5—349 e

INDIAN OFFICE.

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CAUTION!

Positively no papers to be added to or taken from this file, except by an employee of the Mails and Files Division.
By order of

E. B. MERITT,
Asst. Commissioner.

6—344

42822-, 1916. CARLISLE File No. 916

Irrigation
42833-16
A G P

APR 22 1916

Mr. O. H. Lipps,

Superintendent Carlisle School.

My dear Mr. Lipps:

Please find inclosed herewith report of Chief Engineer W. M. Reed, regarding reclamation of the garden plot for the Carlisle School.

You are no doubt familiar with this matter, having gone over the situation with Mr. Reed, and it is suggested that you follow the plans as outlined by Mr. Reed in this report for the improvements mentioned.

Very truly yours,

(Signed) E. B. Meritt

Assistant Commissioner.

4-MMcC-20

DEPARTMENT OF THE INTERIOR

UNITED STATES INDIAN SERVICE

OFFICE OF CHIEF ENGINEER (IRRIGATION)

WASHINGTON, D. C.

April 18, 1916.

The Commissioner of Indian Affairs,

Washington, D. C.

Sir:

In accordance with instructions, I visited the Carlisle School and made an examination of the physical conditions of the garden plot situated near the School buildings.

This garden plot lies on what is commonly called the first bottom and is inclosed on all sides except the north by higher ground or embankments. It is so situated that it receives the run-off from the school grounds, and possibly some seepage water from the Creek during times of flood, and has in former times received overflow water from the creek on the north. (See accompanying plat.)

The surface of the garden slopes from the south toward the north with a good grade except near the north-east corner, where a comparatively small area is practically flat. It is for this area that protection is sought.

Quite naturally the first thought is that drainage is the proper remedy, but a careful observation of the physical conditions and the topography indicate that

drainage as usually understood, would be quite expensive, probably so expensive that the good accomplished would not be sufficient justification for the expense that would have to be incurred.

The second method to be studied was one of prevention and in the study of this method sufficient levels were taken to determine the possibilities along these lines.

A few holes were dug for the purpose of understanding the nature of the sub-strata and estimating what of the damaging water probably came from the creek by means of seepage. The soil conditions are such that it appears that but little reaches the land through this means, and it is probable that this quantity alone would not materially affect the land. However, in conjunction with another and greater supply from surface run-off, it might be a factor in doing damage.

The topography of the surrounding land is such that quite an area to the East and South-east sends its run-off directly on to this plot, and without a more easy means of egress a considerable part of this accumulation settles and sinks into the ground, making the lower edge of the field wet, soggy, and sour.

If only the moisture from the rain falling upon this area is allowed upon it, I believe by the use of some of the embankments found on the west side, for leveling purposes, the land can be fully and completely reclaimed.

I have run levels and made estimates for a ditch and embankment on the East side of the field and an embankment on the North side, which I believe will afford the necessary protection against flooding and will enable the land to be farmed as a garden.

There would be some trouble in growing deep rooted crops without drainage on the lower part of the field, but the short rooted garden crops can be grown after the conditions have been secured as above indicated.

It will require the moving of about 600 cubic yards of earth to construct both ditch and embankments as planned, and Mr. Bradley who is upon the ground and has a knowledge of such work can easily carry it out and I am sure that the trouble heretofore experienced will be entirely removed.

