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ASCE strongly supports efforts to assure the public health, safety, and welfare through the competent practice of engineering, but we do not recommend mandatory additional requirements for relicensing at this time. We believe that such a requirements at this time would not result in overall strengthening of the system of engineering licensing and could be counterproductive.

There is no record proving that the present licensing procedures are not providing adequate protection for the public.

Our licensing requirements successfully measure the qualification of registrants to offer services to the public in accordance with the Model Law and Model Rules. However, the competence of the applicant depends on how he or she uses those qualifications. This is much more difficult to evaluate. We rely on:

a. the registrants' integrity and ethics not to accept those assisgnments for which the engineer is not competent; and
b. on the profession to monitor the engineer's performance, and
c. on the registrantion boards to consider license revocations for unethical and unprofessional work.

This is as it should be and these processes are serving the public's best interest.

Re-examining the engineer in fundamentals will not establish competence. Also, keeping a record of the number of hours devoted to professional development will not establish competence. Adequate procedures for determining the registrant's competence and use of sound judgment are very complex. To administer such complex procedures would be extremely difficult, if not actually impossible.

Although ASCE does not favor additional requirements for renewal of licenses at this time, we currently support licensing of engineers and insuring their competence in the following ways:

a. Nearly 90 percent of ASCE members in the United States are licensed as Professional Engineers or Engineers-in-Training.

b. Licensure is a requirement for admission to membership in ASCE at the grade of Fellow.

c. A four-year degree in engineering is a requirement for advancement to higher grades of membership in ASCE.

an important hallmark of a profession is acceptance by the members of that profession of responsibility for the education and training of those people preparing to enter its practice, as well as for their continuing professional development.

In view of this responsibility and the special requirements of civil engineering practice, the American Society of Civil Engineers acknowledges the need to devote a substantial portion of its energy and resources to civil engineering education. In addition, as members of the American Society of Civil Engineers, it is the responsibility of individual practitioners to participate directly in both on-campus and off-campus educational activities and to provide substantial economic and other support for professional education and training.

e. ASCE designs and conducts Continuing Education courses for engineers and issues Continuing Education Units of credit to those who complete the courses.

f. ASCE sponsors and conducts innumerable educational conferences for engineers annually.

g. ASCE publishes 15,000 journal pages of new civil engineering literature annually for the continuing education of engineers.

We are convinced that the membership of ASCE would experience no difficulty in meeting requirements which might be established for demonstrating continuing competence as a criteria for relicensure. This matter does not give us reason for concern. However, we are concerned with the fact that only about one-third of the total engineering population hold valid professional licensure. And while about 65 percent of the civil engineering population are licensed, only about 28 percent of the remaining engineering population are licensed. We believe it is in the public interest that all practicing engineers be licensed and that priorities in improving registration laws be given to:

1. modifying the Model Law so that persons who are responsible for performing professional engineering work in industry and public and private institutions and agencies are required to be registered in the state of their residence;

2. increasing efforts to license all practicing engineers; and

3. increasing efforts toward the enforcement of Engineering Practice Acts as they now exist.

We believe that increasing the percentage of engineers who are licensed is more important to the public welfare than adding more requirements for those currently licensed. As the above steps are effected, the demonstration of continuing proficiency for relicensing should be considered as a refinement to engineering registration laws.

d. Responsible charge of engineering work is a requirement for advancement to higher grades of membership in ASCE.

e. ASCE designs and conducts Continuing Education courses for engineers and issues Continuing Education Units of credit to those who complete the courses.

f. ASCE sponsors and conducts innumerable educational conferences for engineers annually.

g. ASCE publishes 15,000 journal pages of new civil engineering literature annually for the continuing education of engineers.

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IV SUNSET LAWS

1. History and Current Status

"Probably no single act has had a more profound influence on the present status of engineering and land surveying Boards than the enactment during the past two years of the Sunset Laws." These were the words used in a report of the Public Information Committee of the National Council of Engineering Examiners (NCEE) to express their concern over legislation which has been enacted in 30 states, as of July 1978.

A Sunset Law is a state statute specifically aimed at improving the accountability of state agencies through mandatory periodic review. Should an agency (which would include entities such as departments, divisions, bureaus, commissions, councils, and boards) fail to justify its continued existence, its programs would automatically terminate unless recreated by legislative action.

Proliferation of the Sunset Laws has been a response to the public's disillusionment with the continued existence of defunct agencies with their attendant costs. The positive results anticipated by these laws are: 1. forcing a legislature to perform its often-neglected oversight responsibility; 2. shifting the burden of proof to an agency to show that it is truly performing a public service; 3. requiring public hearings on extending agencies so that citizen and consumer groups may have a voice; 4. providing for the automatic termination of those agencies which don't measure up.

Engineering is but one of the many professions, trades, and commissions affected by the Sunset Laws. While their enactment and proper implementation are admirable there is a latent concern over whether some deleterious effects may be experienced by the engineering community. NCEE's Public Information Committees also has this to say:

"It is clear that with the advent of Sunset Legislation, it will be incumbent upon regulatory agencies to justify their existence. While it is not anticipated that engineering registration boards will encounter difficulty in convincing legislators of the need for their continuance, there is much concern about inadvertent lapses, abolishment of old laws and their replacement by new ones, and the impact on 'grandfather' clauses and comity among the states."

ENGINEERS MAY BE AFFECTED

Of greatest interest and concern to engineers is that the regulation of engineering may be swept along with the current legislative tides and that engineers will become increasingly embroiled with:

(a) The definition of professional engineering as defined in the NCEE "Model Law",

(b) The need of proof of continued competence as a requirement for license renewal,

(c) Zero-based budgeting for the State Boards of Examiners,

(d) Federal licensing as a possible answer to comity.

At this time of Sunset Law generation and application in certain stages, it is imperative for engineering managers and the practicing engineer to be aware of the potential effects these laws may have on the technical operations of both the corporate and private practice of engineering. Some aspects of the implications of these laws follow.

A BROADER DEFINTION

A typical Sunset Law is a state statute which has as its fundamental concept the improvement in accountability of the various agencies and entities through which state government is conducted. The laws generally provide for a periodic review and performance audit of the group with automatic termination unless there is re-authorization by the State Legislature.

The format of these laws is generally similar: purpose of the statute, identification of the agencies to be audited, dates of automatic termination, nature of the audit and time between audits, e.g. life-span of the agency. Many statutes cite the authorizing statute for the agency, which automatically terminates at the time the agency ceases to exist.

HISTORY OF SUNSET LEGISLATION

April 22, 1976, was the date of the first Sunset Law. This was passed in the 50th General Assembly of the State of Colorado. Other states followed in quick order: Florida, June 17, 1976; Louisiana, July 30, 1976; Alabama, August 24, 1976. The movement proliferated to the extent that as of June, 1978, a total of 30 states had enacted similar laws.

In drafting the Sunset Statutes some states grasped the opportunity to apply zero-based budgeting to their agency operations. In effect, the budgets should not automatically be continued, but should be built from scratch each year with every item justified. Additionally, legislation was directed in some states toward a requirement of continuing education courses as proof of competency for license renewal. (Note: Iowa already has such a requirement in its statute regulating the practice of professional engineering. Iowa Senate Bill 312, New Laws 1977, page 217.

A wide range of agencies and occupations is covered under the various Sunset Laws. Colorado, for example, put 39 agencies under its Sunset Law including those responsible for chiropractors, cosmetologists, collection agencies, and short-hand reporters. Other states have fewer agencies covered, many have more. Indiana includes 395 under its law! With professional engineering being but a tiny part of the whole that occupies the attention of the legislator, the need for close monitoring of these laws is apparent.

COMMON ELEMENTS IN THE LAWS

While the 30 state statutes have differing language, most have common elements such as the following:

1. The Automatic Termination of the Agency. Usually the terminal dates are staggered by groups of agencies.

2. The Performance Audit. The audit is usually performed by various means; by a House-Senate committee, or by an oversight or standing committee. The burden of proof rests with the board or agency which must justify its existence to show that it is performing a vital public service.

3. Public Hearings. Testimony is received from (a) the public; (b) a department responsible for regulating the agencies; (c) the agency itself. The key words in most legislation read to this effect: "(the agency) shall have the burden of demonstrating a public need for its continued existence and extent to which a change in type or transfer may increase the efficiency of administration or operation of the agency."

4. Legislative Action. The legislature is forced to join in the procedure to perform its often previously neglected oversight responsibilities.

5. Fixed Agency Life. Provisions are made for the maximum life of the entity between reviews - typically 6 years.

Note should be made that most states provide for orderly shutdown and disposal of the assets of those agencies which are not reinstated.

A SAMPLE OF AN AUDIT

Criteria for the performance audit vary significantly from state to state, but Florida's statute has often been used as a good example:

Section 5. In determining whether to reestablish a program or function, the Legislature shall consider the following criteria:

(1) Would the absence of regulation significantly harm or endanger the public health, safety, or welfare?

(2) Is there a reasonable relationship between the exercise of the state's police power and the protection of the public health, safety, and welfare?

(3) Is there another less restrictive method of regulation available which could adequately protect the public?

(4) Does the regulation have the effect of directly or indirectly increasing the costs of goods or services involved, and if so, to what degree?

(5) Is the increase in cost more harmful to the public than harm which could result from the absence of regulation?

(6) Are all facets of the regulatory process designed solely for the purpose of, and having as their primary effect, the protection of the public?

Other measures that are mentioned are:

(7) What is the efficiency of the formal complaint action?

(8) What is the extent to which changes are necessary in the existing laws to adequately comply with the above factors?

There is the political consideration in any administration of these laws. Specifically, there are fees of various sorts related to the licensing procedure and since these are income-producing entities, that in itself will no doubt have a bearing on decisions.

Sunset Laws represent a new legislative concept, and it is too early to predict with any degree of certainty the effect they may have on existing engineering registration boards. In Colorado, which had the first Sunset Law, engineering has not been audited. Two agencies in the state were abolished; two were combined; two transferred; two reactivated; and five extended for one year. Both the Courts and the Governor became involved in some of the decisions leading to the foregoing. In Nevada, meanwhile, the Legislature failed to reinstate the engineering law and enacted a new law in lieu thereof. The old board was consequently abolished and the Governor subsequently appointed a new Nevada board.

A review by a Montana state legislative committe in late 1978 concluded that engineering and land surveying registration functions should be continued, pro tem.

Perhaps a better idea of what may be expected may be seen in the words of the Sunset Research Director, Department of Regulatory Agencies, State of Colorado: "Probably the major useful effect of Sunset is the agencies' anticipation of the potentially critical reports the process can produce. Files suddenly become better organized, records better kept; meetings are longer and more oriented to the public interest. The threat of termination is not very real. We think that the Sunset process is an effective way of improving legislation, but it seems to be happening more internally on agency and executive branch initiative than through major legislative changes."

IMPLICATIONS FOR THE PRACTICE OF ENGINEERING

The impact that these laws may have on the profession of engineering were touched upon by J.G. Johnstone in addressing the February, 1978, NSPE Intersociety Meeting on Registration in Chicago. He stated, "The problem with Sunset review is the same problem that has been faced by other inadeuqately comprehended 'systems' with a catchy name. The essence of Sunset review is evaluation - program evaluation and organizational and administrative evaluation of an agency in an holistic context. The real risk is that governments will adopt the name Sunset but leave out its essence, and thereby discredit the name as other systems have been discredited.

"There is no doubt that consumer-advocate and government reform-oriented organizations such as Common Cause and the United States Chamber of Commerce will continue to press unrelentingly for Sunset Legislation. It is imperative, therefore, that the State Engineering Registration Boards be prepared to submit to state reviewing authorities a comprehensive report justifying and supporting their continued existence. Failure to do so may result in the deregulation of the professional practice of engineering and land surveying, which course of action may operate to the detriment of the public."

It appears that four key areas will play a part in determining whether examining boards are re-established:

- Zero-based Budgeting
- Continuing Education
- Adoption of NCEE "Model Law"
- Federal Licensing in Answer to Comity

Zero-based budgeting was a cornerstone promise of the present Federal Administration and was endorsed by Governor after Governor. Involved here is a delicate balance of income vs. service to the public and political considerations will play an important role.

Continuing education is being considered as proof of continued professional competence. The concept of such a proof as a prerequisite to renewal of licensing has been argued for years. The NCEE Public Information Committee report emphasizes the point that continuing pressures will force consideration of proof of competence into the Sunset Law audits. The State of Iowa has taken steps in this direction. In 1977 it adopted a continuing education law which mandates continuing education as a requirement for license renewal for all state licensing boards. A "blueprint" for implementing this legal requirement has been prepared and was reported upon by John M. Littschwager in the Annual Conference Proceedings - 1978, American Society for Engineering Education.

The major problems in the mandatory continuing education approach fall into two areas.

- The difficult attempt to express continuing education requirements in terms of widely-recognized and uniform measurement units.
- The need to establish guidelines, including guidelines for the monitoring of licensee participation, and for the approval of programs that qualify under the continuing education requirements proscribed.

The approach to a solution has been to conceive the "Professional Development Hour" (PDH). This unit is then defined in recognized educational units such as university credit, Continuing Education Units (CEU), professional practice, etc. Record keeping, multiple branch registration, and many other variables are covered. There are several implications in the continuing education approach:

Implication for Industry - This plan could be adopted by many states and spread like wildfire. Industry would be forced to allocate resources - dollars and time - to meet such an engineering competence requirement.

