

CONSTRUCTION OF BUILDINGS AT CERTAIN MILITARY POSTS.

LETTER

FROM

THE SECRETARY OF WAR,

RELATIVE TO

The construction of buildings at certain military posts.

JANUARY 26, 1883.—Referred to the Committee on Appropriations and ordered to be printed.

WAR DEPARTMENT,
 Washington City, January 25, 1883.

SIR: In compliance with the provisions of section 1136 of the Revised Statutes, I have the honor to transmit to the House of Representatives plans and estimates for the construction of buildings at the following military posts:

| | |
|---|-------------|
| Hospital at Fort Leavenworth, Kans., to cost | \$37,241 00 |
| Post-office, school-room, &c., at Fort Leavenworth, Kans..... | 10,304 67 |
| Buildings at Fort Snelling, Minn..... | 112,500 00 |
| Buildings at Madison Barracks, Sackett's Harbor, N. Y..... | 52,888 90 |
| Buildings at Fort Wayne, Mich..... | 54,071 65 |
| Buildings, &c., at Fort Niobrara, Nebr..... | 63,793 75 |

I also transmit a communication from General Howard, commanding the Department of the Platte, who urges an appropriation of \$85,400 for the post of Fort Thornburgh, upon plans submitted during the last session of Congress, and \$10,000 for completion of the road to the Union Pacific Railroad; estimate, \$25,000, for completion of Fort Custer, Mont.; and estimate, \$12,409.70, for repairs to buildings at Fort Douglas, Utah; total of new works now submitted, \$378,209.67.

In transmitting these estimates, I beg to invite attention to the subject of buildings at military posts, as presented in the report of the General of the Army of October 16, 1882, and the papers therewith (copy inclosed).

With a view of discontinuing the practice of submitting special estimates to Congress during the session, instructions were given in August last for the preparation of all estimates for buildings at military posts, so that they could be included in the annual estimates. There was not sufficient time to prepare plans and detailed estimates before October 1, 1882, and the General of the Army, in addition to specific

estimates amounting to \$681,859.48, on pages 155 and 156 of the estimate book, submitted an estimate of \$1,000,000 for the enlargement and improvement of the interior posts; the total, \$1,681,859.48, being intended to provide for all projects considered to be necessary during the fiscal year 1884.

A revised estimate has now been prepared, and is submitted herewith, showing the buildings at military posts for which provision should be made at the present session of Congress.

For a number of years a limited sum has been annually allotted from the appropriation for barracks and quarters in the army bill for construction and repair of buildings at the various posts, but that allotment has been sufficient only to provide for the most pressing wants of the service, leaving many applications which could not be granted.

The department is constantly pressed to urge appropriations for particular works, and the whole subject is now brought to the attention of Congress, in order that all the projects deemed necessary by the General of the Army may receive early and favorable consideration.

Very respectfully, your obedient servant,

ROBERT T. LINCOLN,
Secretary of War.

The SPEAKER
of the House of Representatives.

Revised estimates for buildings at military posts for fiscal year ending June 30, 1884.

| | |
|---|--------------|
| Fortress Monroe, Va | \$46,830 00 |
| Atlanta, Ga | 100,000 00 |
| Fort Montgomery, N. Y | 50,000 00 |
| Fort Niagara, N. Y | 30,000 00 |
| Fort Colville, Wash | 50,000 00 |
| Rio Grande, below El Paso | 200,000 00 |
| Fort Bliss, Tex | 50,000 00 |
| Fort Huachuca, Ariz | 52,000 00 |
| Fort Grant, Ariz | 60,000 00 |
| Fort Vancouver, Wash | 50,000 00 |
| Fort Canby, Wash | 9,859 48 |
| Fort Lewis, Cal | 40,000 00 |
| Fort Selden, N. Mex | 251,451 69 |
| San Antonio depot approaches | 3,500 00 |
| Jefferson Barracks, Mo | 24,938 44 |
| Boise Barracks, Idaho | 10,143 44 |
| Fort Cœur d'Alene, Idaho | 6,560 25 |
| Fort Lapwai, Idaho ..... | ..... |
| Fort Klamath, Oreg ..... | ..... |
| Fort Walla Walla, Wash | 38,163 62 |
| Fort Halleck, Nev ..... | ..... |
| Fort Thornburgh, Utah, buildings and road | 94,000 00 |
| Fort Thomas, Ariz | 30,000 00 |
| Fort Apache, Ariz | 61,000 00 |
| Little Rock, Ark | 33,160 00 |
| Fort Leavenworth, Kans | 47,545 67 |
| Fort Custer, Mont | 25,000 00 |
| Fort Snelling, Minn | 112,500 00 |
| Fort Wayne, Mich | 54,071 65 |
| Madison Barracks, N. Y | 52,888 90 |
| Fort Douglas, Utah | 12,409 70 |
| Fort Niobrara, Nebr | 63,793 75 |
| Total | 1,659,816 59 |

WAR DEPARTMENT, January 25, 1883.

BUILDINGS AT CERTAIN MILITARY POSTS.

3

No. 1.

HOSPITAL AT FORT LEAVENWORTH, KANSAS.

Estimate for hospital.

| | | |
|--|----------|------------|
| 1,200 yards excavation, 30 cents..... | \$360 00 | |
| 1,800 perch rubble-stone, 80 cents..... | 1,440 00 | |
| 1,800 bushels lime, 30 cents..... | 540 00 | |
| 9,000 bushels sand, 6 cents..... | 540 00 | |
| 580 days, mason work, \$3..... | 1,740 00 | |
| 300 days, tenders, \$1.50..... | 450 00 | |
| 20 days, stone-setting, \$3..... | 60 00 | |
| 20 days, tender-setting, \$1.50..... | 30 00 | |
| 550 feet cut-stone, 80 cents..... | 440 00 | |
| 120 days, cutting ashlar corners, &c., \$3.50..... | 420 00 | |
| | | \$6,020 00 |
| 525 thousand brick, \$9.50..... | 4,987 50 | |
| 1,000 bushels lime, 30 cents..... | 300 00 | |
| 4,000 bushels sand, 8 cents..... | 320 00 | |
| 380 days, bricklayer, \$5..... | 1,900 00 | |
| 300 days, tender, \$1.75..... | 525 00 | |
| | | 8,032 50 |
| 60 thousand lath, \$4.50..... | 270 00 | |
| 450 bushels Hannibal lime, 50 cents..... | 225 00 | |
| 1,800 bushels sand, 10 cents..... | 180 00 | |
| 140 bushels hair, 50 cents..... | 70 00 | |
| 20 barrels plaster and cement, \$3..... | 60 00 | |
| 5 kegs lath-nails, 8 cents..... | 40 00 | |
| 275 days, plasterer, \$3..... | 825 00 | |
| 167 days, tender, \$1.50..... | 250 00 | |
| | | 1,920 00 |
| 95,000 feet rough lumber, \$25..... | 2,375 00 | |
| 200,000 shingles, \$4.50..... | 900 00 | |
| 16,000 feet yellow-pine flooring, \$48..... | 768 00 | |
| 45,000 feet finishing lumber, \$55..... | 2,475 00 | |
| 90 pairs 4-fold blinds, \$12..... | 1,080 00 | |
| 1,400 days, carpenter work, \$2.75..... | 3,850 00 | |
| 90 sets blind hinges and fastenings, 75 cents..... | 67 50 | |
| 42 door locks and trimmings, \$2.50..... | 105 00 | |
| | | 11,620 50 |
| 90 sets window-pullies, 35 cents..... | 31 50 | |
| 90 sash trimmings, \$1..... | 90 00 | |
| 2,000 pounds guards and other iron-work, 10 cents..... | 200 00 | |
| 4,800 pounds sash-weights, 3 cents..... | 144 00 | |
| 30 kegs nails, assorted, \$4.50..... | 135 00 | |
| Stair-rails, newels, and ballasters..... | 200 00 | |
| | | 800 50 |
| 1,800 feet tinning, 10 cents..... | 180 00 | |
| 200 feet spouting, 20 cents..... | 40 00 | |
| Hooks and cut-offs..... | 15 00 | |
| | | 235 00 |
| 600 pounds sheet-lead, 9 cents..... | 54 00 | |
| 1,800 pounds lead pipe, 8 cents..... | 144 00 | |
| 100 feet cast-iron soil-pipe, 40 cents..... | 40 00 | |
| 10 4-inch cast-iron bends, \$1..... | 10 00 | |
| 2 lead traps, \$5..... | 10 00 | |
| 60 pounds block tin, 25 cents..... | 15 00 | |
| 2 urinals and connections, \$10..... | 20 00 | |
| 2 wash bowls and stands, \$20..... | 40 00 | |
| 2 14-ounce copper bath-tubs, \$18..... | 36 00 | |
| 1 boiler and stand, \$22..... | 22 00 | |
| 1 force-pump, \$30..... | 30 00 | |
| 2 Jennings water-closets with tanks, \$84..... | 84 00 | |
| 100 pr. tags, 8 cents..... | 8 00 | |
| 20 finished brass cocks, \$2..... | 40 00 | |
| 1 kitchen sink, \$15..... | 15 00 | |

BUILDINGS AT CERTAIN MILITARY POSTS.

| | | |
|--|---------|-----------|
| 50 feet 3-inch ventilating pipe, 30 cents..... | \$15 00 | |
| 8 plated bibs, self-closing, \$4..... | 32 00 | |
| 8 stop and waste-cocks, 50 cents..... | 4 00 | |
| 100 feet stern pipe, 40 cents..... | 40 00 | |
| 35 days, plumber, \$4..... | 140 00 | |
| 35 days, helper, \$2..... | 70 00 | |
| | <hr/> | \$869 00 |
| 40 boxes glass, \$4..... | 160 00 | |
| 200 pounds putty, 10 cents..... | 20 00 | |
| 2,000 pounds white lead, 10 cents..... | 200 00 | |
| 120 gallons oil, 80 cents..... | 96 00 | |
| 40 gallons turpentine, 70 cents..... | 28 00 | |
| 10 gallons Japan, \$1..... | 10 00 | |
| | <hr/> | 514 00 |
| Brushes..... | 25 00 | |
| Miscellaneous paints..... | 20 00 | |
| 200 days, painting, \$2.75..... | 550 00 | |
| | <hr/> | 595 00 |
| Steam heating and ventilators..... | | 5,000 00 |
| Incidentals..... | | 800 00 |
| 1 foreman, six months..... | | 750 00 |
| | | <hr/> |
| | | 37,156 50 |

SURGEON-GENERAL'S OFFICE,
Washington, D. C., December 20, 1882.

Respectfully returned to the Quartermaster-General of the Army.

There is scarcely any balance remaining of the appropriation for construction and repair of hospitals for the current fiscal year, and even if the whole appropriation of \$75,000 were available the sum necessary to construct this hospital, \$37,241, could not be spared, as it would consume one-half of the entire appropriation, and pressing necessities of other posts would thereby be left unprovided for. Neither could this hospital be constructed out of the appropriation for the next year, even if an amount sufficient for the purpose were allowed, except under special authority of Congress; because the contemplated building would be of permanent nature and its construction prohibited by section 1136 Revised Statutes, which requires that all buildings and structures of a permanent nature, the cost of which exceed \$20,000, shall be constructed only under special authority of Congress.

A building erected according to the plans inclosed would be well suited for the purposes intended and the estimated cost is not thought to be excessive. It is recommended therefore that the matter be submitted to Congress at an early day with the view of obtaining during the present session the necessary authority for the construction of the building and an appropriation for the purpose.

C. H. CRANE,
Surgeon-General, United States Army.

QUARTERMASTER-GENERAL'S OFFICE,
Washington, December 23, 1882.

Respectfully returned to the honorable Secretary of War, inviting attention to preceding indorsement of the Surgeon-General, in whose views and recommendations this office concurs.

ALEX. J. PERRY,
Acting Quartermaster-General, Brev. Brig. Gen. U. S. A.

HEADQUARTERS OF THE ARMY,
Inspector General's Office, December 20, 1882.

SIR: The following extract from a report of an inspection of Leavenworth military prison made December 6, 1882, by Colonel N. H. Davis, inspector-general, is respectfully furnished for your information.

Very respectfully, your obedient servant,

D. B. SACKET,
Brigadier and Inspector General.

* * * * *

HOSPITAL.

Attention is again respectfully invited to the occupation of a part of one of the prison buildings as a hospital for the post of Fort Leavenworth, and, recently, of one ward of the prison hospital for the same purpose, leaving but one ward thereof with a capacity for only twelve beds for the prison, containing, with the provost guard, six hundred men.

The prison is not the proper place for the post hospital. The accommodations are unsuitable and entirely inadequate for both the prison and the large garrison of this post.

The unavoidable intercourse between soldiers of the post and the convicts in the present condition of affairs is reported to be, as I believe it is, detrimental to the good order and discipline of the prison.

It is reported that patients in this post hospital go outside by permission of the hospital steward, returning late in the evening and at night, noisy and apparently under the influence of intoxicating drink. I found, as on a previous inspection, the police of the post hospital not good; the steward was absent. I reported this matter to the commandant (*ex officio*) of the prison, General Pope. The too crowded condition of the hospital in the prison building was given as the reason for taking one ward of the prison hospital. In the former, was a citizen, for treatment of his eyes, who said he had been there some five weeks. In the event of an epidemic at the post, or the introduction of contagious diseases into the prison by prisoners who are sent there from different parts of the country, an unfortunate and embarrassing condition of things would exist in the absence of suitable and adequate hospital accommodation. In this connection it is respectfully suggested that the sick of the garrison of Fort Leavenworth should be removed from the military prison as soon as possible, and that a post hospital be built without unnecessary delay.

The police condition of parts of the dispensary and of the storeroom in the prison hospital was not up to the required standard that I have heretofore found them in my former inspections. Colonel Blunt requests that another hospital steward, an efficient one, be ordered to relieve the one now on duty here.

* * * * *

Very respectfully,

N. H. DAVIS,
Inspector-General United States Army.

The GENERAL OF THE ARMY
of the United States.

[First indorsement.]

Respectfully referred to the Quartermaster-General for remark.
By order of the Secretary of War,

JOHN TWEEDALE,
Chief Clerk.

WAR DEPARTMENT, *December 29, 1882.*

[Second indorsement.]

QUARTERMASTER-GENERAL'S OFFICE,
Washington, January 12, 1883.

True extract respectfully returned to the honorable Secretary of War with remark that plans, estimates, &c., for a new hospital were forwarded to him from this office December 23, 1882.

RUFUS INGALLS,
Quartermaster-General, Bvt. Maj. Genl., U. S. A.

No. 2.

BUILDING AT FORT LEAVENWORTH, KANS., FOR POST-OFFICE, SCHOOL-ROOM, &c.

OFFICE OF ACTING ASSISTANT QUARTERMASTER,
Fort Leavenworth, Kans., November 17, 1882.

SIR: I have the honor to transmit herewith, in duplicates, plan A, specification B, bill of material C, and estimates of civilian labor D, for construction of a building at this post,

to comprise a post-office, 1 section room, 2 school rooms (for enlisted men), 1 instrument and model room, 1 drawing room, 1 court-martial room, and an attic.*

Very respectfully, your obedient servant,

T. W. LORD,

First Lieut. and Regimental Quartermaster, Twentieth Infantry, A. A. Q. M.

The CHIEF QUARTERMASTER, DEPARTMENT MISSOURI,

Fort Leavenworth, Kans.

Through Post of Fort Leavenworth, Kans.

Specifications for a building at Fort Leavenworth, Kans., comprising post-office, 1 section room, 2 school rooms (for enlisted men), 1 instrument and model room, 1 drawing-room, 1 telegraphy room, 1 court-martial room, and an attic.

Building to be 64½ feet long, 45 wide, by 24 high, of brick, 2 stories, with slate roof, foundation to be of stone, to extend 6 feet below surface of ground and 2 feet above, to be ventilated by 4 barred windows; water-table and window-sills throughout, to be of dressed stone; first story to be 12 feet high, with wall 19 inches thick, with air-space; upper story to be 10 feet high, walls to be 13 inches thick; porches as per plan to cover side and end-doors; the hall walls of first story to be of brick, 13 inches thick; the hall walls of second story and other partition walls to be of wood, lathed and plastered; the continuation of hall wall fronting post-office to consist of wooden posts, 8 by 8, cased; building, including ceilings, to be plastered throughout and hard-finished; the side of post-office fronting on hall to be provided with glass front and wooden lock-boxes; lower floor to have 20 windows, and 3 outside and 3 inside single doors, and one pair folding doors between school-rooms; upper floor to have 22 windows, 4 inside doors, and 1 pair folding-doors between drawing and instrument rooms; attic to have 4 dormers with 8 windows; chimneys as shown by plan; both floors to be wainscoted; building to have 3 coats of paint throughout; stair-case from lower to upper floor as shown in plan.

Respectfully submitted.

T. W. LORD,

First Lieutenant and Regimental Quartermaster, Twentieth Infantry, A. A. Q. M.

FORT LEAVENWORTH, KANS., November 17, 1882.

Bill of material for construction of a building at Fort Leavenworth, to comprise a post-office, 1 section room (for school of application), 2 school rooms, (for enlisted men), 1 instrument and model room, 1 drawing room, 1 telegraphy room, 1 court-martial room, and an attic.

| | | |
|-------|---|------------|
| 225 | M brick laid in walls, at \$14 per thousand | \$3,150 00 |
| 435 | perch stone laid in walls, at \$3 per perch | 1,305 00 |
| 208 | feet water-table, at 45 cents per foot | 93 60 |
| 3 | door-sills, 5 feet, at \$1.30 per foot | 19 50 |
| 42 | window-sills, 3 feet 6 inches, at 40 cents per foot | 58 80 |
| 8 | dormer window-sills, 3 feet, at 40 cents per foot | 9 60 |
| 105 | pieces 2 inches by 10 inches by 20 feet, 3,500 feet; 150 pieces, 2 inches by 6 inches by 14 feet, 2,100 feet; 105 pieces, 2 inches by 10 inches by 20 feet, 3,500 feet; 24 pieces, 3 inches by 12 inches by 20 feet, 1,440 feet; 20 pieces, 2 inches by 12 inches by 24 feet, 960 feet; 60 pieces, 2 inches by 10 inches by 20 feet, 2,000 feet; 16 pieces, 6 inches by 6 inches by 16 feet, 760 feet; 3 pieces, 8 inches by 8 inches by 14 feet, 224 feet; 100 pieces, 2 inches by 6 inches by 20 feet, 2,000 feet; total, 16,484 feet, at \$23 per thousand | 379 13 |
| 4,418 | feet fence flooring for roof, at \$30 per thousand | 132 54 |
| 1,000 | feet finishing lumber, at \$40 per thousand | 40 00 |
| 1,100 | feet mouldings, at 4 cents per foot | 44 00 |
| 1 | stairway complete, with newel-post and rail | 60 00 |
| 6,500 | feet 4-inch yellow pine flooring, at \$40 | 260 00 |
| 40 | squares slate, laid on roof, at \$14 per square | 560 20 |
| 42 | window-frames and casings, at \$5.60 each | 235 00 |
| 8 | dormer windows and casings, at \$4.90 each | 39 20 |
| 3 | door-frames, outside, at \$8.30 each | 24 90 |
| 7 | door-frames, inside, at \$8.30 each | 58 10 |
| 2 | folding-door frames, at \$12 | 24 00 |
| 2 | pairs folding doors, at \$16 | 32 00 |
| 7 | inside doors, at \$2.60 | 18 20 |
| 10 | transoms to doors, at \$1.25 | 12 50 |
| 3 | outside doors, at \$2.60 | 7 80 |

* Designed and prepared by Lieutenant A. Reynolds, Twentieth Infantry.

| | | | |
|---------------------|--|-------|----------|
| 42 | windows, primed and glazed, at \$2.50 | ----- | \$105 00 |
| 8 | dormer windows, primed and glazed, at \$2.50 | ----- | 20 00 |
| | Sash cords and weights | ----- | 75 00 |
| 2,275 | yards plastering, 3 coats, at 22 cents | ----- | 500 50 |
| 1,330 | yards lathing, at 8 cents | ----- | 106 40 |
| 1,666 $\frac{2}{3}$ | yards painting, at 30 cents | ----- | 500 00 |

HARDWARE.

| | | | |
|-------|---|-------|------------|
| 35 | kegs nails, assorted, at \$5 | ----- | 175 00 |
| 30 | gross screws, at 25 cents | ----- | 7 50 |
| 14 | pairs hinges, loose pin, at 20 cents per pair | ----- | 2 80 |
| 12 | locks, with bronze trimmings, at \$28 per dozen | ----- | 28 00 |
| 50 | window-fastenings, at 20 cents each | ----- | 10 00 |
| | Bolts and anchors | ----- | 50 00 |
| 250 | feet gutter-stick, at 7 cents | ----- | 17 50 |
| 150 | feet brackets, at 7 cents | ----- | 10 50 |
| | Galvanized iron (for hips, ridge gutters, and conductors) | ----- | 50 00 |
| Total | | | ----- |
| | | | \$8,222 27 |

Respectfully submitted.

T. W. LORD,

First Lieutenant and Regimental Quartermaster, Twentieth Infantry, A. A. Q. M.

FORT LEAVENWORTH, KANS., November 17, 1882.

Estimate for civilian labor for construction of a building at Fort Leavenworth, Kansas, to comprise a post-office, 1 section room, 2 school rooms (for enlisted men), 1 instrument and model room, 1 drawing room, 1 telegraphy room, 1 court-martial room, and an attic.

| | | |
|--|-------|----------|
| Overseer 2 months at \$100 per month | ----- | \$200 00 |
| 13 carpenters 52 days, at \$2.40 per day | ----- | 1,622 40 |
| 5 laborers 52 days, at \$1 per day | ----- | 260 00 |
| | | ----- |
| | | 2,082 40 |

Stone foundations and brick-work included in bill of material.

Respectfully submitted.

T. W. LORD,

First Lieutenant and Regimental Quartermaster, Twentieth Infantry, A. A. Q. M.

FORT LEAVENWORTH, KANS., November 17, 1882.

[First indorsement.]

POST OF FORT LEAVENWORTH, KANS., November 20, 1882.

Respectfully forwarded to Headquarters Department of the Missouri. Approved.

J. J. UPHAM,

Major Fifth Cavalry Commanding.

[Second indorsement.]

HEADQUARTERS DEPARTMENT OF THE MISSOURI,

Fort Leavenworth, Kans., November 22, 1882.

Respectfully forwarded to the Adjutant-General of the Army, through Headquarters Military Division of the Missouri, approved.

This building is intended to supply a long-felt want at this post; and it is, I think, of great importance that it should be erected.

I respectfully request that the plan and estimates receive prompt and favorable action by the authorities through whom they are transmitted, and be laid before Congress at as early a day as possible asking for the necessary appropriation. If this be done I think I can secure favorable action on the part of the Senators and Representatives from this State.

JOHN POPE,

Major-General Commanding.

