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Alternatives Supplement
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SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT

TENNESSEE VALLEY AUTHORITY CHATTANOOGA OFFICE SPACE ALTERNATIVES: MODIFICATIONS TO ALTERNATIVE 3 Hamilton County, Tennessee

TENNESSEE VALLEY AUTHORITY

NOVEMBER 2007

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The Proposed Decision and Need

In April 2007, the Tennessee Valley Authority (TVA) issued a final environmental assessment (EA) on alternatives for providing future office space for TVA staff in Chattanooga (TVA 2007). The EA evaluated four alternatives: (1) continuing to lease the existing Chattanooga Office Complex, (2) leasing appropriate existing office space, (3) constructing new office space on TVA property at the Chickamauga Dam Reservation, and (4) constructing new office space on non-TVA property. Since the completion of this EA, TVA has narrowed the range of alternatives for office space to Alternative 1 and Alternative 3. Further development of Alternative 3 has led to modifications of the proposed office complex on the TVA Chickamauga Dam Reservation as described in the original April 2007 EA. TVA has prepared this supplemental EA to evaluate the potential impacts of the modified Alternative 3.

Other Environmental Reviews and Documentation

On April 2, 2007, TVA issued a final EA and finding of no significant impact for Chattanooga office space alternatives (TVA 2007). These documents are herein incorporated by reference.

Alternatives

The scope of this supplemental EA is limited to the modifications to Alternative 3 that TVA has proposed since the original EA was issued. Since completion of the original EA, preliminary design work has indicated that in order to construct the proposed office building, some grading would be necessary in the area specified as visual buffer in the original EA. Figure 1 shows the proposed new visual buffer. Consistent with the visual buffer commitment of the original EA, the building would still be located outside of the area originally specified as visual buffer, but approximately 3 acres within the original buffer would have to be cleared and graded to permit construction of an emergency vehicle access road on the north side of the building. Figures 2 through 4 show additional details of the proposed building and buffer and Figure 5 is a photographic simulation of the appearance of the proposed new building from Chickamauga Dam.

In addition to the changes to the visual buffer, the location of proposed water, sewer, and other utility connections has been moved from along the office complex access road to the southeast side of the site, which is closer to existing water and sewer lines.

Affected Environment and Evaluation of Impacts

The change in the visual buffer under the modified Alternative 3 would have little to no impact on any natural or cultural resources other than visual resources. Similarly, the change in the location of the utility lines would have little to no impact on any natural resources; it could, however, affect cultural resources, as the site of the relocated lines was not previously surveyed for archaeological resources. The potential impacts to visual and cultural resources are described below.

Revised Visual Resources Evaluation

In the original EA, potential visual impacts were reduced by the commitment to maintain existing vegetation from the shoreline to the prominent peaks on the north, east, and west sides of the site as a visual buffer (see Figure 1). Duke Realty subsequently completed a site design that requires removal of a substantial amount of earth from the highest peak on the site and a portion of the vegetation on the northern slopes. This would allow the northern edge of the proposed building to be situated along the original visual buffer line. Duke is proposing to utilize a retaining wall on the north side to minimize the amount of grading that would be required.

If this design were implemented, there would potentially be a greater visual change in the natural landscape than was identified under Alternative 3 in the original EA. However, since the peak of the site would be lowered, the new building would have a shorter profile and would likely be only slightly discernible from Chickamauga Dam to the northwest (Figure 5), Booker T. Washington State Park to the east, and other viewing positions along the reservoir. Since the design studies that were used to produce Figures 1 through 5 of this supplemental EA had not been done at the time the original EA was completed, it is not possible to make a meaningful comparison between the relative visibility of the conceptual design as discussed in the original EA and the current design. Views of the building would be less prominent during the growing season when trees are leafed out than during the winter. Even during the winter, the visual intrusion of the building would likely not be significant with adherence to the mitigation measure listed below regarding the use of natural color schemes.

To further address the potential for visual impacts, TVA would replace all trees of 24-inch or greater diameter at breast height (dbh) that are removed from within the original visual buffer area. The trees would be replaced at a ratio of 2:1 and planted within the portion of the original buffer area that would be graded but outside of the emergency vehicle access area or in other sparsely forested parts of the original buffer area. Replacement species would include both hardwood and evergreen species. All trees would be a minimum of 6 feet in height at the time of planting and would be maintained for a minimum of two growing seasons until the root balls have been established. All tree species would be native to the area and approved by a TVA landscape architect prior to planting. The replacement trees would take 5 to 15 years to reach heights that would partially screen the building from view, but due to the inclusion of evergreen species, the final result would enhance visual buffering during the winter months.

