



STATE District of Columbia
CITY.....COUNTY.....
DATE February 6, 1953

ARCHITECTS' ROSTER QUESTIONNAIRE

TO EVERY ARCHITECT IN THE UNITED STATES AND ITS POSSESSIONS:

The Architects' Roster is maintained by The American Institute of Architects as a service to the profession as a whole and to agencies of the United States Government. Every registered architect, whether or not a member of The Institute, is eligible for inclusion in the Roster. The Institute maintains custody of the Roster, keeps it up to date and in good order for use. The Roster is available to any representative of the Government and to representatives of foreign governments in Washington. Reference may be made to The Architects' Roster in negotiations with government agencies and other interested parties. Experience with the Roster since its establishment in 1946 has shown its usefulness. Growing out of an earlier Register of architects qualified for public works, The Roster provides at The Octagon an accurate, current record of the qualifications and achievements of members of the profession. It allows a positive and helpful response to requests for factual information on architects, and in that way constitutes a service to the profession.

The American Institute of Architects assumes no responsibility for the accuracy of statements made in this Questionnaire. The obligation to maintain this record as a current description of an architectural firm rests with the firm, and supplementary record forms are available for this purpose.

PARTNERSHIPS SHOULD MAKE A JOINT RETURN ONLY.

Original and one copy to be mailed to THE ARCHITECTS' ROSTER, The American Institute of Architects, 1735 New York Avenue, N. W., Washington 6, D. C. One copy to be retained by the author.

- 1 a FIRM** (Indicate whether individual, partnership or corporation.)
McGaughan and Johnson
- b FORMER FIRM**, Name if any.....Hugh B. Johnson and Associates
- 2 STREET ADDRESS** 821 19th St. N. W. Phone Executive 3-1162
- 3 YEAR ESTABLISHED** 1947

4 PERSONAL HISTORIES OF PRINCIPALS

Furnish data complete, but keep to essentials. Describe each member of firm individually; if more than four, append extra sheets.

	A. Stanley McGaughan	Hugh B. Johnson
	NAME OF PRINCIPAL	NAME OF PRINCIPAL
a	Date of Birth May 18, 1912	March 12, 1904
b	Place of Birth Philadelphia, Pa.	Franklyn County, N. W.
c	Education University of Michigan	Syracuse University
	Architecture - '33	Architecture

d Experience Prior to Own Practice

(Give architect or architectural firm affiliations, positions held, and approximate dates of employment.)

1934 Leo J. Heenan - Pontiac, Michigan	1928 - 1940 Board of Education Rochester
1934-1936 McGaughan & Ransom Pontiac, Michigan	1940 - 1942 American Council on Education, Wash., D.C. (Research)
1937-1947 Federal Government Resettlement Administration Farm Security Admin. War Production Board Nat'l. Housing Agency	1942 - 1945 War Department (Industrial Design)
	1946 - 1947 National Housing Agency

e Commenced Practice 1947 1947

f Number of Years a Principal 2 6

g Architectural Licenses (Give State, Number and Year issued.)

698-District of Columbia 1950	New York 4726 1936
787-R-Maryland 1951	District of Columbia 582 1947
890-Virginia 1952	Maryland 606-R 1947
	Virginia 659 1947

h Membership in Professional Societies and Offices Held

AIA - Wash-Met. Chapter	Rochester (N.Y.) Society of Architects - Secretary -1937-1940
	AIA - Wash-Met. Chapter

i Service in World Wars I and II (Append data if desired.)

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j Civic Activities

Numerous

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5 REMARKS CONCERNING QUALIFICATIONS OF FIRM

(This space is best used to present qualifying information such as number of employees, amount of office space, financial information and other information presumed of interest to a prospective client. Append extra sheet or use back of this form, if necessary.)

.....Medium size office closely associated with engineering firm.....
.....(names below)..... Collaborative group qualified to handle.....
.....large projects.....

.....Architects office by itself; total staff, 7 to 14; 1500 sq.....
.....ft. air conditioned, more available (not air conditioned);.....
.....adequate capital and good bank relations.....

