodways.
- g. Riprap, as opposed to soil, when permitted by TVA, will be utilized as fill material below the maximum normal pool elevation.
- h. Prior to crossing areas harboring threatened or endangered species, or areas specifically identified as "sensitive," biologists will be contacted and will assist in the determination of mitigative measures necessary to negate or minimize impacts to these areas.
- i. In areas where overhead structures are constructed, streambanks will not be disturbed and equipment will not be driven in streams; selective cutting will be used to remove intruding vegetation; stumps will be left at a height that will encourage resprouting, retain soil, and reduce overland waterflow; and no areas will be stripped of vegetation.
- j. The granting of approval of any structure or use shall not constitute a representation, guarantee, or warranty of any kind or nature by Agency, TVA,

or by an officer or employee of either of the practicality or safety of any structure or use proposed and shall create no liability upon or cause action against such public body, officer, or employee for any damage that may result thereto.

F. Compliance with other regulations

All development within the floodways and flood fringe areas shall comply with the minimum requirements of the National Flood Insurance Program and Executive Order Nos. 11988 and 11990.

3.120. Archaeological resources

A. Preservation of archaeological resources

In order to preserve the archaeological resources of the Tellico project area, no portions of the transferred land shall be excavated, disturbed, or the physical character thereof altered without the initial concurrence of TVA, which shall not be unreasonably withheld, for the purpose of identifying archaeological or historical resources in or on that land and ensuring that the proposed development plans are compatible with preservation objectives required by applicable laws, regulations, and Executive orders, as determined by TVA.

B. Bowman House

Agency shall not take any action to alter the property known as the Bowman House that would affect its significance in American history, architecture, and culture to such an extent, as determined by TVA, that it would no longer qualify for inclusion in the National Register of Historic Places.

ARTICLE 4

SUPPLEMENTARY PROVISIONS APPLYING TO SPECIFIC DISTRICTS

SECTION

- 4.010. Scope
- 4.020. Offstreet loading and unloading standards
- 4.030. Temporary use standards
- 4.040. Customary home occupations
- 4.050. Fallout shelter standards
- 4.060. Gasoline service station standards
- 4.070. Swimming pool standards
- 4.080. Residential subdivision development standards
- 4.090. Standards for planned unit developments in the residential district
- 4.100. Standards for signs, billboards, and other advertising structures
- 4.110. Mobile homes prohibited
- 4.120. Automobile wrecking, junk, and salvage yards prohibited
- 4.130. Development standards for cemeteries
- 4.140. Commercial recreation planned unit development standards
- 4.150. Energy efficiency standards for residential buildings
- 4.160. Public use recreation areas
- 4.170. Industrial development standards
- 4.180. Interim use district standards
- 4.190. Reservoir access procedures and private water use facility standards
- 4.200. Offstreet parking standards

4.010. Scope. The development standards contained in this article are applicable to specific land use districts.

4.020. Offstreet loading and unloading standards. Every building or structure used for industry, business, or trade involving the receiving or distribution of vehicles, materials, or merchandise shall provide space for the loading and unloading of vehicles off the street or public alley. Such space shall have access to a public or private alley or, if there is no alley, to a public street. The minimum required spaces for this provision shall be based on the total usable floor area of each principal building according to the following:

Total Usable Floor Area For Principal Building

0 to 4,999 square feet
5,000 to 9,999 square feet
10,000 to 14,999 square feet
15,000 to 19,999 square feet
Over 20,000 square feet

Space Required

One space
Two spaces
Three spaces
Four spaces
Four spaces, plus
one space for
each additional
20,000 square feet

These standards may be reduced or increased in the interest of safety where unusual or special conditions warrant consideration. In addition, Agency may waive these requirements when the spaces are not needed.

4.030. Temporary use standards. Application for a Temporary Use Permit shall be made to Agency when the proposed use is seasonal or nonpermanent in nature. The application shall contain a description of the property to be utilized, a site plan, a description of the proposed use, and sufficient information to determine yard requirements, setbacks, sanitary facilities, and parking space for the proposed temporary use. The following uses are deemed to be temporary uses:

A. Temporary buildings

In any district, a Temporary Use Permit may be issued for a temporary real estate office or security building which has been approved by Agency or for a contractor's temporary office and equipment sheds incidental to a construction project. Such permit shall be valid for one year and may be renewed for six-month extensions. Such use shall be removed immediately upon completion of the construction project, or upon expiration of the Temporary Use Permit, whichever occurs sooner.

B. Other temporary uses

Temporary use permits may be provided by Agency for whatever use is deemed appropriate by Agency. These permits shall be valid for not more than 30 days.

4.040. Customary home occupations. No stock in trade shall be displayed outside a dwelling, and no alteration to any building including permitted accessory buildings shall indicate from the exterior that the building is being utilized in whole or in part for any purpose other than a residential unit. The following activities are specifically prohibited: dancing instruction, tea rooms, tourist homes, real estate offices, convalescent homes, beauty shops, mortuaries, animal clinics, dog kennels, and retail sales businesses. In addition, any other activity deemed by Agency to be incompatible with the district or a potential nuisance to the surrounding area shall not constitute an acceptable home occupation.

4.050. Fallout shelter standards. Fallout shelters are permitted as principal or accessory uses and structures in any district, subject to the yard and lot coverage standards of the district. Areas of underground fallout shelters extending not more than 30 inches above the general ground level of the graded lot shall not be included in computations of lot coverage by all buildings. Agency may waive side and rear yard setback requirements to permit construction of joint shelters by two or more property owners; provided, however, that side and rear yard setback requirements shall be met where property involved in the joint proposal abuts or adjoins property not included in the proposal. No fallout shelters shall protrude into any required front yard.

4.060. Gasoline service station standards. The following standards shall apply to all gasoline service stations:

- A. There shall be a building setback from all street rights of way lines of a distance of not less than 40 feet, except for canopies designed to cover the gasoline pump islands.
- B. Gasoline pumps shall not be located closer than 15 feet to any street right of way line.
- C. Sign standards as established in section 4.100 shall be met.

4.070. Swimming pool standards. The following standards shall apply to all swimming pools:

- A. No swimming pool or part thereof, excluding aprons and walks, shall protrude into any required front yard.
- B. The swimming pool area shall be walled or fenced so as to prevent uncontrolled access by children and pets from the street or adjacent properties. The fence or wall shall not be less than four feet in height and shall be maintained in good condition.
- C. The swimming pool shall drain into the public wastewater system.

4.080. Residential subdivision development standards.

A. General provisions

- 1. This subsection applies to residential subdivision development which occurs on transferred land designated for that purpose.
- 2. Land to be subdivided shall be of such character that it can be used safely for building purposes without danger to health or peril from fire, flood, or other menace, and land shall not be subdivided until proper provision has been made for drainage, water, roads, sewage, and capital improvements such as schools, parks, and recreation and transportation facilities as determined by Agency.
- 3. Any owner of land within this area proposing to subdivide land shall submit to Agency a plat of the subdivision according to the procedures outlined in section 4.080 B, which plat shall conform to the minimum requirements set forth in section 4.080 C. Improvements shall be installed as required by section 4.080 D of these standards.

4. Wherever a parcel of land is subdivided and the subdivision plat shows one or more lots containing more than one acre of land and there are indications that such lots will eventually be resubdivided into small building sites, Agency may require that such parcel of land allow for the future opening of streets, trails, and utility corridors and the ultimate extension of adjacent streets. Easements providing for the future opening and extension of such streets, trails, and utility corridors may be made a requirement of the plat.
5. Any plat or any part of any plat may be vacated by the owner of the premises, at any time before the sale of any lot therein, by a written instrument, to which a copy of such plat shall be attached, declaring the same to be vacated. Such an instrument shall be approved by Agency in like manner as plats of subdivisions. Agency may reject any such instrument which abridges or destroys any public rights in any of its public uses, improvements, streets, or alleys. Such an instrument shall be executed, acknowledged, or approved, and recorded or filed in like manner as plats of subdivisions; and being duly recorded or filed shall operate to destroy the force and effect of the recording of the plat so vacated, and to divert all public rights in the streets, alleys, and public grounds, and all dedications laid out or described in such plat. When lots have been sold, the plat may be vacated in the manner herein provided by all the owners of lots in such plat joining in the execution of such writing.

B. Procedure for plat approval

1. General

- a. Any developer which wishes to divide land into two or more lots, sites, or divisions for the purpose, whether immediate or future, of resale or building development, or which wishes to resubdivide for this purpose, shall submit a plat of such proposed subdivision to Agency for approval and shall obtain such approval prior to the filing of the subdivision plat for record. Any such plat of subdivision shall conform to the minimum standards of design for the subdivision of land as set forth in section 4.080 C.
- b. In order to secure review and approval by Agency of a proposed subdivision plat, the prospective developer shall, prior to the making of any street improvements or installations of utilities, submit to Agency a preliminary plat. On approval of the

preliminary plat, the developer may proceed with the preparation of the final plat and other documents required in connection therewith upon approval by Agency of the final plat. It shall then be recorded with the appropriate county register of deeds.

2. Preliminary plat

- a. The prospective developer shall submit to Agency six copies of a preliminary plat of the proposed subdivision drawn to a scale of not less than one inch equals 100 feet. A preliminary plat shall not be acceptable for submission unless it meets all the required standards of design and unless it contains all required information.
- b. The preliminary plat which shall meet the minimum standards of design as set forth in section 4.080 C and the general requirements for the construction of public improvements as set forth in section 4.080 D shall give the following information insofar as possible:
 - (1) The proposed subdivision name and location, and the name, address, and telephone number of the designer of the plat, who shall be an engineer or registered surveyor. Agency shall have the right to approve subdivision names or designate names appropriate to subdivision development.
 - (2) Date, approximate north point, and graphic scale.
 - (3) The location of existing and platted property lines, existing streets, buildings, watercourses, railroads, sewers, bridges, culverts, drainpipes, water mains, and any public utility easements or lines, and the names of adjoining property owners or subdivisions.
 - (4) Plans of proposed utility layouts (sewers, water, gas, and electricity) showing feasible connections to the existing or any proposed utility systems.
 - (5) The proposed street names and the locations and dimensions of proposed streets, easements, parks, and other open spaces, reservations, lot lines, building setback lines, and utilities.

- (6) Contours at vertical intervals of not more than five feet except when specifically not required by Agency; such request must be made prior to the submission of a preliminary sketch plat.
 - (7) The acreage of the land to be subdivided.
 - (8) Location sketch map showing relationship of subdivision site to area.
 - (9) If any portion of the land being subdivided is subject to flooding, the area subject to flood shall be shown.
 - (10) Dominant ground cover.
- c. Within 60 days after submission of the preliminary sketch plat, Agency will review it and indicate approval, disapproval, or approval subject to modification as a basis for the preparation of the final plat. If a plat is disapproved, reasons for such disapproval shall be stated in writing. If approved subject to modifications, the nature of the required modifications shall be indicated.
 - d. One copy of the preliminary sketch plat shall be returned to the developer at the time of approval or disapproval with any notations as to required changes, if any.
 - e. The approval of the preliminary plat by Agency will not constitute acceptance of the final plat and a statement to this effect will be included on the preliminary plat.
 - f. The approval of the preliminary plat shall lapse unless a final plat based thereon is submitted within 12 months from the date of such approval unless an extension of time is applied for and granted by Agency.

3. Final plat

- a. The final plat shall conform substantially to the preliminary plat as approved and, if desired by the developer, it may constitute only that portion of the approved preliminary plat which the developer proposes to record and develop at that time; provided, however, that such portion conforms to all requirements of these standards. A final plat shall not be acceptable for submission unless it contains all of the required information.

- b. To allow sufficient time for review and processing by Agency, the developer shall submit six copies of the final plat, together with street profiles or other plans required by Agency at least 15 days prior to the meeting at which it is to be considered. The plat shall be drawn to a scale of 1 inch equals 100 feet on sheets 18 x 24 inches in size. When more than one sheet is required, an index sheet of the same size shall be filed showing the entire subdivision with the streets lettered in alphabetical order as a key. When the plat has been approved by Agency, one copy shall be returned to the developer with the approval of Agency indicated thereon for filing with the appropriate county register as the official plat of record. One copy shall be retained in the records of Agency; one copy shall be provided any utilities department or utility district, as applicable.
- c. Agency shall approve or disapprove the final plat within 30 days after its submission. If the plat is disapproved, the grounds for disapproval shall be stated in the records of Agency.
- d. Approval of the final plat by Agency shall not constitute the acceptance by the appropriate governing body of the dedication of any street or other public way or ground.
- e. The final plat shall show:
 - (1) The lines of all streets and roads, alley lines, building setback lines, lots numbered in numerical order, reservations for easements, and any areas to be dedicated to public use or sites for other than residential use with notes stating their purpose and any limitations.
 - (2) Sufficient data to determine readily and reproduce on the ground the location, bearing, and length of every street line, lot line, boundary line, block line, and building line, whether straight or curved, and including the true north point, radius, central angle, and tangent distance for the centerline or curved streets and curved property lines that are not the boundary of curved streets.
 - (3) All dimensions to the nearest one hundredth of a foot and angles to the nearest minute.

- (4) Square footage of individual lots.
 - (5) Location and description of monuments.
 - (6) The names and locations of adjoining subdivisions and streets and the location and ownership of adjoining unsubdivided property.
 - (7) Date, title, name, and location of subdivision, graphic scale, and true north point.
 - (8) Location sketch map showing the site in relation to the area.
 - (9) The area subject to flood if any portion of the land being subdivided is subject to flood, as provided in section 3.110.
 - (10) All boundary traverses including lot and block traverses to an accuracy of at least 1 part for 5,000.
- f. The following certificates shall be presented with the final plat:
- (1) Certification showing the dedication of streets, rights of way, and other applicable sites for public use.
 - (2) Certification by registered surveyor to accuracy of survey and plat and placement of monuments.
 - (3) Certification that all materials and construction comply with these standards.
 - (4) Certification that all improvements have been installed in accord with the requirements of applicable regulations and these standards or certification that a security bond has been posted in sufficient amount to assure such completion of all required improvements. Such security bond is to be in a form and amount acceptable to Agency. The certification of approval is to be signed by the Executive Director of Agency.
 - (5) Certificate of approval for recording is to be signed by the Executive Director of Agency.
 - (6) Certification shall be in such forms as required by Agency and applicable law.

C. General requirements and minimum standards of design

1. Streets - standards for street design are contained in section 3.100.
2. Blocks
 - a. Length - blocks shall not be less than 400 feet nor more than 1200 feet in length, except as Agency considers necessary to secure efficient use of land or desired features of street pattern. In blocks over 800 feet in length, Agency may require one or more public crosswalks of not less than 10 feet in width to extend entirely across the block at the locations deemed necessary.
 - b. Width - blocks shall be wide enough to allow two rows of lots, except where reverse frontage on major streets and roads is provided or where prevented by topographical conditions or size of the property; in which case Agency may approve a single row of lots of minimum depth.
3. Lots
 - a. Adequate building sites - Each lot shall contain a building site not subject to flood as defined in section 3.110 of these standards and outside the limits of any existing easement or building setback lines required in section 4.080 C.3.d. Land within a floodway, as defined in section 3.110 shall not be platted for building purposes. Said land may be counted as part of the lot in computing lot sizes. Land within a floodway, as defined in section 3.110, shall not be platted for building purposes.
 - b. Arrangement - Of the lots proposed, at least 70 percent must be so oriented that building construction can effectively take advantage of solar energy collection techniques. This criteria is fulfilled if at least 70 percent of the proposed lots are oriented such that a straight line drawn from a point midway between the side lot lines at the required front yard set back to a point midway between the side lot lines at the required rear yard setbacks is oriented to within 23 degrees of true north. Exceptions to this may be granted whenever it is infeasible to comply due to:
 - (1) The configuration or orientation of the property;
 - (2) The nature of the surrounding development;

- (3) Circulation patterns;
- (4) Improvement design; or
- (5) Existing physical features of the site such as topography or vegetation.

Each lot must front for a minimum 75 feet upon a public street or road except in special instances, such as cul-de-sacs, in which case each lot must have frontage of at least 60 feet.

- c. Minimum size - The size, shape, and orientation of lots shall be such as Agency deems appropriate for the type of development and use contemplated.
- d. Building setback lines

- (1) The minimum depth of building setback lines from the street right of way line shall not be less than 30 feet from new minor residential streets and minor collector streets, cul-de-sac streets, and marginal access streets; 40 feet from major collector streets; and 50 feet from arterial streets and highways unless a greater distance is deemed to be necessary by Agency for the protection of the contemplated development on the property.
- (2) In the case of electric transmission lines where easement and rights of way are not definitely established, there shall be a minimum building setback line from the nearest of the transmission lines as follows:

<u>Voltage of Line</u>	<u>Minimum Building Setback</u>
46 KV	38 feet
69 KV	50 feet
161 KV & over	75 feet

- (3) In areas subject to flood where no fill is proposed, the building setback lines shall be located no closer to the stream than the edge of the area subject to flood as defined in section 3.110; in areas subject to flood where fill is proposed to raise the land for a building site, no fill shall be placed in the floodway and the building setback line shall be located not less than 15 feet landward from the outer edge of the fill.

- e. Corner lots - Corner lots shall have width sufficient to permit the additional side yard requirements of the building setback lines required by these standards.
- f. Fencing - The use of chain link fencing, open wire mesh, chicken wire, barbed wire, or other similar fencing materials is prohibited in any side or front yard.

4. Common areas

a. Common space - general requirements

- (1) In order to protect and preserve the physical amenities of the area, Agency shall require the dedication of common space within a development up to and including a total of five percent of the gross area of the development for parking lots and public facilities and 10 percent for recreational, natural, and historic areas.

Such common space area shall not include that area platted for water basins, water storage, or other permanent structures used for the storage or direction of watercourses.

- (2) The location, shape, size, and character of the common space shall be approved by Agency.
- (3) The uses authorized for the common space must be appropriate to the scale and character of the subdivision considering its size, density, expected population, topography, and the number and type of dwellings to be provided.
- (4) Common space may be suitably improved for its intended use but common space containing features worthy of preservation may be left unimproved. The buildings, structures, and improvements which are permitted in the common space must be appropriate to the uses which are authorized for the common open space and must conserve and enhance the amenities of the common open space with regard to its topography and unimproved condition.
- (5) The use and improvements of the common space must be planned in relation to any existing

or proposed public or semipublic common space which adjoins or which is within close proximity to the perimeter of the subdivision.

- (6) All land shown on the final subdivision plat as common space shall be conveyed to a trustee, homeowners' association, or all affected landowners in common.
 - (7) No common space may be put to any use not specified in the final plat unless that plat has been amended to permit that use and approved by Agency.
 - (8) Any organization established for the ownership, operation, and maintenance of any common space shall not dispose of any common space by sale or otherwise (except to any organization established to own and maintain the common space) without first offering to dedicate the same to Agency or any other governmental body for public purposes and without Agency's approval.
 - (9) The developers will establish means to ensure adequate operation and maintenance of reserved common space. In the event that the organization established to own, operate, and maintain common space, or any successor organization, shall at any time after the establishment of the subdivision fail to maintain the common space in reasonable order and condition in accordance with the final subdivision plat, Agency may serve written notice upon such organization or upon owners or residents of the subdivision. If deficiencies or maintenance are not corrected after 30 days, Agency shall have the right to reenter and retake the common space.
- b. Common shoreline acreage - For subdivisions that have lots abutting the 820-foot boundary contour, common shoreline acreage shall be dedicated by the developer to ensure access to the water for all residents of the subdivision. The requirement for common space dedication set forth in this section may be fully or partially met by this shoreline acreage requirement. Community docks may be constructed on this common acreage, according to the standards set forth in section 4.140 D. This acreage shall be used for amenity or recreation purposes only and any proposed development of the acreage after the final plat is accepted must be approved by Agency.

The amount of common shoreline acreage and frontage on the 820 msl contour dedicated, shall be based on the following ratios of shoreline acres (defined in section 5.020) to dwelling units:

1-20 units	0.5 shoreline acre
21-30 units	1 shoreline acre
31-50 units	2 shoreline acres
51-70 units	3 shoreline acres
71-100 units	4 shoreline acres
over 100 units	acreage as required by Agency but not less than 5 shoreline acres

Limited vehicular access to the common shoreline acreage shall be provided. If the acreage is developed for a permitted use, a homeowners' organization shall be formed according to Agency procedures to operate and maintain the acreage.

- c. Easements for utilities - Drainage and utility easements shall be provided on each side and rear lot lines or where deemed necessary by Agency. The interior lot lines shall have no less than five foot easements and rights of way on each side of a lot and front and rear easements shall be no less than ten feet on each side of the lot line. The easements shall be designed to adequately provide utilities and drainage for all lots in the proposed subdivision. Where drainage is proposed to cross any lot at any point other than the side or corner of the lot, the plat shall indicate the size of the pipe necessary to carry the proposed runoff. Each cul-de-sac shall have provisions for a 20-foot utility easement extending therefrom to prevent dead-end water mains. Easements of the same dimensions or greater width may be required by Agency along the lines of or across lots where necessary for the extension of existing or planned utilities.
- d. Storm sewers - Where in the opinion of Agency the flow of water cannot be accommodated with surface drainage, storm sewers will be required. Agency shall determine, on the basis of the watershed and the probable runoff, the size of the storm sewers. In ascertaining the size of the storm sewers, Agency may call upon its technical staff or any public or private agency to assist it in its determinations.

- e. Water supply and sewerage connections - All lots shall be serviced by both public or private water and sewer facilities.
- f. Community assets - In all subdivisions, due regard shall be shown for all natural features such as scenic vistas, large trees, watercourses, historical sites, and similar community assets which, if preserved, will add attractiveness and value to the property.

5. Suitability of the land

- a. Land which Agency has found to be unsuitable for subdivisions due to flooding, bad drainage, steep slopes, rock formations, or other features likely to be harmful to the safety, health, and general welfare of the future residents shall not be subdivided unless adequate methods approved by Agency are formulated by the developer for meeting the problems created by the subdivision of such land.
- b. Land subject to flooding and land deemed to be topographically unsuitable shall not be platted for residential occupancy nor for such other uses as may increase danger to health, life, or property or aggravate erosion or flood hazard. Such land within the plat shall be set aside for uses that will not be endangered by periodical or occasional inundation or these topographic conditions.
- c. Land within a floodway shall be considered unsuitable for residential occupancy or building sites. Special approval by Agency is required for construction of streets and roads in areas subject to flood. Fill may not be used to raise land within areas subject to flooding unless the plans for fill proposed have been approved by TVA in writing pursuant to Section 26a of the TVA Act.
- d. Agency shall require the developer to obtain an opinion from a licensed professional engineer as to safety and adequacy of any fill to be placed on land subject to flood.

6. Large tracts or parcels

When land is subdivided into larger parcels than ordinary building lots, such parcels shall be arranged so as to allow for the opening of streets in the future and for logical further resubdivision.

7. Group housing developments

The following additional standards shall apply to group housing developments:

- a. Although the developer will be allowed to deviate from the lot area requirements for the individual lots on which residential structures are located, the subdivision itself must meet the overall minimum low density requirements. This may be accomplished through the provision of open spaces, open type recreational areas, and consolidated parking areas.
 - b. No parcel of land without an adequate public water supply shall be approved for subdivision use.
 - c. No group housing development will be approved unless an adequate sanitary sewerage system or innovative alternative onsite disposal is included in the plans and approved in accordance with applicable laws and regulations as outlined in section 3.090.
 - d. The exterior yards of the subdivision must meet the minimum setback standards.
 - e. All roads must be constructed to standards as set forth in section 3.100.
8. The following additional plans and schedules shall be submitted to Agency:
- a. The location and legal description of the proposed development.
 - b. Site plan showing location of all buildings, lot lines, yard sizes, setbacks, recreation and open space areas, utilities, parking, and common use facilities.
 - c. The location and dimensions of all points of entry and exit for cars, pedestrians, and complete interior circulation pattern.
 - d. Such other architectural, engineering, and geographical data as may be required to permit Agency to determine if the above standards are being complied with.
 - e. A time schedule for development.

9. Solar access protection

- a. When an active solar energy collection system is installed on a lot, accessory structures or vegetation on an abutting lot shall not be located so as to block the solar collector's access to solar energy. The portion of a solar collector that is protected is that portion which:
 - (1) Is located so as not to be shaded between the hours of 10 a.m. and 3 p.m.; and
 - (2) Has an area not greater than three-quarters of the heated floor area of the structure.
- b. This subsection does not apply to structures or vegetation existing in an abutting lot at the time of installation of the solar energy collection system. This subsection controls any structure erected on, or vegetation planted in, abutting lots after the installation of the solar energy collection system.
- c. A statement that a solar energy collection system is installed on the lot shall be filed and recorded with Agency, and that date of installation shall be the date of recordation.

D. Development prerequisite to final approval - required improvements

Every subdivision developer shall be required to grade and improve streets and to install curbs, sidewalks, monuments, sewers, storm water inlets, and water mains in accordance with these standards. The following standards shall govern:

a. Monuments or corner markers

- (1) Numbered concrete monuments four inches in diameter or four inches square, three feet long, with a flat top, shall be set at all street corners of street right of way lines, at all points where the street lines intersect the exterior boundaries of the subdivision, and at all corners of the plat. The top of the monument shall have an indented cross to identify properly the location and shall be set flushed with the finished grade.
- (2) All other lot corners shall be marked with iron pipe or solid steel rod not less than one-half inch in diameter and 24 inches long and driven so as to be flush with the finished grade.

- b. Grading - Standards for grading all streets, roads, and alleys are included in section 3.100.
- c. Storm drainage - An adequate drainage system, including storm sewers, necessary open ditches, pipes, culverts, intersectional drains, drop inlets, bridges, etc., shall be provided for the proper drainage of all surface water.

(1) All pipe shall be either reinforced concrete or corrugated metal as specified below. Reinforced concrete pipe shall conform to AASHTO designation M-170 for the specified diameters and strength classes. Corrugated metal pipe shall conform to AASHTO designation M-36 for the specified diameters and gauges.

<u>Pipe Size</u>	<u>Corrugated Metal</u>	<u>Concrete</u>
15" - 24"	16 Gauge	Class III
30" - 36"	14 Gauge	Class III
42" - 48"	12 Gauge or 14 Gauge 3" x 1" corrugations	Class III

(2) All culverts over 24 inches in diameter shall be constructed with suitable concrete headwalls, and culverts less than 24 inches in diameter shall be constructed with tapered ends or endwalls.

Castings shall conform to AASHTO Designation M-105, Class 30B, for curb inlets and catch basins. All castings shall be true to pattern and dimension, free from faults or cracks, and cleaned of sand to provide a clean surface and uniform bearing.

Bricks shall conform to AASHTO designation M-91, grade SM. Eight-inch unreinforced concrete walls, six-inch reinforced concrete walls, or double brick walls shall be used.

- d. Roadway improvements - Standards for roadway improvements shall be as provided in section 3.100.
- e. Curbs and gutters - Standards for curbs and gutters are included in section 3.100.

f. Installation of utilities

- (1) All utilities, including electricity, telephone, cable television, and other utility facilities shall be installed underground by the developer. Where practical, all utilities shall be located on back lot lines.
- (2) In cases where it is not practical to locate utilities on back lot lines or road rights of way, then after grading is completed and approved and before any base is applied, all of the underground work including sewers, water mains, gas mains, electrical wiring, and telephone lines shall be installed completely and thoroughly throughout the length of the road.

g. Water supply system

- (1) Water shall be provided by a State-approved public or private water supply system.
- (2) Water mains properly connected with the public water supply system shall be constructed in such a manner as to adequately serve all lots shown on the subdivision plat for both domestic use and fire protection.
- (3) The size of water mains, the location and type of valves and fire hydrants, the amount of soil cover, the pipes, and other features of the installation shall be approved by Agency upon the recommendation of an applicable inspection agency or individual, and shall conform with accepted standards of good practice for municipal water systems and of the State Fire Marshal.

h. Sanitary sewers

- (1) All lots shall be connected to the sewerage system and shall meet the standards set forth in section 3.090. They shall meet all requirements of the Tennessee State Department of Health and be approved in accordance with applicable laws and regulations.
- (2) Innovative alternative onsite disposal - All lots not connected to a sewerage system shall be served by an approved innovative alternative onsite disposal system and shall meet the standards set forth in section 3.090 and the requirements of the Tennessee State Department of Health and other applicable laws and regulations.

- i. Erosion control - All development shall be in conformance with the grading, soil erosion, and sedimentation control standards required by section 3.080.
- j. Street and traffic signs - Street name signs shall be placed appropriately by the developer in new subdivisions and shall conform to the standards required by section 4.100. The developer shall provide and install traffic control signs where required by applicable laws and regulations. Traffic signs and their location and design shall conform to appropriate State and county regulations.
- k. Sidewalks
 - (1) Sidewalks on one or both sides of the streets or trails away from streets will be required if the development is in close proximity to schools, churches, recreational areas, community centers, etc.
 - (2) Sidewalks, if required, shall be located not less than one foot from the property line to prevent interference or encroachment by fencing, walks, hedges, or other planting or structure placed on the property line at a later date. In single-family residential areas, sidewalks shall be four feet wide and four inches thick. In commercial areas of any planned unit developments, sidewalks shall be ten feet wide and four inches thick.

4.090. Standards for planned unit developments in the residential district.

A. General provisions

The following general provisions apply to all planned unit developments in the residential district.

1. Ownership and division of land - No tract of land may be developed as a planned unit development unless the tract is initially under single ownership. The holder of a written option to purchase, any governmental agency, or a developer under contract shall be considered landowners for purposes of this section. Unless otherwise provided as a condition of approval of a planned unit development, the landowner of an approved planned unit development may divide and transfer parts of such development. The transferee shall complete each such unit and use and maintain it in strict conformance with the adopted final master development plan.
2. Relationship to the subdivision standards - The uniqueness of each proposal for a planned unit development may require that there be modification from the specifications established in the subdivision standards in section 4.080. Modifications may be incorporated only with the approval of Agency.
3. Common space - Common space shall be developed as provided in section 4.080.
4. Trails - A neighborhood trail system shall be developed in all planned unit developments according to the standards set forth in section 3.100.
5. Minimum size - The minimum size of a planned unit development is five acres.

B. Permitted activities and uses

The following activities may be permitted as part of a planned unit development except where expressly prohibited by these standards.

1. Residential: Single-family attached, semidetached, detached, duplex, and multifamily dwellings, not including mobile homes.
2. Community facilities: Churches and other religious institutions, not-for-profit clubs, and public or private educational facilities.

3. Recreational facilities: A community center, golf course, swimming pool, or park, playground or other recreational facility.
 4. Commercial activities: Convenience sales and services, including the retail sale from the premises of food items, drugs and other frequently needed small personal convenience items, such as toiletries, tobacco, and magazines, as well as the provision of personal convenience services which are typically needed frequently or recurrently, such as barber and beauty care; and including shoe shining and the operation of self-service laundromats and laundry or dry cleaning pickup stations but excluding other apparel cleaning and repair services.
 5. Financial, consulting, and administrative activities: Includes the provision of financial, insurance, legal, and real estate brokerage services, as well as the provision of advice, designs, information, or consultations of a learned professional nature. Also includes the executive, management, and administrative activities of private, profit-oriented firms, other than public utility firms. These activities do not include the storage of goods and chattels for the purpose of sale unless otherwise permitted by other provisions of these standards.
 6. Food service activities: Includes the retail sale of prepared foods or beverages primarily for onpremises consumption on the same lot but not to be consumed within a parked car.
 7. Medical services: Includes the provision of therapeutic, preventive, or corrective personal treatment services by physicians, dentists, and other practitioners as well as provision for medical testing and analysis services.
 8. Other limitations on commercial activities in planned unit developments are contained in 4.090 D.4.
- C. Obstructions, height regulations, accessory structures, customary home occupations, offstreet parking, and sign control

All residential structures and community facilities within a planned unit development shall conform to the requirements governing these items as specified in these standards.

D. Densities allowed

1. Single-family residential areas may be developed at a density of up to 14 units per acre.
2. The amount of land set aside for common space and recreational use shall not be less than 15 percent of the gross development area for a planned unit development occupying 20 or more acres or 10 percent for a planned unit development occupying more than 5 acres but less than 20 acres.
3. Multifamily development sites may be developed at a density of up to 24 units per acre.
4. Commercial activities are permitted in planned unit developments occupying 20 or more acres. One acre of commercial uses may be permitted for each 100 units in the project provided that 25 percent of the total units proposed shall be ready for occupancy prior to any commercial building permit being issued.
5. The merits, potential impact, and space needs or use of any public or semipublic recreation or community facilities shall be considered in determining maximum site size.

