

Most research problems in Agriculture have broad relationships. Those primarily in the plant field frequently touch the animal field and vice versa, and from either the plant or animal field the problem may lead into the field of economics or marketing on the one hand, or reach back into the field of the basic sciences on the other. The agricultural research worker undertakes a problem of agricultural importance. He attempts to solve that problem with collaboration of other agricultural workers, economists or pure scientists. He goes where necessary to get his answers.

The same principles are followed in training graduate students in Agriculture. A likely student appears interested in some specific field of Agriculture. He finds that the staff in that field can find the time to train him. He is usually assigned a problem that fits into some larger problem already under study. In the solution of such a problem, it may be necessary to cross the subject matter lines of departments or the administrative lines of divisions or schools. The solution of the research problem is the basis of the student's graduate training, just as in the Experiment Station the solution of a specific problem is the job of the staff member regardless of where he may have to go for the necessary information.

The College is prepared to accept a limited number of graduate students as candidates for the Doctor's degree in Agriculture. The scope of training of such students is to a large extent determined by the nature of the thesis problem and supporting studies rather than by the arbitrary lines that separate departments or divisions from one another.

Therefore the School of Agriculture desires to continue its practice of accepting degree candidates in the broad field of Agriculture rather than in specialized departments or divisions within the school.

Sincerely,

Wm. A. Schoenfeld
Dean and Director

cc-President Peavy

OREGON STATE SYSTEM OF HIGHER EDUCATION

GRADUATE DIVISION

UNIVERSITY OF OREGON
UNIVERSITY OF OREGON MEDICAL SCHOOL

OREGON STATE AGRICULTURAL COLLEGE
STATE SYSTEM EXTENSION DIVISION

OFFICE OF THE DEAN
MEDICAL SCHOOL BUILDING
MARQUAM HILL
PORTLAND, OREGON

April 17, 1940

President George W. Peavy
Oregon State College
Corvallis, Oregon

Dear President Peavy:

ok
The spring meeting of the General Graduate Council will be held at Corvallis, probably on May 9. We should very much like to have you meet with us.

Special consideration will be given at this meeting to graduate study in the School of Agriculture.

It is possible that the date may be a little earlier or a little later, but if May 9 is available for you, please let me know.

Very sincerely yours,

O. Larsell

O. Larsell, Dean
Graduate Division

OL:MM

April 24, 1940

Dr. Olof Larsell
Medical School
Marquam Hill
Portland, Oregon

Dear Dr. Larsell:

Reference is made to your letter of April 17. As nearly as I can judge now, May 9 will be a satisfactory date for the meeting of the Graduate Council so far as I am concerned. I trust, however, that since my presence is not vital to the work of the committee, you will not try to hold to this date if members of the committee are to be inconvenienced.

Yours very truly,

President.

B

13 f.

OREGON STATE COLLEGE

SCHOOL OF ENGINEERING

Request for Permission to Grant the Degree of

DOCTOR OF PHILOSOPHY

Corvallis, Oregon
May 4, 1944

INDEX

	<u>Exhibit</u>
Physical Facilities of School of Engineering	I
Staff Training	II
Staff Publications	III
Library Facilities	IV
Graduates from this School	V
Advanced Degrees Since 1932	VI
Consideration of Construction Facilities	VII
Future Development of the School	VIII
Engineering Experiment Station	IX

EXHIBIT I

PHYSICAL FACILITIES OF SCHOOL OF ENGINEERING

Buildings

Chemical Engineering

Chemical Engineering is located in a wing of Chemistry Hall. Laboratory facilities are provided for instruction in both unit operations and manufacturing processes. Laboratories have been designed to facilitate pilot plant studies of typical chemical problems. Special laboratories are available for advanced projects.

Civil Engineering

The third floor of Apperson Hall is devoted to classrooms and drawing rooms. A large room on the ground floor of the Industrial Arts Building houses the surveying instruments, and the entire middle third of the Engineering Laboratory is occupied by hydraulic and sanitary equipment.

The equipment of the hydraulic laboratory is adequate for the execution of all basic experimental work in the field of hydraulic engineering. The department is equipped with cement and highway-testing machinery, and the structural division is equipped with modern apparatus for mechanical analysis of statically indeterminate structures.

Electrical Engineering

The Electrical Engineering department is located in Apperson Hall, occupying the first and second floors of the building.

Laboratory equipment is available for demonstrating and verifying fundamental electrical principles and theory and for original research in some important fields. This equipment is located in the electric-power, communications, electrical-measurements, high-voltage, standardizing, and battery laboratories. The facilities of Radio Station KOAC and the extensive sound-amplifying equipment of the State College group-address systems are also available for instructional and experimental purposes.

Mechanical Engineering

The facilities of the Mechanical Engineering Department are located in the Engineering Laboratory, the Mines Building, and the old power house.

The steam laboratory is provided with equipment for elementary instruction and testing purposes. In addition, the college heating plant is provided with testing

Mechanical Engineering (contd.)

facilities. A special laboratory has been equipped for tests on domestic heating, ventilating, and air-conditioning. An internal-combustion engine laboratory contains equipment for both elementary instruction and for testing and experimental work. The aeronautical laboratory is equipped for both undergraduate and graduate study. In addition, 14,000 square feet of floor space is devoted to engineering materials with adequate equipment for instructional and research purposes.

Mining Engineering

The department has lecture rooms, laboratories, and offices in the Mines Building.

The assaying and metallurgical laboratories are equipped with necessary apparatus for conducting experimental metallurgical operations. Ore-dressing laboratories affording modern metallurgical testing equipment are located in the basement. Glass and drafting-room facilities are available in this building.

Industrial Arts

The Department of Industrial Arts is housed in the Industrial Arts Building and the Foundry.

The principal subdepartments include Drafting, Woodwork and Furniture Construction, Millwork in Wood, Wood and Metal Finishing, Pattern Making, Foundry, Forging and Welding, Machine Shop, and Sheet Metal. Each of these subdepartments is provided with individual shops of ample size and is equipped along modern and approved lines.

Floor Space

The floor space occupied by the Several departments of the School is arranged as indicated below:

Chemical Engineering	-	8,000	sq. ft.
Civil Engineering	-	9,800	" "
Electrical Engineering	-	7,990	" "
Mechanical Engineering	-	28,200	" "
Mining Engineering	-	2,400	" "
Industrial Arts	-	26,600	" "
General Engineering	-	4,240	" "
Total		87,230	" "

There is a decided need to expand the physical facilities of the School to relieve overcrowding in some quarters and provide more adequate space for certain work. The School has been promised additional space, particularly space for research facilities on the building program of the System.

Total Value of Inventory

Without comment as to the several special items involved or the nature of all equipment other than it is generally comparable to other schools like Oregon State, the following evaluation of equipment inventory in the several departments is presented.

Dean of Engineering	-	\$ 8,170.04
Chemical Engineering	-	23,222.04
Civil Engineering	-	48,489.15
Electrical Engineering	-	105,790.14
Mechanical Engineering	-	160,515.89
Mining Engineering	-	8,429.77
Industrial Arts	-	89,392.97
Total		\$444,010.00

It is pertinent to mention that our equipment program for the immediate future is in major part concerned with large-sized units which will contribute to available facilities for research.

Availability of Office Space

The office of the Dean of Engineering has always carried on inventory office furniture for the use of graduate students. These furnishings and the general availability of space will provide ample opportunity for graduate students to establish a campus office address.

EXHIBIT II
STAFF TRAINING

Dearborn, Richard H.

