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File Intracoastal waterway
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21 March 1968

Mr. Carl H. Oppenheimer
1501 Chocksacka Nene
Tallahassee, Florida 32301

Dear Sir:

For an extended period of time I have given considerable study to the three waterways of major interest to West Central Florida: the Cross-Florida Canal, the Anclote-St. Mark's Intracoastal Route, and the Tampa Bay Channel Deepening. As Chairman of the Waterways Subcommittee of the Port Committee of the Greater Tampa Chamber of Commerce, I prepared and presented a briefing to the subcommittee as a means of bringing the three waterways problems before the committee for consideration.

The first part of the briefing discussed the two feasible routes for the so-called Missing Link in the Intracoastal Waterway System between Anclote and St. Mark's. This part highlights important questions that should be resolved in selecting the route to be followed by the waterway: inland or off shore.

The second part provides a resume of the status at this time of the three waterways mentioned above. The main thrust is that concerted and unremitting effort is required on the part of all interested persons, if the waterways are to be completed anytime soon, and the economic and other benefits gained from them.

As a result of the consideration given the subject, the Chamber of Commerce adopted a resolution for wide dissemination calling on governmental officials and all interested parties to do all in their power to obtain completion of the projects as soon as possible.

As an interested party, I thought you might like to see a copy of the briefing materials and have therefore inclosed them.

Sincerely,

Paul D. Adams
Paul D. Adams

PDA:jbl
Incls.

THE MISSING LINK

The Missing Link is the section of the proposed Intracoastal Waterway between Anclote and St. Marks. At Yankeetown it would connect with the Cross State Canal, thereby providing a direct route for barge traffic between the west coast of Florida and the eastern seaboard of the United States. To the west it would connect with the already completed Intracoastal Waterway skirting the Gulf of Mexico from Brownsville, Texas to St. Marks. This section, by crossing the deltas of the great rivers draining the mid-west between the Appalachian and Rocky Mountains, opens that vast area to barge traffic with west central Florida. The economic feasibility of the route is well established, and the commercial potential that its availability would represent staggers the imagination.

There are two routes which are feasible, commonly called the inside route, and the outside route.

The inside route, and the one proposed by the Corps of Engineers at its hearing in Tampa last October, generally follows the plus one-foot contour and is some 234 miles in length, with a canal cross-section of 150 feet in width and 12 feet in depth. The tentative plan calls for spoil material to be placed initially on the landward side of the canal with due consideration of marine life, proper water circulation, and local boat traffic.

The outside route, as I understand, was first proposed by Mr. Ole P. Erickson, of the Erickson Engineering Company, in a brief delivered at a meeting with the U. S. Engineers on 27 February 1962. The authors of this concept called it the Canal and Embankment Plan. The concept is to dredge the canal in long straight sections offshore following the approximate minus five-foot to minus eight-foot contours, with a bottom width of 300 feet, and depth of 17 feet to 18 feet, the total length of which would be 173 miles. The spoil would be deposited to the seaward creating embankments 120 feet wide, exclusive of shoulder slopes, and filled to an elevation of 14 feet above mean low water. The distance from the centerline of the channel to the centerline of the embankment would be 600 feet to 1,000 feet.

The long straight sections would facilitate high speed barge traffic by eliminating as many turns as possible. The 300 foot channel width would further facilitate traffic by permitting barges with tows to pass without substantial reductions in speed.

In order to accommodate tides and the flow of river waters to the sea, the plan envisions the embankment being built in key like segments connected by bridges with 15 foot vertical, and 400 feet to 500 feet horizontal clearance. In addition to accommodating tides, these bridges would allow small craft to pass under them. Two bridges with 70 foot vertical clearance and 200 feet horizontal clearance were included for connecting the embankment

with the mainland. All bridges would be built with roadways 60 feet wide.

Numerous advantages could accrue from development of the Canal and Embankment Plan, such as:

- Creation of outstanding fishing, boating and sailing areas.
- Fills could be created along the inland side of the embankment and along the mainland for commercial, industrial, recreational, and residential areas without interference with barge traffic in the channel.
- Would provide excellent road bed for a scenic high-speed divided highway with 30 foot shoulders on each side of the roadway.
- Land acquisition and related costs would be reduced to a minimum.
- The 14 foot embankment would constitute a hurricane dike, protecting the channel, filled in land and shoreline sheltered by it.