BUILDINGS AT CERTAIN MILITARY POSTS.

[Third indorsement.]

HEADQUARTERS MILITARY DIVISION OF THE MISSOURI,
OFFICE CHIEF AND DEPOT-QUARTERMASTER,

Chicago, Illinois, November 29, 1882.

Respectfully returned to the adjutant-general of the division, recommending reference for action of War Department.

CHAS. H. TOMPKINS,
Asst. Quartermaster-General, U. S. A., Chief Quartermaster.
By G. W. CANDEE,
Major and Paymaster, U. S. A.

[Fourth indorsement.]

HEADQUARTERS MILITARY DIVISION OF THE MISSOURI,

Chicago, December 1, 1882.

Respectfully forwarded to the Adjutant-General of the Army. In the absence of the Lieutenant-General commanding.

R. WILLIAMS,
Assistant Adjutant-General.

[Fifth indorsement.]

WAR DEPARTMENT, ADJUTANT-GENERAL'S OFFICE,

Washington, December 5, 1882.

Respectfully referred to the Quartermaster-General for remark.
By order of the Secretary of War.

R. C. DRUM,
Adjutant-General.

[Sixth indorsement.]

QUARTERMASTER-GENERAL'S OFFICE,

Washington, December 22, 1882.

Respectfully returned to the honorable Secretary of War through Adjutant-General U. S. A.

From fourth indorsement hereon it appears that the Lieutenant-General was absent at the time these papers passed through his headquarters.

The plans herein being suitable for the purpose intended, I recommend approval, provided, on reference of the papers to the General of the Army he thinks a permanent structure of the character named necessary.

RUFUS INGALLS,
Quartermaster-General, Bvt. Maj. Gen. U. S. A.

[Seventh indorsement.]

HEADQUARTERS OF THE ARMY,

Washington, December 26, 1882.

Respectfully submitted to the honorable Secretary of War.

I want to favor every proposition which will make Fort Leavenworth what it should be, a permanent and model military post. I am willing to approve of the erection of the building herein designed for such uses as may hereafter be found economical and necessary, but not to be designated or set apart for a post-office. With this qualification I approve it, and recommend that the papers be sent to the Military Committee of the House.

W. T. SHERMAN,
General.

No. 3.

PLANS AND ESTIMATES FOR BUILDINGS AT FORT SNELLING, MINN.

HEADQUARTERS DEPARTMENT OF DAKOTA,

Fort Snelling, Minn., December 11, 1882.

SIR: In obedience to verbal instructions from the Lieutenant-General commanding, I have caused to be prepared plans and estimates for the conversion of Fort Snelling into a post capable of accomodating a complete regiment of infantry. And inasmuch as since I received the Lieutenant-General's instructions a mounted battery of artillery has been

added to the garrison of the post, I have added plans, &c., for the additional barrack and quarters, the stables, gun-shed, &c., needed by it.

I forward these plans and estimates herewith, and I submit the following explanation of the work which is proposed:

COMMANDING OFFICER'S QUARTERS.

The commanding officer's house at present is a stone building one story in height, with a very low attic, and with a kitchen in the cellar. It has nominally four rooms on the principal floor, but in reality there are but two rooms which should be counted, for the two others are too small to be assignable. Neither can the kitchen be considered an assignable room, for it is in the cellar. The house is entirely inadequate for the necessities of an officer commanding a large post. But the walls are in excellent condition, amply strong enough to support another story, and it is therefore proposed to raise the attic and build up the walls so as to give two full stories beside the attic. The estimated cost of this change, as of all other changes proposed, will be found in the detailed estimates submitted. (See plan and estimate marked D.)

QUARTERS FOR FIELD OFFICERS.

One new set of field officers' quarters has just been completed; it is of wood, but very substantially and thoroughly built. It was intended for and is now occupied by the post surgeon.

It is proposed to build two additional sets upon the same plans and of the same material, one of them for a lieutenant-colonel, the other for a major. (See plan and estimate marked E.)

QUARTERS FOR COMPANY AND REGIMENTAL STAFF OFFICERS, ONE ASSISTANT SURGEON, AND A CHAPLAIN.

For the company and regimental staff officers, an assistant surgeon, a chaplain, and the officers of the battery, thirty-eight sets of quarters are required.

There are now six sets in the stone block next to the commanding officer's house, and sixteen sets in eight double detached wooden buildings, thus leaving sixteen new sets to be constructed.

The walls of the stone block next to the commanding officer's house are thick, well constructed, and in good condition; but the wood work of the interior and of the roof is very old and so much decayed that the quarters are really unfit for occupation. It is proposed to remove all this woodwork and remodel the interior, and in the place of the present low roof, which gives no space for attic rooms, to put a mansard of moderate height. The entire removal of the woodwork of this building is a necessity. (See plan and estimate marked H.)

The eight detached wooden buildings, containing sixteen sets of quarters, were built hurriedly in 1878, when there was a pressure for additional shelter for the troops in the department and very little money to build with. Undoubtedly they are as good as could have been built for the means then available, but they are of small size, with thin walls and no cellars. They rest on wooden piles, which are now decaying. Cellars are absolutely necessary to comfort and convenience in this climate. It is proposed to add to each set one room, with an attic above, and under this room to put a cellar. It is also proposed to put in proper underpinning and to put the buildings in thorough repair. (See plan and estimates marked G.)

For the sixteen additional sets of quarters required it is proposed to erect eight double cottages substantially on the plans published by the Quartermaster-General, September 14, 1872, with, however, the addition of an attic over the kitchen and with a cellar.

QUARTERS OF THE NON-COMMISSIONED STAFF.

The non-commissioned staff of the regiment and of the post, including the leader of the band, are now quartered in old and worthless buildings, which it will be necessary to remove in case the proposed enlargement and conversion takes place. It is therefore proposed to erect three small cottages, each containing two sets of quarters, for the non-commissioned staff, &c. (See plan and estimates marked K.)

BARRACKS.

The barracks at present occupied by the companies are: First, one wooden building of two stories, erected in 1878, into which are crowded four infantry companies and the

band; and, second, one stone building of one story, in which is quartered the battery of artillery.

This last-named building is old; it probably dates from the foundation of the post; the wood work is worn out and rotten, and it is reported to me that the walls are insecure. It is not worth repairing and should be torn down.

The wooden building put up in 1878 was erected under the pressure for shelter and with the scarcity of funds which has already been spoken of. Through no fault of the officers charged with its construction, but as a result of the circumstances existing when it was constructed, it is not in any respect a suitable building for the purposes of a post designed to be permanent. It was a *make-shift*. I have sought to devise some plan by which it could be transformed into a suitable barrack, but I have failed to discover any means of accomplishing that end. I have come to the conclusion that it would be best, and in the end cheapest, to pull it down and use the material in the construction of other buildings. It is therefore proposed to erect as barracks twelve buildings upon the plans published by the Quartermaster-General September 14, 1872; ten of these buildings to be for the ten companies of a regiment of infantry, one for the band, and the remaining one for the battery. (See plan and estimate H.)

BUILDING FOR OFFICES, &C.

The building now occupied as offices, post library, reading room, &c., affords miserable and utterly insufficient accommodations, and is, moreover, in a very decayed state. I have examined it with reference to its enlargement by the construction of another story, but I have found the walls to be in such condition that it would be unsafe to impose any additional weight upon them. It should be pulled down and the materials which it contains should be used in new constructions. I therefore propose a new building to contain the offices of the post, reading and library rooms, and a court room. The want of a court room has been much felt. (See plan and estimate marked I.)

HOSPITAL.

The present post hospital is a good building and is in excellent repair.

It is now receiving some additions, and when they are completed it will contain twenty-four beds. This number of beds is ample for the present garrison, but I am advised by the medical director of the department that it would be insufficient for a regimental post. It is therefore proposed to add a ward with space for twelve beds. (See plan and estimate marked M.)

STOREHOUSES.

There is now at the post one storehouse, an excellent building of stone. It affords rather scanty accommodation for the quartermaster's stores and the subsistence stores for a garrison of the present size. It would be entirely insufficient for the stores required by a garrison of the size proposed. It is therefore proposed to turn this storehouse over entirely to the subsistence department and to build a new quartermaster's storehouse. (See plan and estimate marked B.)

BAKERY.

The present bakery is a good but small building; it would be insufficient for the proposed garrison, and unfortunately it is so planned and so situated that it cannot be enlarged. A new building is therefore proposed. (See plan and estimate marked C.)

ARTILLERY STABLES AND GUN-SHED.

There are no stables at the post available for the horses of the light battery, and there is no gun-shed. I have heretofore represented the necessity of new buildings for these purposes and have sent forward plans and estimates. I now include these buildings in the general plan of enlargement, and I append copies of the former plans, &c. (See estimates and plans marked L.)

WATER CLOSETS, FUEL SHEDS, FENCING, REMOVING CEMETERY, LAYING DOWN WALKS, GRADING, BUILDING ROADS, AND REMOVING RUBBISH.

For the estimate for these purposes see inclosure marked N. In order to make room for new buildings it is proposed to remove the cemetery to a distant point of the reservation and to cut down the elevation it now occupies.

It is also proposed to grade a drill-ground of sufficient size to permit the maneuvering of a regiment of infantry and of a battery of artillery.

The whole estimate is larger than I expected it to be, but it has been, I think, carefully made, and should the sum asked for be granted it can be expended to the great advantage of the service.

I have the honor to be, very respectfully, your obedient servant,
ALFRED H. TERRY,
Brigadier-General Commanding.

To the ADJUTANT-GENERAL,
Of the Military Division of the Missouri, Chicago, Ill.

[Second indorsement.]

HEADQUARTERS MILITARY DIVISION OF THE MISSOURI,
OFFICE CHIEF AND DEPOT QUARTERMASTER,
Chicago, Ill., December 21, 1882.

Respectfully returned to the adjutant-general of the division with recommendation that these plans and estimates be forwarded for the action of the War Department, and that the present Congress be asked for an appropriation for the purpose, and if an appropriation is made it be expended under the direction of the Lieutenant-General commanding; and I recommend further that if the sum appropriated is sufficient for the purpose (and I am positive \$250,000 will be), that new buildings of brick be erected for the ten companies of infantry and battery of artillery, and a new site be selected if in the opinion of the Lieutenant-General it is deemed more desirable to erect new buildings than to repair old ones.

CHAS. H. TOMPKINS,
Assistant Quartermaster-General, U. S. A., Chief Quartermaster.

[Third indorsement.]

HEADQUARTERS MILITARY DIVISION MISSOURI,
Chicago, January 3, 1883.

Respectfully forwarded. I am familiar with the old post of Fort Snelling. It is on a point of land jutting out from the bluffs at the junction of the Minnesota and Mississippi rivers. It is a very old place, built originally with the idea of defense against Indians, and, in my opinion, is too contracted for an increased garrison. Near by there is a beautiful, commanding site on the reservation, offering every facility for such a garrison as is proposed. I feel, and so does the chief quartermaster of the division, that for the money called for in these papers for the building up of the old post a new post constructed of brick and complete in all its appointments for twelve companies can be constructed, and I think it would be wisdom to make this change in making the appropriation.

P. H. SHERIDAN,
Lieutenant-General, Commanding.

[Fourth indorsement.]

HEADQUARTERS OF THE ARMY,
Washington, January 9, 1883.

Respectfully submitted to the honorable Secretary of War.

Fort Snelling has long been, is now, and ever must be "strategic," a proper place for the assemblage of troops and war material bearing upon our northern frontier.

I advise that these papers be transmitted to the proper committee of Congress, with a request for a special appropriation of \$112,500 (one-half the amount asked for); the \$12,500 to be expended in the needed repairs inside the old fort, and the remaining \$100,000 for building permanent barracks of brick and stone on the public land outside the fort on a plan capable of being enlarged to the full extent of a regiment of infantry, the exact location to be approved by the Secretary of War.

W. T. SHERMAN,
General.

Abstract of estimates, with plans, for structures required at Fort Snelling, Minn., to accommodate a full regiment of infantry and one light battery of artillery.

| Name of structures. | Letter designating plan and detailed estimate. | If new building. | If old building requiring additions. | No. of each building required. | Estimated cost of each. | Total cost. | Remarks. |
|--|--|------------------|--------------------------------------|--------------------------------|-------------------------|-------------------|-------------|
| Barracks..... | A | Yes. | ..... | 12 | \$6,182 50 | \$74,190 00 | |
| Quartermaster's storehouse..... | B | Yes. | ..... | 1 | 3,821 50 | 3,821 50 | |
| Bake-house..... | C | Yes. | ..... | 1 | 4,636 00 | 4,636 00 | |
| Commanding officer's quarters..... | D | ..... | Yes. | 1 | 5,203 00 | 5,203 00 | Old. |
| Field officers' quarters..... | E | Yes. | ..... | 2 | 5,700 00 | 11,400 00 | |
| Company officers' quarters..... | F | Yes. | ..... | 8 | 5,280 00 | 42,312 00 | |
| Company and field officers' quarters..... | G | ..... | Yes. | 8 | 2,132 00 | 17,056 00 | Frame, old. |
| Company officers' quarters..... | H | ..... | Yes. | 6 | 2,986 19 | 17,917 14 | Stone, old. |
| Administration building..... | I | Yes. | ..... | 1 | 12,713 00 | 12,713 00 | |
| Non-commissioned staff officers' quarters..... | K | Yes. | ..... | 3 | 2,961 50 | 8,884 50 | |
| Artillery stables, gun-shed, and corral..... | L | Yes. | ..... | 1 | 10,306 90 | 10,306 90 | |
| Addition to hospital..... | M | ..... | Yes. | 1 | 2,654 00 | 2,654 00 | Old. |
| Water-closets, fuel-sheds, fencing, grading, and removing rubbish, &c..... | N | ..... | ..... | ..... | ..... | 13,905 96 | |
| Total..... | | | | | | 225,000 00 | |

Respectfully submitted.

CHAS. BIRD,
Captain and Assistant Quartermaster, U. S. A.

OFFICE ASSISTANT QUARTERMASTER,
HEADQUARTERS DEPARTMENT OF DAKOTA,
Fort Snelling, Minn., December 2, 1882.

A.

Estimate of barracks.

| | |
|---|-----------------|
| Excavators, 316 yards, at 25 cents | \$79 00 |
| Stone-work, 200 perches, at \$3 | 600 00 |
| Chimney, 60 feet, at \$1 | 60 00 |
| Brick lining, 38 M, at \$12 | 456 00 |
| Lumber, 20 M, at \$30 | 600 00 |
| Sheathing, 20 M, underfloors, roofing, &c., at \$25 | 500 00 |
| Siding, 7 M, at \$45 | 315 00 |
| Shingles, 37 M, at \$450 | 166 50 |
| Cornice, 400 feet, at 50 cents | 200 00 |
| Porches, 268 feet, at \$2 | 536 00 |
| Flooring, 16 M (2-inch matched plank), at \$30 | 480 00 |
| Thirteen inside doors, at \$11 | 143 00 |
| Eleven outside doors, at \$18 | 198 00 |
| Fifty-two windows, at \$12 | 624 00 |
| Stairs | 100 00 |
| Plastering, 1,900 yards, at 25 cents | 475 00 |
| Base | 100 00 |
| Tin-work | 200 00 |
| Painting | 350 00 |
| Total | 6,182 50 |

CHAS. BIRD,
Captain and Assistant Quartermaster, U. S. A.

HEADQUARTERS DEPARTMENT OF DAKOTA,
Office of Assistant Quartermaster.

B

Estimate of storhouses.

| | |
|--|-----------|
| Excavation, 408 yards, at 25 cents | \$102 00 |
| Stone-work, 266 perches, at \$2.75 | 731 00 |
| Chimneys, 26 feet, at 75 cents | 19 50 |
| Lumber, 25 M, at \$30 | 750 00 |
| Roof-boards, sheathing, &c., 10,700 M, at \$25 | 267 50 |
| Shingles, 57 M, at \$4.50 | 256 50 |
| Sheathing (inside), 9 M, at \$35 | 315 00 |
| Siding, 7 M, at \$45 | 315 00 |
| Platform and stoop outside | 100 00 |
| Flooring (2-inch matched plank), 5 M, at \$30 | 150 00 |
| Four large doors, at \$15 | 60 00 |
| Two single outside doors, at \$12 | 24 00 |
| Two single inside doors, at \$10 | 20 00 |
| Four cellar windows, at \$5 | 20 00 |
| Twenty-three windows, at \$12 | 276 00 |
| Stairs to cellar | 15 00 |
| Fixtures in issuing-room | 100 00 |
| Painting | 300 00 |
| | 3, 821 50 |

CHAS. BIRD,

Captain and Assistant Quartermaster, U. S. A.

HEADQUARTERS DEPARTMENT OF DAKOTA,
Office of Assistant Quartermaster.

C.

Estimate of bake-house (independent of oven).

| | |
|---|-----------|
| Excavations, 160 yards, at 25 cents | \$40 00 |
| Stone-work, 309 perch, at \$3 | 927 00 |
| Chimneys above oven, 24 feet, at \$1.50 | 36 00 |
| Lumber, 10 M, at \$30 | 300 00 |
| Roof-boards, 3 M, at \$25 | 75 00 |
| Shingles, 30 M, at \$4.50 | 135 00 |
| Floor (of brick), 9 M, at \$12 | 108 00 |
| Two outside doors, at \$18 | 36 00 |
| Two inside doors, at \$12 | 24 00 |
| Nine windows, at \$10 | 90 00 |
| Base | 25 00 |
| Plastering, 360 yards, at 25 cents | 90 00 |
| Tin-work | 75 00 |
| Painting | 175 00 |
| | 2, 136 00 |
| Bake-oven complete | 2, 500 00 |
| | 4, 636 00 |

CHAS. BIRD,

Captain and Assistant Quartermaster, U. S. A.

HEADQUARTERS DEPARTMENT OF DAKOTA.
Office Assistant Quartermaster.

D.

Estimate of commanding officer's house for additional story.

| | |
|---|----------|
| Taking down present roof, &c., and removing partition in second story | \$200 00 |
| Stone-work (second story), 242 perch, at \$4.50 | 1,089 00 |
| Chimneys, 150 feet, at \$2.50 | 375 00 |
| Lumber, 20 M, at \$30 | 600 00 |
| Flooring, 4,800 feet, at \$50 | 250 00 |
| Bay window | 150 00 |
| Balcony | 50 00 |
| Six double dormer windows, at \$30 | 180 00 |
| Two gables, at \$40 | 80 00 |
| Eighteen inside doors, at \$15 | 270 00 |
| Two double windows, at \$25 | 50 00 |
| Eight single windows, \$18 | 144 00 |
| Stairs | 200 00 |
| Changing of plumbing | 50 00 |
| Plastering, 1,500 yards, at \$25 | 375 00 |
| Base wainscoting | 150 00 |
| Closet fixtures | 100 00 |
| Tin work, &c. | 300 00 |
| Painting | 600 00 |
| | 5,203 00 |

CHAS. BIRD,

Captain and Assistant Quartermaster, U. S. A.

HEADQUARTERS DEPARTMENT OF DAKOTA,

Office of Assistant Quartermaster.

E.

Estimate for field officers' quarters.

| | |
|---|----------|
| Excavations, 580 yards, at 25 cents | \$145 00 |
| Stone-work, 375 perch, at \$3.00 | 1,125 00 |
| Cementing cistern | 42 50 |
| Ash-pits | 60 00 |
| Lumber, 23 M feet, at \$30 | 690 00 |
| Roof-boards, sheathing, and paper | 300 00 |
| Shingles, 40 M, at \$4.50 | 180 00 |
| Siding, 6 M feet, at \$45.00 | 270 00 |
| Cornice, 250 feet, at 25 cents | 62 50 |
| Porch | 150 00 |
| Flooring, 6 M feet, at \$40 | 240 00 |
| Two stoops, at \$60 | 120 00 |
| Chimneys, 25 feet, at \$1 | 250 00 |
| Two front doors, at \$30 | 60 00 |
| Two vestibule doors, at \$25 | 50 00 |
| Four outside doors, at \$10 | 40 00 |
| Two folding doors, at \$25 | 50 00 |
| Forty-two doors, at \$8 | 336 00 |
| Thirty windows, with blinds, at \$10 | 300 00 |
| One flight front stairs | 150 00 |
| Two flights back and cellar stairs, at \$50 | 100 00 |
| Base and inside finish | 179 00 |
| Plastering | 400 00 |
| Tin-work | 100 00 |
| Painting | 300 00 |
| | 5,700 00 |

CHAS. BIRD.

Captain and Assistant Quartermaster, U. S. A.

HEADQUARTERS DEPARTMENT OF DAKOTA,

Office of Assistant Quartermaster.

F.

Estimate for double houses for company officers quarters.

| | |
|--|----------|
| Excavations, 580 yards, at 25 cents | \$145 00 |
| Stone-work, 325 perch, at \$3 | 975 00 |
| Cementing cistern | 22 50 |
| Ash-pits | 60 00 |
| Lumber, 23 M feet, at \$30 | 690 00 |
| Roof-boards, sheathing, and paper | 300 00 |
| Shingles, 30 M, at \$4.50 | 135 00 |
| Siding, 6 M feet, at \$45 | 270 00 |
| Cornice, 250 feet, at 25 cents | 62 50 |
| Porch | 138 00 |
| Flooring, 6 M feet, at \$40 | 240 00 |
| Four stoops, at \$15 | 60 00 |
| Chimneys, 205 feet, at \$1 | 205 00 |
| Two front doors, at \$30 | 60 00 |
| Two vestibule doors, at \$25 | 50 00 |
| Four outside doors, at \$10 | 40 00 |
| Two folding doors, at \$25 | 50 00 |
| Forty-two doors, at \$8 | 336 00 |
| Thirty windows, with blinds, at \$10 | 300 00 |
| Two flights front stairs, at \$75 | 150 00 |
| Two flights back stairs, at \$50 | 100 00 |
| Base | 100 00 |
| Plastering | 400 00 |
| Tin-work | 100 00 |
| Painting | 300 00 |
| | 5,289 00 |

CHAS. BIRD,

Captain and Assistant Quartermaster, U. S. A.

HEADQUARTERS DEPARTMENT OF DAKOTA,

Office of Assistant Quartermaster.

G.

Estimate double houses remodeled and enlarged.

| | |
|---|----------|
| Excavation cellar under new parts, 300 yards, at 35 cents | \$105 00 |
| Stone-work, 200 perch, at \$3 | 600 00 |
| Raising up building | 50 00 |
| Lumber, 4 M feet, at \$30 | 120 00 |
| Sheathing and roof-boards, 4 M feet, at \$25 | 100 00 |
| Shingles (entire roof new), 38 M, at \$4.50 | 171 00 |
| Siding, 2,000 feet, at \$45 | 90 00 |
| Cornice, 72 feet, at 50 cents | 36 00 |
| Porches | 40 00 |
| Changing partition inside and stairs | 50 00 |
| Flooring, 1,500 feet, at \$50 per M | 75 00 |
| Ten new doors, at \$10 | 100 00 |
| Ten new windows, at \$12 | 120 00 |
| Base | 50 00 |
| Plastering, 700 yards, at 25 cents | 175 00 |
| Tin-work | 50 00 |
| Painting, new work 3 coats, old work 2 coats | 200 00 |
| | 2,132 00 |

CHAS. BIRD,

Captain and Assistant Quartermaster, U. S. A.

