THE HISTORY AND CONSTRUCTION OF FORT DUPONT

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THE HISTORY AND CONSTRUCTION OF FORT DUPONT

SUMMARY.

At the beginning of the Civil War in April of 1861, the defenses of Washington were still as inadequate as they had been when the nation's capital had been captured by the British. In order to remedy the situation a system of 68 forts was built on the heights around the city with a perimeter of thirty-five miles. Fort Dupont was one of this system of forts and was located on the heights overlooking the Anacostia river and commanding the Navy Yard. Built late in 1861, it was subsequently improved late in 1862 under the direction of Major General Barnard under the Secretary of War, Stanton.

Fort Dupont was built in the form of a regular hexagon of 100 feet on a side inside giving it an inside perimeter of 200 yards. First equipped with only six guns, the armament was later increased to nine guns. A magazine was provided in the center of the fort for 100 rounds of ammunition for each gun.

Some time after the war the land occupied by the fort was purchased by the government. Then on August 10, 1933, it was transferred to the jurisdiction of the Department of the Interior. It is now well kept and used as the District tree nursery.

THE HISTORY AND CONSTRUCTION OF FORT DUPONT

HISTORY.

When the national capital was captured by the British in 1814 after the battle of Bladensburg it had no defenses except a very few hastily thrown up earthworks and the surrounding hills, which George Washington had called natural defensive features at the time he was President of the United States. After the war was over substantially nothing was done in the way of fortifying the city of Washington, in spite of the previous disastrous occurrence, up to the time Fort Sumter was fired upon in April, 1861. According to Major General J. G. Barnard, who later was in charge of the defenses of Washington, our own engineer officers at the beginning of the war knew less about our capital than they did of the historic approaches and fortifications of Paris and other important European capitals. The first serious attempts at further fortifications for the city were quickly improvised earthworks thrown up on the Virginia side of the Potomac by three Army engineers with untrained men who set out from Washington by night to secure a Union foothold at the three main routes out of Washington to the South in the State of Virginia, which had just seceded from the Union in April of 1861.

Late in the summer of 1861 General Mansfield, assisted by Major H. G. Wright acting as a volunteer, began construction of a system of forts to guard approaches and roads leading to the capital. This was deemed expedient at that time since Washington could easily have been taken by the rebel soldiers after the battle of Bull Run in July if they had not been too demoralized

by their victory to follow it up. It was no easy task to fortify Washington since it had grown from its rather compact state in Washington's time to a widely scattered community. Also the low hills, which had seemed good natural defensive features to General Washington, had now turned into a possible threat, since the newly developed artillery with its longer range made it possible for enemy batteries, if located on the heights surrounding Washington, to fire easily on the White House, the Capitol, and other important government buildings. Therefore a string of forts was laid out and construction begun on them. This string of forts, which had a total perimeter of thirty-five miles, circumscribed Washington more or less on the summit of the hills and commanded the important approaches. Construction of these forts was very much hampered by the clause in the Congressional appropriation bill disallowing any expenditures for new fortifications. Hence the few old works had to be improved as much as possible, but since the safety of the capital was considered paramount, land for new fort and battery sites was seized and the timber required for building obtained by cleaning the land for the forts.

South of the Anacostia river, commonly known as the Eastern Branch, the heights not only commanded the government buildings but also the Washington Arsenal where vast stores of ammunition were kept, the Navy Yard, and the only two bridges across the Anacostia, Bennings bridge and the one at the Navy Yard. These heights consisted of a series of contorted ridges, cut by numerous ravines at all angles, located between Oxen Run, now called Oxon Run, which flows into the lower Potomac, and the Anacostia river.