An alternative to the Canal and Embankment concept is to develop the channel generally along the minus three-foot contour and filling the embankment to an elevation of plus eight-feet above mean low water. This concept aims at developing as much land as possible as a by-product of dredging the channel through using the spoil to provide fills of greater area than those

envisioned in the Canal and Embankment Plan. In order to study this concept, two channel dimensions have been used as a means for examining areas of new land that could possibly be produced. The two conceptual channels are called Alternates 1 and 2, for convenience.

(1) Alternate 1 - the channel would be 180 feet wide x 17 feet deep, arrived at by 12 feet desired navigable depth plus 2 feet overdraft plus 3 feet to account for extreme low tides. In this case, approximately 5,135 acres of land could be created with the spoil.

(2) Alternate 2 - the channel would be 350 feet x 17 feet. In this case, approximately 9,629 acres of land would result.

The length of the channel would be 165.4 nautical miles. The table below compares the characteristics of the concepts as described above.

COMPARISON OF CHANNEL CHARACTERISTICS

CONCEPT	CHANNEL			FILL		
	Length	Width	Depth	Width	Height	Acreage
INSIDE ROUTE	234 mi	150'	-12'			Fills land on inland side.
CANAL EMBANKMENT	173 mi	300'	-17'	120"	+14'	Road bed for scenic highway.
ALTERNATE 1	165.4 nm*	180'	-17'	236'	+ 8'	5,135
ALTERNATE 2	165.4 nm*	350'	-17'	440'	+ 8'	9,629
*nm - Nautical Miles						

The preliminary estimated costs pertaining to the Inside Route as published by the Corps of Engineers are shown in the table below, as are the estimated costs of the other concepts discussed here.

ESTIMATED COSTS
(in Millions of Dollars)

CONCEPT	Federal Construction	Local		TOTAL
		Constr.	Rts. of Way; Easements; Bridges; Reloc-Utilities	
INSIDE ROUTE (150' Channel)	\$74.0 m.	\$4.5 m.	\$8.32 m.	\$86.82
CANAL & EMBANKMENT (300' Channel)	\$70.0 m ⁽¹⁾			72.00 ⁽²⁾
ALTERNATE 1 (180' Channel)	\$61.3 m ⁽¹⁾		8.0 m ⁽³⁾	69.30
ALTERNATE 2 (350' Channel)	111.6 m ⁽¹⁾		8.0 m ⁽³⁾	118.60
<div style="display: flex; justify-content: space-between;"> (1) Based on 58½/yd³ (3) 20 Bridges @ \$0.25 m. ea.= </div> <div style="display: flex; justify-content: space-between;"> (2) Includes cost of 2 dredges \$5.0m, & 2 bridges @\$1.5m.ea.= </div> <div style="display: flex; justify-content: space-between;"> \$13.0 m. </div>				

The estimated cost of the Canal and Embankment Plan as shown on your table provided for the construction of the Canal and Embankment with \$2 million dollars included as the estimated cost of two specially designed dredges which could complete the project in about four years. The 60-foot divided highway on the embankment and the bridges would cost an estimated additional \$25,000,000.

While there are many similarities between the proposed intracoastal waterway, and other waterways, there are major dif-

ferences also. Great stretches of the existing intracoastal waterways are sheltered by natural geographical features, which resulted in construction being largely widening, deepening, or straightening and marking natural channels while retaining substantially their natural state, with new construction serving to link the naturally sheltered channels. Because the channels were sheltered by natural land features, they can be correctly characterized because it does not have the natural shelter which so much of the other portions of the intracoastal waterways had to start with, and which must be created for the Missing Link.

Bearing in mind that a navigation route for barge traffic is the primary objective, the two routes should be compared on a basis of costs, navigational characteristics and land development aspects, combined with full consideration of the economic, ecological, biological, hydrographical, and hydrological impacts each route can be expected to have on the region it traverses.

