

Chapter VII

WEST POINT: THE KEY TO THE CONTINENT, 1775–1783

About fifty miles north of New York City the Hudson River cuts a gorge through a range of mountains known as the Highlands, the highest ground along New York's eastern waterways. The heights stretch from Stony Point in the south to New Windsor in the north. During the Revolutionary War, control of the Highlands was vital to control of the Hudson, and control of the Hudson was paramount to America's hopes for victory.

Only at the Highlands, where the Hudson forms a series of points, bends, and rocky islands, was the river narrow enough for the rebels' firepower to be effective in protecting their water obstructions and thereby halting the northward advance of enemy vessels. The river bisected the population of the colonies and its crossings were important links in land communication. Moreover, the surrounding valley was a valuable source of supplies and manpower. By stationing his army at a central location on the Hudson, General George Washington hoped to operate on interior lines, that is, to react to the enemy in all directions, his best hope given British mobility on the water.

Mastery of the Hudson River was also crucial to enemy offensive operations in the north and to providing their Indian allies access to eastern New York and New England. On the other hand, fear of the Indians was very great among the patriots and it reinforced their determination to hold the Highlands. Little wonder that West Point, lying in the midst of this region, would eventually be called the "key to the continent."

When the Revolution broke out the rebels held the Hudson, but the lack of defenses made their grasp tenuous. By mid-1775, however, both the Con-

THADDEUS KOSCIUSZKO. *Trained at Mézières, Kosciuszko (1746–1817) was commissioned an engineer colonel in the Continental Army in October 1776. He served with distinction at West Point, in the period March 1778—June 1780, and then in the Southern Department. At the end of the Revolution he returned to his native Poland, where he became a major general in 1789. For the remainder of his life Kosciuszko was active in the Polish effort to resist Russian domination. The portrait is by Charles Willson Peale.*

Independence National Historical Park Collection

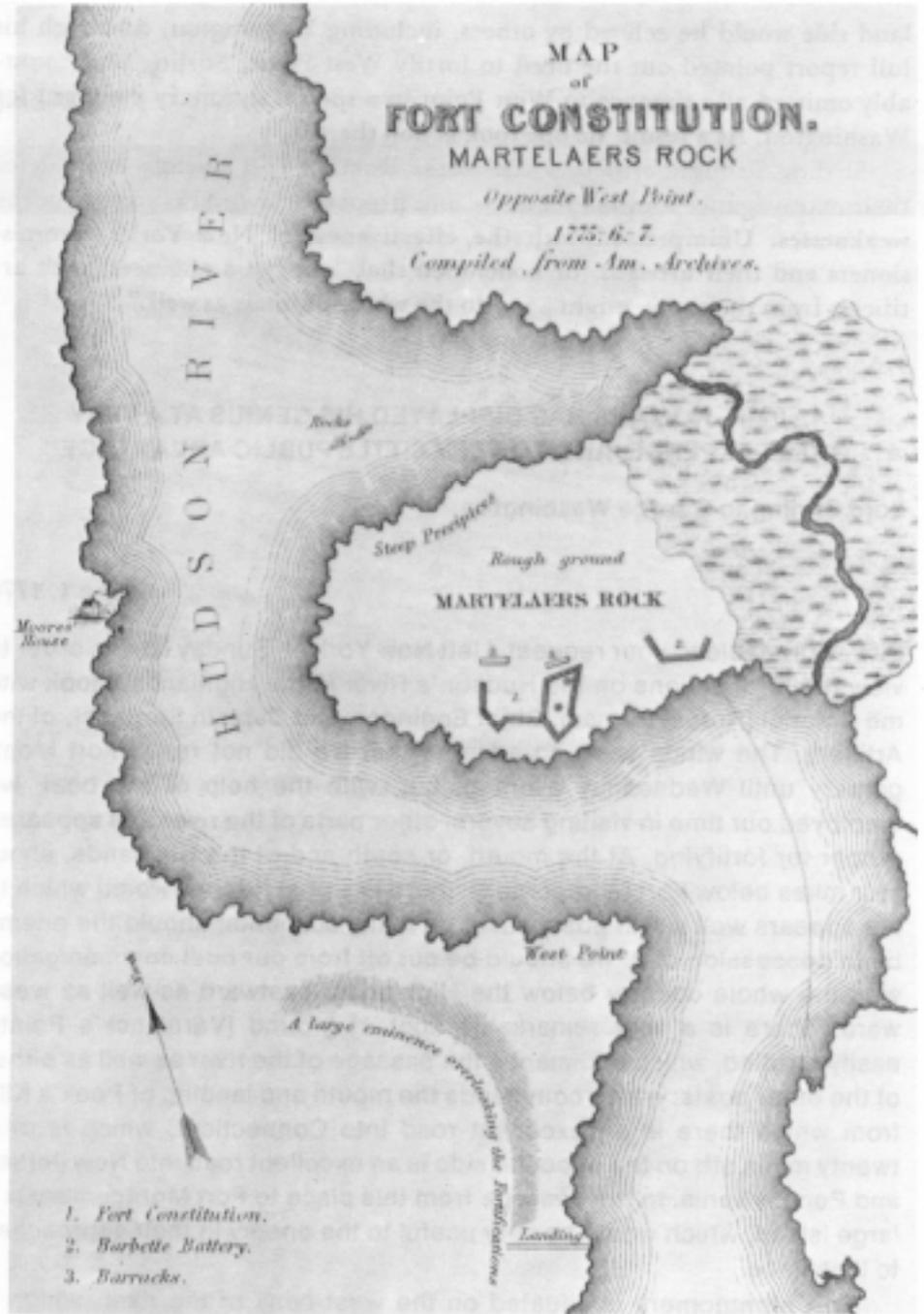
tinental and New York Provincial Congresses had taken action that began the process of fortifying the Highlands. First-hand inspection led a committee of the New York Congress to suggest erecting three forts and constructing a series of booms to block river traffic. New York entrusted the project to a group of commissioners, who in August 1775 hired Bernard Romans to direct the operation. A Dutch-born engineer, botanist, artist, and mapmaker, Romans had limited military engineering experience and lofty ambitions. He had assisted Benedict Arnold with repairs to the works at Ticonderoga and was trying to get Congress to commission him as an engineer officer.

Controversy immediately arose between Romans and his employers. Rejecting plans formulated earlier, Romans wanted to concentrate defenses on Martalaer's Rock (later known as Constitution Island), and he supported the use of firepower rather than river obstructions. Feuding caused delays. The provincial commissioners resented Romans's challenge to their authority and his attempts to get his plan accepted by the New York Congress. Finally the Continental Congress sent a special committee to investigate. The committeemen found the fortifications on Constitution Island not nearly so advanced as they had been led to believe. Even worse, high, unfortified ground across the river at West Point actually commanded Constitution Island. The committee recommended that the point be occupied and also advocated a fort several miles south on the northern bank of Popolopen Creek. Much to the chagrin of the New Yorkers, the insistent Romans took his case to Philadelphia, where Congress supported his plan to fortify Constitution Island while leaving West Point undefended.¹

New York relieved Romans of further duties; and in February 1776 William Smith, chief engineer in New York City and a more amiable man than Romans, briefly took charge in the Highlands. Smith traced three new works, including Fort Montgomery on Popolopen Creek, but did not stay to direct their construction. By spring the Continental Army began to assume complete responsibility for the area. Washington's fear of a British invasion of New York City and concern over the lack of work in the Highlands roused him to action.

In May Washington ordered to inspect the Highlands' fortifications Brig. Gen. William Alexander, Lord Stirling, the commander in New York; Col. Rufus Putnam, the Army's Chief Engineer; and Col. Henry Knox, commander of the Continental artillery. At the last minute Capt. Winthrop Sargeant, another artillery officer, replaced Knox. The three were the first men with military experience to survey the terrain for defensive requirements.

As elaborated in his report, Stirling chose a spot on the south shore of Popolopen Creek where it emptied into the Hudson as "the most proper place . . . to be made the grand post." There the rebels eventually built Fort Clinton. Stirling's concern for protecting the Hudson works from the



FORT CONSTITUTION. *This map, compiled from American Archives, shows fortifications planned for Constitution Island, opposite West Point, by Bernard Romans. He argued that this position ought to be the center of the Highlands' defenses.*

Boydton, History of West Point

land side would be echoed by others, including Washington. Although his full report pointed out the need to fortify West Point, Stirling unaccountably omitted all reference to West Point in a special summary prepared for Washington. As a result, no one took action there.

Stirling strongly criticized the works Romans had already erected for their extravagance and inadequacy, and proposed new works to correct the weaknesses. Unimpressed with the effectiveness of New York's commissioners and their artisans, he concluded that "one good engineer, with artificers from the army, might . . . do the whole business as well."

1. "MR. ROMANS HAS DISPLAYED HIS GENIUS AT A VERY GREAT EXPENSE, AND TO VERY LITTLE PUBLIC ADVANTAGE"

Lord Stirling to George Washington.

June 1, 1776

Sir:—Agreeable to your request, I left New York on Sunday last, in order to view the fortifications on the Hudson's River in the Highlands. I took with me Colonel [Rufus] Putnam, Chief Engineer, and Captain Sargeant, of the Artillery. The winds were so adverse that we did not reach Fort Montgomery until Wednesday evening; but, with the help of our boat, we employed our time in visiting several other parts of the river that appeared proper for fortifying. At the mouth, or south end of the Highlands, about four miles below Fort Montgomery, there is a post [Stoney Point] which to me appears well worth possessing on many accounts; should the enemy be in possession of it, we should be cut off from our best communication with the whole country below the Highlands, eastward as well as westward. There is a very remarkable spot of ground [Verplanck's Point], easily fortified, which commands the passage of the river as well as either of the other posts; it also commands the mouth and landing of Peek's Kill, from which there is an excellent road into Connecticut, which is only twenty miles off; on the opposite side is an excellent road into New Jersey and Pennsylvania. In the passage from this place to Fort Montgomery is a large island, which would be very useful to the enemy in their approaches to that place.

Fort Montgomery is situated on the west bank of the river, which is there about half a mile broad, and the bank one hundred feet high; on the opposite shore is a point of land called Anthony's Nose, which is many hundred feet high, very steep, and inaccessible to any thing but goats, or men very expert in climbing. A body of riflemen placed here would be of very great use in annoying an enemy, as the decks of every vessel that passes must lie open to them.

The works begun and designed at Fort Montgomery are open lines, and all lie on the north side of a small creek called Pooplopen's Kill, on the south side of which is a point of land which projects more into the river, commands all the principal works, and is within two and three hundred yards of them. On the top of this point is a level spot of ground, of near an acre, commanded by nothing but the high, inaccessible mountains, at about twelve hundred yards distance; this spot [the future Fort Clinton], I think, should by all means be fortified, as well for the annoyance of the enemy in their approach up the river, as for the protection of the works at Fort Montgomery. Indeed, this appears to me the most proper place I have seen on the river to be made the grand post; and, in my opinion, should be a regular strong work, capable of resisting every kind of attack, and of containing a grand magazine of all kinds of warlike stores. The whole would then command the passage of the river with so formidable a cross fire as would deter any attempt to approach with shipping. Those works built are all faced with fascines, and filled in with strong, good loam; but as they are liable to take fire, the Commissioners who have the care and direction of the works, propose to roughcast the faces of the embrasures with a strong mortar made of quicklime and sharp sand, of which there is plenty at hand. I advised them to try the experiment on part of the work as soon as possible. As these open lines are entirely defenceless on the land side, it will be very proper to erect a small redoubt on the hill, in the rear of them.

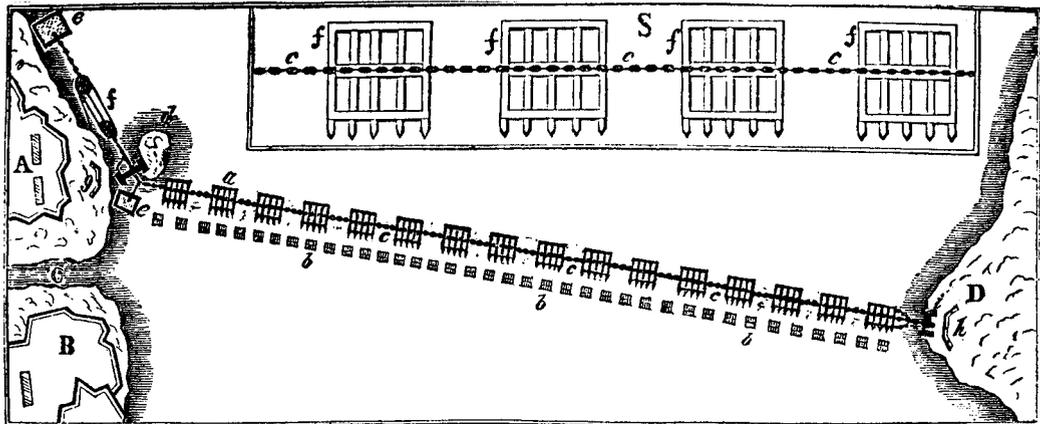
Fort Constitution is about six miles above Fort Montgomery, on an island near the east side of the river, and near the north end of the Highlands, which on the west and south sides is bounded by the river, and on the north and east sides by low marsh and small creeks running through it. The works here consist of four open lines or batteries, fronting the river; the two easternmost command the approach up the river very well; the next, or middle line, commands the approach from West Point upwards; the westernmost battery is a straight line, constructed by Mr. Romans, at a very great expense; it has fifteen embrasures, which face the river at a right angle, and can only annoy a ship in going past; the embrasures are within twelve feet of each other; the merlons on the outside are but about two feet in the face, and about seven feet deep, made of square timber covered with plank, and look very neat; he also built a log-house or tower on the highest cliff, near the water, mounted with eight cannon (four-pounders) pointed out of the garret windows, and looks very picturesque. Upon the whole, Mr. Romans has displayed his genius at a very great expense, and to very little public advantage. The works, in their present open condition and scattered situation, are defenceless; nor is there one good place on the island on which a redoubt may be erected that will command the whole; . . . yet every work on the island is commanded by the hill on the West Point, on the opposite side of the river, within five hundred yards, where there is a level piece of land of near fifty acres in extent. A

redoubt on this West Point is absolutely necessary, not only for the preservation of Fort Constitution, but for its own importance on many accounts. One also is necessary at the west end of the island, to command the approach that way, and to prevent a landing at the north side of the island. An easy communication by land, as well as by water, may be made with Fort Montgomery from the West Point. . . .

The direction of the works at both these forts [Fort Constitution and Fort Montgomery] is in the hands of Commissioners appointed by the Provincial Congress of New York. Two Commissioners, with four carpenters, two blacksmiths and seven attendants, are at Fort Constitution; two Commissioners, one clerk, fifteen carpenters, and four masons, are at Fort Montgomery; the pay of these amounts to at least eight hundred dollars per month, besides their provisions, etc. One good engineer, with artificers from the army, might, I think, do the whole business as well. . . .

—Boynton, *History of West Point*, pp. 29–33.