In order to prevent occupation of these ridges by the enemy, six forts along these heights were planned. Construction was started late in September of 1861 and the forts were practically finished by the end of the year. Fort Dupont was one of the smaller of these forts and was probably so called after Admiral Dupont who had just been a prominent figure at Charlestown as commandant of the Atlantic Blockading Squadron. Located on a hill 300 feet above the Anacostia river, Fort Dupont was in the District of Columbia about one-fourth mile from the District line and near what is now Capitol Heights, Md. It, with the other forts of the system, remained as they were built until in 1862. Then the new Secretary of War, Stanton, realizing that the defenses of Washington were inadequate, assumed full responsibility for the expenditure of money to improve and strengthen the capital's defenses. Therefore, on October 25, 1862, he appointed a committee of the most important engineer officers of the United States Army to look into the situation.

Brevet Major General J. G. Barnard, distinguished scientist and engineer, was made chief engineer in charge of the defenses of Washington. In the report of the committee of which he was a prominent member, he stated that the forts and batteries built around Washington were merely detached earthworks which lacked communication facilities or unity. Also he observed that the buildings, magazines, and bombproofs had been constructed after text-book designs which had been superseded by new designs based on practical experience. He recommended a number of changes in the system of forts in order to strengthen them and replace the

designs which had been found faulty. In regard to the six forts on the ridges overlooking the Anacostia river, he said that the works were too widely separated and therefore could not cover a number of ravines which were invisible from these forts. In order to remedy this situation, the General recommended that batteries be placed between the forts and that an outwork be placed east of Fort Meigs, which were, in his own words "to form with Fort Dupont a congeries of works or forts which can be considered as a single fortification or fortified camp, which shall sustain and flank each other and, from numerous points of view, see and guard all ravines and otherwise hidden surfaces." These forts thus became a number of strong groups of works somewhat isolated from each other which had however been laid out originally with the idea of a line in mind. Previous to the appointment of the committee, General Barnard had recommended to General D. P. Woodbury, who was in command of the works on the Eastern Branch, that these works, which were regarded as holding points from which the city might be shelled, should be provided with several days provisions and a garrison kept inside each fort at all times. He further advised General Woodbury to distribute the field guns from Fort Baker to Fort Dupont, Fort Meigs and Fort Davis.

CONSTRUCTION OF FORT DUPONT.

Fort Dupont was shaped in the form of a regular hexagon of 100 feet on each side, thus giving it an interior perimeter of 600 feet or 200 yards. The front of the fort was one side of the hexagon and faced almost due south but a little to the east. Around the entire fort was a ditch about 8 feet deep and 10 feet wide at the bottom. Just inside this ditch a parapet was thrown up with the earth from the ditch and covered thickly with sod. The outer half of the parapet, that is the part nearest the ditch, had a slope of 45 degrees while the remainder of the parapet, having the same horizontal thickness of 10 feet as the front part, had a slope of about 15 degrees. The inside of the parapet was almost vertical, thus giving the parapet a total thickness at its base of 20 feet. Outside of the ditch, a glacis of earth was thrown up for about 30 feet from the ditch in order to bring the ground in front of the fort in the plane of fire from the fort. The slope of the glacis was the same as the top of the parapet which was 9 feet high from the ground inside the fort to the very top of the parapet. Approximately 35 feet from the ditch, an abatis was constructed from large trees with their sharpened branches pointing outward and the bases of the trunks resting against vertical posts and timbers driven in the ground. The parapet was pierced for embrasures at each corner of the hexagon, and in six places on the three forward sides of the fort. Access to the fort was over a log bridge crossing the ditch and then through a timbered opening in the parapet. Heavy log gates were used to close the opening in the parapet. Inside the parapet raised platforms were built for the guns and runways were made

to reach the platforms. The embrasures for the guns were made in the parapet by using vertical logs about 12 inches in diameter to retain the earth and protect the gunners. The gun platforms were made of wood and arranged so that the guns could be swiveled around to cover about 100 degrees of horizontal fire.

Originally, six guns were installed with embrasures for six more, but later the armament was increased to nine guns with space for six field guns. The final armament of the fort consisted of three 8-inch siege howitzers, three 24-pounders, two 6-inch field guns and one 24-pound mortar.