Education:

A.B., 1895, Willamette University
E.E., 1900, Cornell University

Practical Experience:

1900-01		Portland General Electric Co.
1904-05		Spent several months in plants of large electrical manufacturers and of the larger power systems of the East.
1913-15		First Public Utilities Commission in Oregon. Electrical Engineer on half time. State Tax Commission. Appraisal Engineer.
1930	Winter	Studied power costs on the system of Southern California Edison Co., Los Angeles. On sabbatical leave.
1932	Winter	Studied power costs on system of Pacific Gas & Electric Co. On sabbatical leave.
1936	Winter	Investigated employment conditions for graduates. Attended National AIEE convention in New York. On sabbatical leave.

Teaching Experience:

1901		Established Electrical Engr. at University of Oregon.
1901-03		Instr., Asst. Prof. and Prof., Electrical Engr., Univ. of Oregon.
1903-14		Prof., Head, Electrical Engr., University of Oregon.
1914-37		Prof., Head, Electrical Engr., Oregon State College.
1933-35		Acting Dean, School of Engineering, and Director of Engineering Experiment Station, Oregon State College.
1935-44		Dean, School of Engineering, and Director of Engineering Experiment Station, Oregon State College.
1940-44		Institutional Representative, ESMTT.

Organizations:

Tau Beta Pi	Pi Mu Epsilon
Sigma Tau	Pi Tau Sigma
Eta Kappa Nu	Delta Upsilon

Registered Professional Engineer of Oregon.
American Institute of Electrical Engineers, Fellow.
Society for Promotion of Engineering Education.
Northwest Electric Light and Power Association.
Super Power Survey Committee of Pacific Northwest, 1921-23.
Oregon Planning Commission--lower Committee.
Committee on Post War Readjustment and Development.
Chairman, Sub-Committee on Stream Purification.
Corvallis Country Club.
Chamber of Commerce.

Chemical Engineering

Glosson, George W.

Education:

B.S., 1928, Chemical Engineering, Oregon State College.
M.S., 1934, Mechanical Engineering, Oregon State College.
Ch.E., 1936, (Professional Degree), Oregon State College.

Practical Experience:

1927 Summer Portland Gas & Coke Co. Research Assistant.
1927-28 9 mos. Oregon State College. Chemical Engr. Dept. Student Asst.
1927-28 9 mos. Oregon State College. Engr. Exp. Sta. Research Fellow.
1928 Summer Portland Gas & Coke Co. Research Assistant.
1928-29 9 mos. Oregon State College, Mech. & Mat. Dept. Research Fellow.
1929 Summer Oregon State College, Chem. Engr. Dept. Lab. Constr.
1930 " Iron Fireman Mfg. Co., Portland. Research.
1931 " Tuerek MacKenzie Co., Portland. Research.
1932 2 mos. State Highway Dept., Salem. Research.
1932 1 " Oregon State College, Chem. Engr. Dept. Lab. Constr.
1933 Summer Tech. Comm. Pulp & Paper Ind. Research.
1934 " Charlton Food & Sanitary Lab., Portland. Research.
1935 " Portland Gas & Coke Co. Research Engineer.

In addition to above, acted in advisory capacity for five years to Tuerek MacKenzie Company and Northwest Concrete Products Association and for two years to Charlton Food and Sanitary Laboratory of Portland.

1937 Summer Portland Gas & Coke Co. Research Engineer.
1938 " Portland Gas & Coke Co. Research Engineer.
1939 1 mo. S.I.E.E. Summer School, State College, Pa.
2 mo. Portland Gas & Coke Co. Research Engineer.
1940 Summer Portland Gas & Coke Co. Chemical Engineer.
1941 " Portland Gas & Coke Co. Chemical Engineer & Consultant.
Also with Oregon King Mines, Engr. & Consultant;
Assoc. Concrete Prod. & Mfg. of Oregon, Consultant;
Bonnevillie Power Administration, Test work.
1941 Humphreys Gold Corp., Denver, Colo. Consultant.
Ritter Products Co., Rochester, N. Y. Consultant.
Portland Gas & Coke Co., Portland, Oreg. Consultant.
Oregon King Mines, Portland, Oreg. Consultant.
Oregon Chrome, Inc., Elizabeth, N. J. Consultant.
Pacific Company, Medford, Oreg. Engineering Service.
1942-43 Humphreys Gold Corp., Denver, Colo. Consultant.
Krome Corp., Marshfield, Oreg. Consultant.
Portland Gas & Coke Co., Portland, Oreg. Consultant.
Metals Reserve Co., Washington, D. C. Consultant & Observer.

Teaching Experience:

1929-32 Instr., Mechanics & Materials, Oregon State College.
1932-36 Asst. Prof., Chemical Engr., Oregon State College.
1936-37 "In Charge", Assoc. Prof., Chemical Engr., Oregon State College.
1937-38 Acting Head, Prof., Chemical Engr., Oregon State College.
1938-43 Head, Dept. of Chemical Engr., Oregon State College.
1943- Head, Dept. of Chemical Engr., Asst. Dean of Engr., Oregon State.

Gleeson, George W. (contd.)

Organizations:

Tau Beta Pi--Counselor, 3 years.
Sigma Tau--Chapter Adviser, 4 years.
Phi Lambda Upsilon.
Sigma Xi-Treas; V. Pres, 1940-41; Pres. 1941-42.
Phi Kappa Phi--Pres. Elect. 1940-41; Pres., 1941-42.
Registered Professional Engineer of Oregon.
Professional Engineers of Oregon.
American Institute of Chemical Engineers, Member.
Counselor; Student Chapter Committee, 3 years.
Society for the Promotion of Engineering Education,
Northwest Rep., CHE Section; Lamm Award Comm., 3 years.
American Chemical Society, Member.
Oregon Academy of Science.
Regional Planning Board, Fish Resources Comm., 1934.
State Planning Board.
Chairman, Sub-Committee on Technical Methods of Waste Disposal.
Member, Advisory Committee, Stream Purification.
State Planning Committee, Sub-Committee on Mining, 1942; Sub-Committee on
Stream Purification, 1942.
Chemical Engineering Award Committee (National), 1942.
Triads
Chamber of Commerce.

Locke, Edward G.

Education:

B.S., 1928, Chemical Engineering, Oregon State College.
M.S., 1930, Chemical Engineering, Ohio State University.
Ph.D., 1932, Chemical Engineering, Ohio State University.

Practical Experience:

1929	Summer	Ohio State Highway Testing Lab. Bit. & Agg. Lab.
1930	"	Midgely Foundation, Columbus, O. Research Asst.
1932-33		Ohio State Highway Dept. Test Engineer.
1933	Summer	Dean & Barry Paint Co., Columbus, O. Paint Chemist.
1933-36		Philadelphia & Reading Coal & Iron Co., Pittsville, Pa. Assistant Research Chemist.
1939	Summer	Oregon State College, Engr. Exp. Sta. Research.
1941	"	Oregon State College, Agricultural Research Found. Research.
1942	"	Bonneville Lower Administration, Portland, Marketing and Development Section. Assoc. Chemical Engr.
1943		Bonneville Lower Administration. Leave of absence from OSC.

Teaching Experience:

1928-30 Graduate Assistant, Ohio State University.
1930-32 Assistant, Ohio State University.
1936- Asst. Prof., Chemical Engr., Oregon State College.

Locke, Edward G. (contd.)

Organizations:

Tau Beta Pi
Sigma Tau
Phi Lambda Upsilon
Sigma Xi

Phi Kappa Phi
Gamma Alpha
Kappa Sigma

American Institute of Chemical Engineers, Associate.
American Chemical Society--President, Oregon Section, 1944.

Civil Engineering

Mockmore, Charles A.