6 CONSULTANTS USUALLY EMPLOYED: (If a member of your staff, so state.)

a STRUCTURAL ENGINEERS

Name of Firm or Individual Paul Weidlinger (General Eng. Assoc.)
Business Address 1928 Eye Street, N. W. - Washington, D. C.

b HEATING AND VENTILATING ENGINEERS

Name of Firm or Individual Morris Shapiro (General Eng. Assoc.)
Business Address 1928 Eye Street, N. W. - Washington, D. C.

c ELECTRICAL ENGINEERS

Name of Firm or Individual Claude R. Engle, Jr. (General Eng. Assoc.)
Business Address 1928 Eye Street, N. W. - Washington, D. C.

d PLUMBING OR SANITARY ENGINEERS

Name of Firm or Individual Morris Shapiro (see above)
Business Address.....

e LANDSCAPE ARCHITECTS

Name of Firm or Individual.....
Business Address.....

f OTHER (Civil, Foundation or Mechanical Engineers, Appraiser, Equipment Designers, Valuers, Industrial Lay-out Engineers, etc.)

Frederick Babcock - Appraisals, Real Estate Analysis, etc.
Edward G. Scharf - Construction Cost Estimates
Clinton Rector - Plastics specialist.

7 REPRESENTATIVE WORK FOR WHICH YOU WERE OR ARE ARCHITECTS; OR WERE OR ARE ASSOCIATED WITH OTHERS: (In left margin, mark *—U. S. Government projects, **—projects not yet complete.)

Name and type of project	Location	Date	Cost	Indicate whether as Architect or Associate Architect
Pre-Fab. Aluminum House	Industrial Prod.	1947-48		Architect
WCFM Station	Wash. D. C.	1948	\$100,000.	"
* Prefab. All-Purpose Building	Industrial Prod.	1948-49		"
Aluminum Grain Bins	" "	1950		"
Apartment house	Tupper Lake N.Y.	1950	\$140,000.	"
* Portable Squad Shelter	Industrial Prod.	1950		"
Housing Devel.	Schenectady, N.Y.		\$2800,000.	"
* Fireproof Storage Vault	Ft. Belvoir, Va.	1951	\$ 75,000.	"
* Materials Lab.	" "	" "	\$ 240,000.	"
* Compressed Gas Lab.	" "	" "	\$ 160,000.	"
* Supply & Admin. Bldg.	" "	1952	\$ 90,000.	"
* Electric Distribution System	" "	1951	\$ 40,000.	"
* Mine Detection Lab.	" "	" "	\$ 90,000.	"
* Class Rm. Bldg.	" "	1952	\$ 80,000.	"
Housing Devel.	Buffalo, N.Y.	1951	\$ 750,000.	"
** School (Langston)	Arlington, Va.	1952	\$ 130,000.	"
* Magnesium Tent Frame	Industrial Prod.	1952		"
* Maint. Hangar	Standard Bldg.	1951		"
Housing Devel.	Westchester, N.Y.	1952	\$ 300,000.	"
* Prefab. Sandwich Panel Bldg.	Industrial Prod.	1952		"
Prefab. Plywood House	" "	1952		"
** Maury School-Alter.	Arlington, Va.	1953	\$ 100,000.	"
** Warehouse	Ft. Belvoir, Va.	1953	\$ 260,000.	"
** G-Warehouses	" "	1953	\$ 250,000.	"
** 3-Industrial Bldgs.	Aberdeen, Md.	1953	\$ 175,000.	"

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8 PHOTOGRAPHS/PHOTOSTATS

Not mandatory. Submit herewith photographs or photostats (size 8" x 10") of several buildings for which you have been the Architect, as follows: (N.C.A.R.B. presentation acceptable.)

Will furnish on request
.....
.....
.....
.....
.....

9 COLLABORATION WITH OTHER ARCHITECTS:

a As an established individual firm, are you willing to collaborate with other firms or individuals?

Yes.....

b Are you and/or your firm agreeable to accepting supervision of work where designs are produced by others—or vice versa?

Yes.....

c List firms (or individuals) with which you are associated at present or have an associate or working agreement: (Please furnish a letter from the other party verifying the association.)

General Engineering Associates.....

1928 Eye Street, N. W.
.....
.....
.....
.....
.....

10 THIS QUESTIONNAIRE MAY BE MADE AVAILABLE TO GOVERNMENTAL AGENCIES

yes

no

The undersigned hereby certify that the above is a true statement of facts.

Name of Firm or Individual..... McGaughan & Johnson

Signed by all Principals:..... *A Stanley McGaughan*
A. Stanley McGaughan
.....

