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A History of the Board of Engineers for Rivers and Harbors

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**A HISTORY
OF THE
BOARD OF ENGINEERS
FOR
RIVERS AND HARBORS**



**BOARD OF ENGINEERS FOR RIVERS AND HARBORS
U. S. ARMY CORPS OF ENGINEERS
KINGMAN BUILDING
FORT BELVOIR, VIRGINIA 22060**

JUNE 1980

TABLE OF CONTENTS

	<u>Page</u>
CHAPTER I: THE BOARD IS ESTABLISHED	1
Theodore F. Burton	5
Constituting the Board	6
CHAPTER II: STARTING BUSINESS	9
First Board Members	9
Location	11
The First Reviews	14
Early Board Reviews	15
Public Hearings	17
Board Meetings	21
Expenses	24
Staff	25
CHAPTER III: THE MISSIONS OF THE BOARD	27
The Primary Mission	27
The Review Process	29
Assigned Missions	34
Planning Associates Program	35
Waterborne Commerce Statistics	36
Permanent International Association of Navigation Congresses (PIANC)	37
Foreign Trade Zones	39
Processing Reports for State and Washington-Level Agency Review	41
Former Missions	42
Marine Design	42
Transportation Economics	42
National Capital Planning Commission	43
Port Series Reports	44

	<u>Page</u>
CHAPTER IV: THE EARLY MOLDING OF THE BOARD'S ROLE	47
Independent Review	47
Shaping Corps Policy	49
Maintenance of single-user channel	49
Specific Federal cost limitation	49
Lands and allocations	50
Reasonable cost	50
Considering alternatives	50
Separation of military needs	51
Analysis of navigation systems	51
Limited Federal interest	51
Moving Projects Forward	53
Early Congressional Pressure	54
Processing Reports	61
Board-Chief of Engineers Conflict	65
CHAPTER V: THE ORGANIZATION	68
Introduction	68
The Senior Members and Chairmen	69
The Resident Member	82
The Board Members	91
The Technical Director	99
The Special Assistant	102
The Military Assistant	105
Present	106
The Planning Division	106
The Evaluation Division	108
The Environmental Division	114
The Professional Development Division	115
Past	115
The Port Facilities Division	115
The Transportation Economics Division	121
The Marine Design Division	122
The Statistical Division	126
The Resident Scholars	128
Office, Chief of Engineers (OCE) Details	131

	<u>Page</u>
CHAPTER VI: MAJOR BOARD IMPACTS	134
1906 - Cumberland River	134
1907 - Ohio River	134
1908 - Missouri River	137
1911 - Intracoastal Waterway	138
1924 - Gulf Intracoastal Waterway (GIWW)	139
1925 - St. Lawrence River Project	140
1925 - The Flood Control Mission	142
1930 - Tennessee River and Tributaries	143
1942 - The New Jersey Ship Canal	144
1942 - Cross-Florida Barge Canal	145
1943 - Missouri River (Pick-Sloan Plan)	146
1945 - Tennessee-Tombigbee Waterway	148
1945 - Arkansas River Navigation	149
1946 - Red River, Louisiana, Arkansas, Oklahoma, and Texas (Overton-Red River Waterway)	150
1952 - Inland Waterway from Delaware River to Chesapeake Bay, Delaware and Maryland (The Chesapeake and Delaware Canal)	151
1972 -	
1973 Passaic River, New Jersey	153
1976 - Locks and Dam No. 26, Mississippi River, Alton, Illinois - Replacement	156
SUMMARY	160
CHAPTER VII: THE PRESENT AND THE FUTURE	161
The Board' s Permanent Home	161
The Staff	167
The Future	168

LIST OF APPENDICES

Appendix I	Board Meetings and Dates
Appendix II	Laws Creating, Applying and Designating Status of the Board of Engineers for Rivers and Harbors
Appendix III	Planning Associates Program Graduates
Appendix IV	Senior Members or Chairmen of the Board
Appendix V	Resident Members of the Board
Appendix VI	Members Appointed to the Board
Appendix VII	Military Assistants to the Board
Appendix VIII	Port Series Reports Published by the Board
Appendix IX	BERH Organization Charts (1930, 1935, 1942, 1944, 1955, 1967, 1978, 1980)

LIST OF FIGURES

Figure 1	Mr. Weber's Expense Account
Figure 2	Report Preparation and Review
Figure 3	Letter on Port Series for Portland, Me., 4 April 1921

A

H I S T O R Y

O F T H E

BOARD OF ENGINEERS FOR RIVERS AND HARBORS



Senator Theodore Elijah Burton,
the "father" of the Board of Engineers for Rivers and Harbors

FOREWORD

Just about a year after the country marked its bicentennial, the Board of Engineers for Rivers and Harbors celebrated its 75th anniversary. As many of you may know, the Board is a rather unique member of the Corps of Engineers family. Unique as an organization in that it is established by an Act of the Congress. Unique in its mission in that its members are appointed directly by the Chief of Engineers to serve as an advisory review board for him.

Through its long history, I believe that the Board has well served the Chief of Engineers with an independent review of planning studies for water resources development projects that originate within his Directorate of Civil Works. Although the Board has not always borne glad tidings in its formal recommendations to the Chief, it has quite often lent support and strengthened--by its endorsement--the potential authorization by the Congress of many needed major improvements throughout the nation.

As you read of the changes in the Board's membership, mission, and supporting staff through the years, you will note the many distinguished members of the Corps of Engineers organization who have been associated with the Board at some point in their careers.

My thanks to Richard G. Waugh, Jr. and Judith M. Hourigan of my staff for the preparation of this initial documentation of three-quarters of a century of the Board's history.



ALBERT C. COSTANZO
Colonel, Corps of Engineers
Resident Member

LIST OF PHOTOGRAPHS

Photo 1	Senator Theodore E. Burton
Photo 2	Colonel Alexander MacKenzie
Photo 3	Academic Building, Washington Barracks
Photo 4	Engineer School, Washington Barracks
Photo 5	Uniform of Engineer Officer in 1902
Photo 6	Steamboat "Sprague"
Photo 7	Ohio River Terminal
Photos 8 thru 44	Senior Members or Chairmen
Photos 45 thru 71	Resident Members
Photos 72 thru 84	Board Members
Photos 85 thru 94	Board Staff
Photo 95	Locks and Dam No. 26, Alton, Illinois
Photo 96	Academic Building, Washington Barracks
Photo 97	The Munitions Building
Photo 98	Building T-7
Photo 99	Building Tempo C
Photo 100	Kingman Building
Photo 101	Kingman Building Dedication

CHAPTER I

THE BOARD IS ESTABLISHED

The Board of Engineers for Rivers and Harbors was created by the Congress in Section 3 of the River and Harbor Act of 13 June 1902. That was the culmination of the efforts of Theodore E. Burton, Chairman of the Committee on Rivers and Harbors of the House of Representatives. Mr. Burton had, for several years, observed the different treatment of proposed rivers and harbors projects by Corps of Engineers' officers reporting across the country. In the Committee Report of 10 March 1902, on the River and Harbor Bill for that year, it is stated: ¹

... The object sought by the creation of this board is to secure greater uniformity in the recommendations and reports relating to various projects in the country, and the examination of existing projects the further prosecution of which is considered questionable.

As already stated, the total estimated cost of river and harbor improvements for which estimates have heretofore been made exceeds \$300,000,000. It is evident that the prosecution of many of these improvements must be postponed for a long time or they must be rejected altogether. Under the present system, local engineers make recommendations as to improvements. Some of their reports--namely, those made by officers of a rank lower than that of lieutenant colonel--are submitted to a division engineer,

¹ Report of the Committee on Rivers and Harbors, House of Representatives, U. S. Congress, House Report 795, 57th Congress, 1st Session, 10 March 1902, p. 3-4.

who transmits them to the Chief of Engineers; others are transmitted directly. These engineers are located in different portions of the country, and each acts in making recommendations according to his own standard of the merits of the projects. An examination of their reports shows a marked absence of uniformity. It is thought that the organization of the board provided for will secure greater fairness to all localities and tend to exclude from consideration unworthy projects.

Much the same language had been included in the Committee's earlier 1901 report.² There is no evidence of much Congressional debate over the matter. Congressman Burton, in defending the bill before Congress on 17 March 1902, stated:³

Section 3 provides for a board of engineers, five in number, who shall review all projects examined by the local engineers. This subject was considered at considerable length during the discussions upon the bill last winter. The recommendations upon which items are included in this bill come now directly from those having the rank of lieutenant colonel, or a higher rank, to the Chief of Engineers. Those having a lower rank than that of lieutenant colonel transmit them to the division engineer, who then transmits them to the Chief of Engineers, with his approval or disapproval, then the Secretary of War transmits them to Congress.

The result is just what naturally would be expected. Each engineer has his own standard of the desirability of the work upon which he is called to report, and there comes to Congress and the committee a variety of opinions. It often occurs that an improvement of a certain quality which will cost, say \$100,000, is recommended. Another report comes from another engineer more conservative in his disposition upon an improvement costing \$25,000, which in fact is more beneficial, and yet he gives an adverse report upon it.

² House Report 2136, 56th Congress, 2d Session, 4 January 1901, p. 3.

³ Congressional Record, House of Representatives, 17 March 1902, p. 2913.

It is true that to an extent we can decide upon these reports and recognize the different standards adopted, but it is very desirable that a uniform standard should be adopted by the executive department, and that a board of engineers, five in number, familiar with all the works in the country, should review them before they are sent to Congress. There is also a provision in this section to the effect that the Committee on Commerce of the Senate and the Committee on Rivers and Harbors of the House can call upon this board for a report upon any project already adopted. Occasionally there is a project upon which we are very doubtful and it seems desirable to have an expert opinion upon it.

Burton's thrust definitely ran to the lack of uniformity in reporting.

It should also be noted that he had rather objective views concerning appropriate rivers and harbors projects for authorization in his day.

The Chief of Engineers, Brigadier General George L. Gillespie, did not favor a permanent Board, possibly viewing such as a threat to his authority. In a letter to Mr. Burton on 21 February 1902, he stated:

Sir:

I have the honor to submit herewith certain suggestions as to legislation which appear to me desirable to have inserted in the river and harbor bill now under consideration by your Committee. These are in addition to those submitted by me with letter of February 12, 1902.

.

Item 3-The river and harbor bill of 1901, which failed to become law contains in section 3 a provision for a Board of five Engineer Officers to be constituted in the office of the Chief of Engineers for certain duties. Such duties are considered of great importance, but changes in conditions during the past year incline me to urgently recommend a change in the form of the proposed legislation. During the past year the Engineering Divisions and Districts have been reorganized, the number of divisions and Division Engineers

have been increased to 9, and they are so located as to thoroughly supervise all sections of the country. It is my desire to substitute for the permanent Board formerly proposed, boards composed of the Division Engineers. This will permit a much more convenient arrangement of the duties of the officers and facilitate the administration of the work under my supervision. The consideration and revision of reports on surveys and examinations will in my opinion be as thoroughly and it is believed even more thoroughly provided for by the substitute I now recommend than by the former provision.

I would recommend the omission of Section 3 of the bill of 1901, H. R. 13189, 56th Congress, 2nd Session, and the addition to the section providing for surveys and examinations the words ' Provided, That in all cases, preliminary examinations and surveys provided for in this act shall be examined and reviewed by a Board of Engineer Officers to be detailed for the purpose by the Chief of Engineers. ' so that the section will read

Sec. _____. That the Secretary of War is hereby directed to cause preliminary examinations and surveys to be made at the localities named in this section, as hereinafter provided. In all cases a preliminary examination shall first be made, which shall embrace information concerning the commercial importance, present and prospective, of the river or harbor mentioned, and a report as to the advantages of the improvement. Whenever such preliminary examination has been made, in case such improvement is not deemed advisable, no further action shall be taken thereon without the direction of Congress; but in case the report has been or shall be to the effect that such river or harbor is worthy of improvement, the Secretary of War is hereby directed at his discretion to cause survey to be made, and the cost of improving such river or harbor to be estimated and to be reported to Congress: Provided, That, in all cases, preliminary examinations and surveys provided for in this act shall be examined and reviewed by a Board of Engineer Officers to be detailed for the purpose by the Chief of Engineers.

However, the record will show that Mr. Burton got his way.

Theodore E. Burton.

Mr. Burton entered Congress in 1889. He became a member of the House Rivers and Harbors Committee in 1895, and proceeded to establish an unprecedented record for initiative and expertise on rivers and harbors projects. He was known to travel extensively, both in the United States and abroad, to familiarize himself with the details of such works.⁴ In this manner, he saw the need for uniform project formulation and reporting. He was elected Chairman of the Rivers and Harbors Committee on 7 December 1898 at the early age of 46, the House Committee passing over the senior ranking member of his party to choose him. His success was due to his diligence on committee work. He served on that committee until 1907, and can generally be considered the "Father" of the present Board of Engineers for Rivers and Harbors.

He was known affectionately throughout his career as Senator Burton because he had served in both halls of Congress. In fact, he is one of the few persons in history to have been elected twice to each--House from 1889-1907, Senate from 1908-1914, House from 1920-1928, and Senate again from 1928-1929.

Due to his unequalled expertise for waterway development, President Theodore Roosevelt appointed Senator Burton to chair the

⁴ Crissey, Forrest, Theodore E. Burton, American Statesman, The World Publishing Company, Cleveland and New York, 1956.

Inland Waterways Commission on 14 March 1907. Later, he was appointed Chairman of the National Waterways Commission, established by the River and Harbor Act of 3 March 1909.

One unique note in his illustrious career demonstrates his objectivity; although long a champion of waterway projects, he established a record of sorts by successfully filibustering in 1914 against a massive \$73 million River and Harbor Bill that he believed contained many projects unworthy of approval. He spoke from 6:00 p. m. on 18 September to 6:00 the next morning, was relieved for three hours, and then spoke for nine more hours that Saturday until the opposition gave in--a total of twenty-one hours by this man. ⁵

Constituting the Board.

The 1902 Act specified the initial duties of the Board and its relationship to the Chief of Engineers. Section 3 of the Act states:

That there shall be organized in the Office of the Chief of Engineers, United States Army, by detail from time to time from the Corps of Engineers, a board of five engineer officers, whose duties shall be fixed by the Chief of Engineers, and to whom shall be referred for consideration and recommendation, in addition to any other duties assigned, so far as in the opinion of the Chief of Engineers may be necessary, all reports upon examination and surveys provided for by Congress, and all

⁵ Ibid.

projects or changes in projects for works of river and harbor improvement heretofore or hereafter provided for. And the board shall submit to the Chief of Engineers recommendations as to the desirability of commencing or continuing any and all improvements upon which reports are required. And in the consideration of such works and projects the board shall have in view the amount and character of commerce existing or reasonably prospective which will be benefited by the improvement and the relation of the ultimate cost of such work, both as to cost of construction, continuance, or maintenance at the expense of the United States. And such consideration shall be given as time permits to such works as have heretofore been provided for by Congress, the same as in the case of new works proposed. The board shall, when it considers the same necessary, and with the sanction and under orders from the Chief of Engineers, make, as a board or through its members, personal examinations of localities. And all facts, information, and arguments which are presented to the board for its consideration in connection with any matter referred to it by the Chief of Engineers shall be reduced to and submitted in writing, and made a part of the records of the Office of the Chief of Engineers. It shall further be the duty of said board, upon a request transmitted to the Chief of Engineers by the Committee on Rivers and Harbors of the House of Representatives, or the Committee on Commerce of the Senate, in the same manner to examine and report through the Chief of Engineers upon any projects heretofore adopted by the Government or upon which appropriations have been made, and report upon the desirability of continuing the same or upon any modifications thereof which may be deemed desirable.

The Board shall have authority, with the approval of the Chief of Engineers, to rent quarters, if necessary, for the proper transaction of its business, and to employ such civil employees as may, in the opinion of the Chief of Engineers, be required for properly transacting the business assigned to it, and the necessary expenses of the board shall be paid from allotments made by the Chief of Engineers from any appropriations made by Congress for the work or works to which the duties of the board pertain.

The Board initially had five members. In 1912, its size was increased to no more than nine by the River and Harbor Act of 25 July 1912. Then, it was reduced to seven by the River and Harbor Act of 4 March 1913, the "majority of whom shall be of rank not less than lieutenant colonel." Its size has remained at seven since then.

CHAPTER II

STARTING BUSINESS

In 1902, there were 45 states in the union; Arizona, New Mexico, and Oklahoma being territories. On January 1, the first Rose Bowl postseason football classic was held at Pasadena, California. Teddy Roosevelt began his first full year as President. The Reclamation Act was passed on 17 June and the Isthmian Canal Act was passed on 28 June. On 8 December, Oliver Wendall Holmes was appointed associate justice of the Supreme Court.

On the Mississippi River, the historically-famous steam towboat, "Sprague," made her trial run from St. Louis downstream. On her maiden voyage, she got out of control at Grand Tower, Illinois on Saturday night, 6 September, and demolished the equally famous showboat, "Temple of America."¹

First Board Members

The first Board members were appointed on 28 July 1902 by Special Order No. 24 of the Office, Chief of Engineers. They were: Colonel Alexander Mackenzie, Major Harry F. Hodges, Captain Edward Burr, Captain Charles H. McKinstry, and Captain William V. Judson. Colonel Mackenzie was the first Senior Member of the Board, and later became Chief of Engineers in 1904, the first of nine men to serve

¹ Waterways Journal, December 17, 1977, p. 9.



Alexander MacKenzie,
first Senior Member of the Board in 1902;
later Chief of Engineers

as Senior Member or Chairman of the Board and then as Chief of Engineers. All of the first Board members were graduates of West Point.

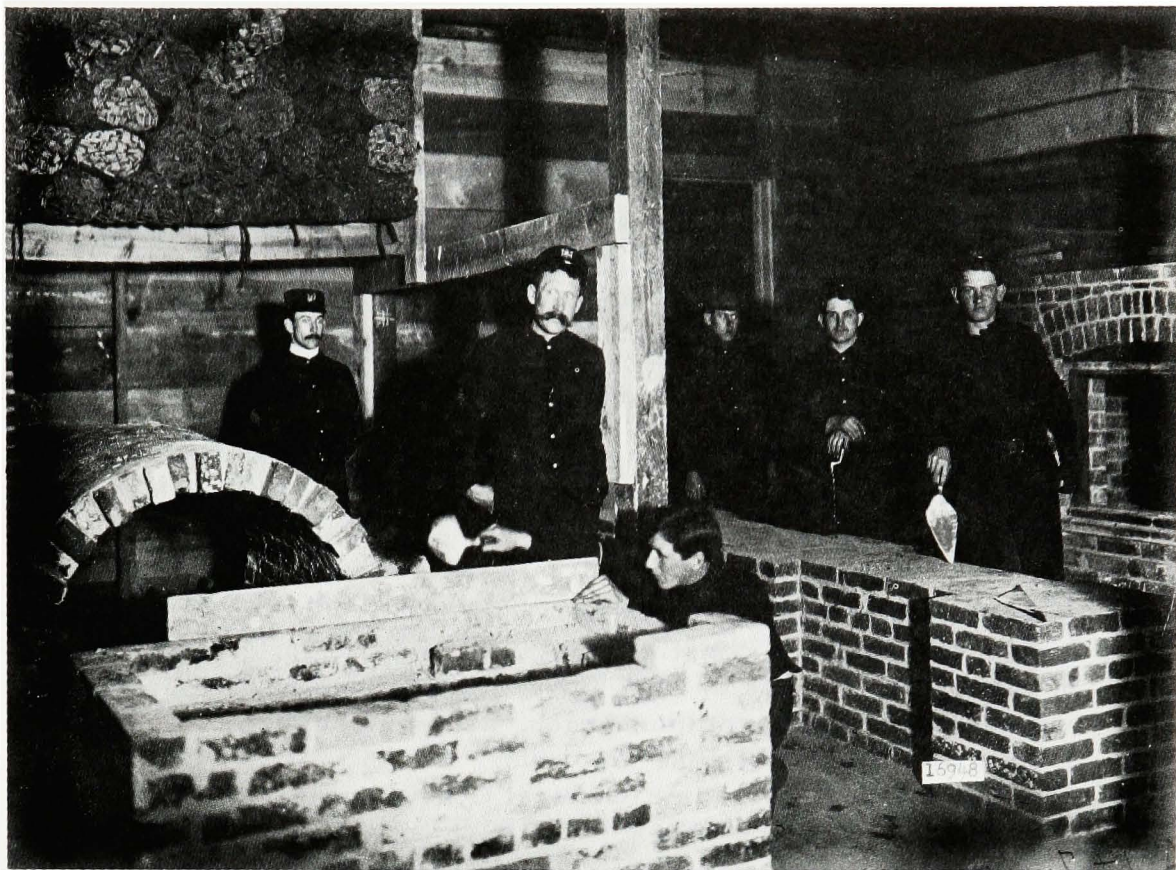
Captains Burr, McKinstry, and Judson were, at the time of their appointments, instructors at the Engineer School of Application, U. S. Army, and were assigned to the 3rd Battalion, Corps of Engineers, at the Washington Barracks in Washington, D. C. The 3rd Battalion and Engineer School had been transferred in 1902 from their former quarters at Willets Point, near Throggs Neck in Queens, New York, where the school had been established back in 1869.

Location

The first home of the Board was at the Washington Barracks, more specifically the Academic Building. The Board remained here for about one year. On 1 November 1903, the Board moved into more permanent quarters at the Colorado Building, on the corner of 14th and G Streets, N. W., in Washington, D. C. Here, they remained until 1911. The first Board members were not all permanently assigned at Washington Barracks. For example, Captain McKinstry also was assigned to the U. S. Engineer Office in New London, Connecticut during 1902, while on the Board; and Captain Judson was likewise assigned to the Engineer Office, Department of the East, New York, New York. Several early reviews were, in fact, handled by correspondence, rather than an actual meeting of the Board. The first formal meeting did not take place until November 1902.



Academic Building, Washington Barracks (now Ft. McNair) in 1902,
first home of the Board of Engineers for Rivers and Harbors.



The Engineer School, Washington Barracks, 1902.
Three of the first Board Members in 1902 were also instructors
at the Engineer School at the same time.



Uniform of Engineer Officer in 1902.

The First Reviews

On 5 August 1902, the Chief of Engineers sent the first report to the Board for review--a preliminary examination of a proposed channel at Wrangells Narrows, Alaska. His brief indorsement reads:

(Second indorsement.)

Office Chief of Engineers,
U. S. Army,
August 5, 1902

Respectfully referred to the Board of Engineers for Rivers and Harbors constituted by Special Orders, No. 24, Headquarters, Corps of Engineers, current series, for consideration and recommendation, as required by section 3 of the act of June 13, 1902.

By command of Brigadier-General Gillespie:

A. MACKENZIE,
Colonel, Corps of Engineers

The Board got off to a fast start, responding to the Chief of Engineers on 12 August with its favorable finding for a further survey:

(Third indorsement.)

Office Chief of Engineers
U. S. Army,
August 12, 1902.

Respectfully returned to the Chief of Engineers.

The Board of Engineers for Rivers and Harbors constituted by Special Orders, No. 24, Headquarters, Corps of Engineers, current series, under provisions of section 3 of the river and harbor act of June 13, 1902, has examined and reviewed the within report of Major Millis on a 'preliminary examination of Wrangell Narrows, Alaska,' as provided for by section 14 of the above-mentioned act.

The Board has the honor to submit the following report and recommendation:

The locality is so far distant from any existing base of operations as to make a personal preliminary examination by the local officer or by the Board difficult and very expensive. Such personal preliminary examination has appeared, however, to be unnecessary, reliable information bearing upon the interests of navigation involved and character of work required being available.

The channel through Wrangell Narrows is used by all vessels running to southeastern Alaska points from ports on the Pacific coast. Its navigation is now rendered difficult by shoals and rocks at several localities.

From the evidence of the most reliable navigators who are familiar with the locality it appears that such an improvement as is under consideration is in the interest of general commerce and navigation, and that the proposed work is worthy of being undertaken by the United States if it can be done at a cost commensurate with the interests of commerce involved.

It is therefore recommended that a survey be authorized as recommended by the local officer and the division engineer, with a view to determining the character, quantity, and approximate cost of work necessary.

From further information received from the local officer it is believed that the limit of cost of the survey should be placed at \$8,000.

A. MACKENZIE,
Colonel, Corps of Engineers,
Senior Member of Board.

Early Board Reviews

The heavy workload for the Board really started on 11 and 12 August, when the Chief sent the Board the following reports:

<u>Date</u>	<u>Project</u>
11 Aug 02	Catskill Creek, New York
	New Harbor, Maine
	Tallahatchie River, Mississippi
	Medomac River, Maine
	Red River, Arkansas and Texas
	Yalobusha River, Mississippi
	Big Black River, Mississippi
	Duncan Rocks, Straits of Juan DeFuca
	Columbia River, Washington
	Cypress Bayou, Texas and Louisiana
	Harlem (Bronx) Kills, New York
	Sulphur River, Texas
	Puyallup and other Waterways, Washington
12 Aug 02	Stone Haven, Wisconsin
	Obion and Forked Deer River, Tennessee
	Menominee, Wisconsin
	Gladstone Harbor, Michigan
	Ile Au Haut Thoroughfare, Maine
	Hatchee River, Tennessee
	Cape Small Harbor, Maine
	Manistique Harbor, Michigan

Public Hearings

When a report was before the Board for review, the Board, in its earliest days, held frequent public hearings for substantial improvements proposed. The purpose of the hearings was to obtain the views of local interests on the proposed works. For that reason, many hearings were held in the area of the project, which also enabled the Board to view the site of the proposed works.

The first known public hearing was held at Jefferson, Texas on 13 December 1902 to consider improvements for Cypress Bayou, Texas.² A committee of Board members attended. Two days later, the Board committee attended a public hearing at Denison, Texas to consider improvements of the Red River in Arkansas and Texas; a local inspection of the river was made. In all, 27 public hearings were held during the first full fiscal year (1 July - 30 June 1904) of Board operation, in places as distant as Duluth, Minnesota and Tampa, Florida. All of these hearings were held with regard to preliminary examination reports--those prepared prior to a more detailed survey report.

The following fiscal year, the Board held three hearings on preliminary examinations, nine hearings related to subjects specified in resolutions of the Committee on Rivers and Harbors calling on

² See A. R. C. E. 1904, p. 3673.

the Board to review, and three hearings on items contained in the 13 June 1902 River and Harbor Act, calling for the Secretary of War to make surveys.

In addition to the committee of Board members, Alexander H. Weber, the first civilian engineer on the Board Staff, often traveled to these hearings. For example, his travel voucher for a trip to Milwaukee, Port Washington, and Oconto, Wisconsin; Gladston, Manistique, and Sault Ste. Marie, Michigan; and Duluth, Minnesota and then back to Washington, listed total expenses of \$65.22, including such items as \$0.75 for dinner at Chicago, \$0.50 for supper at Milwaukee, and \$1.50 for sleeping car fare from Milwaukee to Oconto.³ (Figure 1.)

Through the years, the Board held many hearings, many in the local areas. Also, hearings in Washington at the Board office started in Fiscal Year 1905. In some years, as many as 60 were held; however, in the past ten years, they averaged less than one per year.

Through 30 June 1979, the Board has held 1,557 public hearings; recently, these have been referred to as public meetings.

³ R&H Files, 1903, Item No. 194/4.

FIGURE 1

Early Expense Account for A. H. Weber, the First Staff Engineer at BERH

Washington Barracks, D. C.,
July 6, 1903.

The UNITED STATES

to A. H. WEBER,

DR.

For traveling expenses incurred while en route from Washington, D. C., to Milwaukee, Port Washington and Oconto, Wis.; Gladstone, Manistique and Sault Ste Marie, Mich.; and Duluth, Minn., returning to Washington, D. C., as follows:

1903.			
June 21	Transfer residence to depot at Washington, -----	\$.50	
" 21	Dinner \$1.00, and supper \$1.00, on route, -----	2.00	
" 21	Sleeping car fare, Pittsburg to Chicago, -----	2.50	
" 22	Breakfast en route, -----	1.00	
" 22	Dinner at Chicago, Ill., -----	.75	
" 22	Transfer, depot to hotel at Milwaukee, Wis., -----	.25	
" 22	Supper at Milwaukee, -----	.50	
" 22	Lodging at Milwaukee, -----	.75	
" 23	Breakfast at Milwaukee, -----	.75	
" 23	Dinner at Milwaukee, -----	1.00	
" 23	Trolley car fare, Milwaukee to South Milwaukee, and return, -----	.20	
" 23	Supper at Milwaukee, ^{50¢} 50¢ ^{lodging 75¢} -----	.50 1.25	
" 24	Breakfast at Milwaukee, -----	.90	
" 24	Transfer, hotel to depot at Milwaukee, -----	.25	
" 24	R.R. Fare Milwaukee to Port Washington, Wis., and return to Milwaukee, -----	1.50	
" 24	Dinner at Port Washington, -----	1.00	
" 24	Supper at Milwaukee, -----	1.00	
" 24	R.R. Fare Milwaukee to Oconto, Wis., -----	4.22	
" 24	Sleeping car fare, Milwaukee to Oconto, -----	1.50	
" 24	Transfer hotel to depot at Milwaukee, -----	.25	
" 25	Transfer depot to hotel at Oconto, -----	.25	
" 25	Breakfast at Oconto, -----	.75	
" 25	Transfer hotel to depot at Oconto, -----	.25	
" 25	R.R. Fare, Oconto to Escanaba, -----	3.10	
" 25	Dinner en route, -----	1.00	
" 25	Transfer depot to hotel at Escanaba, -----	.25	
" 25	Boat fare, Escanaba to Gladstone and return, -----	.50	
" 25	Supper at Escanaba, -----	.50	
" 25	Lodging at Escanaba, -----	.75	
" 26	Breakfast at Escanaba, -----	1.00	
" 26	Transfer hotel to depot, -----	.25	
" 26	R.R. Fare, Escanaba to Manistique, Mich., -----	2.05	
" 26	Transfer depot to hotel at Manistique, -----	.25	
" 27	Hotel bill, dinner 26th to and including break- fast 27th, at Manistique, -----	2.00	
" 27	Transfer hotel to depot at Manistique, -----	.25	
" 27	Dinner en route, -----	1.00	
" 27	Transfer depot to hotel at Sault Ste Marie, Mich. Supper 75¢, lodging 75¢ at Sault Ste Marie, -----	.25 1.50	
" 28	Transfer hotel to depot, -----	.25	
" 28	Breakfast \$1.00, dinner \$1.00, -----	2.00	
" 28	Sleeping car fare, Sault Ste Marie to Duluth, Minn. Supper en route, -----	2.50 1.00	
" 29	Transfer depot to hotel at Duluth, -----	.25	
" 29	Breakfast at Duluth, -----	1.00	
" 29	Dinner \$1.00, supper \$1.00, -----	2.00	
" 30	Supper at Duluth, Minn., -----	1.00	
" 30	Lodging at Duluth, -----	1.50	

FIGURE 1 (Cont'd)

Brought Forward:		
July 1	Breakfast \$1.00, dinner \$1.00 at Duluth, -----	\$ 2.00
" 1	Transfer hotel to depot, -----	.25
" 1	Supper en route, -----	1.00
" 1	Sleeper, Duluth to Chicago, Ill., -----	2.50
" 2	Breakfast at Chicago, -----	1.00
" 2	Dinner \$1.00, supper \$1.00, en route, -----	2.00
" 2	Sleeper, Chicago to Washington, D. C., -----	5.00
" 3	Breakfast en route, -----	1.00
" 3	Transfer depot to residence at Washington, D. C.,	.50
Total:		<u>\$65.22</u>

Assistant Engineer,
Board of Engrs. for Rivers & Harbors.

Board Meetings

The Board began report reviews by correspondence, what has now come to be known as a "letter ballot." The reports were sent to each member, and the member reported his findings to the senior member of the Board who, in turn, reported to the Chief of Engineers. At least six project reviews were reported on in this manner before the first formal Board meeting.

The first Board meeting was held in the Academic Building at Washington Barracks on 10 November 1902 at 10:15 a. m. ⁴ The minutes noted that the Board reported on the actions taken prior to the first formal meeting, recommended allotments for five studies, offered employment to Alexander H. Weber as the first staff engineer, decided on the title and address for the Board for use on letterheads, designated the junior member of the Board as the Executive Officer, and discussed the qualifications for hiring a statistician. After a general discussion of its duties, the Board adjourned at 12:30 p. m. and agreed to meet next at 11:00 a. m. on 14 November 1902.

A log of the first several meetings shows the following:

⁴ Minutes of Board Meeting (National Archives Entry No. 496, Box 2)

First formal meeting, 10 Nov 1902, 10:15 a. m. First report lists actions taken prior to the first formal meeting; i. e. , recommended allotments for five studies and offered employment to A. H. Weber, who accepted.

Meeting No. 2. Board met at 10:00 a. m. All members present. Dr. John Crowell, internal Commerce, appeared as discussed. He agreed to prepare a tentative estimate for the statistical machinery required by the Board, consulting with Major Hodges. Board discussed four projects, recommending Board inspection of two. Meeting adjourned at 1:15 p. m. Next meeting at 10:30 a. m. , 18 Nov 02.

Meeting No. 3. All members present except the President. Board approved appointment of A. H. Ritter. Board discussed three projects. Mr. Ritter was appointed as clerk, services to begin 19 Nov at \$100 per month. Board agreed to meet at 1:00 p. m. , 20 Nov 02.

Meeting No. 4. All members present except Colonel Mackenzie, who was absent on other duty. Mr. D. G. Ambler, Chairman of the River and Harbor Committee of the Board of Trade of Jacksonville, Florida appeared to discuss the St. Johns River project. Also discussed were Sister Creek and Sherman Creek.

Meeting No. 5. All members present except Colonel Mackenzie. St. Johns River was discussed along with Dames Point.

Meeting No. 6. All members present except Captain Judson. Discussed were St. Johns River, Florida; Medomac River, Maine; and Damariscotta River, Maine.

Meeting No. 7. All present except Mackenzie. Board discussed five projects.

Meeting No. 8. All present except Mackenzie. Board discussed six projects.

Meeting No. 9. All present; five projects discussed.

3 Jan 03. All present except Mackenzie; five projects discussed.

6 Jan 03. All present except Mackenzie; three projects discussed.

8 Jan 03. All present except Mackenzie; five projects discussed. Board adjourned ' subject to the call of the Senior Member. '

5 Feb 03. Mackenzie and Judson absent; three projects discussed.

10 Feb 03. Mackenzie and Judson absent; three projects discussed.

The Board met with great frequency at first, discussing from three to six projects at each meeting. In its first full fiscal year (1903), the Board held 47 meetings covering 57 days of time. In its next year, it held 56 meetings covering 72 days, significantly increasing the number of two-day meetings. In its 10th year (1912), the Board had settled down to a pattern of one- and two-day meetings, as needed, holding 44 meetings that year covering 65 days. By 1922, the pace had slackened to 18 meetings, of which only two were two-day meetings. It continued in much this manner until the 1940s.

After World War II, the Board decided on a policy of fewer meetings but more projects discussed at each meeting. In the 1950s and 1960s, they averaged about 6 meetings each year, from a low of 3 meetings in 1963 to a high of 11 in 1954. In the latest decade, the Board continues to meet about 4 times each year.

Through September 1979, the Board has held 1,335 meetings, reporting favorably on 3,737 projects and unfavorably on 4,715 survey projects. Appendix I lists the dates of all Board meetings.

Expenses

In the beginning, the Board operating costs were relatively small for its workload. A statement of expenditures from December 1902 through June 1903 shows salaries for only three employees:

Assistant Engineer	\$200/month
Chief Clerk	\$125/month
Clerk	\$75/month

The statement includes a major expense item for ice in the amount of \$3.40.⁵

Ice seems to have been an important office item for the small staff. On 8 March 1904, the Senior Member of the Board, Lieutenant Colonel A. M. Miller, requested authority to purchase not to exceed 25 pounds of ice per day. On 12 March, the Office of the Chief of Engineers approved 15 pounds per day. By 1909, the Board Staff was using 25 pounds ("a ten-cent piece") each day.⁶ Another item of interest concerns the installation of an electric call bell to communicate between the two rooms of the new Board offices in the Colorado Building at the corner of 14th and G. Streets, N. W. in the District of Columbia, to which the Board moved on 1 November 1903.⁷

5 National Archives, Rivers & Harbors Board Files, Entry 500, Box 12, File No. 312/4.

6 National Archives, Rivers & Harbors Board Files, Entry 500, Box 12, File No. 198/3.

7 A. R. C. E., 1904.

January 7, 1904.

Captain C. W. Kutz,
Corps of Engineers,
Office Chief of Engineers,
Washington, D. C.

Captain:

I have the honor to transmit herewith for settlement a voucher, in duplicate, covering a bill of C. Schneider's Sons, in the sum of \$5.00, for furnishing and installing in Rooms 507-510, Colorado Building, one electric call bell with necessary appurtenances.

It is requested that check in payment be sent to C. Schneider's Sons, 1207 F. Street, N. W., Washington, D. C.

Very respectfully,

/s/ (W. V. Judson)

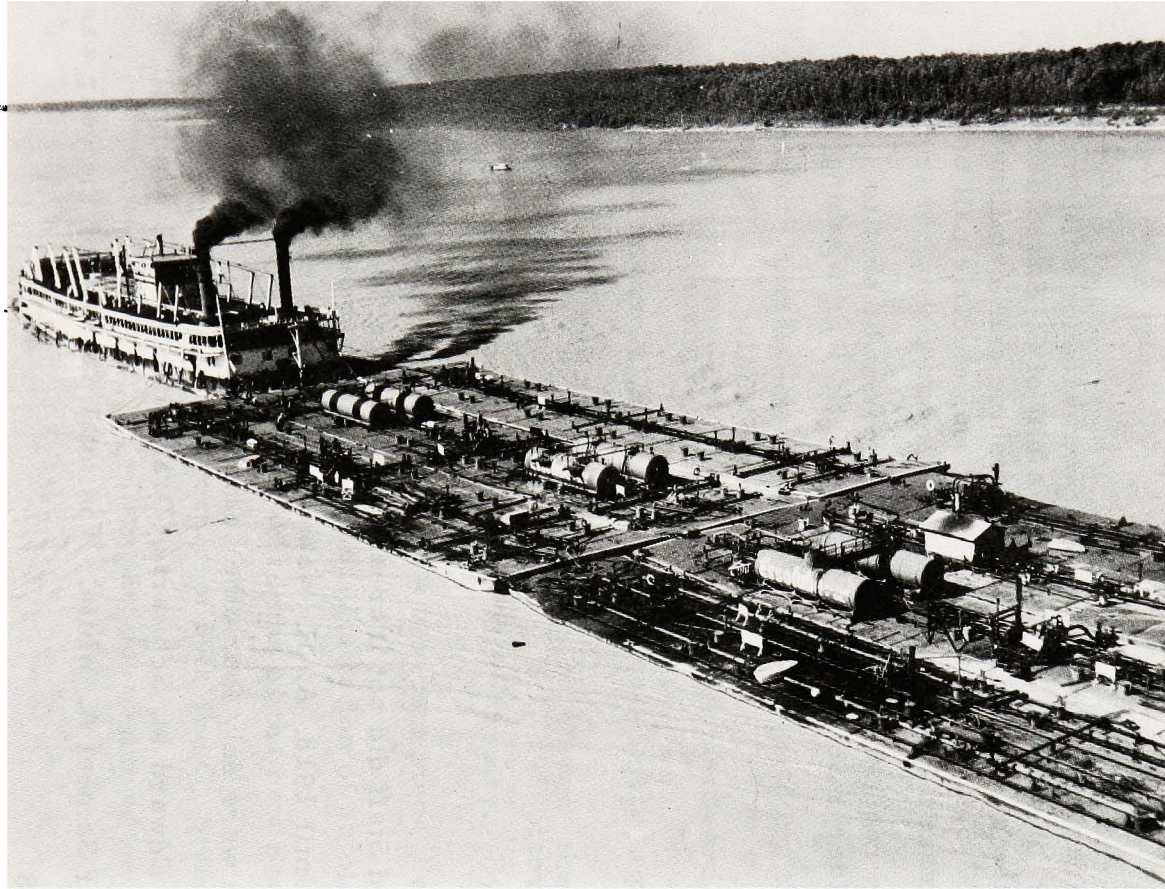
Captain, Corps of Engineers
Member and Executive Officer

2 Inclosures.

Staff

The Board Staff did not increase in size significantly for quite some time. Until 1918, A. H. Weber was the only civilian engineer. In 1915, there were only four other employees: Chief Clerk A. H. Ritter, Clerk Edward M. Schwartz, Draftsman John T. Weighell, and Messenger Samuel A. White. The total payroll for the year was only \$9,660. ⁸

⁸ National Archives, Rivers and Harbors Board Files, No. 272/13.



Steamboat "Sprague," the "Big Mama" of the Mississippi River fleet, pushing a petroleum tow in the 1940s. The "Sprague" was built in 1902 as the Board started business and worked until 1948. She was later featured in the motion picture, "Showboat." In 1907, the "Sprague" set an all-time world record, towing 67,300 tons of coal.

CHAPTER III

THE MISSIONS OF THE BOARD

The missions of the Board are divided into two categories. The statutory missions are those which have been specifically assigned to the Board by Congressional Acts and by Congressional Committee directives. In addition to these statutory missions, the 1902 Act and subsequent Acts authorize the Chief of Engineers to assign additional functions to the Board.

The Primary Mission

The existence of the Board, and the need for it, depends on its review mission. It is the statutory duty of the Board to review all study reports on proposed water resources projects or changes in projects that are to be submitted to the Congress for authorization. This includes reviewing those studies made pursuant to resolutions of both the Public Works Committees of the Senate and the House of Representatives; all special reports ordered by the Congress when, in the discretion of the Chief of Engineers, such a review is directed or warranted; and plans for modification and reconstruction of any lock, canal, canalized river or other work for the use or benefit of navigation. The Board can also perform such additional functions as may be assigned by the Chief of Engineers. The statutory authorities for the Board are shown in Appendix II.

Through 1946, matters related to water resources and the Board mission were handled by two Committees in the House of Representatives--the River and Harbor Committee and the Flood Control Committee--and in the Senate, one Committee--the Senate Commerce Committee. The House Committees considered bills in their respective fields; whereas, in the Senate, the Commerce Committee considered both River and Harbor and Flood Control bills. In 1947, upon reorganization of the Committees of Congress, a Public Works Committee was established both in the House and in the Senate, which Committees now consider and report on both River and Harbor and Flood Control projects. These committees have the authority, by resolutions adopted by them, to request the Board of Engineers for Rivers and Harbors to review previous reports.

A good layman's explanation of the Board's review role is contained in a Fortune Magazine article of April 1964:

* * * * *

To try to slow down as many uneconomic projects as possible by impartial examination, the Engineers have a prestigious seven-officer Board of Rivers and Harbors, which is backed up by a staff of seventy specialists (economists, statisticians, etc.). The board examines projects to find out if the engineering is sound, if the proposal is economic, if there is a cheaper alternative, and how much maintenance will cost. Members meet in executive session; decisions are by majority vote. In 56 percent of the cases the board has voted 'not convinced' --i. e., NO.

One guideline is the Board's ruminations, provided the engineering is sound and there are no cheaper alternatives, is the benefit/cost ratio. This b/c ratio is an attempt to find out if the affected area really will

get as much out of the project as taxpayers put into it. Congress normally requires at least a 1:1 ratio; the board seldom recommends a project unless the benefit exceeds the cost by a ratio of 1.2 to 1. In figuring the b/c ratio there is a certain latitude because many intangibles cannot be defined. For instance, the ability to forecast the volume of freight on a river is at best theoretical; so is the life expectancy of any single project.

But for all of its hardheaded analysis, the board's authority is limited. The Chief of Engineers can enter a contrary opinion, and the board's findings can be nullified by the Secretary of the Army, the Secretary of Defense, or the President of the U. S. The most famous dissent to a board's vote came in 1945; in that year the board found that the navigation aspects of the Arkansas River Basin project were uneconomic and said so, only to have Chief of Engineers Eugene Reybold enter a contrary opinion. Congress was not long in acting on the 'contrary opinion.'

The Review Process

Theoretically, review reports can reach the Board in several ways. Reports are usually prepared in District Engineer offices assigned that duty. Most are prepared in the office located geographically closest to the study area. The District Engineer submits his report to the next higher level, the Division Engineer, for his recommendation. Those that are prepared in response to a Congressional resolution calling for the Board to review can be submitted directly to the Board by the respective Division Engineer. The Board, in turn, will submit the District and Division Engineers' reports along with the Board's recommendations, to the Chief of Engineers, the ultimate Corps of Engineers' decision-maker. The normal process for report preparation and review is illustrated in Figure 2 ; blocks 12 through 14 of this figure depict the role of the Board in the review process.

FIGURE 2

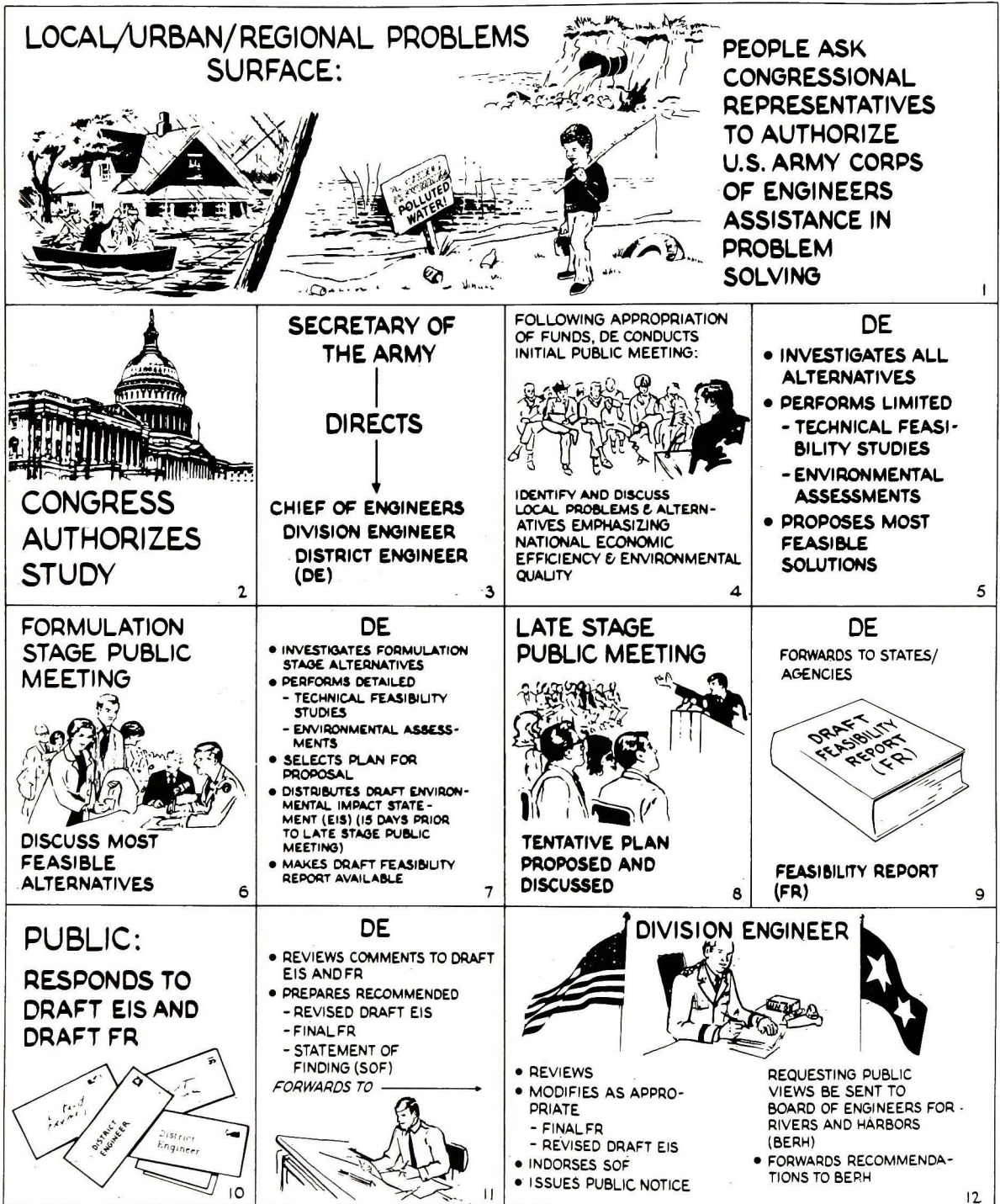


FIGURE 2 (Cont' d)



Reports prepared in response to an item in a Water Resources Development authorization act usually call for the Chief of Engineers to report. The Chief of Engineers assigns the study report to a District Engineer. The Division Engineer may send his report and the report of the District Engineer direct to the Chief of Engineers, who has the responsibility to report. The Chief of Engineers would then refer the report to the Board for review, in accordance with the law. As a practical matter, for the past several years, the Chief of Engineers has requested his Division Engineers to submit these types of studies directly to the Board; and the Board, in turn, will submit its findings and recommendations to the Chief of Engineers.

Once a report reaches the Board, it is given to the Staff for review. The multi-disciplinary staff, including engineers, economists, various scientists, and analysts review the documents for engineering and economic feasibility and assessment of environmental impacts. The staff normally conducts the review within a period of one to four months. During the course of the staff review, there is opportunity for input by the public to the review process. When the Division Engineer forwards his report to the Board, he makes a public announcement to that effect and invites comments to the Board. All information reviewed in response to that announcement is brought to the Board's attention. When a study report is considered suitable for potential Board action, the staff presents it to the Board at a formal meeting.

The Board looks to the uniform and consistent application of policies and procedures for all projects coming before it from all parts of the country. However, the Board does not make the final decision on whether a proposed project is to be recommended for construction; that is the role of the Chief of Engineers. The Board serves to inform the Chief of Engineers of the advisability of water resources improvements and whether or not such works are consistent with the national policies for water resources development.

Currently, Board review time from receipt of study reports by the Board to submittal of the Board's recommendations to the Chief of Engineers is between three and four months. Unusually complex project reviews may take as much as two years. The Board considers proposed improvements ranging from investments as small as \$1 or \$2 million to those passing \$1 billion. Due to the need for the public's input, the minimum review time is about two months.

The Board does not always agree with the District and/or Division Engineer's recommendations that a proposed project should be constructed. In cases where the Board cannot concur in a favorable recommendation, it has several courses of action that it may exercise. It may return the report for restudy; it may defer action while additional studies are made that might support or deny favorable action; it may issue a notice to the public stating its non-concurrence in a proposed

project or its preference for an alternative course of action; it may hold a public meeting to obtain additional information and the views of interested parties; and finally, it may choose to issue an unfavorable recommendation. Traditionally, the Board has reported unfavorably more often than favorably.

Some of the more significant cases of Board influence on plans of improvement are presented in Chapter VI.

Assigned Missions

--Conduct professional training in water resources planning as directed by the Chief of Engineers.

--Provide liaison with other governmental agencies at the national level on the technical phases of the waterborne commerce statistical program.

--Designate the Resident Member to serve, as a representative of the Secretary of the Army, on the Foreign-Trade Zones Board's Committee of Alternates with the Assistant Secretary of Commerce and the Assistant Secretary of the Treasury.

--Manage for the Chief of Engineers the U. S. participation in the Permanent International Association of Navigation Congresses (PIANC) in accord with its regulations and the 1954 Agreement between the Secretary of the Army and the Secretary of State.

--Process for the Chief of Engineers the State and Washington level agency review of his proposed report on studies to be submitted to Congress.

In addition, the Board, in the past, has been assigned missions relating to marine plant design, foreign port information, and representation on the National Capital Planning Commission for the Washington, D. C. metropolitan area.

Planning Associates Program.

In 1961, a program was initiated at the Board offices to provide advanced professional training in the field of water resources development planning. The training was to be provided to planners working in the various Corps of Engineers civil works offices around the country. In 1961, the on-board training was provided to one civil engineer. The classes grew in size each year to the present fifteen water resources planners, who spend eleven months in residence at the Board offices.

The program is directed by the Professional Development Division of the Board Staff. The training function is accomplished by individual and group instruction in the laws, politics, criteria, and procedures in the formulation and evaluation of plans for water resources developments. Instruction is by formal classroom lectures by the Chief of the Division and his staff, by other members of the Board Staff, by staff of the Civil Works Division of the Office, Chief of Engineers, and by lecturers from government agencies, universities, and research and planning organizations; workshops, short courses, case studies, field inspections, seminars, and forums; and by actual practice, where reports before the Board are analyzed with a project manager and the Board report is prepared and may be presented to the Board by the trainee. The workshops,

short courses, seminars, and other appropriate portions of the training program are structured so as to permit maximum participation by the Board professional staff and others.

Through June 1979, the total number of graduates of this program is 200. All but a very few are still employed with the Corps of Engineers, and several have risen to positions of high importance within the Board and Corps organizations. The current Technical Director, Chief of Planning Division, Chief of Professional Development Division, and seven staff project managers at the Board are former Planning Associates. A roster of program graduates is listed in Appendix III.

Waterborne Commerce Statistics.

Section 500 of the Transportation Act of 1920 delegated to the Secretary of War the duty of compilation, publication, and distribution of useful statistics, data, and information concerning transportation on inland waterways. On 1 July 1920, the Chief of Engineers assigned the work of directing the program of collection of waterborne commerce statistics to the Board of Engineers for Rivers and Harbors. Beginning in 1919, these statistics were prepared for publication as Part 2 of the Annual Report of the Chief of Engineers by the Statistical Division of the Board. Then, in

1953, the statistics were published under the direction of the Board in four volumes prepared by four Regional Statistical Offices and a fifth volume, the National Summaries, prepared under the Board's supervision.

