

John W. King

MEM. A.S.E.C.

CIVIL & MECHANICAL ENGINEER

Miami, Fla.

REPORT
of
PROGRESS
upon
PRELIMINARY SURVEY
for
RECLAIMING LANDS
within the
SOUTHERN DRAINAGE DISTRICT

by

Sept. 17th, A.D. 1917.

Miami, Florida.

This report is made in
multiple, and this is
copy No.3.

John W. King
MEM. A.S.E.C.
CIVIL & MECHANICAL ENGINEER
Miami, Fla.

September 17th 1917.

The Supervisors of the
Southern Drainage District,
Capt. J. P. Jaudon,
Locke T. Highleyman,
Joseph P. Conrad,
Miami, Florida.

Gentlemen:

In view of a certain Act of the Legislature formulating the Southern Drainage District, and likewise a certain instrument entered into by and between the Southern Drainage District and the writer, under date of June 15th, 1917, by virtue of which I become the Chief Engineer of the said Southern Drainage District, and also, in view of a letter of instruction from the President of the said Southern Drainage District under date of September 11th, 1917, to the following effect:

"In compliance with Section 5 of the Act creating the Southern District, we wish you to make a full report with maps and profiles, of your work up to date, with suggested or determined by you, main canals and drains for draining and reclaiming the lands in the Southern Drainage District, with length, width and depth of such canals or drains, together with such dikes or levees as may be necessary, taking into account the excavation now being made for the construction of the Tamiami Trail as though complete; also taking into account the improvement and extension of Snapper Creek

canal as though already constructed, or as an expenditure of \$100,000.00, or the amount of cubic yards indicated by the Chief Drainage Engineer of Florida, as though this amount had been expended or excavations made; also an estimate of the cost of tearing out and completing the same, including the cost of superintending and all incidental expenses in connection therewith; said maps and profile, indicating as far as possible, the physical characteristics of the land, and location of any public road, railroads, and other rights-of-way, roadways and other property or improvements located on such lands.

In the matter of survey of these lands we think unnecessary any extensive work at this time.

When you have supplied us with the report as outlined above, we would ask that you then consider the construction of laterals and other excavation work of all the lands embraced within the Southern Drainage District."

I wish to call your attention to the incomplete state of this work in many of its details, of which I have brought to your knowledge and attention; it is, therefore, my interpretation of your letter to consist of a request for a report upon the progress of the work undertaken, which I am pleased to hand you herewith, and trust you will find same sufficient for your purpose.

Yours truly,

John W. King

MEM. A. S. E. C.

CIVIL & MECHANICAL ENGINEER

Miami, Fla.

September 17, 1917.

The Supervisors of the
Southern Drainage District,
Capt. J. F. Jaudon,
Locke T. Highleyman,
Joseph P. Conrad, Engineers,
Miami, Florida.

Gentlemen:

Your request for a complete report in detail of the drainage for the Southern Drainage District, and afterwards, the verbal instructions of your President to confine my report to the location and construction of the main arterial channels, neglecting laterals, etc., I herewith submit, in conformity with my official duties as Chief Engineer, the subject matter, as far as I have now progressed.

The boundaries of the Southern Drainage District lying from a line 1 mile North of the South line of Township 53 S. Ranges 37 E., 38 E., 39 E., 40 E., and a portion of Range 41 East, all in Township 53 S., as well as all of Range 37 East, 38 East, 39 East, 40 East, and a portion of 41 East, Township 54; and also all of 39 East, 40 East, and a portion of 41 East, Township 55 South, all from the Meridian of Tallahassee and lying within the State of Florida, of which nearly all the territory laying within our district in Township 53 S., all in Range 37 East, 38 East,

39 East and a large portion of 40 East, Township 54 South, as well as a portion of Range 39 East, Township 55 South, may be termed as being embodied within the Everglades proper, and subject to over-flow. It is, therefore our object to provide an ample system of drainage for this territory, with the assumption of the following conditions:

The ditch or excavation made on the North side of the Tamiami Trail is to be converted into one of main arterial channels, and on account of its eccentricity of location, necessitates a second water passage further to the South, which is to be provided by an extension of the present Snapper Creek Canal.

PROGRESS OF WORK IN DETAIL -

After due notice and installation in the office of the Chief of the Chief Engineer, and assuming the official duties attached thereto, the first operation being the gathering and accumulation of necessary equipment for the undertaking of the work. June 29th began moving equipment and concentrating same on field.

July 2nd started reconnaissance survey of coastal territory bordering the Everglades locating prominent positions, etc.

July 12th, established datum bench on Biscayne Bay at foot of 20th Street, and ran a series of levels, and set benches at end of Tamiami Trail.

July 19th, began survey, with reconnaissance,

profile, etc., and establishment of levels to the Western boundary of the Southern Drainage District in a line projected from the Tamiami Trail; thence southerly along the Western boundary to the Southwestern corner; thence Eastwardly to about the intersection of Range line 38/39.