By implementing the commitments from the original EA and those as outlined in this section, visual impacts as a result of new construction would be insignificant.

Additional Cultural Resources Evaluation

The modified location of the utility lines crosses land that was not included in the initial archaeological survey (Angst and Guymon 2006) for the proposed project. For this reason, a Phase I archaeological resource survey of four additional portions of an area totaling 19.2 acres was conducted on September 10–12, 2007 (Angst and Guymon 2007). One historic site with an associated capped cistern was recorded during the survey. The land where the historic site lies has been heavily disturbed, and TVA has determined that it is not eligible for the National Register of Historic Places. The Tennessee State Historic Preservation Officer concurred with this determination in a letter dated October 29, 2007. Furthermore, Tribal Historic Preservation Officers representing the Jena Band of Choctaw Indians and the United Keetoowah Band of Cherokee Indians commented with no objections. See Attachment 1 for concurrence correspondence.

The revised site plan would not adversely affect the viewshed of Chickamauga Dam. Implementation of the revised vegetative visual buffer would not adversely change the visual character of the bluff or this section of the reservoir. Additional plantings prescribed, proposed color schemes, and lighting requirements in the commitments listed below further reduce any negative impacts.

Cumulative Impacts

Construction of a new TVA office complex on the TVA Chickamauga Dam Reservation would involve ground-disturbing activities on a maximum of 60 acres out of an approximately 1,028-acre reservation. A wooded riparian buffer zone of 250 feet to 600 feet in width would remain intact to facilitate wildlife access to the reservoir. Due to the relatively small size of the parcel involved and the remaining TVA properties in the immediate vicinity still available for use by wildlife, the cumulative impacts of Alternative 3 (contracting for the construction of a new TVA office complex at the Chickamauga Dam Reservation) would be insignificant.

Mitigation Measures

The mitigation measures specified in the original EA for Alternatives 1, 2, and 4 remain unchanged. In addition to routine best management practices, the following mitigation measures would apply to Alternative 3:

- **Visual/Conservation Buffer** - Maintain existing vegetation on the steep slopes on the north side of the tract from the shoreline to the prominent peaks of the tract as shown in Figure 1 of this supplemental EA.
- **Vegetation Removal From Original Visual Buffer** - All trees of 24-inch dbh removed from the visual buffer area specified in the original EA would be replaced at a 2 to 1 ratio, with a mixture of both hardwood and evergreen species. The replacement trees would be planted within the portion of the original buffer area that would be graded but outside of the emergency vehicle access area or in other sparsely forested parts of the original buffer area. All trees would be a minimum of 6 feet in height at the time of planting and would be maintained for a minimum of two growing seasons until the root balls have been established. All tree species would be native to the area and approved by a TVA landscape architect prior to planting.

- **Lighting** - During construction, all lights used (pole-mounted, equipment-mounted, or structure-mounted floodlights) would be fully shielded or would have internal low-glare optics, such that light would not be emitted from the fixture at angles above the horizontal plane. For construction, this could require temporarily retrofitting floodlights and other fixtures with external visors and side shields. Shielded low pressure sodium lighting would be used during the construction and operational phases. Area lighting and parking lot light poles would be no taller than 40 feet, unless they were lighting objects taller than 40 feet. In such cases, pole heights would be minimized.
- **Structures** - All color schemes for building exteriors would be visually compatible with natural background colors and provide dark roofs on all structures.

TVA Preparers

Peggy L. Jenkins, Manager, Strategic Assets, Proposed Project Review

Michael K. McDowell, Senior Manager, Facilities Management, Proposed Project Review

Charles P. Nicholson, Program Manager, NEPA Policy, NEPA Compliance

W. Chett Peebles, Landscape Architect, Cultural Resources, Visual Effects

Tina M. Tomaszewski, Senior NEPA Specialist, NEPA Services, Principal Preparer

Edward William Wells III, Contract Archaeologist, Cultural Heritage Evaluation

Agencies and Others Consulted

Native American Tribes:

Eastern Band of Cherokee Indians

Jena Band of Choctaw Indians

United Keetoowah Band of Cherokee Indians

Tennessee State Historic Preservation Officer

References

Angst, M. G., and G. Guymon. 2006. *Phase I Archaeological Survey of the Proposed Chattanooga Office Complex, Hamilton County, Tennessee*. Report prepared for the Tennessee Valley Authority.

