

Executive Summary

Foothills Parkway

Analysis



Based on input received from the public through interviews and public meetings, a solid majority of respondents favor full completion of the Parkway. An overwhelming majority also desire options to the personal vehicle in providing the visitor experience. Finally, should any section not be constructed, public sentiment suggests that the National Park Service retain the right-of-way for Park use.

TABLE C. Impact Assessment

SCENARIO	Quality of Viewsheds				Projected Year 2030 Parkway Traffic		Cost			Park Road Traffic Relief		Environmental
	Park		Total		Typ. Summer Weekday	Rating	\$ per mile	Total Annual O&M Cost (thousands)	Rating	Reduction	Rating	
	Score	Rating	Score	Rating								
No Build	0	-	0	-	0	"	0	0	+	0	-	+
Full Build (33.5 mi.)	123.01	++	160.67	++	4,400 - 10,300	"	\$7.5m	\$320	"	6,100 (Little River Rd.)	+	-
Build B (14.1 mi.)	86.89	++	85.37	++	4,400	+	\$7m	\$86	"	0	-	-
Build B Alternate (Pittman Center Proposal)	7.92	-	17.14	-	23,800	-	\$10m+	\$338	-	0	-	"
Build C (9.6 mi.)	24.41	+	35.4	+	7,800	-	\$5m	\$64	+	0	-	-
Build D (9.8 mi.)	11.71	+	39.9	+	10,300	-	\$10m	\$170	-	6,100 (Little River Rd.)	+	-
Build Transit:												
Rail	?		?		n/a	+	\$35m+	\$2,000 - \$3,500	--	n/a	-	-
Monorail	123.01	++	160.67	++	n/a	+	\$70m+	\$3,500 - \$4,500	--	n/a	-	-

++ Very Good
 + Good
 " Neutral
 - Poor
 -- Very Poor

In summary, the analysis indicates that all sections offer opportunities to view the Park and surrounding foothills area. Consequently, they all have the potential to provide a pleasant visitor experience. This visitor experience may over time be impacted by excessive traffic on certain sections. A technology such as ITS may need to be implemented. Completion of all sections of the Parkway best achieves the Congressional mandate and its associated goals. A completed parkway will provide improved connections to the regional roadway network and will reduce traffic on several existing roadway sections within and outside the Park.

This report was produced by Wilbur Smith Associates in conjunction with the U.S. Department of Interior, the National Park Service, the U.S. Department of Transportation, Federal Highway Administration, and the Knoxville Regional Transportation Planning Organization.

Great Smoky Mountains National Park, a gift from the people of Tennessee and North Carolina, was created early in the 20th century for the "benefit and enjoyment of the people." The Park straddles the Tennessee-North Carolina border in the Southern Appalachians and is now the most visited of National Parks. This heavy visitation comes at a price, part of which is traffic congestion. Even prior to World War II, traffic congestion on the Tennessee side of the Park had become a significant issue.

Foothills Parkway came about in response to rising public sentiment in the early 1940's. With a favorable report from Secretary of the Interior Harold L. Ickes, the 78th Congress approved Public

Law 232 on February 22, 1944. This mandate of Congress "...authorized the acceptance of donations of land for the construction of a scenic parkway to provide an appropriate view of the Great Smoky Mountains National Park from the Tennessee side of the park, and for other purposes..." The state of Tennessee confirmed its commitment in 1947 and the proposed road was christened the "Foothills Parkway."

Steady progress was made by the National Park Service and the Department of Interior during the 1950's and 60's. By 1968, construction of Sections A, G, and H, comprising 22.5 miles of the planned 72.1-mile facility, was complete. Construction was also complete on the Spur which links Gatlinburg