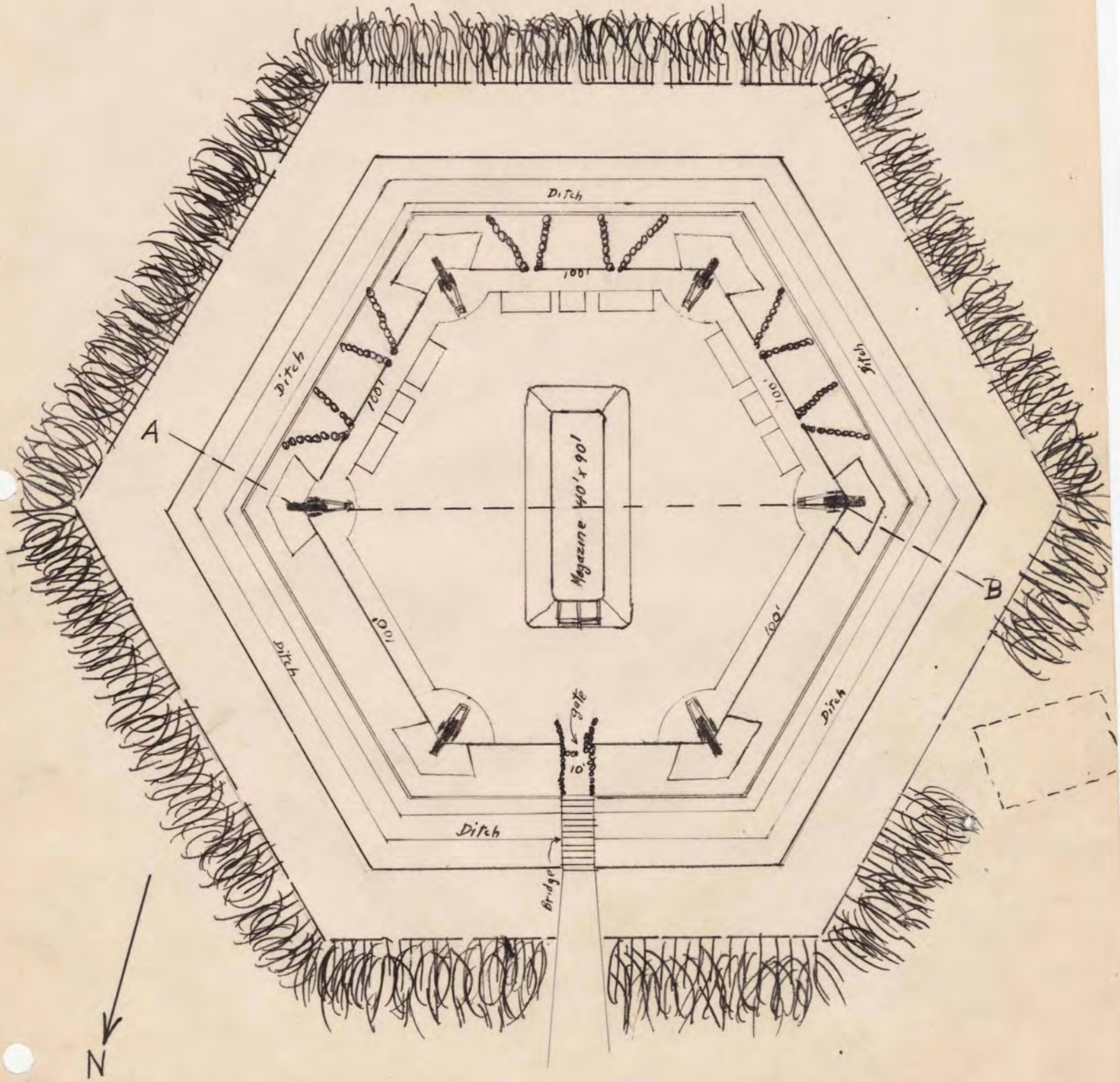
In the center of the fort, a large magazine 40 feet by 90 feet was constructed capable of holding 100 rounds of ammunition for each gun. The magazine consisted of two timbered rooms, one lower than the other, and both partly sunk in the earth floor of the fort and then covered with a thick layer of earth and finally sod so that the earth cover on any point was at least 10 feet thick. This thickness of 10 feet was found, according to Major General Barnard, "to be very satisfactory after extensive tests with short and long range artillery fire." Entrance to the magazine was at the rear. The details of the interior construction of the magazine are very interesting and show the thoroughness with which the powder stores were safeguarded. The side posts of the interior of the magazine were vertical and at least 12 inches in diameter. They were usually of hard wood such as oak, chestnut, or cedar. The roof logs also were at least 12 inches in diameter and were so hewn as to fit tightly together. Around the outside vertical walls inclined roof supports 8 inches in diameter were placed with