Angst, M. G., and G. Guymon. 2007. *Phase I Archaeological Survey of the Proposed Chattanooga Office Complex – Additional Areas, Hamilton County, Tennessee*. Archaeological Research Laboratory, University of Tennessee, Knoxville. Report prepared for the Tennessee Valley Authority.

Tennessee Valley Authority. 2007. *Tennessee Valley Authority Chattanooga Office Space Alternatives Final Environmental Assessment and Finding of No Significant Impact*. TVA, Knoxville, Tennessee. Available at <http://www.tva.gov/environment/reports/COCspace/index.htm>.

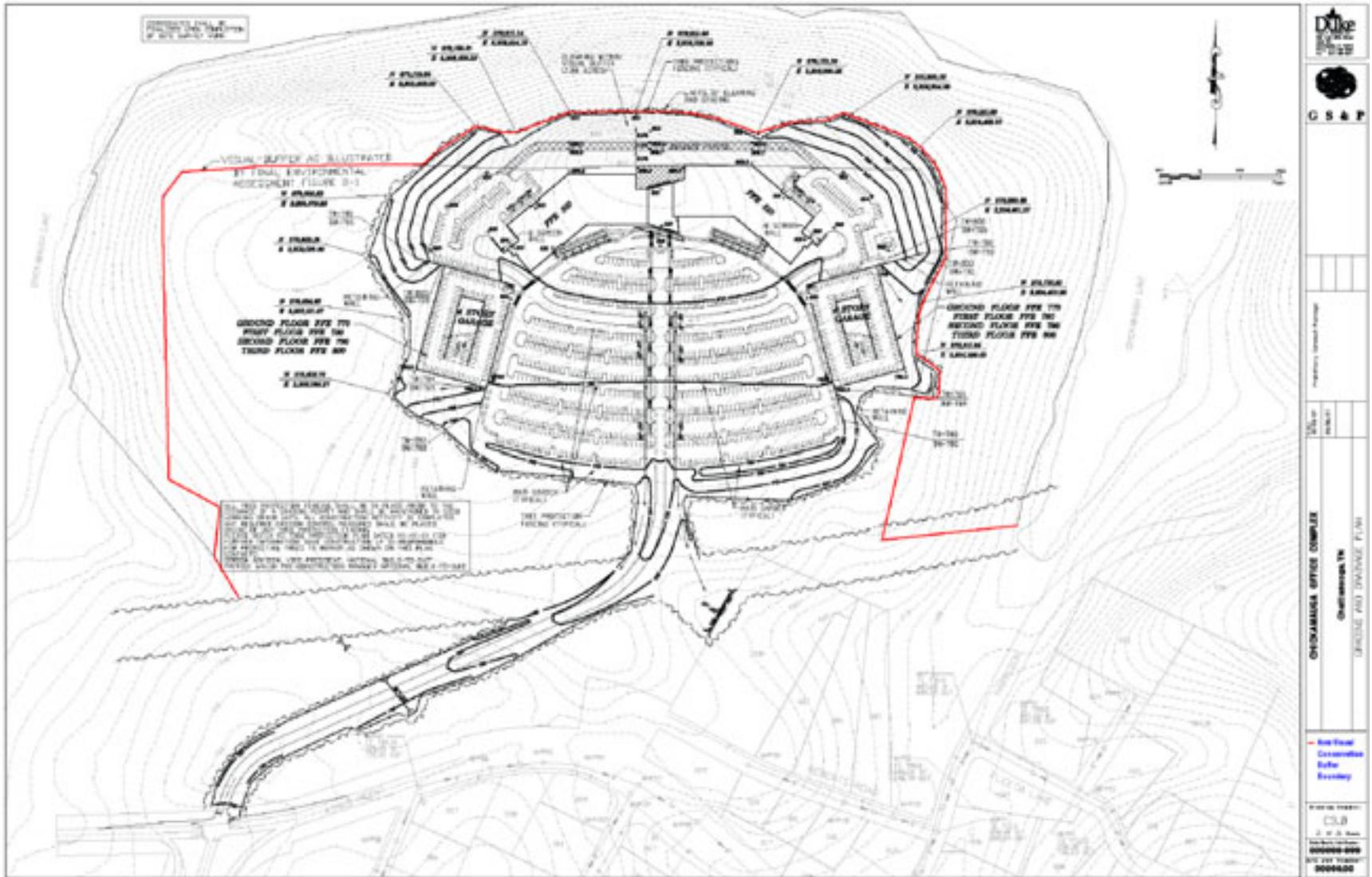


Figure 1. Visual/Conservation Buffer

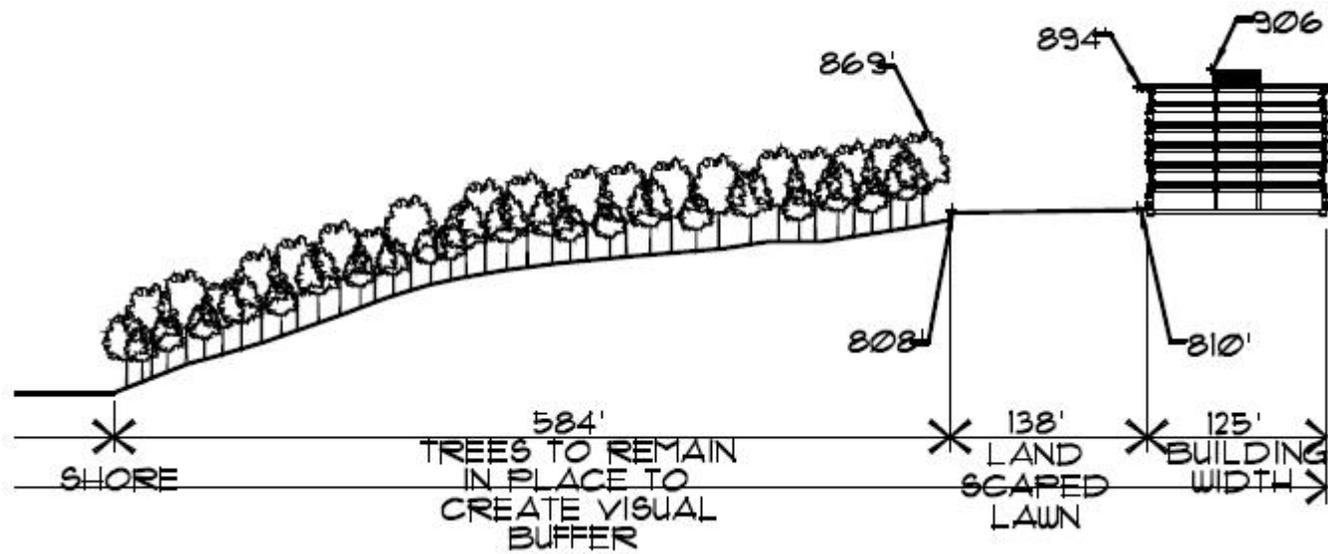


Figure 3. Enlargement of Section "A" Shoreline Cross-Sectional View From Figure 2