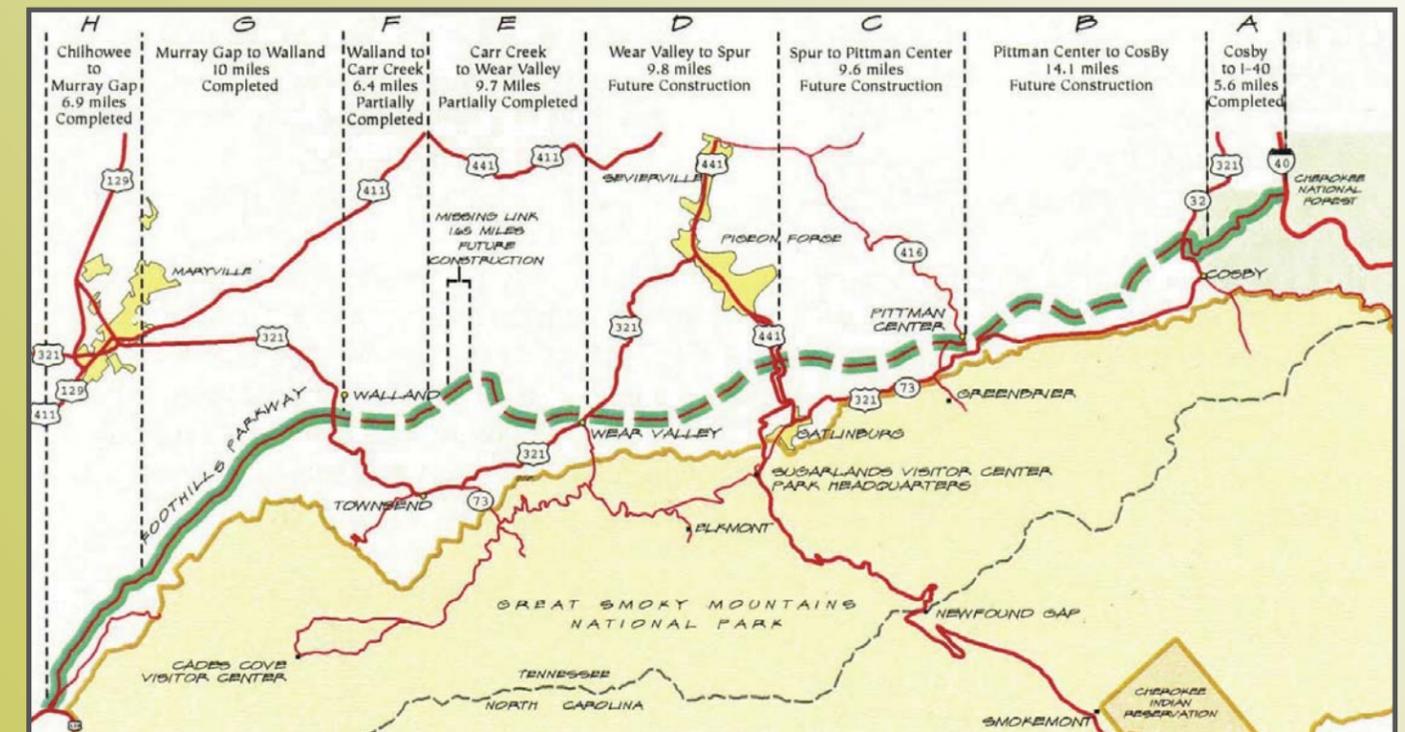


FIGURE 1. Foothills Parkway

and Pigeon Forge, and on the 3.4-mile Gatlinburg Bypass, which was intended to provide improved access to the Park while relieving traffic congestion in Gatlinburg.

The *Foothills Parkway Master Plan* (1968) describes the Parkway as a limited access facility with seven interchanges to connect it with the regional roadway system. The Plan “envisions a pattern of use and suggests a program of visitor services and resource management designed to meet the needs of the parkway visitor...” so it can reach full potential as a “nationally significant scenic recreation resource.”

Project development slowed dramatically after 1968. With the advent of the National Environmental Policy Act, the consequences of construction were more fully considered and the planning and design process became more comprehensive. Also, priority changes at a Federal level made it increasingly difficult to obtain additional construction funds.

Significant questions have arisen in recent years as to whether the Congressional mandate can still be achieved and consequently whether the Parkway should be completed. In recognition of these concerns, this study was commissioned for the specific purpose of providing an in-depth assessment of the Foothills Parkway corridor in context with the Congressional mandate, the mission of Great Smoky Mountains National Park, the regional transportation network and Gateway communities in Blount, Cocke and Sevier counties.

To complete this assessment, the study considers:

- Viewsheds;
- Existing and projected traffic volumes;
- The ability of the Parkway to accommodate traffic demands;
- Visitor experience;
- Environmental impact; and
- Construction.

This study focused on Sections B, C, and D. Sections A, G, and H are complete and Sections E and F are currently under construction.

Figure 1 (on front page) shows the Parkway, section boundaries, and other descriptive information which is current as of 2001.