E. Area regulations

1. Setback requirements

All buildings and structures shall be set back from street or road right of way lines and from the periphery of the planned unit development to comply with the following standards:

- a. Front yard - There shall be a minimum front yard setback as follows:
 - (1) Single-family detached, 20 feet.
 - (2) All others as determined by Agency with the setback being increased in proportion to structure height, but not less than 20 feet from a street or road right of way.
- b. Periphery boundary - All buildings or structures shall be set back from the periphery boundary not less than 35 feet.
- c. Side yard - Side yards shall be provided where buildings or structures are provided on individual lots as follows:

- (1) As determined by Agency but not greater than 15 feet unless this setback is also the periphery boundary.
 - (2) Where side yards are reduced to zero, the development site plans and restrictive covenants which provide for the privacy of such units and the right of maintenance of exterior walls facing adjacent properties shall be submitted to Agency.
- d. Rear yard - As determined by Agency but not greater than 35 feet.
- e. Lot area and size
- (1) Developments which subdivide and transfer property with the sale of individual units but which do not provide common space controlled and maintained by a duly established homeowners' association shall provide lot areas which are not less than 3,000 square feet in size.
 - (2) Developments which subdivide and transfer property with the sale of individual units and which provide common open space controlled and maintained by a duly established homeowners' association in accordance with Tennessee State law shall be permitted to create lots less than 3,000 square feet in size subject to Agency approval of a site plan, consistent with the intent as stated in the general description of this section.
- f. Maximum site coverage - The maximum area which may be covered by buildings shall be 50 percent of the gross acreage of the site.
- g. Maximum building height
- (1) Single-family attached or detached and duplex dwellings shall not exceed three stories.
 - (2) Height of all other buildings shall be as determined by Agency.
- h. Fencing - The use of chain link fencing in planned unit developments is prohibited. Swimming pools and utility installations are exempt from this restriction.

F. Common shoreline acreage

1. For planned unit developments that abut the 820-foot boundary contour, a certain amount of common shoreline acreage shall be dedicated by the developer to ensure access to the water for all residents of the development. The requirement for common open space dedication set forth herein may be fully or partially met by this shoreline acreage requirement. It is on this common acreage that community docks may be constructed, according to these standards. This acreage shall be used for amenity or recreation purposes only, and any proposed development of the acreage after the final development plan is accepted must be approved by Agency.
2. A planned unit development must have at least 20 dwelling units to require dedication of common shoreline acreage. The amount of common shoreline acreage dedicated shall be based on the ratios of shoreline acres given in section 4.080 C.4.b.
3. Limited vehicular access to the common shoreline acreage shall be provided. If the acreage is developed for a permitted use, a homeowners' organization shall be formed according to Agency procedures to operate and maintain the acreage.

G. Administrative procedure - Prospective developers of planned unit developments on transferred land shall submit written proposals for such development as provided in this section.

1. Outline development plan

- a. The prospective developer shall first submit an outline development plan consisting of both maps and a written proposal.

(1) The maps may be in a general schematic form but must contain the following information:

- (a) The existing topographic character of the land.
- (b) Existing and proposed land uses and the approximate density of the existing dwellings.
- (c) The approximate location of any road shown on the major thoroughfare plan.
- (d) Public uses, including schools, parks, play areas, and other open spaces, both existing and proposed.

- (2) The written statement to accompany the outline development plan must contain a general indication of the expected schedule of the development.

- b. Within 30 days after the filing of the outline plan, Agency will decide whether the plan shall be approved, approved with modifications, or disapproved, and give reasons for its decision.

2. Preliminary development plan

- a. If an outline development plan has been submitted and approved, developer shall submit and Agency shall review the submission of a preliminary development plan in stages or as a whole. If a preliminary development plan has not been submitted within three months following the approval of the outline development plan, Agency may withdraw its approval of the planned development. In its discretion and for good cause, Agency may extend for three months the period for the filing of the preliminary development plan.

The preliminary development plan must include all of the following information:

- (1) A map showing street systems, lot lines, lot designs, and existing topographic characteristics.
- (2) Areas proposed to be conveyed, dedicated, or reserved for parks, playgrounds, swimming pools, recreation buildings, supporting commercial areas, trails, and similar public and semipublic uses.
- (3) A site plan for each building site and common area, showing the approximate location and dimensions of all buildings, structures, and improvements and indicating the open spaces around buildings and structures.
- (4) Elevation and perspective drawings of all proposed structures and improvements. The drawings need not be the results of final architectural decisions and need not be in detail.
- (5) A development schedule indicating: (1) the approximate date when construction of the project can be expected to begin; (2) the stages in which the project will be built and the approximate date when construction of

- each stage can be expected to begin; (3) the anticipated rate of development; (4) the approximate dates when the development of each of the stages in the development will be completed; and (5) the area and location of common open space that will be provided at each stage.
- (6) An offstreet parking and loading plan.
 - (7) An estimate of population and density and extent of activities to be allocated to parts of the project.
 - (8) The general means of the disposition of sanitary waste and storm water into State-approved utility systems.
 - (9) A tabulation of the land area to be devoted to various uses and activities and overall densities.
 - (10) Agreements, provisions, or covenants which will also govern the use, maintenance, and continued protection of the planned development and any of its common areas.
 - (11) If Agency finds that the planned development creates special problems of traffic, parking, landscaping, or economic feasibility, the following plans and diagrams shall be provided:
 - (a) A circulation diagram indicating the proposed movement of vehicles, goods, and pedestrians within the planned development and to and from existing and proposed thoroughfares. Any special engineering features and traffic regulation devices needed to facilitate or insure the safety of this circulation pattern must be shown.
 - (b) A landscaping and tree planting plan.
 - (c) An economic feasibility report or market analysis.
 - (12) If no outline development plan has been filed, the preliminary plan must contain the information required by subsection 4.090 G.1.a(1) and (2) and must include

enough of the area surrounding the proposed planned development to show the relationship of the planned unit development to adjacent districts.

Agency shall review the preliminary development plan and recommend its approval if it complies with these standards.

3. Final development plan

- a. Within three months following the approval of the preliminary development plan, the developer shall file with Agency a final plan containing in final form the information previously required in granting preliminary approval and the necessary signatures as required by section 4.080. In its discretion, and for good cause, Agency may extend for three months the period for the filing of the final development plan.
- b. Agency shall review the final development plan, and if it is in substantial compliance with the preliminary development plan, shall recommend approval.
- c. In accordance with applicable laws and regulations, building permits for buildings and structures in the area covered by the approved final development plan will be issued by Agency if the permits are in conformity with the approved final development plan and with all other applicable regulations. Agency shall issue a certificate of occupancy for any completed building or structure located in an area covered by the approved final development plan if the complete building or structure conforms to the requirements of the approved final development plan and all other applicable regulations.

4. Changes to final development plan

- a. No changes may be made in the approved final plan during the construction of the planned unit development except as specified.
 - (1) Minor changes in the location, siting, and height of buildings and structures may be authorized by Agency if required by engineering or other circumstances not foreseen at the time the final plan was approved. No change authorized by this section may change the size of any building or structure by more than 10 percent.

- (2) All other changes in use, rearrangement of lots, blocks, or building tracts, provisions for open spaces, or any other desired changes in the approved final plan must be submitted to Agency which will approve or disapprove them. No amendments may be made in the approved final plan unless they are shown to be required by changes in conditions that have occurred since the final plan was approved or by changes in the development policy of Agency.
 - b. Any changes which are approved for the final plan must be recorded as amendments to the recorded copy of the final plan.
 - c. If no construction has begun or no use is established in the development within one year after approval of the final development plan, the final development plan will lapse and be of no further effect.
5. Control of planned unit development following completion
- a. Upon completion of all the work within the planned unit development, Agency shall issue a certificate of completion which shall be noted on the recorded final planned unit development plan.
 - b. After the certificate of completion has been issued, no changes may be made in the approved final planned unit development plan except upon application to Agency under the following procedures:
 - (1) Any minor extensions, alterations, or modifications of existing buildings or structures may be authorized by Agency if they are consistent with the purposes and intent of the final plan. No change authorized by this section may change the size of any building or structure by more than 10 percent.
 - (2) A building or structure that is totally or substantially destroyed may be reconstructed only in compliance with the final development plan unless an amendment to the final planned unit development plan is approved under one of the two procedures specified above.

- (3) Changes in the use of common space may be authorized by an amendment to the final planned unit development plan under one of the two procedures specified above.
 - (4) All other changes in the final planned unit development plan must be made by Agency under the procedures authorized by these standards. No changes may be made in the final planned unit development plan unless they are required for the continued successful functioning of the planned development, or unless they are required by changes in the development policy of Agency.
- c. No changes in the final planned unit development plan which are approved under this section are to be considered as a waiver of the standards limiting the use of land, buildings, structures, and improvements within the area of the planned development, and all rights to enforce these standards against any changes permitted by this section are expressly reserved.
6. Subdivision and resale of the planned unit development
- a. A planned unit development may be subdivided or resubdivided for purposes of sale or lease after the certificate of completion has been issued.
 - b. If the subdivision or resubdivision of a planned unit development will create a new lot line, the applicant shall make a request to Agency for the approval of the subdivision or resubdivision. Agency shall approve the subdivision or resubdivision if each section of the subdivided or resubdivided planned unit development meets the provisions of these standards governing density, common space, and dimensional requirements.
 - c. All sections of a subdivided or resubdivided planned unit development are to be controlled by the final planned unit development plan.

4.100. Standards for signs, billboards, and other advertising structures. The following standards for signs, billboards, and other advertising structures shall apply:

- A. In any land use district, the following general standards shall apply as well as the regulations for signs and outdoor displays in the most current edition of the Southern Standard Building Code:

1. No sign shall be erected or maintained where by reason of its position, wording, illumination, size, shape, or color it may obstruct, impair, obscure, interfere with the view of, or be confused with, any authorized traffic control sign, signal, or device.
2. No sign having flashing, intermittent, or animated illumination shall be permitted.
3. No illuminated sign shall be permitted within 50 feet of property in any residential district unless the illumination of such sign is so designed that it does not shine or reflect light onto such property.
4. No billboards or portable signs shall be permitted.
5. Signs erected and overhanging any sidewalk must be placed at least eight feet above the sidewalk and may not exceed 200 square inches on one side or have more than two faces.
6. Signs for home occupations shall not exceed three square feet in area and shall be attached to the principal residential building.
7. No building walls or roofs shall be used for display of advertising in any district.
8. No sign shall be located so as to block or obscure vehicle or pedestrian sight lines creating dangerous conditions to either.
9. Temporary signs and posters are subject to the following requirements:
 - a. Each sign shall not exceed three square feet in area or extend more than four feet above ground level in height.
 - b. The signs shall not be located closer together than every 500 feet.
 - c. Such signs shall not be nailed to trees, fence posts, or public utility poles and shall not be located in the public right of way.
 - d. All signs advertising events shall be removed within 10 days after the event date.
10. In any district, the following signs shall be permitted:

- a. For parking areas, entrance and exit signs not exceeding two square feet in area and four feet in height. Such areas may also have not more than one sign not more than four square feet in area identifying or designating the conditions of the use of such parking area.
 - b. Nonilluminated "For Sale" or "For Rent" signs not exceeding two square feet in area, either affixed to the building or no more than four feet above ground in height.
 - c. One sign not more than 12 square feet in area or 6 feet in height giving the names of the contractors, engineers, architects, or other professional consultants during construction of a building.
 - d. Signs established by, or by order of, any governmental agency.
 - e. For special events of public interest, one sign not over 12 square feet in area or 6 feet in height located upon the site of the event.
- B. In a residential district, excepting a planned unit development, the following standards shall also apply:
- 1. Two informational signs are allowed per dwelling unit: (a) one sign of no more than one square foot in area affixed to the dwelling unit indicating the number and street address of the unit; and (b) a second sign of no more than one-half square foot in area affixed to a mailbox.
 - 2. Each subdivision and planned unit development is allowed one sign at its major entrance. The sign shall be ground mounted, no more than 6 feet in height, no more than 25 square feet in area per face with no more than 2 faces, and include only the name of the project and, if desired, a logo.
- C. In a residential planned unit development, residential units shall comply with the standards for signs in residential areas, and commercial properties shall comply with the standards for signs in commercial areas.
- D. In commercial areas, the following standards shall also apply:
- 1. One sign which identifies the owner and address of a building affixed to the building or window and no more than one square foot in size shall be allowed.

2. One permanent sign is allowed per business, not including signs which are part of a directory. The sign shall be permanently affixed to the building and not extend above the roofline of or below 8 feet above ground if it is a hanging sign above a pedestrian walkway or below 15 feet above ground if it is a hanging sign above a roadway or alley.
3. For isolated single establishments only, one ground mounted sign no more than 30 square feet in area per face with no more than 2 faces and no more than 6 feet in height shall be allowed.

E. In industrial districts, the following standards also apply:

1. For industrial parks, one ground-mounted directory sign no more than 75 square feet per face with no more than 2 faces and no more than 8 feet in height is allowed. The name of the industrial park and, if desired, its logo and the name of each industry and, if desired, the industry's logo is allowed.
2. For single industries, one ground-mounted sign no more than 50 square feet in area per face with no more than 2 faces and no more than 6 feet in height is allowed. The name of the industry and, if desired, its logo may be included.

4.110. Mobile homes prohibited. No mobile homes are permitted in any district except for the purpose of providing security at the Bowman House and a residence for resident managers at public use recreation areas as provided in section 4.160 A.6.b.

4.120. Automobile wrecking, junk, and salvage yards prohibited. No automobile wrecking, junk, and salvage yards are permitted in any district.

4.130. Development standards for cemeteries.

A. The following standards shall apply to the development and construction of cemeteries:

1. Except for cemeteries in existence at the time the transferred land was acquired by Agency, cemeteries are restricted to the residential development district.
2. The site proposed for a cemetery shall not interfere with the development of a system of collector and larger streets in the vicinity of such site. In addition, such site shall have direct access to a thoroughfare.

3. Any new cemetery shall be located on a site containing not less than 20 acres.
4. All structures, including, but not limited to, mausoleums, permanent monuments, or maintenance buildings shall be set back not less than 25 feet from any property line or street right of way line.
5. All graves or burial lots shall be set back not less than 25 feet from any property line or street right of way.
6. All cemeteries shall be landscaped and maintained in good order in accordance with State and other applicable regulations.

B. Application for cemetery permit

Except for cemeteries in existence at the time the transferred land was acquired by Agency, no person shall develop, construct, or maintain a cemetery in the area until securing a permit from Agency. An application for said permit shall be filed in accordance with section 6.020 of these standards, and shall be accompanied by a detailed site plan, a schedule for construction, financial plans for perpetual care, and other information herein required. Said application shall be considered by Agency and shall be approved or not approved within 60 days from the date of submission. Agency may require such additional information from the applicant as it feels is necessary to properly review the proposed development. All cemeteries must meet necessary State permitting requirements.

4.140. Commercial recreation planned unit development standards.

A. General

Due to the variety of facilities and levels of development found in commercial recreation enterprises, Agency shall identify specific guidelines and requirements relative to its intended level of development prior to marketing and advertising commercial recreation areas. Furthermore, Agency shall require all potential bidders to prepare and submit to Agency a detailed prospectus which Agency shall use as the basis for selection of a developer. The prospectus shall contain, at the minimum:

1. Conceptual site plans.
2. Specific facility plans.
3. Specific facility construction standards.
4. Specific facility operation and maintenance standards.

5. Schedule of investment.
6. Projections for at least a five-year period of income, expense, and cash flow.

B. Public health standards

Construction, maintenance, and operation of commercial recreation facilities shall be in accordance with applicable Tennessee Department of Public Health regulations.

C. Marinas

1. The installation, operation, and maintenance of marine fueling facilities shall be in compliance with all applicable laws and regulations.
2. All marina proposals are subject to TVA's Section 26a review procedure.
3. Marinas shall only be located in the commercial recreation planned unit development district.

4.150. Energy efficiency standards for residential buildings.

- A. All residential construction shall, as a minimum, fulfill the energy conservation efficiency standards stated in the TVA publication, Energy Saver Home Standards, October 1981, as it may be revised.
- B. New residential construction not specifically designed for active or passive collection of solar energy shall fulfill the standards set forth in Part A of the above publication.
- C. New residential construction not specifically designed for active or passive collection of solar energy may be constructed under Part B of the above publication if approval by Agency has been given prior to the beginning of any construction for tradeoffs in ceiling, wall, and floor insulation levels and window and door requirements to be used in construction under Part B.

4.160. Public use recreation areas.

- A. Public use recreation areas, including all facilities, shall be constructed, maintained, and operated by Agency according to the following standards:
 1. The construction, maintenance, and operation of areas shall be in accordance with applicable Tennessee Department of Public Health regulations.

2. Construction of additional recreation facilities beyond that provided by TVA and all facility reconstruction necessary due to vandalism or normal wear and tear shall be of the same quality in terms of materials and workmanship as that provided by initial TVA development.
3. The construction standards for streets and roads shall be equal to or greater than those standards and specifications set forth in section 3.100.
4. Areas shall be maintained in a condition which is attractive, free from litter and debris, evidence of vandalism, or hazardous obstructions.
5. Prior to the beginning of each recreation season, all areas shall be inspected to ensure that all facilities are in satisfactory condition. Facilities requiring repair or reconstruction shall receive immediate attention or be removed from public use. Areas characterized by extensive patches or bare or compacted soils or showing other signs of overuse shall be closed and rehabilitated.
6. In the operation of public use recreation areas, the following standards shall be applied:
 - a. At areas where boat launching ramps only are provided, no charge shall be assessed for their use. At other areas where charges are appropriate, recreation use fees will not exceed, and will be in accordance with, current Federal guidelines.
 - b. Resident managers shall be provided at all day-use areas and campgrounds to provide 24-hour security and onsite maintenance.
 - c. Length of stay at designated campgrounds shall be limited to 14 consecutive days. Campers will not be allowed to leave unattended camping equipment in campgrounds overnight.

4.170. Industrial development standards.

The standards set out in this section shall be applicable to all industrial development which occurs on the transferred land. These standards are generally applicable to small tracts of land of 20 acres or less. In those cases where these standards do not apply, such standards as TVA and Agency mutually agree to following appropriate review shall be applied.

A. Minimum lot

Lots shall have a minimum size of three acres and a minimum width at the front building setback line of 300 feet.

B. Maximum site coverage

Buildings and accessory facilities shall not cover more than 50 percent of the lot; and buildings, accessory facilities, parking, and materials handling and transfer facilities shall not cover more than 80 percent of the lot. No building or accessory facilities above ground shall extend beyond the building setback line(s) into the setback area.

C. Setbacks

1. The minimum distance structures shall be set back from the right of way line of streets or lot lines is:
 - a. Principal streets - 100 feet.
 - b. Secondary streets - 75 feet.
 - c. Side and rear setback requirements - 50 feet, provided if more than one lot shall be owned by one person or entity and in the improvement of such lot a building shall be erected on more than one lot, then the side setback requirement on the interior lot line or lot lines shall be waived. Provided, further, that if a part of a lot shall be sold before the approved principal building is erected, the line between the part sold and the part retained shall be the lot line to which the setback requirement shall apply.
2. Lots abutting upon a railroad lead track easement or right of way shall reserve a sufficient space to permit construction of a side track approximately parallel to the railroad easement or right of way.
3. Where easements or rights of way have been granted to Louisville & Nashville Railroad Company, its successors or assigns, no structures shall be constructed on said easement or right of way or any part thereof except with written consent of Agency, TVA, and the Louisville & Nashville Railroad Company, its successors, or assigns.
4. No structures shall be erected on the right of way of the Tellico Parkway.

D. Building height

All buildings shall be limited to a height of 55 feet above finished grade, measured from the average elevation of the finished lot grade at the front of the building to the roofline; provided, however, that towers, tanks, fire or parapet walls, skylights, communication masts, flagpoles, chimneys, penthouses for elevator equipment, stairways, ventilating fans, or similar equipment or similar structures may exceed this height.

E. Construction and materials

Any industrial or accessory building shall be of masonry, concrete, or preengineered steel construction or its equivalent or better. Wooden frame construction is prohibited. The exterior of the front wall and the side walls shall be attractively finished and approved prior to construction by the Committee. Buildings located on corner lots must comply with this requirement on two sides. Simulated brick, brick of unnatural tones, and asbestos siding are prohibited. The exterior finish of the remainder of the side walls shall be common brick, concrete, concrete blocks, tile bricks, or enamel metal siding, their equivalent, or better. When the side or rear walls are constructed of concrete or concrete block, unless the exterior finish is stucco, gunite, or their equal, the joints shall be rubbed down and covered sufficiently with standard waterproofing paint. All other types of construction and use of materials not covered in the above shall be subject to and have the approval of the Committee.

F. Underground utilities, pipes, etc.

No outside pipe, conduit, cable, line, or the like for water, gas, sewage, drainage, or steam service shall be installed or maintained upon any lot above the surface of the ground, except for hoses and movable pipes used for irrigation or other purposes if approved by the Committee. All auxiliary machinery, equipment, or facilities used on any lot in connection with any such energies or services shall be located upon any lot only in such manner and upon such conditions as may be approved by the Committee.

G. Parking

1. For each building constructed, there shall be provided and constructed paved parking areas so as to provide dust-free, all-weather surfaces according to plans approved as specified herein and maintained thereafter in good condition. Each parking area shall be served by adequate driveways and space for the movement of

vehicles. The parking area shall be lined to identify individual spaces. Such parking shall be attractively landscaped by approved landscaping techniques and approved by the Committee and shall meet the minimum standards contained in section 4.200.

2. No parking areas shall be located on and no parking shall be permitted within 75 feet of the right of way of a principal street, within 25 feet of the right of way of a secondary street, or within 15 feet of nonstreet lot lines.
3. The number and the specific location of parking spaces required for each lot shall be as designated in plans submitted for each lot and approved in the manner described in this section.
4. Parking shall be partially screened from all streets in a manner approved by the Committee.

H. Loading

1. All provisions for vehicle loading shall be provided on the lot with no onstreet vehicle loading permitted.
2. All unloading and loading facilities, including truck and equipment parking and maneuvering space, shall be constructed entirely within the building setback lines.
3. Vehicle loading shall be confined to the rear and sides of buildings not adjacent to principal streets. Loading areas shall be visually screened from all streets and thoroughfares in a manner approved by the Committee.
4. All loading areas shall be paved.

I. Outdoor storage and service operations

Outdoor storage yards and service operations of any kind shall be visually screened from public view and all streets with suitable permanent-type fencing and/or landscaping in a manner approved by the Committee. No outside storage shall extend above the top of such screening. Said storage and service operations shall be confined to the rear two-thirds of the lot and within the required building setback lines. No fence, masonry wall, or similar fencing shall extend beyond the building setback lines in the setback area.

J. Environmental controls

1. Regulations - No use of the property shall be established, maintained, or permitted or any operation

thereon which violates these standards or any regulations of any public body having jurisdiction over such activities. Detailed plans for the management of operations may be required before approval by the Committee. Unless otherwise stated, all measurements to determine compliance with these controls shall be made at or beyond the boundaries of the lot.

2. Solid waste - All improvements on any lot shall be kept in a safe, clean, neat, and sanitary condition and shall comply in all respects with all Government health, fire, and police requirements. Each owner or lessee shall remove at its expense any solid waste of any character which may accumulate on said lot. During construction or improvement on any lot, the owner or lessee thereof shall keep the site free of unsightly accumulations of solid waste and construction materials; and trailers, shacks, and the like employed in connection with such construction shall be kept in a neat and orderly manner. The handling, storage, transport, and disposal of solid waste shall comply with regulations promulgated by the Tennessee Department of Public Health.
3. Liquid waste - No liquid waste shall be discharged into the public sewerage and treatment system which is dangerous to the public health and safety or is deemed unacceptable by the manager of any waste treatment plant. Any pretreatment that may be required or the use and disposal of hazardous wastes must be approved by the Committee. Storm drainage and surface runoff shall be segregated from industrial and sanitary waste. All apparent sources of contamination, such as operating areas, loading or unloading areas, product transfer pump areas, and equipment cleaning and maintenance areas shall not contaminate surface runoff. The volume, quality, and point of discharge of liquid wastes shall comply with regulations promulgated by the Water Quality Control Board of the Tennessee Department of Public Health and with the standards set forth in section 3.090.
4. Air pollution - No operation, or combination of operations, shall emit any solid, liquid, or gaseous matter that is at any point in concentrations or amounts that are noxious, toxic, or corrosive and which will have a tendency to cause injury or damage to property, business, or vegetation. Regulations promulgated by the Air Pollution Control Board of the Tennessee Department of Public Health shall govern air quality.
5. Fire - The manufacture, transportation, utilization, and storage of flammable materials shall be conducted

in accordance with accepted standards for safety and fire prevention. Such standards shall include the National Fire Codes and the appropriate standards of the American Petroleum Institute, the Manufacturing Chemists Association, and other organizations that promulgate standards of good practice. No flammable liquids shall be discharged into the public sewerage and treatment system.

6. Explosive materials - The manufacture of materials or products which decompose by detonation is prohibited (including, but not limited to, all primary, high, and blasting explosives, unstable organic compounds, and strong oxidizing agents in concentrations greater than 35 percent). The utilization of these materials or products in manufacturing processes is permitted only when authorized by Agency, and no storage is permitted except such accessory storage as may be authorized for use in the manufacturing process or other production. In any case, such storage shall be in accordance with the rules and regulations governing explosives promulgated by the State of Tennessee and other authorities having jurisdiction.
7. Radioactive materials - The manufacture, utilization, storage, and disposal of radioactive materials shall comply with the regulations established by the Nuclear Regulatory Commission and other authorities having jurisdiction.
8. Odorous matter - No operation shall release odorous matter in such quantities as to become a nuisance or source of unreasonable discomfort at any point beyond the lot line.
9. Noise - Noise continuously radiated from any operation shall not cause sound pressure levels greater than those listed in the following table, as adjusted, either at ground level or at a habitable elevation, whichever is more restrictive:

- a. Maximum permissible sound-pressure levels at specified points of measurement for noise

<u>Octave Band in Cycles/Second</u>		<u>Sound Pressure Level in Decibels</u>		
		<u>Zone I</u>	<u>Zone II</u>	<u>Zone III</u>
Below	75	68	74	80
75 -	150	59	67	74
150 -	300	52	59	66
300 -	600	46	52	58
600 -	1,200	42	46	50
1,200 -	2,400	39	42	45
2,400 -	4,800	36	38	40
4,800 -	10,000	33	34	35
Above	10,000	30	30	30

- b. The sound pressure level shall be measured with a sound level meter and an octave analyzer. Sounds of short duration shall be measured with an impact noise analyzer. Instruments shall conform to specifications published by the American Standards Association.
- c. Adjustments (in decibels):
- Minus 5: (a) Any time between 10 p.m. and 5 a.m., (b) at a property line abutting residential zones, and (c) noise of impulsive or periodic character (hammering, hum, screech, etc.).
- Plus 5: At a property line abutting industrial zones.
- Plus 5, 10, or 15: If noise is not smooth and continuous and source operates less than 20 percent, 5 percent, or 1 percent respectively of any one-hour period.
- d. The sound pressure level shall not exceed the maximum values in each column.
10. Vibration - No operation of any device shall create groundborne, steady-state vibrations discernible without the aid of measuring displacements as follows:
- a. Maximum permitted steady-state vibration displacements:

Frequency Cycles/Second	Displacement in Inches		
	Zone I	Zone II	Zone III
0 - 10	.0003	.0008	.0020
10 - 20	.0002	.0005	.0010
20 - 30	.0001	.0003	.0006
30 - 40	.0001	.0002	.0004
40 - 50	.0001	.0001	.0003
50 - 60	.0001	.0001	.0002
60 and over	.0001	.0001	.0001

- b. Measurements shall be made using measuring devices of a standard approved by the U.S. Bureau of Standards and mutually approved by the industry in question and the measuring authority.
11. Heat, movement of air, and humidity - No operations, or combination of operations, on any lot shall cause as a result of normal activities any undue or exaggerated effects on the temperature, motion, or humidity of the atmosphere.
 12. Glare - Operations or processes producing intense glare shall be performed so that direct or sky-reflected glare is not discernible beyond the lot line. This restriction shall not apply to signs otherwise permitted by these regulations or to floodlighting of the building for aesthetic purposes provided that the intensity and brilliance of such lighting does not annoy adjacent property owners or impair the visibility on public thoroughfares.
 13. Electromagnetic radiation and interference - No operation, or combination of operations, on any lot shall create a source of electromagnetic radiation which does not comply with the current regulations of the Federal Communications Commission regarding such sources. Further, said operations shall not cause abnormal degradation in performance of other electromagnetic radiators or receptors.
 14. Animals - No livestock, poultry, or other animals shall be kept on any lot except as required for research and development activities or activities related to the practice of veterinary medicine or the boarding and care of domestic animals; and in no event shall any stable, hutch, barn, coop, or other housing or shelter for animals or for the storage of materials be placed or maintained upon any lot, except as approved by the Committee.

15. Miscellaneous noxious or offensive activities - No noxious or offensive trade or activity shall be carried on or upon any lot or shall any act be done or condition maintained thereon which may be or become an annoyance or nuisance in the generally accepted definition of that term to persons or property in surrounding areas.

K. Plans and specifications

1. Submission - No site improvements shall be commenced, erected, placed, moved onto, or permitted to remain on any lot, nor shall any existing structure upon any lot be altered in any way which materially changes the exterior appearance thereof, nor shall any new use be commenced on any lot subject to these standards until plans and specifications have been submitted in writing by the owner or lessee to Agency.
2. Information required
 - a. Plans and specifications shall be submitted in duplicate and shall contain such information and shall be in such form as may be required by the Committee but in any event shall include information described in this section. The submission of plans and specifications to the Committee shall be made in two phases, preliminary and final design.
 - b. Information which shall be furnished during the preliminary design phase shall include a site plan of the lot showing proposed:
 - (1) Location and orientation of all structures showing the kind, shape, dimension, height, materials, exterior color scheme, and location with respect to the particular lot.
 - (2) Location of driveways, parking lots, loading areas, and easement areas and their relationship to existing and adjacent structures and lots.
 - (3) Location for utilities and drainage.
 - (4) Grading plan relating existing conditions both onsite and on adjacent property to proposed construction.
 - (5) Site clearing plan.
 - (6) Conceptual landscape plan.

- (7) Description of possible environmental situations which may not comply with section 4.170.
- c. Information which shall be furnished during the final design phase shall include detailed plans, working drawings, and specifications reflecting the approved preliminary site plan and including:
 - (1) Detailed plans of structures with elevations showing exterior materials and exact finishes and colors.
 - (2) Details of site improvements, such as parking lots, loading areas, curbing, walks, fences, and special screening.
 - (3) Detailed grading and drainage plans.
 - (4) Detailed landscape plan indicating size and species of all plantings.
 - (5) Driveways, easements, and rights of way.
 - (6) Location and details for signs and lighting.
 - (7) Detailed plan for ensuring compliance with section 4.170, Environmental Controls (as may be requested by the Committee).
3. Approval - Upon approval by the Committee of any plans and specifications, a copy of such plans and specifications, as approved, shall be deposited for permanent record with the county register in the county where the development is to be located so as to provide notice to all future purchasers that such approvals have been obtained; and a copy of such plans and specifications bearing such approval shall be returned to the applicant. Approvals by the Committee shall be in writing.
4. Disapproval
 - a. The Committee shall have the right to disapprove any plans and specifications submitted hereunder because of any of the following:
 - (1) Failure to comply with any of the standards described herein.
 - (2) Failure to include information in such plans and specifications as may have been reasonably requested by the Committee.
 - (3) Objection to the exterior design, appearance, or materials of any proposed structure.

- (4) Objection on the ground of incompatibility of any proposed improvements or use with existing improvements or uses upon other lots in the vicinity.
 - (5) Objection to the location of any proposed structure upon any lot or with reference to other lots in the vicinity.
 - (6) Objection to the grading plan for any lot.
 - (7) Objection to the color scheme, finish, proportions, style of architecture, height, bulk, or appropriateness of any proposed structure.
 - (8) Objection to the number or size of parking spaces or to the design or location of parking areas proposed for any lot.
 - (9) Any other matter which, in the judgment of the Committee, would render the proposed improvements or use inharmonious with the general plan of improvement of the property located upon other lots or other properties in the vicinity.
- b. Where the Committee shall disapprove any plans and specifications submitted hereunder or shall approve the same only as modified or upon specified conditions, such disapproval or qualified approval shall be accompanied by a statement of the grounds upon which such action was based. In any such case, the Committee shall, if requested, make reasonable efforts to assist and advise the applicant in order that an acceptable proposal can be prepared and submitted for approval.

5. Rules and regulations - time for approval

- a. The Committee may promulgate rules, standards, or guidelines governing the form and content of plans and specifications to be submitted for approval and may issue statements of policy with respect to approval or disapproval of the architectural styles or details or other matters which may be presented for approval. Such rules and such statements of policy may be amended or revoked by the Committee to approve or disapprove any feature or matter subject to approval or to waive the exercise of the Committee's discretion as to any such matter.