Implication for technical societies - They would have to get aboard the bandwagon by getting their continuing education programs legally sanctioned.

Implication for the practing engineer - He would have to allocate time and effort to satisfy the legal requirements.

Adoption of NCEE "Model Law" - The definition of professional engineering under the "Model Law" includes the work done on consumer products. Adoption of such a defintion would negate the so-called "manufacturers, exemptions" in the state statutes that have such exemption and/or would be tantamount to mandatory registration by those professional engineers in industry and education who would fall within the defintion.

Only one state - Montana - has such a statute at the present time and enforcement has been minimal since its administration is so complex. Industry - in general - is opposed to the adoption of the Model Law Definition. The appeal at the time of a Sunset Audit may be on the side of mandatory registration or licensing of professional engineers.

Federal Licensing in Answer to Comity - Uniformity among the state board requirements for licensing is practically non-existent since the wording of the statutes varies so much. Uniform examinations are almost "universal" but other requirements show no such uniformity. While this may be only a distant threat, the Sunset Law Audits will focus upon and amplify these differences so that the "Appeal" of Federal regulation (licensing) will become more acceptable to those concerned with comity and multiple licensing. The problems a corporation has in moving engineering personnel from state-to-state would be eliminated with Federal licensing.

TRACKING THE FUTURE WITH EPIC

The Sunset Laws are the result of legislative pressures and actions - largely consumer-oriented. The laws vary and action is not static. Being aware of these is a first order of business and a tabulation has been maintained by EJC to provide a ready reference. Meanwhile, miscellaneous bills are still in various legislative hoppers. The EJC Engineering Practices Information Center will continue to track the status and action on Sunset Laws and related education.

NOTE: The information in Section 1, above is quoted from the EJC Engineering Practices Information Center Bulletin #1, August 1978, with the addition of information concerning review results in Montana. The following tabulation, supplementing this report, is also taken from this source.

Sunset Laws

	LAW CITATION	EFFECTIVE DATE	TERMINATION DATE Engr.	Number Boards Affected	Life after Death Mos.	Total Life Yrs.	Lead Times Mos.
ALABAMA	Chapt. 512-S-128	8/24/76	10/1/78	104	6	4	4
ALASKA	H-1-1977-P.287	5/30/78	6/30/80	22	12	4	4
ARIZONA	S 1001-Chapt. 210 Laws 1978	6/14/78	7/1/81	71	6	6	17
ARKANSAS	Act 100-1977-H-5	2/3/77	6/30/81	257	12	N.A.	3
CALIFORNIA	None—In Session						
CANAL ZONE	————————						
COLORADO (1)	H-1088-1976-P.51	4/22/76	7/1/82	39	12	6	12
CONNECTICUT (2)	PA-77614-S357	1/1/79	7/1/82	94	12	5	6
DELAWARE	None •						
DISTRICT OF COLUMBIA	None •						
FLORIDA (3)	Chapt. 76-168	6/17/76	7/1/78	90	60	6	12
GEORGIA (4)	Act. 613-1977-S-44	3/24/77	7/1/79	43	12	6	6
GUAM	————————						
HAWAII (5)	Act. 70-1977-S-460	5/10/77	12/31/82	39	N.A.	6	12
IDAHO	None—Adjourned •						
ILLINOIS	None •						
INDIANA (6)	S-43-Laws 1978	3/10/78	6/30/81	395	Orderly	N.A.	15
IOWA	None—Recessed						
KANSAS (7)	H-2976 Laws 1978	5/10/78	7/1/81	37	12	6	12
KENTUCKY	None (2 bills failed to pass in 1978) •						
LOUISIANA (8)	Act 277-1976-S-28	7/30/76	7/1/80	Note	0	4	24
MAINE (9)	MRSA Sect. 505-H-2229 C.683	3/29/78	6/30/80	122	12	5	6
MARYLAND	Chapt. 808-1978-S.405 P.2035	5/29/78	7/1/82	62	12	6	12
MASSACHUSETTS	None •						
MICHIGAN	SCR-471-1976-P.267	7/1/76	Special—Provides for Committee to Study methods of evaluation.				
MINNESOTA	None—Adjourned •						
MISSISSIPPI	None—Adjourned •						
MISSOURI	None •						

• Verified

	LAW CITATION	EFFECTIVE DATE	TERMINATION DATE Engr.	Number Boards Affected	Life after Death Mos.	Total Life Yrs.	Lead Times Mos.
MONTANA	S6-162 Sec. 82-4601 Chap. 562	5/12/77	7/1/79	46	12	6	22
NEBRASKA	LB-257-1977	5/16/77	7/1/83	46	12	6	9
NEVADA	NV-ACR-50 Not in Session '78	4/15/77	Directs Legislative Comm. to Study				
NEW HAMPSHIRE	Chapt. 436-1977 Also H 45X	7/5/77	Last date 7/1/85	N.A.	9	N.A.	N.A.
NEW JERSEY	None—Recessed						
NEW MEXICO (10)	Chapt. 259-1977-H-133	See Note	7/1/78	44	9	6	N.A.
NEW YORK	None—In Session						
NORTH CAROLINA	Chapt. 712-1977-S-334	7/1/77	7/1/79	102	12	N.A.	6
NORTH DAKOTA	None—Not in session '78*						
OHIO	None—Recessed						
OKLAHOMA (11)	S-138-1977 Page 13	3/10/77	7/1/80	111	12	6	12
OREGON	H-2323-1977 Chapt. 842	7/27/77	July 1982	44	0	8	18
PENNSYLVANIA	None						
PUERTO RICO	————————						
RHODE ISLAND (12)	S-1069-1977 Chapt. 260	5/13/77	Not Cov.	29	12	5	12
SOUTH CAROLINA	None						
SOUTH DAKOTA (13)	SB-48-1978 Page 481	2/17/78	Pilot Study	5	6	N.A.	N.A.
TENNESSEE	Chapt. 452-1977-HB-937	5/26/77	6/30/80	208	12	6	N.A.
TEXAS	S-54-1977 Page 2507	8/15/77	9/1/81	177	12	12	14
UTAH	S-63-1977 Chapt. 240	3/22/77	7/1/79	All	12	6	12
VERMONT	Act 183-H-3751-1978	4/5/78	7/83	30	N.A.	5	21
VIRGINIA (14)	Chapt. 388-1978-S24	3/30/78	NOTE	28	N.A.	N.A.	N.A.
VIRGIN ISLANDS	————————						
WASHINGTON	None—Not in Session '78*						
WEST VIRGINIA	None—S-63 Vetoed						
WISCONSIN	None						
WYOMING	None						

*Verified

ABBREVIATIONS

1. Comm.—Committee or Commission
2. H. & S.—House and Senate
3. H.B.—House Bill
4. Leg.—Legislative
5. N.A.—Not available
6. Perf.—Performance
7. P.L.—Public Law(s)
8. Std.—Standing

NOTES

(1) **Colorado**—See also S-34 New Law 1978 & Sec. 24-34-104 CRS

(2) **Connecticut**—Section 572-584

(3) **Florida**—Chapt. 77-457-1977-S-1238 changes termination to 7/1/79

(4) **Georgia**– Dates Revised by Act 1407-S458-1978

(5) **Hawaii**—Impact statement required

(6) **Indiana**—Governor may delay the date on which any agency program is abolished for one year.

(7) **Kansas**—Very complex law

(8) **Louisiana**—Termination noted since Engineering Board is under Dept. of Transportation & Development. Zero base budget.

(9) **Maine**—Chapt. 683 P.L. 1978 House Bill 2229 repeals MRSA Sec. 505 enacted by P.L. 1977 Chapt. 554, Sec. 1.

(10) **New Mexico**—Chapt. 189-Laws 1978-H.B. 237, P. 621—Renews State Board of Registration for Professional Engineers for a period of 6 years beginning July 1, 1978. Approved March 6, 1978. *Continuing education* considered as a requirement. The Board could not agree on procedures.

(11) **Oklahoma**—Adds 20 Agencies to be reviewed with Legislature at time of new term for Governor.

(12) **Rhode Island**—Hearings must be 3 months prior.

(13) **South Dakota**—House Bill 1355-New Laws 1978-Page 339 applies "Sunset" principles to rules and regulations.

(14) **Virginia**—Very complex requirements. Final Termination 7/1/87.

DEFINITIONS

1. **Agency**—shall mean to include all departments, divisions, bureaus, commissions, councils and boards, or like governmental units or subunits regulatory in nature or otherwise.
2. **Comity**—kindly courteous behavior; the informal and nonmandatory courtesy sometimes referred to as a set of rules to which the courts of one sovereignty often defer in determing questions (as of jurisdiction or applicable precedent) where the laws or interests of another sovereignty are involved.
3. **Lead time**—Time at which review or audit shall begin prior to next meeting of legislature or termination date of the agency.
4. **Performance audit**—shall mean the same as operational audit.
5. **Termination**—shall mean the end, abolishment or annulment of any agency or the act of causing the existence to cease.

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2. Justification for State Registration Laws

A Position Paper Proposed by the Committee on Registration of Engineers. Adopted by the Board of Direction October 15, 1978.

Since Wyoming adopted a law in 1907 to register professional engineers, all states have enacted similar legislation to establish a relatively uniform registration process. The Board of Direction of the American Society of Civil Engineers, on October 27, 1973, approved a policy by which it, "endorses, supports, and promotes the registration of Professional Engineers, as being in the best interest of the public." The Society agrees that the purpose of registration laws is the protection of public health, safety, and welfare; that this purpose is best served by requiring a demonstration of education, special knowledge and skill, and experience as the necessary qualifications for the practice of engineering and land surveying. Since the public does not ordinarly have the ability to judge the competence of engineers and land surveyors, it has elected to delegate this responsibility to the individual State Boards of Registration.

A growing number of State Legislatures have enacted laws, called Sunset Laws, which have the general purpose of abolishing outmoded and unneeded governmental agencies and programs. Boards of Registration for Engineers and Land Surveyors, by inclusion in this group of agencies and programs, must justify their existence.

The ASCE supports, in principle, the process of periodic review of government agencies and programs including Boards of Registration of Professional Engineers and Land Surveyors. The Society is confident that the engineering profession, together with the individual State Boards, will demonstrate to State Legislatures that registration is in the best interest of the public; in fact, that it is essential to the protection of the public health, safety and welfare in matters pertaining to engineered works and systems.

Therefore, the Society encourages all its members to actively assist and support Boards of Registration in their efforts to demonstrate the value to the public of the Registration Laws. The intent of the laws is not to protect the profession but to identify those who possess the necessary qualifications to practice Engineering and Land Surveying. While it is essential for the states to exercise their authority through the legislatures and the courts, and to view the consequences of their laws, they are not in a position to set standards of technical competence, or control the various levels of practice, nor is the general public able to exercise

this responsibility. It is incumbent upon the members of the Engineering Profession to demonstrate that they are qualified to set standards of education and experience for registration, that they can impose rules of professional conduct and that they are in the best position to maintain a continuing watch over the technical competence of practicing engineers and land surveyors, in the best interest of the public.

Therefore, it is the position of The American Society of Civil Engineers that:

1. Professional registration is for the sole purpose of protecting the public safety, health and welfare;

2. Benefits do accure to the public from registration laws and consumer protection is provided by maintenance of standards of competence and rules for professional conduct;

3. Registration laws promote efficiency in the regulation of engineering and land surveying practice;

4. Direct use of the courts or membership in engineering societies do not provide comparable coverage and effectiveness as do registration laws;

5. The costs of regulation by State Boards of Registration are more than offset by the fees, and, therefore, the Society reaffirms its policy of October 27, 1973 on Registration of Engineers, and urges all its members to assist State Boards of Registration in demonstrating to their Legislatures the value and necessity of continuing the individual state registration laws in the public interest.

V. Selected References

1. Model Laws for Engineering Registration and for Land Surveying. National Council of Engineering Examiners.

2. Registration of Professional Engineers and Land Surveyors in the United States. (A compendium of General Information). NCEE.

3. Digest of Court Decisions on the Registration of Professional Engineers and Land Surveyors. NCEE.

4. Synopsis of State Engineering Registration Laws, Policies and Procedures of State Boards. NCEE.

5. Synopsis of State Land Surveying Registration Laws, Procedures Under Which State Boards Operate. NCEE.

6. NSPE Committee Report on Sunset Laws, Justification for Continuation of State Registration Boards. National Society of Professional Engineers.

7. "Issues Related to Licensing of Architects, Engineers and Land Surveyors": a report prepared by R.E. Fadum, Dean Emeritus, North Carolina State University at Raleigh for the North Carolina Governmental Evaluation Commission, January 1979. (Copy attached).

DAB/ny
1-9-79

Issues Related to Licensing of Architects, Engineers and Land Surveyors

Ralph E. Fadum
Dean Emeritus
North Carolina State University
at Raleigh

January 1979

1. Should there be legal requirements to regulate the practice of architecture, engineering and land surveying?

Recognizing that any law that regulates one's right to work abridges a fundamental freedom, we understand that there must be compelling reasons to establish boards of registration the purposes of which are to discriminate between those judged to be competent and those not to be so, and thus, to regulate one's right to practice. Foremost among such reasons is the objective to protect the safety, health and welfare of the general public by excluding from among those who represent themselves to be practitioners, those who are competent and those who are not so.