The southern portion of the route is the most complicated due to delta areas of the Weekiwachee, Chassahowitzka, Homasassa, St. Martins, Crystal, Withlacoochee, and the Suwannee Rivers. This portion provides a basis for discerning some of the problems requiring solution in selecting the route to be developed.

The significance of this region as an area for basic ecological and biological research is enormous, as well as its potential for future aquaculture. The natural beauty of the area com-

bined with abundant marine and wild life adds to its importance commercially and recreationally.

From the viewpoint of economic urgency, the portion of the total route which lies between Anclothe and Yankeetown seems to justify first priority for construction, since it will connect the existing west coast waterways with the Cross State Canal, thereby allowing earliest possible exploitation of the economic and recreational potential of the growing waterway system.

Construction of a canal wounds nature and leaves a severe scar on the earth, requiring extensive and costly soil rebuilding, landscaping, and reforestration. Even with energetic efforts to assist it, nature works slowly and the return of the affected area to a condition approaching its former natural state would require an uncertain, but long period of time. If there is any way to avoid wounds of this nature, they should be avoided, thereby making repair unnecessary.

Marine life in the coastal waters constitutes a large economic as well as recreational asset. Notably, oyster and sponge beds exist in several areas along the coast, and the fishing resources require no discussion as they are widely recognized. An outside channel can be laid out to avoid these valuable areas precluding, or reducing to the absolute minimum damage to marine life in the area. Some observers estimate that by the virtue of the outside channel providing deeper water, where now relatively shallow water

exists, the fishing will actually be improved.

The coastal area of northwest Florida is young in a geological sense. This fact, combined with the warm climate and seawaters, makes the area unusually valuable for basic research, and its value will remain so indefinitely, particularly as regards its potential for development of aquaculture. Preserving the natural state of the area to the maximum degree possible is therefore highly important for these purposes.

There is abundant wild life in the region, including both fowl and animals. An inland route would pass through the conservation areas which have taken years to develop to their present states. Changing the basic characteristics of an area may affect adversely wild life with an accompanying risk that some, if not all of it would change its habitat.

Another problem related to the inland route, and non-existent with the outside route, is the effect that a large waterway lateral to the general coastline and roughly at right angles to the natural stream lines, will have on the flow of water into the delicately balanced saline waters contiguous to the shoreline. Can an inland canal be kept filled with water at low tides without seriously affecting the flow of rivers to the sea, risking impairment of the marine and wild life in the delta areas. Initial examination indicates that very substantial loss of the river waters could occur by diversions into the canal at low tide.

Unless an active full tide can be counted on, there seems also to be a possibility of stagnating water with attendant sanitation problems.

Returning to the keys, it has been observed by many people that the spoil areas already in existence have developed beaches. There are few beaches along the northwest coast of Florida, and the availability of beaches of considerable length is certainly desirable. An inland route would not serve to create beaches, whereas the keys being in sufficiently deep water would tend to develop beaches on the seaward side, thus producing recreational potentials of a large order for communities in northwest Florida.

In ultimately choosing between the feasible Missing Link routes -- the inside route generally following the plus one-foot contour; or the outside routes generally following the minus five-foot to 8-foot contour, or the minus three-foot contour -- decision must rest on the route which will be most beneficial in all respects for Florida and her people. Much debate based on extensive study combined with a clear public understanding of the pros and cons will be necessary before the best decision, and one enjoying the widest public support, can be reached.

STATUS OF WATERWAYS PROJECTS

CROSS FLORIDA BARGE CANAL, IWW-ST. MARKS TO TAMPA AND TAMPA HARBOR

It seems desirable to review the current status of the three major waterway projects of primary interest to west central Florida.

As everyone here knows, waterway development is a time consuming procedure, and one that is subject to many pitfalls between initiation of projects and their completion leading to their availability for the purposes they are intended to serve. Recent review of the status of the three projects with the District Engineer provides the following information.