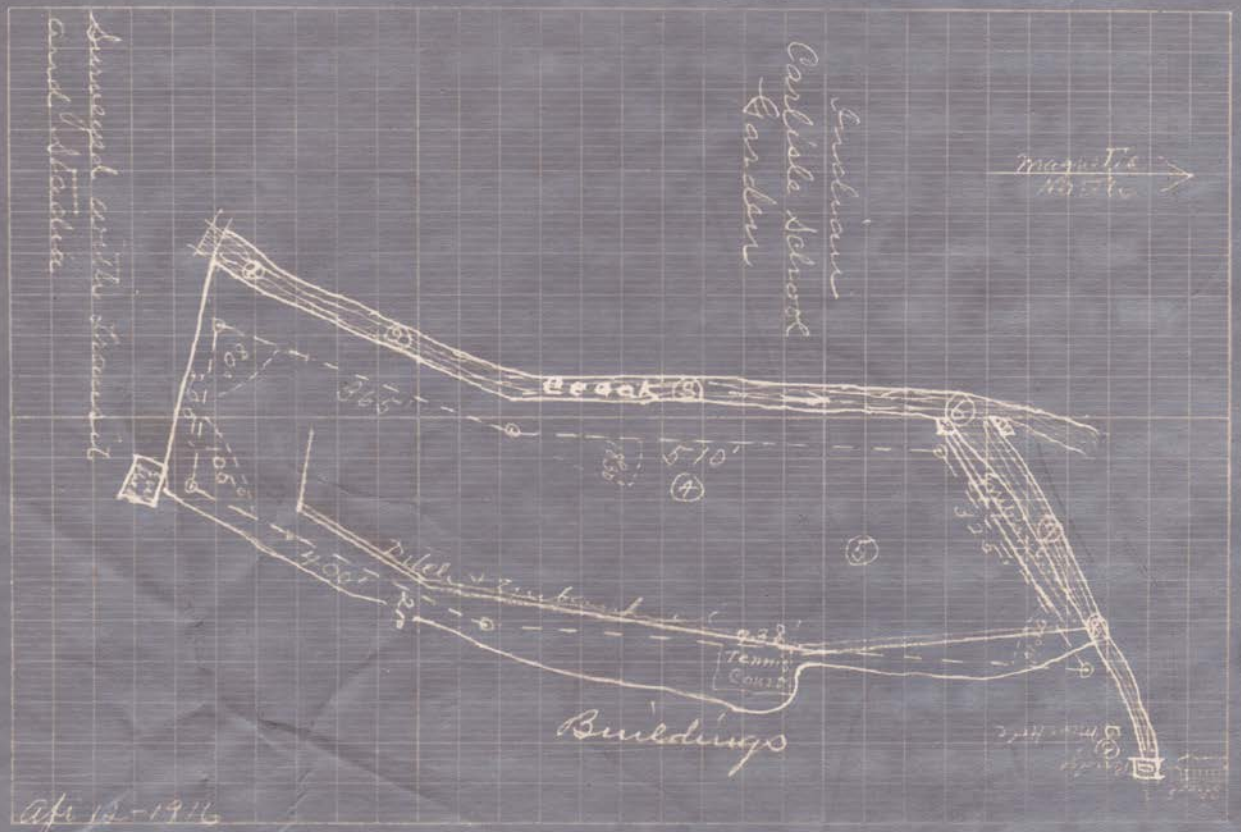
I am attaching copies of notes and sketches made in the field.

Respectfully,

Wm. Reed

MMcC

Chief Engineer.



Sta	+	H I	−	Eleva	Remarks &c	
0				1 00	Top of [illegible] ~~intersecting~~ [illegible] Creek [illegible] R R	
	5 40	105 40	8 9	96 50	Bot[illegible] 40 down from B M	①
			5 3	100 1	[illegible] above [illegible] surface	
			9 14	96 26	About 200 down [illegible] Creek	
			7 15	98 22	Surface water [illegible]	②
			7 21	98 17	" " [illegible]	③
			6 60	98 80	100 out [illegible]	④
T P			5 52	99 88		
	4 10	103 78	6 85	97 10	[illegible]	⑤
			5 8	98 18	Surface water [illegible] Creek	⑥
			7 1	96 88	Bottom [illegible] Creek	
			6 35	97 63	Top [illegible]	
			6 1	97 93	Surface water [illegible]	⑦
			6 4	97 58	Surface water [illegible]	
T P			1 40	102 05	[illegible]	⑨
	1 40	103 48	5 80	97 68	Surface water [illegible] Creek [illegible]	⑧

These levels were run with
a transit by Mr Bradley

Apl 12-1916

Carlisle Indian School
Probable Garden

Carlisle School Garden

Sta	+	H I	−	Elev	
BM				102 68	On top manhole just west Entrance to School
	1 89	103 97	6 25	97 72	Surface water at out let
0			5 62	98 35	
1			5 00	98 97	
2			5 25	98. 72	
3			3 90	100 07	
+24			0 75	103 22	
0			4 84	99 13	
1			5 97	98 00	
2			4 28	99 69	
3			4 42	99 55	
4			3 82	100 15	
TP			3 32	100 65	
5	3 74	104 39	5 40	98. 99	
6			4 08	100 31	
7			2 14	102 25	
8			2 65	101 74	
9			3 20	101 19	
10			2 94	101. 45	
+50			2 08	102. 31	

Levels along north side of tract just South of field. Sta 0 = a point in old ditch - line runs West to intersection with embankment built by City along Creek

Levels along East side of garden beginning at intersection with Little Creek and running South as indicated on preceding page

Apr 12-1916