HEADQUARTERS DEPARTMENT OF DAKOTA,

Office of Assistant Quartermaster.

H.

Stone row, six houses, additional story. Estimate for single house.

| | |
|--|-------------|
| Excavations for area, 90 yards, at 40 cents..... | \$36 00 |
| Area walls, 38 perches, at \$2.50..... | 95 00 |
| Chimneys, 80 feet, at \$2..... | 160 00 |
| Lumber for partitions, roof, &c., 10 M, at \$30..... | 300 00 |
| Roof boards, 2,864 feet, at \$28..... | 80 19. 2 |
| Shingles, 15 M, at \$4.50..... | 67 50 |
| Porch..... | 50 00 |
| Flooring, 5 M, at \$40..... | 200 00 |
| Tearing down partitions, chimneys, &c..... | 50 00 |
| Doors, inside, 25, at \$15..... | 375 00 |
| Four dormer windows, at \$30..... | 120 00 |
| Four dormer windows, at \$20..... | 80 00 |
| Repairing windows..... | 50 00 |
| Stairs..... | 250 00 |
| Dumb waiter..... | 40 00 |
| Closet fixtures and base..... | 100 00 |
| Plastering, 2,130 yards, at 25 cents..... | 532 50 |
| Tin-work..... | 200 00 |
| Painting..... | 200 00 |
| | <hr/> |
| | 2,986 19. 2 |

CHAS. BIRD,

*Captain and Assistant Quartermaster, U. S. A.*HEADQUARTERS DEPARTMENT OF DAKOTA,
Office of Assistant Quartermaster.

I.

Estimate of administration building.

| | |
|---|------------|
| Excavations, 740 yards, at 25 cents..... | \$185 00 |
| Stone-work (including ash-pits), 657 perches, at \$3..... | 1,971 00 |
| Chimneys, 250 feet, at \$2..... | 500 00 |
| Brick lining, 35 M brick, at \$12..... | 430 00 |
| Grouting cellar bottom 554 yards, at 75 cents..... | 415. 50 |
| Plumbing and cess pools..... | 500 00 |
| Lumber, 68 M feet, at \$30..... | 2,040 00 |
| Sheathing under floors and roofing, 27 M, at \$25..... | 675 00 |
| Shingles, 46 M, at \$4.50..... | 207 00 |
| Siding, 10 M feet, at \$45..... | 450 00 |
| Four trusses, at \$50..... | 200 00 |
| Two gables..... | 50 00 |
| Cornice, 290 feet, at 50 cents..... | 145 00 |
| Two dormer windows..... | 35 00 |
| Porch and side stoop..... | 200 00 |
| Flooring, 12 M feet, at \$50..... | 600 00 |
| Front doors..... | 40 00 |
| One side door..... | 20 00 |
| Thirty-four inside doors, at \$15..... | 510 00 |
| Forty-five windows, at \$15..... | 675 00 |
| Stairs..... | 250 00 |
| Closet fixtures..... | 50 00 |
| Base board..... | 200 00 |
| Plastering, 4,500 yards, at 25 cents..... | 1,125 00 |
| Tin-work, roofs, gutters, pipes, &c..... | 500 00 |
| Painting..... | 750 00 |
| | <hr/> |
| | 12. 713 00 |

CHAS. BIRD,

*Captain and Assistant Quartermaster, U. S. A.*HEADQUARTERS DEPARTMENT OF DAKOTA,
Office of Assistant Quartermaster.

K.

Estimate of cost of double house, non-commissioned staff officers' quarters.

| | |
|---|----------|
| Excavations, 150 yards, at 25 cents | \$37 50 |
| Stone-work, 200 perches, at \$3 | 600 00 |
| Cementing cistern..... | 30 00 |
| Chimneys (to start on brackets), 70 feet, at 75 cents | 52 50 |
| Lumber, 30,000 feet, at \$30 | 900 00 |
| Sheathing, roof-boards, &c., 5,000 feet, at \$25 | 125 00 |
| Shingles, 18,000, at \$4.50 | 81 00 |
| Siding, 2,500 feet, at \$45 | 112 50 |
| Flooring, 2,200 feet, at \$40 | 88 00 |
| Porch..... | 25 00 |
| Gable..... | 20 00 |
| Thirty-five doors, at \$10 | 350 00 |
| Twenty-two windows, at \$10 | 220 00 |
| Stairs..... | 75 00 |
| Plastering, 400 yards, at 25 cents | 100 00 |
| Tin-work | 25 00 |
| Painting | 100 00 |
| | 2,961 50 |

CHAS. BIRD,

*Captain and Assistant Quartermaster, U. S. A.*HEADQUARTERS DEPARTMENT OF DAKOTA,
Office of Assistant Quartermaster.

L.

Estimate of cost of stable building.

| | |
|--|----------|
| Excavations, 144 yards at 35 cents | \$50 40 |
| Stone-work, 580 perch at \$3 | 1,740 00 |
| Filling up with clay | 40 00 |
| 34 window-sills, at \$1.50 | 51 00 |
| 4 pair sliding-doors, at \$25 | 100 00 |
| 34 windows, sash to slide in pocket, including sliding blinds, at \$10 | 340 00 |
| Lumber, including work, 24 M, at \$30 | 720 00 |
| Roof boards, including work, 8 M, at \$30 | 240 00 |
| Shingles 73 M, at \$5 | 365 00 |
| Ridge ventilators, flaps, cords, &c | 80 00 |
| 2 doors to forage rooms, at \$10 | 20 00 |
| 62 hooks for harness, at \$1.50 | 93 00 |
| Cast-iron mangers | 160 00 |
| Hoop-iron on top of stable partitions | 40 00 |
| | 4,039 40 |

Estimate of cost of gunshed.

| | |
|--|----------|
| Excavation, 150 yards, at 35 cents | \$52 50 |
| Stone-work, 150 perch, at \$3 | 450 00 |
| 55 M feet lumber framed, at \$30 | 1,650 00 |
| 10 M feet roof boards, at \$30 | 300 00 |
| 10 M feet ceiling boards, inside, at \$35 | 350 00 |
| 6 M feet siding, outside, at \$40 | 240 00 |
| Paper | 40 00 |
| 91 M shingles, at \$5 | 455 00 |
| Floor in gunshed, 3,500 feet, at \$30 | 105 00 |
| Floor in balance of rooms, 500 feet, at \$40 | 180 00 |
| 4 sliding doors, at \$25 | 100 00 |
| 1 double door | 20 00 |
| 4 single doors, at \$12 | 48 00 |
| 20 double doors, gunshed, at \$25 | 500 00 |
| Iron-work for trusses, &c | 100 00 |

| | |
|--|----------|
| 9 windows, with weights, at \$15 | \$135 00 |
| 4 windows, with weights, at \$10 | 40 00 |
| 4 windows, with weights, at \$8 | 32 00 |
| 4 box stalls (for sick animals), at \$25 | 100 00 |
| 2 chimneys, 5 M brick, tin, &c., at \$15 | 75 00 |
| Ventilation-shafts, &c., of stables | 50 00 |
| 4 mangers, at \$5 | 20 00 |
| Medicine-chest | 25 00 |
| Painting | 500 00 |
| Harness-hooks in harness-room | 75 00 |

5,642 50

Estimate of cost of open sheds and stone walls around.

| | |
|---|----------|
| Stone wall, 8 feet high, 20 inches thick, 100 perches, at \$3 | \$300 00 |
| 5 double doors, all complete, at \$25 | 125 00 |
| 4 open sheds, shingle roof | 200 00 |

625 00

RECAPITULATION.

| | |
|---|------------|
| Estimate cost of stable building | \$4,039 40 |
| Estimate cost of gunsheds | 5,642 50 |
| Estimate cost of open sheds, with stone wall around | 625 00 |

10,306 90

CHAS. BIRD,

Captain and Assistant Quartermaster, U. S. A.

M.

*Estimate for the construction of an additional ward to the post hospital at Fort Snelling, Minn.
Estimate for twelve-bed ward to hospital.*

| | |
|--|----------|
| 6,000 feet dimension lumber | \$120 00 |
| 5,000 feet sheathing boards | 100 00 |
| 2,500 feet siding | 65 00 |
| 4,500 feet 3-inch flooring | 147 00 |
| 1,000 feet finish lumber | 35 00 |
| 24 M XX shingles | 96 00 |
| 12 windows, at \$10 | 120 00 |
| 7 windows, at \$3 | 21 00 |
| 5 doors, at \$8 | 40 00 |
| 500 yards plastering, at 30 cents per yard | 150 00 |
| 100 yards excavating | 45 00 |
| 80 perches stone laid in wall | 200 00 |
| Painting | 150 00 |
| Carpenter-work | 300 00 |
| Nails and hardware | 50 00 |
| Chimney | 65 00 |
| | 1,704 00 |
| Plumbing and tinning | 500 00 |
| Cistern, with force-pump and pipe | 300 00 |
| Grading | 150 00 |
| Total | 2,654 00 |

G. PERIN,

*Surgeon, U. S. A., Medical Director.*HEADQUARTERS DEPARTMENT DAKOTA,
Medical Director's Office, November 29, 1882.

N.

| | |
|--|------------|
| For water-closets and fuel-sheds for new part of post, allowing one of each to new barrack buildings, set of officers' quarters, non-commissioned staff quarters, and administration building, thirty-seven in all, at \$150 a piece | \$5,550 00 |
| Fencing for twenty-five sets of officers' and non-commissioned officers' quarters, at \$65 | 1,625 00 |
| Removing cemetery and building new fences | 900 00 |
| Walks at post | 900 00 |
| Grading, building roads, and removing rubbish | 4,930 96 |
| | 13,905 96 |

CHAS. BIRD,

Captain and Assistant Quartermaster, U. S. A.

HEADQUARTERS DEPARTMENT OF DAKOTA,

Office of Assistant Quartermaster.

BUILDINGS AND WATER-WORKS AT MADISON BARRACKS, SACKETT'S HARBOR, NEW YORK.

OFFICE ACTING ASSISTANT QUARTERMASTER,
Madison Barracks, New York, December 11, 1882.

SIR: In compliance with directions of the post commander I have the honor to submit herewith plans and estimates for supplying this post with water, for erecting a building for offices, school, and library, for raising company barracks so as to make attics available as dormitories, for erecting kitchens and bath-rooms to officers' quarters west of sally-port, and for raising rear buildings of east row of officers' quarters so as to make bath-rooms. I also return herewith proceedings of a board of officers convened to recommend system of water supply.

The estimate for water supply includes the building of engine-house, laying of 6-inch mains, joined by lead, to all parts of the garrison, connections with all the buildings by 1½-inch pipe, placing of fire hydrants, and furnishing of hose and hose-reels; it also includes the digging of a sewer back of the west set of enlisted men's barracks, to complete the drainage of that portion of the post. A great portion of the expense on this estimate is due to the necessity of laying the pipes four feet below the surface. All the excavation for this purpose will be in hard rock, which reaches to within six or eight inches of the surface. The necessity for early and favorable action in this matter is evident, as no improvement has been made in supplying the post since the convening of the board whose proceedings are inclosed. A garrison of headquarters, band, and six companies is still supplied by tank on wheels, from which water is carried into the quarters in buckets. Any mishap to this tank or pump would necessitate the carriage of the water by hand from the now frozen lake. The estimate above referred to does not contemplate the erection of a water-tank, all authorities here claiming that a tank would not stand the intense cold. It is proposed to pump directly into the mains, having escape-valves to relieve overpressure, somewhat after the Holly system.

The estimate for the building for offices, school, and library is rendered necessary, as there is no building here for the purpose, nor one that could be used as such. The offices, school, library, and chapel are now occupying two sets of officers' quarters which are very much needed for officers and which would be indispensable when officers now absent rejoin. Even as it is the quarters are overcrowded.

The estimate for raising company barracks is made necessary by the overcrowding of the enlisted men, many of them being compelled to sleep in the attics, with insufficient air space. Some such change is very necessary, not only as more economical than building L's to the quarters, but as it has become apparent that the floor-rafters, roof-plates, and many parts of the roofs, the timbers of which have not been replaced since 1819, are so rotten as to render the laying of new ones necessary in the near future.

The estimate for building kitchens and bath-rooms to the west set of officers' barracks is to replace the wooden sheds, which are in a most ruinous condition and uninhabitable during the winter season. These sheds are built of timber and are but "lean-to's;" they are so old as to be unrepairable, and the connections from the kitchen ranges through the wood-work to the tumble-down chimneys built on the outside is a source of great danger from fire. This estimate also contemplates furnishing each set of quarters with bathing facilities, a necessity at every post; at present there is not a bath-room at the post other than those partitioned off in the enlisted men's barracks, into which water

has to be carried by hand. The building of these kitchens is absolutely necessary, as the wooden sheds will fall down, if they are not destroyed by fire, before the end of next season.

Estimates for raising the second story of the west set of officers' barracks have not been made; they will, however, be forwarded if required. The cost will be about \$5,000. The prices of material and labor in these estimates have been obtained from builders and merchants in this vicinity, and are the ruling prices at this date.

Very respectfully, your obedient servant,

W. W. WOTHERSPOON,
First Lieutenant and Assistant Quartermaster, Twelfth Infantry.

[First indorsement.]

MADISON BARRACKS, N. Y., December 13, 1882.

Respectfully forwarded. Approved; and early action as can be secured is recommended.

The plans, &c., for these repairs and additions have received the most careful and prolonged attention, and are judged to be the most economical and practicable that from all our sources of information we can present, after the subject has been gone over repeatedly by post commanders, inspectors, and boards of officers.

The first thing in order of importance and safety is the water supply; the rest follows for health and convenience.

With reference to the quarters it will be considered that nearly one-half of the year at this post is cold weather, and that the barracks as they stand are for the most part old, dilapidated, and inconvenient, and must in any event be repaired for the present garrison, which is the smallest that should be assembled for the twofold object of regimental instruction and readiness for service against a mob in any of our Eastern cities at short notice.

The new building for the staff and for courts-martial, school, and chapel is highly necessary for the convenience and wants of the service.

At present there are no offices for the commanding officer or any of his staff, who, with the clerks, are cramped up in quarters and barracks needed for the troops.

The administrative building, the increase and repair of quarters for men and officers, the water supply, and the drainage, water and bath closets, in fact all that we ask for, is only what would be required at any post for such a garrison as the present.

The old row of officers' quarters should likewise be raised. I think it can be done for \$5,000 on the plan of the new row. It would be most economical to do the whole job together.

Hereafter, if desired, I will present a plan for increasing the capacity of the post for four more companies, Madison Barracks having been designated by the General of the Army for a whole regiment in his last annual report.

The present plans and estimates would facilitate any such object. We should then have ten companies together for immediate service.

The amount now requested to be appropriated for immediate necessities is \$52,000, or including the raising of the western row of officers' quarters, \$57,000.

O. B. WILLCOX,
Colonel Twelfth Infantry, Bvt. Maj. Gen. U. S. A., Commanding.

[Second indorsement.]

DECEMBER 15, 1882.

Chief quartermaster.

[Third indorsement.]

OFFICE CHIEF QUARTERMASTER, DEPARTMENT OF THE EAST,
Governor's Island, New York Harbor, December 21, 1882.

Respectfully returned to the assistant adjutant-general Department of the East.

The accompanying plans and estimates appear to have been very carefully prepared, and now that it seems probable that Madison Barracks is to be continued as a large garrison for many years, it is believed that all the additions and repairs and new constructions estimated for are absolutely necessary.

The modified estimates call for \$52,888.90, chargeable to the following appropriations, viz: Barracks and quarters, \$33,348.40; Army transportation, \$19,540.50; and their approval by the department commander is recommended.

The new water-supply system should be put in operation early in the coming spring, if the state of the appropriation will admit of it.

I recommend that consideration of the project for raising the old row of officers' quarters, at stated approximate cost of \$5,000, be deferred for the present.

C. G. SAWTELLE,
Deputy Quartermaster-General, Chief Quartermaster.

[Fourth indorsement.]

HEADQUARTERS DEPARTMENT OF THE EAST,
Governor's Island, N. Y., December 27, 1882.

Respectfully forwarded to the Adjutant-General of the Army.

As it is in accordance with the views of the General of the Army, expressed in his annual report, that there should be erected at Madison Barracks permanent quarters for ten companies, the inclosed plans and estimates being in that direction are approved, both for the water-supply and the raising of the old row of officers' quarters.

It will be seen from Colonel Wilcox's indorsement that he has given the question of a garrison for ten companies at Madison Barracks consideration (headquarters and six companies are there now), and is ready with a plan to prepare the post for four additional companies, should it be called for.

WINFD. S. HANCOCK,
Major-General Commanding.

[Fifth indorsement.]

WAR DEPARTMENT, ADJUTANT-GENERAL'S OFFICE,
Washington, December 30, 1882.

Respectfully referred to the Quartermaster-General for remark.

By order of the Secretary of War.

R. C. DRUM,
Adjutant-General.

[Sixth indorsement.]

QUARTERMASTER-GENERAL'S OFFICE,
Washington, January 11, 1883.

Respectfully returned to the honorable Secretary of War.

These papers cover plans and estimates calling for improvements at Madison Barracks, New York, the estimated cost of which is \$52,888.90—barracks and quarters \$33,348.40; army transportation, \$19,540.50.

They have received the approval of General Hancock, they being, the Department Commander adds, in accordance with the views of the General of the Army, as expressed in his annual report that there should be erected at Madison Barracks permanent quarters for ten companies.

The reduced condition of the appropriations above indicated, will not admit of any portion of the work being done at this time.

The General of the Army having in his annual report of 1882 recommended that for the enlargement and improvement of different military posts, Madison Barracks being among the number, that Congress be asked to grant \$1,000,000, and that recommendation having been concurred in by the Secretary of War, as appears from Book of Estimates for 1883 and 1884, page 156, I suggest that these papers be now laid before the General of the Army for his information, &c.

RUFUS INGALLS,
Quartermaster-General, Bvt. Maj. Gen. U. S. A.

[Seventh indorsement.]

HEADQUARTERS OF THE ARMY,
Washington, D. C., January 16, 1883.

To be held until Congress shall have appropriated as asked for, when a due apportionment can be more justly made.

W. T. SHERMAN,
General.

[Eighth indorsement.]

WAR DEPARTMENT, *January 16, 1883.*

The recommendation of the General of the Army is approved.

By order of the Secretary of War.

JOHN TWEEDALE,
Chief Clerk.

Estimate of material and labor to raise the walls and convert the attics of two sets of enlisted men's barracks into dormitories at Madison Barracks, New York.

| | |
|---|----------|
| Labor raising present roof of barracks 4 feet, at \$350 each set | \$700 00 |
| 4,400 feet hemlock lumber, 10 by 12, for roof plates, at \$13 per thousand | 57 20 |
| 15,840 feet hemlock lumber, 2 by 8, for ceiling rafters, at \$13 per thousand | 205 92 |
| 270 thousand sawed shingles, at \$4.75 per thousand | 1,282 50 |
| 44 thousand laths, 1½-inch, at \$4.75 per thousand | 209 00 |
| 20,000 feet pine flooring, tongued and grooved, at \$30 per thousand | 600 00 |
| 400 pounds cut nails, 2 penny, at \$5 per hundredweight | 20 00 |
| 500 pounds cut nails, 10 penny, at \$4.75 per hundredweight | 23 75 |
| 400 pounds shingle nails, at \$5.25 per hundredweight | 21 00 |
| 80 window frames and sash (six lights 10 by 12), at \$4.50 each | 360 00 |
| 708 perches half-dressed stone masonry, at \$5 per perch | 3,540 00 |
| 80 dressed stone window sills, at \$4 each | 320 00 |
| 40 chimneys raised 4 feet, at \$4 each | 160 00 |
| 4,000 yards plastering, two-coat work, at 25 cents per yard | 1,000 00 |
| 40 days' labor lathing, at \$2 per day | 80 00 |
| 264 days' labor, carpenter work, at \$2.50 per day | 660 00 |
| Paints, oils, and labor to paint wood work | 150 00 |
| Total cost of repairs | 9,389 37 |

W. W. WITHERSPOON,

First Lieutenant and Reg. Q. M. Twelfth Infantry, A. A. Q. M.

Approved:

O. B. WILCOX,

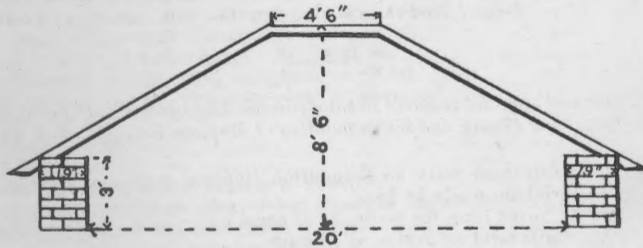
Colonel Twelfth Infantry, Bvt. Maj. Gen., U. S. A., Commanding.

Estimate of labor and material required to build commanding officers', adjutants', quartermasters' offices, and library and school building at Madison Barracks, New York.

| | |
|---|----------|
| 106.60 cubic yards stone-work for foundation, lime and mortar, at 5 cents | \$533 00 |
| 294,338 burnt brick for walls, at \$8 | 2,354 70 |
| 920 bushels burnt lime for walls, at 25 cents | 230 00 |
| 150 cubic yards sand for walls, at 38 cents | 57 00 |
| Labor erecting walls | 1,176 00 |
| 48 cut-stone window caps, at \$4 | 192 00 |
| 48 cut-stone window sills, at \$4 | 192 00 |
| 4 outside door caps, 4 feet 2 inches, cut stone, at \$5 | 20 00 |
| 4 outside door sills, 4 feet 2 inches, cut stone, at \$6 | 24 00 |
| 2 outside door caps, 5 feet 8 inches, cut stone, at \$6 | 12 00 |
| 2 outside door sills, 5 feet 8 inches, cut stone, at \$7 | 14 00 |
| 4 cut-stone platform steps, 4 feet by 4 feet, at \$16 | 64 00 |
| 8 cut-stone platform steps, 16 inches by 4 feet, at \$6 | 48 00 |
| 2 cut-stone platform steps, 4 feet by 6 feet, at \$24 | 48 00 |
| 4 cut-stone platform steps, 16 inches by 6 feet, at \$8 | 32 00 |
| 246 linear feet for water table, at \$1 | 246 00 |
| 22,246 feet rough lumber, rafters, joists, and studding, at \$21 per M | 671 61 |
| 9,548 feet dressed tongued and grooved pine floors, base-boards, casing, &c., at \$45 | 429 63 |
| (Above lumber includes labor of erection.) | |
| 270 feet cornice, at \$1 | 270 00 |
| 21 steps of stairway complete with hand rail and casing, at \$8 | 168 00 |
| 48 window frames, sash, glass, and painting complete, at \$9 each | 432 00 |
| 48 sets weights, cords, pulleys, and locks, at \$2.50 each | 120 00 |
| 4 outside doors, frames, transoms, and painting, at \$16 each | 64 00 |
| 4 sets outside door trimmings, hinges, locks, &c., at \$3 each | 12 00 |
| 2 outside doors, frames, transoms, and painting double, at \$27 each | 54 00 |
| 2 sets door trimmings, hinges, locks, &c., at \$4 each | 8 00 |
| 16 inside doors, frames, casing, and painting, at \$9 each | 144 00 |
| 16 sets door trimmings, hinges, locks, &c., at \$2.50 each | 40 00 |
| 200 square yards painting, at 22 cents | 44 00 |
| 41 squares tin roofing, including labor, at \$8 | 328 00 |

A.