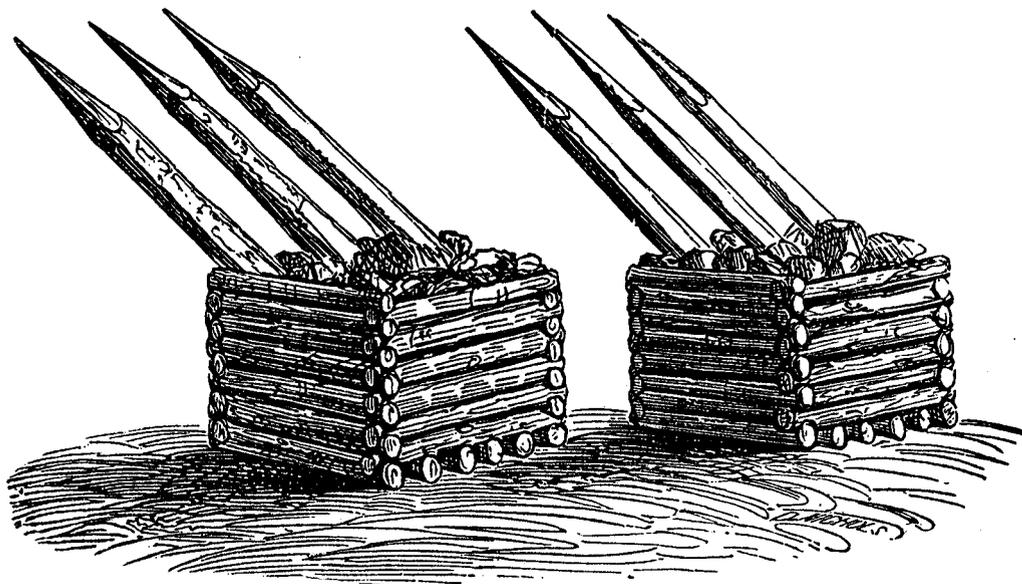
At Stirling's suggestion the brothers George and James Clinton, officers in the New York forces, strengthened Fort Montgomery on the north bank of the Popolopen and placed a breastwork and battery on the creek's south bank. In July Washington sent Thomas Machin, a veteran of the British artillery and co-planner of Great Britain's noted Bridgewater's Canal, to serve



A Fort Montgomery. B Fort Clinton. C Poplop's Kill. D Anthony's Nose
 a Floats to Chain. bbb Booms in front of Chain. ccc Chain.
 d Rock at which the Chain was secured with large Iron Roller. ee Cribs and Anchors.
 f Blocks and Purchase for tightening Chain. gh Ground Batteries for defence of Chain.
 S Section showing Floats and Chain. ccc Chain. fff Floats.

FORT MONTGOMERY BOOM AND CHAIN. *Thomas Machin placed this boom and chain across the Hudson in April 1777, and the British removed them the following October.*

Courtesy New-York Historical Society, New York City



HUDSON RIVER OBSTRUCTIONS. *A drawing depicting the chevaux-de-frise placed in the Hudson from Plum Point to Pollepel Island, north of West Point.*

Courtesy New-York Historical Society, New York City

with the Clintons as an engineer. Soon a new work, Fort Independence, rose opposite Fort Montgomery to protect Peekskill.

Accompanied by Col. Rufus Putnam, Washington made his first visit to the Highlands on 11–12 November 1776. With some foresight, Washington pointed out that it was a mistake to concentrate on the forts along the river. What about the surrounding hills? he asked. The existing forts would be useless if an attack were made by land from the rear. Before leaving for New Jersey, Washington directed Maj. Gen. William Heath, Highlands commander at the time, to correct the problem. Underscoring his concern, Washington left Putnam to assist. Bitter cold weather and a shortage of manpower combined to force a delay in implementing Washington's orders.

While in the Highlands, Thomas Machin also became involved in placing obstructions in the Hudson River. New York leaders had long favored such obstacles, but nothing had been done, in part because of Romans's objections. In mid-1776, however, state officials revived the plan and ordered Machin to lay a chain and boom across the Hudson at Fort Montgomery.

Machin worked through the fall and winter on his tough engineering assignment. At the chosen spot the river was 1,800 feet wide, 120 feet deep, and subject to strong tides. He needed to perfect a chain strong enough to withstand the impact of a ship, yet flexible enough to resist the stress brought on by the tide. Machin contracted with Robert Erskine, the future United States geographer and owner of a forge, to manufacture the iron he needed.

Machin also placed chevaux-de-frise across the Hudson from Plum Point to Pollepel Island, a wide, shallow position north of West Point. He impressed Loyalists to construct the caissons—structures framed with timber and filled with rock—that served as foundations for the chevaux. West Point chevaux, unlike those placed in the Hudson River at New York City, were made of iron-tipped tree trunks wedged at an angle in the stone-filled caissons.

By the end of April 1777 Machin's floating chain was in place. Although the enemy threatened the still-unfinished Highlands posts more than once that spring, the rebels maintained control. As a result a false sense of security, ruffled by only brief moments of concern, came to pervade the Highlands. At the end of summer, when British designs on Philadelphia became clear, attention shifted southward, even though Burgoyne was a real threat in the north.

In October the enemy shocked the rebels by attacking from the land side and capturing the sparsely garrisoned Forts Montgomery and Clinton. Boldly they cut Machin's chain, sailed north, and broke through the chevaux-de-frise. Luckily for the rebels, Sir Henry Clinton, commander of the British expedition, failed to take advantage of his gains. After burning the forts he returned to New York City.

This destruction by the enemy proved a blessing in disguise. Forced to rebuild the Highlands' defenses, the rebels approached the whole problem afresh. The result was a sound, productive reevaluation, unobscured "by blinders of already existing works."²

The task began immediately. Congress wanted an Army engineer officer to take charge of the Hudson defenses, where civilian engineers and artillerymen had been carrying the burden. Washington dispatched Louis de Shaix La Radière, second in command of the Army engineers, to do the job. Disagreements promptly arose between the engineer and the generals over the design of the fortifications and the role of West Point. In addition, Radière's impetuous personality and meticulous habits led him to clash openly with his commander, the "rough-and-ready" Maj. Gen. Israel Putnam.

After a month-long survey, Radière recommended concentrating defenses at Fort Clinton, several miles below West Point. Reflecting his French military training, he envisioned a fortress capable of withstanding a classical siege. Putnam and the other generals in the Highlands, while not disputing Radière's technical expertise, felt his judgment in these circumstances was impractical.³

Putnam turned to New York officials for help. They listened to Radière's arguments in favor of Fort Clinton but urged Putnam to proceed at West Point instead. Not only could West Point be completed sooner than Fort Clinton, the New Yorkers argued, but also workers could erect a more effective chain and supporting batteries there. And, after all, the rebels' primary goal was to close the river.

Radière was overruled and he was angry. He had presented several carefully prepared reports and sketches supporting his views, only to have all his arguments rejected. Putnam ordered the French officer, whom he characterized as “an excellent paper Engineer,”⁴ to proceed with the works at West Point. At the same time the commander reported to Washington: Radière “seems disgusted that every thing does not go as he thinks proper, even if contrary to the judgment of every other person.”

Radière decided to take his case to Congress, much as Romans had done earlier. At this stage he seemed more intent on making a point than on winning the argument. Indeed, after his temper cooled, he concluded that it was “better to fortify a place less good than to do nothing at all,” and agreed to trace the fort at West Point. In the following letter, Radière spelled out his reasons for preferring Fort Clinton. Note his concern for West Point’s vulnerability and his conviction that the loss of a fort there would “be much worse for the country” than the loss of Fort Clinton.

2. “I STILL THINK FORT CLINTON IS THE BETTER”

Louis de Shaix La Radière to a member of Congress.⁵

At Fishkill, 13 January, 1778

Sir:

I am so hurried by the express which General Putnam is sending to Congress that I cannot write you in English. I wrote to the President of Congress but as he will surely not understand my English I beg you to be so good as to explain to him the following details as well as to Congress. . . .

A council was held yesterday relative to the fort which is to be built on the banks of the Hudson River. I read a Memorial upon the subject. It was resolved to fortify a place called West Point, opposite the old fort Constitution six miles above fort Montgomery and eight below New Windsor; this was done contrary to my advice, which was that fort Clinton was preferable. As it is better to fortify a place less good than to do nothing at all, I practically consented since I am going to trace a fort at the place indicated; but I still think fort Clinton is the better. I do not speak at all of the localities lower down the river since I have never been able, in the investigations I have made with the Generals, to descend the river below fort Clinton.

The principal reasons which incline me to fort Clinton are that the enemy cannot, without great difficulty, lay seige to fort Clinton because the ground is narrow and rocky, without earth, so that the Enemy would risk every moment to have their communications broken with their ships unless they disembarked from 10 to 12 thousand men. For this reason a very small fort would suffice. Also, the situation is such that there will be

no need to build a fort on the opposite bank to hold the chain that bars the river.

At West Point the enemy can besiege the place and occupy a ground where he will not be more than a mile from his vessels and can support at the same time both a siege and an attack. If this fort is taken it will be much worse for the country than if it were fort Clinton.

The fort placed at West Point has the advantage of being situated in a place where the navigation is more difficult but it will be necessary to build a fort on the opposite bank of the river.

This fort is so situated that it can be taken in fifteen or twenty days, perhaps less. Nevertheless I hope things will not go that far, but in a comparison it is necessary to weigh exactly what is for or against each.

—Kite, *Duportail*, pp. 86–87.

In a separate note to Washington, the French engineer revealed plans to plead his case at headquarters. But Washington favored the decision to fortify West Point and was troubled that disputations were dangerously delaying progress. “We shall lose the Winter,” he admonished Radière, “which is the only time we have to make preparations for the reception of the enemy.”⁶

Begrudgingly Radière next came forward with elaborate plans for a massive masonry work, with walls fourteen feet high and twenty-one feet thick, at West Point. An impractical proposal indeed, grumbled his American commanders. There was too little time, and money was scarce. In his capacity as president of the Continental Board of War, Maj. Gen. Horatio Gates cautioned Putnam that Radière would not complete the works “till the next campaign is ended, altho’ 5000 men should be at his direction.” Gates thought Putnam should use Radière only sparingly and concluded: “We wish to avoid offense to any foreigners who have interested themselves in our cause; we would treat them with all possible respect: But we must not sacrifice or hazard our safety from a point of delicacy.”⁷

Throughout the winter of 1777–78, bad weather, changes in command, problems with workers, and the disagreement between Radière and his superiors brought fortification to a standstill. Rather than “hazard his reputation on Works erected on a different scale, calculated for a short Duration only,” Radière left the Highlands for camp at Valley Forge.

Lacking confidence in Putnam’s ability, Washington appointed a new commander, Maj. Gen. Alexander McDougall. Washington then persuaded Radière to return to West Point and confidently reported to McDougall: “I can safely recommend him [Radière] to you as a man who understands his profession, and make no doubt of his giving you satisfaction, both in projecting and executing the works required for the defence of the River.”⁸ Kind words indeed for a man whose actions had given Washington so much

concern, but the Commander in Chief could hardly afford to alienate any of the French engineers serving as volunteers in the Continental Army.

When Radière returned to West Point at the end of March 1778, he immediately found himself in the midst of another controversy. This time it involved a new engineer, Thaddeus Kosciuszko of Poland, who had joined Machin at West Point in Radière's absence. Unknown to Washington, Congress had sent Kosciuszko, a friend of Gates and the engineer hero of Saratoga, to replace Radière. McDougall took an immediate liking to the new engineer, declaring: "Mr. Kosciuszko is esteemed by those who have attended the work at West Point, to have had more practice than Col. Delaradiere, and his manner of treating the people more acceptable."⁹ The last point was particularly important from the commander's point of view.

Radière believed it unnecessary to build either redoubts or forts on the hills behind West Point; Kosciuszko, remembering Ticonderoga, strongly disagreed. At one point Radière caustically charged that Kosciuszko did not know his duty.¹⁰ The two engineers got along so poorly together—they even disputed rank—that McDougall did his best to keep them apart. In April Washington finally interceded. He recalled Radière to Valley Forge, noting that Kosciuszko seemed "better adapted to the Genius and Temper of the people."¹¹

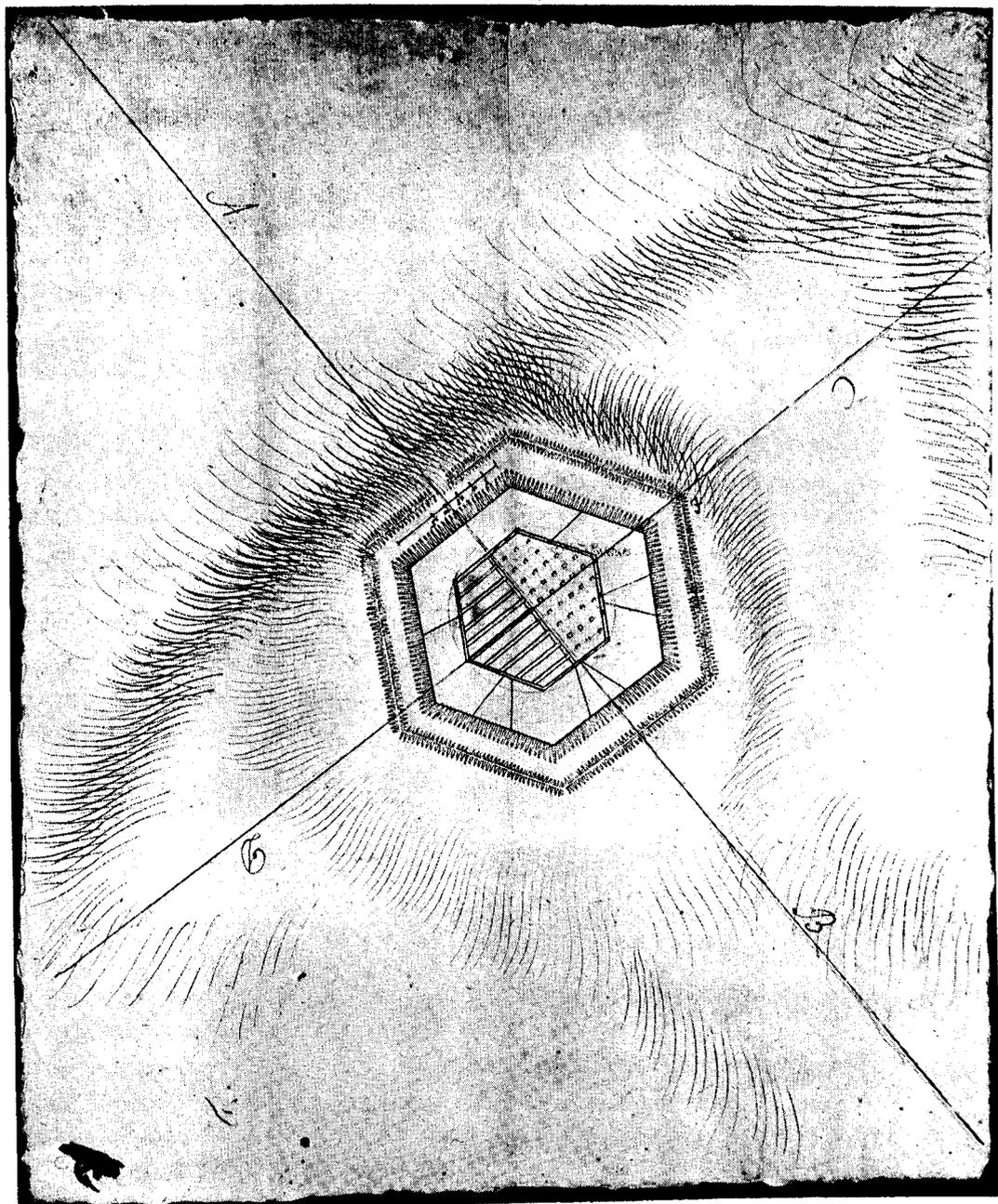
Despite Radière and Kosciuszko's feud, substantial progress was made during April in fortifying the Highlands. The British stayed away because their resources were severely strained now that the French had entered the conflict. McDougall accepted Kosciuszko's plan to place works around Fort Arnold, the main work at West Point. Brig. Gen. Samuel Parsons, commander at the point, called Rufus Putnam and his 5th Massachusetts Regiment to West Point because of Putnam's proven knowledge of engineering. In fact, the former Chief Engineer took charge of the largest work planned by Kosciuszko, a fort 200 feet in diameter atop steep-sided Crown Hill. Parsons also put some of his own Connecticut troops to work on three redoubts planned by Kosciuszko for a level ridge below Fort Putnam, as the Crown Hill work was soon called. James Clinton directed construction of Fort Arnold.

