

historic structure report
historical data and archeological data

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GATEWAY

MILLER FIELD - THE SEAPLANE HANGAR - (BUILDING NO. 38)

NATIONAL RECREATION AREA/NEW YORK-NEW JERSEY



HISTORIC STRUCTURE REPORT
MILLER FIELD - THE SEAPLANE HANGAR - (BUILDING NO. 38)
HISTORICAL DATA AND ARCHEOLOGICAL DATA
GATEWAY NATIONAL RECREATION AREA
NEW YORK - NEW JERSEY

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PREFACE

This report has been prepared to satisfy in part the research needs for the stabilization/preservation of the seaplane hanger (Building No. 38) at Miller Field. The purpose of this study has been to provide sufficient information on the architectural evolution of the hangar to ensure that the stabilization/preservation of the structure is historically accurate.

In 1978 the Denver Service Center let a contract (A/E Contract No. CX-2000-8-0025, Package No. 109) to Hardy Holzman Pfeiffer Associates of New York, New York, to prepare the historical and architectural data sections of the historic structure report on the seaplane hanger at Miller Field. During March and April of that year I spent four weeks collecting and organizing historical photographs and documentary materials from the National Archives, the National Air and Space Museum of the Smithsonian Institution, and the Library of Congress for submission to Hardy Holzman Pfeiffer Associates to be used in the historical data section of its report. The documentation that I submitted to the firm, entitled "Data and Materials Relative to Seaplane Hangar (Building No. 38) at Miller Field, Gateway National Recreation Area, New York and New Jersey" (April 17, 1978), was concerned with four principal topics as requested:

1. Chronology of construction campaigns at Miller Field pertaining to the hangar and appurtenant structures.
2. An inventory indicating location of existing drawings and historical photographs.
3. Brief description of major historical events at Miller Field.
4. List of similar hangars contemporary with Miller Field.

On July 21, 1978, Hardy Holzman Pfeiffer Associates submitted its report, entitled "Historic Structures Report, Miller Field - Seaplane

Hangar, Staten Island Unit, Gateway National Recreation Area, New York - New Jersey," to the Denver Service Center. The report, which contained both historical and architectural data, was considered adequate in meeting the research needs for the stabilization/preservation of the hangar. However, the report was not prepared in the form of a historic structure report nor did it contain all of the component parts of a historic structure report as required by the Activity Standards (1971) and the Management Policies (1978).

Thus, in August and September 1979 I was assigned the task of re-writing and editing the Hardy Holzman Pfeiffer report preparatory to printing the study as a Denver Service Center report. Specifically, my job was to rewrite and amplify the historical material in the report to develop a historical data section according to National Park Service standards.

In August 1979 Jackie W. Powell, Senior Archeologist, Mid-Atlantic/North Atlantic Team, Denver Service Center, prepared the Archeological Data Section.

A number of persons have been involved in the preparation of this report. These individuals include Jack L. Lovell, Architect, Branch of Design and Construction, Mid-Atlantic/North Atlantic Team, Denver Service Center, and Vance L. Kaminski, Senior Historical Architect, Branch of Historic Preservation, Mid-Atlantic/North Atlantic Team, Denver Service Center, both of whom had considerable involvement in the management of the contract with Hardy Holzman Pfeiffer Associates. Data relating to Miller Field and the seaplane hangar was supplied to me by the following National Park Service personnel: Jack L. Lovell; Michael Adlerstein, Senior Park Planner, NY/NJ Support Office, MA/NA Team, DSC; and Sandi Helluksson, Unit Manager, Staten Island Unit, Gateway NRA. Telephone conversations with the late Ricardo Torres-Reyes, Chief, Cultural Resources, and E. Blaine Cliver, Regional Historical Architect, of the North Atlantic Regional Office helped to sharpen the focus of my research efforts.

Harlan D. Unrau
September 9, 1979

STATEMENT OF HISTORICAL SIGNIFICANCE

The seaplane hangar (Building No. 38) at Miller Field is significant as one of the last extant examples of its type remaining on the eastern seaboard. The design of the hangar was prototypical of the era, for both land and seaplanes of a youthful aviation industry. The form and design of hangars, which has changed little in the past 60 years, was a natural economical consequence of physical requirements: a basically square, long-span, well-ventilated, and lighted space with an enormous door for one whole wall, and situated in open, unprotected, flat terrain. At its completion in 1921 the seaplane hangar represented an advanced degree of technology, combining elements of functional design in lightweight steel trusses and what was probably one of the earliest uses of lightweight concrete cast in place. Considering its age, use, and rough weather conditions at water's edge, it is in good condition. The basic structure of the hangar is virtually unchanged since its construction, the successive additions being generally low-keyed and easily detectable. The seaplane hangar, as well as the entire complex of buildings at Miller Field, was the product of the post-World War I industrial economy, typifying an industrial approach to functional solutions, minimum materials, maximum repetition, and preassembly.

CHAPTER ONE
EARLY HISTORY OF AREA ON WHICH MILLER FIELD IS LOCATED:
1635-1919

The history of the property which later became Miller Field can be traced back to the earliest settlements on Staten Island. Nathaniel Britton, who emigrated to New Amsterdam from France in 1635, received a land grant of 144 acres which included the northwestern section of what was to become the government installation. In 1677 John Dally (Daly), who is believed to have been a British soldier since a Royal survey was made for him in that year, was granted what later became the southeastern portion of Miller Field. This land contained the "Elm Tree", an immense tree standing near the shoreline of the property which was used as a navigational aid by ships entering or leaving the harbor.¹ Daly held the land for some eight years before conveying it to Paulus Richards on October 13, 1685, taking a seven-year lease on the property. William Britton, who had inherited his father's property at Nathanael's death in 1683, acquired the Daly property sometime between 1685 and 1719 and conveyed both the Daly and Britton portions to Hendricks Van Lawa in 1719. The land passed to Johannes Simonson in 1748 and he willed it to James Egbert in 1797. At the death of Egbert it was conveyed by the partitioners of his estate to Richard Connor, Jr., on September 18, 1831. The land was transferred through various owners and finally possessed by Walter Livingston who conveyed it to Commodore Cornelius Vanderbilt in 1843.

Vanderbilt constructed a large 3-story, 24-room wood and brick mansion, known as the "White House", near New Dorp Lane soon after acquiring the property. After deciding to move to a Fifth Avenue mansion in New York City, he conveyed the property to his son, William

1. The "Elm Tree" was the ancestor of a succession of lights. By 1852 there was an Elm Tree Beacon operated by the Lighthouse Service which was located on a line with the Swash Channel. The original location of the early wooden Elm Tree lighthouses was somewhat south of the present site of the Elm Tree Light, which was established in 1891. The present concrete tower replaced an old wooden tower in 1939, and it continued to be lit until 1970, when it was deactivated by the U. S. Coast Guard. The "Elm Tree" was located outside of the present boundaries of Miller Field. U.S. Department of the Interior, National Park Service, National Register of Historic Places Inventory -- Nomination Form, "Miller Field (Gateway NRA, Staten Island Unit)", by Richard E. Greenwood, June, 1976.

Henry, on February 26, 1855, believing that farm life might improve his son's health and test his business acumen. William made a success of the farm by introducing various scientific agricultural improvements of the period and earning a good reputation in stockbreeding and raising race horses. He also developed a shrewd business and investment ability and became a leading railroad magnate before his death in 1885.

The Vanderbilt Estate passed to William's son, George Washington Vanderbilt, who continued his father's pursuits in introducing scientific farming reforms and breeding race horses. Near the turn of the century he had the mansion moved back from the road to the approximate center of present Miller Field where it was surrounded by a huge clump of trees.

The estate passed to Edith S. and William Kissam Vanderbilt who appear to have had little interest in the maintenance and operation of the farm. During the early 1900s the property was leased to two individuals and two religious organizations. All of the estate, except for the mansion and 500 square feet of land around the structure, was leased to Matthew Taylor under a lease that would expire on March 1, 1919. The house and adjacent ground were leased to Mrs. James Burdan, Jr., under a lease expiring on the same date. Two small tracts were put under lease to the Diocesan Missionary Society of the Protestant Episcopal Church (lease, with a 60-day cancellation clause, expiring in 1921) and to the Church of St. Patrick (lease, with a 60-day cancellation clause, expiring on May 15, 1920). On March 12, 1919, the Vanderbilts sold the estate, consisting of 186.7427 acres of land, to the United States Government for \$420,041.48.²

2. "History of Miller Field, New York, 1936", January 18, 1937, Central Decimal File, 1917-1925, 314.71, Record Group 407, Records of the Adjutant General's Office, National Archives; "Data In the Matter of Acquiring Property at New Dorp, Staten Island", 1918-1919, Central Decimal File, 1917-1938, Oversize Project, Record Group 18, Records of the Army Air Forces, National Archives; "Notes on Miller Field", prepared by Edna M. Holden, March 1974, attached to National Register of Historic Places Inventory - Nomination Form, "Miller Field"; Dictionary of American Biography, X, 169-177; and U. S. Department of the Interior, National Park Service, "General History of Jamaica Bay, Breezy Point, and Staten Island Units, Gateway National Recreation Area, New York, N. Y.", by Tony P. Wrenn, October 31, 1975, pp. 77-78.

At the time of the sale the estate was in a deteriorating condition. A government report noted that

..Back from the beach, the ground had been cultivated for farming and another section was devoted to pasture. Trees were growing in scattered locations and the bush and underbrush were rampant [sic]. A small brook runs through the northeastern corner of the property... Towards the center of the reservation a small pond is located which is fed by an underground line from the brook. This pond supplied ice to the estate. The entire reservation was surrounded with a stone and wood rail fence which was in a dilapidated condition.

Concerning the buildings that were on the estate at the time of the sale, the report stated:

A large residence constructed of wood with brick lining on outside walls, and of very old design, occupied the center of the estate. This building was called the mansion and was 3 stories in height, containing 24 large and airy rooms. The mansion was in very poor condition due to lack of repairs and disuse. The structural work was however, in good condition.

A small old pumping station built of brick and stucco with a tile roof was located near the present site of the C.O. Quarters. This building was in very poor condition and too small in size to be of any use. A large stable consisting of hay barn, carriage houses, stables, etc. was situated near New Dorp Lane. It was one of the last buildings erected during the Vanderbilt's time. It was built in the shape of a square, the interior forming a large court. These buildings were in good condition and well built of brick with pebble dash stucco exterior and imported Spanish Tile Roof. They were by far the most imposing buildings on the site. The Gardener's Cottage

and green houses on the estate were in very poor condition and of practically no value. An ice house adjoined the small pond. This house was in fair condition being constructed of brick and stucco with a Spanish Tile roof. Adjoining the ice house was a bull pen surrounded by a brick and stucco wall coped with Spanish Tile. A Dairy House with living quarters on the second floor was located near New Dorp Lane. This building was in good condition. The first floor was built of brick with stucco exterior and the second floor was of frame construction with shingle exterior. The roof was of Spanish Tile corresponding with the other buildings. An old water tower of unique design was located near the north boundary of the site. This tower is built of rubble masonry and brick. The upper part is surrounded with wood balcony and the entire structure is covered with a sloping Spanish Tile roof. During the summer months the tower is completely covered with vines and although not used at the present time, it is an ornamental landmark. The Elm tree beacon lighthouse is located close to the beach. It is constructed of wood with a shingle exterior. It is under the jurisdiction of the Department of Commerce, Light House Service, and is in active use.

Two chapels were also located on site. The Catholic chapel is located on New Dorp Lane towards the center of the reservation....³

3. "Completion Report on Construction of Air Coast Defense Station Known As Miller Field at New Dorp, Staten Island, New York....Submitted to the Quartermaster General of the Army, Washington, D.C., on February 3, 1922, by H. L. Green, Major QMC., Constructing Quartermaster, Construction Completion Reports, 1917-1943, Miller Field-I, Record Group 77, Records of the Office of Chief of Engineers, National Archives.

CHAPTER TWO
ESTABLISHMENT OF AIR COAST DEFENSE STATIONS:
1916-1918

In 1916, as World War I continued and the possibility of American involvement increased, the joint Army and Navy Board of Aeronautic Cognizance decided that a supplementary system of aerial coast defense stations was needed for the protection of the Atlantic Coast against enemy attack.⁴ Although the United States declared war on Germany on April 6, 1917, the establishment of air coast defense stations did not receive the approval of the Secretary of War until July 2, 1918.⁵ Less than one week later, on July 8, Congress passed Public Law No. 189 ("An Act Making Appropriations for Fortifications and Other Works of Defense, for the armament thereof, for the procurement of heavy ordnance for trial and service, and for other purposes"), which, among other provisions, authorized the following:

Under the Chief Signal Officer. . .the establishment of eight aviation stations for use in connection with the seacoast defenses of the United States, including the acquisition of land, buildings, heating, lighting, plumbing, water, sewers, roads, and walks, \$8,000,000: Provided, that land may be acquired for the said stations only after a determination by the Secretary of War that sites on existing governmental reservations can not be utilized.⁶

Accordingly, the Joint Army and Navy Board of Aeronautic Cognizance established the purpose of the air coast defense stations and selected seven sites for such installations to be approved by the Secretary of War. The list of prospective sites, which was submitted to the Adjutant General of the U. S. Army on August 1, 1918, consisted of the following:

4. Memorandum for General Patrick, Lt. Col. A. L. Fuller, April 22, 1922, Central Decimal File, 1917-1938, 680.3, RG 18.

5. Richard B. Morris, ed., Encyclopedia of American History (New York 1976), p. 365, and Asst. Chief of Staff, Director of Operations, to Director of Operations, October 22, 1918, Central Decimal File, 1917-1938, 323.5, RG 18.

6. Statutes At Large, Vol. XL, Pt. I, 1919, p. 816.

1. Station in Coast Defenses of Boston
1 hydroplane squadron at Deer Island
2. Station in Narragansett Bay
1 hydroplane squadron at Conanicut Island, Beaver Head
3. Station at Eastern Entrance, Long Island Sound
1 hydroplane squadron at West Harbor, Fishers Island
4. Station near New York City
1 hydroplane squadron at Fort Hancock
5. Station near Philadelphia
1 hydroplane squadron at Essington or vicinity
6. Station near entrance, Chesapeake Bay
1 hydroplane squadron at Langley Field
7. Station near Charleston, South Carolina
1 hydroplane squadron, Sullivan Island

The recommended sites were submitted "with a view to providing temporary measures of defense against submarines pending the completion of permanent buildings for which detailed plans and estimates" were being prepared. Since coast patrolling was being conducted with ill-suited land machines, the approval of these sites for air coast defense stations would necessitate the procurement from the Navy of "a sufficient supply of HS-1 flying boats and F-type training machines."⁷ On August 15, 1918, the list of seven air coast defense stations was approved by the Adjutant General on behalf of the Secretary of War.⁸ Later on March 11, 1920, the Joint Board further amplified the purpose of the air coast defense stations:

The purpose of aerial coast defense stations is to provide for the operation of heavier-than-air craft having the following missions:

- (a) Regulation of fire for the Coast Artillery, location and tracking of targets for shore batteries, and, in general, as an arm of the mobile Army.

7. Director of Military Aeronautics to the Adjutant General, U. S. Army, August 1, 1918, Central Decimal File, 1917-1925, 370.3, 407.

8. Acting Asst. Chief of Staff, Director of Operations to the Adjutant General, August 14, 1918, Central Decimal File, 1917-1925, 370.3, RG 407.

(b) Attack on enemy aircraft and defense of shore establishment.

(c) Either alone or in cooperation with other Arms of the Army or with the Navy, against enemy vessels engaged in attacks on the coast such as bombardment of the coast, operations preparatory to or of landing troops, operations such as mine laying or attacks on shipping in the vicinity of defended ports.

This accords with the approved 'Policy of the Army and Navy relating to Aircraft'; the stations are necessary for the purposes stated and there is no duplication of naval functions.⁹

During the next six weeks detailed plans and estimates were drawn up for the seven sites. Spermacetti Cove, the first location to be considered at Fort Hancock, was rejected because the terrain was very low and it was subject to flooding at high tide. The flying fields at Hazelhurst and Garden City on Long Island were considered as alternative locations, but, due to the absence of water for seaplane facilities, those sites were also rejected.¹⁰

9. Memorandum for General Patrick, Lt. Col. A. L. Fuller, April 22, 1922, Central Decimal File, 1917-1938, 680.3, RG 18.

10. "Completion Report on Construction of Air Coast Defense Station known as Miller Field at New Dorp, Staten Island, New York . . . February 3, 1922," Completion Reports, Miller Field-I, RG 77.

CHAPTER THREE
SELECTION AND ACQUISITION OF SITE AT NEW DORP ON STATEN ISLAND
FOR AIR COAST DEFENSE STATION TO BE NAMED MILLER FIELD:
1918-1919

After a thorough review of various locations in the New York City area, the Joint Board on September 9, 1918, selected the Vanderbilt Estate at New Dorp, Staten Island, in place of Spermacetti Cove. The new site was submitted to the Adjutant General for his approval on October 2.¹¹ On the same date, the Chief, Operations Section, of the Army requested "that early action be taken to erect such buildings and hangars as are necessary for the temporary occupation at the sites which have been already approved." Furthermore, work should "be commenced first on the site on Staten Island."¹²

On October 17, 1918, the Director of Military Aeronautics formally requested authorization from the Office of the Chief of Staff for the expenditure of \$310,000 to construct temporary buildings for a hydroplane station at New Dorp. The estimate was made up of the following items:

3 Steel Hangars, 110 x 140	\$ 64,500.00
1 Steel Hangar for storage and Mch. Shop . .	21,500.00
1 Temporary Infirmary.	6,000.00
1 C. O. House.	2,500.00
4 Barracks (66 men type)	40,000.00
1 Lavatory and Showers	4,000.00
1 Mess - 140 feet.	6,000.00
1 Officers Quarters (45 men).	20,000.00
1 Guard House.	1,500.00
1 Headquarters	3,000.00
1 Truck Shed	4,000.00
1 Repair Shop	3,000.00
1 Ramp	24,000.00
Gasoline Equipment	3,000.00
Roads Temporary	7,000.00
Utilities.	100,000.00
	<u>\$310,000.00</u>

The utilities included a 6-foot water line to New Dorp with a sufficient distribution and hydrant system and a 6-inch and 8-inch sewer for a per-

11. Director of Military Aeronautics to the Adjutant General, October 2, 1918, Central Decimal File, 1917-1925, 370.3, RG 407.