- b. Approval for use on any lot of any plans and specifications shall not be deemed a waiver of the Committee's right, in its discretion, to disapprove such plans or specifications of any of the features or elements included therein if such plans, specifications, features, or elements are subsequently submitted for use on any other lot or lots.
- c. Approval of any such plans and specifications relating to any lot, however, shall be final as to that lot; and such approval may not be revoked or rescinded thereafter, provided: (a) the improvements or uses shown or described on or in such plans and specifications do not violate any specific prohibitions contained in these standards, and (b) that the plans and specifications, as approved, and any conditions attached to any such approval have been adhered to and complied with in regard to all improvements and uses on the lot in question.
- d. In the event that the Committee fails to approve or disapprove any plans and specifications as herein provided within 60 days after receipt, the same shall be deemed to have been approved as submitted; and no further action shall be required to evidence such approval, subject, however, to the standards contained herein.

L. Implementation of plans

- 1. Construction commencement - Construction of an approved principal building shall begin within two years from the date said lot is received by owner or lessee; provided, however, anything in this paragraph to the contrary notwithstanding, Agency may extend in writing the time in which such construction shall begin.
- 2. Lease agreements
 - a. If, at the expiration of two years from the date of execution of a lease agreement conveying any lot within said property, any lessee or assign has not in good faith complied with paragraph 1 of this section, with reasonably complete plans to carry through to prompt completion the construction of said building, Agency shall have the right and option to terminate the lease agreement. A provision to this effect shall be included in all such lease agreements.
 - b. In the event any lessee shall desire to terminate the lease agreement on all or any part of an unimproved lot within the property, Agency shall

have the right, at its option, to terminate the lease agreement and to refuse any refund to the lessee.

M. Easements and rights of way

1. Reservation

a. Nonexclusive easements and rights of way are hereby expressly reserved for Agency, its successors, and assigns in, on, over, and under (a) those areas on each lot with respect to which easements are shown on the recorded subdivision plat relating thereto; or (b) if no easements are shown on any such plat, to a strip of land within lot lines of each lot 20 feet in width in the front and rear of the lot and 10 feet in width on each side of the lot (not adjacent to a street), each said distance being measured in each case from the lot line toward the center of the lot.

b. Owners or lessees shall grant additional easements for future railroad tracks and sidings, gas, water, sewerage, telephone, entrance and access roads, and electrical lines and execute any and all instruments necessary and reasonable for further development of the property; provided that no such area or easement shall interfere with any building planned for, or constructed on, the said real estate by the owner or lessee.

2. Use - Easements and rights of way are reserved for the following purposes:

a. For the erection, installation, construction, and maintenance of (1) poles, wires, lines, and conduits, and the necessary or proper attachments in connection with the transmission of electricity, telephone, community antenna television cables, and other utilities and similar facilities; and (2) stormwater drains, land drains, public and private sewers, pipelines for supplying gas, water, and heat, and for any other public or quasi-public utility facility or function.

b. For slope control purposes, including the right to grade and plant slopes and prevent the doing of any activity which might interfere with slope ratios approved by the Committee for the property or which might create erosion or sliding problems or change, obstruct, or retard drainage flow.

c. For public pathways and open space corridors.

d. For roads, streets, highways, and railroads.

3. Access

- a. Agency and its respective agents, successors, and assigns shall have the right to enter upon all parts of the easement area of each lot for any of the purposes for which said easement and rights of way are reserved.
- b. Agency shall also have the right at the time of, or after, grading any street or any part thereof, to enter upon any abutting lot and grade the portion of such lot adjacent to such street.

Combination or subdivision of lots

1. Combination - Contiguous lots held in common ownership and designated for the same land use may for the purpose of these standards be treated as one entire lot; provided that the owner thereof shall file with Agency a written statement declaring its intention to treat such contiguous lots as one lot, and any severance of ownership of such contiguous lots shall thereafter be subject to the provisions of section 4.170 N.3.
2. Subdivision
 - a. No lot shall be subdivided without the approval of the Committee. In the event that any such subdivision is approved and a portion of a lot or two or more contiguous lots is severed in ownerships from the remainder of such lot or contiguous lots, such portion so severed, and the remaining portion of such lot or contiguous lots, shall each thereafter be treated for all purposes hereunder as separate lots.
 - b. Newly formed lots shall comply with the requirements of section 4.170 D.
 - c. No improvements may be placed or altered on any newly formed lots unless and until requirements of section 4.170 F shall have been complied with, and plans and specifications shall have been approved by the Committee. The Committee may withhold such approval if, in its sole discretion, it determines that any standard contained herein shall have been violated.
3. Lease agreements - The combination or subdivision of leased lots for the purposes of subleasing or renting by lessee shall not be permitted.

4.180. Interim use district standards.

- A. Land in the interim use district (undeveloped land) shall be available for the growing of crops on an interim basis under the following conditions:
1. To avoid serious erosion, the land to be row cropped shall not have a slope greater than 15 percent.
 2. To avoid siltation of water bodies and pollution of surface and ground water by fertilizer and pesticides, the land to be farmed shall not be within 50 feet of any body of surface water.
 3. To avoid conflicts with incompatible land uses, the land to be farmed shall not be within 50 feet of a residential or commercial or public use recreational development.
 4. A 100-foot-wide, undisturbed (uncultivated and unburned) buffer zone, which will be planted or managed to create riparian habitats to enhance wildlife populations, including waterfowl, will be left between the river or lake shoreline and all agricultural areas.
 5. A 100-foot-wide, undisturbed (uncultivated and unburned) buffer zone, which will be planted or managed to create riparian habitats to enhance wildlife populations, including waterfowl, will be left between all tributary streams and licensed areas.
 6. A 25-foot-wide buffer zone of undisturbed vegetation will be allowed to revert to native tree, shrub, or grass cover along the entire length of all existing fence rows (on both sides) and woodland borders.
- B. The grazing of livestock shall also be allowed on an interim basis under the following conditions:
1. Grazing rates will be regulated to protect and enhance soils, vegetation, and other land uses. Numbers of livestock and time periods within an individual tract will be determined by Agency-developed and -applied animal-use-month standards.
 2. To avoid conflict with incompatible land use, the land grazed shall not be within 50 feet of any residential or commercial and public use recreational development.
 3. All grazing areas shall be fenced.
- C. Land in the interim use district shall be available for firewood cutting and commercial forestry on an interim basis under the following conditions:

1. All harvesting operations shall satisfy the requirements of the Tennessee Division of Forestry's "Best Management Practices" issued pursuant to Section 208 of the Non-Point Source Water Pollution Act.
2. To avoid serious erosion and also protect visual amenities, there shall be no clearcuts of greater than five acres.
3. To protect visual amenities, desirable stands of trees of unique value shall be permanently protected.
4. To avoid conflicts with incompatible land uses, there shall be no commercial forestry within one-quarter mile of residential or commercial and public use recreation development, and Agency shall control firewood cutting thereon.
5. Commercial logging trades shall not use residential streets.
6. Proposed firewood cutting and commercial logging shall be approved by procedures developed by Agency.

4.190. Reservoir access procedures and private water use facility standards.

A. Reservoir access procedures - general

1. Access to the Tellico Reservoir shall be in accordance with Attachment C to Contract No. TV-60000A, Procedures For Approval of Private Recreational Water Use Facilities on Tellico Reservoir, Section 26a of the TVA Act and applicable TVA regulations, other applicable law, and these standards.
2. No private water use facilities shall be built along the shorelines of the Little Tennessee River or Tellico River channels.
3. No habitable structures will be allowed.

B. Community docks

1. Each residential subdivision or planned unit development shall be allowed one community dock to be located in an embayment adjacent to the development.
2. The size of community docks will be determined on the basis of not more than one slip per residential unit; provided, however, that no dock shall have fewer than 20 slips. However, the water surface area shall be kept to a minimum so as to limit encroachment and to provide only the minimum area required to accommodate the necessary facilities.

3. Commercial services, including, but not limited to, gasoline pumps, bait and tackle shops, refreshment stands, and repair shops, are not permitted at community docks.
4. All boat slips shall be permanently and securely anchored to the shoreline. Buoy mooring is not permitted.
5. All docks shall be kept in good repair.
6. Access roads and parking lots shall be designed so that automobiles hauling trailers need not be backed except down boat launching ramps.
7. Single- or double-wide concrete boat launch ramps may be provided.
 - a. Ramps' width and top and bottom elevations shall be provided by the applicant and shown on the plans.
 - b. Ramps shall be constructed on a 12- to 15-percent grade to provide optimum launching conditions.
 - c. Piers shall also be provided to gain safe access to boats.

4.200. Offstreet parking standards.

A. Minimum standards

Offstreet automobile storage or standing space shall be provided on each lot upon which any of the following uses are hereafter established. One vehicle space shall be 200 square feet in size (10 feet x 20 feet) and such space shall be provided with vehicular access to a street. The number of parking spaces provided shall meet the minimum standards for the specific uses as set forth below:

1. Single detached dwelling and duplex - not less than two spaces for each dwelling unit.
2. Apartment dwelling - not less than one and one-half spaces per dwelling unit.
3. Boarding houses and rooming houses - not less than one space for each one room to be rented.
4. Townhouse and condominium - not less than two spaces per dwelling unit.
5. Other dwelling units - not less than two spaces per dwelling unit.

6. Hotels, motels, and other tourist accommodations - not less than one space for each room to be rented plus one additional space for each three employees.
7. Auditoriums, churches, stadiums, or other places of public assembly - not less than one space for each five seats provided in such places of assembly. For places of public assembly where seating is not a measure of capacity, such as clubhouses, funeral parlors, etc., at least one space for each two hundred square feet of floor space devoted to that particular use shall be provided.
8. Manufacturing, industrial or wholesaling use - not less than one space for each five employees anticipated during maximum production, with a minimum of five spaces provided for any establishment. For establishments maintaining space for the sale of products at retail, there shall be provided one parking space for each 500 square feet of floor area devoted to retail sales.
9. Office and professional buildings - not less than one parking space for each 300 square feet of office space located on the first floor, plus one parking space for each 500 square feet of floor space, or fraction thereof, above or below the first or main floor; provided that office space constructed or arranged on the floors above or below the first floors of retail or other business establishments and not used in connection therewith, shall not fall within the meaning of this subsection.
10. Retail sales and service establishments - not less than one parking space for each 200 square feet, or fraction thereof, of commercial floor space.
11. Medical or dental clinic - not less than four spaces per doctor, plus one additional space for each two employees.
12. Service stations - not less than five spaces for each grease rack or service bay or one space for each 1,500 square feet of lot area, or fraction thereof, whichever is greater.
13. Restaurants - not less than one space per 150 square feet of floor area, plus one space for each two employees.
14. Other - for buildings and uses not listed, the off-street parking requirements shall be determined by Agency.

B. Compliance with minimum parking standards

Each development proposal submitted to Agency shall include information as to the location and dimensions of offstreet parking spaces and the means of ingress and egress for such spaces. This information shall be in sufficient detail to determine whether or not the standards of this section are met.

C. Combination of required parking space

The required parking space for any number of separate uses may be combined in one lot, but the required space assigned to one use may not be assigned to another use, except that the parking space required for churches, theatres, or assembly halls whose peak attendance will be at night or on Sundays may be permitted to utilize the parking spaces of other uses which will be closed at night or on Sundays.

D. Remote parking space

If the offstreet parking space required by these standards cannot be reasonably provided on the same lot on which the principal use is located, such space may be provided on any land within 200 feet of the main entrance to such principal use, provided such land is in the same ownership as the principal use. Such land shall be used for no other purpose so long as no other adequate provision of parking space, meeting these standards, has been made for the principal use.

E. Standards for design of parking lots

1. Except for parcels of land devoted to one- and two-family residential uses, all areas devoted to offstreet parking shall be so designed and be of such size that no vehicle is required to back into a public street to obtain egress.
2. Each parking space shall be no less than 200 square feet in area.
3. Entrances and exits for all offstreet parking lots shall comply with the standards of section 3.060.
4. The parking lot shall be designed in such a manner as to provide adequate drainage and to eliminate the possibility of stagnant pools of water.
5. Grading of offstreet parking lots shall comply with the standards in section 3.080.

ARTICLE 5
DEFINITIONS

SECTION

- 5.010. Scope
5.020. Definitions of general terms

5.010. Scope. For the purpose of these development standards, and in order to carry out the provisions and intentions as set forth herein, certain words, terms, and phrases are to be used and interpreted as hereinafter defined. Words used in the present tense shall include the future tense; words in the singular number include the plural, and the plural the singular; the term "shall" is always mandatory and not directory; and the word "may" is permissive. The word "used" or "occupied" as applied to any land or building shall be construed to include the words "intended, arranged, or designed to be used or occupied."

5.020. Definitions of general terms. The following words, terms, and phrases are hereby defined as follows and shall be interpreted as such throughout these development standards. Terms not herein defined shall have the meaning customarily assigned to them or such as the context may imply.

ACCESS: The right to cross between public and private property, thereby permitting pedestrians and vehicles to enter and leave property.

ACCESSORY BUILDING: A subordinate building, the use of which is incidental to that of a main building and located on the same lot therewith.

ACCESSORY USE: A use customarily incidental, appropriate, and subordinate to the principal use of land or buildings and located upon the same lot therewith.

ADVERTISING: Includes any writing, printing, painting, display, emblem, drawing, sign, or other device designed, used, or intended for advertising, whether placed on the ground, rocks, trees, tree stumps, or other natural structures or on buildings, structures, milestones, signboards, wallboard, roofboard, frames, supports, fences, or other manmade structure. Any such advertising shall be considered a structure within the meaning of the word "structure" as utilized herein.

ADVERTISING SIGN OR STRUCTURE: See SIGN OR OTHER ADVERTISING DEVICE.

AGENCY: The Tellico Reservoir Development Agency, organized and existing pursuant to The Tellico Reservoir Development Agency Act of 1982, Pub. Ch. No. 679 (to be codified at 66 Tenn. Code Ann. Ch. 1 §§ 2-11).

AGRICULTURAL USE: This includes all forms of agriculture, growing of crops in the open, dairying, grazing, the raising and maintaining of poultry and other livestock, horticulture, viticulture and floriculture.

AGRICULTURAL ACCESSORY USE: Those structures or equipment which are normally required in the operation of agricultural uses.

ALLEY: A minor right of way, dedicated to public use, which affords a secondary means of vehicular access to the back or side of properties otherwise abutting a street, and which may be used for public utility and public service purposes.

ALTERATION: As applied to a building or structure, a change or rearrangement in the structural parts or an enlargement, whether by extending a side or by increasing its height, or structural changes, other than repairs, that would affect safety. The term "alter," in its various modes and tenses and its practical forms, refers to the making of an alteration.

APPRAISED FAIR MARKET VALUE: The fair market value as established by an appraiser, selected from a panel of qualified appraisers mutually agreed to by TVA and Agency, familiar with the project area, and established through an appraisal conducted within the last six months.

AREA, BUILDING: The total area taken on a horizontal plane at the main grade level of the principal building and all necessary buildings exclusive of uncovered porches, terraces, and steps.

AUTOMOBILE WRECKING: The dismantling, storage, sale, or dumping of used motor vehicles, trailers, or parts thereof.

AUTOMOBILE WRECKING, JUNK, AND SALVAGE YARDS: Any lot or place which is exposed to weather and upon which more than three or more vehicles or parts thereof are located which would not be economically feasible to make operative.

AVERAGE GROUND ELEVATION: The elevation of the mean finished grade at the front of a structure.

BASEMENT: A story partly or wholly underground. For purposes of height measurement, a basement shall be counted as a story when more than one-half of its height is above the average ground elevation or when subdivided and used for commercial activities.

BILLBOARD: Any sign, including its structure, which does not conform in height or size to the standards outlined in section 4.100.

BUFFER ZONE: A zone of vegetative cover sufficient to restrict significant movement of soil resulting from land-disturbing actions in the immediate vicinity of watercourses in the reservoir area, including manmade or natural drainageways.

BUILDING: Any structure having a roof supported by columns or by walls, including tents, lunch wagons, dining cars, mobile homes, and similar structures whether stationary or movable.

BUILDING AREA OF A LOT: That portion of a lot bounded by the required rear yard, side yards, and the building setback line.

BUILDING CODE(S): The most recent edition of the Southern Standard Building Code, as revised, published by the Southern Building Code Congress International.

BUILDING, MAIN OR PRINCIPAL: A building in which is conducted the principal use of the lot on which it is situated. In any residential district any dwelling shall be deemed to be a main building on the lot on which it is situated.

BUILDING SETBACK LINE: A line delineating the minimum allowable distance between the property lines and a building on a lot, within which no building or other structure shall be placed except as otherwise provided.

BUILDING SETBACK LINE, FRONT: A line delineating the minimum allowable distance between the street right of way, or if an official future street right of way has been established, from that future street right of way line and the front of a building on a lot. The front building setback line extends the full width of the lot and is parallel to or concentric with the street right of way.

BUILDING SETBACK LINE, REAR: A line delineating the minimum allowable distance between the rear property line and a building on a lot (other than for permitted accessory structures). The rear setback line extends the full width of the lot.

BUILDING SETBACK LINE, SIDE: A line delineating the minimum allowable distance between the side property line and a building on a lot. The side setback line extends from the front building setback line to the rear building setback line.

CLINIC: See MEDICAL FACILITY.

COMMERCIAL FEED LOT: Any parcel of land on which 10 or more cattle or hogs are being kept and fed for the purpose of slaughter and sale on the commercial food market.

COMMERCIAL RECREATION PLANNED UNIT DEVELOPMENT DISTRICT: Transferred land as shown on Attachment A to Contract No. TV-60000A designated for commercial recreation activities in accordance with these development standards.

COMMON SPACE: Land in a residential district that is held in common ownership by the landowners of that residential development district and used for amenity or recreational purposes.

COVERAGE: The lot area covered by all buildings located thereon, including the area covered by all overhanging roofs.

COUNTRY CLUB: A chartered, not-for-profit membership club with facilities catering primarily to its membership and may provide, but not be limited to, one or more of the following recreational or social amenities: golf, riding, clubhouse, pool, dining facilities, and lounge use.

CULTURAL/PUBLIC USE/OPEN SPACE DISTRICT: Transferred land as shown on Attachment A to Contract No. TV-60000A designated to be managed so as to protect and enhance the cultural resources and scenic amenities of the project area; provide a buffer between incompatible or contrasting land uses; provide areas for passive or informal recreational purposes; and permit complementary agricultural, forestry, and wildlife utilization.

CUSTOMARY HOME OCCUPATION: A gainful occupation or profession conducted by a family member residing on the premises and conducted entirely within the principal dwelling unit.

DAY AVERAGE SOUND LEVELS (L_d): The L_{eq} for the 15-hour time period from 7 a.m. to 10 p.m.

DAY NURSERY: Any place, home, or institution which receives six or more young children for exercise, play, observation, and instruction.

DAY-NIGHT AVERAGE SOUND LEVELS (L_{dn}): The L_{eq} for the 24-hour period from midnight to midnight obtained by summing L_d with the quantity (L_n plus 10 dB). By formula:

$$L_{dn} = 10 \log_{10} \left(\text{antilog} \frac{L_d}{10} + \text{antilog} \frac{L_n + 10}{10} \right)$$

DEVELOPER: Any individual, firm, corporation, association, partnership, or other entity involved in the development of land for itself, Agency, or others.

DEVELOPMENT LAND: Those portions of the transferred land that are designated as industrial, residential, and commercial recreational areas, or cultural/public use/open space areas to be transferred to Agency pursuant to Contract No. TV-60000A.

DISTRICT: Any section or sections of the area lying within the transferred land.

DOCK: Any structure extending from the land into the water intended primarily for the mooring of boats.

DWELLING: A building or part thereof used as a habitation under one of the following categories:

- A. Apartment dwelling. A building and accessories thereto principally used, designed, or adapted for use and occupancy by three or more households each of which has separate living quarters.
- B. Boarding house. A building and accessories thereto principally used, designed, or adapted to provide living accommodations for not more than six occupants and having common cooking and dining facilities.
- C. Condominium. An apartment building or townhouse containing three or more dwelling units being under or intended for separate ownership.
- D. Duplex dwelling. A building and accessories thereto principally used, designed, or adapted for use by two households, the living quarters of each of which are completely separate.
- E. Mobile home or trailer. A vehicular, portable structure built on a chassis, designed for year-round or temporary occupancy and designed to have no foundation other than wheels, jacks, or skirtings, and which is capable of being moved, towed, or transported by another vehicle.
- F. Prefabricated dwelling. A single detached dwelling constructed primarily offsite, designed to be transported on a flatbed truck or trailer, installed on a permanently enclosed concrete or masonry foundation, with sewer and water connections designed for permanent connection to municipal or onsite systems and permanently connected to such systems. Such structures are distinguished from mobile homes as described elsewhere in these standards when they have a minimum gross floor area of 600 square feet and having no horizontal exterior dimensions of less than 15 feet not including porches or carports. When such a structure meets the above stated requirements, it shall qualify as a single detached dwelling.
- G. Rooming house. A building and accessories thereto principally used, designed, or adapted to provide living accommodations for not more than six occupants and without owner-provided cooking and dining facilities.
- H. Single attached dwelling. Two separate dwelling units principally used, designed, or adapted for use by two separate households that are attached to each other by an exterior side wall.

- I. Single detached dwelling. A building and accessories thereto principally used, designed, or adapted for use by a single household.
- J. Townhouse. A residential structure containing three or more single nondetached dwelling units each separated by a common vertical wall.

EASEMENT LAND: Those portions of the transferred land that are designated for public use recreational purposes pursuant to Contract No. TV-60000A.

EQUIVALENT CONTINUOUS SOUND LEVELS (L_{eq}): The calculated level of a steady sound which, during a stated time period and at a stated location, has the same A-weighted sound energy as the measured time-varying sound.

EXECUTIVE DIRECTOR: The duly appointed director of Agency or Agency's authorized representative.

EXECUTIVE ORDER NO. 11988: Presidential Executive Order entitled "Floodplain Management" and promulgated May 24, 1977.

EXECUTIVE ORDER NO. 11990: Presidential Executive Order entitled "Protection of Wetlands" and promulgated May 24, 1977.

FAIR MARKET VALUE: The price that unimproved land would bring when offered for sale by one who wants to sell but is not forced to sell and sought by one who would like to buy but is not required to buy, with the seller being allowed a reasonable time to find a purchaser.

FAMILY: One or more persons related by blood, marriage, or adoption, or a group of not to exceed five persons not all related by blood, marriage, or adoption, occupying the premises and living as a single housekeeping unit not operated on a for-profit basis, as distinguished from a group occupying a boarding or lodging house or similar dwelling for group use. A family shall not be deemed to include domestic servants employed by said family.

FLOOD: A temporary rise in water levels or an accumulation of water runoff, resulting in inundation of areas not ordinarily covered by water.

FLOOD, 100-YEAR: A flood having a 1 in 100 (1%) chance of being equaled or exceeded in any one-year period.

FLOOD, REGIONAL: A flood comparable to the largest floods known to have occurred on streams of similar physical characteristics in the same general geographical region. Ordinarily, the region considered is within a radius of 100 miles or less. Extraordinarily large and rare floods are not included in this determination.

FLOOD FRINGE AREA: The area within the floodplain which is outside of the floodway.

FLOODWAY: The natural channel and the portion of the adjacent floodplain along the channel that must be retained solely for the passage of floodwaters to prevent an undue increase in flood heights upstream.

FLOOR AREA: The sum of the gross floor area for each of the several stories under roof, measured from the exterior limits or faces of a building or structure.

FORESTRY USE: Land uses devoted to the extraction of forestry products, such as timber or timber products, but excluding any activity involving the rearing, trapping, or slaughter of animals.

FRONTAGE: All the property on one side of a street between two intersecting streets (crossing or terminating) measured along the line of the street, or if the street is dead ended, then all the property abutting on one side between an intersecting street and the dead end of the street.

GASOLINE SERVICE STATION: Any area of land, including structures thereon, that is utilized for the retail sale of gasoline, oil (but no butane or propane fuels), or automobile accessories, or incidental services including facilities for lubricating, hand car washing and cleaning, or otherwise servicing automobiles, but not including painting or major repair.

GRADE, FINISHED: The completed surfaces of lawns, walks, and roads brought to grades as shown on plans or designs.

GROUNDBORNE VIBRATIONS: A cyclic movement of the earth due to energy propagation.

HEIGHT OF BUILDING OR STRUCTURE: The vertical distance from the average ground elevation or finished grade at the building line, whichever is highest, to the highest point of the building or structure.

HOME OCCUPATION: See section 4.040.

HOSPITAL: See MEDICAL FACILITIES.

IMPACT NOISE: Noise of short duration or rapidly changing sound which causes fluctuation of the sound level meter needle in excess of plus or minus two decibels and is therefore incapable of being accurately measured on a sound level meter.

INDUSTRY: All manufacturing, storage, warehousing, ports, and shipping buildings and facilities, and other related activities which may serve to directly encourage the creation of jobs in the project area.

INDUSTRIAL DEVELOPMENT DISTRICT: Transferred land as shown on Attachment A to Contract No. TV-60000A designated for industrial development activities in accordance with these development standards.

INNOVATIVE ONSITE WASTEWATER SYSTEMS: Any subsurface wastewater disposal system which is an alternative to conventional rectangular trench, gravity-fed distribution design.

INTERIM USE DISTRICT: All undeveloped transferred land to be managed in accordance with these development standards.

JUNK YARD OR SALVAGE YARD: A lot, land, or structure, or part thereof, used for the collection, storage, processing, or sale of wastepaper, rags, scrap metal, or discarded material; or for the collection, dismantlement, storage, and salvage of machinery or vehicles not in running condition, or for the sale of parts thereof.

LAND-DISTURBING ACTIVITY: Any land-disturbing activity including cutting, filling, borrowing, stockpiling, or other activity where material or ground cover is removed or altered.

LIQUID WASTE: All liquid wastes which result from industrial processes and manufacturing operations which may result in the pollution of any surface or ground waters, including, but not limited to, industrial and sanitary sewage and ground, surface, storm, or other water as may be present.

LIVERY OR BOARDING STABLE: Any parcel of land which is utilized to board 10 or more horses which are owned by persons not residing on the premises.

LIVESTOCK: Domestic animals of types customarily raised or kept on farms.

LIVESTOCK FEEDING YARDS: An enclosure designed or used for holding livestock for purpose of sale or transfer by auction, consignment, or other means.

LOADING SPACE: An area 12 feet by 40 feet with a 14-foot high clearance providing for the standing, loading, or unloading of a truck or other vehicle.

LODGES AND RESORTS: Those dwellings and structures whose primary purpose is to provide temporary lodging and short-term recreational use for persons whose principal residence is elsewhere.

LOT: A piece, plot, or parcel of land in one ownership, which may include one or more lots of record, occupied or to be occupied by one principal building and its accessory buildings, including the open spaces required under these standards.

LOT, AREA: The total surface land area included within lot lines.

LOT, CORNER: A lot of which at least two adjoining sides abut their full lengths on a street, provided that the interior angle at the intersection of two such sides is less than 135 degrees.

LOT, DEPTH: The average distance from the street line of the lot to its rear line, measured in the general direction of the side lines of the lot.

LOT, FRONTAGE: That dimension of a lot or portion of a lot abutting on a street, excluding the side dimension of a corner lot.

LOT, INTERIOR: A lot other than a corner lot.

LOT, LINE: The boundary dividing a given lot from the street, an alley, or adjacent lots.

LOT, WIDTH: The width of a lot at the building setback line measured at right angles to its depth.

MARINA: A commercial facility for the docking and servicing of boats and which may include restaurants, shops, and other recreational facilities.

MEDICAL FACILITIES: Such facilities shall include:

- A. Convalescent, rest, or nursing home: A health facility where persons are housed and furnished with meals and continuing nursing care for compensation.
- B. Dental clinic or medical clinic: A facility for the examination and treatment of ill and afflicted human outpatients; provided, however, that patients are not kept overnight except under emergency conditions.
- C. Hospital: An institution providing health services primarily for human inpatient medical or psychiatric care and including related facilities such as laboratories, outpatient facilities, emergency medical services, and staff offices which are an integral part of the facility.
- D. Public health center: A facility utilized by a health unit for the provision of public health services.

MINIMUM FLOOR ELEVATION: The lowest elevation permissible for the construction, erection, or other placement of any floor, including a basement floor.

MINIMUM UPSET PRICE: The appraised fair market value of a tract of property established for purposes of an auction sale or other

transfer to be conducted under the terms of Contract No. TV-60000A, an amount below which will not be accepted for the sale or transfer of this property.

NIGHT AVERAGE SOUND LEVELS (L_n): The L_{eq} for the nine-hour time period from 10 p.m. to 7 a.m.

NONCONFORMING USE: Any building, structure, or use of land which does not conform to these development standards.

NOXIOUS MATTER: Material in gaseous, liquid, or solid form which is capable of causing injury to living organisms, chemical reactions, or detrimental effects upon the social, economic, or psychological well-being of individuals.

ODOROUS MATTER: Any material, gas, liquid, or solid that produces an objectionable response in the normal human nose.

OPEN SPACE: An area on the same lot with a main building which is open, unoccupied, and unobstructed by structures from the ground to the sky except as otherwise provided in these standards.

OWNER: The person in whom or which is vested the ownership, dominion, or title of property so far as the law permits.

PARKING LOT: An offstreet facility including parking spaces with adequate provisions for drives and aisles for maneuvering and obtaining access and for entrance and exit.

PARKING SPACE: An offstreet space available for parking one motor vehicle and having an area of not less than 200 square feet exclusive of passageways and driveways giving access thereto and having access to a street or alley.

PERCENTILE EXCEEDED LEVELS (L_x): The fast A-weighted sound level equaled or exceeded by a fluctuating sound level X percent of the stated time period. For example, L_{10} is the level which would exceed 10 percent of the time period.

PERSON: "Person" includes a firm, partnership, corporation, joint venture, or Federal, State, or local agency, other than TVA, as well as an individual.

PLANNED UNIT DEVELOPMENT: A single planned area of land which has both individual building sites and common property such as a park, and is designed and organized to be capable of satisfactory use and operation as a separate entity without necessarily having the participation of other building sites or other common property. The ownership of the common property may be either public or private.

PLANS AND SPECIFICATIONS: Any site plan, design drawings, specifications, grading, access, landscaping plans and designs,

or any other document, drawing, or literature which illustrates, describes, or otherwise interprets the plan of development proposed for any structure, site, or subdivision designated for development.

PLAT: A map or representation on paper of a piece of land subdivided into lots with streets, alleys, etc., usually drawn to scale.

PORT: A facility for the on-and-off loading of commercial cargo from barges, railcars, or trucks, located only in industrial districts.

PRINCIPAL USE: The specific primary purpose for which land or a building is used.

PRIVATE WASTEWATER TREATMENT: Individual subsurface sewerage disposal systems, package treatment plants, or individual aeration systems employed for the collection, treatment, and/or disposal of wastewater, as approved in accordance with applicable laws or regulations.

PROFESSIONAL OFFICE: The office of a physician, dentist, attorney, architect, engineer, planner, accountant, or one otherwise practicing a learned profession.

PUBLIC ROAD: A road or highway over which the public has the right of passage.

PUBLIC USE: Public parks, schools, and administrative, cultural, and service buildings, not including public land or buildings, devoted solely to storage and maintenance of equipment and materials.

PUBLIC USE RECREATION AREAS: Those tracts of the transferred land as shown on Attachment A to Contract No. TV-60000A which are designated for public use recreation activities in accordance with these development standards.

PUBLIC WASTEWATER SYSTEM: A municipal, community, or utility district sewerage treatment and disposal system of a type approved by the State Department of Public Health and the Public Service Commission.

PUBLIC WATER: A municipal, community, or utility district water treatment and distribution system of a type approved by the State Department of Public Health and the Public Service Commission.

RESIDENTIAL DEVELOPMENT: The comprehensive and orderly development of land designated for such purposes, either by subdivision or planned unit development.

RESIDENTIAL DISTRICT: Transferred land as shown on Attachment A to Contract No. TV-60000A which is designated for residential development activities in accordance with these standards.

RIDING STABLE: Land which is available for individuals to ride or train horses and on which 10 or more horses are boarded for these purposes.

RIGHT OF WAY: The right of passage imposed by law or convention through which one has the right to pass or drive through the estate of another.

ROADSIDE STAND: A structure used or intended to be used solely by the owner or tenants for the sale of only seasonal farm products of the farm on which it is located.

ROADWAY: The actual road surface, including necessary road shoulders and drainage facilities, ditches, curbs, and gutters, which is used to transport motor vehicles.

SANITARY LANDFILL: An area or site utilized by a public or private entity for disposal of solid waste or refuse in a manner which meets the regulations imposed upon the operation and maintenance of sanitary landfill sites by the State Department of Public Health.

SHELTER, FALLOUT: A structure or portion of a structure intended to provide protection to human life during periods of danger from nuclear fallout, air raids, storms, or other emergencies.