Currently, the major effort for waterborne commerce statistics lies with Waterborne Commerce Statistical Center in New Orleans, which is under the direction of the Division Engineer, Lower Mississippi Valley Division. However, since 1966, the Board continued to provide Washington-level liaison for that program for the Corps of Engineers.

Permanent International Association of Navigation Congresses (PIANC).

The Permanent International Association of Navigation Congresses is one of the oldest international organizations, having been formed in 1885 in Brussels, Belgium. PIANC's objective is to promote the maintenance and operation of the maritime and inland waterways of maritime and inland ports for the benefit of mankind. PIANC is a technical organization operating without profit. Forty-one national governments sponsor the work of the association. In addition, there are individual and corporate memberships, currently totaling more than 2600 members.

PIANC holds a Congress of members every four years; the most recent being in Leningrad, United Soviet of Socialist Republics

during September 1977. Seventy-three persons attended from the United States, and 108 technical papers were presented and discussed at that Congress. PIANC also supports continuing international study commissions on specific technical subjects. Current study commissions include such subjects as: Reception of Large Ships, Waves, Locks and Weirs, and Sport and Pleasure Navigation. It also sponsors a Permanent Committee for Developing Countries.

About the time the Board of Engineers for Rivers and Harbors was established, the Congress provided a permanent appropriation of funds for the Permanent International Association of Navigation Congresses in an Act of 28 June 1902. This appropriation was to be used by the Secretary of War to fund the travel and expenses of U. S. participation. In 1923, the Chief of Engineers appointed the Resident Member of the Board as ex-officio and official delegate of the Permanent International Commission of the Association. Since that time, the affairs of the American Section of PIANC have been managed by the Resident Member at the Board, who is known as the Secretary of the American Section and who is also a National Commissioner by virtue of his appointment at the Board.

In 1961, the American Section hosted the International Navigation Congress in Baltimore, Maryland. In 1976, the American Section hosted the annual meeting of the Permanent International Commission in Washington, D. C. at the height of the Bicentennial celebration. Since then, annual meetings of the Permanent International Commission have been held in Leningrad, United Soviet of Socialist Republics (September 1977); Tokyo, Japan (June 1978); and Oslo, Norway (June 1979).

Foreign Trade Zones.

A foreign trade zone is a defined geographic area generally located in or near U. S. Customs ports of entry and, for purposes of customs duty collection, is considered to be outside the jurisdictional customs territory of the United States. This zone is similar to an international free trade zone. The purpose of such a zone is to permit foreign and domestic commerce to be moved into the zone for operations not otherwise prohibited by law, such as storage, exhibition, assembly, manufacture, or other processing. For foreign commerce, movement into the zone does not require payment of duties, and such duties would not be paid until the goods physically enter U. S. Customs territory for domestic use. A zone is generally a fenced-in, isolated, and policed area that may include warehouses and other types of

buildings, with usual access to most forms of transportation. Space is leased to interested firms by a public or private corporation operating much as a public utility under a grant from the Foreign Trade Zones Board.

Authority for foreign trade zones was granted in the Foreign Trade Zones Act, approved 18 June 1934, as amended by Public Law 566, 81st Congress, approved 17 June 1950. The Board of Engineers for Rivers and Harbors was instrumental in laying the groundwork for such zones. In 1929 and 1934, the staff of the Board and the U. S. Shipping Board issued a report entitled, "Foreign Trade Zones or Free Ports," Miscellaneous Report No. 3, that concluded that free ports, properly located, would have some influence in developing our commerce and our ports by stimulating international trade.

The Foreign Trade Zones Board was also established by the 1934 Act to administer the program. That Board consists of the Secretary of Commerce (who is Chairman of the Board), the Secretary of the Treasury, and the Secretary of the Army. That Board prescribes regulations for the establishment, administration, and operation of zones within the general provisions of the Act. Most functions of that Board are carried on by a Committee of

Alternates from the three departments. The Resident Member of the Board of Engineers for Rivers and Harbors is an alternate for the Secretary of the Army and prepares the position for the Secretary for applications for approval of zones.

Through September 1978, there were 53 established foreign trade zones in the United States, handling merchandise valued at \$1.5 billion. There are zones in 23 states, and 12 states have more than one zone. Eleven of the top 15 United States ports in terms of Customs collections had zones. Zones can be found at inland, as well as coastal, points of entry and exit, such as Salt Lake City, Utah; Pittsburgh, Pennsylvania; Omaha, Nebraska; Little Rock, Arkansas; Kansas City, Missouri; and Orlando, Florida.

Processing Reports for State and Washington-Level Agency Review.

The latest assigned mission for the Board by the Chief of Engineers was made during 1977. The Chief gave the Board Staff the responsibility for processing the proposed Chief's report, along with the Board's report and other reports, on all studies for which he must report to the Congress, to affected States, and Washington-level agencies.

Former Missions

Marine Design. On 27 January 1919, the Chief of Engineers assigned the design of floating plant for use on river and harbor work to the Board.¹ The Board Staff developed plans and specifications for government seagoing hopper dredges, clam-shell dredges, and hydraulic pipeline dredges; supervised design and construction; and made inspection of the variety of floating plant in the Corps of Engineers' fleet. This was a major change in work effort for the Board. For most years, the marine design function utilized the majority of the Board Staff support.

In 1939 and 1940, the marine design mission was transferred by direction of the Chief of Engineers to the Office of the Chief of Engineers and to the Philadelphia District.²

Transportation Economics. Although the Board had been involved in the gathering of statistics on ports, waterways, and waterborne commerce for many years, it was not until 1936 that the Board formally recognized the need for detailed economic studies of waterway transportation by the staff. That year, two men were hired to conduct a special study on the cost of water transportation; they were augmented by three more persons the following year. In 1939, the Resident Member officially named their group the "Section of Special Studies." Then, in 1943,

¹ National Archives, River and Harbor Board Files, No. 312/60. Letter dated 27 January 1919, Chief of Engineers to Senior Member, BERH.

² Board Annual Report to the Chief of Engineers, 30 June 1940.

that section and the Engineer-Economist Section were merged into a "Division of Economic Research," which became the Economics Division in 1945.

The major thrust of the work of the Economics Division was transportation economic studies for navigation improvements. By 1957, sufficient emphasis was placed on transportation that a Transportation Economics Branch was established within the Division. In September 1959, the Branch was made a Division; the remaining branches became the Evaluation Division. In 1963, the work on transportation economics had developed into a major effort on guidance and assistance to the Corps of Engineers' District and Division offices in preparation of detailed benefit evaluation studies, rather than review. For this reason, the Transportation Economics Division was transferred to the Planning Division within the Office of the Chief of Engineers in order that it might assist in the management of planning studies.

National Capital Planning Commission. From 1960 through 1972, the Resident Member of the Board served as an alternate for the Chief of Engineers as ex-officio member of the National Capital Planning Commission, a planning group established to guide the land use planning for the Nation's capital.

Port Series Reports

The Port Series Reports were detailed compilations of data pertaining to available facilities at U. S. ports, including the physical characteristics of marine terminals, intermodal transportation services, marine repair services, bunkering stations, available channels, anchorages, and basins, and other related items. These reports were prepared in the Board's Port Facilities Division. The mission of that Division stemmed from an Act of Congress in 1918.

Section 7 of the River and Harbors Act of 18 July 1918 directed the Chief of Engineers to report annually on terminal facilities at Federally-improved harbors and waterways as follows:

SEC. 7. That hereafter the Chief of Engineers, United States Army, shall indicate in his annual reports the character of the terminal and transfer facilities existing on every harbor or waterway under maintenance or improvement by the United States, and state whether they are considered adequate for existing commerce. He shall also submit one or more special reports on this subject, as soon as possible, including, among other things, the following:

(a) A brief description of such water terminals, including location and the suitability of such terminals to the existing traffic conditions, and whether such terminals are publicly or privately owned, and the terms and conditions under which they may be subjected to public use.

(b) Whether such water terminals are connected by a belt or spur line of railroad with all the railroads serving the same territory or municipality, and whether such connecting railroad is owned by the public and the conditions upon which the same may be used, and also whether there is an interchange of traffic between the water carriers and the railroad or railroads as to such traffic which is carried



An Ohio River terminal about 1927. This photograph was collected during an early inland waterways port facilities survey by the Board Staff in 1928.

partly by rail and partly by water to its destination, and also whether improved and adequate highways have been constructed connecting such water terminal with the other lines of highways.

(c) If no water terminals have been constructed by the municipality or other existing public agency there shall be included in his report an expression of opinion in general terms as to the necessity, number, and appropriate location of such a terminal or terminals.

(d) An investigation of the general subject of water terminals, with descriptions and general plans of terminals of appropriate types and construction for the harbors and waterways of the United States suitable for various commercial purposes and adapted to the varying conditions of tides, floods, and other physical characteristics.

Later acts, principally the Transportation Act of 1920 and Merchant Marine Act of 1920, affirmed the role of the Corps of Engineers in collection of port information, which role the Chief of Engineers had assigned to the Board since 1919.

Port reports were prepared by civil engineers and transportation specialists on the Board Staff, who visited the site of each port studied and made detailed surveys of relevant port data. There were approximately 45 reports published on ports of the United States. These reports were revised periodically as funds and manpower permitted. The revision cycle ran between 6 and 12 years.

In Fiscal Year 1979, this function was transferred to the U. S. Army Corps of Engineers' Water Resources Support Center, Ft. Belvoir, Virginia, by Permanent Order 13-5, dated 15 June 1979, of the Office of the Chief of Engineers.

CHAPTER IV

THE EARLY MOLDING OF THE BOARD'S ROLE

Independent Review

Early in its history, the Board of Engineers for Rivers and Harbors asserted its right to independently review projects as directed by the Congress. Prior to the establishment of the Board, most reports on preliminary examinations and surveys for proposed projects were prepared by District Engineers and submitted through the Division Engineer to the Chief of Engineers, who reported to the Congress. In some cases, the Board interpreted the resolutions from the Congress to mean that only the Board should report, and in some cases it did.

In 1903, the Board reported unfavorably on improvements for Oak Orchard Harbor, New York and Wilson Harbor, New York without field reports.^{1, 2} On the Grand River, Michigan, the Board reduced the existing 10-foot deep channel to 6 feet deep.³ More importantly, the Board conducted its own study of the Mississippi River and came up with its first recommendations for a major improvement. In its report of 12 November 1903, the Board recommended

1 HD 208-58-2

2 HD 166-58-2

3 HD 216-58-2

an 8-foot deep and 200-foot wide channel on the Mississippi between St. Louis and Cairo, and a 6-foot deep channel to the mouth of the Missouri River at a cost of \$20,000,000, plus a dredge to be built to do the work at a cost of \$1,200,000 for construction and \$300,000 annually for maintenance. ⁴ The Congress authorized these improvements on 3 March 1905. In these cases, there had been no report by the District or Division Engineer for the respective improvements.

In several instances in its early days, the Board reversed the favorable findings of the District and Division Engineer on reports submitted by them for Board review; the Chief of Engineers usually concurred in the Board's findings. Projects rejected include those at the following locations:

<u>Location</u>	<u>Document No.</u>	<u>Date of Board Report</u>
Medomac River, ME	HD 195-58-2	4 Nov 1903
St. Louis River, MN	HD 215-58-2	11 Jul 1903
Charlotte Harbor, FL	HD 181-58-2	11 Mar 1903
Wateree River, SC	HD 185-58-2	9 Jul 1903
Little Kanawha River, WV	HD 217-58-2	19 Mar 1903
Tomac River, CT	HD 228-58-2	17 Feb 1903
Olcott Harbor, NY	HD 232-58-2	19 Feb 1903
Sandusky River, OH	HD 242-58-2	12 Jun 1903
Sand Island, Ohio River	HD 251-58-2	28 Apr 1903
Kanawha River, WV	HD 305-58-2	9 Dec 1903
Sheepshead Bay, NY	HD 427-58-2	22 Dec 1903
Black River Harbor, NY	HD 428-58-2	22 Dec 1903
Skidaway Narrows, AK	HD 450-58-2	11 Jan 1904
Puyallup and other Waterways, WA	HD 520-58-2	26 Jan 1904

⁴ HD 168-58-2

The proposals for the Kanawha River and Black Rock Harbor were rather extensive; in the first instance, two locks and dams at a cost of \$1, 777, 730 and, in the second, a channel and a lock at a cost of \$4, 500, 000.

Shaping Corps Policy

Early Boards focused attention on the degree of Federal interest in proposed projects. Several early reviews considered the same types of questions that are still being asked in projects reviewed today. Here are some examples.

Maintenance of single-user channel. On 22 September 1903, the Board reported unfavorably on the assumption of maintenance of a 30-foot deep and 200-foot wide channel to Sparrows Point on the Patapsco River at Baltimore, Maryland. The channel had been dredged initially by the Maryland Steel Company to their mill. The company was the sole user. The Board stated, "...leave this maintenance to those most interested in the use of the channel...." ⁵

Specific Federal cost limitation. On 11 November 1903, the Board concurred in the recommendations of the District and Division Engineers to purchase the company-owned canal on the Little Kanawha River in West Virginia. The Board set a limit on the cost to be paid at \$75, 000, based on the assumption that the two counties of Wood

⁵ HD 54-58-2

and Wirt and the City of Parkersburg should be willing to donate their stock in the canal worth \$47,000 to the United States in return for the benefit they would receive from Federal operation and relief of tolls. ⁶

Lands and allocations. On 14 December 1903, the Board recommended for a navigation project on the Minisceongo River in New York, but stipulated that "A proviso should be inserted when appropriation is made prohibiting the inauguration of dredging before the land for the cut-off is donated to the United States, and the water pipe below the bridge removed or lowered to a depth of 12 feet below mean low tide where it crosses the proposed channel." ⁷

Reasonable cost. On 4 January 1904, the Board rejected a dredging plan for the Missouri River, stating that navigation cannot be secured at reasonable cost by means of dredging. ⁸

Considering alternatives. On 9 February 1904, the Board reported unfavorably on a 16-foot deep coastal waterway between Norfolk, Virginia and Beaufort Inlet, North Carolina, finding it not advisable to spend \$10,000,000 on a channel that size. The Board did recommend, however, a new inquiry for consideration of 10-foot and 12-foot deep channels. ⁹

6 HD 309-58-2
7 HD 300-58-2
8 HD 441-58-2
9 HD 563-58-2

Separation of military needs. Again, on 9 February 1904, the Board concurred in the recommendations of the reporting officers that military needs should be considered separate from commercial navigation, and no improvements for commercial interests should be made at Key West, Florida. ¹⁰

Analysis of navigation systems. On 9 February 1904, the Board rejected the District Engineer's proposal for a system of locks and dams on the Wabash River, a tributary to the Ohio River. In its report, the Board reviewed the status of all work built, under construction, and authorized on the Ohio River and its tributaries, and suggested that any improvement on the Wabash in the future "can be made to conform to the conditions then prevailing in the Ohio River." Complete canalization of the Ohio River was under consideration at the time. ¹¹

Limited Federal interest. On 28 March 1906, the Board concurred in the favorable findings for a navigation channel extending up the West Fork of South Branch of the Chicago River in Illinois. In doing so, however, the Board assisted higher level reviewers in making a determination of Federal interest by its comments on the nature of the proposed work:

10 HD 567-58-2

11 HD 568-58-2

From the reports it appears that the probable purpose of the proposed improvement is to provide for the commerce of Chicago and to give suitable sites for manufacturing establishments accessible to water transportation for their raw materials and products. Undoubtedly such an improvement would afford facilities of great value to the commerce of the city, as well as the manufacturing establishments located along the waterway to be improved.

In his report on the survey Colonel Bixby calls attention to the fact that near the head of every navigable stream there must somewhere be a final limit where the stream is more a private road or property for private benefit than a public utility; and that the West Fork is close to such limit, and is quite possibly on the side where improvement by the United States is improper. Nevertheless, on account of the great importance of Chicago as a commercial center, and influenced by the fact that many years will yet elapse before it will be properly provided with harbor facilities, Colonel Bixby comes to the conclusion that the West Fork of the Chicago River is worthy of improvement by the General Government under certain conditions as to free right of way and increased width of the draw spans in the bridges enumerated in his report on the survey. ¹²

On 29 September 1905, the Board concurred in the unfavorable findings of the District and Division Engineers for a proposed 1600-foot long channel up Deckers Creek from the Monongahela River in West Virginia, stating "...it is not desirable for the United States to undertake the improvement.... The construction... would... be equivalent to building a wharf or slip for the benefit of private interests and would not benefit general commerce." ¹³

¹² HD 700-59-1

¹³ HD 193-59-1

Moving Projects Forward

Soon after getting into business, the Board sometimes assisted the Chief of Engineers in his construction program in ways he did not entirely appreciate. The routine procedure for studying project proposals in the early 1900s was to prepare a preliminary examination report which would determine whether a further survey study and report was warranted. Preliminary examinations pointedly omitted cost estimates of proposed work. However, the Board occasionally took a short-cut by requesting cost estimates from the District Engineer and then recommending action based on its judgment of the project's worth. The Chief of Engineers, at times, appeared chagrined at such developments. Reporting to the Secretary of War on 11 January 1906, the Chief stated:

It is not the usual practice to include estimates of cost in reports on preliminary examinations, such estimates being properly prepared only upon order by the Secretary of War after consideration of those reports. Since, however, the necessary data for the estimates were at hand in this case and no special survey was required, I recommend that the reports herewith be transmitted to Congress as covering both the examination and the estimate of cost. ¹⁴

14 HD 381-59-1, p. 2.

Early Congressional Pressure

Although Congressman Burton did not have much trouble getting the Board established, the Board did not escape the scrutiny of the Congress. Attack came early. In 1906, Congressmen A. S. Burleson and R. L. Henry questioned the Board's authority to question the commercial necessity of a proposed navigation project for locks and dams on the Brazos River in Texas. The Chief of Engineers came to the Board's defense in his report of 16 April 1906:

Arguments have been presented by the Congressional representatives interested in the improvement of the Brazos River that the item of law simply calls for certain engineering information in connection with the improvement, and that Congress has made the question as to the advisability of the improvement contingent solely upon the determination by the Secretary of War whether it is feasible to secure four or six months' navigation by open-channel work or by not to exceed nine locks and dams, and, it having been decided by the Secretary that the condition can be complied with, that Congress has itself determined upon the advisability of the improvement. A letter bearing upon this subject and addressed to the Chief of Engineers by the representatives of the Congressional districts interested, under date of April 9, 1906, is transmitted with the other papers in the case.

Section 3 of the river and harbor act of June 13, 1902, which creates the Board now known as the Board of Engineers for Rivers and Harbors, prescribes that the Board shall submit recommendations as to the desirability of commencing or continuing any and all improvements upon which reports are required, and that in the consideration of such works and projects the Board shall have in view the amount and character of commerce existing or reasonably prospective

which will be benefited by the improvement, and the relation of the ultimate cost of such work, both as to the cost of construction and maintenance, to the public commercial interests involved, and the public necessity for the work and propriety of its construction, continuance, or maintenance at the expense of the United States.

Section 9 of the river and harbor act approved March 3, 1905, provides that in all cases preliminary examinations as well as surveys provided for in the act, whether contained in section 1 or section 10(9), shall be examined and reviewed by this Board. It is therefore evident that the action of the Department in calling upon the Board of Engineers for Rivers and Harbors to pass upon the accompanying report, and the action of the Board itself, both in considering the matter from the point of view which it has taken and in expressing an opinion as to the worthiness of the proposed improvement, are strictly in accordance with the law, there being nothing in the item relating to the improvement of the Brazos River above Old Washington which conflicts with the existing law as to the review by the Board or the considerations which should govern its report.

In submitting to Congress reports on preliminary examinations and surveys it is usual for the Chief of Engineers to add his view to those expressed by the officers reporting in the first instance, and by the Board of Engineers for Rivers and Harbors, as to the desirability of undertaking the improvement. In this case, however, since such expression of opinion by the Chief of Engineers is not distinctly called for in the law, and since the point has been made by the Members of Congress most interested in the work that the question of the advisability of the improvement has already been determined by Congress, I submit these reports without further comment. ¹⁵

¹⁵ HD 705, 59th Congress, 1st Session.

Later that year, the Board was forced to reevaluate its position on a lock and dam for navigation at Bayou Teche, Louisiana after Senator M. J. Foster and Congressmen J. E. Ransdell and R. F. Broussard protested against the Board's unfavorable report of 7 February 1905 at a hearing before the Board. The Board, in its later report of 27 December 1906, recommended for the lock and dam. 16

The very next year, 1907, the Board found Congressional pressure to reverse its previous action in three more reports. On one--Salem River, New Jersey--the Board reversed itself. 17 On the other two--Medomac River, Maine and Monterey Harbor, California--the Board held fast and reaffirmed its prior position. 18, 19

Not everyone in Congress disliked the Board. In the Congressional Record of 31 January 1907, Congressman Burton indicated that a new procedure had been initiated for projects included in rivers and harbors appropriations bills:

In this bill we have included only projects reported by a board of reviewing engineers created by the act of 1902. 20

16 R&H Committee, Doc. 6, 59th Congress, 2d Session.

17 R&H Committee, Doc. 12, 59th Congress, 2d Session.

18 R&H Committee, Doc. 14, 59th Congress, 2d Session.

19 R&H Committee, Doc. 10, 59th Congress, 2d Session.

20 Congressional Record, House. 31 January 1907, p. 2030.

Later in those hearings, a congressman from the Mississippi Valley challenged the Board's qualifications to review a proposed deep water route from St. Louis to New Orleans:

I am aware that a certain official body known as the Board of Engineers for Rivers and Harbors, having its headquarters in the city of Washington, recently reported adversely on this proposed project on the ground that the probable amount of commerce that would use this waterway and the resulting benefits to the people from a business standpoint would not warrant the expenditure by the General Government of \$30,000,000. Mr. Chairman. I have no criticism to make of any member of the Corps of Engineers who confines his activities to his legitimate sphere of usefulness. I believe that taken as a whole the engineers of the United States Army possess an exceptionally high degree of technical and scientific skill, and I know that the present head of that great department, Gen. A. Mackenzie, is justly regarded as one of the ablest engineers in this country. I have no doubt but that the members of the Board of Engineers for Rivers and Harbors, who sit in solemn judgment on the recommendations of the local engineers, are fully qualified to pass intelligently on any of the physical phases of a proposition of this character. They no doubt have the technical knowledge that would enable them to estimate the cost of construction within a fraction of a dollar. On a question of this kind, which presupposes a comprehensive knowledge of the science of engineering, their recommendations are entitled to great weight by Congress. But when it comes to giving Congress gratuitous advice on a purely commercial or business proposition, then indeed are we justified in inquiring, 'Upon what meat doth this our Caesar feed, that he is grown so great?' This august board is composed of the following gentlemen: Col. D. W. Lockwood, Lieut. Col. R. L. Hoxie, Maj. C. McD. Townsend, Maj. E. Eveleth Winslow, and Capt. Charles W. Kutz. All of them are graduates of West Point, and they have continued uninterruptedly in the service of the Engineering Corps since graduation. Not one

has ever had any practical business experience of any kind, and I seriously doubt whether any one of them is able to differentiate between a railway tariff and a tariff schedule. Is it possible that Colonel Lockwood, of the Engineering Corps, is better qualified to pass on the commercial advantages of this deep-waterway project than James J. Hill? Is Lieutenant Colonel Hoxie, of the Engineering Corps, more experienced in business matters than Theodore P. Shonts? Does Major Townsend, of the Engineering Corps, know more about the proper remedy to relieve the congestion of traffic in the Mississippi Valley than William K. Kavanaugh, of St. Louis? Has Major Winslow, of the Engineering Corps, a better conception of the requirements of trade than David R. Forgan, of Chicago? Does Captain Kutz, of the Engineering Corps, possess knowledge superior to that of M. J. Sanders, of New Orleans, on a question relating to the improvement of transportation facilities? In the language of the iridescent Ingalls, it is the 'very apex of effrontery, the climax of audacity,' for these gentlemen of the Engineering Corps to arrogate to themselves the right to pass judgment on a matter wholly outside the province of their profession and concerning which they know absolutely nothing, either by training or experience. 21

Congressman Harry T. Rainey continued in the same vein in discussing a project for a 14-foot waterway from Lockport, Illinois to St. Louis:

I submit that a great committee of this House has not the moral right to surrender its functions to a purely executive board. If this statute is to be recognized in the future, it will contribute more to militarism in this country than any other one thing I think of now. A board of Army engineers, if they are competent, ought to be called upon for an opinion as to the engineering features of a project and as to its feasibility, not its commercial desirability. The judgment of Army officers on a matter of that kind is entirely without value. Army officers in general, and the Army officers on this particular board, have had nothing to do with affairs--they

21 Congressional Record House, 31 January 1907, p. 2097.

have probably in all their lives never made a dollar in any commercial transaction. They have little sympathy with the commercial development of the great West. The glorious days in the West, in their judgment, were the days when Army officers, at the head of crushing squadrons of cavalry, were chasing Indians across the plains, who always ran away at their approach. They find little evidence of the present greatness of that section in the fields of wheat that ripen under the summer sun or in the millions of acres of corn that rustle in the winds of autumn.

If I could ever be induced to subscribe to a national policy of foreign spoliation and conquest, it would be for the reason that by embarking, on a larger scale, in exploitations of that character we might be able to get rid of the Army officers that infest this capital in such enormous numbers. I have never been able to find a good reason for keeping them here. Resplendent in gold lace, they contribute to the color scheme at White House receptions; this seems to be about the extent of their utility in the capital city.

The particular board who, in forty-four words, disposed of this great subject and who signed their names to this particular erudite report is composed of the following Army officers: Col. D. W. Lockwood, who entered the Military Academy in 1862 and who has been in the service since that time; Lieut. Col. R. L. Hoxie, who entered the Military Academy in 1864 and who has been in the service since that time; Maj. C. McD. Townsend, who entered the Military Academy in 1875; Maj. E. Evelith Winslow, who entered the Military Academy in 1885 and who had been on this board only a few months when he subscribed to this report; Capt. Charles W. Kutz, who entered the Military Academy in 1889. All of the above-named Army officers have been in the service of the United States since they were boys. During the greater portion of that time they have received small salaries, and none of them except Colonel Lockwood have ever received a larger salary than \$3,000 per year, and if he is getting a salary larger than that now he has not been receiving it a very long time. They are as ignorant as infants of the ordinary business affairs of life. You can not expect them to recognize

the great demands of present-day commerce and the necessity for the development of cheap transportation facilities. A statute which confers that authority upon them is wrong. An attempt to follow it will have a particularly depressing influence upon the future commercial development of the country.

There is not even a great engineer on this board; a really great engineer would have been absorbed long ago by the railroad companies. West Point never has produced a great engineer or even a competent engineer, and that institution never will produce an engineer than can be called either great or competent. Fortunately for the country, however, a majority of the engineers engaged upon public works are graduates of our universities that are provided with engineering departments. The engineers provided by the Army are simply ornamental heads for our engineering equipment; the real work is done by the civilian engineers. Army engineers do not do it, they simply get the credit for doing it. Civilian engineers in the employ of the Government are being drawn upon so largely by railroads that they hardly constitute an impartial body of men. There is present even with them a tendency to color purely engineering reports in the interest of railroad transportation companies. In support of the statements I have been making about engineers I will incorporate here in my speech my correspondence with the Departments upon this subject, and I will do so without further comment upon this phase of this question. 22

Similar debate took place on projects proposed for the Red River in Louisiana and a 35-foot deep channel to Philadelphia. However, the Congressional requirement for BERH review prevailed, and this procedure has been traditionally followed ever since with only rare exceptions.

22 Congressional Record House, 1 February 1907, p. 2102.

Processing Reports

The Board saw its role in processing reports to the Congress as important and made every effort to expedite reviews. In a somewhat firm stance, the Senior Member wrote to the Chief of Engineers on 15 August 1908, stating the need to get reports prepared and submitted for review:

August 15, 1908.

The Chief of Engineers,
U. S. Army,
Washington, D. C.

Sir:

1. The Board of Engineers for Rivers and Harbors has the honor to invite attention to the following provision of the Act of March 2, 1907.

All surveys and examinations provided for by this Act, and the reports thereon, shall either be completed on or before the next Monday in November, nineteen hundred and eight, or else a preliminary report be made in which the reasons for delay shall be stated **

2. The Board interprets this item as requiring the submission of final reports on all investigations ordered by that Act by the date mentioned, including not only reports of the district officers, but those of the Board as well. As it is not improbable that certain further information will be required in some cases, necessitating correspondence with district officers and interested parties, and possibly the holding of public hearings by the Board, it appears desirable that district officers submit their reports sufficiently early to allow for such contingencies. At the present time, the reports on the following investigations ordered by the Act of March 2, 1907, are outstanding.

Section 1:

Connecticut River, above Hartford.
Cumberland River, below Nashville (part).
East River and Hell Gate, N. Y.
Mississippi River, St. Louis to mouth.
Waterway from Savannah to Fernandina.

Section 3, surveys and estimates:

Alabama and Coosa Rivers, Ala.
Beaufort Harbor, N. C.
Big Sunflower River, Miss.
Biloxi Harbor, Miss.
Camden Harbor, Me.
Clearwater Harbor, Fla.
Colorado River, Tex.
Coosa River, Lock No. 5.
Coosa River, at Horseleg Shoals, Ga.
Cowlitz River, Wash.
East Chester Creek, N. Y.
Echo Bay, N. Y.
Gloucester Harbor, Mass.
Isles of Shoals, N. H.
Jamaica Bay, N. Y., entrance.
Merrimac River, Mass.
Oldmans Creek, N. J.
Penobscot Bay, Me.
Pepperells Cove, Me.
Plymouth Harbor, Mass.
Port Chester Harbor, N. Y.
Puyallup River, Wash.
Sacramento River, Cal.
St. Andrews Bay, Fla.
St. Johns River to Sanford, Fla.
St. Johns River to Lake Harney, Fla.
St. Lucia Inlet, Fla.
San Francisco Harbor, Cal.
San Joaquin River, Cal.
Suisun Channel, Cal.
Trent River, N. C.
Vermilion Bayou, La.

3. In view of the foregoing the Board recommends that district officers be requested to submit all reports which are

to be presented prior to the assembling of the next session of Congress at the earliest practicable date and not later than October 10, 1908, except in such special cases as in the opinion of the Chief of Engineers this may not be desirable.

For the Board:

Very respectfully,

D. W. Lockwood [stamped]

Colonel, Corps of Engineers,
Senior Member of the Board.

This apparently did not satisfy the matter, however. So, again, on 26 October 1908, the Senior Member reminded the Chief of Engineers of the status of outstanding Congressional requests for Board review.

October 26, 1908.

The Chief of Engineers,
U. S. Army,
Washington, D. C.

Sir:

1. Referring to the last paragraph of Section 3 of the Act of March 2, 1907, in which it is required that 'all surveys and examinations provided for by this Act, and the reports thereon, shall either be completed on or before the first Monday in November, nineteen hundred and eight, or else a preliminary report be made in which the reasons for delay be stated,' the Board of Engineers for Rivers and Harbors has the honor to submit the following report.

2. There are now in this office five cases upon which reports have been submitted by District Officers within the

limit of time prescribed, but on which the Board is unable to take immediate action. These cases are Trent River, N. C., Beaufort Harbor, N. C., Saint Lucie Inlet, Fla., Clearwater Harbor and Boca Ceiga Bay, Fla., and Coosa River, Dam No. 5.

3. In his report on the survey of Trent River, the District Officer recommends the construction of a channel 4 feet in depth. Inasmuch as the Act ordering this investigation called for an examination of 'Trent River, with a view to obtaining eight feet of water from Newbern to Trenton,' the Board considered it advisable to obtain the views of the community as to the necessity for the depth specified in the Act, before recommending a lesser project. It is believed that the Board's report on this matter can be submitted during the latter half of November.

4. In the matter of Beaufort Harbor, N. C., on which the District Officer recently submitted an unfavorable report, it was deemed advisable to afford interested parties an opportunity to submit their views in behalf of the improvement, and it is understood that action to this end has been taken by the Office of the Chief of Engineers. It is believed that the Board's report can be submitted during the month of November.

5. In reference to Saint Lucie Inlet, upon which the District Officer has recently submitted a favorable report, there is a difference of opinion between the District Officer and Division Engineer as to the character and cost of a suitable improvement of this locality. The questions at issue are of such importance that the Board does not feel justified in submitting its findings without a more careful investigation than can be made within the time designated by the law. It is probable that it will be found necessary for a committee of the Board to visit the locality, in which event the Board's report may be delayed until the latter part of December.

6. The Board has also had before it the report of the District Officer on a survey of Clearwater Harbor and Boca Ceiga Bay, Fla. On account of a difference of opinion between the District Officer and the Division Engineer, it

seemed advisable to secure further information concerning the necessity for the proposed improvement, and to this end the Board, on Oct. 12, 1908, requested that the District Officer be asked to invite statements and arguments from interested parties. It is probable that the Board's report on this matter will be submitted during the month of November.

With reference to the survey of Coosa River, with a view to locating and constructing Dam Numbered Five, certain conditions are referred to in the report of the District Officer concerning which the Board has no information, and it has therefore addressed a letter to the Chief of Engineers, of this date, requesting that the District Officer be asked to furnish further information concerning the same and to submit an estimate for constructing a dam at site 5, as contemplated by the Act. The Board's report will be submitted as soon as possible after the receipt of these data.

For the Board:

Very respectfully,

D. W. LOCKWOOD [Typed]

Colonel, Corps of Engineers,
Senior Member of the Board

Board Chief of Engineers Conflict

An early case of lack of agreement between the Board and the Chief of Engineers over a course of action came about as a result of Congressional pressure. Whereas the Chief of Engineers had previously agreed with the Board's views pertaining to justification of a project at Two Rivers Harbor, Wisconsin, Congressman T. E. Burton, the Chairman on the House Committee on Rivers and Harbors, asked for reconsideration, which resulted in the Chief of Engineers reporting as follows on 18 January 1907:

War Department
Office of the Chief of Engineers
Washington, January 18, 1907

My Dear Mr. Burton:

1. The river and harbor act of March 3, 1905, authorized a survey of the harbor of Two Rivers, Wis. Under date of April 25, 1906, I had the honor to transmit the report on this survey, concurring with the views of the Board of Engineers for Rivers and Harbors that the expenditure necessary for such complete plans as were proper for a channel depth of 16 or 18 feet were so great as compared with the commerce involved as to render the improvement proposed inadmissible. Subsequently the Committee on Rivers and Harbors of the House of Representatives referred to the Board of Engineers for Rivers and Harbors for reexamination of projects the report on wave action, as supplemented by Major Judson's report, including Two Rivers Harbor.

2. In its review the Board expressed the opinion that the present and prospective commerce at Two Rivers Harbor were not sufficient at this time to justify further expenditure toward carrying out the plan of the wave action board, or modifications of this plan. The review of the Board of Engineers for Rivers and Harbors was forwarded to the Committee on Rivers and Harbors by me without remark, as is usual in such cases.

3. I am now requested by you to give consideration to the modified plan submitted and favorably indorsed by Major Judson in a report submitted by him December 3, 1906. 21

* * * * *

5. The commerce of Two Rivers Harbor is not very great in amount, but is of importance in its connection with the large manufacturing establishments which have established themselves there, and such commerce appears to depend upon water transportation to so great extent as to appear to render a deepening of the channel to 16 feet

and the construction of a stilling basin almost a necessity to the continuance of such commerce and the manufactories dependent on it. There would seem to be equity in the claim of the representatives of the harbor of Two Rivers that they have established themselves and built up their manufactories on the strength of the establishment of a harbor by the Government at Two Rivers, and that it is fair that the work on the channel would be such as to keep pace with the draft of vessels upon which dependence for the life of the commerce must depend.

6. The detailed estimates for the work recommended by Major Judson are not available excepting as to the north stilling basin. The detailed estimate of dredging in the channel to give a depth of 16 feet appears to be about \$10,000.

7. It is noted in Mr. Davidson's presentation that an item of \$20,000 is given, making total proposition for the partial improvement \$100,000, but the basis of the estimate can not be secured without a delay which does not appear permissible. ²³

Very respectfully,

A. MACKENZIE,
Brig. Gen., Chief of Engineers, U. S. Army.

Hon. T. E. BURTON,
Chairman Committee on Rivers and Harbors,
U. S. House of Representatives.

²³ River & Harbor Committee Document No. 3, 59th Congress, 2d Session, p. 8-9.

CHAPTER V
THE ORGANIZATION

Introduction

Over the years, the Board has retained its statutory missions for review of reports and has changed many of the assigned missions. Organization of the staff and personnel assignments have changed accordingly. From one engineer reviewing reports until about 1922, there are now approximately twenty. Conversely, certain missions, branches, and divisions of the 1920s are now gone entirely.

The earliest known organization chart of the Board Staff dates back to 13 September 1930 (see Appendix IX). At that time, there were still very few people identified directly with the review mission. By 1935, at least six engineers were concerned with the preparation of reports and research and studies. The organization chart for 1942 indicates many people engaged in special details for the Office of the Chief of Engineers. Two years later, the special details were cut back considerably. By 1955, the Board Staff structure had changed drastically with all special details gone. In 1967, other major changes are noted.

The current organization chart reflects the adjustments made to keep up with the times and changing mission. (Appendix IX.)

The Senior Members and Chairmen

In 1902, the ranking member appointed to the Board was designated the Senior Member and signed reports as such. There is no record that any person was ever officially designated Senior Member by special orders. It seems that a procedure simply evolved that the ranking member would become Senior Member and sign Board reports as such. The first Senior Member, Colonel Alexander MacKenzie, was the only full colonel on the first Board appointed by the Chief of Engineers on 28 July 1902 (Special Order No. 24). He signed the first Board report on Wrangells Narrows, Alaska as Senior Member on 12 August 1902. Although a letter from the Chief of Engineers, signed by Major Frederic V. Abbot for the Chief to Lieutenant Colonel Alexander M. Miller, dated 6 October 1903, refers to a copy furnished to Lieutenant Colonel Charles J. Allen, Corps of Engineers, President of the Board of Engineers for Rivers and Harbors, there is no official record of there being a "President."

In 1902, the total strength of the Engineer Corps was only 160 men, including just one brigadier general, 7 colonels, 14 lieutenant colonels, 28 majors, 40 captains, 40 first lieutenants, and 30 second lieutenants. The provision of a full colonel to chair the first Board is an indication of the prestige attached to that Board. ¹

¹ House Document No. 490, 58th Congress, 2d Session, p. 4.

The first to be designated as Chairman, Roscoe Crawford, was appointed by Special Order No. 32, 7 September 1948; the effective date of his appointment was not indicated. All later Chairmen were also appointed by special orders, except General Robert C. Marshall, who was the first to be appointed via Disposition Form dated 6 August 1976 from the Office, Chief of Engineers, signed by Assistant Chief, Military Personnel Division. Since then, Major General Bates C. Burnell and the current Chairman, Major General James A. Johnson, have also been appointed by Disposition Form.

For the last twenty years, most Chairmen have served in that capacity while, at the same time, serving as Assistant or Deputy Chief of Engineers. The few exceptions have been Chairmen who moved from Deputy Chief of Engineers to become the Division Engineer, Lower Mississippi Valley Division and President of the Mississippi River Commission, who were retained as Chairmen because of their long experience on the Board.

Appendix IV indicates those serving as Senior Member of the Board from 1902 to the present. It is noted that some served as Senior Member while in a retired military status.

In addition to those listed, records of formal Board reports on survey studies indicate that four men served as temporary Senior Member, signing the documents as "Senior Member." These were Colonel F. C. Boggs on 5 December 1926, Colonel Edward H. Shulz on 17 April 1933, Brigadier General Max C. Tyler on 15-16 February,

1, 2, 8, 9 March, 12, 13 April, and 28 June 1927, and Colonel L. V. Frazier on 17 July 1939. Also, records indicate there were two Temporary Chairmen: Brigadier General Don G. Shingler on 6 June 1951, and Brigadier General O. E. Walsh on 30 July 1951, who signed as "Chairman." Further, there were two Acting Chairmen: Brigadier General W. E. Potter on 20 November 1953 and Major General Frank Koisch in August 1976, who signed as "Acting Chairman." There are no records of formal orders appointing any of the Acting Senior Members, Temporary Chairmen, or Acting Chairmen.

There have been 43 Senior Members or Chairmen. Nine persons who served as Board Senior Members or Chairmen later went on to become the Chief of Engineers. They are:

	Served as Chief of Engineers	
	<u>From</u>	<u>To</u>
MG Alexander MacKenzie	23 Jan 04	2 Jul 08
BG William T. Rossell	12 Aug 13	12 Oct 13
MG William M. Black	7 Mar 16	9 Jan 20
MG Harry Taylor	19 Jun 24	27 Jun 26
LTG Edgar Jadwin	27 Jun 26	1 Oct 29
LTG Emerson C. Itschner	1 Oct 56	19 May 61
LTG Walter K. Wilson, Jr.	19 May 61	1 Jul 65
LTG William F. Cassidy	1 Jul 65	2 Aug 69
LTG John W. Morris	1 Jul 76	Present

Two former Chiefs of Engineers have served as Board Senior Member or Chairman. William T. Rossell served as Senior Member as a colonel from 21 September 1909 to 13 June 1913; as Chief of Engineers as a brigadier general from 12 August 1913 to 12 October 1913;

SENIOR MEMBERS OR CHAIRMEN



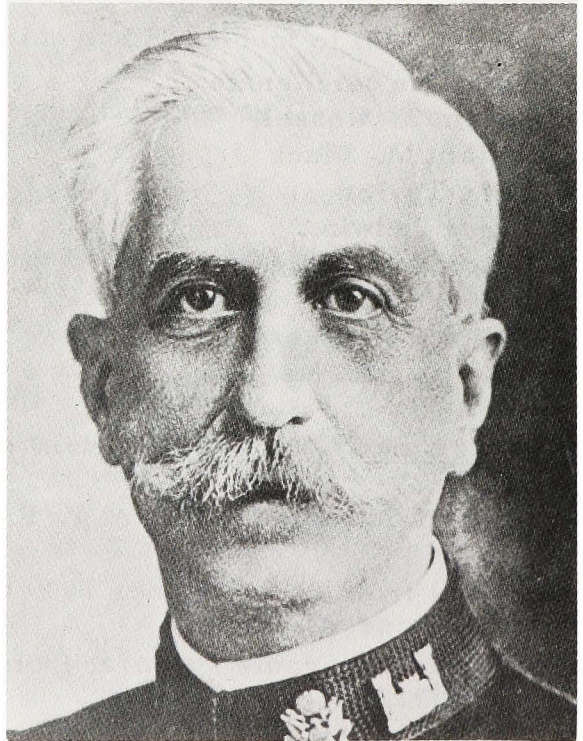
Colonel Alexander MacKenzie
1902 - 1903



Lt. Colonel Charles J. Allen
1903 - 1904



Colonel Daniel W. Lockwood
1904

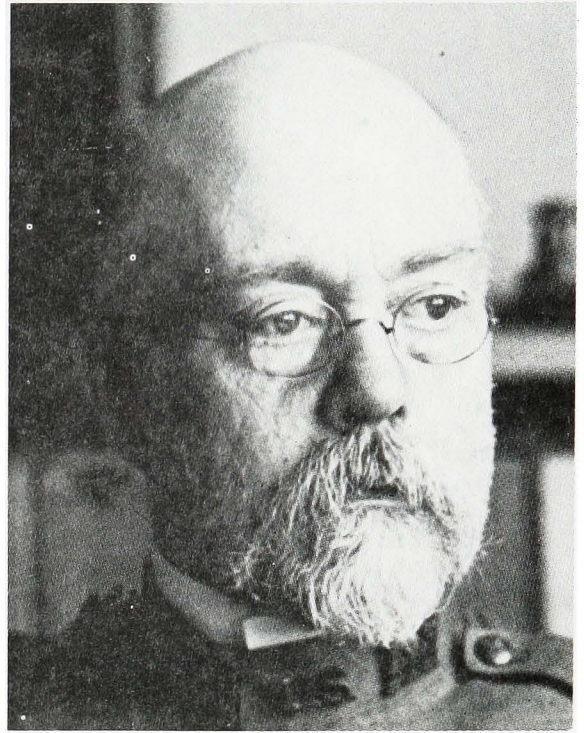


Colonel William T. Rossell
1909-13 and 1917

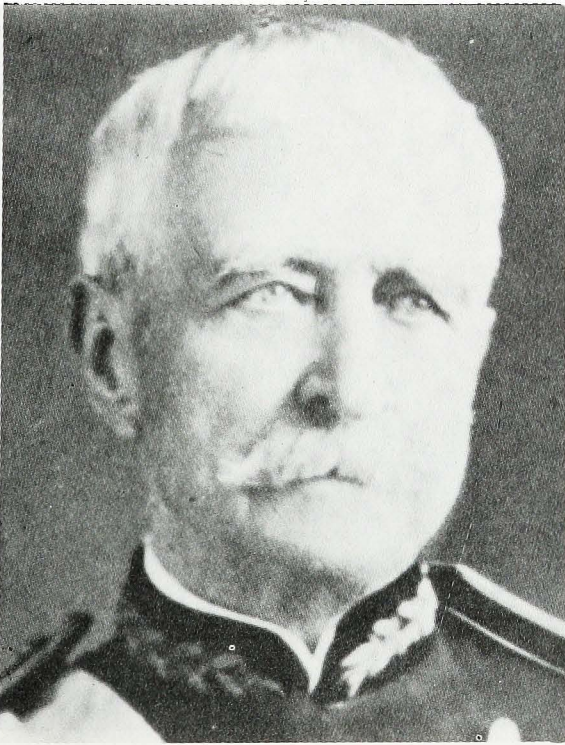
SENIOR MEMBERS OR CHAIRMEN



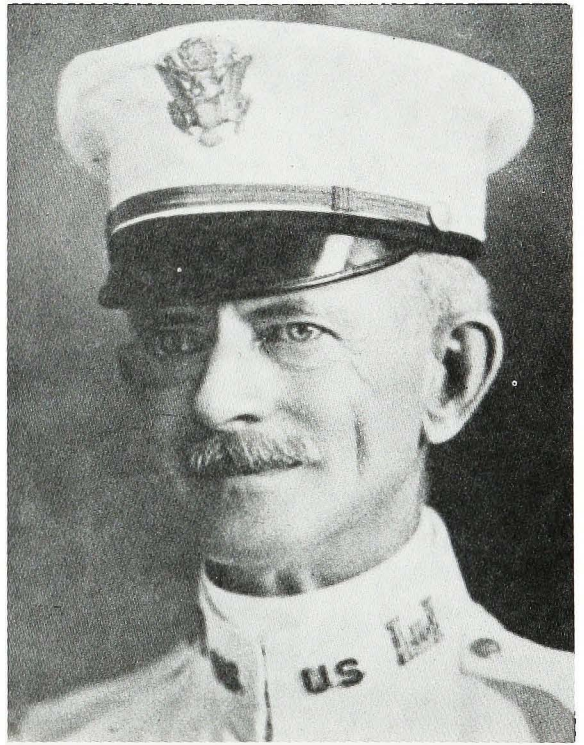
Colonel William M. Black
1913 - 1916



Colonel Frederic V. Abbot
1916 - 1917

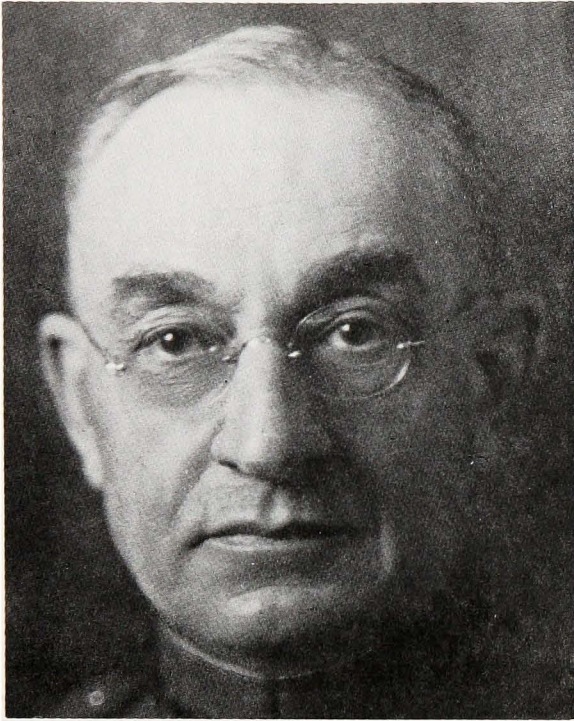


Maj. General Peter C. Hains, USA, Ret.
1917 - 1919

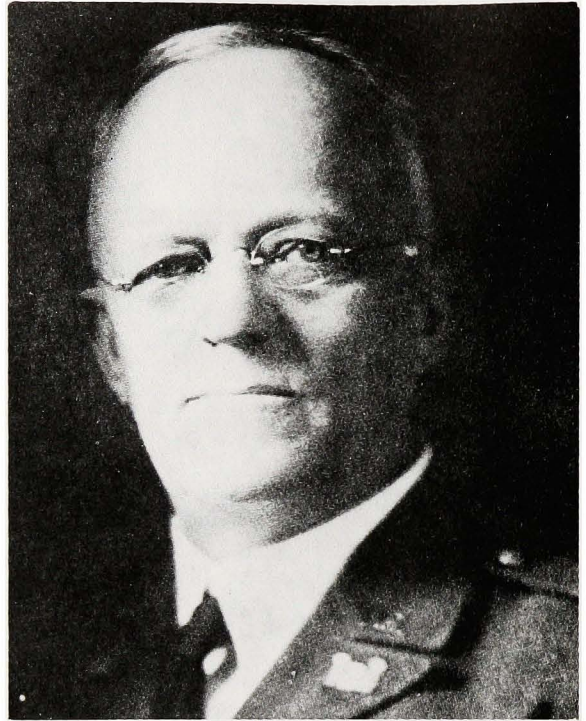


Colonel James C. Sanford
1920

SENIOR MEMBERS OR CHAIRMEN



Maj. General Harry Taylor
1920 - 1924



Brig. General Edgar Jadwin
1924 - 1926



Brig. General Herbert Deakyne
1926 - 1932



Colonel Edward H. Schulz
1933

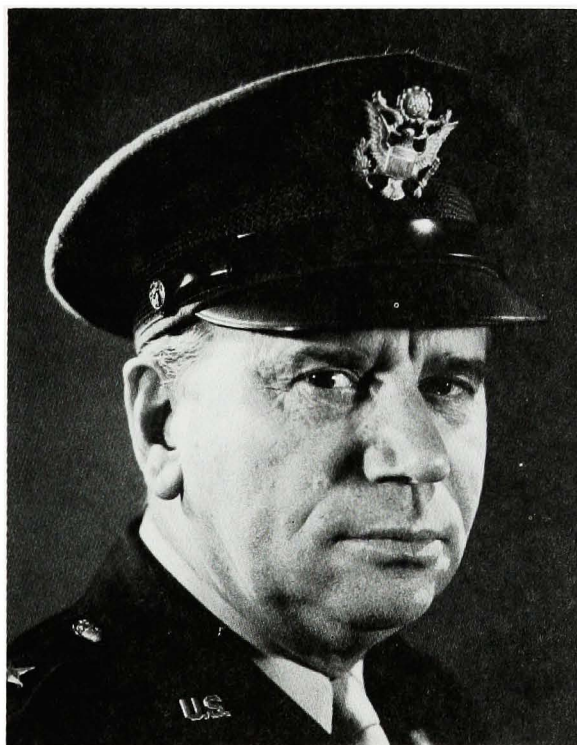
SENIOR MEMBERS OR CHAIRMEN



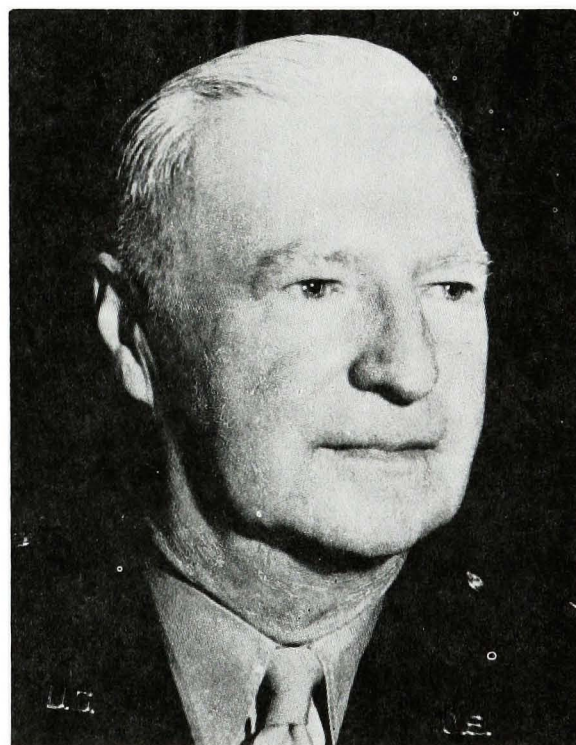
Colonel William J. Barden
1932-33 and 1933-34