12. Chief, Operations Section, to Major Burns, October 2, 1918, Central Decimal File, 1917-1938, 600.1, RG 18.

manent camp of 250 men, using "crock on [the] land and flanged iron pipe for [the] outfall."¹³

The Adjutant General approved the New Dorp site on October 18 after which his recommendation was forwarded to the Office of the Chief of Staff.¹⁴ That office approved the measure on October 22 and submitted its recommendation for approval to the Secretary of War with the following data:

....the building construction is of a temporary nature to provide immediate quarters for personnel which is to be sent to this station in the near future. The utilities, however, are of permanent nature as this site is intended for a permanent hydroplane Coast Defense Station....the new Coast defense guns have 30,000 yd. range and they require spotting by aviation observers as a 200 ft. elevation is required to spot shots from the land and the weather will not permit this method one day in ten.

Another reason for the immediate construction of these stations is because the anti-aircraft batteries are not to be kept in operation during the winter. With the approach of cold weather this construction should be rushed.¹⁵

The Secretary of War authorized the purchase of the Vanderbilt Estate for an air coast defense station on November 1, 1918. Less than two weeks later, on November 11, the Armistice ending the war

13. Director of Military Aeronautics to Director of Army Operations, October 17, 1918, Central Decimal File, 1917-1938, 120.13, RG 18.

14. Adjutant General to Director of Military Aeronautics, October 18, 1918, Central Decimal File, 1917-1925, 370.3, RG 407.

15. Asst. Chief of Staff, Division of Operations, to Lt. Col. G. B. Walbridge, Quartermaster Corps, October 22, 1918, Central Decimal File, 1917-1938, 323.5, RG 18.

was signed, thus relieving the urgent necessity for the construction of the temporary air coast defense station buildings at New Dorp. Hence the earlier request for authorized funds was rejected in favor of plans to construct permanent buildings on the site.¹⁶ As heretofore noted in Chapter I, Edith S. Vanderbilt and William K. Vanderbilt, trustees of the will left by George Washington Vanderbilt, sold the Vanderbilt Estate to the U. S. Government on March 12, 1919, for \$420,041.48 or slightly more than \$2,200 per acre.¹⁷

The New Dorp site was described at length in the "Completion Report on Construction of Air Coast Defense Station Known as Miller Field ... February 3, 1922." The report noted:

A tract of land on Staten Island, New York was found with combined facilities for both land and water planes and this provided accommodations for land machines for defense of New York City and for water machines for coastal defense. This plot of ground is located in the town of New Dorp, Staten Island, N.Y., Borough of Richmond, New York City. It is situated on the south shore of Staten Island having a beach of 1739 feet and a frontage on New Dorp Lane of 4512 feet, and it contains 186.7427 acres of land. Its situation is ideal for the defense of New York and it is about three miles southwest of Fort Wadsworth, one of the Coast Defenses of Southern New York and on the Lower Bay of New York Harbor within 10 miles of New York via airline.

16. "Staten Island Project, History," Central Decimal File, 1917-1925, 323.5, RG 407, and Director of Military Aeronautics to Director of Operations, Office of the Chief of Staff, November 29, 1918, Central Decimal File, 1917-1938, 600.1, RG 18.

17. "Completion Report on Construction of Air Coast Defense Station Known as Miller Field...February 3, 1922," Completion Reports, Miller Field-I, RG 77. Also see, "Data In the Matter of Acquiring Property at New Dorp, Staten Island," 1918-1919, Central Decimal File, 1917-1938, Oversize Project, RG 18.

It is easily accessible to New York City by ferry from New York City to Staten Island and train to New Dorp from ferry, the entire trip taking about 45 minutes. Adequate ferry and train service prevail. The B & O Railroad carries all freight for New Dorp and the town has a small siding which would be totally inadequate in case of an emergency. Staten Island, however, boasts of very good roads and they lead directly to the reservation, making motor transport very easy and desirable.

All ships entering or leaving New York Harbor via its southern entrance, must pass within a few miles of the station...It is a low stretched piece of ground, almost rectangular in shape, its approximate dimensions being 1700 feet by 450 feet. The ground is fairly level throughout, the highest point being only about 16 feet above mean high tide. The beach is gradual in slope and the water is not over 8 or 9 feet deep at a distance of 300 feet from the shore. With the exception of the Winter, there is never any surf or rough water to speak of, thereby making it an ideal place for the launching of sea planes.¹⁸

The advantages of the "Air Service Coast Defense Field at New Dorp" were amplified by Major General Charles T. Menoher, Director of the Air Service, on March 28, 1919. His observations were as follows:

This site is located ten miles from the defenses of Rockaway Beach, eight miles from the defenses of Sandy Hook, eight thousand yards from Fort Hamilton, six thousand yards from Fort Wadsworth, which make it the most centrally located point that could be selected in order that the hydroplanes from this station could coordinate with any battery in the harbor as the maximum distance to the farthest coast defense is only ten

18. "Completion Report on Construction of Air Coast Defense Station Known As Miller Field...February 3, 1922," Completion Reports, Miller Field-I, RG 77.

miles which with the work performed by the hydroplanes, is not prohibitive; furthermore water area behind Sandy Hook and Rockway Beach are accessible for landing hydroplanes.

The location of this site is such that the drawing of the enemies fire by any of the coast defenses would not affect it in any way.

The centralized location of this site would simplify the patrolling of the whole of New York harbor and adjacent waters.

Due to its accessibility to the Staten Island Railroad, the question of the supplies of this station, especially regarding parts of hydroplanes, would be much more efficiently served than from any other site mentioned.

Tactical Advantages.

Facility of supplies and facility of observation in patrolling.

Sanitation.

The general sanitary conditions at this site are excellent. The availability of [the] water supply is [from the] Croton aqueduct [sic] which furnishes the water supply for the entire city of New York. The subsoil is gravel and it is believed that water will not stand. It is probable that the marshes to the east will breed mosquitos but this condition is generally found thruout [sic] the vicinity of New York City on the Jersey Coast. The present sewerage disposal along this cost [sic] is made by means of outflow into the Bay. There is a movement on foot at present to stop this. It is not believed however, that the sewerage disposal will present any difficulty.

Supplies.

Supplies may be obtained from several sources. One by boat from the city of New York, dockage being obtained at the Midland beach Port. The other over the Staten Island rapid transit railroad which has a station at Newdorp [sic], Staten Island, about one miles [sic] from the site.

Roads in the vicinity are good macadam over which supplies can be brought by trucks.

Trolley communcations are found immediately adjacent on two sides of this property.

Comfort of Command.

This site embraces about 175 acres with about 1730 feet of beach of which is available for hydroplane hangars. Immediately back of the beach and extending practically the entire length of the property is an excellent landing field for the operation of land machines. The beach front and the landing field in rear of it are of sufficient extent and area for the operation of two hydroplane squadrons and one land squadron including sufficient area for necessary hangars, shops, etc. This field can be used as it now stands for a landing field. Numerous other fields exist in the immediate vicinity which could be used for emergency landings and also allowing for any future possible expansion in the operation of land machines.

With the facilities at hand anybody [sic] of troops located at this station would be comfortably situated.

. . . Nature and slope of the beach indicate deep water. Actual sounding shows sufficient depth for hydroplane activities. Fifty feet from beach the water depth is three to four feet. One hundred feet out the depth is five feet. About eight

hundred to a thousand feet from the shore line there is a sand bar. This sand bar serves to break the force of waves which might tend to wash out the beach. No evidence could be found that this sand bar was ever dry. The best obtainable evidence shows at least two feet of water if not more at low tide. This would be sufficient for handling hydroplanes.

Advantages.

This site affords an opportunity for immediate construction inasmuch as there is now available sufficient water and electric power. It is believed there would be no work necessary on the beach to prepare for flying as the water is of sufficient depth. The labor market is the [sic] of New York City as the site lies in the metropolitan district. New York City affords a ready market for materials of all kinds which enter into the construction of this Post. The haul from the railroad of building materials is approximately one mile and all down grade over hard surfaced roads. Temporary construction could be started at once and the permanent station follow later. This site is practically level and would require [a] minimum amount of fill for either temporary or permanent construction. The flying field for land machines could be used immediately. No other site inspected by the Board showed the possibilities that this one has for the combination work of the hydroplanes and land machines. . . .¹⁹

Shortly after the construction of the defense facility began, the Secretary of War directed on December 30, 1919, that the field be named Miller Field in memory of Captain James Ely Miller who was killed in a dog-fight with two German planes on March 9, 1918, about four kilometers north of Corberry (Aisne), France, while serving with the 95th Aero

19. Memorandum for Director of Army Operations, Office Chief of Staff, Chas. T. Menoher, March 28, 1919, Central Decimal File, 1917-1938, 323.5, RG 18.

Squadron on the Soissons sector. Miller, a graduate of Yale and a banking executive in his native New York City, was the "the first aviator serving with an American Unit to be killed in Combat in France." The name "Miller Field" was first published in Section II, General Orders No. I of the War Department on January 5, 1920.²⁰

20. "History of Miller Field, New York, 1936," January 18, 1937, Central Decimal File, 1917-1925, 314.71, RG 407, and General Orders, No. I, War Department, January 5, 1920, Central Decimal File, 1926-1939, RG 407.

CHAPTER FOUR
CONSTRUCTION OF THE SEAPLANE HANGAR: 1919-1921

About one month prior to the formal acquisition of the Vanderbilt Estate the Supply Section of the Office of the Director of Military Aeronautics began drawing up preliminary plans for the construction of the air coast defense station. On February 13, 1919, Colonel William Lay Patterson, who had charge of the aerial coast defenses, submitted a memorandum to the Supply Section urging that plans for the buildings of the New Dorp facilities "should follow the sketches heretofore drawn up by the Supply Section. . ." He enclosed a list showing an itemized estimate of a typical aerial coast defense station of permanent construction for one squadron. The cost of the hangars was estimated at \$250,000 (exclusive of heating, plumbing, and wiring) and the total cost of the station was estimated at \$1,289,550.²¹

Two days later the Director of Military Aeronautics submitted a memorandum to the Director of Army Operations of the Office of the Chief of Staff requesting authority for an expenditure of \$1,289,550 to construct the air coast defense station at New Dorp. He noted that the construction contemplated at the facility was "of a permanent type with the exception of hangars, which will have semi-permanent walls and roof." Although the Armistice had been signed, the station was still a necessity for the future defense needs of New York City.²²

On February 17 Captain George W. Price, Chief of the Buildings and Grounds Branch of the Supply Section submitted "preliminary sketches" prepared by his branch for the construction of "temporary coast defense stations, Nos. 1-12 inclusive" and a plot plan showing the location of the various buildings. The sketches and plot plan (none of which could be located) were to be used in drawing up the final plans and specifications

21. Memorandum for Supply Section, William Lay Patterson, February 13, 1919, Central Decimal File, 1917-1938, RG 18. A copy of the enclosed list may be seen in Appendix A.

22. Director of Military Aeronautics to Director of Army Operations, Office of the Chief of Staff, February 15, 1919, Central Decimal File, 1917-1938, 600.1, RG 18.

for the permanent facilities at New Dorp. All of the buildings were to be "of masonry construction with wooden floors and wooden roof framing with some sort of fire proof roofing, such as slate." The hangars were to be Standard Expeditionary Type structures having "110' span, with either an asbestos corrugated metal roofing or toncan metal." In addition, it probably would "be necessary to sheet the roofing with 7/8" lumber, in order that these buildings (i.e., hangars) may be heated to a certain degree."²³

Although the entire aerial coast defense program had been approved during the war, it was projected to cover the future defense needs of the United States. On that basis, although temporarily delayed by the signing of the Armistice and the postwar demobilization effort, the construction of a permanent air coast defense station at New Dorp was approved by the Secretary of War on May 22, 1919. Under this same authority the Construction Division was authorized to draw up the final plans for the station and supervise all of the construction activities. The contracting and field work were assigned to the Constructing Quartermaster, Coast Defenses of New York, located at 39 Whitehall Street.²⁴

The Chief of the Construction Division in the War Department reported on the progress of the facility at New Dorp on June 30, 1919. He noted that:

Aviation seacoast defense stations were being contemplated for the Hawaiian and Philippine Islands, Staten Island, N.Y., and the Panama Canal Zone. Although plans and specifications were being made at the end of the fiscal year, the project at Staten

23. Memorandum for Lieutenant Gray, Geo. W. Price, February 17, 1919, Central Decimal File, 1917-1938, 600.1, RG 18.

24. "Completion Report on Construction of Air Coast Defense Station Known as Miller Field....February 3, 1922," Completion Reports, Miller Field-1, RG 77.

Island, N.Y., was the only one actually authorized. It is contemplated, however, that authority will be given to proceed with these projects in the near future.²⁵

The Constructing Quartermaster received authority to proceed with the work on the New Dorp facility on October 18. Two days later, the plans and specifications, which apparently had been drawn up by the American Bridge Company (later to become U. S. Steel), were received covering what was known as the "Hangar Group of Buildings," including all construction in connection with the hangars such as the Pier and Boat House, Aero Repair Shop, Dope House, Boiler House, Aero Storehouse, Motor Test House, Armorer's House, water, sewer, and gasoline pumping systems, concrete roads, and a concrete ramp.²⁶

The job was immediately advertised, publicly posted, and circularized. The plans and specifications were sent to 27 prospective bidders. Various large subcontractors were also accommodated with plans for estimating purposes. As the building trades were fairly stable at the time and there was a lull of construction work in the city, five complete and satisfactory bids were submitted on November 1 as follows:

Smith, Hauser and MacIsaac, Inc.
\$519,000/145 working days

25. "Report of Chief of Construction Division," printed in War Department Annual Reports, 1919, p. 4,123.

26. Ibid, and U. S. Department of the Interior, National Park Service, "Historic Structures Report, Miller Field - Seaplane Hangar, Staten Island Unit, Gateway National Recreation Area, New York-New Jersey," by Hardy Holzman Pfeiffer Associates, New York, New York, July 21, 1978, p. 8. The steel fabrication drawings in the NPS records bear the name of the American Bridge Company. A single set of drawings sufficed for both land and seaplane hangars, with notations indicating elements "opposite hand" for the seaplane hangar. A thorough search in the various record groups at the National Archives failed to turn up any of the original plans or specifications.

Post and McCord
\$555,500/210 working days

L. B. Cleveland Transportation Club
\$556,980/270 working days

MacArthur Bros.
\$628,267/200 working days

Fox Reynolds
\$841,085/300 working days

The firm of Smith, Hauser and MacIsaac, Inc., located at 18 East 41st Street in New York City, was considered "one of the best in the country" and the contract was awarded to it on November 6 after being approved by the Chief of the Construction Division in Washington.²⁷

Two other contracts were let for the balance of the work at the New Dorp facility. A contract for the "Administration Group of Buildings" was let to the Rangely Construction Company of New York City on March 31, 1920, at a total cost of \$437,604. This contract covered the construction of the Bachelor Officers Quarters, Barracks and Mess, Administration Buildings, Store and Guard House, Post Exchange, four Hose Cart Houses, a Steel Floor Pole, a nonclimable fence, the exterior electrical system, and macadam roads. A second contract was also let to the Rangely Construction Company on June 26, 1920, for \$376,772 to construct one Field Officers' Quarters, twelve Company Officers' Quarters, two 4-family NCO Houses, and an Infirmary. This contract also included the alteration of existing structures on the site to meet the needs of the defense facility. The altered buildings were as follows:

Old Mansion to Officers' Club
Old Dairy House to Radio Receiving Building
Old Stables and Hay Barn to Garage and Storehouse
Old Ice House and Bull Pen to Utility Shop and Storage Yard

27. "Completion Report on Construction of Air Coast Defense Station Known as Miller Field....February 3, 1922," Completion Reports, Miller Field-I, RG 77.

The contract also provided for the (1) erection of three 85-foot steel radio masts, (2) removal of all trees from the flying field, (3) razing of the gardener's cottage, several greenhouses, the power plant, and all old wood and iron fences, (4) repairing and repointing the stone wall along New Dorp Lane and the stone wall around the pond, and (5) sodding, seeding, and planting various portions of the reservation.²⁸

As construction operations were about to commence in late October 1919, the Constructing Quartermaster, who had complete charge of the project, established an office in the Old Dairy House of the former Vanderbilt Estate. Four representatives from the Office of the Constructing Quartermaster were stationed at this office to provide actual supervision and inspection at the site: Assistant Construction Quartermaster, superintendent of construction, inspector, and voucher clerk. Throughout the period of construction, all the contracting, auditing, and office work were handled by the Constructing Quartermaster in his office at the Army Building in New York City. Other supervisory duties handled directly by the Constructing Quartermaster included the (1) checking and approval of all shop drawings submitted by the contractor; (2) day-to-day interpretation of the plans and specifications; and (3) claims for additional work and charges for work changes. The mill steel inspection was carried out by the Robert W. Hunt Company, and the Construction Division at Washington made frequent site inspections.²⁹

Smith, Hauser and MacIsaac, Inc. began actual work at the site on November 17, 1919. Herbert M. Hale was hired to do engineering studies and designs, and the firm of North, Allison and Ettlinger, whose survey of the former Vanderbilt Estate was attached to the deed of the property, was engaged to mark the property lines. The contracting firm also selected eight individuals to oversee the work: superintendent, chief

28. Ibid.

29. Ibid. A list of the personnel from the Office of the Constructing Quartermaster that were involved in the work at Miller Field may be seen in Appendix B.

engineer, assistant engineer with rodman, concrete foreman, carpenter foreman, steel foreman, time and material clerk, and paymaster. Engineers were sent periodically from the home office to the site to make general inspections and settle questionable points. Smith, Hauser and MacIsaac were assigned about one-half of the stable for housing and mess purposes and the old Episcopal Church as an office.