The lay public does not in general have the capability of determining whether or not a person who represents himself to be a practitioner in these fields is, indeed, qualified and competent to render the required service. The consequences of retaining an incompetent practitioner can result in the impairment of the health, safety and welfare of the client. Because of improper design a structure may collapse, because of faulty surveys properties may not be properly recorded, and because of improper planning aesthetic values of the environment may be lost. Thus, there is a need to maintain boards of registration to regulate the practice of architects, engineers and land surveyors.

Our investigation has assured us that there is strong support for the continuance of the N.C. State Board of Registration for Professional Engineers and Land Surveyors and for the N.C. State Board of Registration for Architects. This support comes from those affected by the authority of these agencies in North Carolina as well as throughout our fifty states and five territories in each one of which a similar board exists, and with many of which we have reciprocal and comity agreements. Indeed, North Carolina would be greatly disadvantaged in securing competent professional services from practitioners from other states and territories and practitioners from North Carolina would find it much more difficult to practice outside our state borders if it unilaterally abolished our licensing boards in these fields.

Therefore, we strongly recommend that the Board of Registration for Professional Engineers and Land Surveyors and the Board of Registration for Registered Architects be continued.

2. Should there be a legal requirement for determining professional competence for relicensure?

In addressing this issue, it appears desirable first to distinguish between registration or licensure and certification, both of which are used in the credentialing process. It is our understanding that licensure is a process by which a state certifies those persons who may practice, the purpose being to protect the public from unqualified practitioners. Certification on the other hand is a process by which professional societies identify practitioners of the specialties served by those societies. Certification has no legal basis while licensure has. Here, we are concerned only with licensure and, in particular, relicensure.

For entry into a profession as a licensed practitioner, the candidate submits to examinations primarily designed to determine whether or not he is qualified by knowledge and experience to meet minimum requirements to practice. These examinations cannot determine his competence. The very best formal education does not guarantee competence. Competence depends on how one uses his qualifications and this is very difficult to measure objectively.

There is no debate concerning the need for a professional to maintain his competence. The issue is whether or not there should be a legal requirement with respect to insuring this. An examination of the issues concerning legal requirements to seek to insure that a licensed practitioner has maintained his competence and entailing some form of testing or record keeping leads us to conclude the following.

Competence is a very subjective matter and it is very difficult to measure. It is difficult if not impossible to legislate learning. The amount of formal education, the number of short courses attended, and the number of books read give no assurance of the benefits gained by these activities. Thus, a record of these activities would not be very useful as a measure of one's competence.

To establish a legal requirement for relicensure would discriminate against the licensed practitioner who represents a relatively small percentage of all practitioners. Thus, it might deter some who are not registered from registering. This would be counterproductive in our effort to increase the percentage of practitioners who are licensed. We believe that increasing the percentage of practitioners who are licensed is more important to the public welfare than adding more requirements for those currently licensed.

There is no evidence to demonstrate that there is a need to establish legal requirements for relicensuring. A practitioner knows

that it is in his own self-interest, not only to maintain his competence, but also to improve on it. His livelihood depends on it. He therefore, has a great deal of incentive voluntarily to maintain and improve his competence.

We believe the public interest is best served when the practitioner accepts as he does now responsibility for his own professional development. Our educational institutions and professional societies have a good record of providing opportunities for practitioners to maintain and update their competence. Practitioners on the whole have made good use of these opportunities for professional growth. If the extent of the voluntary effort that is being made by practitioners to keep abreast of developments were known, it is most likely that one would conclude that there is no justifiable need for establishing legal requirements for relicensure.

Administering mandatory standards to insure professional competence would be most difficult because of the great variety of specialties in which these professions are engaged. For example, it has been estimated that there are over one hundred different engineering degree programs offered by U.S. engineering colleges alone. Here it should be noted that it is only because there are many common bodies of knowledge required for entrance into these professions that the initial examinations are valid. As time goes on, however, the degree of commonality diminishes and the point is reached when examinations become meaningless.

It should be noted that state licensing statutes give boards extensive disciplinary control through the exercise of the police powers of the state. We are persuaded that the present disciplinary provisions provided by the statutes as well as those prescribed by professional organizations serve to protect the public to the maximum extent practical and affordable.

In consideration of these observations, it is our recommendation that legal requirements for relicensure not be enacted. We believe that the public interest is best served when the architectural, engineering and land surveying professions accept, as they do now, responsibility for their own professional development.

3. Should exceptions be made to allow certain categories of practice to be exempt from compliance with licensure requirements?

The current law provides that "any person who shall practice or offer to practice engineering, land surveying or architecture in North Carolina without first being registered in accordance with the provisions of the law shall be guilty of a misdemeanor." After having established this requirement, however, the statutes provide for the following exceptions by stating that nothing in the statute shall be construed to prevent or affect a number of categories of practice. These categories include practice by members of the armed forces or employees of the government of the United States while engaged in practice solely

for the government on government owned works and projects, engaging in practice under the responsible charge of a professional or registered engineers, the practice of so called internal engineering by a person, firm, or corporation engaged in manufacturing, processing, or producing a product including the activities of public service corporations, public utility companies and authorities, state agencies, railroads or membership cooperatives, etc. Because of exclusions such as these, we find nationwide, in engineering that approximately 30% of engineers are licensed. Twenty percent voluntarily obtain licenses, whereas ten percent obtain licenses in order to comply with legal requirements relating to their practices. Thus, it can be seen that because of exceptions that are made only a relatively small number of engineers are required to be licensed in order practice their profession.

We believe that the principle that unqualified persons should be prevented from practicing is sound and in the public interest. Establishment of an effective licensing program is a means toward that end. Accordingly, we recommend that registration be required of all individuals performing architectural, engineering and land surveying functions or using titles that represent them to be architects, engineers or land surveyors. In substance, it is recommended that all exemptions be removed so that those who are responsible for performing professional architecture, engineering or land surveying in industry and public and private institutions and agencies be required to be registered in the state of their residence.

4. What, if any, division or spheres of responsibility should be delineated for the architect and engineer?

Engineering involves a great variety of specialty fields including for example, electrical engineering; civil engineering including sanitary engineering, transportation engineering, structural engineering, soil mechanics and foundation engineering; nuclear engineering; industrial engineering; and, mechanical and aerospace engineering. Indeed, some two dozen specialty fields of engineering are commonly recognized. Furthermore, within each of these fields, engineers perform a great variety of functions, including planning, design, production or construction, operations, maintenance and technical sales. Architecture, likewise, includes not only different specialty fields but functions, such as planning, design, supervision of construction, etc.

Some of the specialty fields in which architects and engineers are engaged do overlap. Others fall clearly within the responsibility of one or the other group. Similarly, some of the functions performed by the architect and engineer are common. Others are unique to each profession. In those fields and functions that involve joint participation by the architect and engineer, a decision needs to be made as to who should have prime responsibility. In such instances, we recommend that any legal provisions be made flexible and that it be left to the professionals involved to determine which of the professions should have prime responsibility.

With respect to licensing procedures, clearly the architectural profession should be responsible for establishing requirements for registration for architects just as engineers should be required to establish qualifications for registration for engineers.

R.E. Fadum
17 January 1979

REF/ny

Abstracts of Reference Materials Related to Issues Concerned with Relicensing of Professional Engineers for the N.C. Governmental Evaluation Commission

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1. Memorandum from Charles Willis, P.E., Secretary Consulting Engineer Council of North Carolina (an affiliate of the American Consulting Engineers Council) to Paul Vick, Chairman, N.C. Governmental Evaluation Commission dated October 18, 1978.

   As related to continuing education for relicensure the emphasis should be placed on continuing professional competence rather than on "continuing education." Education in itself is not sufficient to insure competence, and it is unrealistic to lead the public to believe that their interests are protected by requiring continuing education.

2. Memorandum from B.A. Harrell, Counsel for PENC to PENC Officers, undated.

   Continuing Education courses should not be a pre-requisite to renewal of licenses.

3. Paper entitled "Continuing Education - A Requirement for Recertification," by Monroe W. Kriegel, P.E., Oklahoma State University (prepared for a Southern Zone Meeting of N.C.E.E.) dated April 7, 1978.

   Registration or licensure is a process by which individual states identify persons for inclusions in their registers of professional engineers and certify that they may practice engineering. The purpose is to protect the public from unqualified practitioners. Certification is a relatively new process by which some technical societies identify individuals as practitioners of the specialties served by those societies. Registration has a well defined educational base as an entry point into the profession. Certification, on the other hand, is a process to define specializations of practice and to identify for the public and employers qualified practitioners of that specialty. Recertification is a service of the society and serves as an additional credential of the individual. The motivation for recertification is peer recognition. Certification and recertification have no legal basis while licensure and relicensure have. Thirteen engineering related societies operate certification and recertification programs. The admission requirements are almost always below those of the minimum educational requirements for entering the registration process. (None of the founder societies such as ASCE, ASME, IEEE, etc. have

certification programs, but several have this matter under consideration.)

The big question is how to establish a basis for measuring continued professional competence as a justification for relicensure. The real issue is whether or not the registrant has remained professionally competent. Continuing formal education is the first but only one aspect of maintaining continued competence. The problem with continuing education is the lack of an acceptable unit of measurement. (A CEU equals ten contact hours of participation in an organized continuing educational activity under responsible sponsorship, capable direction and qualified instruction.) The second basis for relicensure would involve furnishing a set of credentials. This would be difficult to quantify. A third method for relicensure would be to simply accept the requirements for recertification as established by the professional engineering societies as a basis for relicensure. The examination and recordkeeping would be difficult and expensive. It could be recalled, however, that only a very few societies have these certification programs.

There is one certification program that has been long established. This is the specialty certification in environmental engineering offered by the American Academy of Environmental Engineers. The basis requirements for certification are:

1. Engineering degree or equivalent

2. Engineering license

3. Eight years of environmental engineering experience following graduation

4. Written examination

5. Oral tests

A fourth method, which Kriegel feels has great merit, is the one under study by the American Institute of Architects. A person must be a registered professional architect in order to be qualified for membership in the American Institute of Architects. Thus, he has essentially satisfied the licensure and basic certification requirements when he enters the Institute. AIA is working hard on the development of a recertification program providing a mechanism for permitting an architect to remain a member of AIA but not being a requirement for a renewal of his license. Although continuing education is a large part of the requirement, there are other aspects involving self-studies, meeting attendance and demonstrated knowledge of recent "tools of the trade" in each person's particular area of specialty. What will finally come out is a jointly developed program in which certain interested educational institutions will be involved in providing facilities for retraining but actual teaching will be done by a combination of practitioners and

faculty. It is Kriegel's feeling that engineering needs to follow somewhat the same pattern but probably on an individual state basis rather than on a national basis. The leadership should be taken by the practicing professional engineers because they are the ones that have the most at stake.

In concluding his statement, Kriegel advises that NCEE should continue to resist pressures to legalize relicensure requirements. He points out that it can be well documented that professional engineering societies including all of the Founder Societies have large and rapidly growing continuing education programs that help members maintain professional competence. Universities also provide opportunities for professional growth. All of these programs reach both registered and non-registered engineers.

4. N.C.E.E. Preliminary Position Paper on "Continuing Professional Competence," dated August 1978.

Competence in the present context is referred to as being attained through basic ability and education, and then being developed by experience and continuing training and education, either formal or informal. The central questions are to what extent, if any, would mandatory CPC benefit the public, what would this cost the public, and if the public knew the true facts, would they vote to pay the cost? We should make clear at the outset that N.C.E.E. completely supports continued education and professional development and other aspects of CPC. It is our considered opinion, however, that no significant numbers of incompetent practitioners will be eliminated by mandatory CPC.

A great majority of professionals must continually develop their competence to survive in the market place.

There is no doubt that all professions need continuous upgrading. However, we believe that most engineers are doing this on a large and highly successful scale under the present voluntary system. If the magnitude of the voluntary effort were fully realized, it is likely that the public might well conclude that there is no justifiable need to increase their costs by creating new laws and regulations which would be required if we were to attempt to mandate and legally enforce CPC under the law. Indeed, it might have a negative effect due to the resentment and large scale dropping of licensing.

Another problem with mandating CPC is that engineering is such a diverse profession. Administering mandatory standards would be almost impossible. There are well over 100 different engineering degree programs offered by U.S. engineering colleges alone. Engineering is a vastly more fragmented profession than others, such as medicine, law, teaching, etc.

Another separate but inextricable related issue is the potential discrimination against licensed engineers. Of the approximately one

million engineers in the United States only 300,000 are registered by the state regulatory agencies. This low percentage is due to the exemption clauses written into the state statutes. The present system is a political fact of life. It represents the best current political solution which the public and legislatures have been able to develop. It would therefore seem discriminatory to apply further strictures on the approximately 30% of engineers who already take the trouble to become licensed, 20% voluntarily and 10% for private practice while imposing none of the 70% who remained unlicensed. To prevent such discrimination would require imposing CPC mandates on all engineers not just those who are licensed. Since the public at this point has not even seen fit to require licensing of all engineers, it is doubtful given all the facts they would want to spend the money to enforce additional mandatory CPC requirements on all engineers. This becomes even more doubtful if the public were truly informed on the probable cost of extending such a philosophy to cover all other licensed vocations and professions.