Education:

B.S., 1920, Civil Engineering, University of Iowa.
C.E., 1926, (Professional Degree), University of Iowa.
M.S., 1932, Civil Engineering, University of Iowa.
Ph.D., 1935, Civil Engineering, University of Iowa.

Practical Experience:

1920-21		University of Iowa. Assistant to Supt. of Grounds & Buildings.
1923	Summer	Sun Portland Cement Co., Portland. Asst. Supt. of Constr. at Lime, Oregon.
1925	"	Corvallis, Oregon. Assistant to City Engineer.
1927	"	General Contractor in Oregon.
1928	"	Visited various engineering laboratories in the U.S.
1929	"	Oregon State College, Engr. Exp. Sta. Made Sanitary Survey of Willamette Valley.
1932	"	University of Iowa. Graduate Student.
1934	"	U. S. Engineers. Consulting Engr. on Draft Tubes at Bonneville.
1935	"	Iowa Institute of Hydraulic Research. Graduate Student.
1936	"	State Planning Board, Portland, Oreg.
1938	"	Attended conventions of Am. Soc. Civil Engrs., Salt Lake City, and Soc. for Promotion of Engr. Educ., Texas.
1940	"	Attended conventions: Am. Soc. Civil Engrs., N.Y.; Soc. for Promotion of Engr. Educ., Berkeley; NW Sec. Am. Water Works Assn., Portland.
1941	"	J. W. Cunningham & Associates (U. S. Army Cantonment).
1942	"	Assistant Engineer, 2nd to Chief Engr. U. S. Engineers, Camp Adair. Engineer.

Teaching Experience:

1921-24	Instr., Civil Engr., Oregon State College.
1925-28	Asst. Prof., Civil Engr., Oregon State College.
1929-32	Assoc. Prof., Civil Engr., Oregon State College.
1931-32	Research Assoc., University of Iowa (on leave from OSC).
1932-33	Prof., Acting Head, Civil Engr., Oregon State College.
1933-	Prof., Head, Civil Engr., Oregon State College.

Mockmore, Charles A. (contd.)

Organizations:

Tau Beta Pi
Sigma Xi
Registered Professional Engineer of Oregon.
State Board of Engineering Examiners.
American Society of Civil Engineers.
Pres., Portland Section, 1938; Member, Committee on Juniors, N.Y.
Sub-Committee, Hydraulic Research.
Society for Promotion of Engineering Education.
National Councilor, 1938-41; Member, Board of Direction, 1941-42;
Comm. on Hydraulic Laboratory Practice.
Northwest Regional Planning Commission.
Engineers Council for Professional Development--Member Accrediting Comm. for
schools in Oregon, Washington, Idaho, Montana, North & South Dakota, Nebr.
Benton County Planning Commission
Corvallis City Council
Corvallis Planning Board
Corvallis Board of Appeals
Chamber of Commerce

Griffith, James R.

Education:

B.S., 1916, Civil Engineering, Purdue University.
C.E., 1922, (Professional Degree), Purdue University.

Practical Experience:

1915	Summer	Toledo St. Louis & Western R.R., Frankfort, Ind.	Rodman.
1916-17		New York Central R.R., Chicago Div.	Transitman.
1917		Penn Lines, Ft. Wayne, Ind.	Engr. Corps Asst.
		Interstate Commerce Commission.	Instrument man.
1917-19		U. S. Navy. QM 3/c; Ensign; Lt. (jg).	
1919	2 mos.	French Paddock Co.	In charge of Dist. office in Flint, Mich.
1920	6 "	Standard Shale Brick Corp, Crawfordsville, Ind.	Asst. Engr.
1921	Summer	Deputy State Fire Marshall, Oregon.	Wrote 1921 Fire Marshal Regulations for Stato. City Building inspections.
1923	6 mos.	Bates Expanded Steel Truss Co., Chicago.	Detailer & Checker.
1924	9 "	Illinois Central Chicago Terminal Electrification.	Designer.
	3 "	City of Chicago, Designing Div.	Structural Squad Boss.
1925	6 "	U. S. Gypsum Co., Chicago.	Structural Squad Boss.
	6 "	Board of Education, Chicago.	Supt. of Construction.
1926	Summer	Northwestern University Stadium, Evanston, Ill.	Field Engr.
1927	"	Westchester County Park Commission (N.Y.).	Struct. Squad Boss.
1930	"	City of Portland, Dock Commission.	Structural Designer.
1934	"	Valley & Siletz Railroad, Oregon.	Consultant.
1940	(Dec.)	U. S. Navy, Seattle, Wash.	Lt. Commander (on leave from OSC).

Griffith, James R. (contd.)

Teaching Experience:

1919 Instr., Railway Engr., Summer Surveying Camp, M.I.T.
1920-23 Instr., Civil Engr., State College of Washington.
1923-24 Instr., Mathematics, Chicago Central Y.M.C.A. accredited High School.
1925-29 Asst. Prof., Civil Engr., Armour Institute of Tech.
1929- Prof., Structural Engr., Oregon State College.

Organizations:

Registered Professional Engineer of Oregon.
American Society of Civil Engineers, Member.

Glenn, Burdette

Education:

B.S., 1919, Civil Engineering, University of Michigan.
M.S., 1931, Civil Engineering, Iowa State College.

Practical Experience:

1916 Summer W. H. Daugherty Mfg. Co., Petrolia, Pa. Assistant to Engr.
1917-18 6 mos. W. H. Daugherty Mfg. Co., Petrolia, Pa. Assistant to Engr.
1918 Summer W. H. Daugherty Mfg. Co., Petrolia, Pa. Asst. Plant Engr.
1919 " W. H. Daugherty Mfg. Co., Petrolia, Pa. Plant Engr.
1926 " Oregon State College. Pavement construction.
1927 " Oregon State College. Pavement construction.
1928 " Oregon State College. Pavement construction.
1932 " Oregon State Highway Dept. Res. Engr. & Research Engr.
1934 " Oregon State Highway Dept. Research (Traffic Surveys).
1935 " Oregon State Highway Dept. Research (Traffic Surveys).
1936-37 Oregon State Highway Dept. State Traffic Survey Manager.
1938 Summer Oregon State Highway Dept. Traffic Surveys.
1939 " Oregon State Highway Dept. Traffic Surveys.
1940 " Oregon State Highway Dept. In Charge of Traffic Surveys.
1941 " Oregon State Highway Dept. Research Engineer.
1942 " Oregon State Highway Dept. Research Engineer.

Teaching Experience:

1918-19 Instr., Civil Engr., University of Michigan.
1919-22 Instr., Civil Engr., Oregon State College.
1922-34 Asst. Prof., Civil Engr., Oregon State College.
1934-37 Assoc. Prof., Highway Engr., Oregon State College.
1937- Prof., Highway Engr., Oregon State College.

Organizations:

Lambda Chi Alpha
Soc. for Promotion of Engr. Educ.
Northwest Society of Highway Engineers
American Society of Testing Materials

Elks
Masons
Corvallis Country Club
Corvallis City Council

Holcomb, Glenn W.

Education:

B.S., 1919, Civil Engineering, University of Michigan.

M.S., 1931, Education, Oregon State College.