the ends cut at an angle so as to butt against the roof logs. Outside on these inclined supports, a revetment of small poles was placed. Thus a protective air space was provided all around the magazine and additional support for the roof provided since it had to sustain the enormous weight of earth placed upon it.

In regard to the details of the waterproof roof construction General Barnard's description of the construction used in all of these forts can not be improved upon. "Above the roof logs was placed along the longitudinal center of the magazine a log not less than 12 inches in diameter and parallel with it smaller logs spaced 2½ inches from center to center. These were so hewn as to correspond to superior faces or slopes, having an inclination of one upon four. The earth was then thrown on and rammed completely, flush with the upper surfaces of these hewn purlines. Upon these were nailed, first a course of 1-inch plank, tongued and grooved and painted on the under side with a composition, applied while hot, of coal tar and resin boiled together. A heavier composition of coal tar, resin, and sand was used to flush the joints as they were driven home. The upper side of this roofing course was then painted thickly with the composition, after which was applied another course of 1-inch pine boards nailed to the previous course of oak plank. Great care was necessary in the laying of this roofing, so as to leave no opening through which water might penetrate. The second course was laid simultaneously with the application of the hot composition to the upper side of the oak boards. A strip of oak roofing, not more than one foot in width, was covered with the hot composition applied with a swab or mop of old

canvas and a board of the second course immediately followed, being worked into the composition by two or three longitudinal motions of the hands of the workmen. After the second course was nailed down, another coating of tar was applied, covering every portion of the surface and flushing the joints. Two or three inches of fine clean sand was then thrown on, followed by about two feet of clay applied in layers of 6 to 8 inches, then thoroughly rammed. The remainder of the earth covering was then thrown on and compacted sufficiently to preserve the proper slopes, the whole being covered with sod laid on superficially where the angle of the slope would permit." The magazine was well drained, since its floor level was above the bottom of the ditch which furnished drainage for the whole fort, and well ventilated by the air space around the magazine. In order to lighten the interior of the magazine and improve the air inside, the interior was whitewashed. The following drawings show the layout and construction somewhat more clearly.

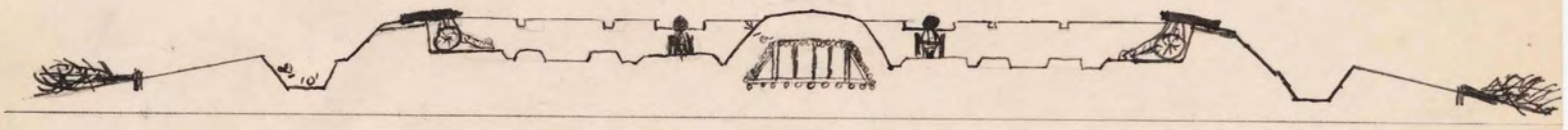
FORT DUPONT



Sketch from original plan
Transferred from office of
Chief Engr. Defenses of Wash.
to Engr. Dept. in Jan. 1866