It should be noted that state licensing statutes give boards entensive disciplinary control through the exercise of the police powers of the state. We are persuaded that the present disciplinary provisions serve to protect the public to a maximum extent practical and affordable. A currently popular statement goes "if it ain't broke, don't fix it." Based on the foregoing discussion the following recommendations are offered:

1. Engineering societies should mandate for themselves a strong and intensive research and public relations program on CPC. A vigorous effort should then be launched on both the state and national level to disseminate the information to the public, to the consumers and to the state legislatures.

2. The societies should investigate and analyze the potential of programs under which one on a voluntary basis can obtain Continuing Educational Units through their journals.

3. The ECPD is the most logical entity to develop and implement an evaluation and monitoring system for the CEU value of CPC programs because of their long experience and status in this field.

This position paper will be sent to presidents of all engineering societies with a request that they place the topic on the agenda for their respective next board of director's meeting and give N.C.E.E, the benefit of their current thinking on the subject.

5. PENC Talking Paper on "Should Continuing Education be a Requirement for Renewal of Registration as a Professional Engineer or Land Surveyor?" dated September 26, 1978.

No system has yet been developed through which the requirement under the law will guarantee that the professional engineer or land surveyor

has done enough study to maintain specified degree of progress in his field. Systems under discussion have generally been considered impractical for several reasons. They are difficult and costly to implement. They rely on either self-evaluation or on an elaborate structure for assigning values to a multitude of educational programs and monitoring and recording progress and they still do not appear to guarantee competence. It is only because there are many common denominators in the initial process leading up to entrance into the profession that the early examinations are applicable. At later stages in the professional's career the differences in kinds of competence become greater. As time goes on the degree of commonality diminishes and the point is reached at which any examination becomes meaningless. We believe that the public interest is best served when the engineer accepts as he does now responsibility for his own professional development. The evidence that this is working well lies in the multitude of seminars, workshops and short courses that are sponsored by professional and technical societies, universities, community colleges, commercial organizations and attended by design professionals.

6. Paper entitled "The Mandatory Continuing Education Bandwagon - Should Professional Engineers Climb Aboard?" by Dr. Benjamin Shimberg, Associate Director, Center for Occupational and Professional Assessment, Educational Testing Services, publication not identified.

I think most professions would prefer to rely on the professional's own sense of responsibility for designing his own areas of competence. If one looks at what it would cost to mount and really carry out a comprehensive program of reassessment, the cost would certainly be staggering and perhaps prohibitive. The most incompetent, the least ethical, the most unprofessional practitioner would have no real difficulty staying in business because it is easy for him to meet mandatory continuing education requirements, and once he has done so, the law says he is competent. I would like to say that if you do not already have a mandatory continuing education law in your state, do not accept such a law as inevitable. Ask yourself: Do we need a mandatory continuing education law, and if such legislation is proposed, should we as a board work for its passage? A great deal of needless pain and suffering can be spared by seeking to discourage mandatory continuing education until the existence of a serious problem has been documented, and it has been determined that an education solution offers the best way of dealing with that problem. It is difficult if not impossible to legislate learning and its subsequent application.

7. Article entitled "Perils of Credentialism," by John Alden, New Engineer, October/November 1978.

Movements are building within engineering to promote various forms of credentialism. Most commonly advocated are specialty certification and changes in professional registration including eliminating the industrial exemption, permitting registration in specialties not now specifically covered by state laws, and requiring periodic re-

examination and registration on the basis of demonstrated continuing education or professional development.

Registration or licensing is the process by which governmental bodies at the state level in the United States qualify individuals to practice certain occupations and professions including engineering. The groups to be qualified are determined on the basis of their relationship to the health, safety or general welfare of the public.

Certification is somewhat similar to registration except that it is carried out by private professional organizations rather than by states.

Underlying credentialism in all of its forms, however, is the desire to protect the interest of the credentialed group by reserving certain kinds of work to it alone - and controling the entry of outsiders.

I am convinced that credentialist efforts to monopolize the kinds of work we now know as engineering are restricting those jobs to registered professional engineers and they will lead ultimately to the designation of a small number of positions legally reserved for professional engineers and the elimination of many jobs now carrying the engineering title.

Another way in which I can see credentialism backfiring is in the increased vulnerability of individual engineers to liability suits. Today, except in cases of gross negligence, it is the corporation that is liable and individual engineers are protected by industrial exemption.

The profession should also recognize the financial burden both registration and certification will have on the individual engineers. Requirements to participate regularly in formal continuing education would add appreciably to the engineer's cost in time and money.

8. Paper entitled "Continuing Education: Boon or Boondoggle," by Roy L. Baber, Jr., Executive Director, PENC, The Professional Engineer, November/December 1978.

Continuing education is a must for any professional but the need to require it for licensing is questionable.

Until we have evidence that the public is not being served well by the present system or until the authorities who are trying to develop a satisfactory and well accepted control system for continuing education succeed, it would seem best that we do not attempt to mandate continuing education standards as a condition for license renewal.

We should determine in precise terms how the present system fails to protect the public, what additional protection is needed, feasible and cost effective, and whether mandatory continuing education can provide that protection, and if so, the details of the plan that should be enacted by the legislature.

9. Letter from C.E. Vick, President, Kimley-Horn and Associates to Paul Vick, Chairman, N.C. Governmental Evaluation Commission, dated December 4, 1978.

I endorse the concept that the protection of the health, safety and welfare of the public requires that professional engineers and land surveyors maintain their competence. To my knowledge this is happening under the present system. If there is a problem (real or perceived), we need to identify the specifics and design a course of action to specifically meet the identified problem. If this evaluation commission feels strongly about continuing education, I would suggest that the legislature establish a study commission made up of members of the legislature, the board of registration, the professional at large, and the public. This study commission would have a specific charge to identify the problem or potential problems of the existing system and recommend specific changes to GS 89 C to correct the problem areas. Continuing education is an extremely complicated matter and should be treated with great care.

10. Letter, dated November 7, 1978 from Eugene Zwoyer, Executive Director, ASCE, in response to a letter from R. E. Fadum dated October 25, 1978.

ASCE has not developed positions on specialty fields versus broad, general P.E. registration, inclusion of public members on boards or combined versus separate boards of the various design disciplines. I believe that we would find widely diversified opinions within the membership on these subjects.

ASCE advocated professional registration as a requirement for all individuals performing engineering functions or using engineering titles regardless of employment in the private sector or private industry or public service.

11. Paper entitled, "Remarks to N.C.E.E. on the Occasion of Their 57th Annual Meeting," by Eugene Zwoyer, Executive Director, ASCE, August 6-9, 1978.

ASCE strongly supports efforts to assure the public health, safety and welfare through the competent practice of engineering, but we do not recommend mandatory additional requirements for licensing at this time. We believe that such requirements at this time would not result in overall strengthening of engineering licensing and it could be counterproductive.

There is no record proving that the present licensing procedures are not providing adequate protection for the public.

Our licensing requirements successfully measure the qualification of registrants to offer services to the public in accordance with the model law and model rules. However, the competence of the applicant depends on how he uses these qualifications. This is much more difficult to evaluate. We rely on the registrant's integrity and ethics not to

accept those assignments for which the engineer is not competent and on the profession to monitor the engineer's performance and on the registration boards to consider license revocations of unethical and unprofessional work. Re-examining the engineer in fundamentals will not establish his competence. Also, keeping a record of the number of hours he devotes to professional development will not establish his competence. Adequate procedures for determining the registrant's competence and use of sound judgment are very complex. To administer such a complex procedure would be extremely difficult if not actually impossible.

We believe that increasing the percentage of engineers who are licensed is more important to the public welfare than adding more requirements to those currently licensed.

We urge modification of the model law to remove all exemptions so that persons who are responsible for performing professional engineering work in industry and public and private institutions and agencies are required to be registered in the state of their residence.

12. Letter dated December 7, 1978 from Donald G. Weinert, P.E., Executive Director, NSPE, in response to a letter from R. E. Fadum dated October 25, 1978.

We are all anxiously awaiting the experience which will emerge from the Iowa approach, but it will probably be a year or more before that procedure can be evaluated. Iowa is the only state to date to have enacted a mandatory recertification continuing education procedure. NSPE concurs that it is a must for engineers to keep up-to-date in their fields of practice in order to serve and protect the public interest. However, our current policy is that this responsibility should be met on a voluntary basis with input from the professional and technical societies to assist the members in meeting this requirement. I enclose NSPE Policy No. 122-A to reflect our position. The practical administration problems in a mandatory program are enormous and costly.

13. NSPE Professional Policy Statement Number 122-A, Continuing Professional Development.

NSPE Professional Policy Statement 122-A on continuing professional development includes the statement "NSPE favors personal acceptance of responsibility by the engineer for professional development and is opposed to legislation that would require a licensed professional engineer to pass a written examination or to submit evidence of continuing education activities as a condition for a license renewal. Such legal requirements are not necessary to protect the public, are impractical, difficult and costly to implement and ineffective as a means of assuring competence to practice engineering."

14. Paper entitled, "Continuing Education - Boon or Boondoggle," by Milton F. Lunch, General Counsel, NSPE, Consulting Engineer, June 1978.

The theory behind the mandatory education program for lawyers, doctors, and now proposed for engineers is philosophically sound, but the author implies that there are practical matters that need to be considered. For example, what course content is acceptable, who would decide and how whether an engineer who attended a seminar learned from it or dozed the time away. A mandatory continuing education law cannot take into account the most important single methods whereby professionals obtain their competence - their day to day work. Is the cost of administering, controlling and enforcing a mandatory continuing education program worth the cost? In spite of all these questions and doubts, however, the basic theory that the professions have an obligation to prevent unqualified persons from practicing is still sound. There is a far simpler and more effective way to reach that goal. To do it, the state boards need the moral support of the profession and the financial means to support an effective enforcement program through a team of trained investigators.

15. Michigan Society of Professional Engineers Policy with respect to Continuing Education, unpublished.

MSPE encourages all professional engineers to maintain their competency through active practice and continuing education activities, including professional meetings and self-education efforts. MSPE believes that a mandatory continuing education program as a condition of re-licensing, is not cost effective nor in the public interest and will seriously divert resources from needed enforcement activities and to meaningless bureaucratic data gathering efforts.

16. Paper entitled, "Qualifications for Continued Practice," by Francis E. Holland, P.E., member, Iowa State Board of Engineering Examiners, contained in a compilation entitled "Trends in Engineering Education," NSPE - Intersociety Conference on Engineering Registration, Chicago, February 7-8, 1978 and published by NSPE.

In 1977, the Iowa legislature enacted the first mandatory continuing education law for all state licensing boards. The law directs that each board including the Iowa State Board of Engineering Examiners develop a plan and program to implement the requirements which become effective on January 1, 1980.

In general, requirements are expressed in terms of Professional Development Hours (PDH). One hour of acceptable professional development equals one professional development hour. It goes on to equate 400 hours of practice to 10 PDHs; one semester of university credit to 45 PDHs, etc. It then stipulates that 80 professional development hours are required each year, etc.

17. Letter dated January 2, 1979 to Ralph E. Fadum, P.E. from Morton S. Fine, P.E., L.S., Executive Director, N.C.E.E., in response to an earlier letter requesting comments concerning various issues related to the "Sunset Law."

With respect to recertification, the official position is reflected in the enclosed statement. This position paper (reference no. 4) has recently been circulated to all engineering societies who are members of ECPD, EJC, and ACE for their comments. Few responses have been received to date, but when all responses have been received and evaluated the N.C.E.E. Board of Directors will probably issue a revised or final paper on this matter which I am sure you will see in due course.

18. "The Registration of Professional Engineers and Land Surveyors in the United States," N.C.E.E., 1978.

This is a very good compilation of matters related to registration in general. Included is the following statement concerning continuing professional development.

At the present time, state boards and engineering societies are discussing continuing education/professional development as a requirement for registration renewal. Discussions in this area have centered on whether basic requirements should be established for continued practice and whether, if established, the requirements should be mandatory or voluntary. Also, under discussion is the determination of a uniform method of measuring, evaluating, and reporting continuing professional development activities.

Iowa is the only state which has enacted legislation requiring the state board to implement continuing education/professional development requirements for licensure. The Iowa Board is currently studying methods for implementing this legislation. N.C.E.E. has offered to assist state boards in establishing uniform guidelines for continuing education/professional development criteria in the interest of maintaining uniform procedures among the state boards.

Quoting further from this document, there is a statement "It may be said that engineers and land surveyors have the finest professional registration system in the world." N.C.E.E. will continue to serve its member boards in the engineering profession by providing an organization through which state boards may "act and council together to better discharge their responsibilities in regulating the practice of engineering and land surveying for the protection of the public welfare and safeguarding life, health and property."

19. "Engineering Registration and the Law - A Review of Engineering Registration in 1977 - How the System Operates, What State Laws Require a Look into the Future," Morton S. Fine, P.E., L.S., IEEE Spectrum, October 1977.

Mandatory requirements for license renewal had been discussed for three or four years before the first mandatory statute was enacted in Iowa in July 1977. The statute mandates the state board to set up rules and regulations to implement the statute within a given time frame. N.C.E.E. hopes to coordinate with the Iowa Board so that guidelines can

be set up for the permissive use of all member boards of N.C.E.E. thereby retaining all the benefits of reciprocity/comity gained after so many years. It is anticipated that the passage of additional state statutes may accelerate in the future.