SHORELINE ACRE: A tract of land of which no less than 100 linear feet and no more than 200 linear feet must abut the 820-foot boundary contour.

SIGN OR OTHER ADVERTISING DEVICE: Any structure or part thereof or device attached thereto or represented thereon which shall display or include any letter, words, model, banner, flag, pennant, insignia, or any representation used as, or which is in the nature of, an announcement, direction, or advertisement. The word "sign" does not include the flag, pennant, or insignia of any nation, State, city, or other political unit.

SIGN, OFF-PREMISE: A sign relating to a product, service, or establishment that is not on the premises on which the sign is located.

SIGN, ON-PREMISE: A sign relating to a product, service, or establishment that is on the premises on which the sign is located.

SITE: Any tract, lot, or parcel of land or combination of tracts, lots, or parcels of land which is in one ownership or is

continuous and in diverse ownership where grading, construction, or development is to be performed as part of a unit, subdivision, or project.

SITE DEVELOPMENT ACTIVITIES: Activities conducted by Agency on development land intended to encourage the sale or other transfer of this property to a third party.

SOLID WASTE: All solid wastes which result from industrial processes and manufacturing operations, including, but not limited to, garbage, refuse, rubbish, trash, scrap materials, off-test and rejected solid materials, by-products, spent catalysts, waste sludges, rubble, and other such solid waste materials resulting from operations and activities taking place on a lot.

SPECIFICATIONS: See PLANS AND SPECIFICATIONS

STORY: That portion of a building included between the upper surface of any floor and the upper surface of the floor next above or any portion of a building between the topmost floor and the roof which is used for human occupancy in which the floor area with 8 feet or more head clearance equals 50 percent or more of floor area of the next story below. Provided it is not used as a dwelling unit, a top floor in which the floor area with 8 feet or more of head clearance equals less than 50 percent of the floor area of the story next below shall be a "half-story." A basement shall be considered as a story if more than half of its height is above the average ground level from which the "height of a building" is measured or if it is used for commercial purposes.

STREET: A public road, highway, or thoroughfare which constitutes, or is designed to constitute, the main access to more than one lot and which has been legally dedicated and accepted for public use.

STRUCTURE: Any combination of materials, including buildings, constructed or erected, the use of which requires location on the ground or attachment to anything having location on the ground and including, among other things, signs, billboards, and fences. Structure shall also mean any fill, diversion dam, or other manmade thing or device which affects or alters the natural flow of surface waters upon or across any natural or artificial stream, wash, or drainage channel.

STRUCTURE PROFILE: The contour established by TVA along the Tennessee River and tributary reservoirs which marks the elevations above which structures are permitted. In no instance are buildings for human habitation or any other form of development subject to significant damage permitted below this elevation. The profile is developed to avoid increasing the flood damage potential in areas affected by reservoir operations. Water use

facilities such as wharves and piers are necessarily built at lower elevations, subject to prior approval by TVA and in most instances by the United States Army Corps of Engineers.

SUBDIVISION: The division of a tract or parcel of land into two or more lots, plots, sites, or other division of land for the purpose of sale or building development, whether immediate or future, including the resubdivision of such tract or parcel.

SWIMMING POOLS: An outdoor swimming pool shall be any pool or open tank not located within a completely enclosed building and containing or normally capable of containing water to a depth of any point greater than one and one-half feet.

TELLICO PARKWAY: A limited access, public use road, the portion of which to be conveyed to Agency under Contract No. TV-60000A is approximately 7.9 miles in length, beginning at Station 11+65, as shown on TVA drawing 1101H201 and ending at Station 431+00, as shown on TVA drawing 1101H215.

TOXIC MATERIALS: Materials (gaseous, liquid, solid, particulate) which are capable of causing injury to living organisms by chemical reaction even when present in relatively small amounts.

TRANSFERRED LAND: All land acquired by TVA in the name of the United States for the Tellico project lying above the 820 msl contour and designated as either development or easement land except for project land adjacent to Watts Bar Reservoir where the structure profile shall be 750 msl rather than 820 msl.

TRAVEL TRAILER: A vehicular, portable structure designed as a temporary dwelling for travel, recreation, and vacation uses.

TRAVEL TRAILER PARK: A plot of land designed and equipped to accommodate travel trailers for short periods of time.

UNIMPROVED LAND VALUE: The fair market value of a tract of property established as though no onsite development activities had been conducted thereon by Agency, pursuant to Contract No. TV-60000A, but taking into account the enhancement in value to such property resulting from offsite improvement activities conducted by Agency or any third parties.

USE: The purpose under these standards for which land or a building or other structure is designed, arranged, or intended, or for which it is or may be occupied or maintained.

WATERCOURSE: Any natural or artificial stream, river, creek, channel, ditch, canal, conduit, culvert, drain, waterway, gully, ravine, street, roadway, or wash in which water flows in a definite direction or course, either continuously or intermittently, and which has a definite channel, bed, or banks subject to inundation by reason of overflow of surface water.

YARD: An open space on the same lot with a principal building, open, unoccupied, and unobstructed by buildings from the ground to the sky except as otherwise provided in this resolution, provided that accessory buildings may be located in a rear yard.

YARD, FRONT: The yard extending across the entire width of the lot between the nearest part of the principal building, including porches, and the front lot line.

YARD, REAR: The yard extending across the entire width of the lot between the nearest part of the principal building, including porches, and the rear lot line.

YARD, SIDE: The required space unoccupied, except as herein provided, measured between the side lot line and the nearest point of the principal building and between the front yard and the rear yard.

ARTICLE 6

ADMINISTRATION AND ENFORCEMENT

SECTION

6.010.	Administration of development standards
6.020.	Building permits
6.030.	Temporary use permits
6.040.	Certificate of occupancy
6.050.	Remedies
6.060.	Validity
6.070.	Interpretation
6.080.	Design review
6.090.	Covenants running with the land
6.100.	Hold harmless
6.110.	Construction of these standards
6.120.	Correction of violations

6.010. Administration of development standards. These development standards shall be administered by Agency in accordance with the provisions of sections 5.1 and 5.8 of Contract No. TV-60000A which provide that development, maintenance, management, and sale of the transferred land be in conformity with these standards, permitted land uses, and applicable environmental laws and regulations. Variances which are in derogation of these standards and all development proposals involving large-tract industrial development on tracts of more than 20 acres must be approved by TVA in writing prior to being made; provided, however, TVA shall be deemed to have approved such a variance or proposal if it does not respond to such a request, except for proposals for large tract development, within 15 days of the receipt of a certified letter from Agency to TVA's project administrator, with a carbon copy to TVA's General Manager, requesting such a variance or approval of such a proposal. For this purpose, a response that a proposed variance or proposal requires further discussion between Agency and TVA before going into effect as provided herein shall be considered sufficient. This provision shall not limit Agency's ability, consistent with its enabling legislation, applicable law, and Contract No. TV-60000A, to adopt additional standards not in any way inconsistent with or in derogation of the provisions of Contract No. TV-60000A or these standards.

6.020. Building permits. No person shall be permitted to commence any excavation, construction of a building, residence, or other structure on any transferred land until Agency has issued a Building Permit containing a statement that the plans, specifications, and intended use of such improvement conform in all respects with the provisions of these standards and have been approved as provided in section 5.8. Application for a Building Permit shall be made in writing to Agency on forms provided for that purpose. Agency shall not approve the plans or issue a Building Permit for any such improvement until the plans and specifications have been inspected in detail and are found to be in conformity with these standards. The application for the Building

Permit shall provide sufficient detailed information to permit Agency's Executive Director and the reviewing third party to determine whether the proposed improvement is in conformance with these standards. No Building Permit shall be issued in less than 10 days of the application being submitted to Agency unless otherwise approved by TVA. All such permits shall be in addition to any other permits required by applicable law or regulations.

6.030. Temporary use permits. Construction or development of any use of a temporary nature shall not be commenced until a permit, accompanied by a fee set by Agency, has been secured from Agency, as provided for in section 4.030. Application for a Temporary Use Permit shall be made in writing to Agency on forms provided for that purpose.

6.040. Certificate of occupancy. No land or building or other structure or part thereof shall be used until Agency shall have issued a Certificate of Occupancy stating that such land, structure, or part thereof is found to be in conformity with the provisions of these standards. Within three days after notification that a building or premises or part thereof is ready for occupancy or use, it shall be the duty of Agency to make a final inspection thereof and to issue a Certificate of Occupancy, if the building or premises or part thereof is found to conform with the provisions of these standards, or, if such certificate is refused, to state the refusal in writing with the cause for such refusal.

6.050. Remedies. In case any building or other structure is erected, constructed, altered, repaired, converted, or maintained, or any building, structure, or land is developed, improved, or used in violation of these standards, Agency or TVA may, in accordance with applicable law, take action to remedy any violation of these standards. In accordance with section 5.7 of Contract No. TV-60000A, all standards applicable to a proposed use shall be included or referenced in the deeds of conveyance as a covenant running with the land and shall remain in effect for a period not to exceed 50 years.

6.060. Validity. Should any section, clause, or provision of these standards be declared by a court of competent jurisdiction to be unconstitutional or invalid, this judgment shall not affect the validity of these standards as a whole or any other part than the part judged invalid.

6.070. Interpretation. Where the conditions imposed by a provision of these standards are less restrictive than comparable conditions imposed by any other provision of these standards or applicable law, the provisions which are more restrictive shall govern.

6.080. Design review. The parties hereby establish the Tellico Project Design Review Committee (herein called "Committee") for the purpose of maintaining sound architectural design, site planning, and environmental, energy, and structural design standards for development occurring on the transferred land consistent with the provisions of Contract No. TV-60000A and these standards. The Committee shall exercise the responsibilities provided for by these standards and shall

be comprised of the Executive Director of Agency, three additional representatives designated by Agency's Board of Directors from the three project-area counties, and one representative designated by TVA. An affirmative vote of a majority of the membership of the Committee shall be required in order to make any finding or determination pursuant to these standards.

6.090 Covenants running with the land. All subsequent conveyances of the transferred land by Agency shall, in accordance with section 5.7 of Contract No. TV-60000A, contain such covenants incorporating the provisions of these development standards for this purpose as the parties may determine to be appropriate, which covenants shall be real covenants and shall run with the land.

6.100. Hold harmless. Neither the Committee nor its successors or assigns shall be liable in damages to anyone submitting plans and specifications to them for approval nor to any owner or lessee of land affected by these standards by reason of mistake in judgment, negligence, or nonfeasance arising out of or in connection with the approval or disapproval or failure to approve any such plans and specifications. Persons who submit plans and specifications to the Committee for approval agree by submission of such plans, and every owner or lessee of any of said property by acquiring title or grant thereto agrees, that they shall not bring any action or suit against the Committee to recover any such damages.

6.110. Construction of these standards

A. Conflict or ambiguity between Agency and third parties

If any discrepancy, conflict, or ambiguity is found to exist between Agency and third parties with regard to any matter set forth in these standards, such ambiguity, conflict, or discrepancy shall, subject to the provisions of section 5.8 of Contract No. TV-60000A, be resolved and determined by Agency in its sole discretion. Agency shall have the right to interpret the provisions of the standards, and in the absence of an adjudication by a court of competent jurisdiction to the contrary, its construction or interpretation shall be final and binding as to all persons purchasing project land from Agency. Any conflict to enforce any of the provisions hereof shall be resolved in favor of the construction or interpretation of Agency. This section shall not be applicable to conflicts between Agency and TVA, which will be determined in accordance with Contract No. TV-60000A.

B. Rules and regulations

Agency, to the extent specifically provided herein, may adopt reasonable rules and regulations regarding the administration, interpretation, and enforcement of the provisions of these standards. In so adopting such rules and regulations and in making any finding, determination, ruling, or

order or in carrying out any directive contained herein relating to the issuance of permits, authorizations, approvals, rules, or regulations, Agency and the Committee shall take into consideration the best interests of the owners and lessees of the property.

6.120. Correction of violations

A. Inspection

Agency, TVA, Committee, and their respective agents, successors, and assigns may from time to time at any reasonable hour or hours enter and inspect any property subject to these standards to ascertain compliance therewith.

B. Abatement

If the owner or lessee of any premises in violation or breach of these development standards shall not have taken reasonable steps toward the removal or termination of same within 15 days after written notice thereof by Agency, Committee, or its respective agents, successors, and assigns, Agency through its agents and employees, shall have the right to enter upon the offending premises and summarily correct, abate, remove, and extinguish any structure, thing, or condition that may be or exist thereon contrary to the provisions herein, all at the sole cost and expense of said owner or lessee. Agency or any such agent or employee shall not thereby be deemed to have trespassed upon such lot and shall be subject to no liability to the owner or lessee of such lot for such entry, abatement, or removal.

C. Enforceability after waiver

Waiver of any of these standards for any development, as provided herein, shall not be deemed a waiver as to any other development, nor with respect to the development in question a waiver of any subsequent violation, nor shall the violation of any of these standards upon any development affect the applicability or enforceability of these standards with respect to any other development.

Appendix B

Important Correspondence



Tellico Reservoir Development Agency

59 Excellence Way
Yonore, Tennessee 37885-9641
(615) 673-8599 / (615) 884-6868
FAX: (615) 884-6869

October 2, 1991

11-1993
Mr. Billy J. Bond
Vice President
River Basin Operations
TENNESSEE VALLEY AUTHORITY
Old City Hall Complex
601 West Summit Hill Drive
Knoxville, Tennessee 37902

Dear Mr. Bond:

The TRDA Board of Directors on August 21, 1991, after careful consideration and discussion, voted to pursue the feasibility of developing approximately 1,000 acres of land for planned residential use. The property is currently designated for industrial use (attachment). The Industrial Committee of TRDA recommended that the TRDA Board take this action. The Board further directed me as Executive Director to request proposals from residential developers as may be appropriate. Article V, Paragraph 5.1 of Contract No. 60000A provides that TVA agree with any change in land use designation.

Please consider this letter a request to TVA for concurrence with the TRDA Board's decision to pursue residential development, if a suitable proposal is received and determined to be acceptable.

The basis for the Board's decision was a combination of factors. I have summarized the considerations below:

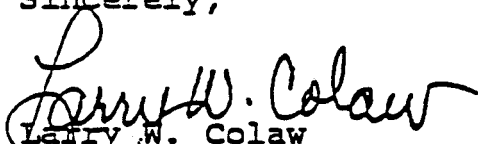
TRDA believes the best potential use for developing the property is to market it for residential use. This opinion has been reinforced several times during the many years of land use planning for Tellico. TVA and the Boeing Company agreed that this particular tract was best suited for residential development. In the market place, we have been approached by major residential developers who indicate they are interested in the tract. It has several attributes for residential use. For example, the shoreline is approximately 12 miles in length, creating some of the best water to land relationships on the lake. The variation of the shoreline creates an interesting environment around which to plan neighborhoods and associated waterfront recreational facilities. General aesthetics are excellent. The tract is strategically located for easy access to several neighboring small towns. Site terrain offers opportunities for exceptional scenic vistas in several directions. As a practical matter, cash received from the land would be a net deal for us, since TRDA would not have to invest significant funds to provide infrastructure to sell the tract.

Mr. Bond
October 2, 1991
Page Two

As industrial property, the tract has problems. Geology is questionable with numerous major sink holes present. Small scattered tracts with topography suitable for industry could be developed, but the cost of providing utilities, etc. to these sites would be prohibitively expensive because of noncongruence of the sites, presence of random sink holes, general terrain, and the linear nature of the tract. Infrastructure development costs govern the tracts' competitive marketability and in TRDA's opinion this marketability is greatly limited by area competition. There are numerous competitors for "light" manufacturing sites in the Tellico region with more convenient urban services. Suggested use as a "business park" without being combined with a "community" type development and associated services is unrealistic. We have tested the market for this type of development and found it unfavorable. Although not a significant factor, the tract is not convenient to rail service.

As we have discussed, TRDA desires to proceed expeditiously to market the property for residential development through a Request For Proposals invitation. We would appreciate a timely response to this request and would be pleased to meet with you should you desire to do so.

Sincerely,


Larry W. Colaw
Executive Director

LWC/jjb

4830



TENNESSEE WILDLIFE RESOURCES AGENCY

ELLINGTON AGRICULTURAL CENTER
P. O. BOX 40747
NASHVILLE, TENNESSEE 37204

PROJECT MANAGER
ADMINISTRATION

Jul - 2 2

July 2, 1993

Mr. William S. Ambrose, Project Leader
Tellico Reservoir Lands Planning
Reservoir Land Management
Tennessee Valley Authority
Norris, TN 37828

re: Tellico Reservoir Land Use Workshop, Bat Creek Peninsula
Residential Development, Vonore, TN

Dear Mr. Ambrose:

This letter responds to your announcement concerning the proposed change in land use designation of the Bat Creek Peninsula (Tellico Reservoir) from industrial to residential. The Tennessee Wildlife Resources Agency has long been concerned with the cumulative impacts of private shoreline development of Tennessee Valley Authority reservoirs and has expressed that concern through a variety of controversies and permit actions over the past twenty years. This concern is basis for our apprehensions associated with the subject proposal.

We have two general reasons for our problems regarding residential zoning at Bat Creek Peninsula. They are associated with the shoreline development that occurs on residential lakefront property.

First, the installation of seawalls, excavation of shallow waters for depth, and clearing of natural riparian vegetation all effect fish and wildlife negatively. Shallow littoral waters are a requirement for fish spawning and nursery fish. Excavation of these shallow waters and construction of retaining walls degrade the reproductive value of these waters, especially for species such as sunfish and black bass. The retaining wall also interrupts the valuable land/water interface which provides nutrient and food exchange between the two entities. Wetlands

The State of Tennessee

AN EQUAL OPPORTUNITY EMPLOYER

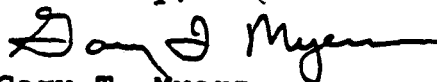
located in shallow embayments become unwanted eyesores and navigation impediments to adjacent landowners who seek to remove them - usually successfully in spite of regulatory processes. Riparian lands along streams and lake shores are the single most valuable wildlife habitat types. The clearing of natural woody vegetation by adjacent residential landowners and conversion of these riparian zones to manicured lawns destroys these valuable habitats - except for geese which thrive to the point of becoming a problem in this setting.

The second general problem with residential development of TVA lakes lies with the de facto privatization of lands which have been converted in ways described above as well as with facilities such as boat docks, launching ramps, lawn furniture, picnic tables, gardens, etc. The public, which is the rightful owner and user of the lake and its shoreline, in fact if not by law, becomes excluded from use of areas developed residential.

The TVA has maintained a policy over the years of not significantly restricting or objecting to private shoreline development. Assuming that TVA's position remains the same as it has in the past, this agency takes a dim view of the land use designation change proposal. We strongly urge TVA to consider the cumulative effects that rapid proliferation of shoreline development is having on fish and wildlife as well as public access before making this decision.

Thank you for considering our comments

Sincerely,



Gary T. Myers
Executive Director

GTM/bjs

cc: Mark Fagg
Bob Ripley
Dan Sherry



Tellico Reservoir Development Agency

59 Excellence Way
Vonore, Tennessee 37885-9641
(615) 673-8599 / (615) 884-6868
FAX: (615) 884-6869

July 20, 1993

Mr. Charles Buffington
Vice President
Land Management
TENNESSEE VALLEY AUTHORITY
Ridgeway Road
Norris, Tennessee 37828

RE: Response to Billy J. Bond's February 11, 1992 Letter

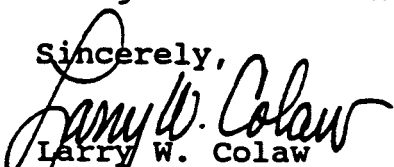
Dear Mr. Buffington:

After careful consideration and discussion, the Tellico Reservoir Development Agency (TRDA) Board of Directors voted on August 21, 1991, to pursue the feasibility of developing approximately 850 acres of TRDA land for planned residential use. The Board directed me, as Executive Director, to request proposals from residential developers as may be appropriate.

On Attachment A to Contract No. TV-60000A between TVA and TRDA, the property is currently designated for industrial use. Article V, Paragraph 5.1, of Contract No. TV-60000A, provides that TVA agree with any change in land use designation. TRDA hereby requests TVA's concurrence to change the land use designation to residential use.

TRDA has signed an agreement which provides for Tellico Lake Properties, Ltd. to construct a planned residential development to be known as "Tellico Bay". TRDA hopes to complete all phases of pre-construction work, reviews, and approvals and sell the property by April 1, 1994. Therefore, we will appreciate a prompt review and response to this request for concurrence by August 20. Please recognize confidential data in Financial Data Section.

Sincerely,


Larry W. Colaw
Executive Director
LWC/jjb

Enclosures: Resolution
Oct. 2, 1991 Letter Colaw to Bond
Feb. 12, 1992 Letter Bond to Colaw

cc: Howard Sain, TVA - 6 copies

Appendix C

Development Proposal for Royal Bay at Tellico Lake

DEVELOPMENT PROPOSAL
FOR

ROYAL BAY
AT TELlico LAKE

"RESIDENTIAL 1000"

DEVELOPERS:
TELlico COMMUNITIES, INC.
P.O. Box 4729
MARYVILLE, TENNESSEE 37802
(615) 681-8591

A PLANNED UNIT RESIDENTIAL AND RECREATIONAL COMMUNITY ON TELlico LAKE

February 15, 1993

Mr. Larry W. Colaw
Tellico Reservoir Development Agency
59 Excellence Way
Vonore, Tennessee 37885-9641

Dear Mr. Colaw:

In accordance with the bid request for "Residential 1000" we would like to submit the following revised development proposal on "Royal Bay" at Tellico Lake as a planned unit Residential and Recreational Community on Tellico Lake.

This development proposal is by Tellico Communities, Inc. The principals in this company possess a broad and specific experience background in development, and as a team will coordinate the development process on site.

The following proposal is being submitted as a comprehensive planned unit Residential and Recreational Community. Placing a strong emphasis on family recreation, this project has been designed as a facility to integrate land and water relationships with innovative design concepts in accordance with professional planning standards which will afford favorable recognition to the Tellico Lake area.

This development is designed to provide an opportunity for potential buyers from a broad spectrum of income levels to purchase a lot and/or home.

Included in the overall development plan is a 18 hole Championship Golf Course complete with a Club House, Swimming Pool, lighted Tennis Court, large Community Center with a Park and Playground located on a designated section of waterfront, along with other amenities as outlined in the proposal.

It is our goal to integrate the lake environment with the community aspects of a 18 hole championship golf course, along with other recreational facilities included in the overall development concept. Our development strategy is very conducive to the property's strategic location, giving consideration to the topography, and relationship to Tellico Lake.

The development strategy calls for 20% of the total project to be developed as open space amenities. The balance of the property will be divided into residential home sites, with affordable housing being given special attention.

The Royal Bay development will compliment the industrial development at Tellico by offering affordable housing to support the industrial work force. Our property owners associates will also require only minimal fees to support the private infrastructure and security of the development. Most of the other amenities of Royal Bay will be supported by user fees as outlined further in our proposal.

Should you have any questions or need additional information, please do not hesitate to call.

We are looking forward to working close with TRDA in order to make this development one in which the community and everyone involved can take pride.

Sincerely,

Tellico Communities, Inc.

By: Michael L. Ross, President

TABLE OF CONTENTS

Cover Letter.....	2
Identity of Proposer/Developer.....	5
Summary of Facilities.....	6
Estimated Development Cost.....	11
Proposed Management Concept.....	12
Experience in Similar Developments.....	13
Experience Profile on Principals.....	15
Financial Commitment Letter.....	18
Business References.....	19
Development Concept.....	20
Development Plan.....	21
Development Timetable.....	23
Site, Utility, and Ecology Plan.....	26
Anti-Speculation & Quality Assurance.....	27
Restriction Outline.....	28
Property Owner Association.....	29
Conditions.....	30

IDENTITY OF PROPOSER/DEVELOPER

Royal Bay is a project by Tellico Communities, Inc.

Michael L. Ross, President

Tellico Communities, Inc.

P.O. Box 4729

Maryville, Tn. 37802

(615) 681-8591

(fax) 681-8594

SUMMARY OF FACILITIES

The developers have taken considerable care to avoid a "gridiron" planning approach. Instead of attempting to maximize the number of residential lots, we have employed a good community planning and design practice. As a result, 20% of the entire development is devoted to community and recreational facilities.

As a planned development, Royal Bay will provide a unique high quality environment for residents complete with recreational facilities designed for family enjoyment by all age groups.

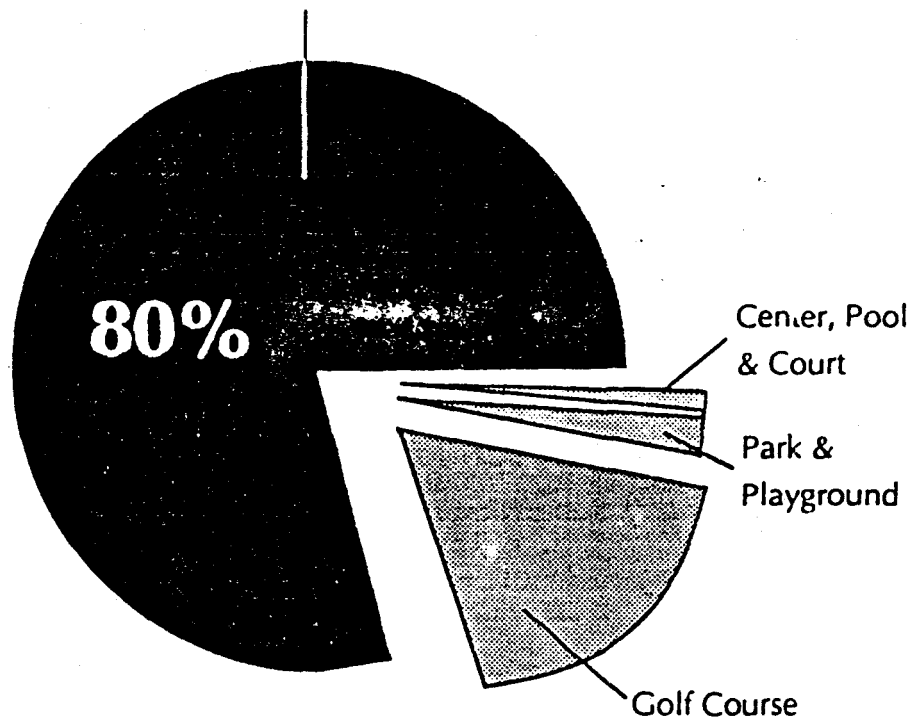
Residential Lots. - approximately 2000 residential lots have been designed into the development.

Golf Course. - The Golf Course will be championship 18 hole course, specially designed as to enhance the entire development. The overall plan makes it possible to play either 18 holes or 9 holes, both of which return to and leave from the Club House. The general topography and shape of the land will be taken into consideration in order to maximize the views and compatibility within the development and adjoining lands. Careful attention was given to the ecology of the property, and the family community as a whole.

ROYAL BAY
PLANNED RESIDENTIAL & RECREATIONAL
COMMUNITY

LOCATED ON TELlico LAKE

Residential Lots with access ways including sites for affordable housing.



LAND ALLOCATION

Club House. - The club house is designed as an amenity to the golf course including a Pro Shop and a restaurant, both of which will be operated by professionals in each field respectively.

Community Center. - The Community Center has been designed at the main entrance to the community. It will function as a gathering place and recreational building for family members of all ages within the development.

Swimming Pool & Tennis Court. - Located in close proximity to the waterfront park, the swimming pool will be strategically located with a scenic lake view. The Tennis Court will also be built to regulation standards and lighted for night play.

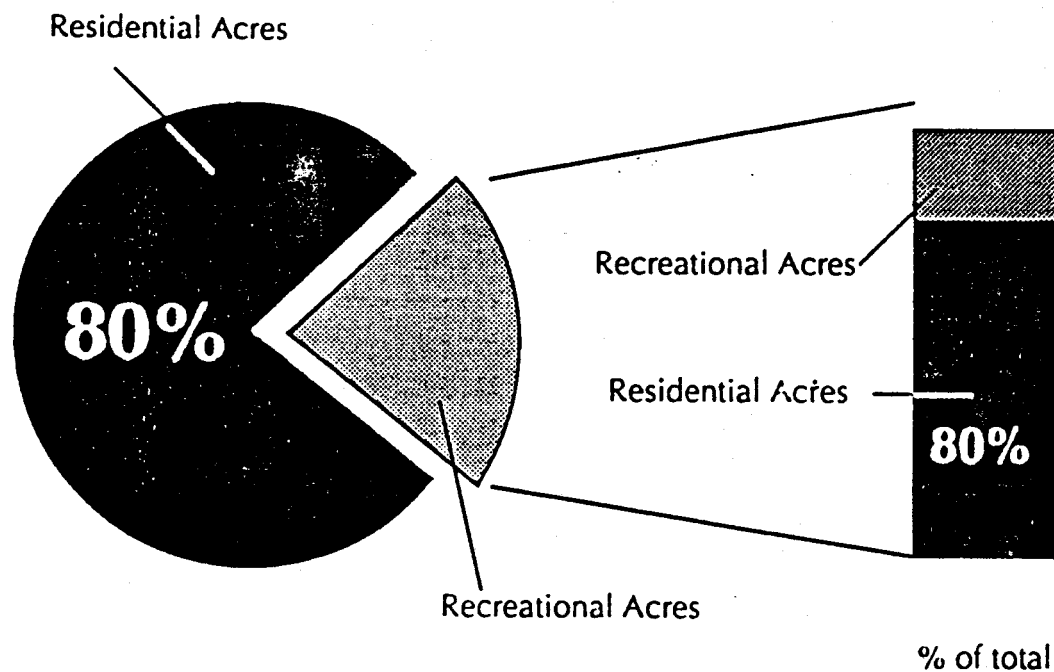
Waterfront Parks and Playground. - The parks and playground will contain approximately 20 acres of land located directly on the waterfront. In an attempt to create a family community, it was felt that a large park complete with picnic areas, lake recreational facilities, Swimming Pool, and Tennis Court would enhance the overall desirability of the entire development.

This development has been designed not only as a residential community, but as a planned residential community, complete with recreational facilities all incorporated within a family atmosphere of relaxation and fun.

ROYAL BAY

PLANNED RESIDENTIAL & RECREATIONAL COMMUNITY LOCATED ON TELlico LAKE

RESIDENTIAL ACRES



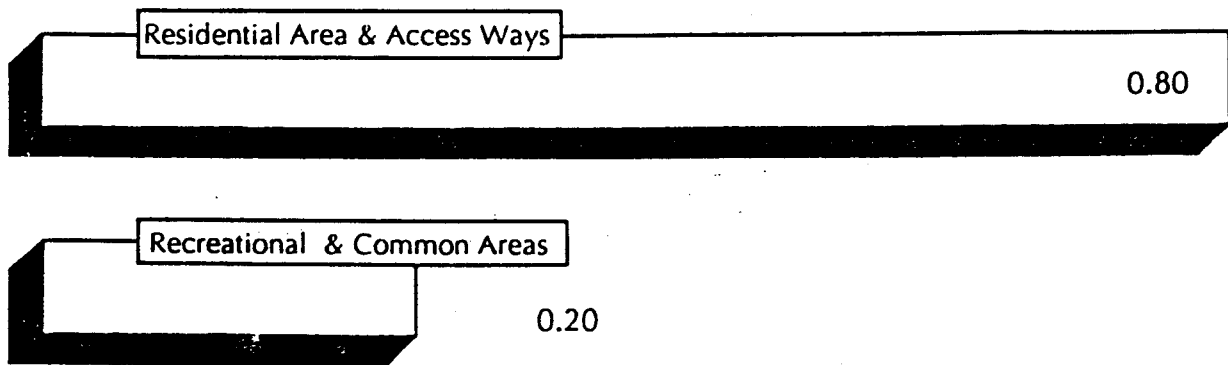
20% Devoted to
recreational areas

ROYAL BAY

PLANNED RESIDENTIAL & RECREATIONAL COMMUNITY

LAND USE PLAN

% of Total Development



Land Use as a Percent of the Total Development

TELLICO BAY ESTIMATED DEVELOPMENT COST

1,000 Acres

2,000 Lots

Land Acquisition

Purchase Price Paid \$ 8,500,000

Total Paid to TRDA for Land \$ 8,500,000

Direct Construction

Site Improvements

Roadway, Grading \$ 4,648,000

Utility - Water \$ 830,000

Utility - Sewer \$ 747,000

Underground Power \$ 581,000

Total Site Improvements \$ 6,806,000

Amenities

Golf Course \$ 1,200,000

Club House \$ 400,000

Community Center \$ 400,000

Swimming Pool & Tennis Court \$ 60,000

Waterfront Parks and Playground \$ 250,000

Total Amenities \$ 2,310,000

Total Hard Cost \$ 17,616,000

Soft Cost

Engineering \$ 840,000

Inspection Fees \$ 2,000

Legal Fees \$ 9,000

Office Overhead \$ 88,000

Contingency \$ 750,000

Total Soft Cost \$ 1,689,000

Total Development Cost \$19,305,000

ROYAL BAY / TELLICO LAKE

PROPOSED MANAGEMENT CONCEPT

A resume of qualifications for Michael L. Ross, with Tellico Communities, Inc., has been included on the following pages.