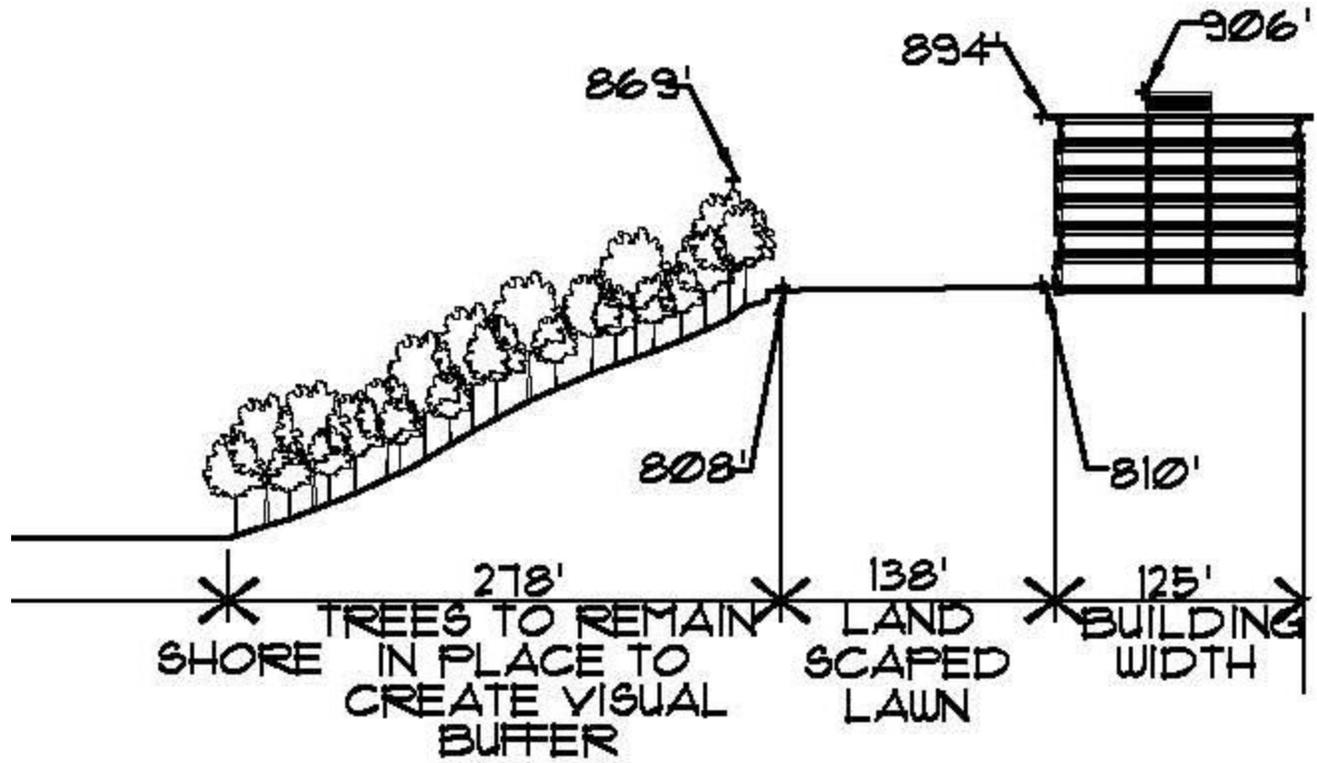


Figure 4. Enlargement of Section "B" Shoreline Cross-Sectional View From Figure 2



Figure 5. View of Proposed Alternative 3 Office Building from Chickamauga Dam

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Attachment I - Correspondence

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TENNESSEE HISTORICAL COMMISSION
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
2941 LEBANON ROAD
NASHVILLE, TN 37243-0442
(615) 532-1550

October 29, 2007

Dr. Thomas Maher
Tennessee Valley Authority
400 W. Summit Hill Drive
WT 11D - Cultural Resources
Knoxville, Tennessee 37902

RE: TVA, ARCHAEOLOGICAL ASSESSMENT, OFFICE SPACE ADDITIONS,
CHATTANOOGA, HAMILTON COUNTY, TN

Dear Dr. Maher:

At your request, our office has reviewed the above-referenced archaeological survey report in accordance with regulations codified at 36 CFR 800 (Federal Register, December 12, 2000, 77698-77739). Based on the information provided, we concur that the project area contains no archaeological resources eligible for listing in the National Register of Historic Places.

If project plans are changed or archaeological remains are discovered during construction, please contact this office to determine what further action, if any, will be necessary to comply with Section 106 of the National Historic Preservation Act.

Your cooperation is appreciated.

Sincerely,

A handwritten signature in black ink that reads "E. Patrick McIntyre, Jr.".

E. Patrick McIntyre, Jr.
Executive Director and
State Historic Preservation Officer

EPM/jmb

CONSULTATION COMMENT RECEIVED VIA TELEPHONE

The United Keetoowah Band of Cherokee Indians in Oklahoma have no objection to the proposed undertaking, and if necessary, we would like to see an agreement document established that would specify data recovery and mitigation plans should any inadvertent discoveries be encountered. We would like to be kept informed regarding this project.

Message relayed to Pat Ezzell (TVA) by Lisa Stopp, Tribal Historic Preservation Officer and Interim Director, Language, Culture and Heritage, United Keetoowah Band of Cherokee Indians in Oklahoma November 14, 2007, at approximately 4:22 EST.

-----Original Message-----

From: lstrangejbc@centurytel.net [<mailto:lstrangejbc@centurytel.net>]

Sent: Thursday, November 15, 2007 4:15 PM

To: Ezzell, Patricia Bernard

Subject: Re: TVA, Proposed Office Space Additions, Archaeological ResourcesAssessment, Chickamauga Reservoir, Hamilton County, TN

After reviewing the documentation it has been found that there will be no impacts in regards to the Jena Band of Choctaw Indians.

Should I be of further assistance, please feel free to call me

Lillie Berryman
Jena Band of Choctaw Indians
318-992-8258
lstrangejbc@centurytel.net