Finally, the adoption of mandatory degree requirement for licensure has moved slowly into the statutes but appears to be accelerating. Six states, Illinois, Kentucky, Michigan, Ohio, South Carolina, and Missouri, either have already implemented such requirements or have set dates for so doing.

REF/ny

R.E. Fadum
January 12, 1979

Reference Materials

1. Memorandum from Charles Willis, P.E., Secretary, Consulting Engineer Council of North Carolina (an affiliate of the American Consulting Engineers Council) to Paul Vick, Chairman, N.C. Governmental Evaluation Commission dated October 18, 1978.

2. Memorandum from B.A. Harrell, Counsel for PENC to PENC officers, undated.

3. Paper entitled "Continuing Education - A Requirement for Recertification" by Monroe W. Kriegel, P.E., Oklahoma State University (prepared for a Southern Zone Meeting of N.C.E.E.) dated April 7, 1978.

4. N.C.E.E. Preliminary Position Paper on "Continuing Professional Competence" dated August 1978.

5. PENC - Talking Paper on "Should Continuing Education be a Requirement for Renewal of Registration as a Professional Engineer or Land Surveyor?" dated September 26, 1978.

6. Paper entitled "The Mandatory Continuing Education Bandwagon - Should Professional Engineers Climb Aboard?" by Dr. Benjamin Shimberg, Associate Director, Center for Occupational and Professional Assessment, Educational Testing Services, publication not identified.

7. Article - "Perils of Credentialism" by John Alden, New Engineer, October/November 1978.

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18. "The Registration of Professional Engineers and Land Surveyors in the United States," NCEE, 1978.

19. "Engineering Registration and the Law - A Review of Engineering Registration in 1977 - How the System Operates, What State Laws Require and a Look into the Future," Morton S. Fine, P.E., L.S., IEEE Spectrum, October, 1977.

STATE OF ALASKA

A PERFORMANCE REVIEW OF THE BOARD OF REGISTRATION FOR ARCHITECTS, ENGINEERS AND LAND SURVEYORS

May 11, 1979

A PERFORMANCE REVIEW OF THE BOARD OF REGISTRATION FOR ARCHITECTS, ENGINEERS AND LAND SURVEYORS

May 11, 1979

Commissioner of the Department of Commerce and Economic Development	Charles Webber
Deputy Commissioner of the Department of Commerce and Economic Development	Bertram L. Wagnon

Members of the Board of Registration for Architects, Engineers and Land Surveyors

President	Wallace I. DeBoff
Member	Jim Bridges
Member	Donald J. Cook
Member	Wayne K. Jensen
Member	James M. Lake
Member	Loren Lounsbury
Member	Paul Stutzman
Member	Gordon Unwin
Member	Wallace Wellenstein

STATE OF ALASKA

THE LEGISLATURE

BUDGET AND AUDIT COMMITTEE

AUDIT DIVISION
POUCH W—ALASKA OFFICE BUILDING

FINANCE DIVISION
POUCH WF—STATE CAPITOL

JUNEAU, ALASKA 99811

May 11, 1979

Members of the
Legislative Budget and Audit Committee:

In accordance with the intent of Title 24 and 44 of the Alaska Statutes, the attached report is submitted for your review.

A PERFORMANCE REVIEW
OF THE
BOARD OF REGISTRATION FOR
ARCHITECTS, ENGINEERS
AND LAND SURVEYORS

May 11, 1979

Gerald L Wilkerson

Gerald L. Wilkerson, CPA
Legislative Auditor
Division of Legislative Audit

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PURPOSE AND SCOPE OF THE REVIEW

Purpose

In accordance with the intent of Alaska Statutes 24.20 .271(1) and 44.66.050 (sunset legislation), a review of the Board of Registration for Architects, Engineers and Land Surveyors was conducted to review Board activities and accomplishments to determine if the Board has been operating in an effective, efficient and economical manner.

As required by legislative intent, this report shall be considered during the legislative oversight function in determining whether the Board will be reestablished. The law currently specifies that this Board will terminate on June 30, 1980, but will continue until June 30, 1981 for the purpose of concluding its affairs.

Scope

The major areas reviewed were the Board's operations and its licensing, examination, administration, complaint and affirmative action functions. Our review consisted of analyzing and evaluating the following:

(1) Applicable statutes and Board regulations;

(2) discussions with the Board and questionnaires sent to Board members;

(3) tests of records and documents of the Board and the Division of Occupational Licensing (OL), Department of Commerce and Economic Development, for the years 1976-1978;

(4) interviews with OL employees;

(5) complaints filed with OL, the Ombudsman's Office, Consumer Affairs Agency and the Human Rights Commission during the period 1976 - 1978;

(6) questionnaires sent to State registered architects, engineers and land surveyors; and

(7) questionnaires sent to individuals whose applications were not approved.

Scope Constraints

This review was hampered by the following constraints:

(1) The Board has not established and reported financial and program plans as required by AS 37.07.050 nor has it developed and reported performance information regarding its effectiveness and accomplishments as required by AS 37.07.090 and AS 08.48.071.

(2) OL has not adequately collected, recorded and maintained pertinent files and statistics relating to the Board to effectively and efficiently carry out its administative responsibilities.

ORGANIZATION AND FUNCTION

Architects, engineers and land surveyors have been licensed in Alaska since 1939, when the Territorial Board of Engineers and Architects Examiners was established. The structure and statutes that relate to today's Board date from Ch 179 SLA 1972, in which the Alaska State Board of Registration for Architects, Engineers and Land Surveyors was created.

As stipulated in AS 08.48, the Board has nine members consisting of two civil engineers, one land surveyor, one mining engineer, two engineers from other branches of the engineering profession and three architects. Members are appointed by the governor and serve staggered six-year terms. Board meetings are held at least four times a year.

The responsibilities of the Board include:

a. The adoption of regulations enabling it to carry out the purposes of AS 08.48;

b. the publication of a code of ehtics;

c. the formulation and administation of examinations;

d. the review of applications; and

e. enforcing the provisions of AS 08.48, through disciplinary actions or other procedures deemed necessary and in accordance with the Administrative Procedures Act (AS 44.62).

Except for specific exemptions provided for in AS 08.48.331, the practice of architecture, engineering or land surveying within Alaska is prohibited unless the practitioner is currently registered with the State. Although the statutes do not distinguish between the various branches of engineering, the Board has interpreted "professional engineering" to include chemical, civil, electrical, mechanical, mining and petroleum engineering. Accordingly, engineers are registered in the specific field for which they apply and are approved. In addition, corporate authorizations are required for corporations practicing architecture, engineering or land surveying within Alaska.

REPORT CONCLUSION

Policy Issues

This review contains policy issues raised as a result of our evaluation of various Board practices. The final policy decisions affecting these practices are not within the scope of this review but require legislative consideration. In debating these issues, the legislative oversight committees should consider the findings and alternatives presented in this report in reaching their decisions.

Report Conclusion

In our opinion, the Board of Registration for Architects, Engineers and Land Surveyors should be continued. For the following reasons, we believe the regulation and licensing of architects, engineers and land surveyors is desirable to protect the public's health, safety and welfare:

A. These professions involve structures and activities that could result in severe physical and financial harm if practiced by incompetent persons. Potential harmful results include collapsed structures, fires, pollution and extensive litigation, as well as large economic loss.

B. The general public as well as the individual consumer is often directly affected by the professional's work. For example, the users of public buildings have as vital an interest in the structural integrity of a building as the owner does. Also, neighbors and subsequent land owners are impacted by inaccurate surveys or poorly designed structures or communities.

C. Registered architects and engineers are involved not only with the construction but with the original design of structures, facilities and processes. Their seals on blue prints and building plans certify their approval of those plans, and accordingly assign them a good deal of professional and legal responsibility.

D. In order to protect the public without unduly restricting individual rights, AS 08.48.331 exempts a wide variety of persons, activities and structures from requiring the services of a registered architect, engineer or land surveyor.

While the reasons above indicate that the Board should continue to license and regulate architects, engineers and land surveyors, certain changes need to be implemented in order for the Board to more effectively serve the public.

The make-up of the Board should be reviewed to provide better representation of the regulated professions and the general public. At least two lay members should serve on the Board (see Recommendation No. 1).

The procedures for the preparation and grading of the Alaska portion of the land surveying examination should be revised (see Recommendation No. 2).

The Board should continue its efforts to make the statutes and regulations more relevant and workable (see Recommendation No. 3).

Legislation should be introduced which will require continuing education for architects, engineers and land surveyors. Continuing education will assist in avoiding professional obsolescence and keep practitioners aware of changes taking place in the field (see Recommendation No. 4).

The Board should prepare annual reports of its objectives and activities, and OL should incorporate this information into its budget documents. This will better enable the Governor's Office, Legislature and other interested parties to evaluate the Board's performance (see Recommendation No. 5).

FINDINGS AND RECOMMENDATIONS

Findings and Recommendations No. 1 through No. 5 are addressed to the Board of Registration for Architects, Engineers and Land Surveyors. Findings and Recommendations No. 6 and No. 7 are addressed to the Division of Occupational Licensing (OL), and should be read in conjunction with "A Performance Review of the Division of Occupational Licensing, Department of Commerce and Economic Development, October 30, 1978".

Recommendation No. 1

In order to ensure that the Board adequately represents the regulated professions and the general public, the qualifications and conditions of Board membership should be reviewed and amended.

AS 08.48.011-.031 creates the State Board of Registration for Architects, Engineers and Land Surveyors, specifies the qualifications and professions of the nine Board members and establishes the members' terms of office. In order that the Board better represent the regulated professions and general public, these statutory provisions should be reevaluated. Some specific areas are addressed below:

A. Of the 23 boards established under AS 08, fifteen have at least one member who has no direct financial interests in the profession(s) regulated by that particular board. The State Board of Registration for Architects, Engineers and Land Surveyors is one the eight boards without lay representation.

   In general, lay members can and should contribute to policy formulation and enforcement decisions. Their expanded roles, particularly in technical evaluations and discussions, will have to be defined for this particular board. However, it should be recognized that the public is the ultimate interest group. We recommend that at least two lay members be included on or added to the Board.

B. The following table shows the relative percentages of professions registered through the Board and the statutory representation afforded each profession.

Profession	As % of All Registrants		Statutory Board Representation
Architects	12%		3
Electrical Engineers	8%		A
Mechanical Engineers	9%		A
Civil Engineers	43%		2
Mining Engineers	2%		1
Chemical Engineers	1%		A
Land Surveyors	21%		1
Petroleum Engineers	1%		A
Corporate Authorizations	3%		-
	100%		7
Representatives from other branches of engineering		A	+ 2
			9

The table illustrates some interesting comparisons: A) Mining engineers, who make up only 2% of all registrants, are guaranteed Board representation. Electrical and mechanical engineers are not, although together they make up 17% of all registrants. B) Architects, who represent 12% of the registrant population, are granted three Board memberships. Land surveyors, representing 21% of all registrants, are only granted one.

Although in actual fact the current Board does have an electrical engineer, a mechanical engineer and the civil engineer members are also registered land surveyors, the law allows for a much less representative membership. We recommend that the professional make-up of the Board, as required by AS 08.48.011, be reevaluated to more accurately reflect the regulated professions and the public.

In addition, the Board is relatively large and the feasibility of a smaller membership should be considered. We recognize, however, that three professions are being regulated and that considerable time is already demanded of Board members.

Recommendation No. 2

The Board should revise its procedures for the Alaska portion of the land surveying exam.

For several years the four-hour land surveying exam on Alaska law and practice has been prepared and graded by a single individual. It is not the auditor's intent to in any way discredit this individual and the Board is rightfully very appreciative of his competence and efforts. However, no one person should have so much input to the determination of whether an applicant is to become a registered land surveyor.

We recognize that the Board has taken preliminary steps to develop alternative procedures for the Alaska portion of the land surveying exam, and recommend that it continue and formalize its efforts. Until such time as the new methods for preparation of the exam are effected, basic control procedures - e.g., ensuring the anonymity of the examinee to the grader - should be followed.

Recommendation No. 3

The Board should continue its efforts to make the statutes and regulations more relevant and workable.

In September, 1978 the Board adopted major revisions to its administrative regulations, 12 AAC 36. These revisions were the culmination of several years' efforts and significantly improve the clarity and applicability of the regulations.

AS 08.48, through which the Board is created and empowered to regulate the professions of architecture, engineering and land surveying, should also be subjected to a review and revision process. In addition, some areas of 12 AAC 36 still need improvement. Some specific areas warranting review are listed below (this list is not intended to be inclusive):

A. AS 08.48.011-.021. As discussed in Recommendation No. 1, Board make-up should be reevaluated.

B. AS 08.48.091. Written exams are required to be held at least twice a year. In the case of the Architecture-Qualifying and the Architecture-Professional exams, which are national tests each of which is offered once a year, this is not possible. The statute should be reworded accordingly.

C. AS 08.48.11. One cause for reprimand is a "crime involving moral turpitude." This is vague and should be eliminated or more precisely defined.