Before cold weather arrived late in September, the contractors started laying the sewer and water lines, thus taking advantage of the fair weather conditions, reasonable prices of the building industry, and plentiful labor supply. A trenching machine was to be shipped via railroad for this work, but the railroads were in a chaotic state during the demobilization period, forcing the contractors to resort to hand labor. Beginning in late December a blizzard, followed by several rain, sleet, and snow storms, brought the work to a standstill for three months since the ground became "entirely encrusted with ice and was frozen for several feet in depth."

During December Smith, Hauser and MacIsaac, Inc. let most of the subcontracts and purchased most of the building materials for the construction of the "Hangar Group of Buildings."³⁰ In January 1920 it was reported that certain unspecified changes had been made in the detailed drawings for the hangars, particularly those that affected structural steel and sliding doors.³¹

The trenching machine arrived in February and operations were restarted on March 23. With a work force of some 150 men the water and sewer line excavations as well as the excavations for the buildings were accomplished with the trenching machine. The contractor employed as

30. See Appendixes C, D, and E for a list of the subcontractors, material orders, and rates of pay, respectively.

31. Director of Air Service to Chief, Construction Division, January 27, 1920, Central Decimal File, 1917-1938, RG 18. A thorough search of the relevant record groups at the National Archives failed to turn up any information concerning these changes.

much local labor as possible, but most of the skilled labor and some common labor came from the Boroughs of Manhattan, Queens, and Brooklyn. Some of the men commuted, while others stayed in the old stable that had been converted to a bunk house.

In late April 1920 Smith, Hauser and MacIsaac, Inc., began laying the concrete roads and foundations. However, a strike occurred on the railroads and the firm was forced to truck cement from mills at Easton, Pennsylvania, and Plainfield, New Jersey, and from railway cars stalled at Bayonne, New Jersey. Even after the strike was over, it was almost impossible to get cement shipments and it was only through the efforts of the Constructing Quartermaster and the transportation officer at Hoboken, New Jersey, that any car shipments were received at all. In addition, the fabrication of the structural steel work was stopped by the American Bridge Company since its yard was overcrowded with material awaiting railway cars for shipment.³²

On May 6, 1920, a supplemental agreement modifying the contract of Smith, Hauser and MacIsaac, Inc., was negotiated. It permitted various changes as follows:

Increase-Changes in water connection layout shown on contract drawing No. 6535-188 and revised on drawing No. 6535-197	\$1,293.37
Increase-Changes on revised drawing 6535-106, doors for hangar and aero repair shop	2,851.20
Increase-Changes in ventilating sash in monitors, aero repair shop	272.00
Increase-Additional excavation and concrete piers for gasolene [sic] tanks	225.00
Increase-Additional vent and gasolene [sic] pump house	27.50

32. "Completion Report on Construction of Air Coast Defense Station Known as Miller Field....February 3, 1922," Completion Reports, Miller Field-I, RG 77.

Increase-Extending 8 inch hangar drains across concrete road	491.00
Increase-Construction of two additional catch basins to handle drainage from east gutter of road	300.00
Increase-Additional work on ramp as per revised drawing 6535-102. If additional sheeting or bracing is required for above, contractor will be allowed an extra of \$170 per M, F.B.M. in place. This item will not exceed 5M F.B.M. at \$170 per M. Contractor will allow on this work the market price F.O.B. Staten Island for any reinforcing rods that may be furnished by Government	850.00 \$9,210.07
Decrease-Changes in road and sewer work as shown on revised drawing 6536-116	2,870.00
Decrease-Credit for installation of Warren Chemical Roof instead of 3 ply Asbestos originally specified.	287.00 \$3,157,000
Net Increase	6,053.07 ³³

The delays caused by the railroad strike and the resultant difficulty in obtaining materials took their toll on the progress of the work at Miller Field. On June 30 the Chief of the Construction Division in the War Department reported that Miller Field, for which \$1,384,000 had been appropriated, was 35 percent completed. The report went on to state that the buildings at the facility were "of a permanent type of construction" and included "two seaplane hangars, each 160 by 200 feet, the side of the same consisting of 2-inch reinforced cement plaster wall with a steel sash, and the roof of gypsum slab." A "concrete ramp was designed for the landing and starting of the seaplanes."³⁴

The contractors continued to make progress on the "Hangar Group of Buildings" despite the delays caused by railroad strikes and freight

33. Ibid.

34. "Report of Chief of Construction Division," printed in War Department Annual Reports, 1920, pp. 1,569 and 1,581.

embargoes. It was not until August 1920 that the steel for the construction of the buildings began to arrive. The steel was quickly set in place using a gin pole. In raising one of the trusses the bottom slipped and struck one of the columns which buckled and cropped, thus requiring the erection of a new one-half column and new flanges.³⁵

On August 18 several officials of the Air Service and the Construction Department inspected the work at Miller Field. They found that the steel work of the hangars was in place and that the concrete ramp for landing the seaplanes was completed.³⁶

The work continued slowly thereafter, delayed by shortages of material and labor. Moreover, the increasing amount of construction activity in New York City was contributing to high wages and low productivity among the work force. A second supplemental agreement modifying the hangar complex contract was negotiated on October 23. It allowed for the following changes:

Increase-Furnishing electric meters, necessary boards, and angle iron frames for Armorer's building, gasolene [sic] pump house, boat house, aero storage, motor test house, boiler & dope house, aero repair shop and the 2 hangars	\$720.00
Increase-Additional power wiring in the aero repair shop and boiler house as shown on revised drawings 6535-110, 6536-189, 6536-192	780.00
Increase-Installing and connecting up house sewer service in Bachalor [sic] Officers' Quarters to the Ejector pit	40.85
Increase-Additional concrete paving over area between aero repair shop and motor test house	825.00
Increase-Furnishing & installing proper supports for curved sections of the track troughs for the rolling steel doors in the hangars & aero repair shops	225.00

35. "Completion Report on Construction of Air Coast Defense Station Known as Miller Field....February 3, 1922," Completion Reports, Miller Field-I, RG 77.

36. Dept. Air Service Officer to Chief of Air Service, August 20, 1920, Central Decimal File, 1917-1938, 600.1, RG 18.

Increase-Furnishing and installation of pipe standards and extension of gasoline [sic] & electric conduits to place the two remote control stations of gasoline [sic] storage system clear of hangar doors.	500.00
Increase-Cutting off and leaving the inner row of sheet piling on either side of ramp from the high tide mark to as far down near low water as is practicable.	1,279.50
Increase-Changing metal clad fire doors of boiler & dope house from gravity sliding to level head doors.	50.00
Increase-Additional excavation for 6" water line east of hangars.	1,757.50
Increase-Additional excavation for ramp	<u>1,380.00</u>
	\$7,557.85
Decrease-Changes in hinges on doors of aero shop	16.00
Decrease-Deduct sheeting and bracing allowed in supplemental agreement dated May 6, 1920 as same was not required and not installed	850.00
Decrease-Deduct cost of reinforcing rods furnished by Government as provided in supplemental agreement dated May 6, 1920	131.21
Decrease-Deduct proportionate cost of inspection as expenses of the Government after expiration of contract, 269 calendar days from May 8, 1920 to Feb. 1, 1921 at \$11.50 per day	<u>3,093.50</u>
Net Increase	\$3,467.14 ³⁷

37. "Completion Report on Construction of Air Coast Defense Station Known as Miller Field....February 3, 1922," Completion Reports, Miller Field-1, RG 77.

On December 8, 1920, Major A. R. Christie, the commander at Mitchel Field, led a delegation to inspect the construction work at Miller Field. The following was a summary of their findings:

Miller Field is excellently situated for the work for which it will be called upon to do. The construction work is about 85% completed, but it will probably be April 15th, 1921, before it will be turned over to the Air Service for occupancy. It is recommended that no attempt be made to rush completion of the work, as this will necessitate guard, heating, etc., and will serve no useful purpose. It is much better to have the contractor take care of the Field during the winter and be responsible for turning it over in good condition in the spring than for us to do it.

Because of the separate heating units in each building a much larger number of men will be necessary for operation and upkeep. A central heating plant is recommended at the first opportunity. Some system of heating should be installed in the hangars.³⁸

During the winter months the work progressed slowly and was not entirely completed until February 1, 1921. Meanwhile, progress on the remainder of the facilities at Miller Field was facing delays caused by the financial problems and ultimate bankruptcy of the Rangely Construction Company in May 1921. The Fidelity and Deposit Company of Maryland in New York City completed the two contracts by June 30. On that date Smith, Hauser and MacIsaac, Inc. received its final payment for the completion of the "Hangar Group of Buildings." All told, the hangar

38. Major A. R. Christie to Chief of Air Service, December 20, 1920, Central Decimal File, 1917-1938, 300, RG 18.

complex cost \$535,068.84. Of this sum, the land and seaplane hangars each cost \$89,936.50.³⁹

On July 11, 1921, the Constructing Quartermaster reported to the Air Officer at the Headquarters of the Second Corps Area on Governors Island that Miller Field was completed and would be turned over to the Air Service on July 20.⁴⁰ On that date, the Miller Field facility was formally transferred to Major Henry Abby, Jr., the Commanding Officer of Mitchel Field on Long Island under whose direction Miller Field would function as a subpost. A list of the buildings and utilities at Miller Field was furnished with the transfer notification. At the head of the list of buildings were "2 landplane hangars" and "2 seaplane Hangars."⁴¹

The completed land and seaplane hangars were aptly described in the "Completion Report on Construction of Air Coast Defense Station Known As Miller Field at New Dorp, Staten Island, New York...February 3, 1922." The structures were:

double hangars (monitor type, size 220 & 160 [& 19' 11" in height]) and are of steel frame construction with concrete floors, reinforced concrete walls, cement plastered and 3" Gypsum slab roof, suspension type, covered with 5 ply tar and felt roofing. Adequate light is furnished by the steel sash glazed with wire glass on 3 sides of the hangar and in the monitors. The fourth side of the hangar is completely taken

39. "Completion Report on Construction of Air Coast Defense Station Known as Miller Field....February 3, 1922," Completion Reports, Miller Field-I, RG 77. The overall contract total included three separate items: (1) cost by contract, \$528,520.21; (2) direct government cost, \$1,500; and (3) overhead costs of government, \$5,048.33.

40. Constructing Quartermaster to Headquarters, Second Corps Area, Governors Island, New York, July 11, 1921, Central Decimal File, 1926-1939, 323.5, RG 407.

41. Constructing Quartermaster to Commanding Officer, Mitchel Field, Long Island, July 20, 1921, Central Decimal File, 1917-1938, 323.5, RG 18. A copy of the complete list of buildings may be seen in Appendix F.

up with the large sectional steel doors which operate on tracks and hangars. These sections operate independent of each other with locking devices on each section. The area in front of the sea plane hangar is paved with concrete and connects with a concrete ramp. The ramp leads directly into the water extending out about 100 feet beyond mean low tide, the entire ramp being 400 feet long and 40 feet wide. The area in front of the land plane hangar is paved with cinders. Additional cinder paving was done at this point between the Aero Repair and Motor Test House so as this whole area would be paved.⁴²

It is significant to note that Miller Field was the only air coast defense station of the seven originally intended for the Atlantic Coast to be formally authorized and constructed. This was the result of at least three factors: (1) the rapid demobilization of the American armed forces after the Armistice of November 11, 1918; (2) the inadequate funding provided in Public Law No. 189; and (3) a prohibition of future purchases of land for defense purposes contained in the Army Appropriations Bill of July 11, 1919. Thus, the remaining sites were never developed as air coast defense facilities as had been envisioned prior to the Armistice.⁴³

42. "Completion Report on Construction of Air Coast Defense Station Known as Miller Field....February 3, 1922," Completion Reports, Miller Field-I, RG 77. The steel frame consisted of trusses every 20 feet designed to span the 110 feet and to support a monitor approximately 22 feet wide and 8 feet high for the entire length of the building. The trusses were supported by columns at each end, sharing columns in the center. "Historic Structure Report, Miller Field-Seaplane Hangar," p. 8.

43. Memorandum for Executive, March 9, 1920, Central Decimal File, 1917-1938, 600, RG 18, and "Report of Chief of Air Service," printed in War Department Annual Reports, 1920, p. 1,461. Two other defense facilities, similar in design, construction, and layout to Miller Field, were built by the Army during this period at Langley Field, near the mouth of Chesapeake Bay in southeastern Virginia, and at Crissy Field at the Presidio in San Francisco. "Report of Chief of Air Service," printed in War Department Annual Reports, 1920, p. 1,461, and Memorandum for Chief, Supply Group, Leslie MacDill, March 27, 1920, Central Decimal File, 1917-1938, 400, RG 18.

CHAPTER FIVE
STRUCTURAL MODIFICATIONS AND UTILIZATION OF THE SEAPLANE HANGAR:
1921-1979

The new Miller Field facility was made a subpost of Mitchel Field and garrisoned by Flight "A", 5th Squadron of the Air Service commanded by First Lieutenant William Moore. By January 1922 the garrison consisted of one flying officer and 23 enlisted men of Air Park #6. In addition, there was one medical officer, two corpsmen, three Signal Corpsmen, and one Quartermaster Corpsman.⁴⁴

On January 20, 1922, an investigation of the construction of Miller Field by a Board of Officers, consisting of Captain G. V. Hart and First Lieutenant W. G. Moore, revealed that there were structural defects in the "Hangar Group of Buildings". Among the problems and recommendations that were reported by the inspectors were the following:

Two 10,000 gallon gasoline tanks have been installed on saddles above ground near the hangars thus forming a fire hazard which could have been avoided.

The hangar group of buildings has been graded to such a low point that exceptionally high tides flood the floors of these buildings to a depth of six or more inches while the ramp leading from the concrete area in front of these buildings to the beach has been graded so low that it acts as an inlet to the flood water; this condition applies to the land and sea plane hangars, the motor test building, the aero-repair building, the aero-repair boiler room, the dope shop, and the aero-repair storehouse. These buildings were flooded to a depth of six inches by the high tide of Jan. 29, 1922.

A flood to a depth of twelve inches would necessitate the drawing of the fires in the boiler room to prevent damage.

The concrete area in front of the hangars has not sufficient slope toward the drains to carry off the storm water.

44. National Register of Historic Places Inventory-Nomination Form, "Miller Field".

The concrete on the floors of the hangar group is of such poor quality that it seeps off in the form of a white powder.

All the down spouts on the buildings have been terminated about six inches from the ground with no provision being made to carry the water away from the foundation of the buildings.

The cast iron leader boots to which the above spouts should have been connected have not been installed.

The areaway leading to the basement of the Infirmary was left entirely open and exposed to the weather, as a result it acts as a catch basin during a rain and so floods the boiler room.

There have been no lattice work floors provided for the developing rooms of the photo building.

The general construction of the buildings shows poor workmanship and an inferior grade of materials used

No window or door screens, storm windows or storm doors have been provided for any of the buildings on the Field....

The slate shingles on the roof of every building were nailed on with iron nails instead of copper nails, thus making a job that will require repairs in a comparatively short time. . . .

RECOMMENDATIONS

That the gasoline storage tanks and the oil tanks be buried under ground to eliminate the fire hazard.

That no practical recommendations can be made for improvement of the floor of the hangars or for the grade established but that beach sand could be graded over the ramp to a sufficient height to keep out the sea water.

That means be provided and installed whereby the water from the downspouts will be carried away from the foundations of the buildings.⁴⁵

The actual use of Miller Field was questioned by early 1922. It was recommended that the field be made a subpost of Fort Wadsworth by the Commanding General of the 2nd Corps Area. The Air Service executive advised against this action by noting to the Adjutant General of the Army:

Although this office has no immediate plans for the active operation of Miller Field, the following considerations make advisable its retention as an operating station:

- a) Centrally located for work involving aerial adjustment of coast artillery fire and mine spotting.
- b) Available as a subbase during maneuvers, problems or exercises using Mitchel Field as a base.
- c) Way station for aerial travel along Atlantic Coast.

45. Proceedings of A Board of Officers, Convened Pursuant to.... Special Orders No. 13, January 16, 1922, Central Decimal File, 1917-1938, 334.7, RG 18.

- d) Logic [sic] terminus of air routes leading into New York.
- e) Available for use by seaplanes. (Mitchel Field is not).
- f) To be used as ultimate station for concentration of Air Service activities in 2nd Corps Area, in case of such extreme reduction of the Army as to necessitate abandoning Mitchel Field.

At the present time it is impossible to determine what the status of the Air Service is going to be. It is highly probable that should the Army be materially reduced that the Air Service will receive a corresponding cut. In case this reduction is so great as to make it impossible to maintain more than one (1) squadron in the vicinity of New York, it is the opinion of this office that it would be logical and proper to concentrate at Miller Field which has permanent quarters and installation. This would make it practicable to salvage and sell all the temporary and rapid deteriorating equipment at Mitchel Field with a view at a more opportune time to taking proper steps to build up a permanent airdrome at Mitchel Field.

In view of the above it is recommended that no action be taken which will in any way interfere with the facilities or future operation of Miller Field as an Air Service station, and that any assignment of units to that station be with the understanding that Air Service requirements may at any time make their removal necessary.⁴⁶

The efforts of the Air Service were unsuccessful and on March 1 the Air Service detachment at Miller Field was relieved by the Howitzer

46. Air Service Executive to the Adjutant General of the Army, March 11, 1922, Central Decimal File, 1917-1938, RG 18.

Company of the 22nd Infantry and the field was transferred as a subpost to Fort Wadsworth. Later that month the First Engineers arrived at the field from Coblenz, Germany, and shortly thereafter the First Signal Corps from Camp Dix, New Jersey. By September these units were replaced by the First Tank Company whose commander, Captain H. W. Bolan, became commanding officer of the field. Another regular Army detachment, the First Ordnance Company, was stationed at Miller Field shortly afterwards, as was the 102nd Observation Squadron of the 27th Division of the New York National Guard Air Service. The 27th Division had been authorized to use the seaplane hangar and the flying field for aeronautical purposes in June and in October provision had been made also for the use of Building No. 36, which had been utilized as a Quartermaster Storehouse up to that time. Thus, by October 1922, when Miller Field became an independent post, the Army had withdrawn all Air Service personnel and replaced them with land troops, and the National Guard squadron was the only air detachment at the field. The cause behind the removal of the Air Service garrison was a gradual reduction of active Army Air operations in the postwar years. By shifting from Mitchel Field to Miller Field, the National Guard unit would be able to provide air support from Miller Field during maneuvers and exercises.⁴⁷

Several additions were made to the seaplane hangar in 1921-1922. A telephone was installed sometime in 1921 by the Signal Corps. In 1922 a Titusville Iron Works furnace and fan system was installed in the building to provide steam or hot water heat--an example of technological advancement for heating such large spaces. The data relative to the heating unit was as follows:

Type of Heat - Steam or Hot Water
Sq. Ft. Direct Radiation or Equivalent in Building - 20,554
Manufacturer - Titusville Iron Works (3)
Serial No. - DD-666
Capacity Sq. Ft. Builder's Rating in Boiler - 13,410

47. Chief of Staff to Commanding Officer, Miller Field, June 10, 1922, and Asst. Adjutant to Commanding Officer, Miller Field, October 10, 1922, Central Decimal File, 1917-1925, RG 407; National Register of Historic Places Inventory-Nomination Form, "Miller Field"; and "History of Miller Field, New York, 1936", January 18, 1937, RG 407.