Cross-section plan of attic of barracks at Madison Barracks, N. Y.



Scale, 1 inch = 8 feet.

H. Ex. 61—face p. 22



| | | |
|-------|---|----------|
| 2,028 | Water-spouts, escapes, &c. | \$60 00 |
| | square yards plastering, 3 coats hard finish, at 30 cents | 608 40 |
| | Total for offices and schools | 8,695 31 |

W. W. WITHERSPOON,

First Lieutenant and Reg. Q. M. Twelfth Infantry, A. A. Q. M.

Approved:

O. B. WILCOX,

Colonel Twelfth Infantry, Bvt. Maj. Gen., U. S. A., Commanding.

Estimate of material and labor required to erect kitchens and bath-rooms to officers' quarters at Madison Barracks, New York.

| | | |
|--------|---|-----------|
| 94,000 | burnt brick for walls, at \$8 | \$752 00 |
| 282 | bushels lime, at 25 cents | 70 00 |
| 47 | cubic yards sand, at 38 cents | 17 96 |
| | Labor, erecting walls | 276 00 |
| 18 | cut-stone window-caps, at \$4 | 72 00 |
| 18 | cut-stone window-sills, at \$4 | 72 00 |
| 4 | cut-stone door-caps, at \$5 | 20 00 |
| 4 | cut-stone door-sills, at \$5 | 20 00 |
| 9,000 | feet rough lumber, rafters, joists, studding, &c., at \$21 | 189 00 |
| 5,395 | feet dressed tongued and grooved lumber, floors, casings, &c., at \$45 | 232 77 |
| | (Above lumber includes labor of erection.) | |
| 6 | outside doors, frames, and casings, complete, at \$9 | 54 00 |
| 10 | inside doors, frames and casings complete, at \$9 | 90 00 |
| 16 | sets door trimmings, locks, hinges, &c., at \$1.50 | 24 00 |
| 18 | window-frames, sashes, glass, complete, at \$8.50 | 153 00 |
| 850 | square yards plastering, two-coat work, at 20 cents | 170 00 |
| 2 | bath-tubs, at \$15 | 30 00 |
| 2 | wash-stands, at \$10 | 20 00 |
| 4 | water-closets, at \$22 | 88 00 |
| 40 | feet iron pipe, elbows and faucets to above | 15 00 |
| 50 | feet glazed soil-pipe from water-closet to sewer, at 40 cents | 20 00 |
| 1 | ventilating pipe and top protection | 5 00 |
| 6 | stationary wash-tubs for laundry, at \$10 | 60 00 |
| 20 | feet iron pipe, elbows and faucets to laundry | 7 50 |
| | Plumber's labor | 20 00 |
| 17 | squares tin roofing, including labor, \$8 | 136 00 |
| 40 | square yards painting, at 22 cents | 13 20 |
| | Total for one double kitchen and bath-room | 2,627 43 |
| | Cost of four double kitchens and bath-rooms | 10,509 72 |
| | Cost of material and labor to erect two single kitchens and bath-room for quarters at either end of officers' row upon same general plan, at \$1,342 each | 2,684 00 |
| | Cost of material and labor to raise walls and furnish bath-rooms to rear buildings of officers' quarters, kitchens to which are already built, at \$414 each, five sets | 2,070 00 |
| | Total cost of repairs to officers' quarters | 15,263 72 |

The above estimate contemplates the erection of four double and two single kitchens in rear of officers' quarters west of sally-port to replace wooden sheds, which are in ruinous condition and a source of danger from fire; also the raising of connection between front and rear building of officers' quarters east of sally-port and fitting the rooms so formed as bath-rooms.

W. W. WOTHERSPOON,

First Lieutenant and Reg. Q. M., Twelfth Infantry.

Approved.

O. B. WILLCOX,

Colonel Twelfth Infantry, Bvt. Maj.-Gen. U. S. A., Commanding.

MADISON BARRACKS, N. Y., December 11, 1882.

Estimate of material and labor for water-works at Madison Barracks, New York.

| Buildings: | | |
|--|--------------|------------------|
| Engine-house, complete | ----- | \$1,000 00 |
| Engines, boilers, and water-mains: | | |
| 2 boilers with air-tank and smoke-stack | ----- | 1,310 00 |
| 1 feed-pump for boilers | ----- | 175 00 |
| Labor setting boilers | ----- | 246 00 |
| 1 force-pump including labor setting same | ----- | 1,000 00 |
| 2,700 feet cast-iron pipe, 6 inches diameter, $\frac{3}{8}$ thick, for main, at \$1.55 | ----- | 4,185 00 |
| Labor trenching and refilling for main in rock, at \$1.50 | ----- | 4,050 00 |
| Labor laying main and connecting pipe by lead, at 21 cents | ----- | 567 00 |
| 30 elbows and T's, 6-inch, at \$2.50 each | ----- | 75 00 |
| 1,380 feet wrought-iron pipe, $\frac{1}{2}$ -inch connections from main, at 35 cents | ----- | 483 00 |
| Labor trenching and refilling for $\frac{1}{2}$ -inch pipe in rock, at \$1.50 | ----- | 2,070 00 |
| Labor laying $\frac{1}{2}$ -inch pipe at 5 cents | ----- | 69 00 |
| 50 elbows and T's, $\frac{1}{2}$ -inch, at 50 cents | ----- | 25 00 |
| 25 stop-cocks, $\frac{1}{2}$ -inch, at \$6 | ----- | 150 00 |
| 6 gates in 6-inch main, at \$44 | ----- | 264 00 |
| 10 double fire hydrants, at \$50 for complete set | ----- | 500 00 |
| 6 single fire hydrants, without standard, at \$15 | ----- | 90 00 |
| Sewer-pipe to carry water to main sewer: | | |
| 500 feet glazed tile sewer-pipe, 6 inches, and laying same, at \$1.80 | ----- | 900 00 |
| 700 feet glazed tile sewer-pipe, 8-inch, and laying same, at \$1.95 | ----- | 1,365 00 |
| 30 elbows and T's, glazed tile sewer-pipe, at 50 cents | ----- | 15 00 |
| Hose-nozzles and hose-reels for use with fire: | | |
| 500 feet linen or rubber hose, 3-inch, with couplings, at \$1.30 | ----- | 650 00 |
| 2 hose-nozzles for fire pat., at \$7 | ----- | 14 00 |
| 250 feet rubber hose, 1-inch, with couplings, at 35 cents | ----- | 87 50 |
| 2 iron hose-carts, at \$125 each | ----- | 250 00 |
| Total for water-works | ----- | 19,540 50 |

The above estimate contemplates the erection of engine-house, laying of mains, placing of hydrants, furnishing necessary hose and appliances for protection against fire, and laying of sewer from S. E. corner of west barracks to lake N. W. of earthwork.

W. W. WOTHERSPOON,

First Lieutenant Reg. Q. M. Twelfth Infantry.

MADISON BARRACKS, N. Y., December 12, 1881.

Approved.

O. B. WILLCOX,

Colonel Twelfth Infantry, Bvt. Maj.-General, U. S. A., Commanding.

No. 5.

BUILDINGS AT FORT WAYNE, MICHIGAN.

OFFICE OF ACTING ASSISTANT QUARTERMASTER,

Fort Wayne, Michigan, December 8, 1882.

SIR: In obedience to instructions contained in your indorsements of October 27 and November 14, 1882, I have the honor to transmit herewith the following papers prepared here, viz:

Estimate for double set company officers' quarters.

Specification and estimate for one set company quarters.

Specifications and estimates for storehouse and shops.

Plan, elevation, and section of company quarters.

Plan, elevation, and section of storehouse and shops.

I also send the following papers received from your office, viz:

Specifications for company officers' quarters, in which I have made provisions for bathtubs and concreting cellars.

Elevation of company barracks.

End elevation and section of company barracks.
 Longitudinal section through roof.
 Framing plan of roof.
 Cellar plan field officers' quarters.
 First floor field officers' quarters.
 Second floor field officers' quarters.
 Front elevation field officers' quarters.
 Side elevation field officers' quarters.
 One set of plans for company officers' quarters.
 Tracings of plans and copies of estimates and specifications have been made and retained here.

The commanding officer will forward plat of post, on which will be indicated the location of proposed buildings.

The following is a recapitulation of the entire cost of proposed buildings:

| | |
|---|-------------------|
| 2 sets company barracks, at \$11,632.26 each..... | \$23, 264 52 |
| 3 sets double company officers' quarters, at \$8,693.82 each..... | 26, 081 46 |
| 1 building for storehouse and workshop..... | 3, 779 38 |
| 6 privies and vaults for officers' quarters, at \$82.57 each..... | 495 42 |
| For extension of sewer in rear of officers' quarters..... | 135 00 |
| For walks in front of officers' quarters..... | 109 20 |
| For paling fences between officers' quarters..... | 33 00 |
| For fencing yards of officers' quarters..... | 173 67 |
| Total..... | 54, 071 65 |

Very respectfully, your obedient servant,

GREGORY BARRETT,

First Lieutenant and Reg. Q. M., Tenth Infantry, A. A. Q. M.

CHIEF QUARTERMASTER DEPARTMENT OF THE EAST,
Governor's Island, New York Harbor.
 (Through commanding officer.)

[First indorsement.]

FORT WAYNE, MICH., December 11, 1882.

Respectfully forwarded. Attention invited to the letter of remarks and suggestions of commanding officer, inclosing a plat of fort and reservation.

The roll of drawings accompanies in separate package.

H. B. CLITZ,

Colonel Tenth Infantry, Commanding.

[Second indorsement.]

DECEMBER 13, 1882.

CHIEF QUARTERMASTER.

[Third indorsement.]

OFFICE OF CHIEF QUARTERMASTER, DEPARTMENT OF THE EAST,
Governor's Island, New York Harbor, December 21, 1882.

Respectfully returned to the Assistant Adjutant-General, Department of the East.

The accompanying plans and estimates, which have been prepared in compliance with orders of the department commander, contained in indorsement bearing date of October 23, 1882, on letter from the General of the Army of October 20, 1882, to Major-General Hancock, commanding Military Division of the Atlantic, have been very carefully prepared, and are for the number and character of buildings which the General of the Army specifies in his letter should be erected to make Fort Wayne a complete garrison for headquarters, band, and six full companies of infantry.

Inclosed herewith, marked A, is a tracing of plan of Fort Wayne, showing the location of all existing buildings, and in red ink the location proposed for the barracks and storehouse if built inside the fort, as suggested by the General of the Army.

Especial attention is invited to the accompanying letter from Col. H. B. Clitz, commanding post. I concur with Colonel Clitz in the opinion that a new building for storehouse, shops, &c., is not immediately necessary at this post, and that whenever built (for the reasons given in his letter) it should be placed *outside* the walls of the fort.

The site for the new officers' quarters, indicated in pencil on the inclosed tracing, seems to be the best possible. This will necessitate the removal of the old post cemetery, which has already been urgently recommended, and of the old chapel, which should be removed or torn down.

The inclosed estimates call for \$54,071.65, or if new storehouse is not now authorized the estimate will be reduced by \$3,779.38; total \$50,292.27; and approval of the same by the department commander is recommended.

C. G. SAWTELLE,
Deputy Quartermaster-General, Chief Quartermaster.

[Fourth indorsement.]

HEADQUARTERS DEPARTMENT OF THE EAST,
Governor's Island, N. Y., December 27, 1882.

Respectfully forwarded to the Adjutant-General of the Army.

The inclosed plans, specification, and estimates, made to accord with the views of the General of the Army, are recommended for approval.

Attention is invited to the letter of Colonel Clitz, commanding the post of Fort Wayne, containing suggestions and remarks in regard to the erection of proposed new buildings at that post.

WINFD. S. HANCOCK,
Major-General, Commanding.

[Fifth indorsement.]

WAR DEPARTMENT, ADJUTANT-GENERAL'S OFFICE,
Washington, December 30, 1882.

Respectfully referred to the Quartermaster-General for remarks.

By order of the Secretary of War:

R. C. DRUM,
Adjutant-General.

[Sixth indorsement.]

QUARTERMASTER-GENERAL'S OFFICE,
Washington, January 13, 1883.

Respectfully returned to the honorable Secretary of War, and invite attention to accompanying notes of the 11th instant, in which the facts of the case are recited.

Based on instructions of the General of the Army, General Hancock has had plans and estimates prepared for providing additional accommodations at Fort Wayne, Michigan.

The estimate calls for \$54,071.65, or, if storehouse be omitted, \$50,292.27, and has received the approval of the major-general commanding the division.

The reduced condition of the barracks and quarters reserve fund will not warrant any portion of the work being done at this time.

As General Sherman, in his annual report of 1882, page 10, considers Wayne as one of the posts which should be maintained in permanency (though changes involving cost are necessary), I recommend that these papers be laid before him for his information, &c.

RUFUS INGALLS,
Quartermaster-General, Brevet Major-General, U. S. A.

WAR DEPARTMENT, *January 18, 1883.*

Respectfully referred to the General of the Army for remark.

ROBERT T. LINCOLN,
Secretary of War.

HEADQUARTERS ARMY OF THE UNITED STATES,
Washington, D. C., January 18, 1883.

SIR: I have the honor herewith to return the plans, estimates, and papers relating to Fort Wayne, Michigan, and recommend that these papers be transmitted to the Military Committee of the House of Representatives with a request for an appropriation of \$54,071.65 to complete the work estimated for, the work to be done under the supervision of the Quartermaster's Department.

Notwithstanding the opinion of Colonel Clitz, I approve of building inside the fort, of good stone or brick, at least one set of barracks and storehouse for war purposes; the buildings outside should be similar to those existing, of frame on good brick foundations, to be destroyed in case of war. Fort Wayne is one of the most valuable military posts on the northern frontier, and should be finished in the best style possible for a garrison of at least six full companies.

W. T. SHERMAN,
General.

Hon. R. T. LINCOLN,
Secretary of War.

FORT WAYNE, MICHIGAN, *December 9, 1882.*

SIR: I have the honor to make the following suggestions and remarks in regard to the erection of the proposed new buildings at this post:

The inclosed tracing of the fort and reservation, shows the position of the proposed new brick barracks, in red, at A and B. Between the back piazzas of Barracks A and B, and the foot of the revetment of the terre-plein, there should be left space 8 feet wide for a road-way, and between barracks and bakery a space of the same width, which will leave a space of 15 feet between the corner of the front piazza of Barrack A and the corner of Barrack No. 12. The north end of Barrack B being in the same plane with the north end of Barrack No. 12, there will be a space of at least 30 feet between the bakery and Barrack B. A two-story brick building for shops and stores, 20 by 100 feet, is shown at C, its foundation lying between the main sewer and the foot of the revetment.

There are strong reasons why this building, if built, should not be placed inside the fort, the main one being that the postern shown at X enters the flank of the bastion at Z, with a passage-way of only 8 feet, makes a sharp turn at an angle only 5 degrees greater than a right angle, into a passage way only 12 feet wide running under the parapet into the fort. It is therefore with difficulty that a short coupled two-horse wagon can pass through it. A long coupled wagon, or a wagon loaded with rafters, flooring, joists, or sleepers, would have to be unloaded outside, and the material carried in by hand. Besides, we have ample store-room and shop-room in buildings Nos. 31, 32, 34, and 35, for a six-company post.

But if it is deemed necessary to erect such a building the best place for it would be on the clear space opposite building No. 30, which is the administration building. The position of the three new double sets of officers' quarters is shown in pencil on the right of the present officers' line. The chapel, which is no longer used as such, could be removed or torn down. There will then be 22 sets of officers' quarters. The full complement of officers of a post for regimental headquarters and six companies would be: 1 commanding officer, 1 surgeon, 1 assistant surgeon, 1 regimental quartermaster, 1 adjutant and 18 company officers, making a total of 23. If all were present, two bachelor second lieutenants could occupy one set of quarters.

Placing these quarters on the right of the present line would be less expensive than placing them anywhere else, because of the sewers, water pipes, fencing, walks, &c., but if placed there the cemetery should be removed, which has already been recommended. It is well to note that the cellar floors of the three new sets of quarters should be 2 feet higher than those of the present quarters, for the sake of good drainage into the vaults, which get shallower as they approach the right of the line. The sewer falls 1 inch in every 10 feet.

All long timber for both barracks will have to be unloaded at the outside end of the foot-bridge and carried by hand into the fort.

Very respectfully, your obedient servant,

H. B. CLITZ,
Colonel Tenth Infantry, Commanding.

ASSISTANT ADJUTANT-GENERAL,
Department of the East, Governor's Island, N. Y. H.

Estimate of store-house and carpenter-shop at Fort Wayne, Michigan.

| | |
|---|------------|
| 180 perches rubble stonework, at \$7 | \$1,260 00 |
| 24 window-sills, 5 by 8.4 feet, 96 feet, at 70 cents | 37 50 |
| 66 M brick laid, at \$11 | 726 00 |
| 200 pounds iron anchors and bolts, at 10 cents | 20 00 |
| 11,000 feet bill stuff, at \$25 | 275 00 |
| 7,500 feet 1½ F. C. pine flooring, at \$35 | 262 50 |
| 3,000 feet roof boards, at \$20 | 60 00 |
| 23 M shingles xxx, at \$6 | 138 00 |
| 272 feet cornice, at 75 cents | 204 00 |
| 24 windows, at \$6 | 144 00 |
| 4 pairs outside double doors, at \$12 | 48 00 |
| 1 pair inside double doors, at \$10 | 10 00 |
| 2 outside single doors, at \$7 | 14 00 |
| 1 inside flight of stairs | 50 00 |
| 1 outside flight of stairs | 100 00 |
| 650 yards painting (2 coats), at 14 cents | 91 00 |
| 288 lights, glazing 12 by 16, at 22 cents | 63 36 |
| 216 feet gutter xx tin | |
| 88 feet conductor galv. iron } 304 feet trimming, at 20 cents | 60 80 |

| | |
|--|------------|
| Hoist beam | \$10 00 |
| 24 pairs outside shutters, at \$5 | 120 00 |
| Drainage, &c.: | |
| 70 feet 4-inch earthen pipe, at 4 cents per foot | 9 80 |
| 3 4-inch traps, at \$1.60 | 7 80 |
| 4 4-inch T's, at 48 cents | 1 92 |
| $\frac{1}{2}$ barrel cement | 1 50 |
| <hr/> | |
| Total | \$3,779 38 |

Estimate of one set company quarters.

| | |
|--|------------|
| 388 perch rubble masonry, at \$7 | \$2,716 00 |
| 52 window sills, 4 feet, 208 feet, at 70 cents | 145 60 |
| 7 door sills, 34 feet, at \$1.50 | 51 00 |
| 282 M brick, at \$11 | 3,104 00 |
| 1,475 yards plastering, at 24 cents | 354 00 |
| 300 pounds iron anchors, &c., at 10 cents | 30 00 |
| 25,000 feet bill stuff, at \$25 | 625 00 |
| 9,200 feet maple flooring, at \$50 | 460 00 |
| 4,500 feet roof boarding, at \$20 | 90 00 |
| 34 M shingles, at \$6 | 204 00 |
| 336 feet cornice, at \$1 | 336 00 |
| 5,500 feet wainscoating, at \$45 | 247 50 |
| 52 windows, complete, at \$14 | 728 00 |
| 15 single doors, at \$14 | 210 00 |
| 4 pairs double doors, at \$25 | 100 00 |
| 1 flight stairs | 200 00 |
| 272 verandas | 1,200 00 |
| Steps | 30 00 |
| Sinks | 20 00 |
| Painting 2,420 yards, at 20 cents | 484 00 |
| Glazing 624 lights, 10 inches by 18 inches, at 20 cents | 124 80 |
| Plumbing | 30 00 |
| Tinning 280 feet gutter, 200 feet conductor, at 20 cents | 96 00 |
| Sewerage and drain pipes. | |
| 244 feet 10-inch earthen pipe, at 40 cents per foot | 97 60 |
| 170 feet 4-inch earthen pipe, at 14 cents per foot | 23 80 |
| 2 2-inch traps, at \$3.20 | 6 40 |
| 1 10-inch elbow | 1 10 |
| 2 10-inch T's, at \$1.25 | 2 50 |
| 2 4-inch T's, at 48 cents | 96 |
| <hr/> | |
| Total | 11,618 26 |

| | |
|--|-----------|
| Amount saved on stone work by building a battering wall with heavy rubble footing, stone footing, 4,500 feet, at 40 cents per yard | 1,800 00 |
| Rubble masonry with footing, 300 perch | 2,100 00 |
| <hr/> | |
| Battering wall, 388 perch, at \$7 | 3,900 00 |
| <hr/> | |
| Saved on square head windows | 2,716 00 |
| <hr/> | |
| Total amount saved on one building | 1,184 00 |
| <hr/> | |
| Cash brought down | 52 00 |
| One bridge from veranda to serraplain | 1,236 00 |
| <hr/> | |
| Total cost | 11,618 26 |
| <hr/> | |
| Total cost | 14 00 |
| <hr/> | |
| Total cost | 11,632 26 |

Estimate of one double set company officers' quarters.