D. 12 AAC 36.010. One of the public need criteria for the continued existence of a board is the extent to which State personnel practices, including affirmative action requirements, have been complied with by the board. 12 AAC 36.010 requires that applicants submit photographs with their applications. We found no evidence of discrimination based on photographs, but the potential for discrimination or charges of discrimination exists. Therefore, we recommend that photographs be used for identification purposes only and that they not be affixed to the application at the time it is reviewed for acceptance.

Recommendation No. 4

Legislation should be introduced requiring continuing education for architects, engineers and land surveyors.

Architects, engineers and land surveyors must demonstrate a high degree of educational and practical competence before they can become registered in Alaska. However, renewal of certificates is not dependent upon evidence of a professional's continued competence.

In our questionnaire to registered professionals, 93% of the architects, 78% of the engineers and 64% of the land surveyors responding reported that they had attended courses and/or seminars in the last two years. Most were concerned, however, that continuing education requirements would be too narrowly defined or too difficult to satisfy. To address these concerns, there must be active involvement by individuals and professional societies in the development of continuing education standards.

Architects, engineers and land surveyors are acutely aware of the public's trust that they maintain their professional competency. Required continuing education is one means of fulfilling that trust. In addition, a program of continuing education will assist in avoiding professional obsolescence and keep practitioners aware of changes taking place in the profession.

Recommendation No. 5

The Board should develop reports and procedures that will enable the legislative and executive branches to evaluate its performance.

A. Under sunset legislation each licensing board will have the burden of demonstrating a public need for its continued existence. As part of this process a board will be expected to establish formal

objectives with, so far as is practicable, quantifiable measures. Without identifiable and measurable objectives, neither the Legislature, the Executive Branch nor the board itself can effectively evaluate performance.

The Division of Occupational Licensing submits annual budget documents in which it establishes its own objectives and evaluates the previous year's performance. Similar reports should be prepared for each board and OL should include these in its annual budget package (see the OL Performance Audit Report).

B. Although required to by AS 08.48.071, the Board has not prepared annual reports to the Governor's Office. As discussed in part A above, there must be some mechanism for evaluating the Board's performance. Furthermore, many registered professionals have expressed an interest in receiving Board reports or newsletters.

We recommend that the Board's annual report include, at a minimum, the following information:

1. Board's purpose, goals and measures;

2. receipts and disbursements related to the Board's operations;

3. Board member participation;

4. new regulations and statutes; and

5. significant developments or concerns of the Board.

Recommendation No. 6

The Division of Occupational Licensing should collect, record and maintain for five-year periods files and statistics of licensing and testing applicants and related workload of the licensing examiner.

The Division needs relevant facts and statistics for evaluating the performance of its personnel and the Board. Many past records have not been maintained or compiled in a usable form, such as:

1. Number of architects, engineers and land surveyors newly registered or renewed in past years;

2. statistics on the pass/fail rates for examinations;

3. number of applicants for examinations or registration as well as number of applicants not approved;

4. breakdown of receipts by fee types; and

5. correspondence workload of licensing examiner.

6. Files for at least 27 registered architects, engineers or land surveyors have either been misplaced or sent to Archives without the necessary cross-reference documents being maintained by OL.

It is to the advantage of the Division to keep these records in order to support its budget request, evaluate its personnel and keep the Board informed as to its progress. Also, feedback from the Board and the public should be encouraged to determine whether staff performance is adequate (see the OL Performance Audit Report).

Recommendation No. 7

The Division of Occupational Licensing should handle investigations in a more comprehensive and timely manner.

As discussed in Legislative Audit's OL Performance Audit Report, OL's investigative performance was not sufficient to provide adequate public protection from abuse by regulated occupations.

In our review of OL complaint files relating to architects, engineers and land surveyors, we also noted the following exeptions:

1. 20% of the cases opened since January, 1975 and subsequently closed were not satisfactorily resolved but were closed due to age.

2. 78% of the cases open as of December, 1978 had not been investigated in a thorough or timely manner. In fact, 64% of the cases had been open for at least six months but had not yet been investigated.

In our October, 1978 audit of OL, we recommended that the Division's investigative unit be transferred to Public Safety. The 1979 legislature did not elect this option, but did approve an additional investigator position (there are currently three OL investigators). The Director of OL has indicated, however, that due to budget restraints the new position will not be filled until October, 1979.

ANALYSIS OF PUBLIC NEED

Limited Analysis

The following analysis of Board activities relates to the public need factors defined in the "Sunset" law. This analysis is not intended to be all inclusive, but addresses those areas we were able to cover within the scope of our review.

I. The extent to which the board, commission or program has operated in the public interest.

1. The Board has adopted revisions to the Code of Ethics which clarify and strengthen the professional's responsibility to the public.

2. During the last four years the Board has initiated or referred approximately 30 investigations to OL.

3. In our testing and observations we found the Board to be conscientious in its review of applications and performance of other administrative duties.

II. The extent to which the operation of the board, commission, or agency program has been impeded or enhanced by existing statutes, procedures, and practices which it has adopted, and any other matter, including budgetary, resource, and personnel matters.

1. The Division of Occupational Licensing (OL) has not maintained updated statistics for Board use (see Recommendation No. 6 and OL Performance Audit Report).

2. OL has not handled investigations of complaints in a timely and effective manner (see Recommendation No. 7 and OL Performance Audit Report).

III. The extent to which the board, commission or agency has recommended statutory changes which are generally of benefit to the public interest.

1. Although the statutes and regulations governing Board activities should be subjected to further review, the Board recently adopted major revisions to its administrative regulations, 12 AAC 36, that significantly improve their clarity and applicabilitity (see Recommendation No. 3).

IV. The extent to which the board, commission or agency has encouraged interested persons to report to it concerning the effect of its regulations and decisions on the effectiveness of service, economy of service, and availability of service which it has provided.

1. Individuals who contact Board members or the licensing examiner and wish to present information, ask questions or register complaints are encouraged to attend Board meetings.

V. The extent to which the board, commission or agency has encouraged public participation in the making of its regulations and decisions.

1. Board meetings are held at least five times a year and are advertised in Juneau, Ketchikan, Fairbanks and Anchorage. However, neither meetings nor examinations have been advertised in a timely manner (see the OL Performance Audit Report).

2. During the process of revising its regulations, and in accordance with the Alaska Administrative Procedures Act, the Board invited interested persons and groups to offer written or oral testimony.

VI. The efficiency with which public inquiries or complaints regarding the activities of the board, commission or agency filed with it, with the department to which a board or commission is administratively assigned, or with the office of the ombudsman have been processed and resolved.

1. During the past three years, four complaints concerning the Board's activities were filed with the Ombudsman's Office. The cases involved the Board's evaluation of applicants' experience, the assessment of registration fees and the Board's failure to investigate. All cases were resolved to the Ombudsman's satisfaction.

2. OL has only one complaint file relating to the Board's activities. This was prompted by a letter written to the Governor and forwarded to OL, and concerned a Board member's outspoken criticism of a landscape architecture exhibit. No formal complaint was filed, and the matter was satisfactorily resolved.

VII. The extent to which a board or commission which regulates entry into an occupation or profession has presented qualified applicants to serve the public.

1. Complaints against registered architects, engineers and land surveyors are indications of the quality of practice in the State. During the last four years, only about a dozen complaints were filed with OL charging registered professionals with unethical or unprofessional conduct.

2. Architects, engineers and land surveyors are not required to demonstrate their continued competence through a continuing education or retesting program (see Recommendation No. 4).

3. During the last three years, approximately 100 architects, 500 engineers and 100 land surveyors were accepted for initial registration. OL has not developed summary data by which we could readily determine the number of renewals processed during this same period.

VIII. The extent to which state personnel practices, including affirmative action requirements, have been complied with by the board, commission or agency to its own activities and the area of activity or interest.

1. Photographs are required to be submitted with applications for examinations and/or professional registrations. This requirement does not comply with affirmative action standards (see Recommendation No. 3).

IX. The extent to which statutory, regulatory, budgeting or other changes are necessary to enable the agency, board or commission to better serve the interests of the public and to comply with the factors enumerated in this subsection.

Please refer to the previous section, Findings and Recommendations.

APPENDIXES

APPENDIX A

BOARD OF REGISTRATION FOR ARCHITECTS,
ENGINEERS AND LAND SURVEYORS
REVENUES COMPARED WITH EXPENDITURES
Fiscal Year 1978
(UNAUDITED)

Average Revenue (See Schedule 1, Notes 1 and 2)	$70,964
Expenditures (See Note 3)	58,786
Excess of Revenues over Expenditures	$12,178

Schedule 1
Types of Revenues (See Note 2)

Revenues	Amount	Collection Time
Individual Application Fee	$50	With Application
Corporate Authorization Application Fee	$100	With Application
Reexamination Fee	$50	With taking of examination
Individual Registration Fee	$15/year	Renewals paid biennially; new registrants pay $15/year for balance of biennial period.
Corporate Authorization Registration Fee	$50/year	Renewals paid biennially; new registrants pay $50/year for balance of biennial period.
Amendment to Corporate Authorization	$20	With amendment
Delinquent Renewal Fee	$30	With reinstatement
Late Fee Fine	$10	With late payment

Note 1

Renewal registration fees are collected once every two years and cause revenues inone year to be significantly greater than revenues collected in the next year. Therefore, we calculated and reported an average of the revenues collected

in Fiscal Year 1977 and 1978 in order to obtain an accurate representation of collected revenues.

Note 2

12AAC 36.170, which outlines fee types and amounts, was revised in October 1978. Application fees were raised and fees for registration certificates were eliminated. The fees in Schedule 1 reflect the current fee structure.

Note 3

Expenditures include those made by Board members, such as travel and per diem and an allocated percentage (estimated) of total administrative expenses of OL. They do not include expenditures for efforts of other departments, such as the Department of Law, that may be assisting the Board and OL.

APPENDIX B

ADMINISTRATIVE STATISTICS

Registered Architects, Engineers and Land Surveyors	As of January 1, 1979 Number	As % of Total
Architects	339	12%
Engineers (Note 1)	1,848	64%
Land Surveyors	624	21%
Corporate Authorizations	99	03%
	2,910	100%

Board Meetings in Calendar Years 1975-1978

Average number of meetings per calendar year (excluding telephone conferences)	5 meetings
Average number of days per meeting	2 days

Examinations	Dates Given Each Year
Engineer-In-Training	November, April
Professional Engineering	November, April
Land Surveying	November, April
Architecture-Qualifying	June
Architecture-Professional	December

Note 1

Engineers are registered in the separate fields of civil, chemical, electrical, petroleum, mechanical and mining engineering. The numbers of engineers registered in each field as of January 1, 1978 has not been determined. However, the percentage break-downs calculated using July, 1978 figures and illustrated in Recommendation No. 1 should be relatively unchanged.

APPENDIX C

QUESTIONNAIRE SENT TO BOARD MEMBERS

1. What do you believe to be the goals and objectives of the Board of Registration for Architects, Engineers and Land Surveyors?

Description	*Number of Board Members' Responses (See Notes 1 and 2)*
To ensure only persons who have demonstrated their ability may practice.	*1*
To ensure minimum level of competency among practitioners.	*3*
To monitor professions as prescribed in AS 08.48.	*1*
To protect health, safety and welfare of consumers as well as general public who use structures.	*3*
To ensure minimum standards of conduct.	*2*

2. Do you believe that the Board is achieving its goals as you perceive them in question number 1? Please show how the goals and objectives are or are not being achieved.

Description	*Number of Board Members' Responses*
In most cases, but problems with enforcement.	*2*
Successful in ensuring that registered professionals meet minimum standards.	*2*
No, because:	
a) Complaints not followed up by OL;	*3*
b) Board losing credibility because of (a);	*1*
c) municipal and State agencies not requiring compliance with statutes and regulations;	*1*
d) legal opinions vary from one administration to another;	*1*
e) budget restricts necessary travel and frequency of meetings.	*1*

3. Is the staff from the Department of Commerce and Economic Development and/or other departments adequate to perform all the administrative and enforcement duties necessary for the operation of the Board? What staff support services are provided adequately/inadequately?

Description	*Number of Board Members' Responses*
No, Because:	
a) Board needs an executive secretary;	*2*
b) quarterly newsletter should be sent to registered professionals;	*1*
c) OL investigation procedures not adequate or timely;	*6*
d) administrative duties of licensing examiner handled well but insufficient to fill Board needs.	*4*

4. Do you think that the absence of regulations for architects, engineers and/or land surveyors would be detrimental to the public's best interests?

Description	*Number of Board Members' Responses*
Yes, because:	
a) Alaska's hostile environment requires special knowledge for safe construction;	*2*
b) absence of statutes would encourage growth of incompetence;	*2*
c) energy conservation is very important and requires specialized training;	*1*
d) poorly designed communities and structures might develop, hurting both consumers and the general public.	*3*

5. Are there any statutes that you believe to be obsolete, vague, unduly restrictive and/or inadequate to provide the Board with the responsibility and power to properly meet its objectives? Please list and explain.

Description	Number of Board Members' Responses
Board has worked diligently to revise and improve regulations.	*1*
Statutes generally adequate; but difficult to enforce or to operate effectively within budget.	*3*
State employees should not be exempted from registration requirements (AS 08.48.331(4)).	*1*
Other exemptions are vague and subject to several interpretations (AS 08.48.331).	*1*

6. Do you think that continuing education requirements should be adopted for architects, engineers and/or land surveyors?

