

### 3.3.2 Bushnell Area (Initial Concept)

This alternative follows the Northern Shore Corridor to the vicinity of Monteith Branch and provides a new destination that would offer some type of visitor services, a tribute to local heritage, and educational opportunities. This corridor would require a major bridge crossing of the Forney Creek embayment. The total length of this corridor is 4.7 miles (7.6 km). Section 8.4 of this report details the refined concept for this alternative.

### 3.3.3 Buckeye Branch Bridge Corridor

The Buckeye Branch Bridge Corridor would follow the Northern Shore Corridor roughly 4.9 miles (7.9 km) to just east of the Chambers Creek embayment. At this point, it would continue south to southwest toward Fontana Lake. After bridging the lake, the corridor would tie into Meetinghouse Mountain Road south of the lake in the Nantahala National Forest. The corridor would follow this road to NC 28. This corridor would involve approximately 7 miles (11.3 km) of new construction within GSMNP, in addition to approximately 5.4 miles (8.7 km) of improvements to Meetinghouse Mountain Road in the Nantahala National Forest.

### 3.3.4 Cable Cove Bridge Corridor

The Cable Cove Bridge Corridor would follow the Northern Shore Corridor to just east of Hazel Creek. At this point, the corridor would cross Fontana Lake, tying into Cable Cove Road west of the Cable Cove Recreation Area. Cable Cove Road is on Nantahala National Forest lands and has an existing intersection with NC 28. Improvements to Cable Cove Road would be necessary with this corridor. The total length of this corridor is 21.4 miles (34.4 km), approximately 19 miles (30.6 km) of which are within GSMNP.

## 3.4 Build Corridors

The following build corridors have two options for the western terminus, both in the vicinity of the Fontana Dam. One would tie the proposed corridor directly into the existing GSMNP roadway segment that crosses Fontana Dam, while the other would follow a short portion of an old roadbed to tie directly into NC 28. The connection closest to Fontana Dam would have less roadway construction (roughly 1.5 miles [2.4 km]) as compared with the other terminus. However, introducing additional vehicles

over Fontana Dam may generate security concerns and would have the potential to increase the structure's maintenance costs.

#### 3.4.1 Northern Shore Corridor (Initial Concept)

The Northern Shore Corridor continues west past the Lake View Road tunnel on a course that generally follows the northern shore of Fontana Lake to the vicinity of Fontana Dam, for a total of roughly 27 miles (43.5 km). This corridor utilizes remaining portions of NC 288 to the extent possible. Major bridge crossings of the Forney Creek, Hazel Creek, and Eagle Creek embayments would be necessary.

#### 3.4.2 Interior Corridor

The Interior Corridor turns to the north from the Lake View Road tunnel to follow Bear Creek Valley as it continues into the interior of GSMNP. After its climb levels off, the corridor follows the mountainside. Just east of Hazel Creek, the corridor turns south to tie into the Northern Shore Corridor in the vicinity of the confluence of the Hazel Creek embayment and Fontana Lake. Major bridge crossings of the Hazel Creek and Eagle Creek embayments would be required. This route continues to follow the Northern Shore Corridor to the vicinity of Fontana Dam. A tunnel would be required where the topography transitions from valley to mountainside. This corridor is roughly 26 miles (41.8 km) in length.

#### 3.4.3 Flint Gap Corridor

The Flint Gap Corridor would follow the Northern Shore Corridor from the Lake View Road tunnel for roughly 16 miles (25.7 km) to just east of Hazel Creek. From here, it would continue north to northwest toward the interior of GSMNP. Just west of Eagle Creek, the corridor would turn south to tie into the Northern Shore Corridor in the vicinity of the confluence of the Eagle Creek embayment and Fontana Lake. This route would continue to follow the Northern Shore Corridor to the vicinity of Fontana Dam. This corridor is the longest, with a total length of roughly 34 miles (54.7 km).

#### 3.5 Potential for Major Bridges

The partial-build and build alternatives have the potential to cross one or more very deep and wide bodies of water. Fontana Dam created a reservoir that is in excess of 200 feet (61 m) deep. This area includes Fontana Lake as well as the impounded waters of major creeks, such as Forney, Hazel and Eagle creeks. It is anticipated that crossings of these water bodies would have spans ranging from 1,500 to 3,000 feet in