(These are oil burners - #134-0 Series S R).⁴⁸

In July 1922 the electrical system in the seaplane hangar was inspected. The report, which noted that the system was operating in good order, contained the following information:

Volts - 110
Apparent Average Life Hours of Lamp - 500
No. of Watt-Hour Meters - 1
Make of Watt-Hour Meters - Duncan
Wiring - 3 - Wire Watt-Hour Meter
House Wiring - Conduit (Kind)
Good (Condition).⁴⁹

The Builders' Hardware Committee of the Federal Specifications Board in New York City conducted an inspection trip of Miller Field on March 28, 1923. In its report on April 5 the committee noted a problem that affected the seaplane hangar as well as other buildings on the reservation:

The downspouts on the buildings constructed at Miller Field are of galvanized iron and the majority of them are in very bad condition. The exteriors in all cases have been protected by frequent painting but rust from the interior has in many instances completely eaten through. . . It is recommended that future repairs to these down spouts and gitters be made with a more lasting material than galvanized iron.

Two weeks later (on April 19), the Quartermaster at Miller Field informed the Quartermaster at the Headquarters of the 2nd Corps Area on Governors Island that the "down spouts and guttering" had been renewed.⁵⁰

48. "Individual Heating Plants, September 17, 1941", Completion Reports, Miller Field-I, RG 77.

49. "House Lighting - Watt-Hour Meters and House Wiring Data, July 20, 1922", Completion Reports, Miller Field-I, RG 77.

50. Report on Meeting of Builders' Hardware Committee of the Federal Specifications Board, New York City, April 5, 1923, General

A severe rain and snow storm, compounded by winds of up to 80 miles per hour, struck Miller Field on March 10-12, 1924. It was reported that:

The concrete ramp for seaplanes between the seaplane hangar and the quartermaster storehouse, facing the sea, was badly broken by the heavy timbers washing and pounding same. A considerable number of slates from the roofs were blown off, which of course causes leaks.

The total cost of repairs to Miller Field was about \$475, of which \$25 was set aside to repair the ramp.⁵¹

In May 1924 it was reported that a stone jetty had been completed recently at Miller Field. The jetty had already proven to be "a valuable asset to this station, in that it has already remade over seventy (70) yards of beach as well as prevented damage to the foundations of several hangars and the seaplane ramp."⁵²

During the decade between 1924-1934 little repair or alteration work was done to the seaplane hangar or the other facilities at Miller Field. The Army continued to garrison Miller Field until June 18, 1931, when it turned the entire field over to the 27th Division of the New York National Guard to be used as a training site and armory for air units. By October of that year, however, Miller Field again had become a subpost of Fort Wadsworth and, in addition to serving as an emergency landing field and maintenance area for land and sea planes, the First Tank Company

Correspondence, Geographic File, 1922-1935, 825.3, Record Group 92, Records of the Office of the Quartermaster General, National Archives.

51. Humphrey to Commanding Officer, Headquarters, 2nd Corps Area, March 12, 1924, General Correspondence, Geographic File, 1922-1935, 600.3, RG 92.

52. Humphrey to Adjutant General of the Army, May 27, 1924, Central Decimal Files, 1917-1938, 800, RG 18.

and the Headquarters Company of the First Brigade were assigned there in addition to the 27th Division.⁵³

In 1934 the Works Progress Administration (WPA) undertook a number of projects to improve the facilities at Miller Field using an allotment from the Public Works Administration. Included in the projects were a concrete apron between the hangars for \$7,500 and the modernization of the hangars for \$25,000. The work which was completed in 1936 included the installation of new canopy doors of glazed metal sash as was on the exterior walls. The tracks for the original doors were removed and a counterweight system was installed with a small electrically-operated motor in the center enabling the entire door to lift at once. The doors were recessed from the wall and made of glazed sheet metal except for a solid four-foot band on the bottom and sides.⁵⁴

During the years 1938-1939 the Works Progress Administration focused on expanding Miller Field in order to provide facilities for the First Brigade Headquarters Company, the First Tank Company, and the 27th Division Aviation of the New York National Guard. Among the major projects at the facility was a complete remodeling and rehabilitation of the seaplane hangar at a total cost of \$629,287.07. The extensive project, which was completed during the spring of 1939, was designed to permit the seaplane hangar to be used as a barracks and mortar school accommodating 300 men. The rehabilitation program included the following additions to the seaplane hangar:

53. National Register of Historic Places Inventory-Nomination Form, "Miller Field"; Robert Krist, "Fort Wadsworth, Part II", Staten Island Historian, XVIII (October-December, 1957), 27; and "History of Miller Field, New York, 1936", January 18, 1937, RG 407.

54. Superintendent of Construction and Repairs of the Armory Board to Secretary, Armory Board, April 3, 1934, Central Decimal File, 1917-1938, 600.12, and Memorandum to the Adjutant General of the Army, December 16, 1935, Central Decimal File, 1917-1938, 600.1, RG 18, and "Historic Structures Report, Miller Field - Seaplane Hangar", p. 15.

1. One-story lean-to on the east side (22 feet x 160 feet).
2. One-story lean-to and boiler house on the south side (21.77 feet x 220 feet)
3. Two-story lean-to on the west side (30.375 feet x 160 feet)
4. Transformer house on southwest corner (22.75 feet x 18 feet)
5. Parachute drying tower
6. Classrooms (Medical Room, Photo Darkroom, Kitchen)
7. Offices

Numerous other alterations and improvements were made to the seaplane hangar. A new heating system was installed that included the following tasks:

To change the manual control burners to semi-automatic control burners that would be regulated by either a pre surestat or an acquastat and to install an individual thermostatic control on each unit heater and that these controls are not to be hooked up to the boilers.

To install a separate oil tank for the auxiliary boiler which is to burn a lighter grade of oil.

To install preheaters in the oil supply tanks which can be started by the auxiliary boiler and maintained by the main boilers.

A new "blow down tank" was installed, the east hangar door was painted, and maple flooring was laid in the hangar. The hangar's gables and eaves were water-proofed by applying a new galvanized lath and cement plaster on furring over the old construction. The electric lighting and power systems in the structure were also replaced with new equipment including a 100-KVA Westinghouse transformer (60 cycle, 3 phase), three blowers for the oil-burning furnace, steam return lines, water feeders to

boilers, an auxiliary oil burner blower, a lift on the hangar doors, and a blower on the ventilating fans. A food mixer was installed as was a sump pump for the seepage around the gas tanks.⁵⁵

Few physical improvements were made to the seaplane hangar or to the other facilities at Miller Field after 1939 with the exception of changes in the use of interior spaces. During the period before American entry into World War II, Miller Field was equipped with two observation flights of three planes each to furnish observation and surveillance for the batteries at Fort Tilden and Fort Hancock.⁵⁶

In 1941 a number of changes were made in the interior of Building No. 38. A temporary mess to accommodate some 300 men was added in the rear of the building by the WPA in March. The project included the installation of one potato peeler and three dishwashing machines. The total cost of the work, including water, sewer, and electrical connections, was \$4,375.58.⁵⁷

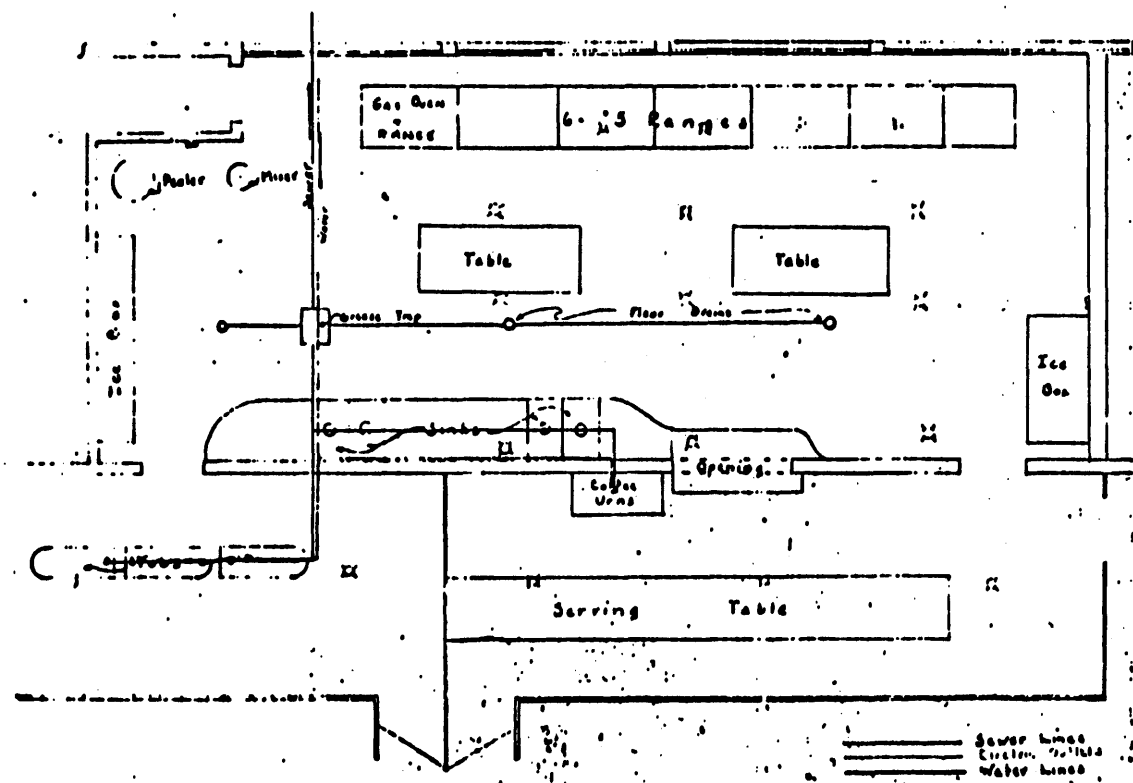
In March 1941 two new watt-hour meters were installed and calibrated in the seaplane hangar as part of a project to upgrade the quality and efficiency of the electrical system. At the time it was noted that there were 427 authorized lighting outlets in the building. The data on the meters and the existing lamps, of which there were 357, was as follows:

55. O.Q.M.G.: Plan No. 6535-103 (1918), Building No. 38, and "Electric Lighting and Power", May 12, 1941, Completion Reports, Miller Field-I, RG 77, and various memoranda of the Works Progress Administration, October 21, 1937, to November 3, 1938, in files, Staten Island Unit, Gateway National Recreation Area. For a description of the side additions see Appendix G for an analysis which appears in "Historic Structures Report, Miller Field-Seaplane Hangar", pp. 17-19.

56. National Register of Historic Places Inventory-Nomination Form, "Miller Field".

57. "Office of the Quartermaster, Fort Wadsworth, Alteration to Building #38, Miller Field", Completion Reports, Miller Field-I, RG 77. A drawing of the mess may be seen on the following page.

77



Building No. 88 - Mess Hall - used as barracks and
 mess hall.
 March 24, 1941 - Addition of a temporary mess to accommodate
 approximately 200 men, added by WPA - \$1,970.00

Office of the QUARTERMASTER
 FORT WADSWORTH
 ALTERATION TO BUILDING 88
 MILLER FIELD

Watt-Hour Meters

Type - CA-3
Manufacturer - Westinghouse
Wiring - 3-wire

Lamps - Number

40 Watts - 12
60 Watts - 32
75 Watts - 20
100 Watts - 22
150 Watts - 98
200 Watts - 68
300 Watts - 71
500 Watts - 24
1000 Watts - 10

In June the Works Progress Administration installed forty wash basins in the seaplane hangar at a cost of \$1,100. Although no other documentation was found relative to this work it is apparent that the basins were placed in the building to accommodate the changing uses of the structure.⁵⁸

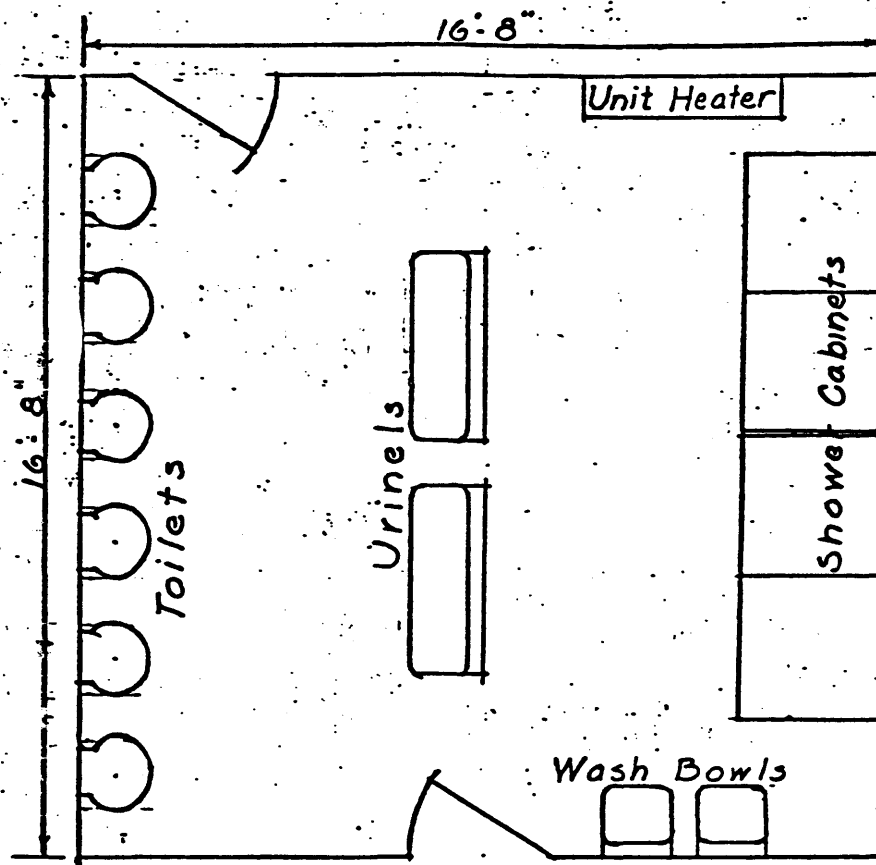
A new latrine (referred to as Latrine #2) was completed in the northwest corner of the second floor of the seaplane hangar on October 17, 1941. The latrine, which cost \$1,196.02, included four shower cabinets, two urinals, two wash basins, and six toilet bowls.⁵⁹

The flying facilities at Miller Field remained inactive throughout World War II. By 1944, a fire control tower and searchlight were constructed and four 90-millimeter anti-aircraft guns had been emplaced on the beach at the field, but aside from conducting patrols the garrison

58. O.Q.M.G.: Plan No. 6535-103 (1918), Building No. 38, Miller Field, Completion Reports, Miller Field-I, RG 77.

59. Ibid., and "New Latrine in Bldg. 38, Miller Field, Completed: 10/17/41," Completion Reports, Miller Field-I, RG 77. A copy of the drawing of the new latrine may be seen on the following page.

Note: This room is known as Latrine 2, and is located on the second Floor, in the N.W. corner of Bldg. 38.



PLAN

Installed 11-17-41:

- 4 Shower Cabinets
- 2 Urinals
- 2 Wash Basins
- 6 Toilet Bowls

New Latrine in Bldg. 38
MILLER FIELD
Completed: 10/17/41

at Miller Field saw no action. As a subpost of Fort Wadsworth, the field housed any overflow including troops, prisoners-of-war, and refugees.⁶⁰

The use of the seaplane hangar reflected the general inactivity at Miller Field. The hangar was used for executive offices, barracks, a Corps Area Motor School, and a Metropolitan District Shop for ordnance vehicle and aircraft maintenance. Some changes were made in the structure to accommodate the new utilization of the building including the addition of hydraulic lifts and a compressor room.⁶¹

Following the end of World War II (a period for which no documentation was found concerning further structural alterations to the seaplane hangar), the entire harbor and coast defense system in New York began to be dismantled. By 1950, there were no longer any batteries in the New York area and no need for supporting aircraft. Miller Field was gradually deactivated with the flying activities the first to cease, and the field became a repair center for the Army in the Greater New York area, a motor transport pool, and later an ordnance depot. By the mid-1950s Miller Field was the base of the 12th Antiaircraft Artillery (90-mm. gun) Battalion and the site of considerable Civil Air Patrol and Air National Guard activity. In the late 1950s the land and seaplane hangars were used as a repair and maintenance base for NIKE missiles and in the 1960s the field became a training camp for Green Beret units, a combination reserve training area and billet for soldiers, and a base housing light aircraft and armored vehicles. Finally in November 1969

60. "Historic Structures Report, Miller Field-Seaplane Hangar", pp. 22-23, and National Register of Historic Places Inventory-Nomination Form, "Miller Field."