Brig. General George B. Pillsbury
1934 - 1937



Brig. General Max C. Tyler
1937 - 1939



Brig. General Thomas M. Robins
1939-43 and 1945

SENIOR MEMBERS OR CHAIRMEN



Brig. General John J. Kingman
1943 - 1945



Brig. General Beverly C. Dunn
1945



Brig. General Roscoe C. Crawford
1946 - 1949

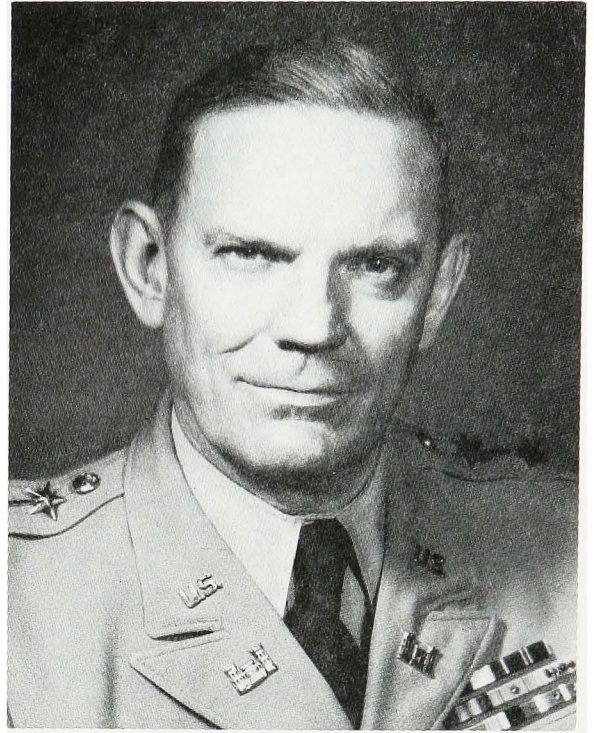


Maj. General John S. Bragdon
1949 - 1951

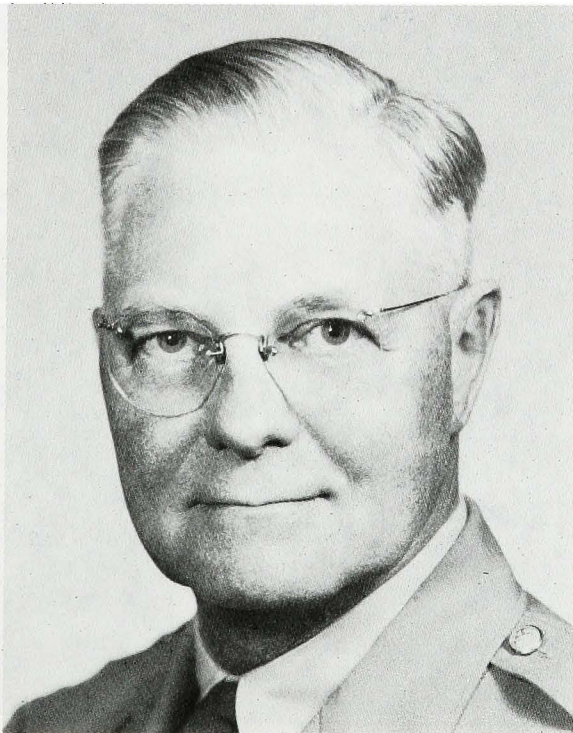
SENIOR MEMBERS OR CHAIRMEN



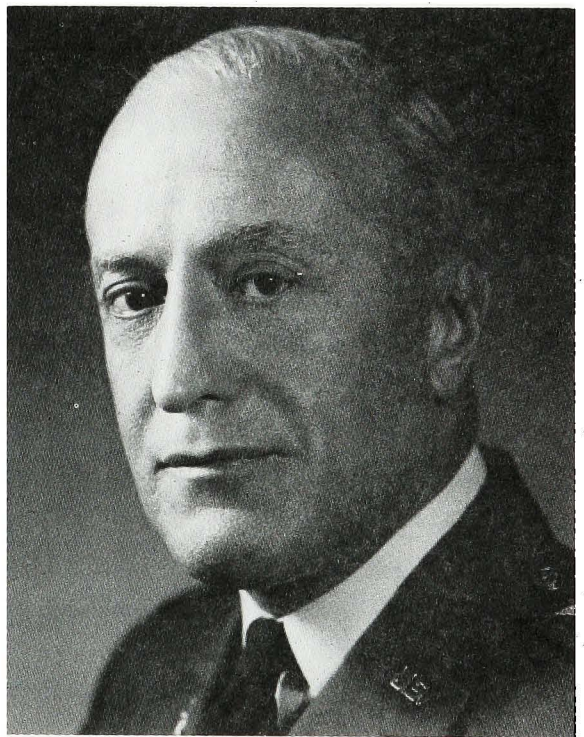
Maj. General George J. Nold
1951 - 1953



Maj. General Bernard L. Robinson
1953 - 1955

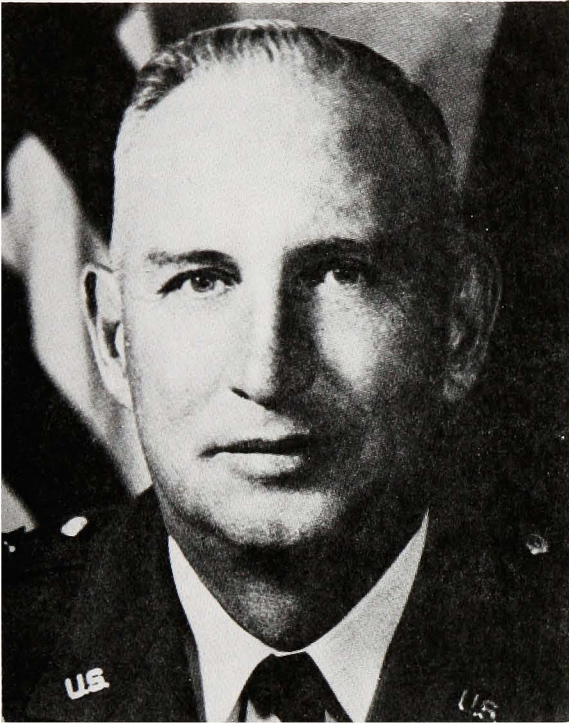


Maj. General Charles G. Holle
1955-56 and 1956-58

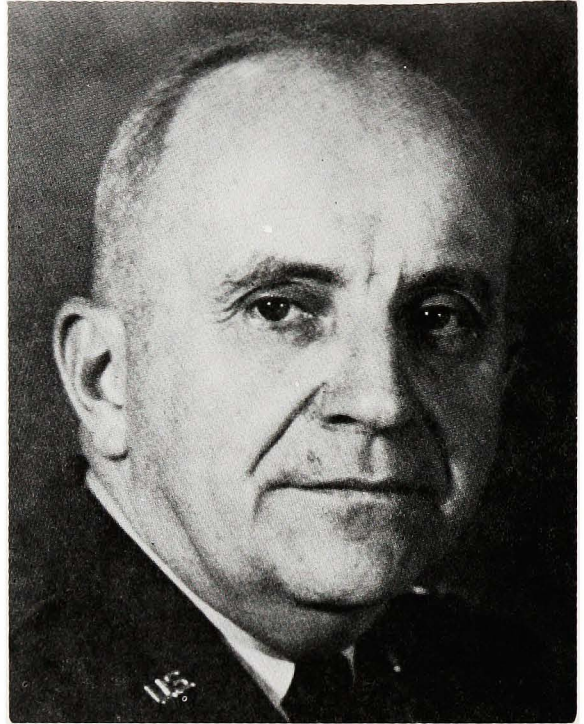


Maj. General Emerson C. Itschner
1956

SENIOR MEMBERS OR CHAIRMEN



Maj. General Walter K. Wilson, Jr.
1958 - 1960



Maj. General Keith R. Barney
1960 - 1962

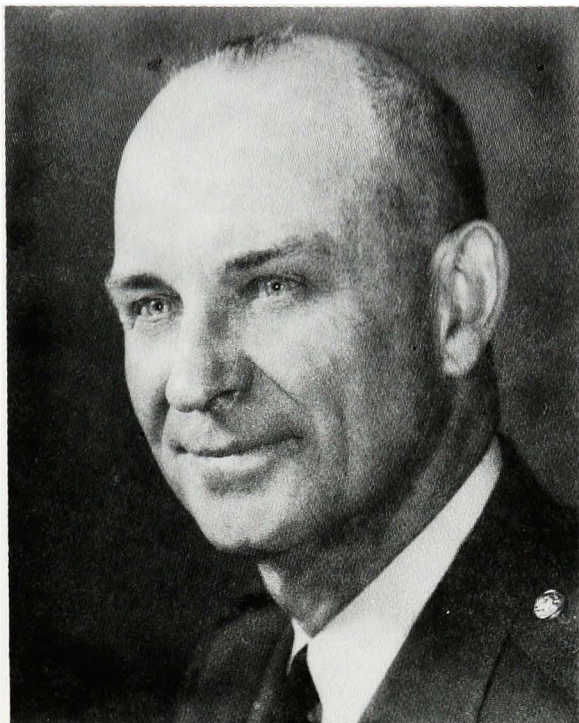


Lt. General William F. Cassidy
1962-63 and 1969-70

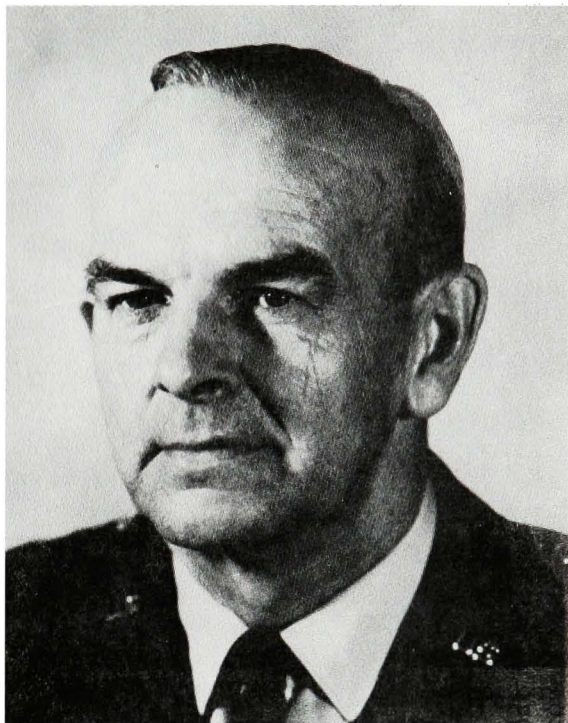


Maj. General Robert G. MacDonnell
1963 - 1969

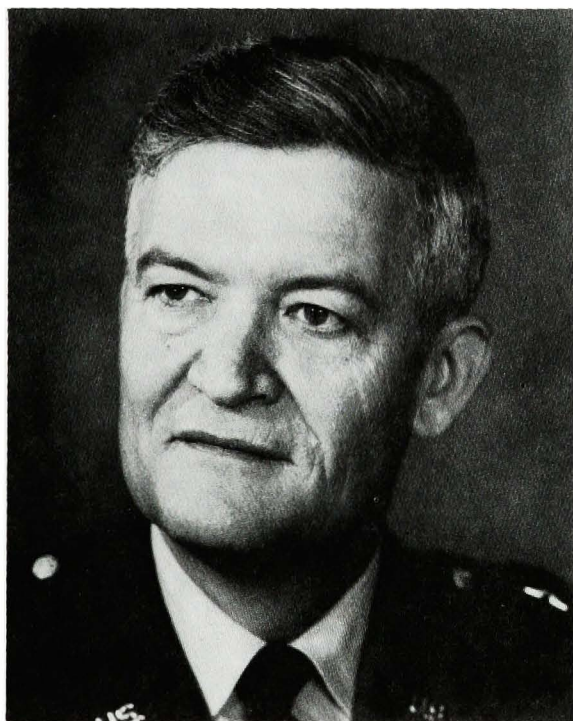
SENIOR MEMBERS OR CHAIRMEN



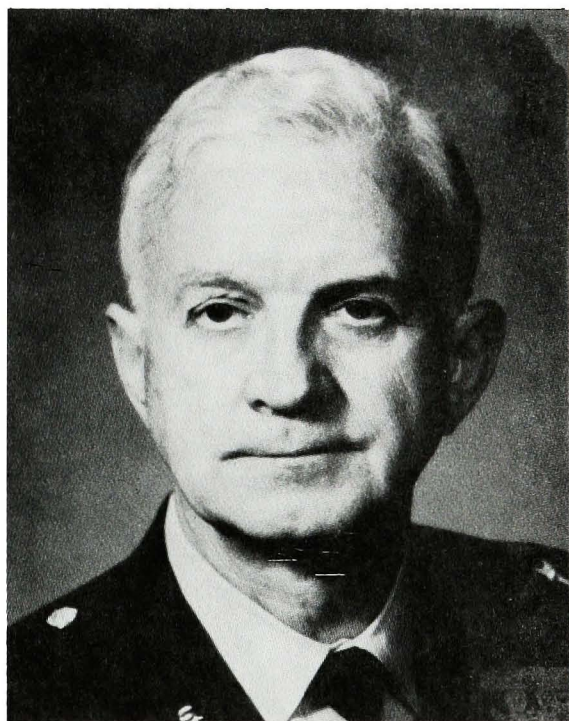
Maj. General Carroll H. Dunn
1969 and 1970



Maj. General Willard Roper
1970 - 1973



Maj. General Andrew P. Rollins
1973



Maj. General Daniel A. Raymond
1973 - 1975

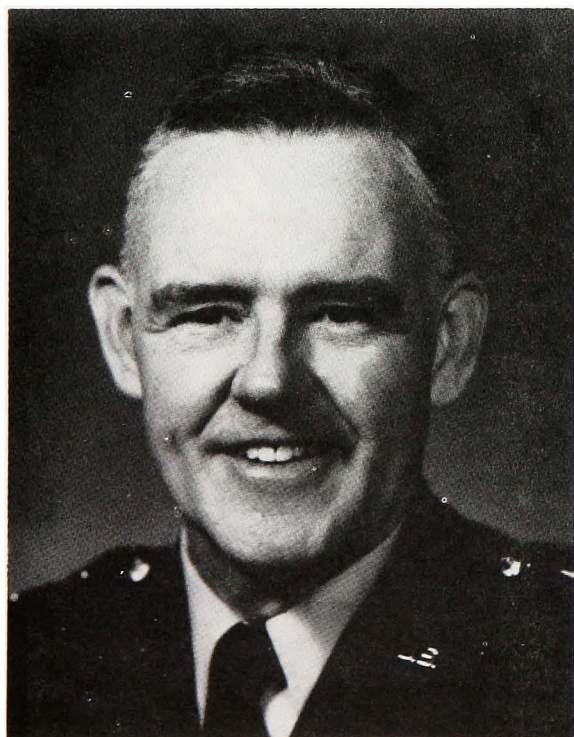
SENIOR MEMBERS OR CHAIRMEN



Maj. General John W. Morris
1975 - 1976



Maj. General Robert C. Marshall
1976-77 and 1978-80



Maj. General Ernest Graves, Jr.
1977 - 1978



Maj. General Bates C. Burnell
1978 - 1979

SENIOR MEMBERS OR CHAIRMEN



Major General James A. Johnson'
1979 -

and then as Senior Member of the Board in a retired status from 15 June 1917 to 9 November 1917. William F. Cassidy served as Chairman as a major general from 1 April 1962 to 18 February 1963; as Chief of Engineers as a lieutenant general from 1 July 1965 to 2 August 1969; and then as Resident Chairman as an active lieutenant general from 1 November 1969 to 1 June 1970.

In recent times, there have been three Resident Chairmen: General Cassidy, General Roper, and General Rollins.

The Resident Member

The Resident Member of the Board supervises the Board staff and also sits as a full member of the Board.

Research to date indicates the first known Resident Member of the Board was Colonel Francis Shunk, who was appointed a member of the Board by Special Order No. 13 of the Chief of Engineers dated 12 June 1916. There is no record of his appointment as Resident Member, and the first known reference to him in that position is a letter on file dated 13 July 1917 addressed to the Chief of Engineers and signed by Colonel Shunk as Resident Member. ²

Most Resident Members were appointed by Special Orders of the Chief of Engineers, although six were appointed by orders of the

² National Archives, River & Harbor Board Files, No. 312/52.

Secretary of Army or War Department. Recent appointments have been made by Disposition Form from the Office, Chief of Engineers.

Raymond A. Wheeler holds the distinction of serving as Resident Member from 2 February 1937 to 27 June 1940, and then going on to become Chief of Engineers from 1 October 1945 to 1 March 1949.

The lowest ranking appointment was 1st Lieutenant Thomas H. Stanley, who was named for one day only--15 July 1935.

There were five appointments designating an "Acting Resident Member," usually for a short duration. Three appointments were to Robert E. Coughlin, first as Captain Coughlin from 27 June 1940 to 1 October 1940, then as Major Coughlin from 7 October 1940 to 31 January 1941 and from 5 May 1941 to 30 April 1942. Major Coughlin was apparently a man of some capability because he also was appointed a temporary Board Member several times.

Predating the Resident Member was an executive officer. Captain W. V. Judson signed a letter dated 14 November 1902 as "Member and Executive Officer." A letter dated 21 August 1903 to Captain C. H. McKinstry lists him in that capacity, and another letter to Captain Judson dated 17 February 1904 again refers to him as such. The Annual Report of the Chief of Engineers of 1905 lists Major Solomon W. Roessler as "executive officer of the Board." Letters dated 25 December 1905 and 17 May 1906 refer to Major C. McD. Townsend as Executive Officer.

RESIDENT MEMBERS



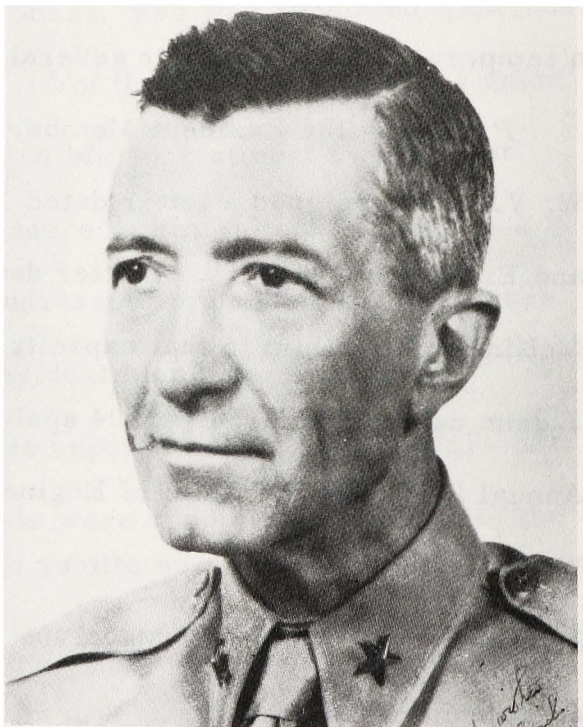
Colonel Francis Shunk
Before 1921



Colonel Charles Keller
1921

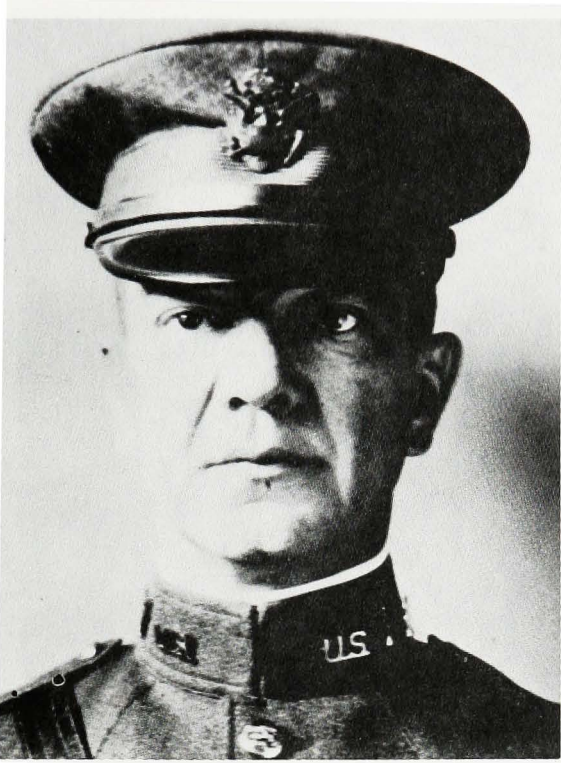


Colonel George M. Hoffman
1921 - 1922



Major Gordon R. Young
1922 - 1926

RESIDENT MEMBERS



Major Daniel I. Sultan
1926 - 1929



Major Milo P. Fox
1933 - 1935

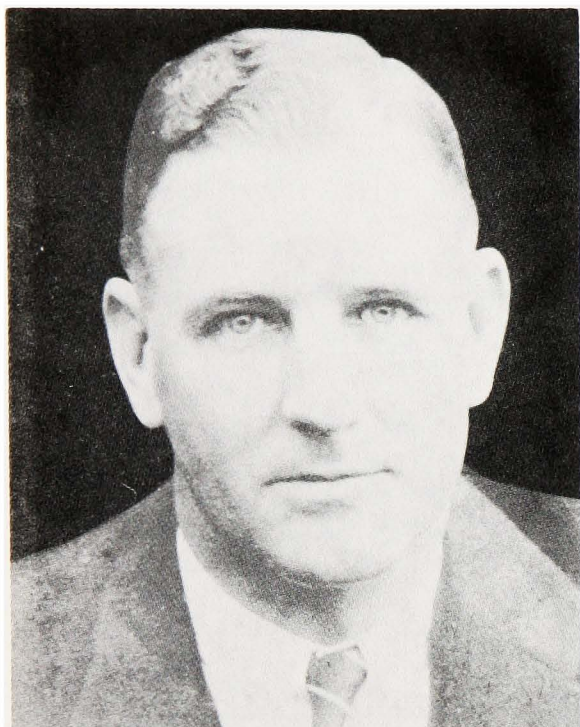


Major Robert W. Crawford
1935



Colonel Wildurr Willing
1935 - 1936

RESIDENT MEMBERS



Major William A. Snow
1936 - 1937



Lt. Colonel Raymond A. Wheeler
1937 - 1940



Colonel Charles L. Hall
1940 - 1941

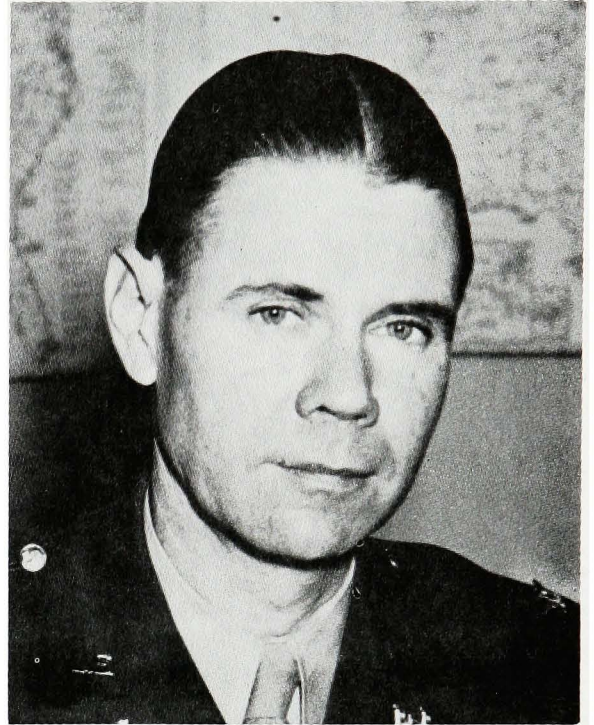


Colonel Roger G. Powell
1942 - 1943

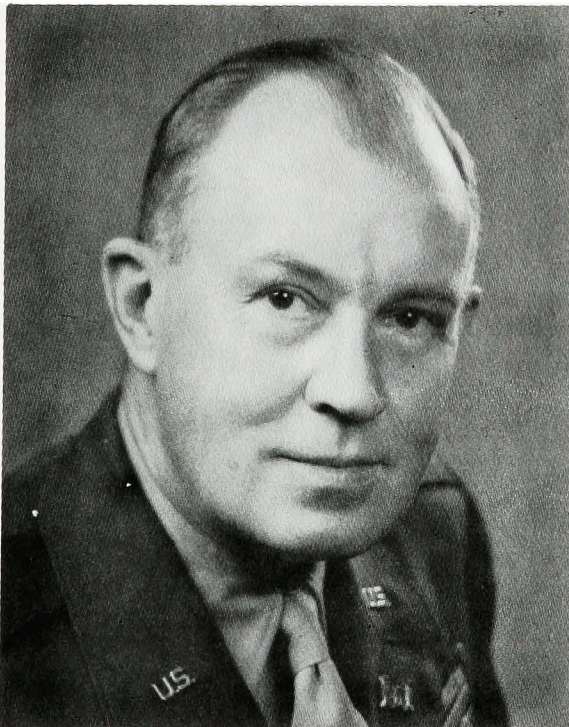
RESIDENT MEMBERS



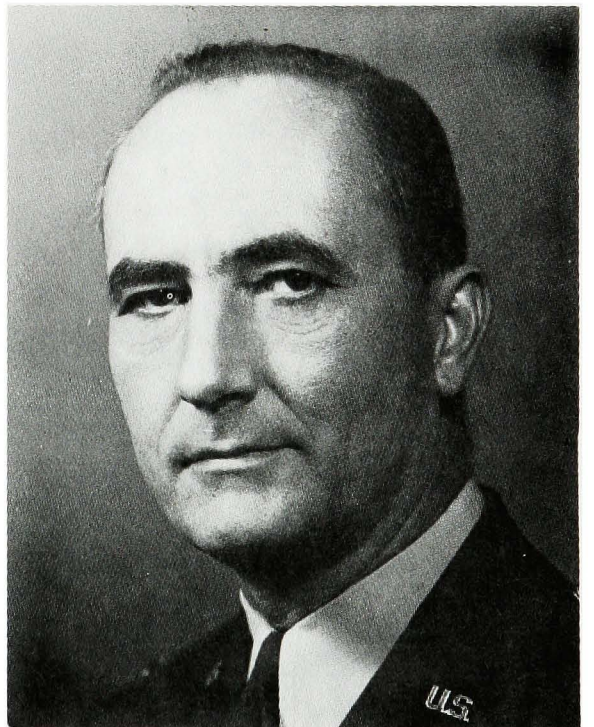
Colonel Peter A. Feringa
1943 - 1944



Colonel Albert H. Burton
1944

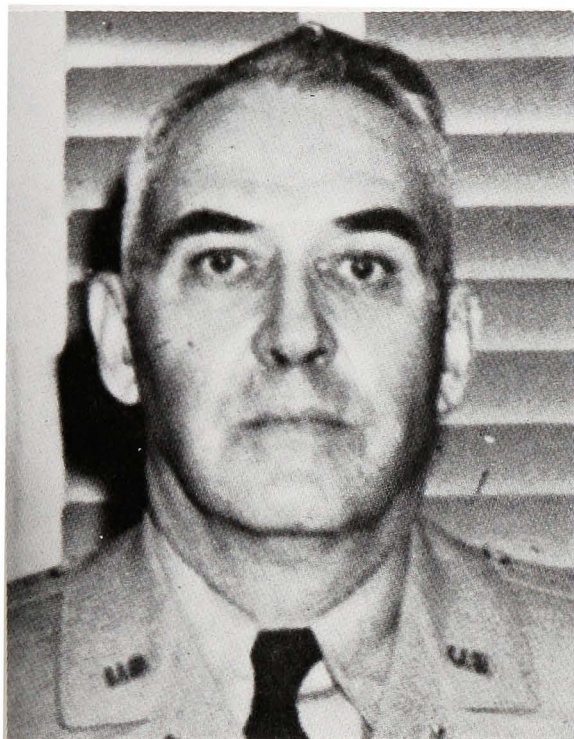


Colonel Wayne S. Moore
1946 - 1949

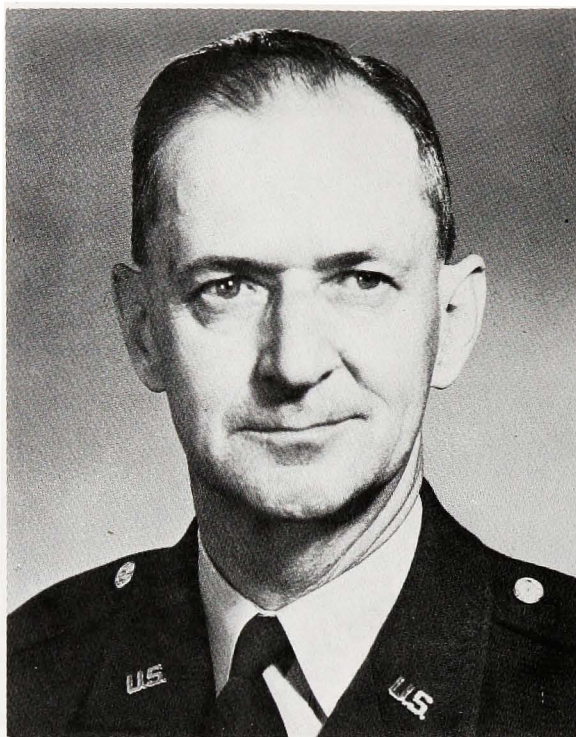


Colonel Henry F. Hannis
1949 - 1950

RESIDENT MEMBERS



Colonel Heston R. Cole
1950 - 1953



Colonel Francis H. Falkner
1953 - 1955

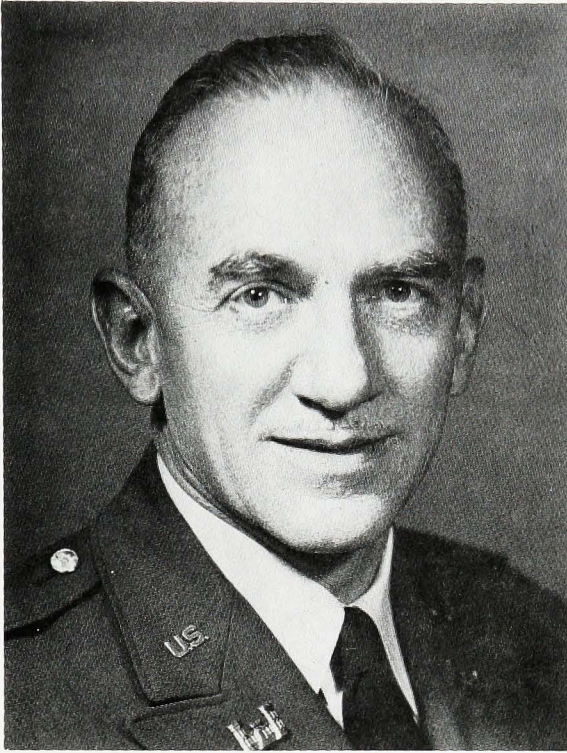


Colonel Hubert S. Miller
1955 - 1956

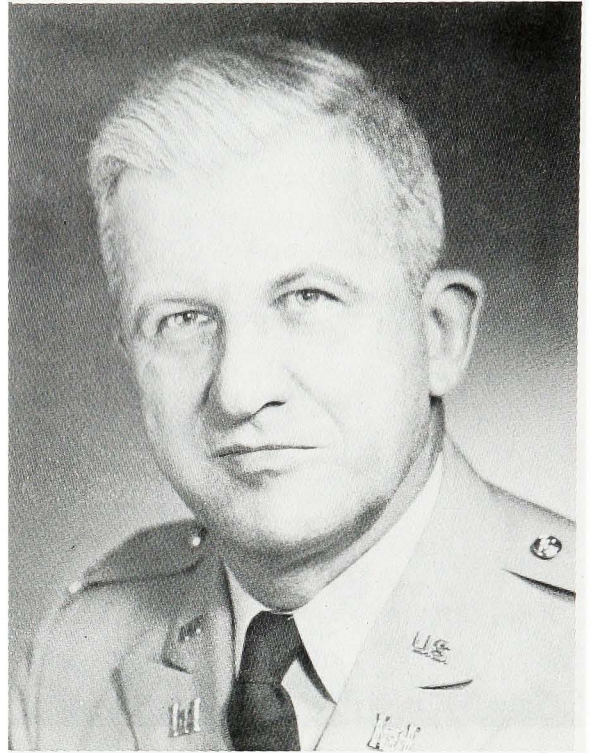


Colonel Gunnard W. Carlson
1956 - 1958

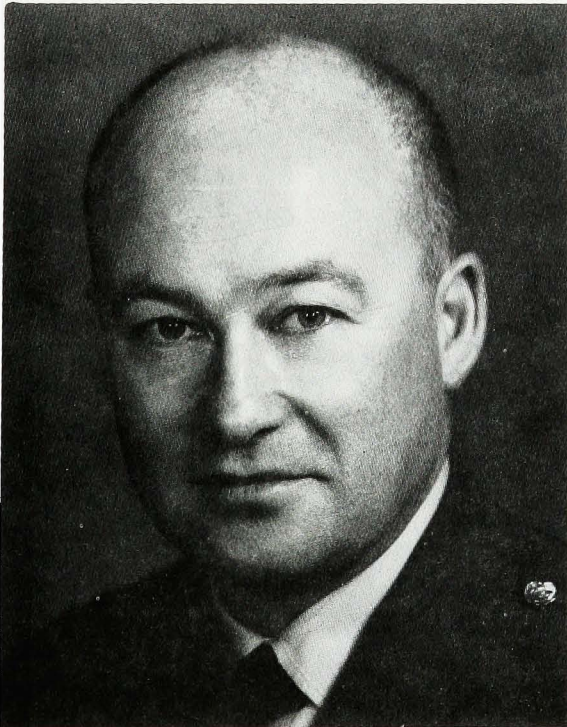
RESIDENT MEMBERS



Colonel Carl H. Bronn
1959 - 1962



Colonel Edmund H. Lang
1962 - 1967



Colonel Alvin D. Wilder
1967 - 1972



Colonel John T. Rhett, Jr.
1972 - 1973

RESIDENT MEMBERS



Colonel William G. Kratz
1973 - 1975



Colonel Robert L. Bangert
1975 - 1977



Colonel Albert C. Costanzo
1977 -
90

The Annual Reports of the Chief of Engineers of 1910 and 1911 list Colonel Daniel W. Lockwood, U. S. Army, Retired, as "Assistant to the Board." Colonel Lockwood had served as member of the Board from 2 September 1904 to 21 September 1909, when he retired.

Appendix V lists all known Resident Members. There have been thirty-three persons who have served as Resident Member. The effective dates shown are only those listed in the special orders as such.

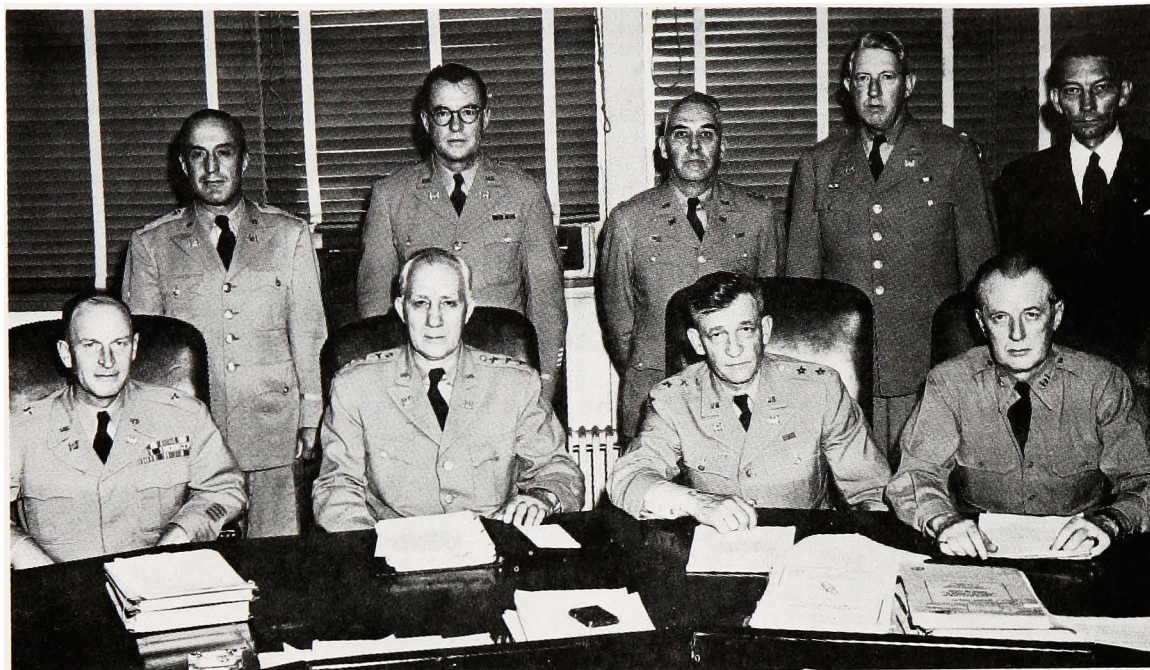
The Board Members

In the early dates of the Board, members were chosen from those serving in various Corps of Engineers assignments, usually in dual capacities while on the Board. The first Board had only one colonel, one major, and three captains. The three captains were also Engineer School instructors.

By 1907, Division Engineers began to appear on the Board. The Corps had first established Division Offices in 1889. In 1907, there were eight divisions; Colonel Daniel W. Lockwood was Eastern Division Engineer in 1907 while serving on the Board. By 1910, there were three Division Engineers on the Board and, by 1914, five Division Engineers.

In current times, almost all Board member appointments, with the exception of the Chairman and Resident Member, have been

BOARD MEMBERS



As of 19 June 1952. Seated, l-r: BG Don G. Shingler; LTG Lewis A. Pick (Chief of Engineers - visiting); MG George J. Nold (Ch.); COL Wendell P. Trower. Standing, l-r: COL Emerson C. Itschner; COL Chester K. Harding; COL Heston R. Cole (RM); COL Paschal N. Strong; Mr. Ben Walker (Exec. Sec.).



As of 1 August 1965. L-r: BG Roy T. Dodge; BG Peter C. Hyzer; MG Robert G. MacDonnell (Ch.); MG George H. Walker; BG Walter P. Leber; COL Edmund H. Lang (RM). Missing: BG William T. Bradley.

BOARD MEMBERS

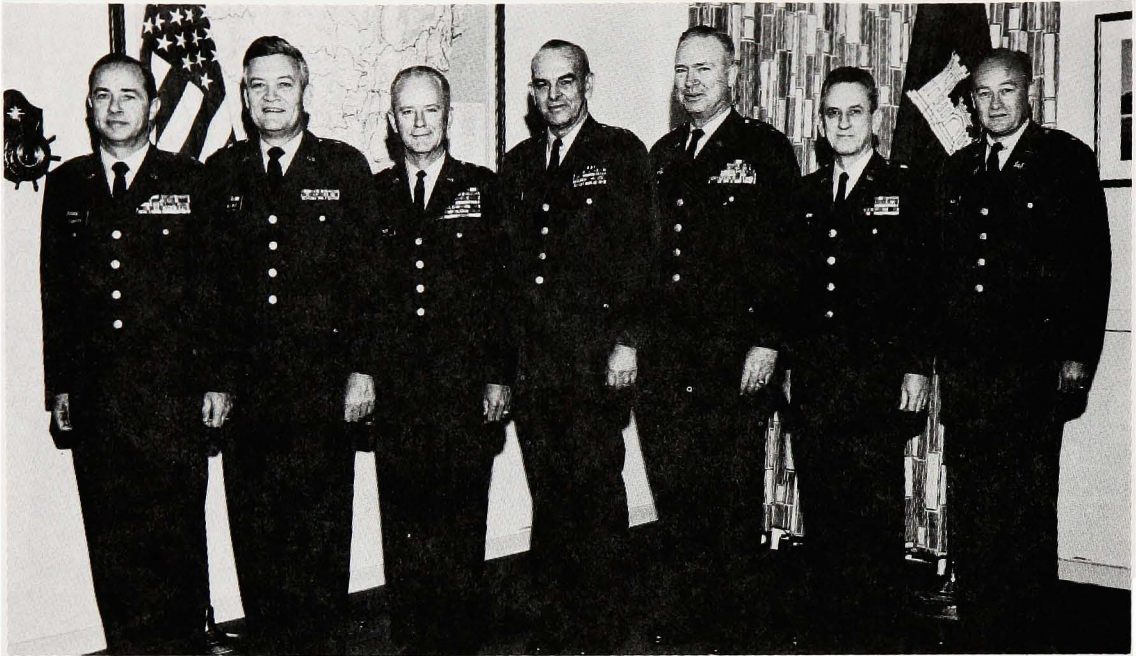


As of 1 July 1968. L-r: BG Robert M. Tarbox; BG Craig C. Cannon; MG Frederick J. Clarke; MG Robert G. MacDonnell (Ch.); MG Thomas J. Hayes III; BG William M. Glasgow, Jr.; COL Alvin D. Wilder (RM).



As of 1 November 1969. L-r: BG Roy S. Kelley; MG Charles M. Duke; MG Carroll H. Dunn; LTC William F. Cassidy (Ch.); MG Richard H. Free; BG Willard Roper; COL Alvin D. Wilder (RM).

BOARD MEMBERS



As of 17 August 1970. L-r: BG Harold R. Parfitt; MG Andrew P. Rollins, Jr.; MG Richard H. Free; BG Willard Roper (Ch.); MG Charles M. Duke; BG Roy S. Kelley; COL Alvin D. Wilder (RM).

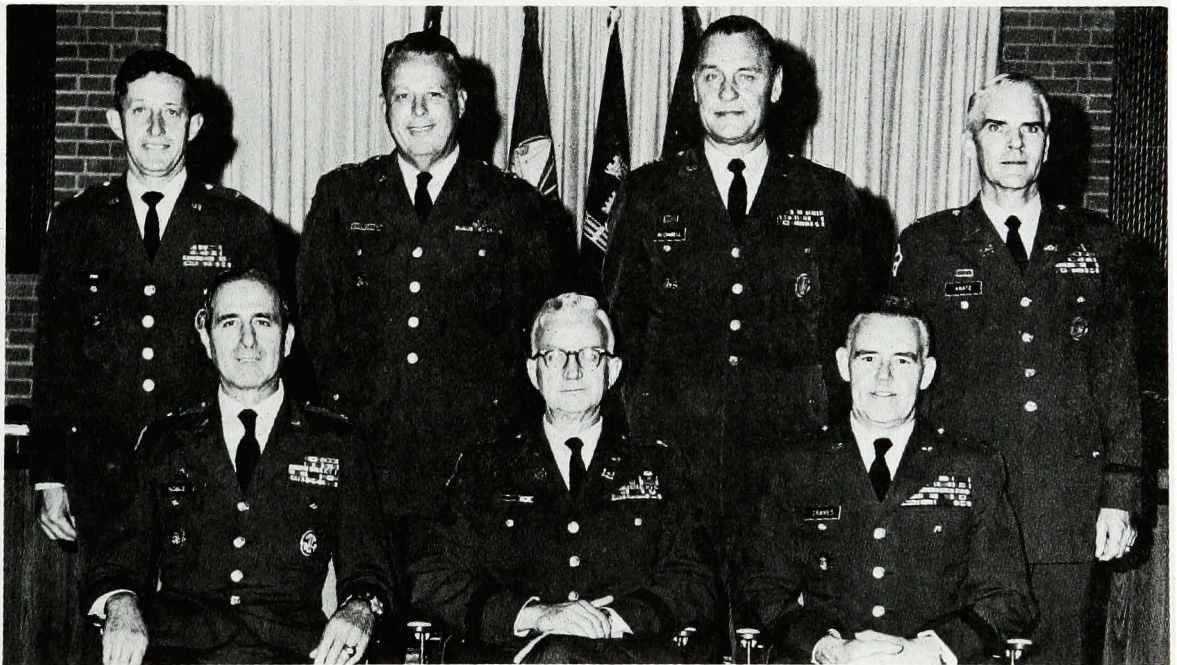


As of 2 March 1973. L-r: BG George B. Fink; MG Ernest Graves, Jr.; MG William L. Starnes; MG Andrew P. Rollins, Jr. (Ch.); BG Harold R. Parfitt; MG Richard H. Groves; COL William G. Kratz (RM).

BOARD MEMBERS



As of 25 June 1973. Seated, l-r: MG Charles C. Noble; MG Andrew P. Rollins, Jr. (Ch.); BG Harold R. Parfitt. Standing, l-r: BG George B. Fink; MG Ernest Graves, Jr.; MG Richard H. Groves; COL William G. Kratz (RM).



As of 5 September 1973. Seated, l-r: MG Charles C. Noble; MG Daniel A. Raymond (Ch.); MG Ernest Graves, Jr. Standing, l-r: BG George B. Fink; MG Richard H. Groves; MG Richard E. McConnell; COL William G. Kratz (RM).

BOARD MEMBERS

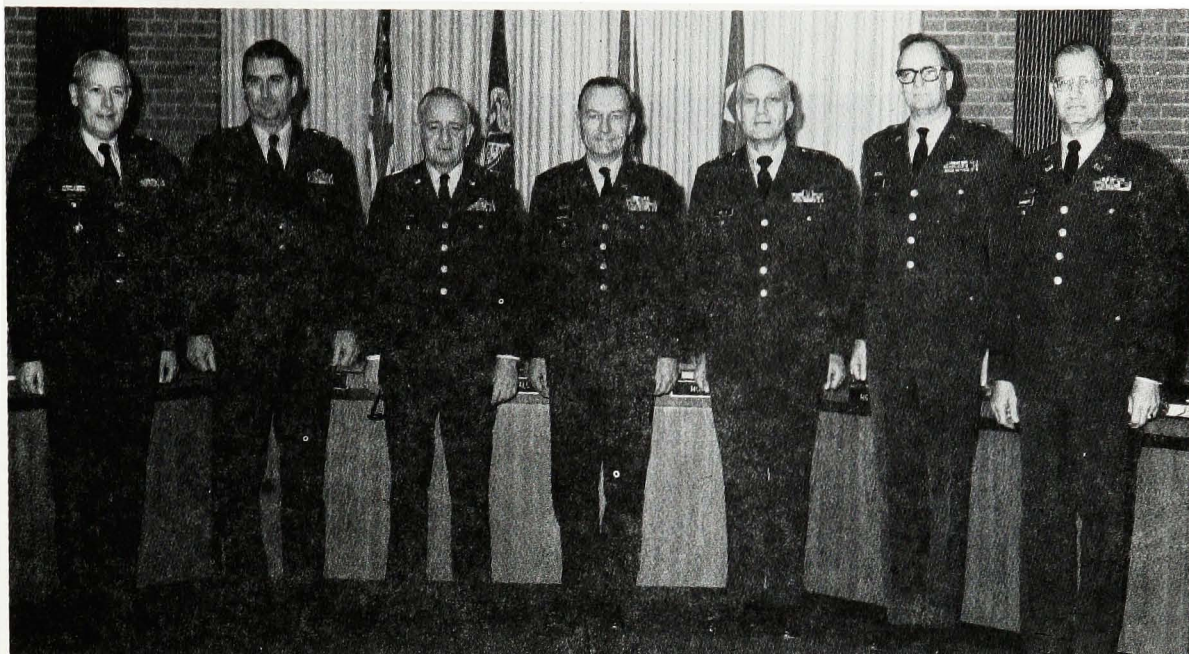


As of 1 September 1974. L-r: BG James L. Kelly; BG Wayne S. Nichols; MG Francis P. Koisch; MG Daniel A. Raymond (Ch.); MG Richard E. McConnell; BG Carroll N. LeTellier; COL William G. Kratz (RM).



As of 1 February 1976. L-r: COL Robert L. Bangert (RM); BG Wesley E. Peel; MG Francis P. Koisch; MG John W. Morris (Ch.); BG James L. Kelly; BG Charles I. McGinnis; COL John H. Mason.

BOARD MEMBERS



As of 1 September 1976. L-r: BG Richard H. Connell; BG Wesley E. Peel; MG Francis P. Koisch; MG Robert C. Marshall (Ch.); BG James L. Kelly; BG Charles I. McGinnis; COL Robert L. Bangert (RM).



As of 15 May 1978. L-r: COL John P. Chandler; BG Kenneth E. McIntyre; MG Robert C. Marshall; MG Bates C. Burnell (Ch.); MG James A. Johnson; BG Richard M. Wells; COL Albert C. Costanzo (RM).

BOARD MEMBERS



As of 1 June 1979. L-r: COL Clyde A. Selleck, Jr.; BG Norman G. Delbridge, Jr.; MG Robert C. Marshall; MG James A. Johnson (Ch.); MG Harry A. Griffith; BG Richard M. Wells; COL Albert C. Costanzo (RM).

Division Engineers. The pattern of selection usually follows a balance of geographic distribution and rotation.

A list of Board Members is given in Appendix VI.

The Technical Director

The senior civilian executive of the Board Staff is known as the Technical Director. He reports to the Resident Member, acts for him in his absence, and assists him in the accomplishment of the review mission and certain other missions of the Board. He supervises and coordinates the activities of the Planning, Evaluation, Environmental, and Professional Development Divisions.

The Technical Director plays a major part in the conduct of Board meetings, public meetings, and coordination of Board activities with the Executive Office of the President, Federal, State and local governmental departments, Congressional interests, and the public.

Through the years, the senior civilian was designated as "Assistant Engineer," "Assistant Engineer and Secretary," "Executive Secretary," "Executive and Executive Secretary," "Executive Officer and Executive Secretary," "Executive Officer," and "Technical Director." In 77 years there have been only nine civilian directors of the Board Staff.

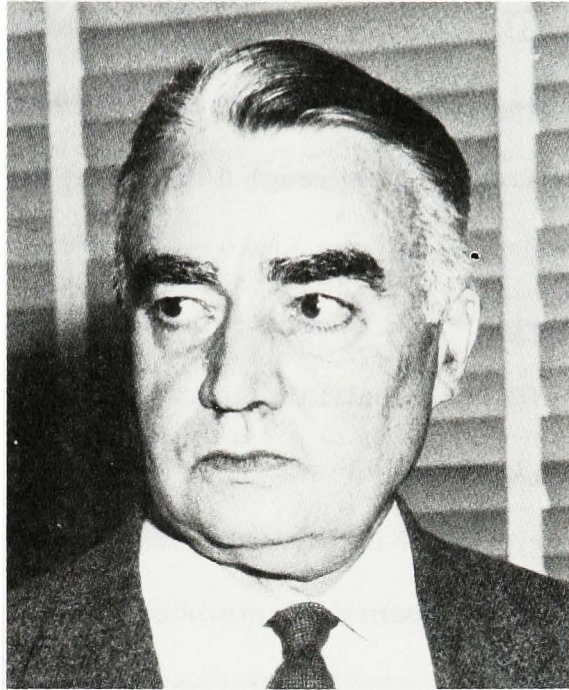
Alexander H. Weber. The earliest forerunner to the Technical Director was Alexander H. Weber. Hired by the Board at its meeting of 10 November 1902, he began work immediately; records indicate

that he initialled the minutes of that meeting. Mr. Weber was a civil engineer; his earliest title was "Assistant Engineer." He was the only engineer on the staff until 27 January 1919, when the Marine Design Division was transferred to the Board from the Office, Chief of Engineers. By 1912, he was referred to as "Assistant Engineer and Secretary," which title he retained until his death on 12 March 1922. During his tenure of almost 20 years, the Board Staff had grown from 1 assistant engineer, 1 chief clerk, and 1 clerk, to 5 engineers, 6 statisticians, 6 clerks, 2 draftsmen, and 1 messenger. It should be noted, however, that Mr. Weber was the only staff engineer, in 1922, who was engaged primarily in the review of reports.

Henry W. Hobbs. The next civilian to supervise the Board Staff was Henry W. Hobbs, who, upon employment and appointment on 1 July 1922, was designated as the "Executive Secretary" by the then Resident Member, Colonel George M. Hoffman. Mr. Hobbs directed the Board until the late 1930s.

J. Ben Walker. The minutes of a Board meeting of 23 May 1935 are signed by J. Ben Walker as "Secretary." Later, Mr. Walker replaced Mr. Hobbs as "Executive Secretary." He was also designated at various times as "Executive and Executive Secretary," "Executive Officer and Secretary," and, finally, "Executive Officer" until 1954. Mr. Walker was also the only civilian ever to be appointed "Acting

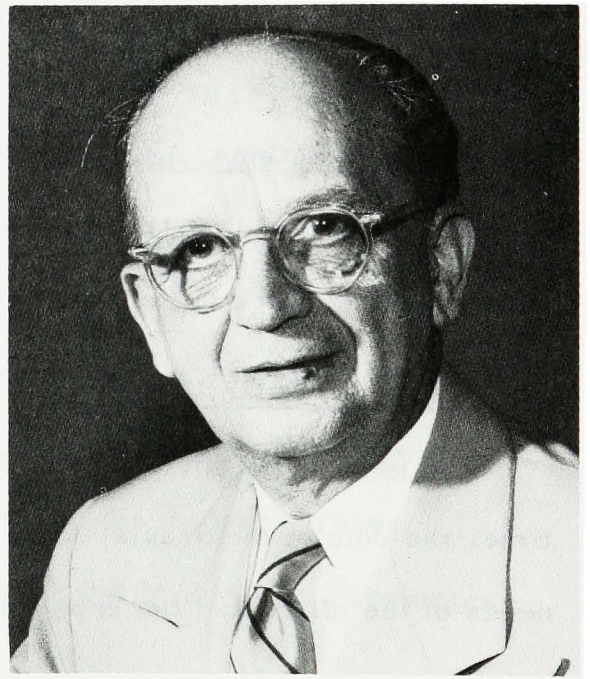
BOARD STAFF MEMBERS



John E. Goodrich
Technical Director, 1959-1964;
Chief, Engineering Division, 1957-1959



J. Ben Walker
Executive Officer, 1951-1954;
Executive Secretary, 1942-1951



Henry N. Muller
Executive Officer, 1954-1958

Resident Member" by the Chief of Engineers for the period 31 March 1953 to 24 June 1953.

Henry N. Muller. Mr. Muller headed the Board Staff as Executive Officer from 1954 through 1958. Mr. Muller started with the Board in June 1937.

John E. Goodrich. Mr. Goodrich was the first person to hold the current title of "Technical Director." He served in that position from 16 February 1959 to 23 September 1964.