Tellico Communities, Inc. is represented by Michael L. Ross, of Blount County, TN., and the development will be called Royal Bay at Tellico Lake.

The above named individual, and/or company both currently reside and do business within the Knoxville MSA. As developers within the local community, we have a broad and specific experience background in development and an understanding of the local residential market. As a team they will personally oversee, manage, and coordinate the development process on site.

With development experience within the local market, the above are very familiar with quality contractors, eliminating the trial and error process, and have a sales, development, and management team in place that should shorten the development time along with improving quality.

EXPERIENCE IN SIMILAR DEVELOPMENTS

The proposers/developers have had considerable experience in real estate development. Mr. Michael L. Ross is currently in the process of developing ROYAL OAKS GOLF COMMUNITY in Blount County, which is very similar to the proposed Tellico project..

ROYAL OAKS GOLF COMMUNITY is a 630 acre planned residential and golf community. This development has all underground utilities and the master plan calls for 775 home sites and 500 Golf Villas along with Two Championship 18 hole Golf Courses, built to USGA specifications and designed with Bermuda Fairways and Bent Greens by D.J. DeVictor, and a 48,000 square foot Mini-Conference Center.

Royal Oaks has been designed as a private community with hostess greetings at the main gate. Homesites currently range from \$22,900 to \$49,900, and home construction is presently in the range of \$109,000.00 to \$390,000.00.

With the support of the City of Maryville, this development has been a tremendous success and is a landmark in the community with lot sales exceeding all expectations.

EXPERIENCE PROFILE

Michael L. Ross
P.O. Box 4729
Maryville, Tennessee 37802

Telephone:
(615) 681-8591

REAL ESTATE & DEVELOPMENT HISTORY

EARLY 1970 - Acquired 180 acres known as the Costner Farm in the Louisville area of Blount County, and sold the entire property in approximately six months.

Purchased and subdivided a 250 acre tract in Friendsville, completed sellout in 1975.

MID 1970. - Actively involved in a partnership that developed the Oaklawn Residential Area. This subdivision is along Grandview Drive in Maryville, and is a very attractive, up-scale, successful development.

Developed White Store Shopping Center in West Maryville.

Purchased an office building in the downtown area of Maryville, and completed a successful renovation, property sold in 1976.

LATE 1970. - Converted and renovated a 30,000 square foot four story building on Ellis Avenue in Maryville, into a deluxe professional office complex. This property was sold in 1980.

EARLY 1980 - Purchased a large tract of land along the Little River in Townsend, and subdivided it into tracts. This property was sold in 1980.

Purchased a 100 acre tract in Maryville, now known as Windridge

Subdivision, and carried through the concept and planning process before selling. This is considered one of the most successful residential development in Blount County.

- EARLY 1980 - Purchased 33 acres along Alcoa Highway and developed Airway Commercial Park. A large portion of this property has been sold and the balance is being held until the Pellissippi Parkway has been completed.
- MID 1980 - Oversaw and completed construction of a 40,000 square foot warehouse in the Blount Industrial Park.
- LATE 1980 - Purchased approximately 140 acres along Raulston Road in Blount County, and developed Raulston View and Remington Park Subdivisions. This property has all utilities available and this project has been totally sold out.

Currently in the process of developing a 630 acre planned residential and golf community with two 18 hole Championship Golf Courses, built to USGA specifications, located in Blount County, and known as Royal Oaks. This quality development has been received very favorably by City Officials and the general community.

BUSINESS REFERENCES

Michael L. Ross

Mr. Joe Bruce
Citizens Bank of Blount County
Broadway Street
Maryville, Tn. 37801
(615) 977-5900

Mr. Charles Sterling
Sterling Engineering, Inc.
P.O. Box 48
Maryville, Tn. 37801
(615) 984-3905

Mr. David Duggan
Nicholson & Garner Attorneys at Law
P.O. Box 5059
Maryville, Tn. 37802-5059
(615) 984-1460

Mr. D.J. DeVictor
DeVictor Langham, Inc.
45 West Crossville Rd.
Suite 502
Roswell, Georgia 30075
(404) 642-1255

DEVELOPMENT CONCEPT

The Royal Bay development will be professionally planned, designed and managed to a superior quality standard that will be in keeping with the Tellico Lake area. Careful consideration will be given to the topography and ecology of the development in order to integrate the community aspects of the development with the lake environment.

Royal Bay should offer affordable housing units in a maximum sales price range of \$80,000.00 including lot, to support manufacturing employees in the Tellico area. Royal Bay Community will be designed to support industrial and commercial growth in the area as well as the retired and empty nester market in an affordable way. Royal Bay will serve the moderate income market who desire to live in a lake and golf oriented community. This development plan should enjoy a very rapid sales rate.

Tellico Communities, Inc. fully expects to meet all of TRDA standards and offer the community an alternative development plan that will continue to compliment the growth and livability goals that we know TRDA has for the Tellico Lake area.

Tellico Communities, Inc. proposes to develop the residential 1000 property in an arrangement with TRDA whereby Tellico Communities, Inc. will pay to TRDA \$10,000.00 per acre for the property on an "As Sold" arrangement at the rate of \$10,000.00 per lot sale. Tellico Communities, Inc. will provide all funding for all improvements to the property as well as all funding for construction of a 18-hole championship golf course. Based on projected development and sell out rates Tellico Communities, Inc. should conclude the pay out to TRDA within eight (8) years.

DEVELOPMENT PLAN

- Phase 1. -
Spring '94 Start and completion of infra-structure associated with Residential lots (\$730,000), Swimming Pool & Tennis Courts (\$60,000), Community Center (\$400,000), initial Waterfront Park and Playground (\$125,000) Complete fall 1995.
- Phase 2. -
Spring '95 Start and completion of an 18 hole Championship Golf Course (\$1,200,000*) and Clubhouse (\$400,000) . This phase will take approximately 18 months to complete (late 1996)
* *company manpower and equipment*
- Phase 3.- Start and completion of the infra-structure associated with 200 Residential lots. This phase will develop approximately six (6) months after the completion of Phase Two (2). (Completion date, Spring, 1997 approximate)
- Phase 4. - Start and completion of the infra-structure associated with 200 Residential Lots. It is estimated that this phase will develop approximately 18 months after the completion of Phase Three (3) (Completion date, Fall, 1998 approximate)
- Phase 5. - Start and completion of the infra-structure associated with 200 Residential Lots. It is estimated that this phase will develop approximately 18 months after the completion of Phase Four (4). (Completion date, Summer, 2000 approximate)

- Phase 6. - Start and completion of the infra-structure associated with 200 Residential Lots. It is estimated that this phase will develop approximately 18 months after the completion of Phase Five (5). (Completion date, Spring, 2002 approximate)
- Phase 7. - Start and completion of the infra-structure associated with 200 Residential Lots. It is estimated that this phase will develop approximately eighteen months after the completion of Phase Six (6). (Completion date, Summer, 2003 approximate)
- Phase 8. - Start and completion of the infra-structure associated with 200 Residential Lots. It is estimated that this phase will develop approximately one year after the completion of Phase Seven (7). (Completion date, Fall, 2004 approximate)
- Phase 9. - Start and completion of the infra-structure associated with 200 Residential Lots. It is estimated that this phase will develop approximately one year after the completion of Phase Eight (8). (Completion date, late, 2005 approximate)
- Phase 10. - Start and completion of the infra-structure associated with 200 Residential Lots. It is estimated that this phase will develop approximately eighteen months after the completion of Phase Nine (9). (Completion date, Spring, 2007 approximate)
- Phase 11. - Start and completion of the infra-structure associated with the Balance of Residential Lots. This phase will develop approximately eighteen months after completion of Phase Ten (10). (Completion date, Summer, 2008 approximate)

*Each phase of residential lot development shall be 50% sold out prior to beginning construction of the next residential phase.

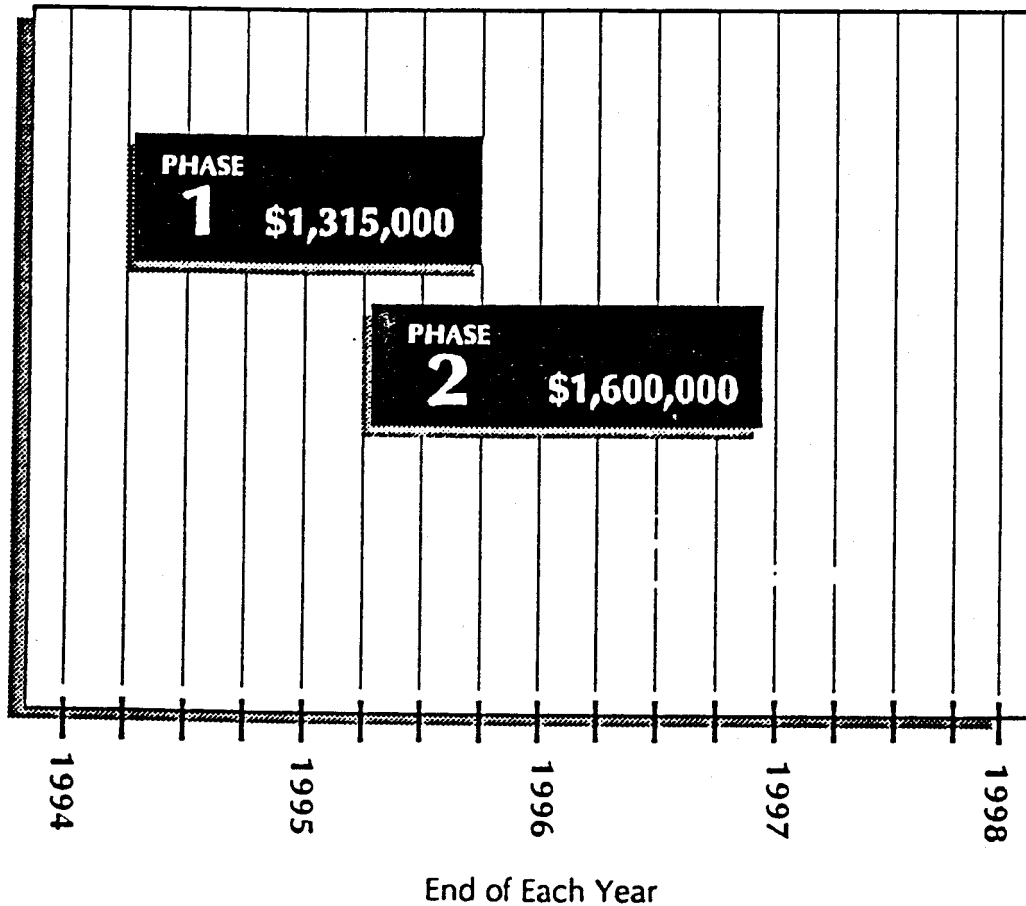
ESTIMATED DEVELOPMENT TIMETABLE

End of Each Year

1993	-	Approval of preliminary proposal
1993	-	Completion of final Master Plan
1994	-	Start Phase 1.
1995	-	Complete Phase 1 Swimming Pool, Tennis Courts, Community Center, Park & Playgrounds Residential Lots
1995	-	Start Phase 2.
1996	-	Complete Phase 2 Golf Course & Club House
1997	-	Complete Phase 3 200 Residential Lots
1998	-	Complete Phase 4 200 Residential Lots
2000	-	Complete Phase 5 200 Residential Lots
2002	-	Complete Phase 6 200 Residential Lots
2003	-	Complete Phase 7 200 Residential Lots
2004	-	Complete Phase 8 200 Residential Lots
2005	-	Complete Phase 9 200 Residential Lots
2007	-	Complete Phase 10 200 Residential Lots
2008	-	Complete Phase 11 Balance of Residential Lots

* See note - development plan

ROYAL BAY DEVELOPMENT TIMETABLE



Phase 1. - Start and completion of infra-structure associated with Residential lots (\$730,000),
Spring '94 Swimming Pool & Tennis Courts (\$60,000), Community Center (\$400,000), initial
Waterfront Park and Playground (\$125,000) Complete fall 1995.

Phase 2. - Start and completion of an 18 hole Championship Golf Course (\$1,200,000*) and
Spring '95 Clubhouse (\$400,000). This phase will take approximately 18 months to complete
(late 1996)

* company manpower and equipment

(See description of Development Timetable, page 23 for detail of additional phases)

PROJECTED DEVELOPMENT/PAYOUT SCHEDULE

Facts & Assumptions:

\$5,185,000 (1994 Property Value)

850 acres @ \$6,100 per acre

Sell 850 lots over 8 year period -
payout \$10,000 per lot

Total payout of \$8,500,000 over 8 year period

Sellout rate equalized @ 108 lots per year

\$1,080,000 paid per year payout

Interest rate of 13% (R) realized over projected sellout period.

Sellout rate equalized @ 85 lots per year

\$850,000 paid per year payout

Interest rate of 10% (R) realized over projected sellout period.

(R) Rounded to whole units

SITE PLAN

The preliminary site plan has been drawn by DeVictor Langham of Atlanta, Ga., and has been submitted as a separate part of this report.

UTILITIES PLAN

All utilities will be underground with sewer, water, electricity, gas, and telephone service provided to each and every lot within the development.

SEWER - Provided by TRDA.

WATER - Provided by Tellico area service system.

ELECTRICITY - Provided by Loudon Electric Service.

TELEPHONE SERVICE - Provided by TDS for Monroe County, and South Central Bell for Loudon County.

ECOLOGY PLAN

SITE ECOLOGY - Sterling Engineering will provide working drawings which will clearly demonstrate how the drainage and surface runoff will be handled. All drainage and surface runoff will be handled in such a manner as to protect the ecology of the property along with adjoining lands, with special consideration being given to Tellico Lake and the surrounding environment.

ANTI-SPECULATION

Being in the development business, it is our goal to create a community in which TRDA along with the developers can take pride in a joint accomplishment, and this property is purchased with no intent toward speculation.

QUALITY ASSURANCE

The developers, as demonstrated by past performance, place a great deal of pride in any development they are associated with, and will not sacrifice quality to increase profits. It should be noted that only 80% of the property will be designated as Residential lot sales, with the balance being Common Areas and/or Recreational Facilities.

The following is an tentative outline for building and site restrictions within the development which will assure continued development quality.

DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS

Prior to selling the first lot within the subdivision, the Declaration of Covenants, Conditions, and Restrictions for the development will be in place, which will address, but will not be limited to, the following provisions:

1. Preservation of Easements
2. Property Rights
3. Permissible Land Uses
4. Building type
5. Dwelling Quality and Size
6. Architectural Review Process
7. Outside Wiring
8. Building Locations
9. Screening
10. Uniformity
11. Signs
13. Nuisances
14. Landscaping
15. Animals
16. Recreational Areas
17. Common Areas
18. Enforcement

Along with miscellaneous provisions in order to maintain and preserve the quality of living standards which are envisioned for this project.

ROYAL BAY PROPERTY OWNERS ASSOCIATIONS

The Property Owners Association at Royal Bay will be responsible only for roadway, utility, common grounds, and security maintenance. Our projection for monthly fees, would be \$20.00 per month.

Any other amenities at Royal Bay such as the golf course, swimming, tennis etc. Will require a user fee of some type. The people who use these amenities pay for their operation and do not burden the entire POA who may not be using these additional facilities.

CONDITIONS

The term and conditions, as contained in this proposal, are subject to and conditioned upon the following:

1. Mutual agreement on the final development plan by TRDA and the developers.
2. Successful negotiating a purchase from T.V.A., for the land which lies between the existing high water level and the 820 contour, subject to Flowage Easements.
3. Subject to closing within parameters acceptable to all parties.
4. Mutual understanding that all timetables and development schedules, contained herein, are estimations which may or may not be subject to change.
5. Tellico Communities, Inc. proposes to retire the property purchase within two years after the projected development and sell out period has expired. If Tellico Communities, Inc. projections are met, TRDA will realize a 13%* (R) interest rate return.

** assumes an equalized sellout rate over an eight year period.*

MANAGEMENT TEAM

Michael L. Ross & Associates
Project Manager

Garry L. Godfrey & Associates
Financial Management and Accounting

Charles Sterling & Associates
On-Site Engineering

George Allen & Associates
Architectural Design

D. J. DeVactor & Associates
Golf Course Architect

Peter Langham & Associates
Land Planner

Appendix D

Summary of Results from the June 22, 1993

Public Workshop

Explanation -

Similar responses to each question were grouped and assigned weighted values based on the participants' expressed priority. Each time a response was given as a FIRST PRIORITY, it was given three points; SECOND PRIORITY, two points; and THIRD PRIORITY, one point. The points were summed to obtain an overall priority value. For example, if a response was given as a first priority four times, second priority five times, and third priority six times, the overall priority value would equal 28 ($4 \times 3 + 5 \times 2 + 6 \times 1 = 28$). Comparison of the priority values provides a ranking of the opinions and concerns as expressed by the workshop participants, as well as providing a measure of relative importance among the various responses.

TELLICO RESERVOIR
BAT CREEK PENINSULA PUBLIC WORKSHOP
VONORE, TENNESSEE
JUNE 22, 1993

QUESTION NO. 1

What do you like most about the Bat Creek Peninsula development proposal?

CATEGORY	RESPONSES			PRIORITY VALUE
	Priority 1	Priority 2	Priority 3	
1. Additional tax revenue for Loudon/Monroe Counties	15	5	4	59
2. Less environmental impact than with industry	5	5	1	26
3. Prefer residential to industry	5	2	1	20
4. Do not like anything about the proposal	5	1	-	17
5. Puts the land to productive use	3	1	2	13
6. Enhances economic development of the region	2	3	1	13
7. The land is not needed for industry	2	2	1	11
8. Will create needed construction and service jobs for the area	1	4	-	11
9. Promotes recreational use of the lake	3	-	1	10
10. Residential development would occur sooner than industrial	3	-	-	9
11. A "planned" development as opposed to piece-meal	2	1	1	9
12. Less impact on local infrastructure than with industry	2	-	1	7

QUESTION NO. 1 (continued)

What do you like most about the Bat Creek Peninsula development proposal?

CATEGORY	RESPONSES			PRIORITY VALUE
	Priority 1	Priority 2	Priority 3	
13. Land not suitable for industrial use	-	3	-	6
14. Enhances potential for commercial/retail development	-	2	1	5
15. Increased political impact with increase in population	-	1	1	3
16. Improved roads and utilities for Tellico area	-	-	-	3
17. Healthy competition for existing developers	-	1	-	2
18. Enhanced value of existing residential areas			1	1
19. In line with current TVA agenda (from a public policy viewpoint)			1	1

QUESTION NO. 2

What are your primary concerns about the Bat Creek Peninsula development proposal?

CATEGORY	RESPONSES			PRIORITY VALUE
	Priority 1	Priority 2	Priority 3	
1. Impact on Tellico Parkway-- already poorly maintained	19	4	3	68
2. Counties cannot fund infrastructure without tax increase. Developer must provide	15	7	7	66
3. Ability of existing infrastructure to support additional development (police, fire, schools, electricity, water, sewer, roads, etc.)	9	5	6	43
4. Peninsula should be for public use (park, wildlife management, etc.) or remain undeveloped	7	6	2	35
5. Developer's management capability. Ability to carry out master plan	8	3	3	33
6. Impact on public recreation in Bat Creek Peninsula and along shoreline (fishing, boating, skiing, etc.)	6	5	3	31
7. Impact of shoreline develop- ment and additional boat traffic on wildlife, water- fowl, refuge, water quality, aesthetics, water safety, bank erosion	6	3	6	30
8. Developer's financial ability to purchase the land outright	4	4	3	23
9. Impact on existing and/or planned residential: Tellico Village, Corntassel/Fourmile Creek, etc. (property values, resale market, tax revenues	1	9	1	22

QUESTION NO. 2 (continued)

What are your primary concerns about the Bat Creek Peninsula development proposal?

CATEGORY	RESPONSES			PRIORITY VALUE
	Priority 1	Priority 2	Priority 3	
10. Lack of data to support the allocation change: feasibility, marketability, etc.	2	4	2	16
11. Require high development standards for infrastructure, residential and shoreline development	2	2	5	15
12. Impact of sewage treatment on water quality	1	1	3	9
13. No opportunity for public review of proposal	1	1	3	9
14. Compatibility with Tellico Village: quality and type of development - no time-share condos, etc.	1	1	-	6
15. TRDA impartiality--not in partnership with developer	1	-	3	6
16. More environmental impact than industrial development	-	1	3	5
17. Site suitability: sinkholes	1	-	1	4
18. Impact of golf course development on loss of residential property taxes	1	-	-	3
19. Increase in population likely to increase crime rate	-	1	-	2
20. Industry will provide more economic benefits	-	-	1	1
21. Increased competition for limited jobs	-	-	1	1

QUESTION 2 - Other Comments

An regional impact study should be done to address impacts on property values and the surrounding areas, including Tellico Village.

TRDA needs a master plan for Tellico (commercial, recreational, residential, industrial, etc.) rather than piece-meal development.

Since the tract is in both Loudon and Monroe Counties, both will be involved in overseeing standards and approvals. Can foresee potential problems for the developer.

Developer will have to provide mitigation for negative impacts.

TRDA has not lived up to other commitments--spent TVA's Tellico Parkway fund on something else. Cannot trust TRDA to follow through.

TVA or state should take over (and maintain) Tellico Parkway.

Do the people in the surrounding communities want the proposed development? Have they recovered from the Tellico Project, i.e., what they sold their land for as opposed to what it is selling for now?

TE-09421

Appendix E

Responses to Comments on the Draft Environmental Assessment

Introduction

A public meeting was scheduled for January 18, 1994 to present the Draft Environmental Assessment for public review. That meeting was postponed until January 27, 1994, due to inclement weather. At that public meeting, nine attendees offered oral statements. A copy of the transcript of their remarks is provided below. Responses to those comments follow the transcript. One commenter requested a written response in the form of a personal letter.

The formal comment period extended through February 18, 1994. A total of 12 letters was received. Those letters are reproduced below. Responses follow the letters. Letters are presented in the order in which they were received.

ALLIED COURT REPORTING SERVICE

Jim Parks
2934 Rennoc Road
Knoxville, Tennessee 37918
Phone (615) 687-8981

Tennessee Valley Authority

Public Meeting

Tellico Reservoir Development Agency

Administrative Services Building

IN RE: BAT CREEK PENINSULA PROPOSED RESIDENTIAL DEVELOPMENT

TVA Representatives

Robert Curtis, Project Specialist, Reservoir Land Policy
Ron Davis, Manager, Environmental Compliance
Don Becker, TVA Land Management
Pat Becker, TVA Land Management

JANUARY 27, 1994

PUBLIC MEETING

The following is a transcript of the proceedings had in the public meeting regarding the Bat Creek Peninsula proposed residential development, the meeting being conducted on this the 27th day of January, 1994, at the TRDA Administrative Services Building of Tellico Village.

After the opening of the meeting and the summary of the meeting agenda, the following questions were asked and comments made:

MR. CURTIS: First of all, the new person that is over here, this is our official court reporter, so your comments will be made a part of our official record. I think I have here ten people who have indicated that they would like to make a statement tonight. I have them exactly as they signed up, first come, first served, in this order. If we allow three to four minutes, that will put us at about thirty to forty minutes and I think we are probably still well within our time period for this meeting.

My personal experience has been that generally most people have their say within three to four minutes. If you can kind of keep it to that, we would appreciate that. Now, that does not mean — If you make a statement tonight, that is not your only chance. We would invite you, if you have something else to say, to go home, think about it, compose a letter or give Ron a call, and I have put Ron's name, address and phone number up here, and go ahead and send us something if you would like to do that.

For your convenience, Brother Becker right here has the mobile phone. And maybe it is a little easier for you if you would — We would like for you to stand up so that we can see you. We need for you to state your full name and if we can't understand you, we will ask you to state it again, but state your full name and then just speak into the mike there so that he can get this all recorded. Okay?

MR. BECKER: You can speak from wherever you are.

MR. CURTIS: From wherever you are sitting. Just stand up, so we can see you. The first person is Mrs. Toni Shaw, Jackson Bend Road, Lenoir City, Tennessee.

MS. SHAW: My name is Toni Shaw. I am

MR. CURTIS: (Interposing) — A little closer, Don.

MS. SHAW: I am not saying that I favor the land being turned over to residential versus industrial. If I had my personal opinion — The land had an industry on it several years ago, and that industry was farming. If I had my druthers, I would rather see the land still as that.

However, I feel like the cart may be being placed in front of the horse a little. With no industry, there are no jobs. There is no money available to pay for these homes. And I spoke with Mr. Ross. He said that this will mainly be geared toward the seniors. And, so, there, you know, you are going to run into the tax dollars, as far as them getting breaks there.

I have another concern concerning Highway 72. All of the traffic will be exiting onto this little piece of a county road and then onto Highway 72, and as of this past Monday, I spoke with Don Rains, and I quote him as saying that "In comparison to other state roads in the State of Tennessee, that there was as much, if not more, repair work in all aspects done to Highway 72 during 1993 and he see that it would be necessary in the very near future for a complete resurfacing of that highway. This additional traffic caused from this residential area is going to be a major concern for myself and anyone else that travels it.

As far as the little county road, it is going to take a beating. I am sure that Mr. Ross will be, according to this book, responsible for — and guidelines with county — doing whatever needs to be done to it to get it able to handle all this traffic. But after each phase of that is completed and they are inspected by the county supervisors, after everything is said and done and the final inspection, then it becomes the county's responsibility. And this one little section of road, now, there is a lot of county roads out there. I have some that my son travels on to school and, you know, they are in worse repair. They need repair work done on them now.

I would like to ask a question to TRDA or whoever represents them. I would like to know how much of a percentage in dollars and cents will you be paying TVA for this land? And I guess that is just about it. I would like to know how much is under review for this. How much did they pay them for this last development project, probably the one that we are in the building here now?

MR. CURTIS: We will answer that. Not right now, but we will —

MS. SHAW: (Interposing) — I would like to request to have my comments directed personally back to myself in the form of a written letter, if I could. Thank you.

MR. CURTIS: All right. Thank you very much. Mr. George Miller, Greenback, Tennessee.

MR. MILLER: Thank you, Bob. As County Executive of Loudon County, I would like to just say that as County Executive and personally I feel that the land should be reclassified.

In the fifteen counties or sixteen counties of the East Tennessee Development District, there are, at latest tally, about 11,000 or 12,000 acres of industrial property available. Some 7,000 acres of that is in some stage of development now, meaning that it could be ready for industry in just a very short period of time.

And I think that is plenty of industrial property to serve the needs of Middle East Tennessee for several years. A good portion, a significant percentage of that property is in this three county area of Loudon, Blount and Monroe Counties, and we have plenty of property left, not only in TRDA, but in each of these counties, and already prepared industrial parks. And there seems to be a present demand for residential property and I think that it would be well used for each of the counties involved here for this land to be reclassified. Thank you.

MR. CURTIS: Thank you, Mr. Miller. The third speaker would be Mr. Frederick Joels of Loudon, Tennessee.

MR. JOELS: Thanks, Bob. My name is Frederick Joels. I am a property owner and resident in Tellico Village. First of all, I would like to say I have only got about a third of the way through, maybe a little more than that, of the draft plan, so I don't plan to comment on the plan itself.

What I would like to comment on tonight is the excellent work, I think, that the TVA and TRDA has done in developing this third approach, where there is consideration for water quality and for land and land use. I think that they have gone way beyond the norm, and I personally, as I say, being already a resident of the area, I think they should really be complimented on the work they have done.

The only closing remark I would like to say is I would like to see them extend that type of energy and effort to the master plan for Tellico Village so that we could have some of the same type of protection. Thank you.

MR. CURTIS: Thank you, Mr. Joels. I hope I pronounced that right.

MR. JOELS: Yes, that is excellent.

MR. CURTIS: The fourth speaker is, I am not sure whether it is a Mr. or Mrs., a D.R. Tracy of Loudon, Tennessee. Mr. Tracy.

MR. TRACY: Thank you. Unlike the previous speakers here that the development to residential as done in June survey and the comments made then, it certainly would benefit Loudon and Monroe Counties, I think the information supplied in the booklet and the proposer, draft environmental assessment statement, I don't think is correct. It doesn't refer to — Or it does refer to utilities, and utilities, mainly power, be supplied and would be provided and et cetera, and it hasn't happened in six years in Tellico Village and it hasn't had in any place else in the area that I know of.

We all face the same problem. I think the problem would be compounded in the next fourteen years that this development would go.

It does not refer to costs the developer would charge the homeowner for hookups, power, water, sewer, et cetera. And it refers to construction, labor, \$19,000.00. I don't know where they got their figure. I think it would probably come out, if you took an average, somewhere around \$25,000.00.

Basically, the information supplied here, \$10,000 lots, \$80,000.00 home, that would mean a 1320 square foot home at \$50.00. And I don't think you can build a house around here for \$50.00 a square foot. I think the information supplied in the booklet is incorrect, therefore, TVA should look at TRDA and the developer. Thank you.

MR. CURTIS: Thank you very much, Mr. Tracy. The next speaker is Mr. Allen Watson, Madisonville, Tennessee.

MR. WATSON: I have a prepared statement. I am County Executive of Monroe County and on most occasions when I am representing TRDA and Monroe County, I represent two hats, wear two hats. As County Executive of Monroe County, I think it is very unfortunate the families that have lost their homes and their property in the name of progress and been paid very little for what their land is worth. And many were and still are my friends, but the Tellico project has turned out well for TVA and the surrounding counties.

TRDA was created in 1982 with 11,000 acres to develop. After twelve years, they still have around 6,000 or 7,000 acres left plus the thousand acres we are talking about here now on Bat Creek Peninsula.

Presently, there are nine manufacturing firms that have created close to 2500 jobs with a payroll that exceeds over \$35 million annually, and most of those industries are now hiring at this time. Forty-three (43%) percent of the work force lives in Monroe County. There has been close to \$200 million invested in new homes and commercial recreational facilities, roads and utilities. They are served by two hundred employees with an annual payroll of \$3.5 million.

We have an 18,000 square foot training center, which we are in here tonight, the waste water treatment plant, a full-time fire and ambulance center here at TRDA. We are currently working to locate medical and child care facilities.

And let me remind you here tonight at this public meeting that this agency receives no local or state taxes. I think it is truly amazing what has been accomplished here in the last few years.

Now, speaking as County Executive of my county, presently there has been over \$300 million invested here in TRDA in Monroe County. We received over a million dollars in property tax in 1992. Our employment rate has dropped from 19.7% in 1982 to 6% in 1994. Our high school dropout rate has dropped from 44.3% down to 20% in 1993, mostly due to our industries here at TRDA and required high school diploma that is required for most of the jobs.

Change in the land use from industrial to residential would benefit Monroe County's property tax base. As many of you may already know, Monroe County has 65% of its land in the Cherokee National Forest, so we are very limited in property tax collections. The creation of Tellico Village has increased Loudon County's property tax collection around \$3 million.

I think by developing this 1,000 acres, it would encourage management and workers and industries of TRDA to buy property and build homes. The developer intends to build up to three hundred housing units in the price range of \$60,000.00 to \$80,000.00, including (Inaudible).

Monroe County is in the process of building a new comprehensive high school less than five miles away. I feel, under the TVA contract, it has enough safeguards to protect our wildlife habitats and also the National Historical Preservation Act or NHPA will apply sufficient to cover all archeological questions.

Highway 72 is designed for a four lane highway and the property is already there and bought. It is a limited access to make it safer to carry a heavier load. Hopefully, that road will be four lane in the near future.

At this point, I think it would be appropriate to make a statement about the Tellico Parkway. I think a possible verbal agreement or understanding has been made about the Parkway. This is not official in any way, but the Parkway has a good chance of becoming a state highway in 1994. I am very hopeful that will happen.

The new development will have a full-time fire department and ambulance center less than a mile away. And building 400 new homes in Monroe County, it will keep our property tax very low. We have the tenth lowest property tax rate in the State of Tennessee at \$2.00.

Our quality of life will improve. The new families will be an asset to our county. I think many of our retirees' talents are not being utilized at this time. They would truly be welcome in Monroe County if they seek to locate there. We are confident that TVA will change the land use from industrial to residential. All Monroe Countians and the surrounding counties will be entirely grateful. Thank you.

MR. CURTIS: Thank you, Mr. Watson. Could I request that you leave a copy of that statement with Mr. Becker or that you submit one in writing to us?

MR. WATSON: Yes.

MR. CURTIS: Thank you. The sixth speaker is Mr. Charles Sterling from Maryville, Tennessee.

MR. BECKER: That is a mistake, Bob.

MR. CURTIS: He did not intend to speak?

MR. STERLING: Right.