61. Staten Island Chamber of Commerce, Staten Island, New York: 50th Anniversary (Staten Island, [ca. 1945-46]), pp. 35, 69; "Schedule of Buildings, Miller Field, Staten Island, N. Y., January 26, 1943," Completion Reports, Miller Field-I, RG 77; and "Historic Structures Report, Miller Field-Seaplane Hangar", pp. 22-23.

the field was vacated and declared surplus government property by the Army.⁶²

When the National Park Service acquired Miller Field in 1973 all of the facilities had been vacant for some time. The structures had all deteriorated in varying degrees as a result of neglect, vandalism, fire, and weather. The seaplane hangar was still in fair condition although the roof had some gaping holes, most of the windows were broken, and the metal sash was rusted beyond repair. The condition and plans for the hangar were described as follows:

Building 38, the double seaplane hangars, is a steel frame structure with stuccoed tile curtain walls. Both hangars have gambrel roofs, supported by open steel trusses and covered with tarred concrete slabs. At the peak of each of the roofs there is a gable-roofed monitor. The gable ends, above the steel and glass windows and doors, are stuccoed as well. On the western side of Building 38 is a flatroofed, two-story service wing, built during the WPA work, which extends halfway along the southern side of the hangar. On the eastern side is a similar wing, only one story high, which extends around to the southern side as well. Both wings have a large number of steel frame windows, most of which are broken. On the southern side of the building, between the service wings, there is a tall brick chimney and a plastered wooden tower which is partially fire-damaged. The northern sides of the hangars are occupied by the steel and glass doors. These are not the original doors and are in poor condition. The interiors of the hangars are open space, divided by a common center wall. The heating system is still installed but is not in

62. Krist, "Fort Wadsworth, Part II", 27; Dorothy Valentine Smith, Staten Island: Gateway to New York (Philadelphia, 1970), p. 219; "Notes on Miller Field, Prepared by Edna M. Holden-March 1974", attached to National Register of Historic Places Inventory-Nomination Form, "Miller Field"; and Staten Island Advance, September 19, 1965.

operation. The building as a whole is in need of a good deal of repair. It will be renovated for indoor recreational activities.⁶³

By June 1977 the condition of the seaplane hangar had deteriorated further. At that time it was reported that:

The building is in a general state of severe deterioration. The roofing over the hangar bays has disintegrated over large areas and needs complete replacement to weatherproof the structure. Some of the steel has rusted due to roof leaks, however, this is minor except for some interior columns which would require restoration treatment. The trusses remain in good condition. The roofing on the wings has major leaks.

Virtually all the window glass is broken and most of the steel sash is rusted beyond repair. All the interior finishes are ruined. Most of the partitions in the side wings have deteriorated or been vandalized beyond repair. All of the mechanical, electrical and plumbing equipment has been removed, destroyed, or has corroded away.

The parachute drying tower has been damaged by fire and should be removed for safety reasons. The other minor additions are all in the poor condition typical of the building in general.

The concrete floor throughout is in fair condition structurally, but with very poor surfaces, and should be either resurfaced, topped, or covered over with a wood floor system.

63. National Register of Historic Places Inventory-Nomination Form, "Miller Field".

The original exterior walls between the hangar bays and the additions are in fair condition, including the walls of the corridor along the west side. The glass block windows along the east and south sides are badly damaged.⁶⁴

64. U. S. Department of the Interior, National Park Service, "A Feasibility Study of Renovation Options, Southwest Hangar, Miller Field, Staten Island Unit, Gateway National Recreation Area", by Denver Service Center, June 1977, pp. 3-4.

CHAPTER SIX
HISTORIC EVENTS ASSOCIATED WITH MILLER FIELD:
1920-1960

Miller Field's involvement in historic events has ranged from its use as a test facility for processing pictures taken in the air for the International Cup Race in 1920 to serving as the experimental base for early pioneering aircraft and the landing site for several famous pilots. In his "General History of the Jamaica Bay, Breezy Point, and Staten Island Units, Gateway National Recreation Area" (October 31, 1975), Tony P. Wrenn provided scattered descriptions of the historic events that occurred at Miller Field. Since my subsequent research has turned up little further information on the subject, the purpose of this chapter will be to provide a chronological resume of historic events at Miller Field using pertinent excerpts from the Wrenn Report as well as some additional information.

1. July 1920 - International Cup Race

Some months before the Miller Field facility was completed it was ordered in July 1920 that the installation be used

in order to make a tactical test on short notice of speed with which a Photo Section can work in the developing and printing of negatives taken from the air, and as a demonstration of one of the practical uses of aircraft, that there be taken motion pictures and still pictures of the International Cup Race at Sandy Hook, on such days as there are contests.

After the event the Commandant at Mitchel Field reported that:

The film companies named . . . were notified that there would be a plane furnished to take motion pictures camera men into the air to photograph the yacht races. The Pathe and Gaumont Film Companies were the only companies to accept the invitation and then only on the first day of the race.

The races took place just off Staten Island, hence the photographic dark room lorry was taken to New Dorp Landing Field, the new Coast Patrol Station on Staten Island, where all

planes landed and turned their plates over to the photographers who developed and printed them, and turned the finished prints over to the newspaper reporters. After the third race (of eight races) the photographic lorry was returned to Mitchel Field where all operations till the finish of the race were conducted.

All the newspapers in New York were notified that they could procure finished prints of the races at New Dorp Landing Field, and many were there to get them. Finished prints were ready for distribution thirty minutes after the planes had landed, which made it possible to publish these pictures in the editions of the following morning. The New York Times, Tribune, Herald, and News, also the Boston Post and Herald had representatives at the field after each race, others were notified but sent no representatives. The out of town papers were more eager for pictures than the New York papers, and consequently gave the Air Service more publicity.⁶⁵

2. August 1923 - Remington Burnelli Aircraft

The Remington-Burnelli Aircraft Corporation tested one of its planes at Miller Field in 1923. Equipped with two 550-horsepower Atlantic-Galloway engines, the airplane was being flight-tested for the Army when it crashed at Miller Field in August 1923. Repairs were made in one of the hangars, and the tests continued.⁶⁶

3. 1923-1924 - Nelson's Flight Around the World

During the period 1923-24, Lieutenant Erik Nelson, who participated in the first flight around the world between April 24 and September 28,

65. "General History of the Jamaica Bay, Breezy Point, and Staten Island Units, Gateway National Recreation Area", pp. 80-81.

66. Ibid., p. 84.

1924, was frequently at Miller Field. Nelson was a member of the Stockholm Club, an organization affiliated with the Ocean Edge Colony whose clubhouse was located across New Dorp Lane from Miller Field. As an Army flier, he entered the race to circle the globe in competition with British, French, Portuguese, and Argentine aviators. Nelson (in his plane, the New Orleans) and Lieutenant Lowell H. Smith (in his plane, the Chicago) made their record flight in Army Air Service Douglas amphibian two-seater biplanes that were noted for their interchangeable floats and wheels. The Douglas World Cruisers were large single-engined aircraft with a top speed of only 100 miles per hour. The round-the-world flight beginning at Seattle, Washington, took 175 days and covered 26,100 miles in 57 legs, although the actual flying time was 351 hours and 11 minutes.⁶⁷

The two fliers became popular heroes, and it was reported that President Calvin Coolidge and his entire Cabinet stood in the rain for more than four hours to greet the fliers when they arrived in Washington after the flight. Later Nelson flew to Miller Field and

was accorded a reception and demonstration equalled by few others who have ever graced Staten Island's shores. The field was located opposite the clubhouse with its beautiful grounds, lawn, shrubbery and flower gardens.... The great field was packed with members of the Colony and club, and with fellow aviators. Lieutenant Nelson on this occasion gave demonstration flights for his clubmates of Number 9 Cedar Grove Avenue, New Dorp.⁶⁸

67. Norris and Ross McWhirter, Guinness Book of World Records (New York, 1972), p. 320, and John Killen, A History Of Marine Aviation: 1911-1968 (London, 1969), p. 69.

68. Vernon B. Hampton, Staten Island's Claim to Fame, (New York, 1925), pp. 86-87.

4. September 12, 1924 - Defense Day Festivities

On September 12, 1924, Miller Field played a prominent role in the New York City National Defense Day celebration. After a parade which ended at Fort Wadsworth, a mock air invasion was staged before some 10,000 spectators. Twenty-one aircraft, five of which were from the 102nd Observation Squadron at Miller Field, attacked the gun emplacements and fortifications of Fort Wadsworth with flour bombs. Later in the day, an infantry demonstration was given by the First Tank Company from Miller Field using machine guns, infantry rifle companies, and tanks.⁶⁹

5. November 11, 1924 - Armistice Day Ceremonies

Public ceremonies at Miller Field on November 11, 1924, featured the unveiling of a tablet donated by the mother and friends of Lieutenant James Ely Miller for whom the field had been named. It was reported that during the ceremonies

several planes of the 102nd Observation Squadron, of this station, flew over the Administration [building] and dropped flowers just as taps were sounded.

All of the troops of this command were assembled at the services, and there was a large attendance of citizens of the community [New Dorp] as well as from New York City.⁷⁰

6. December 21, 1926 - May 2, 1927 - Pan-American Flights

In 1926-27 a series of Pan-American flights were planned to demonstrate the capability of Army aviation and to promote goodwill

69. "General History of the Jamaica Bay, Breezy Point, and Staten Island Units, Gateway National Recreation Area", p. 85.

70. Ibid., pp 85-86.

between the United States and her southern neighbors. Loening amphibian biplanes (the COA-1) were to be used for the missions. At least one of the planes was tested and serviced at Miller Field and eight of the ten pilots were trained there.⁷¹

The Aeronautical Chamber of Commerce listed these flights in the "Epochal Flights of 1927" section of its Aircraft Year Book as follows:

The expedition comprised five Loening amphibians equipped with inverted Liberty engines. The flight under command of Maj. H. A. Dargue, Air Corps, U.S.A. started from Kelly Field, San Antonio, Texas, on December 21, 1926, and ended at Bolling Field, Washington D.C., on May 2, 1927. Twenty-five foreign nations and colonies in North, Central and South America were visited, the point farthest south being Valdivia, Chile, about 40 degrees south latitude. The Andes were successfully crossed, and there were long stretches of flying over open sea as well as over tropical jungles. The expedition gave a splendid account of itself, and again demonstrated the utility of the amphibian type of plane in negotiating such diversified terrain of land, sea, mountains and swamps as was encountered in the Pan American flight. There were many landings and takeoffs on both land and water and the crossing of a number of high mountain ranges which proved the value of the amphibian under all kinds of difficult flying conditions.⁷²

7. June 13, 1927 - The Lindbergh Visit to New York

After his famous transatlantic flight, Charles Lindbergh returned to America by ship. Following public ceremonies in Washington, he was

71. Killen, History of Marine Aviation, p. 70.

72. Aeronautical Chamber of Commerce, Aircraft Year Book (New York, 1928), p. 36.

scheduled to fly the Spirit of St. Louis to New York on June 13, 1927. Although the field at which Lindbergh would land was kept secret in response to his wishes, a likely location was Miller Field due to its proximity to the planned events of the day. Lindbergh was to shift to a seaplane in New York Harbor and then transfer to the steamer Macon from which he would review a marine parade. On June 14 the New York Times reported:

Uncertainty as to the landing place of Colonel Lindbergh in his hop from Washington to this city yesterday caused crowds to gather at many flying fields at dawn in the hope of getting a close-up of the transatlantic flyer as he stepped from his plane. This was particularly the case at Miller Field on the edge of New York Bay at New Dorp, Staten Island.

About 600 motorists had driven to this base for National Guard fliers before 6 a.m. By the time Colonel Lindbergh and his escort of pursuit planes...had passed over the south end of Staten Island on their way to Mitchel Field on Long Island at 11:38 a.m. the crowd there had increased to about 5,000.

. . . Despite the assurances of Colonel James Justice, Commandant at Miller Field, that orders for the reception of Colonel Lindbergh there had been canceled forty-eight hours before, the crowd insisted on staying. They passed the time watching the preparation for the departure of eight National Guard Airplanes that were to join the escort to Colonel Lindbergh.

When Colonel Lindbergh's plane came through a thick haze to the south of Prince's Bay, the crowd felt compensated for its stay. Besides, the wonderful spectacle presented by the flier and his escort as they flew close along the Staten Island shore...they realized that they were the first of the waiting throng to witness the arrival.

The National Guard planes. . .had taken to the air about half an hour before Colonel Lindbergh's plane appeared and had swung into formation as the expected plane sped up the Bay. The manoeuvres brought cheers, and as Colonel Lindbergh passed in his plane, hats, flags, sweaters and coats were waved to let him know that New York's reception had begun.

Before New York Bay was reached, the escort planes had clustered in groups of three and a few minutes later all had passed out of view.

Still the crowd waited and there was some commotion when the National Guard planes were seen coming back to the field at a terrific pace. They reported that Colonel Lindbergh and the Army escort planes had continued to Mitchel Field.

Two motor trucks, loaded with flowers, loosely tied in bunches, which had arrived at Miller Field, were quickly emptied and the flowers distributed among the observers on the National Guard planes. Later when the planes left to join in the escort of Colonel Lindbergh in his flight from Mitchel Field to Quarantine the flowers were dropped on Colonel Lindbergh as he made the change from his Army plane to the amphibian which was to take him to the Steamer Macon. The flowers were given by florists of the city as their contribution to the reception of the famous flyer.⁷³

A second article in the Times on June 14 noted that Lindbergh skirted Staten Island, where "crowds lined Miller Field in the hopes he would land there after all." After glimpsing Lindbergh's plane, the Miller Field crowds had time to seek other vantage points at the Narrows to see the landing of Lindbergh in the Bay and his movement up the Harbor to the Battery. Lindbergh had flown from Washington in a plane

73. New York Times, June 14, 1927.

made available by the Army when a valve malfunctioned in the Spirit of St. Louis just prior to takeoff.⁷⁴

8. Summer 1928 - Testing of Admiral Richard Evelyn Byrd's Plane

Admiral Richard E. Byrd's trimotored monoplane Floyd Bennett to be used in his first expedition to Antarctica in December 1928 was tested at Miller Field during the preceding summer. After establishing his base camp, "Little America" on the Bay of Whales, Byrd and three companions made the first flight over the South Pole on November 28-29, 1929, in the aircraft as part of a 1,600-mile excursion. The airplane was named for Floyd Bennett who had served as the copilot of Byrd in the first flight over the North Pole on May 9, 1926.⁷⁵

9. April 19, 1928 - Mercy Flight to Rescue the Bremen

Miller Field is associated with the mercy flight undertaken by Floyd Bennett and three companions to rescue the crew of the Bremen downed on Greenly Island in the Gulf of St. Lawrence. Bennett was acquainted with the topography of the area, and Herta Junkers, the daughter of the German builder of the downed aircraft, was in New York with the only available spare parts. Bennett flew to New York to begin the rescue flight preparations at Miller Field and on April 19, 1928,

in a Bellanca plane, Floyd, Balchen, Tom Mulroy--Commander Byrd's chief engineer on the Arctic trip--and Charles Murphy, a World reporter, all set out for Detroit, where the party was to pick up a Ford tri-motored plane for the dash to Greenly Island.

Already suffering from a congested head and throat, Floyd found the ride anything but pleasant in such rough weather.

74. Ibid.

75. "General History of the Jamaica Bay, Breezy Point, and Staten Island Units, Gateway National Recreation Area", p. 93.

Bernt Balchen, too, was suffering from a severe cold when they started off from Miller Field. By the time they came down on the field at Ford's factory, in Detroit, both were feverish.

Bennett was hospitalized in Detroit at Edsel Ford's insistence, but later continued with the mercy flight on which he contracted pneumonia and died, one year before Byrd's first flight over the South Pole.⁷⁶

10. Spring and Fall, 1929 - Assembly and Testing of Experimental Aircraft

The year 1929 marked the assembly and testing of several new experimental aircraft at Miller Field. During the spring the American Aeronautical Corporation used the field for the assembly of "one S-55 twin-hulled Savoia-Marchetti flying boat and one type S-62 Savoia-Marchetti flying boat." Later in the fall the New York, Rio & Buenos Aires Airlines requested permission to use facilities at Miller Field to test its Consolidated "Commodores", which would be used on the South American travel routes of the company.⁷⁷

11. July 4, 1938 - Fourth of July Salute to Nation

As part of the New York City festivities on July 4, 1938, the coastal gun batteries at Forts Washington and Tilden and Miller Field were used to fire a salute to the Nation--one shot for each state.⁷⁸

76. Cora L. Bennett, Floyd Bennett (New York, 1932), pp. 139-140.

77. "General History of the Jamaica Bay, Breezy Point, and Staten Island Units, Gateway National Recreation Area", p. 94.

78. New York Times, July 3, 1938.

12. December 16, 1960 - Midair Tragedy

On December 16, 1960, a midair collision between a United Airlines DC-8 and a Trans World Airlines Super Constellation occurred over Miller Field, resulting in the loss of 134 lives.⁷⁹

79. Smith, Staten Island, pp. 218-219.

RECOMMENDATIONS

It is the opinion of the author that no further research needs to be done concerning the physical history of the Seaplane Hangar (Building No. 38) at Miller Field. However, it is recommended that a Historic Resource Study of Miller Field and the entire Staten Island Unit of Gateway National Recreation Area be prepared in order to provide a more thorough documentary historical study of the area than presently exists. Such a study would enable the National Park Service to plan more effectively for the stabilization/preservation treatment and the interpretation of the structures at Miller Field as well as the entire Staten Island Unit.

DRAWINGS

The four drawings in this section of the report were supplied by Hardy Holzman Pfeiffer Associates.