At West Point on the last day of April 1778 Machin again demonstrated great skill in directing the placement of a river obstruction. Pleased with his earlier performance, New York authorities had engaged him the previous December to work both on fortifications and on a new chain. Seeking to avoid problems encountered earlier with the chain at Fort Montgomery, Machin ordered thicker links for the West point, or "great chain," as it became known. He chose the site with care. Workers painstakingly assembled the chain at New Windsor and then floated it on rafts downriver to West Point.

Over the next several months work proceeded steadily under Kosciuszko's direction despite excessive heat, changing command, and shifting troops. Throughout the summer the Pole commanded several companies of

blacksmiths and carpenters, as well as fatigue parties drawn from the line.¹² In mid-July he conducted Washington on his first inspection of the new works at West Point. The batteries — built of dirt and wood because masonry required too much time — now mounted forty-two guns.

Washington said little to indicate dissatisfaction with the state of West Point's defenses, but he must have felt some disappointment. Only a few days later Col. William Malcolm, the new commander at the point,



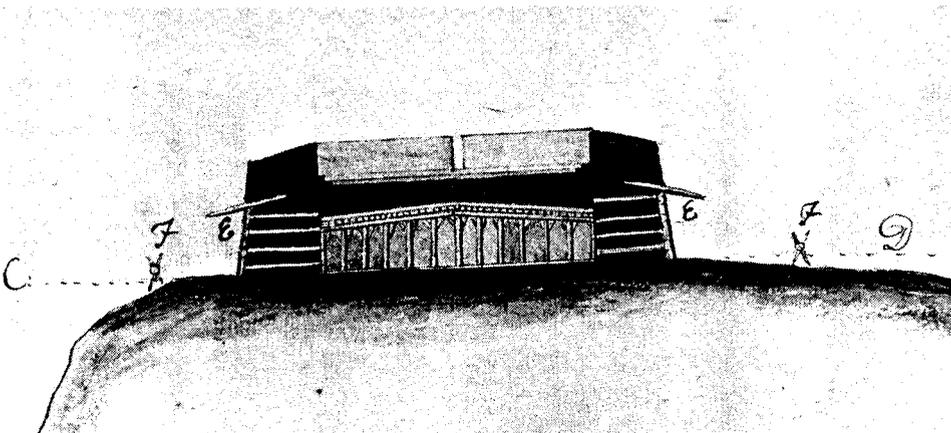
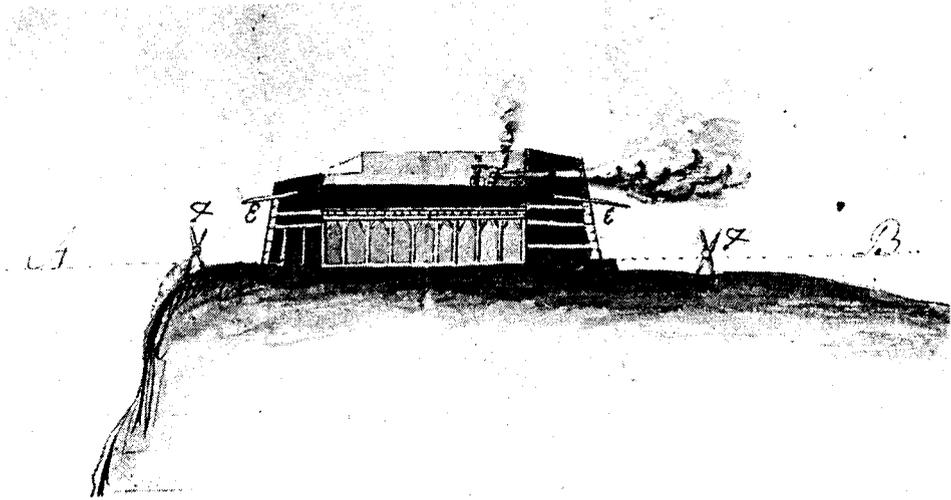
ROCKY HILL REDOUBT. *After his climb atop Rocky Hill in August 1778, Kosciuszko sketched these plans for a six-sided fortification that would be known simply as Redoubt No. 4.*

McDougall Papers, New-York Historical Society, New York City

declared with obvious exaggeration: "The works are not worth a farthing." Admittedly there was much work to do. Malcolm further complained to Parsons: "Here I am holding committee among spades and shovels . . . the more we do the more we find we have to do. Why did you not begin to move the mountain, rather than add to its magnitude?"¹³

Hoping to retake New York and weary of past disappointments from working through subordinates, Washington now became directly involved in even the most minute affairs relating to the Highlands. Before long Malcolm accepted his task more cheerfully too.

Near the end of August, Kosciuszko climbed atop Rocky Hill, located about one-half mile west of Fort Putnam and rising 200 feet higher. He at once observed the threat posed by that position. Not only could artillery mounted on Rocky Hill control the interior of Fort Putnam, but an attacking force could move with ease against the fort unless covered from above. Just as Kosciuszko's memory of Mount Defiance had earlier convinced him of the need for Fort Putnam, it now made a redoubt on Rocky Hill obligatory.



The next month Washington ordered Chief Engineer Louis Duportail, whose engineering advice he most respected, to evaluate the West Point defenses. Duportail faulted Kosciuszko's layout of Forts Putnam and Wyllys, downplayed the need to fortify Rocky Hill, and praised the plan of Fort Arnold executed by Radière. The Chief Engineer also stressed that masonry or bricks ought to be used at Fort Arnold, a point argued earlier by Radière but disputed by Kosciuszko. Constitution Island—earlier the center of Romans's defensive plans—had been virtually ignored, but Duportail proposed "three small works" there to make West Point "perfectly secure."

Duportail's first report on West Point also underscored a fact sometimes forgotten: the West Point defenses were primarily designed to protect the great chain. He proposed measures to prevent damage to the chain from artillery fire, and he suggested postponing work on the New Windsor chevaux-de-frise. Down to several misspellings of Kosciuszko's name, the report reflected genuine animosity toward Kosciuszko, who, after all, had sharply criticized Duportail's associate, Radière.

3. DUPORTAIL FINDS THE WORKS "PERFECTLY FULFIL THE OBJECT WHICH IS PROPOSED"

A report to George Washington on the Highlands.

White Plains, 13th September, 1778

The Works which are in hand at West Point and some inconsiderable ones, which it is necessary to add to them, will, with the help of the chain, perfectly fulfil the object which is proposed,—that of hindering the enemy's remounting the North River.

Fort Putnam, which is as it were, the key of all the others may be rendered almost impregnable. There is indeed a height, which commands it [Rocky Hill], but besides that this height may be taken possession of with a redoubt, it would be very difficult for an enemy, even when master of it to bring heavy cannon there. Besides it would be too far to make a breach. This fort has nothing to fear but a bombardment or escalade with respect to a bombardment, the mean to make it ineffectual is to have bomb-proofs sufficient for three fourths of the Garrison, magazines, hospital, etc.—I am told Col. Kosciuszko proposes, at this time to begin one; but which will not suit more than 70 or 80 men. This is far from sufficient. There must be another, the place and size of which, I have pointed out to the Captain who conducts the works.—It will contain about two hundred men—with respect to the escalade, to prevent its success, the side of the fort which looks towards the river and is the most accessible, as well as that which looks towards Fort Arnold, must be raised a great deal more than it is, and besides the palisades and chevaux de frise, abatis

must be made in front. The roof of the great bomb-proof, which I propose, may be made use of to collect the rain and conduct it into the Cistern. This will always be a small resource.

Fort Willis [Wyllys] does not appear to me well traced. It ought to be put entirely upon the declivity which looks towards the River, the force next Fort Putnam following the ridge of the eminence. In this manner it would have overlooked equally all the valley between Fort Putnam and itself and all its interior would have been under cover of Fort Putnam; the face next the river would have extended to the very border of the declivity; and the work in every respect would have been a great deal stronger. In its present position it is too large, its parapet makes too large a circuit. It will be best perhaps to rebuild this fort altogether; if this is not done, to remedy its inconveniences, the face opposite Fort Putnam must be raised not so as to cover the interior, which I am told Col. Kosciusko proposes, because it must be prodigiously elevated to answer that purpose—but instead of this, I would prolong the eminence which is in the middle of the work, and improve it into a Traverse, to extend the whole length of the work—I would then reject a third of the work on the South as altogether useless—the bomb-proof will be backed by the traverse above-mentioned.

I should have preferred to the Redouts which are in front of the Redout Willis, on the South side, and which require for their defense four or five hundred man—a small inclosed work to secure the possession of the eminence and protect the batteries in front—but for the present, matters may be left as they are.

Fort Arnold appears to me to be pretty well situated and traced—but if the intention of Col. Kosciusko is to leave the sides next the River at the present height—(as appears to be the case) I cannot approve it—they are exceedingly liable to an escalade—it is proper to elevate them, and even to make a small covert way without having good palisades in front, to secure the body of the place against all surprise.

The scantlin for the Bomb-proof appears to me too feeble—the top will be almost flat—What is made of earth ought to have been of masonry or bricks—however I forbear enlarging upon this subject, because time will hardly admit of a Remedy—the Stuff being squared, and ready to be put together—observing only that the work should be sunk more in order to furnish a greater thickness of earth for the roof.

There is below Fort Putnam, a battery nearly round, which is extremely well placed for battering the Vessels which should approach the Chain—but its situation likewise exposes it to the fire of the Ships—at least as it is much advanced, the fire of the tops would injure the Gunners, and the more, as by the form of the battery they are collected within a very small space—it appears to me advisable, to raise the parapet of this battery several feet—and to cover the embrasures from the top of one merlon

to another—so as not to interfere with the working of the Guns—altho it is equally necessary to secure the Chain on the left-hand Shore of the River—it seems to have been little attended to—there is no inclosed work on this side to hinder the enemy from debarking a sufficient number of men to get possession of the ground and cut the Chain—there is only a battery which may answer some good ends—but cannot prevent the enemy from doing as above mentioned—With three small works we shall render the point perfectly secure—the *first* to be placed where the block house [on Constitution Island] stood—it is sufficient for it to contain about sixty men—its end is to afford an immediate defense to the Chain and its extremity—against a hardy enterprise, which a few men are engaged sometimes to undertake by dint of money or other recompense.—The parapets ought to be of wood in order to take less room—and sufficiently elevated to cover the area.

The *second* Redout should be placed on a steep eminence which commands all the other rising ground in the island.

The *third* on an eminence in the rear of the newly constructed battery—these two Redouts ought to be made for 150 men or 200 at most.

There was a battery, the remains of which are still in existence, (below Fort Independence)—it was perfectly well placed for battering the enemy's Ships—it ought to be rebuilt, with a strong parapet of earth—and as this battery is low and exceedingly exposed to a plunging fire from the Tops of Ships—the parapets must be high, and terminated by a Roof of thick plank for the protection of the Canoniers—this battery as well as that which is just finished, will be interlocked by the three Redouts—and be in perfect safety—With these works we shall be completely masters of the Island.

As to the Chain itself, I would not have it floating on the surface of the Water—which exposes it to be laid hold of by machines prepared for the purpose, on board the Vessels which may approach—but the greatest danger arising from this would be the breaking it by Cannon Shot—when a vast number comes to be fired on both sides in a contest between the enemys Ships and the batteries—I should think it more eligible therefore to suspend the Chain three feet below the surface of the water—because as the greatest number of the Shot, bound when they strike the water—there would be so many ineffectual in respect to it—besides, the matter would be very easily executed—by placing the floats above instead of below the Chain—and having another Chain made fast at each end to the great one, and carried above the floats—by these means the great Chain may be supported at the depth which is just suitable—if a Shot should carry away the Chain, by which the great one is made fast to the floats—the whole mischief that would result, would be that the chain in that place would douse a few feet more.

There are so many accidents by which an iron Chain may be broken, that it would be prudent to have a stout cable in reserve, to supply its place in part for a time.

Every thing that I have explained being finished—1800 men will render us completely masters of the River; and put us out of reach of the enemys enterprises. At least, the Resistance that may be made will allow ample time for the arrival of Succours, however remote the Army may be.

The following is the distribution of these Troops as nearly as can be judged.

In Fort Putnam [probably fort Arnold]	700
Willis Redout	200
Fort Putnam	400
Small work above Fort Putnam	100
For the Works on the Island or Peninsula, on the left-hand shore	400
	<hr/>
	1,800

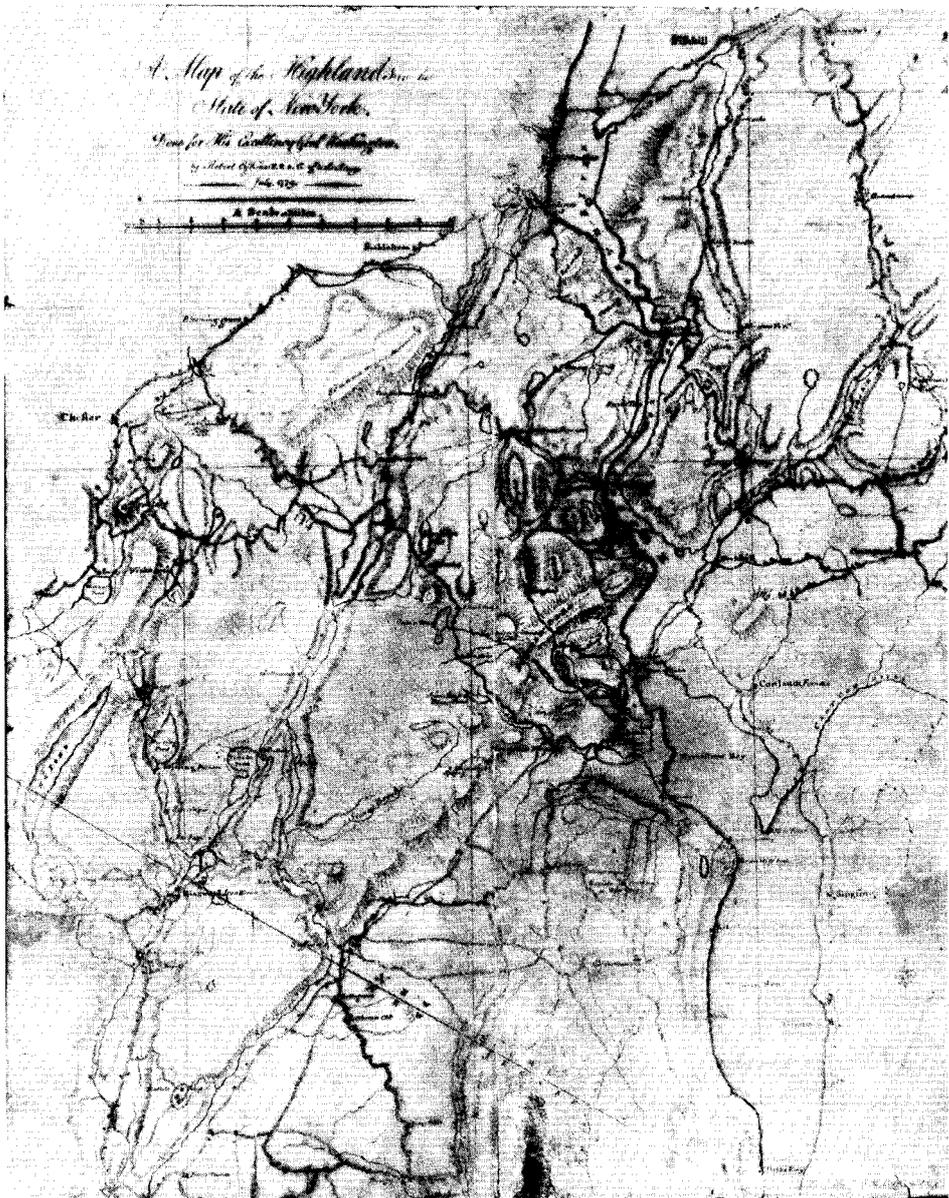
For the present moment, if we except the batteries against Ships—the works are not in a state of defence—but a little time would be sufficient for completing fort Putnam which is the most important—the Redouts on the Island on the left-hand shore—are likewise objects of the first attention.