Frank Kinsler. Mr. Kinsler, who had served as Special Assistant, was Technical Director from 23 September 1964 through 1968.

Howard J. Mullaney. Mr. Mullaney served from 9 January 1969 to 29 June 1973.

Floyd B. Morris. Mr. Morris served from 27 January 1974 to 25 December 1976.

John M. McCann, Jr. Mr. McCann is the current Technical Director, appointed on 1 May 1977. He is also a graduate of the BERH Planning Associates Class of 1966.

The Special Assistant

The position of Special Assistant was established in 1947. Over time, the role of the Special Assistant has changed, depending on the needs of the office and the capability of the individual in the position.

The current Special Assistant reports to the Resident Member, and assists him on matters of policy concerning Corps of Engineers water resources planning and development, Board meeting procedures, and staff operating procedures. He also maintains liaison with other Corps offices and outside agencies on special studies, generally not related to specific projects under review by the Board, conducts certain special studies related to water resources planning and engineering, and provides consultant services to other Corps offices.

There have been nine Special Assistants since 1947.

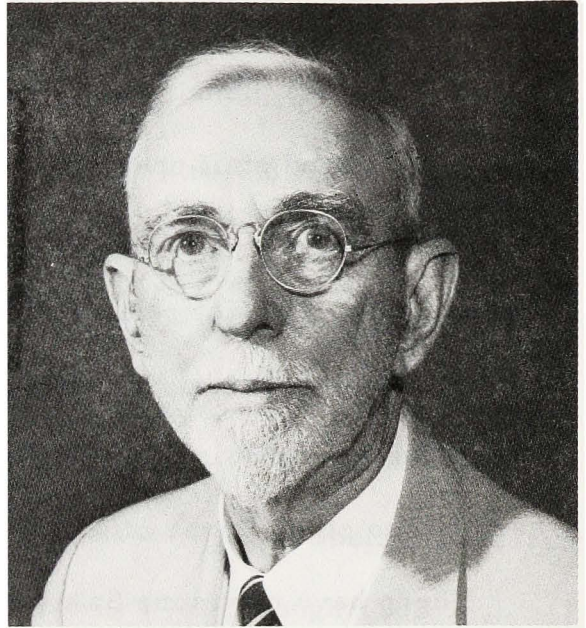
The first Special Assistant, in 1947, was Warren E. Graves, who had been Chief of the Board's Statistical Division since 1929. He retired in August 1948 with 27 years of Federal service.

Mr. Graves was replaced by Henry G. Kuyl, who served until 1954. However, on 1 July 1953, Mr. Kuyl was made "Special Assistant for Engineering," and a second special assistant was named, Haywood R. Faison, who became "Special Assistant for Policies and Procedures." Mr. Kuyl was a civil engineer and had headed the Board's Engineering Division since its beginning, and had been a principal staff engineer since the early 1930s. Mr. Faison was an engineer-economist and head of the Economics

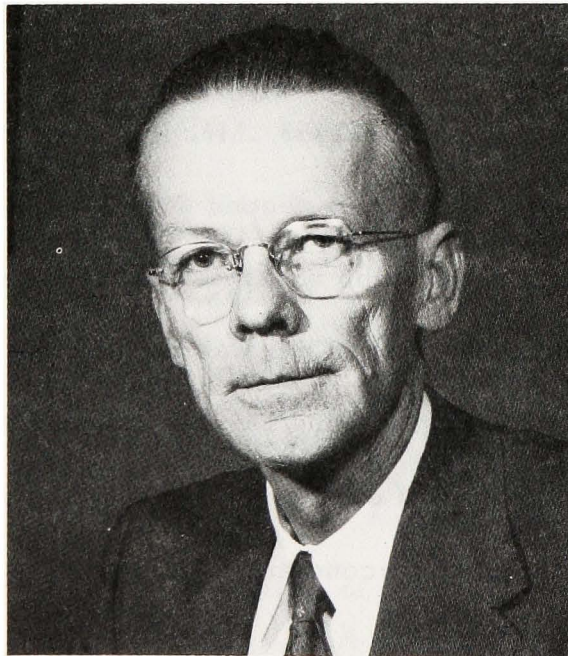
BOARD STAFF MEMBERS



Henry G. Kuyl
Special Assistant, 1948-1954;
Chief, Engineering Division, 1942-1948



Haywood R. Faison
Chief Economist and Chief,
Economics Division, 1943-1952;
Special Assistant for Policies
and Procedures, 1952-1954



Samuel H. Gale
Special Assistant, 1954-1957

Division since 1944. The two Special Assistant positions lasted less than one year.

In 1954, Sam H. Gale, a civil engineer, was named as the sole Special Assistant until 5 September 1957.

Mr. Gale was replaced by Mr. Frank Kinsler, a civil engineer, on 13 September 1957. Mr. Kinsler held the position until 18 December 1963, when he was appointed Technical Director.

Leonard T. Crook, a civil engineer, was appointed next on 27 April 1964, and served officially until 22 November 1968, although he was on detail as Executive Director of the Great Lakes Basin Commission during 1968. (Charles R. Ford, a civil engineer, was designated Special Assistant on 8 January 1968 until he left on 16 September 1968 to join the staff of the Secretary of the Army.)

Richard P. Schultz, a civil engineer, was appointed next on 13 April 1969 and served until his retirement on 4 May 1973.

The current Special Assistant is Richard G. Waugh, Jr., a civil engineer, appointed on 15 July 1973.

The Executive Assistant

The Executive Assistant handles certain administrative functions of the Board, including the logistical staff support.

There have been three Executive Assistants. Mr. W. A. C. Connelly, Chief of the Statistical Division from 1949 to 1959 and the Statistical and Service Division from 1959, was appointed Executive Assistant on 27 April 1964 and held this position until his retirement on 30 June 1972.

Mr. John F. Hummer joined the Board Staff in this capacity on 7 October 1973 and served in this position until his retirement on 31 August 1979.

The current Executive Assistant is Mr. Lyle C. McLaren. Mr. McLaren joined us on 14 October 1979.

The Military Assistant

At different periods in time, the Board has had Military Assistants. Currently, there is not a space designated for this position. Prior Military Assistants have performed different functions, the most important being those dealing with supervision of marine design, Mississippi River flood planning, and special projects for the Chief of Engineers. In April 1937, the Resident Member had three assistants: Lieutenant Colonel William A. Snow, Major Elliot Vandevanter, and Captain Thomas H. Stanley. From 1928 to 1933, the Resident Member had at least two assistants.

The first Military Assistant on record was Major Wilhelm D. Styer, assigned on 21 July 1922. There appear to have been at

least fifteen more assigned through 1949, as shown in Appendix VII. Then there were no more assistants until the Board was assigned a Resident Chairman, Lieutenant General William F. Cassidy, in 1969.

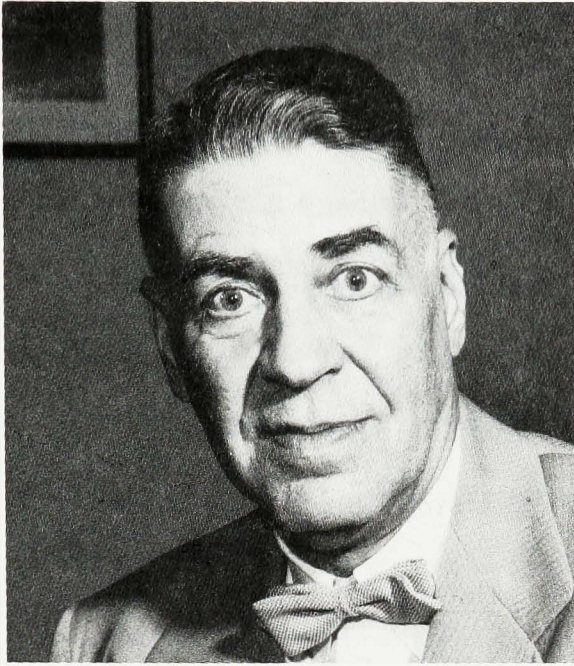
Present

The Planning Division.

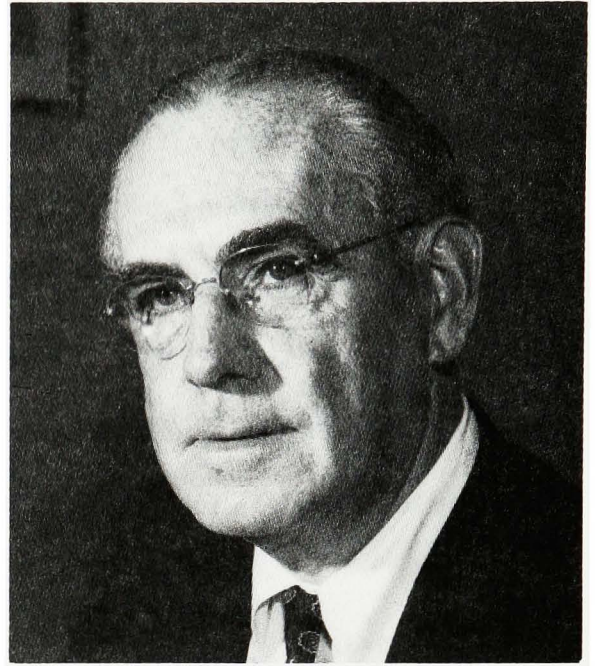
The Board Staff Planning Division was, until April 1978, known as the Engineering Division. This Division has primary responsibility for coordinating the review of water resources projects. For each project under review, a member of the Division is designated as Project Manager. As such, he prepares most of the working papers (briefs, reports, etc.) for the Board members and makes the formal review presentation at the Board meetings. The Division Staff also performs special studies as assigned by the Resident Member, including review of program and project proposals of other agencies, development of planning guidance documents, and participation in the various training courses of the Corps of Engineers.

The Division consists of the chief, 2 senior project managers, and 9 other project managers, chosen for their breadth of experience in water resources planning, including experience in Corps of

BOARD STAFF MEMBERS



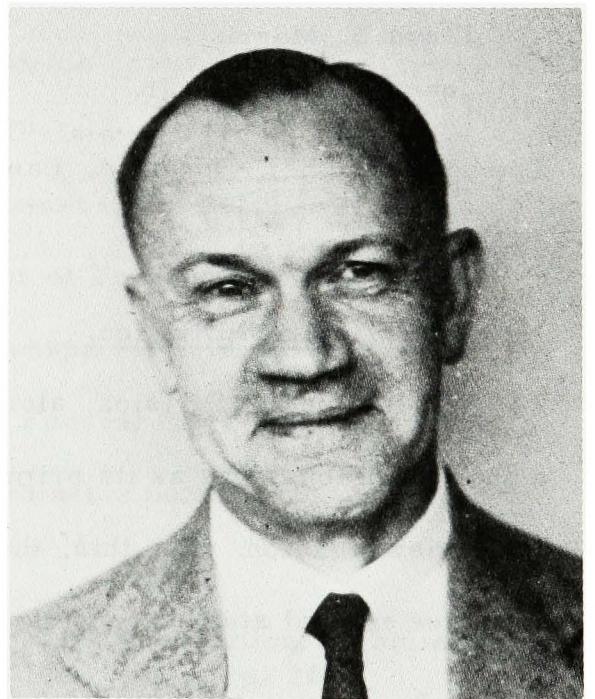
William W. Maddy
Chief, Engineering Division
1948-1957



Charles J. McManus
Chief Economist and Chief,
Economics Division, 1953-1959



Charles C. Vaughan
Chief, Transportation Economics
Division, 1960-1963



Jesse E. Porter
Chief, Domestic Ports Branch,
Statistical Division, 1948-1955

Engineers District and Division offices throughout the country. In 1948, there were 7 project engineers; in 1958, 9 project engineers; in 1962, 12 project engineers; and in 1968, 12 project engineers.

Henry J. Kuyl was the first chief of the Engineering Division, serving until 1953. He had been Chief of the Board's Reports Division, which was the forerunner of the Engineering Division, with little change in functions. Other Division Chiefs have been:

	<u>Dates of Service</u>
William W. Maddy	1953 5 Jan 57
John E. Goodrich	3 Feb 57 - 16 Feb 59
Christopher R. Stark, Jr.	24 May 59 - 8 Aug 69
Floyd B. Morris	31 Aug 69 - 27 Jan 74
John M. McCann, Jr.	24 Mar 74 - 1 May 77

The present chief, Donald A. Banashek, was appointed on 25 September 1977.

The Evaluation Division.

The Evaluation Division, along with the Planning and Environmental Divisions, has as its primary responsibility the support of the review mission. For this, the Division conducts research, prepares special studies, and reviews the economic analyses supporting

the justification of proposed projects before the Board for review. Its review includes analysis of economic base studies and projections of future conditions, including technological, economic, and social changes, and the special needs of under-developed areas. The Division also conducts special studies, as requested, for the Office of the Chief of Engineers, including research on questions of policy as applied to the economic and sociologic evaluations of proposed works, analysis of economic trends, and technological developments related to national and regional growth.

The Division currently includes the chief (a civil engineer), five regional economists, four civil engineers, and one transportation specialist. The Division was formed from the Economics Division, on 14 September 1959, when the Transportation Economics Section was split off into a separate Division.

The Economics Division had its start in the 1930s. From 1933 to 1936, the Federal Coordinator of Transportation had been investigating the various modes of transportation under a Congressional mandate. In reporting on Federal involvement in water transportation, the report of the coordinator noted: ³

³ Report of the Federal Coordinator of Transportation, "Volume III, Public Aids to Transportation by Water," 1936, p. 207.

"The commercial canvasses and economic surveys are not nearly critical enough. The Board of Engineers and its staff have not been equipped with trained men and economists to an extent that would assure a sound appraisal of the ever enthusiastic claims of waterway advocates or to make comprehensive independent analyses. The contributions of the Board of Engineers to the engineering phases of waterway improvements and flood control have, of course, been of the highest order, but economic questions having such broad ramifications as a major waterway project require more varied expert talents than have been available.

At the same time, the Chief of Engineers was finding a declining quality in navigation reports submitted, which was attributed to lack of knowledge on the part of the field-level planners preparing such studies.

In November 1936, the Chief of Engineers directed that the Board undertake a study of the cost of water transportation that would be presented to the Department of the Army for consideration in its economic analyses of proposed waterway improvements. A group of five persons knowledgeable in transportation matters was selected for the assignment. The first to report on 25 November 1936 was Haywood R. Faison. Mr. Faison was to play a major role in shaping the Board's capability in the field of economics. This group became known as the "Section of Special Studies." No sooner did it begin its work that requests started

coming in for assistance to the Corps field agencies in developing navigation benefits and for special studies for the Office of the Chief of Engineers. The demand continued for several years until it became necessary to consolidate the activities of the Special Studies and the Engineer-Economist Sections of the Board. In supporting the move to the "Division of Economic Research," which was approved by the Chief of Engineers, the Resident Member stated: ⁴

At a recent conference with Generals Robins and Kingman it was determined that certain functions of the Board should be combined in order to utilize the staff most effectively and to keep abreast of significant developments in the field of transportation economics now engaging the attention of other governmental agencies. It was decided that these ends could best be accomplished by consolidating the Special Studies and the Engineer-Economist Sections into a Division of Economic Research and the employment of not more than six additional qualified specialists to assist in the economic studies of proposed river and harbor improvements currently being undertaken by the Department. These studies include not only the review of reports received from the Division and District Engineers and the organization and supervision of economic surveys in the field, but also research into the effects of local improvements on economic problems of national scope and the preparation of data constantly being called for under Congressional authority by other Federal Agencies. * * * * *

⁴ Letter, Resident Member to Office, Chief of Engineers, dated 1 October 1943.

And, in 1945, the Chief of Engineers further endorsed the concept by establishing the "Economics Division" at the Board, stating: ⁵

In the preparation of survey reports on river and harbor projects involving complicated problems in transportation economics it has been difficult under present procedures to maintain in the economic studies the uniform standard of technical soundness that usually characterizes the treatment of the engineering features. A recent canvass for personnel disclosed that the division and district officers do not maintain on their permanent staffs employees qualified in this highly specialized field but depend for the necessary analysis of navigation benefits upon groups of specialists temporarily assembled for the purpose. This procedure has in the past resulted in conspicuous inconsistencies in the various reports that have added greatly to the difficulties of effectively presenting the proposed improvements for authorization.

It is essential that determination of the economic benefits to be derived from river and harbor projects conform more closely to a sound and consistent pattern. Accordingly, the staff of the Board of Engineers for Rivers and Harbors has been expanded to include a permanent economics division of experienced and qualified personnel prepared to undertake the guidance of future transportation studies of major importance or complexity....

The Economics Division operated for fourteen years until the Evaluation Division was established.

Haywood R. Faison came to the Board in 1936 as a civil engineer. He was the first Chief of the Special Studies Division

⁵ OCE Circular Letter No. 4045, dated 27 December 1945.

and headed this group until 1942, when he was appointed the "Engineer - Economist" and headed a section under that name. He was also the Chief of the Division of Economic Research in 1943, and then the Economics Division from 27 December 1945 until 1 July 1953, for a continuous span of sixteen years supervising the economic activities of the Board staff. In July 1954, he was appointed the Special Assistant for Policies and Procedures.

Charles J. McManus, the first professional Chief economist at the Board, directed the Special Studies Division from 1 January 1942 to 5 October 1943, was Assistant Chief of the Division of Economic Research and the Economics Division until 1 July 1953, when he became Chief of the Economics Division that he directed until his death on 15 January 1959.

After the death of Mr. McManus and the separation of the Transportation Economics Division, Howard J. Mullaney, a civil engineer, became Chief of the new Evaluation Division on 1 August 1960. He directed the Division until 9 January 1969, when he was appointed Technical Director.

Russell K. Adams, a civil engineer, was Chief of the Evaluation Division from 2 March 1969 through 26 January 1973.

The current Chief, Fred R. Burfoot, a civil engineer, was appointed on 22 August 1973.

The Environmental Division.

The youngest of the Board's active divisions is the Environmental Division, formed in 1971. This division includes four highly qualified environmental scientists.

The primary missions of the Division are: review reports and related environmental statements; conduct sole Washington-level Corps review of Environmental Impact Statements and initiate final 90-day review period by transmitting the final Environmental Impact Statements to the Environmental Protection Agency and to affected Governors and Federal agencies; assist the Board in determining the adequacy of the environmental statement; assist the Professional Development Division in training of water resources planners; furnish staff assistance to the independent environmental experts that may be employed by the Board from time to time; and maintain contacts with the conservation and academic communities throughout the country with regard to environmental concerns.

Other work includes performing, or participating in, tasks assigned the Resident Member by the Chief of Engineers, such as serving on environmental task forces, reviewing or preparing standards and policies on recreation and environmental matters, and the conduct of environmental courses for Corps personnel.

The current Chief of the Division, Richard M. Macomber, is the first chief, appointed on 26 September 1971.

The Professional Development Division.

This Division conducts the Planning Associates training program for experienced water resources planners, which was established in 1961. The program was directed at first by Leonard T. Crook, a civil engineer in the BERH Engineering Division at that time. He later conducted the program as Special Assistant from 1964 to 1968.

In December 1967, the Professional Development Division was established to give supervision of the Board Staff's expanded training mission needed attention and management. The Division includes one civil engineer and one agronomist to guide the program.

Mr. Dean C. Pappas was the first division chief and remained until 1971. Mr. Carl O. Foley replaced him and was chief until 1972. The current chief, Harold T. Kinback, was appointed in 1975.

Past

The Port Facilities Division.

The Port Facilities Division was one of the oldest divisions of the staff. In its earliest days, it was part of the Statistical Section. The Division included three civil engineers and one transportation

specialist, who conducted the field surveys; one illustrator; one cartographic technician; one technical editor, and two editorial assistants. They produced the 45 port series reports covering 120 U. S. ports on a revision cycle of 8 to 12 years. They also supported other Board Staff elements in their review mission for navigation studies and provided drafting and graphic support.

Field surveys for each port series report took from one man-month to nine man-months. All tables and mapping for each report were made by the Division. Also, the Division was the authorized sales agent for its publications.

The Division's work began with the passage of Section 7 of the River and Harbor Act of 8 July 1918, Section 500 of the Transportation Act of 28 February 1920, and Section 8 of the Merchant Marine Act of 5 June 1920, which directed the collection, review, analysis, and publication of data on the physical and intermodal characteristics of coastal and Great Lakes ports. By order of the Chief of Engineers on 28 November 1919, the Board was directed to take over certain duties of the Port Facilities Commission of the U. S. Shipping Board--an independent Board which had been established by the Congress on 7 September 1916 to encourage, develop, and create a naval auxiliary and a merchant marine. In the process, the Board also gave residence

to several members of the U. S. Shipping Board, who worked for many years in a cooperative program to produce the port series with the Board's Statistical Division. The first report on Portland, Maine was published on 4 April 1921 (Figure 3).

Coming to BERH from the Shipping Board where he had headed the Port Facilities Commission was Captain F. T. Chambers, U. S. Navy (Rtd.). He directed the work of Shipping Board employees detailed to BERH from time to time to accomplish the joint mission. Captain Chambers left that assignment in 1926 and was replaced by E. P. Cotter. Shipping Board employees continued to be detailed--as many as 9 at a time--until 1935. By 1933, that group became the Shipping Board Bureau of the Department of Commerce, and their participation in the joint mission was rapidly diminishing. By that time, the Board Staff was preparing the description of physical facilities, rail rate work, and tributary territories, and the Shipping Board personnel prepared descriptions of port organization and administration, port services, and rates and charges for services.

In 1936, the U. S. Maritime Commission took over the mission of the Shipping Board Bureau. However, the joint Port Series effort never had been as cooperative as one would like. Each group had been critical of the other's effort. In 1937, an agreement was reached whereby the Board Staff would separately prepare certain chapters

FIGURE 3

War Department,
The Board of Engineers for Rivers and Harbors,
Washington, D. C., April 4, 1921.

From: The Board of Engineers for Rivers and Harbors.

To: The Chief of Engineers, United States Army, Washington, D.C.

Subject: Report of the port and harbor facilities of Portland, Me.

1. There is transmitted herewith a report by the board on the port and harbor facilities of Portland, Me., prepared for this department and the Shipping Board as a result of the cooperation prescribed by section 8 of the merchant marine act, and in furtherance of the objects entrusted to the War Department by section 500 of the transportation act of 1920. The report is based upon extensive consultation with the Shipping Board, and the use of forms in large part prepared under its auspices. It is the first of a series of reports concerning the principal ports of the United States.

2. Information regarding our ports has not heretofore been available in such form as to afford for any selected port all data essential to a vessel desiring to call, or to enable a shipper to make a comparison of the facilities and charges at one port with those at another for the particular class of business in which he is interested. The report includes information regarding the traffic movements through the port and the development of foreign and domestic commerce. On account of the value of the information to commercial and shipping interests, and to the successful operation of the American merchant marine, it is recommended that the report be published.

For the board:

C. Keller,

Colonel, Corps of Engineers,
Resident Member.

(First indorsement)

Office of Chief of Engineers, April 4, 1921. - To the Board of Engineers for Rivers and Harbors, Washington, D. C.

Approved.

Lansing H. Beach,
Major General, Chief of Engineers, U.S. Army.

of the Port Series as Part I and the Maritime Commission would prepare the remainder as Part I--neither party to review or criticize the other's work.

During World War II, work on the series was suspended. After the war, the two agencies again agreed to jointly prepare the Port Series. In May 1946, the fourth revision of the Port Series commenced with the report for the Port of Boston, Massachusetts; the revision of all reports was completed by 1954. In 1950, the Maritime Commission was abolished and their part was taken over by the Maritime Administration. In 1952, a new agreement resulted in a merger of the two parts of the series into a single publication again. Further, in 1960, at the request of General William F. Cassidy, a new agreement was reached to return to the separate publication format; the Board retaining the description of physical facilities and mapping, and the Maritime Administration compiling information on port administration, services, labor, rates, and charges.

From 1960 until recently, the Maritime Administration had published few Part I's of the Port Series. In recent times, they expressed a desire to discontinue that effort; the reason given being the rapid obsolescence of the data in that section. However, the

Board's effort continued on Part 2, which constituted the more timely publication. Appendix VIII gives the status of port series publications for Fiscal Year 1979.

The persons most instrumental in setting up the Division and molding its work were A. H. Ritter, Chief Statistician from 1920 to 1928; W. E. Graves, Chief Statistician and Chief, Statistical Division from 1929 to 1946; and Oswin W. Menk, Statistician and Assistant to the Chief Statistician from 1920 to 1946. Mr. Menk, in particular, was given credit for designing the initial data collection forms that did not change materially over the years.

Rudolph L. Zimpel was Chief of the Division from 1946 to 1948. William A. C. Connelly was Chief from 1949 to 1956.

On 9 February 1959, the Division was renamed the Statistical and Service Division, with Mr. Connelly as Chief. In 1966, the name was changed to Port Facilities and Administrative Division; Mr. Connelly remaining Chief. On 13 June 1968, it was again changed to the Port Facilities Division; Mr. W. Nelson Alexander becoming Chief. Mr. Alexander had been Chief of the Port Facilities Branch (earlier known as the Domestic Ports Branch) since 1956, and was Division Chief until his retirement in 1973.

Mr. John W. Vetter, appointed on 21 October 1973, was Chief of the Division at the time of its transfer to the U. S. Army Engineer Water Resources Support Center in Fiscal Year 1979.

The Transportation Economics Division.

On 14 September 1959, the Transportation Economics Division was established, with Mr. Charles C. Vaughan as Acting Chief. The Division personnel came from the branch of the same name that had been part of the Economics Division since 1957. The activities of this unit had been conducted since the 1930s.

Its primary missions were to furnish guidance and assistance in transportation studies to Division and District offices, including the conduct of traffic surveys; compiling data on water carrier costs; and analyzing and preparing special reports on matters pertaining to traffic and transportation practices and operations. In 1963, the Chief of Engineers determined that the Division's duties were more properly associated with study management in his office and transferred the unit there.

Mr. Vaughan was appointed Chief of the Division on 2 March 1960 and remained Chief until its transfer to the Office, Chief of Engineers.

The Marine Design Division.

In 1919, the staff of the Board was enlarged by the addition of one of its earliest major divisions--the Marine Design Section. On 27 January, the Chief of Engineers directed the Board to undertake the design of floating plant by taking over the work of the Marine Designing Section of the Office of the Chief of Engineers (OCE). One civilian engineer--Theodore R. Vogel--came to the Board from OCE, raising the total number of engineers on the Board Staff to two in February 1919. Then, in 1921, authority was granted to employ nine persons in this section. By 1922, the unit had been renamed "Marine Design Division." By 1925, four of the five civilian engineers on the staff were in the Division.

In 1930, the Division had the largest number of employees on the staff--twenty--including seven engineers and five associate engineers. This continued for several years until the group grew to forty persons in 1939, when it was known as the Plant and Equipment Section. An example of their workload is given in the Annual Report to the Chief of Engineers for Fiscal Year 1939 as follows:

Plans and Specifications:

16-inch diesel-electric pipe line dredge to replace the Pettus, Mobile District.
Conversion of two Coast Guard cutters to survey boats. Hull for snagboat Preston, Seattle District.
Booster barge for Louisville District.
Three 40-foot workboats for St. Paul District.
Three 120' x 30' x 7' 4" steel barges for Louisville District.
Additional life boats for dredges New Orleans and Rossell.
New dredging pump and equipment for dredge Henry Bacon.
New drag pipe, hoisting davit, winch and equipment for dredge Minquas, Boston District.
80' x 20' x 5' oil barge for Huntington District.

Plans:

New cutter for pipeline dredge Rock Island.
New drag pipe hoisting winches for dredge Chinook.
New ladder for dredge Raymond

Specifications:

42-foot utility boat.
Purchase of survey boat for Boston District.
Radio equipment for Lake Okeechobee, Jacksonville District.
Radio equipment for Ohio River Division.

Miscellaneous:

Assisted in plans and specifications for new office building, and moving some sections of the Board of Engineers for Rivers and Harbors and the Office of the Chief of Engineers into same.
Inspections and tests of Diesel engine generating sets for Fort Funston.
Inspection of engine for tug Welles Harbor, Honolulu District.

Miscellaneous: (cont' d)

Torsiograph tests on engines on workboats Elm and Maple, Memphis District.

Testing pumping engines, propelling engines, and 400 K. W. generating set for dredge Chester Harding.

Inspection and report on Great Bridge Lock, Va.

Inspection and report on electrical machinery for dredge Goethals.

Inspection of construction and approval of construction plans of 100-foot tug Stephen F. Austin for Galveston District.

Test of engine on tender Brunswick, Savannah District.

Specifications of electrical equipment for Wilkes-Barre-Kinston Flood Control project.

Test of engines on U. S. Mine Planter Ellery W. Niles, Quartermaster Corps, at San Francisco, and report of condition.

Test of survey boat Mark Brooke, New York District.

Inspection of dredge Sacramento to determine suitability for work at Welles Harbor.

Survey of Engineer Department floating plant in districts of the Great Lakes, North Atlantic, South Atlantic and Gulf of Mexico Divisions and the Second New Orleans and Sacramento Districts.

Inspection of sea plane harbor projects at Midway Island, Wake Island and Guam.

Compilation and publication of Boiler Feed Water Manual.

Preparation of Boiler Water Conditioning Report form.

Work in Progress:

Plans and Specifications:

105-foot standard survey boat.

50-foot motor launch for Panama Canal.

50-foot steel barge for Panama Canal.

Plans:

54-foot standard Survey Boat, preliminary plans.

Miscellaneous:

Inspection of construction and checking construction plans of seagoing hopper dredge Chester Harding.
Preliminary studies of a proposed 2500 cu. yd. seagoing hopper dredge.
Preliminary studies of a proposed 250-700 cu. yd. seagoing hopper dredge.
Testing of engines on surveyboat Falcon, Norfolk District.
Checking contractor's plans and inspection of equipment for 84-foot tender, J. S. Polhomus, Portland District.
Checking contractor's plans for diesel-electric power plant for Fort Cronkhite, California.
Checking contractor's plans for conversion of surveyboat, E. R. Stuart, New York District.
Preparation of plan for in-service training of plant engineers.
Preparation of a program for replacement of seagoing hopper dredges of the Engineer Department.

On 11 January 1940, the entire section was transferred to the Philadelphia District by order of the Chief of Engineers.

The Statistical Division.

In addition to the Port Series mission, the Statistical Division, later the Statistical and Services Division, and then the Port Facilities and Administration Division had two other missions--the compilation of waterborne commerce statistics and the collection of data on foreign ports.

In 1942, the Board was requested to prepare military reports for use in staff planning of port and terminal facilities at foreign ports. Previously, the Office of the Chief of Engineers had been requested by the Navy to furnish such reports and, inasmuch as the Statistical Division of the Board had for many years prepared and published similar reports on the ports of the United States, it was appropriate for the Board to undertake that assignment. Accordingly, the Foreign Ports Branch of the Statistical Division was established in August 1942.

The first study assigned the Board covered the ports of Morocco, Algeria, and Tunisia, to be submitted in about 30 days, with a preliminary report on Casablanca, Morocco, to be delivered in 3 days. During the 3-year period, August 1942 to September 1945, a total of 41 military reports on foreign ports and terminal facilities were submitted. Each report contained detailed descriptions of all the ports in a given country or area, accompanied by maps and photographs. A total of 1,484 ports or localities were described in these reports, which were accompanied by 1,559 photographs and 986 maps. ⁶

⁶ ARCE 1951, Part 1, Vol. 3, p. 287.

The Foreign Ports Branch functioned during World War II and until 1962, when the unit was transferred to another agency. During World War II, the unit had as many as 19 employees engaged in strategic engineering studies for ports and terminals.

Collection of waterborne commerce statistics at BERH began in the Statistical Division in 1919. The Waterborne Commerce Statistics Branch operated from about 1954 to 1967, when the collection mission was transferred to the Waterborne Commerce Statistics Center in New Orleans, Louisiana. The current Evaluation Division continues to provide Washington-level coordination for the statistics program.

The Resident Scholars.

In 1966, the Resident Member was seeking additional expert capability on the Board Staff to teach the Planning Associates. That October, the Office of the Chief of Engineers authorized a one-year contract for expert services to fill that need. Ensuing discussions concerned the type of individual to be selected, the requirements of expertise and background, and the additional input that the individual might contribute to the Board Staff's missions.

By 1968, it had been decided that the person should be recruited from the active academic fraternity, should have scholarly expertise in fields relating to water resources planning, and should possess advanced educational degrees. A broad range of disciplines and specialties was permitted, including economics; political and other social sciences; geography; ecology; and environmental, urban, regional, and land-use planning. Each year, selection would be made from a different field of specialization.

Responsibility for monitoring this program was placed in the Office of the Special Assistant, who, in the fall of 1968, established that effort as the Resident Scholar program. It was decided that the Resident Scholar should have a one-year tour of duty with the Board and that tour should be scheduled to permit a scholar's convenient leave of absence from teaching. After a detailed review of the qualifications of several candidates, the first Resident Scholar was appointed in July 1969.

There have been seven Resident Scholars between 1969 and 1976. They are:

Dr. Wilmon H. Droze, Professor of History, University of Texas, 1969-70.

Professor William R. Walker, Professor of Law, and Director of the Water Resources Research Center, Virginia Polytechnic Institute and State University, 1970-71.

Dr. Paul D. Kilburn, Professor of Biology, Botany and Ecology, Principia College, 1971-72.

Dr. E. Jackson Baur, Professor and Chairman of the Department of Sociology, University of Kansas, 1972-73.

Ms. Jeanne Nienaber, Professor of Political Science, The Catholic University of America, 1973-74.

Dr. Andrew A. Dzurik, Assistant Professor, Department of Urban and Regional Planning, Florida State University, Tallahassee, Florida, 1974-75.

Dr. Michael A. Champ, Chairman, Environmental Studies, Department of Biology, American University, Washington, D. C., 1975-76.

Major activities of the Resident Scholar included: (1)

conducting special studies on high priority water resources policy problems; (2) participating in agency and interagency meetings and conferences; (3) acting as consultant to the Board Staff in its review mission; and (4) conducting seminars for, and participating in, the Planning Associates Program. Often, the Resident Scholar rendered opinions and furnished information on specific subject matter related to questions arising from the review of reports on proposed water resources projects before the Board for review. As a scholarly program, opportunity was given for major research on subjects of interest to the scholar which would also contribute

to the mission of the Board and the Corps of Engineers, including research on matters concerning major policy and project evaluation techniques. The program was rather flexible in content and was adapted to the particular interests of the scholar so long as it was consistent with the needs of the Board. The Resident Scholar was given a unique opportunity to establish contacts with representatives of other agencies involved in water resources development, and to gain experience that enriched both his teaching and research capabilities in the future.

With a shift in emphasis of mission and capability of the Board Staff by 1976, the Resident Member decided that the program had accomplished its mission without need for further effort.

Office, Chief of Engineers (OCE) Details

Through the years, certain functions and personnel from the Office of the Chief of Engineers have been assigned to the Board for administration only. Although these assignments were temporary, some lasted for several years. Most of these assignments took place in the late 1930s and 1940s.

In 1937, the Board had reached a peak in terms of number of personnel and work assignments. However, there was an effort made to separate those missions considered permanent from those

assigned by the Chief of Engineers. For example, that year, personnel assignments were divided into the following categories on the organization list: Board Office; Statistical Division; Marine Design; Office, Chief of Engineers; Engineering Division; Colonel Graves; and Office, Chief of Engineers, Coast and Geodetic Survey. Those designated as Board Office were involved in the review mission; the last four named were really OCE personnel performing OCE missions. Of the total Board Staff of 100 persons, 32 were performing OCE missions. Organization charts for the period have dashed lines connecting the Resident Member to those activities.

The highest number of OCE assigned personnel was in 1941. The payroll for December showed 163 persons in that category. Their missions are listed on the following page.

The temporary personnel were gradually reduced from then on until all were released to OCE by 1949.

Some other of the more well-known persons assigned to the Board included Carl H. Giroux, Carter Page, Joseph R. Brennan, Ralph L. Bloor, Jacob H. Douma, William H. Dvorachek, and H. Velpeau Darling.

Details to Office, Chief of Engineers

July 1, 1942

Construction Division:		79
Executive Office	3	
Operations Branch	27	
Engineering Branch	49	
Supply Division:		1
Procurement Branch	1	
Administrative Division:		16
Office Service Branch	6	
Fiscal Branch	10	
Mississippi River Commission:		2
Coast and Geodetic Survey:		<u>3</u>
Grand Total:		101

One further major mission was added on 22 September 1946, when 68 persons from the OCE Reports and Machine Records Branch were transferred to the Board's Administrative Division. This unit provided statistical data and reports and "electric accounting machine services" for all components of OCE; however,

it was considered to be another OCE special detail, which proved to be true when the unit moved back to OCE after a few years.

Mr. W. Paul Friedman was Chief of this Division when it transferred in 1946.

CHAPTER VI

MAJOR BOARD IMPACTS

The Board's impacts on the Corps of Engineers program of improvements were felt early. Not only did the Board scrutinize and reject several major construction works, but it also initiated studies and promoted the development of several important waterways and water resources projects through the years. A chronological review of several prominent works and controversial projects where the Board played a major role is presented here.

1906 - Cumberland River

On 26 February 1906, the Board reported the results of its own examination of the needs for navigation on the Cumberland River, recommending six locks below Nashville and five above to Carthage, Tennessee. There was no report of the District or Division Engineer, and the Chief of Engineers gave no opinion on the merit of the proposed work. This major navigation system was then authorized by the Congress on 2 March 1907.¹

1907 Ohio River

On 12 May 1905, the Chief of Engineers appointed a special board of officers of the Corps of Engineers to examine the canalization

¹ House Document 699, 59th Congress, 1st Session.

of the Ohio River to secure a depth of six to nine feet. That board reported favorably on 15 December 1906, recommending a system of 54 locks and dams at a cost of \$63,731,488, the major navigation undertaking of the day on the inland waterways of the United States. Although the Chief of Engineers did not make a recommendation on this proposal, stating that "the question as to whether a step in advance shall be taken and whether this apparently good business proposition shall be made the basis of legislation for entering upon the improvement I prefer to leave to the wisdom of Congress," he did comment on the reports of the special board and the review by the Board of Engineers for Rivers and Harbors.² The Board's report was strongly worded for that time and probably carried the proposed work to authorization. The Board noted:

... the great cause of the failure of waterways as a means of transportation in the United States is that they heretofore have not generally followed a commercial route but have led from nowhere to noplacement. The river systems of the country flow generally in a southerly direction while the trend of commerce has been east and west. Until within the last ten years a railroad running north and south was generally a financial failure. River systems have followed the same laws, their commerce has been confined to the products on their immediate banks, and that of not sufficient amount to justify their permanent improvement. That great waterway, the

² House Document 492, 60th Congress, 1st Session, p. 114-115.

Mississippi River, has been improved by the General Government and is now being maintained from New Orleans to Cairo at the depth proposed for the Ohio and for several years has been maintained from Cairo to St. Louis at a depth of 8 feet, yet its commerce is insignificant except what it receives from the unimproved Ohio. The river commerce of St. Louis has declined from 812, 185 tons in 1895 to 370, 425 tons in 1905, notwithstanding the enormous commercial growth of the city in other directions. The recent railway development from the grain center at Kansas City to the Gulf has diverted a considerable barge commerce from the river to railroad lines by a reduction in rates that the river improvement could not meet.

The Board, however, is of the opinion that conditions are exceptionally favorable for the future development of commerce on the Ohio River. The river now maintains a traffic of over 9, 000, 000 tons in competition with railways. This commerce appears to be slowly increasing and its growth appears principally in other products than coal.

* * * * *

For these reasons the Board is of the opinion that the improvement of the Ohio River by locks and movable dams so as to secure a depth of 9 feet as recommended in the report of the special board is worthy of being undertaken by the United States.

In making this recommendation the Board realizes that it is suggesting a plan for river improvement on a scale not hitherto attempted in this country, but it believes that there will probably be in the near future a popular demand for the improvement of several streams on such a scale. On account of the large commercial development of its shores and its connection with the lower Mississippi now maintained in a navigable condition the Ohio River is, in the opinion of the Board, the one river of all others most likely to justify such work. Furthermore, it should be noted that by authorizing the construction for 9-foot navigation of 14 locks at various parts of the river Congress has already practically entered upon such a system of improvement. ³

3. Ibid. p. 115-116.

1908 - Missouri River

In 1908, navigation channel dimensions on the Missouri River were insignificant and traffic had dwindled from a high of 115,000 tons in 1885 to about 34,000 tons in 1906. The river had been navigated by steamboats for over 90 years, and the Missouri River Commission, which existed from 1884 to 1902, had made sporadic improvements, primarily in the nature of river regulation works by contraction of the river's flow. Asked to report on the present condition of the river and the effects of improvement on the low-water channel, the District Engineer, Captain Edward H. Schulz, reported that a full 12-foot deep channel was warranted; the Division Engineer, Colonel W. H. Bixby, concurred.

In its review, the Board commented on the past difficulty and high cost in securing even a 6-foot deep channel, and stated that benefits would not be commensurate with cost unless the channel were provided at least to Kansas City at a cost of not less than \$20,000,000. If carried to Sioux City, the cost would be \$40,000,000. In a rare case of avoiding directed recommendation, the Board reported as follows: ⁴

14. The question of the advisability of the United States undertaking the improvement of this river appears to the board to depend upon the future policy of Congress in regard to the improvement of internal waterways. Under a system

⁴ House Document 1120, 60th Congress, 2d Session.

of inadequate and irregular appropriations, as in the past, it would be inadvisable to enter upon a project of this extent, for, unless provision be made to complete the project within a reasonable time, the money spent will be practically wasted. If, however, a more liberal policy is to be adopted, as has been publicly urged in the recent past, and funds are to be regularly appropriated in adequate amounts for the development of internal waterways, the improvement of the Missouri River under the plan proposed would then, in the opinion of the board, be advisable.

The Chief of Engineers concurred in the conclusions of the Board, passing the responsibility on to the Congress.

1911 - Intracoastal Waterway

In 1909, the Chief of Engineers appointed a special board to make a survey for a continuous inland waterway from Boston, Massachusetts to Beaufort, North Carolina and submit a report thereon. In its report of 4 October 1911, the special board recommended four major improvements:

- a. a 12-foot deep waterway between Norfolk, Virginia and Beaufort, North Carolina at a cost of \$5, 400, 000;
- b. immediate purchase of the then existing 10-foot deep, locked Chesapeake and Delaware Canal at a cost of \$2, 514, 000 and improvement of this route to a 25-foot deep seal-level canal at a cost of \$9, 910, 000;
- c. a 25-foot deep sea-level canal across the state of New Jersey between the Delaware River and Raritan Bay at a cost of \$45, 000, 000; and

d. an 18-foot deep canal between Narragansett Bay and Long Island Sound at a cost of \$12,322,000.

In its review, the Board found only the first two canals warranted, questioned the need for a canal between Narragansett Bay and Long Island Sound, and suggested study of a 12-foot deep canal across New Jersey rather than 25 feet. The Chief of Engineers concurred in the Board's views. The Congress authorized the improvements recommended by the Board and the Chief of Engineers.

1924 - Gulf Intracoastal Waterway (GIWW)

Routes of an intracoastal waterway along the Gulf Coast had been surveyed in the 1800s. However, when a plan was submitted to the Board in 1907, the Board found it not justified. In the following years, some piecemeal improvements were made to connecting links, but it was not until 1925 that this important project got Congressional approval with major help from the Board. As a matter of interest, the involvement of the Board and its staff was somewhat unique at this time.

Crucial to a favorable finding for the GIWW was an estimation of prospective commerce. The Intracoastal Canal Association of Louisiana obtained the services of Major General George W. Goethals, United States Army, Retired, as a consultant to prepare a study of present and prospective traffic. His report of 27 November

1923 was referred to extensively in the survey report of the Division Engineer. Due to the importance of the proposed work, the Board directed that the Resident Member undertake a further investigation on the commercial prospects and economic value of the waterway. The Resident Member, Major Gordon R. Young, then submitted his detailed report on 11 March 1924. On that date, the Board recommended a 9-foot deep waterway from New Orleans, Louisiana to Gulf, Texas at an estimated cost of \$16,000,000.⁵ The Chief of Engineers concurred, and Congress authorized the project the following year.

1925 - St. Lawrence River Project

Most persons are familiar with the St. Lawrence Seaway and the involvement of the Corps of Engineers in this mammoth engineering project, but few know of the involvement of the Board and its staff in the planning of the present work that was finally completed in 1959.

In 1921, the then Chief Statistician of the Board, Alfred H. Ritter, coauthored a 290-page study entitled "Economic Aspects of the Great Lakes - St. Lawrence Ship Channel," with Roy S. MacElwee.⁶ Then, in 1925, while still the Chief Statistician, he

⁵ House Document 238, 68th Congress, 1st Session.

⁶ MacElwee, Roy S. and Ritter, Alfred H. Economic Aspects of the Great Lakes - St. Lawrence Ship Channel, New York: The Ronald Press Company, 1921.

was asked to prepare a detailed survey of the waterway's potential. His study was used extensively in the study of the St. Lawrence Commission of the United States in 1926, which concluded that the shipway from the Great Lakes to the sea was imperative. Mr. Ritter's good work is referred to in Department of Commerce report, "The St. Lawrence Survey: Part I, History of the St. Lawrence Project." ⁷

In 1925, under the auspices of the Great Lakes St. Lawrence Tidewater Association, the earliest comprehensive survey of the St. Lawrence Seaway project was written by Mr. Alfred H. Ritter, a transportation and port specialist commissioned by the Association. This report was notable particularly for its analysis of the effects of the seaway on the industry of the Great Lakes St. Lawrence tributary area, which was defined as the area bounded by a boundary line which equalized transportation costs by means of the railways and the seaway. All points within that area would show a saving in transportation costs via the seaway. This conception provided the first effective means of determining the traffic that might be expected to move by the seaway and the benefits which it would yield. This method of approach in economic analysis has since dominated much of the discussion concerning the economic effects of the seaway project.

Later, in 1940 and 1941, the staff of the Board assisted in preparing Part II of the St. Lawrence Survey, "Shipping Services on the St. Lawrence River," and Part III, "Potential Traffic on the St. Lawrence Seaway." At the same time, Brigadier General Thomas M. Robins, Senior Member of the Board, was appointed by President Franklin D. Roosevelt to serve on the four-man

⁷ U. S. Department of Commerce. The St. Lawrence Survey: Part I, History of the St. Lawrence Project, Wash., D. C.: Government Printing Office, 1941, p. 8.

St. Lawrence Advisory Committee.⁸ This committee advised the President of the worthiness of development of navigation and power in the International Rapids section of the St. Lawrence river.

1925 - The Flood Control Mission

The Corps of Engineers involvement in flood control dates back to the 1800s. Massive flooding in the Mississippi Valley led to the establishment of the Mississippi River Commission in 1879. In 1917, the Board's review role was broadened when the Congress directed that the Board review flood control projects as well as river and harbor works.⁹ Then, in 1925, the Congress directed the Secretary of War, through the Corps of Engineers, and the Federal Power Commission to study the need for development of water power, navigation, control of floods, and irrigation on the navigable streams of the United States.¹⁰ This led to a popular report in 1926--House Document 308, 69th Congress, 1st Session. From that report flowed a series of studies of comprehensive river basin planning on the major river basins of the United States, known as "308" reports. As a result, the flood control mission of the Corps of Engineers and the Board was greatly enlarged, culminating with the comprehensive 1936 Flood Control Act, which provided much of the guidance in the conduct of the flood control program.

⁸ Executive Order of the President, 16 October 1940.

⁹ Flood Control Act of 1917.

¹⁰ Section 3 of the River and Harbor Act of 1925.

1930 - Tennessee River and Tributaries

On 12 March 1930, the Board reported on its review of the "308" report on the Tennessee River. The proposed project recommended by the District Engineer called for a 9-foot deep navigation channel to Knoxville to be secured by a series of low dams at a cost of \$75, 000, 000, provided that if other interests desired to develop power in the river, a high dam could be substituted for two or more of the proposed low dams. The Board, in its extensive review of this large project, found a need to better outline the plans for power development, but also found that the navigation project alone would not be justified. The Board recommended a 9-foot deep navigation channel to be secured by power dams.

The Chief of Engineers did concur with the plan of the District Engineer, noting in his report his displeasure with all three advisory groups:

(a) The district engineer. -- He sets a time limit on the completion of the project. No time limit can be set at this time since this project must take its economic place in the general array of projects over the entire country and await the availability of money for its economical prosecution.

(b) The division engineer. -- He stops the project at the edge of the area most fruitful in the prospect for tonnage.

(c) The Board of Engineers for Rivers and Harbors. -- It leaves the project in the air by making navigation too

dependent on power development and requires that the matter of the project be referred to Congress continually. The project should be definite and final, and it is possible to make it so in this case, if ever, because there has never been presented to Congress a more thorough and exhaustive study. ¹¹

LYTLE BROWN,
Major General, Chief of Engineers

As it turns out, the plan constructed closely resembled the power dam recommendation of the Board.

1942 The New Jersey Ship Canal

In this very unusual case, the District and Division Engineers in 1941 concluded that neither a ship canal nor a barge canal was economically justified. The Board concluded that "the value of the barge canal in time of war, together with the prospective benefits to be anticipated in normal times, is sufficient to warrant its construction." It recommended a 14-foot deep canal along a route between Bordentown and Sayreville, New Jersey on 8 June 1942.

The Chief of Engineers concluded that a 27-foot deep ship canal would have "genuine military value" and would be compatible with the then 27-foot deep Chesapeake and Delaware Canal. On 14 July 1942, he recommended the 27-foot deep canal.

¹¹ House Document 328, 71st Congress, 2d Session, p. 7.

In testimony at hearings before the Committee on Rivers and Harbors, House of Representatives on 9 March 1943, the Chief of Engineers, Major General E. Reybold, repeated his recommendation for the 27-foot deep canal. That same day, Brigadier General John J. Kingman, then Senior Member of the Board, testified that the Board had not changed its recommendations for the 14-foot deep canal, but that he personally concurred in the Chief of Engineers' recommendations.

The Congress never authorized any canal across New Jersey.

1942 - Cross-Florida Barge Canal

In reports in 1913, 1924, and 1937, the Board found justification lacking for a canal across Florida.¹² However, on 8 June 1942, the Board reported that, although the annual costs for a canal were \$2,575,000 and the annual transportation benefits, \$482,000, "the Board concludes that the value of the barge canal in time of war, together with the prospective benefits to be anticipated in normal times, is sufficient to warrant its construction."¹³ The project was authorized by the Congress on 23 July 1942.¹⁴

12 HD 233, 63rd Congress, 1st Session; SD 179, 68th Congress, 2d Session; and HD 194, 75th Congress, 1st Session.

13 HD 109, 79th Congress, 1st Session.

14 Public Law 675, 77th Congress.

1943 - Missouri River (Pick - Sloan Plan)

In 1943, the Board played a major role in supporting greatly-expanded improvements for multiple-purpose river basin development on the Missouri River and its tributaries. On 10 August 1943, the Division Engineer, Missouri River--Colonel Lewis A. Pick--presented a \$490,000,000 plan for expansion of the then-authorized Missouri River project. His plan included levees, five additional main-stem reservoirs, five additional reservoirs on the upper Republican River, one reservoir on the Big Horn River, and one reservoir on the Yellowstone River. His report supporting these improvements totaled only thirteen pages in length. There was no supporting District Engineer report. The Board, in its report of 23 August 1943, supported General Pick's recommended plan, but did not estimate the benefits, stating:

12. Because of the many interests involved and uncertainty as to the manner in which this important section of the United States may develop in the future, the Board considers it impracticable at this time to make a detailed monetary estimate of the benefits which will accrue from the comprehensive plan. Considering the potentialities of the Missouri River Basin, the Board expects a continued expansion of its economic activities and considers the proposed plan as an advisable aid in that connection. It is certain that the benefits from the work will be very great and widespread. After thorough consideration the Board concludes that the United States will profit by undertaking the improvements as recommended by the division engineer on a step-by-step basis.¹⁵

¹⁵ HD 475, 78th Congress, 2d Session.

The Bureau of Reclamation, in commenting on the Division Engineer and Board reports and recommendations on 17 December 1943, referred to their own extensive five-year study which was to be completed soon. (That document covered 209 pages.) Their proposal called for more reservoirs in the upper tributaries, more emphasis on irrigation and reclamation, and changes in some of the mainstem reservoirs. The engineer in charge of the study was William G. Sloan. The Chief of Engineers supported the recommendations of the Division Engineer and the Board, without reservation, on 31 December 1943.¹⁶

President Roosevelt had wanted the Congress to create a Missouri Valley Authority to develop the basin's water resources; however, there were many opponents to this proposal. Those opponents saw elements in each of the Pick and Sloan plans that would be a better alternative than the authority to be created. Therefore, the Missouri River States Committee asked for a single, coordinated plan for the whole Missouri River basin in September 1944. At meetings in Omaha in October, the Pick-Sloan Plan was developed and finally the famous plan was adopted by the Congress in February 1945--a project eventually to cost \$1 billion.¹⁷

¹⁶ Ibid

¹⁷ U. S. Army Corps of Engineers, Kansas City District, Missouri River Division. "Taming the Mighty Missouri: A History of the Kansas City District, Corps of Engineers, 1907-1971." Kansas City: 1974, p. 72.