..... *Hugh B Johnson*
Hugh B. Johnson
.....
.....

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Edna Cole

McGAUGHAN & JOHNSON architects

821 19th Street N.W., Washington 6, D.C.
telephone: EXecutive 3-1162

March 25, 1954

American Institute of Architects
1735 New York Avenue
Washington, D. C.

Gentlemen:

Some time ago your office requested information regarding our firm in connection with the request of a prospective client. We forwarded a statement regarding our organization which is now out of date. I would appreciate your replacing that statement with the enclosed "Organization of McGaughan and Johnson, Architects" dated January 1954.

Very truly yours,

Hugh B. Johnson
Hugh B. Johnson

HBJ/mla
Encl.

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January, 1954

THE ORGANIZATION OF McGAUGHAN AND JOHNSON, ARCHITECTS

The firm of McGaughan and Johnson is organized to bring together a highly qualified group of experts in planning, building design and related fields. This group consists of the principals of the firms of Hugh Johnson Associates, Inc. and General Engineering Associates as listed below, plus consultants in cost estimating, financing, electronics and plastics and including a cartographic firm for projects which require surveying and mapping.

Principals are as follows:

- A. Stanley McGaughan, Architect
- Hugh B. Johnson, Architect
- Chris W. Jorgensen, Construction specialist
- Paul Weidlinger, Structural engineer
- Howard M. Zimmerman, Structural engineer
- Morris Shapiro, Mechanical engineer
- Robert R. Jones, Mechanical engineer
- Claude R. Engle, Jr., Electrical engineer

The experience of the above group includes an unusual variety of practical field work as well as experience in research and testing, manufacturing and construction management. The combination of practical and research experience plus imaginative design ability has led to unusual success by this group in the development of unique engineering concepts and their practical application to produce more efficient and economical construction.

Hugh Johnson Associates and General Engineering Associates were organized simultaneously in 1947, the principals of both firms having been previously associated in

government war work. The McGaughan and Johnson architectural practice has developed from this association. The allied firms are closely integrated and are able to function as a single team on each project that is taken up. In addition to the eight principals listed, a staff of from 20 to 45 assistants and draftsmen are now employed. The two allied firms are described briefly as follows:

Hugh Johnson Associates, Inc. Mr. McGaughan and Mr. Johnson are officers of this firm which occupies the same offices as McGaughan and Johnson architects. Hugh Johnson Associates is an industrial engineering firm specializing in design, development and consulting work relating to prefabricated structures.

General Engineering Associates is a firm of highly qualified consulting engineers with offices in Washington, D. C. and New York. Structural, mechanical and electrical engineering work required by McGaughan and Johnson is performed exclusively by General Engineering Associates.

McGaughan and Johnson have continued an association for several years with Edward G. Scharf, cost estimator, Frederick M. Babcock, financial consultant and Clinton Rector, consultant on plastic materials. The firm has recently expanded this relationship with the addition of Henry S. McGaughan, physicist of Cornell University, as a special consultant in electronics, and the firm of Cartographics Inc., Washington, D. C., who will handle all cartographic work. Other specialists are added to the staff or employed as consultants as required to accomplish all phases of each project in the most thorough and authoritative manner.

Short biographical summaries of each of the principals and associated consultants are attached. A list of representative projects completed by McGaughan and Johnson and Hugh Johnson Associates, Inc. follows.

REPRESENTATIVE COMPLETED PROJECTS

CLIENT

Cairns Corporation
Port Washington, N. Y.
1947

Bannockburn Cooperative Inc.
Washington, D. C.
1948

Arlington Public Schools
Arlington, Va.
1948

Friends Meeting
Washington, D. C.
1948

WCFM
Washington, D. C.
1948

SERVICE

Consulting service; plant layout and production methods for aluminum house components. Design and shop drawings for;

- A. Prefabricated aluminum house using stock shapes.
- B. Panelized self compensating aluminum roof system for houses, (Patent pending).
- C. Insulated aluminum structural wall panel for houses. (Patent pending).
- D. Aluminum house and office partition. (Patent pending).
- E. Aluminum interior door and hardware.

Cost analysis of 8 standard house types and cost comparison with prefabricated houses.

Building appraisal and analysis of remodeling cost.

Building appraisal and analysis of remodeling cost.