His Excellency had ordered me to give him an account of the expenses arising from all these works to the present time—it is not in my power to present any thing on this subject, not having seen Col. Kosciusko, who alone is possessed of these facts—I am going to write to him for this purpose.

I was likewise at New Windsor—The River appears to me very wide in this part for a defense of Chevaux de Frise—besides the Chevaux de frise themselves appear to me to be very weak—and I can with difficulty persuade myself that a Ship would be much embarrassed by them—and indeed until West Point is completed—I do not think we should occupy ourselves about New Windsor—I shall therefore forbear adding any thing farther relative to it.

—Washington Papers, roll 51.

With Duportail's report in hand, Washington soon viewed the works at West Point and heartily endorsed his Chief Engineer's plans. Customarily kind words from Washington eased Kosciuszko's injured feelings, but there was no question that Duportail's views would prevail.¹⁴ After the inspection Kosciuszko reported to Gates: "Conclusion was made that I am not the worst of Ingénieur."¹⁵ As a result of Duportail's suggestions, new construction



began on Constitution Island, and Fort Putnam got a larger bombproof and cistern.

As chief engineer at West Point, Kosciuszko was responsible for maintenance of the great chain. During the winter of 1778, for example, he designed a machine to simplify removal of the chain from the river, a process that had to be repeated each winter. He also refurbished the chain's log supports with tar and lime and replaced rotten logs.

The West Point fortifications General McDougall viewed at the end of 1778 were well under way; but considering the expenditure of labor and money since his last assignment there a year earlier, a surprising amount of work remained. In truth, incompleteness seems to have been the status quo throughout the Highlands during most of the war. Although regarded as the "key to the continent" and America's Gibraltar, West Point was completed slowly and constantly needed maintenance. Many factors were involved. Washington frequently was torn between keeping troops there and moving them elsewhere. Commanders came and went. The British threat waxed and waned. Winters were harsh and supplies were often wanting.

Beginning in December 1778, Kosciuszko gained an able—and compatible—assistant in Lt. Col. Jean Baptiste de Gouvion. Yet Duportail continued to find Kosciuszko's efforts inadequate. In May 1779 the Chief Engineer made his views emphatically known to Congress, reiterating the crucial significance of West Point. Of greatest concern to Duportail was his fear of being blamed should the position fall. He defended himself on the grounds of not having authority even to require monthly reports from Kosciuszko, and complained of Congress's failure to appoint a commander in chief of the engineering department and thereby clarify responsibility within it.

4. "I DO NOT THINK MYSELF RESPONSIBLE IN ANY MANNER FOR THE NEGLECTS . . . OF THAT FORT"

Louis Duportail to John Jay, President of Congress.

Philadelphia, May 11, 1779

Honble. Sir

. . . His Excellency the Commander in Chief ordered me last year to Fort West Point on the North River, to see in what Condition were the Works then Erecting and what new ones it was necessary to add. After I had ac-

THE HIGHLANDS AND NORTHERN NEW JERSEY. *In 1779 the geographer's department prepared this map of the roads connecting the Highlands with New Jersey to assist Washington in planning troop movements in defense of the Hudson.*

Historical Society of Pennsylvania

quainted Genl. Washington with my Observations and imparted him my Ideas [see preceding document] (which he approved of) I gave, according to his Orders, the necessary Directions to the Officer [Kosciuszko] Entrusted with the fortifications of that Place, pointing out the new Works that were wanting, those that were the most pressing, the Way of making them, etc. I then thought that if the remaining part of the Autumn and as much as possible of the Winter was well employed, West Point might be in a State of Defence *against the first of May*. But unhappily, I have lately heard, that *almost nothing has been done*, and all is in nearly the same Condition as when I left it in September. However, Sir, you are of the State of New York, Your Excellency is probably acquainted with the Situation of the place, and you know of what importance it is to us to remain in possession of it. It is the Key of the North River, and if the Enemy is once master of its Navigation, the Communication between New England and the other States is Entirely cut off; this Communication is however necessary to our Army, which cannot Even Subsist without it, on either side of the River, from the want of Cattle on one side and the Want of flour on the other. Thus the loss of West Point must necessarily Expose a part of the Country, to be without Troops for its defence, and perhaps, as I have already Said, the whole Continent, by the great difficulty of maintaining an Army. This is, methinks, a matter highly interesting for the United States, and I make no doubt, that when the English receive sufficient reinforcements, to come out of New York and open the Campaign, their first Operations will be against Fort West Point as it is the only Way for them to do anything decisive. It should then be our care to put it in a proper State of defence.

No doubt Your Excellency is anxious to know, what relation there may be between these Speculations and my affairs. It is this: If the Enemies happen to take possession of West Point, when the unhappy Circumstance which must necessarily arise from such an Event, shall have carried grief in the minds of many, it will be natural to seek the cause of that misfortune, and a person to whom it may be imputed. And perhaps that Congress or the Commander in Chief will betake themselves to me, and ask of me, Why I did not take care that the Works at West Point should be carried on with regularity and dispatch, and why, when they have been interrupted, I have not given any Notice of it My answer will be this: *“I had no right to demand the necessary informations from the Engineer entrusted with the fortifications of that Place: When I went there in September by the Commander in Chief’s orders, I requested him to render me an account Every month of the Condition of the Works, of the difficulties of every kind that might arise in the Execution:—He has not done it.* But that Officer is not in any manner to be blamed. He [received] no Orders in writing for that purpose from Congress or the Commander in Chief. This Winter, Genl. Washington, who has well conceived of what necessity it was to have somebody at the Head of the Engineer’s Department, has desired a

Regulation which among other things should establish such an officer. The Regulation has been made, and approved both by Congress and the General, but no Commander in Chief of that Corps has yet been appointed.’’

I expect Every Day the resolution of Congress on this account. I have often urged the Honorable Board of War to make new representations; my reasons have always been that the state of the fortifications of Some necessary and important Points for this Campaign, *should be known*, and particularly that of Fort West Point. Unhappily a resolution has been delayed to this instant and I find myself obliged to declare to Congress, that I do not think myself responsible in any manner for the neglects or interruptions which may happen in the Works of that Fort, nor shall think myself answerable in the future, as long as I have not the authority to have the necessary Accounts rendered me, by the Engineers Entrusted with the Fortifications, and the right to make to the proper persons the necessary representations, in case of any interruption.

—Papers of the Continental
Congress, roll 181.

A few weeks later on June 1, after the rebels abandoned their unfinished works there, the British took Stony Point without firing a shot. The enemy also captured Fort Lafayette, a completed work across the river on Verplanck’s Point. When Clinton failed to extend this offensive to West Point, Washington had the British positions below King’s Ferry reconnoitered exhaustively to determine the feasibility of retaking them. Although he now commanded in the line, Rufus Putnam lent his engineering experience to the effort. Putnam made the following report to Washington.

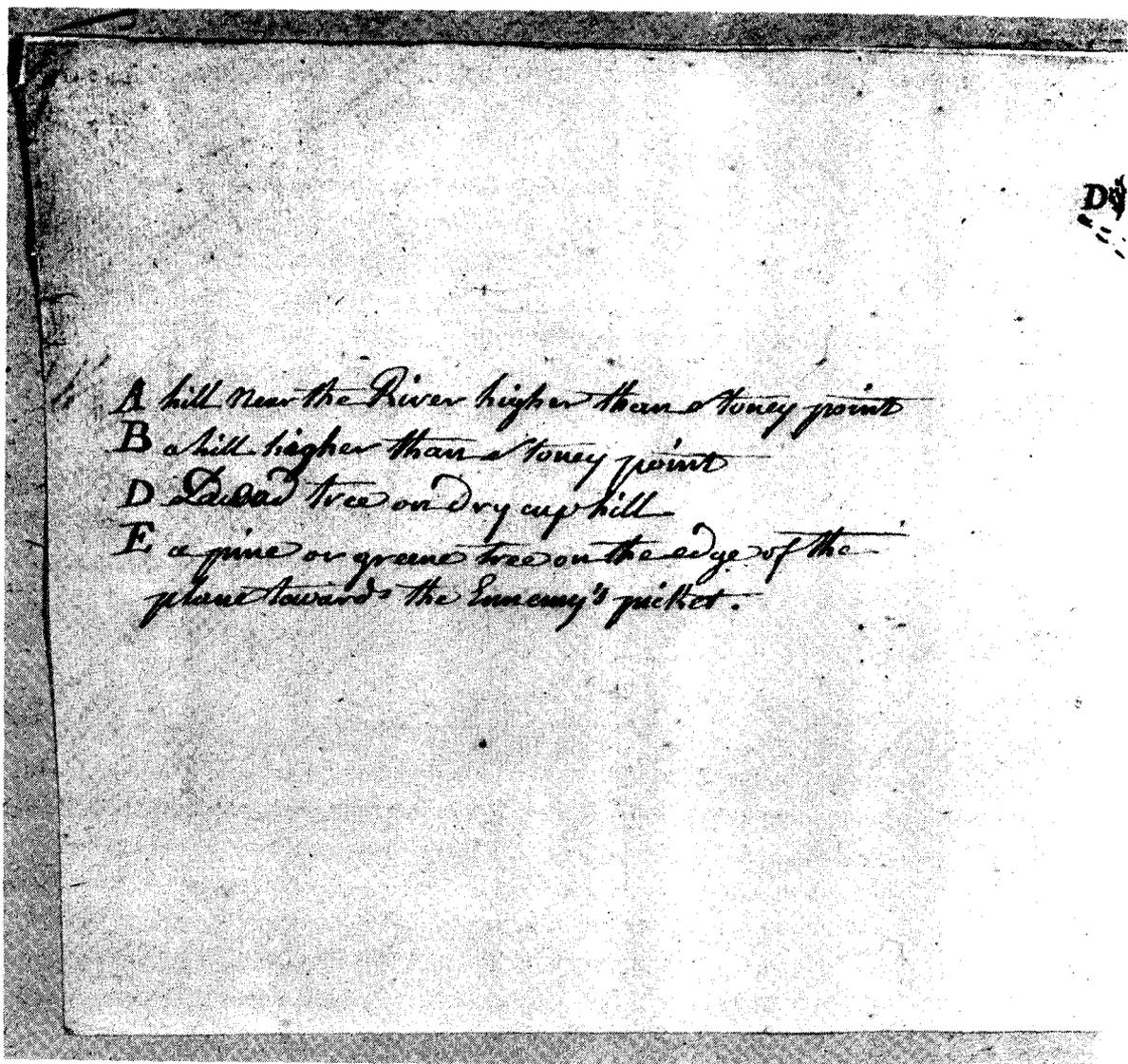
5. “I HAD SEVERAL FAIR OBSERVATIONS AS THE SUN PASSED THROUGH THE OPENINGS OF THE CLOUDS”

Rufus Putnam to George Washington.

Constitution Island, July 13th, 1779

Report of observations made at Vanplanks Point taken this Morning.

The Roof of the Block House in Fort De La Fyatte [Verplanck’s Point] taken off Proverbally with a Designe to add another Story of Timber work.—The Block house on Stonney hill quite inclosed with a parrepet. A New flash or Redan in a line of there other works Next the Block house on the North River. A New work on the old Barbitt battery,—built by the americans Enlarged and Eambrasure made which Rake the beach and

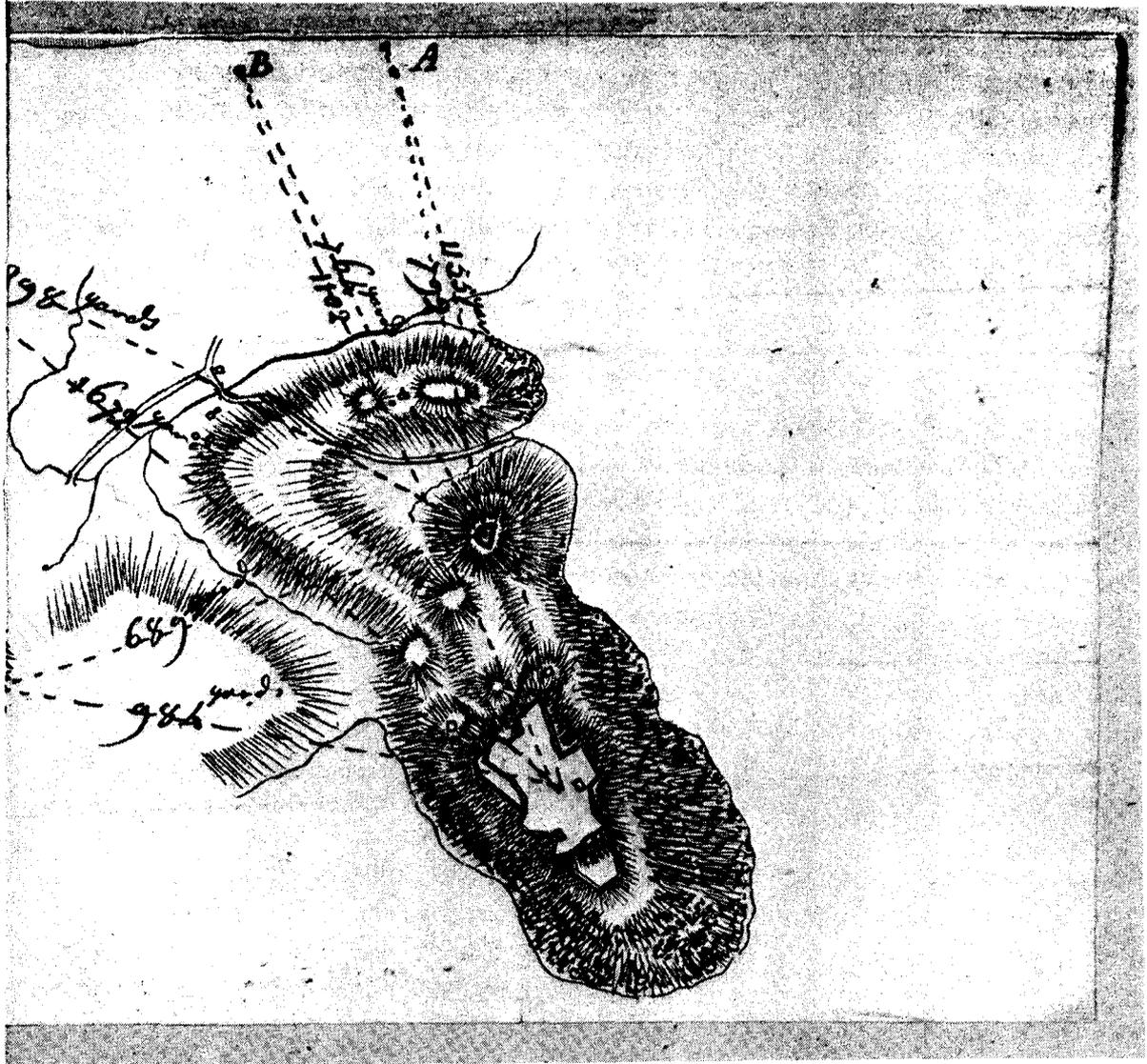


STONY POINT, NEW YORK. Although no longer an engineer of-
ficer, Rufus Putnam drew this plan for Washington after reconnoiter-
ing the area surrounding Stony and Verplanck's points in 1779.