Practical Experience:

1917-18		U. S. Army. Member of Engineers Reserve.
1919	Dec.	City of Detroit. Transitman on City Subdivisions.
1919-20		M. E. Cooley Railroad. Appraiser.
1921	Summer	City of Portland, City Engineer. Construction work.
1922	"	Travel.
1923	"	Oregon State College. Construction of concrete pavement.
1924	"	Oregon State College. Construction of concrete pavement.
1925	"	City of Corvallis. Pavement construction.
1926	"	Surveying.
1927	"	Travel. Visited eastern engineering schools.
1933	"	Travel.
1935	"	Oregon State Highway Dept. Research on Traffic Surveys.
1936	"	Oregon State Highway Dept. Assistant Traffic Manager.
1937	"	Oregon State Highway Dept.
1940	"	Eugene Water Board. Design of Structures.
1941	"	Cunningham & Associates. Design Engr., Longview Filtra. Plant.
1942	"	U. S. Engineers, Camp Adair. Principal Engineer (Constr.)

Teaching Experience:

	Instr. in Surveying, University of Michigan, under direction of U. S. Army, during most of period of World War I.
1919-20	Instr., Surveying, University of Michigan.
1920-26	Instr., Civil Engr., Oregon State College.
1927-34	Asst. Prof., Civil Engrs., Oregon State College
1934-39	Assoc. Prof., Civil Engr., Oregon State College.
	Chairman, General Engr.
1939-	Prof., Civil Engr., Oregon State College.
1944-	Institutional Representative, Engr. Science, & Mgt. War Training.

Organizations:

Kappa Delta Pi	Web & Flange
Lambda Chi Alpha	Blue Key
Registered Professional Engineer of Oregon.	
Professional Engineers of Oregon--Trustee, 1943-44.	
American Society of Civil Engineers.	
V. Pres, Portland Section, 1941-42.	
President, Portland Section, 1942-43.	
Society for Promotion of Engineering Education.	
Secretary, Northwest Section, 1934-35.	
Vice-Chairman, Northwest Section, 1935-36.	

Masons

Elks

Rotary

Dolan, Samuel M.

Education:

C.E., 1910, Notre Dame.

Practical Experience:

1910	Summer	Oregon State College.	Surveying, Mapping, Walk Construction.
1911	"	Oregon State College.	Surveying, Mapping, Walk Construction.
1912	"	Oregon State College.	Surveying, Mapping, Walk Construction.
1913	"	Oregon State College.	Surveying, Mapping, Walk Construction.
1914	"	Oregon State College.	Surveying, Mapping, Walk Construction.
1915	"	Oregon State College.	Surveying, Mapping, Walk Construction.
1916	"	Southern Pacific R.R. Co.	Drafting, computing, estimating.
1917	"	Southern Pacific R.R. Co.	Railroad evaluation.
1918	"	U. S. Engineers.	Instrumentman and Engineer (Crater Lake).
1919	"	Oregon State Highway Commission.	Locating Engr.
1920	"	Oregon State Highway Commission.	Resident Engr.
1924	"	U. S. Bureau of Public Roads.	Instrumentman & Computer.
1926	"	Oregon State Highway Commission.	Engineer & Inspector.
1927	"	Oregon State Highway Commission.	Resident Engineer.
1928	"	Oregon State Highway Commission.	Inspector.
1930	"	Oregon State Highway Commission.	Resident Engineer.
1931	"	Oregon State Highway Commission.	Engineer & Inspector.
1932	"	Oregon State Highway Commission.	Resident Engineer.
1934-36		Public Works Administration.	Senior Resident Engr. & Engineer Examiner on Coos Bay Bridge.
1939	Summer	Oregon State Highway Commission.	Construction Inspector.
1942	"	Parker-Shram Company, Camp Adair.	Superintendent.

Teaching Experience:

1910-14	Instr., Civil Engr., Oregon State College.
1914-20	Asst. Prof., Civil Engr., Oregon State College.
1920-	Assoc. Prof., Civil Engr., Oregon State College.

Organizations:

Northwest Society of Highway Engineers--Former President-Director.
West Side Pacific Highway Association--President.
American Association of Engineers--Former President.
Oregon State Dad's Club--Vice President, 1938-39.
Corvallis Buck O'Month Club--President, 1938-39.
Kiwanis Club--Former President.
Rotary Club.
Chamber of Commerce.

Waterman, Ivan F.

Education:

B.S., 1910, John B. Statson University.
C.E. 1912, University of Wisconsin.
Graduate work in Education at Oregon State College.
One semester, 1933, University of California.

Waterman, Ivan F. (contd.)

Practical Experience:

1915 Summer J. B. McCrary Engineering Co., Fla. Asst. Res. Engr.
1916-17 Wisconsin State Highway Comm. Field Engineer.
1917 9 mos. Volusia County, Fla. County Engineer.
1917-18 J. B. McCrary Engineering Co., La. Resident Engr.
1918 6 mos. U. S. Army. Left Service as 1st Lt. of Engineers.
1919 8 mos. Florida State Road Dept. Resident Engineer.
1 Summer Oregon State Highway Commission. Testing, Bridge Dept.
1934 8 mos. Warm Springs Indian Reservation, U. S. Dept. of Interior.
Road Engineer, in charge of P.W.A. work.
1941 Summer John Cunningham & Associates (Cantonment). Struct. Design.
1942 Summer John Cunningham & Associates, Tillamook, Oreg. In Charge
of Foundation Surveys and Tests, Naval Air Station.
3 Summers Plant Inspector in setting mix for asphaltic concrete paving
in Corvallis, Cottage Grove, and Oregon City.

Teaching Experience:

1912-16 Instr., John B. Stetson University.
1919-21 Instr., Mechanics & Materials, Oregon State College.
1921-34 Asst. Prof., Mechanics & Materials, Oregon State College.
1934-37 Asst. Prof., Civil Engr., Oregon State College.
1937- Assoc. Prof., Civil Engr., Oregon State College.

Organizations:

Registered Professional Engineer of Oregon.
Society for Promotion of Engineering Education.
Chamber of Commerce

Merryfield, Fred

Education:

B.S., 1923, Civil Engineering, Oregon State College.
M.S., 1930, Civil Engineering, University of North Carolina.

Practical Experience:

1923-27 Southern Pacific R.R. Levelman & Transitman.
1928 Umatilla County. Engineering Construction.
1929-30 University of North Carolina. Graduate work (on leave from CSC)
1929 Summer Conservation & Development, N. C. Asst. Engr. Dept.
1930 " Dept. of Conservation & Development, Water Resources Div.,
N. C. Asst. Engr.
1932 " Oregon State College. Sewage research.
1933 " Worked on sewage tests for cities of Willamette Valley in
cooperation with Governor's Commission of Engineers. Or-
ganized Sanitary Conference of City Engineers.
1934 " Traveled in Europe. Visited hydraulic laboratories in Germany.
1935 " City of Milton. In advisory capacity, power plant operation.
1936 " Stevens & Koon, Consulting Engineers, Portland. Principal
Assistant "Col. River Basin Study", Nat. Resources Comm.
1937 " J. C. Stevens, Portland, Oreg. Engineering Design.

Merryfield, Fred. (contd.)

Practical Experience (contd):

1938 Summer City of Corvallis. Installed water system.
1940 " John W. Cunningham & Assoc. Design (Sewage Treatment).
1941 " U. S. Quartermaster Corps, Cantonment. Asst. Engineer.
1942 " U. S. Engineers, Camp Adair. Engineer in Charge of Water Sup.
1943-44 Year U. S. Army. Captain, Major. Water Supply Engrs., 6th Army.

Teaching Experience:

1927-29 Instr., Civil Engr., Oregon State College.
1929-30 Faculty, University of North Carolina.
1930-37 Asst. Prof., Civil Engr., Oregon State College.
1937- Assoc. Prof., Civil Engr., Oregon State College.