Full architectural service; broadcasting studio, transmitter building and tower. Construction cost \$200,000.00

CLIENT

Office of the Chief
of Engineers
Washington, D. C.
1948 - 1950

Esco Foundation
New York, N. Y.
1949

Office of the
Quartermaster General
Washington, D. C.
1949

International Aluminum
Manufacturing Company
New York, N. Y.
1949

Shapiro, Inc.
New York, N. Y.
1949

SERVICE

Design and development of all purpose building for theatre of operations, including investigation of materials for large volume war time use. Design included:

- A. Interchangeable wood and steel frames.
- B. 20' and 40' widths with expansion to any length.
- C. Three interchangeable enclosures for Tropic, Temperate and Frigid Zones.

Prototype building furnished with steel frame and Temperate Zone enclosure.

Design of prefabricated classroom, dormitory and infirmary units exported to Israel for the Vocational-Agricultural school at Pardess Hanna.

- A. Revision and improvement of design of Army prefabricated squad shelter (16' x 32').
- B. Design of expandable all climate prefabricated shelter to meet Air Force requirements. Width 16', 24 & 32'; length in multiples of 8'; constructed of aluminum faced sandwich panels.

Design and shop drawings for prefabricated aluminum grain bins for on farm storage, two projects;

- A. 1000 bushel bin, conventional construction.
- B. Panelized bin for quick erection by farmers, four sizes, 2000 to 5000 bushel capacities.

Design of factory assembled door and frame complete with trim for house construction.

CLIENT

Karl Wallace
Charlottesville, N. C.
1949

Metropolitan Enterprise, Inc.
Schenectady, N. Y.
1950

U. S. State Department
Washington, D. C.
1950

Metropolitan Enterprise, Inc.
Schenectady, N. Y.
1950

National Security
Resources Board
Washington, D. C.
1950

Southern States Cooperative
Baltimore, Md.
1950

Johnson Construction Co.
Tupper Lake, N. Y.
1950

Office of the
Quartermaster General
Washington, D. C.
1951

Grand Island Realty Corp.
Buffalo, N. Y.
1951

SERVICE

Full architectural service; apartment house at Tupper Lake, N. Y. Construction cost \$75,000.00.

Economic studies; market analysis for shopping center. Preliminary drawings of shopping center of 72 stores. Estimated cost \$2,000,000.00. First units under construction (1954).

Design of traveling library ("Book-mobile") for use in occupied Germany.

Design and consulting service "Coldbrook" housing development. 850 houses completed. Construction cost \$7,000,000.00.

Consulting service; development of emergency housing resources.

Full architectural service; reinforced concrete foundations and conveyor tunnel for grain tanks.

Site planning and house designs. Group of 20 houses.

A. Design of magnesium, frame for bakery tent. 30' x 90' clear span, 12'-9" overall height with catenary suspension of canvas.

B. Structural analysis of wood ribbed Arctic shelter ("Jamesway Hut") including preparation of test procedure and analysis of tests performed by National Bureau of Standards.

Site planning, house designs and consulting service for housing development. 110 houses completed to date. (1953). Construction cost \$1,200,000.00.

CLIENT

Office of the
District Engineer
Washington D. C. District
1951

SERVICE

Full architectural service, less supervision, for
the following projects at Ft. Belvoir, Va.;

<u>Project</u>	<u>Construction Cost</u>
A. Materials Laboratory	\$ 327,500.00
B. Fireproof Storage Vault	77,925.00
C. Compressed Gas Laboratory	151,784.00
D. Mine Detection Laboratory	175,784.00
E. Bulk Oil Storage and Distribution Plant	51,000.00
F. Floating Bridge Facility (Not built)	89,000.00
G. Addition to Water Filtration Plant	36,330.00
H. Sewer, Water & Other Utilities	64,500.00
I. Electric Distribution System	121,480.00
J. Classroom Building	76,711.00
K. Covered Work Area	23,621.00
L. Supply & Administration Building	60,627.00
M. Hump Test Railroad Siding	19,711.00
N. Underground Oil Storage Tanks	5,946.00
O. Water Main	33,021.00
Total	<u>\$1,214,156.00</u>

Arlington Public Schools
Arlington, Va.
1951

Full architectural service. Addition to Langston
School. Construction cost \$130,000.00.