1945 - Tennessee-Tombigbee Waterway

On 2 January 1945, the Committee on Rivers and Harbors, House of Representatives, asked the Board to review a previous report (HD 269, 76th Congress, 1st Session) on a waterway to connect the Tombigbee and Tennessee Rivers to bring up to date data on economic benefits from the proposed improvement. Without supporting reports from the District and Division Engineers, the Board conducted its own extensive study, preparing both costs estimates, prospective waterborne commerce, and estimates of transportation savings. In its 52-page report on 10 September 1945, the Board recommended a waterway, not less than 9 feet in depth, stating that "the benefits which would accrue would be national in scope and character and of sufficient magnitude to warrant the undertaking of the project by the United States." The Chief of Engineers concurred in the Board's recommendations on 25 September 1945, noting that ratio of calculable benefits to costs is 1.05 to 1.

The project was authorized by the Congress in the River and Harbor Act of 24 July 1946 in accordance with the recommendations of the Board and the Chief of Engineers.

1945 - Arkansas River Navigation

On 11 September 1945, the Board reported on a comprehensive plan for the future development of the water resources of the Arkansas River Valley, recommending that flood control features proposed by the Arkansas River Survey Board and the Division Engineer, Southwestern be constructed, but also recommended that construction of navigation features of the plan proposed by the survey board and the Division Engineer be deferred, stating that "... the Board is not convinced that the benefits to be derived from the navigation project warrant its construction at this time."¹⁸ However, the Chief of Engineers, in his report of 20 September 1945, concurred in the recommendations of the survey board and Division Engineer, stating that the construction of the navigation features is fully warranted. The reported ratio of benefits to costs was 1.08 to 1. The Congress authorized the navigation features, as well as the flood control works, in the River and Harbor Act of 24 July 1946.¹⁹

After several years of debate over the question of the navigation system's economic feasibility, the Arkansas River navigation

¹⁸ House Document 758, 79th Congress, 2d Session.

¹⁹ Ibid.

project--the largest ever undertaken by the Corps--was begun in 1955 and officially opened to navigation all the way to Catoosa, Oklahoma on 31 December 1970. Post-construction evaluation indicates that the project is bringing considerable economic growth to the region.

1946 - Red River, Louisiana, Arkansas, Oklahoma, and Texas
(Overton-Red River Waterway)

On 8 February 1946, the Board reported favorably for a 9-foot deep navigation channel on the Red River from the junction with the Mississippi River to Shreveport, concurring in the recommendations of the Division Engineer, Lower Mississippi Valley in his report. The project had a ratio of benefits to costs of 1.28 to 1.²⁰ The project was authorized by the Congress in the Rivers and Harbors Act of 24 July 1946.

Here, in the space of a few months, the Board reported favorably on the Red River and Tennessee-Tombigbee projects and unfavorably on the Arkansas River project. Congress authorized all three. Today, the Arkansas River project is completed for navigation and the other two projects are under construction, but several years from completion.

²⁰ House Document 320, 80th Congress, 1st Session.

1952 - Inland Waterway from Delaware River to Chesapeake Bay,
Delaware and Maryland (The Chesapeake and Delaware Canal)

An interesting case of extensive Board review and insistence on recommendations of greater scope than those proposed by reporting officers is the review that led to the currently authorized project for the Chesapeake and Delaware Canal. Early in its history, the Board had strongly favored a deep channel along this route, foreseeing the need for deeper channels as ship sizes and traffic increased. This posture the Board maintained for fifty years.

The studies which led to the present 35-foot deep and 450-foot wide canal were requested by a resolution of the Congress on 28 March 1939. The study resolution asked for particular consideration of modification of bridges on the waterway. A preliminary examination recommending a detailed survey of improvements was submitted by the District Engineer, Philadelphia, on 1 April 1940 and was favorably reviewed by the Board; the Chief of Engineers approved the survey on 6 May 1940. Questions of policy on bridge replacements caused the return of a favorable report submitted by the District Engineer in 1942. In 1943, the Board issued its own interim report recommending a short cut-off channel to eliminate a bend near a bridge and a high-level bridge at Summit

to carry both railroad and highway traffic; however, this report was superseded by a more detailed report of the Board in 1952, when the Board greatly modified the recommendations of the District Engineer with respect to channel dimensions and bridge relocations.

On 1 October 1952, the Board reported favorably for construction of a 35-foot deep and 450-foot wide canal and replacement of all moveable bridges over the canal by three fixed bridges. The District Engineer, Philadelphia and Division Engineer, North Atlantic had recommended only a 32-foot deep and 400-foot wide canal, two fixed span bridges, and one moveable-span bridge, at a cost of \$45, 800, 000. The Board's modifications more than doubled the project cost to \$96, 000, 000. The Chief of Engineers concurred in the Board's recommendations, and the project was authorized accordingly by the Congress in 1954. ²¹ Today, the project canal is essentially complete.

²¹ Senate Document 123, 83rd Congress, 2d Session.

1972-73 - Passaic River, New Jersey. The long, involved history of the Passaic River flood control project is particularly significant to the role of the Board in shaping development of projects. Disastrous floods on the Passaic River in 1902 and 1903 were among the worst in U. S. history. Studies for flood remedies began immediately thereafter at the state level.

In 1936, the Congress asked the Corps of Engineers to report on flood control measures for the river basin. In 1939, the District Engineer, New York and the Division Engineer, North Atlantic submitted their reports to the Board for review. The Board noted many objections: the lack of support from proponents, and lack of endorsement from the State of New Jersey--a situation which was to prevail for many years. The Board then held a public hearing in Paterson, New Jersey on 18 December 1939, at which the local interests stated their inability to furnish the required assurances of local cooperation and requested an extension of time for submitting additional data. Further extensions were granted until, finally, the Board returned the report to the Division Engineer for revision in consideration of changed conditions on 20 April 1945.

On 28 February 1949, the Division Engineer, North Atlantic issued a public notice that announced the submittal of a new report

to the Board. The notice drew many unfavorable responses from concerned interests. The Board then held a public hearing in Washington on 26 January 1950. Due to the numerous objections, the Board again returned the report to the Division Engineer for restudy.

Many hearings were held and studies made over the next twenty years and, on 17 July 1972, the Division Engineer again issued a notice that he was forwarding the District Engineer's report and his report recommending a plan of improvement for multiple purpose development. Their plan, known as Plan III, called for two reservoirs--one at Two Bridges and one near Myers Road--and channel improvements, levees, and flood walls at selected locations. The two reservoirs included storage for flood control, water supply and water quality.

The Board received many objections to the plan recommended. As a result, the Board directed that a public meeting be held in Wayne, New Jersey on 10 May 1972. As a result of the testimony heard, the Board then investigated and recommended an alternative plan, II-B, that would eliminate water quality and water supply and provide essentially for flood control. The Myer Road reservoir was dropped and the Two Bridges Reservoir reduced in scope. The Board acted on 22 June 1973.

The Chief of Engineers then sent his draft report, concurring with the Board's recommendations, to the Governor of New Jersey and Washington-level Federal agencies for review. Due to a change in administration in New Jersey, the Governor's endorsement of the plan did not come until April 1974. The Chief of Engineers signed his report on 18 February 1976. Finally, the Congress authorized the project recommended by the Board and concurred in by the Chief of Engineers for Phase I engineering and design studies on 22 October 1976 in the Water Resources Development Act of 1976 (Public Law 94-587).

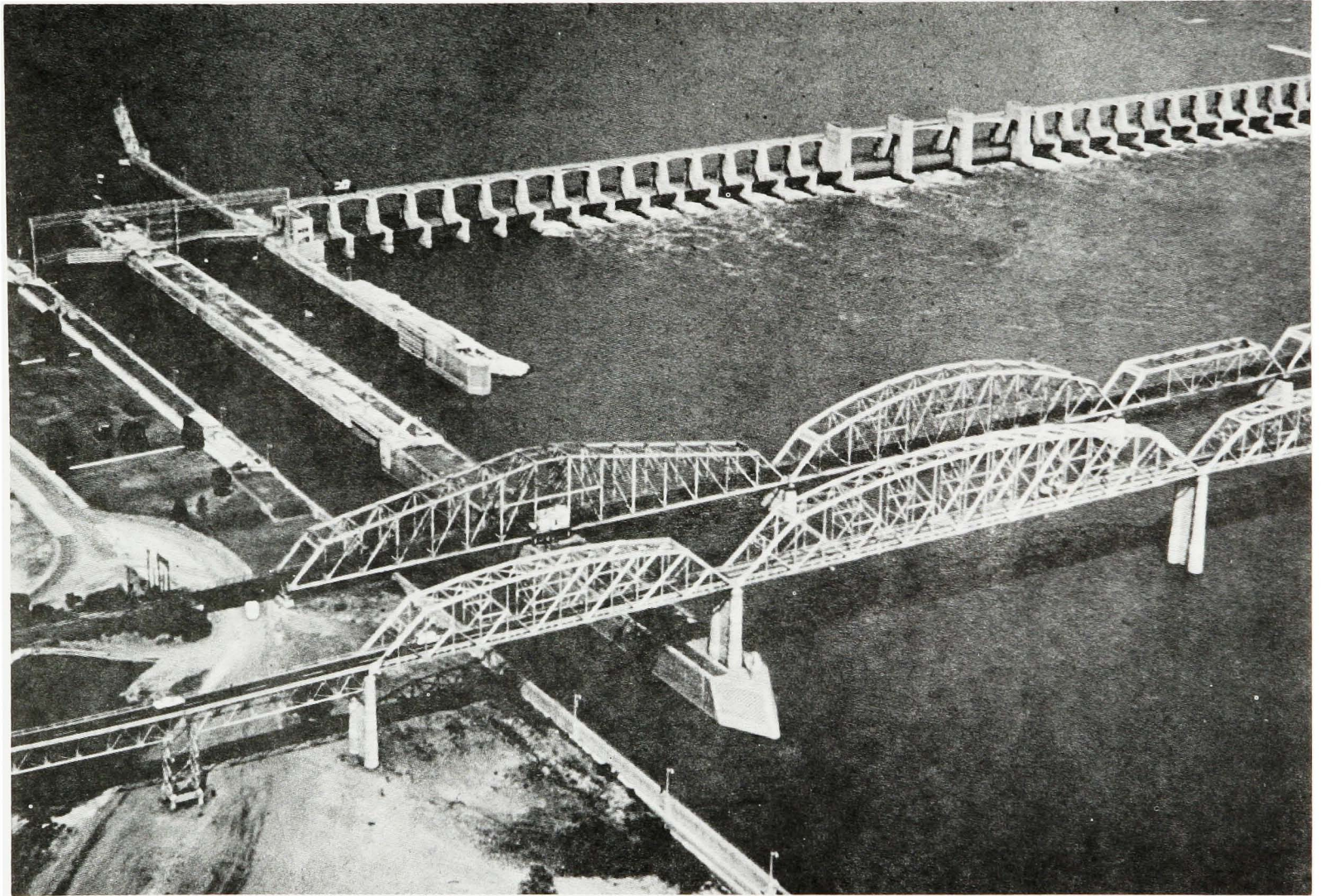
The story of the Passaic River flood control project is not over, however. Quite often, the Congressional acts authorizing projects do not tell the whole story on what the Congress desires to be done. If there is doubt, Corps planners often refer to the responsible House or Senate Committee reports for guidance. In this case, the report of the House Public Works and Transportation Committee No. 94-1702, dated 27 September 1976, provides the guidance for further studies. In essence, it states that there is much controversy in the Board's recommended plan II-B, as it affects water quality, water management, and consideration of alternative plans, and asks that the plan be reformulated for flood control and water management.

On 30 December 1977, the District Engineer, New York issued a notice that he was starting the Phase I study and would consider alternative plans. So the Passaic River story goes on.

1976 - Locks and Dam No. 26, Mississippi River, Alton, Illinois Replacement

Probably the most controversial waterway project to be considered by the Board in the last ten years is Locks and Dam No. 26. During the entire period of review, from August 1975 to February 1976, the proposed replacement project for Locks and Dam No. 26 was in litigation.

In October 1968, the Division Engineer, Lower Mississippi Valley, and District Engineer, St. Louis recommended the replacement of the existing dam and two lock chambers--one 600 feet long and 110 feet wide and the other 360 feet long and 110 feet wide--by a new dam downstream with two locks, each 1200 feet long and 110 feet wide. The existing dam and lock chambers had been completed in 1938. The Board concurred in the recommendations of the reporting officers but, in its report of 4 March 1969 to the Chief of Engineers, added that provision should be made for future lock(s) and/or other modifications which may be needed to serve the commerce estimated for the latter part of the project life. The Secretary of the Army



Locks and Dam No. 26, Upper Mississippi River, at Alton, Illinois. The replacement of these locks has been the project of greatest recent interest and controversy as reviewed and recommended by the Board.

approved that project under the authority delegated to him by the Congress in Section 6 of the River and Harbor Act of 1909 (known popularly as the "1909 replacement authority"). The Congress appropriated funds for design of the replacement project in 1970.

Design studies proceeded on schedule. On 14 November 1972, the Board was asked by the Chief of Engineers to review the Design Memorandum No. 2, General Design dated 8 September 1972. The Board did so and, in its 19 December 1972 report to the Chief of Engineers, reaffirmed the recommended project. However, two years later, on 5 September 1974, the District Court of the District of Columbia enjoined the Corps of Engineers from proceeding with construction until the consent of the Congress was obtained and the Environmental Impact Statement was revised to the Court's satisfaction.

By August 1975, the District Engineer's studies had proceeded to a draft Design Memorandum No. 11, Formulation Evaluation Report and a draft Supplemental Environmental Impact Statement, again confirming the need for a new dam and two lock chambers, each 1200 feet long and 110 feet long.

On 19 August 1975, the Chief of Engineers requested that the Board review all documents prepared by the District Engineer, previous

reports, and all actions associated with the project. The extensive six-month review effort consumed the time of much of the Board Staff and involved a public meeting for the Board in St. Louis on 11-12 September 1975, special environmental briefings for the Board members in LaCrosse, Wisconsin on 4-5 November 1975, a briefing with the Governor of Wisconsin with subsequent public information meetings in LaCrosse and St. Paul on 2 and 3 December 1975, and site visits by Board members and staff.

The Board reported to the Chief of Engineers on 24 February 1976 and recommended that a new dam be built two miles downstream of the existing dam and that a single lock chamber 1200 feet long and 110 feet wide be constructed there, that the operational need and economic justification of a second lock be recognized, and that the design and construction of the dam provide for future expansion. The estimated cost of the dam and single lock chamber was \$330,000,000, the most expensive single navigation structure on the inland waterway system to date. The Chief of Engineers concurred in the Board's recommendations on 31 July 1976. In his letter of transmittal to the Speaker of the House of 24 August 1976, the Secretary of the Army recommended the new dam and single lock, but recommended that no auxiliary lock be authorized until such time as an "interagency study indicate that such lock should be constructed."²²

²² House Document 94-584, 94th Congress, 2d Session.

The replacement of Locks and Dam No. 26 then became the subject of much Congressional debate over the need and cost recovery of such large Federal investments for inland navigation. The issue of user charges became linked to any proposed legislation that included this replacement project.

SUMMARY

Throughout its history, the Board has continued to assert its right to significantly modify the recommendations of reporting officers, and even to express opinions contrary to those of the Chief of Engineers, if it sees the need for such difference. For example, in a survey of Board actions for the five calendar years from 1966 through 1970, the Board took action on 339 survey reports, reporting favorably on 169 and unfavorably on 141, and returning 29 to the reporting officers for restudy. Of the 169 favorable actions, the Board made significant changes in the recommendations of 35 reports. In addition, Board Staff review results in substantial changes in 80 to 90 percent of the reports of the District Engineers.

CHAPTER VII

THE PRESENT AND THE FUTURE

The Board' s Permanent Home

Not until six years ago did the Board find quarters especially designed to suit the Board and its staff' s needs. The movement to the Kingman Building was a landmark in the Board' s long history.

The Board had been located in eight buildings in the Washington metropolitan area since its beginning:

- 1902-03 In 1902, the Board started business at the Academic Building, located at Washington Barracks, now the home of Ft. McNair in southwest District of Columbia.
- 1903-11 On 1 November 1903, the Board moved to the Colorado Building, at the corners of 14th and G. Streets, N. W., in the District of Columbia. It occupied Rooms 507 to 510, and added Room 630 later on.
- 1911-20 In June 1911, the Board moved to the Southern Building, at 15th and H. Streets, N. W., in the District of Columbia. It occupied Rooms 732 to 736.
- 1920-38 In 1920, the Board established a place of long residence at the Munitions Building, located in the District of Columbia, in Rooms 2741 to 2751. The Munitions Building was actually a complex of seventeen World War I temporary buildings connected by a central corridor fronting on the south side of Constitution Avenue, just west of the Washington Monument, District of Columbia.

- 1938-46 In November 1938, the Statistical and Marine Design Divisions of the Board moved to the Triangle Building at No. 2 New York Avenue, N. W., in the District of Columbia. They were later joined by the remainder of the staff. This building was formerly the home of Triangle Motors, a Ford Motor Company dealership. The Board stayed here for eight years.
- 1946-51 On 25 October 1946, the Board moved to quarters at the Chief of Engineers' headquarters, located at Temporary Building T-7, Gravelly Point, Virginia, just west of Washington National Airport.
- 1951-54 In April 1951, the Board moved back to the District of Columbia to a building located at 119 D. Street, N. E., just opposite Union Station Plaza.
- 1954-73 On 17 May 1954, the Board moved into its longest residency--nineteen years--at Temporary Building T-C at 2nd and Q. Streets, S. W., just outside and to the east of Ft. McNair, returning almost to the home of its beginning 52 years earlier.

In May 1973, the Board moved into its first new and, hopefully, permanent home at the Kingman Building, on Ft. Belvoir, Virginia.

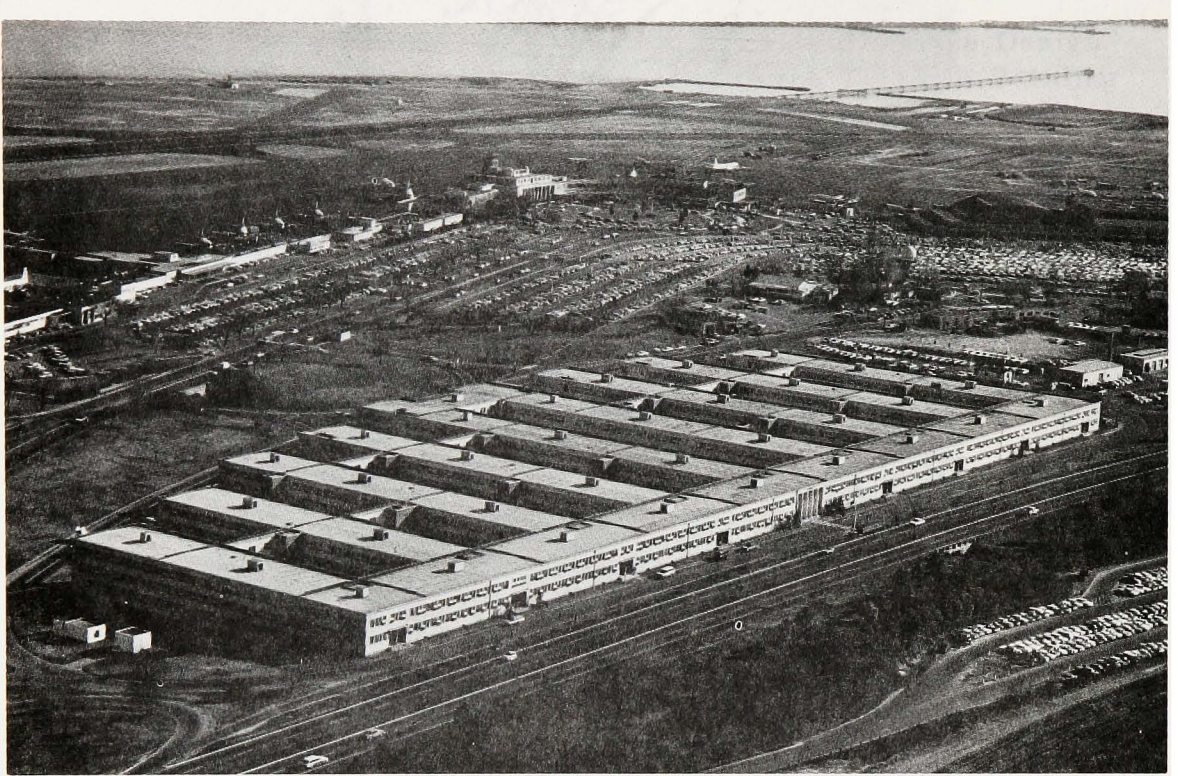
The Chief of Engineers had long wanted a permanent and suitable home for the Board. In the 1960s, it was planned to move the Board to a new building to be installed on property set aside for the Corps' role as water supply agent for the District of Columbia, a site off MacArthur Boulevard in northwest Washington, DC, just north of Sibley Hospital and south of the home of the U. S. Army Coastal Engineering Research Center. That building initially was to be designed for the Board alone. Later, it was expanded in concept to include new office space for the Coastal Engineering Research Center.



Academic Building, Washington Barracks, D.C.
Home of the Board in 1902 and 1903.



The Munitions Building, 19th & Constitution Avenue, N.W.
Washington, D.C., home of the Board from 1920 to 1938 .



Building "T-7," Gravelly Point, Virginia,
home of the Board from October 1946 to April 1951.

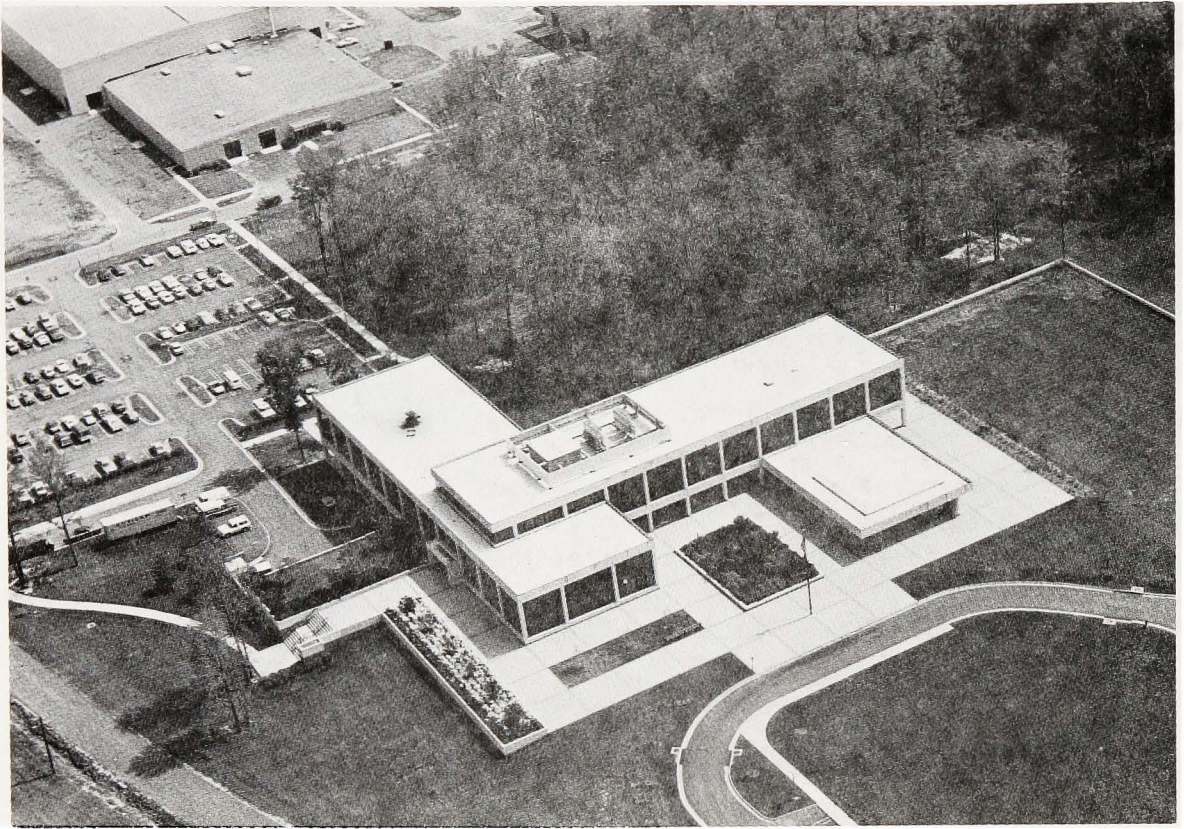


The familiar entrance to "TEMPO C," at
2nd and Q St., S.W., Washington, D. C.
Home of the Board from May 1954 to May 1973.

However, in the late 1960s, the National Capital Planning Commission objected to expansion of Corps of Engineers activities on property reserved primarily for the District of Columbia's water supply needs. Therefore, the Chief of Engineers, Lieutenant General William F. Cassidy, decided to move the building to Ft. Belvoir, Virginia, along with the relocation of all of the Coastal Engineering Research Center's laboratories and offices.

The Kingman Building houses three tenants: the Board, the Coastal Engineering Research Center, and the Institute for Water Resources. The Institute was added as an occupant after the building design was completed. The principal conference room is the Board Hearing Room, designed to accommodate the Board of Engineers for Rivers and Harbors' meetings in a manner most suitable for its use. A smaller conference room adjacent to the Hearing Room is known as the Board Room. These conference facilities are currently utilized heavily by all of the building's occupants and by other outside activities.

The Kingman Building was dedicated on 29 June 1973 to the memory of Brigadier General John J. Kingman, a West Point graduate and distinguished Corps of Engineers officer with 42 years of service. General Kingman had been a District Engineer at Milwaukee, Providence, and Boston; the Division Engineer, South Pacific Division in San Francisco; and Assistant Chief of Engineers. Most important,



Present Home of the Board at Fort Belvoir, Virginia



THE KINGMAN BUILDING

DEDICATED TO THE MEMORY OF

JOHN J. KINGMAN

1882 • 1948

BRIGADIER GENERAL, U.S. ARMY CORPS OF ENGINEERS

GENERAL KINGMAN'S DISTINGUISHED FORTY-SIX YEAR ARMY CAREER BEGAN IN 1900 WHEN HE ENTERED THE UNITED STATES MILITARY ACADEMY AT WEST POINT. HE GRADUATED IN 1904 AND WAS COMMISSIONED A SECOND LIEUTENANT IN THE CORPS OF ENGINEERS. DURING WORLD WAR I COLONEL KINGMAN SERVED AS CHIEF OF STAFF OF THE 90TH DIVISION. HE PARTICIPATED IN THE ST. MIHIEL AND MEUSE-ARGONNE OFFENSIVES, AND WAS AWARDED THE DISTINGUISHED SERVICE MEDAL IN RECOGNITION OF HIS "EXCEPTIONALLY MERITORIOUS AND DISTINGUISHED SERVICE." HE ALSO RECEIVED THE FRENCH LEGION OF HONOR (OFFICER), AND THE FRENCH CROIX DE GUERRE WITH PALM. FOLLOWING THE WAR HE SERVED IN A NUMBER OF CORPS CIVIL WORKS ASSIGNMENTS. HE BEGAN A THREE YEAR TOUR AS ASSISTANT CHIEF OF ENGINEERS IN 1938. FROM 1941 UNTIL HIS RETIREMENT IN 1948, GENERAL KINGMAN SERVED AS SENIOR MEMBER OF BOTH THE BEACH EROSION BOARD AND THE BOARD OF ENGINEERS FOR RIVERS AND HARBORS. DURING HIS LEADERSHIP OF THESE COMPLEMENTARY BOARDS HE CONCEIVED THE IDEA OF A COMMON FACILITY FOR THE TWO AGENCIES. NOW, WITH THE COMPLETION OF THIS BUILDING, HIS IDEA HAS BEEN BROUGHT TO FRUITION. IN RECOGNITION OF GENERAL KINGMAN'S DISTINGUISHED SERVICE TO HIS COUNTRY AND HIS VISION AND UNTIRING EFFORTS TOWARD THE REALIZATION OF HIS IDEA, THIS BUILDING IS DEDICATED TO HIS MEMORY.

General Kingman served as Senior Member (now Chairman) of the Board of Engineers for Rivers and Harbors from 10 February 1943 to 3 October 1945. He also served as Senior Member of the former Beach Erosion Board and Resident Member of the Beach Erosion Board's staff from December 1941 to October 1945. It is known that General Kingman had often expressed a desire to find a proper permanent home for the Board of Engineers for Rivers and Harbors.

The Staff

The 66-person Board Staff occupies two floors of the south wing of the Kingman Building. At present, the staff is engaged in several activities for the Chief of Engineers in addition to performing the review mission.

Five professional staff members are now engaged, either full- or part-time, in the conduct of the Congressionally-mandated National Waterways Study. One other staff member recently returned from full-time assignment on the National Hydropower Study. Several staff persons were recently engaged in special task forces designing policy and guidance for the President's Water Policy. One staff member has just returned from a year's Congressional fellowship assignment on the Senate Public Works Committee.

Two other staff members have returned from a similar Congressional assignment. A staff member recently completed a special economic development assignment in Pakistan arranged through the Office, Chief of Engineers and the Agency for International Development. Periodically, other staff have been called on to assist the staffs of the Chief of Engineers, the Secretary of the Army, and the Water Resources Council in special assignments related to water resources development.

The Future

The Board and its staff have long been regarded as important members of the Corps of Engineers family. Key staff members will continue to be called upon by the Corps and other agencies to lend expertise, particularly in the field of water resources planning.

Review of projects has become a more complex undertaking over the years, as can be witnessed by the broadening of expertise in those staff elements involved with the review mission. Water resources planning today is carried out in the open, with much public scrutiny along the way. The need for review, particularly review within the agency, is more apparent than ever.

It is expected that the Board will continue to fulfill important missions for the Chief of Engineers, the Congress, and the Nation.

APPENDIX I

BOARD MEETING DATES

(By Fiscal Year (F. Y.))

<u>F. Y. 1903</u>	<u>F. Y. 1903</u> (Cont' d)	<u>F. Y. 1904</u> (Cont' d)	<u>F. Y. 1904</u> (Cont' d)
10 Nov 02	3 Apr 03	24 Jul 03	11 Nov 03
14 Nov 02	4 Apr 03	27 Jul 03	12 Nov 03
18 Nov 02	6 Apr 03	29 Jul 03	2 Dec 03
20 Nov 02	8 Apr 03	31 Jul 03	4 Dec 03
26 Nov 02	9 Apr 03	3 Aug 03	5 Dec 03
28 Nov 02	13 Apr 03	5 Aug 03	9 Dec 03
2 Dec 02	15 Apr 03	7 Aug 03	10 Dec 03
4 Dec 02	17 Apr 03	14 Aug 03	14 Dec 03
30 Dec 02	21 Apr 03	19 Aug 03	15 Dec 03
3 Jan 03	23 Apr 03	21 Aug 03	21 Dec 03
6 Jan 03	28 Apr 03	25 Aug 03	22 Dec 03
8 Jan 03	1 May 03	26 Aug 03	4 Jan 04
22 Jan 03	4 May 03	31 Aug 03	5 Jan 04
5 Feb 03	6 May 03	2 Sep 03	11 Jan 04
10 Feb 03	9 May 03	9 Sep 03	12 Jan 04
12 Feb 03	11 May 03	11 Sep 03	18 Jan 04
17 Feb 03	21 May 03	14 Sep 03	19 Jan 04
19 Feb 03	4 Jun 03	16 Sep 03	26 Jan 04
24 Feb 03	6 Jun 03	18 Sep 03	29 Jan 04
26 Feb 03	9 Jun 03	22 Sep 03	30 Jan 04
3 Mar 03	10 Jun 03	24 Sep 03	4 Feb 04
4 Mar 03	12 Jun 03	29 Sep 03	5 Feb 04
5 Mar 03	13 Jun 03	1 Oct 03	9 Feb 04
6 Mar 03	19 Jun 03	2 Oct 03	10 Feb 04
9 Mar 03		10 Oct 03	15 Feb 04
10 Mar 03	<u>F. Y. 1904</u>	12 Oct 03	16 Feb 04
11 Mar 03		13 Oct 03	23 Feb 04
12 Mar 03	7 Jul 03	24 Oct 03	29 Feb 04
17 Mar 03	9 Jul 03	29 Oct 03	1 Mar 04
19 Mar 03	11 Jul 03	30 Oct 03	3 Mar 04
24 Mar 03	17 Jul 03	2 Nov 03	7 Mar 04
26 Mar 03	20 Jul 03	4 Nov 03	8 Mar 04
1 Apr 03	22 Jul 03	6 Nov 03	14 Mar 04

BOARD MEETING DATES (Cont' d)

<u>F. Y. 1905</u>	<u>F. Y. 1906</u> (Cont' d)	<u>F. Y. 1906</u> (Cont' d)	<u>F. Y. 1907</u> (Cont' d)
4 Nov 04	4 Oct 05	21 Mar 06	3 Jan 07
1 Dec 04	18 Oct 05	28 Mar 06	5 Jan 07
3 Dec 04	19 Oct 05	30 Mar 06	7 Jan 07
6 Dec 04	23 Oct 05	4 Apr 06	8 Jan 07
15 Dec 04	25 Oct 05	6 Apr 06	9 Jan 07
16 Dec 04	27 Oct 05	11 Apr 06	10 Jan 07
19 Dec 04	1 Nov 05	16 Apr 06	11 Jan 07
21 Dec 04	3 Nov 05	18 Apr 06	16 Jan 07
23 Dec 04	6 Nov 05	25 Apr 06	21 Jan 07
29 Dec 04	8 Nov 05	7 May 06	23 Jan 07
30 Dec 04	15 Nov 05	16 May 06	4 Feb 07
4 Jan 05	20 Nov 05	18 May 06	7 Feb 07
19 Jan 05	22 Nov 05	23 May 06	23 Feb 07
20 Jan 05	24 Nov 05	8 Jun 06	23 Mar 07
2 Feb 05	27 Nov 05	13 Jun 06	15 Apr 07
6 Feb 05	29 Nov 05	15 Jun 06	29 Apr 07
7 Feb 05	4 Dec 05	18 Jun 06	7 May 07
1 Mar 05	6 Dec 05	29 Jun 06	13 May 07
20 Apr 05	20 Dec 05		20 May 07
16 May 05	27 Dec 05	<u>F. Y. 1907</u>	27 May 07
14 Jun 05	29 Dec 05		3 Jun 07
15 Jun 05	3 Jan 06	6 Jul 06	10 Jun 07
19 Jun 05	5 Jan 06	13 Aug 06	17 Jun 07
	8 Jan 06	24 Aug 06	24 Jun 07
<u>F. Y. 1906</u>	10 Jan 06	19 Sep 06	
	12 Jan 06	15 Oct 06	<u>F. Y. 1908</u>
10 Jul 05	15 Jan 06	5 Nov 06	1 Jul 07
12 Jul 05	17 Jan 06	17 Nov 06	8 Jul 07
14 Jul 05	24 Jan 06	6 Dec 06	15 Jul 07
19 Jul 05	26 Jan 06	7 Dec 06	22 Jul 07
30 Aug 05	31 Jan 06	8 Dec 06	29 Jul 07
6 Sep 05	7 Feb 06	12 Dec 06	5 Aug 07
8 Sep 05	9 Feb 06	17 Dec 06	12 Aug 07
13 Sep 05	12 Feb 06	18 Dec 06	19 Aug 07
14 Sep 05	14 Feb 06	19 Dec 06	26 Aug 07
15 Sep 05	16 Feb 06	20 Dec 06	3 Sep 07
18 Sep 05	23 Feb 06	21 Dec 06	9 Sep 07
20 Sep 05	26 Feb 06	22 Dec 06	16 Sep 07
25 Sep 05	28 Feb 06	27 Dec 06	23 Sep 07
27 Sep 05	7 Mar 06	28 Dec 06	30 Sep 07
29 Sep 05	19 Mar 06	29 Dec 06	

BOARD MEETING DATES (Cont' d)

<u>F. Y. 1908</u> (Cont' d)	<u>F. Y. 1909</u>	<u>F. Y. 1909</u> (Cont' d)	<u>F. Y. 1910</u> (Cont' d)
7 Oct 07	6 Jul 08	15 Mar 09	6-7 Dec 09
14 Oct 07	13 Jul 08	12 Apr 09	13 Dec 09
28 Oct 07	20 Jul 08	19 Apr 09	20-21 Dec 09
4 Nov 07	27 Jul 08	26 Apr 09	27-28 Dec 09
11 Nov 07	3 Aug 08	3 May 09	3 Jan 10
18 Nov 07	10 Aug 08	10 May 09	10-11 Jan 10
25 Nov 07	17 Aug 08	14 May 09	17-18 Jan 10
2 Dec 07	31 Aug 08	17 May 09	24-25 Jan 10
9 Dec 07	8 Sep 08	24 May 09	28 Jan 10
16 Dec 07	14 Sep 08	1 Jun 09	31 Jan 1 Feb 10
23 Dec 07	21 Sep 08	3 Jun 09	4 Feb 10
30 Dec 07	5 Oct 08	7 Jun 09	7-8 Feb 10
6 Jan 08	12 Oct 08	14 Jun 09	14-15 Feb 10
13 Jan 08	20 Oct 08	21 Jun 09	21 Feb 10
22 Jan 08	26 Oct 08	28 Jun 09	28 Feb & 1 Mar 10
31 Jan 08	2 Nov 08		7 Mar 10
10 Feb 08	9 Nov 08	<u>F. Y. 1910</u>	14-15 Mar 10
17 Feb 08	16 Nov 08	6 Jul 09	21 Mar 10
24 Feb 08	23 Nov 08	12 Jul 09	4 Apr 10
2 Mar 08	30 Nov 08	19 Jul 09	11 Apr 10
9 Mar 08	1 Dec 08	26 Jul 09	18 Apr 10
13 Mar 08	7 Dec 08	2 Aug 09	25 Apr 10
16 Mar 08	8 Dec 08	9 Aug 09	16 May 10
23 Mar 08	14 Dec 08	23 Aug 09	23 May 10
28 Mar 08	21 Dec 08	30 Aug 09	31 May 10
30 Mar 08	22 Dec 08	4 Sep 09	6 Jun 10
4 Apr 08	28 Dec 08	13 Sep 09	13 Jun 10
6 Apr 08	4 Jan 09	20 Sep 09	27 Jun 10
13 Apr 08	11 Jan 09	27 Sep 09	
20 Apr 08	12 Jan 09	4 Oct 09	<u>F. Y. 1911</u>
27 Apr 08	18 Jan 09	11 Oct 09	5 Jul 10
4 May 08	25 Jan 09	18 Oct 09	11 Jul 10
11 May 08	1 Feb 09	1 Nov 09	18 Jul 10
18 May 08	8 Feb 09	8 Nov 09	25 Jul 10
25 May 08	15 Feb 09	15 Nov 09	1 Aug 10
1 Jun 08	23 Feb 09	22 Nov 09	8 Aug 10
8 Jun 08	1 Mar 09	29 Nov 09	15 Aug 10
29 Jun 08	8 Mar 09		

BOARD MEETING DATES (Cont' d)

<u>F. Y. 1911</u> (Cont' d)	<u>F. Y. 1911</u> (Cont' d)	<u>F. Y. 1912</u> (Cont' d)	<u>F. Y. 1913</u> (Cont' d)
29 Aug 10	5 Jun 11	19-20 Feb 12	17-18 Feb 13
6 Sep 10	12 Jun 11	26-27 Feb 12	24-25 Feb 13
12 Sep 10	19 Jun 11	4-5 Mar 12	10 Mar 13
26 Sep 10	26 Jun 11	11 12 Mar 12	24 Mar 13
3 Oct 10		18-19 Mar 12	31 Mar 13
11 Oct 10	<u>F. Y. 1912</u>	1-2 Apr 12	7 Apr 13
17 Oct 10		8 Apr 12	28 Apr 13
22 Oct 10	3 Jul 11	15 Apr 12	5 May 13
31 Oct & 1 Nov 10	10 Jul 11	13 May 12	12 May 13
7 Nov 10	18 Jul 11	27 May 12	19-20 May 13
14 Nov 10	8-9 Aug 11	3 Jun 12	26-27 May 13
25 Nov 10	12 Aug 11	10 Jun 12	2-3 Jun 13
28 Nov 10	21-22 Aug 11	24-25 Jun 12	16-17 Jun 13
5-6 Dec 10	29 Aug 11		30 Jun 13
12-13 Dec 10	5 Sep 11	<u>F. Y. 1913</u>	
19-20 Dec 10	11 Sep 11		<u>F. Y. 1914</u>
27 Dec 10	18-19 Sep 11	10 Jul 12	
3-4 Jan 11	26 Sep 11	22 Jul 12	1 Jul 13
9-10 Jan 11	2 Oct 11	5 Aug 12	15-16 Jul 13
16-17 Jan 11	9 Oct 11	26 Aug 12	29-30 Jul 13
23-24 Jan 11	16 Oct 11	9 Sep 12	12-13 Aug 13
30-31 Jan 11	26 Oct 11	23 Sep 12	26-27 Aug 13
6-7 Feb 11	30 Oct 11	7 Oct 12	9-10 Sep 13
13-14 Feb 11	6 Nov 11	14 Oct 12	23 Sep 13
20 Feb 11	13-14 Nov 11	21 Oct 12	14 Oct 13
27 Feb 11	20-21 Nov 11	4 Nov 12	28 Oct 13
6 Mar 11	27-28 Nov 11	11 Nov 12	4 Nov 13
13 Mar 11	4 Dec 11	25-26 Nov 12	18-19 Nov 13
27 Mar 11	11-12 Dec 11	5-6 Dec 12	2-3 Dec 13
3 Apr 11	18-19 Dec 11	9-10 Dec 12	16 Dec 13
10 Apr 11	26 Dec 11	16 Dec 12	30 Dec 13
17 Apr 11	2-3 Jan 12	23 Dec 12	13-14 Jan 14
24 Apr 11	8-9 Jan 12	6 Jan 13	27-28 Jan 14
1 May 11	15-16 Jan 12	13-14 Jan 13	4 Feb 14
8 May 11	22 Jan 12	20-21 Jan 13	10-11 Feb 14
15 May 11	29-30 Jan 12	27 Jan 13	24 Feb 14
22 May 11	5-6 Feb 12	3-4 Feb 13	10-11 Mar 14
29 May 11	12-13 Feb 12	10-11 Feb 13	24-25 Mar 14

BOARD MEETING DATES (Cont' d)

<u>F. Y. 1914</u>	<u>F. Y. 1916</u>	<u>F. Y. 1917</u>	<u>F. Y. 1919</u>
(Cont' d)	(Cont' d)	(Cont' d)	(Cont' d)
7-8 Apr 14	16 Nov 15	27-28 Feb 17	11 Feb 19
21-22 Apr 14	17 Nov 15	13-14 Mar 17	11 Mar 19
5-6 May 14	23 Nov 15	27 Mar 17	8 Apr 19
19 May 14	7-8 Dec 15	10 Apr 17	19 May 19
16 Jun 14	21 & 23 Dec 15	24-25 Apr 17	10 Jun 19
30 Jun 14	11-12 Jan 16	15 May 17	24 Jun 19
	19 Jan 16	29 May 17	
<u>F. Y. 1915</u>	25-26 Jan 16	26-27 Jun 17	<u>F. Y. 1920</u>
	8-9 Feb 16		
14 Jul 14	23-24 Feb 16	<u>F. Y. 1918</u>	15 Jul 19
27 Jul 14	7-8 Mar 16		12 Aug 19
15 Sep 14	21-22 Mar 16	17 Jul 17	9 Sep 19
29 Sep 14	23-24 Mar 16	31 Jul 17	23 Sep 19
20 Oct 14	11-12 Apr 16	25 Sep 17	14 Oct 19
24 Nov 14	25-26 Apr 16	13 Nov 17	4 Nov 19
9 Dec 14	9-10 May 16	27 Nov 17	2 Dec 19
5 Jan 15	23-24 May 16	18 Dec 17	9 Dec 19
27-28 Jan 15	6-7 Jun 16	8 Jan 18	23 Dec 19
11 Feb 15	20 Jun 16	29 Jan 18	13 Jan 20
16 Mar 15		12 Feb 18	27 Jan 20
20-21 Apr 15	<u>F. Y. 1917</u>	5 Mar 18	10 Feb 20
28 Apr 15		19 Mar 18	24 Feb 20
26 May 15	11-12 Jul 16	9 Apr 18	23 Mar 20
15-16 Jun 15	25 Jul 16	23 Apr 18	20 Apr 20
24-30 Jun 15	8 Aug 16	7 May 18	4 May 20
	22 Aug 16	21 May 18	25 May 20
<u>F. Y. 1916</u>	12 Sep 16	26, 29 May 18	8 Jun 20
	20 Sep 16	11-12 Jun 18	29 Jun 20
13 Jul 15	26 Sep 16	25 Jun 18	
27 Jul 15	17 Oct 16		<u>F. Y. 1921</u>
18 Aug 15	14 Nov 16	<u>F. Y. 1919</u>	
14-15 Sep 15	21 Nov 16		27 Jul 20
28 Sep 15	6-7 Dec 16	23-24 Jul 18	3 Aug 20
12 Oct 15	20-21 Dec 16	20 Aug 18	24 Aug 20
13 Oct 15	9-10 Jan 17	24 Sep 18	21 Sep 20
19 Oct 15	19 Jan 17	5 Nov 18	16 Nov 20
26 Oct 15	30-31 Jan 17	3 Dec 18	30 Nov 20
27 Oct 15	6 Feb 17	7 Jan 19	9 Dec 20
9-10 Nov 15	13-14 Feb 17	21 Jan 19	21 Dec 20

BOARD MEETING DATES (Cont' d)

<u>F. Y. 1921</u> (Cont' d)	<u>F. Y. 1923</u> (Cont' d)	<u>F. Y. 1925</u> (Cont' d)	<u>F. Y. 1927</u> (Cont' d)
11 Jan 21	21 Nov 22	11 Nov 24	23 Nov 26
25 Jan 21	5 Dec 22	28 Nov 24	1-6 Dec 26
8 Feb 21	16 Jan 23	9 Dec 24	13-15 Dec 26
24 Feb 21	13-14 Feb 23	23 Dec 24	28 Dec 26
15 Mar 21	27 Feb 23	3 Feb 25	14-15 Jan 27
29 Mar 21	27 Mar 23	25-26 Feb 25	2-3 Feb 27
12 Apr 21	24 Apr 23	6 Apr 25	15 Feb 27
26 Apr 21	8 May 23	5-6 May 25	26 Feb 27
10 May 21	22 May 23	28 May 25	2 Mar 27
24 May 21	13 Jun 23		15 Mar 27
7 Jun 21	27 Jun 23	<u>F. Y. 1926</u>	29 Mar 27
21 Jun 21			8 Apr 27
	<u>F. Y. 1924</u>	14 Jul 25	19 Apr 27
<u>F. Y. 1922</u>		9 Sep 25	25 May 27
26 Jul 21	10 Jul 23	29 Sep 25	28 Jun 27
9 Aug 21	21 Aug 23	20 Oct 25	29 Jun 27
30 Aug 21	18-19 Sep 23	7 Nov 25	
27 Sep 21	23 Oct 23	17 Nov 25	<u>F. Y. 1928</u>
18-19 Oct 21	13 Nov 23	8-9 Dec 25	19 Jul 27
8 Nov 21	4-5 Dec 23	22 Dec 25	23 Aug 27
6 Dec 21	11 Dec 23	11-12 Jan 26	27 Sep 27
20 Dec 21	20 Dec 23	26 Jan 26	18 Oct 27
17 Jan 22	8 Jan 24	30 Jan 26	10-11 Nov 27
7 Feb 22	22 Jan 24	16 Feb 26	22 Nov 27
21 Feb 22	5-6 Feb 24	9 Mar 26	13-14 Dec 27
7 Mar 22	19 Feb 24	15-17 Mar 26	29 Dec 27
14 Mar 22	4 Mar 24	23, 25-26 Mar 26	17-18 Jan 28
4 Apr 22	11 Mar 24	6-8 Apr 26	3 Feb 28
11 Apr 22	5 Apr 24	27-28 Apr 26	17-18 Feb 28
18 Apr 22	11 Apr 24	11-12 May 26	23 Feb 28
16-17 May 22	22-23 Apr 24	25 May 26	6 Mar 28
20 Jun 22	6 May 24	15 Jun 26	20, 21 & 23 Mar 28
	20 May 24	17 Jun 26	29 Mar 28
	17 Jun 24		3 Apr 28
<u>F. Y. 1923</u>	<u>F. Y. 1925</u>	<u>F. Y. 1927</u>	12 Apr 28
11-12 Jul 22		28 Jul 26	17 Apr 28
22 Aug 22	15 Jul 24	8 Sep 26	25 Apr 28
19 Sep 22	19 Aug 24	15 Oct 26	28 Apr 28
24 Oct 22	10 Oct 24	12 Nov 26	1, 2 & 3 May 28

BOARD MEETING DATES (Cont' d)

<u>F. Y. 1928</u>	<u>F. Y. 1930</u>	<u>F. Y. 1931</u>	<u>F. Y. 1933</u>
(Cont' d)	(Cont' d)	(Cont' d)	(Cont' d)
4 May 28	10 Dec 29	30 Mar 31	7 Sep 32
15-16 May 28	20 Dec 29	20 Apr 31	26 Sep 32
25 May 18	7 Jan 30	11 May 31	17-18 Oct 32
5 & 6 Jun 28	14-15 Jan 30	1 Jun 31	31 Oct 32
28 Jun 28	21-22 Jan 30	29 Jun 31	5-6 Dec 32
	28 Jan 30		19 Dec 32
<u>F. Y. 1929</u>	4-5 Feb 30	<u>F. Y. 1932</u>	9-10 Jan 33
	11 Feb 30		30 Jan 33
24 Jul 28	18 Feb 30	21 Jul 31	13-14 Feb 33
21 Aug 28	25-26 Feb 30	31 Aug 31	27 Feb 33
25 Sep 28	11-12 Mar 30	29 Sep 31	13 Mar 33
23 Oct 28	25-26 Mar 30	12 Oct 31	7-8 Apr 33
15 Nov 28	1-2 Apr 30	19 Oct 31	24-25 Apr 33
4 Dec 28	15 Apr 30	2 Nov 31	15, 16, 17 May 33
10 Dec 28	23 Apr 30	16 Nov 31	5, 6, 7 Jun 33
18 Dec 28	13 May 30	30 Nov 31	19, 20 Jun 33
9 Jan 29	27 May 30	7 Dec 31	
1 Feb 29	24 Jun 30	14 Dec 31	<u>F. Y. 1934</u>
19 Feb 29		21 Dec 31	
6 Mar 29	<u>F. Y. 1931</u>	11 Jan 32	10 Jul 33
30 Mar 29		18 Jan 32	31 Jul 1 Aug 33
17 Apr 29	29 Jul 30	25 Jan 32	14 Aug 33
23-24 Apr 29	9 Sep 30	1 Feb 32	11, 12 Sep 33
2 May 29	14 Oct 30	8 Feb 32	2, 3 Oct 33
7 May 29	21-22 Oct 30	15 Feb 32	23, 24 Oct 33
20 May 29	4 Nov 30	23 Feb 32	13, 14 Nov 33
28 May 29	24 Nov 30	29 Feb 32	11, 12 Dec 33
18 Jun 29	2 Dec 30	14 Mar 32	8 Jan 34
	9 Dec 30	28-29 Mar 32	17 Jan 34
<u>F. Y. 1930</u>	12 Dec 30	11 Apr 32	29, 30 Jan 34
	22 Dec 30	22 Apr 32	12 Feb 34
9 Jul 29	30 Dec 30	2-3 May 32	26 Feb 34
6 Aug 29	5 Jan 31	16 May 32	26, 27 Mar 34
27 Aug 29	12 Jan 31	1 Jun 32	9 Apr 34
25 Sep 29	20 Jan 31	13-14 Jun 32	23, 24 Apr 34
8 Oct 29	3 Feb 31	27-28 Jun 32	2 May 34
22 Oct 29	10 Feb 31		11 May 34
12 Nov 29	17-18 Feb 31	<u>F. Y. 1933</u>	26 Jun 34
15 Nov 29	24 Feb 31		
25-26 Nov 29	9 Mar 31	18-19 Jul 32	

BOARD MEETING DATES (Cont' d)