Historical Society of Pennsylvania

flats towards the bridge. The abette (abatis) in front of there works con-
tinued down the bank and across the beach to Low warter marke.

From the Bridge across the Marsh towards the Stone house is about
Eighty Rod. The Beach here at low warter, is about three Rod wide nearly
on a level with the Marsh where was a Small fier where I apprehend a night
picket is posted. After you leave the Marsh between the high bank and the
warter the beach is not Quite So wide. The distence to march here before
you are in the Rear of there line of works is also about Eighty Rod directly
in front and under the Rake of the afore Said american battery which is
Retiered from there line of Works and is built on a part of the Point that



projects more in to the bay and Servs as a kind of flank and in front of which there Encampment must be entered.

I had in my party a Number of intilgent Soldiers of Colo. Nixon Regiment. . . . I proposed to them last eving to pilate me across the crick below the bridge in order as I pretended to take of Some of the out guards. . . .

. . . I took my Stand this morning before light a few Rods from the old church. The morning was not So favourable as I could have wished but I had Several fair observations as the Sun passed through the openings of the clouds. I could See very little of the works on Stonney Point. Northing to contradict my observation made from the hill on the west Sid the River.—On the beach South of the crick that Sepperets Stonney point or Island from the main I discovered a Small guard Round a fier—and on Vanplanks Point neare the edge of the hill coming onto the Marsh from the Stone house towards the bridge was also a fier where I conclude they had

a picket in the night and from which a Sentry it is most proverble is posted on the beech at or neare the Bridge. Haveing made all the observations in my power and being determened to come Immediately to camp I marched my party which consisted of fifty (Rank and file) and paraded them in open Vew Near the church. They maned there works and the quad at the Stone house Turned out which Consisted of one officer and about 20 men. The Excessive Rain while I was out prevented my being abel to perform the Service Sooner. . . .

—Washington Papers, roll 25.

Its natural surroundings made Stony Point a forbidding target, and the British thought they had secured it against either a quick thrust or a siege. The audacity of an attack tempted Washington. Thus on 16 July 1779, rebel forces using information reported by Putnam and others and commanded by Brig. Gen. Anthony Wayne dramatically recaptured Stony Point. The sometime engineer officer Lt. Col. François Fleury, now also a battalion commander, was the first man to enter the enemy works. His performance in combat was singular: he stormed over the walls and boldly pulled down the British flag. Though the rebels abandoned the fort only two days later, Fleury had earned himself a congressional silver medal, the only foreigner so honored during the Revolution.

Washington relinquished Stony Point because he lacked enough men to hold it and take Verplanck's Point as well. The British promptly recovered Stony Point and fortified it more extensively than ever. For a time Washington considered another assault but abandoned the idea on the advice of his council of war.

As a member of that council, Duportail opposed a renewed attack on either Stony or Verplanck's Points. This time, Duportail realized, the Americans would have to confront more formidable defenses. His plan to menace the British positions was a good one. His view that the enemy would soon find themselves overcommitted was remarkably prescient, for on October 21 the British abandoned the fort, leaving it in ashes.

6. "IT WOULD NOT BE PRUDENT TO RISK THE LOSS OF A GREAT NUMBER OF MEN, UPON HOPES NOT WELL FOUNDED"

Louis Duportail to George Washington.

July 27, 1779

West Point being to us a point which it is of the greatest importance to preserve and to put once for all in a state of defense. I think that we ought not to touch the fund of troops necessary to the defence of this Post, in its

present state, and to the construction of the Works already undertaken. According to what His Excellency has been pleased to submit to our views, it appears that we have there about 5000 Men. This is perhaps more than sufficient to receive the Enemy 'till the rest of the Army can arrive to their succour, but it is not too much for the Work we are carrying on. I therefore think it best to leave them there. The question then is, what we can do with the rest. Can we attack Stony Point or Verplanks point?

The English having augmented considerably the number of their Troops at Stony Point, labouring to inclose their Works and probably keeping themselves more upon their guard than heretofore, I think that we ought not to attack them because we should be likely to lose a good many Men and perhaps without success. Besides, according to my conception of the matter, we should not have any great advantage by gaining possession of Stony point; because we must be also masters of Verplanks. . . . If we should attack Stony Point, it could only be to possess ourselves of the Garrison and of the Magazines, but tho' we have succeeded once without loss, we must not believe, that we should succeed in the same manner a Second time; and it would not be prudent to risk the loss of a great number of Men, upon hopes not well founded, who may become very necessary to us. The arrival of Lord Cornwallis and the strong appearances of an embarkation, seem to indicate that the English have received, or are sure of receiving a reinforcement, which enables them to send Troops to Carolina or elsewhere. Perhaps therefore until we know with what number of Troops we Shall have to do, it will be proper not to adventure our Troops in expeditions more than uncertain.

We cannot propose to ourselves, to attack Stony Point by regular approaches. The ground which is on a level with it, or which commands it, is too distant for the batteries erected there, to be able to batter the Works to advantage and render them more easy to be carried by assault, in which it must ultimately end. Besides, by the disposition of the Roads, we should run great risk of losing our cannon, Mortars, etc.

What I say respecting the attack of Stony Point *Sword in hand*, applies itself to Verplanks point. But as to attacks by means of Batteries, Verplanks point is very susceptible of them; and I think if the enemy should be imprudent enough to abandon Verplanks point to its own force, and there is no *body* of Troops near enough to support it, we ought not to hesitate to make the attack, because we risk nothing. If the Enemy arrives in time to bring them succour, we get rid of the business by retiring. I think therefore that we ought always to be ready for this enterprise.

Though I do not think that we ought to attack Stony point or Verplanks Point by assault or otherwise, unless in some extraordinary circumstances which may present themselves, nevertheless it appears to me essential to menace them continually. I should then have been glad if 12 or 1400 Men had been left at the outlet of the mountains above Stony Point and a like Corps at the Continental Village. These Corps will absolutely

risk nothing unless they should suffer themselves to be surprised, and even this would be very difficult. They could be turned on neither side and they have always their communication secure with West Point. By showing themselves always ready to attack the Forts, they oblige the Enemy to have within reach to support them, a Corps of at least three thousand Men, to have nothing to fear. Then which will appear singular, the possession which the Enemy have of Verplanks point and Stony Point will turn against them and become an advantage to us. For here are 5000 Men employed to maintain a Point, which is of no great consequence to us. Let us add to these, the number of Men they must have at New York for the Security of that place, and on this side of Kingsbridge to support readily the three thousand Men advanced, unless they keep their Men upon the Water; and we shall see that the Enemy, by having posted themselves at Kings ferry, have imposed on themselves the necessity of establishing a chain of Posts from Kings ferry to New York, which will prevent their having so many for distant operations; and thus we shall perhaps save the Country from pillage.

—Washington Papers, roll 25.

Following a now-familiar pattern, Washington renewed his commitment to West Point after the American capture and abandonment of Stony Point. He established headquarters at West Point. Then, after viewing Fort Putnam, he decided that Rocky Hill—as well as three additional high points to the south and southwest and still others across the river—should be fortified immediately. Washington had always appreciated the possibility of attack from the rear, while some advisors had found it impossible to shift their attention from the Hudson. Yet Kosciuszko had first urged fortification of Rocky Hill and had even drawn the plans in 1778; fully a year before Washington's intervention.

In August the Commander in Chief directed Duportail to make yet another survey of West Point's defenses. In a masterful reassessment Duportail considered the consequences to both sides of losing control of the Hudson. After months of anxiety, he now welcomed an attack by the British, assured that it would mean ruin and dishonor for them. The rebels stood in a position to weaken the enemy so much that New York City would surely have to be abandoned unless substantial reinforcements arrived.

In his report, Duportail evaluated West Point's defenses by considering the several courses of action open to the British and the Continentals' possible responses to each. He concluded that the most probable approach for the enemy would be to gain control of the heights to the west above Fort Putnam and Webbs and Wyllys redoubts. And, Duportail declared, "we have assured the defense of this mountain, as much as it is necessary to do it." Hidden beneath his assertion was Duportail's hearty acceptance of works he originally opposed, works proposed and designed by Kosciuszko.

7. "HAPPILY, THE TIME FOR FEAR IS PASSED"

From Louis Duportail's review of British options at West Point.

August 20, 1779

To bar the river from the North in a suitable location is one thing the extreme importance of which everyone is presently aware. It is known that the depth of this river is considerable enough so that warships or frigates at least can go up it almost to Albany and that the breadth or the nature of its banks is such that enemy ships would find innumerable spots where in no manner would it be possible to damage them from the river bank. The enemy, by constant sailing of its frigates or small armed boats would prevent communication from the North to the south below Albany. Since the country above is still quite new sparsely populated and since there are few roads and besides the enemy, most of the river up to Albany, has the greatest facilities to reinforce and maintain the army of English, Tories and savages that he has within reach in these cantons, it follows that the passages above Albany would soon be in their possession, consequently, all communication between the lands situated on one side of the river and those of the other would be completely broken; which would have very fatal consequences: the main ones are that all parts of the United States thus separated would be left to their own forces, without being able to call on any aid one from the other, which would weaken them considerably, against an enemy which can maneuver anywhere he desires. . . . When one reflects on that, one is surprised that the English have not turned their sights to that point, that they have not undertaken an operation so easy for a long time and so decisive. They could have done it up to the time of last May, for at that moment the works at West Point, even though I prepared them, and until then, there had never been enough troops to make up for the insufficiency of the works. Thus were we in a constant dilemma in regard to this valuable post. Happily, the time for fear is passed, and now far from being apprehensive about seeing the enemy march on this place, we infinitely desire it, assured that he would find there his ruin and his dishonor, and we an opportunity to weaken him so as to be unable to maintain himself any longer in New York, without receiving considerable reinforcements; this is what we are going to try to show by the following study:

In order to judge correctly the effect of the fortifications built at West Point, . . . it is appropriate to examine the different undertakings that the enemy can plan against this post; the different means by which he can proceed in his operations, as much by the land as by water, and what we can contrast with if from our side, we supposing West Point left to its own forces, that is defending itself with its garrison. . . .

[Here Duportail considered four alternatives open to the British before reaching the following conclusion.]

. . . It must . . . be admitted that the different undertakings that [I] have just . . . described lead only to breaking the chain in a hurry, without having time to carry it away nor to detach it from the woods in order to sink it. It is not probable that the enemy would expose himself to so much danger in order to cause a damage that can be easily repaired, if we prepare the means. I am inclined to believe that if he undertakes something against West Point it will be in a more solid and decisive way. This will be to make himself master following operations against all the forts of West Point either to hold them or to destroy them completely and thus procure for himself a free passageway on the river. . . .

Fifth Undertaking. The 5th Undertaking is the probable plan. If one examines the terrain above Fort Clinton, one will see that the heights which overlook it or which looks down on each other, are occupied rather extensively in two directions. On one side Putnam, Rockhill and [a redoubt]; from the other side Webbs, Willys, but also one sees a mountain which begins at Rockhill and which extends behind Putnam, Webbs and Willys and which perfectly dominates these works, so that this array of fortifications which prescribes a great deal at first look, is reduced to little for effect, because the enemy, supposedly in possession of this mountain can establish at the same time cannon and mortar batteries against Rockhill . . . , Putnam . . . , Webbs and Willys . . . these last two works are not even tenable for very long under these conditions, being too prolonged. It will be necessary then to abandon them early and consequently the enemy would advance along the slope . . . and can set up his batteries against Clinton without even having taken Fort Putnam. It is evident then that the real point of attack against West Point is from the mountain M, O¹⁶ in question, since one comes all of a sudden from it to the attack on Putnam instead of making successive attacks on all the Forts above or below this Fort, as would be necessary coming from the other side. Now with respect to the difficulty to the enemy to get to this place, if there were no works, there would be none. This mountain is most accessible from any side and its slope from the west is such that cannon can easily be brought there, so that supposing the enemy, disembarked opposite Robinson's,¹⁷ establishes himself on the mountain, sets up his batteries and fires his first cannon shot against Putnam, cannot require more than four or five days (since the batteries can be constructed even while the cannon are being brought up) it would be indispensable, then, to occupy this mountain; this is what we have done by the two works S, T. . . . I don't think it any longer possible for the enemy to select it as his debarkation point; it is true that from there to the first battery . . . is more than a mile; but one must consider that it is not a question of firing on a work, on a small space, but on a multitude of boats, ships, horses, carriages, men; everything conceivable assembled in one spot where all the apparatus of an army

munitions of all types being unloaded. It is clear that at a distance of more than a mile each cannon round is almost sure and it must always strike something; that consequently one cannot select such a point to establish himself; moreover the enemy, getting off of his ships, will not expose himself by camping on the plain under the fire of these same batteries, he must then withdraw to the rear of this point. We can conclude that he will prefer to disembark at the other place This is already an advantage, to move further away the enemy's disembarkation point; this stretches still more his communications, gives greater facility to attacking him, renders more difficult the transportation of artillery and munitions.

Let us suppose now that the enemy established on the plain at the required distance and on the mountain (U) opposite our redoubts, what decision will he make then? Will this be to advance on our left under the fires of [two of our] batteries . . . and those that can be set up on the same mountain for the attack on the redoubt Willys, then on Webbs, from there to Putnam or Clinton? The absurdity of such a plan is too palpable for there to be a need to show its effect. The enemy can do only one of these two things. He can advance by the mountain . . . attack redoubt R in order to march against Rockhill, and from Rockhill against Putnam; but it must be noticed that redoubt R, can only be attacked in strength because it is perhaps impossible for the enemy to bring up large cannon against it as long as he does not control Redoubts S and T, secondly because it would be covered by [a] Battery . . . , against that which one might set up opposite . . . after having taken redoubt R by strong attack he must likewise take Rockhill and then Putnam for . . . the enemy cannot find (neither at the Redoubt R nor at Rockhill) cannon suitable for firing on the works.

The other route that the enemy can take to get to Putnam (which is still the central point to which he must come) is by the mountain . . . as we have already pointed out. He must then capture Redoubts S and T. If he captures only Redoubt T, he can easily establish his troops on the mountain, but he could only bring his cannon up there with an extraordinary, laborious and long toil, by the eastern slope; if he captures only Redoubt S he must bring his cannon along the Furnace [?] road, which can be regarded as almost impracticable, because it cannot be supposed in advance that he will bring his cannon through the valley under fire from Redoubts T and S and of their batteries. As to the difficulty itself of capturing the works, one can only set up batteries against them on the slope of the mountain opposite at more than 500 Toises,¹⁸ too great a distance to destroy them with cannon. There will be, moreover, in each of these redoubts an underground bomb-proof shelter to protect the garrison. The enemy must then always come to an attack in force and they are in such condition that the undertaking would certainly be very dangerous.

It seems to me that we have assured the defense of this mountain, as much as it is necessary to do it, in view of the number of troops the enemy can sacrifice to the attack of West Point. . . .

Munitions. We have supposed up to the present the post of West Point left to its own forces, that is, defended by its own fortifications with their garrisons. We will say a word on how to use the additional troops that should be on hand when the enemy appears or who should come in the course of the attack. First, as we have said, the first posts to be occupied are the points of debarkation. Since we think that the enemy cannot come from King's Ferry by land, one might question that we do not advise stringing out troops in quantity on the roads and paths which lead from this area to West Point. Patrols only are necessary to warn that the fort at Montgomery not be surprised from the rear.

After that, the mountains opposite the redoubts R, S, T, being the first posts where the enemy must establish himself in order to push his operations against West Point, it is thus also one of the first that we must garrison. Some hundred men on these mountains making the approaches difficult by abatis will stop the enemy for a long time. We must reconnoiter, look for ways to attack them, to dislodge them. In areas of difficult access, covered with woods and rocks, this is quite long.