CLIENT

U. S. Navy
Bureau of Ordnance
Washington, D. C.
1951

Defense Production
Administration
Washington, D. C.
1951

Office of the
Chief of Engineers
Washington, D. C.
1951

Ichabod Glen Homes, Inc.
Westchester County, N. Y.
1952

Engineering Research and
Development Laboratory
Fort Belvoir, Va.
1952

Green Park Cooperators
Montgomery County, Md.
1952

Housing and Home Finance Agency
Washington, D. C.
1952

Pressed Steel Car Corporation
Chicago, Illinois
1952

SERVICE

Preparation of Inspection Manual
using statistical quality control.

Consulting Service; determination of
critical areas for defense housing.

Design and preparation of standard
drawings and specifications for
repetitive construction of permanent
hangars;

- A. Maintenance Hangar (160' span)
with shops.
- B. Readiness Hangar (160' span)
with shops.

Each building designed for four struc-
tural loading conditions and three
climatic zones.

Site planning, house designs and
consulting service for housing de-
velopment. 22 houses completed.
Construction cost \$608,000.00.

Design and procurement drawings for
CAS building. A prefabricated de-
mountable and air transportable all
climate building, constructed of
aluminum faced sandwich panels.

Site planning, house designs and
consulting service for project of
45 houses. (Not built).

Consulting Service, evaluation of
portable prefabricated houses for use
in defense production areas.

Design of prefabricated 2 and 3 bed-
room housing units in portable house
sections. Plywood monocoque con-
struction. 260 houses completed at
first project site at a construction
cost of \$2,150,000.00.

CLIENT

**Engineering Research and
Development Laboratories
Fort Belvoir, Va.
1952**

**Office of the
District Engineer
Washington D. C. District
1953**

SERVICE

Consulting services as follows:

- A. Engineering and economic evaluation of Macomber pre-fabricated barracks and warehouse buildings.
- B. Recommended project requirements and budget for project to develop facilities for drying Army parachutes.
- C. Review of procurement drawings for three designs for 20' x 48' steel buildings and recommended revisions.
- D. Developed design criteria for light gage steel buildings for use in theatres of operation. Work included review of existing criteria used by armed services; review of specifications, codes and standards of trade associations and recommendations for design load factors, factors of safety and other structural design criteria.
- E. Checked shop drawings for 160' span light gauge steel "Hangar, Airplane." Stock number 58-4946. 160-115.

Full architectural service, less supervision, for the following projects at Ft. Belvoir, Va.

- A. General Purpose Warehouse, ERDL Construction cost (Est.) \$201,521.00.
- B. Three warehouses. Construction cost (Est.) \$301,356.00.

CLIENT

St. Mary's Hospital, Inc.
Leonardtwn
St. Mary's County
Maryland
1953

Arlington School Board
Arlington, Va.
1953

Office of the
District Engineer
Baltimore Md. District
1953

Farm Bureau Insurance Co.
Columbus, Ohio
1953

Office of the
Chief of Engineers
Washington, D. C.
1953

SERVICE

Full architectural service, addition to hospital including operating, obstetrical, emergency and out patient facilities and 30 new beds, plus alteration of the existing hospital to create all elements of a 100 bed general hospital. Construction cost (Est.) \$500,000.00.

Full architectural service. Alterations and Additions to Maury School. Construction cost (Bid) \$143,000.00. Construction postponed to 1954.

Full architectural service, less supervision for projects at Aberdeen Proving Ground as listed below. Preliminary work only completed.

- A. Rocket Range Windbreak
- B. Shock Tube Work Bldg.
- C. Technical Vehicle Training Shop.

Construction cost (Est.) \$173,882.00.

Construction cost estimate for mortgage evaluation of Washington D. C. shopping center.

Design and preparation of standard drawings and specifications for repetitive construction of warehouses for posts, camps and stations. 12 warehouse sizes from 5,000 to 37,000 sq. ft. Four types of construction as follows:

- A. Emergency (Wood frame & walls).
- B. Modified Emergency (Wood frame, masonry walls).
- C. Permanent — Steel Frame
- D. Permanent — Mill Construction

Permanent and Modified Emergency buildings designed for four structural loading conditions. All buildings designed for three climatic zones.

CLIENT

Cook Enterprises
Montgomery County, Md.
1953

Macomber, Incorporated
Canton, Ohio
1953

SERVICE

Site planning, house designs and consulting service for project of 40 houses. Construction cost \$20,000.00 each. 5 completed (Dec. '53).