| | |
|--|------------|
| 158 perch rubble masonry, at \$7 | \$1,106 00 |
| 8 cellar steps, 32 feet 4 inches, stone, at 50 cents | 16 00 |
| 10 cellar-window sills, 4x10—40 feet, at 50 cents | 20 00 |
| 60 square feet 4-inch stone coalslide, two man hole: | 40 00 |

| | |
|--|-------------------------|
| 144 square feet hearthstone, at 50 cents | \$72 00 |
| 78,000 brick, at \$11 | 858 00 |
| 2 cellar-door sills, 8 feet, at \$1.50 per foot | 12 00 |
| 2,826 yards plastering, at 24 cents | 678 24 |
| 275 yards deafening, at 35 cents | 96 25 |
| 30,000 feet bill stuff, at \$25 | 750 00 |
| 3,000 feet deafening floor, at \$28 | 84 00 |
| 6,500 feet flooring, at \$32 | 208 00 |
| 4,000 feet roof boards, at \$20 | 80 00 |
| 29,000 shingle, at \$6 | 174 00 |
| 270 feet cornice, at \$1.50 | 405 00 |
| 5,500 feet sheathing, at \$22 | 121 00 |
| 390 feet plinth and corner boards, at \$35 | 13 65 |
| 4 flight rear steps, at \$15 | 60 00 |
| 48 feet veranda, at \$7 | 336 00 |
| 10 basement windows, at \$5 | 50 00 |
| 14 first-story windows, at \$15 | 210 00 |
| 18 dormer windows, at \$25 | 450 00 |
| 2 pairs double doors, at \$25 | 50 00 |
| 2 pairs sliding doors, at \$30 | 60 00 |
| 36 single doors, at \$12 | 432 00 |
| 1,350 feet run of base, at 10 cents | 135 00 |
| Closet finish | 30 00 |
| 2 flights cellar stairs | 10 00 |
| 2 flights main stairs, at \$150 | 300 00 |
| 2 flights rear stairs, at \$40 | 80 00 |
| 32 sets outside blinds, at \$5 | 160 00 |
| 8 mantles and grates, at \$30 | 240 00 |
| Trimming— | |
| 126 feet gutter | } 258 feet, at 20 cents |
| 132 feet conductor | |
| 5 square veranda roof, at \$10 | 50 00 |
| 400 feet valley, at 10 cents | 40 00 |
| Flashing around chimneys and dormers | 30 00 |
| Painting— | |
| 1,900 yards painting, at 20 cents | 380 00 |
| Glazing— | |
| 414 lights, at 25 cents | 103 50 |
| Plumbing | 150 00 |
| Bell-hanging | 30 00 |
| 6,500 feet siding, at \$35 | 227 50 |
| Total | 8,380 74 |
| Drainage: | |
| 156 feet 4-inch earthen pipe, at 14 cents per foot | \$21 84 |
| 48 feet 6-inch earthen pipe, at 20 cents per foot | 9 60 |
| 2 4-inch traps, at \$1.60 | 3 20 |
| 2 6-inch traps, at \$1.74 | 3 48 |
| 4 4-inch T's, at 48 cents | 1 92 |
| 2 6-inch elbows, at 50 cents | 1 00 |
| 6 4-inch elbows, at 40 cents | 2 40 |
| 2 6 by 4 Y's, at 72 cents | 1 44 |
| 1 barrel cement | 3 00 |
| | 47 88 |
| Bath tubs: | |
| 2 bath-tubs and connections, complete, at \$80 | 160 00 |
| Concreting cellars: | |
| 263 yards concreting, at 40 cents per yard | 105 20 |
| Grand total | 8,693 82 |

| | | |
|--|-------|---------|
| Privy: | | |
| 250 feet bill stuff, at \$25 | ----- | \$6 25 |
| 60 feet 1½-inch flooring, at \$40 | ----- | 2 40 |
| 100 feet roof boards, at \$20 | ----- | 2 00 |
| 500 shingles, at \$6 | ----- | 3 00 |
| 200 feet sheathing, at \$22 | ----- | 4 40 |
| 150 feet corner boards, at \$40 | ----- | 6 00 |
| 300 siding, at \$35 | ----- | 4 50 |
| 2 doors, at \$3.50 | ----- | 7 50 |
| 2 windows and shutters | ----- | 2 00 |
| 2 seats, with covers | ----- | 2 00 |
| 2 ventilators | ----- | 2 00 |
| 28 yards plastering, at 24 cents per yard | ----- | 6 72 |
| 75 yards painting, at 14 cents per yard | ----- | 6 30 |
| | | \$55 07 |
| 1 brick vault, 2,500 brick, at \$11 | ----- | 27 50 |
| Total | ----- | 82 57 |
| Fencing to inclose yards of company officers' quarters: | | |
| 175 feet fencing, 6 feet high, at 25 cents per foot | ----- | 43 75 |
| 101 yards fence painting (two coats), at 14 cents per yard | ----- | 14 14 |
| Total | ----- | 57 89 |
| Extension of sewer: | | |
| 300 feet 10-inch earthen pipe, at 40 cents per foot | ----- | 120 00 |
| 5 barrels cement, at \$3 | ----- | 15 00 |
| Total | ----- | 135 00 |
| Walks: | | |
| Seven-foot walk in front of officers' quarters. | | |
| 546 feet 4-foot walk, at 20 cents per foot | ----- | 109 20 |
| Paling fence: | | |
| Paling fence between officers' quarters. | | |
| 150 feet paling fence, at 22 cents per foot | ----- | 33 00 |

No. 6.

BUILDINGS AT FORT NIOBRARA, NEBRASKA.

POST-QUARTERMASTER'S OFFICE.
Fort Niobrara Nebr., December 21, 1882.

SIR: I beg leave to acknowledge the receipt of your telegraphic instructions of December 15, 1882, directing plans and estimates to be prepared for the construction of a sufficient number of barracks, quarters, and stables at the post to enable it to accommodate a garrison of eight companies of cavalry.

Such an increase would necessitate the construction of the following buildings, viz:

Four barracks, each for one company of cavalry.

Five stables, each for one company of cavalry.

Five sets of captain's quarters (single).

Three sets of lieutenant's quarters (double).

Upon this basis the inclosed plans and estimates have been prepared, and the total estimated expense for material and the labor of civilian mechanics, is as follows:

| | | |
|--|-------|-------------|
| Four barracks at \$4,355 each | ----- | \$17,422 00 |
| Five cavalry stables \$1,360 each | ----- | 6,800 00 |
| Three sets lieutenant's quarters (double) \$3,881 each | ----- | 11,643 00 |
| Five sets captain's quarters at \$2,585.75 each | ----- | 12,928 75 |
| Making a total for material and labor of | ----- | 48,793 75 |

It is proposed to use adobe as a building material, the adobe being laid upon mortar instead of mud as is usually the case. The price named in the estimate covers the cost of the adobe delivered in the wall, the lime and sand being furnished by the United States and the adobe hauled from the brickyard to the buildings by government teams.

It is proposed to cut all dimension-timber at the post saw mill, where the lengths do not exceed fourteen feet, and to purchase dimension stuff, where the lengths exceed that limit. This has been found necessary on account of the impossibility of obtaining sound logs of greater length than fourteen feet within a reasonable distance (30 miles) of the post.

It is proposed to burn the lime and brick at the post by the labor of troops, joined to such skilled civilian labor as may be needed for the purpose. In addition to this it is proposed to accomplish the following tasks by the labor of troops, *i. e.*: to cut and skid all logs needed for making lumber and shingles, to furnish working parties to operate the saw mill, planer, and shingle and lath machines, and to quarry, haul, and deliver all the stone, clay, and sand needed for burning brick and lime and for laying the foundation walls of the buildings contemplated in the inclosed estimates.

Should the post be increased in size according to the plans submitted herewith it is respectfully requested that the following work be undertaken in connection therewith. Detailed plans and estimates can be submitted if it be deemed proper to do so. They are as follows:

| | |
|---|------------|
| The construction of a heavy wagon bridge across the Niobrara River between this post and Valentine, Nebr., the terminus of the Sioux City and Pacific Railroad, at an expense of..... | \$6,500 00 |
| The establishment of a system of drainage and the increase and extension of the water-supply system at the post, at an estimated expense of..... | 4,500 00 |
| Increasing the size of the present company quarters to make them conform to the plan submitted herewith, at an expense of..... | 4,000 00 |
| Making a total of..... | 15,000 00 |

All of these works should be undertaken if it be proposed to garrison the post for any considerable length of time. The extension of the water supply and the construction of a heavy wagon bridge are deemed of so much importance that it is proposed to ask for authority and means to construct them in the estimates of the next fiscal year.

I am, sir, very respectfully, your obedient servant,

GEO. B. DAVIS,

First Lieutenant Fifth Cavalry, Acting Assistant Quartermaster.

ASSISTANT ADJUTANT-GENERAL,

Department of the Platte, Omaha, Nebraska.

(Through the commanding officer.)

[First indorsement.]

FORT NIOBRARA, NEBR., *December 22, 1882.*

Respectfully forwarded to the assistant adjutant-general, Department of the Platte. Approved.

S. MUNSON,

Captain Ninth Infantry, Commanding.

To CHIEF QUARTERMASTER.

[Third indorsement.]

HEADQUARTERS DEPARTMENT OF THE PLATTE,
CHIEF QUARTERMASTER'S OFFICE,
Omaha, January 4, 1883.

Respectfully returned to the adjutant-general, Department of the Platte, concurring in the views of the regimental quartermaster, Fort Niobrara, and recommending the construction of the buildings referred to, as also the construction of a bridge across the Niobrara River for military purposes, and the establishment of a system of drainage and extension of the water-supply system already at the post, as herein suggested.

According to the estimates of the regimental quartermaster, Fort Niobrara, the cost of the buildings proposed to be constructed would be \$48,793.72; the bridge, \$6,500; system of drainage, \$4,500; extension of water-supply system, \$4,000; which amounts are considered by this office to be reasonable in view of the work to be accomplished.

As only one copy each of the estimates and plans were forwarded by the regimental quartermaster, Fort Niobrara, duplicate copies of same, as required by General Orders No. 23, Adjutant-General's Office, of 1882, have been prepared by this office and are herewith inclosed.

JOHN V. FUREY,

Captain and Assistant Quartermaster, U. S. A., in Charge of Office.

[Fourth indorsement.]

HEADQUARTERS DEPARTMENT OF THE PLATTE,
Omaha, Nebr., January 5, 1883.

Respectfully forwarded through headquarters Military Division of the Missouri to the Adjutant-General of the Army, approved and recommended.

The necessity for the expenditure arises from the proximity of Fort Niobrara to two large reservations occupied by many Indians, and the probability of the discontinuance of other posts of the department rendering consolidation of troops at other stations necessary.

O. O. HOWARD,
Brevet Major-General, Commanding.

CHIEF QUARTERMASTER OF THE DIVISION.

[Sixth indorsement.]

HEADQUARTERS MILITARY DIVISION OF THE MISSOURI,
OFFICE CHIEF AND DEPOT QUARTERMASTER,
Chicago, Ill., January 15, 1883.

Respectfully returned to the adjutant-general of the division, recommending estimate be forwarded for action of War Department, and that the present Congress be asked for the money for the purpose indicated in this estimate.

CHAS. H. TOMPKIN,
Assistant Quartermaster-General, U. S. A., Chief Quartermaster.

[Seventh indorsement.]

HEADQUARTERS MILITARY DIVISION OF THE MISSOURI,
Chicago, Ill., January 17, 1883.

Respectfully forwarded to the Adjutant-General of the Army. Approved.

P. H. SHERIDAN,
Lieutenant-General, Commanding.

[Eighth indorsement.]

WAR DEPARTMENT, ADJUTANT-GENERAL'S OFFICE,
Washington, D. C., January 19, 1883.

Respectfully referred to the Quartermaster-General for remark.
By order of the Secretary of War.

C. MCKEEVER,
Assistant Adjutant-General, in Charge.

[Ninth indorsement.]

QUARTERMASTER-GENERAL'S OFFICE,
Washington, D. C., January 23, 1883.

Respectfully returned to the honorable Secretary of War.
These papers cover plans and estimates calling for—

| | |
|--|-------------|
| Four barracks of adobes..... | \$17,422 00 |
| Five cavalry stables of adobes..... | 6,800 00 |
| Three double sets lieutenants' quarters..... | 11,643 00 |
| Five sets captains' quarters..... | 12,928 75 |

Or a total of..... 48,793 75

in order to accommodate a garrison of eight companies of cavalry at Fort Niobrara, the labor of troops being utilized to reduce the cost as much as possible.

If above work is authorized, a further expenditure of \$15,000 appears necessary for the construction of a heavy wagon bridge, drainage, and water supply, and for alterations of present company quarters.

Plans and estimates are approved and recommended by General Howard, who adds that "the necessity for the expenditure arises from the proximity of Fort Niobrara to two large reservations occupied by many Indians, and the probability of the discontinuance of other posts of the department rendering consolidation of troops at other stations necessary."

Approved also by the Lieutenant-General.

The General of the Army having in his last annual report included Niobrara among the posts now occupied that will be necessary for, say, ten years, and that consequently all repairs and improvements should be of a temporary character, and paid for out of the annual appropriation for barracks and quarters, I recommend that these papers be transmitted for the information, &c., of the headquarters of the Army.

RUFUS INGALLS,
Quartermaster-General, Brevet Major-General, U. S. A.

[Tenth indorsement.]

HEADQUARTERS OF THE ARMY,
Washington, D. C., January 24, 1883.

Respectfully submitted to the Secretary of War.

Fort Niobrara will be needed as long as the Sioux occupy their present locations on the White Earth. If Congress will make specific appropriations to the enlargement of this post, I will assuredly approve.

W. T. SHERMAN,
General.

Estimate of labor and material needed in the construction of one set barracks for a company of cavalry at Fort Niobrara, Nebraska.

| Articles. | Number or quantity. | Expense. | |
|--|-------------------------------|-----------|-----------|
| | | Material. | Labor. |
| Masonry foundations, at 40 cents per linear yard.....yards... | 200 | | \$80 00 |
| Adobes, delivered in wall, at \$15 per 1,000 | 60,000 | | 900 00 |
| 2" by 6" by 18' rafters | 4,680 feet b. m.....pieces... | 260 | |
| 2" by 6" by 16' ties..... | 4,160 " " | 260 | |
| 1" by 6" by 16' braces..... | 1,820 " " | 260 | |
| 2" by 12" by 16' plates..... | 1,100 " " | 550 | |
| 2" by 10" by 16' floor joists | 3,840 " " | 240 | |
| 2" by 8" by 12' doors and windows | 1,500 " " | 100 | |
| Total dimension lumber..... 17,100 " " at \$25 per 1,000 feet | | \$427 50 | |
| Shingles, at \$3 per M | 80,000 | 240 00 | |
| Tongued and grooved flooring, 1" by 6", at \$45 per M | 9,000 | 405 00 | |
| Tongued and grooved ceiling, 1" by 6", at \$35 per M..... | 15,000 | 525 00 | |
| Finishing lumber, at \$45 per M | 2,000 | 90 00 | |
| B. stock boards, at \$45 per M..... | 2,000 | 90 00 | |
| Windows, 12-light, 10 by 16, at \$3.50 each | No. 42 | 147 00 | |
| Doors, 3' by 7' 6" by 12", with hinges and fastenings, at \$5 each | No. 30 | 150 00 | |
| Nails, 5 30d., 5 20d., 10 10d., 10 8d., 6 shingle, 4 fin., at \$4 per keg | 40 kegs... | 160 00 | |
| White lead, at 9 cents per lb..... | 1,000 lbs..... | 90 00 | |
| B. L. oil, at 80 cents per gallon..... | 60 gallons... | 48 00 | |
| Turpentine, at 70 cents per gallon..... | 50 gallons... | 35 00 | |
| 3-0 oval brushes, at \$3 per dozen | No. 12 | 3 00 | |
| Tools | | 40 00 | |
| Plastering 1,200 yards, at 20 cents per yard, material to be furnished by the United States..... | | | 240 00 |
| Burning lime and brick..... | | | 50 00 |
| Superintending..... | | | 50 00 |
| Saw mill (labor)..... | | | 25 00 |
| Labor of eight carpenters one month, at \$70..... | | | 560 00 |
| Total..... | | 2,450 50 | 1,905 00 |
| Total material and labor..... | | | 4,355 50 |
| Total for four sets barracks | | | 17,422 00 |

Estimates of labor and material needed in the construction of one (1) set cavalry stables at Fort Niobrara, Nebraska.

| Articles. | Number or quantity. | Expense. | |
|---|--------------------------------|-----------|----------|
| | | Material. | Labor. |
| 2" by 6" feet plates | 2,500 linear feet... | 2,500 | |
| 2" by 6" by 18' rafters, ties, &c. | 4,500 pcs | 250 | |
| 2" by 6" by 18' posts | 1,600 " | 100 | |
| 4" by 6" by 18' kicking posts | 1,920 " | 60 | |
| 2" by 12" by 18' partitions | 9,000 " | 250 | |
| Total | 19,520 at \$25 per 1,000 | | \$488 00 |
| 8-in. drop siding or ship-lap | \$35 " " | 5,000 | 175 00 |
| Shingles | \$3 " " No | 80,000 | 240 00 |
| Nails 2-30d. 4-20d. 5-40d. 4-8d. 5 shingles | \$4 a keg | 20 | 80 00 |
| Mineral paint | 5c. per lb | 600 | 30 00 |
| Hinges, locks, and hardware | | | 30 00 |
| Oil, B. L. | at 50c. gal | 40 | 32 00 |
| Labor of 3 carpenters | 1 mo. at \$70 | | \$210 00 |
| Labor of 1 Mason | 1 mo. at \$75 | | 75 00 |
| Total | | 1,075 00 | 285 00 |
| Total material and labor | | | 1,360 00 |
| Total for 5 cavalry stables | | | 6,800 00 |

Estimate of material and labor needed in construction of one set captain's quarters at Fort Niobrara, Nebraska.

| Articles. | Number or quantity. | Expense. | |
|---|---------------------------------------|-----------|-----------|
| | | Material. | Labor. |
| Foundation walls at 40 cents per yard | yards | 2,000 | \$80 00 |
| Adobes, laid in wall at \$15 per thousand ..... | ..... | 20,000 | 300 00 |
| 2" by 6" by 28' rafters | 1,400 pieces | 50 | |
| 2" by 6" by 20' ties | 1,000 " | 50 | |
| 2" by 6" by 12' posts | 800 " | 70 | |
| 2" by 12" plates | 400 linear feet | 200 | |
| 2" by 10" by 16' floor joist | 2,600 pieces | 100 | |
| 2" by 8" by 16' " " | 1,470 " | 70 | |
| 2" by 6" by 12' rafters | 480 " | 40 | |
| 2" by 6" by 10' ties | 400 " | 40 | |
| Total dimensions, lumber | 3,550 feet at \$25 per thousand | | \$213 75 |
| Shingles at \$4 per thousand | 34,000 | 136 00 | |
| Building paper at 5 cents per pound | 400 lbs. | 20 00 | |
| Finishing lumber at \$45 per M | 2,500 feet | 112 50 | |
| B. stock boards at \$40 per M | 2,000 feet | 80 00 | |
| Doors 3' by 7' 6" by 13" at \$4.50 each | 20 | 90 00 | |
| Double doors at \$9 each | 2 | 18 00 | |
| Windows at \$3.50 each | 20 | 70 00 | |
| Window blinds at \$2.50 each | 20 | 50 00 | |
| Door hardware at \$1.25 sets | 20 | 25 00 | |
| Iron mantles at \$25 | No | 4 | 100 00 |
| Nails, 4 kegs 30d., 4 kegs 20d., 6 kegs 10d., 6 kegs 8d., 6 kegs shingle, 4 kegs fine at \$4.50 | kegs | 30 | |
| White lead at 9 cents per lb | 30 lbs. | 135 00 | |
| B. L. Oil at 80 cents per gallon | 500 gallons | 45 00 | |
| Turpentine at 70 cents per gallon | 30 gallons | 24 00 | |
| Brushes No. 3 at \$3 per dozen | No | 20 | 14 00 |
| Tools \$30. Screws \$8 | 6 | | 1 50 |
| 200 feet iron pipe, 2 inch, at 9 cents, \$18. Bath-tub, \$30 | | | 38 00 |
| Brick at \$10 per M | 8,000 M | | 48 00 |
| 10 bbls. of plaster at \$3, \$30. 50 bushels hair at 30 cents, \$15 | yards | 1,200 | 80 00 |
| Plaster (3 coats) at 25 cents per yard | | | 300 00 |
| Carpenter labor, 7 men, 1 month, at \$70 | | | 490 00 |
| Painting labor, 1 man, 1 month | | | 70 00 |
| Total | | 1,345 75 | 1,240 00 |
| Total material and labor | | | 2,585 75 |
| Total for 5 sets captains quarters | | | 12,928 75 |

Estimate of material and labor needed in the construction of one (1) double set of officers' quarters at Fort Niobrara, Neb.

| Articles. | Number or quantity. | Expense. | |
|---|------------------------|------------|------------|
| | | Material. | Labor. |
| Foundation walls, at 40 cents per linear yard.....yards | 200 | | \$80 00 |
| Adobes, laid in walls, \$15 per M.....No. | 25,000 | | 375 00 |
| 2" by 10" by 30' hip rafters..... | 200 | pcs | 4 |
| 2" by 8" by 25' rafters..... | 3,300 | " | 100 |
| 2" by 6" by 18' rafters..... | 512 | " | 32 |
| 2" by 6" by 20' ties..... | 2,000 | " | 100 |
| 2" by 6" by 20' ties..... | 400 | " | 20 |
| 2" by 10" by 16' floor joists..... | 2,600 | " | 100 |
| 2" by 6" by 14' studding..... | 2,100 | " | 150 |
| 2" by 4" by 14' studding..... | 1,500 | " | 150 |
| 2" by 12' plates..... | 600 | " | 300 |
| Total dimension lumber..... | 13,212, at \$25 per M. | | \$330 00 |
| Window-frames, at \$3..... | 30 | | 90 00 |
| Door-frames, side and top sash, \$3..... | 2 | | 16 00 |
| Door-frames, 3' by 7' 6", \$4..... | 6 | | 24 00 |
| Doors, 3' by 7' 6" by 14", \$5..... | 12 | | 60 00 |
| Doors, 3' by 7' 6" by 14", at \$4.50..... | 24 | | 108 00 |
| Doors, 2' 6" by 6' 6" by 14", at \$5..... | 12 | | 36 00 |
| Door hardware, at \$6..... | 26 | sets | 72 00 |
| Door latches, at 75 cents..... | 12 | | 9 00 |
| Glazed sash, 10 by 16, 12-light, at \$3.50..... | 30 | pieces | 105 00 |
| Tongued and grooved flooring, 4", at \$45 per M..... | 8,000 | feet | 350 00 |
| B stock boards, at \$40 per M..... | 2,800 | feet | 80 00 |
| Finishing lumber, at \$50 per M..... | 2,800 | feet | 140 00 |
| Shingles, at \$4 per M..... | 60 | M | 240 00 |
| Building paper, at 5 cents per pound..... | 400 | lbs | 20 00 |
| Plaster, at \$3 per barrel..... | 40 | barrels | 120 00 |
| Plastering hair, at 30 cents per bushel..... | 100 | bushels | 30 00 |
| Plastering 2,000 square yards, three coats, at 25 cents per yard..... | | | 500 00 |
| White lead, at 9 cents per pound..... | 1,000 | lbs | 90 00 |
| B. L. oil, at 80 cents per gallon..... | 50 | gallons | 40 00 |
| Turpentine, at 70 cents per gallon..... | 40 | gallons | 28 00 |
| Brushes, No. 3, at \$3 per dozen..... | 12 | dozen | 3 00 |
| Cast-iron mantels, \$25 each..... | 2 | | 50 00 |
| Tools..... | | | 40 00 |
| Carpenters' labor, ten men, one month, at \$70..... | | | 700 00 |
| Mason's labor, one month, \$75; painter's labor, one month, \$70..... | | | 145 00 |
| Total..... | | | 2,081 00 |
| Total labor and material..... | | | 3,881 00 |
| Total for three sets officers' quarters (double)..... | | | 11,643 00 |
| RECAPITULATION. | | | |
| Barracks..... | 4 | \$9,802 00 | \$7,620 00 |
| Cavalry stables..... | 5 | 5,375 00 | 1,425 00 |
| Captain's quarters..... | 5 | 6,728 75 | 6,200 00 |
| Officers' quarters (double)..... | 3 | 6,243 00 | 5,400 00 |
| Grand total..... | | 28,148 75 | 20,645 00 |
| Grand total material and labor..... | | | 48,793 75 |

No. 7.