I will note here in passing that in a mountainous country if troops are placed on a mountain which has another one on its flank, . . . it is appropriate to put some men (as small a number as it might be) on this other mountain. This would prevent the enemy, who does not know their strength, from descending in the valley in order to turn the troops on the first mountain for fear of finding himself between two, or cut. There is place to apply this principle in the locations of which I am speaking here.

After occupying the mountains of which it was just a question, the location of the troops which we have more of as well as the natural retreat of those forward, if they were dislodged and on the mountain M, O, then they would place themselves in the rear of the abatis constructed between the redoubts S.T. and along the eastern and western slopes within range of defending these redoubts and to oppose themselves everywhere to the passage of the enemy. These troops, depending on their number, would construct in their rear, fortifications in the most favorable locations, leading to the type of works they can execute; in a word, they must use everything to defend this mountain for as long a time as possible for on it depends principally the defense of West Point, it cannot be repeated too much. . . .

—Manuscript Department, U.S.
Military Academy Library.
Translated by Lt. Col. Donald
Dunne.

By fall 1779 plans for the West Point defensive complex were complete. With all sixteen enclosed positions either finished or under construction, only improvements and maintenance were required. Yet such work con-

sumed considerable time. West Point now boasted a mutually supporting system of forts, redoubts, and batteries. Their combined effectiveness was required to achieve the primary goal—the closing of the Hudson to enemy vessels.

Duportail viewed West Point's scattered defenses with misgivings because they seemed to violate the dictates of the great French military engineer Marshal Sébastien le Prestre de Vauban. Yet while Vauban had stressed the use of single massive fortresses, he had also injected a note of flexibility by urging that defenses ought to utilize and augment the surrounding natural terrain. Although most of the foreign engineers in America had studied at the great French engineering school at Mézières where Vauban's theories were gospel, only Kosciuszko appears to have recognized Vauban's flexibility. The West Point system, historian Dave Richard Palmer has convincingly argued, was "a splendid prototype for the system of fortifications which were to be built in Europe in the next century."¹⁹

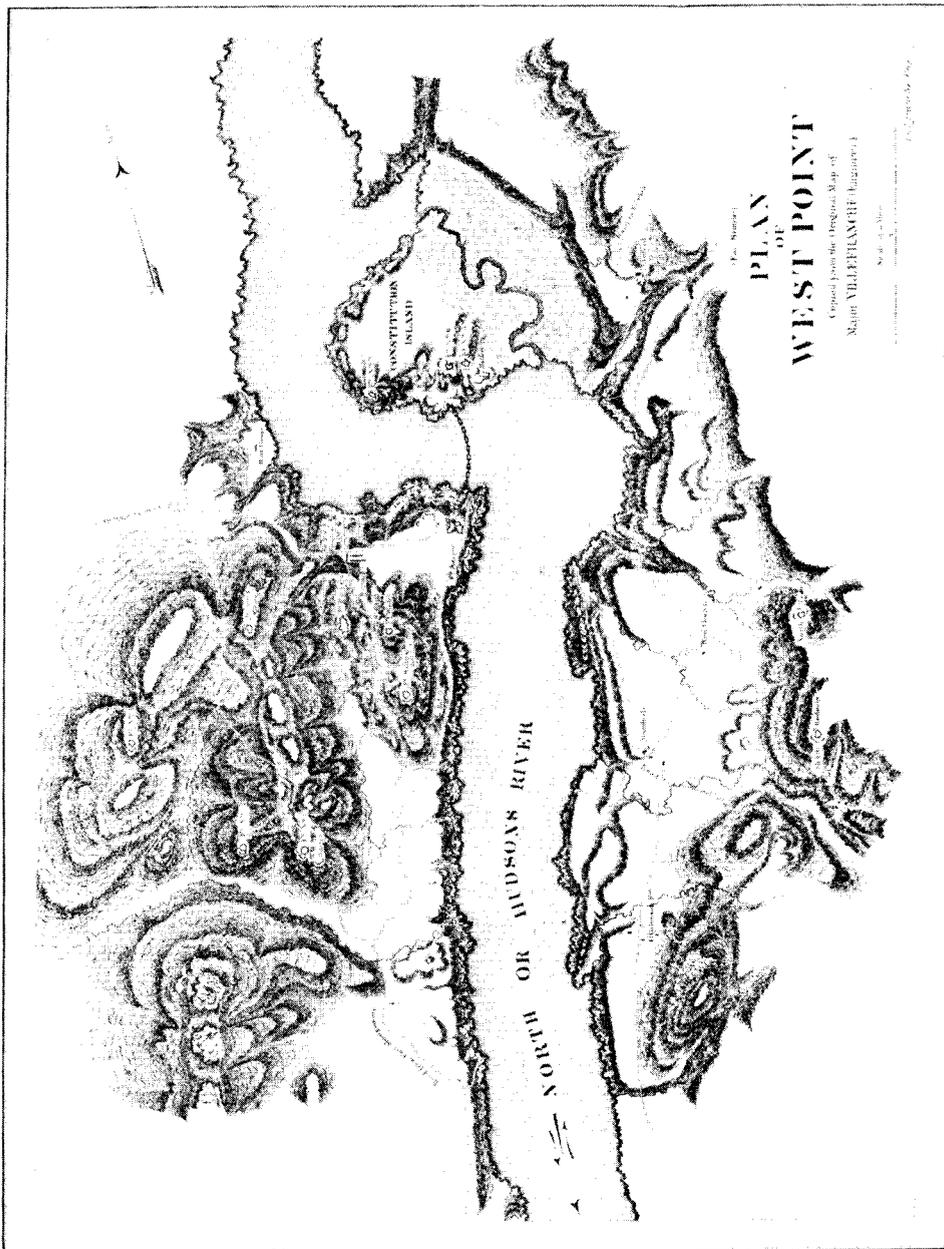
The enemy did not move against West Point that fall. After the British abandoned Stony and Verplanck's points, Gouvion led a large detachment of soldiers to level the enemy works at Verplanck's Point.²⁰ Little else happened in the Highlands throughout the harsh winter of 1779–80 except efforts to provide adequate barracks and customary repairs to the great chain. What little fortification Kosciuszko attempted was frustrated by a lack of artificers and laborers, a recurring problem at West Point.²¹

When Washington sent Duportail to help Maj. Gen. Benjamin Lincoln at Charleston, South Carolina, Gouvion left West Point to replace Duportail at headquarters. Another change occurred in August 1780 when Kosciuszko departed West Point to serve as an engineer in the south with General Gates. Maj. Jean Louis Ambroise de Genton, the Chevalier de Villefranche, succeeded Kosciuszko as West Point's engineer. A quick inspection of the point with Gouvion convinced Villefranche that improvements were needed.

Soon more than 400 men worked under Villefranche's direction, while a group of ten musicians eased the laborers' tasks with invigorating martial tunes. Although the newly formed companies of sappers and miners ought to have assisted Villefranche, evidence indicates that instead they were stationed with the artillery at Dobb's Ferry until the end of October, when they moved to West Point for the winter.

Unfortunately Villefranche also had to work with Maj. Gen. Benedict Arnold, commander at West Point since August 3. Already engaged in treason, Arnold outwardly supported Villefranche's plans but actually undermined his efforts by detaching sorely needed troops.²² As construction and repairs lagged, the "Gibraltar of America" became weaker. Fortunately for the American cause, Arnold's treachery was discovered late in September, before he could deliver West Point into the hands of the enemy.

In late November the Chevalier de Chastellux, one of the Comte de Rochambeau's major generals, visited the Highlands during his travels



around America. His journals contain the following graphic description of the awesome Highlands setting and of the fortifications at West Point and Stony and Verplanck's points at a time when further combat operations in the north seemed unlikely. Revealing a Frenchman's bias, Chastellux attributed everything about the "beautiful and well-contrived works" to Duportail and Gouvion and did not even mention Kosciuszko's contributions.

8. "THE MOST MAGNIFICENT PICTURE I HAVE EVER BEHELD"

From the journal of the Marquis de Chastellux.

November 21, 1780. . . . Descending slowly, at a turn of the road, my eyes were suddenly struck with the most magnificent picture I have ever beheld. It was a view of the North River [Hudson], running in a deep channel formed by the mountains, through which in former ages it had forced its passage. The fort of West Point and the formidable batteries which defend it, fix the attention on the western bank, but on lifting your eyes you behold on every side lofty summits, all bristling with redoubts and batteries. I leaped off my horse and stood there for a long time looking through my spyglass, the only method of acquiring a knowledge of the whole of the fortifications with which this important post is surrounded. Two lofty heights, on each of which a large redoubt is constructed, protect the eastern bank. These two works have no other name than the Northern and the Southern Redoubt; but from the fort of West Point proper, which is on the edge of the river, to the very top of the mountain at the foot of which it stands, are six different forts, all in the form of an amphitheater, and protecting each other. . . . General Heath . . . conducted me to the river, where his barge was waiting to take me across to the other side. As we were going down towards the river bank a new scene opened to my view, not less sublime than the former. We were facing towards the north: in that direction is an island covered with rocks, which seems to close the channel of the river, but you soon perceive, through a sort of embrasure which the river bed has formed by separating immense mountains, that it comes obliquely from the westward, and that it has made a sudden turn round West Point to open itself a passage and rush on to reach the sea,

WEST POINT FORTIFICATIONS. *This plan of the complete system of defenses at West Point was copied from the original map drawn in 1780 by the Chevalier de Villefranche. Villefranche (1747-84), a topographical engineer in France before coming to America in 1777, served in Pennsylvania and at West Point and Fort Herkimer in New York. He was one of the best mapmakers in the Corps of Engineers.*

Boynton, *History of West Point*

FORT ARNOLD

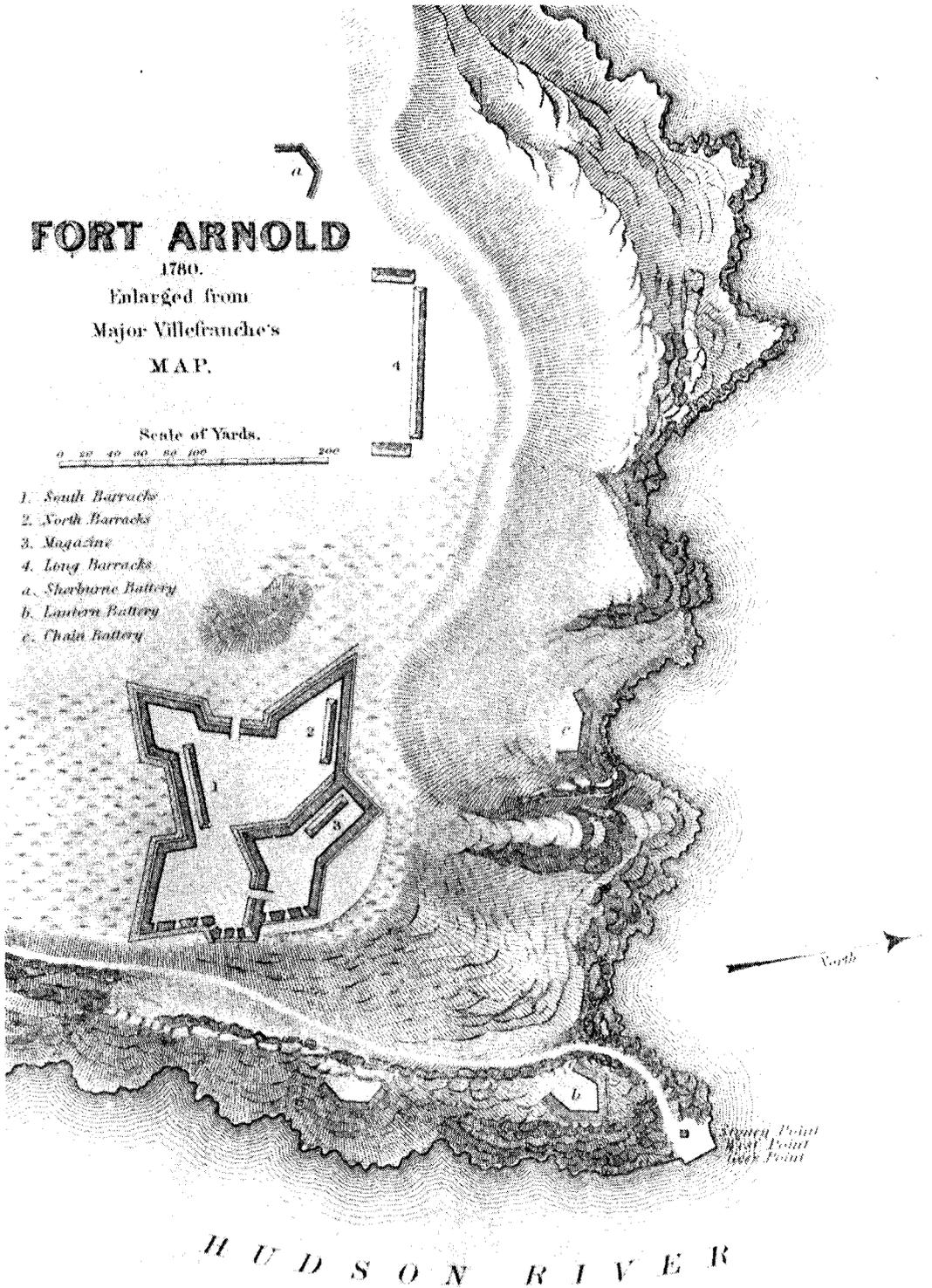
1780.

Enlarged from
Major Villefranche's
MAP.

Scale of Yards.

0 20 40 60 80 100 200

1. South Barracks
2. North Barracks
3. Magazine
4. Long Barracks
- a. Sherburne Battery
- b. Lauson Battery
- c. Chain Battery



FORT ARNOLD. This detailed sketch of West Point's main fort is enlarged from the plan made by Villefranche in 1780.

Boynton, *History of West Point*

without hereafter making the smallest bend. The eye looking towards the north beyond Constitution Island (the island I have been speaking of) again perceives the river, discerns New Windsor on the western bank, and is then attracted by different amphitheatres formed by the Appalachian Mountains, whose nearest summits, terminating the scene, are more than ten leagues away. We embarked in the barge and crossed the river, which is nearly a mile wide. As we approached the opposite shore the fort of West Point which, seen from the eastern bank, had seemed humbly situated at the foot of the mountains, rose before our eyes and itself appeared like the summit of a steep rock; this rock however was only the bank of the river. Had I not remarked that the chinks on it, in several places, were embrasures for cannon and formidable batteries, I should soon have been apprised of this fact by thirteen 24-pounders, which were fired successively. This was a military salute, with which General Heath was pleased to honor me in the name of the thirteen states. Never was honor more imposing nor more majestic; every shot was, after a long interval, echoed back from the opposite bank with a noise nearly equal to that of the discharge itself. When we recollect that two years ago West Point was an almost inaccessible wilderness, which has since then been covered with fortresses and artillery, by a people, who six years before had scarcely ever seen cannon; when we reflect that the fate of the thirteen states has depended in great measure on this important post, and that a horse trader, transformed into a general, or rather become a hero, always intrepid, always victorious, but always purchasing victory at the price of his blood; that this extraordinary man, at once the honor and the opprobrium of his country, sold and expected to deliver this *Palladium* of American liberty to the English; when, indeed, so many wonders, of both the physical and moral order, are brought together, it may easily be imagined that I had sufficient food for thought, and that my mind was not idle on the road.

. . . Pressed by dinner time, we went immediately to General Heath's barrack. The fort, which was begun on much too extensive a plan, has since been compressed by M. Duportail, so that this barrack is no longer within its walls. Around it are some magazines, and farther to the northwest, barracks for three or four battalions; they are built of wood and similar to those at Fishkill. . . .