Projected 2030 Daily Summer Traffic on Foothills Parkway and Environs

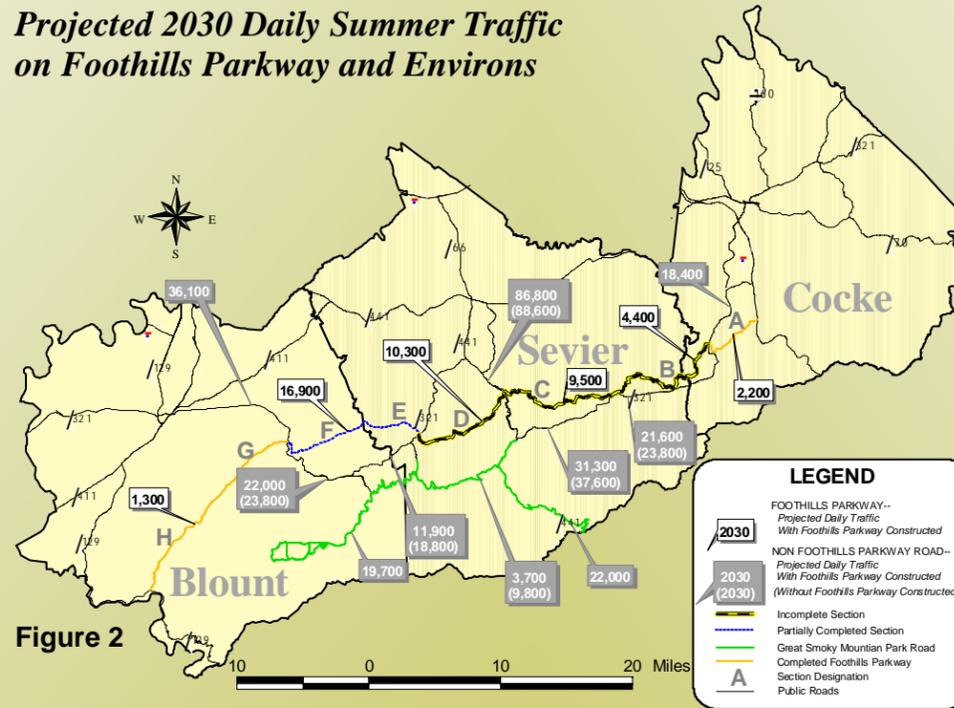


Figure 2

Foothills Parkway was conceived as a scenic drive and one measure of the value of this facility is the quality and availability of views or viewsheds (the geographic area visible to an observer from a specific location) available from the Parkway. In this study, 3D computer models and satellite imagery were used to identify, analyze, and quantify the quality of Parkway viewsheds. Viewshed quality was estimated by utilizing the results of a previous NPS study titled *Scientific Monograph Series No. 18, “Visual Preferences of Travelers Along the Blue Ridge Parkway.”* Tables A and B summarize the viewshed analysis for the uncompleted sections of the Parkway. When views of both the Park and surrounding areas are considered, each of the uncompleted sections provides quality views. Viewshed values per mile range from a low of 3.69 for Section C to a high of 6.05 for Section B.

TABLE A. Foothills Parkway Viewshed Analysis--Park View Only

Parkway Section	Section Length (miles)	Viewsheds Per Section	Viewsheds Per Mile	Park Viewshed Value	Viewshed Value Per Mile
B	14.10	22	1.56	86.89	6.16
C	9.60	7	0.73	24.41	2.54
D	9.80	3	0.31	11.71	1.19

TABLE B. Foothills Parkway Viewshed Analysis--Total View

Parkway Section	Section Length (miles)	Viewsheds Per Section	Viewsheds Per Mile	Total Viewshed Value	Viewshed Value Per Mile
B	14.10	22	1.56	3.58	0.25
C	9.60	10	1.04	35.40	3.69
D	9.80	11	1.12	39.90	4.07

Traffic analysis for this study consisted of three primary components. These were to determine (1) the impact of Parkway construction on the regional transportation network and Park roads, (2) the projected traffic flow on the Parkway, and (3) the effect of projected Parkway traffic volume on visitor experience. The results of this analysis are illustrated in Figure 2, which shows Park roads in green. The analysis concluded that the completion of Foothills Parkway would have a significant impact on the regional transportation network and Little River Road in the Park. The Parkway itself would carry a substantial volume of traffic, both commuter and that traveling the road for the experience itself. Excessive traffic can detract from the ability to enjoy roadside views as drivers have to concern themselves with other motorists. In fact, this is a concern for Sections D, E and F where the projected traffic volume may be so high as to negatively affect visitor experience. Monitoring the volume of traffic along with the implementation of technologies such as Intelligent Transportation Systems (ITS) is recommended.



Based on current knowledge of the environment, construction of Sections B, C and D appears to be feasible, although further evaluation of environmental impacts is required. Cost estimates (Table C) for each of the sections reflect potential mitigation requirements and the cost of construction in mountainous terrain. Potential operational costs were only marginally assessed in this study and should be further considered.

A variety of future development scenarios that could provide mobility and a pleasant visitor experience were reviewed as a part of this study. These included several roadway construction options, a no build option, and alternative transportation system options ranging from trails to several types of mass transit. The results of the evaluation of each option with reference to quality of viewsheds provided, cost, Park road traffic relief and environmental impact are provided in Table C.

None of the alternatives (monorail, trails, etc.) to roadway construction were found to be cost effective and/or able to meet the mandate requirements. Should the Parkway be completed and opened to general non-commercial traffic, however, the addition of rubber tired transit as a modal choice is considered to be very