CONSTRUCTION OF POST OF FORT THORNBURGH, UTAH, AND COMPLETION OF ROAD LEADING THEREFROM.

HEADQUARTERS DEPARTMENT OF THE PLATTE,
Omaha, Nebr., December 12, 1882.

SIR: The reoccupation of Fort Thornburgh by an adequate force next spring is in my judgment of the first importance. On account of the restless character of the Indians, especially of those gathered at the new Ute agency, all parties agree, including the Ute Commission, that it would be unwise to leave the Ashley Valley and vicinity, where there are already six hundred white inhabitants, absolutely at the mercy of the Indians. Should the fort be continued there is but little danger of trouble at either of the agencies, each being thirty miles distant. The appropriation of \$85,400 already asked for is deemed sufficient for building the post, but as the new road just opened across the mountains to the Union Pacific Railway is not yet practicable, except for the dryest season, and as it will require \$10,000 to put it into proper condition I recommend that this sum be appropriated for that purpose. It is next to impossible to work these extended roads by the soldiers' labor, and with the few men we have for military duty it

is a wrong to the service and a virtual violation of contract with the men so employed to make them simply and continuously laboring men.

The Indians in our vicinity are so many and so well armed that I regard it as a suicidal policy to use up the time essential for the drill of soldiers and preparation for war in unending labor in the construction of roads, and posts; so I urge most earnestly that the appropriation for Thornburgh, \$85,400, and for the road, \$10,000, be made without reduction. I ask special attention to the condition of the title, that it may be, through the Secretary of the Interior, secured beyond question.

Very respectfully, your obedient servant,

O. O. HOWARD,
Brevet Major General Commanding.

ASSISTANT ADJUTANT-GENERAL,
Military Division of the Missouri, Chicago, Illinois.

[First indorsement.]

HEADQUARTERS MILITARY DIVISION OF THE MISSOURI,
Chicago, Ill., December 16, 1882.

Respectfully forwarded to the Adjutant-General of the Army.

The recommendations of the Commanding General Department of the Platte are approved.

P. H. SHERIDAN,
Lieutenant-General Commanding.

[Second indorsement.]

ADJUTANT-GENERAL'S OFFICE,
Washington, December 19, 1882.

Respectfully submitted to the General of the Army, inviting attention to the accompanying Ex. Doc. No. 90, Forty-seventh Congress, first session, from which it will be seen that plans and estimates for the construction of the post of Fort Thornburgh, involving an expenditure of \$84,000, were submitted to Congress at its last session.

Previous papers relative to the title of the United States to the land in the Ashley Valley selected as the site for the post were submitted to the Secretary of War, with report, on the 9th instant.

The commanding-general Department of the Platte now earnestly recommends an appropriation of \$85,400 for the construction of this post, and \$10,000 for completion of a new road across the mountains to the Union Pacific Railroad, in which the Lieutenant-General concurs.

R. C. DRUM,
Adjutant-General.

[Third indorsement.]

HEADQUARTERS OF THE ARMY,
Washington, December 27, 1882.

Respectfully submitted to the Secretary of War. Approved and recommended.

W. T. SHERMAN, *General.*

No. 8.

COMPLETION OF POST OF FORT CUSTER, MONTANA TERRITORY.

HEADQUARTERS DEPARTMENT OF DAKOTA,
Fort Snelling, Minn., December 18, 1882.

SIR: I have the honor to inclose a letter from Col. J. P. Hatch, commanding officer at Fort Custer. It explains itself. Mr. Maginnis, the delegate from Montana, has been very successful in obtaining appropriation for military posts in the Territory which he represents, and I have no doubt would interest himself in obtaining the one which Colonel Hatch suggests.

Fort Custer is an admirable post for the headquarters of a regiment of cavalry and for a regimental school of instruction, and such schools I think are necessary, for it appears to be almost impossible to do anything for the instruction of cavalry at posts where there are but one or two troops, and where the garrison is mixed.

But I, of course, would not approach Mr. Maginnis upon this matter without the approval of my superiors, and I therefore submit the suggestion of Colonel Hatch to the lieutenant-general commanding.

From the allowance to this department from the appropriation for barracks and quarters for the current fiscal year, over seven thousand dollars have already been allotted to Fort Custer, and should the demands of other posts permit it a further allowance may be made; but to put the post in thoroughly good condition the sum named by Colonel Hatch is, I think, necessary.

Very respectfully, your obedient servant,

ALFRED H. TERRY,
Brigadier-General Commanding.

ADJUTANT-GENERAL,
Military Division of the Missouri, Chicago, Ill.

[Third indorsement.]

HEADQUARTERS MILITARY DIVISION OF THE MISSOURI,
Chicago, Ill., December 22, 1882.

Respectfully forwarded to the Adjutant-General of the Army. I regard Fort Custer as a permanent post. Its location is such that its occupation for many years will be necessary.

P. H. SHERIDAN,
Lieutenant-General Commanding.

[Fourth indorsement.]

HEADQUARTERS OF THE ARMY,
Washington, D. C., December 29, 1882.

Respectfully submitted to the honorable Secretary of War.

As long as the Sioux are in a semi-barbarous condition, corralled in the Sioux Reservation, the post of Fort Custer will have to be maintained. I therefore recommend a special appropriation of \$25,000 to complete the buildings already begun.

W. T. SHERMAN, *General.*

FORT CUSTER, MONTANA, *November 24, 1882.*

DEAR GENERAL: The Delegate from Montana having succeeded last year in getting through Congress a special appropriation for Fort Maginnis, it has occurred to me that if this post is to be permanent a similar appropriation to complete it might be obtained.

We are now completing the tenth, a cavalry barrack. It will be divided and used for the present as library, band-practice room, and telegraph office.

If an appropriation could be got, as above suggested, I would recommend that the number of troops of cavalry be increased one, giving me half the regiment, the troops to be changed from time to time with those at other posts, as the commander of the department thought fit. I would use such appropriation about as follows:

| | | |
|--|-------|---------|
| Replacing foundation of present buildings, using soldier labor principally | ..... | \$1,000 |
| Two blocks of officers' quarters | ..... | 6,000 |
| Granary | ..... | 3,000 |
| Quartermaster storehouse | ..... | 3,000 |
| Band-practice room | ..... | 1,600 |
| Reading-room or library and telegraph office | ..... | 1,200 |
| Ordnance storehouse, brick | ..... | 3,000 |
| Two troop stables | ..... | 4,000 |
| One headquarter stable | ..... | 500 |
| Troop blacksmith shop (6 fires) | ..... | 1,000 |
| Wheelwright and carpenter shop | ..... | 700 |
| Total | ..... | 25,000 |

The above is but a rough estimate. I am, however, confident I can complete all that I propose with the above amount, and possibly do more. The two blocks of officers' quarters I would so arrange as to accommodate six officers. At present our quarters are uncomfortably crowded. As I suggest, an increase of three officers with quarters for six, it would afford material relief.

The ordnance building, stables, shops, and storehouses are necessary with the present garrison, and it is hardly probable they can be got out of the barrack and quarter fund.

Hoping the above will meet with your approval, I am, General, very respectfully, your obedient servant,

JOHN P. HATCH,
Colonel Commanding Post.

General A. H. TERRY.

No. 9.

REPAIRS OF BUILDINGS AT FORT DOUGLAS, UTAH.

Estimate of supplementary building material for repairs required for the service of the post of Fort Douglas, Utah, during the year ending on the 30th day of June, 1883.

[By First Lieutenant Charles G. Penney, R. Q. M., Sixth Infantry, acting assistant quartermaster, U. S. Army.]

Number of officers, and rank: 1 colonel, 3 majors, 7 captains, 14 subalterns. Number of men, 256; number of laundresses, 1; number of horses, 16; number of mules, 41; number of wagons, 11.

| Articles and quantity. | Cost in the immediate vicinity of the post. | Remarks. |
|---|---|---|
| I. OFFICERS' QUARTERS. | | |
| (One single set, ten double sets.) | | |
| 700 feet pine, 2 by 6 inches; 1,800 feet pine, 1½ inches thick, 12 inches wide. | \$75 00 | } Repair of cellars, stairs, and doors. |
| 42 pair T-hinges, 12-inch, heavy | 12 00 | |
| 21 pair T-hinge hasps, 8-inch | 10 00 | |
| 3½ gross screws, No. 10, 1½-inch | 3 50 | |
| 30 pounds clout-nails, 2-inch; 15 pounds cut nails, 20d. | 7 00 | } Repair of steps. |
| 1,500 feet pine, 1½ inches thick, 12 inches wide | 45 00 | |
| 63 pounds cut nails, 10d | 2 00 | |
| 2,000 shingles | 18 00 | } Repair on roofs. |
| 12 pounds cut nails, 4d | 75 | |
| 12,000 feet pine, 6 by 6 inches; 5,000 feet pine, 2 by 4 inches; 20,000 feet pine, 1 inch, rough; 400 feet pine, 2 by 6 inches. | 1,122 00 | } Repairs of part of iron fences between officers' quarters and of fences around yards of officers' quarters and on cellars and cellar doors. |
| 40 pairs hinges, strap, heavy, 10-inch | 20 00 | |
| 80 pair hinges, strap, heavy, 14-inch | 50 00 | |
| 24 wrought hasps, hooks, and staples | 8 00 | |
| 200 pounds cut nails, 20d | 10 00 | |
| 400 pounds cut nails, 12d | 21 00 | |
| 15 dozen screws, 1½-inch, No. 12 | 10 00 | } Repairs on coal-sheds. |
| 20,000 shingles | 180 00 | |
| 150 pounds cut nails, 4d | 7 00 | |
| 12 gate-latches | 5 00 | } Repairs on gates in front of officers' quarters. |
| 12 door-springs | 10 00 | |
| 24 gate-hinges | 24 00 | } To protect buildings from damage by water. |
| 1,280 feet tin spouting, 4-inch, with fastenings; 640 feet tin pipes, 3-inch; 46 tin elbows, 3-inch; 30 pounds solder. | 300 00 | |
| 500 yards plastering | 140 00 | } Repair of walls. |
| 700 pounds white lead, 12 pounds graining color, oak; 12 pounds graining color, walnut; 25 pounds burnt sienna, 25 pounds ivory black, 30 gallons linseed oil, 10 gallons turpentine, 200 pounds putty. | 120 00 |  | } Repainting of quarters inside and outside. |
| Total cost of materials | 2,200 25 | |
| LABOR. | | |
| 4 carpenters for 20 days, at \$4 each per day | 320 00 | } In repair of officers' quarters, 1 single, 10 double sets. |
| 1 painter, 45 days, at \$4 per day | 180 00 | |
| 2 plumbers for 20 days, at \$4.90 each per day. | 196 00 | |
| Total cost of labor | 696 00 | |
| Total amount required for repair of officers' quarters. | 2,896 25 | |
| 2. HEADQUARTER OFFICES, READING-ROOM, AND BAND QUARTERS. | | |
| 6,000 feet flooring, hard pine, 4-inch | 312 00 | } Repairs on floors. |
| 80 pounds cut nails, flooring | 4 25 | |

Estimate of supplementary building material for repairs, &c.—Continued.

| Articles and quantity. | Cost in the immediate vicinity of the post. | Remarks. |
|--|---|---|
| 2. HEADQUARTER OFFICES, &c.—Continued. | | |
| 500 yards plastering..... | \$140 00 | Repair on walls. Whitewashing inside. |
| 20 bushels lime, 200 pounds salt, 200 pounds Spanish whiting, 120 pounds rice, 40 pounds glue. | 70 00 | |
| 260 feet tin spouting, 4-inch; 100 feet tin pipe, 3-inch; 4 tin elbows, 3-inch; 8 pounds solder. | 60 00 | To protect building against damage by water. |
| 80 feet pine, 2 by 6 inches; 120 feet pine, 2 by 4 inches; 150 feet pine, 1-inch, rough. | 7 50 | Repairs on cellar and cellar-doors. |
| 10 pounds cut nails, 12d; 20 pounds cut nails, 20d. | 2 00 | |
| 1 wrought-iron hasp and staples, 4 pair hinges, T, heavy, 14-inch. | 2 75 | Repairs on steps. Repainting of inside of buildings. |
| 5 dozen screws, 1½-inch, No. 12 | 75 | |
| 400 feet pine, 1½-inch, planed on one side..... | 15 00 | |
| 10 pounds cut nails, 16d..... | 70 | |
| 75 pounds of white lead, ¼ pound litharge, 4 gallons linseed-oil, 1 gallon turpentine. | 10 00 | |
| Total cost of material..... | 624 95 | |
| LABOR. | | |
| 2 carpenters for 10 days, at \$4 each per day.. | 80 00 | |
| 1 painter for 8 days, at \$4 per day | 32 00 | |
| 1 plumber, 5 days, at \$4.90 per day..... | 24 50 | |
| Total cost of labor | 136 50 | |
| Total amount required for repairs of headquarter offices, &c. | 761 45 | |
| 3. BARRACKS. | | |
| (6 single sets.) | | |
| 18,000 feet of flooring, hard pine, 4-inch | 900 00 | Repairs on floors. |
| 200 pounds of cut nails, flooring | 10 00 | |
| 1,000 yards plastering..... | 280 00 | Repairs on wall. |
| 2,020 feet tin spouting, 5-inch; 20 tin elbows, 3-inch; 520 feet tin pipe, 3-inch; 75 pounds solder. | 410 00 | To protect buildings against damage by water. |
| 2,000 feet of pine, 1½-inch; 4,000 feet pine, 1-inch, common; 800 feet pine 2 by 4 inches; 400 feet pine, 2 by 6 inches. | 216 00 | Repairs on steps, on cellars, and cellar-doors. |
| 24 pair hinges, T-heavy, 14-inch..... | 4 00 | |
| 6 hinge-hasps and staples | 3 75 | Replacing broken ones. |
| 2 gross screws, 1½-inch, No. 10; 2 gross screws, 3-inch, No. 16. | 4 00 | |
| 100 pounds cut nails, 12d; 20 pounds cut nails, 20d. | 6 00 | Reglazing windows. |
| 100 mortice door-locks, 3½ by 4½ by 9.16 inches, with knobs and extra keys. | 90 00 | Replacing worn-out ones. |
| 400 feet of glass, 10 by 16 inches; 50 pounds putty; 6 papers glazier's points. | 19 50 | |
| 36 window sashes, 6 lights each, 10 by 16 inches. | 52 20 | |
| 800 pounds white lead | 56 00 | Repainting of barracks, inside and outside. |
| 36 pounds burnt umber..... | 7 20 | |
| 15 pounds burnt sienna..... | 4 00 | |
| 20 pounds yellow ochre..... | 3 75 | |
| 30 gallons linseed oil..... | 24 00 | |
| 10 gallons turpentine | 9 00 | |
| 3 pounds litharge | 1 05 | |
| Total cost of material..... | 2,100 45 | |

Estimate of supplementary building material for repairs, &c.—Continued.

| Articles and quantity. | Cost in the immediate vicinity of the post. | Remarks. |
|---|---|---|
| LABOR. | | |
| 6 carpenters for 10 days, at \$4.00 each per day. | \$240 00 | |
| 2 painters for 24 days, at \$4.00 each per day.. | 112 00 | |
| 3 plumbers for 8 days, at \$4.90 per day each.. | 117 60 | |
| 2 stone-masons for 10 days, at \$6.00 each per day, to repair vent in two barracks and refix plinth of two doors. | 120 00 | |
| Total cost of labor | 589 60 | |
| Total amount required for repairs on barracks. | 2,690 05 | |
| 4. GUARD-HOUSE. | | |
| 4,000 feet flooring, hard pine, 4-inch | 200 00 | } Repair on floor. |
| 50 pounds cut nails, flooring | 2 50 | |
| 50 feet pine, 2 by 6 inches | 1 50 | } For putting up bunk for members of the guard. |
| 200 feet flooring, common | 10 00 | |
| 50 feet clear lumber, 1 by 10 inches wide..... | 2 50 | |
| 20 pounds cut nails, flooring; 5 pounds cut nails, 12d. . | 1 25 | |
| 200 yards plastering..... | 56 00 | Repairs on walls. |
| 50 feet glass, 10 by 16 inches; 12 window sashes, 6 lights each, 10 by 16 inches; 12 pounds putty; 2 papers glazier's points. | 24 00 | Repair on windows. |
| 100 pounds white lead, 4 gallons linseed oil, 2 gallons turpentine, 1 pound litharge. | 13 00 | Repainting inside and outside. |
| 140 feet tin spouting, 4 inch; 40 feet tin pipe, 3-inch; 2 tin elbows, 3-inch; 8 pounds solder. | 30 00 | Protecting building against damage from water. |
| 50 bushels lime, 15 pounds glue..... | 27 00 | Whitewashing inside repeatedly. |
| Total cost of material..... | 367 75 | |
| LABOR. | | |
| 2 carpenters for 5 days, at \$4 each per day.. | 40 00 | |
| 1 plumber 2 days, at \$4.90 per day..... | 9 80 | |
| 1 painter 6 days, at \$4 per day..... | 24 00 | |
| Total cost of labor | 73 80 | |
| Total amount required for repair of guard-house. | 441 55 | |
| 5 QUARTERS OF N. C. STAFF OFFICERS. | | |
| 2,000 feet siding..... | 60 00 | Repairs on outside walls. |
| 2,000 feet flooring, hard pine, 4 inches..... | 100 00 | Repairs on floors. |
| 6 panel doors, 6 feet 8 inches by 2 feet 8 inches; 2,000 feet common lumber. | 60 00 | Replacing broken doors. General repairs on buildings, cellars, cellar-door. |
| 150 pounds cut nails, 10-penny; 30 pounds cut nails, flooring..... | 10 00 | |
| 500 yards plastering..... | 140 00 | |
| 50 feet glass, 19 by 16 inches; 6 pounds putty; 2 papers glazier's points. | 4 60 | Repairs on walls. Reglazing windows. |
| 500 feet tin spouting, 4-inch; 150 feet tin pipe, 3-inch; 12 tin elbows, 3-inch; 10 pounds solder..... | 90 00 | To protect buildings from damage by water. |
| Total cost of material..... | 464 60 | |
| LABOR. | | |
| 3 carpenters for 10 days, at \$4 per day each.. | 120 00 | |
| 2 plumbers for 3 days, at \$4.90 per day..... | 29 40 | |
| Total cost of labor..... | 149 40 | |
| Total amount required for repair of quarters of N. C. S. officers. | 614 00 | |

Estimate of supplementary building material for repairs, &c.—Continued.

| Articles and quantity. | Cost in the immediate vicinity of the post. | Remarks. |
|---|---|--|
| 6 STOREHOUSES OF A. C. S. AND A. A. Q. M. | | |
| 13,500 feet C lumber; 13,500 feet lumber (in length), O. G. Battens; 400 pounds cut nails 10-penny. | \$800 00 | Repairs of walls. |
| 200 feet pine, 1½ inch thick, 12 inches wide; 150 feet pine, 2 inches wide..... | 10 50 | Repair on steps. |
| 5,000 shingles, A..... | 45 00 | } Repairs on roofs. |
| 50 pounds cut nails 4-penny..... | 2 25 | |
| 15,000 feet pine, 1½ inches; 1,000 feet pine 2 by 8 inches; 300 pounds cut nails 16-penny..... | 495 00 | Repairs on flooring. |
| 4,800 feet C lumber..... | 240 00 | For laying floor on upper part of buildings to utilize them for storage. |
| 500 feet pins, 2 by 6 inches; 600 feet pins, 1½ inch thick, 12 inches wide. | 33 00 | } Putting up shelves. |
| 100 pounds cut nails, 10-penny..... | 4 75 | |
| 600 feet tin spouting, 4-inch; 100 feet tin pipe, 3-inch; 6 tin elbows; 15 pounds solder. | 110 00 | To protect buildings from damage by water. |
| Total cost of materials..... | 1,740 50 | |
| LABOR. | | |
| 6 carpenters for 12 days, at \$4 per day..... | 282 00 | |
| 2 plumbers for 3 days, at \$4.90 per day..... | 29 40 | |
| Total cost of labor..... | 311 40 | |
| Total amount required for repair of store-houses. | 2,051 90 | |
| 7. OFFICE OF A. C. S. AND A. A. Q. M. | | |
| 1,800 feet flooring, hard pine, 4-inch..... | 90 00 | } Repairs on floor. |
| 20 pounds cut nails; flooring..... | 1 00 | |
| 500 yards plastering..... | 148 00 | } Repair of walls. |
| 400 feet pine, 2 by 6 inches; 200 feet pine, 2 by 6 inches; 2,000 laths. | 47 00 | |
| 25 pounds cut nails; lath..... | 1 75 | } Enlarging office of A. C. S. |
| 500 pounds white lead; 2 gallons linseed oil; 1 gallon turpentine. | 6 00 | |
| Total cost of material..... | 293 75 | Repainting of offices. |
| LABOR. | | |
| 1 carpenter 10 days, at \$4 per day..... | 40 00 | |
| 1 painter 4 days, at \$4 per day..... | 16 00 | |
| Total cost of labor..... | 56 00 | |
| Total amount required for repair of offices of A. C. S. and A. A. Q. M. | 349 75 | |
| 8. Q. M. WORKSHOPS. | | |
| (4 buildings.) | | |
| 8 thousand shingles; 100 pounds cut nails, 4-penny. | 76 00 | Repairs on roofs. |
| 4,000 feet C lumber; 50 pounds cut nails, 10-penny. | 123 00 | Repairs on walls and floors. |
| 48 window-sashes; 6 lights, each 10 by 12 inches. | 90 00 | Replacing worn-out ones. |
| Total amount of material..... | 289 00 | |

Estimate of supplementary building material for repairs, &c.—Continued.