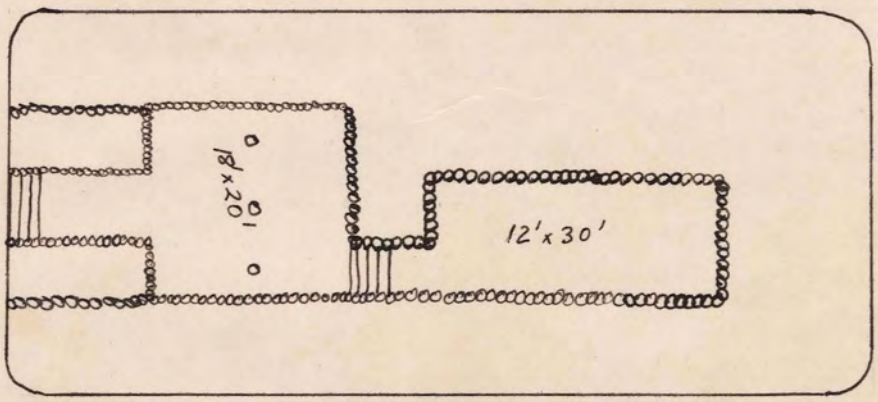
Drawn by
R. F. Lane
Dec 29, 1933

Construction Features of Fort Dupont.

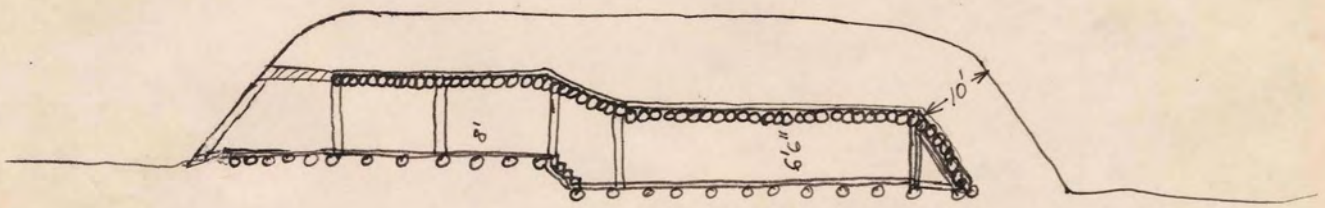


Sketch of Section A-B

PLAN OF MAGAZINE



Section View of Magazine



Sketches from
Official Original Plan.

Drawn by
R.F. Lane
Dec. 29, 1933

FORT DUPONT SINCE THE WAR

Some time after the war, the land which Fort Dupont occupies was purchased by the Federal Government and placed under the direction of the Director of Public Buildings and Public Parks. On August 10, 1933, by executive order of the President of the United States, the property was transferred to the Department of the Interior under the jurisdiction of the Division of National Parks, Buildings, and Reservations.

During 1923 there was proposed a boulevard joining all the old Civil War forts and running past Fort Dupont but the plan did not go through. At the present time Alabama Avenue runs past the old Fort Dupont.

At the present time the grounds around Fort Dupont are very well kept up and the property is used as the District tree nursery. The old earthworks are still standing and the hexagonal outline of the fort is easily discernible. The parapets are somewhat rounded and eroded but the openings for the embrasures are still very plain. All that remains of the magazine is a long rectangular mound of earth about 10 feet high and sunk along the top to a depth of about 4 feet where the interior of the magazine collapsed after the timbers had rotted out. The ditch is still in good condition although the bottom has been somewhat eroded by water.

Below - View showing east half of interior of fort looking north with embrasure at northeast corner in background.

Above - View of west half of interior of fort looking north, showing embrasure and old runway in background.

Below - View of front of old powder magazine showing how earth has caved in.

Above - Another view of old powder magazine looking northeast.

Close-up view showing details of inclined runway to east side of fort.

PART OF TOPOGRAPHIC MAP SHOWING LOCATION OF FORT DUPONT