<u>F. Y. 1935</u>	<u>F. Y. 1937</u>	<u>F. Y. 1938</u> (Cont' d)	<u>F. Y. 1941</u>
16-17 Jul 34	31 Aug 36	18 Apr 38	19 Aug 40
6 Aug 34	21 Sep 36	2 May 38	30 Sep/1 Oct 40
28 Aug 34	19 Oct 36	16 May 38	28 Oct 40
17-19 Sep 34	16 Nov 36	6 Jun 38	2 Dec 40
8 Oct 34	14 Dec 36		27 Jan 41
29 Oct 34	16, 17, 18 Dec 36	<u>F. Y. 1939</u>	3 Mar 41
19 Nov 34	11 Jan 37	11 Jul 38	31 Mar 41
10 Dec 34	12, 13, 14 Jan 37	25 Jul 38	29-30 Apr 41
11-12 Jan 35	22 Jan 37 (1tr ballots)	26 Sep 38	26 May 41
4-5 Feb 35	25 Jan 37	27 Sep 38	16 Jun 41
15-16 Feb 35	26-27 Jan 37	21 Nov 38	30 Jun 41
4 Mar 35	8 Feb 37	20 Dec 38	
25-26 Mar 35	9 Feb 37	23 Jan 39	<u>F. Y. 1942</u>
15, 16, 17 Apr 35	15-16 Feb 37	24 Jan 39	14 Jul 41
6 May 35	24 Feb 37	7 Feb 39	15 Jul 41
13 May 35	1 Mar 37	13 Feb 39	11 Aug 41
23 May 35	8-9 Mar 37	6 Mar 39	8 Sep 41
3 Jun 35	15-16 Mar 37	20 Mar 39	13-14 Oct 41
17, 18, 19 & 20 Jun 35	29 Mar 37	21 Mar 39	24 Nov 41
	12-13 Apr 37	10 Apr 39	19 Jan 42
<u>F. Y. 1936</u>	26 Apr 37	15 May 39	23 Feb 42
15 Jul 35	10 May 37	16 May 39	23 Mar 42
7-8 Aug 35	24 May 37	5 Jun 39	4 May 42
26-27 Aug 35	7 Jun 37	26 Jun 39	8 Jun 42
23 Sep 35	14 Jun 37	27 Jun 39	
21 Oct 35	23 Jun 37		<u>F. Y. 1943</u>
18 Nov 35	28-29 Jun 37	<u>F. Y. 1940</u>	28 Sep 42
17 Dec 35	30 Jun 37	17 Jul 39	8 Feb 43
20, 21, 22 Jan 36	<u>F. Y. 1938</u>	11 Sep 39	3 May 43
10, 11 Feb 36	1 Jul 37	25-26 Sep 39	
28, 29 Feb 36	12 Jul 37	2-3-4 Oct 39	<u>F. Y. 1944</u>
16, 17, 18 Mar 36	19 Jul 37	30 Oct 39	23 Aug 43
30-31 March/ 1-2 Apr 36	23-24 Aug 37	27-28 Nov 39	8 Nov 43
6, 7, 8, 9 Apr 36	27-28 Sep 37	5 Dec 39	10 Nov 43
27, 28, 29 & 30 Apr 36	1 Nov 37	18 Dec 39	12 Nov 43
18, 19, 20 & 21 May 36	10, 11, 12 Jan 38	29-30 Jan 40	13 Dec 43
1 Jun 36	7-8 Feb 38	26-27 Feb 40	7 Feb 44
29 Jun 36	7-8 Mar 38	25-26 Mar 40	27 Mar 44
	21 Mar 38	18 Apr 40	
	4-5 Apr 38	29-30 Apr 40	
		27-28 May 40	

BOARD MEETING DATES (Cont' d)

<u>F. Y. 1945</u>	<u>F. Y. 1949</u>	<u>F. Y. 1953</u> (Cont' d)	<u>F. Y. 1957</u> (Cont' d)
2 Nov 44	18-19 Oct 48	5 Feb 53	28 Jan 57
2-4 Apr 45	17-18-19 Nov 48	19-20 Mar 53	26 Mar 57
4-5-7 May 45	16 Dec 48	20-21 Apr 53	21 May 57
28 May 45	24-25-26 Jan 49	19 Jun 53	
25 Jun 45	31 Jan/1-2-3		<u>F. Y. 1958</u>
26 Jun 45	Feb 49	<u>F. Y. 1954</u>	24-25 Sep 57
	11 Mar 49	4 Sep 53	4 Dec 57
<u>F. Y. 1946</u>	21-22 Apr 49	15 Oct 53	27-28 Jan 58
	2-3 Jun 49	20 Nov 53	28-29 Apr 58
10-11 Sep 45		19 Jan 54	
15 Oct 45	<u>F. Y. 1950</u>	22 Jan 54	<u>F. Y. 1959</u>
22 Oct 45	13-14 Oct 49	26 Feb 54	11 Jul 58
13-14 Nov 45	8-9 Dec 49	26 Mar 54	30 Sep 58
10 Dec 45	25-26-27 Jan 50	29-30 Apr 54	22 Oct 58
14 Jan 46	2-3 Mar 50	9-10-11 Jun 54	2-3 Dec 58
18-19 Feb 46	17-18-19 Apr 50	13 Sep 54	27 Jan 59
18 Mar 46	19-20 Jun 50	30 Nov 54	13-14 Mar 59
29-30 Apr 46			7-8 May 59
30-31 May 46	<u>F. Y. 1951</u>	<u>F. Y. 1955</u>	4-5 Jun 59
18 Jun 46	23-24 Oct 50	13 Sep 54	
	31 Jan/1-2 Feb 51	29 Nov 54	<u>F. Y. 1960</u>
<u>F. Y. 1947</u>	9 Apr 51	20 Jan 55	21-22 Jul 59
7-8 Oct 46	4-5-6 Jun 51	23-25 Mar 55	20 Oct 59
18 Nov 46		12 May 55	15 Dec 59
2 Dec 46	<u>F. Y. 1952</u>	<u>F. Y. 1956</u>	16-17 Feb 60
4 Dec 46	30-31 Jul 51	21 Sep 55	29-30 Mar 60
10 Jan 47	29-30 Oct 51	8 Nov 55	5-6 May 60
5-6 Mar 47	14-15 Jan 52	29 Nov 55	
27-28 Mar 47	11-12 Feb 52	19-20 Jan 56	<u>F. Y. 1961</u>
19 May 47	9-10-11 Apr 52	6 Mar 56	9 Aug 60
	19 Jun 52	19 Jun 56	14-15 Nov 60
<u>F. Y. 1948</u>			31 Jan/1 Feb 61
11 Jul 47	<u>F. Y. 1953</u>	<u>F. Y. 1957</u>	28-29 Mar 61
3 Nov 47	29-30 Sep/1 Oct 52	8 Aug 56	23-24 May 61
19-20 Jan 48	18 Nov 52	25-26 Sep 56	
2-3-4-5 Feb 48	18 Dec 52 (ballot)	29-30 Nov 56	
26-27 Feb 48	6 Jan 53		
19-20 Apr 48			
7-8 Jun 48			

BOARD MEETING DATES (Cont' d)

<u>F. Y. 1962</u>	<u>F. Y. 1967</u>	<u>F. Y. 1971</u> (Cont' d)	<u>F. Y. 1976</u> (Cont' d)
8-9 Aug 61	7-8 Sep 66	30 Sep 70	22-23 Jan 76
13-14 Nov 61	10-11 Oct 66	27 Apr 71	12 Feb 76
24-26 Jan 62	15-16 Feb 67		21 Apr 76
26-27 Feb 62	21-22 Mar 67	<u>F. Y. 1972</u>	15 Jun 76
22-23 Mar 62	12-13 Apr 67	22 Sep 71	28-29 Jun 76
4-5 May 62	2 May 67	14 Dec 71	26-27 Jul 76
		19 Jan 72	28-29 Sep 76
<u>F. Y. 1963</u>	<u>F. Y. 1968</u>	24 Feb 72	<u>F. Y. 1977</u>
29-30 Nov 62	6-7 Sep 67	29-30 Mar 72	7-8 Dec 76
12-13-14 Mar 63	10 Oct 67	1-2 May 72	1-2 Mar 77
2 May 63	29 Nov 67		3-4 May 77
	6 Feb 68	<u>F. Y. 1973</u>	9-10 Aug 77
<u>F. Y. 1964</u>	26-27 Mar 68	6 Jul 72	<u>F. Y. 1978</u>
23-24 Jul 63	6-7 May 68	30 Aug 72	11 Nov 77
20-21-22 Nov 63	6-7 Jun 68	29 Nov 72	16-17 Jan 78
18-19 Feb 64	<u>F. Y. 1969</u>	1 May 73	5-6 Apr 78
24-25 Mar 64	13-14 Aug 68	<u>F. Y. 1974</u>	21 Jun 78
4-5 May 64	29 Oct 68	1-2 Aug 73	
	18 Dec 68	18 Sep 73	<u>F. Y. 1979</u>
<u>F. Y. 1965</u>	4 Mar 69	4-5 Dec 73	21 Mar 79
13-14 Jul 64	13 May 69	12-13 Feb 74	31 Jul - 1 Aug 79
16-17 Nov 64	<u>F. Y. 1970</u>	<u>F. Y. 1975</u>	
24-25 Feb 65	3 Sep 69	9-10 Jul 74	
20-21 Apr 65	14 Oct 69	1-2 Oct 74	
3-4 Jun 65	20-21 Nov 69	9-10-11 Dec 74	
	9-10 Feb 70	13-14 Mar 75	
<u>F. Y. 1966</u>	28 Apr 70	<u>F. Y. 1976</u>	
14-15 Sep 65	17-18-19 Jun 70	7-8 Oct 75	
29 Oct 65	<u>F. Y. 1971</u>	9-10 Dec 75	
7-8-9 Dec 65	28-29 Jul 70		
12-13 Jan 66			
5-6-7 Apr 66			
3-4 May 66			

APPENDIX II

LAWS CREATING, APPLYING, AND DESIGNATING STATUS
OF THE
BOARD OF ENGINEERS FOR RIVERS AND HARBORS

Attachment 1	River and Harbor Act, approved June 13, 1902
Attachment 2	River and Harbor Act, approved March 3, 1909
Attachment 3	River and Harbor Act, approved July 25, 1912
Attachment 4	River and Harbor Act, approved March 4, 1913
Attachment 5	Flood Control Act, approved March 1, 1917
Attachment 6	River and Harbor Act, approved November 7, 1963

(Basic Law Creating Board of Engineers for Rivers and Harbors)

River and Harbor Act, approved June 13, 1902

(R&H Laws, Vol. 2, pp. 1006-1007)

* * * * *

Sec. 3. That there shall be organized in the Office of the Chief of Engineers, United States Army, by detail from time to time from the Corps of Engineers, a board of five engineer officers, whose duties shall be fixed by the Chief of Engineers, and to whom shall be referred for consideration and recommendation, in addition to any other duties assigned, so far as in the opinion of the Chief of Engineers may be necessary, all reports upon examinations and surveys provided for by Congress, and all projects or changes in projects for works of river and harbor improvement heretofore or hereafter provided for. And the board shall submit to the Chief of Engineers recommendations as to the desirability of commencing or continuing any and all improvements upon which reports are required. And in the consideration of such works and projects the board shall have in view the amount and character of commerce existing or reasonably prospective which will be benefited by the improvement, and the relation of the ultimate cost of such work, both as to cost of construction and maintenance, to the public commercial interests involved, and the public necessity for the work and propriety of its construction, continuance, or maintenance at the expense of the United States. And such consideration shall be given as time permits to such works as have heretofore been provided for by Congress, the same as in the case of new works proposed. The board shall, when it considers the same necessary, and with the sanction and under orders from the Chief of Engineers, make, as a board or through its members, personal examinations of localities. And all facts, information, and arguments which are presented to the board for its consideration in connection with any matter referred to it by the Chief of Engineers shall be reduced to and submitted in writing, and made a part of the records of the Office of the Chief of Engineers. It shall further be the duty of said board, upon a request transmitted to the Chief of Engineers by the Committee on Rivers and Harbors of the House of Representatives, or the Committee on Commerce of the Senate, in the same manner

to examine and report through the Chief of Engineers upon any projects heretofore adopted by the Government or upon which appropriations have been made, and report upon the desirability of continuing the same or upon any modifications thereof which may be deemed desirable.

The Board shall have authority, with the approval of the Chief of Engineers, to rent quarters, if necessary, for the proper transaction of its business, and to employ such civil employees as may, in the opinion of the Chief of Engineers, be required for properly transacting the business assigned to it, and the necessary expenses of the board shall be paid from allotments made by the Chief of Engineers from any appropriations made by Congress for the work or works to which the duties of the board pertain.

* * * * *

River and Harbor Act, approved March 3, 1909

(35 Stats 818)

* * * * *

Sec. 4. That no tolls or operating charges whatever shall be levied upon or collected from any vessel, dredge, or other water craft for passing through any lock, canal, canalized river, or other work for the use and benefit of navigation, now belonging to the United States or that may be hereafter acquired or constructed; and for the purpose of preserving and continuing the use and navigation of said canals and other public works without interruption, the Secretary of War, upon the recommendation of the Chief of Engineers, United States Army, is hereby authorized to draw his warrant or requisition, from time to time, upon the Secretary of the Treasury to pay the actual expenses of operating, maintaining, and keeping said works in repair, which warrants or requisitions shall be paid by the Secretary of the Treasury out of any money in the Treasury not otherwise appropriated: Provided, That whenever, in the judgment of the Secretary of War, the condition of any of the aforesaid works is such that its entire reconstruction is absolutely essential to its efficient and economical maintenance and operation as herein provided for, the reconstruction thereof may include such modifications in plan and location as may be necessary to provide adequate facilities for existing navigation: Provided further, That the modifications are necessary to make the reconstructed work conform to similar works previously authorized by Congress and forming a part of the same improvement, and that such modifications shall be considered and approved by the Board of Engineers for Rivers and Harbors and be recommended by the Chief of Engineers before the work of reconstruction is commenced.

* * * * *

(Increasing the Number of Board Members to Nine)

River and Harbor Act, approved July 25, 1912

(R&H Laws, Vol. 2, p. 1562)

* * * * *

Sec. 3. That all reports on examinations and surveys authorized in any section of this Act shall be reviewed by the Board of Engineers for Rivers and Harbors as provided for in section three of the river and harbor Act approved June thirteenth, nineteen hundred and two, and all special reports ordered by Congress shall, in the discretion of the Chief of Engineers, be reviewed in like manner by said board; and the said board shall also, on request by resolution of the Committee on Commerce of the Senate or the Committee on Rivers and Harbors of the House of Representatives, submitted to the Chief of Engineers, examine and review the report of any examination or survey made pursuant to any Act or resolution of Congress, and report thereon through the Chief of Engineers, United States Army, who shall submit his conclusions thereon as in other cases: Provided, That in no case shall the board, in its report thus called for by committee resolution, extend the scope of the project contemplated in the original report upon which its examination and review has been requested, or in the provision of law authorizing the original examination or survey: Provided further, That the Chief of Engineers may, at his discretion, increase to not to exceed nine the number of Engineer officers constituting said board: And provided further, That a majority of said board shall be of rank not less than Lieutenant colonel.

* * * * *

(Reducing the Number of Board Members to Seven)
(Present Strength of Board)

River and Harbor Act, approved March 4, 1913

(R&H Laws, Vol. 2, pp. 1609-1610)

* * * * *

Sec. 4. That all reports on examinations and surveys authorized by law shall be reviewed by the Board of Engineers for Rivers and Harbors as provided for in section three of the river and harbor Act approved June thirteenth, nineteen hundred and two, and all special reports ordered by Congress shall, in the discretion of the Chief of Engineers, be reviewed in like manner by said board; and the said board shall also, on request by resolution of the Committee on Commerce of the Senate or the Committee on Rivers and Harbors of the House of Representatives, submitted to the Chief of Engineers, examine and review the report of any examination or survey made pursuant to any Act or resolution of Congress, and report thereon through the Chief of Engineers, United States Army, who shall submit his conclusions thereon as in other cases: Provided, That in no case shall the board, in its report thus called for by committee resolution, extend the scope of the project contemplated in the original report upon which its examination and review has been requested, or in the provision of law authorizing the original examination or survey: Provided further, That said board shall consist of seven members, a majority of whom shall be of rank not less than lieutenant colonel.

* * * * *

(Flood Control and Multiple Purposes)

Flood Control Act, approved March 1, 1917

(39 Stats 948)

* * * * *

Sec. 3. That all provisions of existing law relating to examinations and surveys and to works of improvement of rivers and harbors shall apply, so far as applicable, to examinations and surveys and to works of improvement relating to flood control. And all expenditures of funds hereafter appropriated for works and projects relating to flood control shall be made in accordance with and subject to the law governing the disbursement and expenditure of funds appropriated for the improvement of rivers and harbors.

All examinations and surveys of projects relating to flood control shall include a comprehensive study of the watershed or watersheds, and the report thereon in addition to any other matter upon which a report is required shall give such data as it may be practicable to secure in regard to (a) the extent and character of the area to be affected by the proposed improvement; (b) the probable effect upon any navigable water or waterway; (c) the possible economical development and utilization of water power; and (d) such other uses as may be properly related to or coordinated with the project. And the heads of the several departments of the Government may, in their discretion, and shall upon the request of the Secretary of War, detail representatives from their respective departments to assist the Engineers of the Army in the study and examination of such watersheds, to the end that duplication of work may be avoided and the various services of the Government economically coordinated therein: Provided, That all reports on preliminary examinations hereafter authorized, together with the report of the Board of Engineers for Rivers and Harbors thereon and the separate report of the representative of any other department, shall be submitted to the Secretary of War by the Chief of Engineers, with his recommendations, and shall be transmitted by the Secretary of War to the House of Representatives, and are hereby ordered to be printed when so made.

Flood Control Act, Approved March 1, 1917 (Cont' d)

In the consideration of all works and projects relating to flood control which may be submitted to the Board of Engineers for Rivers and Harbors for consideration and recommendation, said board shall, in addition to any other matters upon which it may be required to report, state its opinion as to (a) what Federal interest, if any, is involved in the proposed improvement; (b) what share of the expense, if any, should be borne by the United States; and (c) the advisability of adopting the project.

All examinations and reports which may now be made by the Board of Engineers for Rivers and Harbors upon request of the Committee on Rivers and Harbors relating to works or projects of navigation shall in like manner be made upon request of the Committee on Flood Control on all works and projects relating to flood control.

* * * * *

(Beach Erosion Board Review Transferred to
River and Harbor Board)

River and Harbor Act, approved 7 November 1963

(P. L. 88-172)

* * * * *

SEC. 3. All functions of the Beach Erosion Board pertaining to review of reports of investigations made concerning erosion of the shores of coastal and lake waters, and the protection of such shores, are hereby transferred to the Board established by section 3 of the River and Harbor Act approved June 13, 1902, as amended (33 U.S.C. 541), referred to as the Board of Engineers for Rivers and Harbors.

Approved November 7, 1963.

* * * * *

APPENDIX III

PLANNING ASSOCIATES PROGRAM GRADUATES

1962 - 1979

Class of 1962

Gaum, Carl Chief, Central Planning Management Branch Planning Division	Office, Chief of Engineers Directorate of Civil Works Washington, DC 20314
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Class of 1963

Butler, Harry	Consultant 3196 Mill Road Eden, NY 14057
Finck, John A. Assistant Director for Plan Development	New York State Department of Environmental Conservation Albany, NY 12201
Kimball, Vernon L.	Deceased
Stipp, John R.	Retired (BERH) 3800 26th Street, North Arlington, VA 22207

Class of 1964

Beemer, Harold W. Chief, Planning Division	Ohio River Division P.O. Box 1159 Cincinnati, OH 45201
Chandler, Alan R. Chief, Navigation Studies Branch	Ohio River Division P.O. Box 1159 Cincinnati, OH 45201
Duncan, Donald B. Chief, Policy Development Office of Policy	Office, Chief of Engineers Directorate of Civil Works Washington, DC 20314
Morgan, Thurman T. Chief, Economics & Statistics Section	Charleston District P.O. Box 919 Charleston, SC 29402
Ostroth, George P.	Retired (Seattle District) 3267 57th S.W. Seattle, WA 98116
Wilson, Paul C., Jr. Chief, Regional Planning Section	Galveston District P.O. Box 1229 Galveston, TX 77553

Class of 1965

Corle, Felix G., Jr. Chief, Planning Branch	Albuquerque District P.O. Box 1580 Albuquerque, NM 87103
Flanary, Millard B. Chief, Planning and Reports Branch	Memphis District 668 Clifford Davis Federal Bldg Memphis, TN 38116
Kent, Theodore A.	Deceased
Lawson, Edgar H. Chief, Economics and Urban Studies Branch	North Atlantic Division 90 Church Street New York, NY 10007
Ratushewitz, Leonard Acting Deputy Chief, Planning Division	North Atlantic Division 90 Church Street New York, NY 10007

Class of 1966

Banashek, Donald A. Chief, Planning Division	Bd of Engrs for Rivers & Harbors Kingman Building Fort Belvoir, VA 22060
Caldwell, Noel D. Chief, Plan Formulation Branch	Lower Mississippi Valley Division P.O. Box 80 Vicksburg, MS 39180
DeBruin, Ronald R. Chief, Plans Formulation Branch	Southwestern Division Main Tower Bldg., 1200 Main St. Dallas, TX 75202
Dillon, Donald L. Deputy for Policy, Planning and Legislative Affairs	Ofc, Asst Secy of the Army (CW) The Pentagon Washington, DC 20310
Dyre, James F. Project Manager Planning Division	Bd of Engrs for Rivers & Harbors Kingman Building Fort Belvoir, VA 22060
Haydel, Norman C. Civil Engineer Regional Planning Branch	New Orleans District P.O. Box 60267 New Orleans, LA 70160
Hoare, Gordon C. Chief, Plan Formulation Branch	North Pacific Division P.O. Box 2870 Portland, OR 97208

Class of 1966 (cont)

Kelly, Daniel T. Chief, Eastern District Basin Planning Branch	Buffalo District 1776 Niagara Street Buffalo, NY 14207
McCann, John M., Jr. Technical Director	Bd of Engrs for Rivers & Harbors Kingman Building Fort Belvoir, VA 22060
Pappas, Dean C. Project Manager Planning Division	Bd of Engrs for Rivers & Harbors Kingman Building Fort Belvoir, VA 22060

Class of 1967

Elmore, Charles E. Chief, Water Resources Planning Section	San Francisco District 211 Main Street San Francisco, CA 94105
Finch, Kenneth A. Civil Engineer Planning Branch	Sacramento District 650 Capital Mall Sacramento, CA 95814
Green, Lawrence R. Chief, Planning Division	Mobile District P.O. Box 2288 Mobile, AL 36628
Kinback, Harold T. Chief, Professional Development Division	Bd of Engrs for Rivers & Harbors Kingman Building Fort Belvoir, VA 22060
Lawhun, Dallas E. Chief, Legislative Coordination	Office, Chief of Engineers Directorate of Civil Works Washington, DC 20314
McMichael, Gary G. Chief, Basin Planning Section	Walla Walla District City-County Airport Walla Walla, WA 99362
Murphy, John F. Chief, Planning Branch	Philadelphia District US Custom House, 2d & Chestnut Sts. Philadelphia, PA 19106
Rahubka, E. David Chief, Urban Studies	St. Louis District 210 Tucker Blvd., North St. Louis, MO 63141

Class of 1967 (cont)

Ross, John R. Study Manager Water Resources Branch	Los Angeles District P.O. Box 2711 Los Angeles, CA 90053
Sargent, Charles R. Project Manager Planning Division	Bd of Engrs for Rivers & Harbors Kingman Building Fort Belvoir, VA 22060
Scoggins, Kenneth D. Chief, Design Branch	Tulsa District P.O. Box 61 Tulsa, OK 74102

Class of 1968

Campbell, Thomas R. Chief, Policy & Long-Range Plng Br Planning Division	Lower Mississippi Valley Division P.O. Box 80 Vicksburg, MS 39180
Denny, Peter P. Asst Chief, Planning Branch Engineering Division	Seattle District P.O. Box C-3755 Seattle, WA 98124
Foley, Carl O. Project Manager Planning Division	Bd of Engrs for Rivers & Harbors Kingman Building Fort Belvoir, VA 22060
Geiger, David A. Chief, Policy & Long-Range Planning	North Pacific Division P.O. Box 2870 Portland, OR 97208
Jenkins, Neal E. Chief, Planning Division	Louisville District P.O. Box 59 Louisville, KY 40201
McGee, Elias T., Jr.	Private Enterprise (Huntington Dist) 102 Pike Street Louisa, KY 41230
McLarty, Durley Y. Chief, Pre-Authorization Section	Memphis District 668 Clifford Davis Federal Building Memphis, TN 38116
Ottinger, Gene A. Supervisory Civil Engineer	Nashville District P.O. Box 1070 Nashville, TN 37202

Class of 1968 (cont)

Pearson, William R. Chief, Policy & Long-Range Plng Br Planning Division	Southwestern Division Main Tower Bldg, 1200 Main St. Dallas, TX 75202
Pitts, Kerry F. Project Engineer	Lower Mississippi Valley Division P.O. Box 80 Vicksburg, MS 39180
Smith, Victor W., Jr. Special Projects Branch Planning Division	South Atlantic Division 30 Pryor Street, SW Atlanta, GA 30303
Thomas, Walter M. Military Branch Engineering Division	Fort Worth District P.O. Box 17300 Fort Worth, TX 76102

Class of 1969

Davidson, James D. Project Manager Planning Division	Bd of Engrs for Rivers & Harbors Kingman Building Fort Belvoir, VA 22060
Gilbert, Charles E. Chief, Planning Branch	Buffalo District 1776 Niagara Street Buffalo, NY 14207
Harari, Jacob Chief, Planning and Reports Branch	South Pacific Division 630 Sansome Street San Francisco, CA 94111
Howard, Earl Asst Chief, Construction Engineering Section	Jacksonville District P.O. Box 4970 Jacksonville, FL 32201
Kaighn, Robert J. Office of Policy	Office, Chief of Engineers Directorate of Civil Works Washington, DC 20314
Purdy, James A. Chief, Environmental Planning Section	Pittsburgh District 1000 Liberty Avenue Pittsburgh, PA 15222
Reid, Ralph D. Asst Chief, Planning Division	Louisville District P.O. Box 59 Louisville, KY 40201

Class of 1969 (cont)

Rotert, Philip L. Chief, Basin Planning Branch	Kansas City District 700 Federal Building Kansas City, MO 64106
Scoggins, Carroll E. Chief, Hydraulics Branch	Tulsa District P.O. Box 61 Tulsa, OK 74102
Sikes, Eugene W. Project Engineer Plans Formulation Branch	Southwestern Division Main Tower Bldg, 1200 Main St. Dallas, TX 75202
Washburn, Gene N. Chief, Project Reports Section	Little Rock District P.O. Box 867 Little Rock, AR 72203
Wooley, William G. Chief, Planning Branch	Galveston District P.O. Box 1229 Galveston, TX 77553

Class of 1970

Cingle, George, Jr. Chief, Planning Branch	Pittsburgh District 1000 Liberty Avenue Pittsburgh, PA 15222
Epps, William S., Jr. Planning Branch	Huntington District P.O. Box 2127 Huntington, WV 25721
Heape, Robert E., Jr. Chief, Floodplain Management Services Branch	Savannah District P.O. Box 889 Savannah, GA 31402
Jaren, Raymond E. Civil Engineer	North Pacific Division P.O. Box 2870 Portland, OR 97208
Knott, Wayne A. Section Chief Planning Branch	St. Paul District 1135 USPO & Custom House St. Paul, MN 55101
Larsen, Charles W. Project Monitor Planning Division	North Central Division 536 S. Clark Street Chicago, IL 60605
Matthews, J. L. Chief, Design Salt Section	Tulsa District P.O. Box 61 Tulsa, OK 74102

Class of 1970 (cont)

Nelson, Harold L. Asst Chief, Planning Division	Baltimore District P.O. Box 1715 Baltimore, MD 21203
Ogle, Robert V. Chief, Hydrologic Engineering Section	Norfolk District 803 Front Street Norfolk, VA 23510
Pena, Pilar Chief, Coordination Section	Fort Worth District P.O. Box 17300 Fort Worth, TX 76102
Rogers, Donald P. Senior Regional Planner Planning Division	Office, Chief of Engineers Directorate of Civil Works Washington, DC 20314
Schlaht, Terry F. Plan Formulation Branch Planning Division	Missouri River Division P.O. Box 103 Downtown Station Omaha, NE 68101
Turner, Rogers C. Chief, Regional Planning Branch	Vicksburg District P.O. Box 60 Vicksburg, MS 39180

Class of 1971

Ballif, James D. Eastern Branch Programs Division	Office, Chief of Engineers Directorate of Civil Works Washington, DC 20314
Bates, Jimmy F. Chief, Eastern Branch	Office, Chief of Engineers Directorate of Civil Works Washington, DC 20314
Haumersen, David J. Chief, Advance Planning Section Planning Branch	St. Paul District 1135 USPO & Custom House St. Paul, MN 55101
Keough, Patrick J. Chief, Planning Branch	Portland District P.O. Box 2946 Portland, OR 97208
Metz, Paul S., Jr. Chief, Plan Formulation Branch	Savannah District P.O. Box 889 Savannah, GA 31402
Post, Robert F. Chief, Environmental Resources Branch	St. Paul District 1135 USPO & Custom House St. Paul, MN 55101

Class of 1971 (cont)

Reid, William H. Chief, Urban and Regional Branch	Mobile District P.O. Box 2288 Mobile, AL 36628
Wagahoff, Cletis R. Chief, Planning Branch	Nashville District P.O. Box 1070 Nashville, TN 37202
Warnken, Donald E. Mineral Appraiser	Tulsa District P.O. Box 61 Tulsa, OK 74102
Wilson, Leland R. Chief, Basin Planning Section	Fort Worth District P.O. Box 17300 Fort Worth, TX 76102
Haseman, Paul B., CPT, USA	Unknown

Class of 1972

Barrett, Ronald G. Chief, Flood Plain Section Planning Branch	Walla Walla District Bldg 602, City-County Airport Walla Walla, WA 99362
Bucolo, Salvatore J. Chief, Coastal & Special Studies Planning Branch	Philadelphia District US Custom House, 2d & Chestnut Sts. Philadelphia, PA 19106
Buddecke, Ronald T. Public Assistance Officer	Federal Disaster Assistance Admin. 300 S. Wacker Chicago, IL 60606
Daniels, James Civil Engineer Plan Formulation Branch	North Atlantic Division 90 Church Street New York, NY 10007
Farrar, Walter L. Chief, Regional Planning Section	Seattle District P.O. Box C-3755 Seattle, WA 98124
Johnson, William K. Supervisory Hydraulic Engineer	Hydrologic Engineering Center 609 Second Street Davis, CA 95616
Keranen, Paul F.	Private enterprise Wehrman Chapman Associates, Inc. 1415 North Lilac Drive Minneapolis, MN 55422

Class of 1972 (cont)

Lammi, Phillip E.	Air Force Regional Civil Engineer, Western Region 630 Sansome Street San Francisco, CA 94111
Mace, John P. Chief, Recreation Planning Section	Tulsa District P.O. Box 61 Tulsa, OK 74121
Mershimer, James F. Planning Branch	Pittsburgh District 1000 Liberty Avenue Pittsburgh, PA 15222
Muller, Bill	Deceased
Sands, Samuel E. Project Manager Planning Division	Bd of Engrs for Rivers & Harbors Kingman Building Fort Belvoir, VA 22060
Stuart, Richard E. Civil Engineer	Lower Mississippi Valley Division P.O. Box 80 Vicksburg, MS 39180
Watson, Carl R.	Route 2, Box 80 West Concord, MN 55985
Woodward, Jerry W. Post-Authorization Planning Section	Galveston District P.O. Box 1229 Galveston, TX 77553

Class of 1973

Bax, Lawrence G., Jr. Supervisory Regional Economist	Southwestern Division Main Tower Building 1200 Main Street Dallas, TX 75202
Birindelli, Joseph R., Jr. Urban & Regional Branch Planning Division	Mobile District P.O. Box 2288 Mobile, AL 36628
Burke, Patrick T. Chief, Special Studies Section Planning Branch	Rock Island District Clock Tower Building Rock Island, IL 61201
Carlson, Richard E. Chief, Planning Division	Chicago District 219 S. Dearborn Street Chicago, IL 60604

Class of 1973 (cont)

Denys, Arthur D. Chief, Engineering Division	Omaha District P.O. Box 103, Downtown Station Omaha, NE 68101
Duck, James C. Chief, Plan Formulation Branch	Louisville District P.O. Box 59 Louisville, KY 40201
Johnston, Gerald C. Civil Engineer	Portland District P.O. Box 2946 Portland, OR 97208
Jones, Ralph C. Chief, Project Planning and Economics Section	Albuquerque District P.O. Box 1580 Albuquerque, NM 87103
Lee, Henry J. Chief, Navigation & Coastal Branch	Mobile District P.O. Box 2288 Mobile, AL 36628
Martin, Robert E. Study Manager Planning Division	Mobile District P.O. Box 2288 Mobile, AL 36628
Otto, Alexander C. Planning Division	Office, Chief of Engineers Directorate of Civil Works Washington, DC 20314
Smyth, James J. Chief, General Planning Section	Fort Worth District P.O. Box 17300 Fort Worth, TX 76102
Tillman, Robert J. Asst Chief, Design Branch	Tulsa District P.O. Box 61 Tulsa, OK 74102
Walker, Edwin C. Civil Engineer Planning Division	South Pacific Division 630 Sansome Street San Francisco, CA 94111
Welch, John D. Project Manager	Seattle District P.O. Box C-3755 Seattle, WA 98124
Wood, Thomas J. Director, Lake Superior Basin Studies Center	413 Administration Bldg Univ. of Minnesota - Duluth Duluth, MN 55812

Class of 1974

Andrews, Gerald C. Project Manager Military Branch	Fort Worth District P.O. Box 17300 Fort Worth, TX 76102
Barnes, Gerald W. Project Manager Military Branch	Norfolk District 803 Front Street Norfolk, VA 23510
Boyd, P. Michael	2607 E. 38th Street Davenport, IA 52807
Brown, Robert D. Chief, Planning Branch	Tulsa District P.O. Box 61 Tulsa, OK 74121
Crews, James E. Chief, Urban Studies Branch	Baltimore District P.O. Box 1715 Baltimore, MD 21203
Doyle, Brian W. Chief, Investigations Section	Sacramento District 650 Capitol Mall Sacramento, CA 95814
Foster, John Steven Chief, Hydropower Planning Section	Seattle District P.O. Box C-3755 Seattle, WA 98124
Fujiwara, Shigeru Asst Chief, Engineering Division	Fort Worth District P.O. Box 17300 Fort Worth, TX 76102
Kepler, Jack E. Chief, Environmental Planning Branch	Ohio River Division P.O. Box 1159 Cincinnati, OH 45201
Kumpula, Stanley R. Chief, Hydraulics Section	St. Paul District 1135 USPO & Custom House St. Paul, MN 55101
Kutscheid, Benjamin B. Ecologist	Alaska District P.O. Box 7002 Anchorage, AK 99501
Steinrock, George F. Chief, Policy & Regional Planning Section	Philadelphia District US Custom House, 2d & Chestnut Sts. Philadelphia, PA 19106
Summitt, William R. Supervisory Economist, Planning	Southwestern Division Main Tower Bldg, 1200 Main St. Dallas, TX 75202

Class of 1974 (cont)

Thomas, Alfred P. Chief, Basin Studies Section Plan Formulation Branch	Louisville District P.O. Box 59 Louisville, KY 40201
Wisdom, Lloyd L. Chief, Hydrology and Hydraulics Section	Kansas City District 700 Federal Building Kansas City, MO 64106

Class of 1975

Bailey, Susan V. Regional Economist Planning Branch	Portland District P.O. Box 2946 Portland, OR 97208
Blake, Linda J. Programs Division	Office, Chief of Engineers Directorate of Civil Works Washington, DC 20314
Borash, Carl E. Chief, Reports Section	Alaska District P.O. Box 7002 Anchorage, AK 99510
Davis, Thomas L. Project Manager Planning Division	Bd of Engrs for Rivers & Harbors Kingman Building Fort Belvoir, VA 22060
Flasch, Donald A.	Private law firm
Getzen, Beverley Bushong Chief, Special Studies Branch	South Pacific Division 630 Sansome Street San Francisco, CA 94111
Gonzales, Raymond O. Hydraulic Engineer	US Nuclear Regulatory Commission Washington, DC 20555
Jensen, Paul E. Superintendent of Utilities	Macon Municipal Utilities 121-123 West Bourke St. Macon, MO 63552
Justice, John P., Jr. Actg Chief, Special Studies Branch	Huntington District P.O. Box 2127 Huntington, WV 25721
McDevitt, William J. Project Engineer	Philadelphia District US Custom House, 2d & Chestnut Sts. Philadelphia, PA 19106

Class of 1975 (cont)

Redlinger, Jacob F., Jr. Flood Plain Mgmt & Cont Auth Br Planning Division	North Pacific Division P.O. Box 2870 Portland, OR 97208
White, Thomas L. Regional Economist Planning Division	North Pacific Division P.O. Box 2870 Portland, OR 97208

Class of 1976

Anderson, Thomas L. Regional Economist Planning Division	Baltimore District P.O. Box 1715 Baltimore, MD 21203
Bennett, Warren W., Jr. Chief, Urban Studies Branch Planning Division	Vicksburg District P.O. Box 60 Vicksburg, MS 39180
Chatelain, Donald J. Civil Engineer	Mobile District P.O. Box 2288 Mobile, AL 36628
Day, David L. Chief, Project Formulation Section	Kansas City District 700 Federal Building Kansas City, MO 64106
Gladden, Robert W. Urban Studies Branch Planning Division	Savannah District P.O. Box 889 Savannah, GA 31402
Hill, John D. Red River Planning Section Planning Branch	Tulsa District P.O. Box 61 Tulsa, OK 74121
Lanier, D. Toney Hydraulic Engineer Flood Control Section	Jacksonville District P.O. Box 4970 Jacksonville, FL 32210
Norton, Lucian N., Jr. Construction Operations Division	Office, Chief of Engineers Directorate of Civil Works Washington, DC 20314
Porter, Kenneth R. Natural Resources Planner	St. Louis District 210 Tucker Blvd. North St. Louis, MO 63101
Price, Robert G.	Soil Conservation Service P.O. Box 2323 Little Rock, AR 72203

Class of 1976 (cont)

Sizemore, Edward W. Senior Project Manager	US Army Engineer Division, Europe APO New York 09757
Spychalla, William W. Study Manager	St. Paul District 1135 USPO & Custom House St. Paul, MN 55101
Swenson, Norman P. Economist Planning Division	South Pacific Division 630 Sansome Street San Francisco, CA 94111
Vogt, Thomas R. Civil Engineer	Buffalo District 1776 Niagara Street Buffalo, NY 14207
Waller, James O. Hydropower Study Manager Hydropower Planning Section	Seattle District P.O. Box C-3755 Seattle, WA 98124
Weyer, David J. Civil Engineer	Louisville District P.O. Box 59 Louisville, KY 40201

Class of 1977

Degenhardt, Eugene A. Civil Engineer Planning Branch	St. Louis District 210 Tucker Blvd. North St. Louis, MO 63101
Gonzales, Dionicio Project Manager Water Resources Branch	Los Angeles District P.O. Box 2711 Los Angeles, CA 90053
Herndon, Donald W. Chief, Planning Division	Huntington District P.O. Box 2127 Huntington, WV 25721
Hudson, Franklin E. Regional Economist	Vicksburg District P.O. Box 60 Vicksburg, MS 39180
Jones, S. Derwood Landscape Architect Environmental Resources Section	Southwestern Division 1200 Main Street Dallas, TX 75202
Kitch, Harry E. Planning Division	Baltimore District P.O. Box 1715 Baltimore, MD 21203

Class of 1977

Knutson, Roger S. Civil Engineer Planning Branch	Portland District P.O. Box 2946 Portland, OR 97208
McDaniel, James M., Jr. Arkansas River Planning Section Planning Branch	Tulsa District P.O. Box 61 Tulsa, OK 74102
Mocek, Michael J. General Planning Section	Fort Worth District P.O. Box 17300 Fort Worth, TX 76102
Neff, Susan E. Landscape Architect	Nashville District P.O. Box 1070 Nashville, TN 37211
Penick, David L. Assistant Chief	Waterborne Commerce Statistics Center P.O. Box 61280 New Orleans, LA 70161
Smith, James R. Regional Economist	Seattle District P.O. Box C-3755 Seattle, WA 98124
Stanley, Ernest J.	Private industry
Steele, G. David Planning Branch Engineering Division	Tulsa District P.O. Box 61 Tulsa, OK 74121

Class of 1978

Baker, Newton C. Civil Engineer Project Manager	U.S. Army Engineer Division, Europe APO New York 09757
Burke, Roger A. Planning Division	Mobile District P.O. Box 2288 Mobile, AL 36628
Clements, Joseph T., Jr. Planning Branch	Little Rock District P.O. Box 867 Little Rock, AR 72203
Cooper, Kenneth S. Chief, Economics Section	Portland District P.O. Box 2946 Portland, OR 97208

Class of 1978 (cont)

Dashiell, Eugene P. Community Planner Planning Branch	Pacific Ocean Division Bldg 230 Fort Shafter, HI 96858
Dryden, John R. Project Planning Branch Engineering Division	Jacksonville District P.O. Box 4970 Jacksonville, FL 32201
Gjesdahl, David P. Planning Division	Missouri River Division P.O. Box 103, Downtown Station Omaha, NE 68101
Jackson, Richard M. Chief, Environmental Resources Branch	Wilmington District P.O. Box 1890 Wilmington, NC 28401
Johnson, Melvin A. Community Planner	North Central Division 536 S. Clark Chicago, IL 60643
Pietrowsky, Robert A. Civil Planning Management Branch	New York District 26 Federal Plaza New York, NY 10007
Smith, Brian W. Hydraulic Engineer Planning Analysis Branch	Hydrologic Engineering Center 609 Second St. Davis, CA 95616
Swegle, William F. Community Planner Planning Division	Omaha District 6014 USPO & Courthouse Omaha, NE 68102
Waguespack, Leslie S. Project Manager Plan Formulation Branch	New Orleans District P.O. Box 60267 New Orleans, LA 70160
Walton, Harry P., Jr. Policy & Long-Range Planning Branch Planning Division	Lower Mississippi Valley Division P.O. Box 80 Vicksburg, MS 39180
Worthington, Richard T. Study Manager Regional Planning Section	Seattle District P.O. Box C-3755 Seattle, WA 98124

Class of 1979

Branch, William E. Hydrology Section Planning Branch	Walla Walla District Bldg 602, City-County Airport Walla Walla, WA 99362
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Class of 1979 (cont)

Burnham, Michael W. Hydraulic Engineer	Hydrologic Engineering Center 609 Second Street Davis, CA 95616
Coffee, Glendon L. Biologist & Study Manager Environmental Studies & Evaluation Section	Mobile District P.O. Box 2288 Mobile, AL 36628
Goehlert, Richard A.	Environmental Protection Agency Waltham, MA 02154
Lauwaert, Alan J. Project Manager Project Planning Branch	Jacksonville District P.O. Box 4970 Jacksonville, FL 32201
Letson, Kenneth W. Community Planner Plan Formulation Branch	Louisville District P.O. Box 59 Louisville, KY 40206
Parker, C. Maurice Regional Economist Planning Division	Office, Chief of Engineers Directorate of Civil Works Washington, DC 20314
Saucer, T. Wayne Study Manager	Mobile District P.O. Box 2288 Mobile, AL 36628
Waller, James Chief, ADP Center	Wilmington District P.O. Box 1890 Wilmington, NC 28402
Weaver, Jerry L. Civil Engineer Planning Branch	Portland District P.O. Box 2946 Portland, OR 97208
Willis, William W. Civil Engineer	Detroit District P.O. Box 1027 Detroit, MI 48231
Wilson, Ronald L. Civil Engineer	Vicksburg District P.O. Box 60 Vicksburg, MS 39180

APPENDIX IV
 SENIOR MEMBER OR CHAIRMAN
 BOARD OF ENGINEERS FOR RIVERS AND HARBORS

	<u>Name</u>	<u>Rank Held</u>	<u>Title</u>	<u>Date of * Appointment</u>
	1. Alexander MacKenzie **	Colonel	Senior Member	SO 24 - 28 Jul 1902
	2. Charles J. Allen	Lt. Colonel	do	SO 14 - 7 May 1903
	3. A. M. Miller	Lt. Colonel	do	SO 1 - 9 Jan 1904
	4. Daniel W. Lockwood	Colonel	do	SO 42 - 31 Oct 1904
(A)	5. H. M. Adams	Colonel	do	
(B)	6. William T. Rossell **	Colonel	do	SO 52 - 21 Sep 1909
(C)	7. William M. Black **	Colonel	do	SO 6 - 13 Jun 1913
(D)	8. Frederic V. Abbot	Colonel	do	SO 5 - 9 Mar 1916
(E)	9. William T. Rossell	Brig. Gen. (Ret.)	do	SO 13 - 15 Jun 1917
(F)	10. Peter C. Hains	Maj. Gen. (Ret.)	do	SO 48 - 9 Nov 1917
(G)	11. William C. Langfitt	Major General	do	SO 181 - 4 Aug 1919
(H)	12. James C. Sanford	Colonel	do	SO 63 - 9 Apr 1920
(I)	13. Harry Taylor **	Major General	do	
	14. Edgar Jadwin **	Brig. General	do	SO 53 - 2 Jul 1924
	15. Herbert Deakyne	Brig. General	do	SO 56 - 19 Jul 1926
(J)	16. William J. Barden	Colonel	do	SO 1 - 2 Jan 1932
(K)	17. Edward H. Schulz	Colonel	do	SO 53 - 10 May 1933
(L)	18. William J. Barden	Colonel	do	SO 81 - 8 Jul 1933
(M)	19. George B. Pillsbury	Brig. General	do	SO 72 - 1 Oct 1934
(N)	20. Max C. Tyler	Brig. General	do	SO 111 - 12 Nov 1937
	21. Thomas M. Robins	Brig. General	do	SO 50 - 10 Jul 1939
	22. John J. Kingman	Brig. General	do	SO 35 - 10 Feb 1943
(O)	23. Thomas M. Robins	Major General	do	SO 226 - 3 Oct 1945
(P)	24. Beverly C. Dunn	Brig. General	do	SO 250 - 6 Nov 1945
(P)	25. Roscoe C. Crawford	Brig. General	do	
	do	Major General	Chairman	SO 32 - 7 Sep 1948
(Q)	26. John S. Bragdon	Major General	do	SO 60 - 2 Dec 1949

<u>Name</u>	<u>Rank Held</u>	<u>Title</u>	<u>Date of * Appointment</u>
27. George J. Nold	Major General	Chairman	SO 44 - 10 Aug 1951
28. Bernard L. Robinson	Major General	do	SO 4 - 4 Feb 1953
(R) 29. Charles G. Holle	Major General	do	SO 25 - 27 Jun 1955
30. Emerson C. Itschner **	Major General	do	SO 20 - 7 Aug 1956
31. Charles G. Holle	Major General	do	SO 29 - 5 Oct 1956
32. Walter K. Wilson, Jr. **	Major General	do	SO 39 - 1 Nov 1958
33. Keith R. Barney	Major General	do	SO 53 - 28 Sep 1960
34. William F. Cassidy **	Major General	do	SO 15 - 1 Apr 1962
35. Robert G. MacDonnell	Major General	do	SO 10 - 18 Feb 1963
36. Carroll H. Dunn	Major General	do	SO 31 - 1 Aug 1969
37. William F. Cassidy	Lt. General	do	SO 73 - 1 Nov 1969
38. Carroll H. Dunn	Major General	do	SO 40 - 1 Jun 1970
39. Willard Roper	Major General	do	SO 59 - 5 Aug 1970
40. Andrew P. Rollins	Major General	do	SO 12 - 1 Mar 1973
41. Daniel A. Raymond	Major General	do	SO 69 - 5 Sep 1973
42. John W. Morris **	Major General	do	SO 34 - 1 Aug 1975
43. Robert C. Marshall	Major General	do	DF - 1 Sep 1976 ***
44. Ernest Graves, Jr.	Major General	do	DF - 1 Oct 1977
45. Robert C. Marshall	Major General	do	DF - 1 Mar 1978
46. Bates C. Burnell	Major General	do	DF - 1 Jul 1978
47. James A. Johnson	Major General	do	DF - 1 Jun 1979

- (A) Special orders do not indicate H. M. Adams appointed as Senior Member; however, BERH report on Ohio River dated 18 October 1907 lists him as "Senior Member" and Lockwood is not on the Board for that report. See H. D. 492, 60th Congress, 1st Session.
- (B) Special Order does not indicate Colonel Rossell as Senior Member; however, subsequent papers on file indicate that he was.
- (C) Colonel Black was appointed April 26, 1913 as the 7th member of the Board - provided by Act of July 25, 1912. He signed from 17 June 1913 to 9 February 1916.
(See Annual Reports of FY 1913, 1914, 1915 for Colonel Black as Senior Member.)
(See Annual Report of FY 1916 for Colonel Abbott as Senior Member.)
- (D) Colonel Abbott signed as Senior Member from 21 March 1916 to 17 May 1917.
- (E) Brig. General Rossell signed as Senior Member from 26 June 1917 to 13 November 1917.
- (F) Major General Hains signed as Senior Member from 27 November 1917 to 12 August 1919.
- (G) Major General Langfitt signed as Senior Member (Colonel) from 23 September 1919 to 10 February 1920. Relieved without replacement by Special Order 63 - 9 Apr 1920.
- (H) Colonel Sanford signed as Senior Member from 4 May 1920 to 8 June 1920.
- (I) Brig. General Taylor signed as Senior Member from 29 July 1920 to 1 July 1924.
- (J) Colonel Barden signed as Senior Member from 11 January 1932 to 7 April 1933. Colonel Barden went off the Board by Special Order 53 - 10 May 1933. Colonel Schulz signed temporarily on 17 April 1933.
- (K) Colonel Schulz signed as Senior Member from 15 May 1933 to 7 June 1933.
- (L) Colonel Barden returned to Board by Special Order 81 - 8 July 1933; although the Special Order did not designate him as Senior Member, he signed as such from 10 July 1933 to 17 September 1934. He was replaced by Brig. General Pillsbury by Special Order 72 - 1 October 1934.
- (M) Colonel Earl I. Brown signed as Senior Member on 27 September 1937 while General Pillsbury was off temporarily. On all other dates when General Pillsbury was removed temporarily, others signed as Senior Member Present, except General Max Tyler, who often signed as Senior Member.
- (N) Brig. General Tyler relieved by Special Order 50 - 24 Aug 1939. Also, for one day, 17 July 1939, Colonel L. V. Frazier signed as Senior Member.

- (O) Title changed from Senior Member to Chairman 9/7/48.
- (P) Special Order 250 - 6 Nov 45 - was listed in earlier record, but the record is somewhat incomplete. By this SO, Colonel Hall replaced MG Robins as a member of the Board; however, a congressional document (HD 693/79/2) indicates MG Robins as Senior Member on 16 Nov 45. Further, BG Dunn is indicated as Senior Member on at least five congressional documents on 10 Dec 45. Later congressional documents indicate BG Crawford as Senior Member on 14 Jan 46 and continuing into 1949.
- (Q) Major General Bragdon off temporarily for June and July 1951 meetings. BG Don G. Shingler signed as Chairman on 6 June 1951; BG Orville E. Walsh signed as Chairman on 30 July 1951.
- (R) General Holle was then Special Assistant to the Chief of Engineers.

* Date of appointment is the effective date if stated; if not, date is that of the special order.

** Later served as Chief of Engineers.

APPENDIX V

16 May 80

RESIDENT MEMBERS

BOARD OF ENGINEERS FOR RIVERS AND HARBORS

<u>Name</u>	<u>Rank</u>	<u>Special Order No. and Date</u>	<u>Effective Date</u>
1. Francis Shunk	Colonel		
(A) 2. Charles Keller	Colonel	2/4/21	?
3. George M. Hoffman	Colonel	124 9/26/21	
4. Gordon R. Young	Major	72 8/5/22	
5. Daniel I. Sultan	Major	61 7/31/26	31 Jul 1926
6. James J. Loving	Lt. Colonel	49 7/31/29	31 Jul 1929
7. Milo P. Fox	Major	* 66 3/22/33	1 Jul 1933
8. Robert W. Crawford	Major	18 4/19/35	19 Apr 1935
(B) 9. Thomas H. Stanley	1st Lt.	45 7/15/35	15 Jul 1935 (one day only)
10. Wildurr Willing	Colonel	48 7/20/35	20 Jul 1935
11. William A. Snow	Major	* 107 5/5/36	5 May 1936
(C) 12. Raymond A. Wheeler	Lt. Colonel	* 26 2/2/37	1 Feb 1937
13. Robert E. Coughlin	Captain	44 6/27/40	27 Jun 1940 (Acting)
14. Joseph D. Arthur, Jr.	Lt. Colonel	* 217 9/13/40	1 Oct 1940
15. Robert E. Coughlin	Major	84 10/7/40	7 Oct 1940 (Acting)
16. Charles L. Hall	Colonel	* 299 12/20/40	31 Jan 1941
17. Earl North	Colonel	* 98 4/28/41	
18. Robert E. Coughlin	Major	59 5/5/41	5 May 1941 (Acting)
19. Roger G. Powell	Colonel	92 4/30/42	
20. Peter A. Feringa	Colonel	193 8/18/43	20 Sep 1943
(D) 21. Albert H. Burton	Colonel	155 10/1/44	
22. Xenophon H. Price	Colonel	234 10/4/44	6 Oct 1944
23. Peter A. Feringa	Colonel	241 10/24/45	30 Oct 1945
24. Wayne S. Moore	Colonel	64 4/8/46	8 Apr 1946
25. Henry F. Hannis	Colonel	20 5/20/49	1 Jun 1949

Resident Members - Board of Engineers for Rivers and Harbors (Cont' d)

16 May 80

<u>Name</u>	<u>Rank</u>	<u>Special Order No. and Date</u>	<u>Effective Date</u>
26. Dabney O. Elliott	Colonel	37 7/20/50	1 Aug 1950 (Acting)
27. Heston R. Cole	Colonel	41 8/11/50	15 Aug 1950
28. J. Ben Walker	Exec. Secretary	8 3/31/53	1 Apr 1953 (Acting)
29. Francis H. Falkner	Colonel	20 6/24/53	29 Jun 1953
30. Hubert S. Miller	Colonel	26 6/27/55	5 Jul 1955
31. Gunnard W. Carlson	Colonel	10 5/9/56	1 Jul 1956
32. Carl H. Bronn	Colonel	46 12/22/58	1 Jan 1959
33. Edmund H. Lang	Colonel	61 10/16/62	22 Oct 1962
(E) 34. Alvin D. Wilder	Colonel	15 3/24/67	1 Apr 1967
35. John T. Rhett, Jr.	Colonel	200 4/20/72	21 Aug 1972
36. William G. Kratz	Colonel	18 3/2/73	"Upon arrival"
(F) 37. Robert L. Bangert	Colonel	44 3/5/75	1 Jul 1975
38. Albert C. Costanzo	Colonel	27-1 8/30/77	1 Oct 1977

* Office, Secretary of War or War Department Special Order.