| Articles and quantity. | Cost in the immediate vicinity of the post. | Remarks. |
|---|---|--|
| 9. STABLES. | | |
| 2 Quartermaster's stables. | | |
| 800 feet pine, 1 inch C; 800 feet common flooring; 600 feet pine, 4 by 6 inches; 40 pounds cut nails, 8-penny; 10 pounds cut nails, 20-penny. | \$69 00 | } Repairs on doors. |
| 16 hinges T heavy, 14 inches..... | 4 00 | |
| 480 feet pine, 2 by 6 inches; 2,700 feet pine, 1 inch C; 4,320 feet pine, 1½ inches | 340 00 | } Repairs on stalls, mangers, and flooring stalls. |
| 600 feet pine, 2 by 6 inches; 2,400 feet pine, 2 inches; 100 pounds cut nails, 8-penny; 100 pounds cut nails, 20-penny. | | |
| 2,000 shingles; 20 pounds cut nails, 4-penny.... | 19 00 | Repairs on roofs. |
| Total cost of material | 432 00 | |
| LABOR. | | |
| 4 carpenters for 14 days, at \$4 per day..... | 224 00 | |
| Total amount required for repair of stables | 656 00 | |
| 10. GENERAL REPAIRS. | | |
| 6,000 feet pine, 1 inch C | 180 00 | } Repairs on fences at post. |
| 400 feet pine, 2 by 4 inches; 800 feet pine, 6 by 6 inches; 130 cedar posts 7 feet long; 60 pounds cut nails, 10-penny. | 111 00 | |
| 30 pounds cut nails, 20-penny..... | 1 75 | } Repairs on coal-sheds for companies. |
| 5,000 feet pine, 1 inch C; 1,000 feet pine, 2 by 4 inches; 1,000 feet pine, 2 by 6 inches; 80 pounds cut nails, 10-penny; 20 pounds cut nails, 16-penny. | 215 00 | |
| 10,000 feet pine, 1 inch C; 1,000 feet pine, 2 by 6 inches; 2,000 shingles; 1,000 feet clear pine, 1½ inches; 100 pounds cut nails, 10-penny; 25 pounds cut nails, 4-penny. | 386 00 | Repairs on water-closets. |
| 300 bushels lime; 1,000 pounds salt; 3,000 pounds copperas; 60 whitewash brushes. | 490 00 | Yellow-wash on wooden public buildings and fences at post. |
| 36 Rim door-locks with knobs and extra key. | 36 00 | Repairs on doors. |
| Total cost of material | 1,419 75 | |
| LABOR. | | |
| 1 carpenter, 60 days, at \$4 per day..... | 240 00 | |
| Total amount required for general repairs. | 1,659 75 | |

RECAPITULATION.

| | Officers' quarters. | Headquarters, offices, and band quarters. | Barracks. | Guard-house. | Non-commissioned staff quarters. | Store-houses. | Offices. | Workshops. | Stables. | General repairs. | Total. |
|---|---------------------|---|------------|--------------|----------------------------------|---------------|----------|------------|----------|------------------|------------|
| Lumber, shingles, &c..... | \$1,440 00 | \$334 50 | \$1,116 00 | \$214 00 | \$220 00 | \$1,588 50 | \$137 00 | \$192 00 | \$413 00 | \$877 25 | \$6,532 25 |
| Hardware, nails, &c..... | 200 25 | 10 45 | 117 75 | 3 75 | 10 00 | 42 00 | 2 75 | 7 00 | 19 00 | 52 50 | 465 45 |
| Paints, oils, &c..... | 120 00 | 10 00 | 105 00 | 13 00 | | | 6 00 | | | | 254 00 |
| Glass, window-sash, &c..... | | | 71 70 | 24 00 | 4 60 | | | 90 00 | | | 190 30 |
| Spouting, &c..... | 300 00 | 60 00 | 410 00 | 30 00 | 90 00 | 110 00 | | | | | 1,000 00 |
| Plastering, by the job..... | 140 00 | 140 00 | 280 00 | 56 00 | 140 00 | | 148 00 | | | | 904 00 |
| Lime, &c., for white and yellow wash..... | | 70 00 | | 27 00 | | | | | | 490 00 | 587 00 |
| Labor : | | | | | | | | | | | |
| Carpenter..... | 320 00 | 80 00 | 240 00 | 40 00 | 120 00 | 282 00 | 40 00 | | 224 00 | 240 00 | 1,586 00 |
| Stone mason..... | | | 120 00 | | | | | | | | 120 00 |
| Plumber..... | 196 00 | 24 50 | 117 60 | 9 80 | 29 40 | 29 40 | | | | | 346 70 |
| Painter..... | 180 00 | 32 00 | 112 00 | 24 00 | | | 16 00 | | | | 364 00 |
| | 2,896 25 | 761 45 | 2,890 05 | 441 55 | 614 00 | 2,051 90 | 349 75 | 299 00 | 656 00 | 1,659 75 | 13,499 95 |

I certify that the above estimate is correct, and that the articles specified are requisite for the public service, rendered so by the circumstances set forth in the above remarks.

Approved: .

FORT DOUGLAS, UTAH, December 9, 1882.

CHAS. G. PENNEY,
First Lieutenant, Regimental Quartermaster Sixth Infantry, A. A. Q. M.

A. McD. McCOOK,
Colonel Sixth Infantry, Brevet Major-General, Commanding.

OFFICE OF POST QUARTERMASTER,
Fort Douglas, Utah, December 9, 1882.

SIR: I have the honor to forward herewith a supplementary estimate, in duplicate, for materials for repairs of barracks, quarters, storehouses, &c., at this post.

The allotment heretofore made to this post has not been sufficient to even place in good repair a small portion of the garrison, particularly when by increase of garrison all the quarters and barracks became occupied.

Where so many demands are made the sum of \$1,500 will admit only patch-work and not substantial repairs, such as would last for a number of years and obviate the necessity to call for large amounts every year.

As to the condition of the public buildings at this post and its wants, I would respectfully refer to my letter of April 17, 1882.

I am, sir, very respectfully, your obedient servant,

CHAS. G. PENNEY,

First Lieutenant, Sixth Infantry, Regimental Quartermaster, A. A. Q. M.
QUARTERMASTER-GENERAL, U. S. A.,
Washington, D. C. (Through commanding officer.)

[First indorsement.]

FORT DOUGLAS, UTAH, December 12, 1882.

Respectfully forwarded through headquarters Department of the Platte, Omaha, Nebr.

A. McD. MCCOOK,

Colonel Sixth Infantry, Brevet Major-General U. S. A., Commanding.

[Second indorsement.]

HEADQUARTERS DEPARTMENT OF THE PLATTE,
Omaha, Nebr., December 26, 1882.

Respectfully forwarded through headquarters Military Division of the Missouri to the Adjutant-General of the Army—approved—with recommendation for favorable consideration in the preparation of estimates for the coming fiscal year.

O. O. HOWARD,

Brevet Major-General, Commanding.

CHIEF QUARTERMASTER OF THE DIVISION.

[Fourth indorsement.]

HEADQUARTERS MILITARY DIVISION OF THE MISSOURI,
OFFICE CHIEF AND DEPOT QUARTERMASTER,
Chicago, Ill., January 6, 1883.

Respectfully returned to the Adjutant-General of the Division with recommendation that this estimate be forwarded for the action of the War Department, and the special attention of the Secretary of War be called to it; and the amount, \$12,409.70, estimated for be asked for from the present Congress. In a late inspection of this post, made by the Lieutenant-General and myself, all the repairs contemplated by the estimate were deemed necessary.

CHAS. H. TOMPKINS,

Assistant Quartermaster-General U. S. A., Chief Quartermaster.

[Fifth indorsement.]

HEADQUARTERS MILITARY DIVISION OF THE MISSOURI,
Chicago, Ill., January 11, 1883.

Respectfully forwarded to the Adjutant-General of the Army.

Approved.

P. H. SHERIDAN,

Lieutenant-General, Commanding.

[Sixth indorsement.]

QUARTERMASTER-GENERAL'S OFFICE,
Washington, January 18, 1883.

Respectfully forwarded to the honorable Secretary of War through headquarters of the Army.

An estimate is herein, calling for \$12,409.70 for general repair of public buildings at Fort Douglas, Utah, and is approved by Department Commander.

The Lieutenant-General having, with his Chief Quartermaster, personally inspected the post, found all the repairs herein contemplated necessary. I concur in their recommendation that Congress be asked at the present session to appropriate the requisite

money, *i. e.*, \$12,409.70, as the reduced condition of the barracks and quarters' reserve fund will not warrant any portion of the work being done at this time.

RUFUS INGALLS,

Quartermaster-General, Brevet Major-General U. S. A.

HEADQUARTERS OF THE ARMY,
Washington, D. C., January 20, 1883.

Respectfully submitted to the honorable Secretary of War.

Approved.

W. T. SHERMAN, *General.*

REPORTS OF THE GENERAL OF THE ARMY AND THE QUARTERMASTER-GENERAL, IN EXPLANATION OF THE ESTIMATES FOR BUILDINGS AT MILITARY POSTS.

[Submitted to Congress December 4, 1882, and printed in House Executive Document No. 5, Forty-seventh Congress, second session, pp. 155 and 156. To accompany War Department letter of January 25, 1882.]

Estimates for buildings at military posts.

HEADQUARTERS ARMY OF THE UNITED STATES,
Washington, D. C., October 16, 1882.

SIR: The subject-matter treated of in your indorsement of October 9th is one of very great importance, and the time is now for a radical change in our whole system of piecemeal work in quartering the troops of the United States.

For a hundred years we have been sweeping across the continent with a skirmish line, building a post here and another there, to be abandoned next year for another line, and so on. Now we are across, and have railroads everywhere, so that the whole problem is changed; and I advise the honorable Secretary of War to go to Congress with a plan that will approximate permanency, instead of as heretofore meeting specific temporary wants by special appropriations, often in the interest of private parties.

We now have four national frontiers:

- 1st. The Atlantic and Gulf frontier;
- 2d. The northern frontier;
- 3d. The southern or Mexican frontier;
- 4th. The Pacific frontier; and
- 5th. The interior.

1st. The Atlantic frontier is purely maritime—harbors with permanent forts and batteries, and quarters for peace garrisons either permanent or temporary. These are Portland, Boston, New York, the Delaware, the Chesapeake, Key West, Pensacola, Mobile, New Orleans, and the Rio Grande. All these points are occupied by small artillery garrisons in reasonably good condition, needing only the repairs incident to time, which repairs can be made annually by means of the usual appropriation for "barracks and quarters."

Now that all the Gulf posts may be reached by railroads, I do not deem it wise or humane to keep garrisons thereat, liable to the annual visitation of the yellow fever. I advise the purchase at Atlanta of a suitable site, and the erection thereon of barracks for a full regiment, at a cost not to exceed \$100,000, where troops can be maintained in good discipline and in good health, ready to be sent to Charleston, Savannah, Saint Augustine, Pensacola, and Mobile, on the shortest notice.

2d. The northern or Canadian frontier. The posts which should be maintained in permanency are: Fort Montgomery, outlet of Champlain; Fort Niagara, outlet of Erie; Fort Wayne, Detroit; Mackinac; Fort Brady, Sault Sainte Marie; Pembina; Fort Buford; Fort Assiniboine; Fort Colville; and Port Townsend, Puget Sound. All these places are now occupied, but need changes involving cost.

Fort Montgomery is a costly fort, nearly if not complete, mounting sixty sea-coast guns, but without barracks. I advise that an appropriation be asked for of \$60,000 to erect thereon (the reservation is ample, 600 acres) permanent barracks for four companies of artillery.

Plattsburg Barracks could then be sold, or donated to that city for a park. It should have been abandoned after the war of 1812.

Fort Niagara has also a good reservation of 300 acres, admirably located, with brick barracks for one company. I recommend that \$30,000 be asked for another similar barracks, and for a corresponding proportion of officers' quarters. This will enable us to give up Fort Porter, Buffalo, which is in ruins, and of no further military value to the United States.

Along this northern line the posts of Forts Wayne, Mackinac, Brady, Buford, Assiniboine, and Port Townsend will answer all present uses, leaving only a new post to be built on the Upper Columbia to replace old Fort Colville, which has rotted down and has been abandoned as uninhabitable. I advise that Congress be asked for \$50,000 to build new Fort Colville, to be erected on a site to be chosen near where the Columbia River enters our territory north of old Colville.

3d. The southern or Mexican frontier. The posts now occupied are: Forts Brown; Ringgold Barracks; McIntosh, Laredo; Duncan, Eagle Pass; Del Rio, San Felipe; Fort Clark; San Antonio; Fort Davis; Presidio del Norte; Camp Rice; and Fort Bliss, El Paso del Norte—all these in Texas; and Camp Rucker; Huachuca; Fort Grant; Fort Lowell, Tucson; Fort Yuma, and San Diego, in Arizona and California.

The rapid growth of our railroad system in the past three years has much simplified the problem of the defense of that most difficult frontier, and private interests have assumed such a permanent shape that we may now with safety adopt a system permanent and suited to the probable state of facts during the next fifty years.

Fort Brown is subject to overflow, and during this year has been afflicted with yellow fever in its worst form. I advise its absolute abandonment.

Ringgold Barracks being the property of the United States, and with reasonably good barracks, should be held a few years until the extension of the railroad down the valley of the Rio Grande from Laredo will enable us to dispatch troops to any threatened point promptly, when Ringgold Barracks may also be allowed to pass away.

The strategic points of the Texas frontier are: San Antonio, McIntosh, and Duncan, on the Lower Rio Grande; Fort Davis, with Presidio and Camp Rice, on the Upper Rio Grande, and Fort Bliss.

There is now an existing appropriation of \$200,000 for the purchase of sites and building of posts on this extensive and important frontier. The sum is insufficient, and I advise the appropriation of \$200,000 more; with which sum I believe General Angur, the department commander, will and can put that whole frontier in a good and permanent condition of defense.

After a personal inspection, I am convinced that the appropriation of \$257,451.69 asked for Fort Seldon, N. Mex., is not needed. (See Senate Ex. Doc. 125, Forty-seventh Congress, first session.) What barracks are needed there or thereabouts should be added to those now existing at Fort Bliss, Paso del Norte, for which I would ask 50,000, instead of the \$100,000 embraced in the inclosed estimate.

Following the southern line westward, I will remark that nature has done so little for that region that Congress should be liberal to the troops who must guard that frontier. In the table of estimates herewith I find Fort Huachuca, \$52,000; Fort Grant, \$62,000; Fort Thomas, \$30,000, and Fort Apache, \$61,000. I approve the two former, but not the two latter, until General Crook, the new commander of the department, submits his estimates. Forts Grant and Huachuca are likely to become permanent, but the latter are temporary, dependent on the existence of the Apache Indians, who, in my judgment, will not long be a disturbing element in that Territory. Forts Lowell and Yuma are of the past.

4th. The Pacific frontier may be construed as Port Townsend; Forts Canby and Stevens, mouth of the Columbia; Fort Vancouver; San Francisco, and San Diego, Cal. At all these places the United States possesses sufficient land and public reservations, and the posts are reasonably good. The inclosed estimate for Vancouver, \$90,579.61, is not approved. Fifty thousand dollars should suffice; and \$9,859.48 for Fort Canby is approved.

I now come to the interior posts. These have grown up in the progress of the settlement of the continent, were absolutely demanded by the necessities of the country at the time, but many of them are now worse than useless; built of the rawest materials, mere shelters against the winter's storm or the summer's heat, and having fulfilled their purpose should be allowed to die out. Some of them occupy strategic positions and should be held forever as places of arms, in which to collect war material, and for the quartering of troops.

I will mention by name such as I believe should be held permanently, and where barracks of stone or brick should be erected from time to time, so as to quarter troops, which will otherwise soon be roofless by the decay of the temporary quarters which have heretofore been their homes.

Fort Assiniboine, Dak., permanent for ten companies.

Boisé Barracks, Idaho, permanent for four companies.

Fort D. A. Russell, Cheyenne, Wyo., permanent for six companies.

Fort Douglas, Utah, permanent for six companies.

Fort Gibson, Indian Territory, permanent for four companies.

Fort Laramie, Wyo., permanent for six companies.

Fort Leavenworth, Kans., permanent for twelve companies.

Little Rock, Ark., permanent for two companies.

Madison Barracks, N. Y., permanent for ten companies.
 Fort Marcy, Santa Fé, N. Mex., permanent for two companies.
 Fort Marion, Fla., permanent for two companies.
 Fort Meade, Dak., permanent for four companies.
 Fort Missoula, Mont., permanent for four companies.
 Mount Vernon Barracks, Ala., permanent for two companies.
 Newport Barracks, Ky., permanent for two companies.
 Omaha, Nebr., permanent for ten companies.
 Fort Riley, Kans., permanent for six companies.
 San Antonio, Tex., permanent for twelve companies.
 San Diego, Cal., permanent for two companies.
 Fort Sill, Ind. T., permanent for six companies.
 Fort Snelling, Minn., permanent for six companies.
 Fort Sully, Dak., permanent for four companies.
 Fort Walla Walla, Wash., permanent for six companies.
 Washington Barracks, D. C., permanent for six companies.
 Fort Wingate, N. Mex., permanent for six companies.

At these interior posts all alterations and repairs of barracks and quarters should be of brick or stone of the most permanent character, meant to last forever.

For the enlargement and improvement of these military posts, the Secretary of War should ask of Congress *annually* \$1,000,000 for, say, five years, to be expended by him at discretion by the officers of the Quartermaster's Department, and, in my judgment, in four of five years by this process we will have abundance of good quarters for the whole Army, which will endure for the next fifty years.

The following list of posts now occupied will be necessary for, say, ten years, the repairs to which should consequently be temporary, and paid for out of the annual appropriation for barracks and quarters:

Fort Abraham Lincoln, Dak., frame buildings.
 Fort Apache, Ariz., logs and frame buildings.
 Fort Bayard, N. Mex., frame buildings.
 Fort Bridger, Wyo., frame buildings.
 Fort Cameron, Utah, frame buildings.
 Fort Coeur d'Alene, Idaho, frame buildings.
 Fort Cummings, N. Mex., adobe and frame buildings.
 Fort Custer, Mont., logs and frame buildings.
 Fort Elliott, Texas, logs and frame buildings.
 Fort Ellis, Mont., logs and frame buildings.
 Fort Fred Steele, Wyo., logs and frame buildings.
 Fort Keogh, Mont., logs and frame buildings.
 Fort Lewis, Col., logs and frame buildings.
 Fort Lowell, Ariz., adobe buildings.
 Fort Maginnis, Mont., frame buildings.
 Fort McDowell, Ariz., frame and adobe buildings.
 Fort McKinney, Wyo., logs and frame buildings.
 Fort Niobrara, Neb., frame buildings.
 Ringgold Barracks, Texas, brick buildings.
 Fort Randall, Dak., frame buildings.
 Fort Reno, Ind. T., frame buildings.
 Fort Robinson, Nebr., frame buildings.
 Fort Shaw, Mont., frame buildings.
 Fort Sidney, Nebr., frame buildings.
 Fort Spokane, Wash., frame buildings.
 Fort Stanton, N. Mex., frame buildings.
 Fort Washakie, Wyo., logs and frame buildings.
 Fort Whipple, Ariz., adobe and frame buildings.
 Fort Yates, Dak., frame buildings.

The following military posts are obsolete and ought to be abandoned. To accomplish this end Congress should be asked for authority to dispose of all the buildings and materials which cannot be moved, and to sell the reservations, or to transfer the same to the Interior Department for sale or grant under existing laws for the disposition of the public domain, viz:

Bad Lands Cantonment, Dak.
 Baton Rouge Barracks, La.
 Fort Bennett, Dak.
 Fort Bidwell, Cal.
 Fort Bowie, Ariz.
 Fort Brooke, Fla.
 Fort Brown, Texas.

Fort Clark, Texas.
 Fort Clinch, Fla.
 Old Fort Colville, Wash.
 Fort Concho, Texas.
 Fort Craig, N. Mex.
 Fort Dodge, Kans.
 Fort Fetterman, Wyo.
 Fort Foote, Md.
 Fort Garland, Colo.
 Fort Gaston, Cal.
 Fort Hale, Dak.
 Fort Hall, Idaho.
 Fort Halleck, Nev.
 Fort Hays, Kans.
 Fort Klamath, Oreg.
 Fort Lapwai, Idaho.
 Fort Lyon, Colo.
 Fort McDermit, Nev.
 Fort McKavett, Texas.
 Fort Mojave, Ariz.
 Cantonment North Fork of the Canadian, Ind. T.
 Fort Porter, Buffalo, N. Y.
 Plattsburg Barracks, N. Y.
 Fort Sanders, Wyo.
 Fort Sisseton, Dak.
 Fort Stevenson, Dak.
 Fort Stockton, Texas.
 Fort Supply, Ind. T.
 Fort Verde, Ariz.
 Fort Wallace, Kans.
 White River, Colo.
 Fort Yuma, Cal.

For convenience of reference, I will now recapitulate:

| | |
|---|--------------|
| ATLANTIC FRONTIER. | |
| New post at Atlanta, Ga..... | \$100,000 00 |
| NORTHERN FRONTIER. | |
| Fort Montgomery, N. Y..... | 50,000 00 |
| Fort Niagara, N. Y..... | 30,000 00 |
| Fort Colville, Wash..... | 50,000 00 |
| SOUTHERN OR MEXICAN FRONTIER. | |
| Rio Grande Frontier, below El Paso..... | 200,000 00 |
| Fort Bliss, Paso del Norte..... | 50,000 00 |
| Fort Huachuca, Ariz..... | 52,000 00 |
| Fort Grant, Ariz..... | 60,000 00 |
| PACIFIC FRONTIER. | |
| Fort Vancouver, Wash..... | 50,000 00 |
| Fort Canby, Wash..... | 9,859 48 |
| Total specific appropriations..... | 651,859 48 |
| For enlargement and improvement of the interior posts of the United States..... | 1,000,000 00 |
| Grand total for 1883-'4..... | 1,651,859 48 |

In conclusion, I submit a list of all the posts and military reservations held or in charge of the Army, with remarks which explain their general condition, and my recommendation as to their future disposition.

I also inclose map, marked so as to exhibit the location of each post with colors to exhibit which should be treated as permanent, which should be held for temporary use, and which should be abandoned or converted to other uses.

I have the honor to be your obedient servant,

W. T. SHERMAN,
General.

Hon. R. T. LINCOLN,
Secretary of War.