Subcontract for engineering design and drawings for prefabricated building system for military construction in theatres of operation. System includes 8' clear height "barracks" type structures for use as hospitals, barracks, offices, warehouses etc.; 12' clear height "warehouse" buildings for use as shops and warehouses; and 20' clear height "shops" type buildings for larger shops. Under prime contract with Engineering Research and Development Laboratories, Fort Belvoir, Va.

THE STAFF

The staff of the combined firms of McGaughan and Johnson, Hugh Johnson Associates, Inc. and General Engineering Associates consists of 8 principals and from 20 to 45 assistants and draftsmen. Average total full time staff for the year 1953 was 41.

McGAUGHAN AND JOHNSON AND HUGH JOHNSON ASSOCIATES, INC.

The principals are listed below with brief biographical summaries of their experience prior to 1947 when this organization was formed.

Hugh B. Johnson, A.I.A. is a resident of Virginia and a registered architect in Virginia, the District of Columbia, Maryland and New York. He completed his architectural training at Syracuse University in 1928 and was then employed in the architectural office of the Board of Education of Rochester, N. Y. until 1940. During this period he participated in the design and construction of a large school building program including over twenty new elementary and high schools and a continuous program of modernization and alteration of existing facilities. As a result of his work in this program Mr. Johnson was called to Washington in 1940 to head a privately sponsored research project at the National Bureau of Standards to develop school building and equipment standards. He left this project in 1942 to engage in war work on the staff of the Research and Development Branch, Office of the Quartermaster General. In this position he was responsible for the design and development of a variety of military equipment including prefabricated Army shelters. After the war he continued in this industrial work, with a manufacturing firm in New York and then returned to Washington to join the staff of the National Housing Agency until 1947 when he entered private practice.

A. Stanley McGaughan, A.I.A., is a resident of Maryland and a registered architect in the District of Columbia, Maryland and Virginia. Mr. McGaughan has a background of more than 20 years active practice in architecture and related engineering consulting. After completing his architectural training at the University of Michigan he worked with architectural and engineering firms in Michigan on the design and construction of schools, commercial and industrial buildings. He then entered practice with the firm of McGaughan and Ransom, consulting engineers of Pontiac, Michigan, and engaged in the design and construction of municipal improvements and community planning. In 1936 he was appointed Architect for the Resettlement Administration and designed numerous suburban and rural housing projects for that agency. He later became Regional Engineer for the Farm Security Administration, supervising architectural and engineering planning and construction activities of the agency in eight midwestern states. This work involved the design of houses, farm buildings, schools and community structures and a wide variety of highly specialized construction projects. Mr. McGaughan has supervised both plant production and large scale on-site fabrication work. During the early days of World War II he designed and supervised the construction of Defense Housing Projects, and also served as Housing Consultant to the War Food Administration. Later he received an appointment with the War Production Board

where he was technical advisor on production of building materials and construction machinery, headed an area analysis research group, and served as a member of WPB's Production Readjustment Committee and the V. E. Planning Committee. After World War II Mr. McGaughan joined the staff of the National Housing Agency as an Economist engaged on market research and later served that agency as Production Engineer for new materials and prefabricated housing.

Chris W. Jorgensen, construction engineer and labor relations specialist, received his technical training at Stout Institute, Menomine, Wisconsin, and at Iowa State College, Ames, Iowa. Mr. Jorgensen served progressively as a building tradesman, foreman and superintendent in construction work followed by special teaching and lecturing assignments in labor relations. He came to Washington from the T.V.A. where he was employed as a labor relations expert. In 1946 he joined the staff of the National Housing Agency as a Construction Specialist. Mr. Jorgensen has served for many years as a member of the American Arbitration Association as an arbitrator of labor disputes. He brings to this firm a rare combination of knowledge of construction techniques and ability to evaluate labor skills and productivity.

GENERAL ENGINEERING ASSOCIATES

In addition to the structural, mechanical and electrical work completed on projects in collaboration with McGaughan and Johnson, General Engineering Associates have accomplished the engineering work on a variety of important projects with other firms since their organization in 1947. These projects include all engineering work on the widely publicized Readers Digest Building, Tokyo, a number of apartment, bank and office buildings, a large overseas Air Force base, and a number of other military projects. The associated engineers have also handled the mechanical and electrical work on a large number of projects including air conditioning and mechanical engineering for over 60 new Safeway and Giant markets in the Washington, D. C. area and electrical engineering for over 70 new school buildings in Maryland and Virginia.

