

plies could be drawn from the Cat-tail Branch before the ground would admit of descending to the level of its feeder.

The Hawlings River rises 2 miles to the south of our tunnel through the Damascus Ridge, so that if the impediment of the Unity Ridge separating it from the Patuxent, were removed, its drainage would be too limited for our purpose. The first secondary supplies in the Patuxent side must therefore be drawn from the basin of the Cat-tail Branch, and this cannot be brought into the canal to advantage nearer than 7 miles 1698 miles from the centre of the tunnel as the mouth of Cat-tail Branch is more than 100 feet below our summit, and its position with respect to the Patuxent, diverging considerably from it, forces us to obtain this supply from some point near its mouth. This makes the whole length of canal, as located, to be supplied by the 11445.76 acres of drainage above the summit 11 miles 73 yds. and renders the passage of a canal through the ridge at the point assumed impossible.

Recapitulating the results obtained we have—

Summit Level—82.57 ft. below lowest part of Damascus Ridge,
122.473 ft. below Damascus Ridge at H. Griffith's,
496.200 ft. above mid-tide at Baltimore.

Length of Canal depending upon summit water—11 mi. 73½ yds.

Area of drainage, for summit supplies, 11445.76 acres or 17.884 square miles.

Tunnel at summit, 547½ yards.

Two Reservoirs—1st, on Cabin Branch	} Dam—30 feet. Surface—31.253 acres Contents—1008.420 cub. yds.
for a drainage of	
2903.68 acres,	

Quantity of water to be stored, 861966.

2d, on the Patuxent	} Dam—42 feet. Surface—5805 acres. Contents—2622312 cub. yds.
for a drainage of	
8544.080 acres,	

Quantity of water to be stored, 2536541.

Two Feeders—1st, From Cabin Br. to Patuxent, length 840½ yds.

2d, From Patuxent to the summit, length 1 mile
1644½.

BROOKVILLE ROUTE.

Your instructions in relation to surveys of the Seneca Route of the Maryland Canal were received on the 20th June, 1838, previous to which time however, we had been preparing and obtaining the necessary instruments.

The following copy of these instructions will form a proper introduction to this description, illustrative of the accompanying maps of the Brookville Route, so termed, which we have now the honor to submit.

MAPS.

These maps are:—First—A sheet marked No. 4. comprehending