MR. CURTIS: All right. Then, the next would be B. Shane Burris from Madisonville.

MR. BURRIS: My name is Shane Burris, and I am in charge of industrial development here in Monroe County. I am very much in favor of this project being changed, the land, from industrial to residential. Like has been stated, we have plenty of land here for the development of industry. Also, as we bring prospects through to show our industrial parks, both the TRDA and Niles Ferry, the companies that are looking ask us about a good place for relocation of families and people to live. And with this available as a recruiting tool, on top of the fine project that it is, we can also create additional jobs for the people here in Monroe County and Loudon County, and it would just be great for the whole area. Thank you.

MR. CURTIS: Thank you, Mr. Burris. Next would be Richard J. Solenski, Loudon, Tennessee. I hope I pronounced your name correctly.

MR. SOLENSKI: I have not seen the draft environmental assessment report until tonight, but I too am impressed with the alternative number 3 that has been put forth to try and protect the resources that we have with the development. In the short time that I have had tonight, I have identified two items that, if they could be addressed, I think might be appropriate.

One is the Tellico Parkway, which I presume will be a major source of access. In the several years I have traveled that parkway, my experience is that it has been inadequately maintained in a proactive manner, and the approach to maintenance and resurfacing, the quality that was done this last time, I think, keeps

us behind the power curve relative to what is needed for a development such as this, much less what we have today, and would suggest that some sort of condition on upgrading the quality of the road initially and for some sort of a maintenance agreement or condition would be very appropriate as a condition to the development.

And, secondly, I have some concerns about the waste water treatment and effluent discharge for the project. It is not totally clear from the discussion I had in the other room as to what the exact plans for this development are, but I would certainly recommend against allowing a separate waste water treatment plan and outfall discharge, even though it would be permitted by the state, into the lake. Certainly, I would prefer to see use of existing or centralized treatment facilities with a minimum number of outfalls into the lake. And if every development such as this had its own outfall, I think we would have a proliferation of sources of potential pollution in the lake.

MR. CURTIS: Thank you very much. Next is Mr. David Whitehead from Vonore, Tennessee.

MR. WHITEHEAD: I think, from the Tennessee Wildlife Resources' point of view, anytime we have any type of development, residential development or industrial development along the lake, we are concerned with the water quality and shoreline development. I feel, with alternative 3 and the mitigation measures that TVA has put into that alternative, those type of water quality issues would be substantially reduced, but still I believe TVA would have to work very closely with the developer and the landowners to make sure that those mitigation measures were followed as strictly as they are laid out in the alternative.

MR. CURTIS: Okay. Thank you, Dave. I have the last speaker. If anyone wishes to speak, you can run down and raise your card. Marcus E. Kennedy from Vonore, Tennessee.

MR. Kennedy: I represent the town of Vonore, and we fully support the change of industry into residential. Most of you people don't live probably in this area, but if you were on 411 of the morning when the plants all come to work or in the afternoon when they are leaving, you can see the traffic flow that comes through there.

We have people calling City Hall all the time looking for places to live. There is not anything around Vonore. We feel like this would be a great asset to the town of Vonore to help take our traffic off 411, that a lot of these people would buy in this area since they work in the plants here, that they will buy in this subdivision, and it will take a lot of traffic off our highways. Thank you .

MR. CURTIS: Thank you, Mr. Kennedy.

Anyone else?

(None Indicated)

MR. CURTIS: Okay. Thank you very much.

Take this information home. Read it over. If you have really heard enough and you don't want to take this home, we do recycle this material, so you can leave it out on the desk. We prefer you leave it with us and we will recycle it rather than you just tossing it away. We hope though that you take it home and read it. We have had this meeting to try to engage you in some dialogue and some conversation about how you feel about the proposal, how you feel about some of the measures that TRDA, Mr. Ross and TVA have tried to come to here in this alternative 3.

We feel the proposal is different. We have tried this in a couple of other places in the Tennessee Valley. If this proves to be successful, as we think it will be, this, we hope, will be a model for the types of concept in waterfront planning and development that we would like to encourage in a much broader scale on all the TVA reservoirs. We hope that it perhaps becomes a model even outside of the Tennessee Valley. So, we are hopeful we are successful in doing that.

One of the things we need though is your comments and your feedback on it. Even if you don't think the property perhaps should be used for residential purposes, you can tell us that, but also maybe comment on that alternative 3, because we would really like to know how you feel about what we tried to incorporate there from the habitat and environmental protection standpoint. That would be of use to us, if you will do that.

You have three more weeks, as I said. Ron will talk to you on the phone. Ron or some of the folks there, if Ron is not there, there will be folks like Jim Williamson and others, Don Becker, who can talk to you. This is the phone number. Here is the address. And if you need any extra maps, I am not sure we have any more extra copies of the AEA. If you need them for your friends and neighbors, you can have what we have and take them with you if you would like to. And if we have any more in Norris, I am not sure whether we do or not —

UNIDENTIFIED SPEAKER: (Interposing) — No, we are out.

MR. CURTIS: Are we out?

UNIDENTIFIED SPEAKER: We are out.

MR. CURTIS: We can print some more. If we need to get them to you and we don't have enough and we get a request for more, we are going to print more and we will send them out. Okay? Thank you all — It is not such a good night to be out, but thank you all for taking the effort and time to do that. We appreciate it.

Thereupon, the meeting adjourned.

RESPONSES TO ORAL COMMENTS:

Toni Shaw

In accordance with Ms. Shaw's wishes, responses to her comments were provided in a letter to her. That letter is reproduced here for the record.

February 15, 1994

Ms. Toni J. Shaw
9087 Jackson Bend Road
Lenoir City, Tennessee 37771

Dear Toni:

As requested in your statement at the Bat Creek public meeting, I am responding to your comments by letter. A copy of this letter will be included in the Final Environmental Assessment.

You were concerned that for economic reasons there may not be a demand for residential development. Based on similar situations along Tellico Reservoir, there does appear to be a demand for homesites and homes. As you know, that market has been targeted towards retired persons and recreational homeowners. The Tellico West Industrial Park, where the meeting was held, is home to several active industries, and additional acreage is available for expansion. There appears to be no shortage of industrial sites in the area.

Potential effects on local highways, including State Route 72, the primary access to the proposed development, are mentioned in Section 4.2.1 of the Draft Environmental Assessment. Our conclusion is that additional residential traffic resulting from the development would not result in undue wear and tear on Route 72 or other local roads.

You asked how much Tellico Reservoir Development Agency (TRDA) would be paying TVA for the Bat Creek property. I am unable to provide a precise figure because several things affect that amount. According to Contract No. TV-60000A between TRDA and TVA, when TRDA sells land, TRDA will pay TVA 50 percent of the unimproved land value derived from that sale. (The Bat Creek peninsula is unimproved land.) The Contract goes on to say how that value is derived. A third-party appraiser is required, and the appraisal must be current (less than six months old).

Also, I understand that the potential developer will have several options on paying for the property, with the price depending on how quickly the developer is able to pay for the entire tract. I estimate that TRDA would pay TVA approximately \$3,000,000 to \$5,000,000 for the Bat Creek peninsula, depending on the exact acreage sold and the per acre price of the property sold. The payment procedures for TRDA are fixed by Contract No. TV-60000A. TVA is not a party to the negotiations between TRDA and prospective residential or industrial developers. These payment procedures also apply to Tellico West Industrial Park, which contains a total of 2421 acres, including the 1060 acres on the Bat Creek peninsula. Payments to TVA have been made as industries located in that area. Exact figures can be obtained by contacting Larry Colaw, Executive Director of TRDA, at (615) 673-8588 or Mrs. Pat Becker at the TVA Athens office at (615) 632-2088.

Please feel free to contact me again at (615) 632-1516 if you need additional information. I regret that I did not have the opportunity to meet you personally at the public meeting.

Sincerely,

James F. Williamson, Jr.
Environmental Scientist
Land Management

George Miller

TVA acknowledges the comments provided by Mr. Miller.

Frederick Joels

The comments and the compliment are noted and appreciated.

D. R. Tracy

A discussion of utilities and services is provided in Sections 3.8 and 4.8 of the Draft. Utilities providers are also identified in the Development Proposal (Appendix C of the Draft).

The commenter is accurate in his observation that the costs the developer would charge for utilities hookups are omitted. This information was not supplied to TVA by the prospective developer. The commenter questioned the \$19,000 annual salary for construction workers at Tellico Village cited in Section 4.3.2 of the Draft Environmental Assessment. That estimate was provided by Siegel and Leuthold in a 1992 study (referenced in the Draft), and TVA has no reason to doubt its validity. As stated previously, the purpose of the assessment was to determine the potential environmental effects from residential development, and not to evaluate the financial feasibility of the proposal put forth by the prospective developer.

(Mr. Tracy also provided written comments. Responses follow his letter.)

J. Allan Watson

Mr. Watson's statement is acknowledged for the record.

B. Shane Burris

Mr. Burris's comments are acknowledged for the record.

Richard J. Sawinski

Although the Tellico Parkway would undoubtedly be used by many of the residents of the proposed development, major access would be from Highway 72. A discussion of the potential effects to the local highway system is provided in Section 4.2.1 of the Draft Environmental Assessment.

As stated in Section 3.8.2 of the Draft, wastewater treatment would be provided by an existing TRDA facility which discharges at Little Tennessee River Mile 16.2. No new facilities or discharges associated with the proposed Bat Creek residential development are anticipated.

J. David Whitehead (Tennessee Wildlife Resources Agency)

TVA appreciates the concerns expressed by Mr. Whitehead on behalf of the Tennessee Wildlife Resources Agency regarding water quality and shoreline development. TVA intends to ensure that mitigation measures mentioned in the Draft are implemented and followed.

Marcus E. Kennedy

Mr. Kennedy's comments are noted for the record.

BLOUNT COUNTY GOVERNMENT

WILLIAM A. CRISP
BLOUNT COUNTY EXECUTIVE



LEGISLATIVE BODY

Keith W. Brock
Pete Carter
W. C. (Bob) Evans
J. C. Franklin
Craig L. Garrett
Mike Gregory
Thomas E. Hatcher
Scott Helton
James Leroy Huff
John T. Keeble
Bob Kidd
James M. Kyker
Sam Lambert, III
Clara McNutt
Virginia Morton
Dan Neubert, Sr.
Cinda L. Reed
Steve Samples
Mickey Walker
Mike Walker
Richard Williams, Jr.

301 COURT STREET
MARYVILLE, TN 37801-4987
(615) 982-1302

January 27, 1994

Mr. Ronald D. Davis, Sr.
Manager, Environmental Compliance
Land Management
Tennessee Valley Authority
17 Ridgeway Road, Box 920
Norris, Tennessee 37828-0920

Dear Ronald:

I am writing this letter to express my support of land use changes for TRDA's request to TVA to change from industrial designated use to residential use in the Bat Creek Peninsula on Tellico Reservoir.

I appreciate your positive consideration in this matter. If you have any questions, please call me.

Sincerely,

William A. Crisp
Blount County Executive

WAC:rp

January 21, 1994

(2)

Ronald D Davis, Sr
Tennessee Valley Authority
17 Ridgeway Rd
Norris, TN 37828

Re: draft EA Bat Creek

Dear Sir:

I did not attend the workshop on June 22, 1993 regarding the proposed residential development of the Bat Creek peninsula. The comments following have nothing to do with the environmental assessment of the project, but are my opinion in regard to the original condemnation of the Tellico Lake area and the original premise of the forcible taking of real estate belonging to the residents of that area and this subsequent use of that property.

From my memory TVA condemned and took real estate in this area over and above what was needed for the Tellico Reservoir. This was done in order for TVA to control access and development of the surrounding property and to promote "industrial development" in the area. The primary use of most of the property at the time was for residential and farm purposes. Of course, there were court battles and objections but ultimately this land was purchased from the residents, willing or not.

I do not think it is appropriate to develop this area for residential purposes of any kind. If the "industrial development" that was planned is now known to be inappropriate or unobtainable, this land should be used in a way that benefits the entire public. Addition to the Cherokee National Forest area or creation of a separate national park area for the sole benefit of the public would be more appropriate uses at this point. This land should not have been forcibly purchased with public money from the original owners and resold to others for the same type use and I wonder if it is even legal?

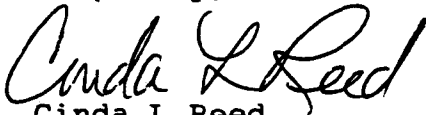
Further, I do not see how the Tellico Reservoir can continue to be used as a recreational area and developed further around its border. Pollution and conflict between residents and recreational users of the water will eventually lead to its non-use for boating, fishing, watersports, camping or etc. The water is already too busy for everyone's comfortable recreational use. Residential development will intensify problems.

We are now reading about TVA's involvement in the "offloading" scandal regarding government contracts. Is TVA's creation of TRDA (Tellico Reservoir Development Agency) to control these "sticky" issues regarding the public land around the Tellico Lake, not an "offloading" of public issues that could be embarrassing to TVA upon a smaller, less visible agency?

Please forward a copy of the draft EA to me at 5405 Indian Warpath Rd., Maryville TN 37801.

Thank you for the opportunity to give you my opinion.

Sincerely,

A handwritten signature in cursive script that reads "Cinda L. Reed".

Cinda L Reed
Blount County

CC: Congressman John Duncan Jr

TRDA/doc

Ronald D. Davis, Sr.
TVA, 17 Ridgeway Road
Norris, Tennessee 37828

1 February 1994

Dear Mr. Davis,

The following comments are submitted regarding the proposed development of the Bat Creek Peninsula on Tellico Lake.

There are currently four developments on Tellico Lake. Tellico Village is roughly 50% developed with approximately 4500 lots sold out of 9000. 800 homes and townhomes have been constructed equaling less than 10% developed. In addition, there are over 700 lots in the Village currently on the resale market. Foothills Point and Tellico Harbor are very similiar as far as percentage developed (housing) and lots sold. Lakeside Mountain Vistas now has four homes built out of approximately forty lots. My point is, by granting the permit for the Bat Creek development to anyone, it will further weaken the market and could result in failure of one of the existing smaller developments and/or Bat Creek.

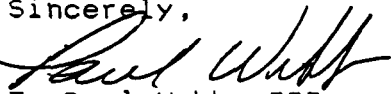
I would also discourage granting a development to a Limited Partnership because it is easier for the Limited Partnership to fail and leave a partially developed eye sore on the lake after the cream has been skimmed off the top.

The proposed arrangement by the Limited Partnership also requires no front money to TRDA which I believe is a problem. TRDA and TVA do not need to be in the piece by piece collection agency business for each lot sold; when and if it is sold. If it is decided to award the development to Tellico Lake Properties, Limited Partnership, it would be cost effective to sell the property for a lump sum and not be involved in a piecemeal payment mode that could last ten to twenty years and needlessly extend the life of TRDA into another bureaucracy that has no purpose.

In summary, I am against the development by anyone at this time which I believe will dilute the developments currently in existence. I am also against awarding it to a Limited Partnership. If you cannot receive payment for the land of the development in advance, in a lump sum, then do not sell it. The legal implications of foreclosure on a failed development when no payments are due on the land until lots are sold is almost legally unenforceable.

I appreciate your request for comments and I have no opinion one way or the other concerning changing the Bat Creek Peninsula from commercial to residential.

Sincerely,



T. Paul Webb, III
145 Saligugi Way
Tellico Village
Loudon, Tennessee 37774-2518

④ 117 Doostoe Ln
London, TN 37774
Feb 3, 1994

TVA
Mr R D Davis Sr, Mgr
TVA Forestry Bldg
Morris, TN 37828

Dear Mr Davis,

Sorry we were unable to attend your rescheduled meeting pertaining to the planning of land use for the Bat Creek Peninsula, on Lake Pellico. As residents of Pellico Village we have a keen interest in how that property is developed. Therefore will you please send me a copy of your "grey book" covering the present development plans for this area.

Thank you for your prompt attention to my request.

Sincerely,
Charles E. Jasin
117 Doostoe Ln
London, TN 37774

5

February 4, 1994

R. D. Davis, Sr. Engineer
TVA Forestry Building
Norris, TN 37828

Re: Tellico Lake - Rezoning of Back Creek Peninsula from Industrial
to Residential

Dear R. D.:

I have lived in Tennessee since 1968 and watched with great interest the establishment and development of Tellico Lake. My interest finally culminated with the building of my home in Tellico Village in 1989. One of the main reasons I chose to move my family from Athens, Tennessee to Tellico Village was the fact that TVA had carefully zoned the entire shoreline of this Lake when it was formed in 1980.

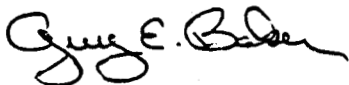
It disturbs me that after all the tax dollars and utility dollars that have been spent by TVA and TRDA on the development of this Lake, we are going to begin to second-guess ourselves and start rezoning different sections of shoreline. It has the implication that regardless of what you are looking at, TVA can take it upon themselves to change it and the neighboring landowners be damned.

Times do change, and maybe justification can be built for rezoning property. If there is justification, then why in the world take 1,062 acres and approve developers' plans which permit high-density housing with 2,000 building sites. At best, I suspect 1,000 building sites is more reasonable. In an area that is so underpopulated as this area, to go from farm land in the 70's to 2,000 residential building lots in the 90's is poor planning. I don't care what your 1-inch field environmental impact statement has to say, this is overdevelopment of this Peninsula and the surrounding waterways. Why do we have to begin to create a cluster of homes with lots as small as those you find within the city limits of Lenoir City when so much land is available? Why create on the waterways in such a concentrated area the potential for a crowded lake like Lake Lanier outside Atlanta? Tellico lake is not a wide Lake, and if TVA is not careful, they are going to create a section of Lake between the Highway 411 bridge and Fort Loudon Dam which has too much boat traffic and which water safety is seriously compromised. I am shocked that a professional organization like TVA can

R. D. Davis, Sr. Engineer
Page 2
February 4, 1994

honestly consider this extensive development of the Peninsula. Maybe I should not be shocked, because both your organization and TRDA created Tellico Parkway in 1980 with no real provisions to properly maintain it. It has taken continual political pressure to even have this road with proper white and yellow lines so that workers and residents alike could travel this frequently, fog-covered stretch of highway in a safe manner. I sincerely hope that when your committee considers this rezoning, they will take a second look at what they are about to approve. There is just no excuse to approve plans in this rural area which allows for such a large cluster of homes in such a small area.

Sincerely yours,



Guy E. Baker
143 Cheeskogili Way
Loudon, TN 37774

GEB/bjm

cc: George Miller
County Executive
100 River Road
Loudon, TN 37774

cc: Eugene Lambert
1014 Maulberry
Loudon, TN 37774

cc: James Matlock, Commissioner
Matlock Tire
Hwy. 70 W
Lenoir City, TN 37771

PS: Environmentally speaking, if anyone thinks the bird sanctuary at the end of this Peninsula can truly survive with 2,000 homes in front of it and 1,000 boats running around the Peninsula, they truly need to have their heads examined. No self-respecting bird is going to continue to utilize the sanctuary with this heavy population built on top of it.

(6)

February 6, 1994

Mr. R. D. Davis, Sr., Mgr.
Tennessee Valley Authority
TVA Forrestry Building
Norris, Tennessee 37828

Dear Mr. Davis:

RE: Draft Environmental Assessment, Bat Creek Peninsula, Tellico Reservoir
Loudon and Monroe Counties, TN

I have attended both meetings regarding the proposed change to residential for the above Bat Creek Peninsula and still feel that the change will be good for the Counties of Loudon and Monroe, particularly with the Alternative #3.

However, I would like to point out shortcomings in the proposal submitted to M. Ross & Associates, which could have an adverse environmental effect on the area at some future date. The same could apply to Loudon and Monroe Counties by creating tax-short falls because of the shortcomings:

1. Density of the residential area, lot size
 - a. Sewer and water waste disposal
 - b. Fire protection, Vonore City won't be able to handle and proposal looks to Loudon and Monroe Counties
 - c. Same for police protection
2. Electricity - Loudon Utility District - In 7 or 8 years of Tellico Village they have not been able to provide the power needed as the area has grown; add Bat Creek and the problem is compounded.
3. Tellico Parkway - TRDA states that the Parkway can handle the added traffic. To this date, they have not maintained it without many conferences on the subject. TRDA also states that "Negotiations are under way for TDOT to accept ownership and maintenance;" current feeling in that area is not of a positive nature. The Parkway's condition can affect the area's environment.
4. The financial support structure proposed by the developer and agreed to by TRDA is weak. P.O.A. dues of \$20.00 per lot owner cannot support roadways, utilities, common ground security. Throw in additional fire/police protection and the problem becomes even more acute and can affect the future tax base and area environment.
5. Land and home cost - \$10,000/\$80,000 affordable housing does not reflect the true picture, to name a few:
 - a. Cost of water, sewer, power hookups
 - b. Cost of buying TVA easement for water rights below 820 will run \$8,000-\$12,000

It looks to me that Loudon County, while gaining tax revenue now, will face a short-fall later based on the developer and TRDA agreement.

Very truly yours,



D. R. Tracy
318 Chamiloti Circle
Loudon, TN 37774

cc: Mr. G. Miller, Loudon County
Mr. E. Lambert, " "
Mr. J. Matlock, " "

120 Oostanali Way
London, Tennessee 37774
February 11, 1994

Dear Mr. Davis:

After extensive study of the Draft Environmental Assessment of the Bat Creek Peninsula alternative proposals dated Jan. 18, 1994 I offer the following comments:

I assume appendix A, TRDA Development Standards for the Jellico Project, were written some years ago and will be enforced by TRDA during development of Bat Creek. Article 4.090 dealing with densities, areas and lot sizes allows single family dwelling lot sizes of 3000 square feet or 54.8 feet square. Multifamily sites could be developed at a density of 1.7 times the single family ratio or equivalent land area of 42 feet square. Article 5.02 states prefabricated dwellings with floor area of 600 square feet shall qualify as single detached dwellings.

The Royal Bay development plan states that affordable housing units in a maximum price range of \$80,000 including a \$10,000 lot will be offered.

Based on the information in this draft it seems

clear that the developer plans a modular home community that could well develop into a very undesirable community. There is no mention of more upscale housing in the over \$100,000 range so I assume none is planned.

It is hard for me to believe that this venture as outlined can be successful either for the developer or the greater community.

In summary, I support the rezoning from Commercial to residential. I support the Alternate 3 as outlined and commend TVA for the effort to protect the environment and the public with this alternate. I do not support the plan outlined by the developer and respectfully request public meetings be held to solicit input from concerned citizens regarding this plan. TVA should use its position to insure that the Bat Creek Development is given adequate public scrutiny before TRDA is allowed to proceed.

Sincerely,

Raymond K. Doty



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
KNOXVILLE ENVIRONMENTAL FIELD OFFICE
2700 MIDDLEBROOK PIKE, SUITE 220
KNOXVILLE, TENNESSEE 37921-5602
(615) 594-6035 FAX (615) 594-6105

February 3, 1994

Mr. Ronald D. Davis
Manager, Environmental Compliance
Tennessee Valley Authority
17 Ridgeway Road, Box 920
Norris, TN 37826-0920

Re: COMMENTS ON DRAFT ENVIRONMENTAL ASSESSMENT
RESIDENTIAL DEVELOPMENT OF BAT CREEK PENINSULA
Tellico Reservoir, Monroe County

Dear Mr. Davis:

We have reviewed the draft EA concerning the residential development of the Bat Creek peninsula in Monroe County, and would like to have the following comments considered:

Alternative 1 - The No Action Alternative would obviously be acceptable to this Division, since there would be no changes to existing water quality conditions and land use.

Alternative 2 - This alternative provides for little or no restrictions designed to protect existing water quality and aquatic habitat. If public lands are to be rezoned to allow a private development company to realize personal profits from that land, restrictions should be mandated to prevent impacts to wildlife and water quality, at the very least. Under Alternatives 2 and 3 this Division must strongly reiterate the comments concerning this issue submitted by TWRA's Gary Myers, dated July 2, 1993.

Alternative 3 - This alternative allows for residential development but provides some restrictions for minimizing impacts on wildlife and aquatic resources. While this is clearly preferable to Alternative 2, we feel that these restrictions are not adequate to protect water quality and aquatic resources (we also find the idea of relocating endangered bird habitat of dubious merit; however, we will restrict our comments

to water quality issues).

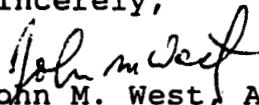
The Division would like to propose the following restrictions to help prevent impacts from development, to be added to those already proposed under Alternative 3:

- 1) Permits - Page 5, Section 1.5 of the draft EA "Necessary Federal Permits" mentions the 401 Water Quality Certification of Federal permits. It should also be stated that any physical alterations of waters of the State including wetlands will require an Aquatic Resource Alteration Permit from the Tennessee Division of Water Pollution Control, unless such activity is already covered under 401 Certification of a Federal permit. Physical alterations include but are not limited to filling, draining, relocation, channelization, damming, culverting, and excessive riparian disturbance. In addition, a Notice of Intent to be covered under the General NPDES Permit for Stormwater Associated with Construction must be filed with this Division for any land disturbance greater than 5 acres.
- 2) Wetlands - We would like to propose that the contract specify that all jurisdictional wetlands on the peninsula be preserved and maintained in perpetuity by the developer, in order to prevent any attempts to develop or otherwise alter these wetlands in the future. These wetlands are invaluable as aquatic habitat, shoreline protection, and pollution filters from lawn and golf course runoff. In addition, we would suggest that the 50 foot buffer zones around wetlands specified under Alternative 3 be expanded to at least 100 feet to better protect these vital wetland functions.
- 3) Golf Course Runoff - Golf courses can be serious non-point sources of nutrients and pesticides/herbicides. It seems appropriate in this case to place some limits on the amounts of such chemicals that can be applied, and to have these concerns addressed in the initial golf course design. It is likely that the course could be designed in such a way that would minimize application and maximize retention and treatment of these chemicals in order to protect water quality in Tellico Reservoir.

Tellico Reservoir already exhibits some water quality problems with strong stratification and low dissolved oxygen levels in the summer months - problems that could only be exacerbated by any increase in nutrient loading. TVA's Water Quality Management Plan For Tellico Reservoir (TVA, August 1985) recommended on page x that "...land disturbing activities on project lands adjacent to Tellico Reservoir should be conducted in a manner which will minimize adverse impacts from nonpoint

Thank you for providing this office with an opportunity to comment in this matter. We feel certain that TVA shares our concerns for water quality in Tellico Reservoir and elsewhere.

Sincerely,


John M. West, Assistant Manager
Knoxville Field Office
Division of Water Pollution Control

cc: Mark Fagg, TWRA, Talbott
Cathy Elliott, USA-COE, Lenoir City
Dan Eagar, Natural Resources Section
Andrew Barrass, NPS Section
Larry Collaw, TRDA

Tellico Village
Home Owners Association
Herb Phillips, President
245 Chatuga Way
Loudon, TN 37774
(615) 458-9446

February 14, 1994

Mr. Ronald D. Davis, Sr.
TVA Forestry Building
Norris, TN 37828

Re: Proposed Development of Bat Creek Peninsula

Dear Mr. Davis:

As President of the Tellico Village Home Owners Association, I am writing you on behalf of the residents of Tellico Village to convey our concerns over the proposed development of Bat Creek Peninsula.

First and foremost, over and above the "environmental" aspect of TVA's responsibility, TVA also has a responsibility for the enhancement of and the quality development of the entire Tellico Reservoir. This commitment cannot be delegated. It extends beyond the "environmental" status surrounding the growth and change of the shoreline.

Several questions have surfaced about the proposed development, especially concerning the credibility of the cost estimates to construct and maintain the infrastructure and amenities. Simply stated, the figures are not financially realistic. The developer's development concept and financial plan raise more questions than answers.

Other related concerns are:

■ **Electrical Service** - Dependence on LUB to provide adequate and timely electrical power and maintenance raises serious questions of capability. Our experience in Tellico Village tells us the issue of electrical power requirements and support planning have not been thoroughly assessed or prepared.

■ **Public Safety** - Aside from adequate fire protection, who will provide police and ambulance service, and in what manner? The Loudon County portion of the peninsula is not contiguous with any other Loudon County land. Dividing responsibility for public services (schools, fire, police, et al) is workable, but not a desirable solution, especially in a small isolated residential community. Also, how will the costs for these services be apportioned between the counties involved? These matters should be resolved or dictated up front.

■ **Wastewater Treatment** - We continue to hear about repeated periods of low nutrients level for biological process. The whole

area of wastewater should be addressed before any change is made.

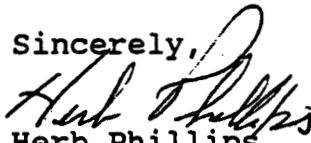
■ **Recreation - Wildlife** - The Bat Creek Peninsula and surrounding waters are obviously ideally suited for many forms of public recreation and wildlife habitation. Questions have surfaced about what alternate areas of comparable suitability will be made available for current and anticipated public use. Also, what will be the environmental effects on the Bat Creek Peninsula Shoreline and the adjacent commercial recreation designated directly across from the proposed Bat Creek Development? The combined development of these two shoreline areas should be assessed as an integrated package with respect to the projected increase in boat traffic and recreational activity. Time sharing of the Bat Creek water area by recreational users is not a desirable nor practical option.

■ **Transportation System** - The Tellico Village Property Owners Association (TVPOA) has been promoting transfer of Tellico Parkway to Loudon County or Tennessee Department of Transportation (DOT) since 1991 without success. We are unaware of referenced ongoing negotiations between TRDA and TDOT cited in the recently distributed publication (Chapter 3). Additionally, the statement that Parkway condition compares favorably with other roads in Loudon County contradicts Loudon County's position that the Parkway does not meet road standards and would require considerable costly upgrading to resolve the issue. We feel strongly that this issue should be resolved before any further development activity is approved affecting the potential traffic and maintenance factors of the Parkway. Our recommendation is to transfer the Parkway to TDOT.

The issues identified in this letter represent only a portion of the overall concerns expressed by our Village residents regarding the Change-in-Land Use and Development Project as proposed by Tellico Communities, Inc., and Tellico Reservoir Development Agency (TRDA).

Because this matter will greatly affect the future quality-of-life and life-style of Monroe and Loudon Counties, we are also forwarding our concerns to the TVA Board of Directors, recommending it conduct a more detailed appraisal of the proposed project and the potential adversities that threaten its success.

Sincerely,


Herb Phillips
President

Tellico Village Home Owners Association

Enclosure - TVHOA letter dated 2/14/94
to Craven Crowell

cc: Craven Crowell

Tellico Village
Home Owners Association
Herb Phillips, President
245 Chatuga Way
Loudon, TN 37774
(615) 458-9446

February 14, 1994

Mr. Craven Crowell
Chairman of the Board
Tennessee Valley Authority
400 W. Summit Hill Drive
Knoxville, TN 37902

Dear Mr. Crowell:

TVA currently is conducting an environmental assessment on redesignating the 1,060-acre Bat Creek Peninsula on Tellico Reservoir from industrial to residential use.

The draft environmental assessment indicates TVA is limiting its assessment to environmental factors while delegating to the Tellico Reservoir Development Agency (TRDA) assessment of the economic aspects of the proposed development. The capabilities of the developer to carry out the project in a manner that would contribute to the economic growth of the area is the basis for our concern.

As you know, economic development and shoreline enhancement were major factors in justifying the Tellico Reservoir project. Therefore, TVA has the specific and ultimate responsibility for assessing the economic, as well as the environmental, aspects of all development proposals affecting Tellico Reservoir -- a responsibility it cannot delegate to TRDA or to anyone else.

The Tellico Village Home Owners Association, representing the approximately 1,500 Tellico Village residents, requests TVA to conduct a thorough analysis of: (1) the economic feasibility of the proposal submitted by Tellico Communities, Inc., of Maryville, TN; (2) the financial resources and experience of Tellico Communities, Inc., and its principals to carry out a project of this magnitude; and (3) the propriety of TRDA to participate in an "as sold" property arrangement with the developer.

The proposal by Tellico Communities, Inc., as contained in the draft environmental assessment, is, at best, sketchy, incomplete, impractical, and highly speculative. A failed development at that location would deflate property values around the entire reservoir, including Tellico Village, Foothills Pointe, and Tellico Harbor, and could impose an added financial

burden on Loudon and Monroe taxpayers for services promised but not delivered by the developer.

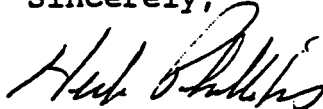
We also have a number of questions and concerns on the environmental findings in the draft assessment; we have conveyed these directly to Mr. Ronald Davis in your Norris office.

We would remind you that TVA sent a team of lawyers and accountants to Bella Vista, Arkansas, in 1985 to make a thorough analysis of the operations, experience, and financial resources of Cooper Communities, Inc., (CCI) before agreeing to turn over the property that is now Tellico Village to CCI. Tellico Village Home Owners Association believes that you owe no less to the proposed development on Bat Creek Peninsula.