Organizations:

Tau Beta Pi Sigma Xi
Sigma Tau Pi Tau Sigma
International Geophysical Union--Statistical Committee
American Water Works Association.
Committee on Stream Pollution.
Committee on Programs.
Secretary--1936, 1937, 1938, 1939, 1940, 1941, 1942.
Pacific Northwest Sewage Works Association.
Secretary--1935, 1936, 1937, 1938, 1939, 1940, 1941, 1942.
U. S. Public Health Service, Abstractor (Wash. D.C.).
Corvallis Rural Fire Protection District--Director, 1942.
Rotary--Editor local Rotary paper, 1940.

Wanless, Rupert A.

Education:

B.S., 1923, Civil Engineering, Oregon State College.
Graduate work for M.S. Degree, 1928-29, Oregon State College. Completed
38 credit hours with major in Structures, minor in Education.

Practical Experience:

1917-19 U. S. Army. American Expeditionary Force.
1919 Summer Farming.
1920 " Oregon State Highway Commission. Chainman, Rodman, Computer.
1921 9 mos. City of Newberg. Construction Engineer.
1922 Summer Pacific Light & Power Co. Transitman.
1923 6 mos. Long Beach, Calif., City Engineering work. Chief of Party.
1924-25 Associated Oil Co., Portland, Oreg. Clerk & Salesman.
1925-27 Associated Oil Co., Corvallis, Oreg. Manager.
1927 6 mos. Mountain States Power Co. Refrigeration Engr. for State.
1927-28 Oregon State College. Research.
1928-29 Oregon State College, Engr. Exp. Sta. Research Fellowship.
1928-29 Oregon State College. Painting.
1930 Summer Oregon State Highway Commission. Resident Bridge Engineer.
1931 " Oregon State Highway Commission. Resident Bridge Engr.
1932-35 Oregon State Highway Commission. Resident Bridge Engr.
1936 Summer Oregon State Highway Commission.

Wanless, Rupert A. (contd.)

Practical Experience (contd.)

1937	Summer	A.A.A., Soil Conservation Program, Corvallis.
1940	"	Oregon State Highway Commission. Bridge Engineer.
1941	"	J. W. Cunningham & Associates, Cantonment. Design.
1942	"	U. S. Engineers, Camp Adair. Assistant Engineer.

Teaching Experience:

1929-32	Instr., Civil Engr., Oregon State College.
1935-36	Instr., Civil Engr., Oregon State College.
1936-43	Asst. Prof., Civil Engr., Oregon State College.
1943-	Assoc. Prof., Civil Engr., Oregon State College.

Organizations:

Tau Beta Pi
Northwest Society of Highway Engineers

Electrical Engineering

McMillan, Fred O.

Education:

B.S., 1912, Electrical Engineering, Oregon State College.
M.S., 1919, Electrical Engineering, Union College, Schenectady, N. Y.

Practical Experience:

1912-14		General Electric Company. Testing Dept.
1914-20		General Electric Co. Design Engr.
1925	Summer	Port of Portland. Consulting Electrical Engr.
1926	2 mos.	Pacific Power & Light Co. Research on Elec. Fish Screens.
1928		Research on Gaseous Conductor Lamps.
1928	Summer	Lightning Investigation for U. S. Forest Service, Oregon State Board of Forestry, Private timber interests, and Engr. Exp. Sta. Work continued each summer up to and including 1931.
1931	Summer	Visited manufacturers of High Voltage Insulators in the East to convey results of research on "Radio Interference from High-Voltage Insulators".
1930-42		Research on influence of polarity on high-voltage discharges.
1930-42		Research on radio interference from high-voltage trans. lines.
1927-32		Northwestern Elec. Co. Consulting Electrical Engr.
1933		Pacific Power & Light Co. Consulting Electrical Engr.
1929-35		U. S. Bureau of Fisheries. Consulting Electrical Engr.
1936	Spring	Made electrical energy demand and use survey of State institutions in and near Salem.
1936	Fall	Made survey of radio interference in Port Angeles, Wash.
1939	Summer	Portland General Elec. Co. Consulting Engr.
1940	"	Portland General Elec. Co. Consulting Engr.
1941	"	Portland General Electric Co. Consulting Engr.
1942	"	Portland General Electric Co. Consulting Engr.
1943	June 1-	U. S. Dept. of State. Visiting Professor & Industrial Consultant, Ministry of Education, Chungking, China. (on leave from OSC)

McMillan, Fred O. (contd.)

Teaching Experience:

1920-23 Asst. Prof., Electrical Engr., Oregon State College.
1923-30 Assoc. Prof., Electrical Engr., Oregon State College.
1930-37 Research Prof., Electrical Engr., Oregon State College.
1937- Prof., Head, Dept. of Electrical Engr., Oregon State College.

Organizations:

Tau Beta Pi

Sigma Xi

Sigma Tau

Phi Kappa Phi

Eta Kappa Nu

Registered Professional Engineer of Oregon.

American Institute of Electrical Engineers, Fellow

Vice-President, 1935-36

Comm. on Student Branches, 1935.

Comm. on Research, 1935-36, 37, 38, 39.

Comm. on Electrophysics, 1935.

Comm. on Transfers, 1936, 37, 38, 39, 40.

Comm. on Section Territories, 1936.

Comm. on Education, 1939.

Society for Promotion of Engineering Education.

Comm. on Graduate Study.

Institute of Radio Engineers, Member.

American Association for Advancement of Science, Fellow.

Northwest Electric Light & Power Association

Comm. on Transmission and Distribution.

Corvallis Chamber of Commerce

Albert, Arthur L.

Education:

B.S., 1923, Electrical Engineering, Oregon State College.

M.S., 1926, Electrical Engineering, Oregon State College.

E.E., 1939, (Professional Degree), Oregon State College.

Practical Experience:

1923 6 mos. Pacific Tel. & Tel. Portland. Student Engineer.
1924 Summer Pacific Tel. & Tel. San Francisco. Personnel Dept.
1925 2 mos. Pacific Tel. & Tel. Portland. Engineering Dept.
1926 2 mos. Pacific Tel. & Tel. Portland. Engineering Dept.
1928 Summer Pacific Tel. & Tel. Portland. Engineer on Toll Cable.
1929 " Pac. Tel. & Tel. Co., Transmission Dept. Engineer.
1934 " Designed and installed group address system on campus.
1941 " Attended SPEE Meeting, Ann Arbor, Michigan.
Attended AIEL Meeting, Yellowstone Park.
1942 Summer Oklahoma A & M College, U. S. Naval Radio Training School.
1942-43 Year Purdue University, Lafayette, Ind. Elec. Engr. Dept.

Albert, Arthur L. (contd.)

Teaching Experience:

1923-29 Instr., Electrical Engr., Oregon State College.
1929-34 Asst. Prof., Electrical Engr., Oregon State College.
1934-38 Assoc. Prof., Communication Engr., Oregon State College.
1938- Prof., Communication Engr., Oregon State College.
1942-43 Prof., Electrical Engr., Purdue University.

Organizations:

Tau Beta Pi

Sigma Tau

Eta Kappa Nu

Sigma Xi

American Institute of Electrical Engineers, Fellow.

Society for Promotion of Engineering Education.

Chairman, Electrical Division, 1941-42.

Institute of Radio Engineers

Chamber of Commerce

Wooster, Lawrence F.

Education:

B.S., 1906, Electrical Engineering, University of Illinois
M.S. 1931, Education, Oregon State College

Practical Experience:

1905 Summer Illinois Traction System.
1906-08 General Electric Company. Tests.
1914-19 Oregon State College, Dept. of Light & Power. Supt.
1924 Summer Westinghouse Elec. & Mfg. Co. Railway Engr. office.
1940 " Westinghouse Elec. & Mfg. Co. Central Sta. Div. office.
1941 " John Cunningham & Assoc. Cantonment. Electrical Engr.
1942 " U. S. Army Engineers, Air Base. Office Engineer.