August 15th, reconnoissance survey Southern border and to South of Southern Drainage District.

August 24th, reconnoissance survey and levels of present Snapper Creek Canal and region East of Railroad.

September 4th, reconnoissance survey of Snapper Creek trail from Everglades Easterly as far as water would allow, reaching Section 22, Range 39 East, Township 54 South.

From the above you will see that the greater portion of the primary field work has been accomplished. The substance of this work, as so far developed, I herewith beg to submit in the attached blueprint, which contains a topographical map of all the Southern Drainage District, with profiles along the Tamiami Trail, profile of Snapper Creek Extension, and a profile showing fall of waters in Western portion of district in a North and South direction.

On the map of the district is indicated the contemplated location and size of some of the main arterial water channels, the two most prominent being the Tamiami Trail Canal and the Extension of the Snapper Creek Canal; there is also shown the diverting channel conveying the

waters from the Snapper Creek Extension Canal back to the Tamiami Trail Canal, of such size and proportion as to convey a portion, if not all the waters arising in the Snapper Creek Extension, to the Tamiami Trail Canal; also there is shown a main outlet canal from the Tamiami Trail Canal emptying into the Miami River, as shown, this Canal empties into the Seminole F. & F. Co.'s Canal which has been built of narrow width to the proximity of Lees Island. If it should be deemed advisable to utilize the Seminole F. & F. Co. Canal, both the present Canal, as well as the South Fork of the Miami River, will require widening and deepening.

On the Western boundary, as well as on the Southern boundary, provision must be made to prevent the over flowing of the lands within the drainage district from the waters accumulating on the undrained lands lying adjacent thereto. This is possible by constructing dykes of rock dredged from a collecting ditch along the Western and Southern borders of sufficient height and thickness to prevent more than moderate percolation, unless the State sees fit to construct the so-called "Shark River" Drainage Canal and thereby withdraw water from within these basins as well as to relieve them of possible accumulations in the future.

Owing to the incomplete nature of our work, coupled with the lack of approval on the part of the State, any commendation or premises now taken would be

premature. However, as a matter of contemplation I submit you for your consideration the scheme as shown in the attached plan accompanied by the following estimate of cost, with the idea of acquainting the respective supervisors of the Southern Drainage District of what might be done per adventure they meet the approval of the State Engineer and are consistent with the State drainage work as a whole now going on or to be done in the future.

PAGE NO.

ESTIMATE NO. 1 - TO ACCOMPANY

JOHN W. KING
CIVIL & MECHANICAL ENGINEER
PARK ROW BUILDING
NEW YORK CITYKING STEEL UNDERFRAME
NATIONAL CONSTRUCTION CAR CO.
LAWSON CAR CO.
TERRY & TENCH CO.
JOHN W. KING, M. E.

STATION NO. REPORT DATED

DATE SEPT. 17th 1917

Estimate of Cost of Dredging Arterial Waterways, SOUTHERN DRAINAGE DISTRICT.

MEMBER NO.	MATERIAL	WEIGHT PER FOOT	LENGTH	Mill Creek		Excavation Cu Yds.		Price per Cu Yd.		
				NUMBER	LENGTH	ROCK	MUCK			
	SNAPPER CREEK EXTENTION									
	5½ miles	20' wide	5' deep.			82500		45¢		\$ 37125
							27500	15¢		4125
	6 miles	30 wide	5' deep.			90000		45¢		40000
							30000	15¢		4500
	SNAPPER CREEK OVERFLOW									
						100000		45¢		45000
							34000	15¢		5100
	TAMIAMI TRAIL CANAL TRIVISION									
	11 Miles. increased to 30' wide		6½ deep.			88000		45¢		40600
							50000	15¢		7500
	4 miles increased to 60' wide		6½ deep			128000		45¢		57600
							80000	15¢		12000
	OVERFLOW TO BAY									
	3½ miles	60ft wide	6½ deep			156000		45¢		72000
							97500	15¢		14625
	2½ Miles. increasing S. Canal to 60' x 6½					100000		45¢		45000
							62500	15¢		9375
	2 miles enlarging S. branch Miami River					80000		45¢		36000
							50000	15¢		7500
	Locks									
	DIVING WESTERN & SOUTHERN SOUNDING									
	22 miles of									154000 154000
	ESTIMATED 154 Miles LATERAL									
	of ESTIMATED 4' deep									
	OPERATING COST OF WORK									
	Overhead. ENGINEERING 5%									
	OFFICE 5%									
	EXTRAS & ADDITIONS 10%									
	176000									
	TOTAL COST OF WORK 968000									

In the estimate, herewith attached, it shows that the probable cost of the work in hand, and to be done by the Southern Drainage District, will amount to approximately One Million Dollars.

I wish to again call the attention of the Board to the fact that the figures of cost given in the enclosed estimate are to be considered absolutely valueless under the present circumstances, as already outlined you, and are to be in no way to be considered as final.

Trusting you will give the above information your valued consideration, I remain,

Yours truly,