In this regard, Tellico Village Home Owners Association requests an opportunity to address the TVA Board on this issue at its February 23rd meeting in Knoxville.

We appreciate your consideration of this important matter and look forward to hearing from you.

Sincerely,



Herb Phillips
President

Tellico Village Home Owners Association

HP:ss

Enclosure - TVHOA letter of 2/14/94
to Ronald D. Davis

cc: Ronald D. Davis, Sr.

Feb. 1994

(10)

Dear Sir,

As a hunter, fisherman, boater, birdwatcher and environmentalist I am concerned about the development of Bat Creek peninsula. Isn't it a waterfowl refuge?

Think carefully before you charge forever this beautiful piece of land. This development will affect the future of this area. Please think clearly on this matter and do what is right.

Thank you.

Pyall Mayhew
211 Kigoga Lane
London E. 37774



February 4, 1994

Mr. Ronald D. Davis, Sr.
Manager, Environmental Compliance
Land Management
TVA Forestry Building
Norris, Tennessee 37828

Dear Mr. Davis,

Cooper Communities, Inc. appreciates the opportunity to comment on the proposed residential development on the Bat Creek peninsula. TVA's concern for the potential impact of this development and the fairness in soliciting comments from all interested parties is to be commended.

Based on our engineering, financial and marketing studies, CCI believes that residential development represents the highest and best use of the Bat Creek property. The topography and numerous surface depressions would severely limit the acreage that could be utilized for any type of industrial development, whereas in residential development, such areas can be used for golf courses, etc. In terms of economic impact, residential development can equal or even exceed the benefits derived from industrial development. This has been demonstrated with the successful development of Tellico Village. In 1994, Loudon County tax revenues generated from Tellico Village will exceed all the tax revenue generated to Monroe County from the industrial development on TRDA lands. From an environmental standpoint, residential development, if done properly, will have minimal impact on aquatic and terrestrial wildlife. When considering the amount of undeveloped land surrounding Tellico Reservoir, the development of this tract should have relatively insignificant environmental impact as compared to the potential positive economic impact to the surrounding counties.

Mr. Ronald D. Davis, Sr.
Page 2

Cooper Communities does have some concerns regarding the proposed residential development on the Bat Creek peninsula. These are:

The timing of the development should be phased with existing developments on Tellico Reservoir to avoid an oversupply of homesites that could adversely affect property values in all developments resulting in a negative impact on tax revenues to the counties involved.

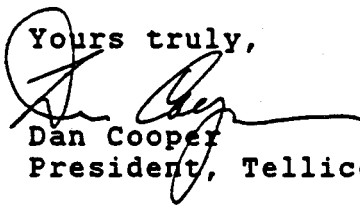
Development of the Bat Creek peninsula will result in increased traffic and greater maintenance requirements for the Tellico Parkway. The issue of proper funding for maintenance needs to be resolved before development of this tract is underway.

Shoreline strip restrictions as proposed as your Alternative #3 would have a substantial negative impact on lakefront property values in the area to which the restrictions apply. Reduced land values would be reflected to some degree in reduced values of homes constructed. This could severely reduce the assessed value of the properties and have a significant negative impact on tax revenues generated. The loss of income would adversely affect both Loudon and Monroe counties and over an extended period of time, could amount to millions of dollars.

Also, it is our understanding that there is no scientific evidence to prove that residential development will have any net negative impact on the environment. Without evidence to support the need for increased restrictions on the shoreline strip, we feel the negative economic impact is too great a price to pay. We would suggest that the shoreline strip be governed by TVA's existing regulations.

Thank you again for this opportunity to comment on the proposed change in land designation of the Bat Creek peninsula. If Cooper Communities, Inc. can be of any help or provide any additional information, please contact me at 1-800-TELLICO.

Yours truly,



Dan Cooper

President, Tellico Village

cc: Mr. Roger McMennamy
Mr. Larry Colaw, TRDA
Mr. George Miller, Loudon County Executive
Mr. Allan Watson, Monroe County Executive



United States Department of the Interior

FISH AND WILDLIFE SERVICE

446 Neal Street
Cookeville, TN 38501

March 4, 1994

Mr. Ronald D. Davis, Sr.
TVA Forestry Building
Norris, Tennessee 37828

Subject: Proposed change in land use designation for the Bat Creek Peninsula, Tellico Reservoir, Loudon and Monroe Counties, Tennessee.

Dear Mr. Davis:

We appreciate the opportunity to review Tennessee Valley Authority's (TVA) draft environmental assessment for the proposed land use change (from industrial to residential) at Bat Creek Peninsula. We also appreciate the opportunity to meet with Mr. Bob Curtis and Mr. Ralph Jordan to discuss this proposed action and our concerns regarding potential impacts to fish and wildlife resources.

As you are aware, the Fish and Wildlife Service and other resource agencies are extremely concerned by the level of development on and adjacent to both TVA and Corps of Engineers reservoirs. We believe that many of the activities which take place result in significant adverse impacts to publicly owned aquatic and terrestrial habitat, and the public's use thereof. Although individual activities may not appear to be significant on an individual basis, the impacts are very serious when evaluated on a cumulative basis. Resource agencies have previously stressed the need for cumulative impact assessments and long-range shoreline development planning.

We are particularly pleased by TVA's effort to proactively formulate a development plan for Bat Creek Peninsula. Such pre-development planning not only benefits fish and wildlife resources, but also developers and prospective landowners who can determine in advance all restrictions and limitations on the site. As discussed during our recent interagency meeting, we strongly recommend that a general permit be developed pursuant to Section 26(a) of the TVA Act and Section 404 of the Clean Water Act for this specific development. Such a permit would clearly outline the type, maximum size, and location of all permissible future development. The permit would describe an environmentally acceptable and aesthetically desirable maximum level of development that should facilitate the sale of

individual land tracts. This procedure would also preclude the sometimes lengthy and expensive individual permit process for some several hundred potential development actions.

In regard to TVA's draft Bat Creek Peninsula development plan, we believe that the TVA staff has included a number of desirable shoreline development restrictions. It obviously would be desirable that a wider shoreline buffer be provided, but we understand that the existing TRDA contract provides no flexibility in this area. In particular, we are pleased by the provision of a wetland protection buffer, restrictions on the spacing and total number of boat docks and access paths, the emphasis on community docks and dry boat storage, the preclusion of retaining walls, and the preclusion of development in more sensitive areas. There are, however, several additional areas of potential concern to the Service as discussed during our recent meeting. These concerns and our related recommendations are described below.

Dredging Resource agencies generally view dredging of shallow reservoir shoreline and embayment areas to be one of the most destructive impacts associated with residential development. Because most of the reservoir body is deep, open water, these littoral zones provide the most important aquatic reproduction, nursery, and feeding habitat in the system. Dredging creates deep water and generally leaves a featureless hard clay substrate. Both individual and community docks can and should be built in areas with sufficient depth to accommodate boat access. We recommend that the plan include a specific prohibition against any dredging. We also recommend that during development of the general permit for Bat Creek Peninsula, water depths be mapped and potential dock locations determined accordingly.

Boardwalks The land-water interface along the shoreline is very important, particularly due to the vegetation which generally exists here. Based on our experience, the construction and maintenance of boardwalks results in the unnecessary destruction of both emergent and woody shoreline vegetation. Boardwalks are also usually associated with undesirable upland clearing induced by a landowner's desire to create a park-like atmosphere. Regardless, we can see no justification for boardwalks since the shoreline will be controlled within a buffer zone. We strongly recommend that all boardwalks be prohibited.

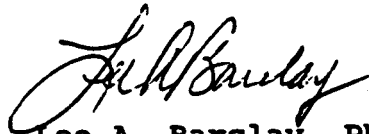
Land-clearing During our interagency meeting, it was indicated that clearing of vegetation below the 820 foot amsl contour would be limited to two narrow access paths within every 240 linear feet of shoreline. We strongly support this proactive restriction and oppose consideration of additional individual

applications for clearing as described in the environmental assessment.

Community Docks Absent specific information regarding water depths, it appears that the majority of suggested community dock sites are suitable. We note, however, that the Little Tennessee River site adjacent to River Mile 13.3 would likely require access across wetlands and dredging to provide sufficient water depths. We suggest that this site be withdrawn from consideration.

Again, we express our appreciation for the opportunity to review this proposed plan. We believe that TVA's front-end approach to development will greatly benefit the resources, the general public, the developer, and prospective landowners. We encourage similar planning for additional future developments on Tellico and the other TVA reservoirs. If we can be of assistance in facilitating the development of a general permit for the Bat Creek Peninsula development, please feel free to call Bob Bay at 615/528-6481. We can arrange a meeting with the Corps of Engineers and other involved agencies here at our office, if desirable.

Sincerely,

A handwritten signature in cursive script, appearing to read "Lee A. Barclay".

Lee A. Barclay, Ph.D.
Field Supervisor

RESPONSES TO WRITTEN COMMENTS:

Letter 1 - William A. Crisp

The comments are acknowledged and will be included in the record.

Letter 2 - Cinda L. Reed

As acknowledged in the second sentence of the letter, many issues raised in this letter do not apply to the Environmental Assessment, and will not be addressed here. The letter does raise the concern that residential development could intensify pollution and generate conflicts between residents and recreational water users. Potential effects on air and water quality are addressed in Sections 4.6 and 4.7, respectively, of the Draft Environmental Assessment. Solid waste disposal is addressed in Section 4.8.2. Potential effects on recreation are provided in Section 4.4.

Letter 3 - T. Paul Webb, III

The concern that residential development at Bat Creek would weaken the real estate market and adversely affect smaller developments is addressed in Section 4.3.2 of the Draft Environmental Assessment. Contract No. 60000A between TVA and the Tellico Reservoir Development Agency (TRDA) clearly places the responsibility for financial and business arrangements between TRDA and a potential developer under the independent purview of TRDA. In such matters, TVA must defer to the judgement of TRDA.

Letter 4 - Charles G. Finn

TVA appreciates the concern and interest expressed in the letter. A copy of the Draft Environmental Assessment has been sent to the commenter as requested.

Letter 5 - Guy E. Baker

Upon transfer to TRDA, various land use allocations were assigned to the Tellico Reservoir properties. However, the shoreline proper (i.e., that property below the 820-foot contour) was not transferred and will be retained by TVA. That shoreline property does not have a land use allocation.

If the land use allocation of the Bat Creek peninsula is changed to residential, TVA is expected to issue recreation easements across the retained shoreline strip to the water. Policies regarding these easements are discussed in the Draft Environmental Assessment. As shown in Figure 1 of that document, several sections of shoreline would not be available for easements.

As the commenter noted, times do change. Industrial development on Tellico Project lands has not progressed as fast as expected, while demand for retirement/recreation communities has increased. The request from TRDA to change the land use designation from industrial to residential reflects those conditions.

Several points concerning the scale and type of development and the potential for overdevelopment of the peninsula are mentioned in the letter. The purpose of this Environmental Assessment was to evaluate the effects of the decision to agree to a change in land use designation for the Bat Creek peninsula. The Assessment considered the potential effects of residential development as identified in the preliminary development proposal presented by Tellico Lake Properties, LP. The Environmental Assessment did not evaluate this particular residential development proposal. Measures designed to provide environmental protection or mitigate potential impacts would apply to any developer of the Bat Creek peninsula. However, the concerns expressed in the letter have been relayed to TRDA.

Concerns about increased boat traffic and water safety are addressed in Sections 4.4.2 and 4.4.3 of the Draft.

Regarding the concern about residential density, the commenter is reminded that land available for residential use is in fact quite limited. Quality development does not necessarily depend on lot size. Both cluster housing and smaller lots enable more people to enjoy lakeside living on a given acreage and can make this opportunity more affordable. TVA considers these elements to be positive if they provide more area residents the opportunity to live in the Tellico vicinity.

Very early in talks between TVA, TRDA, and the prospective developer, possible creation of a wildlife sanctuary at the far end of the peninsula was discussed. However, that idea proved impractical. There is no mention of a bird sanctuary on the Bat Creek peninsula made in the Draft Environmental Assessment.

Letter 6 - D. R. Tracy

The concerns regarding residential density are addressed in the response to the previous letter. Sewerage and waste water treatment are addressed in Sections 3.8, 4.7.2, 4.7.3, and 4.8.1 of the Draft. As stated in Section 4.8.3, negotiations are underway to provide fire protection. A section on police protection will be added to the Final Environmental Assessment.

Electrical service to the area is addressed in Section 3.8.5 and 4.8.4. These sections will be expanded to include recent developments. Specifically, major new additions to the electrical distribution facilities have been completed recently. These additions, a new substation and a switching station, will provide more reliable electrical service to Tellico Village area. These facilities are adequate to meet the needs of the proposed development with no degradation in service to existing customers.

Potential impacts to local highways are discussed in Section 4.2.1.

Property owner association (POA) fees of \$20 per lot owner are an estimate and are subject to change. As stated in Appendix C of the Draft, other amenities such as the golf course, swimming, tennis, etc. will require an additional user fee, which may result in lower POA fees as compared to Tellico Village.

The preliminary development proposal included as Appendix C of the Draft Environmental Assessment states that homes in the \$80,000 range will be provided. Certainly, some homes will be in that price range. However, the majority of the homes will likely be in the same price range as those in nearby Tellico Village.

Previous economic studies of Tellico Village (e.g., Siegel and Leuthold; cited in the Draft) indicate that taxes and economic activity generated by that development far exceed costs of additional governmental services. Our analysis indicates a similar situation with the proposed Bat Creek residential development. Thus, we anticipate no long-term shortfalls for either Loudon or Monroe county.

Letter 7 - Raymond K. Doty

The statements regarding allowable residential densities under Contract No. TV-60000A are correct. The prospective developer has not submitted a diagram or plan showing lot locations. This information will be provided in the Master Plan submitted to TRDA. Information provided in the development proposal indicates residential areas and cluster housing areas.

As stated in the response to the previous letter, homes in the \$80,000 price range will be provided. However, the potential developer has indicated that most homes would be in the \$100,000 to \$350,000 price range. Such homes would be comparable to those in Tellico Village. The developer has no plans to build modular homes.

Two public meetings have been held regarding the change of land use designation and the proposed residential development of the Bat Creek peninsula. TVA does not plan further meetings regarding its decision on the change of land use designation.

Letter 8 - John M. West (Tennessee Dept. of Environment and Conservation)

The comment that there would be no changes in water quality and land use under Alternative 1 is true in the short term. In the long term, land use could obviously change if an industry were to locate on the site.

Measures and restrictions designed to protect water quality are stipulated in Contract No. 60000A (Appendix A to the Draft Environmental Assessment). Sections 3.080 and 3.090 of the Contract deal specifically with water quality protection. Protection of aquatic habitats is not addressed specifically in Contract No. 60000A. However, various applicable state and federal regulations protecting both water quality and aquatic habitats would be in effect under Alternative 2. The letter from Gary Myers, referenced in the comment, was included in Appendix B to the Draft.

Section 1.5 has been altered to accommodate the suggested changes regarding necessary permits.

TVA will not be transferring ownership of any jurisdictional wetlands on the Bat Creek peninsula because all wetlands on that tract lie below the 820-foot contour. Only property above the 820-foot contour has been transferred to TRDA and is therefore subject to residential development. TVA realized the value of these wetlands and will maintain them rather than requiring a third party to do so. Strict guidelines apply to recreational easements in the vicinity of wetlands. The wetland buffer of 50 feet was established because of its approximate coincidence with the 820-foot contour. TVA biologists believe that a 50-foot buffer provides adequate protection for these wetlands.

TVA shares the Department's concern about possible golf course runoff and its optimism that the course could be designed and maintained in a manner to protect water quality in the Tellico Reservoir. TVA aquatic biologists will be working with TRDA and the prospective developer to develop a satisfactory solution. TVA would welcome involvement by the Department and will supply the information requested to the Department as it becomes available. This request for information has also been forwarded to TRDA.

The concerns regarding wastewater treatment capabilities are noted. TVA assumes that TRDA will upgrade their treatment facilities, if necessary, over the 15 year development period.

Letter 9 - Herb Phillips (Tellico Village Home Owners Association)

TVA appreciates the comments from the Tellico Village Home Owners Association. Cost estimates for constructing and maintaining the infrastructure and amenities as provided in Appendix C to the Draft Environmental Assessment should be regarded as preliminary and subject to change. Regardless of estimated costs, such amenities must be provided in accordance with the Development Standards for the Tellico Project, Attachment B to Contract No. TV-60000A (Appendix A to the Draft Environmental Assessment).

With respect to provisions for electrical service to the Bat Creek peninsula, Sections 3.8.5 and 4.8.4 of the Final Environmental Assessment have been revised to reflect recent upgrades made by the Loudon Utilities Board.

Sections 3.8.4 and 4.8.3 have been revised to provide additional information on fire and police protection and emergency medical services. The financial arrangements between Loudon and Monroe counties to provide these services have not been resolved. However, the Loudon County Rescue Squad has a mutual aid agreement with Vonore. Such arrangements for fire and police protection are possible.

The topic of wastewater treatment is addressed in Section 4.8.1 of the Draft Environmental Assessment. As stated in that section, addition of domestic sewage to existing industrial wastewater from the Tellico West Industrial Park would increase biological nutrients and improve the performance of the treatment plant. As noted in a response to a previous letter, upgrading of treatment facilities may be necessary by the end of the proposed 15-year development period.

Potential effects on recreation are addressed in the Draft Environmental Assessment in Section 4.4. Specifically, in Section 4.4.2 of the Draft Environmental Assessment, we conclude that the 11,000 acres of public lands in the vicinity of Tellico Reservoir would provide ample land-based informal recreational opportunities. In Section 4.4.3 we recognize that boating use in the Bat Creek embayment might reach a saturation point. If that occurred, some boaters could be displaced. Mitigation of grasshopper sparrow habitat is discussed in Sections 2.4 and 4.5.1.3 of the Draft.

Potential environmental effects on the Bat Creek peninsula shoreline are discussed in various sections throughout the Draft. The Tellico Development Plan has area allocated for commercial recreation on the north shore of the Bat Creek embayment. No firm plans exist for that facility at this time. Certain restrictions on the number of community boat storage spaces and the amenities provided at community docks as stated in Section 2.4 of the Draft are designed to reduce potential competition with local commercial facilities.

An assessment of the potential environmental effects of a commercial recreation facility, as requested in the letter, is impractical at this point. If in fact a facility were being planned and more information were available, TVA would have included that facility in this environmental review.

The condition of Tellico Parkway has been the subject of several comments. Our assessment of the condition of the Parkway is given in Section 3.2.1.

Letter 10 - Lyall Mayberry

As stated in Section 3.5.3 of the Draft Environmental Assessment, the Bat Creek Waterfowl Refuge, a state waterfowl refuge, extends from the State Route 72 bridge to the mouth of Bat Creek. The Refuge contains approximately 625 acres of TVA shoreline property and adjacent surface water. The property above the 820-foot contour which is being considered for residential development is not a part of the Refuge.

The commenter is reminded that the Bat Creek property is subject to change from its current predominant agricultural land use regardless of TVA's decision. Industrial development of the site can occur without TVA involvement. TVA concurrence is required only for a change in land use designation from its current industrial designation to a residential allocation.

TVA appreciates the commenter's concerns and will consider many factors in its decision.

Letter 11 - Dan Cooper (Cooper Communities, Inc.)

Mr. Cooper's statements on the benefits of residential development are acknowledged for the record. Potential effects on property values due to an oversupply of homesites are addressed in Section 4.3.2 of the Draft Environmental Assessment.

TVA agrees that development (industrial or residential) of the Bat Creek peninsula would likely result in some increased traffic and maintenance requirements on the Tellico Parkway. Our assessment of the current highway situation is provided in Section 3.2.1.

The comment that adoption of Alternative 3 would result in decreased values of the adjacent backlying property is acknowledged for the record. The conditions imposed under Alternative 3 were designed to afford additional environmental safeguards and to supplement existing TVA regulations and shoreline policies. These measures are indicative of TVA's desire to further protect shoreline properties.

Letter 12 - Lee A. Barclay (U.S. Fish and Wildlife Service)

A response to the Service's comments is provided in the letter reproduced below.

March 7, 1994

*Dr. Lee A. Barclay
Field Supervisor
Fish and Wildlife Service
U.S. Department of the Interior
446 Neal Street
Cookeville, Tennessee 38501*

Dear Lee:

TVA appreciates the comments provided by the Fish and Wildlife Service (FWS) on the draft Environmental Assessment (EA) for the Bat Creek peninsula on Tellico Reservoir. In your March 4 letter you mention FWS' preference for development of a general section 26a permit for the total proposed shoreline development, rather than review of individual permits. TVA shares this preference due to the efficiency involved in a single application and the fact that much of the review process has been accomplished already. We will work with the prospective developer and the U.S. Army Corps of Engineers (USACE) to pursue the feasibility of a general permit.

TVA recognizes and is sensitive to the adverse effects from dredging and discourages this practice unless there is no practicable alternative. As stated in Section 2.4 of the draft EA, dredging would be minimized (although not prohibited) under the conditions of Alternative 3. We anticipate few requests for dredging due to sufficient water depths along most of the shoreline. TVA has agreed to consider a need for dredging if proposed by the developer and would do so through the general permit review process. However, no assurances have been provided that approvals would be given.

TVA guidelines for construction of boardwalks were not addressed in detail in the draft EA. As stated in Section 2.4, cleared access across TVA retained property (i.e., shorelands below the 820-foot contour) would be restricted to 6 feet in width for private docks and 10 feet for communal docks. Permissible boardwalks, as mentioned in Section 2.4 of the draft EA, refer to shoreline platforms with dimensions no greater than 20 feet long and 5 feet wide. These type structures are specifically applicable where navigation restrictions dictate that shoreline structures extend no more than 5 feet channelward of the 813-foot shoreline elevation.

TVA recognizes FWS' concerns about the community dock site at river mile 13.3. Recent soundings in that area indicated depths from 15 to 20 feet; thus, we anticipate little or no dredging. All applications for dock sites on the Bat Creek peninsula, community or private, are subject to review and approval by TVA and USACE.

Again, we appreciate your comments.

Sincerely,

Ronald D. Davis, Sr.
Manager, Environmental Compliance
Land Management

Appendix F

List of Preparers

Donald C. Becker - Land Management

Stanford E. Davis - Land Management

George R. DeVeney - Community Partnerships

Charles H. Ellenburg - Land Management

Gary D. Hickman - Water Management

John M. Higgins - Water Management

Wesley K. James - Land Management

Jack Don Lokey - Environmental Research Center

Robert A. Marker - Land Management

John J. McFeters - Occupational Health and Safety

Roger A. Milstead - Water Management

Danny E. Olinger - Land Management

Samuel C. Perry - Property Services and Development

Peter K. Scheffler - Community Partnerships

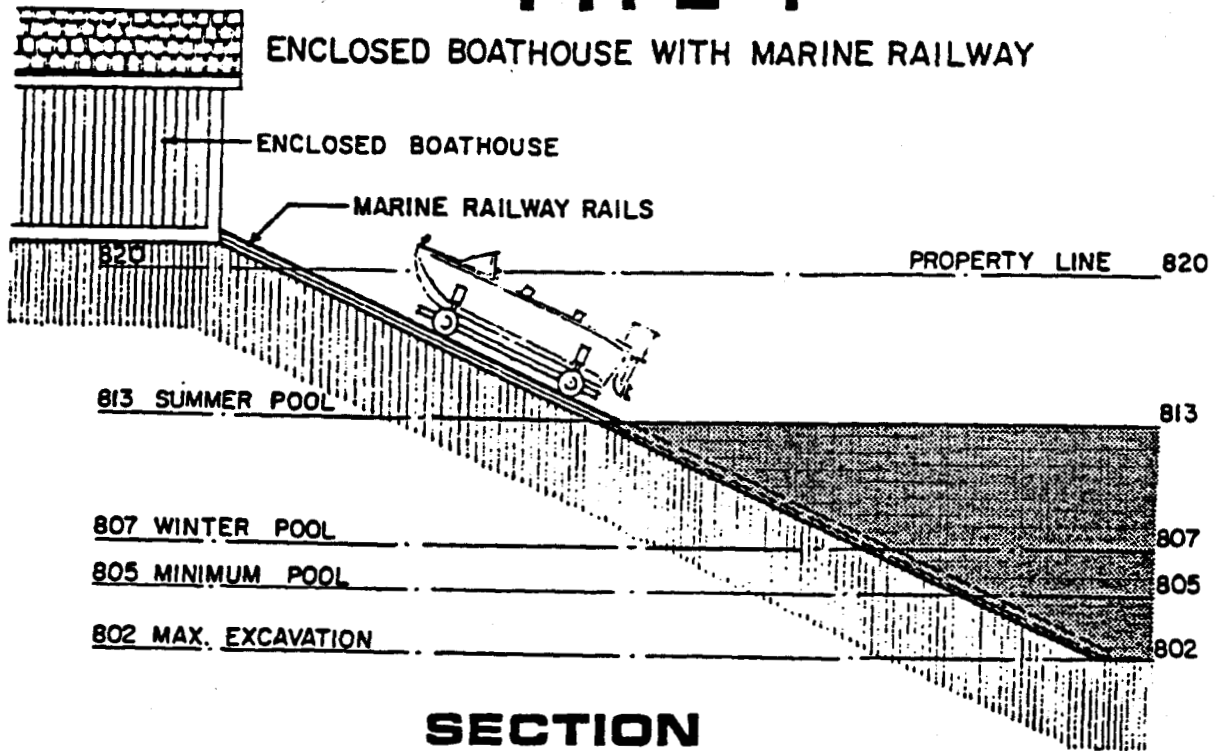
James F. Williamson, Jr. - Land Management

Appendix G

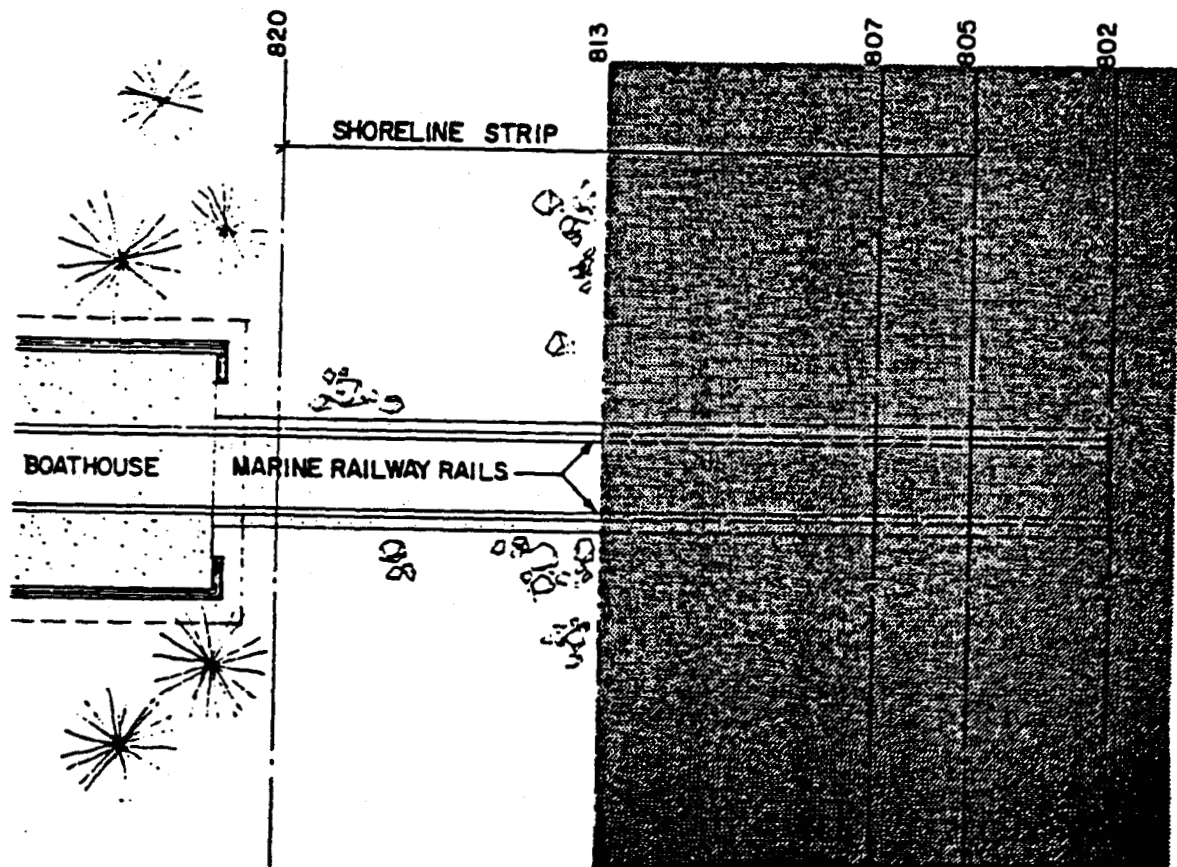
Permissible Private Water Use Facilities

The following diagrams provide guidelines for the types of permissible docks and other private water use facilities associated with the residential development of the Bat Creek peninsula, Tellico Reservoir.

TYPE 1



SECTION

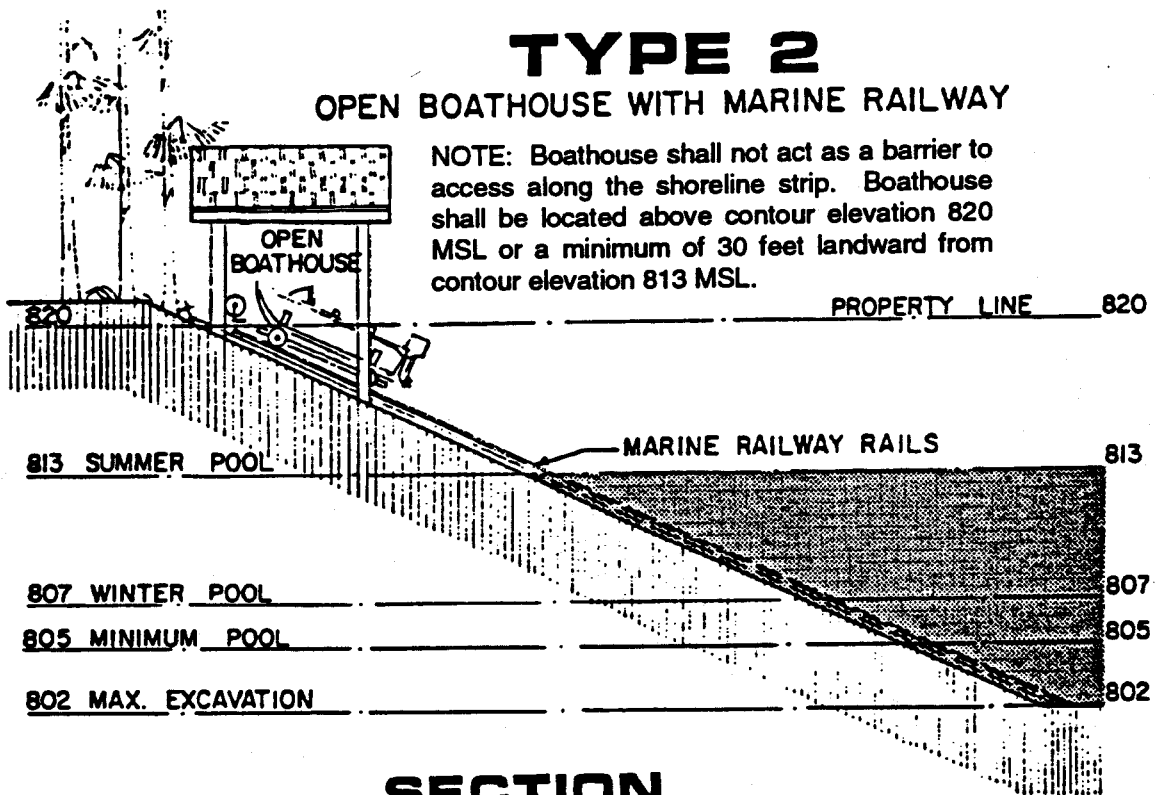


PLAN

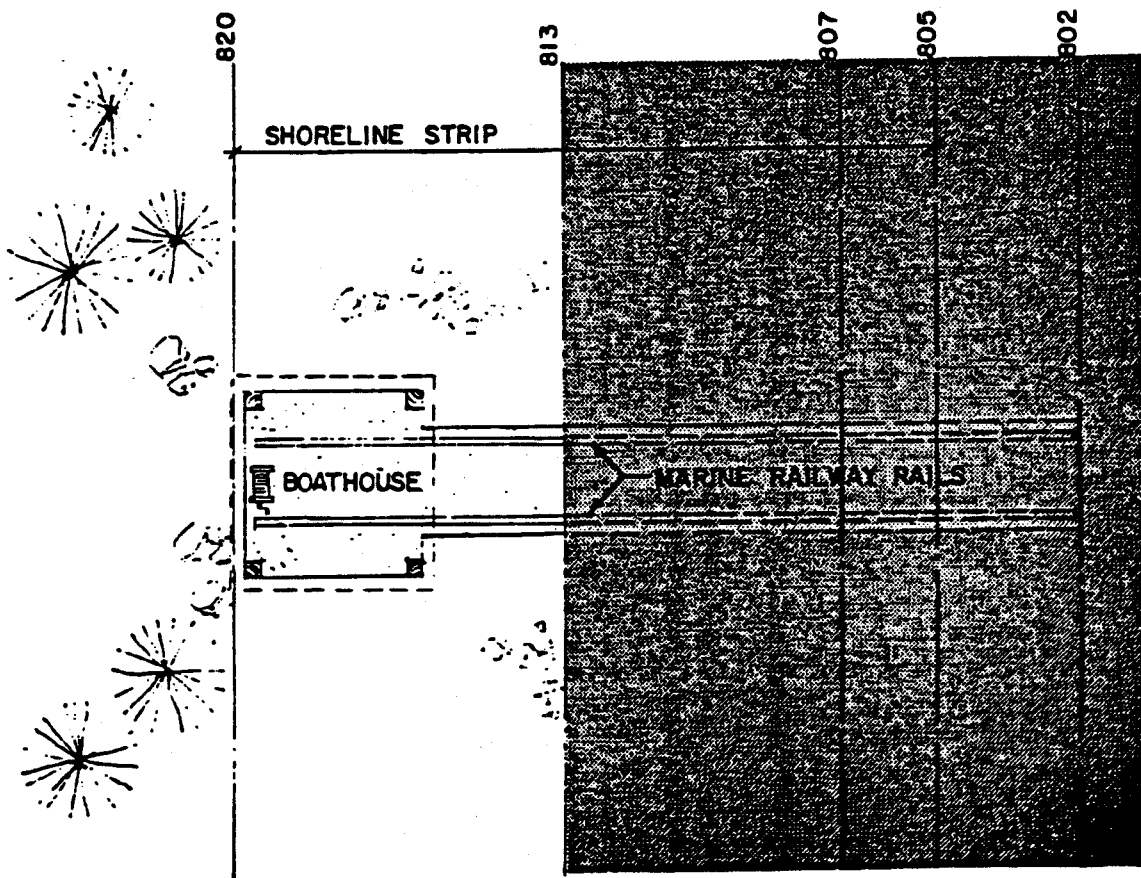
TYPE 2

OPEN BOATHOUSE WITH MARINE RAILWAY

NOTE: Boathouse shall not act as a barrier to access along the shoreline strip. Boathouse shall be located above contour elevation 820 MSL or a minimum of 30 feet landward from contour elevation 813 MSL.