Alphabetical list of the posts of the United States occupied or cared for by the Regular Army, 1882.

| Names. | State or Territory. | General condition. | Disposition recommended. |
|-----------------------|-----------------------|--|----------------------------|
| Abraham Lincoln..... | Dakota..... | In fair condition; of frame. | To be retained; temporary. |
| Adams..... | Rhode Island..... | A permanent fort, in fair condition. | To be retained; permanent. |
| Alcatraz Island..... | California..... | Permanent batteries and citadel. | Do. |
| Andrew..... | Massachusetts..... | A fort without barracks..... | Of no real value. |
| Angel Island..... | California..... | Wooden barracks and site for fort. | To be retained; permanent. |
| Apache..... | Arizona..... | Temporary; poor condition. | To be retained; temporary. |
| Assinibipine..... | Montana..... | Permanent; fair condition.. | To be retained; permanent. |
| Bad Lands..... | Dakota..... |do..... | To be abandoned. |
| Barrancas..... | Florida..... | Brick barracks; fair condition; permanent. | To be retained; permanent. |
| Baton Rouge..... | Louisiana..... |do..... | To be abandoned. |
| Bayard..... | New Mexico..... | Temporary; fair condition.. | To be retained; temporary. |
| Benicia Barracks..... | California..... | In fair condition; of frame.. | To be retained; permanent. |
| Bennett..... | Dakota..... |do..... | To be abandoned. |
| Bidwell..... | California..... |do..... | Do. |
| Bliss..... | Texas..... | Permanent..... | To be retained; permanent. |
| Boise Barracks..... | Idaho..... | In fair condition; of stone.. | Do. |
| Bowie..... | Arizona..... | In fair condition; of adobe.. | To be abandoned. |
| Brady..... | Michigan..... | Permanent; of frame..... | To be retained; permanent. |
| Bridger..... | Wyoming..... | Temporary; poor condition; frame. | To be retained; temporary. |
| Brooke..... | Florida..... | Condition poor..... | To be abandoned. |
| Brown..... | Texas..... | On leased ground..... | Do. |
| Buford..... | Dakota..... | In good condition; permanent. | To be retained; permanent. |
| Cameron..... | Utah..... | In fair condition; of stone.. | To be retained; temporary. |
| Canby..... | Washington..... | Condition good..... | To be retained; permanent. |
| Carroll (?)..... | Maryland..... |do..... |do..... |
| Caswell (?)..... | North Carolina..... |do..... |do..... |
| Cheyenne Depot..... | Wyoming..... |do..... |do..... |
| Clark..... | Texas..... | Buildings and ground leased | To be retained; permanent. |
| Clark's Point..... | Massachusetts..... |do..... | To be abandoned. |
| Clinch..... | Florida..... |do..... | Do. |
| Cœur d'Alene..... | Idaho..... | Condition good..... | To be retained; temporary. |
| Columbus..... | New York..... | In fair condition..... | To be retained; permanent. |
| Colville..... | Washington..... | Poor..... | To be abandoned. |
| Concho..... | Texas..... | Buildings on rented ground.. | Do. |
| Constitution (?)..... | New Hampshire..... |do..... |do..... |
| Craig..... | New Mexico..... | In fair condition; adobe, &c. | To be abandoned. |
| Cummings..... |do..... |do..... | To be retained; temporary. |
| Custer..... | Montana..... | Condition good..... | Do. |
| D. A. Russell..... | Wyoming..... | In poor condition; frame..... | To be retained; permanent. |
| Davis..... | Texas..... |do..... | Do. |
| Delaware (?)..... | Delaware..... |do..... |do..... |
| Dodge..... | Kansas..... |do..... | To be abandoned. |
| Douglas..... | Utah..... | In fair condition..... | To be retained; permanent. |
| Duncan..... | Texas..... |do..... | Do. |
| Dutch Island..... | Rhode Island..... |do..... |do..... |
| Elliott..... | Texas..... | In fair condition; frame..... | To be retained; temporary. |
| Fetterman..... | Montana..... | In fair condition; logs..... | Do. |
| Finn's Point..... | Wyoming..... |do..... | To be abandoned. |
| Poote..... | New Jersey..... |do..... | Do. |
| Fort Point..... | Maryland..... |do..... | Do. |
| Fort Steele..... | California..... | In fair condition..... | To be retained; permanent. |
| Fred Steele..... | Wyoming..... |do..... | To be retained; temporary. |
| Gaines..... | Alabama..... |do..... | To be abandoned. |
| Garland..... | Colorado..... | Buildings of adobe on leased ground. | Do. |
| Gaston..... | California..... | In fair condition; of frame.. | Do. |
| Gibson..... | Indian Territory..... | In fair condition..... | To be retained; permanent. |
| Gorges..... | Maine..... |do..... | Do. |
| Grant..... | Arizona..... | New post..... | Do. |
| Gratiot..... | Michigan..... |do..... | To be abandoned. |
| Griswold..... | Connecticut..... |do..... | Do. |
| Hale..... | Dakota..... | In poor condition; of logs.. | To be retained; temporary. |
| Hall..... | Idaho..... | In fair condition; of frame and logs. | To be abandoned. |
| Halleck..... | Nevada..... | In fair condition; adobe, &c. | Do. |
| Hamilton..... | New York..... |do..... | To be retained; permanent. |
| Hays..... | Kansas..... | In poor condition; of frame.. | To be abandoned. |
| Huachuca..... | Arizona..... |do..... | To be retained; permanent. |
| Independence..... | Massachusetts..... |do..... | Do. |
| Jackson Barracks..... | Louisiana..... |do..... | Do. |
| Jackson..... | Georgia..... |do..... | To be abandoned. |
| Jackson..... | Louisiana..... |do..... | Do. |
| Jefferson..... | Florida..... |do..... | To be retained; permanent. |
| Johnston..... | North Carolina..... |do..... | Do. |

Alphabetical list of the posts of the United States, &c.—Continued.

| Names. | State or Territory. | General condition. | Disposition recommended. |
|----------------------------|-----------------------|---|----------------------------|
| Keogh..... | Montana..... | New post..... | To be retained; temporary. |
| Key West Barracks.. | Florida..... | ..... | To be retained; permanent. |
| Klamath..... | Oregon..... | Frame; fair condition..... | To be abandoned. |
| Knox..... | Maine..... | ..... | To be retained; permanent. |
| Lafayette..... | New York Harbor..... | ..... | Do. |
| Lapwai..... | Idaho..... | In fair condition; of frame and logs. | To be retained; temporary. |
| Laramie..... | Wyoming..... | In fair condition; of frame.. | Do. |
| Leavenworth (Fort).. | Kansas..... | ..... | To be retained; permanent. |
| Leavenworth (Prison) | do..... | ..... | Do. |
| Lewis..... | Colorado..... | ..... | To be retained; temporary. |
| Little Rock Barracks. | Arkansas..... | ..... | To be retained; permanent. |
| Livingston..... | Louisiana..... | ..... | To be abandoned. |
| Lowell..... | Arizona..... | In fair condition; of adobe.. | To be retained; temporary. |
| Lyon..... | Colorado..... | In fair condition; of frame and stone. | To be abandoned. |
| Mackinac..... | Michigan..... | do..... | To be retained; permanent. |
| Macomb..... | Louisiana..... | ..... | To be abandoned. |
| Macon..... | North Carolina..... | ..... | Do. |
| Madison Barracks.. | New York..... | ..... | To be retained; permanent. |
| Maginnis..... | Montana..... | ..... | To be retained; temporary. |
| Marcy..... | New Mexico..... | ..... | To be retained; permanent. |
| Marion..... | Florida..... | ..... | Do. |
| McClary..... | Maine..... | ..... | To be abandoned. |
| McDermit..... | Nevada..... | In good condition; of stone and adobe. | Do. |
| McDowell..... | Arizona..... | In fair condition; of adobe.. | To be retained; temporary. |
| McHenry..... | Maryland..... | In fair condition; of brick and frame. | To be retained; permanent. |
| McIntosh..... | Texas..... | ..... | Do. |
| McKavett..... | do..... | ..... | To be abandoned. |
| McKinney..... | Wyoming..... | ..... | To be retained; temporary. |
| Meade..... | Dakota..... | In good condition..... | To be retained; permanent. |
| Miffin..... | Pennsylvania..... | ..... | To be abandoned. |
| Missoula..... | Montana..... | In good condition; of frame.. | To be retained; permanent. |
| Mojave..... | Arizona..... | In fair condition; of adobe.. | To be abandoned. |
| Monroe..... | Virginia..... | ..... | To be retained; permanent. |
| Montgomery..... | New York..... | ..... | Do. |
| Morgan..... | Alabama..... | ..... | Do. |
| Moultrie..... | South Carolina..... | ..... | Do. |
| Mt. Vernon Barracks. | Alabama..... | ..... | Do. |
| Meyer..... | Virginia..... | ..... | To be retained; permanent. |
| Newport Barracks.. | Kentucky..... | ..... | Do. |
| Niagara..... | New York..... | ..... | Do. |
| Niobrara..... | Nebraska..... | In good condition; of adobe.. | To be retained; temporary. |
| North Fork Canadian River. | Indian Territory..... | ..... | To be abandoned. |
| Oglethorpe Barracks.. | Georgia..... | ..... | Do. |
| Omaha..... | Nebraska..... | Brick and frame; old and decayed. | To be retained; permanent. |
| Ontario..... | New York..... | In fair condition..... | Do. |
| Pembina..... | Dakota..... | In poor condition..... | Do. |
| Phoenix..... | Massachusetts..... | ..... | To be abandoned. |
| Pickens..... | Florida..... | ..... | To be retained; permanent. |
| Pike..... | Louisiana..... | ..... | To be abandoned. |
| Plattsburg Barracks. | New York..... | In fair condition; of stone, &c. | Do. |
| Point San José..... | California..... | In fair condition; of frame.. | To be retained; temporary. |
| Popham..... | Maine..... | ..... | To be retained; permanent. |
| Poplar River..... | Montana..... | In fair condition; of pickets. | To be retained; temporary. |
| Porter..... | New York..... | In fair condition; of stone, brick, &c. | To be abandoned. |
| Preble..... | Maine..... | ..... | To be retained; permanent. |
| Presidio of San Francisco. | California..... | In good condition; of adobe, frame, &c. | Do. |
| Randall..... | Dakota..... | ..... | To be retained; temporary. |
| Reno..... | Indian Territory..... | In fair condition; of frame.. | Do. |
| Pulaski..... | Georgia..... | ..... | To be retained; permanent. |
| Riley..... | Kansas..... | In fair condition; of stone.. | Do. |
| Ringgold..... | Texas..... | ..... | To be retained; temporary. |
| Robinson..... | Nebraska..... | In fair condition; adobe, brick, &c. | Do. |
| San Antonio..... | Texas..... | ..... | To be retained; permanent. |
| Sanders..... | Wyoming..... | ..... | To be abandoned. |
| San Diego Barracks.. | California..... | In fair condition..... | To be retained; permanent. |
| Sandy Hook..... | New Jersey..... | ..... | Do. |
| Scammel..... | Maine..... | ..... | Do. |
| Schuyler..... | New York..... | ..... | Do. |
| Selden..... | New Mexico..... | ..... | To be abandoned. |
| Sewell..... | Massachusetts..... | ..... | Do. |
| Shaw..... | Montana..... | In poor condition..... | To be retained; temporary. |

Alphabetical list of the posts of the United States, &c.—Continued.

| Names. | State or Territory. | General condition. | Disposition recommended. |
|-----------------------|-----------------------|---|----------------------------|
| Ship Island..... | Mississippi..... | | To be retained; permanent. |
| Sidney..... | Nebraska..... | In fair condition..... | To be retained; temporary. |
| Sill..... | Indian Territory..... | do..... | To be retained; permanent. |
| Sisseton..... | Dakota..... | In fair condition; of frame, logs, &c. | To be retained; temporary. |
| Snelling..... | Minnesota..... | Undergoing improvement... | To be retained; permanent. |
| Snake River, camp on | Wyoming..... | | To be abandoned. |
| Standish..... | Massachusetts..... | | Do. |
| Spokane..... | Washington..... | In fair condition; of logs, &c. | To be retained; temporary. |
| Stanton..... | New Mexico..... | In poor condition; of adobe. | Do. |
| Saint Augustine..... | Florida..... | | To be retained; permanent. |
| Stevens..... | Oregon..... | In fair condition; of frame... | Do. |
| Stevenson..... | Dakota..... | In fair condition; of adobe... | Temporary. |
| Stockton..... | Texas..... | On leased ground..... | To be abandoned. |
| Saint Philip..... | Louisiana..... | | To be retained; permanent. |
| Sullivan..... | Maine..... | | Do. |
| Sully..... | Dakota..... | In fair condition; of frame and logs. | Do. |
| Sumter..... | South Carolina..... | | Do. |
| Supply..... | Indian Territory..... | In fair condition; of frame and logs. | To be retained; temporary. |
| Taylor..... | Florida..... | | To be retained; permanent. |
| Thomas..... | Arizona..... | | To be retained; temporary. |
| Thornburg..... | Utah..... | | To be retained; permanent. |
| Totten..... | Dakota..... | In good condition; of brick, &c. | To be retained; permanent. |
| Townsend..... | Washington..... | In fair condition; of frame, &c. | Do. |
| Trumbull..... | Connecticut..... | In fair condition; of frame, stone, &c. | Do. |
| Uncompahgre..... | Colorado..... | In poor condition; of pickets. | To be retained; temporary. |
| Union..... | New Mexico..... | In fair condition..... | Do. |
| Vancouver Barracks.. | Washington..... | In fair condition; of frame logs, &c. | To be retained; permanent. |
| Verde..... | Arizona..... | In fair condition; of adobe, &c. | To be retained; temporary. |
| Wadsworth..... | New York..... | In good condition; of frame. | To be retained; permanent. |
| Wallace..... | Kansas..... | | To be abandoned. |
| Walla Walla..... | Washington..... | In fair condition..... | To be retained; permanent. |
| Warren..... | Massachusetts..... | | Do. |
| Washakie..... | Wyoming..... | Condition poor; of logs, adobe, &c. | To be retained; temporary. |
| Washington Barracks | District Columbia. | | To be retained; permanent. |
| Washington..... | Maryland..... | | Do. |
| Wayne..... | Michigan..... | | Do. |
| Whipple Barracks..... | Arizona..... | In fair condition; of frame.. | To be retained; temporary. |
| White River, camp on | Colorado..... | | To be abandoned. |
| Wingate..... | New Mexico..... | | To be retained; permanent. |
| Winthrop..... | Massachusetts..... | | Do. |
| Wolcott..... | Rhode Island..... | | Do. |
| Wood..... | New York Harbor..... | | Do. |
| Yates..... | Dakota..... | | To be retained; temporary. |
| Yuma..... | California..... | In fair condition; brick..... | To be abandoned. |

W. T. SHERMAN,
General.

HEADQUARTERS OF THE ARMY,
Washington, D. C., October 16, 1882.

QUARTERMASTER-GENERAL'S OFFICE,
Washington, D. C., September 26, 1882.

SIR: On August 9, 1882, I was directed by the Secretary, in order to obviate the necessity of submitting to Congress during the session what had heretofore been called "special estimates," to submit with my annual estimates any and all items for military posts, buildings, and roads which I might deem actually necessary, due regard being had to the interests and economy of the public service. Based upon these instructions, I immediately caused to be gathered together the following projects which had during the last session been recommended by the Secretary, but for which Congress had failed to appropriate, *i. e.*:

| | |
|------------------------------|-------------|
| Fort Lewis, Colo..... | \$40,000 00 |
| Fort Selden, N. Mex..... | 251,451 69 |
| New Fort Colville, Wash..... | 40,000 00 |

| | |
|--|-------------|
| San Antonio depot approaches | \$3, 500 00 |
| Jefferson Barracks, Mo | 24, 938 44 |
| Fort Monroe, Va | 16, 830 00 |
| Boise Barracks, Idaho | 10, 143 44 |
| Fort Canby, Wash | 9, 859 48 |
| Fort Cœur d'Alene, Idaho | 6, 560 25 |
| Fort Lapwai, Idaho | 7, 800 00 |
| Fort Klamath, Oreg | 15, 221 13 |
| Fort Walla Walla, Wash | 38, 163 62 |
| Vancouver Barracks, Wash | 90, 519 61 |
| Fort Halleck, Nev | 7, 500 00 |
| Fort Thornburg, Utah | 84, 000 00 |
| Fort Huachuca, Ariz | 52, 000 00 |
| Fort Grant, Ariz | 62, 000 00 |
| Fort Thomas, Ariz | 30, 000 00 |
| Fort Apache, Ariz | 61, 000 00 |
| The General of the Army on May 18, 1882, having recommended, which was approved by the Secretary, that on receipt of proper plans and estimates, that for new buildings at Fort Bliss, Texas, Congress be asked for \$100,000, I included that item also | 100, 000 00 |
| And General Hancock having also reported need of barracks and quarters improvements at Little Rock Barracks, Ark., I further added an item of | 33, 160 00 |
| Making a total of | 984, 647 66 |

Estimates for which in due form I submitted on the 20th instant. Attention is invited to the original estimate to complete Fort Bliss, which was \$40,290.

The General of the Army and Secretary of War believed it in May last to be the interest of the service to expend, if Congress would appropriate, \$100,000, and that General Pope now reports that if Selden is rebuilt, that all that will be needed to put Fort Bliss in condition to accommodate two companies is \$20,000.

On the 24th August the Secretary, after a personal interview with Maj. J. M. Moore, who is in immediate charge of the barracks and quarters branch of this office, somewhat changed the phraseology of his previous orders, upon which this office telegraphed to the different chief quartermasters for a list of all needed projects within their respective divisions, limiting time of preparation of estimates to September 15, as it was necessary that all annual estimates of this office be completed and submitted to the War Department by the 20th instant.

The time was too brief to admit of any extended details, and the result of the call will be found in the papers herewith, which were not received in time to be examined and tabulated before submitting the regular annual estimates.

I invite attention to the projects embraced in the inclosed memorandum marked A to S, which are essentially the same, with two or three exceptions, as those heretofore submitted.

Regarding some of the crude estimates itemized in the memorandum, I would call special attention, *i. e.:*

| | |
|---------------------------|-----------|
| Fort Davis, Tex | \$83, 250 |
| San Antonio, Tex | 291, 200 |
| Fort Snelling, Minn | 200, 000 |
| Fort Omaha, Nebr | 162, 892 |

The information regarding the absolute need of these heavy expenditures in this office is meager, but probably the Secretary of War or the General of the Army may have other data which has not as yet reached the Quartermaster-General.

| | |
|--|-----------|
| For Fort Brady, Mich., estimate is made for | \$49, 318 |
| For Fort Montgomery, N. Y., estimate is made for | 55, 010 |
| For Fort Niagara, N. Y., estimate is made for | 23, 271 |

The correspondence, &c., regarding these three projects has already been laid before Congress, and is published in House Ex. Doc. 45, Forty-sixth Congress, second session.

For Fort Monroe, Va., estimate is made for \$52,830. This covers the item of \$30,000 for a school and library building heretofore called for (see Estimate Book for 1883, page 150); \$16,830 is referred to in Senate Ex. Doc. 95, Forty-seventh Congress, first session; while \$6,000 is for repairs called for on the annual report of inspection, &c.

For Washington Barracks, D. C., estimate is made for \$27,860. This covers the following work: Converting timber-shed into barracks, \$10,500; remodeling south store into three sets of officers' quarters, \$7,200; light-battery stable, \$6,660; gun-shed, \$3,500.

In an estimate of \$32,827 for repairs and alterations, the General of the Army on July

14, 1882, recommended the first item, *i. e.*, \$10,500, and a further sum of \$9,500 for alterations and repairs most needed, but as it was subsequently found that neither the allotment nor contingent fund would bear so large an expenditure only \$3,000 was authorized.

The difference in estimates for Huachuca, Grant, Apache, and Thomas is accounted for by the fact that the sums reported as needed were originally approximated by department and division commanders, while study and details gave other figures.

The estimates, correspondence, tabulated statement, and this report are submitted for the information of the General of the Army and honorable Secretary of War, and for such further instructions, if any, that they may have or consider necessary to issue in the premises.

Very respectfully, your obedient servant,

RUFUS INGALLS,
Quartermaster-General, Brevet Major-General, U. S. A.

The ADJUTANT-GENERAL, U. S. A.,
Washington, D. C.

*Estimates of appropriations required for the service of the fiscal year ending June 30, 1884,
by the Quartermaster's Department, U. S. Army.*

| Detailed objects of expenditure, and explanations. | Total amount to be appropriated under each head of appropriation. |
|--|---|
| Fort Lewis, Colo. Recommended by the Secretary of War to the President, March 25, 1882. (See House Ex. Doc. 146, Forty-seventh Congress, first session.) (Rev. Stat., pp. 206-7, sec. 1136.) Submitted | \$40,000 00 |
| Fort Selden, N. Mex. (See Senate Ex. Doc. 125, Forty-seventh Congress, first session.) Submitted | 251,451 60 |
| Fort Colville, Wash. (See Senate Ex. Doc. 1, Forty-seventh Congress, first session.) Submitted | 40,000 00 |
| San Antonio Depot, Tex. Recommended by the Secretary of War to the chairman of the House Committee on Appropriations, May 3, 1882. Submitted..... | 3,500 00 |
| Jefferson Barracks, Mo. Recommended by the Secretary of War to the President, June 14, 1882. (See House Ex. Doc. 37, Forty-seventh Congress, first session.) Submitted ... | 24,938 44 |
| Fort Monroe, Va. Submitted | 16,830 00 |
| Boisé Barracks, Idaho. Submitted..... | 10,143 44 |
| Fort Canby, Wash. Submitted | 9,859 48 |
| Fort Cœur d'Alene, Idaho. Submitted..... | 6,500 25 |
| Fort Lapwai, Idaho. Submitted | 7,800 00 |
| Fort Klamath, Oreg. Submitted | 15,221 13 |
| Fort Walla Walla, Wash. Submitted..... | 38,163 62 |
| Vancouver Barracks, Wash. Submitted | 90,519 61 |
| Fort Halleck, Nev. Submitted..... | 7,500 00 |
| (See Senate Ex. Doc. 95, Forty-seventh Congress, first session.) | |
| Fort Thornburgh, Utah. (See House Ex. Doc. 90, Forty-seventh Congress, first session.) Submitted | 84,000 00 |
| Fort Huachuca, Ariz. Submitted..... | 52,000 00 |
| Fort Grant, Ariz. Submitted..... | 62,000 00 |
| Fort Thomas, Ariz. Submitted..... | 30,000 00 |
| Fort Apache, Ariz. Submitted..... | 61,000 00 |
| (See Senate Ex. Doc. 187, Forty-seventh Congress, first session.) | |
| Fort Bliss, Tex. New buildings. Approved by Secretary of War, and plans now being prepared by division quartermaster. Submitted..... | 100,000 00 |
| Little Rock Barracks, Ark. Repairs of existing buildings. Recommended by Major-General Hancock, and approved by the Quartermaster-General. Submitted..... | 33,160 00 |
| | <hr/> |
| | 984,647 66 |

NOTE.—This estimate is submitted in compliance with instructions contained in letter from War Department to the Quartermaster-General of 9th of August, 1882. Most of the projects have already received the approval of the Secretary of War, and have been favorably reported to Congress.

Respectfully submitted.

RUFUS INGALLS,
Quartermaster-General, Brevet Major-General, U. S. A.

QUARTEMASTER-GENERAL'S OFFICE,
September 20, 1882.