. . . As soon as we rose from table, we hurried to avail ourselves of the remaining daylight to examine the fortifications. The first fort we met with above West Point, on the declivity of the mountain, has been named for General Putnam. It is placed on a rock very steep on every side; the ramparts were at first constructed with trunks of trees; they are being rebuilt of stone and are not yet entirely finished. There is a bombproof powder magazine, a large cistern, and a souterrain for the garrison. Above this fort, and on reaching the highest peak, you can still see, on three other summits, three strong redoubts lined with cannon, each of which would



WEST POINT PANORAMA. *This view of West Point from the east side of the Hudson is from a watercolor by Pierre Charles L'Enfant, an officer in the Corps of Engineers.*

Record Group 66, National Archives

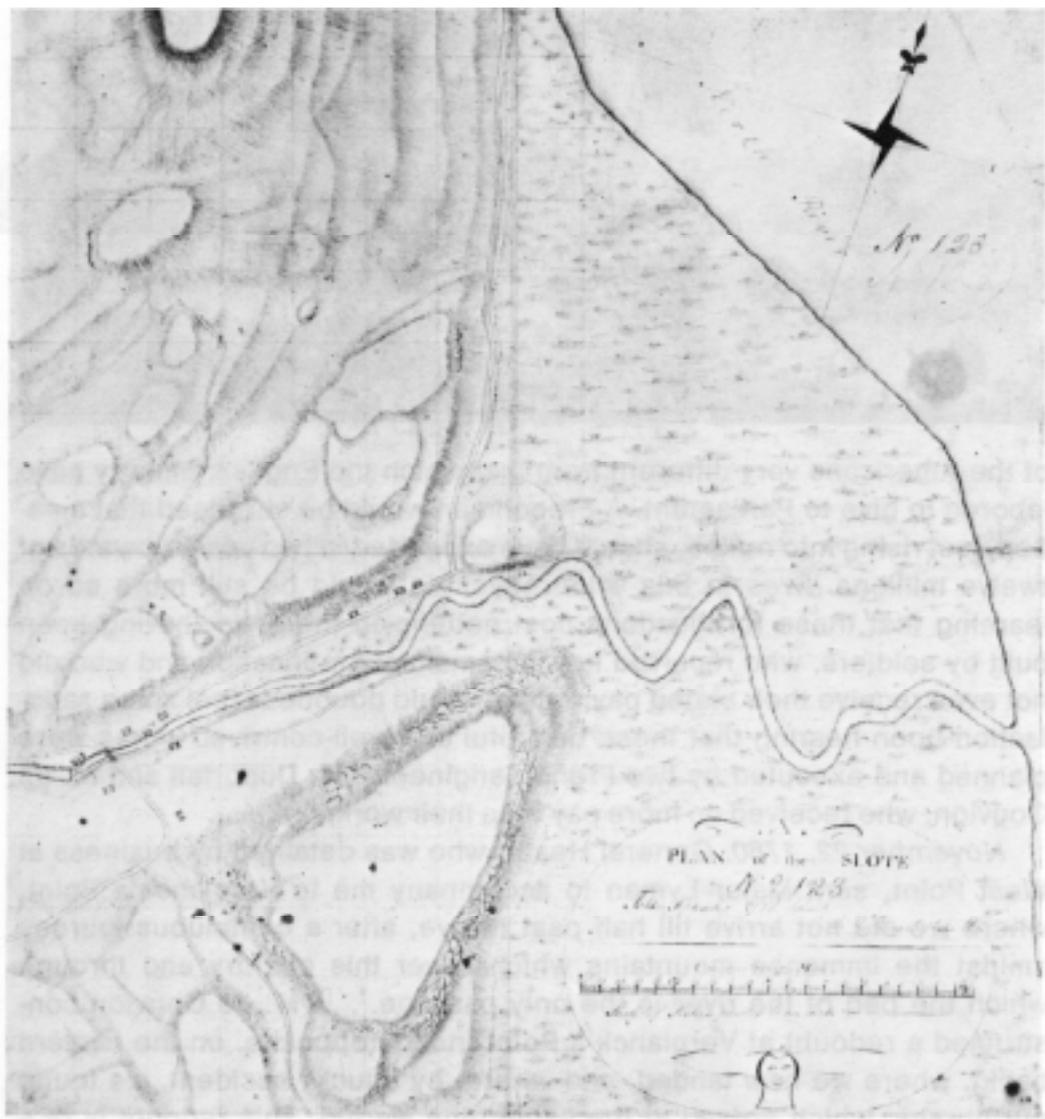
require a formal siege. The day being nearly spent, I contented myself with judging by the eye of the very intelligent manner in which they are calculated for mutual protection. Fort "Wallis" [Wyllis], whither General Heath conducted me, was nearer and more accessible. Though it is placed lower than Fort Putnam, it still commands the river to the south. It is a large pentagonal redoubt, built of huge tree trunks; it is picketed (*fraisé*) and lined with artillery. Under the fire of this redoubt, and lower down, is a battery of cannon to range more obliquely the course of the river. This battery is not closed at the gorge, so that the enemy may take it, but never keep it; which leads me to remark that this is the best method to follow in all field fortifications. Batteries placed in works have two inconveniences: the first is that if these works be ever so little elevated, they do not graze sufficiently; and the second, that the enemy may at the same time attack the redoubt and the battery: whereas if the battery is exterior and protected by the redoubt, it must be attacked first; in which case it is supported by troops who have nothing to fear for themselves, and whose fire is consequently better directed and more deadly. A battery still lower down and nearer to the river completes the security of the southern part.

While returning to West Point we saw a redoubt that has been allowed to go to ruin, as being useless, which in fact it is. It was dark when we got home, but what I still had to observe did not require daylight. This was a vast souterrain, formed within the fort of West Point [Fort Clinton], where not only the powder and ammunition necessary for this post are kept in reserve, but also the depot for the whole army. These magazines neatly filled, the numerous artillery one sees in these different fortresses, the prodigious labor necessary to transport and pile up on steep rocks, huge trunks of trees and enormous hewn stones, impress the mind with an idea



of the Americans very different from that which the English ministry have labored to give to Parliament. A Frenchman would be surprised that a nation, just rising into notice, should have expended in two years upwards of twelve millions *livres* in this wilderness. He would be still more so on learning that these fortifications cost nothing to the state, having been built by soldiers, who received not the smallest gratification and who did not even receive their stated pay; but he would doubtless feel some satisfaction upon hearing that these beautiful and well-contrived works were planned and executed by two French engineers, M. Duportail and M. de Gouvion, who received no more pay than their workmen. . . .

November 22, 1780. General Heath, who was detained by business at West Point, sent Major Lyman to accompany me to Verplanck's Point, where we did not arrive till half past twelve, after a continuous journey amidst the immense mountains which cover this country and through which the bed of the river is the only passage. . . . M. de Gouvion constructed a redoubt at Verplanck's Point [nearly opposite, on the eastern bank], where we now landed, and where, by a lucky accident, we found our horses, which arrived at the same time we did. This redoubt is of a peculiar form, hardly ever used in America: the ditch is within the parapet, which is made steep on both sides, and picketed (*fraisé*) at the level of the cordon; lodgings for the soldiers are formed below. The middle of the work is a *reduit* constructed of wood, and in the form of a square tower. It has battlements everywhere and commands the rampart. An abatis formed of interwoven tops of trees surrounds the whole and is a substitute for a covered way. We may easily perceive that such a work cannot be surprised, nor taken without cannon. Now as this is backed by the mountains, of which the Americans are still masters, it is almost impossible that the English should besiege it. A "creek" which flows into the Hudson river, and runs to the southward of this redoubt, renders its position still more advantageous. Colonel [James] Livingston, who commands at King's Ferry, has established himself there in preference to Stony Point, to be nearer White Plains, where the English frequently make incursions. . . .



THE SLOTE. *As part of the Army's attempt to map crucial terrain, Captain William McMurray of the sappers and miners drew this plan in September 1780. The map details the major road connecting New Windsor with the rebel encampments in northern New Jersey as it passes through Smith's Clove, also known as the Sote. It is the only map known to have been executed for the geographer's department by an officer of the sappers and miners.*

New-York Historical Society, New York City

About two o'clock we crossed the river, and stopped to examine the fortifications of Stony Point. The Americans finding them too extensive, have reduced them to a redoubt, nearly similar to that of Verplanck's, but not quite so good. There I took leave of Mr. Livingston, who gave me a guide to conduct me to the army, and I set off. ... On leaving the river, I frequently turned round to enjoy the magnificent spectacle it presents in

this place, where its bed becomes so large, that in viewing it to the southward, it has the appearance of an immense lake, whilst the northern aspect is that of a majestic river.

—Chastellux, *Travels in North America*, 1:89–91, 93–94, 96–98. Copyright 1963 by the University of North Carolina Press. Published for the Institute of Early American History and Culture. By permission of the publisher.

By the end of 1780 the British still had not attempted a direct assault on West Point, nor were they to do so for the remainder of the war. In 1781 the Americans concentrated first on turning the British out of New York City and then on the final strategy against Lord Cornwallis in Virginia that culminated with the siege of Yorktown. With attention focused elsewhere, the works at West Point were allowed to deteriorate.

Circumstances changed considerably after the American victory at Yorktown, because Washington stationed the bulk of his Army in the Highlands. Thus General Heath, the commander, and Villefranche, his engineer, planned a hospital and other buildings to house the Army, its equipment, and supplies.

In spring 1782 Washington returned to West Point and found conditions unacceptable. With both Duportail and Gouvion on leave in France, he ordered Villefranche to prepare a full report on the requirements for housing and protecting the Army. Throughout the war there had always seemed to be plenty of work to keep the Army's engineers, artisans, and fatigue men busy; in Villefranche's view, 1782 was no different. Washington responded to the engineer's numerous requests by ordering the repairs.

9. VILLEFRANCHE'S REPORT ON THE WORK REQUIRED AT WEST POINT

West Point, 15 April 1782

To Complete the several Redoubts and batteries at this post.

Fort Clinton. The fascines which constitute that work are so very dry that the least sparks of fire is sufficient to set the fort in a blaze; i think therefore that those old fascines ought to be taken away entirely and timber put in the place of them, or good masonry.

The Counterscarp must also be secured, and the Coverd way Continued all round the fort and ought to be palissadoed.

A new Bomb proof should be built as large as the Tereplain will admit.

The half bastion of the old fort which faces the river ought to be finished and a battery establish[ed] upon it, to Command the plain and defend the river. This half bastion to be joind to the new fort by a branche.

The old fort aught to be demolished quite to the powder magazine.

A barbet Battery is to be Constructed under the protection of the fort for the defense of the Chain.

Fort Putnam. Half of the fort which is built with dry stone wall, ought to be rebuilt in good Masonry. A new Magazine for powder, and barracks sufficient to quarter the troops of the garrison should be Built; the Cistern must be finished. . . .

Fort Willys. The bomb proof should be Coverd with two feet of earth. The inside of the parapet is to be raised a little, so as to make it four feet four inches higher than the Banquet.

The south part of the wall must be rebuilt. The battery must be joind to the fort by two branches of palissadoes.

Fort No. 1. There must be a bomb proof, a Magazine for powder, one for provisions, and Barracks for the Garrison. The two batteries are Complete.

Fort No. 2. There must be a bomb proof, a Magazine for powder, one for provisions, and Barracks for the garrison: three quarters of the Battery only is don therefore aught to be finished.

Fort No. 3. There ought to be a bomb proof, a Magazine for powder, one for provisions, and Barraks for the Garrison.

The battery newly began, must be finished and an other established to defend the Valley towards the north.

Fort No. 4. The new breast work, a quarter part of which is don must be finished, a powder Magazine one for provisions, and barraks for the garrison, must be built;

There ought also a battery to be Constructed north of the fort.

There must be a Block house Built between No. 3 and 4.

Constitution Island, Fort No. 5 and 6. Palissadoes are to be erected upon the parapets, bomb proofs Magazines for powder, and provisions, and Barracks for the garisons, should be Constructed and Batteries erected under the protection of the forts, for the defence of the back part of the Island, and abatis put all round the forts.

[Constitution Island,] *Fort No. 7.* A bomb proof, a Magazine for powder, one for provisions, and Barracks for the Garison are to be Built, and a battery is to be erected under the protection of the fort to defend the Back part of the Island; abatis are to be put alround the fort.

There is a battery begun for the defence of the chain which ought to be finished.

On the east side of the river, the north and south redoubt with their Batteries are Completed. . . .

To put this post in a state of defence, together with an estimate of the materials requisite.

I don't think the embrasures in this fort, in their present situation, will bear the exercise of Cannon without the greatest danger of setting the whole on fire; it will therefore be necessary to pull down the fascines with which the faces of the embrasures are constructed and to build them with timber. The necessary articles to make the reparation are the following: 24 pieces of timber 10 feet in length [*sic*] and 8 by 8; 12 pieces of timber 13 feet in length and 8 by 8; 12 pieces of timber 18 feet in length and 8 by 8; 108 four inch plank. 8 Carpenters and 16 fatigue men will accomplish it in 15 days.

As the Bomb proof in Fort Clinton is half filled up with powders, the fascines with which it is surrounded should be replaced by a dry stone wall. The requisite assistance to accomplish it in 15 days are three teams 8 Masons, six miners, 60 fatigue men, and 30 hand barrows. . . .

The Courtin which covers the powder Magazine is not defended, and is a shelter for the enemy to come to the foot of the magazine; I think it would be proper to profit of the bastion which flanks that Courtin, and to make a redoubt with it; the gorge of which should be left open. A block house could be erected in the tereplain of the said redoubt, which would answer both to augment the defence, and Barrack the troops. A powder Magazine could also be constructed under the block house; if your excellency thinks proper to have that redoubt erected, I shall give an estimate of the materials.

Fort Putnam. The powder Magazine is not secure against the shells. Consequently a wall should be built allround it.

That part of the fort which faces the river is very easy to be storm'd, a little breast work erected on the top of the parapet would add greatly to its defence, the assistance requisite to complete these two works in 15 days are 12 Masons, 8 Miners, 150 fatigue men, 40 . . . hand barrows. . . . [Villefranche continued his report listing in a similar fashion the men, materials, and equipment required to improve West Point's fortifications.]

—Washington Papers, roll 84.

For a brief period in May Villefranche's attention turned to a more frivolous concern, the celebration of the birth of an heir to the French king, Louis XVI. In a passage from his journal, army surgeon James Thacher described the grand festivities at West Point and Villefranche's ingenious contributions to them. The revelry infused a new spirit into the war-weary troops.

10. VILLEFRANCHE'S "SUPERB STRUCTURE . . . AFFECTED THE SPECTATORS WITH ADMIRATION AND PLEASURE"

From James Thacher's journal.