65

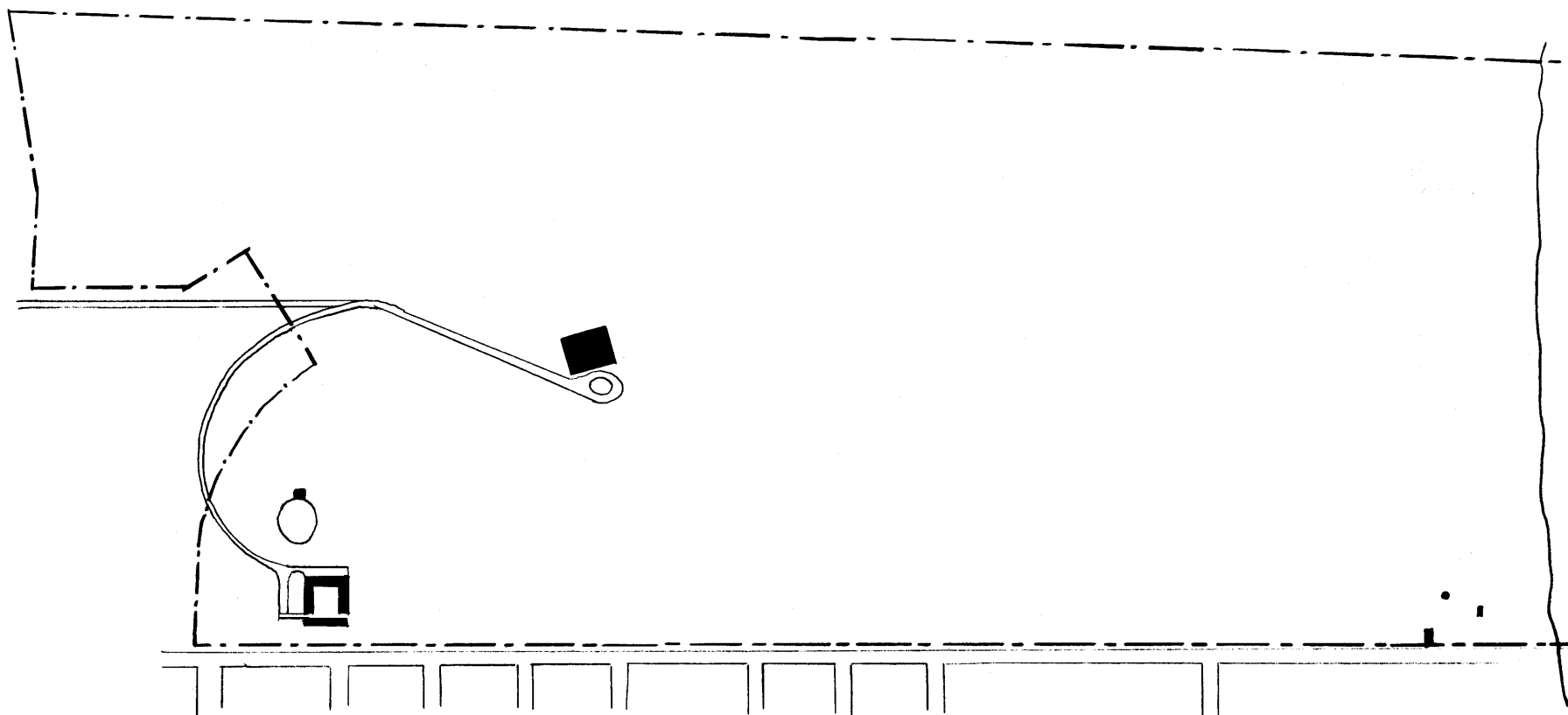


FIGURE A

1919

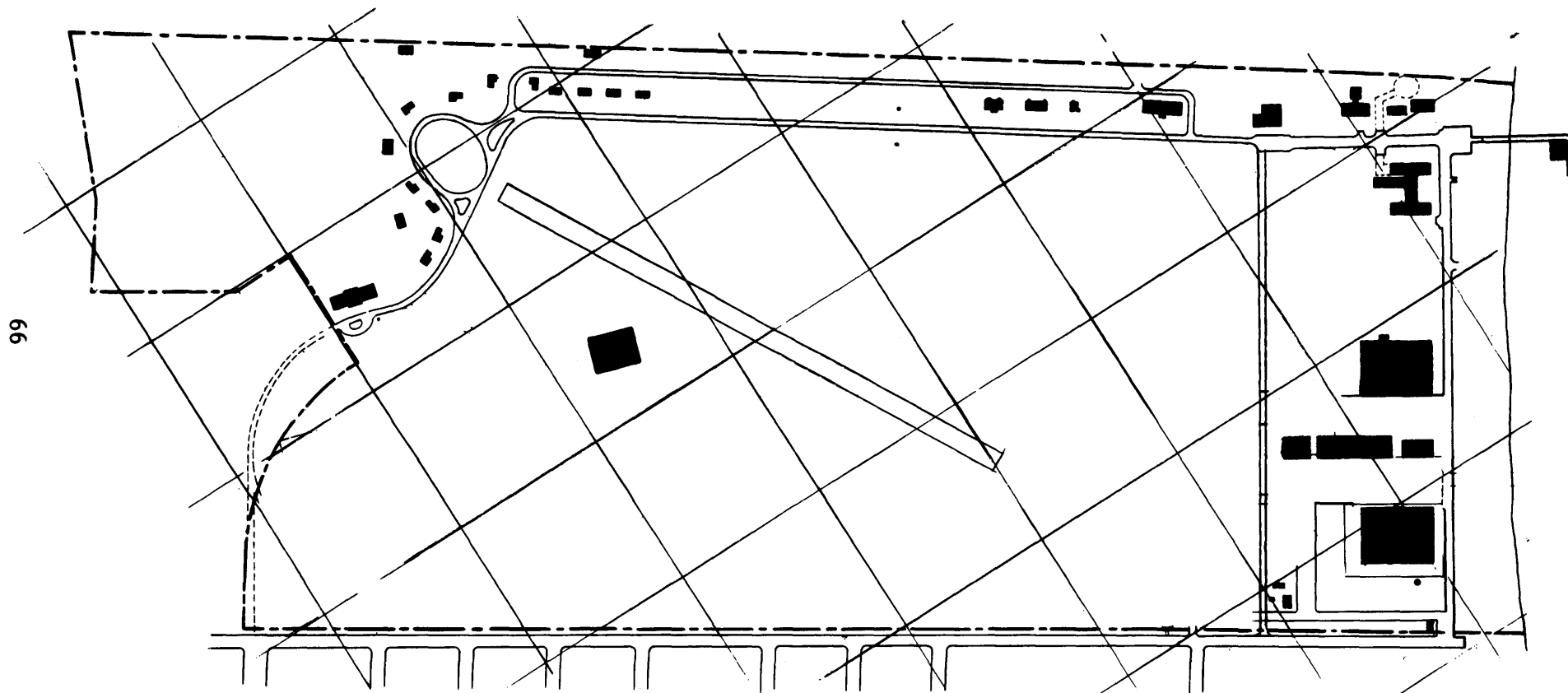


FIGURE B

1921 

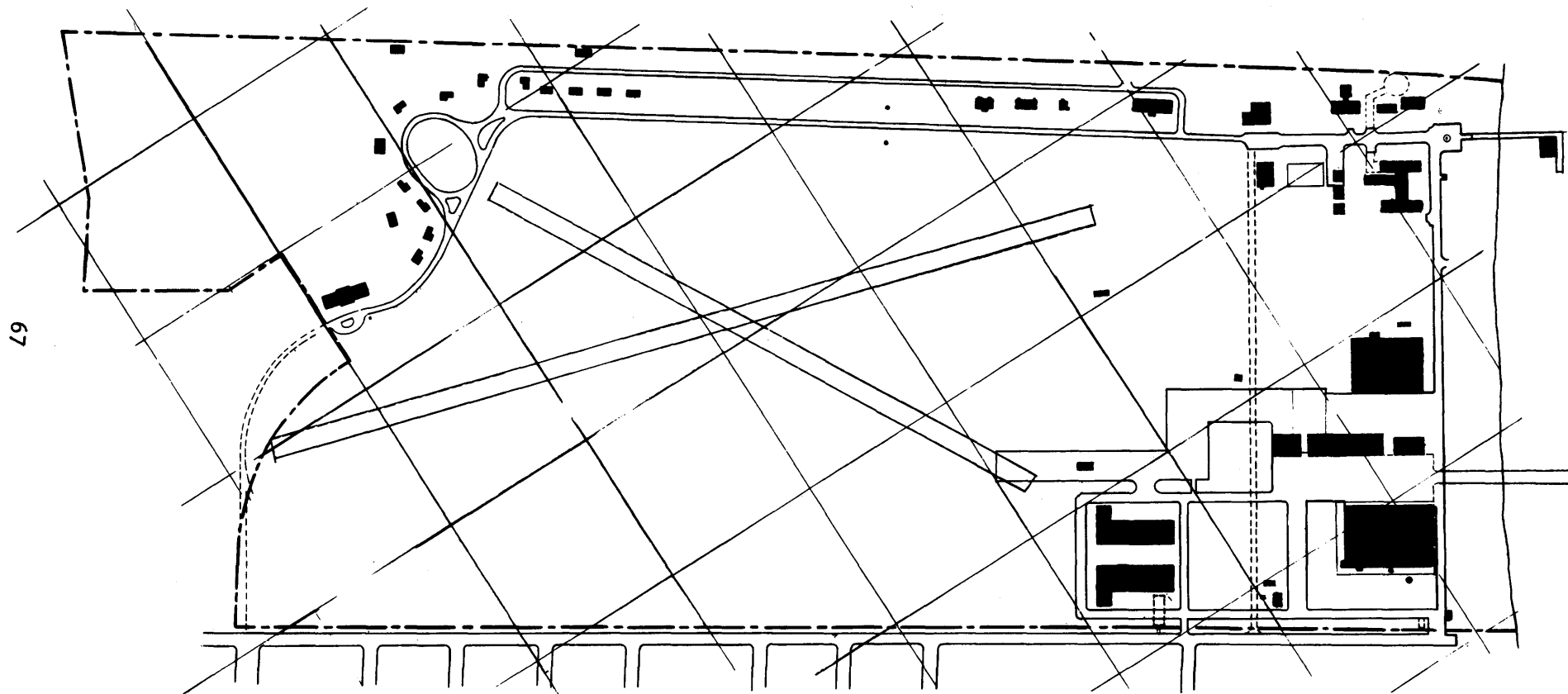


FIGURE C

1939 

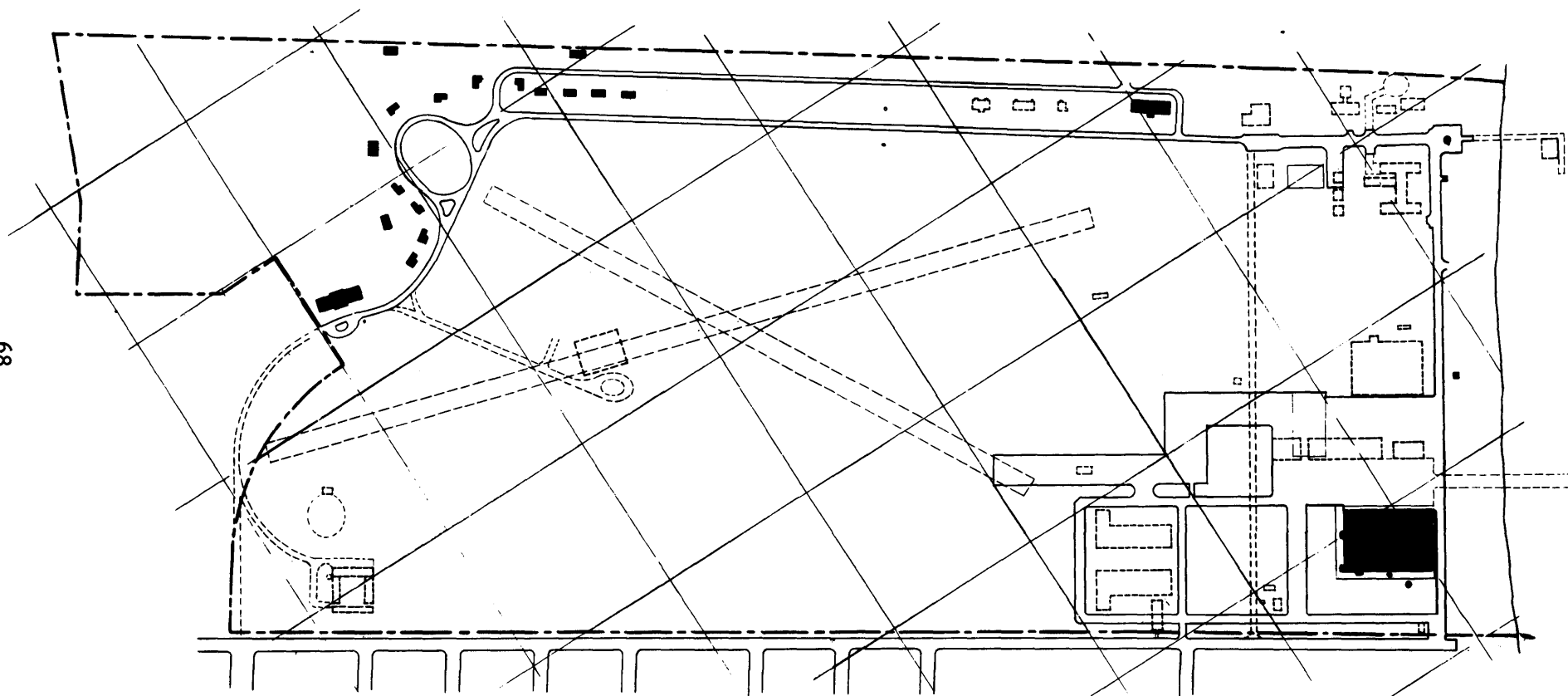


FIGURE D

1978 

APPENDIXES

APPENDIX A

January 31, 1919.

AERIAL COAST DEFENSE STATION Itemized estimate of typical station of permanent construction for 1 Squadron.

Item

1. Hangars	\$ 250,000.00
2. Machine Shop & Aero Repair	150,000.00
3. Oil Storage & Reclaiming Bldg.	12,000.00
4. Storehouse	30,000.00
5. Garage	16,000.00
6. Magazine	3,000.00
7. Armourers Bldg.	5,000.00
8. Radio & Photographic Bldg.	9,000.00
9. Steel Radio Masts 50'	500.00
10. Administration Bldg.	15,000.00
11. Guard House	12,000.00
12. Post Exchange	18,000.00
13. Bakery	13,000.00
14. Power House Heating Bldg.	25,000.00
15. Hospital	33,000.00
16. Pigeon Loft	800.00
17. C.O. House	12,000.00
18. Officers quarters for 10 unmarried officers	30,000.00
19. Apartment House for 6 married officers	45,000.00
20. Barracks & Mess for 200 men	120,000.00
21. Apartment House for 10 N.C.O.'s	30,000.00
22. Boat House and Dock	25,000.00
23. Observation Tower	5,000.00
24. 10,000 gal. gasoline tank	2,500.00
25. Derrick	2,500.00
26. Ramps	40,000.00
(The costs given for the above items are for structural work only and do not include heating, plumbing or wiring)	
27. Roads & Walks	30,000.00
28. Water & Fire Protection	40,000.00
29. Plumbing	40,000.00
30. Sewer System	15,000.00
31. Electric System, Underground Conduit	60,000.00
32. Heating Including Central Plant	200,000.00
Total	\$1,289,550.00

Estimated cost of typical 1 Squadron Station - \$1,289,550.00
 Estimated cost of typical 2 Squadron Station - \$2,051,800.00
 Estimated cost of typical 3 Squadron Station - \$2,868,800.00

Memorandum for Supply Section, William Lay Patterson, February 13, 1919,
 Central Decimal File, 1917-1938, RG 18.

APPENDIX B

List of Personnel from Office of Construction Quartermaster involved in Work at Miller Field.

Constructing Quartermasters

Maxwell Whitelaw, Major, Q.M.C.	Oct. 1, 1919 to May 27, 1920
Clarence H. Greene, Major, Q.M.C.	May 25, 1920 to Oct. 3, 1920
H. L. Green, Major, Q.M.C.	Oct. 3, 1920 to July 31, 1921

Assistant Constructing Quartermasters

W. F. Howe, Captain, Q.M.C.	Oct. 31, 1919 to Feb. 9, 1920
Henry B. Andrews, Captain, Q.M.C.	Mar. 1, 1920 to Oct. 8, 1920
Clarence H. Greene, Captain, Q.M.C.	Oct. 3, 1920 to Jan. 22, 1921

Civilian Force

Jos. M. Story, Supt. of Construction	Nov. 24, 1919 to July 31, 1921
Chas. T. Dusselberg, Field Auditor and Chief Clerk	Oct. 1, 1919 to July 31, 1921
George J. Smith, Inspector Construction	Oct. 1, 1919 to June 30, 1921
William F. Roberts, Field Clerk	Nov. 17, 1919 to July 31, 1921

"Completion Report on Construction of Air Coast Defense Station Known as Miller Field....February 3, 1922" Completion Reports, Miller Field-I, RG 77.

APPENDIX C

List of Subcontractors of Smith, Hauser and MacIsaac, Inc., for Hangar Group of Buildings

Cement	Vulcanite Portland Cement Co., 8 West 40th St., N.Y.C.
Electrical Work	J. Livingston & Co., Inc., Grand Central Terminal, N.Y.C.
Fabricated Steel	American Bridge Company, 30 Church St., N.Y.C.
Fire Doors	F. M. Gabler, Inc., 308 W. 133d Street, N.Y.C.
Gypsum Roofing	Keystone Gypsum Fireproofing Corp., Broadway & 34th St., N.Y.C.
Heating & Ventilating	Gillis & Geoghegan, 537 W. Broadway, N.Y.C.
Lathing & Plastering	H. W. Miller, Inc., 410 Eleventh Ave., N.Y.C.
Mastic in Tracks	Daniel J. Skelton, 102 Oak St., Brooklyn, N.Y.
Miscellaneous Iron Work	Angus Hopkins, Flat Iron Bldg., N.Y.C.
Painting	J. S. Kelly, 407 E. 89th St., N.Y.C.
Plumbing	W. G. Cornell & Co., 4th Ave., and 17th St. N.Y.C.
Roofing & Sheet Metal Work	National Sheet Metal Roofing Co., 337 Grand St., Jersey City, N.J.
Rolling Steel Doors	J. Edward Ogden Co., Inc. 147 Cedar St., N.Y.C.
Steel Sash	David Lupton's Sons, Co., 50 Church St., N.Y.C.
Swinging Steel Doors	Angus Hopkins, Flat Iron Bldg., N.Y.C.

"Completion Report on Construction of Air Coast Defense Station Known as Miller Field....February 3, 1922," Completion Reports, Miller Field-I, RG 77.