SECTION

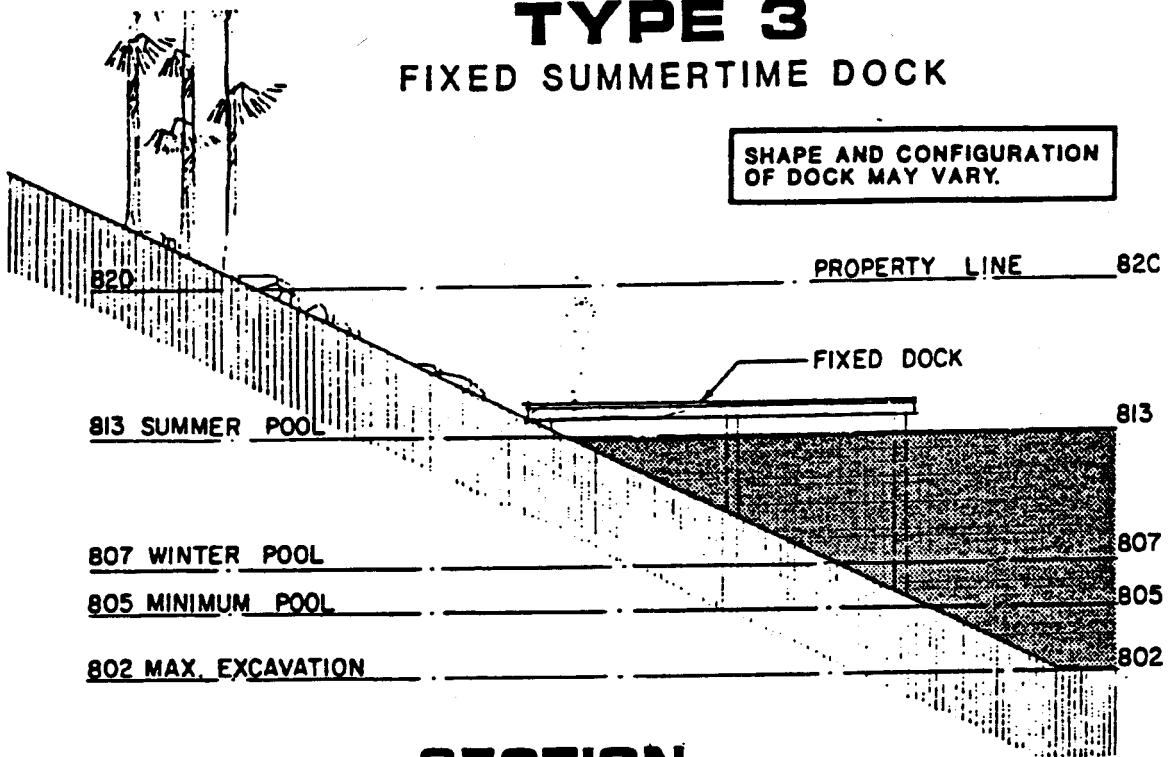


PLAN

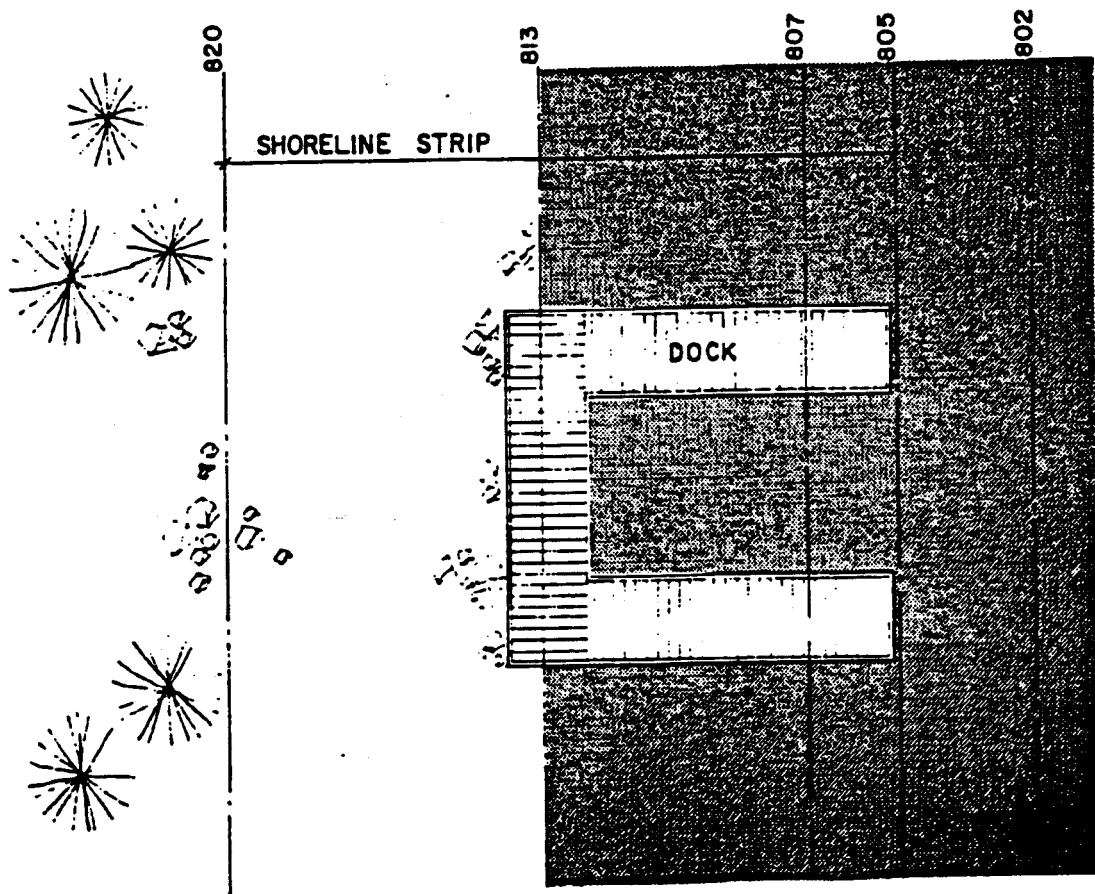
TYPE 3

FIXED SUMMERTIME DOCK

SHAPE AND CONFIGURATION
OF DOCK MAY VARY.



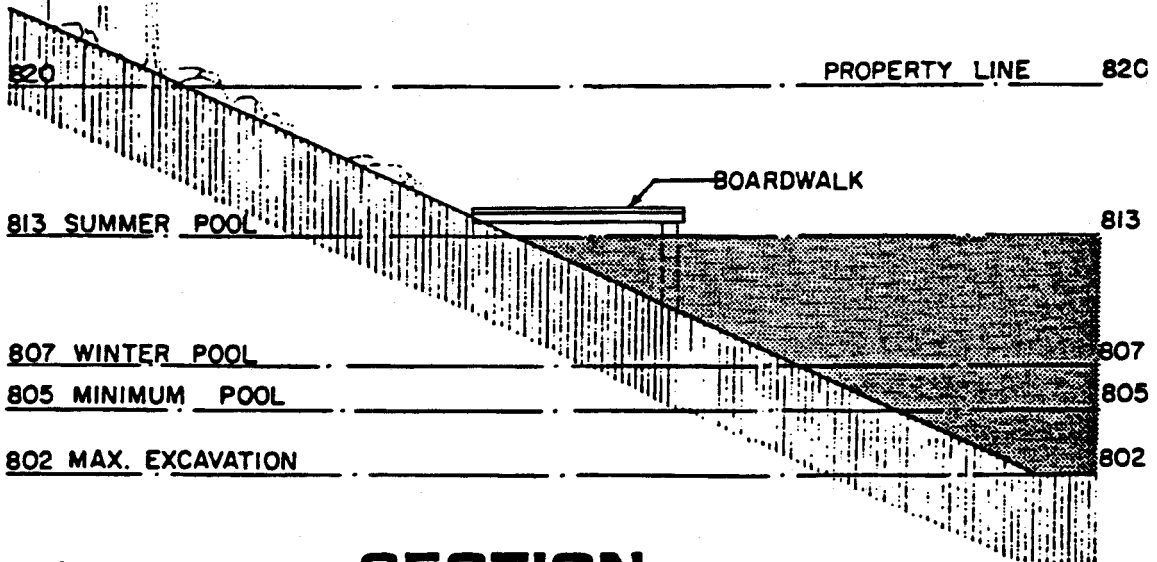
SECTION



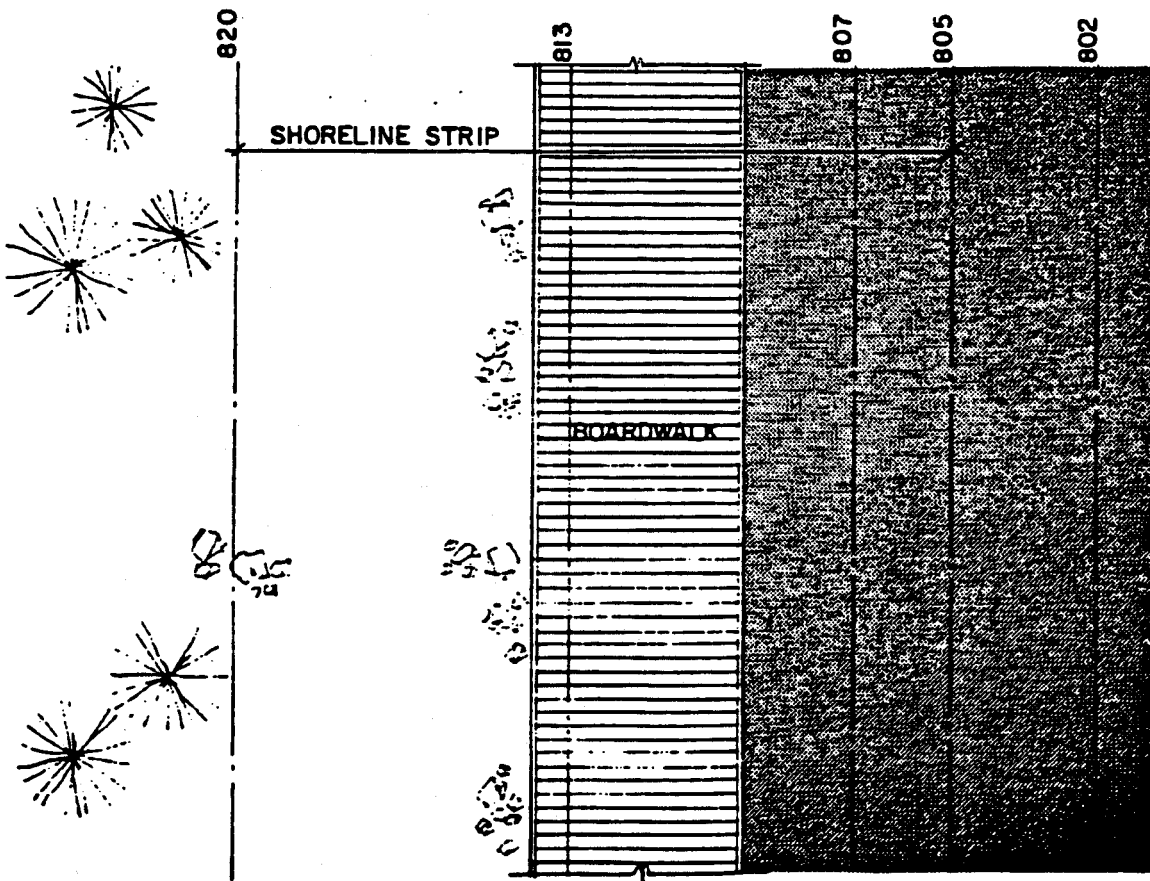
PLAN

TYPE 5 BOARDWALK

SHAPE AND CONFIGURATION
MAY VARY.



SECTION

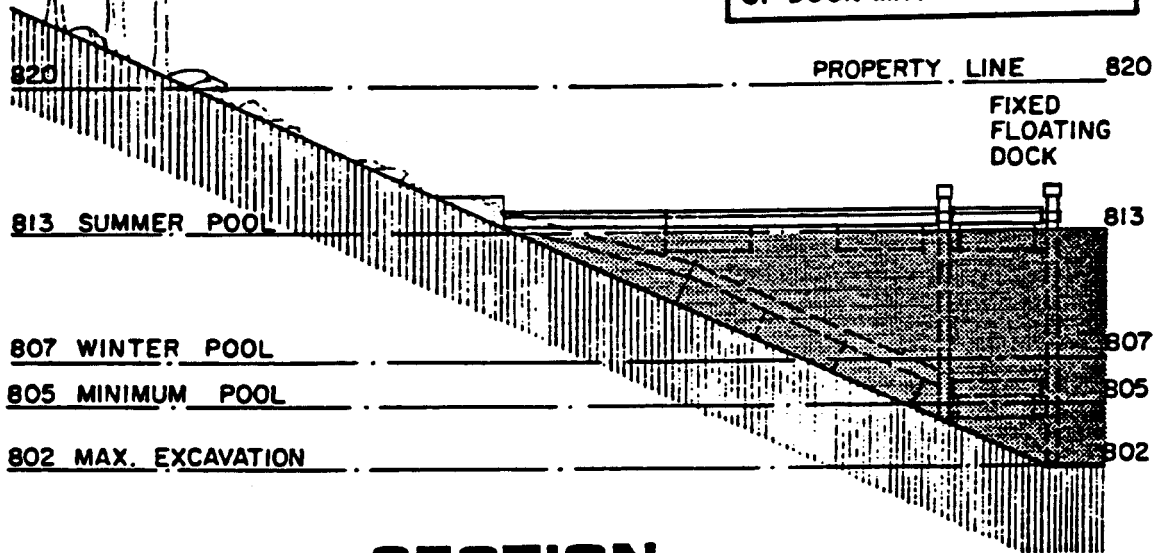


PLAN

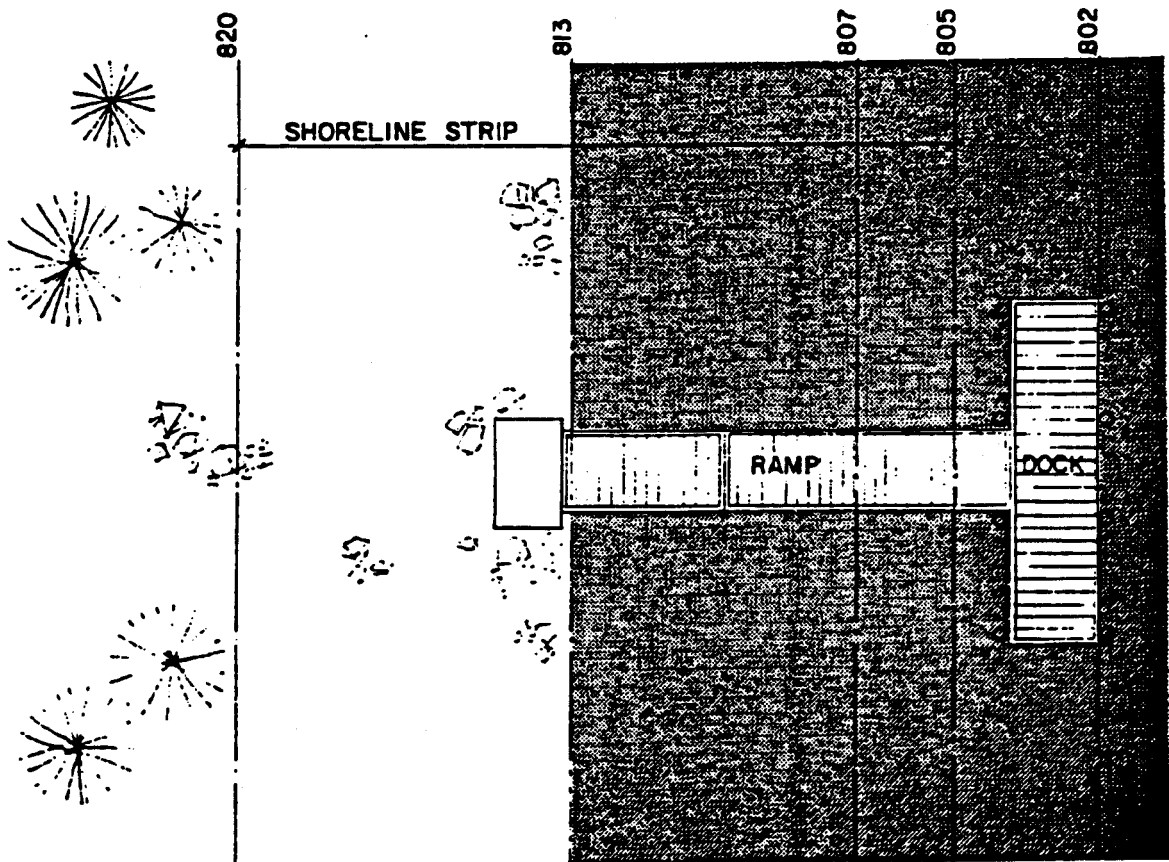
TYPE 7

PROJECTING FLOATING DOCK

SHAPE AND CONFIGURATION
OF DOCK MAY VARY.



SECTION

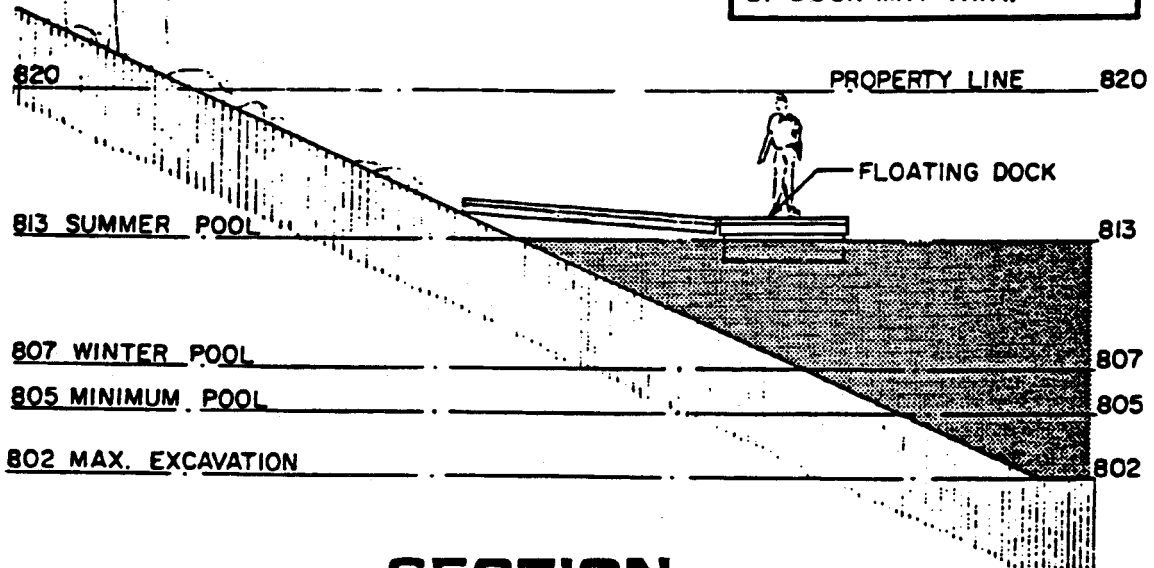


PLAN

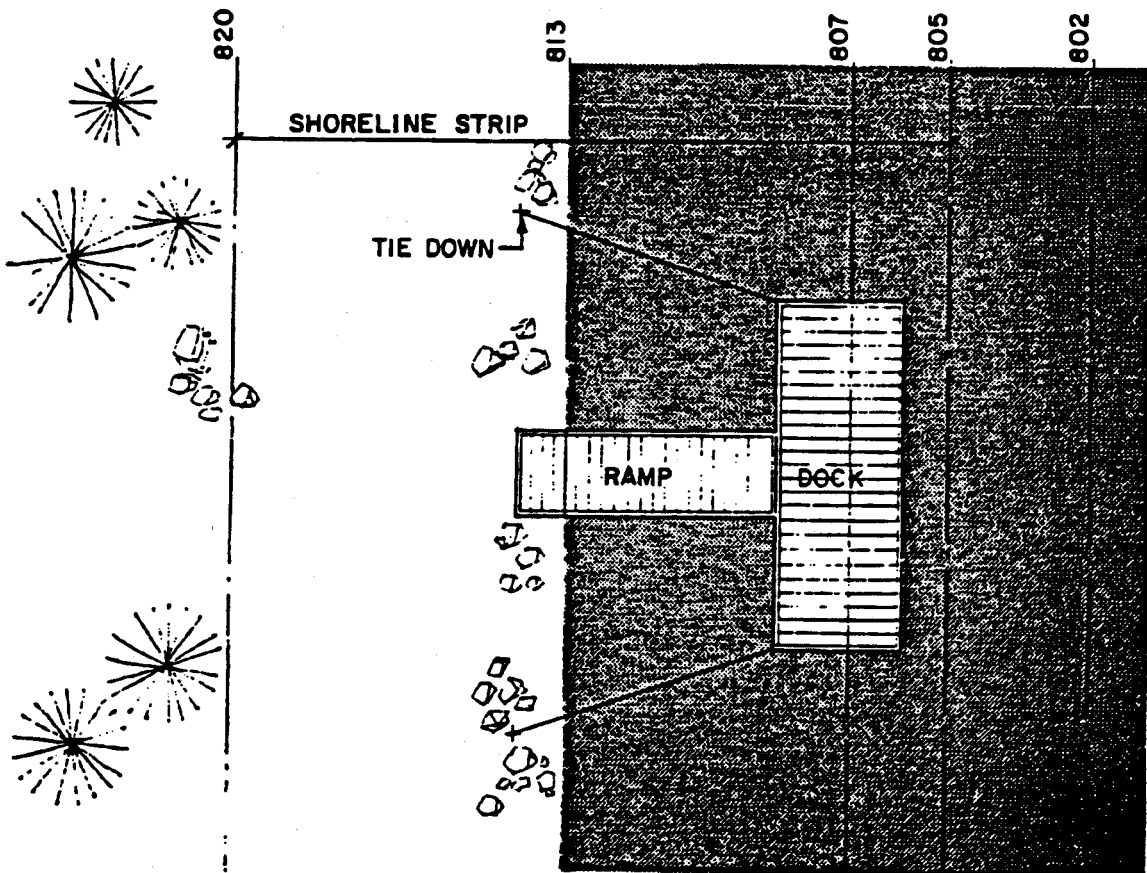
TYPE 8

MOVABLE DOCK

SHAPE AND CONFIGURATION
OF DOCK MAY VARY.



SECTION

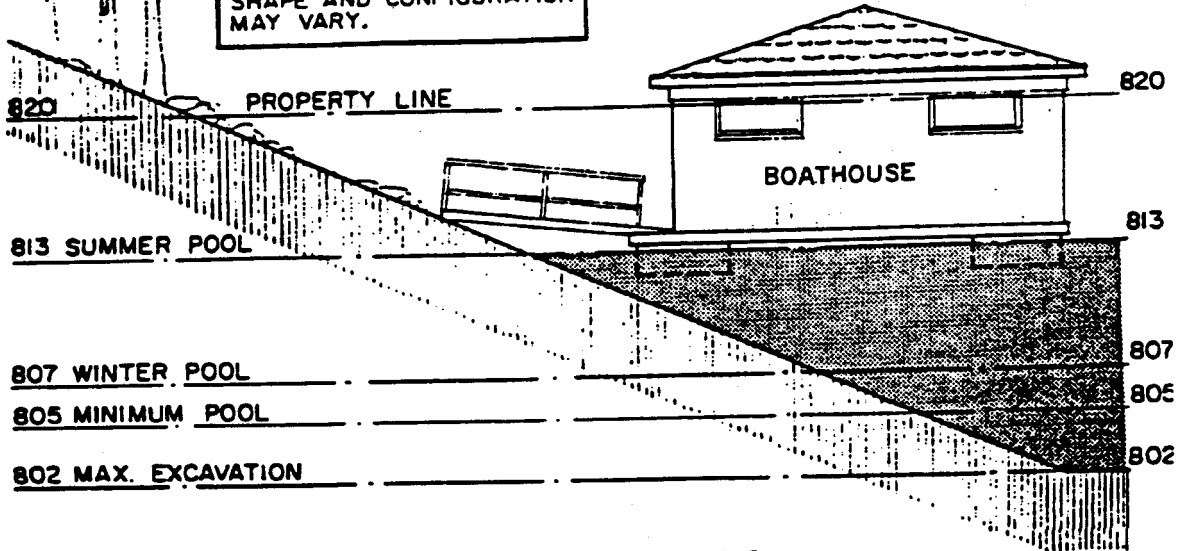


PLAN

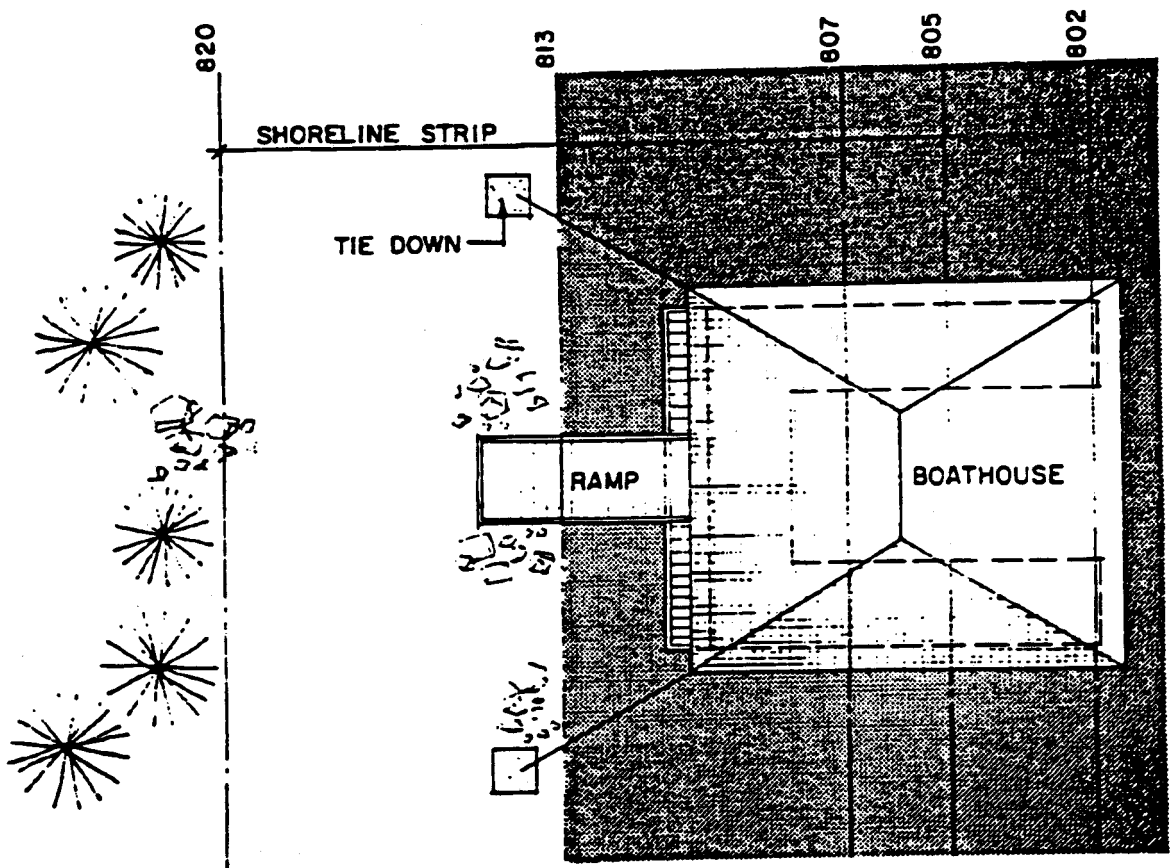
TYPE 10

COVERED OR ENCLOSED BOAT DOCK OR FLOATING
BOATHOUSE

SHAPE AND CONFIGURATION
MAY VARY.



SECTION



PLAN

Appendix H

References

- Brinson, M. M. 1993. A hydrogeomorphic classification for wetlands. Technical Report WRP-DE-4. U.S. Army Corps of Engineers. Waterways Experiment Station, Vicksburg, Miss.
- Carnes, L. F. 1980. A summary of historic archaeological resources located within Tellico Industrial Area II. Report submitted to the Tennessee Valley Authority. Department of Anthropology, University of Tennessee, Knoxville.
- Cowardin, L. M., V. Carter, F. C. Golet, and E. T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. U.S. Dept. of the Interior, Fish and Wildlife Service. FWS/OBS-79/31.
- Davis, R. P. S., Jr. 1980. A preliminary report of probabilistic and nonprobabilistic archeological sampling in Industrial Area II, Tellico Reservoir, Tennessee, Tellico Archeological Survey Report 2. Department of Anthropology, University of Tennessee, Knoxville.
- Davis, R. P. S., Jr. 1990. Aboriginal settlement patterns in the Little Tennessee River Valley, Report of Investigations No. 50, University of Tennessee Department of Anthropology: Publications in Anthropology No. 54, Tennessee Valley Authority, Knoxville.
- Davis, R. P. S., Jr., L. R. Kimball, and W. W. Baden. 1982. The Tellico archeological survey: A management summary. Report submitted to the Tennessee Valley Authority. Department of Anthropology, University of Tennessee, Knoxville.
- East Tennessee Development District. 1993. Industrial land inventory.
- Grossmann, J. 1993. How green are those fairways? Audubon 95(5):90-99.
- Hall, C. L. 1987a. Archaeological survey of Development Area 2: North portion, Industrial Area II. Report submitted to Tellico Reservoir Development Agency. Department of Anthropology, University of Tennessee, Knoxville.
- Hall, C. L. 1987b. Archaeological survey of Development Area 3: Industrial Area II, South portion. Report submitted to Tellico Reservoir Development Agency. Department of Anthropology, University of Tennessee, Knoxville.
- Siegel, P. B. and F. O. Leuthold. 1992. Economic and fiscal impacts of Tellico Village, Loudon County, Tennessee. Research Report 92-17, University of Tennessee, Agricultural Experiment Station, Knoxville.
- Tennessee Valley Authority. 1983. Tellico Reservoir Postimpoundment Water Quality. Knoxville.
- Tennessee Valley Authority. 1993. A report on the condition of the Tennessee River and its tributaries in 1992. RiverPulse (May). Knoxville.