The principals are listed below with brief biographical summaries of their experience prior to the organization of General Engineering Associates.

Paul Weidlinger, structural engineer, is a graduate of the Swiss Polytechnical Institute, Zurich, Switzerland. After spending several years with leading architectural and engineering firms in Europe he went to Bolivia in 1939 where he served as Chief Engineer of the Bureau of Reclamation and professor of structural engineering at St. Andrew University. He designed a number of dams and water control projects in Bolivia including the Pilomayo Dam, one of the largest of its type. Mr. Weidlinger came to the United States in 1943 and served as Chief Engineer, Aircraft Hangar Division, Atlas Aircraft Products, Inc., and later as Chief Engineer for the firm of Fellheimer and Wagner, consulting engineers, New York, and Director, Industrialization Program Division, National Housing Agency. Mr. Weidlinger is a recognized authority on structural engineering design and stress analysis and has lectured at Harvard, Yale, and the University of Illinois. He currently lectures weekly on structural analysis at M.I.T. He has published a number of articles in this field and is the author of the signed article on concrete construction in the 1947 Encyclopedia Americana. He is a registered professional engineer in New York and the District of Columbia.

Howard M. Zimmerman, structural engineer, graduated from Johns Hopkins University in 1927. He is a member of the American Concrete Institute and a licensed professional engineer in Maryland and the District of Columbia. Mr. Zimmerman taught applied mechanics and theory of structures at Johns Hopkins University Evening School of Engineering for a number of years. As Supervising Structural Engineer, Public Buildings Services, he was responsible for the structural design numerous federal buildings including the National Institute of Health Clinical Center, Bethesda, Md., the West Central Heating Plant, Washington, D. C. and the Hospital Roosevelt, Guatemala City, Guatemala.

Morris Shapiro, mechanical engineer, is a graduate of Cornell University and attended Harvard Business School. He is a registered professional engineer in Maryland, the District of Columbia and Virginia, and has engaged in mechanical engineering for a number of years in both private practice and government work. Mr. Shapiro has conducted original research projects in the heating of small structures and has developed techniques for the analysis of "fuel and energy

combinations" to be used in selecting appropriate equipment, fuels, etc., for large housing projects and other installations. Mr. Shapiro has served as Assistant Chief, Mechanical-Electrical Section of the Federal Public Housing Authority and as Chief of Material Requirements Section for the National Housing Agency.

Robert R. Jones, mechanical engineer, is a graduate of the University of Michigan. He is a member of the National Society of Professional Engineers and a licensed professional engineer in Virginia and the District of Columbia. Mr. Jones served as Assistant Naval Architect for the Maryland Drydock Company in charge of air conditioning and hull technical work. As Mechanical Engineer, Public Buildings Services, he was responsible for the mechanical design of various federal projects including the National Bureau of Standards Laboratory at Corona, California, the Cuban Nickel Plant, Nicaro, Cuba and power plants for Washington West Central, Howard University and Leavenworth, Kansas.

Claude R. Engle, Jr., electrical engineer, is a graduate of Pennsylvania State College and a registered professional engineer in the District of Columbia, Maryland and Virginia. He has a broad experience in electrical engineering practice in connection with both government and private work. He worked as an electrical engineer for the American Telephone and Telegraph Company supervising the design and construction of four research laboratories, and later designed electrical distribution systems for a number of projects for the State of Pennsylvania. He was Chief Electrical Engineer for the Resettlement Administration and Farm Security Administration where he directed the design and construction of electric distribution systems for large scale housing projects and communities and also designed wiring systems for prefabricated and other specialized structures. Mr. Engle was also a consulting engineer for the Bureau of Agricultural Engineering of the Department of Agriculture in connection with electrical installation for the various research laboratories, etc.

CONSULTANTS

McGaughan and Johnson have arrangements with the following firms and individuals for collaboration whenever their special knowledge and skill will benefit the project.