Teaching Experience:

1910-14 Instr., Electrical Engr., Oregon State College.
1914-19 Asst. Prof., Electrical Engr., Oregon State College.
1919- Prof., Electrical Engr., Oregon State College.

Organizations:

Eta Kappa Nu

Kappa Delta Pi

Registered Professional Engineer of Oregon.

Illuminating Engineering Society--Associate.

Board of Governors, Oregon Branch.

Masons

Shrine

Knights Templar

Starr, Eugene C.

Education:

B.S., 1923, Electrical Engineering, Oregon State College.
E.E., 1938, (Professional Degree), Oregon State College.

Practical Experience:

1923-27	General Electric Co., Pittsfield. General Test work & res.
1928	Research: Investigation of electrical characteristics of gaseous-conductor lamps. Design & construction of high-voltage impulse generator for Oregon State Elec. Engr. Lab.
1929	Research: Mechanical vibrations; lightning & its relation to forest protection. Assisted with acceptance tests on diesel-electric generating unit for U. S. Bureau of Fisheries.
1930	Research: Influence of polarity on high-voltage discharges; polarity influence on sphere-gap voltmeter. Investigated transformer failure at LaGrande for General Electric Co. Visited engineering schools in California and some industries during Christmas vacation.
1931	Luminous Tube Lighting Corp., Seattle. Consulting Engr. Research: Lightning and its relation to forest protection.
1932	City of Eugene, Water Board. Special investigation. Visited Boulder Dam project during Christmas vacation. Investigated underground cable failure, campus.
1933	Attended AIEE summer convention, Chicago. Visited many industries in the East.
1934	Research: Electrical determination of water velocity; determining & analyzing car resistance. Visited Boulder Dam.
1935	Research: Electrical determination of water velocity; studies on automotive car resistance; investigation of lightning and its relation to forest protection.
1936	Research: Field lightning. Attended AIEE summer convention.
1937	United Air Lines. Consultant on rain- and snow-static elimination.
1938	United Air Lines. Consultant.
1939	Bonneville Power Administration. Special Consultant; Sr. Engr.
1940	Bonneville Power Administration. Consulting Elec. Engr. Attended AIEE summer convention.
1941	Bonneville Power Administration. Consulting Engineer. Attended AIEE summer convention. Administered research in EE lab., OSC, for National Defense Research Committee.
1942	Bonneville Power Administration. Consulting Engr. National Defense Research Comm. Coordinator, Precipitation-Static Research, Communications Section.
1943	Bonneville Power Administration. Consulting Engr. National Defense Research Comm. Coordinator. Appointed member of Liaison Staff, London Mission, Office of Scientific Research & Development. (on leave from OSC)

Teaching Experience:

1927-30	Instr., Electrical Engr., Oregon State College.
1930-37	Asst. Prof., Electrical Engr., Oregon State College.
1937-39	Assoc. Prof., Electrical Engr., Oregon State College.
1939-	Prof., Electrical Engr., Oregon State College.

Starr, Eugene C. (contd.)

Organizations:

Tau Beta Pi

Sigma Tau

Eta Kappa Nu

Sigma Xi

Lambda Chi Alpha

American Institute of Electrical Engineers, Fellow

National Committee on research.

Committee on Membership, Portland Section.

Coordinating Committee No. 3. Sub-Committee on Impulse Testing.

Institute of Radio Engineers.

American Association for Advancement of Science.

Cockerline, Harold B.

Education:

B.S., 1912, Electrical Engineering, University of Oregon.

Practical Experience:

1912-14 General Electric Co. Test.

1914-17 F. J. Sprague. Assistant. Worked on development of various inventions.

1922-23 F. J. Sprague. Assistant. Worked on development of various inventions.

1917-19 U. S. Navy. Engr. Officer, USS Texas.

1919-20 Automobile and accessory sales work.

1920-21 C.M. & St. P. & P. Co. Inspection and Maint. of Elec. Equip.

1936 Summer Federal Agricultural Conservation Program.

1937 " Eugene Water Board. Study of future elec. power plant Dev.

1938 " Eugene Water Board. Economic studies on sources of peak power.

1939 " Eugene Water Board. Engineer.

1940 " Eugene Water Board. Engineer.

1941 " Eugene Water Board. Engineer.

1942 " U. S. Army Engineers, Camp Adair. Electrical Engr.

Teaching Experience:

1921-23 Instr., Electrical Engr., Oregon State College.

1923-40 Asst. Prof., Electrical Engr., Oregon State College.

1940- Assoc. Prof., Electrical Engr., Oregon State College.

Organizations:

Eta Kappa Nu

American Institute of Electrical Engineers.

Nichols, Benjamin H.

Education:

B.S., 1919, Mechanical Engineering, Oregon State College.

M.S., 1932, Electrical Engineering, Oregon State College.

Nichols, Benjamin H. (contd.)

Practical Experience:

1920-21 General Electric Co., Schenectady, N.Y. Testing Dept.
1924 Summer Mountain States Power Co., Albany, Oreg. Line Constr.
1925 " Mountain States Power Co., Albany, Oreg. Line Constr.
1926 " Mountain States Power Co., Albany, Oreg. Line Constr.
1931 " Oregon State Highway Comm. Experimental work.
1922-24-27-28-)
29-30-31-34-) U. S. Army. Attended summer training camp. Major.
35-36-39)
1936 Summer Agricultural Soil Conservation Service. Measured Land.
1938 " Hydroelectric Commission of Oregon. Wrote reports.
1939 " Public Utilities Commission of Oregon. Electrical Engr.
1940 2 wks. U. S. Army. Attended Summer Training Camp.
1941 ESMDT. Supervisor of courses in Portland and Corvallis.
1942 U. S. Army, Engineer Amphibian Command. Major, Lt. Col.
(on leave from OSC)

Teaching Experience:

1919-20 Instr., Mechanical Engr., Oregon State College.
1921-22 Asst., Electrical Engr., Oregon State College.
1922-34 Instr., Electrical Engr., Oregon State College.
1934-39 Asst. Prof., Electrical Engr., Oregon State College.
1939- Assoc. Prof., Electrical Engr., Oregon State College.

Organizations:

Sigma Tau
American Institute of Electrical Engineers, Member.
Society for Promotion of Engineering Education.
Reserve Officers Association.
Parent Teacher Association.
Eastern Star, Grand Sentinel of Grand Chapter of Oregon.

Felkert, Grant S.

Education:

B.S., 1930, Electrical Engineering, Oregon State College.
M.S., 1932, Physics, Oregon State College.
E.E., 1937, (Professional Degree), Oregon State College.

Practical Experience:

1929-33 Radio Station KOAC, General Extension Div. Asst. Engr.
1933- Radio Station KOAC, General Extension Div. Chief Engr.
1941 (Year) Construction of KOAC Building and Radio Program Line.
Installation of 5000-watt transmitter for KOAC.
Construction of Studio System, University of Oreg.

Teaching Experience:

1938- Asst. Prof., Electrical Engr., Oregon State College.

Folkert, Grant S. (contd.)

Organizations:

Eta Kappa Nu
Sigma Pi Sigma
Registered Professional Engineer of Oregon.
American Institute of Electrical Engineers, Assoc. Member.

Everest, F. Alton

Education:

B.S., 1932, Electrical Engineering, Oregon State College.
E.E., 1936, (Professional Degree), Stanford University.