- NOTE:
- (A) Brigadier General Charles Keller was appointed to the Board by S. O. 144, dated 6/20/19. The Special Order file contains no reference to a Resident Member of the Board until the 2nd Ind of a letter on file dated 4 February 1921 was signed by Colonel C. Keller as Resident Member.
 - (B) 1st Lieutenant Stanley replaced Major Crawford as Resident Member for one day only.
 - (C) Later Chief of Engineers, 1 Oct 45 - 1 Mar 49 as Lt. General Wheeler.
 - (D) Although not officially designated Resident Member by referenced special order, Burton signed correspondence in such capacity.
 - (E) Also appointed Resident Member vice Col. Lang by S. O. 9, dated 1 Mar 67.
 - (F) Special Order assigned Col. Bangert to duty with BERH; did not designate him specifically as Resident Member. No S. O. relieving Col. Kratz.

Chronological List of Board Members, Chairmen, Resident Members and Assistants

<u>SO No.</u>	<u>Date</u>	<u>Member On</u>	<u>Member Relieved</u>	<u>Eff. Date</u>
24	28 Jul 1902	* Col. Alexander Mackenzie Maj. Harry F. Hodges Capt. Edward Burr Capt. Charles H. McKinstry Capt. William V. Judson	-	-
14	7 May 1903	Lt. Col. Charles J. Allen	Col. MacKenzie	-
46	1 Dec 1903	Lt. Col. A. M. Miller Maj. Richard L. Hoxie	Major Hodges Capt. McKinstry	-
1	9 Jan 1904	Capt. Henry C. Newcomer	Lt. Col. Allen	-
28	13 Aug 1904	Maj. Solomon W. Roessler	Maj. Newcomer	-
31	2 Sep 1904	Lt. Col. Daniel W. Lockwood	Capt. Judson	-
42	31 Oct 1904	Capt. Charles W. Kutz	(1) -	-
23	18 Jul 1905	Maj. William C. Langfitt	Maj. Roessler	-
40	17 Oct 1905	Maj. Curtis McD. Townsend	Maj. Burr	-
118 (War Dept.)	17 May 1906	-	Maj. Curtis McD. Townsend	-
23	3 Aug 1906	Maj. E. Eveleth Winslow	Maj. Townsend	-
33	8 Nov 1906	Maj. Curtis McD. Townsend	Maj. Langfitt	Temp.
39	8 Dec 1906	Maj. Chester Harding Capt. William J. Barden	Maj. Townsend Maj. Langfitt Capt. Kutz	-
?	2 Jan 1907	Maj. Townsend	Col. Lockwood	Temp.
?	8 Jan 1907	Col. H. M. Adams	Maj. Harding	Temp.
?	8 Jan 1907	Col. Chas. E. L. B. Davis	Capt. Barden	Temp.
30	17 Jul 1907	Maj. Harry F. Hodges	Maj. Harding	-
48	15 Nov 1907	Lt. Col. Walter L. Fisk	Col. Hoxie (1 rept: Peperells Cove, Me.)	Temp.
1	3 Jan 1908	Lt. Col. Smith H. Leach	Lt. Col. Hodges	Temp.

Chronological List of Board Members, Chairmen, Resident Members and Assistants (cont' d)

16 May 80

<u>SO</u> <u>No.</u>	<u>Date</u>	<u>Member On</u>	<u>Member</u> <u>Relieved</u>	<u>Eff. Date</u>
2	17 Jan 1908	-	Lt. Col. Fisk	-
20	25 Jun 1908	-	Lt. Col. Hodges	-
23	9 Jul 1908	Col. Leach	Lt. Col. Hodges	-
25	14 Jul 1908	Maj. Spencer Cosby	Col. Hoxie	-
36	16 Sep 1908	Lt. Col. Langfitt	Col. Leach	-
42	21 Oct 1908	Col. John G. D. Knight	Maj. Winslow	-
51	21 Dec 1908	Maj. Newcomer	Maj. Cosby	-
15	31 Mar 1909	Col. Leach	Maj. Newcomer	-
52	21 Sep 1909 *	Col. William T. Rossell	Col. Lockwood (Rtd.)	-
60	18 Oct 1909	Maj. Herbert Deakyne	Col. Leach (dec.) (2)	-
71	8 Dec 1909	Maj. William E. Craighill	Col. Knight	-
3	2 Feb 1910	Lt. Col. Craighill	-	-
11	12 Mar 1910	Lt. Col. Newcomer	Lt. Col. Craighill (on leave)	Temp
13	25 Mar 1910	-	Lt. Col. Newcomer	31 Mar 1910
27	13 Jun 1910	Lt. Col. Newcomer	Lt. Col. Craighill	-
50	24 Oct 1910 *	Col. Dan C. Kingman	Lt. Col. Langfitt	-
55	30 Nov 1910	Lt. Col. Langfitt	Col. Kingman	-
2	20 Jan 1911 *	Lt. Col. Harry Taylor	Maj. Deakyne	-
14	22 May 1911	Maj. Deakyne	Lt. Col. Taylor	24 May 1911
		Col. Roessler	Lt. Col. Newcomer	10 Jun 1911
22	26 Oct 1911	Lt. Col. Newcomer	Col. Roessler	10 Nov 1911
14	26 Jun 1912	Lt. Col. Taylor	Maj. Deakyne	-
21	23 Aug 1912 *	Lt. Col. Lansing H. Beach	-	-
4	26 Apr 1913 *	Col. William M. Black	-	-
6	13 Jun 1913	Col. Frederic V. Abbot	Col. Rossell	-
9	24 Jul 1913	Lt. Col. Winslow	Maj. Barden	-
4	12 Mar 1914	Maj. Kutz	Col. Langfitt	-
19	23 Oct 1914	Maj. Edward N. Johnston	Maj. Kutz	-
1	21 Jan 1915	Col. Harry F. Hodges	Maj. Johnston	-
5	12 Mar 1915	Maj. Johnston	Col. Hodges	-
17	21 Sep 1915	Col. John Biddle	Col. Beach	-
		Lt. Col. Clement A. F. Flagler	Maj. Johnston	-

Chronological List of Board Members, Chairmen, Resident Members and Assistants (cont' d) 16 May 80

<u>SO No.</u>	<u>Date</u>	<u>Member On</u>	<u>Member Relieved</u>	<u>Eff. Date</u>
5	9 Mar 1916	Lt. Col. Charles Keller	Col. Black	-
105 (War Dept.)	4 May 1916	-	Lt. Col. Harry Taylor	-
13	12 Jun 1916	Lt. Col. Francis R. Shunk	Col. Biddle	-
20	3 Aug 1916	Lt. Col. William V. Judson	Lt. Col. Keller	-
13	15 Jun 1917	BG Rossell (Rtd.)	Col. Taylor	-
		Col. Fisk (Rtd.)	Col. Judson	-
246 (War Dept.)	22 Oct 1917	-	Col. Francis Shunk	-
48	9 Nov 1917	MG Peter C. Hains (Rtd.)	Col. Shunk	-
3	10 Jan 1918	Col. Roessler (Rtd.)	BG Flagler	-
78	21 Nov 1918	BG Taylor	BG Rossell	-
47	26 Feb 1919	Col. Max C. Tyler	Col. Newcomer	-
119	21 May 1919	Col. James C. Sanford	Col. Roessler	-
		Col. John C. Oakes	Col. Fisk	-
144	20 Jun 1919	BG Keller	Col. Abbot	-
152	30 Jun 1919	Col. James P. Jervey	Col. Winslow	-
181	4 Aug 1919	MG Langfitt	MG Hains	-
63	9 Apr 1920	-	Col. Langfitt	-
147	25 Sep 1920	Maj. Clarence S. Ridley	BG Jervey	-
		Col. William B. Ladue	Col. Langfitt	-
7	17 Jan 1921	-	Col. Ladue	-
15	16 Feb 1921	Col. Mason W. Patrick	-	-
63	11 Jun 1921	Col. George M. Hoffman	Maj. Ridley	6 Oct 1921
124	26 Sep 1921	Col. Hoffman (RM)	Col. Keller	-
133	15 Oct 1921	-	Col. Patrick	-
140	1 Nov 1921	Col. Clement A. F. Flagler	-	-
		Col. Frank C. Boggs	-	-
41	12 Jun 1922	Col. Henry C. Newcomer	Col. Flagler (Died)	-
		Maj. Gordon R. Young	-	10 Jun 1922
		-	Col. Sanford	-
66	26 Jul 1922	Maj. Wilhelm D. Styer (Asst. to RM)		21 Jul 1922

Chronological List of Board Members, Chairmen, Resident Members and Assistants (cont' d)

16 May 80

<u>SO</u> <u>No.</u>	<u>Date</u>	<u>Member On</u>	<u>Member</u> <u>Relieved</u>	<u>Eff. Date</u>
72	5 Aug 1922	Maj. Gordon R. Young (RM)	(3) -	-
11	9 Feb 1923	Col. Spencer Cosby	Col. Hoffman	-
85	4 Sep 1923	Col. John R. Slattery	Maj. Tyler	-
53	2 Jul 1924	* BG Edgar Jadwin	BG Taylor (4)	-
6	6 Feb 1925	Col. Herbert Deakyne	Col. Newcomer (Rtd.)	-
27	13 May 1926	Maj. Richard C. Moore	Lt. Col. Slattery (Rsg.)	-
56	19 Jul 1926	Maj. Charles R. Pettis	BG Jadwin (5)	-
61	31 Jul 1926	Maj. Daniel I. Sultan (RM)	Maj. Young (RM)	31 Jul 1926
89	30 Oct 1926	Col. Max C. Tyler	Col. J. C. Oakes	15 Nov 1926
		* Col. E. M. Markham	Col. Cosby	15 Nov 1926
94	30 Nov 1926	Maj. E. L. Daley	BG Deakyne (1 rept: Gr. Lakes to Hud. R.)	Temp.
7	14 Feb 1927	Col. J. C. Oakes	Lt. Col. Tyler	17 Feb 1927
		Col. Spencer Cosby	Col. Markham	17 Feb 1927
58	1 Aug 1927	Maj. Ernest Graves (6)	Col. J. C. Oakes	2 Aug 1927
9	13 Feb 1928	Col. James A. Woodruff	Col. Spencer Cosby (1 rept.)	Temp.
	14 Feb 1927	Lt. Col. Henry C. Jewett	Lt. Col. Chas. R. Pettis (1 rept.)	Temp.
26	11 May 1928	Lt. Col. George B. Pillsbury	Lt. Col. Moore	Temp.
28	24 May 1928	Col. James A. Woodruff	Col. Boggs	-
34	7 Jun 1928	Col. William J. Barden	Lt. Col. Moore	-
36	25 Jun 1928	Maj. Glenn E. Edgerton	Col. Cosby	1 Jul 1928
51	7 Aug 1928	Lt. Col. George B. Pillsbury	Col. Woodruff	-
77	5 Nov 1928	Lt. Col. Thomas M. Robins	Lt. Col. Pettis	-
2	5 Jan 1929	Lt. Col. Mark Brooke	Maj. Edgerton (1 rept.)	Temp.
15	18 Mar 1929	Lt. Col. Mark Brooke	Col. Pillsbury (2 repts.)	Temp.
49	31 Jul 1929	Maj. James J. Loving (RM)	Maj. Sultan (RM)	31 Jul 1929
52	7 Aug 1929	Lt. Col. Warren T. Hannum	Maj. Graves	-
63	10 Sep 1929	Lt. Col. Max C. Tyler	Maj. Edgerton	10 Sep 1929
77	7 Nov 1929	Col. Edward H. Schulz	Col. Robins	-
41	26 Jun 1930	Col. Harley B. Ferguson	Col. Pillsbury	-
42	27 Jun 1930	Col. Herbert Deakyne	(7)	27 Jun 1930
79	5 Oct 1931	Col. George M. Hoffman	Lt. Col. Hannum	-

Chronological List of Board Members, Chairmen, Resident Members and Assistants (cont' d) 16 May 80

<u>SO No.</u>	<u>Date</u>	<u>Member On</u>	<u>Member Relieved</u>	<u>Eff. Date</u>
1	2 Jan 1932	Col. Edward M. Markham	BC Deakyne (Rtd.)	-
5	18 Jan 1932	Lt. Col. Warren T. Hannum	Lt. Col. Tyler	-
		Col. William J. Barden	(8)	16 Jan 1932
23	6 Apr 1932	Col. George R. Spalding	Lt. Col. Hannum	Temp.(18-24 Apr)
37	7 Jun 1932	Lt. Col. Thomas M. Robins	Lt. Col. Hannum (Pac. O. Div. repts. only)	Temp.
38	8 Jun 1932	Lt. Col. Robins	Lt. Col. Hannum	Temp.(25-30 Jun)
39	9 Jun 1932	Col. Earl I. Brown	Col. Ferguson	-
44	29 Jun 1932	Col. Thomas H. Jackson	Col. Brown	-
82	1 Nov 1932	Lt. Col. Robins	Lt. Col. Loving	Temp.(9-23 Nov)
2	7 Jan 1933	Col. Spalding	Lt. Col. Hannum (1 rept.)	Temp.
66 (War Dept.)	22 Mar 1933	Capt. Elliot Vandevanter (Asst. to RM)	-	15 Jun 1933
		Maj. Milo P. Fox (RM)	-	1 Jul 1933
45	25 Apr 1933	Lt. Col. John J. Kingman	Lt. Col. Hannum (2 repts.)	Temp.
53	10 May 1933	Col. Earl I. Brown	Col. Barden	-
81	8 Jul 1933	Col. Barden	Col. Brown	-
166 (War Dept.)	19 Jul 1933	-	Lt. Col. Loving (RM)	15 Oct 1933
92	3 Aug 1933	* Lt. Col. Eugene Reybold	Lt. Col. Loving	-
111	20 Oct 1933	Col. Earl I. Brown	MG Markham	-
131	13 Dec 1933	Col. Spalding	Col. Schulz	-
12	27 Feb 1934	Lt. Col. Max C. Tyler	Col. Jackson	-
15	5 Mar 1934	Col. James A. Woodruff	Col. Spalding	5 Mar 1934
26	28 Apr 1934	Lt. Col. John C. H. Lee	Col. Hannum	1 May 1934
48	7 Jul 1934	Lt. Col. Daniel I. Sultan	Col. Hoffman (Rtd.)	-
67	13 Sep 1934	-	Lt. Col. Sultan	-
68	15 Sep 1934	Maj. Robert W. Crawford	-	15 Sep 1934
72	1 Oct 1934	BG George B. Pillsbury	- (9)	1 Oct 1934
7	5 Feb 1935	Maj. Malcolm Elliot	Col. Brown	Temp.(5 Feb)
10	16 Feb 1935	Col. Gustav R. Lukesh	BG Woodruff	-
18	19 Apr 1935	Lt. Col. Glen E. Edgerton	Maj. Crawford	19 Apr 1935
		Maj. Robert W. Crawford (RM)	(10)	19 Apr 1935

Chronological List of Board Members, Chairmen, Resident Members and Assistants (cont' d)

16 May 80

<u>SO No.</u>	<u>Date</u>	<u>Member On</u>	<u>Member Relieved</u>	<u>Eff. Date</u>
22	8 May 1935	Col. Elliot J. Dent	Col. Brown	Temp. (13 May)
25	20 May 1935	Col. Dent	Lt. Col. Lee	20 May 1935
28	3 Jun 1935	Lt. Col. Francis B. Wilby	Col. Edgerton	Temp. (3 Jun)
45	15 Jul 1935	1st Lt. Thomas H. Stanley (RM) (11)	Maj. Crawford	Temp. (15 Jul)
48	20 Jul 1935	Col. Wildurr Willing (RM)	Maj. Crawford	20 Jul 1935
53	27 Jul 1935	-	Maj. Crawford	27 Jul 1935
63	17 Aug 1935	Col. Hannum	BG Pillsbury	Temp. (26-27 Aug)
		Lt. Col. Lee	Col. Tyler	Temp. (26-27 Aug)
77	17 Sep 1935	Lt. Col. Lee	Col. Brown	Temp. (23 Sep)
97	30 Oct 1935	Col. George R. Spalding	Col. Lukesh	-
100	6 Nov 1935	Col. John J. Kingman	Col. Tyler	Temp. (18 Nov)
104	14 Nov 1935	Col. Edward D. Ardery	Lt. Col. Edgerton	Temp. (18 Nov)
107	23 Nov 1935	Col. Kingman	Col. Tyler	Temp. (17-18 Dec)
6	20 Jan 1936	Col. Ardery	Col. Spalding	Temp. (20-23 Jan)
9	28 Jan 1936	Col. Ardery	Col. Dent	Temp. (10-11 Feb)
14	25 Feb 1936	Capt. Frank O. Bowman (Asst. to RM)		Temp. (eff. 25 Feb)
19	11 Mar 1936	Col. Ernest D. Peek	Col. Spalding	Temp. (mtg. 30 Mar)
21	23 Mar 1936	Col. Peek	Col. Brown	Temp. (mtg. 6 Apr)
25	2 Apr 1936	Col. Hannum	BG Pillsbury	Temp. (mtg. 6 Apr)
33	27 Apr 1936	Col. Peek	BG Pillsbury	Temp. (mtg. 27 Apr)
107 (War Dept.)	5 May 1936	Maj. Wm. A. Snow (RM)	-	-
37-38	13 May 1936	Col. Peek	Col. Spalding	15 May 1936
44	25 May 1936	Col. Hannum	Col. Brown	Temp. (mtg. 1 Jun)
79	20 Aug 1936	Lt. Col. John H. Carruth	Col. Edgerton	Temp. (mtg. 31 Aug)
92	16 Sep 1936	Lt. Col. Carruth	Col. Edgerton	Temp. (mtg. 21 Sep)
94	26 Sep 1936	Col. Laurence V. Frazier	Col. Edgerton	26 Sep 1936
111	14 Nov 1936	Col. Hannum	Maj. Snow	Temp. (mtg. 16 Nov)
116	27 Nov 1936	Col. Edmund L. Daley	Col. Brown (1 rept.)	Temp.
121	5 Dec 1936	Col. John N. Hodges	Col. Frazier (1 rept.)	Temp.

Chronological List of Board Members, Chairmen, Resident Members and Assistants (cont' d) 16 May 80

<u>SO No.</u>	<u>Date</u>	<u>Member On</u>	<u>Member Relieved</u>	<u>Eff. Date</u>
2	13 Jan 1937	Col. Roger G. Powell	Col. Brown (2 repts)	Temp.
3	23 Jan 1937	Lt. Col. William H. Holcombe	Col. Powell (2 repts)	Temp.
5-6	1-2 Feb 1937	-	Col. Brown (12)	1 Feb 1937
6	2 Feb 1937	-	Col. Frazier	Temp. (8 Feb)
26 (War Dept.)	2 Feb 1937	* Lt. Col. Raymond A. Wheeler (RM)	Maj. Snow (RM)	1 Feb 1937
		Maj. Snow (Asst. to RM)	-	1 Feb 1937
8	12 Feb 1937	-	BG Pillsbury	Temp. (15 Feb)
10	25 Feb 1937	-	BG Pillsbury	Temp. (1 Mar)
12	3 Mar 1937	-	Col. Brown	Temp. (3-15 Mar)
13	4 Mar 1937	Lt. Col. Francis K. Newcomer (13)	BG Pillsbury	Temp. (8 Mar)
			Col. Dent	Temp. (15 Mar)
14	6 Mar 1937	Col. Hannum	Col. Peek	Temp. (8 Mar)
16	16 Mar 1937	-	Capt. Frank Bowman (Asst. RM)	16 Mar 1937
25	7 Apr 1937	-	BG Pillsbury	Temp. (12 Apr)
26	13 Apr 1937	Maj. Thomas D. Stamps (as member) (14)	Maj. Snow	Temp. (13 Apr)
30	26 Apr 1937	-	BG Tyler	Temp. (26 Apr)
35	7 May 1937	Lt. Col. Frank S. Besson	BG Tyler	Temp. (10 May)
			Maj. Snow	Temp. (10 May)
36	12 May 1937	-	Col. Brown	Temp. (24 May)
44	5 Jun 1937	-	Maj. Snow	Temp. (7 Jun)
49	12 Jun 1937	Capt. Stanley	Lt. Col. Wheeler	Temp. (14 Jun)
50	14 Jun 1937	-	Maj. Snow	Temp. (14 Jun)
52	17 Jun 1937	Col. Edmund L. Daley	Col. Peek	28 Jun 1937
53	19 Jun 1937	-	BG Tyler	Temp. (23 Jun)
54	21 Jun 1937	Col. Roger G. Powell	Lt. Col. Wheeler	Temp. (23 Jun)
71	31 Jul 1937	-	Col. Dent	31 Jul 1937
79	16 Aug 1937	Lt. Col. David McCoach, Jr.	Lt. Col. Snow	Temp. (23 Aug)
80	20 Aug 1937	Lt. Col. Stuart C. Godfrey	Col. Brown	Temp. (24 Aug)
		Capt. Stanley	Col. Daley	Temp. (24 Aug)

Chronological List of Board Members, Chairmen, Resident Members and Assistants (cont' d) 16 May 80

<u>SO No.</u>	<u>Date</u>	<u>Member On</u>	<u>Member Relieved</u>	<u>Eff. Date</u>
83	24 Aug 1937	Maj. Harry B. Vaughan, Jr. (Asst. to RM)	-	24 Aug 1937
		* Col. Julien L. Schley	Lt. Col. Snow	25 Aug 1937
203 (War Dept.)	30 Aug 1937	-	Lt. Col. Snow (Asst. to RM)	-
92	18 Sep 1937	Capt. Stanley	Col. Schley	Temp. (27-28 Sep)
94	24 Sep 1937	Col. Hannum	BG Tyler	Temp. (27-28 Sep)
		Col. John C. H. Lee	BG Pillsbury	Temp. (27-28 Sep)
107	30 Oct 1937	Col. Hannum	BG Pillsbury	Temp. (1 Nov)
		Lt. Col. Godfrey	MG Schley	Temp. (1 Nov)
111	12 Nov 1937	Col. Hannum	BG Pillsbury	12 Nov 1937
		Col. James A. O' Connor	MG Schley	12 Nov 1937
7 (War Dept.)	10 Jan 1938	Capt. Robert E. Coughlin (Asst. to RM)	-	10 Feb 1938
7	18 Jan 1938	Lt. Col. McCoach	Col. Hannum	Temp. (7-8 Feb)
18	15 Feb 1938	Lt. Col. McCoach	Col. Hannum	Temp. (7-8 Mar)
22	9 Mar 1938	Lt. Col. McCoach	Col. Hannum	Temp. (21 Mar)
23	10 Mar 1938	Lt. Col. Godfrey	Col. Brown	Temp. (21 Mar)
		Capt. Stanley	BG Tyler	Temp. (21 Mar)
28	25 Mar 1938	BG John J. Kingman	Col. Hannum	25 Mar 1938
30	4 Apr 1938	Col. Jarvis J. Bain	Col. Brown	6 Apr 1938
34	11 Apr 1938	Lt. Col. Godfrey	BG Tyler	Temp. (18 Apr)
44	6 May 1938	Capt. Coughlin	Col. Frazier	Temp. (6-16 Apr)
48	20 May 1938	Capt. Coughlin	Col. Frazier	Temp.
51	31 May 1938	Col. Godfrey	BG Tyler	Temp. (6 Jun)
62	23 Jun 1938	Maj. Albert B. Jones	BG Tyler	Temp. (11 Jul)
		Col. Thomas M. Robins	Col. O' Conner	23 Jun 1938
70	21 Jul 1938	Maj. Jones	BG Kingman	Temp. (25 Jul)
110	1 Nov 1938	Col. Francis B. Wilby	Col. Daley	-
30	10 May 1939	Capt. Coughlin	BG Kingman	Temp. (15 May)
36	31 May 1939	Capt. Coughlin	BG Kingman	Temp. (5 Jun)

Chronological List of Board Members, Chairmen, Resident Members and Assistants (cont' d)

16 May 80

<u>SO No.</u>	<u>Date</u>	<u>Member On</u>	<u>Member Relieved</u>	<u>Eff. Date</u>
45	26 Jun 1939	Capt. Coughlin	Col. Wilby	Temp.(26 Jun)
50	10 Jul 1939	Col. Edward H. Marks	BG Tyler	-
		Lt. Col. Malcolm Elliott	BG Kingman	-
		Capt. Coughlin	Col. Wilby	Temp.(17 Jul)
83	22 Sep 1939	Capt. Coughlin	BG Robins	Temp.(25 Sep)
85	28 Sep 1939	Col. Charles L. Hall	Col. Wilby	16 Oct 1939
98	30 Oct 1939	Capt. Coughlin	Col. Frazier	Temp.(30 Oct)
103	17 Nov 1939	Capt. Coughlin	Col. Frazier	Temp.
107	25 Nov 1939	Lt. Col. Earl A. Gesler	Col. Marks	Temp.(27-28 Nov)
3	4 Mar 1940	Col. Ulysses S. Grant, 3d	Col. Frazier	-
24	15 May 1940	Col. John N. Hodges	Col. Hall	-
146 (War Dept.)	21 Jun 1940	-	Col. Wheeler off as RM	-
44	27 Jun 1940	Capt. Coughlin (Acting RM)	-	27 Jun 1940
217 (War Dept.)	13 Sep 1940	Lt. Col. Joseph D. Arthur, Jr. (RM)	-	1 Oct 1940
84	7 Oct 1940	Maj. Coughlin (Acting RM)	Lt. Col. Arthur (RM)	7 Oct 1940
299 (War Dept.)	20 Dec 1940	Col. Charles L. Hall (RM)	-	31 Jan 1941
51	15 Apr 1941	Col. Roger G. Powell	BG Grant	-
98 (War Dept.)	28 Apr 1941	Col. Earl North (RM)	Col. Hall (RM)	-
56	28 Apr 1941	Maj. Coughlin	BG Marks	-
59	5 May 1941	Maj. Coughlin (Acting RM)	-	5 May 1941
61	8 May 1941	Col. Charles L. Hall (15)	-	8 May 1941
65	14 May 1941	Lt. Col. John S. Bragdon	Col. Bain	-
69	23 May 1941	Col. David McCoach, Jr.	Lt. Col. Bragdon	Temp. (26 May)
84	14 Jun 1941	Col. McCoach	Lt. Col. Bragdon	Temp. (16 Jun)
93	28 Jun 1941	Maj. Coughlin (16)	Lt. Col. Bragdon	Temp. (30 Jun)
97	3 Jul 1941	Col. Hall (15)	Maj. Coughlin	8 May 1941
102	12 Jul 1941	Maj. Coughlin	Col. Bragdon	Temp.(14 Jul)

Chronological List of Board Members, Chairmen, Resident Members and Assistants (cont' d)

16 May 80

<u>SO</u> <u>No.</u>	<u>Date</u>	<u>Member On</u>	<u>Member</u> <u>Relieved</u>	<u>Eff. Date</u>
158	11 Oct 1941	Lt. Col. Coughlin	Col. Hall	Temp. (13 Oct)
280 (War Dept.)	2 Dec 1941	-	Lt. Col. Coughlin as Asst. to RM	5 Jan 42
84	21 Apr 1942	Col. Thomas F. Farrell	Col. Hodges	-
		Col. Beverly C. Dunn	Col. Powell	-
92	30 Apr 1942	Col. Roger G. Powell (RM)	Col. North (RM)	-
		Col. North (Asst. to RM)	-	-
203 (OSA ?)	4 Aug 1942	-	Lt. Col. Gordon E. Textor (Asst. to RM) (17)	?
10	12 Jan 1943	Col. Clark Kittrell	Col. Farrell	-
35	10 Feb 1943	BG Kingman	MG Robins	-
97	23 Apr 1943	Col. Ralph G. Barrows	BG Bragdon	Temp. (3 May)
193	18 Aug 1943	Col. Peter A. Feringa (RM)	-	20 Sep 1943
226	27 Sep 1943	Col. Peter A. Feringa (Member)	Col. Powell	30 Sep 1943
15	18 Jan 1944	BG Roscoe C. Crawford	BG Dunn	18 Jan 1944
114	15 May 1944	Col. Earl E. Gesler	Col. Kittrell	15 May 1944
144	19 Jun 1944	-	Col. Feringa (Member) (18)	-
155	1 Jul 1944	Col. Albert H. Burton (Member)	Col. Feringa	-
234	4 Oct 1944	Col. Xenophon H. Price (RM)	-	6 Oct 1944
241	12 Oct 1944	Col. Xenophon H. Price (Member)	Col. Burton	-
89	16 Apr 1945	BG James A. O' Connor	BG Bragdon	-
118	21 May 1945	Col. Albert B. Jones	BG O' Connor	-
663 (OCE Memo)	8 Jun 1945	BG J. S. Bragdon	Col. A. B. Jones	8 Jun 1945
672 "	27 Jun 1945	Col. A. B. Jones	BG Bragdon	25 Jun 1945
693 "	7 Aug 1945	BG Beverly C. Dunn	Col. A. B. Jones	2 Aug 1945
226	3 Oct 1945	MG Thomas M. Robins	BG Kingman	-
		BG John S. Bragdon	Col. Hall	-
		Col. Harry A. Montgomery	Col. Elliot	-
241	24 Oct 1945	Col. Peter A. Feringa (RM)	-	30 Oct 1945

Chronological List of Board Members, Chairmen, Resident Members and Assistants (cont) 16 May 80

<u>SO No.</u>	<u>Date</u>	<u>Member On</u>	<u>Member Relieved</u>	<u>Eff. Date</u>
250	6 Nov 1945	Col. Hall	MG Robins	-
252	8 Nov 1945	Col. Kittrell	Col. Gesler	-
254	13 Nov 1945	Col. Kittrell	Col. Gesler	15 Nov 1945
27	6 Feb 1946	BG James B. Newman, Jr.	BG Bragdon	-
43	5 Mar 1946	Col. Dabney O. Elliott	Col. Montgomery	-
64	8 Apr 1946	Col. Wayne S. Moore (RM)	-	8 Apr 1946
		-	Col. Moore (Asst. RM) (19)	8 Apr 1946
126	16 Aug 1946	Col. George W. Gillette	BG Newman	
135	18 Sep 1946	Col. Gesler	Col. Hall	Temp. (7 Oct)
2	10 Jan 1947	Col. Henry Hutchings, Jr.	Col. Kittrell	-
34	18 Jun 1947	Col. Kittrell	Col. Dunn	Temp. (11 Jul)
11	14 Nov 1947	BG Douglas L. Weart	Col. Gillette	-
1	6 Jan 1948	Col. Kittrell	Col. Hall	-
5	12 Feb 1948	BG Raymond G. Moses	Col. Dunn	Temp. (26-27 Feb)
13	7 May 1948	BG Moses	Col. Dunn	-
		Col. Mason S. Young	MG Weart	-
31	2 Sep 1948	Col. James H. Stratton	BG Moses	-
32	7 Sep 1948	MG Roscoe C. Crawford (1st Chairman)	-	-
48	17 Dec 1948	MG Joseph C. Mehaffey	Col. Elliot	-
9	17 Mar 1949	Col. Dwight F. Johns	Col. Hutchings	-
14	7 Apr 1949	Col. Henry F. Hannis (Asst to RM)	-	11 Apr 1949
20	20 May 1949	-	Col. Moore (RM)	1 Jun 1949
		Col. Hannis (RM)	-	1 Jun 1949
32	8 Jul 1949	Col. Bernard L. Robinson	Col. Young	-
37	29 Jul 1949	BG George J. Nold	Col. Stratton (rtd.)	31 Jul 1949
47	30 Sep 1949	Col. Gesler	Col. Nold	Temp. (13-14 Oct)

Chronological List of Board Members, Chairmen, Resident Members and Assistants (cont) 16 May 80

<u>SO No.</u>	<u>Date</u>	<u>Member On</u>	<u>Member Relieved</u>	<u>Eff. Date</u>
59	1 Dec 1949	* BG Samuel D. Sturgis, Jr. Col. Orville E. Walsh Col. Louis W. Prentiss	MG Crawford MG Mehaffey Col. Johns	- - -
60	2 Dec 1949	BG John S. Bragdon (Ch.)	BG Nold	-
68	30 Dec 1949	Col. John R. Hardin	Col. Kittrell	1 Jan 1950
4	6 Feb 1950	Col. Gesler	Col. Hardin	2-3 Mar 1950 (T)
12	27 Mar 1950	Col. Gesler	Col. Robinson	17-19 Apr 1950 (T)
27	13 Jun 1950	Col. Gesler	BG Sturgis	19-21 Jun 1950 (T)
37	20 Jul 1950	Col. Dabney O. Elliott (Actg RM)	Col. Hannis (RM)	1 Aug 1950
40	9 Aug 1950	Col. Henry J. Woodbury Col. Arthur N. Pence	Col. Walsh Col. Prentiss	25-26 Aug 1950 (T) 25-26 Aug 1950 (T)
41	11 Aug 1950	Col. Heston R. Cole (RM)	Col. Elliott (Actg RM)	15 Aug 1950
46	22 Aug 1950	Col. Elliot	BG Bragdon	25-26 Aug 1950 (T)
49	8 Sep 1950	Col. Kenneth M. Moore	BG Bragdon	25-29 Sep 1950 (T)
50 (20)	18 Sep 1950	Col. Gesler	Col. Walsh	25-29 Sep 1950 (T)
3	15 Jan 1951	Col. Pence	BG Sturgis	31 Jan - 2 Feb 1951 (T)
10	5 Mar 1951	BG Don G. Shingler	BG Sturgis	-
25	9 May 1951	Col. Wendell P. Trower	Col. Hardin	-
29	25 May 1951	Col. Gesler Col. Arthur A. G. Kirchhoff	MG Bragdon Col. Robinson	4-6 Jun 1951 (T) 4-6 Jun 1951 (T)
40	12 Jul 1951	Col. Gesler	Col. Kirchhoff	30-31 Jul 1951 (T)
44	10 Aug 1951	MG George J. Nold (Ch.)	MG Bragdon (Ch.)	-
49	17 Sep 1951	Col. Gesler	BG Robinson	29-30 Oct 1951 (T)
53	5 Oct 1951	Col Gesler	BG Robinson	24 Sep-30 Oct 1951 (T)
		Col. Chester K. Harding	BG Walsh	29-30 Oct 1951 (T)
62	17 Dec 1951	Col. Harding	BG Robinson	-
12	25 Mar 1952	Col. Paschal N. Strong	BG Walsh	8-11 Apr 1952 (T)
13	8 Apr 1952	Col. Gesler	BG Shingler	8-11 Apr 1952 (T)
17	7 May 1952	Col. Emerson C. Itschner	BG Walsh	-
22	29 May 1952	Col. Strong	Col. Prentiss	19-20 Jun 1952 (T)

Chronological List of Board Members, Chairmen, Resident Members and Assistants (cont' d)

16 May 80

<u>SO No.</u>	<u>Date</u>	<u>Member On</u>	<u>Member Relieved</u>	<u>Eff. Date</u>
30	14 Jul 1952	Col. Herbert D. Vogel	Col. Prentiss	-
		BG William E. Potter	BG Shingler	-
41	22 Sep 1952	Col. Strong	Col. Cole	29-30 Sep & 1 Oct 1952 (T)
		* Col. Walter K. Wilson	Col. Harding	'
46	22 Oct 1952	Col. Strong	Col. Cole	Temp (18 Nov)
		Col. Wilson	Col. Harding	' "
49	11 Dec 1952	Col. Strong	Col. Cole (one rept; Sabine-Neche Waterway)	-
		Col. Wilson	Col. Harding	-
50	17 Dec 1952	Col. Benjamin B. Talley	Col. Harding	-
3	28 Jan 1953	Col. Wilson	Col. Cole	Temp. (5 Feb)
4	4 Feb 1953	BG Bernard L. Robinson (Ch.)	MG Nold (Ch.)	-
6	26 Feb 1953	Col. Leland H. Hewitt	Col. Cole	Temp. (19-20 Mar)
8	31 Mar 1953	J. Ben Walker (Actg. RM)	Col. Cole (RM)	1 Apr 1953
9	8 Apr 1953	Col. Hewitt	-	Temp. (20-21 Apr)
17	9 Jun 1953	BG Charles G. Holle	Col. Talley	Temp. (19 Jun)
		Col. Hewitt	-	Temp. (19 Jun)
20	24 Jun 1953	Col. Francis H. Falkner (RM)	Ben Walker (Actg RM)	29 Jun 1953
41	26 Oct 1953	BG Holle	MG Robinson	Temp. (20 Nov)
		Col. Paul D. Berrigan	BG Itschner	1 Nov 1953
27	24 May 1954	BG Holle	Col. Talley	Temp. (9-10 Jun)
46	16 Aug 1954	BG Holle	BG Vogel	16 Aug 1954
9	14 Mar 1955	Col. John L. Person	Col. Talley	-
18	20 May 1955	Col. Louis H. Foote	Col. Trower	1 Jun 1955
117 (DA)	14 Jun 1955	-	Col. Falkner (relieved)	-
25	23 Jun 1955	Col. Robert J. Fleming	MG Robinson	27 Jun 1955
		BG Holle (Ch.)	MG Robinson (Ch.)	27 Jun 1955
26	27 Jun 1955	Col. Hubert S. Miller (RM)	Col. Falkner (RM)	5 Jul 1955
44	25 Nov 1955	Col. Clarence Renshaw	BG Fleming	Temp. (28-29 Nov)
47	19 Dec 1955	BG Henry J. Hoefler	-	Temp. (19 Dec)
7 (21)	28 Mar 1956	Col. Renshaw	BG Potter	1 May 1956
9	17 Apr 1956	BG Lyle E. Seeman	BG Potter	25 Apr 1956
10	9 May 1956	Col. Gunnard W. Carlson (RM)	Col. Miller (RM)	1 Jul 1956

Chronological List of Board Members, Chairmen, Resident Members and Assistants (cont' d)

16 May 80

<u>SO</u> <u>No.</u>	<u>Date</u>	<u>Member On</u>	<u>Member</u> <u>Relieved</u>	<u>Eff. Date</u>
20	23 Jul 1956	MG Itschner (Ch.)	MG Holle (Ch.)	7 Aug 1956
23	1 Aug 1956	MG Gerald E. Galloway	Col. Person	10 Aug 1956
29	5 Oct 1956	MG Holle (Ch.)	MG Itschner (Ch.)	5 Oct 1956
32	12 Oct 1956	Col. Rudolf E. Smyser	MG Galloway	Temp. (29-30 Nov)
5	5 Feb 1957	Col. Smyser	BG Fleming	-
14	3 Apr 1957	Col. Renshaw	BG Foote	-
31	10 Jul 1957	* BG William F. Cassidy	BG Berrigan	1 Aug 1957
1	8 Jan 1958	MG Louis J. Rumaggi	MG Galloway	1 Feb 1958
		BG Alden K. Sibley	BG Seeman	1 Feb 1958
15	5 Jun 1958	Col. Allen F. Clark	BG Cassidy	9 Jun 1958
23	22 Jul 1958	MG Frank M. Albrecht	Col. Smyser	1 Aug 1958
39	13 Nov 1958	MG Walter K. Wilson (Ch.)	MG Holle (Ch.)	1 Nov 1958
46	22 Dec 1958	Col. Carl H. Bronn (RM)	Col. Carlson (RM)	1 Jan 1959
15	10 Jun 1959	BG Robert G. MacDonnell	BG Renshaw	-
		BG William Whipple	MG Rumaggi	-
1	6 Jan 1960	MG Keith R. Barney	MG Albrecht	1 Feb 1960
		BG William W. Lapsley	BG Sibley	1 Feb 1960
28	16 Jun 1960	BG Thomas H. Lipscomb	BG Whipple	1 Jul 1960
34 (22)	6 Jul 1960	MG William E. Potter (Ch.)	MG Wilson (Ch.)	10 Jul 1960
53	9 Sep 1960	MG Barney (Ch.)	MG Wilson (Ch.)	28 Sep 1960
		BG Thomas Def. Rogers	MG Barney (as mbr)	28 Sep 1960
71	9 Nov 1960	BG Fleming	BG Lapsley	16 Nov 1960
1	6 Jan 1961	BG William R. Shuler	BG Clark	31 Jan 1961
41	14 Jul 1961	MG Alfred D. Starbird	BG MacDonnell	-
68	12 Dec 1961	BG Howard A. Morris	MG Starbird	-
3	8 Jan 1962	BG Seymour A. Potter, Jr.	MG Fleming	5 Jan 1962
7	30 Jan 1962	BG Arthur H. Frye, Jr.	BG Rogers	24 Jan 1962
10	16 Feb 1962	BG William W. Lapsley	BG Lipscomb	1 Mar 1962
		BG Jackson Graham	BG Shuler	1 Mar 1962
15	15 Mar 1962	MG Cassidy (Ch.)	MG Barney (Ch.)	1 Apr 1962
51	15 Aug 1962	Col. Edmund H. Lang (23)	-	17 Sep 1962

Chronological List of Board Members, Chairmen, Resident Members and Assistants (cont' d) 16 May 80

<u>SO</u> <u>No.</u>	<u>Date</u>	<u>Member On</u>	<u>Member Relieved</u>	<u>Eff. Date</u>
56	14 Sep 1962	BG Carroll H. Dunn	BG Potter	15 Sep 62
61	16 Oct 1962	Col. Lang (RM)	Col. Bronn (RM)	22 Oct 1962
9	8 Feb 1963	MG Ellsworth I. Davis	BG Morris	28 Jan 1963
10	11 Feb 1963	MG MacDonnell (Ch.)	MG Cassidy (Ch.)	18 Feb 1963
		BG Robert F. Seedlock	BG Graham	7 Feb 1963
61	26 Sep 1963	BG John C. Dalrymple	MG Seedlock	22 Oct 1963
2	22 Jan 1964	BG Peter C. Hyzer	BG Frye	31 Jan 1964
43	27 Jul 1964	MG George H. Walker	BG Dunn	21 Jul 1964
4	13 Jan 1965	MG Alvin C. Welling	MG Lapsley	15 Jan 1965
42	6 Jul 1965	BG Roy T. Dodge	BG Dalrymple	2 Jul 1965
47	26 Jul 1965	BG Walter P. Leber	MG Welling	1 Aug 1965
49	19 Sep 1966	BG William T. Bradley	MG Davis	1 Oct 1966
54	8 Nov 1966	* MG Frederick J. Clarke	BG Leber	1 Dec 1966
2	6 Jan 1967	BG Willard Roper	BG Hyzer	9 Jan 1967
9	1 Mar 1967	Col. Alvin D. Wilder, Jr. (RM)	Col. Lang (RM)	-
15	24 Mar 1967	Col. Wilder (RM)	Col. Lang (RM)	1 Apr 1967
49	21 Aug 1967	BG John A. B. Dillard, Jr.	BG Dodge	1 Sep 1967
		BG Francis P. Koisch	MG Walker	1 Sep 1967
61	17 Oct 1967	BG Elmer P. Yates	BG Roper	18 Oct 1967
6	29 Feb 1968	MG Thomas J. Hayes III	BG Bradley	15 Mar 1968
15	16 May 1968	BG Robert M. Tarbox	BG Dillard	16 May 1968
18	11 Jun 1968	BG Craig C. Cannon	BG Koisch	1 Jul 1968
46	22 Oct 1968	BG William M. Glasgow, Jr.	BG Yates	21 Oct 1968
31	4 Jun 1969	MG Dunn (Ch.)	MG MacDonnell (Ch.)	1 Aug 1969
		MG Charles M. Duke	MG Clarke	1 Aug 1969
		BG Roper	MG Hayes	1 Aug 1969
		BG Roy S. Kelley	BG Tarbox	1 Aug 1969
58	10 Sep 1969	MG Richard H. Free	BG Glasgow	1 Oct 1969
73	4 Nov 1969	LTG Cassidy (Ch.)	MG Dunn (Ch.)	1 Nov 1969
		MG Dunn	BG Cannon	1 Nov 1969
36	18 May 1970	MG Andrew P. Rollins, Jr.	-	1 Jun 1970

Chronological List of Board Members, Chairmen, Resident Members and Assistants (cont' d)

16 May 80

<u>SO No.</u>	<u>Date</u>	<u>Member On</u>	<u>Member Relieved</u>	<u>Eff. Date</u>
40	28 May 1970	MG Dunn (Ch.)	-	1 Jun 1970
52	9 Jul 1970	MG Roper (Ch.)	-	-
59	5 Aug 1970	BG Parfitt	-	17 Aug 1970
45	8 Jul 1971	MG Roper (Ch.)	MG Dunn (Ch.)	-
		BG Frank A. Camm	BG Kelley	1 Aug 1971
		* BG John W. Morris	MG Rollins	1 Aug 1971
20	6 Mar 1972	MG William L. Starnes	MG Duke	1 Sep 1971
		MG Ernest Graves, Jr.	MG Free	1 Mar 1972
		MG Richard H. Groves	MG Morris	1 Apr 1972
46	17 May 1972	Col. John T. Rhett, Jr.	-	Temp. (6 Jul)
49	1 Jun 1972	MG Kenneth T. Sawyer	MG Camm	1 Jun 1972
200 (DA)	20 Apr 1972	Col. Rhett (RM)	Col. Wilder (RM)	21 Aug 1972
90	7 Nov 1972	BG George B. Fink	MG Sawyer	16 Oct 1972
12	16 Feb 1973	MG Rollins (Ch.)	MG Roper (Ch.)	1 Mar 1973
18	2 Mar 1973	Col. William G. Kratz (RM)	Col. Rhett (RM)	upon arrival
45	11 Jun 1973	MG Charles C. Noble	MG Starnes	25 Jun 1973
60	25 Jul 1973	MG Rollins (Ch.)	-	1 Aug 1973
69	21 Aug 1973	MG Daniel A. Raymond (Ch.)	MG Rollins (Ch.)	5 Sep 1973
		MG Richard E. McConnell	MG Parfitt	5 Sep 1973
100	7 Dec 1973	BG Carroll N. LeTellier	MG Graves	15 Dec 1973
69	8 Aug 1974	BG James L. Kelly	MG Groves	31 Aug 1974
		MG Koisch	MG Noble	10 Sep 1974
70	9 Aug 1974	MG Koisch	-	16 Sep 1974
76	28 Aug 1974	BG Wayne S. Nichols	BG Fink	1 Sep 1974
44 (DA)	5 Mar 1975	Col. Robert L. Bangert (24)	-	1 Jul 1975
15	3 Apr 1975	-	MG McConnell	1 May 1975
34	11 Jul 1975	MG John W. Morris (Ch.)	MG Raymond (Ch.)	1 Aug 1975
37	17 Jul 1975	BG Wesley E. Peel	MG McConnell	16 Jul 1975
46	15 Aug 1975	BG Charles I. McGinnis	BG Nichols	1 Sep 1975
48	21 Aug 1975	Col. John H. Mason (Alt. Mbr.)	-	Temp
13	4 Feb 1976	Col. Mason	MG LeTellier	1 Feb 1976

Chronological List of Board Members, Chairmen, Resident Members and Assistants (cont' d)

16 May 80

<u>SO</u> <u>No.</u>	<u>Date</u>	<u>Member On</u>	<u>Member</u> <u>Relieved</u>	<u>Eff. Date</u>
44	(25) 23 Jun 1976	BG Richard H. Connell	-	1 Jul 1976
DF	(26) 6 Aug 1976	MG Robert C. Marshall (Ch.)	LTG Morris (Ch.)	1 Sep 1976
DF	(27) 6 Apr 1977	BG Kenneth E. McIntyre	MG Koisch	7 Apr 1977
DF	(28) 1 Jun 1977	MG Ernest Graves, Jr.	MG McGinnis	1 Jul 1977
DF	(29) 7 Jul 1977	BG Robert L. Moore	MG Kelly	1 Aug 1977
DF	4 Oct 1977	MG Ernest Graves, Jr. (Ch.)	MG Marshall (Ch.)	1 Oct 1977
DF	18 Oct 1977	MG Robert C. Marshall (Mbr.)	-	1 Oct 1977
DF	4 Oct 1977	BG Elvin R. Heiberg III	MG Marshall (Mbr.)	1 Oct 1977
SO 27-1	30 Aug 1977	COL Albert C. Costanzo (RM)	COL Bangert (RM)	1 Oct 1977
DF	27 Oct 1977		BG Heiberg III	18 Oct 1977
DF	28 Nov 1977	BG Elvin R. Heiberg III	BG Connell	1 Dec 1977
DF	10 Feb 1978	MG Robert C. Marshall (Ch.)	MG Graves (Ch.)	1 Mar 1978
DF	17 May 1978	COL John P. Chandler	BG Moore	15 May 1978
DF	17 May 1978	MG James A. Johnson	MG Peel	15 May 1978
DF	(30) 17 May 1978	MG Bates C. Burnell (Ch.)	MG Marshall (Ch.)	1 Jul 1978
DF	30 Aug 1978	BG Richard M. Wells	BG Heiberg III	1 Sep 1978
DF	29 May 1979	MG James A. Johnson (Ch.)	MG Burnell (Ch.)	1 Jun 1979
DF	29 May 1979	BG Norman G. Delbridge, Jr.	-	1 Jun 1979
DF	29 May 1979	MG Louis W. Prentiss, Jr.	BG McIntyre	1 Jun 1979
DF	29 May 1979	COL Clyde A. Selleck, Jr.	COL Chandler	1 Jun 1979
DF	29 Aug 79	MG Harry A. Griffith	MG Prentiss	1 Sep 1979

* Later served as Chief of Engineers.

NOTES:

- (1) Lt. Col. A. M. Miller died 14 September 1904.
- (2) Col. Leach died on 16 October 1909.
- (3) Major Young replaced Col. Hoffman as Resident Member. Hoffman stayed on Board.
- (4) Gen. Taylor named Chief of Engineers on 19 June 1924.
- (5) BG Jadwin named Chief of Engineers on 27 June 1926.
- (6) Major Graves was first assigned to duty with the Board by SO 28, 4 May 1927; no duty specified and not a member. Also, on 1 October 1927, a Captain Albert B. Jones was assigned to duty with the Board; duties not specified (SO 80, 1 October 1927).
- (7) Former BG Deakyne assigned to duty with BERH as Colonel Deakyne; he is already a member.
- (8) Col. Barden assigned to duty in the BERH; he is already a member.
- (9) Believe that Pillsbury replaces Col. Barden as noted in letter on file of Board Members dated 24 October 1934. Barden retired on 30 September 1934. No special order found that would relieve him.
- (10) Crawford named Resident Member and apparently replaces Fox, although Special Order does not state so.
- (11) Lt. Stanley relieved Major Crawford for only one day (15 July 1935).
- (12) Colonel Brown relieved, but revoked by Special Order 6, dated 2 February 1937.
- (13) Lt. Colonel Newcomer relieved General Pillsbury at one meeting and Colonel Dent at another.
- (14) No record found for Major Snow as member between 1 February 1937 and this date; appointed Assistant to Resident Member on 1 February 1937.
- (15) Special Order 61 amended by No. 97 to replace Coughlin as member by Hall, effective 8 May 1941.
- (16) Apparently Major Coughlin did not vote as Acting RM; he replaced others as member temporarily.
- (17) No record found appointing Lt. Col. Textor as Assistant to Resident Member.
- (18) Although Col. Feringa was relieved as a Board Member by this Special Order dated 19 June 1944, the Annual Report of the Chief of Engineers for Fiscal Year 1944 shows Col. Feringa as a member on 30 June 1944.
- (19) No record found appointing Col. Moore as Assistant Resident Member.
- (20) Revoked by Special Order 51, 22 September 1950.
- (21) Revoked by Special Order 9, 17 April 1956.
- (22) Revoked by Special Order 36, dated 12 July 1960. (Theoretically, Gen. Potter was Chairman on 10-11 Jul 1960.
- (23) Appoints him to duty with Board; no designation yet as Resident Member.
- (24) Appoints him to duty with Board; no designation yet as Resident Member.

NOTES: (Cont' d)

- (25) Did not state who has replaced, but assumed to be Colonel Mason.
- (26) No special order; appointed by DF, dated 6 August 1976, from DAEN-EPM-A. All Disposition Forms (DFs) making future assignments originated from DAEN-EPM-A (later DAEN-PEM-A), unless otherwise indicated.
- (27) No special order; appointed by DF, dated 6 April 1976, from DAEN-EPM-A.
- (28) No special order; appointed by DF, dated 1 June 1977, from DAEN-EPM-A; member only as of this date.
- (29) No special order; appointed by DF, dated 7 July 1977, from DAEN-EPM-A.
- (30) General Marshall relieved as Chairman only; still a Board member.