The Cross Florida Barge Canal is about 40 per cent complete. The budget now before Congress provides \$4,600,000 for construction as compared with some ten of eleven million required to maintain the rate of construction attained in past years. Unless the deficiency is made up on subsequent years, the reduced funds will have the effect of extending the construction time by one year. Currently the estimate is completion in 1975.

The Tampa Harbor Project to deepen the channels and harbor to - 40 feet plus 2 feet overdraft, is currently under study, and it is hoped that the study can be completed this year in sufficient time for consideration by the 1969 Congress. If the 1969 Congress passes an authorization bill, the project would be eligible for

an appropriation in Fiscal Year 1969. Subject to the rate of appropriations, the project could be completed in four to eight years.

The study on the proposed Intracoastal Waterway from St. Marks to Tampa project should be completed in sufficient time for its inclusion in an Omnibus River and Harbor Bill during the current session of Congress, if such a bill is considered this year. If the project becomes an authorized project this year, it would be eligible for an appropriation in Fiscal Year 1970, which is the earliest time initial funds could be expected. Depending upon the rate of appropriations after the initial appropriations, the project could be completed in five to ten years.

The following chart provides a graphical resume of the status of the three major projects in relation to one another, and to emphasize the time elements involved.

STATUS OF WATERWAYS PROJECTS

Project	68	69	70	71	72	73	74	75	76	77	78	79
Cross Florida Barge Canal												
	Approx. 40% Complete											
Tampa Harbor Deepening	E* S	C** A	A***									
IWW-St. Marks to Tampa	C** A	A***										
*E/S - Engineer Study												
**C/A - Congressional Authorization												
*** Initial Appropriation												

Perusal of the chart highlights the importance of everyone interested in the development of the waterways continuously taking timely actions to insure that the general programs are not interrupted.

Significant interruptions in the essential processes can result in prolonging the completion of the projects by one year for each interruption. The reduced budget for FY 69 for construction of the Cross Florida Canal mentioned previously is example of an interruption which will have the effect of prolonging construction time if the deficiency is not made up.

R E S O L U T I O N

BE IT RESOLVED that the Greater Tampa Chamber of Commerce that, having reviewed the status of the three waterways of major economic interest to West Central Florida and to the Tampa Bay Area, it takes note of the following circumstances with respect to them.

1. The Cross Florida Canal construction is being delayed due to a reduced Federal budget for Fiscal Year 1969, and that the reduction, unless made up for in some future budget, operates to extend the construction time by one year, while the need for the completed canal becomes more necessary to the economy and future development of the area becomes more urgent with each passing year.
2. The Tampa Harbor Deepening Project is currently under study preliminary to seeking Federal appropriations for construction funds, but the deeper channels and basins are needed now. This is due to the fact that seagoing bulk cargo vessels of 40 foot draft which are operating in international commerce are now calling at Tampa Port, but have to arrive and depart several thousands of tons short of capacity, thereby denying operators the most economic use of their vessels.
3. The Intracoastal Waterway from St. Marks to Tampa, now under study preliminary to seeking Federal authorization and subsequently appropriations, is of prime importance to facilitating barge traffic between Florida and the central states, and is of vital importance to the early development of the large undeveloped areas of Northwest Florida.

Additionally, it is noted that the most optimistic completion times for the three waterways are in the mid 1970's although they are all needed now, and any significant delays can extend these times to the late 1970's, or later.

Resolution Continued
March 8, 1968
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NOW, THEREFORE, BE IT RESOLVED by the Board of Governors of the Greater Tampa Chamber of Commerce that:

- a. The three waterways are of major economic importance to West Central Florida and to the Tampa Bay Area and their early authorization, construction and completion are urgently needed for future growth and development of the regions they will serve; and,
- b. The city, county and state officials; organizations interested in waterways development; the Florida representation in Congress; and appropriate Federal officials are hereby urged to insure that no stone is left unturned in a concerted effort to bring the three projects to successful conclusions at the earliest times possible.

Adopted this 8th day of March, 1968
Board of Governors
Greater Tampa Chamber of Commerce

Attest:

W. Scott Christopher

W. Scott Christopher
Executive Vice President

J. H. Williams, Jr.

J. H. Williams, Jr.
President