Practical Experience:

1927-28		R. W. Lee's Shop, Portland, Oregon.
1929	Summer	R. W. Lee's Shop, Portland, Oregon.
1930	"	U. S. Forest Service, Mt. Hood National Forest.
1931	"	U. S. Forest Service, Mt. Hood National Forest.
1932	"	U. S. Forest Service, Mt. Hood National Forest.
1932	6 mos.	R. W. Lee's Shop, Portland, Oregon.
1933-34		U. S. Forest Service.
1935	Summer	U. S. Forest Service.
1936	6 mos.	Don Lee Broadcasting System, Los Angeles. Television.
1937	Summer	Fish Screen Investigation.
1938	"	Don Lee Broadcasting System, Los Angeles. Television.
1939		Supervised construction of neurophysiological research amplifier for University of Oregon Medical School.
1941	(Oct.)	U. S. Navy Radio and Sound Laboratories, San Diego. Research. (on leave from OSC).

Teaching Experience:

1935-36	Laboratory Assistant, Electrical Engr., Stanford University
1936-39	Instr., Electrical Engr., Oregon State College.
1939-	Asst. Prof., Electrical Engr., Oregon State College.

Organizations:

Eta Kappa Nu
Sigma Xi
Registered Professional Engineer of Oregon.
American Institute of Electrical Engineers, Associate Member.
Institute of Radio Engineers.

Mechanical Engineering

Graf, Samuel H.

Education:

B.S., 1907,	Electrical Engineering, Oregon State College.
E.E., 1908,	Oregon State College.
B.S., 1908,	Mechanical Engineering, Oregon State College.
M.E., 1909,	Oregon State College.
M.S., 1909,	Electrical Engineering, Oregon State College.

Graf, Samuel H. (contd.)

Practical Experience:

War Service, World War I.
1918-19 Summer Work in industrial and public utility plants and laboratories such as Fairbanks-Morse & Co., Mammoth Copper Mining Co., Portland Gas & Coke Company.
1920 " Port of Portland. Tests on four Suction Dredges.
1919-20 U. S. Shipping Board. Test Engineer on 16 trial trips of merchant vessels built in Portland.
1933 Summer A.G.A. Testing Laboratory, Cleveland, Ohio. Research.
1934 Iron Fireman Manufacturing Co. Research Engineer.
1935 to date Bonneville Power and Navigation Project. Consulting Engr.
1936 U. S. Engineers, Willamette Valley Project. Consulting Engr.
1941 Summer U. S. Engineers and Willamette Iron & Steel Corp. Testing, and investigational work on mechanical equipment for Panama Canal.
1942 " Service testing for several agencies, especially War Dept. Served as consultant on Camp Adair and other projects.
1943 Served as consultant, including investigation of failure of SS Schenectady, Kaiser Company, Portland.

Teaching Experience:

1908-09 Assistant in Mechanical Engr., Oregon State College.
1909-12 Instr. in Mechanical Engr., Oregon State College.
1912-14 Asst. Prof. and Head of Experimental Engr., Oregon State College.
1914-20 Prof., Mechanical Engr., Oregon State College.
1920-34 Prof., Head, Mechanics & Materials, Oregon State College.
1934-35 Prof., Acting Head, Mechanical Engr., Oregon State College.
1935- Head, Mechanical Engr., Oregon State College.
1927-28 Assoc. Director, Engineering Experiment Station.
1928- Director, Engineering Research, Oregon State College.

Organizations:

Tau Beta Pi	Sigma Xi
Sigma Tau	Phi Kappa Phi
Eta Kappa Nu	Phi Sigma Kappa
Sigma Pi Sigma	

Registered Professional Engineer of Oregon.
American Society of Mechanical Engineers.
Council Member (Manager) 1934-46.
Past Chairman, Oregon Section.
National Council of State Boards of Engineering Examiners.
Director, Western Zone, 1934-36.
Vice President, 1936-37.
President, 1937-39.
Delegate to National Meeting, New York, Oct. 27-30, 1941.
Delegate to National Meeting, Indianapolis, Oct. 1943.
Oregon State Board of Engineering Examiners.
President, 1939, 40, 41, 42, 43, 44.
Member of Board since 1927.
American Society for Testing Materials (Mem. Comm.).
American Society for Metals--President, Oregon Chapter, 1937.

Graf, Samuel H. (contd.)

Organizations (contd.)

Pacific Coast Gas Association.
Northwestern Society of Highway Engineers--Past Vice President.
Society for X-Ray Diffraction.
American Society for Stress Analysis.
Masonic Lodge, 32nd Degree.
Shrine.
Triad Club-Vice President, 1936; President, 1939.

Martin, Wallace H.

Education:

M.E., 1910, University of Minnesota.
M.S., 1930, Iowa State College.

Practical Experience:

1910-11 Oliver Iron Mining Co., Hubbing Minnesota. Spec. Apprentice.
Hart Mfg. Co. Erection of Tractors.
Emerson Brantingham Co. Jig & Fixture Design.
York Mfg. Co. Refrigeration operating & Testing.
1918 Pennsylvania State College. Training auto mechanics and truck drivers for Army Service.
Puma State College. Design & constr. steam & gas lab.
Northwestern Ice & Cold Storage Co., Portland. Design.
1928-29-30 Iowa State College, Engr. Exp. Sta. Research on tractive resistance of motor vehicles.
(summers)
1942 Summer U. S. Engineers, Camp Adair. General Consultant.

Teaching Experience:

1911-17 Instr., Mechanical Engr., University of Minnesota.
1917-20 Asst. Prof. & Assoc. Prof., Mechanical Engr., Pennsylvania State Coll.
1920- Prof., Heat Engr., Oregon State College.

Organizations:

Tau Beta Pi
Sigma Tau
Pi Tau Sigma
Sigma Xi
Registered Professional Engineer of Oregon.
American Society of Mechanical Engrs.
Society for Promotion of Engineering Education.
National Association of Practical Refrigerating Engineers.

Phillips, M. Clyde

Education:

B.M.E., 1896, Oregon State College.

Practical Experience:

Oregon State College. Superintendent of Physical Plant.
Oregon State College. Superintendent of Heating.
Oregon State College. Shop layout, blacksmith & machine shop.

Phillips, M. Clyde (contd.)

Practical Experience (contd.):

- Designed Central Heating Plant; superintendent of construction of College buildings for 20 years.
- 1937 Oregon State College. Designed and constructed new conveyor system for heating plant.
- 1942 Summer U. S. Engineers, Camp Adair. Assoc. Engr. (part-time).

Teaching Experience:

- 1897-09 Instr., Mechanical Engr., Oregon State College.
- 1909-37 Assoc. Prof., Mechanical Engr., Oregon State College.
- 1937- Prof., Mechanical Engr., Oregon State College.

Organizations:

- Tau Beta Pi
- Pi Tau Sigma
- American Society of Mechanical Engineers.

Thomas, Charles E.

Education:

- M.E., 1913, Cornell University.
- M.M.E., 1931, Cornell University.

Practical Experience:

- 1917-18 Doble-Detroit Motor Car Company. Laboratory Research.
- 2 summers Portland Gas & Coke Co. Plant & Utilization Lab. investigations. Numerous laboratory investigations in public service and in problems of industrial concerns:
1. Oregon State Highway Commission--study of composite concrete and timber beams.
 2. American Wood Preservers' Association--study of creosoted railroad, cross-ties and bridge timbers.
 3. Pacific Car & Foundry Company--study of effects of heat-treatment on alloy cast steel.
- 1939 Summer General Electric Company, Schenectady, N. Y. Attended four weeks' professors conference.
- 1941 " Made tests on gate rollers for Panama Canal and on welded bus-bars for Bonneville Power Administration.
- 1942 " Public Service testing in Engineering Laboratory, OSC.