APPENDIX D

List of Material Orders issued by Smith, Hauser and MacIsaac, Inc., for Hangar Group of Buildings

<u>Material</u>	<u>Firm & Address</u>
Brick, Common	American Brick Mfg. Corp., Woolworth Bldg., N.Y.C.
	John A. McCarthy, 149th St., & Harlem River.
Brick, Fire	Kreischer Mfg. Co., 131 E. 28th St., N.Y.C.
Calking Yarn for Float	C. D. Durkee & Co., Inc., 2 South St., N.Y.C.
Carriage for Boat House Ramp	Greenlie-Halliday Co., 499 Water St., N.Y.C.
Catch Basins - Covers & Frames - C.I.	J. L. Mott Iron Works, 118 Fifth Ave., N.Y.C.
Cinders for Fill	Moran Towing & Transp. Co., 17 Battery Pl., N.Y.C. S. I. Rapid Transit Ry. Co., St. George, Staten Island.
Clean Out Door for Chimney	Hull, Grippen & Co., 310 Third Ave., N.Y.C.
Creosoted Lumber	Wyckoff Pipe & Creosoting Co., Portsmouth, Va.
Creosoted Piles	Eppinger & Russell Co., 165 Broadway, N.Y.C.
Crushed Stone for Concrete	Joseph Johnson's Sons, West New Brighton, S.I.
Drains - C.I. Bell Trap Cess Pools	Reed Iron Works, 50 Church St., N.Y.C.
Finish Hardware	Hammacher, Schlemmer Co., 4th Ave. and 13th St., N.Y.C.
Floor Hardener	A. C. Horn Company, Long Island City, N.Y.
Gasoline Line - Distributing Pipe	Crane Company, 247 Willoughby Street, Brooklyn, N.Y.

Gasoline Line - Valves	Jenkins Brothers, 80 White St., N.Y.
Gasoline Pumping Equipment	Wayne Oil Tank & Pump Co., Fort Wayne, Indiana
Gravel for Sludge Bed	Manhattan Sand & Gravel Co., 418 E. 49th St., N.Y.
Joint Filler for Concrete	Philip Carey Co., 114 Liberty St., N.Y.C.
	Warren Chemical Co., 17 Battery Place, N.Y.
Manhole Covers & Frames C.I.	John Fox & Company, 253 Broadway, N.Y.C.
Manhole Steps	Thos. W. Kiley & Co., 57-61 Grand St., Brooklyn
Metal Lath	Fireproof Products Co., 257 E. 133d St., N.Y.
Miscellaneous Bolts for Flanged Specials	G. S. Green Co., Inc., 74 Warren St., N.Y.
Miscellaneous Hardware for Boat House	G. S. Green Co., Inc., 74 Warren St., N.Y.
	Thos. W. Kiley & Co., 57-61 Grand St., Brooklyn, N.Y.
Miscellaneous Hardware for Pier	Topping Brothers, 122 Chambers St., N.Y.C.
Miscellaneous Lumber	Johnson & Wimsatt, Washington, D.C.
Nozzles for Sewage Filters	Pacific Flush Tank Co., Singer Bldg., N.Y.
Overhead Trolley Switches	J. Duncan Co., Everett, Mass.
Paint	Geo. D. Wetherill & Co., Philadelphia, Pa.
Pig Lead	Pearson, Peppard & Co., 233 Broadway, N.Y.C.
Rails for Rolling Doors	Central Frog & Switch Co., Cincinnati, Ohio

Reinforcing Steel	Carnegie Steel Co., 30 Church St., N.Y.
	Concrete Steel Co., 42 Broadway, N.Y.C.
	Hydraulic Steelcraft Co., 149 Broadway, N.Y.
Rip Rap for Ramp	Jos. Johnson's Sons, West New Brighton, S.I.
Sash Weights and Cord	Hull, Grippen & Co., 310 Third Ave., N.Y.
Sewage Disposal - Miller Siphon	Pacific Flush Tank Co., Singer Bldg., N.Y.
Sewage Disposal - Special Fittings	F. N. DuBois & Co., 247 Ninth Ave., N.Y.
Sewage Ejector Machinery	Yeomans Brothers Co., Chicago, Ill.
Sewer & Drain Pipe - Vitrified	Robinson Clay Products, Co., Flat Iron Bldg., N.Y.C.
Soil & Drain Pipe C.I.	F. H. DuBois & Co., 247 Ninth Ave., N.Y.C.
Toilet Room Doors	Gross, Austin & Ireland, Grand St., Brooklyn, N.Y.
Toilet Room Hardware	W. H. Jacobus, 81 Walker St., N.Y.
Trim & Mill Work	Applebee & Dean Bros., Ossining, New York
Water Line - Corporation Cocks	H. Mueller Mfg. Co., 145 W. 35th St., N.Y.
Water Line - 8" Gate Valves	John Fox & Co., 253 Broadway, N.Y.
Water Line - House Connections	John Simmons Co., 110 Centre St., N.Y.
Water Line - Hydrants & Valves	R. D. Wood & Co., Philadelphia, Pa.
Water Valve Boxes	John Fox & Co., 253 Broadway, N.Y.C.

Water Meters

Worthington Pump & Mach. Co.,
115 Broadway, N.Y.C.

Water Pipe - C.I.

John Fox & Co.,
253 Broadway, N.Y.C.

Wooden Doors - Special

Gross, Austin & Ireland,
Grand St., Brooklyn, N.Y.

"Completion Report on Construction of Air Coast Defense Station Known as Miller Field....February 3, 1922," Completion Reports, Miller Field-1, RG 77.

APPENDIX E

Rates of Pay (per day) - Smith, Hauser, and MacIsaac, Inc.

Carpenters	\$3.00
Cement Masons	10.00
Chauffeurs	6.00
Dock Workers	10.00 to 12.00
Electricians	8.00 to 9.00
Engineers	12.00
Firemen	8.00
Iron Workers	10.00
Laborers	4.00 to 5.00
Masons (brick)	8.00
Painters	8.00
Plasterers	10.00
Plumbers	8.00 to 10.00
Sheet Metal Men	8.00
Slaters	
Steam Fitters	10.00
Teams	12.00
Timekeepers	6.00
Trucks	30.00
Watchmen	5.00

"Completion Report on Construction of Air Coast Defense Station Known as Miller Field....February 3, 1922," Completion Reports, Miller Field-I, RG 77.

APPENDIX F

List of Buildings at Miller Field transferred from Constructing Quartermaster to Commanding Officer, Mitchel Field, Long Island, July 20, 1921

- 2 landplane hangars
- 2 seaplane hangars
- 1 Aero Repair Shop
- 1 Motor Test House
- 1 Dope House
- 1 Aero Storehouse
- 1 Boiler House
- 1 Armorers House
- 1 Gasoline Pumping Station and Tanks
- 1 Sewage Ejector House
- 1 Pier, Float, and Boat House
- 1 Concrete Seaplane Ramp
- Concrete Pavements
- Concrete Roads
- Macadam Roads
- 1 Barracks and Mess
- 1 Post Exchange
- 1 Administration Building
- 1 Photographic Building
- 1 Fire Station
- 1 Radio Transmission Station
- 1 Bachelor Officers' Quarters
- 1 Steel Flagpole
- 4 House Cart Houses
- 1 Storehouse
- 1 Guard House
- 1 Infirmary
- 1 Field Officers' Quarters
- Set #1 Company Officer's Quarters
- Set #2 Company Officer's Quarters
- Set #3 Company Officer's Quarters
- Set #4 Company Officer's Quarters
- Set #5 Company Officer's Quarters
- Set #6 Company Officer's Quarters
- Set #7 Company Officer's Quarters
- Set #8 Company Officer's Quarters
- Set #9 Company Officer's Quarters
- Set #10 Company Officer's Quarters
- Set #11 Company Officer's Quarters
- Set #12 Company Officer's Quarters
- 2 N.C.O. Four Family Houses
- 1 N.C.O. Two Family House
- 1 Utility Shop and Storage Yard
- 1 Garage and Storehouse Structure
- 1 Radio Receiving Building
- 1 Club House
- Galvanized Steel Fence

Walks
Sodding, seeding and planting
3 Radio Masts, 85' each
Water Distribution System and Hydrants
Gasoline Pumping Equipment and Service System
Sewerage System and Sewage Disposal Plant
Electric Light and Power Distribution System
and Transformers
Surface Drainage System

Constructing Quartermaster to Commanding Officer, Mitchel Field, Long Island, July 20, 1921, Central Decimal File, 1917-1938, 323.5, RG 18.

APPENDIX G

Description of Additions to Seaplane Hangar, 1938-1939

The side additions are of steel construction encased in concrete. There is a concrete wall 4' high that runs along the entire perimeter. The column bays are articulated on the exterior with recessed window panes. The one story east addition has a slightly pitched wooden roof deck with steel supports. The wall between the shop area and the hangar proper is made of steel frame with structural clay tile walls covered with cement plaster. The columns 16" x 24" are every twenty feet; wood columns 10" x 10" are placed midway. The base of the wall is four feet high and ten inches wide. Glass blocks (4" x 8" x 4") fill the frame. Personnel doors occur along the wall in each bay.

This same wall construction continues between the hangar and the one-story south addition. Towards the common wall separating the hangars, the construction increases in height with fewer openings, because it houses the boilers. The exterior south wall has the same bay emphasis as the east but with glass block rather than panes of glass. There is an operable window in the top center of each bay. This window configuration was typical of all one-story bays in 1939. The rooms on the western end of the south addition are also one-story high and have only personnel and service doors connecting to the hangar interior.

The west addition is two stories high and seems to have been used for dining, classes, offices, and locker room accommodations. Kitchen and serving areas are on the first floor; lavatories are found on both floors. There is an enclosed concrete corridor between the hangar and the rooms of the addition on the ground floor. Above the corridor is a walkway with a metal railing no longer extant. (It may have been removable to begin with but there is no document to this effect.) The construction between the rooms is typical wood stud partition. The floors are concrete slabs covered with maple flooring and vinyl asbestos tile. The exterior wall is a cast-in-place concrete frame with steel supports. The frame is filled with structural clay tile with a cement stucco and large glass windows (4' x 8'). The ten foot bays are articulated by recessed window planes as on the east addition.

The west addition extends the entire length of the hangar although it appears to be three separate buildings because the center section is slightly indented. This indentation and the corners' end sections are articulated by pilasters with five sided bases. A one-story transformer house projects from the southern corner of the addition, of poured concrete construction and similar appearance.

A red brick chimney 64' high was built 8' behind the southern addition. The breeching between the chimney and the boiler room is centered on the double hangar.

"Historic Structures Report, Miller Field - Seaplane Hangar," p. 17-19.

ANNOTATED BIBLIOGRAPHY

PRIMARY SOURCES

Manuscript Materials

Washington, D.C. Forrestal Building. Air Force History Division.

Various files, vertical files, and records.

These records contained nothing of value relative to Miller Field.

_____. National Archives. Records of the Army Air Forces. Record Group 18.

Central Decimal File, 1917-1938.

_____. _____. Records of the Office of Chief of Engineers. Record Group 77.

Construction Completion Reports, 1917-1943, Miller Field-I and IA.

_____. _____. Records of the Office of the Quartermaster General. Record Group 92.

Construction Division, Completion Reports, 1917-1919.

General Correspondence, Geographic File, 1922-1935.

_____. _____. Records of the Adjutant General's Office. Record Group 407.

Central Decimal File, 1917-1925. Central Decimal File, 1926-1939.

The material from all of these record groups was the only primary manuscript documentation that was found relative to the construction, utilization, and structural modifications affecting the seaplane hangar. The most useful document for the report was the construction completion report for Miller Field, copies of which were found in Record Groups 77 and 92.

_____. Smithsonian Institution, National Air and Space Museum.

Various files, vertical files, and records.

These records contained nothing of value relative to Miller Field.

Published Documents

Statutes At Large, Vol. XL, Pt. I, 1919.

This volume contained Public Law No. 189 establishing the air coast defense stations and appropriating funds for their construction.

War Department Annual Reports, 1919-1920.

These volumes contained brief reports on the progress of construction at Miller Field.

Newspapers

New York Times, June 14, 1927, and July 3, 1938.

Staten Island Advance, September 19, 1965.

These issues contained articles describing people and events associated with Miller Field.

Vertical Files

Staten Island Unit, Gateway National Recreation Area.

These files, made available to me by the park, contained various primary and secondary source materials that have been collected from a variety of sources. Some of the material was most helpful, particularly information dealing with structural modifications in the late 1930s.

SECONDARY SOURCES

Books

Aeronautical Chamber of Commerce. Aircraft Year Book. New York, 1928.

Bennett, Cora L. Floyd Bennett. New York, 1932.

Dictionary of American Biography. X.

Hampton, Vernon B. Staten Island's Claim to Fame. New York, 1925.

Killen, John. A History of Marine Aviation: 1911-1968. London, 1969.

McWhirter, Norris and Ross. Guinness Book of World Records. New York, 1972.

Morris, Richard B., ed. Encyclopedia of American History. New York, 1976.

Smith, Dorothy Valentine. Staten Island: Gateway to New York. Philadelphia, 1970.

Staten Island Chamber of Commerce. Staten Island, New York: 50th Anniversary. Staten Island, ca. 1945-46.

While none of these books provided information relative to the construction of Miller Field, most provided data on the utilization of the facilities and on people and events associated with the field. The Dictionary of American Biography provided biographical information on the Vanderbilts who owned the property on which Miller Field is located from the mid-19th century to 1919.

Periodicals

Krist, Robert. "Fort Wadsworth, Part II." Staten Island Historian, XVIII (October-December, 1957), 21-22, 27.

This article provides a short history of the construction, operation, and utilization of Miller Field.

Technical Studies

U. S. Department of the Interior. National Park Service. "A Feasibility Study of Renovation Options, Southwest Hangar, Miller Field, Staten Island Unit, Gateway National Recreation Area," by Denver Service Center. June, 1977. On file at Denver Service Center.

_____. "Data and Materials Relative to Seaplane Hangar (Building No. 38) at Miller Field, Gateway National Recreation Area, New York and New Jersey," by Harlan D. Unrau. April 17, 1978. On file at Denver Service Center.

_____. "General History of Jamaica Bay, Breezy Point, and Staten Island Units, Gateway National Recreation Area, New York, N.Y.," by Tony P. Wrenn. October 31, 1975. On file at Gateway National Recreation Area and the Denver Service Center.

_____. "Historic Structures Report, Miller Field-Seaplane Hangar, Staten Island Unit, Gateway National Recreation Area, New York -New Jersey," by Hardy Holzman Pfeiffer Associates. July 21, 1978. On file at Denver Service Center.

_____. National Register of Historic Places Inventory-Nomination Form, "Miller Field (Gateway NRA, Staten Island Unit)," by Richard E. Greenwood. June, 1976. On file at Gateway National Recreation Area and the Denver Service Center.

These reports were all helpful in the preparation of this report, particularly those by Wrenn, Greenwood, and Hardy Holzman Pfeiffer Associates. These studies provided information not readily available elsewhere and leads to primary and secondary source materials.

PHOTOGRAPHS

Photograph No. 1

Seaplane Hangar, June 13, 1921, seen from the northeast.

Courtesy of the National Archives.



Photograph No. 2

Land Plane Hangar, June 13, 1921.

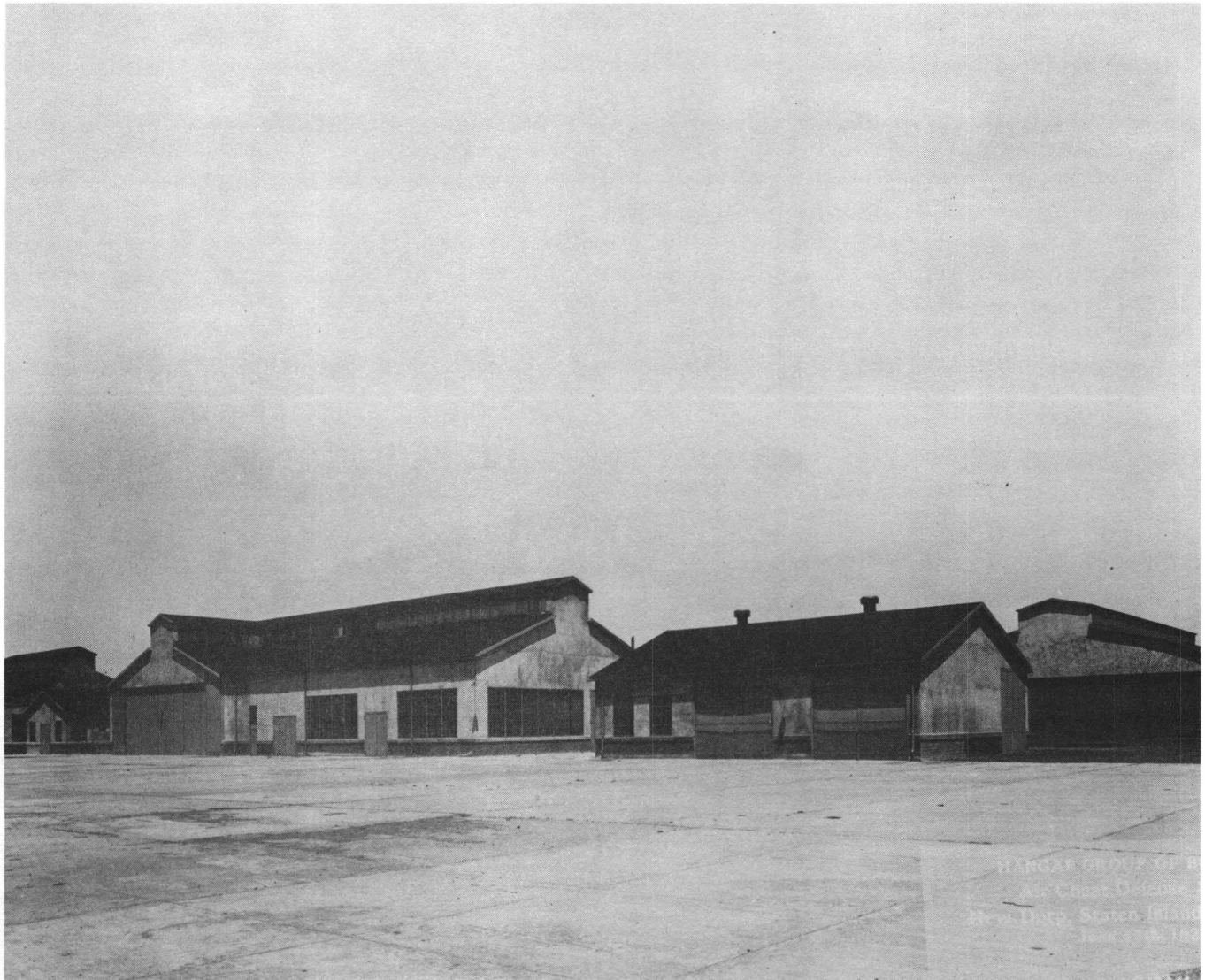
Courtesy of the National Archives.