Edward G. Scharf, consulting estimator, studied architecture at George Washington University and after service in the Army in World War I was employed as cost accountant by a construction firm in New York. He continued this work, studying cost estimating at Columbia University and beginning a lifetime career of construction cost estimating. Mr. Scharf has estimated the cost of construction projects in forty states including such projects as a survey of all physical property of the New York Consolidated Gas Co., (1922) and the new Library of Congress Building (1932). He is one of the quantity surveyors accredited by the Associated General Contractors of America.

Frederick M. Babcock is a consultant in the rating of mortgage risks, analysis of real estate projects, valuation of properties, mortgage finance, housing developments, etc. Mr. Babcock was formerly Deputy Administrator for Real Estate, Surplus Property Administration; Vice President of Allied Building Credits, Inc.; Assistant Administrator of the Federal Housing Administration and organized and operated the entire underwriting staff responsible for all case decisions; Appraisal Advisor on the home office staff of the Prudential Insurance Company; member of the research faculty, School of Business Administration, University of Michigan; and a partner in the firm of Wm. H. Babcock and Sons, Real Estate Consultants and valuers, Chicago. Mr. Babcock is an authority on real estate valuation and has appraised properties located in twenty-seven states, apartments, housing projects, and residences. He is author of "The Valuation of Real Estate" (McGraw Hill 1932), "The Appraisal of Real Estate" (Macmillan 1923), and numerous articles, booklets, and addresses in technical journals.

Henry S. McGaughan, Electronic's Engineer, received the degree of B.S.E. in Physics from the University of Michigan and the degree of M.E.E. from Cornell University. Mr. McGaughan was Electronic's Engineer at the Naval Ordnance Laboratory, Washington, D. C. from 1941 to 1947. Since 1947 he has been a member of the staff of Cornell University where he is now Associate Professor of Electrical Engineering. Mr. McGaughan is widely known as a consultant on radar, electronics information theory, and network synthesis. He is currently consultant to the General Electric Advanced Electronics Center at Cornell. Mr. McGaughan is a Senior Member of the Institute of Radio Engineers and a Member of the Sigma Xi and Eta Kappa Nu honor societies.

Clinton Rector, consultant on plastics, graduated in electrical engineering from Johns Hopkins University. Mr. Rector has had twenty-five years active experience in the plastic industry beginning with more than ten years as an engineer for the Bake-lite Corporation, where he was engaged in the development of industrial processes utilizing plastics in new or improved ways. He has spent the last eleven years on a variety of technical assignments including the position of Chief of the Plastics Division of the War Production Board. Mr. Rector is now Vice-President of National Engineering Products, Inc., of Washington, D. C., a firm engaged in the development and manufacture of a variety of plastic materials.

Cartographics, Inc., is a firm well equipped in terms of experience, staff and equipment to accomplish map design, compilation, editing, final drafting and reproduction. The firm is prepared to do the original precision compilation from aerial or other surveys or to edit other compilation, as required. Drafting work is of the highest order and maps are prepared in any number of plates for final color separation. Cartographics, Inc. produce their own printed lettering to obtain maximum sharpness and uniformity. Maps are reproduced by any required process in any number of colors. The offset lithography process is carried through to zinc plates in the firm's own laboratory.

Brief biographical summaries of the principals of Cartographics, Inc. follow:

Wilbur H. Eskite, Jr., is a graduate of George Washington University in civil engineering and is fully experienced in all phases of applied cartography. Mr. Eskite was employed for several years with the U. S. Navy Hydrographic Office compiling and constructing surface navigation and aeronautical maps and charts and has conducted research projects in photo-lithographic mapping techniques and mapping instruments.

J. Gilbert Sangster, cartographer, has been engaged in cartographic work for over 12 years as an employee of the U. S. Navy Hydrographic Office, he was in charge of large groups of draftsmen and had complete responsibility for planning and scheduling the assembly and creation of aeronautical charts. He has initiated research in drafting on plastics, and is an authority on the use of plastics and plastic inks for map preparation. He has designed several instruments to facilitate cartographic drafting on all media.

Fred J. Hartman, cartographic engineer, is a graduate of North Carolina State College. After graduation he was a surveyor for the North Carolina Pulp Co. Later, he was appointed as cartographic engineer for the Navy Hydrographic office and had charge of compilation of approach and landing charts for Naval Air Craft. He was in charge of the drafting and mapping section of the Northeastern Forest Experiment Station and has published a paper on the photogrammetric application of sample plots to timber survey mapping.