Description	Number of Board Members' Responses
Not yet because of cost and administrative time required.	*1*
Desirable but difficult to regulate - progressive individuals will do on their own and competition will eliminate those who don't.	*2*
Yes, but standards should first be established on national basis.	*2*
No - so far only one state requires it.	*1*
Yes - need to ensure continued competence.	*1*

7. Do you believe that the residency, experience or professional requirements for Board membership are valid and/or adequate?

Description	Number of Board Members' Responses
Yes - adequate as minimum requirements. Experience requirement needed for member to evaluate applicants, and residency requirement needed for member to fully appreciate Alaska's unique problems.	6

8. What changes could be made to the Board which would improve its service to the public?

Description	Number of Board Members' Responses
Employ an executive secretary.	2
Publish a quarterly or semi-annual newsletter to keep public, State and registrants informed of Board activities.	1
Need more direct authority to enforce statutes and regulations.	4
Assign an investigator to the Board.	1
Provide adequate funding so that meetings could be held as needed and so members could attend necessary national and/or regional meetings.	1
Provide adequate investigative support to process complaints within a month of receipt.	1
No changes needed to Board itself.	1

9. Please add any other comments or suggestions that you believe would enable us to better evaluate the public need for the Board.

Description	*Number of Board Members' Responses*
Revenues generated by Board would cover cost of executive secretary as well as Board's share of State service costs.	*2*
Need to keep registration so that Alaska's standards are comparable to other states and to ensure interstate flow of professionals.	*2*
Survey needed of building officials, municipal and State agencies, etc., to determine their awareness of and compliance with statutes.	*1*
Public has the right to know that structures and facilities are safe.	*1*
An area that should be looked into is the development of professional intern programs.	*1*

Note 1

Number of Board Members	9
Number of Board Members Responses	6
Response Rate	67%

Note 2

Each Board member responded to each question with several answers. Therefore, total responses to a question may exceed the number of Board members.

QUESTIONNAIRE SENT TO REGISTERED ARCHITECTS ENGINEERS AND LAND SURVEYORS

The following questionnaire was sent to registered architects, engineers and land surveyors (see Note 1). For each question on the questionnaire we have noted the percentage of yes and no responses. We have also shown the most typical written comments for each question as compiled from the questionnaire (see Note 2).

	% of Responses (See Note 1)								
	Architects			Engineers			Land Surveyors		
	Yes	No	No Opinion	Yes	No	No Opinion	Yes	No	No Opinion
1. Have you ever had any contact with the Board of Registration for Architects, Engineers and Land Surveyors?	61%	39%	0%	49%	51%	0%	57%	43%	0%
If so, was it concerning:									
A. New regulations?	22%			18%			29%		
B. Board policy?	43%			21%			36%		
C. New legislation?	22%			12%			25%		
D. Investigations?	18%			12%			11%		
E. Other? (please specify)	18%			27%			25%		

Registration; preparing, proctoring or grading exams; enforcement; availability of courses; proposed registration of landscape architects.

2. Alaska statutes require Board membership to consist of two civil engineers, one land surveyor, one mining engineer, two engineers from other branches, and three architects.									
A. Do you think the Board is: too large?	11%			10%			07%		
too small?	04%			11%			0%		
OK?	71%			55%			61%		
No opinion?	14%			24%			32%		
B. Do you think all professions are adequately represented?	82%	11%	07%	55%	29%	16%	54%	29%	07%

Comments:

No - Each profession should have its own board.
No - All fields of engineering should be represented.
No - Landscape architects should be registered.

	% of Responses (see Note 1)								
	Architects			Engineers			Land Surveyors		
	Yes	No	No Opinion	Yes	No	No Opinion	Yes	No	No Opinion
C. Are any professions over represented?	07%	68%	25%	38%	45%	17%	43%	46%	11%
Comments:									
Yes - Too many architects (30% of engineers and land surveyors responding added this comment);									
- too many civil engineers.									
D. Should the public (non-professionals) be represented on the Board?	18%	75%	07%	14%	78%	08%	07%	86%	07%
Comments:									
No - Unable to understand technical issues; Board members already represent public.									
Yes - But not as voting member; should be one or two representatives from industry or government.									
3. Do you believe that it is necessary to register architects, engineers and/or land surveyors in order to protect the public's health, safety and welfare?	89%	07%	04%	97%	03%	0%	100%	0%	0%
Comments:									
Yes - To establish minimum standards which consumer cannot assess;									
- particularly with Alaska's harsh environment and land issues;									
- however, if regulations not enforced it is better to have no regulations at all.									
4. If so, do you think Alaska's certification requirements are necessary and/or adequate?	75%	14%	11%	90%	07%	03%	89%	07%	04%
Comments:									
Yes - Comparable to national standards.									
No - Should require more experience;									
- should require college degree;									
- should not exempt government employees.									
Is the requirement that architects and engineers demonstrate knowledge of construction under sub-arctic conditions a valid and/or reasonable requisite to professional practice in Alaska?	89%	11%	0%	82%	15%	03%	N/A	N/A	N/A

	Architects			Engineers			Land Surveyors		
	Yes	No	No Opinion	Yes	No	No Opinion	Yes	No	No Opinion
4 (Cont'd.)									

Comments:

No - No more valid than requiring knowledge of other climate types;
- very little work is done under Arctic conditions.
Yes - Should also demonstrate knowledge of earthquakes and energy conservation;
- but Board should define topic requirements better.
- Architects' thesis requirements should not be stiffer than engineers.
- Arctic Engineering courses aimed at Engineers not Architects.

Do you feel that the examination required for registration is a fair and reasonable test of professional knowledge and ability?	68%	25%	07%	69%	12%	19%	68%	11%	21%

Comments:

No - Exams do not adequately test legal knowledge, design skills, reasoning ability or professionalism;
- there should be more emphasis on a professional interim program.

5. In the last two years, have you attended any classes or seminars directly relating to your professional skills?	93%	07%	0%	78%	21%	01%	64%	36%	0%

If so, how many hours of classes have you had?

No meaningful average available because responses were in terms of seminars, credit hours, contact hours, etc.

6. Do you believe continuing education should be required for renewal of certificates?	50%	46%	04%	38%	54%	08%	46%	50%	04%

Comments:

No - Active practice sufficient to stay current;
- course offerings too limited in Alaska;
- no national standards have been established;
- continuing education is a gimmick by educators to create classes.

Board should encourage independent continuing education and should help organize seminars and classes.

	% of Responses (see Note 1)								
	Architects			Engineers			Land Surveyors		
	Yes	No	No Opinion	Yes	No	No Opinion	Yes	No	No Opinion
7. Do you think that the State should issue temporary certificates?	04%	86%	10%	14%	77%	09%	14%	82%	04%

If so, under what conditions should they be issued?

Only if - Shortage of registered professionals;
- Required to post bonds or Board reviews individual cases for public's best interests.
No - State would be inundated with carpet baggers and consumer would have not redress after temporary licensees left State.
Yes - To juniors or apprentices;
- to persons from states with comparable requirements.

8. In your opinion, has the Board of Registration for Architects, Engineers and Land Surveyors operated in the public's best interests?	68%	14%	18%	82%	04%	14%	68%	04%	28%

Comments:

Board has not policed the profession.
Meetings should be held more often.
Yes - By revising regulations;
Yes - but Board is under-funded.

9. Do you think that any of the statutes under which architects, engineers and land surevyors are regulated are obsolete, vague, unduly restrictive and/or inadequate?	29%	29%	42%	16%	46%	38%	18%	39%	43%

If so, please list and explain:

Yes - State employees and other exemptions should be reviewed (AS 08.48.331);
- statutes should better define incompetence, negligence and distinctions among the professionals;
- there should be a land surveyor-in-training exam;
- the Board has little real authority.

10. Have you any complaints concerning the support services provided by the staff of the Division of Occupational Licensing, Department of Commerce and Economic Development?	21%	61%	18%	16%	75%	09%	25%	64%	11%

	Architects			Engineers			Land Surveyors		
	Yes	No	No Opinion	Yes	No	No Opinion	Yes	No	No Opinion
10. (Cont'd.)									
If so, please specify:									
Yes - Board is inadequately funded and cost of services too high for services rendered. Inadequate services evidenced by no executive secretary, no yearly rosters, no newsletters, difficulty in obtaining renewal information, delays in registration process, and insufficient investigative support.									
11. Are you aware of any discriminatory practices involving the registration and certification of any particular individual or minority groups?	04%	92%	04%	03%	95%	02%	0%	96%	04%

Comments:

Yes, in Board's interpretation of requirements that experience must be under registered professional.
In general, persons without college degree are discriminated against through stiffer experience requirements.

12. Please add comments or suggestions you feel are relevant.

Many persons, particulary government employees, are unable to get breadth of experience; Board should consider breaking CE into several disciplines;
Board should encourage Bureau of Land Management to give mineral surveyors test more often.
Comity applicants should not have to furnish references and college transcripts.
Persons with active applications on file should be notified of regulation changes that affect them.
Board should be allowed to hire an executive secretary and hire direct legal services.
Board should utilize the services and expertise of other State agencies, such as the Division of Lands.

Note 1

	Architects	Engineers	Land Surveyors
Number of questionnaires sent to registered professionals	51	165	61
Number of responses	31	115	35
Response Rate	61%	70%	57%

Note 2

Comments were all reviewed and considered in the performance of our audit, and are briefly summarized in this appendix.

APPENDIX E

QUESTIONNAIRE SENT TO APPLICANTS NOT ACCEPTED FOR EXAMINATION OR COMITY

Questionnaires were sent to some of the individuals whose applications to take examinations or to become registered by comity were turned down by the Board:

	Applicants for Examination	Applicants for Registration by Comity
Number of Questionnaires Sent	16	11
Number of Responses	8	8
Response Rate	50%	73%

Questionnaires are not reproduced in this report but all responses were reviewed and considered in the performance of our audit.

STATE OF ALASKA

JAY S. HAMMOND, GOVERNOR

DEPARTMENT OF COMMERCE &
ECONOMIC DEVELOPMENT

OFFICE OF THE COMMISSIONER

POUCH D
JUNEAU, ALASKA 99811

June 18, 1979

Mr. Gerald Wilkerson, CPA
Division of Legislative Audit
Pouch W
Juneau, Alaska 99811

Dear Mr. Wilkerson:

The following comments are in response to the Performance Review of the Board of Registration for Architects, Engineers and Land Surveyors, as submitted by the Division of Legislative Audit.

Recommendation No. 1: We agree that statutory provisions for board membership should be reevaluated. The requirement for one mining engineer appears unwarranted, while one land surveyor may be insufficient. At this time the board is representative of all fields and, in our opinion, is performing in an excellent manner. We would support inclusion of public members on the board while not increasing its overall size. The subjects of board composition and public membership have been under discussion by the board and it is expected that the board will support this recommendation.

Recommendation No. 2: Agreed. The board has been discussing this matter for some time and is currently investigating alternatives which will maintain examination integrity and quality.

Recommendation No. 3: Agreed. The board, in conjunction with the division, is addressing statutory and regulatory clarification.

Recommendation No. 4: Agreed. The board has discussed this subject and is generally in support of mandatory continuing education. However, care should be taken as to approval of courses to meet such requirements and with respect to possible exemptions.

Recomendation No. 5: Agreed. All boards have been contacted for input into the division's budget for FY '81. This information will address board goals and objectives as well as its financial needs. All boards have also been contacted regarding the requirement for performance reporting. The board is currently preparing its annual report for 1978.

08-H2LH

Recommendation No. 6: Agreed. The division has implemented record maintenance for all boards and commissions under its jurisdiction.

Recommendation No. 7: Agreed. Complaints received against all regulated professions should be handled on a timely basis. Budgetary restraints have mandated priortization of investigations.

I appreciate the time and efforts expended by your staff and the opportunity to provide these comments.

Sincerely,

Charles R. Webber
Commissioner

CRW/sa2/5

STATE OF ALASKA

JAY S. HAMMOND, GOVERNOR

DEPARTMENT OF COMMERCE & ECONOMIC DEVELOPMENT

DIVISION OF OCCUPATIONAL LICENSING

POUCH D
JUNEAU, ALASKA 99811

June 25, 1979

Mr. Gerald L. Wilkerson, CPA
Legislative Auditor
Division of Legislative Audit
Pouch W
Juneau, Alaska 99811

Dear Mr. Wilkerson:

Re: Comments on the Sunset Review Preliminary Legislative Audit Report.

Board members have reviewed the preliminary audit report that you submitted by letter dated June 6, 1979 and have several comments to the recommendations presented by the report. Several of the board members have submitted their comments as individuals because your cover letter was not clear regarding the method in which responses should be submitted; however, as per our telephone conversation, I will attempt to combine all board members' comments in this one letter.

First, I would like to state that the intent of the Sunset legislation, as I understand it from reading "Sunset Legislation in the United States" by Dan R. Price, is to evaluate present bureaucratic effectiveness and efficiency and to deter unnecessary bureaucratic growth. The same publication also states that evaluation and not termination is the primary purpose of Sunset. From this, I would conclude that the Legislature's intent is to improve the relationship between the board and the public by making changes to our statutes and regulations when or if such legislation is necessary to meet that end. I can assure you that such legislative action would be welcomed by all members of this board and, although the following comments may be contrary to the recommendation in the preliminary audit report submitted by your office, the board feels that through these comments it also will obtain the Sunset intent.