June 1st [1782]—Yesterday was celebrated the birth of the Dauphin of France [the eldest son of Louis XVI], by a magnificent festival. The edifice under which the company assembled and partook of the entertainment, was erected on the plain at West Point. The situation was romantic, and the occasion novel and interesting. Major Villefranche, an ingenious French engineer, has been employed with one thousand men about ten days, in constructing the curious edifice. It is composed of the simple materials which the common trees in this vicinity afford. It is about six hundred feet in length and thirty feet wide, supported by a grand colonnade of one hundred and eighteen pillars, made of the trunks of trees. The covering of the roof consists of boughs, or branches of trees curiously interwoven, and the same materials form the walls, leaving the ends entirely open. On the inside, every pillar was encircled with muskets and bayonets bound round in a fanciful and handsome manner, and the whole interior was decorated with evergreens, with American and French military colors, and a variety of emblems and devices, all adjusted in such style as to beautify the whole interior of the fabric. This superb structure, in symmetry of proportion, neatness of workmanship, and elegance of arrangement, has seldom perhaps been surpassed on any temporary occasion; it affected the spectators with admiration and pleasure, and reflects much credit on the taste and ability of Major Villefranche. Several appropriate mottos decorated the grand edifice, pronouncing benedictions on the Dauphin and happiness to the two allied nations. The whole army was paraded on the contiguous hills on both sides of the river, forming a circle of several miles in open view of the public edifice, and at the given signal of firing three cannon, the regimental officers all left their commands and repaired to the building to partake of the entertainment which had been prepared by order of the Commander in Chief. At five o'clock, dinner being on the table, his Excellency General Washington, and his lady and suite, the principal officers of the army and their ladies, Governor [George] Clinton and his lady, and a number of respectable characters from the states of New York and New Jersey, moved from Major General McDougall's quarters through the line formed by Colonel Crain's regiment of artillery, to the arbor, where more than five hundred gentlemen and ladies partook of a magnificent festival. A martial band charmed our senses with music, while we feasted our appetites and gazed with admiration on the illustrious guests, and the novel spectacle exhibited to our view. The cloth being removed, thirteen appropriate toasts were drank, each one being announced by the discharge of thirteen cannon and ac-

accompanied by music. The guests retired from the table at seven o'clock, and the regimental officers repaired to their respective commands. The arbor was, in the evening, illuminated by a vast number of lights, which being arranged in regular and tasteful order, exhibited a scene vieing in brilliancy with the starry firmament. The officers having rejoined their regiments, thirteen cannon were again fired as a prelude to a general feu de joie, which immediately succeeded throughout the whole line of the army on the surrounding hills, and being three times repeated, the mountains resounded and echoed like tremendous peals of thunder, and the flashing from thousands of fire arms in the darkness of evening, could be compared only to the most vivid flashes of lightning from the clouds. The feu de joie was immediately followed by three shouts of acclamation and benediction for the *Dauphin*, by the united voices of the whole army on all sides. At half past eleven o'clock, the celebration was concluded by the exhibition of fire works very ingeniously constructed of various figures. His Excellency General Washington was unusually cheerful. He attended the ball in the evening and with a dignified and graceful air, having Mrs. Knox for his partner, carried down a dance of twenty couple in the arbor on the green grass.

—Thacher, *Military Journal*,
pp. 372–74.

In July 1782 the Board of War designated West Point a powder depository. Washington favored a site on the west side of the Hudson for the powder magazine, but Villefranche disagreed. The engineer got his way, and a magazine was built on Constitution Island according to the principles of Vauban.

By the end of the summer West Point had a new commander, Henry Knox, the chief of artillery; and members of the sappers and miners corps had returned to West Point from duty in the south. These engineer troops immediately began blasting rock for use in repairing the works on Constitution Island. "Our duty was not hard," a sergeant in the corps recalled, "but the engineers kept us busy."²³ The sappers and miners also built "elegant" new two-story barracks, which, before the new year, they moved into, along with part of an artillery regiment and the Corps of Invalids.

After Yorktown the British still held New York City, but no one thought West Point was threatened. The sappers and miners' detail was reduced to the routine tasks of cutting firewood and standing guard duty, which in some cases they shared with the invalid corps.²⁴

In these waning months of the war, life in the Highlands was often boring and seldom comfortable. Discipline problems began to plague the sappers and miners. As related with typical cleverness by Joseph Plumb Martin in the first of the following documents, several incidents, including a plan to

“blow up” David Bushnell, revealed how unpopular the captain was with the non-commissioned officers and enlisted men.

11. “I VERILY BELIEVE, I SAVED THE OLD MAN’S LIFE”

From the narrative of Joseph Plumb Martin.

In the month of September [1782], while we lay here [Constitution Island] and our tents were pitched about promiscuously, by reason of the ruggedness of the ground, our captain [David Bushnell] had pitched his marquee in an old gravel pit, at some distance from the tents of the men. One day, two or three of our young hotheads told me that they and some others of the men, whom they mentioned, were about to have some fun with “the old man,” as they generally called the captain. I inquired what their plans were, and they informed me that they had put some powder into a canteen and were going to give him a bit of a hoist. I asked them to let me see their apparatus before they put their project in execution. Accordingly, they soon after showed me a wooden canteen with more, as I judged, than three pounds of gunpowder in it, with a stopper of touchwood for a fuse affixed to it, all, they said, in prime order. I told them they were crazy, that the powder they had in the canteen would “hoist” him out of time, but they insisted upon proceeding. It would only frighten him, they said, and that was all they wished to do—it would make him a little more complaisant. I then told them that if they persisted in their determination and would not promise me on the spot to give up their scheme, I would that instant go to the captain and lay the whole affair before him. At length, after endeavoring without effect to obtain my consent to try a little under his berth, they concluded to give up the affair altogether, and thus, I verily believe, I saved the old man’s life, although I do not think that they meant anything more than to frighten him. But the men hated him and did not much care what happened to him.

There was the foundation of some barracks which the British had burnt in their excursion up the North River in the year 1777; it was composed of stone and lime, perfectly level and, perhaps, a hundred feet long. The bushes had grown up around it, excepting the side next the river; the place formed a very pretty spot for a contemplative evening’s walk. The captain used frequently, in fine weather, to be seen pacing backward and forward upon this wall, between sunset and dark. The men observed him and itched to discommode him but, since they had made me privy to their roguery, they dare not play any of their tricks upon him without consulting me for fear of being discovered. They therefore applied to me for my consent to “cut some caper” with him, as they called it. Their plan now was to set an old musket, which they had somewhere obtained, in the manner that hunters set them to kill wild animals, charged only with powder. I con-

sented to let them try this experiment, but, after all, it never took effect. Either the captain discovered it or it failed by accident or from some other cause, for I never heard anything more about it. I did not wish him to receive any personal injury from their roguery, but I cared very little how much they frightened him. I did not consider myself as being under very heavy obligations to him for his civilities to me, and many of the men considered themselves under still less.

One young man, who was the ringleader of this "gunpowder plot," had a particular grudge against the old man, which urged him on to devise mischief against him. I imagine that he considered himself justified by his conscience in doing so, in consequence of several affronts, as he termed them, which he had received from him. I will mention one or two to which I was knowing, that the reader may be able to form some judgment as to the cause he had to be revenged on the poor old captain.

He once purloined a flour barrel, I think, from the baker, for the purpose of making a washing tub. The pretended owner complained to the captain, who, apparently, took no notice of it at the time. However, as it appeared not long afterwards, he did not forget it, for this man, one morning soon after, went off without leave with some others, who had permission, across the mountain to New Windsor, eight or ten miles distant, and did not return till after evening roll call, at which time he was reported as absent without leave. The sergeant major (who belonged to our company) chanced that evening to call the roll. He was a sheer sycophant and would, at any time, have a man punished if he could by so doing ingratiate himself with the officers. He therefore, as might be expected, informed the captain of the whole affair. The captain ordered the sergeant major to send the delinquent to him as soon as he returned, which he accordingly did. The captain used but very little reasoning with him before he began to use harder arguments than words could convey, urged by the weight of his rattan. After he had satiated his vengeance upon the poor culprit for playing the truant, he told him that the flour barrel was still to settle for, and then paid him for that, principal and interest.

Another affair, in which the captain and he differed in opinion, happened while we were lying at West Point. It was as follows. This man used sometimes to attend on the sergeants' mess, as they were allowed a waiter or cook. He acted as such at the time I mention. One morning after roll call, we (the sergeants) allowed him, at his own request, to go and work for a farmer in the neighborhood of the camp. He had done so before, and it was quite agreeable to us all, for he received his wages for his work in milk, butter, etc., which he always brought into the mess. On the day mentioned, he was at work at the farmer's pulling flax. The farmer had an orchard close by where our man was at work. The soldiers, as they passed, used often to pillage some of the good man's apples. To prevent these depredations upon his property, in some measure, he requested our soldier to take an old musket belonging to the house, loaded with

powder only, and when any . . . plunderers passed by, to pretend that he was a sentinel and drive them off. Not content with going thus far, he must put a small plighted apple into his musket for a ball. It was not long before he had an opportunity to exercise his sentryship, for several soldiers coming by and taking the liberty, as usual, to take some fruit, they were ordered off by our hero, and not obeying as soon as he desired, or expected, he fired his apple amongst them, which did not seem to be very agreeable to their feelings. They knew to what corps he belonged by his uniform, and ours was the first they came to on entering the garrison. As the poor fellow's ill luck would have it, the sergeant major was the first they encountered upon entering. They made bitter complaint against the pretended sentry, and he carried it directly to the captain, without losing a morsel by the way. The captain ordered him to send the man to him as soon as he came home. The captain's marquee had a shade over and round the entrance. I was upon quarters guard at a tent in the rear of the captain's when, just after roll call, I saw poor Pilgarlick repairing to the captain's tent. I pretty well knew what would be the consequence of his visit. I listened, heard some discourse between them, but the distance was so great that I could hear but little distinctly, but I soon heard the rattan in motion again, very plainly. As soon as the action was over, the man came to me at the guard. I asked him what the captain and he had been at, as they had, to appearance, been very lively. "I will tell you," said he, "the sergeant major had told the captain that I had deserted, but when he found I had not, he sent for me to come and see him, and you cannot conceive how glad he was to see me, and nothing would do but I must dance a jig with him. I told him I had much rather not, as, possibly, it might injure his character to be seen dancing with a private soldier. But it would not signify, a jig we must have at all events, and he got hold of my hand and began to whistle and I began to dance, and a fine jig I suppose he thought we had. The plague seize his old carcass, I wish he was *twisted* up fifteen miles above the seven stars, there to remain till every hair of his head was a meteor and every limb a comet." I could not help laughing at his buffoonery, though I thought if I had been in his place I should not have turned it off so lightly.

—Martin, *Private Yankee Doodle*, pp. 262–67.

A court-martial in 1783, involving two officers charged with disobeying Bushnell's orders, demonstrated further that tension was rife within the companies of sappers and miners.

12. "THE BLOT WHICH NOW STAINS A PAGE IN THE RECORDS OF THE ARMY"

From George Washington's general orders.

Thursday, February 13, 1783

. . . The Court after maturely considering the evidences for and against Captn. Lieut. [Peter] Taulman and his Defence are of opinion that he did not make out a provision return agreeably to a form sent him for that purpose Decr. the 31st. 1782, by Captain Bushnell his Commanding officer, and also that he did order his Baggage into Captn. Bushnells quarters the first of January last contrary to Captain Bushnells command to him, and refused to take it away agreeably to Captn. Bushnell's express orders in breach of the latter part of art. 5 section 2d. of the rules and articles of war, the Court are also of opinion that Captain Lieutenant Taulmans answer to Captn. Bushnells order to him of the 31st. December 1782 is indecent and impertinent and unbecoming the Character of an Officer in breach of articles the 5th section 18th. of the Rules and articles of war. On the third charge the Court are of opinion that Captain Lieutenant Taulman did order soldiers to disobey the express orders of Captain Bushnell on the 1st. of January, in such a manner however as not to amount to mutinous behavior, but which does amount to very disorderly behavior in breach of Article 5th. section 18th. of the rules and articles of war.

The court sentence Captain Lt. Taulman to be reprimanded in Genl. orders, and be suspended from service for three months.

. . . The court after maturely considering the evidences for and against Captain Lieutt. [David] Kirkpatrick and his defence are of opinion that Captain Lt. Kirkpatrick did on the first of January order soldiers to disobey the express orders of Captain Bushnell his commanding officer, and also that he did order his baggage into Captain Bushnells Quarters contrary to Captain Bushnells command to him, and refused to take it away agreeably to Captn Bushnells express orders to him. The court acquit Captn. Lieutenant Kirkpatrick of mutinous behavior but find him guilty of disobedience of orders in breach of a part of article 5th. section 2d. of the rules and articles of war and sentence him to be reprimanded in general orders.

The Commander in chief approves the foregoing sentences.

Had the transaction's which are the subject of reprehension taken place at the commencement of our military establishment, want of experience, ignorance of the rules of service or someother palliating cir-

cumstance might have been plead in excuse; and would in some degree have effaced the blot which now stains a page in the Records of the Army; but at this period of the war, when the necessity of subordination, and the principles of service are generally well understood, and practiced, Captn. Lieutt. Taulman and Captn. Lt. Kirkpatrick could not but have known, that the improper Conduct, willful disobedience of Orders they have been guilty of were an outrageous infraction of military Discipline: and the behavior of Captain Lieutenant Taulman (that officer must be sensible) would have justified a more rigorous and exemplary sentence; with this consciousness to attend them, the Commander in Chief leaves the young Gentlemen to the sting of their own reflections as a punishment for what is past, and only advises them not to be guilty of any thing of a similar nature in the future.

—Fitzpatrick, *Writings of Washington*, 26:130–32.

In April 1783 Congress declared hostilities at an end, but the peace treaty was not signed until September. On June 11 the Corps of Engineers and its companies of sappers and miners finally disbanded by order of Congress. In a passage from his memoirs, Sergeant Martin recalled the occasion with considerable sadness. The soldiers had formed “as strict a band of brotherhood as Masons,” he wrote, “and now we were to be . . . separated as though the grave lay between us.”

13. “WE HAD LIVED TOGETHER AS A FAMILY OF BROTHERS”

From the narrative of Joseph Plumb Martin.

At length the eleventh day of June, 1783, arrived. “The old man,” our captain [David Bushnell] came into our room, with his hands full of papers, and first ordered us to empty all our cartridge boxes upon the floor (this was the last order he ever gave us) and then told us that if we needed them we might take some of them again. They were all immediately gathered up and returned to our boxes. Government had given us our arms and we considered the ammunition as belonging to them, and he had neither right nor orders to take them from us. He then handed us our discharges, or rather furloughs, for they were in appearance no other than furloughs, permission to return home, but to return to the army again if required. This was policy in government; to discharge us absolutely in our present pitiful, forlorn condition, it was feared, might cause some difficulties which might be too hard for government to get easily over.

The powder in our cartridges was soon burnt. Some saluted the officers with large charges; others only squibbed them, just as each one’s

mind was affected toward them. Our "old man" had a number of these last-mentioned symbols of honor and affection presented him. Some of the men were not half so liberal in the use of powder as they were when they would have given him a canteenful at once.

I confess, after all, that my anticipation of the happiness I should experience upon such a day as this was not realized; I can assure the reader that there was as much sorrow as joy transfused on the occasion. We had lived together as a family of brothers for several years, setting aside some little family squabbles, like most other families, had shared with each other the hardships, dangers, and sufferings incident to a soldier's life; had sympathized with each other in trouble and sickness; had assisted in bearing each other's burdens or strove to make them lighter by council and advice; had endeavored to conceal each other's faults or make them appear in as good a light as they would bear. In short, the soldiers, each in his particular circle of acquaintance, were as strict a band of brotherhood as Masons and, I believe, as faithful to each other. And now we were to be, the greater part of us, parted forever; as unconditionally separated as though the grave lay between us. This, I say, was the case with the most, I will not say all; there were as many genuine misanthropists among the soldiers, according to numbers, as of any other class of people whatever, and some in our corps of Miners, but we were young men and had warm hearts. I question if there was a corps in the army that parted with more regret than ours did, the New Englanders in particular. Ah! it was a serious time.

Some of the soldiers went off for home the same day that their fetters were knocked off; others stayed and got their final settlement certificates, which they sold to procure decent clothing and money sufficient to enable them to pass with decency through the country and to appear something like themselves when they arrived among their friends. I was among those; I went up the river to the Wallkill and stayed some time.

—Martin, *Private Yankee Doodle*, pp. 279–81.

The American grasp on West Point effectively neutralized enemy occupied New York City. And the Point's defenses very likely deterred the British from a full-scale attempt to gain control of the Highlands. Clearly Army engineers contributed substantially to the patriot success in holding the Highlands. Overall the experience at West Point provided a strong argument in favor of a professional army—including a corps of engineers—in the future.