May 1980

APPENDIX VII

MILITARY ASSISTANTS

(Assistant to the Resident Member)

<u>Name</u>	<u>Special Order</u>	<u>Date Assigned</u>	<u>Date Relieved</u>
MAJ Wilhelm D. Styer	66 - 26 Jul 22	21 Jul 22	-
CPT John G. Drinkwater	-	28 Sep 25	18 Aug 29
CPT Albert B. Jones	-	2 Oct 27	28 Oct 32
1LT J. P. Dean	-	3 Jun 28	19 Oct 31
1LT H. W. Ehr Gott	-	10 Jul 32	1 Aug 32
LTC Eugene Reybold	-	1 Nov 32	26 Sep 35
CPT Elliott Vandevanter	66 - 22 Mar 33	15 Jun 33	5 Aug 37
CPT Thos. H. Stanley	-	15 Oct 34	(1)
CPT Frank O. Bowman	14 - 25 Feb 36	25 Feb 36	16 Mar 37 (2)
MAJ William A. Snow		29 Jun 36	27 Jul 36 (3)
MAJ William A. Snow	(OSA) 26 - 2 Feb 37	1 Feb 37	30 Aug 37 (3)
MAJ Harry B. Vaughan	83 - 24 Aug 37	24 Aug 37	(4)
CPT Robert E. Coughlin	(OSA) 7 - 10 Jan 38	10 Feb 38	2 Dec 41 (5)
LTC Gordon E. Textor	-	(6)	4 Aug 42 (7)
COL Earl North	92 - 30 Apr 42	30 Apr 42	(8)
COL Wayne S. Moore		(9)	8 Apr 46 (10)
COL Henry F. Hannis	14 - 7 Apr 49	1 Apr 49	1 Jun 49 (11)
CPT Paul B. Haseman	-	(12)	1 Sep 71
CPT Robert D. Wolff	145	13 Sep 71	5 Oct 72
CPT Ralph Locurcio	173	25 Sep 72	(13)
MAJ Steven Young	131	1 Sep 75	(14)
CPT Mark Anderson			(15)

MILITARY ASSISTANTS (Cont' d)

May 1980

- (1) Date relieved not known. Captain Stanley served as RM for one day only, 15 Jul 35 (SO 45, 15 Jul 35).
- (2) Bowman relieved by SO 16, 16 Mar 37.
- (3) Major Snow's first detail not confirmed by known special orders. He was RM from 5 May 36 (OSA SO 107, 5 May 36) until 1 Feb 37 when relieved as RM by Raymond Wheeler and appointed as Ass't to RM that date (OSA SO 29, 2 Feb 37). LTC Snow was later relieved as Ass't to RM by OSA SO 203, 30 Aug 37.
- (4) Date relieved not known.
- (5) Relieved by OSA SO 280, 2 Dec 41.
- (6) Date assigned not known. There on 29 Apr 42; see File No. 125.1/136.
- (7) Relieved by OSA SO 203, 4 Aug 42.
- (8) Date relieved not known. Col. North also RM from 28 Apr 41 to 5 May 41.
- (9) Date assigned not known.
- (10) Col. Moore relieved as Ass't and assigned as RM by SO 64, 8 Apr 46.
- (11) Col. Hannis relieved as Ass't and appointed RM by SO 20, 20 May 49.
- (12) Date assigned not known. Cpt. Haseman signed correspondence in March 1970.
- (13) Date relieved not known; estimated departure June 1975.
- (14) Date relieved not known; estimated departure June 1977.
- (15) Dates assigned and relieved not known; estimated assignment June 1977 and departure September 1978.

APPENDIX VIII

Port Series

<u>NO.</u>	<u>TITLE</u>	<u>DATE OF REVISION</u>
1	Portland and Searsport, ME, and Portsmouth, NH.....	1976
3	Boston, MA.....(UNDER REVISION)	1979
4	Ports of Southern New England (Providence, RI; Fall River, MA; and New London, New Haven, and Bridgeport, CT).....	1976
5	New York, NY and NJ.....(IN PRESS)	1978
6	Albany and Ports on Hudson River, NY.....(UNDER REVISION)	1979
8	Philadelphia, PA, Camden, NJ, Wilmington, DE, and Ports on Delaware River.....(IN PRESS)	1978
10	Baltimore, MD.....	1978
11	Ports of Hampton Roads, VA (Norfolk, Newport News, Chesapeake, Portsmouth, and Hampton).....	1970
12	Wilmington and Morehead City, NC.....	1970
13	Charleston and Georgetown, SC.....	1970
14	Savannah and Brunswick, GA.....	1972
15	Jacksonville, FL.....(IN PRESS)	1978
16	Miami, Port Everglades, and Palm Beach, FL.....	1972
17	Tampa, FL.....(UNDER REVISION)	1979
18	Mobile, AL.....(UNDER REVISION)	1979
19	Panama City & Pensacola, FL, & Pascagoula & Gulfport, MS (UNDER REVISION)	1979
20	New Orleans, LA.....	1970/77
21	Baton Rouge and Lake Charles, LA.....	1969
22	Port Arthur, Beaumont, and Orange, TX.....	1969
23	Galveston and Texas City, TX.....	1969
24	Houston, TX.....	1971
25	Corpus Christi, TX.....(IN PRESS)	1979
26	Freeport, Port Isabel, and Brownsville, TX.....	1969
27	San Diego, CA.....(IN PRESS)	1978
28	Los Angeles and Long Beach, CA.....(UNDER REVISION)	1979
30	San Francisco and Redwood City, CA.....	1974
31	Oakland, Alameda, Richmond, Vallejo, and Ports on Carquinez Strait, CA.....	1974
32	Sacramento, Stockton, Pittsburg, and Antioch, CA.....	1974
33	Coos Bay and Astoria, OR; Longview and Vancouver, WA; and Ports on Columbia River.....	1975
34	Portland, OR.....	1974
35	Tacoma, Grays Harbor, and Olympia, WA.....	1975
36	Seattle, WA.....	1975
37	Port Angeles, Port Townsend, Everett, Anacortes, and Bellingham, WA.....	1976
38	Anchorage, Nikiski, Whittier, Seward, Valdez, and Ketchikan, AK.....	1976
41	Buffalo, NY.....	1971
42	U.S. Ports on Lake Erie (Erie, PA; and Conneaut, Ashtabula, Fairport Harbor, Lorain, Huron, and Sandusky, OH).....	1972
43	Cleveland, OH.....	1970
44	Toledo, OH.....	1972
45	Detroit and Ports on the Saginaw River, MI.....	1972
46	Chicago, IL.....	1974
47	Milwaukee, WI.....	1972
48	Ports on Lake Michigan (Green Bay and Manitowoc, WI; Muskegon and Escanaba, MI; Indiana Harbor and Burns Waterway Harbor, IN).....	1973
49	Duluth, MN, Superior, WI, Taconite Harbor, Silver Bay, and Two Harbors, MN, and Ashland, WI.....	1974
50	Ports of Hawaii (Honolulu, Hilo, Kawaihae, Kahului, Nawiliwili, and Port Allen).....	1969

APPENDIX IX

ORGANIZATION CHARTS

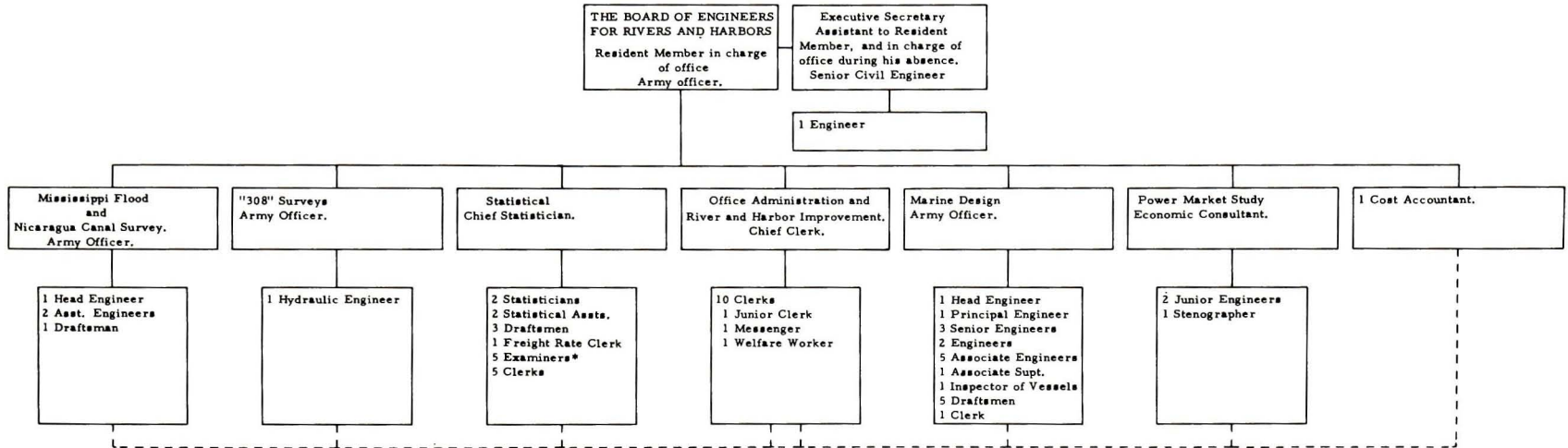
OF THE

BOARD OF ENGINEERS FOR RIVERS AND HARBORS

September 1930 - February 1980

APPENDIX IX

ORGANIZATION CHART. THE BOARD OF ENGINEERS FOR RIVERS AND HARBORS.



* Assigned by Shipping Board, except 1 Clerk.

September 13, 1930.

(COPY : First Organizational Chart on Record)

THE BOARD OF ENGINEERS
FOR RIVERS AND HARBORS

Resident Member in charge

1 Military Assistant

Executive Secretary
Assistant to Resident Member, and in
charge of office during his absence
Engineer

Statistical
Chief Statistician

1 Assoc. Statistician
1 Asst. Statistician
1 Asst. Engineer
1 Prin. Draftsman
1 Freight Rate Clerk
1 Statistical Asst.
1 Clerk
1 Clerk
1 Jr. Stenographer

Administrative
Assistant

9 Clerks
1 Jr. Clerk
1 Messenger
1 Welfare Worker

Preparation of
Reports


1 Senior Engineer
1 Senior Engineer

Research and
Studies

1 Prin. Engineer
1 Prin. Engineer
1 Assoc. Engineer

April 29, 1935.

Approved:


R. W. Crawford,
Major, Corps of Engineers,
Resident Member of the Board.

**BOARD OF ENGINEERS
FOR RIVERS AND HARBORS**

January 1, 1942.

RESIDENT MEMBER
R. G. Powell,
Colonel, Corps of Engineers

EXECUTIVE SECRETARY
J. Ben Walker, Prin. Engineer (Civil),
P-6, \$5800 per annum.

PERSONAL SECRETARY
Loyce Brinson, Sr. Clerk, CAF-5,
\$2100 per annum.

ASSISTANT TO EXECUTIVE SECRETARY
Henry N. Müller, Engineer (Admin.),
P-4, \$3800 per annum.

ENGINEERING DIVISION
Henry G. Kuyf, Head Engineer (Hydro-Elec.),
P-7, \$6500 per annum; 3 additional employees.
1 Head Engineer, P-7
2 Prin. Engineers, P-6

ADMINISTRATIVE DIVISION
C. L. Benson, Prin. Administrative
Assistant, CAF-11, \$4000 per
annum; 22 additional employees.
1 Assoc. Administrative Assistant, CAF-8
2 Prin. Clerks, CAF-6
3 Sr. Clerks, CAF-5
1 Clerk, CAF-4
1 Clerk-Steno., CAF-4
1 Asst. Clerk, CAF-3
3 Asst. Clerk-Stenos., CAF-3
2 Sr. Stenos., CAF-3
1 Jr. Clerk, CAF-2
1 Jr. Steno., CAF-2
1 Jr. Clerk-Typist, CAF-2
1 Messenger, CU-3
1 Asst. Messenger, CU-2
2 Chauffeurs, CU-3

SPECIAL STUDIES
Charles J. McManus, Prin. Statistical
Analyst (Trans.), P-6, \$5600 per
annum; 4 additional employees
1 Sr. Statistical Analyst, P-5
1 Assoc. Statistical Analyst, P-3
1 Sr. Traffic Manager, CAF-9
1 Sr. Steno., CAF-3

STATISTICAL DIVISION
Warren E. Graves, Prin. Statistician, P-6,
\$5600 per annum; 21 additional employees.
1 Sr. Statistician, P-5
2 Statisticians, P-4
1 Assoc. Engineer, P-3
1 Asst. Engineer, P-2
1 Chief Draftsman, SP-8
1 Assoc. Administrative Assistant, CAF-8
1 Asst. Editor, CAF-7
1 Sr. Statistical Clerk, CAF-5
2 Sr. Clerks, CAF-5
2 Clerks, CAF-4
1 Clerk-Steno., CAF-4
1 Asst. Clerk, CAF-3
1 Jr. Clerk, CAF-2
5 Jr. Clerk-Typists, CAF-2

ENGINEERING ECONOMIST
Haywood R. Faison, Head Engineer (Civil),
P-7, \$6500 per annum.

SPECIAL DETAILS

OFFICE, CHIEF OF ENGINEERS

OTHER

CONSTRUCTION DIVISION
EXECUTIVE OFFICE
2 Chief Engineers, P-8
1 Asst. Clerk, CAF-3

SUPPLY DIVISION
PROCUREMENT BRANCH
1 Sr. Accounting Clerk, CAF-5

ADMINISTRATIVE DIVISION
OFFICE SERVICE BRANCH
GENERAL SERVICE SECTION
1 Chauffeur, CU-3
ENGINEERING DATA SECTION
1 Asst. Engineering Aide, SP-4
1 Sr. Clerk-Steno., CAF-4
1 Asst. Clerk, CAF-3
REPRODUCTION SECTION
1 Sr. Supervisor, CAF-6
1 Jr. Supervisor, CAF-4

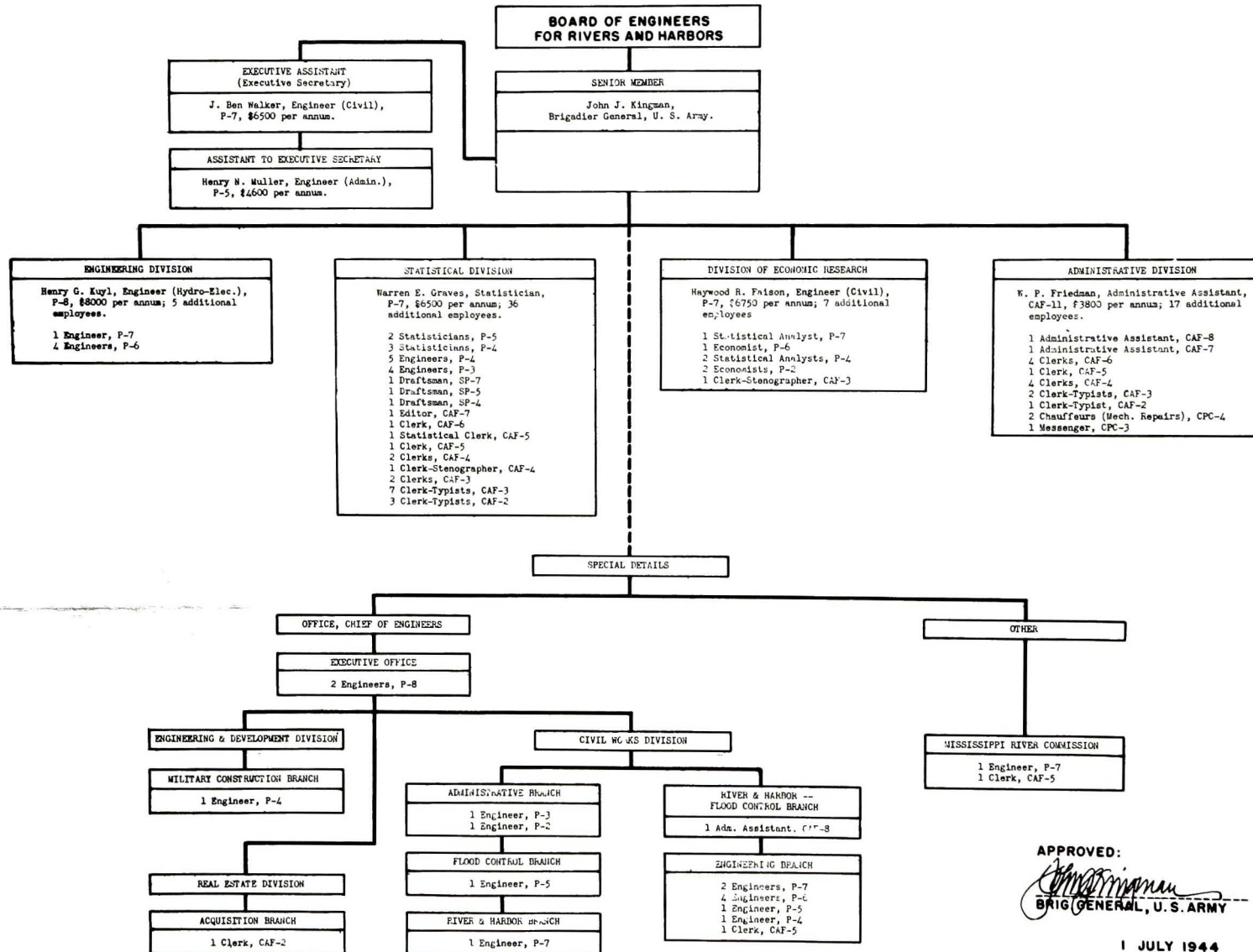
FISCAL BRANCH
EXECUTIVE OFFICE
1 Clerk-Steno., CAF-4
PROCEDURES SECTION
1 Jr. Steno., CAF-2
COST SECTION
1 Accountant, CAF-9
1 Assoc. Accountant, CAF-8
1 Jr. Accountant, CAF-7
1 Prin. Accounting Clerk, CAF-6
1 Sr. Clerk, CAF-5
1 Clerk, CAF-4
1 Asst. Clerk-Typist, CAF-3
FIELD ADMINISTRATION SECTION
1 Accountant, CAF-9

ENGINEERING BRANCH
CONSULTANTS
1 Head Engineer, P-7
WAR CONSTRUCTION SECTION
5 Prin. Engineers, P-6
3 Sr. Engineers, P-5
10 Engineers, P-4
6 Assoc. Engineers, P-3
3 Asst. Engineers, P-2
1 Jr. Engineer, P-1
2 Prin. Draftsmen, SP-7
7 Sr. Draftsmen, SP-6
1 Sr. Engineering Aide, SP-6
1 Draftsman, SP-5
2 Asst. Clerk-Stenos., CAF-3
1 Jr. Clerk-Steno., CAF-2
FORTIFICATION SECTION
1 Engineer, P-4
5 Sr. Draftsmen, SP-6

OPERATIONS BRANCH
ADMINISTRATIVE SECTION
1 Assoc. Engineer, P-3
1 Prin. Engineering Draftsman, SP-7
RIVER AND HARBOR SECTION
2 Head Engineers, P-7
2 Clerk-Stenos., CAF-4
AIR FORCES SECTION
1 Assoc. Engineer, P-3
**RIVER & HARBOR--
FLOOD CONTROL SECTION**
2 Head Engineers, P-7
4 Prin. Engineers, P-6
4 Sr. Engineers, P-5
3 Engineers, P-4
1 Assoc. Engineer, P-3
2 Chief Draftsmen, SP-8
1 Prin. Draftsman, SP-7

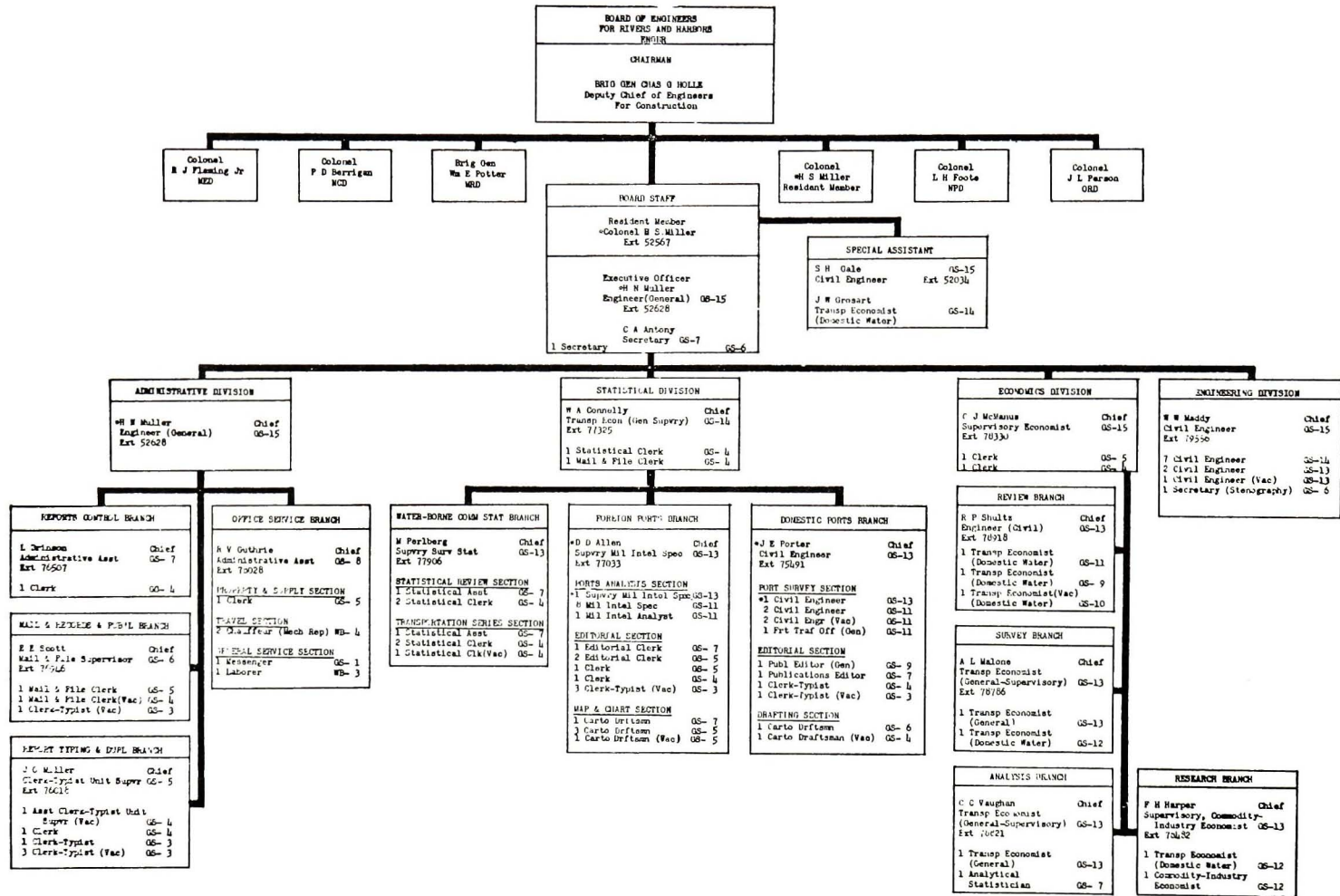
MISSISSIPPI RIVER COMMISSION
1 Prin. Engineer, P-6
1 Clerk-Steno., CAF-4

COAST & GEODETIC SURVEY
2 Asst. Mathematicians, P-2
1 Jr. Clerk-Typist, CAF-2



APPROVED:
John J. Kingman
BRIGADIER GENERAL, U. S. ARMY

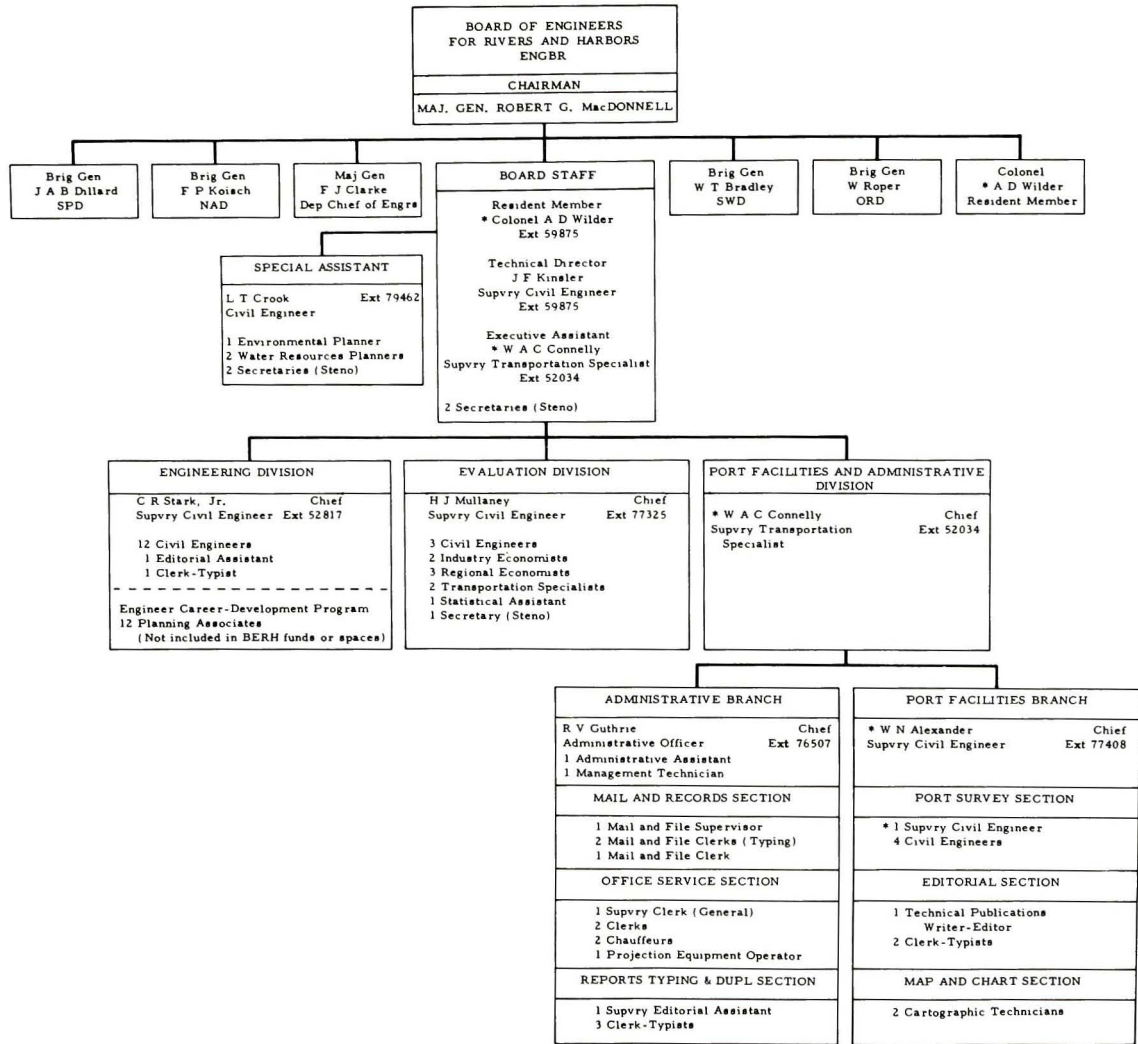
1 JULY 1944



95 Graded
3 Ungraded

APPROVED:

H. S. Miller, Col. Enr
Resident Member



APPROVED:

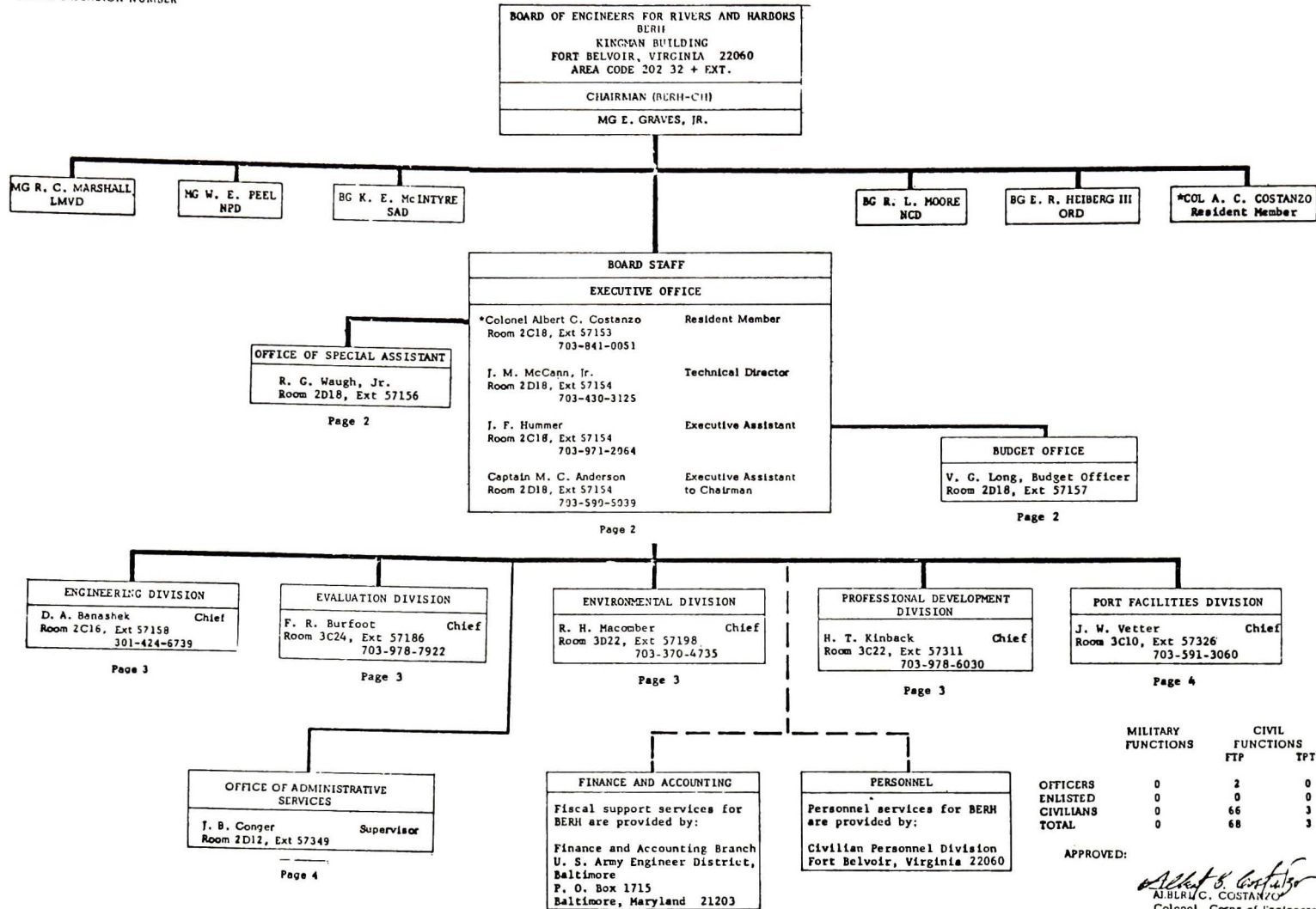
(Signed)

A. D. WILDER, COL, CE
Resident Member
1 September 1967

Page 1

* Dual Assignment
62 Graded
3 Ungraded

NON DUTY PHONE NUMBER LISTED
UNDER EXTENSION NUMBER



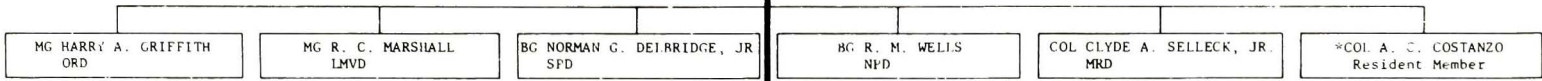
*Dual Assignment

1 February 1978

NON DUTY PHONE NUMBER LISTED
UNDER EXTENSION NUMBER

BOARD OF ENGINEERS FOR RIVERS AND HARBORS
BERH
KINGMAN BUILDING
FORT BELVOIR, VIRGINIA 22060
AREA CODE 202 32 + EXT.

CHAIRMAN (BERH-CH)
MG JAMES A. JOHNSON

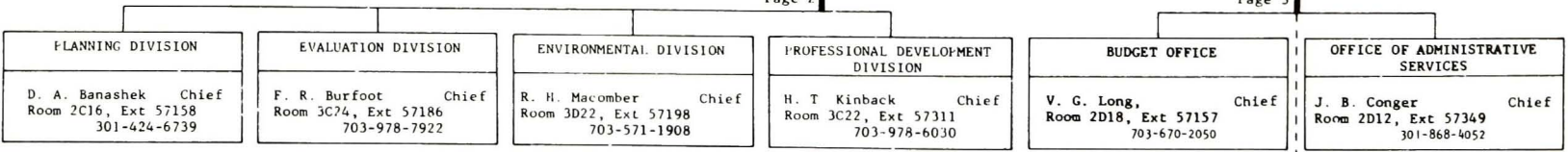


BOARD STAFF
*COL Albert C. Costanzo Resident Member
Room 2D18, Ext 57153
703-841-0011

OFFICE OF SPECIAL ASSISTANT
R. G. Waugh, Jr.
Room 2D18, Ext 57156

Technical Director
J. M. McCann, Jr.
Room 2D18, Ext 57154
703-430-3125

Executive Assistant
L. C. McLaren
Room 2C18, Ext 57154
703-256-6314



SUPPORT SERVICES
Finance & Accounting - Balt. Dist.
Payroll - Omaha District
Personnel - Fort Belvoir
Procurement - CERC
Safety - CERC

	MILITARY FUNCTIONS	CIVIL FUNCTIONS	
		FTP	PPT
OFFICERS	0	1	0
ENLISTED	0	0	0
CIVILIANS	0	54	2**
TOTAL	0	55	2

** 1 WAE

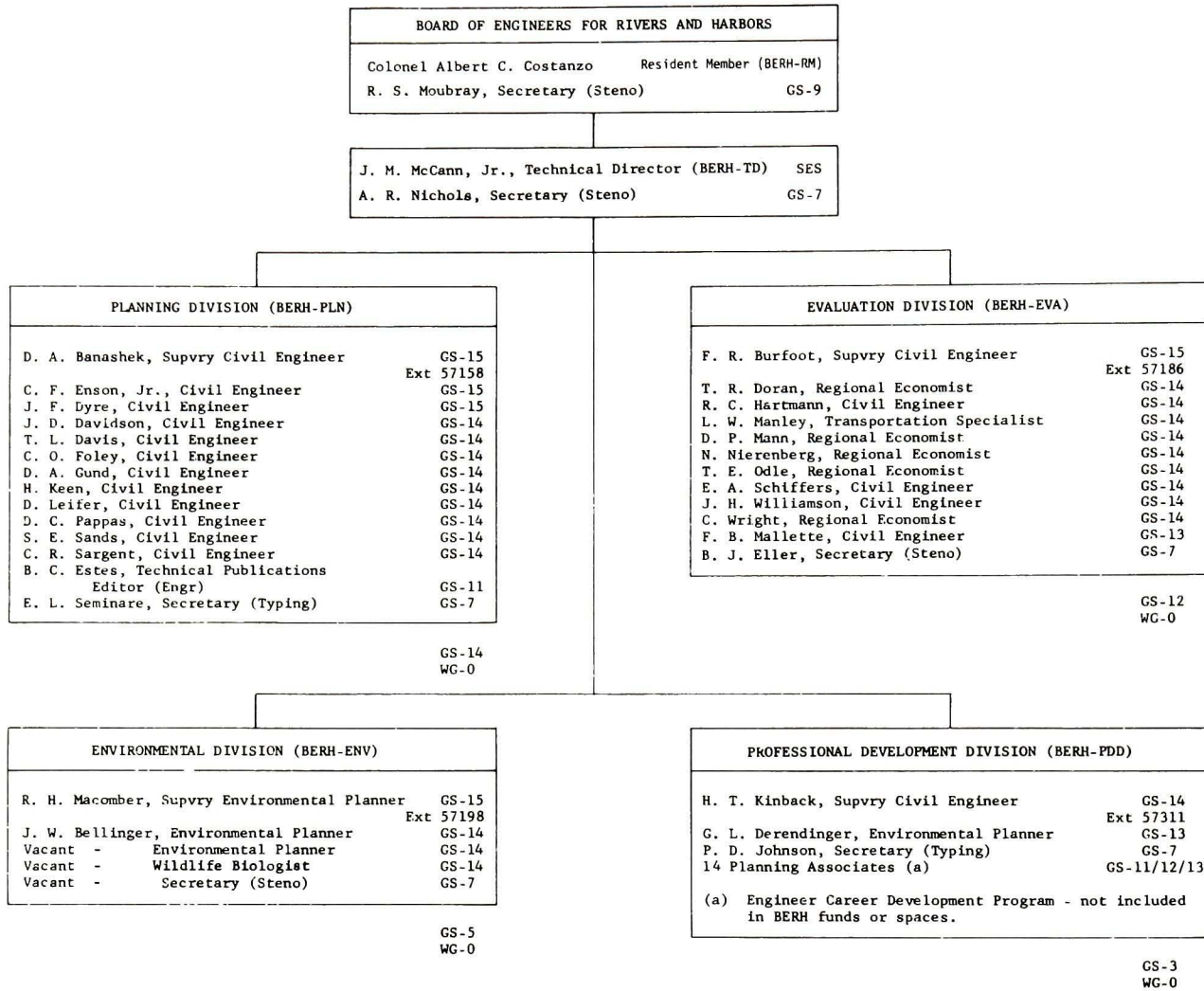
* Dual Assignment

APPROVED:

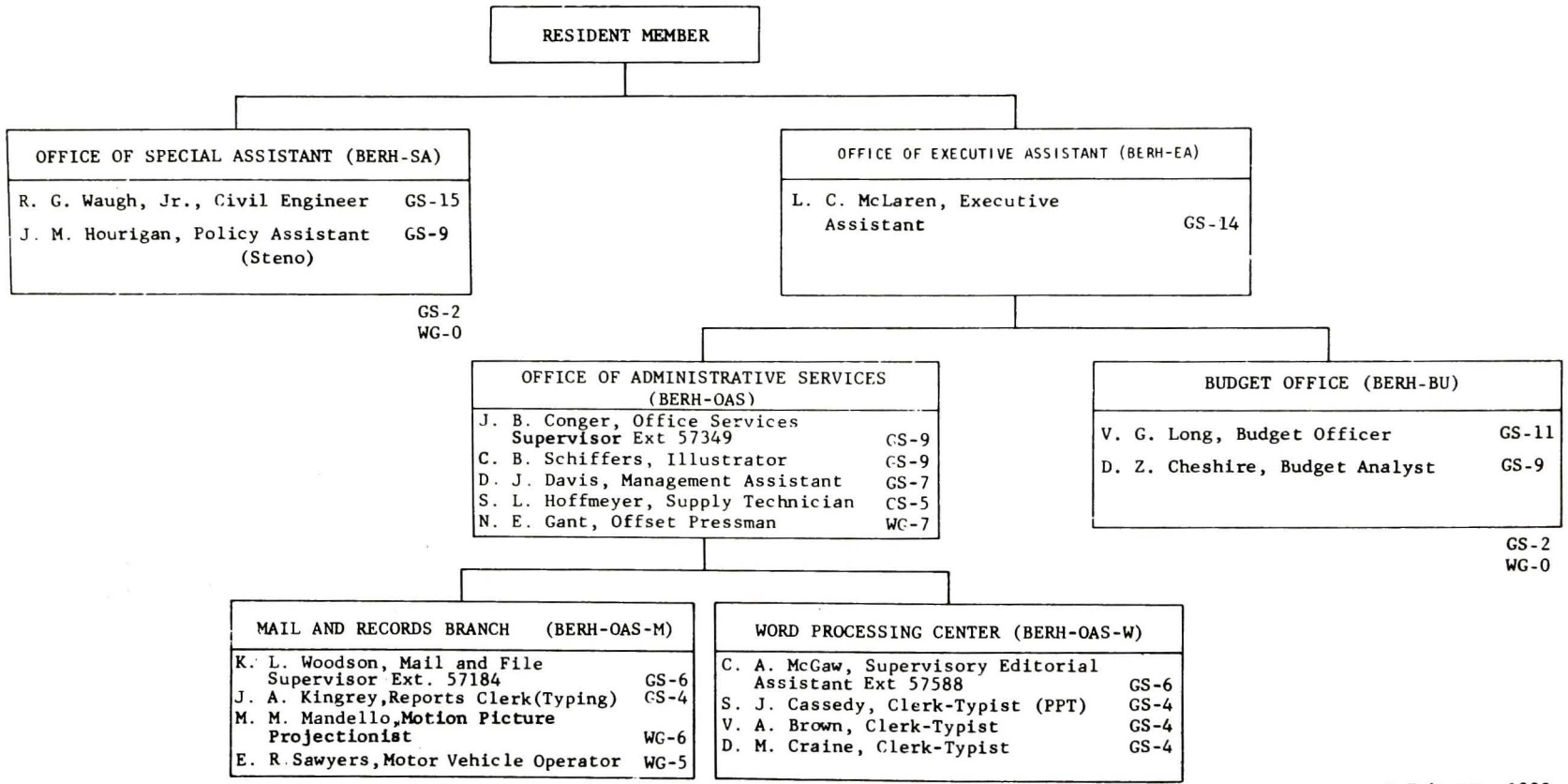
Albert C. Costanzo

ALBERT C. COSTANZO
Colonel, Corps of Engineers
Resident Member

1 February 1980



1 February 1980



Editorial Section.
PART II—LOCAL NEWS: 10 PAGES.
XXVIITH YEAR.

Los Angeles Daily Times

California del Sur.
CITY AND COUNTRY.
On All News Stands 15 CENTS

WEDNESDAY MORNING, JANUARY 15, 1908.

East Side of Broadway
W.B. Blackstone & Co.
DRY GOODS
 Between Third and Fourth Sts.

\$1.00 to \$3.50 Corsets 50c
 Women who require medium and large size corsets will be the beneficiaries of this day's corset sale.
 We are going to close out several standard numbers of some of the best known makes—discontinue them entirely—and we've made the price so ridiculously low that there will be no question about value. If there's anything among them you can wear you'll buy it, that's all.
P. D's, W. B's, Kabos, R. & G's, La Greques

and other such well known makes, none of which sell regularly for less than \$1.00 and from that up to \$3.50. And precious few there are, at \$1.00. Majority range between \$2.00 and \$3.50.
Your Choice While They Last 50c Each
 Only about ten dozen in all, so be prompt.
 (Third Floor)

Millinery at Half
 Every trimmed hat in the house—and that means all high class pattern hats and Paris modes as well as those most fashionable creations from our own work rooms—free to go this week at just half the price asked before the holidays.
Ready-to-Wear Apparel at Half
 Tailored Suits, Afternoon and Evening Coats and Costumes and Skirts are going this week at half or near it. Not one entire line of these garments, but a sufficiently varied assortment to please most any fashionable fancy.
 (Third Floor)

Stamped Belts 25c
 Students of needlework will be interested in this item. Fine linen belts in brown, tan, green, pink and white, already stamped for working the popular Willchain, French eyelet or shadow stitches, and all materials to complete the belt.
 For one day each...
 Free lessons in embroidery work each day from 9:30 to 11:30.
 (Third Floor)

CLOSING OUT NEW PIANOS

Lending Los Angeles House Discontinues Six Important Agencies

THE PIANO BUYER'S OPPORTUNITY

This is a sale with a Reason behind it. It is different from other Piano Sales that have been conducted in Los Angeles—in scope, in the quality of instruments offered, and in opportunities for money-saving. The Piano offered in this sale, including some of the World's Best Makes, are priced at about Half Retail Value.
 The Elwell Company has decided to discontinue handling Eberhard, Knabe, Chickering, Steinway, LaFarge and Huntington Pianos and will in future devote its entire operations to the Blüthner, Knabe & Beck, Rowley and Kautzmann—being the wonderful Bergesen told to select.
 Liberal time payments may be arranged if desired. Pianos placed in parsonages' houses (anywhere in Southern California) about extra cost. Write for circular and send to miss this opportunity.



United States Army Representatives at San Pedro. From left to right: Capt. John A. Price, assistant Engineer, U.S.A.; Lt. W. C. ...

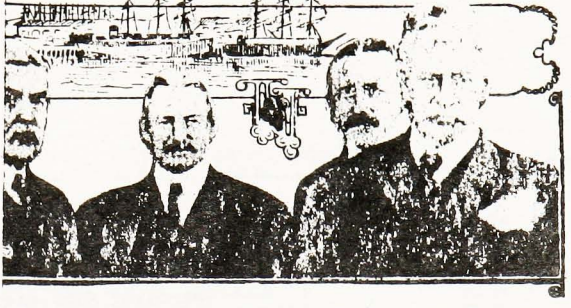
DRAWBRIDGES ONLY HARBOR DIFFERENCE.

Hearing Before the National Board of Engineers at San Pedro Develops that Unity Prevails on All Questions but One.

THE belief of two drawbridges in the city water department among the various interests that center in San Pedro and Wilmington harbors. This fact was brought out clearly at a meeting held at San Pedro, conducted by Col. D. W. Lockwood and Capt. J. B. Lamb, Corps of Engineers, U.S.A., members of the National Board of Engineers for Rivers and Harbors. The discussion of regulations will develop almost entirely the question of drawbridges at San Pedro and Wilmington in the next few months.

Objection to the bridge was made by engineers for the Southern Pacific and Los Angeles International railways. The San Pedro Chamber of Commerce also stood by the opening of the harbor. It stated that the bridge are not needed at this time. The Los Angeles Harbor Commission, and other bodies argued that the bridge be built as soon as possible.
 On all other points—particularly the character of the bridge, and between the tide water and the harbor—the regulations for the inner harbor to 20 feet—the various cities, and all corporations were fully agreed. With such apparent unity of ideas except on the one point the belief was expressed by many officials and present that there soon will be a getting together of all interests on the quick and lasting good of the entire harbor system.

Lack of faith in the worth of the harbor, these engineers have been urged to erect the best basin, in order to be able to take four times as much work as with the drawbridges now in use. The harbor will be repaired and given to the attention of the National Board of Engineers for the two national committee at San Pedro. It is a matter of great importance for the two national committee at San Pedro. It is a matter of great importance for the two national committee at San Pedro.



Harbor Hearing at San Pedro, at Which Future Big Projects Were Discussed. In charge at Los Angeles, A. H. Welch, secretary National Board of Engineers for Rivers and Harbors; Col. Maj. W. G. Hann, Artillery Corps, U.S.A.; Lieut. Col. John H. ...

THROUGH RATES ADOPTED.

Espee, Santa Fe and Salt Lake Accept Suggestion of Interstate Commerce Commission.
 In accordance with the suggestion of the Interstate Commerce Commission, the Southern Pacific, Santa Fe and Salt Lake Railroads have adopted a through rate for shipments from California points to the Alberta district in Canada, as well as to places on small branch lines in Minnesota and the Dakotas. Until now to the flat rate on extra fruits of 31.1 per hundred pounds, had been added the rate from the San Pedro point with another line to destination.
 By the new plan shippers can ascertain the exact charges in any city or town. While freight rates are not lowered, the amount of work carried in making out bills of lading will be much reduced.
 R. A. Tidwell, traffic manager of the Southern Pacific, says that from six to ten cars of fruit and vegetables are forwarded to distant points every week.

ROPE MISSES ROBE'S NECK.

Life Imprisonment Verdict of the Jury.
Bandit Guilty of Murder in First Degree.
Lawyers Battle for His Life or Death.

The gallows is cheated of one victim. The neck of Holla Robe is saved. Late this evening the jury in the Criminal Court returned a verdict of "guilty of murder in the first degree, with a recommendation of imprisonment for life."
 This verdict makes it obligatory upon Judge Smith to send Robe to the penitentiary for life, while his partner, Miskin, goes to the gallows. He will be sentenced tomorrow.
 Robe seemed to be perfectly satisfied, and when taken from the courtroom to the County Jail calmly proceeded to go to bed, and a few minutes later was fast asleep. Like an innocent bird in the snare's clasp, he refused to make a statement after the verdict.
 After a day of strenuous words by four eloquent attorneys, two pleading for the justice of death, the other two pleading just as hard for mercy, the jury retired at 6:40 o'clock in the afternoon. It was about 9 o'clock having commenced the organization of the first company of the Southern California Rifles. The interior was, night informally indeed the project and appointed a committee of three to confer with the members of the other sections of Native Sons in California with the view to forming at least one company to combat the mysterious delinquent world which has been such a prominent

NATIVE SONS TO THE FRONT.

Target Range Offered by Redondo and Venice. The San Pedro Rifle Company met with favor.
 To the members of Sierra Madre Parlor No. 236, Native Sons of the Golden West falls the distinction of having commenced the organization of the first company of the Southern California Rifles. The interior was, night informally indeed the project and appointed a committee of three to confer with the members of the other sections of Native Sons in California with the view to forming at least one company to combat the mysterious delinquent world which has been such a prominent

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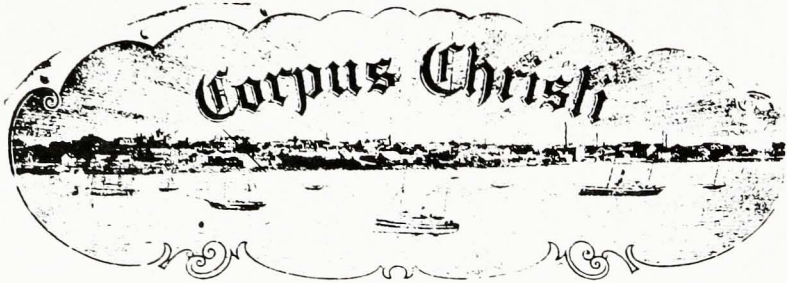
FOR SLANDER, ONE DOLLAR.

Damages in the sum of \$1 were awarded by a jury in Judge Monroe's court yesterday against Mrs. Lulu Fouts in favor of Mrs. J. K. ...
 The defendant put in no evidence to the contrary, but her attorney made the plea that what Mrs. Fouts said was only as a report to officers of the sheriff, and was not intended to be made public.
 The \$1 was immediately paid into court.
 Mrs. Fouts sued Mrs. Fouts for \$1000 damages, alleging that she had slandered her 10 other members of the chapter.
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BARBECUE FOR BLUEJACKETS.

Committee of Forty Discuss Plans for Entertainment of Seaman of Battleship Fleet.
 A barbecue and wild west show will probably be features of the entertainment provided for the men of the battleship fleet when the ships arrive here. The committee of forty, appointed by Mayor Harper to arrange a welcome and entertainment, are yesterday afternoon in the Council chamber and discussed plans.
 The Mayor was elected permanent chairman of the committee yesterday, and Gen. Robert W. Washburn, vice chairman, J. B. Elliott was chosen secretary. It was decided to entertain the

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VOLUME VIII

CORPUS CHRISTI, TEXAS, SATURDAY, NOVEMBER 24, 1906.

NUMBER 100.

A MEETING OF IMPORTANCE

Was Held With U. S. Engineer Corps in Corpus Christi To-day.

PLANS OF NATIONAL ROAD

For Deep Water Port at Corpus Christi Disclosed By Official Representative; Interesting Talks Made By Citizens and Visiting Delegates.

Major Edgar Jadwin, Col. Hoxie, chairman of the board; Maj. E. E. Winston, Capt. C. W. Kutz, Mr. A. E. Weber, sec'y., Capt. J. C. Oakes, members of the corps of United States engineers in charge of rivers and harbors work, arrived here last evening from Aransas pass and Turtle Cove on the yacht Naulakka, accompanied by Capt. Ed Mercer, the government engineer. The party arrived during a

line as the two preceding speakers, augmenting his argument with the statement that the matters spoken of by Mr. Cobolini in the forenoon were misgivings of the past and the people's loss, but that the actual securing of deep water at Aransas Pass would mean the establishment of a great port here. He favored the construction of Turtle Cove channel.

Capt. Ed Mercer spoke on the condition of the bar at the pass, stating that he would not assume the risk of bringing a vessel over the bar drawing more than ten feet at the present time.

Mr. E. H. Caldwell then spoke of the importance of the construction of the straight channel from Aransas pass, through Turtle Cove to Corpus Christi bay and submitted some very important statistical data to justify the construction of the straight channel.

PLANS OF THE NATIONAL

Mr. Daniels, representing the National Lines of Mexico, stated that he was officially authorized by his company to state that it was the desire of his road to establish a deep water port at Corpus Christi in order to handle the traffic of Northern Mexico, which is now going through the ports of Vera Cruz and Tampico. He stated that he was also authorized not to favor any temporary shallow channel, (which would be worthless to his company) that would not float ocean-going vessels.

Mr. Daniels gave a vast amount of statistics showing the heavy tonnage which would pass over his line through this port, both exports and imports. In reply to questions put by the audience Mr. Daniels stated that he was

AN INJUNCTION

Secured By B. M. Sheldon Against Tobe Woods.

Special to the Caller

Victoria, Tex., Nov. 24.—Thursday, Judge Wilson, district judge of this judicial district, issued a writ of injunction, restraining Mr. Tobe Woods from disposing of his Refugio county ranch, consisting of 37,000 acres. This injunction suit was brought by Mr. Ben M. Sheldon, of Rockport, through his attorneys, Judge Ben M. Fly of this place and Judge G. R. Scott of Corpus Christi.

This land was sold by Sheldon to Theodore F. Koch of St. Paul, Minn., a Hollander and general manager of one of the largest and most successful colonization corporations in the United States.

Subsequently other parties, composed of E. O. Burton, General Immigration agent of the San Antonio & Aransas Pass railroad, A. H. Danforth of San Antonio, joined by several others, according to the information furnished

ANOTHER

RICHMOND

In the Field; National of Mexico to Have a Harbor Here.

Reference to another column will disclose the fact that the great National Railway of Mexico has determined to have a deep water harbor at Corpus Christi.

This means that this city will be the great point of entry for all Northern and Central Mexico, receiving much of the great traffic now going via Vera Cruz.

Nothing of more vital import to Corpus Christi, so definitely presaging immediate development, has come to light in years. It means a speedy realization of the dream of half a century

DARK MYSTERY

May Be Cleared Up By Fragments of a Letter.

By Scripps-McRae Press.

Chicago, Nov. 21.—Inquest proceedings over the bodies of J. V. Delaney and wife, found dead yesterday, have been postponed till next Friday.

The theory of the police is, the couple were murdered by a third party, though there is little evidence to support it. A letter torn into minute fragments, has been found, and it is hoped this will furnish a clue to the bloody mystery.

NO GREAT HASTE

Battleship Louisiana Jogging Leisurely Homeward.

By Scripps-McRae Press.

Washington, Nov. 21.—The navy department is in receipt of a wireless message from the battleship Louisiana, with President