Teaching Experience:

- 1914-17 Instr., Experimental Engr., Cornell University.
- 1918-22 Asst. Prof., Experimental Engr., (Mechanics & Mat.), Oregon State.
- 1922-39 Assoc. Prof., Mechanics & Mat. (Mechanical Engr.), Oregon State.
- 1939- Prof., Engineering Materials, Oregon State College.

Organizations:

- Tau Beta Pi
- Sigma Xi
- Sigma Tau
- Pi Tau Sigma
- Registered Professional Engineer of Oregon.

Thomas, Charles E. (contd.)

Organizations (contd.)

American Society for Metals--Executive Committee; Vice Chairman;
Chairman, 1941-42.
Triad Club.

Ruffner, Benjamin F.

Education:

B.S., 1929, Mechanical Engineering, New York University.
Aero.E., 1930, New York University.
M.S., 1935, New York University.

Practical Experience:

		Conducted wind tunnel & flight tests on models and airplanes. Consulting work with aircraft design, stability, and performance. Supervised experimentation on autogiro and other modern developments in aeronautics.
1939	Summer	New York University. Consultant on wind tunnel operation. University of Minnesota. Visiting Prof. of Aero. Engr., 6 weeks summer session.
1940	"	Civil Pilot Training, Oregon State College. Administered.
1941	"	Civil Pilot Training, Oregon State College. Administered. National Advisory Comm. for Aeronautics. Research.
1942	"	Yates Aircraft Co. Consultant on flight tests.

Teaching Experience:

1929-30	Assistant in Aeronautics, New York University.
1930-36	Instructor in Aeronautics, New York University.
1929-36	In Charge of Aerodynamic Research, New York University.
1936-37	Asst. Prof., Aeronautical Engr., Oregon State College.
1937-39	Assoc. Prof., Aeronautical Engr., Oregon State College.
1939-	Prof., Aeronautical Engr., Oregon State College.

Organizations:

Tau Beta Pi	Iota Alpha (Engr. Honorary, N.Y.U.)
Pi Tau Sigma	Sigma Xi
Phi Kappa Phi	
Registered Professional Engineer of Oregon.	
Institute of Aeronautical Sciences.	
National Aeronautic Association.	
Oregon State Flying Club--Faculty Advisor.	
American Association for Advancement of Science.	
Triad Club.	

Paul, William H.

Education:

B.S., 1924, Mechanical Engineering, Oregon State College.
M.S., 1935, Mechanical Engineering, Oregon State College.

Paul, William H. (contd.)

Practical Experience:

1917-25		Automobile maintenance. Redlands, California. During summer months. Did general repair work.
1924-25		Automobile maintenance. Redlands, California. Shop superintendent. Ten-man shop.
1925	3 mos.	Long Bell Lumber Co., Longview, Wash. Electrician's helper.
1926	Summer	Redlands Hupmobile Company. Automobile salesman.
1927	"	Portland Gas & Coke Co., Portland. Refrigeration Engr.
1938	"	Dallas Machine & Locomotive Works. Design.
1929-30-31		Pacific Coast Gas Assn., San Francisco. Draftsman. (summers)
1932	Summer	Carburetion Specialist. In business for self.
1933		Visited various petroleum refineries & schools on Pac. Coast.
1935	Summer	Oregon State Highway Dept. Road Test Engineer.
1936	"	Oregon State Highway Dept. Automotive Economist.
1937	"	Oregon State Highway Dept. Automotive Economist.
1938	"	Oregon State Highway Dept. Test work.
1941	"	Cunningham & Allyn, Cantonment. Asst. Engineer.
1942	"	Standard Oil Co. of California, Berkeley. Research Engr.

Teaching Experience:

1926-35	Instr., Mechanical Engr., Oregon State College.
1935-39	Asst. Prof., Mechanical Engr., Oregon State College.
1939-42	Assoc. Prof., Mechanical Engr., Oregon State College.
1942-	Prof., Automotive Engr., Oregon State College.

Organizations:

Tau Beta Pi	Kappa Delta Rho--Faculty Adviser
Pi Tau Sigma	
American Society of Mechanical Engineers.	
Society of Automotive Engineers, Member.	
Vice-Chairman, Oregon Section, 1935-36.	
Student Branch Adviser.	
Engineering Student Council--Staff Adviser.	

Hughes, Arthur D.

Education:

B.S., 1932, Mechanical Engineering, State College of Washington.
M.S., 1932, Mechanical Engineering, State College of Washington.

Practical Experience:

1933-35		State College of Washington. Asst. Design Engr. and Chief Draftsman on equipment for coal-fired power plant.
1936-38		Iron Firoman Manufacturing Co. Design Draftsman & Mach. Oper.
1941	Summer	Hunt & Chambers, Blackie & Wood, Camp White cantonment. Des.
1942	"	U. S. Engineers, Camp Adair. Mechanical Engineer.

Teaching Experience:

1932-33	Acting Instr., Mechanical Engr., State College of Washington.
1933-36	Instr., Mechanical Engr., State College of Washington.

Hughes, Arthur D. (contd.)

Teaching Experience (contd.)

1938, 4mo. Instr., Mechanical Drawing, Benson Polytechnic School, Portland.
1938-40 Instr., Mechanical Engr., Oregon State College.
1940-43 Asst. Prof., Mechanical Engr., Oregon State College.
1943- Assoc. Prof., Mechanical Engr., Oregon State College.

Organizations:

Tau Beta Pi
Sigma Tau
Pi Tau Sigma
Sigma Xi
Alpha Kappa Lambda (social)
Registered Professional Engineer of Oregon and of Washington.
American Society of Mechanical Engineers.
Chairman, Oregon Section, 1940.
Hon. Chairman, OSC Student Branch, 1940-
Oregon Technical Council, representing ASME 1941.
Scoutmaster, Boy Scout Troop No. 2.
President, Franklin School PTA.

Willey, Earl C.

Education:

B.S., 1921, Mechanical Engineering, Oregon State College.
M.S., 1941, Mechanical Engineering, Oregon State College.

Practical Experience:

1907-08-09 After school and during summers, draftsman for patent attorney in Springfield, Illinois.
1910 Summer Idaho National Guard. Served with Guard fighting fires.
1910-11 Faller and Scaler in northern pine forests of Idaho.
1912-13 Worked in small sawmill in Melrose, Oregon.
1913-14 Farmed in Coos County, Oregon.
1915 Summer Stage Terminal Garage, Bandon, Oregon. Head Mechanic.
1916 " Stage Terminal Garage, Bandon, Oregon. Head Mechanic.
1917-19 U. S. Army. Lt., 3rd Div. Motor Transport.
1921-34 Summers Oregon State College. Asst.-to Supt. of Heating.
1930 " Westinghouse Elec. & Mfg. Co. Design.
1935-36 " Consulting work in Heating and Ventilating.
1937 " Soil Conservation Program, AAA, Corvallis, Oregon.
1938-41 " Consulting work, Heating and Ventilating.
1942 " Research.

Teaching Experience:

1921-37 Instr., Mechanical Engr., Oregon State College.
1937- Asst. Prof., Mechanical Engr., Oregon State College.

Organizations:

American Society of Mechanical Engineers.
Sec.-Treas--Oregon Section, 1935-37.
Society for Promotion of Engineering Education.
American Society of Heating and Ventilating Engineers.
President, Oregon Section 1944.
Northwest Delegate to National Convention, 1944.