Photograph No. 3

Aero Repair Shop, Dope House, and Other Buildings of the Hangar Group,
June 13, 1921.

Courtesy of the National Archives.



Photograph No. 4

Seaplane Ramp Construction, August 5, 1920, showing the cofferdam and ramp.

Courtesy of the National Archives.

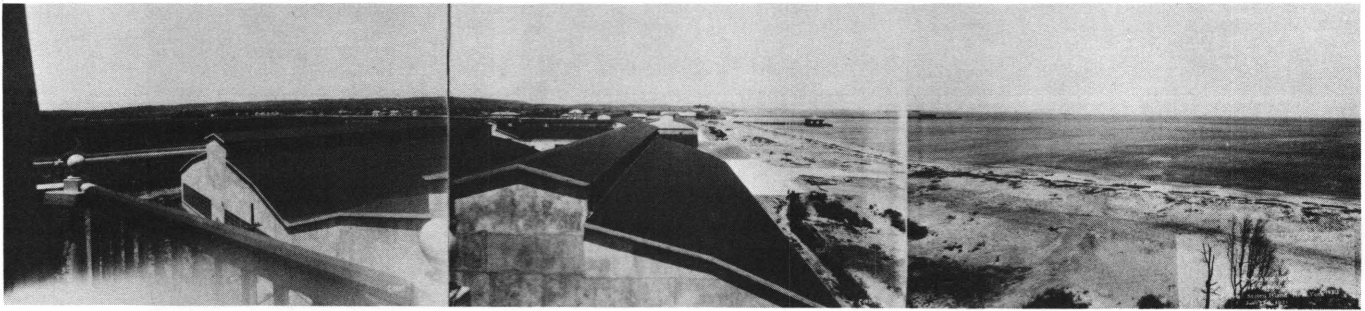


Cofferdam and Ramp
AT DEFENCE STATION, NEW DORP
STATEN ISLAND, N. Y.

Photograph No. 5

Panoramic view over roofs of seaplane hangar of beach and other buildings at Miller Field, June 13, 1921, looking north from Beacon Tower.

Courtesy of the National Archives.

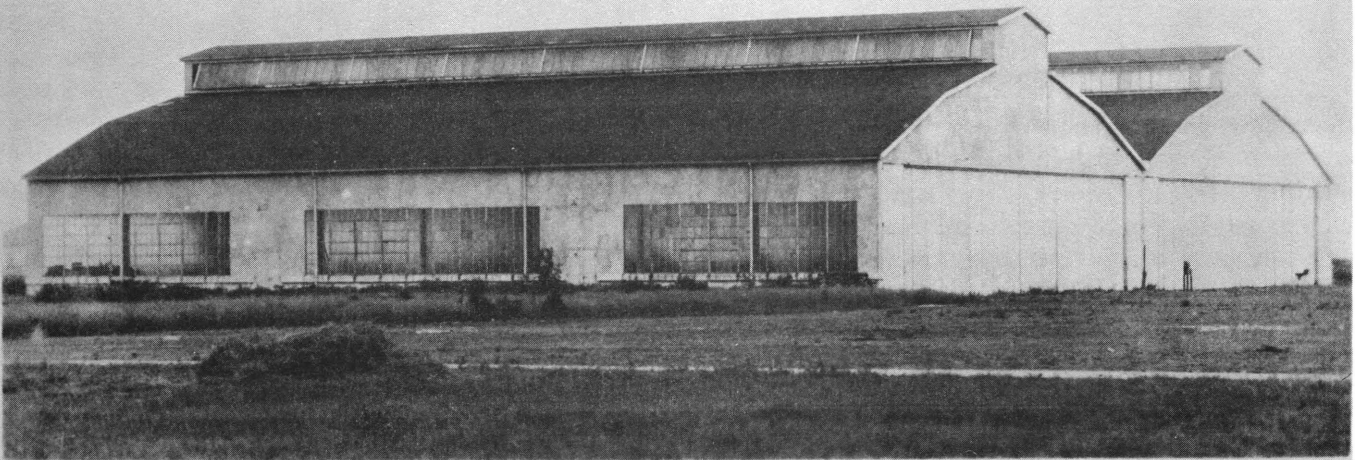


Photograph No. 6

Seaplane Hangar, September 1922, seen from the east.

Courtesy of the National Archives.

SEP 1922



GOVERNMENT PRINTING OFFICE

Photograph No. 7

Aerial view of Miller Field, August 20, 1924.

Courtesy of the National Archives.



Photograph No. 8

Aerial View of Miller Field, August 20, 1924.

Courtesy of the National Archives.



(04-870N-14) (8-20-24 1P.M.) (12"-800)

MILLER FIELD, N. Y.

Photograph No. 9

Construction at Southwest Corner of Seaplane Hangar, May 2, 1938.

Courtesy of the National Archives.



Photograph No. 10

Construction of South Addition to Seaplane Hangar, July 25, 1938.

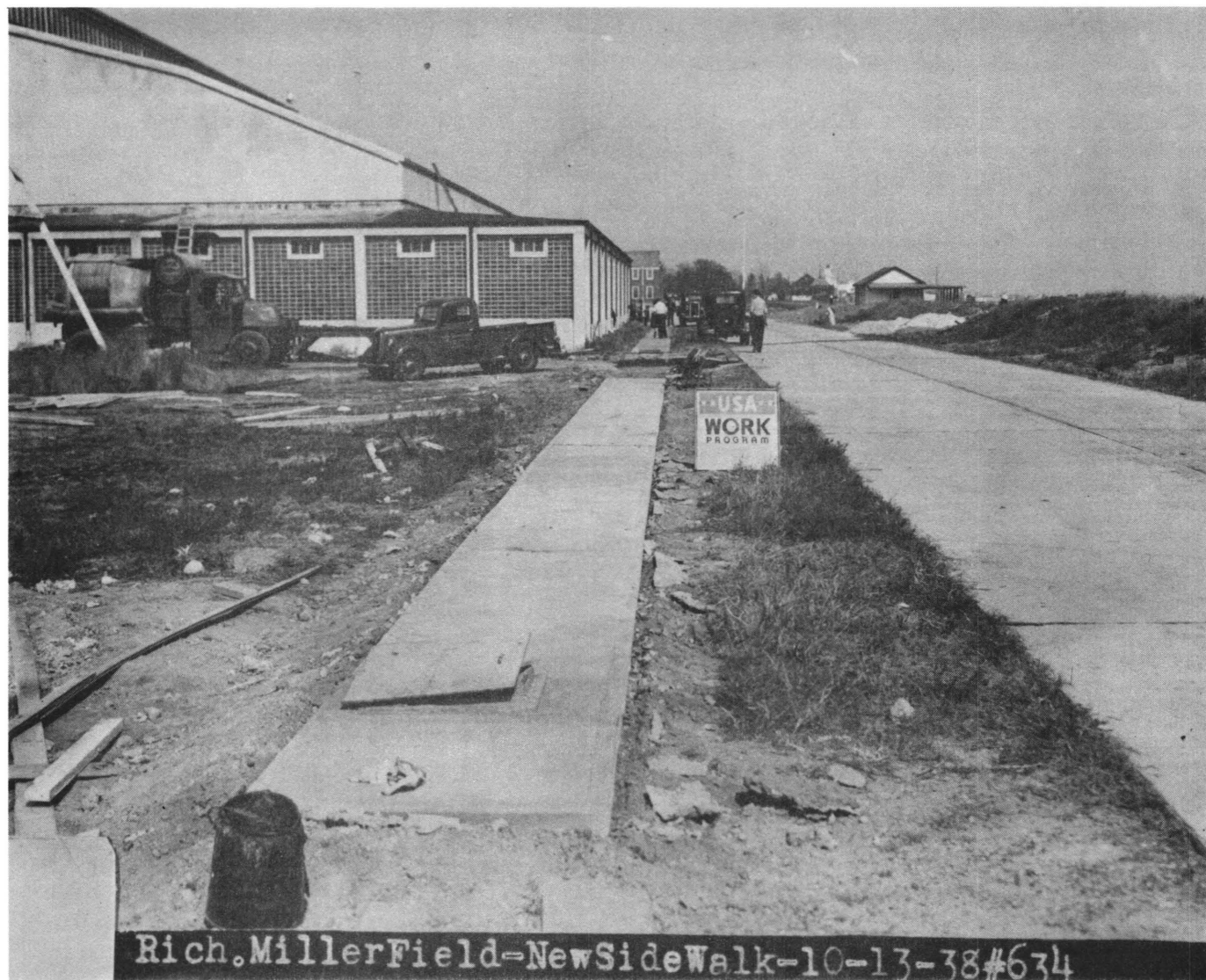
Courtesy of the National Archives.



Photograph No. II

Construction at Southeast Corner of Seaplane Hangar, October 13, 1938.

Courtesy of the National Archives.

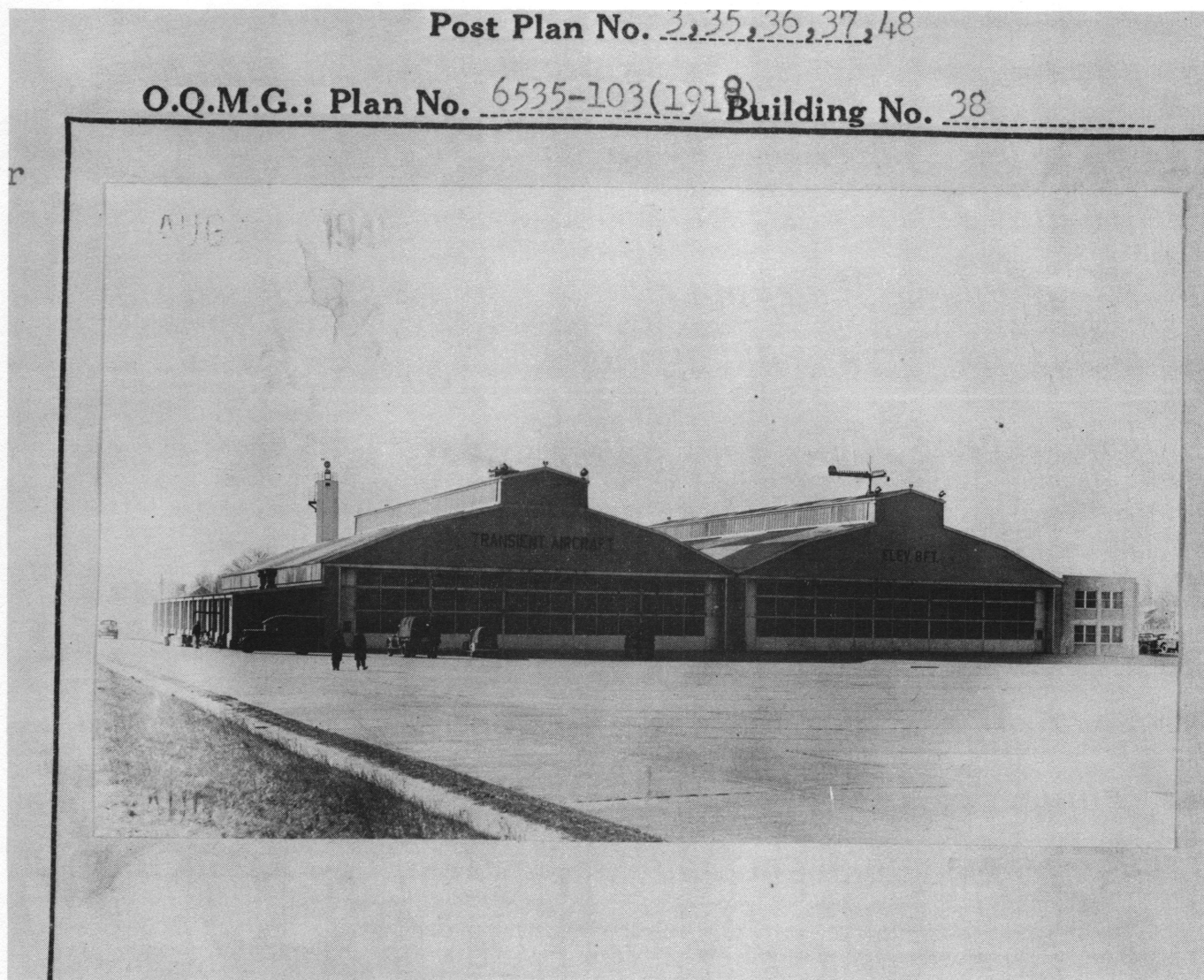


Rich. Miller Field - New Side Walk - 10-13-38 #634

Photograph No. 12

Seaplane Hangar, August 1941, seen from the Northeast.

Courtesy of the National Archives.



MILLER FIELD - THE SEAPLANE HANGAR

ARCHEOLOGICAL DATA SECTION

JACKIE W. POWELL

Archeological investigations which have been conducted in the Miller Field area include several poorly documented studies during the first half of the 20th century. In 1978 John Milner, Associates, under contract with the National Park Service, summarized known information about the Staten Island Unit of Gateway NRA and conducted a surface survey on a general level.¹ The resultant inventory includes discussion of the known and potential archeological remains in and near Miller Field.

The isolated prehistoric cultural remains have been recovered from various parts of what is now Miller Field. Their accurate locations are not known, but their existence does indicate a high potential for prehistoric remains in the entire Miller Field area. Prehistoric use and occupation of the area could have begun at the time of the first estimated appearance of man in the northeast, perhaps as long as 12,000 years ago, because of the potential for exploitation of available land and marine resources.

The inventory discusses the Dutch village of Nieuwe Dorp, which was "established and relatively stable by early 1665."² The location and extent of the early settlement is not exactly known, and there is some confusion about whether it was originally located where the modern village of New Dorp is, or whether it was closer to the shore and therefore possible on or near the site of the seaplane hangar. Regardless of its precise location, there is a high potential for historic remains beginning with this early Dutch settlement itself and activity areas or structures associated with it or with supporting subsistence activities. The area is known to have been in continuous use and occupation since this settlement was established. Significant historic events mentioned which occurred in the area include:

1. U. S. Department of the Interior, National Park Service, "Gateway National Recreation Area: An Inventory of Cultural Resources," by John Milner, Associates, 1978, pp. 53-82.

2. Ibid., p. 60.

...In July of 1776, General William Howe, commanding a considerable fleet for the Crown, garrisoned nearly 30,000 men on the south shore of Staten Island, and headquartered himself in a home in New Dorp evidently somewhere near the juncture of New Dorp Lane and the lower New York Bay.

...toward the end of July, he ferried most of his men across the Narrows to Brooklyn, where the Battle of Long Island took place . . . a small number of Howe's men remained stationed near New Dorp until 1783.³

...By 1843, William Vanderbilt had bought a large parcel of land on the present site of Miller Field, and shortly thereafter had transformed it into a country estate, including a mansion (known as the "White House") and numerous farm and outbuildings.⁴

...During the Civil War, the south shore of Staten Island played a significant role in the training and preparation of Union troops. No less than four military training camps at this time were set up: Camp Scott at the site of Oude Dorp, and Camps Vanderbilt, Yates, and Lafayette at the site of Nieuwe Dorp. It was from these camps that many of the Union troops embarked during the Civil War.⁵

...Perhaps, spurred on by the lead of Vanderbilt, Crooke, and other prominent individuals, the potential of the south and east shores of Staten Island as a resort area was realized toward the latter part of the nineteenth century. By the turn of the century, tourism had become one of the most profitable enterprises in this area of Staten Island, an enterprise which was not to diminish until

3. Ibid., p. 61.

4. Ibid., p. 63.

5. Ibid., p. 62.

water pollution detracted from the area's allure in the first decades of the twentieth century.⁶

Since the site of the seaplane hangar is on what once was the Vanderbilt Estate, remains of activities associated with tourism and outdoor recreation by the general public probably do not exist on the tract in question. It is possible, however, that such facilities as docks and boathouses or other out-buildings associated with beach activities might have been constructed by the Vanderbilts at this location. Examination of available historical documentation would shed more light on this possibility. Additionally, since the Vanderbilts had essentially left the estate by the turn of the century, there might have been public recreational activities on the site between then and when the hangar was built in 1919.

Historic photographs and maps indicate outbuildings and structures such as beacons near and adjacent to the hangar itself. It is very likely that artifact scatter resulting from construction of those structures and from movement of material from one structure to another, as well as from work or recreational activities conducted outdoors near the hangar, could amplify the structural and social history of the hangar itself, and of the associated activities that took place there.

At the seaplane hangar site, then, there exists a potential for cultural remains extending from the early prehistoric period through the twentieth century. Unlike many other portions of Gateway NRA, this site has not experienced significant landfill, excavation, or other modification except for landscaping and the construction of the seaplane hangar and ancilliary structures. Before any development takes place, an intensive archeological survey, including subsurface sampling, must be conducted. Site-specific archeological tests must be done before any ground disturbance such as installation of utility lines, landscaping, construction,

6. Ibid., p. 63.

and building stabilization are undertaken. This is especially important in the case of the suggested installation of a swimming pool as a part of the adaptive use of the hangar. Excavation of this expanse and depth would be particularly likely to encounter archeological deposits predating Miller Field. If cultural remains dating to any point in the continuum of human use and occupation of the area are encountered, appropriate treatment to avoid or mitigate the effects of development must be undertaken.

As the nation's principal conservation agency, the Department of the Interior has basic responsibilities to protect and conserve our land and water, energy and minerals, fish and wildlife, parks and recreation areas, and to ensure the wise use of all these resources. The department also has major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

Publication services were provided by the editorial and graphics staffs of the Denver Service Center. NPS 1848