Following is the board's response to the recommendations contained in the performance review of the Board of Registration for Architects, Engineers, and Land Surveyors prepared by the Division of Legislative Audit.

-H8LH

Recommendation No. 1

In order to ensure that the board adequately represents the regulated professions and the general public, the qualifications and conditions of board membership should be reviewed and amended.

A. Addition of Lay Members to the Board

Reply a. Addition of Lay Members to the Board. I disagree with the recommendation to add two lay members to the Board. The tasks performed by the Board, in almost all instances, require technical knowledge of the professions regulated. A lay member, by definition, would not have the necessary background to intelligently act on the technical matters. Secondly, there is no evidence that the Board has failed to act in the best interests of the public and consequently I see no demonstrated need to further increase the size of the Board and to thus increase the costs of Board operations.

(Seven Members Agree with this Statement)

Reply b. It has become more apparent that lay members are being appointed to public regulation boards throughout the country. I would be in favor of adding two lay members to the board providing that the number of professional members, currently nine, is not reduced.

(Two Members Agree with this Statement)

B. Re-evaluation of Professional Make-up of the Board

The table showing relative percentages of professions registered is misleading. I call to your attention, Section 08.48.011 of the Alaska Statutes which states, "There is created the State Board of Registration for Architects, Engineers and Land Surveyors." It further states that the Board consists of two civil engineers, and one land surveyor, one mining engineer and two engineers from other branches of the profession of engineering. A further investigation of the statute will identify that we register Professional Engineers, Professional Architects and Professional Land Surveyors, reference to Section 08.48.221. The identification of a specific expertise within the Professional Engineering registration is specifically for the health protection and welfare of the public.

With reference to these three professions, the Board of Registration for Architects, Engineers and Land Surveyors does, in fact, have lay members on the Board, as each separate profession is a lay member relative to the other two.

Of the fifty-five boards registering professionals throughout the nation, thirty-nine of these boards are made up of only architects, and represent only the architectural profession. Of the sixteen boards representing combined professions each of the boards was chaired by a registered professional architect prior to recent officer elections on these boards.

Of the fifty-five boards nationally thirty-eight of these boards have Executive Secretaries or Executive Directors. These individuals are not members of the board and do not represent a professional registration.

On some boards serving the combined professions all members are registered professional architects. I would call to the committee's attention the fact that most projects to be constructed, which affect the health, safety and welfare of the public, have a single prime professional responsibility to the client. For virtually all commercial construction projects involving buildings housing the public or serving the public, the architect is the prime consultant identified by contract. Mechanical, electrical, civil and other engineering services are subcontracted to the architect for coordination and management. This of course does not apply to pure engineering projects such as roadways, bridges and utility services. Perhaps representatives of the audit committee should review State contracts through the Department of Transportation and Public Facilities, to determine how many contracts are awarded to engineers and how many contracts are awarded to architects. It is specifically through this contractual relationship between consultant and owner that the prime responsibility for the protection of the public's health and welfare is established.

If representation is desired for each separate branch of the professional engineering registration and for additional branches recognized in the future, I would offer the suggestion that the State of Alaska consider separate boards of registration for architects and engineers, as thirty-nine other states and districts have done in the past.

Such a separation of boards would respond to the review comment that the board is relatively large and the feasibility of a small membership should be considered.

(Nine Members Agree with this Statement)

Recommendation No. 2

The Board should revise its procedures for the Alaska portion of the land surveying exam.

I agree with the recommendation of the audit that procedures must be undertaken to develop alternative procedures for the Alaska portion of the land surveying exam. At the last board meeting we met with the individual who has been making up and grading the land surveying exam and we are in the process of revising those procedures to insure security of the exam and the anonymity of the individual, or individuals, involved in preparing that examination.

(Nine Members Agree to this Statement.)

Recommendation No 3.

The Board should continue its efforts to make statutes and regulations more relevant and workable.

A. Board make-up. Discussed in Recommendation No. 1.
B. Architectural Exams. I concur.
C. Definition of moral turpitude. I agree.
D. Photographs. No comment other than to question the desirability of increasing the cost and effort involved in identifying applicants for no valid reason.

(Nine Members Agree with this Statement.)

Recommendation No. 4

Legislation should be introduced requiring continuing education for architects, engineers and land surveyors.

In my judgement, mandatory continuing education is not appropriate at this time. The National Council of Engineering Examiners and the National Council of Architectural Registration Boards is addressing this matter and it would appear prudent to delay any action on mandatory continuing education until the Council has completed its study and come up with a recommended system that can uniformly be adopted by State Registration Boards. The problems in uniformity of evaluating continuing education units, accreditation of institutions offering continuing education opportunities, record keeping and comity registration requirements are extensive. Solutions to these problems can best be obtained through the application of uniform requirements developed through the National Councils.

(Nine Board Members Agree with this Statement.)

Recommendation No. 5

The Board should develop reports and procedures that will enable the legislative and executive branches to evaluate its performance.

I concur with the recommendations to develop reports and establish procedures and to enable the legislative and executive branches to evaluate the board's performance. During recent years, however, we have been advised that funding is limited and to limit expenditures where possible. This includes the additional days of meetings required to prepare reports.

We have been advised in the past that the preparation of budgets is not necessary as we are a portion of a larger budget and will receive a pre-established share of funding from the Division of Occupational Licensing, regardless of predefined goals and objectives or the amount of revenue generated by the professional registrants represented by collected.

(Nine Members Agree with this Statement.)

Recommendation No. 6.

> The Division of Occupational Licensing should collect, record and maintain for five-year periods files and statistics of licensing and testing applicants and related workload of the licensing examiner

I am in agreement with Recommendation No. 6 and as a Board we have been trying to have this information and statistical data made available. We have found it virtually impossible to even obtain an alphabetical listing of the registrants, or the ability to have a listing of registrants numerically. If our data storage system cannot provide this type of information, it appears that we are going to have a great deal of difficulty providing the types of information recommended in Recommendation No. 6. This information is not difficult to compile, it's a matter of having the clerical support and the computer program to provide it.

(Nine Members Agree with this Statement.)

I would like to thank you on behalf of the nine members that make up the Board of Architects, Engineers and Land Surveyors for the opportunity to make comments to your preliminary report. If you have any questions concerning these comments, please feel free to contact me at my work number (364-3280) or at my home (789-7814).

Very truly yours,

Wallace I. Deboff, P.E.

HEWITT V. LOUNSBURY & ASSOCIATES
ENGINEERS PLANNERS SURVEYORS . 723 W. 6th. Avenue, Anchorage, Ak. 99501 Tel. (907) 272-5451

June 20, 1979

Gerald L. Wilkerson, CPA
Legislative Auditor
Division of Legislative Audit
Pouch W
Alaska Office Building
Juneau, AK 99811

Reference: Preliminary Audit Report on a Performance Review of the Board of Registration for Architects, Engineers and Land Surveyors, May 11, 1979

Dear Mr. Wilkerson:

I have reviewed the above report and offer the following comments:

Recommendation No. 1:

A. It has become more apparent that lay members are being appointed to public regulation boards throughout the country. I would be in favor of adding two lay members to the board providing that the number of professional members, currently nine, is not reduced.

B. Even through your table illustrates that there is a disparity in the representation of the board members to the various categories of professions, it is my recommendation that if there is to be a change in the required make-up of the board, that the architects continue to be represented by three members. Even though they represent only 12% of the total registrants, their requirements for registration and their educational backgrounds are somewhat different than those for engineers and land surveyors; therefore, it requires knowledgeable professionals to evauate and pass on candidates for registration as architects. However, the mix of electrical, mechanical, civil, mining, chemical and petroleum engineers is really not that critical inasmuch as our educational background and the requirements for registration are the same. I would have no problem in the law being revised to reflect that at least three of the six engineers serving on the board must also be also registered as land surveyors, or that at least one individual registered solely as a land surveyor must be on the make-up of the board.

I do not agree that a smaller board is feasible. There are a large number of applicants to screen at most of our meetings; it takes a great deal of time to thoroughly analyze the applicants; and we require that at least three board members review each applicant. I think the additional cost in per diem and travel is well worth having a nine-member professional board.

Recommendation No. 2:

I agree with the recommendation of the audit that procedures must be undertaken to develop alternative procedures for the Alaska portion of the land surveying exam. At the last Board meeting we met with the individual who has been making up and grading the land surveying exam and we are in the process of revising those procedures to insure security of the exam and the anonymity of the individual, or individuals, involved in preparing that examination.

Recommendation No. 3:

I agree with Recommendation No. 3 as it pertains to Items A, B, C and D. As the report points out, we are in continual discussions each meeting on revisions to the regulations. Because of the statutory requirements pertaining to regulations and the time involved in making changes, we have normally waited until there were a number of changes to be made before initiating the process of public hearings, etc. Our current position is to wait until we have determined what specific portions of the current statute and regulations need to be revised as a result of Sunset Legislation before starting the revision procedure. We certainly recognize changes to both the statute and regulations are in order.

Recommendation No. 4:

I am in agreement with the philosophy of continuing competence. The problem that Alaska is faced with, as well as the other boards throughout the United States, is a means by which to monitor continuing education requirements that will meet the needs of all of the states while allowing individuals registered and practicing in more than one state to meet the same requirements in each state with minimal effort. The current thinking is to provide a means through the National Council of Engineering Examiners to provide for continuing competence on a national basis. This will be one of the topics discussed at the National Convention of NCEE in August. I am sure the Alaska Board would endorse a national program of continuing competence that is endorsed by all 50 states and maintained by a national central depository. Until this is accomplished monitoring and administering a program on a state level would be prohibitive.

Recommendation No. 5:

I am in complete agreement with Paragraphs A and B. One of the problems that the board members have indicated to the audit group is the lack of clerical support by the Division of Occupational Licensing. It is virtually impossible for the board, as such, to prepare this information on a timely basis without the assistance of a qualified individual such as an executive director. It is virtually impossible to comply with this recommendation without help that has expertise in engineering, land surveying and architecture. The secretary to the board, while totally dedicated and willing, has never been more than a secretary or stenographer, totally untrained in the professional areas that we regulate.

Recommendation No. 6:

I am in agreement with Recommendation No. 6 and as a Board we have been trying to have this information and statistical data made available. We have found it virtually impossible to even obtain an alphabetical listing of the registrants, or the ability to have a listing of registrants numerically. If our data storage system cannot provide this type of information, it appears that we are going to have a great deal of difficulty providing the types of information recommended in Recommendation No. 6. This information is not difficult to compile, it's a matter of having the clerical support and the computer program to provide it.

Recommendation No. 7:

This area is probably the most important and most difficult area to control. As the response to your questionnaire indicates, this is the one area that is most visible to the public. If there is one particular area that the Board is criticized for, it is the lack of enforcement of the regulations and statute. In addition, it is probably the most frustrating to the Board members. All of the Board members would like the authority, that we have been denied by various Assistant Attorney General's Opinions, to informally investigate and, if necessary, reprimand individuals in violation of our statutes and regulations. A vast majority of complaints could be delt with and eliminated in this manner. The more flagrant and serious complaints and violations could be handled in accordance with the more formal procedures. However, in order for even formal complaints and violations to be effective, they must be investigated and handled in a timely manner. This has not been the case inasmuch as our Board has received a much lower priority on complaints than those in the health sciences. Because of the lack of investigators and the direction they have been given, our complaints have either gone unheeded or are so low in priority that they are usually

dismissed or forgotten before any investigative effort is started. I feel a staff consisting of an executive director, secretary, and investigator would not only increase the ability of the Board to perform their duties, but would allow the complaint procedure to be handled in a timely and proper fashion.

I am pleased for the opportunity to respond to the audit and feel that the information it contains has been fairly presented.

Yours truly,

Loren H. Lounsbury, P.E.

LHL/sw

June 20, 1979

Mr. Gerald L. Wilkerson
Legislative Auditor
Division of Legislative Audit
Pouch "W" - Alaska Office Bldg.
Juneau, Alaska 99811

Dear Mr. Wilkerson:

The following statements are in response to your letter of June 6, 1979 and the preliminary review of the Board of Registration for Architects, Engineers and Land Surveyors.

My comments respond to the numbered recommendations of the Findings and Recommendations of your report.

Recommendation #1 (A) Lay Members

This evaluation compares boards within this State and does not respond to National statistics. This may not be a concern, but I provide the following statistics for the fifty-five boards registering architects, engineers and land surveyors throughout the nation.

Eleven, of the fifty-five registration boards nationally, have lay members. The average public representation on those boards is 26%. Of these eleven boards six have only one member, four have two members and California has five members.

I believe that selected lay members could provide advantages in the interest of the public. I do not believe however, that adding lay members simply to have lay members on boards will provide for the health protection and welfare of the public.

Lay members can and should contribute to policy formulation and enforcement except where those decisions require an understanding of the professions. As our board is a board representing special training and experience I see the lay members limited in their ability to perform truly serviceable functions to the public.

Recommendation #1 (B)

The table showing relative percentages of professions registered is misleading. I call to your attention, Section 08.48.011 of the Alaska statutes which states, "There is created the State Board of Registration for Architects, Engineers and Land Surveyors". It further states that the board consists of two civil engineers, one land surveyor, one mining engineer and two engineers from other branches of the profession of